

Cyperaceae Japonicae, II.

A Synopsis of the *Rhynchosporoideae* and *Scirpoideae* of Japan, including the Kuriles, Saghalin, Korea, and Formosa

(Continued from Vol. XI. P. 514.)

By

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Familia *Cyperaceae* St. HILL.

Cyperaceae St. HILL. Expos. Fam. 1 (1805) 62; KUNTH, Enum. Plant. 2 (1837) 1 et in Abh. K. Akad. Wiss. Berl. 1837 (1839) 37 et 1839 (1841) 1; BÖCKLR. in Linnaea 35 (1868) 402; BENTH. et HOOK. f. Gen. Plant. 3 (1883) 1037; PAX in ENGL. Bot. Jahrb. 7 (1886) 287; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 98; DALLA TORRE et HARMS, Gen. Siphon. (1900) 29; ASCHERS. et GRAEBN. Synops. Mitteleur. Flor. 2:2 (1902) 1.

Flores hermaphroditi vel unisexuales, in spicula dispositi, singuli ad axillam bractae parvae (squamae); squamae in spicula distiche vel undique imbricatae inferiores vacuae vel spicula ad florem unicum reducta; perianthium saepe setas hypogynas reductum vel nullum; stamina 3 vel pauciora raro numerosiora, filamentis filiformibus, antheris basifixis bicularibus; ovarium integrum 1-loculare; stylus terminalis filiformis vel basi incrassatus, superne 2-3-fidus raro plurifidus; ovulum 1, a basi ovarii erectum anatropum; fructus parvus indehiscens compressus vel trigonus, pericarpio crustaceo indurato vel interdum subdrupaceo, exocarpio tenui vel suberoso-incrassato, endocarpio duro; semen a basi erectum, testa tenui; embryo intra basin albuminis copiosi farinacei vel carnosus parvus, lenticularis vel globosus vel ovoideus.

Systema Familiae

1. Flores strictae unisexuales; feminei prophyllati; masculi eprophyllati.

(Subfam. *Caricoideae* PAX).

2. Prophylla clausa. (vide part. I, p. 232).

1. *Carex*.

2. Prophylla antice aperta. (vide part. I, p. 514).
1. Flores bisexuales, vel unisexuales et eprophyllati.
2. Spiculae pauciflorae, flores uni- vel bisexuales.
(Subfam. *Rhynchosporoideae* ASCHERS. et GRAEBN.).
3. Flores semper unisexuales, spiculae androgynae vel unisexuales.
(Trib. *Sclerieae* DUMORT.).
4. Spiculae minutae, in fasciculis subsessilibus collectae, achenia squamis 2 conniventibus cuspidatis inclusa.
3. *Diplacrum*.
4. Spiculae saepius majores fasciculatae vel paniculatae, achenia decidua basi disco dilatato saepe trilobo vel obsoleto praedita.
4. *Scleri*.
3. Flores nonnullis hermaphrodit.
4. Spiculae bi- vel pauciflorae, flos superior hermaphroditus, stigmata 3 raro 2 vel numerosiora. (Trib. *Gahnieae* PAX).
5. Flores in spiculis solitarii vel 2-6, hermaphroditus vel superiores hermaphroditus, inferiores masculi sterilesve, stamina 3 vel 2, rami stylini 2-3, setis hypogynis 0 vel raro 1-6.
5. *Cladium*.
5. Flores in spiculis plerumque 2, superior fertilis hermaphroditus, inferior sterilis vel masculus, setis 0, stam. 3-6, rami stylini 3-5.
6. *Gahnia*.
4. Spiculae uni- vel pauciflorae, flores omnes hermaphroditus vel superiores masculi. (Trib. *Rhynchosporae* NEES).
5. Squamae spirale vel subspirale dispositae.
6. Stigmata 2, achenia rostrata, setae hypogynae setaceae.
7. *Rhynchospora*.
6. Stigmata 3, achenia apice nuda, setae hypogynae 0.
8. *Remire*.
5. Squamae distichae, stigmata 3.
6. Achenia oblonga acuta angulata, styli-basi induratoapiculata, triquetra.
9. *Carpha*.
6. Achenia erostrata teretia vel triquetra, nunc tricostata.
10. *Schoenus*.
2. Spiculae plerumque multiflorae, flores semper hermaphrodit.
- (Subfam. *Scirpoideae* PAX).
3. Flores eprophyllati. (Trib. *Scirpeae* KUNTH).
4. Squamae spirale dispositae.
5. Stylus basi bulboso-incrassatus, ab achenio distinctus.
6. Setae hypogynae 0 vel 3-8, achenia styli basi persistente coronata, foliorum vaginae aphyllae, spiculae solitariae.
11. *Eleocharis*.
6. Setae hypogynae 0, laminae foliorum vulgo bene evolutae, spiculae numerosae rarius 1.
7. Styli-basis diu persistens.
12. *Bulbostylis*.
7. Styli-basis decidua.
13. *Fimbristylis*.
5. Stylus cum achenio continuus nec incrassatus.
6. Perigonii phylla numerosa filiformia.
14. *Eriophorum*.
6. Perigonii phylla (setae hypogynae) indivisa setacea vel petaloidea.
7. Tota planta cum squama hirta, setae hypogynae interiores saepe petaloideae.
15. *Fuirena*.
7. Squamae glabrae.
16. *Scirpus*.
4. Squamae distichae.
5. Spiculae multiflorae vel rarius pauciflorae.
17. *Cyperus*.
5. Spiculae uniflorae capitulum sessile formantes compressae.
18. *Kyllinga*.

3. Flores prophyllati. (Trib. *Hypolytreae* NEES).
4. Prophylla 2 dorsi-ventraliter posita.
19. *Lipocarpa*.
4. Prophylla 2 lateraliter posita dorso saepe connata.
20. *Hypolytrum*.

Gen. 3. *Diplacrum* R. BR.

Diplacrum R. BR. Prodr. (1810) 241; BÖCKLR. in Linnaea 38 (1874) 433; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 121; DALLA TORRE et HARMS, Gen. Siphon. (1900) 35; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 134.

Herba annua humilis, radice fibrosa, culmis foliosis erectis, foliis brevibus angustis basi vaginatis, spiculis minutis monoicis, in glomerulo parvulo axillari pedunculato bracteolato fasciculatis, femineis terminalibus unifloris bisquamatis, squamis aequales plurinervis ex apice bidentato cuspidatis, stylo trifido, cupula nulla, spiculis masculis lateralibus 1-2-floris subtrisqueamatis, squamis angustis membranaceis, staminibus 1-3, achenio squamis arcte conniventibus incluso et cum iis demum deciduo globoso mucronato, disco minuto basi insidente albido nitido.

Species unica

D. caricinum.

1. *Diplacrum caricinum* R. BR.

Diplacrum caricinum R. BR. Prodr. Flor. Nov. Holl. (1810) 241; KUNTH Enum. Plant. 2 (1837) 360; STEUDEL Synops. 2 (1855) 180; MIQ. Fl. Ind. Bat. 3 (1855) 345; BÖCKLR. in Linnaea 38 (1874) 434; GOEBEL in Ann. Jard. Bot. Buitenz. 7 (1888) 132, t. 15, f. 21-29; TRIM. Fl. Ceyl. 5 (1900) 101; C. B. CLARKE in Journ. Linn. Soc. Bot. 36 (1903) 267 et Illustr. Cyper. (1909) t. 134, f. 3; DUNN et TUTCH. Kew Bull. add. ser. 10 (1912) 304; E. G. CAMUS in Lecomte Fl. Génér. Indochin. 7 (1912) 157; MERRILL, Enum. Philipp. Fl. Pl. 1 (1923) 136.

Scleria carina (R. BR.) BENTH. Fl. Austral. 7 (1878) 426; C. B. CLARKE in Hook. f. Fl. Brit. India 6 (1894) 638.

Scleria Onoei (non FRANCH. et SAVAT.) MAKINO in Bot. Mag. Tokyo 10 (1896) 313; MATSUM. Ind. Pl. Japon. 2:1 (1905) 165.

Annum erizomatosum glabrum, culmis solitariis simplicibus vel basi tantum ramosis ascendente-erectis 5-20 cm altis subalato-triquetris pluri-foliatis, internodiis 1-3 cm longis, foliis linearibus latiusculis planis mollibus 2-3 mm latis 15-25 mm longis, supra bicostatis, praeter marginem superiorem scaberulam laevibus, apice breviter acuminatis, vaginis 3-10 mm longis sursum ampliatis viridulis, ligula non evoluta, paniculis partialibus singulis raro geminis axillaribus 3-5 mm latis ac longis dense glomeratofasciculatis, bracteolis paucinervis viridulis margine alboscariosis, inferioribus subsetaceis, prophylo ord. u't. tenuimembranaceo alboscarioso, spiculis masculis ca. 2 mm longis paucisqueamatis, squamis late lanceolatis albohyalinis uninervis, spiculis femineis 2-3 mm longis brevistipitatis, squamis aequalibus oblongis vel ellipticis elevato-5-8-costatis viridulis glabris, inter se conniventibus submembranaceis ex apice leviter bifido cuspidatis, achenio vix 1 mm diam. globoso mucronato costis tribus longitudinalibus prominentiore, lineis elevatis sulongitudinalibus laxe reticulato nitido, lineis sub apice parcissime pilosulo.

Nom. Jap. Kagashira, Himeshinjugaya.

Hab.

Riukiu: Kubo, ins. Okinawa (Y. TAIRA n. 91), Nagomachi, ins. Okinawa (T. KANASHIRO).

Formosa: Sirin, urbe Taihoku (K. ODAJIMA in T. TANAKA et Y. SHIMADA n. 17829 partim).

Kiushiu: Kinoe in Higo (K. MAYEBARA), in prov. Chikuzen (K. YASUKOCHI), Osadaike in Buzen (T. YAMAZAKI; HIROTSU), Sue in Higo (K. MAYEBARA), Kawamura in Higo (K. MAYEBARA).

Shikoku: Midorisozu in Iyo (M. OGATA.)

Hondo: Ono in Harima (K. MATSUSIMA), Yatsumi in Kadzusa (S. OKUYAMA), Naruto in Shimosa (S. KUNORI), Sanageyama in Owari (H. KATO), Kasaoka in Bitchu (G. MORIYA), urbe Toyohashi (T. ICHIKAWA), m. Rokko in Settsu (T. KAWASAKI).

Gen. 4. *Scleria* BERG.

Scleria BERG. in K. Veten. Acad. Handl. 26 (1765) 142; KUNTH, Enum. Plant. 2 (1837) 339; STEUD. Synops. 2 (1855) 167; BÜCKL. in Linnaea 38 (1874) 436; BENTH. et HOOK. f. Gen. Plant. 3 (1883) 1070; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 120; DALLA TORRE et HARMS, Gen. Siphon. (1900) 35; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 131.

Diaphora LOUR. Fl. Cochinchin. (1790) 578.

Hypoporum NEES in Linnaea 9 (1834) 303.

Herba plerumque perennis, culmo trigono, foliis linearibus basi vaginatis, ligula plus minus elongata, spiculis monoicis vel androgynis in paniculas partiales raro abortu in spicam interruptam collectis, paucisquamatis, femineis lateralibus unifloris, stigmatibus vel styli ramis 3, achenio globosotrigono crustaceo varie reticulato ruguloso laevis nitido cum disco integro vel trilobo maturitate deciduo, cupula plus minus evoluta.

1. Rhizomate bene evoluto brevi repente crasso, paniculis partialibus saltem terminalibus 4-6 cm longis pluri-multispiculosis, bracteis oblique patentibus, prophyllis ord. ult. dure membranaceo saepe scabro. (Sect. *Elatae* C. B. CLARKE).
2. Disco achenii integro vel obsolete triangulato, panicula partiali ampla multi-spiculosa, prophyllis ord. ult. dure membranaceo.
3. Disco cupuliformi ca. dimidio achenii aequante, spiculis rubrobrunneis sanguineosuffusis, achenio facie distincte elevato-reticulato brunnescente.

S. sumatrensis.
3. Disco minusculo disciformi quam achenium multo brevius, spiculis fuscopurpureis, achenio superficie obsolete scrobiculato vel fere laevi.

S. Doederleiniana.
2. Disco achenii distincte trilobo.

S. hebecarpa.
1. Omnibus partibus minoribus minus rigidis, rhizomate non vel vix evoluto, paniculis partialibus paucis 1-3 cm longis pauci-pluri-spiculosis, bracteis suberectis, prophyllis ord. ult. tenuimembranaceo laevi scarioso. (Sect. *Tessellatae* C. B. CLARKE).
2. Achenio rete opaco.

S. mikawana.
2. Achenio ex toto nitido.
3. Disco trilobo, lobis acutis, achenio distincte clathrato, pedunculo paniculae partialis lateralis erecto vel erecto-ascendente.
4. Achenio mucrone atrata apiculato, disco brunnescente submembranaceo,

- lobis apice breve caudatis, margine crassioribus, medio linea elevata semicirculari notatis. *S. ferruginea.*
4. Disco albido crasso coriaceo, lobis apice contracto breviter cuspidatis, margine extenuatis, dorso medio puncto unico minuto elevatulo tantum notatis. *S. fenestrata.*
3. Disco trilobo, lobis deltoideis obtusissimis.
4. Achenio superne seriatim reticulato, inferne partim interdum sublaevi, pedunculo paniculae partialis lateralis exserto arcuato. *S. Onoei.*
4. Achenio laevissimo, pedunculo brevi non arcuato. (vid. Add. p. 169). *S. mutoensis.*

1. *Scleria sumatrensis* RETZ.

Scleria sumatrensis RETZ. Obs. 5 (1789) 19, t. 2; NEES in WIGHT, Contr. Bot. India (1834) 116; BÖCKLR. in Linnaea 38 (1874) 513; C. B. CLARKE in Hook. f. Fl. Brit. India 6 (1894) 693; MERR. Enum. Philipp. Fl. Pl. 1 (1925) 135.

Scleria Fauriei OHWI in Act. Phytotax. et Geobot. 1 (1942) 78.

Culmo elato triquetro multifoliato, foliis subverticillatim dispositis rigidis 10-13 mm latis sursum margine scabris, apice sensim attenuatis, vaginis inferioribus triaristatis superioribus exalatis, ligula semirobundata coriacea margine barbulata, paniculis partialibus 5-8 dense multispiculosis, praeter imam remotiusculam non interruptis plus minus exserte pedunculatis 4-5 cm longis, ramulis patentibus alatoangulatis crassiusculis, prophyllis ult. ord. ovato glabro pallide brunneo sanguinescente nervuloso margine vix alboscarioso, bracteolis brevibus setaceis, spiculis rubrobrunneis 5-6 mm longis distiche paucisquamatis, squamis femineis ovatis vel late ovatis, carina viridi, apice acutissimis, achenio depressogloboso olivaceo-brunneo nitido elevato-reticulato 2 mm diam. mucronato sparse pilosulo, disco cupuliformi $\frac{1}{2}$ achenii involvente brunneo leviter trilobo subdenticulato.

Nom. Jap. Kuromino-shinjugaya.

Hab. Formosa: Bankingsing (U. FAURIE n. 5).

2. *Scleria Doederleiniana* BÖCKLR.

Scleria Doederleiniana BÖCKLR. in ENGLER, Bot. Jahrb. 5 (1884) 512.

? *Scleria elati* (non THWAITES) C. B. CLARKE in Journ. Linn. Soc. Bot. 36 (1903) 261 ex pte; MATSUM. Ind. Pl. Japon. 2:1 (1905) 164 (var. *decolorans*).

Scleria margaritifera (non WILLD.) C. B. CLARKE l. c. (1903) 265; MATSUM. l. c. 2:1 (1905) 165.

Scleria scrobiculata (non NEES et MEYEN) C. B. CLARKE l. c. (1903) 263; MATSUM. l. c. 2:1 (1905) 165; MATSUM. et HAYATA Enum. Pl. Formos. (1906) 492.

Scleria hebecarpa (non NEES) C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 203.

Rhizomate crasso brevi repente, culmo valido 2-5 ped., angulo saepe retrososcabro vix vel medio subconferte foliato, foliis rigidulis 5-12 mm latis sensim attenuato-acuminatis, sursum scabris glabris, vaginis vix usque manifeste alatis vel in speciminibus depauperatis omnino exalatis, ligula vix producta margine coriacea saepe fusco-barbulata, paniculis partialibus 3-5 praeter imam saepe subremotam approximatis 4-8 cm longis densiuscule pluri-multi-spiculosis, ramis ramulisque patentibus crassiusculis sub-

alato-triquetris ciliato-scabris, prophylo ord. ult. late ovato ciliato-scabro brunneo-purpureo nervuloso margine vix alboscarioso, bracteolis setaceis longiusculis basi auriculis atratis ciliato-pilosis praeditis, spiculis fuscopurpureis 3-5 mm longis subdistiche pauci-squamatis, squamis femineis late ovatis acutis, carina viridi, superne scaberula, in inferioribus mucronata, achenio globoso obsoletissime trigono fere 2.5 mm diam. nitido ex albido griseo leviter apiculato obsoletissime scrobiculato vel fere laevi, lineis transversalibus brevissime papilloso-pilosello, disco arcto humili albido obsolete trigono vel fere orbiculato margine spongioso-subincrassato subreflexo, brunnescente nitido, angulo obtusissimo.

Nom. Jap. O-shinjugaya, Hane-shinjugaya.

Hab.

Formosa: Hokuto (U. FAURIE n. 58, 802; Y. SHIMADA n. 327), Kelung (S. NAGASAWA), m. Shichisei (J. OHWI n. 2032, 2060), Tamsui (Y. SHIMADA n. 4475), m. Taiheizan (J. OHWI n. 2237), inter Urai et Rarasan in Taihokushu (J. OHWI n. 1011),

Riukiu: ins. Iriomote (G. KOIDZUMI; Y. DOI; S. OKAMOTO), ins. Yonakuni (G. KOIZUMI), ins. Okinawa (G. KOIDZUMI; Z. TASHIRO; K. MIYAZAKO) ins. Amamioshima (U. FAURIE n. 4329; H. OHBA), ins. Okinoerabu (H. OHBA), ins. Tokunoshima (H. OHBA), ins. Yakushima (Z. TASHIRO; K. NAGAO et K. YAMAGUCHI; Y. NAKANO; M. TAGAWA n. 1885; K. MAYEBARA).

3. *Scleria hebecarpa* NEES

Scleria hebecarpa NEES in WIGHT, Contr. Bot. India (1834) 117; KUNTH Enum. Pl. 2 (1837) 357; BÜCKLER in Linnaea 38 (1874) 478; C. B. CLARKE in Hook. f. Fl. Brit. India 6 (1894) 689 et in Journ. Linn. Soc. Bot. 36 (1903) 264; TRIMEN Fl. Ceylon 5 (1900) 99; MATSUM. Ind. Pl. Japon. 2:1 (1905) 165.

Scleria japonica STEUD. Synops. 2 (1855) 169; MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 146; FRANCH. et SAVAT. Enum. Pl. Japon. 2 (1879) 122; E. G. CAMUS in Lecomte Fl. Génér. Indochin. 7 (1912) 163.

Rhizomate crasso breviter repente, culmo subrobusto triquetro saepe retrososcabro 2-3 ped. alto, foliis subpluribus 5-8 mm latis rigidulis scabris apice sensim attenuatis, vaginis triquetris manifeste triaristatis, ligula vix producta margine incrassato pilosulis, paniculis partialibus terminalibus et interdum altera minore additis, 4-5 cm longis plurispiculis, ramis ramulisque acute triquetris scabris oblique patentibus, bracteolis setaceis longiusculis, prophylo ord. ult. ovato brunneo nervuloso scaberulo, margine vix alboscarioso, spiculis 3-4 mm longis paucisquamatis fusco-purpureo-tinctis, squamis femineis late ovatis acutis, e carina viridi mucronatis, achenio globoso albido nitido fere 2.5 mm diam. mucronato, facie obsoletissime scrobiculato vel fere laevi, lineis transversalibus minutissime piloso, disco adpresso humili trifido, lobis ovato-triangulatis brunnescentibus nitidulis vix incrassatis submembranaceis laevibus planis, e basi latiore sursum sensim angustatis acutis.

Nom. Jap. Shinju-gaya.

Hab.

Hondo: Shinjo in Kii (N. U₁), Seto in Kii (G. KOIDZUMI; S. MIKI), Bonin (S. NISHIMURA).

Kiushiu: Aida in Higo (K. MAYEBARA), Uzukimura in Satsuma (Z. TASHIRO), m. Jusso in Satsuma (Z. TASHIRO), Hitotsume in Higo (S. TOKUNAGA), Uchida in Higo (K. NAKAHARA), Nishitaramura in Satsuma (Y. DOI), m. Kurokami in Hizen (Z. TASHIRO).

Shikoku: Mikazuki, prov. Tosa (I. OKUBO).

Riukiu: ins. Yakushima (J. NAKAE; U. FAURIE n. 4331; Z. TASHIRO), ins. Okinawa (S. SAKAGUCHI), ins. Miyako (G. KOIDZUMI), ins. Iriomote (G. KOIDZUMI), ins. Ishigaki (G. KOIDZUMI).

Formosa: m. Kannonzan in Taihokushu (KOBAYASHI).

4. *Scleria mikawana* MAKINO

Scleria mikawana MAKINO in Bot. Mag. Tokyo 27 (1913) 57.

Probabiliter perennis, rhizomate vix evoluto, culmo 1-2 ped. alto tenui acute triquetro laevi, foliis subrigidis 2.5-4 mm latis, imprimis costas superne parce scaberulis, apice sensim attenuato obtusis, ligula vix producta submembranacea saepe margine puberula, vaginis stricte exalatis, paniculis partialibus 2-3 dense pauci-pluri-spiculosi incluse pedunculatis 15-30 mm longis 10-15 mm latis, ima saepe remota, ramis ramulis bracteolisque suberectis laevibus, his breviter setaceis, prophylo ord. ult. straminescente tenuimembranaceo subscarioso nervuloso, spiculis 4-5 mm longis pallidis vel straminescentibus saepe rubescentibus plus minus distincte pedicellatis pauci-squamatis, squamis femineis oblongo-ovatis acutissimis dorso viridi carinatis, achenio albido demum fusco-electrino globoso vel obovato-globoso 2 mm diam. vix mucronato glaberrimo opaco, scrobiculis minutis nitidis longitudinaliter oblongis subseriatim foveolato, disco humiliusculo albostramineo vix nitido crassiusculo trifido, lobis ovatis subcoriaceis crassis, margine abrupte extenuatis, dorso laevibus, apice abrupte contractio acutis.

Nom. Jap. Mikawa-shinjugaya.

Hab.

Hondo: Fuse in Omi (C. HASHIMOTO), Osadano in Tanba (Y. ARAKI).

Kiushiu: Menda in Higo (K. MAYEBARA), Nishifutoramura in Satsuma (Y. DOI), Hazuki in Satsuma (Z. TASHIRO), Osadaike in Buzen (T. YAMAZAKI), Tokuma in Chikuzen (Y. DOI),

5. *Scleria ferruginea* OHWI

Scleria ferruginea OHWI in Act. Phytotax. et Geobot. 7 (1933) 37.

Rhizomate vix evoluto, culmo plerumque solitario 1-1.5 ped. alto tenui acutangulo laevi, foliis 1.5-2.5 mm latis molliusculis superne costis margineque scabris, apice abrupte obtusulis, ligula semirotundata submembranacea ciliolata, vaginis fere exalatis, paniculis partialibus 2-3 valde distantibus erectis subexserte pedunculatis 15-25 mm longis ca. 10 mm latis paucispiculosi densis, ramis ramulis bracteolisque erectoascendentibus glabris, his longiusculis setaceis, prophylo ord. ult. praeter carinam scaberulam glabro straminescente tenuimembranaceo, margine alboscarioso, spiculis 3-4 mm longis stramineo-ferruginescentibus pauci-squamatis, squamis femineis late

ovatis acutissimis, carina viridi, achenio globoso albo nitido vix 2 mm diam. parce puberulo, mucrone atrato apiculato, minute sed distincte elevato-clathrato, disco humili adpresso pallide stramineo trifido, lobis e basi latissima sursum caudato-attenuatis subovato-triangulatis membranaceis nitidulis planis paullo infra medium linea transversali semirobundata elevatula tantum notato; margine subspongiosa crassiore. Ex sffinitate *S. biflorae* ROXB.

Nom. Jap. Hosoba-shinjugaya.

Hab.

Riūkiu: ins. Iriomote (G. KOIDZUMI), ins. Okinawa (S. SAKAGUCHI), ins. Iheya (S. TAWADA no. 224).

Formosa: Toyen (Y. SHIMADA n. 1019), Shirin, urbe Taihoku (K. ODASHIMA).

6. *Scleria fenestrata* FRANCH. et SAVAT.

Scleria fenestrata FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 122, 549.

Scleria tessellata (non WILLD.) C. B. CLARKE ex L'VEILLÉ in Bull. Acad. Intern. Géogr. Bot. 13 (1904) 203; MATSUM. Ind. Plant. Japon. 2:1 (1905) 165; NAKAI Fl. Korean. 2 (1911) 299.

Scleria koreana PALLA ap. NAKAI in Bot. Mag. Tokyo 30 (1916) 274, in clave.

Rhizomate vix evoluto, culmo subcaespitoso gracili 1-1.5 ped. alto, internodiis triquetris laevibus ob vaginarum alam latam margine retroscabram inferne decurrentem alatotriquetris subcompressis, foliis planis mollibus 3-5 mm latis scabriusculis apice abrupte acuminatis, ligula semirobundata submembranacea pilosula, vaginis laxis, paniculis partialibus 4-6 remotis 1-3-nis paullo exserte pedunculatis ascendentibus, dense paucispiculosis 1-30 mm longis, ramis ramulis bracteolisque glabris suberectis, his longiusculis setaceis raro subrecurvis, prophylo glabro tenuimembranaceo, margine alboscarioso, spiculis 4-5 mm longis stramineis vel saepe sanguineo-tinctis paucisquamatis, squamis ovatis acutis, e carina viridi submucronatis, achenio obovato-globoso albido nitido 2 mm diam. leviter apiculato, facie distincte minuteque elevato-clathrato, lineis transversalibus stramineo-puberulo vel glabrescente, disco humiliusculo albido vix nitidulo trifido, lobis ovato-deltoides abrupte acutis crassiusculis subconvexis, margine extenuatis, medio puncto minuto paullo elevato notatis.

Nom. Jap. Koshinjugaya.

Hab.

Hondo: Aomori (U. FAURIE n. 1036, 7215); urbe Akita (S. MURAMATSU), Sendai (S. MURAI), Sambongi (U. FAURIE n. 6261), Morioka (C. WAGAWA), Mito (Y. TSURUMACHI), Togakushi (U. FAURIE n. 1361), Otakizawa in Yechu (T. OTAYA), oppido Okazaki (T. ICHIKAWA), m. Karasu in Tanba (Y. ARAKI), Fujitani in Tanba (Y. ARAKI), Hananoki in Iga (T. HATTORI), urbe Kyoto (G. KOIDZUMI; Z. TASHIRO).

Shikoku: Shiomizu in Awa (T. INOBE), Nagata in Iyo (T. IMAIZUMI), Ozu in Iyo (K. YAMASHITA).

Kiushu: Oomura in Higo (K. MAYEBARA), m. Komposan in Satsuma (Y. DOI), m. Kurokami in Hizen (K. YAMASHITA), Sue in Higo (K. MAYEBARA), Hitotsume in Higo (S. TOKUNAGA), Kawamura in Higo (K. MAYEBARA), Yamano in Satsuma (S. MURAMATSU).

Korea: m. Kangakusan (G. KOIDZUMI), Suigen (T. SAKATA), Koryo (G. KOIDZUMI), Ouen-san (U. FAURIE n. 954), Hongno, ins. Quelpaert (E. TAQUET n. 2136), Mokpo (U. FAURIE n. 1403).

7. *Scleria Onoei* FRANCH. et SAVAT.

Scleria Onoei FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 122, 549.

Scleria tokusanensis NAKAI in Bot. Mag. Tokyo 30 (1916) 274.

var. *glabrescens* KOIDZ. in Act. Phytotax. et Geobot. 9 (1940) 161.

Rhizomate vix evoluta, culmo solitario vel subcaespitoso 10–30 cm alto erecto sursum arcuato acutangulo, foliis planis mollibus 2–3 mm latis laeviusculis glabris vel margine et supra in costis parce ciliatis, sursum abrupte acutis, ligula semirotundata membranacea, margine non incrassato ciliolata, vaginis acute triquetris exalatis, paniculis partialibus 3–5 paucispiculis 1–2-nis exserte arcuato-pedunculatis 7–15 mm longis, bracteolis suberectis setaceis, axi squamisque exterioribus in costis saepe albo-ciliatis, prophylo ord. ult. tenuimembraneo, margine albo-scarioso glabro, spiculis 2–4 mm longis albobiridibus interdum straminescentibus vel raro rubescentibus paucisquamatis, squamis femineis ovatis acutis, e carina viridi mucronatis, achenio albido nitido globoso 1.5 mm diam. humile mucronato glaberrimo, lineis longitudinalibus elevatis et lineolis transversalibus elevatis clathrato, inferne interdum partim fere laevi, disco vix humili incrassato trifido, lobis deltoideis obtusissimis albidis vix nitidis, margine crassioribus, medio planis et linea unica longitudinali leviter tantum elevatis notatis.

Nom. Jap. Maneki-shinjugaya.

Hondo: Fuseike in Omi (C. HASHIMOTO), Kannabiyama, urbe Kyoto (H. YAMAMOTO), m. Hattojiyama in Harima (H. MURAI), Osadano in Tanba (Y. ARAKI; T. ASHIDA), oppido Okazaki (T. ICHIKAWA), Shiraoka in Musashi (T. SUZUKI), Aritoshimura in Harima (H. MURAI), Hiraishi in Omi (C. HASHIMOTO).

Shikoku: Kaidani in Iyo (M. MITSUI).

Kiushiu: Ogijima (K. NAKAJIMA) et Fujita in Chikugo (K. NAKAJIMA), Sue (K. MAYEBARA), et Oomura in Higo (K. MAYEBARA), Aida (K. MAYEBARA), et Kawamura in Higo (K. MAYEBARA), Shimo-juin in Satsuma (Z. TASHIRO), Hazukimura in Satsuma (Z. TASHIRO), Nishitara mura in Satsuma (Y. DOI), Takuma in Chikuzen (Y. DOI).

Korea: Tokushin in Zenhoku (K. T. CHO).

var. *pubigera* OHWI in MAYEBARA Florul. Austro-Higoensis (1931) 84.

Scleria pubigera MAKINO in Bot. Mag. Tokyo 27 (1913) 55; HAYATA Icon. Plant. Formos. 6 (1916) 117.

Scleria fenestrata var. *pubigera* OHWI in Bot. Mag. Tokyo 45 (1931) 190.

A typo diversa omnibus partibus praeter achenium pube albida patente dense pilosis.

Nom. Jap. Ke-shinjugaya.

Hondo: m. Rokko in Settsu (T. KAWASAKI; Z. YOSHINO), Osada in Tanba (Y. ARAKI), oppido Okazaki (T. ICHIKAWA), Fuseike in Omi (C. HASHIMOTO).

Kiushin: Sendai in Satsuma (Z. TASHIRO), Taira in Hizen (K. OSHIMA), Oomura (K. MAYEBARA) et Kawamura in Higo (K. MAYEBARA).

Riukiu: ins. Iriomote (G. KOIDZUMI; S. TAWADA).

Formosa: Toyen (Y. SHIMADA n. 329), Hokuto (U. FAURIE n. 174), Sirin, urbe Taihoku (K. ODAJIMA in TANAKA et SHIMADA n. 17829 partim).

Species dubiae

Scleria pergracilis KUNTH: NAKAI in Bot. Mag. Tokyo 30 (1916) 274 in clave. Hab. Korea.

Scleria lithosperma SWARTZ: SASAKI Cat. Governm. Herb. Taihoku (1930) 112. Hab. Formosa: Takao ex SASAKI.

Gen. 5. *Cladium* P. BR.

Cladium P. BR. Hist. Jamaic. (1756) 114; SCHRAD. Fl. Germ. 1 (1806) 74; KUNTH, Enum. Plant. 2 (1837) 303; STEUD. Synops. 2 (1855) 152; BÖCKLR. in Linnaea 28 (1874) 231; BENTH. et HOOK. f. Gen. Plant. 3 (1883) 1065; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 116; C. B. CLARKE in Kew Bull. add. ser. 8 (1903) 124.

Mariscus HALL. Enum. Stirp. Helv. 1 (1742) 251; ZINN, Cat. Pl. Hort. Gott. (1757) 79.

Machaerina VAHL, Enum. Plant. 2 (1806) 228.

Baumea GAUDICH. Voy. Freyc. (1826) 416.

Vincentia GAUDICH. l. c. (1826) 417.

Chapelliera NEES in Linnaea 9 (1834) 417.

Plerumque elatum validum, culmo trigono foliato vel nudo, foliis angustis explanatis vel teretibus vel a latere complanatis, ligula vix evoluta, inflorescentia paniculata, paniculis partialibus corymbosis vel spicato-paniculatis, spiculis paucisquamatis, squamis inferioribus vacuis, superioribus sensim majoribus floriferis, quarum superioribus 1-2 fertilibus, summa vacua vel sterili vel nulla, perigonii phyllis nullis vel setas breves reductis, staminibus 2-3, achenio trigono coriaceo vel exocarpio plus minus fungoso glabro, styli basi incrassata coronato vel nudo, stigmatibus 3.

1. Foliis explanatis, paniculis partialibus corymbosis, achenio drupaceo apice nudiusculo, exocarpio fungoso (§ *Eucladium*) *C. chinense*.
1. Foliis teretibus vel a latere complanatis et distiche equitantibus, paniculis partialibus spicato-paniculatis, achenio vix drupaceo apice rostrato. (§ *Baumea*)
2. Foliis teretibus, squamis ciliatis, styli basi depressa.
3. Bracteis ord. ult. subuninervis, spiculis 5-6 mm longis 6-7-floris, squamis uninervis, antheris 2 mm longis, connectivo elongato-subulato rubro $\frac{1}{2}$ mm longo, stylo cum stigmatibus 7-8 mm longo. *C. nipponense*.
3. Bracteis ord. ult. nervulosis, spiculis bifloris 4 mm longis, squamis nervulosis, antheris 1.2 mm longis, connectivo brevisubulato concolore $\frac{1}{2}$ mm longo, stylo cum stigmatibus 4 mm longo. *C. brevistigma*.
2. Foliis a latere complanatis distiche equitantibus, squamis glabris, styli basi elongato-conica. *C. boninsimae*.

1. *Cladium chinense* NEES

Cladium chinense NEES in Linnaea 9 (1934) 301 et in Nov. Act. Nat. Cur. 19 suppl. 1 (1843) 116; STEUD. Synops. 2 (1855) 152.

Cladium japonicum STEUD. Synops. 2 (1855) 152.

Cladium Mariscus (non R. BR.) BÖCKLR. in Linnaea 38 (1874) 232 ex pte; FRANCH.

et SAVAT. Enum. Plant. Japon. 2 (1879) 548; PALLA in Le Mond. d. Pl. (1910) 39; NAKAI Flor. Korean. 2 (1911) 513.

Cladium jamaicense (non CRANTZ) C. B. CLARKE in Journ. Linn. Soc. Bot. 36 (1903) 262 et ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 200; MATSUM. Ind. Plant. Japon. 2:1 (1905) 139; HAYATA Icon. Plant. Formos. 6 (1916) 117.

Mariscus chinensis (NEES) FERNALD in Rhodora 25 (1923) 51.

Caespitosum breviter stoloniferum, culmo valido 1-2 m alto plurifoliato obtusangulo laevi, nodis interdum surculos fasciculatim plurifoliatos emittentibus, internodiis superioribus concavo-convexissimis, margine scabris, foliis planis 8-10 mm latis perrigidis, margine et dorso in costa serrato-scabris, apice sensim triquetro-attenuato scaberrimis, ligula nulla, corymbis 5-7 pluriradiatis 4-8 cm latis, radiis radiolisque obtusangulis ancipitibus subtenuibus, spiculis oblongis demum ellipticis brunneis 3 mm longis capitulum pluriflorum 6-10 mm longum ac latum globosum formantibus ca. 10-squamatis, bifloris, flore superiore fertili, squamis late ovatis obtusis brunneostriolatis tenuiter unicostatis, inferioribus ca. 7 parvis vacuis, superioribus 3 majoribus subaequilongis, staminibus 2, antheris ca. 2 mm longis, mucrone atrato laevi acuto, achenio tereti late ovoideo 2.5 mm longo luteobrunneo subopaco fungoso glabro, basi late truncata depresso, apice atromucronato, stylo glabro, stigmatibus 3.—A *C. Marisco* R. BR. diversum, corymbi ramulis tenuioribus, achenio late ovoideo fungoso vix nitido luteobrunneo, basi truncata medio depresso, antheris apice brevius mucronatis, et a *C. leptostachyo* NEES et MEYEN, corymbis minus divisis, achenio basi late truncato et medio depresso.

Nom. Jap. Hitomoto-susuki, Shishikiri-gaya.

Hab.

Hondo: ins. Bonin (S. NISHIMURA), Nakada in Tango (K. TAKEUCHI), Shimoda in Idzu (Z. TASHIRO), Kitawada in Kii (Y. TSUCHIGA), Seto-Kanayana in Kii (K. TAKEUCHI), Kumihama in Tango (Z. TASHIRO), Kasagahana in Iwami (J. TAKAGI), Hekura in Noto (J. YOSHIKAWA).

Kiushiu: Saegi in Bungo (Z. TASHIRO), ins. Sakurajima (T. SUGINO), ins. Kakeshima in Hizen (K. YAMASHITA), ins. Fukaejima in Hizen (Z. TASHIRO).

Korea: ins. Quelpaert (U. FAURIE n. 2240).

Riukiu: ins. Yakushima (U. FAURIE n. 4337), ins. Iheya (S. SAKAGUCHI), ins. Iriomote (G. KOIDZUMI), ins. Miyako (G. KOIDZUMI).

Formosa: m. Kiraishu in Taichushu (Y. SHIMADA n. 5106).

2. *Cladium nipponense* OHWI

Cladium nipponense OHWI, sp. nov.

Cladium glomeratum C. B. CLARKE in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 200; MATSUM. Ind. Plant. Japon. 2:1 (1905) 139, non R. BR.

Chapelliera glomerata FRANCH. et SAVAT. Enum. Plant. Japon. 2:1 (1879) 121, non NEES.

Rhizomate stolonifero, culmo 2-3 ped. alto teretiusculo molliusculo glabro medio monophyllo, internodiis superioribus uno latere profunde sulcatis, foliis confertis teretibus laevibus linearibus 2-3 mm latis apice atte-

nuatis obtusulis, vix septatis, foliis culmorum vaginiformibus 10-15 cm longis apice setaceis ligula nulla, paniculis partialibus 3-5 singulis vel geminis, pedunculis planoconvexis angulo scabris, dense 5-8-glomeriferis remotis, glomeris 6-10 mm longis subglobosis pauci-spiculatis, bracteis vaginatis subaphyllis, spathaceis, spiculis 5-6 mm longis ca. 10-squamatis oblongo-ovatis sanguineobrunneis 6-7-floris, flore medio fertili, squamis oblongo-ovatis membranaceis unicostatis, costis scabris, margine ciliolatis, apice acutis vel mucronatis, inferioribus 2-3 sensim minoribus vacuis, staminibus 3 elongatis persistentibus, antheris 2 mm longis, mucrone laevi acuminato, achenio oblongo obtuse trigono luteobrunneo nitido 3 mm longo glabro laevisimo sessili utrinque abrupte contracto, apice styli basi depressa griseo-villosulo persistente coronato, stylo (cum stigmatibus) 7-8 mm longo glabro, stigmatibus 3 tenuibus papillosis 3-4 mm longis.—A *C. glomerato*, spiculis plurifloris nec bifloris differt.

Nom. Jap. Ampera-i, Nebiki-gusa, Hira-suge.

Hab.

Hondo: Mikatagahara in Mikawa (N. OE), oppido Uno in Bizen (K. TASHIRO), Tamagakimura in Ise (T. MATSUYAMA), Shingu in Kii (G. KOIDZUMI), Kinseisui in Ise (Z. TASHIRO), Nagasawaike in Suwo (J. NIKAI).

Kiushiu: prope Gamo in Osumi (Z. TASHIRO), Masuda in Hizen (Z. TASHIRO), Yadame in Buzen (R. NAKAYA), ins. Goto (U. FAURIE n. 4919), Hazukimura in Satsuma (Z. TASHIRO).

Riukiu: ins. Yakushima (Z. TASHIRO), ins. Okinawa (S. SAKAGUCHI).

3. *Cladium brevistigma* NAKAI

Cladium brevistigma NAKAI ex TUYAMA in Bot. Mag. Tokyo 49 (1935) 509.

Rhizomate stolones longos crassos, squamis ovatis concavis brunneis dense obtectos emittente, culmis 50-80 cm altis teretibus glaucescentibus supra basin uninodis, basi foliatis, foliis culmum aequantibus teretibus striolatis ut culmi 1.5-2.5 mm diam., vaginis partim rubescentibus, summa elongata culmum amplexante brachyphylla, panicula 15-20 cm longa angusta basi interdum interrupta 4-5-bracteata, ramis 1-2-nis, bractea ima 4-6 cm longa tubuloso-vaginate brachyphylla inferne fusco-suffusa, superioribus decrescentibus, bracteis ord. ultim. oblongis acuminatis nervulosis spiculas subaequantibus, spiculis ovatis sessilibus subfasciculatis (fasciculis racemosis) 4 mm longis 4-5-squamatis bifloris vix compressis, squamis interioribus ovatis membranaceis parce ciliatis brevi-acuminatis nervulosis fuscisanguineis 3 mm longis, exterioribus brevioribus, staminibus 2 (an semper?), antheris flavis brevi-linearibus 1.2 mm longis, apice appendiculo subulato acuminato concolore terminatis, ovario glabro trigono, stylo tenui 4 mm longo basi ad angulos albo-piloso, sursum papillosis, superne $\frac{1}{2}$ trifido, achenio ignoto.

Nom. Jap. Munin-ampera.

Hab. Ins. Bonin (S. NISHIMURA), do. (T. TUYAMA in Hb. Tokyo).

4. *Cladium boninsimae* NAKAI

Cladium boninsimae NAKAI in Bot. Mag. Tokyo 25 (1911) 223.

Mariscus boninsimae (NAKAI) FERNALD in Rhodora 25 (1923) 51.

Rhizomatosum, culmo 50-70 cm alte compresso dense foliato, superne scaberulo teretiusculo et uno latere concavo, foliis distichis ensiformibus planis 8-10 mm latis subcoriaceis levibus apice attenuato-acutis facie plurinervosis, ligula nulla, paniculis partialibus paucis 3-4-nis subexserte pedunculatis, e fasciculis 3-5 paucispiculatis densis ca. 10 mm longis ac latis, dense dispositis sessilibus compositis bracteis inferioribus, superioribus vaginam ampliata reductis, pedunculo compresso scaberulo, spiculis ovato-oblongis 5 mm longis fusco-sanguineis unifloris 3-4-squamatis, squamis oblongo-ovatis submembranaceis scabridulis obtusulis, e carina concolore mucronulatis, summa vacua, sequente fertili, inferioribus vacuis paulo minoribus, staminibus 3, antheris 2 mm longis, mucrone 0.7 mm longo acuminato glabro, achenio trigono sessili griseobrunneo nitido (irregulariter ruguloso?) late ovoideo 2.5 mm longo, styli basi elongato-conica albovillosa 1.5 mm longa, stylo 2 mm longo tenui, stigmatibus 3 tenuibus 3-4 mm longis.—A *C. Gaudichaudii* differt, spiculis longioribus, fasciculis paucis majoribus, antheris duplo longioribus.

Nom. Jap. Hira-amperai.

Hab. Bonin: loco non indicato (S. NISHIMURA).

Gen. 6. *Gahnia* FORST.

Gahnia FORST. Char. Gen. (1776) 51, t. 26; ENDL. Gen. Pl. (1836) 115; BÖCKL. in Linnaea 38 (1874) 338; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1066; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 117; DALLA TORRE et HARMS, Gen. Siphon. (1900) 34; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 127.

Lampocarya R. BR. Prodr. (1810) 238.

Lamprocarya NEES in Linnaea 9 (1834) 301.

Phacellanthus STEUD. in ZOLL. Verz. (1854) 61, non S. Z.

Perennis, rhizomatosa, culmo saepe elato valido, foliis teretibus vel convolutis longe filiformi-attenuatis, paniculis laxis vel spiciformibus, partialibus spicato-paniculatis, spiculis nigrescentibus paucisquamatis, squamis superioribus 3 latioribus, quarum unica summa florem fertilem fovente, sequente vacua vel mascula, reliquis vacuis, perigonii phyllis nullis, staminibus 2-5, achenio ovoideo maturitate e spicula rejecta sed filamentis persistentibus apice intra squamam retentis diu a spicula pendulo, styli basi persistente saepe villosa rostrato, stigmatibus 3-5.

1. Foliis supra glaucis laevibus, filamentis glabris, antheris 3 mm longis, mucrone longo, achenio trigono 4-4.5 mm longo, stigmatibus 3 mm longis. *G. tristis*.
1. Foliis supra in costis scabris, filamentis parce ciliatis, antheris 1.5 mm longis, mucrone brevi, achenio 5-5.5 mm longo, obtusangulo, stigmatibus 4 brevibus.

G. aspera.

1. *Gahnia aspera* SPR.

Gahnia aspera (R. BR.) SPRENG. System. Veg. 2 (1825) 114; STEUD. Synops. 2 (1355) 164; BÖCKL. in Linnaea 38 (1874) 344; BENTH. Flor. Austral. 7 (1878) 412.

Lampocarya aspera R. BR. Prodr. (1810) 238.

Gahnia boninsimae MAXIM. in Mém. Biol. 12 (1886) 559, cfr. BENL in Fedde Repert. 49 (1940) 31.

Culmo elato tereti folioso obtusangulo valido laevi, superne uno facie sulcato, foliis elongatis e basi breviter vaginata fuscescente longe filiformi-attenuatis convolutis utrinque crebre scaberrimis, 5-7 mm latis, ligula nulla, paniculis partialibus numerosis, e fasciculis spicularum sessilibus plurispiculiferis agglomeratis compositis globosis 2-3 cm longis ac latis multispiculatis subsessilibus, spicam clavato-cylindricam 20 cm longam basi subinterruptam formantibus, bracteis e basi dilatata vix vaginata longe foliaceis, spiculis atrofuscis 7-9-squamatis unifloris 10 mm longis, squamis inferioribus ovatosubulatis rigidis opacis apice subulato-acuminatis, carina scabra, superioribus 3 late ovatis obtusis brevioribus uninervis glabris, summa fertili, staminibus 4-5, filamentis parce ciliatis, antheris 1.5 mm longis, mucrone laevi acuto brevi, achenio fusco nitido laevi late elliptico 5-5.5 mm longo obtuse angulato, apice styli basi parum dilatata parce piloso terminato, stylo longiusculo piloso, sursum sensim tenuiore, stigmatibus 4 brevibus.

Nom. Jap. Munin-kurogaya.

Hab. Bonin: loco non indic. (J. TOYOSHIMA).

2. *Gahnia tristis* NEES

Gahnia tristis NEES in Linnaea 9 (1831) 301 nom. nud. et in Hook. et Arn. Beech. Voy. 228; BENTH Flor. Hongkong. (1861) 398; C. B. CLARKE in Journ. Linn. Soc. Bot. 36 (1903) 263; MATSUM. Ind. Plant. Japon. 2:1 (1905) 153 ex pte.

Gahnia Wichurii BÜCKL. in Linnaea 33 (1874) 348.

Rhizomate caespitoso, collo conferte longifoliato, culmo 2-3 ped. alto obtusangulo laevi firmo subrobusto remote paucifoliato, foliis perrigidis explicatione 5-8 mm latis, involutis supra glaucis, infra sursum et margine crebre serrulato-scabris, vaginis basilaribus spadiceis nitidis, ligula nulla, paniculis partialibus numerosis 15-30 mm longis dense plurimulti-spiculiferis, in fasciculis paucis divisis, paniculam cylindricam densam basi interdum interruptam 15-20 cm longam formantibus, bracteis foliaceis elongatis erectis, bracteolis squamiformibus, spiculis oblongo-lanceolatis demum oblongis ca. 10 mm longis brevipedicellatis ca. 10-squamatis fuscis anguinis vel atrofuscis opacis, floribus 1 vel 2, superiore fertili, squamis inferioribus late lanceolatis vacuis rigidis punctulatis acuminatissimis, superioribus sensim majoribus, carina concolore scabris, superioribus 3 late ovatis obtusis brevioribus glabris rigidis uninervis, summa fertili, staminibus 2-3, filamentis elongatis persistentibus, antheris 3 mm longis mucrone 0.7 mm longo laevi acuminato, achenio trigono obovato nitido laevi 4-4.5 mm longo primo albido demum atrofusco sessili, apice obtuso, stylo tenui deciduo paucè puberulo, stigmatibus subaequilongis 3 parce papulosis tenuibus 3 mm longis.

Nom. Jap. Kuro-gaya.

Hab. Riukiu: ins. Amami-oshima (G. KOIDZUMI; Z. TASHIRO; H. OHBA), ins. Okinoerabu (H. OHBA), ins. Tokunoshima (H. OHBA), ins. Okinawa (G. KOIDZUMI; Z. TASHIRO; S. SAKAGUCHI).

Gen. 7. **Rhynchospora** VAHL (Nom. conserv.)

Rhynchospora VAHL, Enum. Plant. 2 (1806) 229; WILLD. Enum. Pl. Hort. Berol. 1 (1809) 71; KUNTH, Enum. Plant. 2 (1837) 287; STEUD. 2 (1855) 139; BÖCKL. in Linnaea 37 (1871) 525; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1058; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 116. DALLA TORRE et HARMS, Gen. Siphon. (1900) 33; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 117.

Triodon L. C. RICH. in PERS. Synops. 1 (1805) 60 in nota.

Haplostylis NEES in Linnaea 9 (1834) 295.

Perennis, culmo simplici triangulato saepe uno facie superne sulcato, plus minus foliato, foliis linearibus, inflorescentia terminali et laterali globoso-capitata vel umbellata fasciculata vel laxe corymbosa, spiculis lanceolatis brunnescentibus vel albidis paucifloris paucisquamatis, teretiusculis vel compressis, squamis uninervis, inferioribus minoribus vacuis, floribus hermaphroditis, setis hypogynis (perigonii phyllis) saepe 6 raro usque ad 20 vel 0 setaceis glabris vel scabris, achenio compresso, stylo basi incrassato (rostro) persistente coronato, stylo tenui, stigmatibus 2 vel fere indivisis, staminibus 2-3.

1. Spiculis numerosis caput globosum formantibus, bracteis evaginatibus.
2. Capite unico terminali.
 3. Foliis ascendentibus coriaceis 2-3 mm latis, achenio late obovato fusco-brunneo 1.5-1.8 mm longo apice disco vel rostro depresso mamillato terminato, setis hypogynis inaequalibus subduplo breviores. *R. rubra.*
 3. Foliis patentibus percoriaceis 2-3.5 mm latis, achenio oblongo-obovato 2-2.5 mm longo apice rostro conico paullo elongato terminato, setis subaequalibus subduplo longiore. *R. boninensis.*
2. Capitibus 2-5. *R. nipponica.*
1. Spiculis corymbosis terminalibus et axillaribus.
 2. Corymbis amplis, spiculis majusculis, rostro basi constricto, medio facie linea unica depresso notato, stigmatibus fere indivisis. *R. corymbosa.*
 2. Corymbis mediocribus vel parvis, rostro basi vix constricto, medio non lineato, stigmatibus 2.
 3. Squamis brunneis, setis plerumque 6.
 4. Spiculis 7-9 mm longis.
 5. Setis achenium 2-3-plo superantibus antrorsim densiuscule scabris. *R. chinensis.*
 5. Setis achenium 3-4-plo superantibus tenuibus flexuosis parce retroscabris. *R. Fauriae.*
 4. Spiculis 3-6 mm longis.
 5. Corymbis pluri- vel multispiculosis majusculis, ramis paullo elongatis. *R. Brownii.*
 5. Corymbis brevibus pauci- vel plurispiculatis, ramis abbreviatis.
 6. Achenio anguste oblongo. *R. Yasudana.*
 6. Achenio obovato.
 7. Achenio oblongo-obovato, setis hypogynis tenuibus. *R. Fujiiana.*
 7. Achenio late obovato, setis hypogynis rigidis. *R. Faberi.*
 3. Setis 9-15; squamis albidis demum ferruginescentibus. *R. alba.*

1. *Rhynchospora rubra* MAKINO

Rhynchospora rubra (LOUR.) MAKINO in Bot. Mag. Tokyo 17 (1903) 180; MERRILL Flor. Manila (1912) 119 et Enum. Philipp. Flow. Plant. 1 (1922) 130.

Schoenus ruber LOUR. Flor. Cochinch. (1790) 41.

Rhynchospora Wallichiana KUNTH Enum. Plant. 2 (1837) 289; MŨQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 145; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 121; C. B. CLARKE in HOOK. f. Flor. Brit. India 6 (1893) 638 et in Journ. Linn. Soc. Bot. 36 (1903) 260 et ex L'VEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 198; MATSUM. Index Plant. Japon. 2:1 (1905) 159.

Caespitosa vix rhizomatosa, culmo 1-1.5 ped. alto obtusangulo laevi nudo basi tantum foliato, foliis parum brevioribus rigidulis conduplicatoplanis 1.5-3 mm latis apice attenuatoacutis scabriusculis, spiculis numerosis caput terminale ca. 15 mm diam. globosum bracteis 5-10 patentissimis inaequilongis evaginatis suffultum formantibus 6-7 mm longis subdistiche 5-6-squamatis compressiusculis, squamis anguste oblongis rigis rigidulis stramineis plicatis acutis et sub apice mucronulatis, carina concoloribus, summa maxima, achenio obovato luteobrunneo demum fusco laevi sed cellulis minimis subrotundatis punctulato, aequaliter biconvexo nitido 1.5-1.8 mm longo, margine acutiusculo supra medium usque ad apicem facie que superne parce ciliatoscabro, rostro depresso minuto conico punctulato, basi abrupte dilatato, stylo longo simplici, setis 6 subaequalibus adpressis quam achenia duplo brevioribus antrorsim scaberulis.

Nom. Jap. Igakusa.

Hab.

Hondo: Arimaïke in Kii (J. OHWI et M. TAGAWA n. 94), m. Rokko in Settsu (S. MIKI), Tajimi in Mino (K. SHIODA), Arima in Kii (Y. TSUCHIGA), Horamura in Aki (S. SUZUKI), Fukuchiyama in Tanba (Y. ARAKI), basi m. Kannabi in Yamashiro (H. YAMAMOTO).

Shikoku: Matsuyama (U. FAURIE n. 11604), Mikazuki in Tosa (I. OKURO).

Kiushiu: Kamimine in Hizen (K. YAMASHITA), m. Kurokami in Hizen (Z. TASHIRO), Osadaïke in Buzen (T. YAMAZAKI), urbe Nagasaki (leg. ?).

Riukiu: ins. Yakushima (Z. TASHIRO; M. TAGAWA n. 1886), ins. Amami-oshima (U. FAURIE n. 4334; G. KOIDZUMI), ins. Tokunoshima (H. OHBA), ins. Okinawa (G. KOIDZUMI; Y. TAIRA), ins. Miyake (Y. NAKAZONE), ins. Ishizaki (E. TAKAMINE) ins. Iriomote (G. KOIDZUMI).

Formosa: Hokuto (U. FAURIE n. 53), Koko in Shinchikushu (Y. SHIMADA n. 4474).

2. *Rhynchospora boninensis* NAKAI

Rhynchospora boninensis NAKAI ex TUYAMA in Bot. Mag. Tokyo 49 (1935) 511.

Culmis 40-60 cm altis trogonis laevibus firmis nudis basi conferte multifoliatis, foliis rigidis conduplicato-planis 2-3.5 mm latis 15-20 cm longis patentibus, spiculis numerosis caput terminale 10-15 mm diam. globosum bracteis 2-3 patentibus usque ad 5 cm longis suffultum formantibus 5-6 mm longis subdistiche 5-6-squamis subcompressis, squamis lanceolato-ovatis acutis glabris subcoriaceis ferrugineo-rubris compressis, carina concolore, achenio oblongo-obovato rubro-brunneo laevi glabro biconvexo nitido 2-2.5 mm

longo, rostro conico paullo elongato, stylo longo simplici, setis 6 rigidulis subaequalibus achenio subduplo longioribus antrorse scabris, staminibus 3, antheris linearibus 1.5 mm longis apice brevissime mucronatis.

Nom. Jap. Shima-igakusa.

Hab. Ins. Bonin (T. TUYAMA in Hb. Tokyo Imp. Univ.).

3. *Rhynchospora nipponica* MAKINO

Rhynchospora nipponica MAKINO in Bot. Mag. Tokyo 18 (1904) 145; MATSUM. Index Plant. Japon. 2:1 (1905) 159.

Rhizomate elongato breviter stolonifero, surculos steriles 2 ped. altos versus apicem conferte multifoliosos agente, culmo 1.5-3 ped. alto inferne obtuse, superne acute triangulato robustiusculo laevi medio conferte plurifoliato, foliis planis longis 5-8 mm latis subrigidis praeter marginem cum costaque superne scabram laevibus apice sensim augustatis et riquetro-acutis, ligula parum producta membranacea glabra ferruginea, capitulis 3-5 globosis multifloris 1.5 mm latis ac longis praeter imam remotam contiguus, bracteis inferioribus foliaceis 7-15 cm longis patentibus basi evaginato, spiculis lanceolato-ovatis acuminatis compressis 6-7 mm longis unifloris paucisquamatis pallide rufo-straminescentibus, squamis oblongo- usque late ovatis acutis dorso carinatis, achenio late obovato crasse biconvexo nitido 2 mm longo obsolete ruguloso glabro atrobrunneo, margine obtuso, rostro angusto lineari conico glabro, e basi latiore subconstricta sursum sensim angustato quam achenia brevior, stylo tenui, stigmatibus 2 tenuibus fere 2 mm longis, setis 6 filiformibus laevibus flexuosis glabris quam achenia duplo longioribus.

Nom. Jap. Mikuri-gaya.

Hab. Hondo: Kanayama in Kii (T. NAKAJIMA).

Kiushiu: Tsukabaru in Hizen (S. Ono), Yunoso in Chikugo (Y. NABESHIMA), Hatsuki in Satsuma (Z. TASHIRO), Nagamine in Chikugo (K. NAKAJIMA).

Riukiu: ins. Okinawa (S. TAWADA).

Formosa: Jitsugetsutan (S. MIKI).

4. *Rhynchospora corymbosa* BRITT.

Rhynchospora corymbosa (LINN.) BRITT. in Trans. N. Y. Acad. Sci. 11 (1892) 84; MAKINO in Bot. Mag. Tokyo 17 (1903) 181; MERRILL Enum. Philipp. Flow. Plant. 1 (1922) 130.

Scirpus corymbosus LINN. Cent. Pl. 2 (1756) 7.

Rhynchospora aurea VAHL Enum. Plant. 2 (1806) 229; KUNTH, Enum. Plant. 2 (1837) 293; BÖCKL. in Linnaea 37 (1873) 626; HENRY List Pl. Formos. (1896) 105; C. B. CLARKE in Journ. Linn. Soc. Bot. 36 (1903) 259; MATSUM. Ind. Plant. Japon. 2:1 (1905) 158; MATSUM. et HAYATA Enum. Plant. Formos. (1906) 491.

Rhizomate brevi crasso, culmo robusto 3-4 ped. alto triangulato ex toto remote, basin versus conferte foliato, internodiis superioribus superne ad angulos scabriusculis, foliis planis 8-15 mm latis rigidis longe augustatis, margine superne carinaeque scabris, vaginis longiusculis, ligula antice mem-

brana brunnea rotundata instructa, corymbis 2-4 approximatis amplis multiradiatis, radiis patentibus usque ad 10 cm longis, ramulisque superne scaberulis, his apice pauci-pluri-spiculatis, spiculis lanceolatis teretibus 7-10 mm longis subdistiche paucisquamatis, bracteolis filiformibus 3-6 mm longis basi membranaceodilatatis, squamis oblongo-ovatis brunneoferrugineis membranaceis acutis, achenio obovato compresso luteobrunneo opaco glabro 3-3.5 mm longo, cellulis minutis punctulato, margine obtusulum versus grosse undulato, rostro longiore subulato-conico scabro crasso, medio linea unica depressa longitudinali prominulo basi 1.5 mm lato, setis 6 rigidulis ca. 5 mm longis antrorsim scabris.

Nom. Jap. Yaeyama-aburasuge, Onino-hige.

Hab.

Riukiu: ins. Ishigaki (S. TAWADA; S. SAKAGUCHI), ins. Iriomote (G. KOIDZUMI; S. SAKAGUCHI; Y. DOI),

Formosa: Suitenka (U. FAURIE n. 803), Keelung (U. FAURIE n. 170), Hokuto (U. FAURIE n. 48), Heichin in Shinchikushu (Y. SHIMADA n. 664).

5. *Rhynchospora chinensis* NEES et MEYEN

Rhynchospora chinensis NEES et MEYEN ex NEES in WIGHT Contr. Bot. India (1834) 115 ex pte, emend. BÖCKL. in 'Linnaea 37 (1873) 586; PALLA in le Monde d. Plantes (1910) 39; E. G. CAMUS in LECOMTE, Flor. Génér. Indochin. 7 (1912) 148.

? *Rhynchospora fusca* (non VAHL) MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1365) 145; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 121; MATSUM. Ind. Plant. Japon. 2:1 (1905) 159.

Rhynchospora glauca var. *chinensis* C. B. CLARKE in HOOK. f. Flor. Brit. India 6 (1893) 672 et in Journ. Linn. Soc. Bot. 36 (1903) 259 et Illustr. Cyperac. (1909) t. 73, f. 8-11; MATSUM. Ind. Plant. Japon. 2:1 (1905) 156 forsan pro pte.

Rhynchospora japonica MAKINO in Bot. Mag. Tokyo 17 (1903) 184; MATSUM. Ind. Plant. Japon. 2:1 (1905) 159.

Rhynchospora longisetigera HAYATA Icon. Plant. Formos. 6 (1916) 116.

Perennis caespitosa estolonifera, vix rhizomatosa, culmo 1-2.5 ped. alto subtenui obtusangulo laevi ex toto remote, basi conferte foliato, foliis planis vel conduplicatis 2-3.5 mm latis in acumen triquetrum scabrum sensim attenuatis, ligula antice truncata ferruginescente, corymbis 3-5 plerumque geminis erectis inaequaliter exserte pedunculatis in fasciculis 1-10 suberectis paucispiculosis solutis, bracteolis squamiformibus minutis inferioribus interdum setaceis, spiculis primo lineari- demum late lanccolatis 7-8 mm longis 4-5-squamatis saepe bifloris, squamis brunneis membranaceis oblongoovatis acutissimis vel mucronatis carina concolore, achenio late obovato inaequaliter biconvexo brunneo glabro 2 mm vel paullo longiore, faciebus cellulis longitudinaliter lineari-oblongis leviter transverse ruguloso, margine subacuto, rostro paullo brevior conico compresso glabro, stylo tenui, setis 6 tenuibus antrorsim scabris 4-5.5 mm longis.

Nom. Jap. Inuno-hanahige, Suisha-igakusa.

Hab.

Hondo: Kyoto (S. MIKI; N. KINASHI), Koidzumimura in Mino (K. SHIODA), m.

Tanakami in Omi (S. HASHIMOTO), Kumihama in Tango (Z. TASHIRO), Kanbe in Ise (T. HATTORI), Shinjomura in Kii (N. UI), Miyajima in Aki (T. SHIRAKAMI), Tokusa in Suwo (H. OHBA), Narai in Bitchu (Z. YOSHINO).

Shikoku: fide MAKINO.

Kiushiu: Osadaike in Buzen (T. YAMAZAKI), Yokoyamamura in Buzen (Z. TASHIRO), m. Tsurumi in Bungo (Z. TASHIRO), Kawamura in Higo (K. MAYEBARA), urbe Nagasaki (leg.?), Hatsuki in Satsuma (Z. TASHIRO), Senchomuda in Bungo (Z. TASHIRO), Imudaike in Satsuma (Z. TASHIRO; S. MIKI), Nishitara in Satsuma (Y. DOI), Uchiyama, ins. Tsushima (K. NAKAJIMA).

Korea: in turfosis Quelpaert (U. FAURIE n. 1418).

Riukiu: ins. Iheya (S. SAKAGUCHI; S. TAMASHIRO), ins. Okinawa (S. TAWADA).

Formosa: Jitsugetsutan (S. MIKI; S. KITAMURA n. 1358, 1359), Shin-oku in Shinchikushu (Y. SHIMADA n. 5037), Yobai in Shinchikushu (Y. SHIMADA n. 4326).

var. *curvo-aristata* TUYAMA in Bot. Mag. Tokyo 52 (1938) 567, sub *R. japonica* MAKINO.

Spiculis achenioque angustioribus et pallidioribus, aristis squamarum longioribus et leviter curvatis.

Nom. Jap. Munin-inunohanahige.

Hab. Ins. Bonin (S. NISHIMURA).

6. *Rhynchospora Fauriae* FRANCH.

Rhynchospora Fauriae FRANCH. in Bull. Soc. Philom. -Paris 7: 10 (1886) 104; MAKINO in Bot. Mag. Tokyo 17 (1903) 137; TAKEDA in Bot. Mag. Tokyo 24 (1910) 174; MIYABE et KUDO Flor. Hokkaido a. Saghal. 2 (1931) 213.

Subcaespitosa estolonifera, culmo 1-2 ped. alto tenui laeviusculo obtusangulo, basi conferte, sursum remote paucifoliato, foliis conduplicato-planis 1.5-2.5 mm latis rigidulis laeviusculis apice sensim attenuato triquetro-obtusulis, corymbis 2-3 remotis dense plurispiculosis 1-2-nis subexsertis, ramis brevibus, fasciculis paucispiculatis, bracteolis squamiformibus, spiculis late lanceolatis 7-8mm longis paucisquamatis rufobrunneis, squamis oblongo-ovatis acutomucronatis, achenio late obovato biconvexo glabro luteo-brunneo 2 mm longo nitidulo leviter ruguloso obsolete marginato, rostro conico quam achenia breviora compresso glabro, setis 6 tenuibus leviter flexuosis quam achenia 3-4-plo longioribus parce retrososcabris.

Nom. Jap. 0-inunohanahige, Hime-mikazuki.

Hab.

Yezo: Kamiiso (U. FAURIE n. 4901), Horomui (S. MIKI), Sapporo (U. FAURIE n. 3039), Yesan (U. FAURIE n. 7562).

Hondo: Aomori (U. FAURIE n. 1023, 1037, 1079, 1363; S. MURAMATSU), Omyojin in Rikuchiu (G. TOBA), Otakizawa in Yetchiu (T. OTAYA), Tonakuchihara in Aidzu (S. MIKI), Daijagaike in Shinano (S. MIKI), Tanabu (U. FAURIE n. 4611), Tsurugisan (U. FAURIE n. 13813), Kanagi (U. FAURIE n. 13350), Sado (U. FAURIE n. 1855, 1856), Hachinohe (U. FAURIE n. 1858), Akita (U. FAURIE n. 1029; S. MURAMATSU), m. Sukawa in Rikuchiu (C. WAGAWA), Ose in Kotsuke (J. OHWI et M. TAGAWA n. 801, 8924), Kawawada in Hitachi (Y. TSURUMACHI), Kambe in Ise (T. HATTORI), Kyoto (S. MIKI), Yatsuka in Mimasaka (Z. TASHIRO), m. Buna in Omi (S. MIKI).

7. *Rhynchospora Brownii* ROEM. et SCHULT.

Rhynchospora Brownii ROEM. et SCHULT. Syst. 2 (1817) 86.

Rhynchospora capitellata (non VAHL) H. PFEIFF. in Fedde Rep. 49 (1940) 75, ex pte, quoad pl. asiat.

Rhynchospora glauca (non VAHL) KUNTH, Enum. Pl. 2 (1837) 297, ex pte; BOECKL. in Linnaea 37 (1873) 585 ex pte.; C. B. CLARKE in Hook. f. Flor. Brit. India 6 (1893) 671 et in Journ. Linn. Soc. Bot. 36 (1903) 259; MAKINO in Bot. Mag. Tokyo 17 (1903) 185; HAYALA Icon. Plant. Formos. 6 (1916) 116.

Rhynchospora glauca var. *chinensis* C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 13 (1904) 198 ex pte; MATSUM. Ind. Plant. Japon. 2: 1 (1905) 159 ex pte.

Caespitosa vix rhizomatosa, culmo 2-3 ped. alto tenui obtusangulo laeviusculo remote, basi conferte foliato, foliis conduplicatoplanis rigidulis 1.5-2.5 mm latis, sursum sensim angustatis, margine costaque scabris, ligula vix evoluta, corymbis 2-3 plerumque solitariis remotis densiuscule vel dense pluri-multi-spiculosis, ramis patentibus vel suberectis vulgo usque ad 4 cm longis, bracteolis lanceolatis cuspidatis vel setaceis, spiculis oblongo-ovatis brunneis 3-4.5 mm longis paucifloris paucisquamatis, squamis late ovatis acuto-mucronatis, achenio 2 mm longo late obovato biconvexo brunneo cellulis longitudinaliter oblongis leviter transverse ruguloso submarginato glabro, rostro duplo brevius conico compresso glabro, apice obtuso, basi dilatato, setis 6-7 rufobrunneis antrorsim scabris quam achenia paullo brevioribus.

Nom. Jap. Torano-hanahige.

Hab.

Hondo: Higashitomitamura in Kii (N. UI), m. Rokko in Settsu (Z. YOSHINO). Tonoi in Nagato (M. YAMAZAKI), Nameradani in Kii (Y. ARAKI), Seto in Kii (G. KODZUMI), Ninose in Nagato (T. ODA).

Shikoku: Meguro in Iyo (C. WATANABE).

Kiushiu: Imuda in Satsuma (Z. TASHIRO), Akune in Satsuma (Z. TASHIRO), Tateishi in Hizen (leg. ?), m. Karimata in Buzen (T. YAMAZAKI), Kubo in Buzen (R. NAKADANI), Yunomae in Higo (K. MAYEBARA).

Riukiu: ins. Yakushima (U. FAURIE n. 4330; Z. TASHIRO), ins. Amami-oshima (MIYANO), ins. Okinawa (S. TAWADA; T. MIYAGI).

Formosa: Pianan-anbu (N. FUKUYAMA n. 4056).

8. *Rhynchospora Yasudana* MAKINO

Rhynchospora Yasudana MAKINO in Bot. Mag. Tokyo 17 (1903) 188.

Rhynchospora Franchetiana C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 197, ex pte.

Subcaespitosa estolonifera vix rhizomatosa, culmo 15-30 cm alto obtusangulo sursum scaberulo tenui, foliis basin culmi confertis planis vel conduplicatoplanis 1-2 mm latis sursum scaberulis, corymbis 4-6 paucispiculiferis exsertis, inferioribus remotis, spiculis lanceolatis fuscobrunneis 5-6 mm longis paucisquamatis, squamis ovatis acuto-mucronatis, carina concolore, achenio angusteblongo compresso biconvexo 2-2.5 mm longo stramineo

glabro ac laeviusculo obsolete marginato, rostro conicolineari fere 2 mm longo glabro compresso, setis 6 achenium paullo superantibus rectis retroscabris.

Nom. Jap. Miyama-inunohanahige.

Hab.

Hondo: Ose in Kotsuke (J. OHWI et M. TAGAWA n. 251, 448, 799, 800, 8989; T. SUZUKI), Nosorike in Kotsuke (S. SAKAGUCHI), Tsurugisan (U. FAURIE n. 13439), m. Shirouma (J. OHWI n. 7710; S. MIKI), m. Naeba in Shinano (S. MIKI), m. Hakkoda (U. FAURIE n. 5717; K. KORIBA), m. Hyonosen in Tanba (Y. ARAKI), Hachimantai in Ugo (S. MURAMATSU), m. Kammuri in Yetchizen (Y. HORI), m. Gassan (U. FAURIE n. 1031; M. KATO), m. Iwate (S. MIKI), m. Adzuma (G. KOIDZUMI), m. Zao (S. MURAI).

Yezo: m. Muine (I. YAMAMOTO).

9. *Rhynchospora Fujiiiana* MAKINO

Rhynchospora Fujiiiana MAKINO in Bot. Mag. Tokyo 17 (1903) 183.

Rhynchospora Fauriei var. *leviseta* C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 197.

Rhynchospora Franchetiana C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 197 ex pte; MATSUM. Ind. Plant. Japon. 2:1 (1905) 159 ex pte.

Rhynchospora Miyakeana (non MAKINO) NAKAI Flor. Korean. 2 (1911) 298.

Rhynchospora coreana PALLA in Oesterr. Bot. Zeitschr. 59 (1909) 186.

Vix caespitosa estolonifera erhizomatosa, culmo 30-100 cm alto setaceo obtusangulo sursum scaberulo, remote, sed basi conferte foliato, foliis subrigidulis setaceis 1-1.5 mm latis involutis sursum scabriusculis, ligula non evoluta, corymbis 4-5 dense paucispiculatis vix exsertis, distantibus, spiculis lanceolatis 5-6 mm longis rufo-brunneis paucisquamatis, squamis ovatis acutomucronatis, carina concolore, achenio oblongo-obovato compresso biconvexo 2 mm longo luteobrunneo obsolete transverse ruguloso, leviter marginato glabro, rostro subbreuiore elongato-conico glabro, setis 6 rectis laevibus quam achenia paullo longioribus.

Nom. Jap. Koinunohanahige, Hosoinunohanahige.

Varietates geographice vix distinctae sunt:

1. var. *scabriseta* MAKINO l. c. (1903) 184.—Setis antrorsim scabris.
2. var. *retrososcabra* TAKEDA in Bot. Mag. Tokyo 24 (1910) 111.—Setis retrososcabris.

Hab.

Yezo: Shiraoi (S. TAMAKI), Iwamigawa (U. FAURIE n. 11393).

Hondo: Kanekatsu in Omi (C. HASHIMOTO), m. Tanakami in Omi (C. HASHIMOTO), Kinseisui in Ise (S. MATSUYAMA), Nakaarai in Uzen (G. KOIDZUMI), m. Gassan (U. FAURIE n. 1030), Togakushi (U. FAURIE n. 1854, 1857), Nambu (U. FAURIE n. 6263), m. Tsurugisan (U. FAURIE n. 13312, 13314), Tanabu (U. FAURIE n. 4642), Okumasan (U. FAURIE n. 13485), Wakamatsu (U. FAURIE n. 1830), Kyoto (G. KOIDZUMI; S. MIKI), m. Hira in Omi (Z. TASHIRO), Yatsuka in Mimasaka (Z. TASHIRO), Manio in Bitchiu (Z. YOSHINO), Yanaizu in Nagato (T. YAMAHARA), Arai in Iga (T. HATTORI), Tokusa in Suwo (K. OHBA), Hitotsuiki in Totomi (G. HASHIMOTO), Ide in Suruga (J. SUGIMOTO), Kashi in Iwaki (N. UI), Ukari in Totomi (J. SUGIMOTO), Fujitani in Tanba (Y. ARAKI), Kumi-hama in Tanba (Z. TASHIRO),

Shikoku: Matsuyama (U. FAURIE n. 11612), Midorisozu in Iyo (M. OSATA), Nagata in Iyo (T. IMAIDZUMI).

Kiushiu Yukiura in Hizen (Y. HORIKAWA), m. Kirishima (Z. TASHIRO; K. MAYEBARA), Sarayama in Hizen (S. ONO), Taragi in Higo (Z. TASHIRO), Atamura in Satsuma (Y. DOI), Koishihara in Chikuzen (Z. TASHIRO), Ebino in Hiuga (Z. TASHIRO), Yamano in Satsuma (S. MURAMATSU).

Korea: Ouensan (U. FAURIE n. 655), ins. Quelpaert (U. FAURIE n. 1419; E. TAQUET n. 2124), Tairyo in Keiki (K. T. CHO. n. 960).

10. *Rhynchospora Faberi* C. B. CLARKE

Rhynchospora Faberi C. B. CLARKE in Journ. Linn. Soc. Bot. 36 (Oct. 1903) 259.

Rhynchospora Miyakeana MAKINO in Bot. Mag. Tokyo 17 (Nov. 1903) 184.

Rhynchospora Umemurae MAKINO l. c. (Nov. 1903) 187.

Rhynchospora Hattoriana MAKINO ibid. 189.

Rhynchospora Fauriei (non FRANCH.) C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 197, excl. var.; MATSUM. Index Plant. Japon. 2:1 (1905) 159 ex pte; NAKAI Flor. Korean. 2 (1911) 298; ROSHEV. in KOMAR. Fl. URSS. 3 (1935) 104.

Rhynchospora breviseta PALLA in Oesterr. Bot. Zeitschr. 59 (1909) 187.

Rhynchospora Umemurae var. *Hattoriana* (MAKINO) MAKINO in Bot. Mag. Tokyo 19 (1905) 17.

Rhynchospora ouensanensis KOIDZ. in Bot. Mag. Tokyo 43 (1929) 339.

Rhynchospora Umemurae var. *exigua* TAKEDA in Bot. Mag. Tokyo 24 (1910) 174; MIYABE et KUDO Flor. Hokk. a. Saghal. 2 (1931) 213.

Rhynchospora Umemurae var. *kiusiana* HONDA in Bot. Mag. Tokyo 44 (1930) 699.

Rhynchospora Umemurae var. *yakusimensis* MASAMUNE in Trans. Nat. Hist. Soc. Formos. 23 (1933) 210.

Rhynchospora yakusimensis (MASAM.) MASAM. in Mem. Fac. Sci. a. Agric. Taihoku Imper. Univers. Bot. 4 (1934) 522.

Subcaespitosa estolonifera, culmo 10-40 cm alto gracili obtusangulo laeviusculo, basi conferte paucifoliato, foliis 0.5-1 mm latis setaceis vel fere capillaribus laeviusculis involutis, corymbis 3-4 valde distantibus 2-5-spiculatis plerumque singulis incluse pedunculatis, spiculis oblongo-ovatis 4-5 mm longis rufo-brunneis paucisquamatis, squamis ovatis acutis, carina viridi demum concolore mucronatis, achenio 1.5-2 mm longo late obovato compresso-biconvexo leviter transverse ruguloso brunneo nitidulo obsolete marginato, rostro elongato-conico compresso glabro, stylo tenui bifido, setis 6 rectis subtenuibus quam achenia parum longioribus retroscabris.

Nom. Jap. Ito-inunohanahige, Hime-inunohanahige.

Varietates plus minus conspicuae sed geographice vix distinctae sunt:

1. var. *exigua* (TAKEDA l. c. sub *R. Umemurae*) OHWI, comb. nov., setis laevibus a typo diversa. Nom. Japon. Nezumino-hanahige.

2. var. *breviseta* (PALLA, l. c. pro sp.) OHWI, comb. nov., setis laevibus quam achenia distincte brevioribus. Nom. Jap. Chosen-inunohanahige.

3. var. *Umemurae* (MAKINO l. c. pro sp.) OHWI, comb. nov., setis antrorism scabris. Nom. Jap. Hime-inunohanahige.

Hab.

Yezo: Nayoro (U. FAURIE n. 5718), Sapporo (U. FAURIE n. 3045).

Hondo: Komatsu in Uzen (M. MATO), Rokuroshihara in Yechizen (Y. HORI), m. Ogasa in Totomi (J. SUGIMOTO), Yuzaki in Kii (S. SAKAGUCHI), Kanekatsu in Omi (C. HASHIMOTO), Arahama in Rikuchu (S. MURAI), Tajimi in Mino (K. SHIODA), m. Rokko in Settsu (S. MIKI), urbe Akita (U. FAURIE n. 1032; S. MURAMATSU), Kawagishi in Shinano (M. TAKAHASHI), Morioka (G. TOBA), Tokusa in Nagato (T. ODA), Iijimura in Mino (K. SHIODA), Kyoto (G. KOIDZUMI: N. KINASHI), Osada in Tanba (Y. ARAKI), Kawawada in Hitachi (Y. TSURUMACHI), Sendai (Y. IISHIBA), Tamogami in Iwaki (N. IMAI).

Shikoku: Hashinemura in Tosa (H. YAMAGUCHI).

Kiushiu: Takayasanyo in Osumi (Z. TASHIRO), Kawamura in Higo (K. MAYEBARA), Matsuyama in Hizen (leg.?), Kawabe in Satsuma (N. SHINAGAWA), ins. Yakushima (S. OCHIAI).

Korea: ins. Quelpaert (E. TAQUET n. 2123), m. Hokukansan (G. KOIDZUMI), m. Kangakusan (G. KOIDZUMI), Chemulpo (U. FAURIE n. 6420), Ouen-san (U. FAURIE n. 956), m. Gesshitsuzan in Zennan (M. K. BOKU), m. Myokozan in Heihoku (M. K. BOKU), Tairyo in Keiki (K. T. CHO) m. Hachieizan in Zennan (K. T. CHO), m. Hokkanzan in Keiki (K. T. CHO).

11. *Rhynchospora alba* VAHL

Rhynchospora alba (LINN.) VAHL Enum. Plant. 2 (1806) 236; KUNTH Enum. Plant. 2 (1837) 295; MIQ. Ann. Mus. Bot. Lugd. Bat. 2 (1865) 145; BÖCKL. in Linnaea 37 (1873) 570; FRANGH. et SAVAT. Enum. Plant. Japon. 2 (1879) 121; MAKINO in Bot. Mag. Tokyo 17 (1903) 189 incl. var. *kiusiana* MAKINO; CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 198; MATSUM. Ind. Plant. Japon. 2:1 (1905) 158; MIYABE et KUDO Flor. Hokk. a. Saghal. 2 (1931) 212; ROSHEV. in KOMAR. Fl. URSS. 3 (1935) 103.

Schoenus albus LINN. Spec. Plant. (1853) 44.

Subcaespitosa estolonifera erizomatosa, culmo 10-60 cm alto triangulato gracili sursum scaberulo, remote foliato, foliis filiformibus involutis 0.5-1.5 mm latis rigidulis laeviusculis, ligula vix producta, membranacea, corymbis 1-3 exsertis pluri- vel pauci-spiculatis plerumque singulis distantibus, spiculis lanceolatis 4-6 mm longis primo albidis demum ferruginescentibus nitidulis paucisquamatis unifloris, squamis oblongo-ovatis obtusulis, e carina concolore mucronulatis, achenio obovato compresso subaequaliter biconvexo 2-2.5 mm longo luteobrunneo obsoletissime transverse ruguloso vix marginato, rostro duplo brevior compresso conico glabro, setis 9-15 rectis rostrum aequantibus retrososcabris, inferne pilis longioribus antrorsim ciliolatis.

Nom. Jap. Mikazuki-gusa.

Hab.

Saghalin: Aba (G. KOIDZUMI).

Kuriles: ins. Kunashiri (U. FAURIE n. 8510; J. ORWI n. 883; Y. MATSUMURA).

Yezo: Junsainuma (U. FAURIE n. 5364), Nayoro (U. FAURIE n. 5716, 5719), Sapporo (U. FAURIE n. 3038), Iwamizawa (U. FAURIE n. 11392), Horomui (S. MIKI), Kushiro-Hamanaka (S. MIKI), m. Muine (I. YAMAMOTO).

Hondo: m. Hakkoda (U. FAURIE n. 922, 923; S. MURAI), Tanabu (U. FAURIE n. 4643), Tsurugisan (U. FAURIE n. 13443), Koidzumimura in Mino (K. SHIODA), Taka-

washi in Mino (K. SHIODA), Iwagisan (U. FAURIE n. 1853), Hachinohe (U. FAURIE n. 1859), Tateyama (U. FAURIE sin. num. ex pte). urbe Akita (S. MURAMATSU), Kashi in Iwaki (N. IMAI), m. Sukawa in Rikuchiu (S. MIKI), Akaihara in Aidzu (S. MIKI), m. Kirigamine in Shinano (J. OHWI n. 7378; S. MIKI; M. TAKAHASHI), Hotosuike in Totomi (G. HASHIMOTO), Hanayama in Rikuzen (S. MURAI), Fuseike in Omi (S. HASHIMOTO), Ose in Kotsuke (J. OHWI et M. TAGAWA n. 8919), m. Yokura in Aki (Z. TASHIRO), Nagoya in Owari (K. MAYEBARA).

Kiushiu: Yunoso in Chikuzen (Y. NABESHIMA), m. Kirishima (Z. TASHIRO).

Korea: ins. Quelpaert (E. TAQUET n. 2129).

Gen. 8. *Remirea* AUBL.

Remirea AUBL. Hist. Guian. Fr. 1 (1775) 44, t. 16; KUNTH, Enum. Plant. 1 (1837) 138; STEUD. Synops. 2 (1855) 71; BÖCKLR. in Linnaea 35 (1863) 435; BENTH. et Hook. Gen. Plant. 3 (1883) 1058; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 116; DALLA TORRE et HARMS, Gen. Siphon. (1900) 33; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 128.

Miegia SCHREBER, Gen. 2 (1791) 786.

Herba perennis, e rhizomate late repente breviter caespitoso-ramosa, basi dense foliata, culmo humili obtusangulo, foliis radicalibus linearibus rigidis, spicis in capitulo terminali simplici vel composito bracteato, dense confertis multispiculatis late ovoideis, spiculis parvis unifloris, flore hermaprodito, glumis 4 obsolete distichis, exterioribus 3 vacuis gradatim auctis, summa florifera demum spongioso-incrassata, setis hypogynis nullis, staminibus 3, stylo cum ovario continuo basi vix incrassato, ramis 3, achenio glumia summa arcte incluso ovoideo-trigono saepe leviter compresso.

Species unica.

R. maritima.

1. *Remirea maritima* AUBL.

Remirea maritima AUBL. Pl. Guian. 1 (1775) 45, t. 16; KUNTH, Enum. Pl. 2 (1837) 139; BÖCKLR. in Linnaea 36 (1870) 435; C. B. CLARKE in Hook. f. Flor. Brit. Ind. 6 (1893) 677 et in Journ. Linn. Soc. 36 (1903) 258; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 130; SASAKI, Catal. Governm. Herbar. Taihok. (1930) 110.

Miegia maritima (AUBL.) WILLD. Spec. Plant. 1 (1798) 311.

Mariscus capitatus STEUD. in ZOLL. Verz. Ind. Archip. (1854) 63 et Synops. 2 (1855) 60.

Mariscus maritimus (AUBL.) MIQ. Fl. Ind. Bat. Suppl. 262.

Remirea Wightiana NEES in Hook. Journ. Bot. Kew Miscell. 6 (1854) 29.

Rhizomate tenuiusculo elongato, vaginis aphyllis fulvis vel fuscobrunneis tecto surculos ascendentes agente, culmo ex foliorum fasciculo solitario 3-10 cm alto rigido striato subtrigono validulo laevi saepe intra folia subabscondito, foliis confertis pluribus perrigidis 7-12 cm longis patentibus conduplicato-planis e basi lata 4-5 mm lata sursum sensim angustatis apice triquetris, margine superne scabris, vaginis breviusculis arcte imbricatis glabris, anthela capitato-glomerata 3-5-bracteata, bracteis patentibus vel subreflexis 2-7 cm longis 2-3 mm latis, spicis sessilibus 2-subpluribus ovoideis vel globoso-ovatis dense multispiculosis 8-15 mm longis 7-10 mm latis, spi-

culis sessilibus ovatis subteretibus vix compressis 4-5 mm longis acutis subdistiche 4-squamatis, squamis imbricatis quarta excepta subconformibus, late ovatis pallide ferruginescentibus dure membranaceis plurinervosis vix distincte carinatis, apice calloso-acutis, ima 2 mm, sequente 2.5-3 mm, tertia 3.5 mm longis vacuis, quarta valde spongiosa involuta oblongo-ovata 3 mm longa enervi laevi florem perfectum arcte involvente, achenio oblongo-cylindrico atrofusco compresso-trigono sessili 2 mm longo glabro, cellulis extimis minutis subrotundatis planis punctulato, stylo cum stigmatibus 3 mm longo superne 3 trifido, stigmatibus subglabris, staminibus 3.

Nom. Jap. Koshun-suge.

Hab.

Riukiu: arenis littoris ins. Ishigaki (E. TAKAMINE n. 245).

Formosa: Koshun (fide SASAKI), Kwarenko (fide SASAKI).

Gen. 9. *Carpha* BANKS et SOLAND

Carpha BANKS et SOLAND ex R. BR. Prodr. (1810) 230 ex pte; KUNTH, Enum. Plant. 2 (1837) 321, p. p.; STEUD. Synops. 2 (1855) 159 ex pte; BÖCKL. in Linnaea 33 (1874) 265; BENTH. Flor. Austral. 7 (1878) 381; BENTH. et HOOK. Gen. Plant. 3 (1883) 1061; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 107; DALLA TORRE et HARMS, Gen. Siphon. (1900) 30; C. B. CLARKE in Kew Bull. add. ser. 8 (1903) 122; KÜKENTH. in Fedde Repert. 47 (1939) 103.

Herbae perennes haud elatae, foliis basin culmi confertis, inflorescentia fasciculata plurispiculosa, fasciculis corymbosis vel fere in capitula contractis, capitulis terminalibus vel interdum 1-2 minoribus axillaribus, bracteis 1-2 foliaceis, spiculis angustis 1-2-floris, floribus hermaphroditis, glumis 3-6 rigide membranaceis distichis, 2-3 exterioribus vacuis, floriferis longioribus, rhachilla ultra florem rigide setiformi vel glumam vacuum ferente, setis hypogynis 6 longis plumosis vel antice scabris vel squamellis planis 3, staminibus 3, stylo basi incrassato cum ovario continuo, ramis 3, achenio trigono.

Species unica.

C. aristata.

1. *Carpha aristata* KÜKENTH

Carpha aristata KÜKENTH. in Fedde Repert. 47 (1939) 118.

Radix fibrosa, fibrillis tenuibus: culmus gracilis 42 cm altus compressus laevis profunde sulcatus ad apicem usque foliatus: folia 6 culmo breviora distantia flaccida 1.5-2 mm lata plana acuminata sicut culmus obsolete nodulosa, vaginae longae postice semiapertae subinflatae e fasciculis 2 spicarum constructa: spicae binae inaequaliter pedunculatae (pedunculi erecti graciles sulcati ad 2 cm longi) oblongae 8-12 mm longae sublaxe spiculatae: bractae foliaceae breves evaginantes: spiculae plures oblongo-lanceolatae 5 mm longae uniflorae: squamae 4-5 lanceolatae carinatae stramineo-brunneae, inferiores vacuae subacutae, superiores florem hermaphroditum foventes in aristam conspicuam excurrentes: setae perigonii 6 partim nucem subsuperantes partim breviores stramineae antrorsus scabrae: stamina 2 (?), fila-

emnta ferruginea: stylus longus apice tenuis trifidus basi breviter pyramidalis cum nuce continuus: nux oblonga trigona ferruginea minute tessellata. (sec. KÜKENTH.).

Nom. Jap.

Hab. Kiushiu: Nagasaki (SCHOTTMÜLLER, non vid.). An planta certe in Japonia indigena?

Gen. 10. *Schoenus* LINN.

Schoenus LINN. Sp. Plant. (1753) 42, ex pte; KUNTH, Enum. Plant. 2 (1837) 334; STEUD. Synops. 2 (1855) 165; BÖCKL. in Linnaea 33 (1874) 273; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1062; BENTH. Flor. Austral. 7 (1878) 352; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 115; DALLA TORRE et HARMS, Gen. Siphon. (1900) 32; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 122; KÜKENTH. in Fedde Repert. 44. (1938) 15. *Chaetospora* R. BR. Prodr. Flor. Nov. Holl. (1810) 232.

Elatus vel parvus, rigidulus, culmo simplici basi foliato, foliis angustis vel in vaginam subaphyllam reductis, spiculis distiche pauci- vel subplurisquamatis plerumque compressis angustis, plerumque fasciculatis et in paniculam dispositis, 2-5-floris, floribus hermaphroditis, squamis maturitate ab axi facile deciduis, inferioribus paucis vacuis minoribus, summa interdum sterili, axi elongato persistente flexuoso, rhachillis mediis crassis uno facie excavatis, perigonii phyllis in setas 6 vel pauciores reductis vel nullis, staminibus 3, achenio in cavo rhachillae inserto trigono ovoideo erostrato, stylo deciduo basi vix incrassato, stigmatibus 3.

1. Spiculis plus quam 20 mm longis, squamis rigidulis, achenio 3 mm longo irregulariter scrobiculato-ruguloso. *S. calostachyus*.
1. Spiculis minus quam 15 mm longis, achenio minore.
 2. Foliis basilaribus in vaginas subaphyllas reductis. *S. Hottorianus*.
 2. Foliis basilaribus elongatis foliiformibus.
 3. Culmo 10-21 cm alto tenuissimo, foliis $\frac{1}{2}$ mm latis, spiculis 3-6 mm longis, achenio glabro. *S. apogon*.
 3. Culmo 2-3 ped. alto, foliis 2-5 mm latis, spiculis 8-12 mm longis, achenio vertice brevi-hispido. *S. falcatus*.

1. *Schoenus calostachyus* POIR.

Schoenus calostachyus (R. BR.) POIR. Encycl. Suppl. 2 (1811) 251; BENTH. Flor. Austral. 7 (1878) 368; C. B. CLARKE in Hook. f. Flor. Brit. India 6 (1894) 674 et Illustr. Cyper. (1909) t. 78, f. 7-9; E. G. CAMUS in Lecomte Flor. Génér. Indochin. 7 (1912) 150; t. 1; OHWI in Bot. Mag. Tokyo 45 (1931) 188.

Chaetospora calostachya R. BR. Prodr. (1810) 233; KUNTH Enum. Plant. 2 (1837) 326.

Rhizomate caespitoso, foliorum vaginis foliiferis paullo dilatatis atrosanguineis nitidis integris distiche imbricatis dense oblecto, culmo sesqui-bipedali firmo tereti laevi tenuiusculo, medio 1-2-phyllo, superne in internodiis inferne uno facie concavo et margine scabro, foliis subbrevioribus crassis rigidis planis praeter marginem scabram laeviusculis, supra leviter canaliculatis, subtus crasse tricostatis, apice abrupte acuminatis, ligula nulla,

inflorescentia racemosa, bracteis atosanguineo-vaginatibus breviter foliaceis, spiculis 5-10 ad nodos solitariis vel 2-3-nis erectis exserte longe pedicellatis, 20-25 mm longis compressis fuscis opacis linearilanceolatis acutis distiche 9-12-squamatis, squamis coriaceis margine parce pubescentibus apice acutiusculis, superioribus fertilibus usque ad 20 mm longis lanceolatis, carina viridiuscula scabriusculis, staminibus 3, achenio falcato-obovato trigono griseo-brunneo opaco 3 mm longo, facie irregulariter leviter scrobiculato-ruguloso glabro subpruinoso, basi crasse attenuato sessili, stylo deciduo leviter exserto tenui basi vix incrassato, superne parce puberulo, stigmatibus 3, setis 5-6 quam achenia 2-3-plo brevioribus tenuibus superne parcissime antrorsim scabris facile deciduis.

Nom. Jap. Iheya-higejusa.

Hab. Riukiu: ins. Iheya (S. SAKAGUCHI).

2. *Schoenus Hattorianus* NAKAI

Schoenus Hattorianus NAKAI in Bot. Mag. Tokyo 26 (1912) 96.

Rhizomate crasso nodoso 5-7 mm diam. longe repente, squamis castaneis coriaceis obtecto, culmo approximato 60 cm alto 1.2-1.5 mm diam. tereti uno latere sulcato nudo enodoso, basi paucivaginato, vagina summa 3-5 cm longa sanguineo-castaneo truncato imberbi, seta erecta 5-10 mm longa terminata, inflorescentia 3-5-nodosa, 10-15 cm longa interrupta saepe apice nutante, ramis 3-7-fasciculatis 1-3-spiculatis scabris, 2-5 cm longis effusis, bractearum vaginis 3-5 mm longis castaneis, seta brevi terminatis, spiculis longe pedunculatis fuscobrunneis opacis 8-10 mm longis paullo compressis 6-7-squamis late lanceolatis acutulis vel obtusulis usque ad 7 mm longis deciduis, inferioribus 2-3 vacuis minoribus, reliquis perfecte floriferis, carina concolore, margine leviter puberulis, staminibus 3, antheris ---, achenio globoso-obovato trigono sessili, facie obsolete undulato-tuberculato, stylo tenui glabro basi aequali, stigmatibus 3, setis hypogynis nullis.—Affinis *S. Tenaci* Hook. f. sed bractearum vaginis brevibus, staminibus 3, distinctus.

Nom. Jap. Jo-i.

Hab. Ins. Bonin: Chichijima (K. OGURA), do. (NAKAI in Hb. Univ. Tokyo), do. (OGURA et HONDA in Hb. Univ. Tokyo).

3. *Schoenus apogon* ROEM. et SCHULT.

Schoenus apogon ROEM. et SCHULT. Syst. Veget. 2 (1817) 77; C. B. CLARKE in Journ. Linn. Soc. Bot. 36 (1903) 261 et ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 193; MATSUM. Ind. Plant. Japon. 2:1 (1905) 160; KÜKENTH. in Fedde Repert. 44 (1938) 91.

Chaetospora albenscens FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 122 et 548.

Chaetospora japonica FRANCH. et SAVAT. l. c.

Schoenus albenscens (FRANCH. et SAVAT.) MATSUM. Catal. (1886) 219; MAKINO in Bot. Mag. Tokyo 12 (1898) 15.

Dense caespitosus erizomatosus, culmo tenuissimo 10-25 cm alto laevi sulcato-striato, medio 1-2-phyllo, foliis basilaribus erectis culmo vix latiori-

bus et brevioribus $\frac{1}{2}$ mm latis, convolutis sulcatis sursum parce scabris, apice abrupte acutis, vaginis partim rubescentibus, ore glabro, spiculis 4-6 mm longis compressis stramineis et saepissime atosanguineotinctis glabris lanceolatis acutis 5-6-squamatis, in corymbis 2-3 umbellatis vel glomeratis 2-10-spiculatis distantibus dispositis, bracteis vaginatis brevifoliaceis, squamis subrigidis glabris, carina viridi saepe scabriuscula, inferioribus 2-3 vacuis 2-3-plo brevioribus, apice obtusulo mucronulatis, superioribus fertilibus lanceolatis 3-4 mm longis apice obtusulis, demum ab axi deciduis, margine sessili, apice mucronato, ex toto minutissime reticulato, stylo 1.5 mm longo glabro tenui basi aequali, stigmatibus 3 pilosulis 1.5 mm longis, setis 6 fere 2 mm longis tenuissimis antrorsim scabris.

Nom. Jap. Nogusa, Hige-kusa

Hab.

Hondo: Katata in Tamba (S. Hosomi), Matsushima (U. FAURIE n. 1025), Abuto in Tomo, Prov. Bingo (Z. TASHIRO), Shinohara in Omi (C. HASHIMOTO), in prov. Kii (N. UI), Iwanemura in Omi (C. HASHIMOTO), Kinseisui in Ise (Z. TASHIRO), in littore Otsuka in Iwami (H. TAMURA), basi m. Rokko in Settsu (Z. TASHIRO; S. OKAMOTO), Takashihara in Mikawa (S. MIKI).

Shikoku: Matsuyama (H. YAMAMOTO), in prov. Iyo (Z. TASHIRO), in prov. Sanuki (S. OSHIMA), basi m. Seta in Iyo (I. Yogo).

Kiushiu: m. Wakasugiyama in Chikuzen (S. HATUSIMA), Umi in Chikuzen (Z. TASHIRO), m. Inunakiyama in Chikuzen (leg.?), Yunoso in Chikugo (Z. TASHIRO), Onomura in Chikuzen (Y. DOKI).

Riukiu: ins. Amami-oshima (U. FAURIE n. 4335), ins. Tokunoshima (H. OHBA), ins. Iheya (S. TAMASHIRO; S. SAKAGUCHI).

4. *Schoenus falcatus* R. Br.

Schoenus falcatus R. Br. Prodr. (1810) 232; KUNTH Enum. Plant. 2 (1837) 336; HENRY List Plant. Formos. (1896) 105; BENTH. Flor. Austral. 7 (1878) 372; C. B. CLARKE in Journ. Linn. Soc. Bot. 38 (1903) 261; MATSUM. Ind. Plant. Japon. 2:1 (1905) 160; MATSUM. et HAYATA Enum. Plant. Formos. (1906) 492; E. G. CAMUS in LECOMTE Flor. Génér. Indochin. 7 (1912) 150; MERRILL Enum. Philip. Flow. Pl. 1 (1922) 128; KÜKENTH. l. c. (1938) 24.

Cladium undulatum (non THW.) HENRY, List Pl. Formos. (1896) 105.

Caespitosus, culmo 2-3 ped. alto tereto-compresso laevi remote paucifoliato striato, angulo obtuso in parte superiore scabriusculo, foliis elongatis canaliculato-planis rigidulis 2-5 mm latis praeter marginem scabram laeviusculis, subtus striatis, apice attenuato-triquetris, vaginis basilaribus atosanguineis nitidis integris, ligula nulla, inflorescentia paniculata angusta, paniculis partialibus paucis vel pluribus 1-3-nis pluri-multi-floris 2-10 cm longis densis vel laxis, pedunculis ramulisque ancipitibus, angulo scabro, bracteis inferioribus vaginatis foliaceis, vaginis saepius fusco-sanguineis, bracteolis vaginas breves brunneas brevisetaceas reductis, spiculis fusco-brunneis compressis 8-10 mm longis late lanceolatis saepe falcatis 7-8-squa-

matibus, squamis inferioribus 2-3 vacuis minoribus, reliquis fertilibus lanceolatis glabris submembranaceis obtusulis, dorso viridicarinato scabris, demum ab axi deciduis 6-7 mm longis, staminibus 3, achenio trigono late ovoideo nitidulo luteo fuscotincto 1.3 mm longo sessili minute foveolato, superne parce hispido-pilosulo, stylo deciduo glabro basi sensim leviter incrassato, stigmatibus 3, setis 2-3 tenuissimis antrorsim parce pilosis.

Nom. Jap. O-higekusa.

Hab.

Riukiu: ins. Kumejima (H. KUROIWA), ins. Iheya (S. SAKAGUCHI), ins. Okinawa (S. TAWADA).

Formosa: Kwarenko (Y. SHIMADA n. 10).

Gen. 11. *Eleocharis* R. BR. (Nom. conserv.)

Eleocharis R. BR. Prodr. (1810) 224; KUNTH, Enum. Plant. 2 (1837) 139; STEUD. Synops. 2 (1855) 75; ECKL. in Linnaea 36 (1870) 418; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1047; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 112; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 105; BRACK. et FERN. in Rhodora 31 (1929) 57; SVENSON, ibid. 31 (1929) 147.

Trichophyllum EHRH. Beitr. 4 (1789) 147.

Bulbostylis STEV. in Mém. Soc. Nat. Mosc. 5 (1813) 355.

Limnochloa BEAUV. in LESTIB. Ess. fam. Cyperac. (1819) 41.

Clavula DUMORT. Flor. Belg. (1827) 143, p. p.

Chaetocyperus NEES in Linnaea 9 (1834) 289.

Scirpidium NEES, l. c. 293.

Limnochloa NEES, l. c. 294.

Limnocharis KUNTH, Enum. Plant. 2 (1837) 153.

Herbae perennes vel annuae interdum stoloniferae, culmis caespitosis simplicibus praeter basin nudis, foliis ad vaginam reductis, spiculis terminalibus solitariis erectis ebracteatis rarissime basi proliferis, plurimifloris, floribus hermaphroditis, squamis undique, rarissime subdistiche imbricatis, inferioribus 1-2 vacuis, setis hypogynis 0-6 vel 7-8, staminibus 1-3, stylo supra basin bulboso-incrassatam (stylopodium) persistentem tenui continuo, ramis stigmatosis 2-3, achenio trigono vel compresso saepe obovato.

1. Spiculae cylindricae non vel vix crassiores quam culmi, squamae plus minus rigidulae plerumque multinervulosae vix carinatae plerumque viridescentes vel stramineascentes, stigmatibus 2-3. (Ser. *Mutatae* SVENS.). Sect. *Limnochloa* (NEES) BENTH.
2. Culmi non septati, achenia longitudinaliter striata, cellulis extimis transverse oblongis.
 3. Culmi acute triquetri, annulus (i. e. basis stylopodii) basi constrictus, antherae 2-3 mm longae. *E. fistulosa.*
 3. Culmi teretes, annulus basi non constrictus, antherae 1-1.5 mm longae. *E. ochrostachys.*
2. Culmi transverse septati, achenia non striata, cellulis extimis minutis 4-6-gonis.
3. Squamae late ellipticae apice rotundatotruncatae, annulus obsoletissimus margine ascendens, antherae apice triangulato-productae. *E. dulcis.*

3. Squamae anguste oblongae, apice obtusae, annulus subdistinctus margine erectus, antherae apice lineari-productae. *E. Kuroguwai.*
1. Culmi tenues, quam spiculae plerumque multo angustiores, squamae plerumque membranaceae. Sect. *Scirpidium* BENTH. (emend.).
2. Stigmata 3.
3. Stylopodia sessilia cum achenio continua, basi sine constrictione. (Ser. *Pauciflorae* SVENS.).
4. Achenia absque stylopodio 3 mm longa basi attenuata, annulo distincto lato terminata, culmi 25–50 cm alti, spicula ca. 10 mm longa. *E. margaritacea.*
4. Achenia vix 1 mm longa basi non attenuata, apice exannulata, culmi ca. 3–5 cm alti pergraciles, spicula ca. 3 mm longa. *E. parvula.*
3. Stylopodia basi constricta, ab achenio distincte separata.
4. Planta parvula, achenia longitudinaliter elevato-striata et transverse septulata, cellulis extimis transverse linearibus. (Ser. *Aciculares* SVENS.). *E. acicularis.*
4. Achenia laevia, cellulis extimis vix visibilibus, longitudinaliter oblongis vel sublinearibus. (Ser. *Multicaules* SVENS.).
5. Plantae subtenues, culmi plerumque acute 3–5-quetri, spiculae 10–20 mm longae elongatae, stylopodia spongiosa majuscula.
6. Setae hypogynae retroso-spinulosae, squamae (excl. var.) subcoriaceae obtusae. *E. tetraquetra.*
6. Setae hypogynae plumosae, squamae membranaceae perobtusae. *E. Wichurai.*
5. Plantae tenues saepe subcapillaceae, culmi obtuse costati, spiculae plerumque minus quam 1 cm longae.
6. Stylopodia ca. $\frac{1}{3}$ achenii aequilata vel angustiora. *E. pellucida.*
6. Stylopodia achenii latit. fere aequilata. *E. leviseta.*
2. Stigmata 2.
3. Stylopodia non spongiosa, achenia nitida, plantae (in nostr.) tenues, spiculae ovatae.
4. Stylopodia compressa lamelliformia, achenia pallida demum brunnescentia. (Ser. *Ovatae* SVENS.). *E. soloniensis.*
4. Stylopodia depressa conica vix compressa non lamelliformia, achenia maturitate nigrescentia. (Ser. *Maculosae* SVENS.—Subser. *Rigidae* SVENS.)
5. Culmi tenuissimi, vagina summa apice tenuimembranacea oblique fissa, achenia 0.5 mm longa, setis hypogynis albidis tenuibus. *E. atropurpurea.*
5. Culmi tenues, vagina summa apice oblique truncata diu persistens, achenia 1 mm longa, setis hypogynis ferruginescentibus rigidulis. *E. caribaea.*
3. Stylopodia spongiosa, achenia vix nitida, plantae stoloniferae robustiores, spiculae plerumque elongatae. (Ser. *Palustriformes* SVENS.—Subser. *Palustres* SVENS.).
4. Squamae infimae tantum steriles, stylopodium magnum, quam achenia aequilatum valde spongiosum. *E. kamtschatica.*
4. Squamae inferiores 2 steriles, stylopodia multo angustiora ac breviora quam achenia.

5. Setae hypogynae 5-6, culmi in sicco valde compressi robusti, spiculae ferruginescentes. *E. mamillata.*
5. Setae hypogynae 4 vel 0, culmi leviter compressi.
6. Setae hypogynae rigidae achenio subtriplo longiores strictae, spinulis brevissimis densis retroso-scabrae. *E. parvinux.*
6. Setae hypogynae tenues achenio sesqui-duplo tantum longiores flexuosae ferrugineae, spinulis brevibus laxiusculis retrososcae. *E. valleculosa.*
7. Culmi elevato-costati, squamae sanguineo-tinctae obtusissimae. *E. intersita.*
7. Culmi obsolete tantum striati vel laeves, squamae atropurpureo-fuscae obtusae vel subacutae.

1. *Eleocharis fistulosa* LINK

Eleocharis fistulosa (POIR.) LINK in SPRENG. Jahrb. 3 (1820) 78; SCHULT. Mant. 2 (1824) 89; BÜCKL. in Linnaea 36 (1870) 472; BENTH. Fl. Austr. 7 (1878) 293; C. B. CLARKE in Hook. f. Fl. Br. Ind. 6 (1893) 626 et in DUR. et SCHINZ, Consp. Fl. Afric. 5 (1895) 598 et in Illust. Cyper. (1909) t. 35, f. 1-4; MAKINO in Bot. Mag. Tokyo 18 (1904) 109; MATSUM. Ind. Pl. Japon. 2:1 (1905) 145; HAYATA, Icon. Pl. Formos. 6 (1916) 107; SVENS. in Rhodora 31 (1929) 152 et 41 (1939) 4.

Scirpus fistulosus POIR. Encycl. 6 (1804) 749.

Scirpus acutangulus ROXB. Fl. Ind. ed. WALL. 1 (1820) 216.

Scirpus medius ROXB. l. c.

Limnochloa acutangula et *media* (ROXB.) NEES in WIGHT, Contrib. Bot. Ind. (1834) 114.

Rhizomate breviusculo subcaespitoso longe stolonifero, culmis 40-80 cm altis mollibus acute triquetris laevibus obsolete striatis 2.5-4 mm facie latis, vaginis summis tenuibus 5-10 cm longis apice obtusulo oblique fissis, saepe rubescentibus, spicula cylindracea 2-3 cm longa 3-4 mm lata apice acutiuscula cinerascens pallide viridi tereti laxiuscule pluriflora erecta, squamis adpressis, inferioribus 2 sterilibus, late ovatis obtusissimis glabris cinerascens herbaceis multistriatis margine anguste scariosis demum deciduis 4-5 mm longis dorso rotundatis, medio intus tantum tenuiter uninnervis, rhachilla alata, achenio ca. 1.5-2 mm longo late obovato pallide stramineo nitido crasse biconvexo utrinque longitudinaliter pluristriato, cellulis extimis transverse oblongis, stylopodio subelongato-deltaideo, annulo (i. e. basi stylopodii) $\frac{2}{3}$ latitud. achenii aequilato basi constricto, stylo incl. stigm. 7 mm longo tenui, glabro, stigmatibus 3 fere 4 mm longis tenuibus parce papillois, setis hypogynis 6 rigidis stylopodium subsuperantibus praeter basin retroso-scabris, staminibus 3, antheris linearibus 2-3 mm longis flavidis apice minutissime mucronatis.

Nom. Jap. Misumi-i.

Hab.

Hondo: Tanabe in Kii (N. UI), Shinjo in Kii (T. NAKAJIMA).

Kiushiu: Osadaike in Buzen (Z. TASHIRO).

Riukiu; ins. Ikebaru in ins. Okinawa (S. TAWADA n. 93), Gotenshiki, ins. Okinawa (S. TAWADA n. 809), ins. Miyako (S. SAKAGUCHI), Ikema, ins. Miyako (G. KOIDZUMI).

Formosa: Toyen (Y. SHIMADA n. 291), Jitsugetsutan (S. MIKI).

2. *Eleocharis ochrostachys* STEUD.

Eleocharis ochrostachys STEUD. Synops. 2 (1855) 80; C. B. CLARKE in Hook. f. Flor. Brit. Ind. 6 (1893) 626.

Scirpus laxiflorus THW. Enum. Pl. Zeyl. (1864) 435.

Eleocharis variegata PRESL var. *laxiflora* (THW.) C. B. CLARKE in Hook. f. l. c. (1893) 601 et in Journ. Linn. Soc. 36 (1903) 229; MATSUM. Ind. Pl. Japon. 2:2 (1905) 147; SVENS. in Rhodora 31 (1929) 156.

Eleocharis laxiflora (THW.) H. PREIFF. in Mitt. Inst. Bot. Hamb. 7 (1928) 169; SVENS. l. c. 41 (1939) 8.

Rhizomate brevi subcaespitoso longe stolonifero, culmis pluribus 50-80 cm altis strictis nitidulis teretibus interdum obsolete angulatis, in sicco saepe longitudinaliter striatis, 2-3 mm inferne latis, sub spicula 1.2-1.8 mm latis, vaginis summis 7-10 cm longis apice oblique truncatis, inferne saepe rubescentibus, spicula cylindrica 1-2 cm longa subangulata laxè pauci- vel pluri-flora pallide viridi interdum ferrugineosuffusa 3-4 mm lata, squamis erectis infima amplexante sterili, reliquis fertilibus oblongo-ovatis herbaceis 4-5 mm longis obtusis viridulis multinervulosis margine latiuscule scariosis dorso rotundatis, achenio late obovato stramineo-brunneo 1.5-2 mm longo crasse inaequaliter biconvexo nitido longitudinaliter pluristriato, cellulis extimis transverse oblongis, stylopodio e basi lata non constricta sursum subabrupte angustato elongato-triangulari compresso, annulo $\frac{1}{2}$ latit. achenii eaquilato, stylo tenui 5-6 mm longo glabro, stigmatibus 3 parce papulosis 3-4 mm longis, setis hypogynis 6-7 rigidis achenium duplo superantibus retrososcabris, staminibus 2, antheris linearibus 1-1.5 mm longis apice breviter deltoideo-productis.

Nom. Jap. Tokusa-i, Shima-harii.

Hab.

Riukiu: ins. Iriomote (G. KOIDZUMI), Kitadanimura, ins. Okinawa (Y. TAIRA), Gotenshiki, ins. Okinawa (S. TAWADA n. 808).

Formosa: Tamsui (fide MATSUMURA, l. c.).

3. *Eleocharis dulcis* TRIN.

Eleocharis dulcis (BURM. f.) TRIN. ex HENSCHEL, Vita Rumph. (1833) 186; MERR. Interpr. Herb. Amb. (1917) 104 et Enum. Philipp. Fl. Pl. 1 (1922) 119; SVENS. in Rhodora 31 (1929) 158 (excl. t. 188, f. 16) et 41 (1939) 11, t. 537, f. 6.

Cyperus dulcis RUMPH. Herb. Amb. 6 (1750) 7, t. 3, f. 1.

Andropogon dulce BURM. f. Fl. Ind. (1768) 219.

Scirpus plantaginoides ROTTB. Descr. et Icon. (1773) 45.

Hippuris indica LOUR. Fl. Cochinch. (1790) 16.

Scirpus plantagineus RETZ. Observ. 5 (1789) 14.

Eleocharis plantaginea (RETZ.) ROEM. et SCHULT. System. 2 (1817) 150; BÜCKL. in Linnaea 36 (1870) 474 ex pte; C. B. CLARKE in Hook. f. Fl. Brit. Ind. 6 (1893) 625 et in Journ. Linn. Soc. 36 (1903) 228; MATSUM. Ind. Plant. Japon. 2:2 (1905) 146.

Rhizomate brevi longe stolonifero, stolonibus demum apice tuberiferis,

culmis subpluribus 40-80 cm altis strictis teretibus cinereoviridibus laevibus in sicco nodulosis 2-5 mm, sub spicula 2-3 mm latis obsolete striatis, vaginis 5-20 cm longis saepe rubescentibus, apice mutico oblique fissis, spicula cylindrica albescente tereti 2-4 cm longa 3-4 mm lata obtusula subdense pluriflora, squamis adpressis, infima amplexante, reliquis fertilibus ellipticis 5-6 mm longis herbaceis albidis permultinervulosis, medio viridescente elevato-uninervatis, margine angustissime scariosis apice truncato-rotundatis, achenio late vel orbiculato-obovato lutescente vel brunnescente nitido 2 mm longo inaequaliter biconvexo laevi non striato, cellulis extimis irregulariter 4-6-gonis vel subrotundatis, stylopodio e basi lata abrupte angustato arcuato-brevi-deltaideo, annulo obsoletissimo $\frac{1}{2}$ latit. achenii aequilato, margine ascendente, stylo ca. 7 mm longo, stigmatibus 3 papulosis 3-4 mm longis, setis hypogynis 6-8 rigidis saepe rufescentibus retroso-scabris saepe inaequalibus achenio sesqui-duplo longioribus, staminibus 3, antheris linearibus 2-2.5 mm longis apice triangulato-productis.

Nom. Jap. Shiro-guwai, Inu-kuroguwai.

Hab.

Hondo: Funakoshimura in Shima (T. MAGOFUKU), Shinjomura in Kii (T. NAKASHIMA), Arimaiké, Minami-murogun in Kii (J. OHWI et M. TAGAWA n. 93).

Kiushiu: Setomura in Chikuzen (K. NAKASHIMA n. 176), Segawamura in Chikuzen (T. CHIBA).

Riukiu: prope Naha, ins. Okinawa (G. KOIDZUMI), Nakagami, ins. Okinawa (G. KOIDZUMI), ins. Miyako (Y. NAKAZONE), ins. Tanegashima (Z. TASHIRO).

Formosa: Shinko in Taihokushu (T. IRO), oppid. Shinchiku (Y. SHIMADA n. 4433), Sozan (Y. SHIMADA n. 5537).

4. *Eleocharis Kuroguwai* OHWI

Eleocharis Kuroguwai OHWI in Journ. Jap. Bot. 12 (1936) 654.

Scirpus plantagineus (non RETZ.) FRANCH. et SAVAT. Enum. Pl. Japon. 2 (1879) 111.

Eleocharis plantaginea (non ROEM. et SCHULT.) MATSUM. Ind. Plant. Japon. 2:2 (1905) 146 ex pte.

Eleocharis dulcis (vix TRIN., SVENS. in Rhodora 31 (1929) 158, quoad pl. ex japon., cum t. 188, f. 16.

Rhizomate brevi longestolonifero, culmis pluribus strictis teretibus cinereoviridulis 40-100 cm altis 3-5 mm latis glabris in sicco septatis, vaginis summis 10-25 cm longis interdum rubescentibus apice mutico oblique fissis tenuiter membranaceis, spicula cylindrica pallide virente subtereti acutiuscula sublaxe pluriflora 2-4 cm longa 3-4 mm lata pallide viridi, squamis adpressis, infima amplexante, reliquis anguste oblongis 6-8 mm longis tenuiter herbaceis permultinervulosis obtusis vel obtusissimis margine anguste scariosis, achenio 2 mm longo inaequaliter crasse biconvexo brunneo-lutescente nitido laevi non striato late obovato, cellulis extimis 4-6-gonis, stylopodio e basi lata abrupte angustato breviter arcuato-deltaideo, annulo $\frac{1}{2}$ latitud. achenii aequilato subdistincto, margine erecto, stylo 8 mm longo tenui superne papuloso, stigmatibus 3 papulosis 5 mm longis, setis hypogynis

5-7 rigidulis retroso-scabris achenium sesqui-duplove superantibus, staminibus 3, antheris linearibus 2.5-3 mm longis apice longe lineari-productis.

Nom. Jap. Kuro-guwai.

Hab.

Hondo: Haramura in Aki (S. SUZUKI), Kai-inji in Yamahiro (H. YAMAMOTO), Mantomimura in Bizen (I. OKUBO n. 12), Mizoro, urbe Kyoto (N. KINASHI), Takaraike in Yamashiro (K. TAKEUCHI), Wajima in Noto (J. KIKKAWA), Misumura in Kii (N. Uti), Kitakogane in Shimoosa (J. OHWI).

Shikoku: Mikazuki in Kochi (I. OKUBO n. 12).

Kiushiu: Nagiasa in Buzen (K. IKEBE), Kasugamura in Chikuzen (K. NAKASHIMA n. 274), Tabusemura in Satsuma (Y. DOI).

Korea: Suigen (T. SAKATA), Dokushin, prope Ranan (R. SAITO n. 7483).

5. *Eleocharis margaritacea* MIYABE et KUDO

Eleocharis margaritacea (HULT.) MIYABE et KUDO, Fl. Hokk. a. Saghal. 2 (1931) 210; SVENSON in Rhodora 35 (1934) 386; ZINSERL in KOMAR. Flor. URSS. 3 (1935) 89. *Scirpus margaritaceus* HULT. Flor. Kamtch. 1 (1927) 167.

Rhizomate brevi ascendente estolonifero, culmis pluribus 25-50 cm altis profunde sulcatis laevibus tenuibus, vaginis summis 3-10 cm longis straminiscentibus arctis, apice oblique truncato membranaceis, spicula late lanceolata usque anguste ovata acutissima 7-12 mm longa 3-4 mm lata basi breviter attenuata aureo-brunnescente interdum fusco-tincta subdense paucipluri-flora nitidula, squamis suberectis inferioribus 2 sterilibus, infima sterili late ovata amplectente, reliquis fertilibus membranaceis fusco-aureo-tinctis 5-6 mm longis oblongo-ovatis superioribus angustioribus et involutis obtusis vel acutiusculis margine latiuscule tenuiter albo-scariosis, dorso clarius uninnervis, achenio obovato obtuse trigono pallido 3 mm longo basi attenuato obsolete impresse punctulato apice annulo lato humile terminato, stylopodio trigono depresso-deltaideo, stylo tenui 4 mm longo ultra medium usque trifido, stigmatibus papulosis, setis hypogynis 6 achenium superantibus retroscabris, staminibus 3, antheris brevi-linearibus 1 mm longis apice breviter productis.

Nom. Jap. Shiromino-harii.

Hab.

Kuriles: Furukamapp, ins. Kunashiri (J. OHWI n. 892, 943).

Yezo: Hamatombetsu in Kitami (J. OHWI n. 4533).

Hondo: Yanagisawa in Rikuchiu (Y. FUKUDA n. 711).

6. *Eleocharis parvula* LINK

Eleocharis parvula (ROEM. et SCHULT.) LINK ex BLUFF, NEES, et SCHAUER in BLUFF et FINGERH. Comp. Fl. Germ. ed. 2, 1:1 (1836) 93; HOOK. Brit. Flor. ed. 5 (1842) 418; SVENS. in Rhodora 31 (1929) 168; OHWI in Act. Phytotax. et Geobot. 4 (1935) 64; ZINSERL in KOMAR. Flor. URSS. 3 (1935) 63; MANSF. in Fedd. Repert. 45 (1933) 212.

Scirpus pusillus (non LINN.) VAHL, Enum. Pl. 2 (1803) 246.

Scirpus nanus (non POIR.) SPRENG. Pugill. 1 (1813) 4.

Scirpus pollicaris DEL. Flor. Egypte III. (1813) 50, t. 63, f. 10, cfr. SVENSON, l. c. 168, adn. 2.

Scirpus parvulus ROEM. et SCHULT. Syst. 2 (1817) 124; REICHB. Icon. Fl. Germ. 8 (1846) f. 706; ANDERSS. Cyper. Scand. (1849) 9; MEINSH. in Act. Hort. Petrop. 18 (1901) 238; ASCHERS. et GRAEBN. Synops. 2:2 (1904) 297.

Rhizomate vix evoluta, stolones tenues apice demum tuberiferos emittente, culmo flaccido capillaceo 3-5 cm alto compresso paucistriato laevissimo viridulo, vaginis membranaceis inconspicuis, spicula ovata vel oblonga compressa pallida stramineo-suffusa pauciflora ca. 3 mm longa, squamis subdistiche dispositis demum oblique erectis ovatis tenuimembranaceis pallidis nitidulis obtusulis dorso late viridescente-costatis, infima minori vacua, reliquis fertilibus ca. 1.5 mm longis, achenio obovato subinflato-trigono stramineo fere 1 mm longo laevi, cellulis extimis obsoletissimis minutis oblongis obscuriter striolato-reticulato, stylopodio sessili minuto triquetropyramidato, annulo non evoluta, stylo 1 mm longo tenui glabro ultra medium usque trifido, stigmatibus papulosis, setis hypogynis 4 tenuibus subinaequalibus achenium vix vel leviter tantum superantibus retrososcarberulis, staminibus 3, antheris linearibus 1 mm longis apice rubro lanceolato-productis.

Nom. Jap. Chabo-i.

Hab. Kiushiu: Imazumura, Itoshimagun in Chikuzen (S. HATUSIMA n. 8), Komoda, ins. Tsushima (K. NAKASHIMA n. 8495).

7. *Eleocharis acicularis* ROEM. et SCHULT.

Eleocharis acicularis (LINN.) ROEM. et SCHULT. Syst. Veg. 2 (1817) 154; KUNTH, Enum. Pl. 2 (1837) 141; NAKAI Flor. Korean. 2 (1911) 296 p. p.; SVENSON in Rhodora 31 (1929) 184 (var. *typica* SVENS.); MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 207 (var. *typica*); ZINSERL. in KOMAR. Fl. URSS. 3 (1935) 70; KITAGAWA, Lineam. Flor. Manshur. (1939) 118.

Scirpus acicularis LINN. Sp. Plant. (1753) 43; ASCHERS. et GRAEBN. Synops. 2:2 (1904) 303.

Rhizomate fere nullo, stolones pertenuis emittente, culmis capillaribus laevibus 3-10 cm altis sulcato-angulatis atroviridibus, vaginis tenuimembranaceis 2-10 mm longis saepe rubescentibus, apice oblique fissis obtusis, spicula ovata vel lanceolata pauciflora acuta 2-4 mm longa subcompressa, squamis oblongo-ovatis tenuimembranaceis pallidis et sanguineo-tinctis obtusulis vel acutis 1.5-2 mm longis suberectis medio viridi-costatis, inferioribus subdistiche dispositis, infima etiam saepe fertilibus, superioribus sterilibus, achenio obovato-oblongo pallido ca. 1 mm longo inflato obsolete trigono nitido glabro vix compresso facie longitudinaliter 3-4-striato et minute transverse septulato, cellulis extimis transverse linearibus, stylopodio triangulato depresso conico $\frac{1}{2}$ - $\frac{3}{4}$ latitud. achenii aequilato, stylo 1.5-2 mm longo tenui glabro ad medium usque trifido, stigmatibus papulosis, setis hypogynis in specim. nostr. nullo evolutis, staminibus 3, antheris linearibus 1 mm longis apice brevissime productis.

Nom. Jap. Chishima-matsubai.

Hab.

Kuriles: ins. Kunashiri (fide MIYABE et KUDO, l. c.).

Korea: in uliginosis vel in orizetis Ouen-san (U. FAURIE n. 962).

var. *longiseta* SVENSON in Rhodora 31 (1929) 189; MIYABE et KUDO, Fl. Hokk. a. Saghal. 2 (1931) 207; KITAGAWA, Lineam. Flor. Manshur. (1939) 118.

Scirpus acicularis (vix LINN.) FRANCH. et SAVAT. Enum. Pl. Jap. 2 (1879) 108.

Eleocharis acicularis (vix ROEM. et SCHULT.) MAXIM. Prim. Flor. Amur. (1859) 298; C. B. CLARKE in Journ. Linn. Soc. 33 (1903) 225, saltem p. p. major.; KOMAR. Flor. Manshur. 1 (1901) 350; saltem ex pte; MATSUM. Ind. Plant. Japon. 2:1 (1905) 144; MATSUM. et HAYATA Enum. Plant. Formos. (1906) 480; PALLA in Mond. Plant. (1910) 40; NAKAI, Flor. Korean. 2 (1911) 296 ex pte; HAYATA Icon. Plant. Formos. 6 (1906) 107.

? *Scirpus yokoscensis* FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 109 et 543. ex descr. et clave n. 2 in p. 545.

Eleocharis Svensonii ZINSERL. in KOMAR. Flor. URSS. 3 (1935) 71.

Setis hypogynis 3-4 interdum subinaequilongis achenium conspicue superantibus a typo differt.

Nom. Jap. Matsuba-i.

Hab.

Yezo: Hakodate (U. FAURIE n. 3196).

Hondo: Sendai (E. ISHIBA), Kosemura in Yetchiu' (T. OTAYA), urbe Niigata (E. YAWATAYA), Tamayamamura in Rikuchiu (G. TOBA), Hiroshima (T. SATO), Tokura, Ose in Kotsuke (J. OHWI et M. TAGAWA n. 721), Nerima in Musashi (S. OKUYAMA), Ikedamura in Kai (S. FUNO).

Shikoku: in aquis (U. FAURIE n. 11863), Kcchi (T. YOSHINAGA), Mishomura in Iyo (M. OGATA), oppid. Heijo in Iyo (M. OGATA).

Kiushiu: Mizushiromura in Chikuzen (S. HATUSIMA), Koiwai in Buzen (T. YAMAZAKI), Kajiki (Z. TASHIRO), Shimogomura in Buzen (K. IKEBE).

Korea: Kanyo in Keinan (J. OHWI n. 9099), Chinnampo (U. FAURIE n. 1337), Seiryori in Keiki (M. K. BOKU), ins. Quelpaert (J. OHWI n. 9324) ibid. (E. TAQUET n. 1963, 1970, 1974, 3461).

Riukiu: ins. Tokunoshima (H. OHBA), ins. Okinoerabu (H. OHBA), ins. Okinawa (T. KANASHIRO n. 44, Y. TAIRA).

Formosa: Takao (Y. SHIMADA n. 4435), Shinchiku (Y. SHIMADA n. 4432), orizetis Hokuto (U. FAURIE n. 172), Shirin, urbe Taihoku (T. TANAKA et Y. SHIMADA n. 13443).

8. *Eleocharis tetraquetra* NEES

Eleocharis tetraquetra NEES in WIGHT, Contrib. Bot. Ind. (1834) 113; KUNTH, Enum. Plant. 2 (1837) 150; BÜCKLER in Linnaea 36 (1870) 447; BENTH. Flor. Austral. 7 (1878) 294; C. B. CLARKE in Hook. f. Flor. Brit. Ind. 6 (1893) 630 et in Journ. Linn. Soc. 36 (1903) 229 ex pte et Illustr. Cyper. (1909) t. 37, f. 17-20; MATSUM. Ind. Plant. Japon. 2:1 (1905) 146 ex pte; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 121; SVENSON in Rhodora 41 (1939) 99 ex pte.

Limnochloa tetraquetra NEES l. c. pro syn.

Eleocharis erythrochlamys MIQ. Flor. Ind. Batav. 3 (1855) 300.

Rhizomate brevi, stolones lineari-squamosos interdum emittente, culmis, acute tetraquetris pluribus rigidulis glabris 1-2 mm latis 40-60 cm altis, facie obsolete 1-2-striatis vel laevibus, vaginis summis submembranaceis 7-15 cm longis stramineo-pallidis basi saepe rubro-brunnescentibus, apice brunnes-

cente truncatis et deltoideo-mucronatis, spicula oblongo-ovata vel late lanceolata saepe subsecunda tereti obtusula vel subacuta dense multiflora 8-17 mm longa 3-5 mm lata ferruginescente basi saepe subangustata, squamis inferioribus 3-subpluribus sterilibus et paullo minoribus sed praeter infimam medio late viridem subconformibus, oblongis obtusis subcoriaceis opacis ferrugineis dorso pallidiores obsolete uninerviis, margine anguste alboscariosis 3-4 mm longis adpressis, achenio obovato compresse convexo-obtusangulo pallide viridi-lutescente demum brunnescente subnitidulo sublaevi vel obsolete striolato-punctulato, cum stipite brevi latiusculo 1.5-2 mm longo, stylopodio compresso trigono spongioso albido alte vel humile deltoideo $\frac{3}{4}$ - $\frac{1}{2}$ longitud. achenii aequilongo, $\frac{1}{2}$ - $\frac{3}{4}$ latitud. achenii aequilato inferne papuloso, stylo 2.5-3 mm longo ad medium usque trifido, stigmatibus papulosis, setis hypogynis 6 rigidulis brunnescentibus strictis, spinulis densis quam latitudine setae 1-2-plo longioribus retrospinulosis, stylopodium vix vel leviter tantum superantibus, staminibus 3, antheris 1-1.7 mm longis linearibus apice brevissime acuto-productis.

Nom. Jap. Mashikaku-i.

Hab.

Hondo: Yunotsumachi in Iwami (S. TAKAGI).

Kiushiu Nishize in Higo (K. MAYEBARA n. 3578), Aida in Higo (K. MAYEBARA n. 380), Nagasaki (T. CHIBA), Shinokuri in Chikuzen (S. HATUSIMA), Hitotume in Higo (S. TOKUNAGA), Imutaike in Satsuma (Z. TASHIRO).

Riukiu: ins. Yakushima (G. KOIDZUMI; Z. TASHIRO), ins. Okinawa (S. SAKAGUCHI; S. TAWADA n. 777).

Formosa: Ryutan, Taikei in Shinchikushu (Y. SHIMADA n. 2344, flf.).

var. *Tsurumachii* (OHWI) OHWI in Act. Phytotax. et Geobot. 6 (1937) 151.

Eleocharis Tsurumachii OHWI in Act. Phytotax. et Geobot. 2 (1933) 29.

Culmis minus rigidis, spicula latiore, squamis latioribus magis obtusis membranaceis a typo differt.

Nom. Jap. Kadohari-i.

Hab.

Hondo: Tamatsukuri in Hitachi (H. TSURUMACHI).

9. *Eleocharis Wichurai* BÖCKL.

Eleocharis Wichurai BÖCKL. in Linnaea 36 (1870) 448; OHWI in Act. Phytotax. et Geobot. 2 (1933) 271; HARA in Bot. Mag. Tokyo, 52 (1938) 395, cum var. *teres* HARA et f. *petasata* (MAXIM.) HARA; KITAG. Lineam. Flor. Manshur. (1939) 121.

Scirpus hakonensis FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 110, nom. seminud.

Scirpus Onoei FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 544.

Scirpus Wichurai (BÖCKL.) FRANCH. et SAVAT. l. c. 544, non BÖCKL., 1870.

Scirpus yokohamensis O. KTZE. Rev. Gen. Plant. 2 (1891) 758.

Eleocharis tetraquetra var. *Wichurai* (BÖCKL.) MAKINO in Bot. Mag. Tokyo, 19 (1905) 16.

Scirpus petasatus MAXIM. in Bull. Soc. Nat. Mosc. 54:1 (1879) 64.

Eleocharis petasata (MAXIM.) ZINSERL. in KOMAR. Flor. USSR. 3 (1935) 589.

Eleocharis tetraquetra (non NEES) C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 229

ex pte et in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 203; MATSUM. Ind. Plant. Japon. 2:1 (1905) 146 pro pte; KOMAR. Flor. Manshur. 1 (1901) 351; NAKAI, Flor. Korean. 2 (1911) 297; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 210; SVENSON in Rhodora 41 (1939) 99 ex pte.

Rhizomate brevi interdum stolones lineari-squamatos emittente, culmis 30-50 cm altis pluribus molliusculis tenuibus glabris cinereo- vel pallide viridibus 0.5-1.5 mm latis acute 4-quetris vel triquetris (f. *petasata* HARA, l. c.) vel 5-6-quetris rarius subteretibus et costatis (f. *teres* HARA, l. c. pro var.—Nom. Jap. Inu-shikakui), vaginis summis 5-10 cm longis inferne saepe rubescentibus, apice saepe ferruginescente oblique truncatis et mucronulatis, spicula lanceolata usque oblongo-ovata acuta vel obtusula 10-15 mm longa 3-5 mm lata dense pluri-multiflora subtereti basi raro subattenuata subobliqua, squamis inferioribus 2 sterilibus, reliquis fertilibus membranaceis ellipticis vel oblongis 4-6 mm longis obtusissimis ferrugineo-tinctis, margine albo-scariosis adpressis, dorso pallide uninervi ante apicem evanidis, achenio late obovato compresso convexo-obtusangulo cum stipite lato 1.2-2.2 mm longo viridiluteolo demum brunnescente nitidulo, laevi vel obsolete striolato-punctulato, stylopodio compresso albido papuloso ovato vel ovato-deltoido quam achenium subaequilongum $\frac{1}{2}$ - $\frac{3}{4}$ latitud. achenii aequilato, stylo 3 mm longo ultra medium usque trifido, stigmatibus papillois, setis hypogynis 6 stylopodio aequilongis brunnescentibus latiusculis, pilis albidis patentibus vel subreflexis mollibus dense plumosis, staminibus 3, antheris linearibus 1-1.5 mm longis apice brevissime mucronatis.

Nom. Jap. Shikaku-i.

Hab.

Kuriles: ins. Kunashiri (J. OHWI n. 874, 999), ins. Shikotan (J. OHWI n. 770. 1086).

Yezo: Hakodate (U. FAURIE n. 1416, 5760), Yesan (U. FAURIE n. 5763).

Hondo: Sambongi (U. FAURIE n. 41), Shiroyamamura in Shimotsuke (H. SEKIMOTO), Sambonginuma in Uzen (S. OKUYAMA), Hanayamamura in Rikuzen (S. MURAI), Takahama in Hitachi (H. TSURUMACHI), Hokunomura in Mino (K. SHIODA), Hikiumamura in Totomi (G. HASHIMOTO), Ichinokuramura in Mino (K. SHIODA), Morioka (G. TOBA), Ukita in Bitchu (C. TSUBOI), Kosekimura in Iwaki (N. IMAI), Nozori-ike in Kotsuke (S. SAKAGUCHI), urbe Osaka (N. UI), Iwasaki in Mutsu (S. MURAMATSU), Koizumimura in Mino (K. SHIODA), Oze in Kotsuke (S. SUZUKI; J. OHWI et M. TAGAWA n. 25, 3988), Kumadoo in Shimotsuke (H. SEKIMOTO), Kurikomamura in Rikuzen (S. MURAI), Ogawamura in Kii (Y. OGAWA), Yatsumi in Kazusa (S. OKUYAMA), Kawaradamura in Noto (J. KIKKAWA), Kogashi in Shimotsuke (H. SEKIMOTO), Tanabe in Kii (T. NAKAJIMA), Otakizawa in Yetchu (T. OTAYA), Narai in Bitchu (Z. YOSHINO).

Shikoku: Ozu in Iyo (K. YAMASHITA), Sakawa in Tosa (T. YOSHINAGA), Mikazuki, urbe Kochi (I. OKUBO).

Kiushiu: Takaya-sanryo in Osumi (Z. TASHIRO), Koishiwara in Chikuzen (Z. TASHIRO), Hiranoyama in Chikugo (T. SUGINO), Kawamura in Higo (K. MAYEBARA n. 3576), Jizobaru in Bungo (K. IKEBE), m. Kuju (M. TAKENOUCHI n. 12683), Nishinomura in Higo (K. MAYEBARA n. 378), Nakabaru in Higo (K. MAYEBARA n. 381), Menda in Higo (K. MAYEBARA n. 379), m. Ehiko in Bungo (Z. TASHIRO).

Korea: ins. Quelpaert (E. TAQUET n. 2085, 2118, 2119), Gempo in Kannan (G. KOIZUMI), m. Banryusan in Keinan (N. NOMURA), Ouen-san (U. FAURIE n. 964),

Rahoku in Kampoku (R. SAITO n. 1544).

var. *liukiensis* (MAKINO) OHWI, comb. nov.

Eleocharis liukiensis MAKINO in Bot. Mag. Tokyo 18 (1904) 111.

Culmis teretibus ca. $2\frac{1}{3}$ mm diam. sola a typo differt.

Nom. Jap.

Hab.

Riukiu: ins. Okinawa (Y. TASHIRO).

var. *yezoensis* HARA in Bot. Mag. Tokyo, 52 (1933) 396, sub. *E. tetraquetra*.

Eleocharis yezoensis HARA, ibid.

Differt omnibus partibus minoribus, squamis membranaceis apice rotundatis.

An? *E. Wichur* i x *E. pellucida*.

Nom. Jap. Hime-shikakui.

Hab.

Yezo: in marshy places of Mt. Apoi in Hidaka (H. HARA).

10. *Eleocharis pellucida* PRESL

Eleocharis pellucida PRESL Rel. Haenk. 1 (1830) 196; STEUD. Synops. 2 (1855) 80; MIQ. Flor. Ind. Batav. 3 (1855) 301; HAND. MAZZ. Symb. Sinic. Anth. 7 (1936) 1250; SVENSON in Rhodora 41 (1939) 101.

Eleocharis afflata STEUD. in ZOLL. Verz. Ind. Archip. (1854) 84 et l. c. (1855) 76; MAKINO in Bot. Mag. Tokyo (1890) 229; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 629 et in Journ. Linn. Soc. 36 (1903) 226; MATSUM. Ind. Plant. Japon. 2:1 (1905) 144; CAMUS in Lecomte, Fl. Indoch. 7 (1912) 87; MERR. Enum. Philipp. Fl. Pl. 1 (1922) 119.

Scirpus afflatus (STEUD.) BENTH. Flor. Hongk. (1861) 394; FRANCH. et SAVAT. l. c. 109.

Eleocharis subprolifera STEUD. Synops. 2 (1855) 80; BÖCKLER. in Linnaea 36 (1870) 426.

Eleocharis pileata A. GRAY, Bot. Jap. (1859) 417 ex pte.

Eleocharis japonica MIQ. in Ann. Mus. Bot. Lugd. Batav. 2 (1865) 142; KOMAR. Flor. Manshur. 1 (1901) 351; MATSUM. Ind. Plant. Japon. 2:1 (1905) 145; NAKAI, Flor. Korean. 2 (1911) 297; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 210; HARA in Bot. Mag. Tokyo 52 (1938) 395.

Scirpus japonicus (MIQ.) FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 109.

Eleocharis afflata var. *japonica* C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 203 ex pte.

Scirpus attenuatus FRANCH. et SAVAT. l. c. (1879) 543.

Eleocharis attenuata (FRANCH. et SAVAT.) PALLA in Mond. Pl. (1910) 40.

Eleocharis Shimadai HAYATA, Icon. Plant. Formos. 6 (1916) 107.

Eleocharis congesta (vix D. DON) C. B. CLARKE ex LÉVEILLÉ, l. c. 203; MATSUM. Ind. Plant. Japon. 2:1 (1905) 145.

Rhizomate vix evoluta estolonifero, culmis 5-40 cm altis capillaribus vel tenuibus laete viridibus glabris costato-angulatis $\frac{1}{2}$ -1 mm latis, vaginis summis tenuimembranaceis, basi saepe rubentibus, apice oblique truncato deltoideo-productis, spicula oblongo-ovata usque lanceolata raro globoso-ovata vel sublineari dense vel subdense pauci-pluri-raro submulti-flora obtusula usque acuta 3-8 mm longa 1.5-2.5 mm lata saepe basi prolifera, squamis praeter imam latiore latius viridi-costatam fertilibus ellipticis vel oblongis membranaceis pallidis 1.5-2.5 mm longis obtusis vel obtusissimis

demum saepius ascendentibus, plus minus ferrugineo-sanguinescentibus, margine albidis, dorso viridescente uninervis, achenio obovato vix compresso lutescente vel viridi-lutescente raro subolivaceo nitidulo, angulo subcostato inflato-trigono 0.7-1.2 mm longo laevi vel cellulis longitudinaliter oblongis planis obsoletissime punctulato-striolato, stylopodio trigono acuto-triangulato quam latitud. plerumque longiore vix spongioso $\frac{1}{2}$ - $\frac{1}{3}$ latitud. achenii aequilato, $\frac{1}{2}$ - $\frac{1}{3}$ longitud. achenii aequilongo, stylo ca. 1.5 mm longo tenui ultra medium usque trifido, stigmatibus papulosis, setis hypogynis 6 tenuibus achenia leviter vel subduplo longioribus retroso-scabris saepe ferruginescentibus, staminibus 2 linearilanceolatis 0.3-0.5 mm longis apice brevi-mucronatis.

Occurrit formae duae vix bene distinctae: forma 1. *japonica* (Miq. l. c., pro sp.). Nom. Jap. Harii; Culmis tenuissimis fere capillaceis, achenio plerumque 0.7-0.8 mm longo, setis hypogynis tenuioribus parce scabris achenium leviter tantum superantibus: forma 2. *attenuata* (FRANCH. et SAVAT. l. c., pro sp.). Nom. Jap. O-harii; Culmis elatioribus ac crassioribus, achenio plerumque 1-1.2 mm longo, setis hypogynis rigidioribus densius scabris achenio sesqui-duplo-ve longioribus.

Nom. Jap. Hari-i, O-harii.

Hab.

Yezo: Kuromatsunai (U. FAURIE n. 5734).

Hondo: Iwamimura in Iwami (I. MARUYAMA), m. Kirigamine in Shinano (H. TOBITA), m. Myokenyama in Kii (T. KOIDE), Nogimura in Izumo (M. HAYASHI), Wanimura in Omi (C. HASHIMOTO), Sugetoge in Yetchigo (M. NAKAMURA), m. Hakkoda (S. MURAI), Tamayamamura in Rikuchu (G. TOBA), Higashinemachi in Uzen (S. OKUYAMA), Kurikomamura in Rikuzen (S. MURAI), Toyonaka, urbe Osaka (N. Ur). urbe Aki-ta (S. MURAMATSU), Kosekimura in Iwaki (N. IMAI), Shirakawa in Iwaki (S. SUZUKI), Uji, urbe Kyoto (Z. TASHIRO), Iwakuni in Suwo (S. ONO), Itsukushi in Rikuchu (C. WAGAWA), Kinshosan in Omi (C. HASHIMOTO), Kamisuwa in Shinano (J. OHWI n. 8326), Narai in Bitchu (Z. YOSHINO), Sambongi (U. FAURIE n. 2), Morioka (U. FAURIE n. 6235), Wakayama (U. FAURIE n. 12020), Tsu (U. FAURIE n. 11344), Ganju (U. FAURIE n. 13633), presqu'île des vulcans (U. FAURIE n. 1474), Akita (U. FAURIE n. 1447, 13786), Kuroishi (U. FAURIE n. 1261), Aomori (U. FAURIE n. 1134, 4336), Sado (U. FAURIE n. 1839), To-gakushi (U. FAURIE n. 1838), Matsushima (U. FAURIE sin. num.), Kinkasan in Mino (S. KAWADA), Rokugomura in Rikuzen (S. MURAI).

Shikoku; Kochi (U. FAURIE n. 11853), Mikazuki in Tosa (I. OKUBO).

Kiushiu: Kasugamura in Chikuzen (S. HATUSIMA n. 1660), Shimohirokawamura in Chikugo (K. NAKASHIMA n. 177), m. Kuju (M. TAKENOUCI n. 12630), m. Kirishima (Z. TASHIRO).

Korea: ins. Quelpaert (E. TAQUET n. 1975, 1976, 3460; U. FAURIE n. 1402, 2242), Kan-yo in Keinan (J. OHWI n. 9102), Ouen-san (U. FAURIE n. 962).

Riukiu: ins. Yakushima (Z. TASHIRO), ins. Amamioshima (H. OHBA), ins. Okino-erabu (H. OHBA), ins. Okinawa (G. KOIDZUMI; Y. TAIRA; S. TAWADA n. 12), ins. Ishi-gaki (E. TAKAMINE).

Formosa: Shori in Shinchikushu (Y. SHIMADA n. 4009), Kwarei, Churei in Shin-chikushu (Y. SHIMADA n. 287).

var. *thermalis* (HULT.) HARA in Journ. Jap. Bot. 16 (1940) 263.

Scirpus japonicus FR. et SAV. var. *thermalis* HULT. Flor. Kamtch. 1 (1927) 165.

Eleocharis japonica Miq. var. *thermalis* (HULT.) HARA in Bot. Mag. Tokyo 52 (1938) 395.

Culmis humilibus rigidioribus diffusis, spicula raro prolifera subaxe pauci-pluriflora acuta fusco-purpurea, achenio olivaceo ca. 1.2 mm longo, stylopodio latiore, angulis basi leviter decurrentibus, setis hypogynis stylopodium subaequantibus.

Nom. Jap. Yezo-harii.

Hab.

Yezo: basi m. Apoi in Hidaka (fide. H. HARA l. c.).

Hondo: m. Amagi (K. HISAUCHI n. 761), Zeze in Otsu (C. HASHIMOTO), Suwa in Shinano (H. TOBITA), basi m. Tonomine in Yamato (Y. MURATA).

Shikoku: Mishomura in Iyo (M. OGATA).

Kiushiu: m. Onamiike in Osumi (Z. TASHIRO).

var. *Maximowiczii* (ZINSERL.) OHWI, comb. nov.

Eleocharis Maximowiczii ZINSERL. in KOMAR. Flor. URSS. 3 (1935) 88 et 588.

Eleocharis afflata var. *japonica* C. B. CLARKE ex LÉV., l. c. (1904) 203, ex pte.

Culmis tenuibus erectis, spicula raro prolifera oblongo-ovata vel ovata obtusula dense pluriflora pallide rubro-suffusa, achenio olivaceo 1.2 mm longo, stylopodio depresso deltoideo, setis hypogynis achenium vix superantibus.

Nom. Jap. Mansen-harii.

Hab.

Korea: Ouen-san (U. FAURIE n. 960), Daihozan in Heinan (M. K. BOKU), Genzan (S. KITAMURA n. 1985).

var. *nipponica* (MAKINO) OHWI, comb. nov.

Eleocharis nipponica MAKINO in Bot. Mag. Tokyo 18 (1904) 110.

Spicula lineari acuminata 7-17 mm longa 1.5-2.5 mm lata, squamis magis obtusis, achenio 1-1.3 mm longo, stylopodio ovato-triangulato vel oblongo-conico $\frac{1}{2}$ - $\frac{3}{4}$ longitud. achenii aequilongo.—An? *E. pellucida* × *E. Wichurii*.

Nom. Jap. Yari-harii.

Hab.

Hondo: Morioka (Y. FUKUDA), Shiroyamamura in Shimotsuke (H. SEKIMOTO), Ukarimura in Totomi (J. SUGIMOTO).

Kiushiu: Hatsukimura in Satsuma (Z. TASHIRO), m. Kurokami in Hizen (Z. TASHIRO).

11. *Eleocharis leviseta* NAKAI

Eleocharis leviseta NAKAI in Fedde Repert. 13 (1914) 246; SVENSON in Rhodora 41 (1939) 100.

Rhizomate brevi interdum breviramoso, culmis pluribus vel numerosis 30-50 cm altis costato-striatis glabris ca. 1 mm latis, vaginae summis 5-8 cm longis membranaceis inferne rubescentibus, apice ferrugineo oblique truncatis submucronulatis, spicula rarissime prolifera oblongo-ovata vel ovata obtusula dense submultiflora 4-12 mm longa tereti 2.5-4 mm lata, squamis conformibus inferioribus 1-2 sterilibus, ima amplexante, fertilibus ellipticis vel oblongis membranaceis ca. 2 mm longis rotundatis pallidis vel ferruginescentibus rubro-suffusis margine superne alboscariosis, medio saepius pallidioribus, achenio obovato lutescente vel demum brunnescente nitido laevi ca. 1.2 mm longo vix compresso obtuse trigono, stylopodio valde

depresso deltoideo $\frac{3}{4}$ -1 achenii latitud. aequilato, angulis inferne decurrentibus, stylo 1.5 mm longo ad medium usque trifido, stigmatibus papulosis, setis hypogynis 6 ferrugineis fere laevibus achenio subaequilongis, staminibus 2-3, antheris brevilinearibus ca. 0.7 mm longis apice brevimucronatis.

Nom. Jap. Chosen-harii.

Hab.

Korea. ins. Quelpaert (E. TAQUET n. 1965, 1972; U. FAURIE n. 1392).

Hondo: Kutsukake in Musashi (T. MIYAKE).

var. *major* (HARA) HARA in Journ. Jap. Bot. 14 (1938) 521.

Eleocharis major HARA, ibid. 11 (1935) 820; S. OKUYAMA, ibid. 12 (1936) 190.

Setis hypogynis distincte retroso-scabris achenio plerumque paulo longioribus.

Nom. Jap. Seitaka-harii.

Hab.

Hondo: Ichinomiya in Bizen (Z. TASHIRO), Ikuimura in Shimotsuke (H. SEKI-MOTO), m. Kiyosumi in Awa (S. ASANO), Hirosaki (U. FAURIE n. 999), Matsushima (U. FAURIE n. 1000), Notojima in Noto (J. KIKKAWA), Kinugasayama in Yamashiro (Z. TASHIRO), Aomori (U. FAURIE sin. num.), Yamadera in Uzen (Y. YUKI), Ikeko in Sagami (T. MOMIYAMA), Tonomine in Yamato (Y. MURATA).

Shikoku: Tokushima (U. FAURIE n. 4349), Kinzoji in Sanuki (OSHIMA).

Kiushiu: ins. Tsushima (K. NAKASHIMA n. 331), ins. Fukuejima (M. TAKENOUCHI), Yabakei in Bungo (T. YAMAZAKI), Akamachi in Chikuzen (S. HATUSIMA n. 1662).

Riukiu: ins. Miyako (Y. NAKAZONE).

12. *Eleocharis soloniensis* HARA

Eleocharis soloniensis (DUBOIS) HARA in Journ. Japan. Bot. 14 (1938) 338, cum var. *nipponica* HARA; KITAGAWA, Lineam. Flor. Mansh. (1939) 120; MANSF. in Fedde Repert. 46 (1939) 59.

Scirpus ovatus (non GILIB.) ROTH, Tent. Fl. Germ. 3 (1893) 562; ASCHERS. et GRAEBN. Synops. 2:2 (1904) 292.

Scirpus compressus MOENCH. Meth. (1794) 349.

Scirpus annuus (non ALL.) THUILL. Fl. Paris. ed. 2 (1799) 22.

Scirpus soloniensis DUBOIS, Méth. Orléan. (1803) 295.

Eleocharis ovata (ROTH) ROEM. et SCHULT. System. 2 (1817) 152; KUNTH, Enum. Plant. 2 (1837) 151; LEDEB. Flor. Ross. 4 (1853) 245; STEUD. Synops. 2 (1855) 79; MAXIM. Prim. Flor. Amur. (1859) 293; C. B. CLARKE in Journ. Linn. Soc. 25 (1887) 268 et in Hook. f. Flor. Brit. Ind. 6 (1893) 628; KOMAR. Flor. Mansh. 1 (1901) 349; SVENSON in Rhodora 31 (1929) 221; ZINSERL. in KOMAR. Flor. URSS. 3 (1935) 71; MIYABE et KUDO, Fl. Hokk. a. Sâghal. 2 (1931) 207; HARA l. c. 338 (var. *nipponica* HARA) in syn.

Rhizomate brevi ascendente, culmis pluribus tenuibus glabris sicco longitudinaliter sulcatis 6-40 cm altis, vaginis 10-30 mm longis pallide viridescentibus apice subrecte truncato submucronatis, spicula ovata vel late ovata dense multi- vel pluriflora obtusa 3-4 mm lata 4-8 mm longa tereti ferruginescente, squamis inferioribus 2 sterilibus late ovatis dorso latius viridinervis, reliquis fertilibus oblique patentibus ovatis vel oblongo-ovatis vel lateovatis membranaceis pallidis brunneo-suffusis dorso fascia lata viridula ante apicem evanida vix manifeste carinatis, 2-2.5 mm longis obtusis apice scariosis, achenio obovato pallido demum brunnescente ca. 1 mm longo

nitido glabro margine praesertim superne crasse subcostato, inflatobiconvexo, cellulis extimis inconspicuis, stylopodio compresso deltoideo $\frac{1}{2}$ - $\frac{3}{4}$ latitud. achenii aequilato, stylo 1.5 mm longo tenui ad medium usque bifido, stigmatibus breviter papulosis, setis hypogynis 6 achenio sesqui- vel (in specim. japon.) subduplo longioribus (var. *nipponica* HARA, l. c.) rigidulis retroso-scabris ferruginescentibus, staminibus 2, antheris lanceolatis $\frac{1}{2}$ - $\frac{3}{4}$ mm longis apice rubro-mucronatis.

Nom. Jap. Maruho-harii.

Hab.

Yezo: lac. Abashiri (S. MIKI).

Hondo: circa stat. Jokoeki in Iwaki (Y. HATTORI), Tsukinowamura in Iwashiro (S. SUZUKI), Shirokomaike, Yatsugatake in Shinano (S. MIKI; D. USHIYAMA), Tanabu (U. FAURIE n. 4652), lac. Kawaguchiko in Kai (S. OKUYAMA).

13. *Eleocharis atropurpurea* PRESL

Eleocharis atropurpurea (RETZ.) PRESL, Reliq. Haenk. 1 (1828) 196; KUNTH, Enum. Plant. 2 (1837) 151; BÖCKL. in Linnaea 35 (1870) 453, excl. var.; C. B. CLARKE in Journ. Bot. 25 (1887) 269 et in Hook. f. Fl. Brit. Ind. 6 (1893) 627 et in DUR. et SCHINZ, Consp. Flor. Afric. 5 (1895) 596 et in Journ. Linn. Soc. 226; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 119; SVENSON in Rhodora 31 (1929) 227; ZINSERL in KOMAR. Fl. URSS. 3 (1935) 72; OHWI in MAYEBARA, Flor. Austrohigoensis (1931) 83 et in Act. Phytotax. et Geobot. 1 (1932) 18, var. *Hashimotoi* OHWI.

Scirpus atropurpureus RETZ. Obs. 5 (1789) 14; REICHB. Icon. Flor. Germ. 5 (1846) f. 699.

Rhizomate nullo evoluto, culmis tenuibus vel subcapillaribus pluribus 5-15 cm altis erectis viridulis glabris sulcatis, vaginis membranaceis 5-15 mm longis inferne saepe rubescentibus superne pertenuibus apice oblique fisso muticis, spicula ovata vel oblongo-ovata subacuta dense pluriflora tereti 3-5 mm longa 2-2.5 mm lata rubro-purpurascens, squamis inferioribus 2 sterilibus dorso latiuscule viridibus, reliquis fertilibus tenuimembranaceis ellipticis obtusis pallidis et rubro- vel purpureo-tinctis dorso late viridicostatis demum oblique patentibus 1.5 mm longis, achenio obovato-obtriangulato biconvexo ca. 0.5 mm longo nigricante nitido laevi, cellulis extimis inconspicuis, stylopodio minuto depresso $\frac{1}{2}$ - $\frac{1}{3}$ latit. achenii aequilato, stylo tenui 1.5 mm longo superne $\frac{1}{2}$ bifido, stigmatibus papulosis, setis hypogynis 4-5 tenuibus albo-nitentibus achenium (in plantis japonensibus) semper superantibus (var. *Hashimotoi* OHWI) parce scabris, staminibus 1, antheris oblongo-linearibus $\frac{1}{2}$ - $\frac{3}{4}$ mm longis muticis.

Nom. Jap. Kuromino-harii.

Hab.

Hondo: Zeze, urbe Otsu in Omi (C. HASHIMOTO).

Kiushiu: Taragi in Higo (K. MAYEBARA).

Formosa: Takao (Y. SHIMADA n. 4434), inter Horai et Rokki in Takaoshu (S. OKAMOTO).

14. *Eleocharis caribaea* BLAKE

Eleocharis caribaea (ROTTB.) BLAKE in Rhodora 20 (1913) 24; MERR. Enum. Philipp. Fl. 1 (1922) 119; SVENSON in Rhodora 31 (1929) 225.

Scirpus caribaeus ROTTB. Descr. Pl. Rar. Progr. (1772) 24 et Descr. Icon. Nov. Pl. (1773) 46, t. 15, f. 3.

Scirpus capitatus (non LINN.) WILLD. Sp. Pl. 1 (1798) 294.

Eleocharis capitata R. BR. Prodr. (1310) 225 excl. syn.; BÖCKL. in Linnaea 36 (1870) 461; BENTH. Flor. Austral. 6 (1878) 296; C. B. CLARKE in HOOK. f. Flor. Brit. Ind. 6 (1893) 627 et in DUR. et SCHINZ, Consp. Flor. Afr. 5 (1895) 597 et in URB. Symb. Ant. 2 (1900) 66 et in Journ. Linn. Soc. 36 (1903) 227; MATSUM. Ind. Plant. Japon. 2: 1 (1905) 145, omn. excl. syn.

Rhizomate nullo evoluto, culmis pluribus caespitosis tenuibus sed non flaccidis pallide viridibus glabris pauci-costato-striatis 7-40 cm altis interdum diffusis, vaginis summis 10-30 mm longis viridulis inferne saepe rubescentibus apice subrecte truncato deltoideo-mucronatis diu persistentibus, spicula ovato-globosa vel ovata obtusissima ferrugineo-suffusa 3-7 mm longa 3-3.5 mm lata dense multiflora tereti, squamis infima latius viridi-nervata excepta conformibus, inferioribus 3-4 sterilibus, omnibus late ellipticis perobtusis membranaceis pallidis 2 mm longis oblique patentibus rubro-ferruginescentibus dorso inferne tantum medio viridescentibus, achenio late obovato nigricante 1 mm longo late obovato laevi compresso biconvexo, cellulis extimis obsoletis, stylopodio $\frac{1}{2}$ latitud. achenii subaequilato depresso apice abrupte angustato in stylum 1.5 mm longum superne $\frac{2}{3}$ - $\frac{3}{4}$ bifidum, stigmatibus dense et longiuscule papillois, setis hypogynis ca. 7 achenium parum superantibus ferrugineis rigidulis rectiusculis retroso-scabris, staminibus 2, antheris lineari-lanceolatis $\frac{2}{3}$ - $\frac{1}{2}$ mm longis apice breviter albo-mucronatis.

Nom. Jap. Tama-harii, Fushi-i.

Hab.

Riukiu: Awase, ins. Okinawa (S. TAWADA n. 71; Y. TAIRA), ins. Yagachi (Z. TASHIRO), ins. Okinawa (S. SAKAGUCHI), Nago, ins. Okinawa (T. MIYAGI).

Formosa: in paludibus Tamsui (U. FAURIE n. 795), fluv. Shimotansui (S. MIKI).

15. *Eleocharis kamtschatica* KOMAR.

Eleocharis kamtschatica (C. A. MEY.) KOMAR. Flor. Penins. Kamtsch. 1 (1927) 207; FERNALD et BRACKETT in Rhodora 31 (1929) 75, f. 32-33; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 209; OHWI in Bot. Mag. Tokyo 45 (1931) 184, cum var. *reducta* OHWI; ZINSERL. in KOMAR. Flor. URSS. 3 (1935) 81; HARA in Bot. Mag. Tokyo 52 (1938) 348.

Scirpus kamtschaticus C. A. MEY. in Mém. Acad. St.-Pétersb. Sav. Etr. 1 (1831) 193; HULT. Flor. Kamtsch. 1 (1927) 166,

Eleocharis pileata A. GRAY in Bot. Jap. (1859) 417, ex pte.

Scirpus sachalinensis MEINSH. in Act. Hort. Petrop. 18 (1901) 260.

Eleocharis Savatieri C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 203 nom. sol.; MATSUM. Ind. Plant. Japon. 2: 1 (1905) 146 nom. nud.; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 21 et Ill. Cyper. (1909) t. 36, f. 15-18.

Eleocharis sachalinensis (MEINSH.) KOMAR. in KOMAR. et ALIS. Key Pl. Far East. USSR. 1 (1931) 266; ZINSERL. l. c. 80.

Scirpus mitratus (non GRISEB.) FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 111 et 544.

Eleocharis mitrata (FRANCH. et SAVAT.) MAKINO in Bot. Mag. Tokyo 8 (1894) 330; KITAGAWA, Lineam. Flor. Manshur. (1939) 120.

Eleocharis uniglumis (non SCHULT.) FR. SCHM. Reis. Amurl. u. Sachal. (1868) 190; KOMAR. Flor. Manshur. 1 (1901) 349; KOIDZ. Plant. Sachal. Nakahar. (1910) 26; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1951) 209.

Eleocharis triflora (non BÖCKL.) KOMAR. in Fedde Repert. 13 (1914) 162.

Eleocharis Komarovii ZINSERL. in KOMAR. Flor. URSS. 3 (1934) 81.

Rhizomate stolonifero, culmis paucis usque subpluribus tenuibus subsulcatis 1-1.5 mm latis stramineo-viridibus 20-50 cm altis glabris, vaginis summis 5-10 cm longis, inferne rubescentibus, apice saepe ferruginescente recte truncatis et interdum triangulato-mucronatis, spicula ovata usque lanceolata 7-20 mm longa 3-5 mm lata acuta subdense pluri-pauci-flora subtereti fusco-sanguinescente, squamis ima tantum sterili basi amplexante, reliquis fertilibus oblongo-ovatis membranaceis 4-5 mm longis adpressis atrofusco-sanguineis obtusis vel acutiusculis margine p. m. alboscariosis, medio interdum pallidiore obsolete costatis, achenio lutescente vel demum brunnescente inflato-biconvexo 1-1.5 mm longo laevi vel obsolete punctulato, stylopodio magno subcompresso valde spongioso ovato usque deltoideo 1-2 mm longo quam achenio vix vel paullo tantum angustiore latioreve albido, apice saepe fulvescente, stylo 3 mm longo superne $\frac{1}{2}$ -bifido, stigmatibus papillois, setis hypogynis ca. 5 tenuibus ferruginescentibus saepe flexuosis quam achenio subbrevioribus vel sesqui-longioribus (forma *typica*, frequentior in parte borealiori.—Nom. Jap. Hime-numaharii) vel 0 (forma *reducta* OHWI, l. c. pro var., frequentior in parte australiori.—Nom. Jap. Kuro-harii), staminibus 3, antheris linearibus 1.5-2 mm longis breviter subulato-productis.

Nom. Jap. Kuro-harii, Hime-numaharii.

Hab.

Saghalien : Habomai (S. SUGAWARA), Kaitsuka (S. SUGAWARA), Tonaichan (U. FAURIE n. 846), Funakoshi (S. SUGAWARA), Sakaehama (S. OTAGIRI).

Kuriles : ins. Kunashiri (J. OHWI n. 891, 924), ins. Shikotan (J. OHWI n. 716, 817).

Yezo : Nemuro (J. OHWI ; S. SAKAGUCHI), Sekinai Date in Iburi (I. YAMAMOTO), Samani (Z. TASHIRO), Mororan (U. FAURIE n. 10278, 10289), Kushiro (U. FAURIE n. 5261 ; S. MIKI), Shari (J. OHWI n. 4831), Hariusu (J. OHWI), Mombetsu (U. FAURIE n. 657).

Hondo : Takahagi in Hitachi (H. TSURUMACHI), Oide in Rikuchu (Y. FUKUDA), ins. Hekura in Noto (S. YASUDA ; J. KIKAWA), Shimo-miyata in Sagami (T. MOMIYAMA), urbe Iwanuma in Rikuzen (K. NAOHARA), Shonai (U. FAURIE n. 2737), Isokawa in Shimotsuke (H. SEKIMOTO), Tamatsukuri in Hitachi (H. TSURUMACHI), Hamamatsu (leg. ?), Todogasaki in Rikuchu (Y. FUKUDA), ins. Sado (Y. IKEGAMI), Hayachine (U. FAURIE sin. num.), Akita (U. FAURIE n. 5735), Toya, Ogahanto (S. MUYAMATSU), Morioka (G. TOBA).

Kiushiu : Imazumura in Chikuzen (S. HATUSIMA), Saitozaki in Chikuzen (K. NAKASHIMA n. 330).

Korea : Mokpo (U. FAURIE n. 2243).

16. *Eleocharis mamillata* LINDB. f.

Eleocharis mamillata LINDB. f. in Act. Soc. Faun. et Flor. Fenn. 23 (1902) 7; FERN. et BRACKETT in Rhodora 31 (1929) 66.

var. *cyclocarpa* KITAGAWA, Lineam. Flor. Manshur. (1939) 119, emend.

Eleocharis ussuriensis ZINSERL. in KOMAR. Flor. URSS. 3 (1935) 75 et 581.

Eleocharis palustris (non ROEM. et SCHULT.) C. B. CLARKE ex LÉVEILLÉ, in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 203, quoad FAURIE n. 963; MATSUM. Ind. Plant. Japon. 2:2 (1905) 145 ex pte; NAKAI, Flor. Korean. 2 (1911) 297 ex pte.

Eleocharis mamillata (non LINDB. f.) MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 208.

Eleocharis cyclocarpa KITAGAWA l. c. (1939) 119, pro syn.

Rhizomate longe stolonifero, culmis solitariis vel saepissime paucis rarius subpluribus, subrobustis vel subtenuibus mollibus sicco compressis 1.5-5 mm latis laevibus obsolete striatis pallide vel stramineo-viridibus 30-70 cm altis, vaginis summis membranaceis subrecte truncatis inferne interdum rubescentibus, spicula lanceolata usque ovata 1-3 cm longa 3-6 mm lata obtusula ferruginescente dense multiflora tereti, squamis 2 inferioribus sterilibus $\frac{1}{2}$ -amplectentibus, reliquis fertilibus late lanceolatis usque oblongo-ovatis ascendentibus obtusulis vel superioribus acutiusculis ferrugineo-vel brunneo-tinctis membranaceis margine superne scariosis 4-5 mm longis, dorso fascia viridi demum concolore ante apicem evanidis, achenio biconvexo lutescente demum interdum pallide brunnescente vix nitido late vel orbiculato-obovato 1.5-2 mm longo laevi vel obsoletissime punctulato, stylopodio depresso deltoideo raro submamillato vel altiore quam latitud. $\frac{2}{3}$ - $\frac{1}{2}$ latit. achenii aequilato fungoso albescente, stylo 3 mm longo ad medium usque bifido, stigmatibus papillois, setis hypogynis 5-6 achenio duplo longioribus tenuibus ferruginescentibus, spinulis interdum subpatentibus retroso-scabris saepe flexuosis, staminibus 3, antheris 1.5-2 mm longis linearibus apice brevissime deltoideo-productis.

Nom. Jap. O-numaharii, Numa-harii, Futo-numaharii.

Hab.

Kuriles: ins. Kunashiri (J. OHWI n. 933; Y. MATSUMURA).

Saghalien: fide MIYABE et KUDO, l. c.

Yezo: Ochiai (U. FAURIE n. 5733), Nemuro (S. SAKAGUCHI), in palud. Ishikari (U. FAURIE n. 3290), Mororan (U. FAURIE n. 10290), Washibetsu (U. FAURIE n. 10318), Ranskosi in Shiribeshi (I. YAMAMOTO), Hokodate (U. FAURIE, sin. num.) Niki in Shiribeshi (I. YAMAMOTO), Samani in Hidaka (Z. TASHIRO), Abashiri (S. MIKI).

Hondo: Shirakawa in Iwaki (S. SUZUKI), in m. Sukawa in Rikuchiu (C. WAGAWA), Fuchu in Musashi (Z. TASHIRO; K. NUMAJIRI), Chikasonomura in Shimotsuke (H. SEKIMOTO), m. Mikuni in Omi (Z. TASHIRO), Nishihara in Mimasaka (K. NANIWA), Koizumi-numa in Ugo (S. MURAMATSU), Nanko in Iwaki (T. SUZUKI), ins. Miyake in Idzu (K. HAYASHI), m. Kirigamine in Shinano (S. MIKI), Ashiu in Tamba (Y. ARARI; M. TAGAWA), m. Chokaisan in Ugo (M. KATO), m. Yudonosan in Uzen (M. KATO), Morioka (Y. FUKUDA), Kurikomamura in Rikuzen (S. MURAI), lac. Nozori in Kotsuke (S. SAKAGUCHI), Kamikochi in Shinano (S. MIKI).

Kiushiu: Bogatsuru in Bungo (M. TAKENOUCHI), Nishimura in Higo (K. MAYEBARA), Kinoe in Higo (K. MAYEBARA).

Korea: Naipiang (U. FAURIE n. 963), Kan-yo in Keinan (J. OHWI n. 9077), Shinsenmen in Keinan (T. ISOMINE, ster.), Gosompo in Kampoku (R. SAITO n. 687), Enjomen in Kampoku (S. HATUSIMA), Seijori in Kannan (N. NOMURA).

17. *Eleocharis parvinux* OHWI

Eleocharis parvinux OHWI, sp. nov.

Rhizomate longe stolonifero, culmis pluribus vel paucis subtenuibus 30-60 cm altis glabris laeviter striatis 1-2 mm latis, vaginis summis membranaceis 10-20 cm longis inferne rubescentibus apice subrecte truncatis vix mucronatis, spicula oblonga usque oblongo-lanceolata tereti obtusula vel acutiuscula dense pluri-multi-flora 7-15 mm longa ferruginescente 3-4 mm lata, squamis 2 inferioribus sterilibus, imis $\frac{1}{2}$ -amplectentibus, reliquis fertilibus suberectis late triangulato-lanceolatis membranaceis ferrugineo- vel brunneo-tinctis acutis vel subacutis 3-4 mm longis margine late albo-scariosis medio pallido obsolete costatis, achenio lutescente obovato biconvexo 1-1.2 mm longo glabro laevi vel obsoletissime punctulato, stylopodio conico-deltaideo quam latitudine aequilongo subspongioso $\frac{2}{3}$ - $\frac{1}{3}$ achenii latitud. aequilato, stylo ca. 2 mm longo fere ad medium usque bifido, stigmatibus papilosis, setis hypogynis 4 pallidis rigidulis strictis quam achenia subtriplo longioribus, spinulis brevissimis rigidulis dense retroso-scabris, staminibus 3, antheris in specim. ab Ikuimura lecto 1.5 mm longis linearibus apice rubro-cuspidatis.

Nom. Jap. Kotsubu-numaharii.

Hab. Hondo: Akamamura in Shimotsuke (H. SEKIMOTO. Typus speciei), Ikuimura in Shimotsuke (H. SEKIMOTO).

18. *Eleocharis valleculosa* OHWI

Eleocharis valleculosa OHWI in Act. Phytotax. et Geobot. 2 (1933) 29, cum var. *setosa* OHWI; KITAGAWA, Lineam. Flor. Manshur. (1939) 121, cum f. *setosa* (OHWI) KITAGAWA.

Eleocharis palustris (non ROEM. et SCHULT.) C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 203, quoad FAURIE n. 961; NAKAI, Flor. Korean. 2 (1911) 297 ex pte.

Rhizomate stolonifero, culmis pluribus vel paucis 30-50 cm altis vix compressis tenuibus cinereo-viridibus crasse paucicostatis 1-2 mm latis, vaginis summis membranaceis 5-10 mm longis inferne saepe rubescentibus, apice truncatis, spicula oblongo-ovata usque lineari-lanceolata acuta vel obtusula dense pluri-multi-flora 7-15 mm longa 3-3.5 mm lata tereti, squamis inferioribus 2 sterilibus $\frac{1}{2}$ -amplectentibus, reliquis fertilibus oblongis suberectis 3-4 mm longis membranaceis sanguineo-tinctis obtusissimis vel obtusis, margine perlate alboscariosis, dorso pallido uninervis, achenio 1-1.3 mm longo biconvexo lutescente late obovato, laevi vel obsoletissime punctulato, stylopodio valde spongioso depresso conico-trapezoideo vel brevi-conico $\frac{1}{3}$

latitud. achenii aequilato, stylo 3 mm longo ad medium usque bifido, stigmatibus papillois, setis hypogynis 0 vel saepe evolutis 4 (form. *setosa* KITAG.) stylopodium conspicue superantibus tenuibus ferruginescentibus retroscabis saepe flexuosis, staminibus 3, antheris linearibus ca. 2 mm longis apice cuspidatis.

Nom. Jap. Suji-numaharii.

Hab.*) Korea: inter Kakuho et Koei in Kampoku (R. SAITO n. 2551), Ranan (R. SAITO n. 520), Koshu in Zennan (K. T. CHO n. 97), ins. Quelpaert (E. TAQUET n. 4023), Seoul (U. FAURIE n. 961), Enjomen in Kampoku (S. HATUSIMA, flf.).

Kiushiu: Ishuin in Satsuma (Y. DOI), urbe Miyazaki (S. WAKABAYASHI).

19. *Eleocharis intersita* ZINSERL.

Eleocharis intersita ZINSERL. in KOMAR. Fl. URSS. 3 (1935) 76 et 581; KITAGAWA, Lineam. Flor. Mansh. (1939) 119.

Eleocharis palustris (non ROEM. et SCHULT.) C. B. CLARKE ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 203 ex pte, quoad U. FAURIE n. 13796; MATSUM. Ind. Plant. Japon. 2:2 (1905) 146 ex pte; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 208; OHWI in Act. Phytotax. et Geobot. 2 (1933) 271.

Rhizomate longe stolonifero, culmis paucis vel subpluribus teretibus in sicco subcompressis striatis 30-60 cm longis 1.5-3 mm latis, vaginis summis 7-30 cm longis basi saepe rubescentibus subrecte truncatis interdum submucronatis, spicula late ovata usque oblongo-ovata raro late lanceolata dense pluriflora 7-15 mm longa obtusula vel acuta 3-5 mm lata, squamis inferioribus 2 sterilibus, reliquis fertilibus oblongo-ovatis obtusis vel subacutis 2.5-4 mm longis atro-purpureo-fuscis, medio praeter apicem pallide uninervis, margine latiuscule alboscariosis, ascendentibus vel subpatentibus, achenio lutescente demum brunnescente obovato vel late obovato vix nitido 1.2-1.7 mm longo biconvexo laevi vel obsolete punctulato, stylopodio deltoideo spongioso $\frac{1}{2}$ - $\frac{1}{3}$ latitud. achenii aequilato, latitudine longitudinem subaequante; stylo 2 mm longo ad medium usque bifido, stigmatibus papillois, setis hypogynis 4 tenuibus ferrugineis stylopodium subsuperantibus subflexuosis, spinulis nonnullis patentibus retroscabis, staminibus 2 vel 3, antheris linearibus 1.2-2 mm longis apice breviter triangulato-productis.

Nom. Jap. Kuro-numaharii, Numaharii.

Hab.

Saghalien: Nishitaraika (J. OHWI).

Kuriles: ins. Etorofu (D. MIYAGI), ins. Shikotan (J. OHWI n. 656), ins. Kunashiri (J. OHWI n. 972), ins. Shumushu (J. OHWI et R. YOSHII n. 57, 5678), ins. Paramushir (K. KISHIKAWA; J. OHWI et R. YOSHII n. 5459, 6095).

Yezo: prope Saruru (U. FAURIE n. 10387, ster., an ? *E. mamillata*).

*) Besidae the specimens cited above, I have examined the following.

Manchuria: Ryojun (J. SATO n. 5, 997, 993), Yugakujo (O. YAMATSUTA n. 67), Tokoshi (O. YAMATSUTA n. 65), Furanten (J. SATO n. 4).

China: Hopei (T. TANG n. 1988), Lingpao-hsien in Honan (K. M. LIU n. 4254, flf.), Nanyuan, urbe Peking (T. KANASHIRO n. 3578).

Hondo: m. Tsurugisan (U. FAURIE n. 13796), Guwassan (U. FAURIE n. 938), m. Hakkoda (S. MURAI), m. Sukawa in Rikuchu (H. IWABUCHI), m. Yakeishi in Rikuchu (Y. FUKUDA).

Gen. 12. *Bulbostylis* KUNTH (nom. conserv.)

Bulbostylis KUNTH, Enum. Plant. 2 (1837) 205; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 109.

Stenophyllus RAFIN. Neogenyt. (1825) 4.

Herbae annuae vel perennes, culmis tenuibus, foliis elongatis ad basin culmi confertis, filiformibus, inflorescentia terminali saepe irregulariter umbellata simplici vel composita raro capitato-glomerata basi saepe bracteata, spiculis plurifloris, floribus hermaphroditis, glumis undique imbricatis, setis hypogynis nullis, staminibus 1-3, stylo tenui basi bulbiformi saepe parva diu persistente, ramis 3, achenio obovato trigono.

1. Squamae ferrugineo-suffusae, apice excurvato-aristatae, achenia laevia.

B. barbata.

1. Squamae castaneae vel brunneae, apice muticae, achenia obsolete undulato-punctulata.

B. densa.

1. *Bulbostylis barbata* KUNTH

Bulbostylis barbata (ROTTB.) KUNTH, Enum. Plant. 2 (1837) 108; C. B. CLARKE in Hook. f. Flor. Brit. India, 6 (1893) 651 et in Journ. Linn. Soc. 36 (1903) 247 et ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 199; MAKINO in Bot. Mag. Tokyo 9 (1895) 390; PALIB. Consp. Flor. Korea. 3 (1901) 18; KOMAR. Flor. Manshur. 1 (1901) 345; MATSUM. Ind. Plant. Japon. 2:2 (1905) 97; NAKAI, Flor. Korean. 2 (1911) 295; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 127; KITAGAWA, Lineam. Flor. Manshur. (1939) 96.

Scirpus barbatus ROTTB. Descr. et Icon. (1773) 52, t. 17, f. 4; HANCE in Journ. Linn. Soc. 13 (1873) 131; BCKL. in Linnaea 36 (1870) 751.

Isolepis barbata (ROTTB.) R. BR. Prodr. (1810) 312; BENTH. Flor. Hongk. (1861) 393; MIQ. Prol. Flor. Japon. (1867) 75; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 115.

Fimbristylis barbata (ROTTB.) BENTH. Flor. Austral. 7 (1878) 321.

Isolepis Cumingii STEUD. Synops. 2 (1855) 101; MIQ. Fl. Ind. Batav. 3 (1855) 310.

Dense caespitosa estolonifera erizomatosa, culmis numerosis erectis tenuissimis glabris pluricostato-striatis strictis 5-40 cm altis nudis basi paucifoliatis, foliis culmo multo brevioribus capillaribus glabris paucicostatis subteretibus supra sulcatis quam culmi angustioribus laevibus vel superne parce scabris, apice sensim aristellato-attenuatis, vaginis 0.5-2 cm longis membranaceis ferrugineo-suffusis glabris, dorso viridulo costato-striatis, apice truncato antice brevi-fisso ore longe albo-hirtis, anthela e spiculis 2-15 sessilibus composita capitato-hemispherica 5-12 mm lata, bracteis 1-2 vel 3 e basi membranacea ferruginescente oblonga medio viridi setaceis anthelam aequantibus vel 2-3-plo superantibus patentibus, spiculis lanceolatis angulatis ferruginescentibus spiraliter pauci-pluri-floris 3-8 mm longis ca. 2 mm latis, squamis subdense dispositis omnibus vel praeter imam fertilibus

tenuimembranaceis glabris vel parcissime ciliatis ovatis enervibus ca. 2 mm longis pallidis ferrugineo-suffusis, e dorso crasso viridi-carinato superne saepe scabriusculo excurvato-cuspidatis, achenio trigono late orbiculato-obovato albido laevi sessili 0.6-0.7 mm longo, apice stylibasi minuta depressa terminato, stylo tenui brunneo ca. 1.5 mm longo glabro superne $\frac{1}{2}$ trifido, stigmatibus papulosis, stamine 1, antheris lineari-lanceolatis transverse striolatis apice vix productis.

Nom. Jap. Hata-gaya.

Hab.

Hondo: Hirazawa in Ugo (G. KOIDZUMI), Tajimi in Mino (K. SHIODA), Shizumamura in Izumo (J. TAKAGI), Tanabe in Kii (N. UI), Ono in Harima (K. MATSUSHIMA), Akita (U. FAURIE n. 1024), Yoshidamura in Iwami (H. TAMURA), Ayameike in Yamato (S. MIKI), Komono in Ise (T. HATTORI), Sakamotomura in Rikuzen (S. MURAI), Kibukimachi in Izumo (G. MARUYAMA).

Shikoku: Kochi (U. FAURIE n. 11880), Toichimachi in Tosa (I. OKUBO), Ozu in Iyo (Z. TASHIRO), Matsuyama (U. FAURIE n. 11624).

Kiushiu: Kagoshima (U. FAURIE n. 4332), Karatsu (leg. ?), Miikemachi in Chikugo (T. SUGINO), Shigajima in Chikuzen (Y. NABESHIMA), Chosa in Osumi (Z. TASHIRO).

Korea: Kyurei in Zennan (M. K. BOKU), Nohodo in Kampoku (R. SAITO n. 1512), Genkori in Kannan (N. NOMURA), Kyuryuri in Kannan (N. NOMURA), Ouen-san (U. FAURIE n. 951), Hakusen in Kokaido (M. K. BOKU), Soshin in Kampoku (R. SAITO n. 2779).

Riukiu: ins. Yakushima (Z. TASHIRO), ins. Tokunoshima (H. OHBA), ins. Amami-oshima (leg. ?), ins. Iriomote (G. KOIDZUMI), ins. Ishigaki (S. TAWADA n. 46).

Formosa: Tamsui (U. FAURIE n. 57), Hokuto (KOBAYASHI), Karenko (S. KITAMURA n. 1577), Shinchiku (E. KUROSAWA).

2. *Bulbostylis densa* HAND.-MAZZ.

Bulbostylis densa (WALL.) HAND. MAZZ. in KARSTEN et SCHENK, Vegetationsb. 20:7 (1930) 16; HARA in Journ. Japan. Bot. 18 (1942) 467.

Scirpus densus WALL. in ROXB. Fl. Ind. 1 (1820) 231.

Bulbostylis capillaris var. *trifida* (KUNTH) C. B. CLARKE in Hook. f. Flor. Brit. India, 6 (1893) 652 et in Journ. Linn. Soc. 36 (1903) 248 et ex LÉVEILLÉ in Bull. Acad. Intern. Géogr. Bot. 14 (1904) 199; MAKINO in Bot. Mag. Tokyo 9 (1895) 390; MATSUM. Ind. Plant. Japon. 2: 2 (1905) 98; NAKAI, Flor. Korean. 2 (1911) 295; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 206; HONDA in Bot. Mag. Tokyo 46 (1932) 675 (var. *alpina* HONDA); HAND. MAZZ. Symbol. Sinic. Anth. 5 (1936) 1250.

Isolepis capillaris var. *trifida* (KUNTH) MIQ. Prol. Flor. Japon. (1867) 75; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 116.

Fimbristylis capillacea HOCHST. var. *japonica* MIQ. Prol. Flor. Jap. (1867) 77; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 120.

Bulbostylis trifida KUNTH, Enum. Plant. 2 (1837) 213.

Scirpus trifidus (KUNTH) HANCE in Journ. Bot. 16 (1878) 112.

Bulbostylis capillaris (vix KUNTH) PALLA in Mond. Plant. (1910) 40; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 128; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 97; KITAGAWA, Lineam. Flor. Manshur. (1939) 97.

Scirpus capillaris (vix LINN.) MEINSH. in Act. Hort. Petrop. 18 (1901) 247 ex pte.

Isolepis tenuissima DON, Prodr. Fl. Nepal. (1825) 40.

Isolepis densa ROEM. et SCHULT. Syst. Veg. Mant. 2 (1824) 71.

Rhizomate nullo evoluto estolonifero, culmis pluribus vel numerosis erectis nudis capillaribus viridulis costato-striatis glabris laevibus 5-40 cm altis basi 2-3-phyllis, foliis capillaribus costato-sulcatis glabris culmo plerumque multo brevioribus superne parcissime scabris, apice sensim angustatis, vaginis 1-4 cm longis ferruginescentibus glabris tenuimembranaceis apice oblique fissis, ore pilis longis albis hirtis, anthela 1-pluri-stachya laxa simplici vel subcomposita 2-5 cm longa, bracteis vix evolutis vel ima tantum brevi-setacea ab anthela multo superata basi utrinque appendiculo ferrugineo membranaceo instructa, radiis 1-5 tenuibus laevibus glabris costatis indivisis vel radiolos paucos gerentibus usque ad 5 cm longis, spiculis terminalibus sessilibus, lateralibus pedicellatis, omnibus oblongo-ovatis vel oblongis obtusulis subdense plurifloris 3-5 mm longis ca. 1.5 mm latis angulatis castaneis vel brunnescentibus, squamis ovatis vel late ovatis membranaceis glabris vel parcissime puberulis ca. 2 mm longis valide carinatis castaneis dorso crasse viridi-costatis, margine dilutioribus, superne ciliolatis, apice subacutis mutis, achenio albido nitido orbiculato-obovato 0.8 mm longo trigono, cellulis minutis punctulato et obsolete undulato, apice styli-basi humili minutissima umbonato, stylo brunneo 1 mm longo glabro superne $\frac{3}{4}$ trifido, stigmatibus papillois, staminibus 3 vel 2, antheris lanceolatis $\frac{1}{4}$ - $\frac{1}{2}$ mm longis apice rubro-cuspidatis.

Nom. Jap. Itohanabitentsuki.

Hab.

Yezo: fide MIYABE et KUDO, l. c.

Hondo: Tanabu (U. FAURIE n. 4653), Sambongi (U. FAURIE n. 22, 828), Akita (U. FAURIE n. 1442; S. MURAMATSU), Fujiyama (U. FAURIE n. 6618), Takawashimura in Mino (K. SHIODA), Araimura in Iga (T. HATTORI), m. Hira in Omi (Z. TASHIRO), Inatorimura in Izu (Z. TASHIRO), Takashimidzu in Iwaki (T. SUZUKI), m. Noboriyama in Ugo (M. HEMMI), Sanagemura in Mikawa (K. SHIODA), Yawatamura in Kii (S. OKAMOTO), Kasshionsen in Iwaki (T. SUZUKI), m. Kammuri in Aki (T. SATO), Kosekimura in Iwaki (N. IMAI), Yamashitamura in Rikuzen (S. MURAI), m. Kirigamine in Shinano (H. TOBITA), Tanukinuma in Suruga (J. SUGIMOTO), Nitta in Ugo (S. MURAMATSU), Washimi in Mino (K. SHIODA), m. Takamizu in Musashi (S. OKUYAMA), Osadano in Tamba (Y. ARAKI).

Shikoku: Midorisozumura in Iyo (M. OGATA), m. Odamiyama in Iyo (T. IMAIZUMI), Hashiuemura in Tosa (H. YAMAGUCHI), fl. Shishichigawa in Iyo (Y. DOI), Meijimura in Iyo (C. WATANABE), Madotoge in Awa (S. TAKASHI), Kuroiwamura in Tosa (T. YOSHINAGA).

Kiushiu: m. Sobosan (U. FAURIE n. 2725), m. Aso (T. SUGINO), Maisuyamamura in Hizen (leg. ?), Uchinomura in Hizen (Y. NABESHIMA), m. Seburiyama (K. YAMASHITA), Tsutamamura in Buzen (T. YAMAZAKI), m. Nokieboshi in Higo (K. MAYEBARA), m. Kurokami in Hizen (Z. TASHIRO; K. YAMASHITA), Oike in Higo (S. TOKUNAGA), Shimoishuinmura in Satsuma (Y. DOI), Kikuchimura in Higo (S. TOKUNAGA), Kajiki in Osumi (Z. TASHIRO), Iwadamura in Hiuga (M. OGATA), Ebino in Hiuga (T. NAITO),

m. Unzen (Z. TASHIRO), Kawamura in Higo (K. MAYEBARA), m. Happo in Higo (K. MAYEBARA), m. Yuhu in Bungo (K. NAKASHIMA), Nagauramura in Hizen (T. CHIBA).

Korea: ins. Quelpaert (E. TAQUET n. 2112, 2115, 2116; U. FAURIE n. 1; K. NAKASHIMA n. 143), Chemulpo (U. FAURIE n. 1399), Ouen-san (U. FAURIE n. 992), m. Reigisan in Keike (T. SAKATA), Tosenmen in Kanann (N. NOMURA), Ranan (R. SAITO n. 270, 922), Kyojo in Kampoku (R. SAITO n. 2327), Kyurei in Zennan (M. K. BOKU), Koryo (M. K. BOKU n. 96), Umpo in Zenhoku (S. OKAMOTO).

Formosa: Arisan (U. FAURIE n. 223), inter Keinanzan et Takimi in Takaoshu (S. OKAMOTO), Nokoizan in Musha (E. MATSUDA), inter Sekigahara et Gokwan (M. TAGAWA n. 860).

var. *capitata* (Miq.) OHWI, comb. nov.

Isolepis capillaris ROEM. et SCHULT. var. *capitata* MIQ. Prol. Fl. Japon. (1867) 75; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 116.

Bulbostylis japonica C. B. CLARKE in MATSUM. Ind. Plant. Japon. 2:1 (1905) 98 nom. sol; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 27.

Bulbostylis c. pillaris var. *c. pit t i* (Miq.) MAKINO in Bot. Mag. Tokyo 9 (1895) 390 et 18 (1904) 54.

Stenophyllus capitatus (Miq.) OHWI in MAYEBARA. Fl. Austrohigoens. (1931) 83.

Spiculis omnibus sessilibus caput globosum interdum parum solutum formantibus sola a typo differt.

Nom. Jap. Itotentsuki, Kuro-hatagaya.

Hab.

Hondo: Ukirimura in Totomi (J. SUGIMOTO n. 27227), Kuroimachi in Tamba (S. HOSOMI n. 563), Gifu (S. KAWADA), Fujiyama (U. FAURIE n. 9540), Osadano in Tamba (Y. ARAKI).

Shikoku: Mimakimura in Iyo (M. OGATA).

Kiushiu: m. Toishi in Chikuzen (S. HATUSIMA n. 1685), Imutaike in Satsuma (Z. TASHIRO), m. Wakideyama in Bungo (K. IKEBE), Hatsukimura in Satsuma (Z. TASHIRO), Shimoishuimura in Satsuma (Y. DOI), Taragi in Higo (K. MAYEBARA), m. Iwaya in in Hizen (leg.?), m. Kirishima (Z. TASHIRO), Kajiki in Satsuma (Z. TASHIRO), ins. Tsushima (T. HARA), m. Unzen (Z. TASHIRO), Yoshinomureoka in Satsum (Z. TASHIRO).

Riukiu: Yaeyama (fide MATSUM. l. c.).

Gen. 13. *Fimbristylis* VAHL (nom. conserv.)

Fimbristylis VAHL, Enum. Plant. 2 (1806) 285; KUNTH, Enum. Plant. 2 (1837) 220; STEUD. Synops. 2 (1855) 106; BÜCKLR. in Linnaea 37 (1871) 2; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1048; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 113; DALLA TORRE et HARMS, Gen. Siphon. (1900) 32; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 107; OHWI in Journ. Jap. Bot. 14 (1933) 564.

Iria L. C. RICH. in PEKS. Synops. 1 (1805) 65.

Echinolytrum DESV. in Journ. d. Bot. 1 (1808) 20.

Iriha O. KTZE, Rev. Gen. Plant. 2 (1891) 751.

Mischospora BÜCKLR. in Flora 43 (1860) 113.

Abildgaardia VAHL, Enum. Plant. 2 (1806) 296.

Pogonostylis BERTOL. Fl. Ital. 1 (1833) 312.

Trichelostylis LESTIB. Ess. Fam. Cyper. (1819) 40.

Herbae annuae vel perennes caepitosae, culmis saepe tenuibus, foliis ad basin culmi confertis rarius ad vaginam reductis, inflorescentia terminali saepe irregulariter umbellata simplici vel composita raro capitato glomerata, vel unispiculosa, basi saepe bracteata, spiculis pluri-multi-floris, floribus

hermaphroditis, glumis undique imbricatis vel partim distiche dispositis, infimis 1-3 vacuis, setis hypogynis nullis, staminibus 1-3, stylo basi incrassato, cum stylo deciduo, ramis 2-3, achenio obovato trigono vel compresso.

1. Achenia oblongo-cylindrica.
 2. Spicula 1 terminalis teres, styli compressi latiusculi, squamae arcate imbricatae latissimae muticae. Sect. *Mischospora* (BÜCKLER.) OHWI, comb. nov.

F. tetragon.
 2. Spiculae numerosae angulatae, styli vix latiusculi, squamae angustae carinatae apice aristatae. Sect. *Echinolytrum* (Desv.) OHWI, comb. nov.
 3. Spiculae viridulae, achenia tenuistipitata, margine clavato-appendiculata.

F. verrucifera.
 3. Spiculae brunnescentes, achenia subsessilia inappendiculata.
 4. Squamae 1.5-2 mm longae, styli 1.5-2 mm longi, ramis exsertis, achenia 0.7 mm longa.

F. Stauntoni.
 4. Squamae 2-2.5 mm longae, styli 2.5-3 mm longi, ramis valde exsertis, achenia 0.8-1 mm longa.

F. tonensis.
1. Achenia obovata.
 2. Spiculae plus minus compressae, squamae saltem partim distichae.

Sect. *Abildgaardia* (VAHL) BENTH.
 3. Squamae nitidulae glabrae. (Ser. *Monostachyae*).
 4. Spiculae 1-2 majusculae pallidae vel straminescentes, achenia majuscula basi multo angustata.

F. monostachya.
 4. Spiculae plures minores brunneo-suffusae, achenia minora basi porrum angustata.

F. Eragrostis.
 3. Squamae adpresse puberulo-scaberulae opacae, fusco-suffusae (Ser. *Fuscae*).
 4. Culmi 7-12 cm alti oligostachyi, squamae fertiles 3 mm longae, achenia $\frac{3}{4}$ mm longa basi subtruncata, styli 2 mm longi.

F. straminea.
 4. Culmi 20-40 cm alti pluristachyi, squamae fertiles 4-5 mm longae, achenia 1 mm longa basi angustata substipitata non truncata, styli 4-5 mm longi.

F. fusca.
2. Spiculae vix compressae, squamae spirale dispositae.
3. Styli tenues vix compressi non vel sparse ciliati, ramis 3, raro 2.

Sect. *Trichelostylis* (LESTIB.) A. GRAY.

 4. Squamae vix ciliatae integrae muticae vel mucronatae, antherarum apices glabro-producti vel mutici.
 5. Culmi inferne sine vaginis aphyllis, spiculae lanceolatae vel oblongo-lanceolatae acutae vel obtusulae.
 6. Styli rami semper 3, achenia albo-straminea. (Ser. *Autumnales*).
 7. Antherae brevi-lineares minus quam $\frac{1}{2}$ mm longae, squamae 1-2 mm longae, stylus 1-1.5 mm longus.
 8. Folia flaccida, spiculae 3-6 mm longae, squamae 1.5-2 mm longae.

F. autumnalis.
 8. Folia vix flaccida, spiculae 2-4 mm longae, squamae 1-1.2 mm longae.

F. taiwanica.
 7. Antherae plus quam $\frac{3}{4}$ mm longae, squamae 1.5-6 mm longae, stylus 2-6 mm longus.
 8. Rhizomata nulla vel brevissima, non squamata, florum squamae 1.5-3.5 mm longae, folia intus basi a vagina plus minus distincte limitata.

9. Vaginae foliorum compressae carinatae, achenia $\frac{1}{2}$ -1 mm longa.
10. Squamae 1.5-2 mm longae, antherae $\frac{2}{3}$ mm longae.
F. tainanensis.
10. Squamae 3 mm longae, antherae ca. 1.5 mm longae.
F. complanata.
9. Vaginae foliorum teretes, achenia 1.5 mm longa, antherae 1.5-2 mm longae.
F. Thomsonii.
8. Rhizomata repentia ad 5 cm longa, squamis deltoideis tecta, florum squamae 5-8 mm longae, folia basi intus in vaginas transeuntia, achenia 1.2 mm longa, antherae ca. 2.5 mm longae.
F. Pierotii.
6. Styli rami 2-3, achenia brunnea vel atrofusca. (Ser. *Cymosae*).
7. Folia dense albo-pubescentia, spiculae 6-10 mm longae 4 mm latae, achenia 1.5 mm longa.
F. sericea.
7. Folia glabra, spiculae 3-6 mm longae 2 mm latae, squamae 1.5-2 mm longae, antherae $\frac{2}{3}$ mm longae, achenia non super 1 mm longa.
8. Spiculae solitariae vel pauciaggregatae, achenia biconvexa rarissime trigona, styli ramis 2 vel rarissime 3.
F. spathacea.
8. Spiculae pluri-aggregatae, achenia trigona vel rarissime biconvexa, styli rami 3 rarissime 2.
F. cymosa.
5. Culmi inferne vaginis 1-3 aphyllis tubulosis vel compressis tecti, spiculae globosae vel late ovatae vel oblongae obtusae vel acutiusculae.
6. Styli rami 3, achenia cellulis extimis planiusculis minutis laevia vel obsolete punctulata. (Ser. *Miliaceae*).
7. Foliorum laminae a latere compressae ensiformes, margine superne sulcatae, spiculae obtusae.
8. Anthela laxiuscula, spiculae obtusissimae rufo- vel ferrugineo-brunneae, squamae 1 mm longae maturitate patentes, achenia trigona.
F. miliacea.
8. Anthela densiuscula, spiculae obtusulae fusco-brunneae, squamae 1.5-2 mm longae ascendentes, achenia compresse trigona.
F. Koidzumiana.
7. Foliorum laminae planae, spiculae acutiusculae.
F. quinquangularis.
6. Styli rami 2-3, achenia cellulis extimis margine elevatis cancellata. (Ser. *Globulosae*).
7. Rhizoma caespitosum, caespitibus praeter innovationes steriles efoliata, anthela paucispiculosa, stylus trifidus rarissime bifidus, achenia trigona rarissime biconvexa.
F. globulosa.
7. Rhizoma caespitosum, caespitibus foliatis, anthela pluristachya, stylus bifidus vel rarissime trifidus, achenia biconvexa vel rarissime trigona.
F. diphylloides.
4. Squamae ciliatae, ex apice exciso cuspidatae lateribus pertenuimembranaeae, antherae apice connectivo setuloso-pilosulo terminatae, achenia nigrescentia biconvexa vel trigona, styli rami 2-3. (Ser. *Leptocladae*).
5. Culmi 5-15 cm alti apice 1-3-stachyi, squamae 3 mm longae, achenia fere 1 mm longa, sparse verrucosa.
F. kadzusana.

5. Culmi 20-30 cm alti, apice 5-10-stachyi, squamae fere 2 mm longae, achenia $\frac{3}{4}$ mm longa verrucosa. *F. Takamineana.*
3. Styli compressi latiusculi, margine superne ciliati, ramis semper 2.
Sect. *Dichelostylis* BENTH.
4. Culmi basi saepe foliati, achenia laevia vel reticulata vel cancellata nec grosse rugosa.
5. Spiculae 2-7 mm latae teretes, squamae submembranaceae vel chartaceae.
6. Achenia laevia vel sublaevia nec cancellata. (Ser. *Ferrugineae*).
7. Squamae uninerviae vel inferne obsolete trinerviae.
8. Squamae albo-ferrugineae glabrae subnitidae, achenia obtriangulato-obovata sparse verrucosa, cellulis extimis 6-gonis alboreticulata, stylus 1.5 mm longus, antherae $\frac{1}{2}$ mm longae.
F. Shimadana.
8. Squamae fusco-brunneae vel ferrugineo-brunneae plerumque albo-puberulae opacae, achenia late obovata vix verrucosa, cellulis extimis minutissimis laevia vel obsoletissime lineolata, stylus 3-3.5 mm longus, antherae 1-1.5 mm longae.
F. ferruginea.
7. Squamae tenuiter plurinervulosae, achenia stipitata.
8. Spiculae albae et castaneo- vel ferrugineo-variagatae, squamae quam longitudo latiores, antherae $\frac{1}{2}$ mm longae.
F. schoenoides.
8. Spiculae ex toto fulvae vel brunneae, squamae quam latitudo longiores membranaceae, antherae fere 1 mm longae.
9. Spiculae 4-7 mm latae, clare fulvo- vel ferrugineo-brunneae, achenia longe stipitata.
F. subbispicata.
9. Spiculae 2.5-3 mm latae dilute stramino-suffusae, achenia modice stipitata.
F. pacifica.
6. Achenia cancellata. (Ser. *Dichotomae*).
7. Glabra, spiculae fulvo- vel flavo-brunneae, achenia cellulis extimis sub-4-gonis minutiuscule cancellata.
F. longispica.
7. Saepe pilosa, spiculae castaneo-tinctae, achenia cellulis extimis transverse oblongis cancellata.
F. dichotoma.
5. Spiculae angulatae, ca. 1.5 mm latae interdum squarrosae, squamae membranaceae. (Ser. *Squarrosae*).
6. Stylus basi pilis longis reflexis achenium cingentibus praeditus, achenia sublaevia.
7. Spiculae squarrosae, squamae apice longe recurvato-aristatae.
F. squarrosa.
7. Spiculae non squarrosae, squamae breviter rectiaristatae.
F. Makinoana.
6. * Stylus basi nudus vel pilis brevissimis papillois praeditus.
7. Folia perangusta, achenia sublaevia.
F. aestivalis.
7. Folia paulo latiora, achenia cancellata.
F. bisumbellata.
4. Culmi basi paucivaginati aphylli, achenia medio grosse paucirugosa.
Ser. *Nutantes.* *F. nutans.*

1. *Fimbristylis tetragona* R. Br.

Fimbristylis tetragona R. Br. Pr. Prodr. Flor. Nov. Holl. (1810) 226; KUNTH, Enum. Plant. 2 (1837) 242; SREUD. Synops. 2 (1855) 103; BENTH. Flor. Austral. 7 (1878) 305; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 631 et in Journ. Linn. Soc. 36

(1903) 246 et in Philipp. Journ. Sci. 2 (1907) 91 et Illustr. Cyperac. (1909) t. 40, f. 1-4; KOORDERS, Exkursionsfl. Java, 1 (1911) 1911) 198; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 93; MERRILL, Flor. Manila (1912) 115) et Enum. Philipp. Fl. Pl. (1922) 127; DUNN et TUTCH. in Kew Bull. add. ser. 10 (1912) 299; OHWI in Bot. Phytotax. et Geobot. 2 (1933) 160.

Scirpus tetragonus (non POIR., 1804) POIR. Encycl. Suppl. 5 (1817) 98.

Fimbristylis cylindrocarpa KUNTH, Enum. Plant. 2 (1837) 222; BÜCKLER. in Linnaea 37 (1871) 7; HANCE in Journ. Linn. Soc. 13 (1873) 132.

Mischospora efoliata BÜCKLER. in Flora, 43 (1860) 113.

Rhizomate vix evoluto, culmis dense caespitosis 20-40 cm altis tetraquetris laevibus tenuibus strictis leviter striatis basi tantum paucivaginat, vaginis ferrugineis opacis membranaceis glabris striatis, 3-5 cm longis aphyllis apice oblique fissis margine tenuimembranaceis, summa aphylla vel breviter (1-5 mm) setacea, spicula singula terminali ovata vel oblongo-ovata obtusa vel acutiuscula ebracteata 7-10 mm longa 4-6 mm lata tereti opaca sordide brunnea dense multiflora erecta, squamis oblongis vel obovato-oblongis 4-5 mm longis obtusissimis muticis membranaceis ex toto brunneo-suffusis glabris et tenuissime nervulosis vix carinatis opacis, dorso fusco-viride trinerviis, achenio oblongo-cylindrico pallide brunneo-suffuso nitido leviter compreso absque stipite fere 2 mm longo non verrucoso, cellulis extimis transverse ellipticis margine vix elevatis minute reticulato, stipite crasso spongioso $\frac{2}{3}$ mm longo, stylo atrofusco compresso lato 3 mm longo, subpersistente sparse ciliato, basi sensim latiore quam achenio subaequilato, ramis 2-3 brevibus papulosis, staminum (3) antheris linearibus 1.2-1.5 mm longis vix apiculatis, filamentis atrofusis latiusculis.

Nom. Jap. Shikaku-tentsuki.

Hab. Formosa: Chureki in Shinchikushu (Y. SHIMADA n. 2669; T. Ito).

2. *Fimbristylis verrucifera* MAKINO

Fimbristylis verrucifera (MAXIM.) MAKINO in Bot. Mag. Tokyo 9 (1895) 259; et 17 (1903) 46; MATSUM. Ind. Plant. Japon. 2:1 (1905) 149.

Isolepis verrucifera MAXIM. Prim. Flor. Amur. (1859) 300.

Fimbristylis nipponensis MAKINO in Bot. Mag. Tokyo 6 (1892) 47 nom. nud.

Scirpus verruciferus (MAXIM.) MEINSH. in Act. Hort. Petrop. 18 (1901) 246.

Echinolytrum verruciferum MAKINO in Bot. Mag. Tokyo 20 (1906) 9.

Fimbristylis dipsacea (vix BENTH.) KOMAR. Flor. Mansh. 1 (1901) 346; C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 199.

Rhizomate nullo, culmis dense caespitosis 5-15 cm altis mollibus tenuibus laevibus subcompressis striatis, basi paucifoliatis, foliis culmo multo brevioribus 3-5 cm longis filiformibus flaccidis viridulis involutis vel planiusculis laevibus et glabris $\frac{1}{2}$ -1 mm latis, vaginis ferrugineo-brunnescentibus glabris tenuimembranaceis apice oblique fissis, inferioribus subaphyllis, anthela simplici vel subcomposita pauci-pluri-spiculosa 3-10-radiata, radiis inaequalibus tenuibus laevibus patentibus, bracteis 3-10 filiformibus inferioribus 1-2 interdum antheam subsuperantibus, spiculis globoso-ovatis usque oblongis obtusis pallide viridulis 3-6 mm longis 2-2.5 mm latis dense

multifloris solitariis vel rarius geminis, squamis oblongis vel ovato-oblongis tenuimembranaceis pallidis vel sordide straminescentibus patulis obtusis et aristatis, sine arista 1 mm longis, dorso viridi carinatis uninerviis, arista $\frac{1}{3}$ – $\frac{1}{2}$ mm longa recta laevi, achenio $\frac{1}{2}$ mm longo oblongo-cylindrico vix compresso nitido brunneo, basi subtruncata tenuiter stipitato, apice rotundato subalbido, margine utrinque tuberculis 4–6 albidis clavato-globosis demum facile deciduis cincto, cellulis extimis transverse sub-6-gono-ellipticis minutissimis obsoletissimis sublaevi vel transverse sublineolato, stylo tenui 1 mm longo glabro basi subincrassato, ramis 2 subglabris, staminum (1) antheris lanceolatis $\frac{1}{2}$ mm longis apice acuto-productis.—Differt a *F. dipsacea* BENTH. spiculis vix squarrosis, squamis apice breviter recto-aristatis, achenio vix compresso.

Nom. Jap. Ao-tentsuki.

Hab.

Hondo: m. Tonomine in Yamato (Y. MURATA), basi m. Tsukuba in Hitachi (K. NUMAJIRI), Naranoi in Bitchu (Z. YOSHINO), Sempako in Hitachi (H. TSURUMACHI), Funakoshi in Ugo (S. MURAMATSU), Ogura, urbe Kyoto (S. MIKI; K. TAKEUCHI), Tokyo? (K. MIYABE).

Shikoku: Miyoshimura in Iyo (M. OGATA), Kanehisa in Iyo (I. YOGO), Sakade in Sanuki (Z. TASHIRO; OSHIMA), Matsuyama (Z. TASHIRO), Narimiyomura in Iyo (C. WATANABE).

Kiushiu: Ginsuimura in Chikugo (E. TOBINAGA), Haramachi in Chikuzen (S. HATSUSIMA).

Korea: Zennan-koshu (K. T. CHO).

3. *Fimbristylis Stauntoni* DEBEAUX et FRANCH.

Fimbristylis Stauntoni DEBEAUX et FRANCH. in DEBEAUX, Flor. Tchefou in Act. Linn. Soc. Bord. 31 (1877) t. 3, et 32 (1878) 38; FRANCH. in Mém. Soc. Sc. Nat. Cherb. 31 (1884) 263; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 245; MATSUDA in Bot. Mag. Tokyo 28 (1914) 300; OHWI in Journ. Jap. Bot. 14 (1938) 573; KITAG. Lineam. Fl. Manshur. (1939) 118.

Fimbristylis tonensis (non MAKINO) PALLA in Mond. Plant. (1910) 40.

Rhizomate nullo, culmis caespitosis mollibus compressis striatis erectis tenuibus laevibus glabris 7–40 cm altis basi paucifoliatis, foliis culmo subbrevioribus planis mollibus viridulis glabris laeviusculis 2–2.5 mm latis apice sensim angustato abrupte acuminatis, vaginis 2–4 cm longis antice tenuimembranaceis et ferrugineo-suffusis, apice dorso annulo pilorum brevissimorum cinctis, antice oblique fissis, anthela simplici vel composita rarius subdecomposita usque ad 10 cm longa et lata laxa vel densiuscula paucipluri-radiata pluri-multi-spiculosa, bracteis 2–3 linearibus, infima saepe anthelam aequante, radiis saepe patentibus compressis tenuibus laevibus, bracteolis brevisubulatis vel squamiformibus, spiculis ovatis vel oblongis 3–5 mm longis obtusis vel obtusulis basi saepe subattenuatis 2–2.5 mm latis subdense plurifloris sordide brunneo-stramineis, squamis erectis late lanceolatis fulvo-ferruginescentibus tenuimembranaceis 1.5–2 mm longis dorso viridi-carinatis uninervis, apice abrupte cuspidatis, cusptide breviuscula recta laevi, achenio

oblongo-cylindrico obsolete trigono vel vix compresso 0.7 mm longo albido subsessili non verrucoso, cellulis extimis transverse oblongis minute lineolato, stylo tenui glabro 1.5-2 mm longo subpersistente, basi abrupte bulboso-incrassato, ramis 2-3 patentibus tenuibus exsertis papulosis, staminum (1 vel 2) antheris $\frac{1}{3}$ mm longis linearibus breviter obtuso-apiculatis.

Nom. Jap. Hatake-tentsuki.

Hab.

Kiushiu: Sugitanimura in Hizen (S. HATUSIMA).

Korea: Unnanmen in Kannan (N. NOMURA), Chinampo (U. FAURIE n. 1432), Heijo (K. T. CHO).

4. *Fimbristylis tonensis* MAKINO

Fimbristylis tonensis MAKINO in Bot. Mag. Tokyo 9 (1895) 260, nom. seminud. et ibid. 17 (1903) 45.

Fimbristylis Stauntoni var. *tonensis* (MAKINO) OHWI, hoc loco.

Rhizomate nullo, culmis dense caespitosis 10-30 cm altis compressis striatis glabris, laevibus erectis basi paucifoliatis, foliis culmo aequilongis vel brevioribus mollibus viridulis planis 1.5-2 mm latis apice sensim attenuato abrupte acuminatis glabris laeviusculis, vaginis brevibus antice ferrugineo-suffusis et tenuimembranaceis, apice dorso annulo pilorum brevissimorum cinctis, antice oblique fissis, anthela composita laxa effusa 3-6 cm longa pluri-spiculosa pauci-pluri-radiata, bracteis 2-3 linearibus, infima saepe anthelam aequante, radiis tenuibus laevibus, spiculis oblongis obtusis 3-6 mm longis 1.5-2 mm latis basi attenuatis, ob styli ramos exsertos comosis, brunneo-ferrugineis, squamis late lanceolatis 2-2.5 mm longis erectis ferrugineo-fulvosuffusis tenuimembranaceis dorso viridi-carinatis uninerviis, apice subabrupte cuspidatis, cuspidate breviuscula recta laevi, achenio 0.8-1 mm longo oblongo-cylindrico subsessili non verrucoso obsolete trigono vel vix compresso albido, cellulis extimis transverse oblongis minute lineolato, stylo 2.5-3 mm longo subpersistenti glabro basi abrupte bulboso-incrassato, ramis 2-3 patentibus longis, staminum (1) antheris linearibus 0.4 mm longis breviter apiculatis.

Nom. Jap. Tone-tentsuki.

Hab. Hondo: Ichinomiya in Kadzusa (T. MAKINO), basi m. Tonomine in Yamato (Y. MURATA), Nakateshimamura in Settsu (N. UJI), Hitotsumatsumura in Kadzusa (I. MISONO), Yatsumi in Kadzusa (S. OKUYAMA).

5. *Fimbristylis monostachya* HASSK.

Fimbristylis monostachya (LINN.) HASSK. Pl. Jav. Rar. (1848) 61; STEUD. Synops. 2 (1855) 107; BENTH. Flor. Austral. 7 (1878) 308; HANCE in Journ. Linn. Soc. 13 (1873) 132; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 649 et in THIS. DYER, Fl. Trop. Afr. 8 (1902) 424 et in Journ. Linn. Soc. 36 (1903) 240 et in Philipp. Journ. Sci. 2 (1907) 97; MAKINO in Bot. Mag. Tokyo 10 (1896) 110; MATSUM. Ind. Plant. Japon. 2:1 (1905) 150; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 484; E. G. CAMUS in LECOMTE, Flor. Génér. Indochin. 7 (1912) 122; MERR. Flor. Manila (1912) 117 et Enum. Philipp. Flow. Pl. 1 (1922) 124.

Cyperus monostachyus LINN. Mant. 2 (1771) 180.

Abildgaardia monostachya (LINN.) VAHL, Enum. Plant. 2 (1806) 296; KUNTH, Enum. Plant. 2 (1837) 247; BUCKLER, in Linnaea 37 (1871) 53.

Rhizomate abbreviato, estolonifero, culmis 15-40 cm altis tenuibus compressoangulatis striatis laevibus vel superne scabriusculis, basi subincrassata foliatis, foliis 7-20 cm longis erectis $\frac{3}{4}$ -1 mm latis glabris sed margine primo parce spinuloso-scabris, apice abrupte acuminatis, vaginis 1-3 cm longis glabris antice albo-membranaceis facile fissis, spicula unica vel rarissime altera pedicellata addita, ovata vel oblongo-ovata compressiuscula vel subtereti nitida 8-15 mm longa 4-6 mm lata acuta, basi bracteis 1-2 squamiformibus deciduis cuspidatis vel aristatis (arista spiculam plerumque non superante) praedita, squamis distiche vel interdum subspirale dispositis pallidis vel cinereo-straminescentibus late ovatis subcoriaceis nitidis carinatis glabris saepe intus ferrugineo-striolatis acutis et cuspidatis 4-6 mm longis dorso obsolete trinervis, achenio 2.5-3 mm longo albido nitido trigono late obovato verrucoso, umbonato, basi abrupte crasse et longe stipitato-angustato, cellulis minutis 6-gonis planis punctato, stylo 4-5 mm longo, trigono, e basi crassa glabriuscula sursum subangustato ciliato, ramis 3 parce papulosis, staminum (2-3) antheris 1.5-2 mm longis cuspidatis laevibus.

Nom. Yari-tentsuki.

Hab.

Hondo: Kurosaki in Sagami (T. MOMIYAMA), Seto-kanayama in Kii (N. UI; T. NAKAJIMA; K. HIROTANI).

Kiushiu: Takashiromura in Satsuma (Y. DOI), Yamakawa in Satsuma (Z. TASHIRO), Hatsuyama, ins. Iki (Z. TASHIRO; K. NAKASHIMA), Toyano in Hizen (Z. TASHIRO), Nishikata in Satsuma (Y. DOI), Matsuai in Higo (Z. TASHIRO), Izashiki in Satsuma (Z. TASHIRO), Yamakawa in Satsuma (Z. TASHIRO).

Korea: ins. Quelpaert (E. TAQUET n. 2081),

Riukiu: ins. Kikai (Z. TASHIRO), ins. Okinoerabu (Z. TASHIRO; H. OHBA), ins. Iheya (M. HORI), ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI), ins. Ishigaki (E. TAKAMINE), ins. Miyako (G. KOIDZUMI).

Formosa: Tojimo, Prov. Karenko (J. OHWI n. 1341), ubique frequens in pratis (U. FAURIE n. 809), Shinchiku (Y. SHIMADA n. 3972). Sanshikyaku, urbe Taihoku (K. ODASHIMA n. 488), ins. Sharyoto (S. NAGASAWA), Taihoku (J. OHWI n. 2154).

6. *Fimbristylis Eragrostis* HANCE

Fimbristylis Eragrostis HANCE in Journ. Linn. Soc. 13 (1873) 132; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 235; MATSUM. Ind. Plant. Japon. 2:1 (1905) 149; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 483.

Rhizomate nullo, culmis vix caespitosis 30-50 cm altis pertenuibus acute 4-5-angulatis superne seabris, basi foliatis, foliis 5-10 cm longis planis praeter margines spinuloso-scabris glabris et laevibus exacte linearibus 1.5-2.5 mm latis apice abrupte contracto-mucronatis, vaginis 1-2 cm longis brunescenscentibus, anthela subcomposita pauciradiata pluristachya, bracteis 2-3 erectis usque ad 15 mm longis margine scabris basi dilatatis, radiis inaequalibus laevibus tenuibus ad 3 cm longis, antherulis breviter pauciradiolatis,

spiculis solitariis late lanceolatis acutis 6-10 mm longis compressis 8-16-floris albobrunneis, squamis 1-2 inferioribus sterilibus, fertilibus late ovatis 3-3,5 mm longis submembranaceis glabris partim brunneo-suffusis pallidis et fusco-striolatis unicostatis apice obtusulo recte mucronatis, achenio $\frac{3}{4}$ mm longo late obovato albido nitido umbonato trigono verrucoso basi abrupte angustato vix stipitato, cellulis 6-gonis minutis obsolete punctato, stylo 4 mm longo tenui superne papilloso basi dilatato trigono, ramis 3 papillois, staminum (3) antheris linearibus 1.5 mm longis, connectivo acuminato-producto.

Nom. Jap. Kazekusa-tentsuki.

Hab. Formosa: Juhachisenzan, urbe Shinchiku (Y. SHIMADA n. 302).

7. *Fimbristylis straminea* TURRILL

Fimbristylis straminea TURRILL in Kew Bull. (1911) 192; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 124; OHWI, l. c. (1938) 574.

Rhizomate nullo, culmis caespitosis 7-12 cm longis tenuibus sulcatis apice scabriusculis, basi foliatis, foliis arcuatis planis patentibus 1-1.5 mm latis $\frac{1}{4}$ - $\frac{1}{2}$ culmi aequantibus margine sparse spinuloso-scabris, apice abrupte contracto subapiculatis, vaginis 1-2 cm longis antice fissis, anthera paucispiculosa subsimplici pauciradiata, bracteis 2-3 brevibus usque ad 7-15 mm longis erectis, radiis tenuibus piloso-scabris usque ad 3 cm longis, spiculis compressis lanceolatis 5-10 mm longis 7-10-floris 2 mm latis acutis pallide brunneis, squamis 1-2 inferioribus vacuis saepe breviaristatis, ceteris ovatis 3 mm longis angustato acutis et saepe mucronatis carinatunicostatis submembranaceis dorso ciliato-scabris, lateribus extus pilis minutissimis scaberulis, margine anguste albomembranaceo ciliatis, achenio trigono late obovato albostramineo $\frac{3}{4}$ mm longo umbonato verrucoso, cellulis 6-gonis planis obsolete punctato nitido, basi subangustata abrupte truncato, stipite minuto, stylo glabro, e basi dilatata trigona angustato tenuissimo 2 mm longo, ramis 3 sparse papulosis, staminum (2) antheris lanceolatis $\frac{1}{2}$ mm longis muticis.

Nom. Jap. Tomoeba-tentsuki.

Hab.

Riukiu: ins. Iriomote (S. TAWADA n. 546), ins. Okinawa (S. SAKAGUCHI).

Korea: m. Chiisan (M. K. BOKU).

8. *Fimbristylis fusca* BENTH.

Fimbristylis fusca (NEES) BENTH. in BENTH. et Hook. f. Gen. Plant. 3 (1883) 1048; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 619 et in Journ. Linn. Soc. 36 (1903) 236 et in Philipp. Journ. Sci. 2 (1907) 98; MATSUM. Ind. Plant. Japon. 2:1 (1905) 153; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 123.

Abildgaardia fusca NEES in WIGHT, Contrib. Bot. Ind. (1834) 95; KUNTH, Enum. Plant. 2 (1837) 249; STEUD. Synops. 2 (1855) 72; BICKLER in Linnaea 37 (1871) 54.

Fimbristylis stenantha MAKINO ex MATSUM. Ind. Plant. Japon. 2:1 (1905) 150, pro syn.

Rhizomate nullo, culmis vix caespitosis pertenuibus 20-40 cm altis erectis sulcato-angulatis praeter apicem piloso-scabrum laevibus, basi foliatis, foliis 5-15 cm longis planis rigidulis 1-2 mm latis praeter paginam superiorem piloso-scabris, apice abrupte acutis, vaginis brunnescentibus 1-2 cm longis antice fissis, anthela pluristachya inaequaliter 5-10-radiata simplici vel subcomposita, bracteis setaceis 2-4, usque ad 5 cm longis suberectis pilosocabris, anthelulis subbracteolatis, breviter radiolatis, spiculis solitariis lanceolatis 7-10 mm longis 2-2.5 mm latis compressis fuscis attenuato-acutis vel acuminatis 3-8-floris, squamis subdistiche imbricatis inferioribus brevioribus, infima 2-3 sterilibus, apice cuspidatis, mediis 4-5 mm longis ovatis submembranaceis, e basi latiori sensim angustatis acuminatis carinatis unicostatis fusco-brunneis opacis margine anguste albomembranaceis, dorso pilis brevissimis scaberulis, achenio late obovato trigono albido verrucoso 1 mm longo umbonato, basi angustato vix stipitato, cellulis 6-gonis minutis planis obsolete punctulato, stylo 4-5 mm longo glabro tenui basi dilatato-trigono, ramis 3 parce papulosis, staminum (3) antheris linearibus 1.5 mm longis, connectivo breviter acuto-producto.

Nom. Jap. Onoe-tentsuki, Noyama-tentsuki.

Hab.

Shikoku: Minami-uwagun in Iyo (M. OGATA).

Kiushiu: Iriki in Satsuma (Z. TASHIRO), Kawamura in Higo (K. MAYEBARA), Ichibu in Higo (Z. TASHIRO), Asahi in Osumi (Z. TASHIRO), Kitasatomura in Hiuga (Z. TASHIRO), Yamaye in Higo (K. MAYEBARA), Tairamura in Hizen (Z. TASHIRO), basi m. Shibisan in Satsuma (Z. TASHIRO), ins. Yakushima (Z. TASHIRO).

9. *Fimbristylis autumnalis* ROEM. et SCHULT.

Fimbristylis autumnalis (LINN.) ROEM. et SCHULT. Syst. 2 (1817) 97; KUNTH, Enum. Plant. 2 (1837) 227; STEUD. Synops. 2 (1855) 111; BÜCKL. in Linnaea 37 (1871) 574 var. *gracilis* tantum; ? FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 119; MATSUM. Ind. Plant. Japon. 2:1 (1905) 147.

Scirpus autumnalis LINN. Mant. 2 (1771) 180.

Fimbristylis complanata var. *microcarpa* (vix C. B. CLARKE, 1893) C. B. CLARKE in Bull. Geogr. Bot. 14 (1914) 198; MATSUM. Ind. Plant. Japon. 2:1 (1905) 291.

Rhizomate nullo, culmis caespitosis flaccidis compressis angulatis tenuibus laevibus basi foliatis, foliis culmo brevioribus vel subbrevioribus flaccidis planis 1.5-2.5 mm latis abrupte acuminatis praeter marginem superne scaberulam laevibus, vaginis distiche imbricatis compressis, antice tenuimembranaceo ferrugineo facile fissis, ore dorso annulo pilorum brevissimorum cinctis, anthela composita vel decomposita rarius subsimplici pluri-vel multi-spiculosa laxa vel laxiuscula 3-7 cm longa, bracteis 2-3 linearibus suberectis anthela plerumque brevioribus, radiis tenuibus laevibus, anthelulis effusis breviter setaceo-bracteolatis, spiculis solitariis lanceolatis vel linearilanceolatis acutis angulatis laxiuscule 7-16-floris 3-6 mm longis ca. 1.5 mm latis rufo-vel ferrugineo-brunneis, squamis oblongo-ovatis 1.5-2 mm longis tenuimembranaceis acutis et mucronatis acute carinatis trinervis,

dorso viridibus, margine albohyalinis, achenio 0.7 mm longo obovato albob-straminescente parce verrucoso vel laevi umbonato subsessili, cellulis extimis transverse oblongis planis minutis punctulato, stylo 1.5 mm longo tenui glabro basi dilatato, ramis 3 mediocribus papulosis, staminum (1-2) antheris brevi-linearibus flavidis $\frac{1}{2}$ mm longis apice rubroapiculatis. (Chromosomatibus $n=5$, sec. N. TANAKA).

Nom. Jap. Hime-hiratentsuki, Kusa-tentsuki, Hime-tentsuki.

Yezo: Hakodate (U. FAURIE n. 3335).

Hondo: Tanabe (U. FAURIE n. 4649), Sambongi (U. FAURIE n. 20), Morioka (G. TOBA), Ganju (U. FAURIE n. 13630), Siraoka in Musashi (T. SUZUKI), Takanamimura in Yetchu (T. OTAYA), Kosekimura in Iwaki (N. IMAI), Akaho in Shinano (H. SUZUKI), basi m. Kampusan in Ugo (S. MURAMATSU), urbe Akita (S. MURAMATSU), Okoto in Omi (C. HASHIMOTO), Sado (U. FAURIE n. 1847), Jokoji in Owari (K. SHIODA), Akatsumura in Owari (K. SHIODA), Shimokawaguchimura in Tamba (Y. ARAKI), Yamashitamura in Rikuzen (S. MURAI), Kawaradamura in Noto (J. YOSHIKAWA), Hitotsumatsumura in Kadzusa (I. MISONO), Kuki in Musashi (T. SUZUKI).

Shikoku: Mimakimura in Iyo (K. YAMASHITA), Sakawa in Tosa (T. YOSHINAGA), Nishibunmura in Tosa (I. OKUBO), Matsuyama (Z. TASHIRO), Meijimura in Iyo (C. WATANABE), Yokomineyama in Iyo (I. YOGO).

Kiushiu: Isakumachi in Satsuma (Y. DOI), Nagaura in Hizen (T. CHIBA), Yawatamura in Bungo (K. IKEBE), Soeda in Chikuzen (Z. TASHIRO), Hataketoge in Bungo (M. ONO), Sugidamimura in Hizen (S. HATUSIMA), Nogamimura in Bungo (Z. TASHIRO), Fukuoka (K. NAKASHIMA), Nittamura, ins. Tsushima (K. NAKASHIMA), Shimogomura in Buzen (K. IKEBE), Taragi in Higo (K. MAYEBARA), Tsutamimura in Buzen (T. YAMAZAKI).

Riukiu: ins. Tokunoshima (H. OHBA).

Korea: Koko penins. in Zennan (K. T. CHO), basi m. Chiisan in Keinan (S. OKAMOTO), Gensan (S. KITAMURA n. 1982), m. Mutosan in Zennan (K. T. CHO), Hoseiri in Kannan (N. NOMURA), Seoul (U. FAURIE n. 990), Chemulpo (U. FAURIE n. 1398).

10. *Fimbristylis taiwanica* OHWI

Fimbristylis taiwanica OHWI in Journ. Jap. Bot. 14 (1938) 574.

Rhizomate nullo, culmis caespitosis tenuibus laevibus ancipitibus vel compressotrigonis 20-30 cm altis erectis, basi foliatis, foliis culmo brevioribus molliusculis 1.5-2.5 mm latis planis, praeter margines superne scaberulas laevibus, ad apicem abrupte acutum versus sensim angustatis, vaginis subdistiche dispositis compressiusculis carinatis laevibus, antice albomembranaceo ferrugineo-striolatis fissis, ore dorso annulo pilorum brevissimorum cinctis, anthela decomposita laxiuscula polystachya pluriradiata 4-5 cm longa, bracteis 3-4, infima lineari anthela breviori suberecta, reliquis setaceis brevibus, radiis tenuibus usque ad 4 cm longis superne cum radiolis radiolulisque scabriusculis, bracteolis brevi-setaceis, spiculis solitariis lanceolatis angulatis acutis 2-4 mm longis 1 mm latis laxiuscule 5-7-floris ferrugineo-brunneis opacis, squamis ovatis 1-1.2 mm longis tenuimembranaceis ferruginescentibus et brunneo-striolatis acutis et subrecurvato-mucronatis, margine dilutioribus, dorso acute carinatis trinervis, achenio $\frac{1}{2}$ mm longo

albostraminescente laeviusculo obtuse trigono umbonato, cellulis extimis transverse oblongis planis minutis obsolete lineolato, stylo vix 1 mm longo glabro basi incrassato, ramis 3 mediocriter longis papulosis, staminum (2) antheris brevilinearibus $\frac{1}{2}$ mm longis muticis.

Nom. Jap. Kogome-tentsuki.

Hab. Formosa: Tainan (ex Hb. T. Ito).

11. *Fimbristylis tainanensis* OHWI

Fimbristylis tainanensis OHWI in Journ. Jap. Bot. 14 (1933) 574.

Rhizomate brevi, culmis caespitosis superne subalato-ancipitibus vel compressis trigonis ca. 60 cm altis tenuibus, superne margine scaberulis, basi foliatis, foliis planis 3-5 mm latis subrigidis margine superne scabris, apice abrupte acutissimis, vaginis compressis distiche imbricatis, ore dorso annulo pilorum brevissimorum cinctis, saepe partim fusco-suffusis, anthela densiuscula polystachya composita vel decomposita 3-4 cm longa, bracteis 2-4, infima lineari anthelam subaequante, reliquis brevibus setaceis, radiis pluribus compressis margine superne cum radiolis crebre scabris usque ad 2 cm longis, anthelulis brevissime setaceo-bracteolatis, spiculis solitariis vel paucis aggregatis anguste oblongis vel late lanceolatis acutiusculis 4-6 mm longis angulatis 1.5-2 mm latis castaneo- vel fusco-brunneis opacis laxiuscule 5-10-floris, squamis tenuimembraneis oblongis abrupte acutis et submucronatis lateribus brunnescentibus et castaneo-striolatis, marginibus albohyalinis, dorso viridi demum straminescente acute carinatis, 1.5-2 mm longis trinervis, achenio albostraminescente trigono obovato verrucoso subsessili, 0.7 mm longo, apice umbonato, cellulis extimis obsoletissimis transverse oblongis minutis planis obsolete punctulato, stylo 2 mm longo glabro basi incrassato ad medium usque trifido, ramis papulosis, staminum (3) antheris linearibus $\frac{3}{4}$ mm longis fuscis muticis vel brevissime mucronatis.

Nom. Jap. Taiwan-tentsuki.

Hab. Formosa: Seira, Kobigun in Tainanshu (Y. SHIMADA n. 4456), Bihiyu in Takaoshu (S. OKAMOTO), Rokki in Takaoshu (S. OKAMOTO).

12. *Fimbristylis complanata* LINK

Fimbristylis complanata (RETZ.) LINK, Hort. Berol. 1 (1827) 292; KUNTH, Enum. Plant. 2 (1837) 228; STEUD. Synops. 2 (1855) 112; MIQ. Flor. Ind. Bat. 3 (1856) 320; HANCE in Journ. Linn. Soc. 13 (1873) 132; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 646 et in Journ. Linn. Soc. 36 (1903) 231 et in Philipp. Journ. Sci. 2 (1907) 96; MATSUM. Ind. Plant. Japon. 2:1 (1905) 148 ex pte; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 482; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 116; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 122.

Scirpus complanatus RETZ. Observ. 5 (1789) 14.

Fimbristylis autumnalis (non ROEM. et SCHULT., char. mut.) BÖCKL. in Linnaea 37 (1871) 38, excl. var.

Rhizomate nullo vel brevissimo, culmis 50-80 cm altis caespitosis compressis 3-4-gonis subrobustis vel tenuibus erectis sub anthela ad angulos

subalatos parce scabriusculis vel laevibus striatis, basi plurifoliatis, foliis planis culmo brevioribus subrigidis 3-5 mm latis margine superne scabris apice abrupte acutis, vaginis subdistiche imbricatis compressis stramineo-viridibus antice tenuimembranaceo ferruginescente fissis, ore dorso annulo pilorum brevissimorum cinctis, anthela ampla decomposita vel supradecomposita ca. 10 cm longa laxa vel densa, polystachya pluriradiata, bracteis 2-4 linearibus anthela multo brevioribus erectis, radiis suberectis subtenuibus ad 7 cm longis cum radiolis radiolulisque parcissime scaberulis, bracteolis brevibus setaceis, spiculis solitariis vel pauci-aggregatis lanceolatis vel anguste oblongo-ovatis acutis angulatis fuscobrunneis 5-8 mm longis 1.5-2 mm latis sublaxe 5-12-floris, squamis oblongo-ovatis vel oblongis 3 mm longis brunneis opacis membranaceis acute carinatis striolatis, marginibus albo-hyalinis, dorso stramineo-viridi trinervis, apice acutissimo saepe mucronatis, achenio fere 1 mm longo trigono late obovato albido-stramineo sessili parce verrucoso vel sublaevi, apice umbonato, cellulis extimis minutis transverse oblongis planis punctulato, stylo 4 mm longo tenui glabro basi incrassato, ad medium usque trifido, ramis 3 papulosis, staminum (3) antheris linearibus rubro-fuscis ca. 1.5 mm longis muticis vel brevissime mucronatis.

Nom. Jap. O-hiratentsuki, Takasago-hiratentsuki.

Hab.

Riukiu: ins. Okinawa (S. SAKAGUCHI; S. TAWADA; Y. TAIRA), ins. Iheya (S. SAKAGUCHI).

Formosa: Karenko (ex Hb. T. Ito), Sanwan in Shinchikushu (Y. SHIMADA n. 301), Kushaku (U. FAURIE n. 815).

var. *Kraussiana* C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 646 et in Journ. Linn. Soc. 36 (1903) 231; MATSUM. Ind. Plant. Japon. 2:1 (1905) 148.

Fimbristylis Kraussiana HOCHST. ex STEUD. in Flor. 38 (1845) 757 pro syn.

Fimbristylis complanata (vix LINK) C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 193; MATSUM. l. c. (1905) 148 ex pte.

Culmis 20-50 cm altis tenuibus, foliis 1.5-3 mm latis mollibus, anthela composita vel subcomposita, rarius subdecomposita, pluristachya pauciradiata 2-7 cm longa, spiculis rufo-brunneis vel fusco-brunneis, antheris submuticis vel mucronatis. (Chromosomatibus $n=8$, sec. N. TANAKA).

Nom. Jap. No-tentsuki, Hira-tentsuki.

Hondo: Sakaiwaimura in Mino (K. SHIODA), Kosekimura in Iwaki (T. SUZUKI), Gomanohara in Tamba (Y. ARAKI), Jokoji in Owari (T. HATTORI), Gotomura in Totomi (G. HASHIMOTO), Kinkasan in Rikuzen (Z. TASHIRO), Kanayama in Kii (T. NAKAJIMA; Y. ARAKI), Morioka (G. TOBA), Akaho in Shinano (H. SUZUKI), Numasaki (U. FAURIE n. 1022), Tanabe (U. FAURIE n. 4647), Okumasan (U. FAURIE n. 13506), Matsumoto in Nagato (I. NIKAI), Kamitokiharamura in Mimasaka (O. KAJIYA), Junigasanya in Ugo (S. MURAMATSU), Toyoka in Mino (K. SHIODA), Morigami in Shinano (J. OHWI n. 7557).

Shikoku: Kochi (T. YOSHINAGA), Matsuyama (H. YAMAMOTO), Kuwabarayama in Iyo (H. YAMAMOTO), basi m. Setayama in Iyo (I. YOGO).

Kiushiu: Tomoedamura in Chikuzen (T. YAMAZAKI), Osadaike in Buzen (Z. TASHIRO; T. YAMAZAKI), Ichikimachi in Satsuma (Y. DOI), Yasumura in Chikuzen (Y. NABESHIMA), Kamiminemura in Hizen (Y. ONO), Kasugamura in Chikuzen (S. HATU-

SIMA), Fukuyamamura in Osumi (Z. TASHIRO), Yunoso in Chikuzen (Z. TASHIRO), Aso (U. FAURIE n. 2723), Nakaharu in Higo (K. MAYEBARA).

Korea: Kyurei in Zennan (M. K. BOKU), ins. Quelpaert (E. TAQUET n. 2086; M. K. BOKU), Koshu in Zennan (K. T. CHO).

Riukiu: ins. Iriomote (G. KOIDZUMI; Y. DOI).

Formosa: Shin-oku in Shinchikushu (Y. SHIMADA n. 309), Toyen (ex Hb. T. ITO).

13. *Fimbristylis Thomsonii* BÖCKLR.

Fimbristylis Thomsonii BÖCKLR. in Linnaea 37 (1871) 37; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 646 et in Journ. Linn. Soc. 36 (1903) 246; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 117; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 127; OHWI, l. c. (1938) 575.

Rhizomate abbreviato, culmis caespitosis 30-80 cm altis erectis compresse trigonis striatis laeviusculis plurifoliatis, foliis culmum subaequantibus rigidis planis 3-5 mm latis praeter marginem scabram laevibus apice abrupte acutis, vaginis teretibus ecarinatis saepe fusco-suffusis, antice tenuimembranaceis et ferrugineo-maculatis fissis, anthela ampla 7-10 cm longa densiuscula vel laxiuscula polystachya pluriradiata decomposita vel supra-decomposita, bracteis 2-3 linearibus erectis althela multo brevioribus, radiis compressis laeviusculis usque ad 5 cm longis, bracteolis brevi-setaceis, spiculis solitariis oblongo-ovatis acutiusculis angulatis 6-8 mm longis castaneo-brunneis laxiuscule 8-15-floris, squamis ovatis 3.5 mm longis submembranaceis dilute castaneo-suffusis et striolatis acute carinatis, carina viridi, dorso tenuiter 7-9-nervis, apice acutis, margine dilutioribus. achenio obovato 1.5 mm longo trigono albido nitido virrucoso sessili umbonato, cellulis extimis transverse oblongis planis minutissimis obsoletissime lineolato, stylo 3-3.5 mm longo glabro basi sensim pyramidato-dilatato, ramis 3 mediocriter longis papulosis, staminum (3) antheris linearibus 1.5-2 mm longis muticis.

Nom. Jap. Oni-tentsuki.

Hab. Formosa: Baibara in Taichushu (M. TATEWAKI), Sanshikyaku in Taihoku-shu (K. ODASHIMA n. 493).

14. *Fimbristylis Pierotii* MIQ.

Fimbristylis Pierotii MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 145; BÖCKLR. in Linnaea 37 (1871) 32; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 120; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 642 et in Bull. Geogr. Bot. 14 (1904) 193 ex pte; OHWI in Bot. Mag. Tokyo 45 (1931).

Rhizomate crassiusculo repente squamis deltoideis cincto usque ad 5 cm longo, culmis solitariis 20-60 cm altis tenuibus compressotriquetris scabris, basi paucifoliatis, foliis inferioribus 2-3 subaphyllis, superioribus culmo brevioribus planis vel margine involutis atroviridibus rigidulis erectis 1-2 mm latis praeter marginem scabram laevibus apice brevi-acutissimo interdum breviter setaceo-productis, vaginis subteretibus antice tenuimembranaceis fissis, ore dorso nec pilosis non ligulatis, anthela 3-10-stachya simplici vel subsimplici 2-4 cm longa, bracteis 2-3 setaceis vel squamiformibus anthela multo brevioribus, spiculis late lanceolatis angulatis castaneis vel

atro-castaneis acutis 7-15 mm longis 3-4 mm latis sublaxe pauci- vel plurifloris, squamis oblongo-ovatis 5-6 mm longis carinatis castaneo-suffusis et striolatis submembranaceis trinervis obtusulis vel acutiusculis, margine tenuimembranaceo dilutioribus, carina viridistraminea, achenio late obovato straminescente trigono nitido parce verrucoso 1.2 mm longo sessili subumbonato, cellulis extimis transverse brevioblongis medio leviter impressis minutis punctato, stylo ca. 6 mm longo tenui glabro basi dilatato, ramis 3 papulosis, staminum (3) antheris linearibus ca. 2.5 mm longis fuscis muticis.

Nom. Jap. Nohara-tentsuki, Buzen-tentsuki.

Hab.

Hondo: Matsubaramura in Bitchu (ex Hb. Z. TASHIRO), ins. Arashima in Shima (B. SOBASHIMA).

Shikoku: Togigozenyama in Iyo (T. IMAIDZUMI), Mishimamura in Iyo (C. WATANABE).

Kiushiu: Shimogomura in Buzen (K. IKEBE), Oomura in Higo (K. MAYEBARA), (U. FAURIE n. 2731; Z. TASHIRO), Naruo in Higo (K. MAYEBARA), Ajda in Higo (K. MAYEBARA), m. Iwayama in Hizen (Z. TASHIRO), m. Fudo in Hizen (K. YAMASHITA), Uki-dake in Chikuzen (S. HATUSIMA), Kabadotoge in Bungo (Z. KIYOHARA), m. Kirishima in Osumi (Z. TASHIRO), Hiraodai in Buzen (S. YOSHIOKA), Imagawamura in Buzen (R. NAKATANI), Yasumura in Chikuzen (Y. NABESHIMA), Tsutamimura in Buzen (T. YAMAZAKI).

Korea: ins. Quelpaert (E. TAQUET n. 3511), Hokuheiri, Kainangun in Zennan (K. T. CHO).

15. *Fimbristylis sericea* R. Br.

Fimbristylis sericea (POIR.) R. Br. Prodrum. (1810) 228; KUNTH, Enum. Plant. 2 (1837) 244; STEUD. Synops. 2 (1855) 121; BÖCKL. in Linnaea 37 (1871) 22; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 243 et in Hk. f. Flor. Brit. Ind. 6 (1893) 611 et in Bull. Geogr. Bot. 14 (1904) 199; MATSUM. Ind. Plant. Japon. 2:1 (1905) 151.

Scirpus sericeus POIR. Encycl. Suppl. 5 (1804) 99.

Fimbristylis decora NEES in WIGHT, Contrib. Bot. Ind. (1834) 101.

Fimbristylis velutina FRANCH. in Bull. Soc. Bot. France 26 (1879) 83.

Rhizomate ascendente ramoso caespitoso, foliis emortuis vestito, culmis erectis 10-30 cm altis compresse trigonis pubescentibus demum subcalvescentibus, basi foliatis, foliis linearibus planis 7-20 cm longis sursum subcircinato-recurvis 1.5-2 mm latis crassiusculis sericeo-pubescentibus, anthera simplici pauciradiata brevi-1-2-bracteata, radiis compressis ad 3 cm longis sericeo-pubescentibus interdum brevissimis, spiculis 3-10-aggregatis anguste oblongo-ovatis angulatis cinereobrunnescentibus acutis 6-10 mm longis ca. 4 mm latis late ovatis plurinervis ca. 4 mm longis obtuso-mucronulatis carinatis, margine perlate albo-cinerascentibus ciliolatis, achenio late obovato 1.5 mm longo biconvexo sessili vix umbonato, cellulis minutis obsoletissime punctulato vel sublaevi, maturitate fusco, stylo 3-3.5 mm longo tenui glabro basi dilatata interdum subsetulosis, ramis 2 papulosis, staminum (2-3) antheris 1.5 mm longis apiculatis. (Chromos. n=22, sec. N. TANAKA).

Nom. Jap. Birodo-tentsuki.

Hab.

Hondo: Ujimura in Noto (Y. KIKKAWA), Oarai in Hitachi (H. TSURUMACHI), Minatomura in Tango (Z. TASHIRO), Ikuratsu in Ise (T. HATTORI), Shizuoka (U. FAURIE n. 1841), Kamakura (U. FAURIE n. 6482), Yura in Tango (R. KISHINO), urbe Tsu (K. YATO; S. MIKI), Shimokomura in Iwami (I. MARUYAMA), Tottori (S. MIKI), Misaki in Noto (S. TANAKA), Shirahama in Kii (K. TAKEUCHI), ins. Niijima in Idzu (H. TÔBITA), Kugenuma in Sagami (T. MOMIYAMA), Shimaô in Yetchu (T. OTAYA).

Shikoku: Nagahamamura in Iyo (M. OGATA), Aki in Tosa (Z. TASHIRO), Kochi (U. FAURIE n. 11882), Juichimura in Tosa (Z. TASHIRO), in littore Sanuki (S. OSHIMA).

Kiushiu: Kuroshima in Bungo (Z. TASHIRO), Saiwaijima in Hiuga (FUKUDA), Yonosono in Chikugo (Z. TASHIRO), Isaku in Satsuma (T. FUKAZAWA), Karatsu in Hizen (Z. TASHIRO), Miyazaki in Hiuga (Z. TASHIRO), Fukiagenohama in Satsuma (Y. NAKANO).

Formosa: Tamsui (U. FAURIE n. 47, 810; Y. SHIMADA n. 4452; S. NAGASAWA), Kinzan in Taihokushu (Y. SHIMADA n. 4453). Chikunan in Shinchikushu (Y. SHIMADA n. 299).

16. *Fimbristylis spathacea* ROTH

Fimbristylis spathacea ROTH, Nov. Sp. Pl. (1821) 24; KUNTH, Enum. Plant. 2 (1839) 246; STEUD. Synops. 2 (1855) 114; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 640 et in Journ. Linn. Soc. 36 (1903) 244 et in Philipp. Journ. Sci. 2 (1907) 95; MATSUM. Ind. Plant. 2:1 (1905) 152; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 485; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 109; KOORDERS, Exkursionsfl. Java 1 (1911) 199; MERRILL, Enum. Philipp. Flow. Pl. 1 (1922) 126.

Scirpus glomeratus (non LINN.) RETZ. Observ. 4 (1786) 11.

Fimbristylis glomerata (RETZ.) NEES in Linnaea 9 (1834) 290; KUNTH, Enum. Plant. 2 (1837) 246; BÖCKL. in Linnaea 37 (1871) 47.

Fimbristylis Wightiana NEES in WIGHT, Contrib. Bot. Ind. (1831) 99.

Fimbristylis formosensis C. B. CLARKE in HENRY List. Pl. Formos. (1896) 105, nomen; MATSUM. Ind. Plant. Japon. 2:1 (1905) 150, nomen.

Fimbristylis kankaoensis HAYATA, Icon. Pl. Formos. 6 (196) 111.

Rhizomate brevi erecto estolonifero, culmis 15-40 cm altis compresso-trigonis sulcatis laevibus strictis tenuibus, basi incrassata multifoliatis, foliis linearibus planis rigidis vel perrigidis planis margine subincurvo sparse scabris, 7-20 cm longis, 1.5-3 mm latis, p'erumque uno latere crassioribus, apice abrupte acutis, vaginis fuscotinctis opacis, anthela composita vel subdecomposita laxa vel densa multispiculosa, bracteis 1-3 erectis anthela multo brevioribus, radiis laevibus ad 3 cm longis, spiculis pauci-aggregatis vel solitariis oblongis usque late ovatis 3-5 mm longis ca. 2 mm latis subangulatis obtusis dense plurifloris, squamis ovatis vel late ovatis carinatis ferrugineo-fuscis submembranaceis obtusis muticis vel mucronulatis margine late albohyalinis integris glabris, 1.5-2 mm longis obsolete 3-5-nervis, achenio late obovato vel obovato inflato biconvexo vel raro trigono (et styli ramis 3) vix 1 mm longo maturitate atrofusco laeviusculo sessili, apice vix umbo-nato, cellulis 4-gonis minutis obsoletissime punctato-lineolato, stylo 1.5 mm longo glabro basi leviter incrassato, ad medium usque bifido, vel rarissime

trifido, ramis papulosis, staminum (1-2) antheris linearibus $\frac{3}{4}$ mm longis muticis.—A sequente caute distinguenda.

Nom. Jap. Shiokaze-tentsuki, Shiba-tentsuki.

Hab.

Hondo: Hitotsumatsumura in Kadzusa (I. MISONO).

Shikoku: Fukuura in Iyo (M. OGATA), Mushadomari-hama in Iyo (M. OGATA).

Kiushiu: Funaai in Osumi (Z. TASHIRO), Shimanoura in Osum. (Z. TASHIRO), Sata-misaki in Osumi (Z. TASHIRO), Higashi-minakatamura in Satsuma (Z. TASHIRO), Tajiri in Osumi (Z. TASHIRO), Fukazima in Buzen (Z. TASHIRO), Kogushi in Osumi (Z. TASHIRO), Shimadomari in Osumi (Z. TASHIRO).

Riukiu: ins. Yakushima (G. KOIDZUMI; U. FAURIE n. 4362), ins. Tanegashima (K. MAYEBARA), ins. Tokunoshima (H. OHBA), ins. Amami-Oshima (Z. TASHIRO), ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI; Y. TAIRA), ins. Iriomote (G. KOIDZUMI; Y. DOI).

Formosa: Kyuko in Shinchikushu (Y. SHIMADA n. 307), Tamsui (U. FAURIE n. 41), Takao (Y. SHIMADA n. 4454).

17. *Fimbristylis cymosa* R. BR.

Fimbristylis cymosa (LAM.) R. BR. Prodr. (1810) 228; KUNTH, Enum. Plant. 2 (1837) 244; STEUD. Synops. 2 (1855) 121; BENTH. Flor. Austral. 7 (1878) 318; C. B. CLARKE in Journ. Linn. Soc. 36 (1803) 232 et in Philipp. Journ. Sci. 2 (1907) 97; MATSUM. Ind. Plant. Japon. 2:1 (1905) 148.

Scirpus cymosus LAM. Tabl. 1 (1796) 141.

Rhizomate brevi erecto estolonifero, culmis 10-60 cm altis strictis tenuibus compresso-trigonis laevibus, basi incrassata multifoliatis, foliis perrigidis breviacutissimis 1.5-4 mm latis 5-30 cm longis crassis, planis, praeter margines parce scabras laevibus, uno latere crassioribus, anthela simplici vel subcomposita vel raro capitulum 1 reducta, bracteis 1-3 anthela multo brevioribus erectis, radiis patentibus firmulis laevibus apice capitulatis, capitulis paucis vel pluribus, hemisphaericis 5-10 mm diam. plurispiculosis, spiculis oblongis vel ovatis 4-6 mm longis obtusis ca. 2 mm latis subangulosis sessilibus dense plurifloris, squamis ovatis 1.5-2 mm longis obtusis submembranaceis carinatis rufobrunneis, margine perlate albo-scariosis subtrinervis laevibus glabris, achenio trigono subcompresso vix 1 mm longo obovato vel late obovato maturitate atrofusco obsolete verrucoso umbonato sessili, cellulis 4-gonis vel transverse brevi oblongis obsoletissime et minutissime lineolato vel fere laevi, stylo 1.5 mm longo tenui basi leviter incrassato, glabro, ramis 3 papulosis, staminum (3) antheris linearibus $\frac{3}{4}$ mm longis muticis.

Nom. Jap. Tama-tentsuki.

Hab.

Riukiu: ins. Iriomote (S. TAWADA), ins. Yonakuni (G. KOIDZUMI; S. TAWADA), ins. Ishigaki (E. TAKAMINE).

Formosa; Garambi (N. FUKUYAMA n. 4053, culta), sine loc. (S. MIKI).

18. *Fimbristylis miliacea* VAHL

Fimbristylis miliacea (LINN.) VAHL, Enum. Plant. 2 (1806) 237; KUNTH, Enum.

Plant. 2 (1837) 238; STEUD. Synops. Glumac. 2 (1855) 113; BÜCKL. in Linnæa 37 (1871) 43 et ENGL. Bot. Jahrb. 6 (1885) 51; BENTH. Flor. Austral. 7 (1878) 316; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 119; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 644; et in THIS. DYER, Fl. Trop. Afr. 8 (1902) 421 et in Journ. Linn. Soc. 36 (1903) 239 et in Bull. Geogr. Bot. 14 (1904) 199; MATSUM. Ind. Plant. Japon. 2: 1 (1905) 150; MATSUM. et HAYATA, Enum. Pl. Formos. (1906) 484; NAKAI, Flor. Korean. 2 (1911) 290; KOORDERS, Exkursionsfl. Java 1 (1911) 200; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 115; MERR. Enum. Philipp. Fl. Pl. 1 (1922) 124; ABRAMS, Illustr. Flor. Pacif. St. 1 (1923) 268; KITAG. Lineam. Fl. Mansh. (1939) 118.

Scirpus miliaceus LINN. System. ed. 10 (1759) 868; BURM. f. Flor. Indic. (1768) 22, t. 9, f. 2; THUNB. Flor. Japon. (78) 37.

Rhizomate nullo, culmis caespitosis mollibus 10-60 cm altis compressis 4-angulatis laevibus, basi vaginis 2-3 compressis ad 15 cm longis apice oblique fissis acuminatis vel brevissime setaceis cinctis, foliis paucis a latere compressis ensatis equitantibus 1.5-2.5 mm latis margine interne sulcatis et parce scabris, apice sensim attenuato-angustatis, culmum interdum subaequantibus, vaginis a latere compressis, dorso carinatis, antice fisso hyalino-marginatis, anthela composita vel decomposita laxiuscula polystachya usque ad 8 cm longa, bracteis 2-4 setaceis anthela multo brevioribus, radiis pluribus tenuibus cum radiolisque scaberulis, anthelulis setaceobraceolatis, spiculis solitariis globosis vel ellipticis 2.5-4 mm longis 1.5-2 mm latis obtusissimis dense plurifloris, rufo- vel ferrugineo-brunneis, squamis ovatis 1 mm longis obtusis membranaceis rufo-brunnescentibus glabris dorso clariore trinervis muticis, maturitate patentibus, achenio obovato stramineo nitido verrucoso 0.6 mm longo trigono umbonato, basi angustata sessili, cellulis transverse oblongis medio subimpressis minute lineolato et striolato, stylo fere 1.5 mm longo glabro basi paullo dilatato, ramis 3 papulosis, staminum (1-2) antheris lanceolatis $\frac{1}{2}$ mm longis muticis. (Chromosomatibus $n=5$, sec. N. TANAKA).

Nom. Jap. Hideriko.

Hondo: Kyoto (N. KINASHI; S. MIKI), Sakai (T. YAMADA), Akaho in Shinano (H. SUZUKI), Arimaie in Kii (J. OHWI et M. TAGAWA), Shiraoka in Musas'hi (T. SUZUKI), Hakone (U. FAURIE n. 6512), Yoshida in Iwami (H. TAMURA), Shirakawa in Iwaki (T. SUZUKI), Kuki in Musashi (T. SUZUKI), Akita (U. FAURIE n. 1019), Shonai (U. FAURIE n. 1020), Kuroishi (U. FAURIE n. 1264), Tokita (U. FAURIE n. 13783), Miyazu (U. FAURIE n. 4926), Ido in Kii (H. KOIDE), Matsushima (U. FAURIE n. 1846), Niigata (U. FAURIE n. 1845), Kinkasan in Mino (S. KANADA), Fukuroda in Hitachi (H. TSURUMACHI), Kasahara in Mino (K. SHIODA), Nogimura in Idzumo (M. HAYASHI), Morioka (G. TOBA), Toyokawa in Settsu (N. U).

Shikoku: Kochi (U. FAURIE n. 11864; T. YOSHINAGA), Matsuyae (U. FAURIE n. 11636), Shinryo in Awa (T. INOBE), Ozu in Iyo (K. YAMASHITA), Mikazuki in Tosa (I. OKUBO).

Kiushiu: Oguchi in Satsuma (S. MURAMATSU), Tokitsumura in Hizen (Z. TASHIRO), Yukiura in Hizen (Z. TASHIRO), in m. Kirishima (Z. TASHIRO).

Korea: Seoul (U. FAURIE n. 939), ins. Quelpaert (E. TAQUET n. 705, 2089), Chinnampo (U. FAURIE n. 1395), Reigisan (T. SAKATA), Kyurei in Zennan (M. K. BOKU).

Riukiu: ins. Yakushima (G. KOIDZUMI; Z. TASHIRO), ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI), ins. Okinoerabu (H. OHBA), ins. Iriomote (G. KOIDZUMI), ins. Ishigaki (G. KOIDZUMI; S. TAWADA; E. TAKAMINE).

Formosa: Hokuto (U. FAURIE n. 45; Y. SHIMADA n. 4450), Kagi (U. FAURIE sin. num.) Taihoku (Y. KUROSAWA; S. NAGASAWA), Manshu (S. KITAMURA n. 1108), Sankyaku in Taihokushu (E. KUROSAWA).

19. *Fimbristylis Koidzumiana* OHWI

Fimbristylis Koidzumiana OHWI in Act. Phytotax. et Geobot. 1 (1932) 78.

Rhizomate nullo, culmis caespitosis 20-40 cm altis tenuibus 4-angulatis sub anthela parce scabriusculis, basi vaginis 2-3 subcompressis subcarinatis aphyllis ad 7 cm longis cinctis, foliis paucis culmo multo brevioribus a latere compressis equitantibus planis linearibus mollibus laevibus 1-2 mm latis erectis apice sensim angustato-attenuatis margine interiore sulcatis, vaginis straminescentibus parum compressis, anthela composita vel decomposita densiuscula polystachya 3-5 cm longa, bracteis 3-5 setaceis ad 2 cm longis scabris, radiis 5-10, angulatis superne scabriusculis ad 3 cm longis, spiculis solitariis 3-5 mm longis 2 mm latis obtusulis dense plurifloris oblongis vel oblongo-ellipticis fusco-brunneis, squamis ovatis obtusis brunneis 1.5-2 mm longis membranaceis carinatis margine vix albidis dorso linea duplici fuscobrunnea notatis trinervis, achenio obovato obtuse trigono subcompresso $\frac{1}{2}$ mm longo albido-stramineo sparse verrucoso subsessili apice subumbonato, cellulis transverse oblongis medio leviter impressis lineolato et striolato, stylo 1.3 mm longo glabro basi dilatato-trigono, superne et ramis (3) breviter ciliatis, staminum (2) antheris lanceolatis $\frac{1}{2}$ mm longis muticis.

Nom. Jap. Taiwan-hideriko.

Hab. Formosa: Takao (U. FAURIE n. 42).

20. *Fimbristylis quinquangularis* KUNTH

Fimbristylis quinquangularis (VAHL) KUNTH, Enum. Plant. 2 (1837) 22; STEUD. Synops. 2 (1855) 113; BICKLER in Linnaea 37 (1871) 42; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 644 et in THIS. DYER, Fl. Trop. Afr. 8 (1902) 421 et in Journ. Linn. Soc. 36 (1903) 242 et in Bull. Geogr. Bot. 14 (1904) 199; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 125.

Fimbristylis Fauriei OHWI in Act. Phytotax. et Geobot. 1 (1932) 77.

Rhizomate abbreviato, culmis pluribus 30-100 cm altis laevibus erectis 5-angulatis, inferne vaginis 2-3 vix compressis tubulosis aphyllis usque ad 20 cm longis apice oblique fissis margine brunnescentibus cinctis, foliis paucis rigidulis planis culmum saepe aequantibus 3-4 mm latis supra marginibusque scabris, subinvolutis, subtus laevibus, apice sensim attenuatis obtusulis, vaginis straminescentibus nitidis rigidulis, anthela decomposita dense polystachys 4-6 cm longa, bracteis 4-5 setaceis anthela multo brevioribus, radiis pluribus scabriusculis ad 3 cm longis, spiculis solitariis ovatis acutiusculis

vel acutis ca. 3 mm longis ca. 2 mm latis dense plurifloris. squamis ellipticis 1.5 mm longis obtusis castaneis margine anguste albobyalinis, dorso linea duplici atrofusca notatis trinervis, sursum leviter obtuse carinatis, apice submucronatis, achenio obovato obtuse trigono subcompresso $\frac{3}{4}$ mm longo sparse verrucoso pallide straminescente nitido umbonato, cellulis extimis transverse oblongis lineolato et striolato, stylo ca. 1.5 mm longo glabro, inferne dilatato, superne et ramis 3 breviciliatis, staminum (1) antheris oblongo-lanceolatis ca. 0.6 mm longis muticis.

Nom. Jap. Inu-hideriko.

Hab. Formosa: Tamsui (U. FAURIE n. 43), Chikushiko, urbe Taihoku (Y. SHIMADA n. 5038).

21. *Fimbristylis globulosa* KUNTH

Fimbristylis globulosa (RETZ.) KUNTH, Enum. Plant. 2 (1837) 231; STEUD. Synops. 2 (1855) 114; BÜCKL. in Linnaea 37 (1871) 45; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 614 et in Journ. Linn. Soc. 36 (1903) 237; E. G. CAMUS in Lecomte, Flor. Indo-chin. 7 (1912) 115; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 123.

Scirpus globulosus RETZ. Obs. 6 (1791) 19.

Fimbristylis Torresiana GAUDICH. Bot. Freyc. Voy. (1826) 413; KUNTH, l. c. (1837) 231; STEUD. l. c. 2 (1855) 114.

Fimbristylis globulosa var. *Torresiana* (GAUDICH.) C. B. CLARKE in Hk. f., l. c. (1893) 645 et in Journ. Linn. Soc. 36 (1903) 237.

var. *austro-japonica* OHWI, var. nov.

Fimbristylis globulosa (vix KUNTH) OHWI in Journ. Jap. Bot. 14 (1938) 575.

Rhizomate abbreviato, caespitos densos praeter innovationes vix foliatos formante, culmis numerosis 20-40 cm altis trigonis compressis striatis laevibus erectis tenuibus brunneo-viridibus, basi vaginis 2-3 aphyllis tubulosis oblique fissis ad 5 cm longis margine cinnamomeis cinctis, anthela simplici paucistachya pauciradiata, bracteis 2-3 e basi dilatata breviter cuspidatis ad 1 cm longis, radiis laevibus ad 1.5 cm longis, spiculis globoso-ellipticis usque oblongoovatis 3-4 mm longis obtusis 2.5-3 mm latis dense plurifloris fuscis vel rufo-fuscis, squamis oblongis glabris obtusis muticis 2 mm longis membranaceis, dorso crassiore fuscescente trinervis, lateribus brunneo-suffusis, margine late albo-scariosis, achenio $\frac{3}{4}$ mm longo nitido trigono modice compresso vel in una spicula nunc biconvexo, stramineo verrucoso umbonato sessili, cellulis transverse oblongis margine elevatis minute cancellato, stylo 2 mm longo tenui glabro, basi leviter dilatato-trigono, a medio trifido vel rarissime bifido, ramis papulosis, staminum (3) antheris linearibus $\frac{3}{4}$ mm longis submuticis. Culmo tenui a typo diversa.

Nom. Jap. Hanashi-tentsuki.

Hab. Riukiu: ins. Iriomote (G. KOIDZUMI), ins. Ishigaki (E. TAKAMINE), ins. Yonakuni (G. KOIDZUMI; S. TAWADA n. 511).

22. *Fimbristylis diphyloides* MAKINO

Fimbristylis diphyloides MAKINO in MAKINO et NEMOTO, Flor. Japan (1925) 1389

nom. seminud.; TUYAMA in Journ. Japan. Bot. 11 (1935) 252; NAKAI in Journ. Jap. Bot. 16 (1940) 65.

Fimbristylis globulosa var. *Torresiana* (non C. B. CLARKE, 1893), C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 199; MATSUM. Ind. Plant. Japon. 2:1 (1905) 151, ex pte.

Fimbristylis campylophylla TUYAMA in Journ. Japan. Bot. 11 (1935) 248, incl. var. *pygmaea* TUYAMA, 250.

Rhizomate nullo vel brevissimo, caespitos foliosos formante, culmis pluribus 10-50 cm altis subcompressis laevibus sulcato-striatis tenuibus pallide viridibus, ex axilla foliorum longe laminatorum ortis, basi vaginis 1-2 aphyllis usque ad 5 cm longis tubulosis oblique truncatis cinctis, foliis culmum subaequantibus glabris submollibus 1.5-3 mm latis planis sursum angustatis et apice abrupte acutis, margine spinuloso-scabris, saepe arcuatis, anthela simplici vel saepius subcomposita pluristachya, bracteis 4-6 e basi dilatata abrupte setaceis ad 10-20 mm longis suberectis, radiis 4-8 laevibus ad 4 cm longis, anthelulis pauciradiolatis, spiculis pedicellatis vel terminali sessili, omnibus solitariis ovatis usque oblongo-ovatis obtusulis vel acutiusculis 4-6 mm longis dense plurifloris 2.5-3 mm latis teretibus fusco- vel rufo- (var. *campylophylla* TUYAMA in Journ. Japan. Bot. 11: 248, 1935, pro spec., incl. var. *pygmaea* TUYAMA) brunneis, squamis oblongo-ovatis vel ovatis obtusis muticis membranaceis ca. 2 mm longis membranaceis margine anguste scariosis, dorso vix carinato viridulo trinervis, achenio $\frac{3}{4}$ mm longo inaequaliter biconvexo nitido stramineo obovato verrucoso subsessili umbonato, cellulis transverse oblongis margine elevatis pluribus cancellato, stylo glabro 2 mm longo e basi paullo latiore sensim angustato a medio bifido, rarissime trifido, ramis papulosis, staminum (1-2) antheris linearibus $\frac{1}{2}$ mm longis muticis. (Chromosomatibus $n=10$, sec. N. TANAKA).

Nom. Jap. Kuro-tentsuki, Noji-tentsuki, Ko-nojitentsuki.

Hondo: urbe Wakayama (S. SAKAGUCHI), Matsudo in Shimoda (S. OKUYAMA), Kyoto (N. KINASHI), Owase in Kii (N. YASUI), Tokusa in Nagato (T. ODA), Zeze in Omi (C. HASHIMOTO), Shiraoka in Musashi (S. SUZUKI). Yoshidamura in Iwami (H. TAMURA), Kambe in Ise (T. HATTORI), Sado (U. FAURIE n. 1843), Anamizu in Noto (Y. YOSHIKAWA), Katsutamura in Bizen (I. OKUBO), Matsue (M. HAYASHI), Uji, urbe Kyoto (Z. TASHIRO), fl. Banyu in Sagami (K. HISAUCHI), Wakayama (U. FAURIE n. 12019), Ikedamura in Kii (Z. TASHIRO).

Shikoku: Matsuye (U. FAURIE n. 11660), Mimakimura in Iyo (C. WATANABE), Osemura in Iyo (T. IMAIZUMI), Awatsumura in Iyo (M. OGATA), Namikatamura in Iyo (H. YAMAMOTO), Kochi (T. YOSHINAGA), Otsumura in Tosa (T. YOSHINAGA), Meijimura in Iyo (C. WATANABE), Shinryomura in Awa (T. INOBE), Ozu (K. YAMASEITA).

Kiushiu: Chiwatamura in Hizen (T. BABA), m. Kurokami in Hizen (K. YAMASHITA), Shimogomura in Buzen (K. IKEBE), m. Fudo in Hizen (K. YAMASHITA), Yawatamura in Bungo (K. IKEBE), Nakatsu in Buzen (T. YAMAZAKI), Umadamura in Chikuzen (Y. NABESHIMA), Nishi-kokubumura in Osumi (Z. TASHIRO), Fukuoka (K. NAKASHIMA), Nogimura in Idzumo (M. HAYASHI), Aida in Higo (K. MAYEBARA), Kikuchimura in Higo (S. TOKUNAGA), Hinatatoge in Chikuzen (S. HATUSIMA).

Riukiu: ins. Tanegashima (Z. TASHIRO).

Korea: ins. Quelpaert (E. TAQUET n. 2093, 2110, 2111), Kyurei in Zennan (M. K. BOKU), penins. Koko in Zennan (K. T. CHO), Koshu in Zennan (K. T. CHO).

23. *Fimbristylis katzusana* OHWI*Fimbristylis katzusana* OHWI in Fedde Repert. 36 (1931) 43.

Rhizomate nullo, culmis subcaespitosis 4-15 cm altis tenuibus subcompressis striatis laevibus, inferne interdum vagina unica subaphylla cinctis, basi foliatis, foliis 2-6 cm longis planis glabris ca. 1 mm latis praeter marginem superne parvissime spinuloso-scabriusculam laevibus apice abrupte acutis, vaginis brunnescentibus, anthela 1-3-stachya, bracteis 1-2 squamiformibus apice brevisetosis, radiis horizontaliter patentibus usque ad 1 cm longis laevibus, spiculis solitariis, terminali sessili, lateralibus pedunculatis, omnibus oblongis clare fusco-brunneis opacis 5-7 mm longis subteretibus obtusis dense plurifloris, squamis adpressis oblongis tenui-membranaceis brunnescentibus et fusco-maculatis, margine vix dilutiore parce ciliatis, costa crassa prominente laevi viridi inferne subtrinervi notatis, apice emarginato mucronatis, achenio crasse biconvexo vix 1 mm longo late obovato nigricante subnitido umbonato sessili, cellulis longitudinaliter oblongis planis obsolete striolato, stylo 2-2.5 mm longo inferne sparse papilloso-piloso vel glabriusculo basi dilatato ramis 2 papulosis, staminum (3) antheris $\frac{1}{2}$ - $\frac{3}{4}$ mm longis linearibus apice connectivo brevi producto parce albo-setuloso terminatis.

Nom. Jap. Issun-tentsuki.

Hab. Hondo: Takane-hongoson in Kadzusa (S. OKUYAMA; S. NAKAMURA), Hitotsumatsumura in Kadzusa (I. MISONO).

24. *Fimbristylis Takamineana* OHWI*Fimbristylis Takamineana* OHWI in Journ. Japan. Bot. 13 (1937) 332.

Rhizomate nullo, culmis caespitosis 20-30 cm altis tenuibus leviter striatis laevibus sub anthela subcompressis, inferne saepe vagina unica subaphylla tectis, basi foliosis, foliis 10-20 cm longis planis mollibus ca. 1.5 mm latis glabris praeter margines spinuloso-scabras laevibus apice abrupte acutis, vaginis brunnescentibus brevibus, anthela 5-10-stachya pauciradiata subcomposita, bracteis 2-3 cm cum bracteolis squamiformibus mucronatis, radiis 2-4 usque ad 2 cm longis laevibus oblique patentibus, anthelulis 2-3-spiculosis, spiculis solitariis oblongis subteretibus opacis fuscis 4-6 mm longis dense plurifloris obtusis, squamis ellipticis fere 2 mm longis tenuimembranaceis fulvis dense atrorufopunctatis margine vix dilutiore superne ciliatis, lateribus enervis, costa dorsali crassa viridi inferne trinervi, laevi elevata notatis, apice retuso mucronatis, achenio $\frac{2}{3}$ mm longo biconvexo late obovato nigricante verrucoso albo-straminescente umbonato, cellulis longitudinaliter oblongis planis obsolete striolato, stylo 1.5 mm longo e basi trigono-incrassato albo-pilosulo sursum sensim angustato inferne parce ciliato, ramis breviusculis 2 vel altero brevi additis parce papulosis, staminum (3) antheris $\frac{2}{3}$ mm longis linearibus, apice connectivo distincto atrato albo-setuloso terminatis.

Nom. Jap. Chairō-tentsuki.

Hab. Riukiu: ins. Ishigaki (E. TAKAMINE).

25. *Fimbristylis Shimadana* OHWI

Fimbristylis Shimadana OHWI in Act. Phytotax. et Geobot. 5 (1936) 184.

Rhizomate nullo, culmis pluribus erectis tenuibus angulatis mollibus laevibus trigonis interdum sub apice parce scabris, striatis, basi foliatis, foliis culmum subaequantibus mollibus planis 1-1.5 mm latis angustatis glabris vel parce pubescentibus, praeter marginem involutam superne scabriusculam laevibus, apice sensim vel vix angustatis et abrupte acutis, vaginis sordide stramineis 2-4 cm longis, antice tenuimembranaceis, breviter parce pilosis vel glabris, apice oblique fissis, anthela laxa subcomposita 3-4 cm longa pauciradiata pauci-pluri-spiculosa, radiis laevibus patentibus compressis ad 4 cm longis, bracteis 3-4, ima anthelam saepe subsuperante, anthelulis breviter setaceo-bracteolatis, radiolis laevibus, spiculis oblongo-ovatis vel ovatis acutis teretibus 5-10 mm longis ca. 2.5 mm latis dense plurifloris alboferrugineis subnitidis, squamis late ovatis submembranaceis concavis albidis et ferrugineo-suffusis obtusissimis 2 mm longis vix carinatis mucronulatis dorso superne unicostatis, inferne subtrinervis, achenio obtriagulato-late-obovato brevistipitato biconvexo 1 mm longo parce verrucoso brunneo nitido umbonato, cellulis extimis minutis transverse oblongis margine albido vix elevatis longitudinaliter striato et tenuiter transverse lineolato, stylo 1.5 mm longo compresso basi parum incrassato, margine ciliato, ramis 2 papulosis, staminum (1) antheris linearibus $\frac{1}{2}$ mm longis apiculatis.

Nom. Jap. Shiraho-tentsuki.

Hab. Formosa: Daijusho in Takaoshu (S. ITO in Y. SHIMADA n. 5174), Shoanseki in Tainanahu (ex Hb. T. Iro).

26. *Fimbristylis ferruginea* VAHL

Fimbristylis ferruginea (LINN.) VAHL, Enum. Pl. 2 (1836) 291; DECNE in Nouv. Ann. Paris, 3 (1834) 362; KUNTH, Enum. Plant. 2 (1837) 236; STEUD. Synops. 2 (1855) 118; BENTH. Flor. Hongkong. (1861) 391; BENTH. Flor. Austral. 7 (1878) 312; BÜCKL. in Linnaea 37 (1871) 16; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 638 et in THIS. DYER, Fl. Trop. Afr. 8 (1902) 417 et in Journ. Linn. Soc. 36 (1903) 235 et in Philipp. Journ. Sci. 2 (1907) 94; MAKINO in Bot. Mag. Tokyo 10 (1896) 65; MATSUM. Ind. Plant. Japon. 2:1 (1905) 149; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 483; KOORDERS, Exkursionsfl. Java 1 (1911) 199; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 108; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 123; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 94.

Scirpus ferrugineus LINN. Spec. Plant. (1753) 50.

Fimbristylis aginkotensis HAYATA, Icon. Plant. Formos. 6 (1916) 108.

Fimbristylis anpinensis HAYATA, Icon. Plant. Formos. 6 (1916) 108.

Rhizomate lignoso brevi repente, culmis pluribus 20-60 cm altis laevibus cinerascentiviridibus compressis leviter striatis firmulis, basi paullo incrassata tantum paucifoliatis, foliis inferioribus aphyllis, superioribus culmo multo brevioribus brevibus anguste linearibus crassis saepe subconduplicatis apice abrupte obtusis, praeter marginem superne scabriusculum laevibus, glabris 1-1.5 mm latis erectis rigidis, vaginis exterioribus fusco-

spadiceis coriaceis laevibus aphyllis, interioribus usque ad 10 cm longis tubulosis truncatis antice ferrugineotinctis tenuimembranaceis, anthela 3-5 cm longa pluri-pauci-spiculosa densiuscula simplici vel subcomposita, radiis firmulis laevibus compressis laevibus ad 2.5 cm longis, bracteis 2-3 linearibus, ima anthelam aequante vel superante suberecta basi leviter dilatata, bracteolis squamiformibus, spiculis oblongo-ovatis usque anguste oblongis acutis teretibus opacis cinerascens fusco- vel ferrugineo-brunneis 7-13 mm longis ca. 3 mm latis dense multifloris, squamis oblongis vel ellipticis vel ovatis 3.5-4 mm longis obtusissimis et mucronatis submembranaceis sordide brunneotinctis et striolatis, vix carinatis, dorso clariore uninervis, extus superne margineque brevissime cinereo-puberulis vel subglabris, margine vix dilutioribus, achenio brunneo vel fusco lata obovato compresso biconvexo humile umbonato vix verrucoso 1-1.2 mm longo brevissime stipitato, cellulis extimis minutissimis transverse oblongo-6-gonis planis laevi vel obsoletissime punctulato-lineolato, stylo 3-3.5 mm longo compresso latiusculo basi leviter dilatato, margine ciliato, ramis 2 papulosis, staminum (3) antheris linearibus brevimucronatis 1.2-1.5 mm longis.

Nom. Jap. Shima-tentsuki.

Hab.

Bonin: ins. Chichishima (S. NISHIMURA), ins. Hahajima (S. NISHIMURA).

Riukiu: ins. Tokunoshima (H. OHBA), ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI; S. TAWADA; S. OKAMOTO), ins. Iriomote (G. KOIDZUMI; Y. DOI), ins. Miyako (G. KOIDZUMI; S. SAKAGUCHI), ins. Yonakuni (G. KOIDZUMI).

Formosa: Keelung (U. FAURIE n. 178, 179; K. ODASHIMA in TANAKA et SHIMADA n. 17809), Hokuto (U. FAURIE n. 50), Tamsui (U. FAURIE n. 36, 812), Chikunan in Shin-chikushu (Y. SHIMADA n. 677).

var. *Sieboldii* (MIQ.) OHWI in Journ. Jap. Bot. 14 (1938) 576.

Fimbristylis leiocarpa MIQ. (non MAXIM.) in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 144.

Fimbristylis Sieboldii MIQ. in Cat. Mus. Bot. Lugd. Bat. (1870) 118, nomen sol.; FRANCH. et SAVAT. Enum. Plant. Japon. 2:1 (1879) 118 cum synonym.; MAKINO in Bot. Mag. Tokyo 4 (1890) 229; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 151 et in Bull. Geogr. Bot. 14 (1904) 198; MATSUM. Ind. Plant. Japon. 2:1 (1905) 151; NAKAI, Flor. Korean. 2 (1911) 291 et 514.

Fimbristylis subbispicata (non NEES et MEY.) C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 199, sc. sol. FAURIE n. 4348.

Omnibus partibus minus firmis et tenuioribus, foliis saepe parum elongatis, sed culmo plerumque brevioribus, anthela simplici pauci-(1-5)-spiculosa, antheris 0.8-1 mm longis.

Nom. Jap. Isoyama-tentsuki.

Hab.

Hondo: Naruo in Settsu (Z. YOSHINO), Uotsu in Iwami (I. TAKBGI), Goyu in Owari (T. ICHIKAWA), ins. Niishima in Idzu (H. TOBITA), Takashima in Iwami (T. MARUYAMA), Shirahama in Idzu (Z. TASHIRO; I. OKUBO), Oshima in Kii (T. NAKASHIMA; S. SAKAGUCHI), Iwakuni in Suwo (S. ONO), Shimoda in Idzu (Y. FUKUDA), Aburatsubo in Sagami (T. MOMIYAMA), Hosono in Kii (T. NAKASHIMA), Hitotsumatsumura in Kadzusa (T. MISONO), Kitakijima in Bitchiu (Z. TASHIRO), Wakanoura in Kii (Z. TASHIRO), ins. Bonin (S. NISHIMURA), Hekurajima in Noto (J. YOSHIKAWA), ins. Hachijo in Idzu

(ex Hb. Z. TASHIRO), Atsukimura in Suwo (J. NIKAI), Hayama in Sagami (K. HISAUCHI).
Shikoku: Matsuyama (S. YAGI).

Kiushiu: Hakozaki (K. NAKASHIMA), ins. Iki (Z. TASHIRO), Takenoura in Satsuma (S. TOKUNAGA), Kajiki in Osumi (Z. TASHIRO), Manosegawa (Z. TASHIRO), Sakuraimura in Chikuzen (Z. TASHIRO), ins. Amakusa (T. TANIYAMA), ins. Hirato (Z. TASHIRO), Koguchi in Osumi (Z. TASHIRO), Yukinoura in Hizen (Z. TASHIRO), Nishikata in Satsuma (Y. DOI), Kitauome in Hizen (Z. TASHIRO), Fukushima in Buzen (Z. TASHIRO), Yamadamura in Hizen (Z. TASHIRO), urbe Fukuoka (T. ICHIKAWA), Shigetomimura in Osumi (Z. TASHIRO), Kagoshima (U. FAURIE n. 4338).

Korea: Hokitsuto in Zennan (K. T. CHO), ins. Quelpaert (E. TAQUET n. 2068, 2069, 2097, 1998, 2108; U. FAURIE n. 2241), Mokpo (U. FAURIE n. 1396), Fusan (U. FAURIE n. 993).

Riukiu: Oshima (U. FAURIE n. 4346), ins. Yakushima (G. KOIDZUMI; Z. TASHIRO).

27. *Fimbristylis schoenoides* VAHL

Fimbristylis schoenoides (RETZ.) VAHL, Enum. Plant. 2 (1806) 286; NEES in WIGHT, Contrib. Bot. Ind. (1834) 97; KUNTH, Enum. Plant. 2 (1837) 222; MIQ. Flor. Ind. Bat. 3 (1856) 315; BENTH. Flor. Hongkong. (1861) 391; BÜCKLER in Linnaea 37 (1871) 5; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 634 et in Journ. Linn. Soc. 36 (1903) 243 et in Philipp. Journ. Sci. 2 (1907) 92; MATUM. Ind. Plant. Japon. 2:1 (1905) 151; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 486; KOORDERS, Exkursionsfl. Java 1 (1911) 199; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 99; MERILL, Flor. Manila (1912) 116 et Enum. Philipp. Fl. Pl. 1 (1922) 125.

Scirpus schoenoides RETZ. Observ. 5 (1789) 14.

Fimbristylis kagiensis HAYATA, Icon. Plant. Formos. 6 (1916) 110.

Rhizomate nullo vel brevissimo, culmis tenuibus pluribus 10-40 cm altis compressis laevibus striatis basi paucisoliatis, foliis culmo brevioribus angustissimis planis $\frac{3}{4}$ -1 mm latis glabris, praeter marginem involutam sursum spinuloso-scabram laevibus, apice abrupte acutis, vaginis glabris usuque ad 3-7 cm longis apice truncatis, antice tenuimembranaceis et ferrugineo-maculatis, anthela 1-, vel 2, rarius 3-spiculosa ebracteata vel bractea 1 (vel 2) lineari ad 2 cm longa praedita, spiculis sessilibus vel pedicello laevi 0.5-2 cm longo sustentis late ovatis vel oblongo-ovatis acutiusculis 5-10 mm longis 4 mm latis dense plurifloris nitidulis albo-ferrugineis vel fulvescentibus, squamis latissime orbiculato-ovatis subchartaceis 2.5-3 mm longis concavis albidis et fusco-striolatis tenuiter plurinervulosis vix carinatis, apice rotundatis et muticis vel mucronulatis oblique patentibus glabris, achenio (cum stipite obconico brevi) 1.5 mm longo orbiculato-obovato biconvexo nitido umbonato primo albido maturitate brunneo, cellulis extimis 6-gonis minutissimis planis punctulato, stylo 2-2.5 mm longo compresso basi incrassato, margine superne ciliato, ramis brevibus papulosis, staminum (3) antheris linearibus $\frac{1}{2}$ mm longis apice acutoproductis.

Nom. Jap. Hime-yamai, Shono-tentsuki, Kagi-tentsuki.

Hab. Formosa: Hokuto (U. FAURIE n. 175), Juhachisenzan in Shinchikushi (Y. SHIMADA n. 4446), Sirin, urbe Taihoku (K. ODASHIMA n. 610 et in TANAKA et SHIMADA n. 17828), Fukikaku in Taihokushu (Y. SHIMADA n. 4414), Chuho in Tainanshu (Y.

SHIMADA n. 304), Shizangan in Taihokushu (Y. SHIMADA n. 2043), Tamsui (U. FAURIE n. 54; Y. SHIMADA n. 4445), Toyen (Y. SHIMADA n. 305).

28. *Fimbristylis subbispicata* NEES et MEYEN

Fimbristylis subbispicata NEES et MEYEN in Nov. Act. Nat. Cur. 29 Suppl. 1 (1843) 75; MIQ. Flor. Ind. Batav. 3 (1856) 315 var. *caesia* MIQ.; BENTH. Flor. Hongkong. (1861) 391; HANCE in Journ. Bot. 17 (1879) 16; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 634 et in Journ. Linn. Soc. 36 (1903) 245 et in Bull. Geogr. Bot. 14 (1904) 199 et in Philipp. Journ. Sci. 2 (1904) 152; NAKAI, Flor. Korean. 2 (1911) 290; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 101; MERRILL, Enum. Philipp. Fl. Pl. 1 (1922) 126 et in Journ. Arn. Arbor. 18 (1937) 61.; MIYABE et KUDO, Fl. Hokk. a. Saghal. 2 (1931) 211; KITAG. Lineam. Fl. Manshur. (1939) 118.

Fimbristylis bispicata (non NEES in WIGHT, 1834) NEES in Hook. et ARN. Bot. Beech. Voy. (1836) 224; BICKLER in Linnaea 37 (1871) 6 ex pte.

Fimbristylis japonica SIEB. et ZÜCC. ex STEUD. in Zoll. Verz. Ind. Archip. 2 (1854) 62 et Synops. 2 (1855) 107; MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 144; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 117; MAKINO in Bot. Mag. Tokyo 13 (1899) 8.

Fimbristylis gynophora C. B. CLARKE in Bull. Geogr. Bot. 16 (1906) 63 et in Kew Bull. add. ser. 8 (1908) 24.

Fimbristylis crassipes PALLA in Oesterr. Bot. Zeitschr. 59 (1909) 192.

Rhizomate nullo, culmis pluribus tenuibus erectis laevibus striatis compressis trigonis cinerascensiviridibus 10-60 cm altis basi foliatis, foliis culmum plerumque brevioribus angustissimis rigidulis crassis planis $\frac{3}{4}$ -1 mm latis abrupte obtusulis, praeter marginem subincurvum superne parce spinuloso-scabrum laevibus, vaginis ad 20 cm longis apice ferrugineis et tenuimembranaceis facile fissis, anthela e spiculis 1-3, sessilibus vel lateralibus pedicellatis formata, bractea nulla vel 1 usque ad 5 cm longa suberecta, pedicellis (radiis) laevibus usque ad 1 cm longis suberectis, spiculis oblongo-ovatis vel anguste oblongis 8-25 mm longis acutis 4-7 mm latis teretibus dense multifloris fulvoferrugineis, vel cinereo-brunneis, squamis ovatis vel elliptico-ovatis membranaceis obtusis et mucronatis brunneo-vel fulvo-suffusis 4-6 mm longis glabris vix carinatis, dorso fascia lata plurinervulosa notatis superne viridi-uni-costatis, achenio orbiculato-obovato compresso-biconvexo albosuffuso demum fusco-brunneo humile umbonato, sine stipite 1-1.2 mm longo, cellulis extimis 6-gonis minutissimis planis punctulato vel fere laevi, stipite $\frac{1}{2}$ -1 mm longo, stylo 4-6 mm longo ciliato compresso basi paullo dilatato, ramis 2 reflexis papulosis, staminum (3) antheris linearibus 1.2-1.8 mm longis muticis. (Chromos. n=5, sec. N. T. TANAKA).

Nom. Jap. Yama-i.

Hab.

Yezo: fide MIYABE et KUDO.

Hondo: Tobishima in Ugo (G. KOIDZUMI), Hachirogata in Ugo (S. MURAMATSU), Oiryose in Mutsu (S. MURAMATSU), Kosekimura in Iwaki (N. IMAI), Nonoborimura in Ise (T. HATTORI), Iwamimura in Iwami (H. TAMURA), Minamiwauchimura in Kii (Y. TSUCHIGA), Tarumi in Iwami (J. TAKAGI), Suzukatoge in Ise (T. HATTORI), Kawakamimura in Kawachi (H. YAMAMOTO), ad ripas fl. Kinugawa in Shimotsuke (M. NAKAMURA), Morioka (G. TOBA), Arimaiké in Kii (J. OHWI et M. TAGAWA), Katsuura in Kii

(J. OHWI et M. TGAAWA), Kamitokihara in Mimasaka (O. KAJITANI), Kyoto (N. KINASHI; S. MIKI), Kurauchi in Mutsu (S. MIKI), Sambongi (U. FAURIE n. 57), Nuruyu (U. FAURIE n. 723), Aomori (U. FAURIE n. 1049), Hirosaki (U. FAURIE 984), Hachinohe (U. FAURIE n. 1844), ins. Miyake in Idzu (K. HAYASHI), m. Riiso in Suruga (S. KITAMURA).

Shikoku: Mikazuki in opp. Kochi (I. OKUBO), Osemura in Iyo (T. IMAIDZUMI), Otsumura in Tosa (T. YOSHINAGA), Nagahama in Tosa (T. YOSHINAGA).

Kiushiu: Sobosan (U. FAURIE n. 2722), Ogushimura in Hizen (T. CHIBA), Sukimura in Hiuga (T. TOKUNAGA), Shiroimura in Buzen (T. YAMAZAKI), m. Onamiike in Osumi (Z. TASHIRO), Koishiharu in Chikuzen (Z. TASHIRO), ins. Amakusa (T. TANIYAMA), Izashiki in Osumi (Z. TASHIRO).

Korea: Hoseiri in Kannan (N. NOMURA), Samposan in Keinan (S. OKAMOTO), Gensan (S. KITAMURA n. 1991), m. Hokkansan in Keiki (G. KOIDZUMI), ins. Quelpaert (E. TAQUET n. 2082; U. FAURIE n. 2244), ins. Wanto (K. OKAMOTO), Ouen-san (U. FAURIE n. 995).

Riukiu: ins. Yakushima (Z. TASHIRO; M. TAGAWA n. 1891; Y. FUKUDA), ins. Tanegashima (Y. DOI), ins. Iheya (S. TAWADA), ins. Kumejima (S. TAWADA).

Formosa: Kannon in Shinchikushu (Y. SHIMADA n. 2976), Hokuto (U. FAURIE n. 40), Takuran in Shinchikushu (Y. SHIMADA n. 4438), Takao (Y. SHIMADA n. 4439), Toyen (E. KUROSAWA), sin. loc. (U. FAURIE n. 809, ex pte), Chikunan (Y. SHIMADA n. 4325), Kuraru (E. MATSUDA).

29. *Fimbristylis pacifica* OHWI

Fimbristylis pacifica OHWI in Journ. Jap. Bot. 14 (1938) 576.

Fimbristylis polytrichoides (non VAHL) C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 199; MATSUM. Ind. Pl. Japon. 2:1 (1905) 151 ex pte.

? *Fimbristylis takaoensis* HAYATA, Icon. Pl. Formos. 6 (1916) 112.

Rhizomate nullo vel brevissimo tenui, culmis pluribus 10-30 cm altis pertenuibus obtusangulis compressis striatis laevibus, basi paucifoliatis, foliis culmo multo vel modice brevioribus angustissimis planis arcuatis cinereoviridibus $\frac{1}{2}$ - $\frac{3}{4}$ mm latis glabris, apice abrupte acutis, praeter marginem superne parce scabram laevibus, vaginis brevibus ferruginescentibus membranaceis glabris apice oblique truncatis, anthela 1- vel rarissime 2-spiculosa, ebracteata vel bractea unica spiculam interdum superante praedita, spiculis oblongis vel anguste oblongis teretibus obtusiusculis 7-15 mm longis 2.5-3 mm latis dense plurifloris stramineis, squamis ovatis vel ellipticis membranaceis sordide stramineis et superne ferrugineo-maculatis obtusis et mucronulatis vel submuticis vix carinatis tenuiter plurinervulosis, dorso superne subcostatis, 3-4 mm longis glabris, achenio orbiculato-obovato margine acutiusculo compresso biconvexo albido demum brunneo stipitato humile umbonato 1 mm longo, cellulis extimis minutis 6-gonis margine vix elevatis punctato-reticulato, stylo 3-3.5 mm longo compresso, basi sublatis, superne margine ciliato, ramis 2 papulosis, staminum (2) antheris linearibus vix 1 mm longis apice breviter acuminato-productis.

Nom. Jap. Iso-tentsuki.

Hab.

Hondo: ins. Hachijo (S. KITAMURA).

Shikoku: Shimidzu in Tosa (J. OHWI).

Kiushiu: Yoshiimura in Hizen (T. CHIBA), ins. Amakusa (T. TOMITA; T. TANIYAMA).

Riukiu: ins. Oshima (U. FAURIE n. 4347), ins. Okinawa (S. SAKAGUCHI; TAWADA; Y. TAIRA), ins. Iriomote (G. KOIDZUMI).

30. *Fimbristylis longispica* STEUD.

Fimbristylis longispica STEUD. Synops. 2 (1855) 118; MIQ. Flor. Ind. Bat. 3 (1856) 325; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 639 et in Journ. Linn. Soc. 36 (1903) 239 et in Bull. Geogr. Bot. 14 (1904) 199; MATSUM. Ind. Plant. Japon. 2:1 (1905) 150; KOORDERS, Exkursionsfl. Java 1 (1911) 199; E. G. CAMUS in Lecomte, Flor. Génér. Indochin. 7 (1912) 107; KITAG. Lineam. Fl. Manshur. (1939) 118.

Fimbri stylis ferruginea (non VAHL) MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 144.

Fimbristylis Buergeri MIQ. l. c. (1865) 144; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 119.

Fimbristylis spadicea var. *major* BÖCKLR. in Linnaea 37 (1871) 20 p. p.

Fimbristylis Dietrichseni BÖCKLR. in ENGL. Bot. Jahrb. 5 (1884) 505.

Fimbristylis koreensis C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 199.

Rhizomate abbreviato, culmis subcaespitosis compressis laevibus subtenuibus firmulis, 40-60 cm altis, basi foliatis, foliis culmum subaequantibus planis vel margine subinvolutis 2-4 mm latis subrigidis glabris, margine inferne scabris, apice abrupte acutis, vaginis cinnamomeo-viridulis usque ad 20 cm longis antice fissis et ferrugineis, anthela composita vel subdecomposita densa 4-6 cm longa pluri-multi-spiculosa, bracteis 2-3, inferioribus 1-2 foliaceis anthelam multo superantibus usque ad 30 cm longis suberectis, radiis firmulis suberectis ad 5 cm longis, cum radiolis laevibus, bracteolis setaceis brevibus, spiculis anguste oblongo-ovatis vel oblongo-ovatis 7-15 mm longis 3-4 mm latis teretibus acutis flavo brunneis opacis dense plurifloris, squamis 3.5 mm longis ovatis obtusis submembranaceis mucronulatis flavo-ferruginescentibus et dorso fascia duplici fusca notatis vix carinatis trinervis, achenio orbiculato-obovato biconvexo albido demum ferrugineobrunneo nitido laevi, apice obsolete umbonato, cellulis extimis minutiusculis tetragonis margine elevato cancellato, stylo 3 mm longo ciliato compresso basi subincrassato, ramis 2 papulosis, staminum (3) antheris linearibus fere 1 mm longis.

Nom. Jap. Nagabo-tentsuki, O-tentsuki.

Hab.

Hondo: Jogashima in Sagami (T. MOMIYAMA), Rokugomura in Rikuzen (S. MURAI), Ichinomiya in Kadzusa (M. TAGAWA, n. 2489), Aburatsubo in Sagami (T. MOMIYAMA), Isomura in Ise (T. MAGOFUKU), Koshien in Settsu (E. ISHIKAWA).

Shikoku: fide MATSUM. l. c.

Kiushiu: Sendai in Satsuma (I. OKUBO), Tanoura in Higo (K. MAYEBARA), Kitauome in Hizen (Z. TASHIRO), Kechi, ins. Tsushima (K. NAKASHIMA), Yatsushiro (K. MAYEBARA), Akune in Satsuma (Y. DOI), Kagamimachi in Higo (Z. TASHIRO), ins. Fukue in Hizen (Z. TASHIRO; M. TAKENOUCHI).

Korea: ins. Quelpaert (E. TAQUET n. 2501), Chemulpo (U. FAURIE n. 963, 1394).
var. *boninensis* (HAYATA) OHWI, comb. nov.

Fimbristylis boninensis HAYATA Icon. Pl. Formos. 6 (1916) 109.

Foliis 4-5 mm latis rigidis, anthela saepe capitato-contracta vel in capitulis paucis radiatis, solutis, spiculis saepe aggregatis, antheris 1-1.5 mm longis.

Nom. Jap. Munin-tentsuki.

Hab.

Ins. Bonin (S. NISHIMURA; I. SHISHIDO).

var. *hahajimensis* (TUYAMA) OHWI, in Journ. Japan. Bot. 18 (1942) 134, sub *F. dichotoma* var.

Fimbristylis hahajimensis TUYAMA in Bot. Mag. Tokyo 49 (1935) 368.

Foliis 1-1.5 mm latis, anthela parva pauci-spiculosa simplici, spiculis breviusculis, antheris fere 1 mm longis.

Nom. Jap. Hahajima-tentsuki.

Hab.

Ins. Bonin (T. TUYAMA; S. NISHIMURA).

31. *Fimbristylis dichotoma* VAHL

Fimbristylis dichotoma (LINN.) VAHL, Enum. Plant. 2 (1806) 237 ex pte, excl. var.; C. E. C. FISCHER in Kew Bull. (1935) 150; OHWI, l. c. (1933), 577; KITAG. Lineam. Fl. Manshur. (1939) 117.

Scirpus dichotomus LINN. Spec. Plant. (1753) 50.

Scirpus annuus ALL. Flor. Pedem. 2 (1785) 277, t. 88, f. 5.

Scirpus diphyllus RETZ. Observ. 5 (1789) 15.

Fimbristylis diphylla (RETZ.) VAHL, Enum. Plant. 2 (1806) 239; STEUD. Synops. 2 (1855) 116; BENTH. Flor. Hongkong. (1861) 392; MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 144, incl. var. *floribunda* MIQ.; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 118; TRIM. in Journ. Linn. Soc. 24 (1888) 135; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 639 et in THIS. DYER, Fl. Trop. Afr. 8 (1902) 415 et in Journ. Linn. Soc. 36 (1903) 233 et in Bull. Geogr. Bot. 14 (1904) 198 et in Philipp. Journ. Sci. 2 (1907) 93; MATSUM. Ind. Plant. Japon. 2:1 (1905) 148; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 493; KOORDERS, Exkursionsfl. Java 1 (1911) 199; NAKAI Flor. Korean. 2 (1911) 291 et in Bot. Mag. Tokyo 36 (1922) 20; E. G. CAMUS in Lecomte, Flor. Génér. Indo-chin. 7 (1912) 103.

Fimbristylis annua (ALL.) ROEM. et SCHULT. Syst. 2 (1817) 95; REICHB. Icon. Flor. German. 8 (1846) f. 834; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 337; NAKAI in Bot. Mag. Tokyo 36 (1922) 19; KÜKENTH. in Act. Hort. Gotob. 5 (1929) 109, incl. var. *diphylla* (RETZ.) KÜKENTH.; HULT. Flor. Kamtch. 1 (1927) 170, var. *ochotensis* (MEINSH.) HULT. et *pusilla* HULT.; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 211, var. *ochotensis* HULT.; SCHISCHK. in KOMAR. Flor. URSS. 3 (1931) 93.

Fimbristylis laxa VAHL, Enum. Plant. 2 (1806) 262.

Fimbristylis tomentosa VAHL, Enum. Plant. 2 (1806) 290.

Fimbristylis communis KUNTH, Enum. Plant. 2 (1837) 234.

Fimbristylis polymorpha BÜCKL. in Linnaea 37 (1871) 15.

Fimbristylis Goeringiana STEUD. Synops. 2 (1855) 118.

Scirpus ochotensis MEINSH. in Act. Hort. Petrop. 18 (1901) 248.

Fimbristylis ochotensis (MEINSH.) KOMAR. Flor. Penins. Kamtsch. 1 (1927) 212; SCHISCHK. l. c. 3 (1935) 93.

Fimbristylis tikushiensis HAYATA, Icon. Plant. Formos. 6 (1916) 113.

Rhizomate nullo vel brevissimo, culmis 15-50 cm altis caespitosis compressis trigonis striatis laevibus glabris vel parce pilosis tenuibus vel subtenuibus, basi foliatis, foliis culmo brevioribus vel subbrevioribus mollibus vel rigidis planis 1.5-5 mm latis abrupte acuminatis pilosis vel glabris, margine superne scabris, vaginis glabris vel pilosis, antice ferrugineis et fissis, anthela laxa vel densa pauci-pluri-multi-spiculosa simplici usque decomposita, bracteis 2-5, ima lineari vel lineari-setacea anthela brevior vel sublongior, radiis nunc brevibus nunc elongatis ad 5 cm longis laevibus glabris vel parce pilosis tenuibus vel subvalidis, bracteolis brevisetaceis, spiculis solitariis vel pauci-aggregatis ovatis teretibus, subnitidis 5-8 mm longis acutiusculis dense plurifloris 2.5-3 mm latis rufo-castaneis vel fusco-castaneis, squamis orbiculato-ovatis ascendentibus vel oblique erectis 2-3 mm longis subchartaceis castaneo-tinctis glabris vix carinatis obtusissimis et saepe mucronulatis, dorso trinervis et lateribus tenuiter paucinervulosis, margine plus minus dilutioribus, achenio 0.8-1.2 mm longo brevi-stipitato late obovato biconvexo, albido vel fulvo-brunneo-suffuso parce verrucoso vel sublaevi, apice breviter umbonato, cellulis transverse oblongis margine elevatis cancellato, stylo 2-2.5 mm longo compresso latiusculo, basi subdilato, superne albociliato, ramis 2 patentibus inferne extus ciliatis, superne papulosis, staminum (2-3) antheris linearibus $\frac{1}{2}$ - $\frac{3}{4}$ mm longis brevissime apiculatis. (Chromosomatibus $n=10$, sec. N. TANAKA).

Nom. Jap. Tentsuki.

Formae sequentes saepe distinguitur:

forma 1. *annua* (ALL.) OHWI, l. c.—*Scirpus annuus* ALL. l. c.—*Fimbristylis annua* (ALL.) ROEM. et SCH. l. c.—*Fimbristylis diphylla* var. *annua* (ALL.) C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 639.—Omnibus partibus gracilibus, anthela simplici paucispiculosa.—Nom. Jap. Tentsuki.

forma 2. *floribunda* (MIQ.) OHWI, l. c.—*Fimbristylis diphylla* var. *floribunda* MIQ. l. c. (1865) 144.—Omnibus partibus robustioribus, rigidioribus, anthela pluri-multispiculosa.—Nom. Jap. Kugu-tentsuki.

forma 3. *depauperata* (C. B. CLARKE) OHWI, l. c.—*Fimbristylis diphylla* var. *depauperata* C. B. CLARKE, l. c.—Omnibus partibus valde depauperatis, foliis setaceis, anthela 1-2-stachya.—Nom. Jap. Hosoba-tentsuki.

forma 4. *tomentosa* (VAHL) OHWI, l. c.—*Fimbristylis tomentosa* VAHL, l. c.—*Fimbristylis diphylla* var. *tomentosa* (VAHL) BENTH. Fl. Hongk. (1861) 392; FRANCH. et SAVAT. l. c.; NAKAI in Bot. Mag. Tokyo 35 (1922) 19 sub *F. annua*, et in Journ. Jap. Bot. 16 (1940) 65, sub *F. annua*.—Ut f. 2, sed foliis vaginisque dense pilosis.—Nom. Jap. Kentsuki.

Yezo: Akan (U. FAURIE n. 10669).

Hondo: Akita (U. FAURIE n. 13781), Yamagata (S. OKUYAMA), Kanayama in Kii (T. NAKAJIMA), Arimura in Iya (T. HATTORI), ins. Bonin (S. NISHIMURA), Ayukawa in Kii (T. NAKAJIMA), Oimura in Bitchu (G. MORIYA), m. Mayasan (U. FAURIE n. 4961), Itemura in Rikuchu (C. WAGAWA), Tajimi in Mino (K. SHIODA), Ayameike in Yamato (S. MIKI), Wani in Omi (S. MIKI), Yusaki in Kii (S. SAKAGUCHI), Niigata (U. FAURIE n. 1842), Kosekimura in Iwaki (N. IMAI), prope Choshi in Kadzusa (K. HAYASHI), Hi-

kami in Suwo (T. ODA), Yamadamura in Mino (K. SHIODA), Morioka (Y. FUKUDA), ins. Miyake in Idzu (K. HAYASHI), Kamiidemura in Suruga (J. SUGIMOTO).

Shikoku: Tokushima (T. MURAI), Matsuyama (U. FAURIE n. 11680), Idzumimura in Iyo (C. WATANABE), Narimiyomura in Iyo (C. WATANABE), Usa in Tosa (I. OKUBO), Shinryomura in Awa (T. INOBE), Sotoumimura in Iyo (M. OGASA), Tobemura in Iyo (Z. TASHIRO), Ozu in Iyo (Z. TASHIRO).

Kiushiu: Nishikata in Satsuma (Y. DOI), Shimogo in Buzen (K. IKEBE), Ono in Buzen (T. YAMAZAKI), Umadamura in Chikuzen (Y. NBESHIMA), prope Arita in Hizen (Z. TASHIRO), in m. Kuju in Bungo (M. TAKENOUCHI), m. Kimpusan in Satsuma (Y. DOI), Kitakokunimura in Higo (K. IKEBE), Kurobarutoge in Hiuga (M. OGATA), Yuki-noura in Hizen (Z. TASHIRO), Kirekawa in Osumi (Z. TASHIRO), Ginsuimura in Chikugo (T. SUGINO), Kawamur in Higo (K. MAYEBARA), Kikuchimura in Higo (S. TOKUNAGA), Kuchinotsu in Hizen (S. HATSUSIMA), Hondomura in Higo (T. TOMITA), Airamura in Osumi (Z. TASHIRO), Yoshino in Satsuma (Z. TASHIRO), Takasu in Osumi (Z. TASHIRO).

Korea: ins. Quelpaert (E. TAQUET n. 703, 2080, 2099; U. FAURIE n. 1397; K. NAKASHIMA), Reigisan in Keiki (T. SAKATA), Gensan (S. KITAMURA n. 1981), Chemulpo (U. FAURIE n. 991).

Riukiu: ins. Yakushima (Z. TASHIRO; M. TAGAWA n. 1883, 1884), ins. Amami-oshima (J. MURO; T. KAMIYA), ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI; S. TAWADA; Y. TAIRA), ins. Iriomote (G. KOIDZUMI; Y. DOI), ins. Miyako (G. KOIDZUMI; Y. NAKAZONE).

Formosa: Taihoku (J. OHWI n. 2121; E. KUROSAWA), Kozen in Shinchikushu (Y. SHIMADA n. 4441), Tsusho in Shinchikushu (Y. SHIMADA n. 4440), Shizangan, urbe Taihoku (Y. SHIMADA n. 2044; 4459), Komo-kan in Shinchikushu (Y. SHIMADA n. 306), Sangyaku in Taihokushu (E. KUROSAWA), Shinchiku (Y. SHIMADA n. 4443), Hokuto (U. FAURIE n. 37, 181), Shin-oku in Shinchikushu (Y. SHIMADA n. 303), Hokuhan in Taihokushu (Y. SHIMADA n. 26), Dandan in Taihokushu (Y. SHIMADA n. 4458), inter Botan-sya et Sizyukei in Takaosiu (M. TAGAWA n. 1001), Kusukusu-Botansya in Takaosiu (M. TAGAWA n. 958), Tamsui (U. FAURIE n. 819), Kuraru in Takaosiu (M. TAGAWA n. 928), m. Taiheizan (J. OHWI n. 2224), Nichigetsutan (S. KITAMURA n. 316), Chikushiko, urbe Taihoku (S. NAGASAWA), sine loc. exact. (U. FAURIE n. 816).

var. *Tashiroana* (OHWI) OHWI, l. c. (1938) 578.

Fimbristylis Tashiroana OHWI in Bot. Mag. Tokyo 45 (1931) 377, incl. var. *cincta* OHWI.

Foliis angustis 1-2 mm latis, glabris, spiculis elongato-oblongo-ovatis 8-15 mm longis longius (2-7 cm) pedicellatis, squamis suberectis oblongis 4 mm longis, achenio obtriangulato-obovato, paullo infra apicem latissimo subtruncato, antheris 1.2-1.8 mm longis.

Nom. Jap. Tsukushi-tentsuki.

Hab.

Kiushiu: m. Kirishima (Z. TASHIRO; Y. DOI), Tano in Bungo (Z. TASHIRO), m. Unzen (Z. TASHIRO; S. HATSUSIMA), m. Aso (H. KODZUMA), Yunono in Hiuga (Z. TASHIRO), Yunoura in Osumi (Z. TASHIRO).

forma *cincta* (OHWI, l. c. pro var.), foliis latioribus 2-3 mm latis pilosis.—Nom. Jap. Ketentsuki.—Hab. Kiushiu: m. Odake-onsen in Bungo (Z. TASHIRO).

32. *Fimbristylis squarrosa* VAHL

Fimbristylis squarrosa VAHL, Enum. Plant. 2 (1806) 239; KUNTH, Enum. Plant. 2 (1837) 224; REICHB. Icon. Fl. German. 8 (1846) t. 315; STEUD. Synops. 2 (1855) 110;

BENTH. Flor. Hongkong. (1861) 392; BICKLER in Linnaea 37 (1871) 10; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 118; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 635 et in THIS. DYER, Fl. Trop. Afr. 8 (1902) 413 et in Journ. Linn. Soc. 36 (1903) 244 (ex pte?) et in Bull. Geogr. Bot. 14 (1904) 198 ex pte; KOMAR. Flor. Mansh. 1 (1901) 347; MATSUM. Ind. Plant. Japon. 2:1 (1905) 152; ? MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 486; NAKAI, Flor. Korean. 2 (1911) 290; MIYABE et KUDO, Flor. Hokkaid. a. Saghal. 2 (1931) 95; KITAG. Lineam. Fl. Manshur. (1939) 118.

Scirpus squarrosus (non LINN.) POIR. Encycl. Suppl. 5 (1823) 100.

Pogonostylis squarrosus BERTOL. Flor. Ital. 1 (1833) 313.

Fimbristylis comata NEES in WIGHT, Contrib. Bot. Ind. (1834) 99.

Rhizomate nullo, culmis dense caespitosis tenuibus mollibus compressis sulcatis laevibus 10-20 cm altis, basi pauci-foliatis, foliis mollibus filiformibus involuto-planis culmo brevioribus plus minus pilosis, $\frac{1}{4}$ - $\frac{3}{4}$ mm latis acutis, vaginis cinnamomeo-brunneis membranaceis 1-5 cm longis dense pilosis, anthela simplici composita vel decomposita pluri-multi- vel paucispiculosa laxiuscula 3-5 cm longa effusa pauci-pluri-radiata, bracteis 3-5 filiformibus, inferioribus 1-2 anthelam subaequantibus, bracteolis squamiformibus, radiis tenuibus laevibus, spiculis (absque aristis) lanceolatis vel late lanceolatis 4-10 mm longis 1-5 mm latis squarrosis acutis subangulatis ferrugineobrunneis densiuscule plurifloris, squamis oblongis absque arista 1.5-2 mm longis carinatis ferrugineo-brunnescentibus vel sordide pallidis, tenui-membranaceis dorso acute viridi-costatis, subtrineris plerumque glabris, ex apice obtusulo in aristam 0.5-1 mm longam plerumque laevem patulam excurrentibus, achenio pallide brunneo nitido obovato $\frac{3}{4}$ mm longo brevissime stipitato umbonato biconvexo glabro non verrucoso, cellulis extimis minutissimis sub-6-gonis obsoletissime striolatopunctulato vel sublaevi, stylo ca. 1 mm longo tenui superne ciliato, basi dilatato, basi pilis longis reflexis albis cincto, ramis 2 papulosis, staminum (1) antheris oblongis $\frac{1}{4}$ mm longis breviter obtuse apiculatis. (Chromosom. n=10, sec. N. TANAKA).

Nom. Jap. Aze-tentsuki.

Hab. Yezo: fide MIYABE et KUDO.

Hondo: ins. Sado (Y. ISEGAMI), Takanosumura in Yetchu (T. OTAYA), Otomomura in Rikuzen (G. TOBA), Inbemura in Idzumo (I. ONDA), Kamisuwa (J. OHWI n. 8325), Teganuma in Shimosa (I. OKUBO), Tateishi in Yechizen (Z. TASHIRO), Osaka (Z. TASHIRO), Hichinohe (U. FAURIE sin. num.) Iriyamabe in Shinano (K. MAYEBARA), nord du Japon (U. FAURIE n. 2786), Yamagata (U. FAURIE n. 4352), Akita (U. FAURIE n. 1446), Kawaimura in Mino (K. SHIODA).

Korea: Ouen-san (U. FAURIE n. 994).

34. *Fimbristylis Makinoana* OHWI

Fimbristylis Makinoana OHWI in Jour. Jap. Bot. 14 (1938) 578; KITAG. Lineam. Fl. Mansh. (1939) 118.

Fimbristylis squarrosa var. *esquarrosa* MAKINO in Bot. Mag. Tokyo 17 (1903) 47.

Fimbristylis leiocarpa (non MAXIM.) KOMAR. et ALIS. Key Pl. Far East. Reg. USSR. (1931) 265, t. 78, f. sup.

Rhizomate nullo, culmis caespitosis gracilibus compressis subtrigonis

striatis mollibus 10-25 cm altis, basi pauci-foliatis, foliis angustissimis planis vel conduplicatis parce pilosis $\frac{1}{2}$ - $\frac{1}{2}$ mm latis culmo multo brevioribus flaccidis, apice acuminatis, vaginis ferrugineis membranaceis pilosulis 2-4 cm longis, anthela composita vel decomposita laxiuscula 2-4 cm longa, pluri vel pauci-radiata, bracteis 3-7, infima anthelam aequante basi dilatata dorso puberula, radiis tenuissimis laevibus, bracteolis brevisetaceis, spiculis lanceolatis acutis 4-7 mm longis 1-1.5 mm latis solitariis subdense plurifloris angulatis ferruginescentibus vel stramineiscentibus opacis, squamis oblongis suberectis tenuimembranaceis 1.5-2 mm longis viridi-carinatis ferrugineo-suffusis, apice obtusulo breviaristatis, arista recta vel rectiuscula $\frac{1}{2}$ - $\frac{1}{2}$ squamae aequante, laevi, achenio obovato stramineo compresso nitido sessili $\frac{1}{2}$ mm longo non verrucoso, apice umbonato, cellulis extimis minutissimis 6-gonis obsoletissime striolato-punctulato vel sublaevi, stylo vix 1.5 mm longo tenui margine ciliato, basi incrassata pilis longis reflexis praedito, ramis 2 tenuibus papulosis, staminum (1) antheris brevilinearibus $\frac{1}{2}$ mm longis. (Chromosomatibus $n=12$, sec. N. Tanaka).

Nom. Jap. Me-azetentsuki.

Hondo : Hottamura in Uzen (M. KATO), Toyonaka, urbe Osaka (N. UI), Uji, urbe Kyoto (Z. TASHIRO), Kambe in Ise (T. HATTORI), Morioka (G. TOBA), Aramura in Iga (T. HATTORI), Osaka (Z. YOSHINO; N. UI), Akita (U. FAURIE n. 1021), m. Hankokusan in Tamba (K. TAKEUCHI), Hachinohe (U. FAURIE n. 1848), Hamasaka in Inaba (S. MIKI), Numasaki (U. FAURIE n. 1023), Nambu (U. FAURIE n. 6132, 6256), Wakayama (U. FAURIE n. 12003), Hirosaki (U. FAURIE n. 3441), Yatsumi in Kadzusa (S. OKUYAMA).

Shikoku : Kamibun in Iyo (M. MITSUI), Namikatamura in Iyo (II. YAMAMOTO), Ozu in Iyo (K. YAMASHITA), Miyoshimura in Iyo (M. OGATA), Sakade in Sanuki (Z. TASHIRO), Narimiyomura in Iyo (C. WATANABE).

Kiushu : Isaku in Satsuma (Y. DOI), Hikimura in Satsuma (Y. DOI), Haramachi in Chikuzen (S. HATUSIMA).

Korea : Kyuryuri in Kannan (N. NOMURA).

35. *Fimbristylis aestivalis* VAHL

Fimbristylis aestivalis (RETZ.) VAHL, Enum. Plant. 2 (1806) 288; NEES in WIGHT, Contrib. Bot. Ind. (1834) 102; KUNTH, Enum. Plant. 2 (1837) 225; STEUD. Synops. 2 (1855) 110; BENTH. Flor. Hongkong. (1861) 392; BÜCKL. in Linnaea 37 (1871) 11; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 637 et in Journ. Linn. Soc. 36 (1903) 230 et in Philipp. Journ. Sci. 2 (1907) 94; MAKINO in Bot. Mag. Tokyo 4 (1890) 229 et 17 (1903) 46; MATSUM. Ind. Plant. Japon. 2:1 (1905) 147; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 482.

Scirpus aestivalis RETZ. Observ. 4 (1786) 12.

Fimbristylis leiocarpa MAXIM. Prim. Flor. Amur. (1859) 301; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 93.

Fimbristylis laxa (non VAHL) REGEL, Tent. Fl. Ussur. (1861) 245.

Fimbristylis tokyoensis MAKINO in Bot. Mag. Tokyo, 6 (1892) 47; MATSUM. l. c. 153.

Scirpus leiocarpus (MAXIM.) MEINSH. in Act. Hort. Petrop. 18 (1901) 249.

? *Fimbristylis squarrosa* (non VAHL) C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 244, quoad OLDHAM n. 591; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 486.

Rhizomate nullo, culmis 5-15 cm altis gracilibus laevibus angulato-striatis subcompressis, basi paucifoliatis, foliis culmo brevioribus filiformibus planis vel margine involutis $\frac{1}{2}$ -1 mm latis sparsim pilosulis mollibus apice sensim angustato-acuminatis, vaginis pilosulis membranaceis stramineo-viridulis brevibus apice oblique fissis, anthela composita laxiuscula 2-3 cm longa pluristachya pauci-pluri-radiata, bracteis 3-5 filiformibus, inferioribus 1-2 saepe anthelam subaequantibus erectiusculis, radiis gracilibus laevibus, bracteolis squamiformibus, spiculis lanceolatis acutis 3-7 mm longis 1-1.5 mm latis angulatis sordide brunnescentibus densiuscule plurifloris, squamis oblongis vel ovatis 1 mm longis tenuimembranaceis sordide brunnescentibus vel pallescentibus obtusis et conspicue mucronatis acute viridi-carinatis inferne subtrinnerviis, achenio obovato 0.6 mm longo nitido stramineo non verrucoso subsessili humile umbonato biconvexo, cellulis extimis 6-gonis planis minutis obsoletissimis laevi vel obsoletissime punctulato-striolato, stylo vix 1 mm longo tenui basi bulboso-incrassato, saepe minutissime puberulo, superne parce ciliato, ramis 2 brevibus, staminum (1) antheris lanceolatis $\frac{1}{4}$ - $\frac{1}{2}$ mm longis muticis.

Nom. Jap. Ko-azetentsuki.

Hab.

Hondo: Ichibe in Omi (C. HASHIMOTO), Aomori (U. FAURIE n. 2724), Kotomo in Rikuzen (G. TOBA).

Formosa: Hokuto (U. FAURIE n. 182), Formosa in orizetis (U. FAURIE n. 814), Tamsui (U. FAURIE n. 104), Sanshikyaku in Taihokushu (K. ODASHIMA n. 576), Koko in Taihokushu (E. KUROSAWA), Taihoku (J. OHWI n. 2127; T. ITO), Nichigetsutan (S. KITAMURA n. 1851), Shinchikushu (Y. SHIMADA n. 303)

35. *Fimbristylis bis-umbellata* BUBAN.

Fimbristylis bis-umbellata (FORSK.) BUBAN. Dodecanth. (1850) 30; C. E. C. FISCHER in Kew Bull. (1935) 149.

Scirpus bis-umbellata FORSK. Flor. Aegypt. Arab. 1 (1775) 15.

Fimbristylis dichotoma VAHL, Enum. Plant. 2 (1806) 287, ex pte, excl. syn.; KUNTH, Enum. Plant. 2 (1837) 225; BÜCKLER in Linnaea 37 (1871) 12; Trim. in Journ. Linn. Soc. 24 (1888) 135; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 635 et in THIS. DYER, Fl. Trop. Afr. 8 (1902) 414 et in Journ. Linn. Soc. 36 (1903) 233; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 336; HUSNOT, Cyperac. (1905-6) 70; KOORDERS, Exkursions fl. Java 1 (1911) 199; E. G. CAMUS in LECOMTE, Flor. Génér. Indochin. 7 (1912) 102; SCHISCHK. in KOMAR. Flor. USSR. 3 (1935) 92.

? *Fimbristylis liukiuensis* TUYAMA in Journ. Japan. Bot. 11 (1935) 250.

Rhizomate nullo, culmis dense caespitosis 7-20 cm altis tenuibus compressis trigonis laevibus striatis glabris, basi foliatis, foliis culmo brevioribus planis 0.7-1.2 mm latis dorso pilosis vel glabris, margine incurvis sursum scabris, apice abrupte acutis, vaginis viridulis brevibus, antice fissis pertenuimembranaceis et ferrugineo-suffusis, anthela composita vel subdecomposita laxiuscula usque ad 4 cm lata 5-10-radiata polystachya, bracteis 2-3 linearibus suberectis, ima anthelam aequante vel parum superante, radiis radiolisque tenuibus laevibus, bracteolis brevissimis, spiculis solitariis ob-

longo-ovatis vel anguste oblongis acutis 3-5 mm longis 1.5 mm latis angulatis brunneis opacis, squamis late ovatis membranaceis brunneis 1.5-2 mm longis acutis et distincte mucronatis, lateribus enervis, dorso carinato viridi triner-vis, marginibus dilutioribus, achenio $\frac{3}{4}$ mm longo late obovato biconvexo vix verrucoso albostraminescente nitido subsessili, apice conspicue umbonato, cellulis extimis transverse oblongis margine elevatis cancellato, stylo 1.5 mm longo compresso basi incrassato, superne margine ciliato, ramis 2 papulosis, staminum (1-2) antheris lanceolatis $\frac{1}{2}$ mm longis apiculatis.

Nom. Jap. O-aze-tentsuki.

Hab.

Riukiu: ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI; S. TAWADA; Y. TAIRA), ins. Miyako (Y. NAKAZONE).

Formosa: Bankinsing (U. FAURIE n. 39), Takao (U. FAURIE n. 38).

37. *Fimbristylis nutans* VAHL

Fimbristylis nutans (RETZ.) VAHL, Enum. Plant. 2 (1806) 285; NEES in WIGHT, Contrib. Bot. Ind. (1834) 96; STEUD. Synops. 2 (1855) 106; BENTH. Fl. Hongkong. (1861) 391 et Flor. Austral. 7 (1878) 303; BÜCKL. in Linnaea 37 (1871) 5; C. B. CLARKE in HK. f. Flor. Brit. Ind. 6 (1893) 632 et in Journ. Linn. Soc. 36 (1903) 241; KOORDERS, Exkursionsfl. Java 1 (1911) 198; E. G. CAMUS in LECOMTE, Flor. Génér. Indochin. 7 (1912) 96; OHWI in Bot. Mag. Tokyo 45 (1931) 185.

Scirpus nutans RETZ. Observ. 4 (1786) 12.

Rhizomate nullo vel brevissimo, culmis dense caespitosis glabris 15-40 cm altis teretibus laevibus subcompressis sulcato-3-4-gonis erectis basi vaginatis, vaginis glabris, inferioribus 1-2 squamiformibus stramineo-brunneis subnitidis, summa tubulosa 3-5 cm longa brunneo-viridi laevi apice oblique fisso margine ferrugineo membranaceo aphylo vel brevissime mucronato, anthela unispiculosa, bractea unica 2-3 mm longa ovata squamiformi decidua apice saepe cuspidata, spiculis ovatis vel oblongo-ovatis acutis 6-10 mm longis 2.5-3.5 mm latis dense plurifloris sordide stramineis et castaneo-variegatis, squamis late ovatis chartaceis castaneo- vel bruneo-suffusis et striolatis glabris obtusissimis et mucronatis concaviusculis vix carinatis subnitidis dorso medio plurinervosis superne costatis 3.5-4 mm longis, achenio obovato albido inaequaliter biconvexo albido brevissime stipitato vix umbonato 1.2 mm longo glabro, versus marginem verrucoso, medio transverse grosse 3-4-rugoso, cellulis extimis 6-gonis planis obsolete striolato-punctulato vel sublaevi, stylo 5-6 mm longo valde compresso basi paullulo dilatato margine superne ciliato, ramis 2 papulosis, staminum (3) antheris lato-linearibus 1.5 mm longis apice acuto-productis.

Nom. Jap. Unadzuki-tentsuki.

Hab.

Riukiu: ins. Iriomote (G. KOIDZUMI; S. TAWADA), ins. Ishigaki (E. TAKAMINE).

Formosa: Hokuto (U. FAURIE n. 50), Hokuhan in Taihokushu (Y. SHIMADA n. 296).

Gen. 14. *Eriophorum* LINN.

Eriophorum LINN. Sp. Plant. (1753) 52; KUNTH, Enum. Plant. 2 (1837) 176; STEUD. Synops. 2 (1855) 128; BÄCKL. in Linnaea 37 (1871) 91; BENTH. et HOOK. f. Gen. Plant. 3 (1883) 1052 excl. *Trichophoro*; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1839) 111; DALLA TORRE et HARMS, Gen. Siphon. (1900) 31; C. B. CLARKE in Kew Bull. add. ser. (1908) 115 ex pte.

Linagrostis ADANS. Fam. 2 (1763) 41.

Herbae perennes caespitosae vel stoloniferae, culmis paucinodosis, foliis radicalibus elongatis, culmorum saepe ad vaginas brachyphyllas reductis, inflorescentia terminali, 1- vel pluri-spiculata saepius simplici, bracteata vel ebracteata, spiculis pluri-multi-floris, floribus hermaphroditis, glumis undique imbricatis saepe nisi infima floriferis, setis hypogynis numerosis filiformibus vel complanatis, post anthesin longissime excrescentibus, staminibus 3, stylo cum ovario continuo basi vix incrassato, ramis 3, achenio obovato trigono utrinque saepe attenuato, interdum setulis persistentibus scabro.

§. *Phyllanthela* ANDERSS.—Spiculae paucae vel plures, folia culmorum distincte laminata.

1. Squamae subtri- vel tenuiter pluri-nerviae; plantae tenues, folia compressa triquetra angusta 1-1.5 mm lata, pedunculi papilloso-puberuli, achenia oblongo-cylindrica. *E. gracile*.

1. Squamae praeter inferiores 1-2 semper uninerviae; plantae rigidulae robustiores, folia plana superne triquetra, achenia obovata vel anguste obovata.

2. Pedunculi laeves glabri; plantae longe stoloniferae, culmi obtuse trigoni, folia apice longe triquetra, antherae 3-4 mm longae. *E. angustifolium*.

2. Pedunculi plus minus scabri; plantae brevistoloniferae, culmi trigoni, folia apice breviter triquetra, antherae 2-3 mm longae. *E. latifolium*.

§. *Vaginata* ANDERSS.—Spicula unica terminalis, folia culmorum non vel brevissime laminata.

1. Plantae caespitosae non stoloniferae; folia radicalia compressa triquetra.

2. Folia margine scabra, antherae 2.5-3 mm longae. *E. vaginatum*.

2. Folia margine laevia, antherae 0.5-1 mm longae. *E. brachyantherum*.

1. Plantae stoloniferae, folia teretia laevia supra unisulcata.

2. Spicula demum hemisphaerica albo-lanata, squamae attenuato-acutae, margine anguste pellucidae, achenia laevia oblanceolata, antherae 0.8-1 mm longae.

E. Scheuchzeri.

2. Spicula demum obovata rufo-lanata, squamae apice obtusae, margine perlate pellucidae, achenia obovata margine superne spinulosa, antherae 2-3 mm longae. *E. russeolum*.

1. *Eriophorum gracile* KOCH

Eriophorum gracile KOCH in ROTH, Catalect. 2 (1800) 259; KUNTH, Enum. Plant. 2 (1837) 179; REICH. Icon. Flor. Germ. 3 (1846) t. 290; LEDEB. Flor. Ross. 4 (1853) 255; FR. SCHM. Flor. Amur. Sachal. (1863) 191; BÄCKL. in Linnaea 37 (1871) 95; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 115; MEINSH. in Act. Hort. Petrop. 18 (1901) 271; KOMAR. Flor. Manshur. 1 (1901) 337; ASCHERS. et GRAEBN. Synops. 2; 2 (1903) 324; MATSUM. Ind. Plant. Japon. 2:1 (1905) 147; NAKAI, Flor. Korean. 2 (1911) 299; MIYABE et KUDO, in Trans. Sapporo Nat. His. Soc. 5 (1914) 67; ABRAMS, Illustr. Flor. Pac. St.

1 (1922) 269; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 200; KOMAR. et ALIS. Key Pl. Far East. Reg. URSS. 1 (1931) 257; JUZEPCZ. in KOMAR. Flor. URSS. 3 (1935) 30.

Eriophorum coreanum PALLA in Oesterr. Bot. Zeitschr. 59 (1905) 190; HULTÉN, Flor. Kamtch. 1 (1927) 160, pro *E. gracile* ssp.; JUZEPCZ. l. c. (1935) 30; KITAG. Lineam. Fl. Mansh. (1939) 116.

Rhizomate longe stolonifero, culmis tenuibus erectis vix caespitosis 20-50 cm altis obtuse trigonis basi paucifoliatis, foliis radicalibus angustis compressis triquetris culmo interdum longioribus abrupte obtusulis, foliis culmorum 2 vel 1, vaginis superne vix inflatis brevisetaceolaminatis, anthera simplici brevi 2-5-stachya, bractea ima suberecta 1-2 cm longa inferne dilatato-subvaginante, spiculis anthesi oblongis 5-10 mm longis, pedunculis papilloso-puberulis, squamis oblongis vel oblongolanceolatis obtusulis pallide griseo-nigris vel pallide griseis subtri-vel tenuiter pluri-nervis, achenio oblongo-cylindrico compresso-trigono cinereo-brunnescente aut vix aut brevissime (var. *coreanum* PALLA, l. c., pro sp.) apiculato 3-3.5 mm longo, stylo tenui 5-6 mm longo infra medium usque papilloso, superne $\frac{1}{2}$ trifido, setis hypogynis albis demum 2 cm longis, staminum antheris 2-3 mm longis.

Nom. Jap. Sagi-suge.

Hab.

Saghalien: Shiska (G. YAMADA; H. TOBITA; J. OHWI), Kaitsuka (G. KOIDZUMI), Dobuki (U. FAURIE n. 850), Korsakof (U. FAURIE n. 849), Soriofka (U. FAURIE n. 848).

Kuriles: ins. Kunashiri (Y. MATSUMURA; J. OHWI), ins. Shikotan (J. OHWI n. 312, 388).

Yezo: Sapporo (U. FAURIE n. 1852), Kabato (U. FAURIE n. 8075, 8076), Tomakomai (U. FAURIE n. 10056), Kushiro (U. FAURIE n. 5293; S. MIKI), Yurap (U. FAURIE n. 10249), Shari (J. OHWI n. 4908).

Hondo: Kuroishi (U. FAURIE n. 13233), Morioka (U. FAURIE n. 360), Shiobara (U. FAURIE n. 4100), Hayachine (U. FAURIE n. 13162), Rokuroshi, Onogun in Yechizen (Z. TASHIRO), Ose (J. OHWI et M. TAGAWA), Aomori (U. FAURIE n. 1018), Iwagisan (U. FAURIE n. 1851), Takizawa in Rikuchu (G. TOBA), m. Hakkoda (S. MUROI), Yakusui in Yamato (D. KUME), Hananokimura in Iga (T. KUROKAWA), Himegamiyama in Rikuchu (Y. FUKUDA), lac. Chinami in Hitachi (H. TSURUMACHI), Kamagaike in Shinano (S. MIKI), Asamayama (U. FAURIE n. 1017), Nikko (S. MIKI).

Korea: Gensan (U. FAURIE n. 1435), Kan-ouento (U. FAURIE n. 953), Gempori in Kannan (J. OHWI), Gekatsuguri in Kannan (J. OHWI).

2. *Eriophorum angustifolium* ROTH

Eriophorum angustifolium ROTH, Tent. 1 (1788) 24 et Flor. Germ. 2 (1789) 63; KUNTH, Enum. Plant. 2 (1837) 178; REICHB. Icon. Flor. German. 8 (1846) t. 291; LEDEB. Flor. Ross. 4 (1853) 254; STEUD. Synops. 2 (1855) 129; БЭКЛЕР. in Linnaea 37 (1871) 95; MEINSH. in Act. Hort. Petrop. 18 (1901) 270; KOMAR. Flor. Manshur. 1 (1901) 337; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 255; Yabe et Yendo, in Bot. Mag. Tokyo 18 (1904) 174; NAKAI, Flor. Korean. 2 (1911) 298; MIYABE et KUDO in Trans. Sapporo Nat. Hist. Soc. 5 (1914) 68, excl. pl. e Saghal.; KUDO, Flor. Param. (1922) 76; ABR. Illustr. Flor. Pac. Stat. 1 (1922) 269; HULTÉN, Flor. Kamtch. 1 (1927) 159; KOMAR. et ALIS. Key Pl. Far E. Reg. USSR. 1 (1931) 257; MIYABE et KUDO, Flor. Hokk. a. Saghal.

2 (1931) 201; TATEW. Phytog. Middl. Kuriles (1933) 261 et 290; JUZEPCZ. in KOMAR. Flor. URSS. 3 (1935) 29; MANSF. in Fedde Repert. 45 (1938) 212.

Eriophorum polystachyon LINN. Spec. Plant. (1753) 52, ex pte; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 333; OSTENF. Flor. Arct. 1 (1902) 40; KITAG. Lin. Fl. Mansh. (1939) 117.

Rhizomate stolones longos agente, culmis plerumque solitariis 20-40 cm altis obtuse trigonis erectis laevibus basi foliatis, foliis radicalibus culmo saepe brevioribus conduplicatoplanis vel planiusculis 1.5-4 mm latis, margine scabris, apice longiuscule triquetris angustato-obtusulis, foliis culmorum 2 vel 1, vaginis sursum sensim paullo ampliatis, laminam erectam vulgo 3-7 cm longam infra vel supra medium usque triquetram abeuntibus, anthela 2-5-stachya simplici, bractea ima tantum plerumque evoluta, e basi brevivaginata fusco-nigra antice fissa sursum ampliata et in laminam brevem setaceam erectam desinente, spiculis anthesi oblongo-ovatis 10-15 mm longis, lateralibus pedunculatis secundis vel cernuis, pedunculis compressis laevibus, squamis late lanceolatis griseo-atris uninervis, inferioribus obtusis, superioribus attenuatoacutis, achenio obovato compresso-trigono 2.5-3 mm longo fusco brevi-apiculato laevi, stylo 5-6 mm longo ferrugineo tenui, fere ad medium usque trifido, lobis papillois, setis hypogynis albis 2-3 cm longis, staminum antheris 3-4 mm longis.

Nom. Jap. Shumushu-watasuge, Chosen-sagisuge.

Hab.

Kuriles: ins. Paramushir (J. OHWI et R. YOSHII n. 5360, 5545; K. KOJIMA; K. KISHIKAWA), ins. Shumushu (J. OHWI et R. YOSHII n. 60; K. KISHIKAWA).

Korea: fide KOMAROV.

3. *Eriophorum latifolium* HOPPE

Eriophorum latifolium HOPPE, Bot. Taschenb. (1800) 108; KUNTH, Enum. Plant. 2 (1837) 178; REICHB. Icon. Flor. German. 8 (1846) t. 292; LEDEB. Flor. Ross. 4 (1853) 254; STEUD. Synops. 2 (1855) 129; MAXIM. Flor. Amur. (1859) 199; BÜCKL. in Linnaea 37 (1871) 96; MEINSH. in Act. Hort. Petrop. 18 (1901) 270; KOMAR. Flor. Manshur. 1 (1901) 338; OSTENF. Flor. Arct. 1 (1902) 39; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 256; NAKAI, Flor. Korean 2 (1911) 299; KOMAR. et ALIS. Key Pl. Far. E. Reg. USSR. 1 (1931) 257; JUZEPCZ. l. c. 3 (1935) 29; MANSF. in Fedde Repert. 45 (1938) 212; KITAG. Lineam. Fl. Mansh. (1939) 117.

Eriophorum polystachyon LINN. Spec. Plant. (1753) 52 ex pte.

Rhizomate stolones breves agente, culmis plerumque solitariis 30-50 cm altis trigonis laevibus basi foliatis, foliis basalibus planis 3-5 mm latis culmum interdum superantibus margine scabris, apice breviquetris, foliis culmorum 2 vel 1, vaginis sursum levissime inflatis, breviter setaceolaminatis, lamina apice breviter triquetra obtusula, anthela plerumque simplici 3-7-stachya, pedunculis scabris, spiculis primo oblongo-ovatis vel ovatis 10-15 mm longis, lateralibus saepe nutantibus, bracteis erectis 1 vel 2, e basi ampliata subvaginante fusconigra brevisetaceis, squamis late lanceolatis obtusis 1-nervis, griseo-atris margine dilutioribus, achenio anguste obovato trigono subcompresso 2.5 mm longo apiculato aterrimo, stylo 6-7 mm longo,

tenui infra medium usque papilloso, $\frac{1}{2}$ trifido, setis hypogynis 2-2.5 cm longis albis, staminum antheris 2-3 mm longis.

Nom. Jap. Hiroha-sagisuge.

Hab. Korea: Seisuiria in Kampoku (J. OHWI n. 608, 650), Ryodo, prope Kwaini in Kampoku (S. GOTO), Daitaku in Kampoku (J. OHWI n. 2645), Gempori in Kannan (J. OHWI).

4. *Eriophorum vaginatum* LINN.

Eriophorum vaginatum LINN. Spec. Plant. (1753) 521; KUNTH, Enum. Plant. 2 (1837) 177; REICHB. Icon. Flor. Germ. 8 (1846) t. 289; LEDEB. Flor. Ross. 4 (1853) 252; STEUD. Synops. 2 (1855) 128; MAXIM. Prim. Fl. Amur. (1859) 299; FR. SCHM. Reis. Am. Sachal. (1868) 66 et 191; MEINSH. in Act. Hort. Petrop. 18 (1901) 269; KOMAR. Flor. Manshur. 1 (1901) 336; OSTENF. Flor. Arct. 1 (1902) 40; C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 203; MATSUM. Ind. Plant. Japon. 2:1 (1905) 147; PALLA in Mond. Plant. (1910) 40; MIYABE et KUDO in Trans. Sapporo Nat. Hist. Soc. 5 (1914) 66 excl. pl. e Saghal. et Flor. Hokk. a. Saghal. 2 (1931) 199; HULT. Flor. Kamtch. 1 (1627) 163; KOMAR. et ALIS. Key Pl. Far E. Reg. USSR. 1 (1931) 257; TATEW. Phytogeogr. Midd. Kuriles (1933) 217 et 261; JUZEPCZ. in KOMAR. Flor. URSS. 3 (1935) 33; KITAG. l. c. (1939) 117.

Eriophorum Scheuchzeri (non HOPPE) MATSUM. Ind. Plant. Japon. 2:1 (1905) 147.

Eriophorum Fauriei E. G. CAMUS in LECOMTE, Notul. System. 1 (1910) 249.

Eriophorum scabridum OHWI in Bot. Mag. Tokyo 45 (1931) 187.

Rhizomate dense caespitoso estolonifero, culmis erectis obtuse trigonis laevibus vel superne parce scabris, basi foliatis, foliis interdum culmum superantibus triquetris 1-1.5 mm latis scabris apice abrupte angustato-acutiusculis, foliis culmorum 2 vel 1, in vaginam longam sursum inflatam apice saepe atrato muticam reductis, spicula unica terminali anthesi oblongo-ovata 1-2 cm longa demum cum lana copiosa obovato-globosa, multiflora, squamis triangulato-lanceolatis griseo-nigrescentibus attenuato-acutis uninervis, margine sensim dilutioribus, achenio obovato 2-2.5 mm longo compresso trigono fusco, stylo 4-5 mm longo compresso trigono fusco, stylo 4-5 mm longo ferrugineo superne $\frac{1}{2}$ trifido, lobis papillois, setis hypogynis albis 20-25 mm longis, staminum antheris 2.5-3 mm longis.

Nom. Jap. Wata-suge, Suzumeno-keyari.

Hab.

Saghalien: Shiska (G. KOIDZUMI; J. OHWI), Aba (G. KOIDZUMI), Aikawa (S. OTAGIRI), Vladimirofka (U. FAURIE n. 851), Toyohara (G. YAMADA).

Kuriles: ins. Kunashiri (J. OHWI n. 910), ins. Shikotan (J. OHWI n. 297).

Yezo: Kuroiwa (U. FAURIE n. 7216), m. Taisetsu (J. OHWI), Ochiishi (J. OHWI), m. Muine in Iburi (I. YAMAMOTO), Hamatombetsu (J. OHWI n. 4382), Nemuro (J. OHWI).

Hondo: m. Hakkoda (U. FAURIE n. 848, 13059; S. MURAI), Hirugano in Mino (Z. TASHIRO), m. Kirigamine in Shinano (S. MIKI), m. Naeba in Yechigo (Z. TASHIRO), Nikko (S. MIKI; H. TSURUMACHI), m. Adzuma in Uzen (M. KATO), m. Tsurugisan (U. FAURIE n. 13448), m. Kurikoma in Rikuchu (T. KIMURA; H. KURIYAMA), m. Myokosan (U. FAURIE n. 1016), m. Tateyama (Z. TASHIRO; K. SHINNO), m. Shirouma (S. MIKI; J. OHWI n. 7585).

Korea: Osorei in Kannan (N. NOMURA), Gempori in Kannan (J. OHWI).

5. *Eriophorum brachyantherum* TRAUTV.

Eriophorum brachyantherum TRAUTV. Flor. Ochot. Phaen. (1956) 93; MEINSH. in Act. Hort. Hort. Petrop. 18 (1901) 269; KOMAR. Flor. Manshur. 1 (1901) 337; OHWI in Bot. Mag. Tokyo 45 (1931) 141; KOMAR. et ALIS. Key Pl. Far. E. Reg. USSR. 1 (1931) 257; JUZEPEZ. in Komar. Flor. URSS. 3 (1935) 34.

Rhizomate caespitoso estolonifero, culmis 15-30 cm altis obtuse trigonis laevibus basi foliatis, foliis radicalibus culmum interdum superantibus 1-1.2 mm latis triquetris cineracentibus laevibus abrupte obtusulis, foliis culmorum 1 vel 2, in vaginam longam tubulosam sursum ampliatam muticam vel brevissime setosam saepe ore late nigrescentem reductis, spicula unica anthesi oblongo-obovata 10-15 mm longa dense multiflora, squamis triangulato-lanceolatis acutiusculis uninervis opacis, margine vix dilutioribus griseo-nigrescentibus, achenio obovato-compresso 2-2.5 mm longo opaco punctulato apice vix apiculato, stylo 3.5-4 mm longo tenui ferrugineo ultra medium usque trifido, lobis papillois, setis hypogynis albidis 2 cm longis, staminum antheris 0.5-1 mm longis.

Nom. Jap. Ko-watasuge.

Hab. Korea: m. Setsurei (Sorryon) in Kampoku (J. OHWI n. 1997; R. SAITO n. 1069).

6. *Eriophorum Scheuchzeri* HOPPE

Eriophorum Scheuchzeri HOPPE, Bot. Taschenb. (1800) 104, app. t. 7; KUNTH, Enum. Plant. 2 (1837) 177; REICH. Icon. Flor. German. 8 (1846) t. 289; LEDEB. Flor. Ross. 4 (1853) 253; BICKLER. in Linnaea 37 (1837) 92; OSTENF. Flor. Arct. 1 (1902) 41; HULTÉN, Flor. Kamtch. 1 (1927) 163; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 199; TATEW. Phytog. Midd. Kuriles (1933) 261; JUZEPCZ. in Komar. Flor. URSS. 3 (1935) 36.

Eriophorum capitatum Host, Gram. 1 (1801) 30, t. 33; STEUD. Synops. 2 (1855) 128.

Rhizomate stolonifero, culmis vix caespitosis 10-30 cm altis molliusculis laevibus obsolete trigonis inferne tantum 1-2-vaginatibus, basi paucifoliatis, foliis radicalibus demum elongatis teretibus 1 mm latis supra unisulcatis laevibus, apice abrupte obtusulis, foliis culmorum 1 vel 2, in vaginam tubulosam superne paullo inflatam apice interdum brevisetaceam reductis, spicula singula primo late obovata 1-1.5 cm longa demum cum lana albida copiosa hemisphaerica, squamis triangulato-lanceolatis attenuato-acutis griseo-nigrescentibus uninervis, margine anguste scariosis, achenio brunneo oblanceolato compresso trigono 2 mm longo mucronato, stylo 2-2.5 mm longo ferrugineo superne sparse papilloso trifido, setis hypogynis albidis 2-2.5 cm longis, staminum antheris 0.8-1 mm longis.

Nom. Jap. Chishima-watasuge.

Hab. Kuriles: ins. Paramushir (J. OHWI et R. YOSHII n. 5393, 6038), ins. Shumushu (K. KISHIKAWA).

var. *tenuifolium* OHWI, var. nov.

Culmīs $\frac{2}{3}$ -1 mm latis, foliis radicalibus $\frac{2}{3}$ mm latis a typo differt.

Nom. Jap. Yezo-watasuge.

Hab. Yezo: m. Taisetsu (J. OHWI n. 7408).

7. *Eriophorum russeolum* FRIES

Eriophorum russeolum FRIES in HARTM. Handb. Skand. Fl. ed. 3 (1838) 13; FRIES, Nov. Mant. 3 (1842) 67; NYLAND. in Act. Soc. Sc. Fenn. 4:1 (1849) 9; ANDERSS. Cyper. Scadinav. (1849) 13; STEUD. Synops. 2 (1855) 128; OSTENF. Fl. Arct. 1 (1902) 42; HULTÉN, Flor. Kamtch. 1 (1927) 162; JUZEPCZ. in KOMAR. Flor. URSS. 3 (1935) 35; KITAG. Lineam. Fl. Mansh. (1939) 117.

Eriophorum Chamissonis C. A. MEY. ex LEDEB. Fl. Alt. 1 (1829) 70, ex pte et Cyper. Nov. (1831) 204 et auct. plur.

Eriophorum vaginatum var. BÜCKLR. in Linnaea 37 (1871) 94.

Eriophorum mandshuricum MEINSH. in Act. Hort. Petrop. 13 (1901) 26; KOMAR. et ALIS. Key Pl. Far E. Reg. USSR. 1 (1931) 257.

Eriophorum strigosum MIYABE et KUDO in Trans. Nat. Hist. Soc. Sapporo 5 (1914) 67 et Flor. Hokk. a. Saghal. 2 (1931) 187.

Rhizomate longe stolonifero, culmis vix caespitosis tenuibus obsolete trigonis laevibus 30-60 cm latis, foliis radicalibus demum elongatis culmum saepe superantibus subteretibus laevibus supra unisulcatis 1-1.3 mm latis apice calloso-obtusis, foliis culmorum 1 (0-2), in vaginam saepe rubescentem arctam sursum vix inflatam muticam vel inferiori brevi-setosolaminatam reductis, spicula unica 15-20 mm longa anthesi oblonga demum cum lana copiosa rufa ambitu obovata, squamis oblongo-lanceolatis uninervis obtusis griseo-nigrescentibus marginibus perlate pellucidis, achenio obovato vel oblongo-obovato brunneo ca. 2.5 mm longo compresse trigono margine superne plus minus spinuloso, stylo tenui 5-6 mm longo superne papilloso $\frac{1}{3}$ trifido, setis hypogynis rufescentibus ca. 3 cm longis, staminum antheris 2-3 mm longis.

Nom. Jap. Kitsune-suge.

Hab.

Saghalien: Shiska (S. SUGAWARA; J. OHWI).

Korea: Kanjanmuri in Kampoku (J. OHWI n. 2338), Seisuiru in Kampoku (J. OHWI n. 669).

Gen. 15. *Fuirena* ROTTB.

Fuirena ROTTB. Descr. et Icon. Pl. (1773) 70, t. 19; KUNTH, Enum. Plant. 2 (1837) 180; STEUD. Synops. 2 (1855) 125; BÜCKLR. in Linnaea 37 (1871) 98; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1053; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 111; DALLA TORRE et HARMS, Gen. Siphon. (1900) 31; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 115.

Vaginaria PERS. Synops. 1 (1805) 70.

Herbae annuae vel perennes foliatae, saepe pubescentes, culmis paucinodosis, foliis saepe elongatis, vaginis membrana coronatis, spicularum fasciculis terminalibus et in axillis superioribus, breviter pedunculatis, in panicula irregulari angusta collectis vel paucis et distantibus, spiculis pubescentibus pluri-multi-floris, floribus hermaphroditis, glumis undique imbricatis, nisi infima 1-2, floriferis, squamellis hypogynis 3 latis saepe stipitatis membranaceis vel carnosulis, saepe cum setis totidem alternanti-

bus, staminibus 3, stylo basi cum ovario continuo haud incrassato, deciduo, ramis 3, achenio trigono erostrato.

1. Planta erhizomatosa, culmi tenues molles obtuse trigoni 10-40 cm alti, folia mollia 3-7 mm lata, squamellae vel setae hypogynae interiores crassae conspicue stipitatae, achenia acute triquetra. *F. ciliaris*.
1. Planta breviter rhizomatosa, culmi validi pentagoni 50-100 cm alti, folia rigidula 5-10 mm lata, squamellae vel setae hypogynae interiores tenues brevissime stipitatae, achenia triquetra. *F. umbellata*.

1. *Fuirena ciliaris* ROXB.

Fuirena ciliaris (LINN.) ROXB. Hort. Beng. (1814) 81 et Flor. Indic. 1 (1820) 184; NEES in WIGHT, Contrib. Bot. Ind. (1837) 93; MERR. Enum. Philipp. Fl. Plant. 1 (1922) 116.

Scirpus ciliaris LINN. Mant. 2 (1771) 182.

Fuirena glomerata LAM. Tabl. Encycl. 1 (1791) 150; KUNTH, Enum. Pl. 2 (1837) 184; STEUD. 2 (1855) 127; BECKL. in Linnaea 37 (1871) 107; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 666 et Journ. Linn. Soc. 36 (1903) 256 et Illustr. Cyperac. (1909) t. 59, f. 6; MATSUM. Ind. Plant. Japon. 2:1 (1905) 153; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 490; E. G. CAMUS in Lecomte, Fl. Génér. Indochin. 7 (1912) 141.

Rhizomate nullo, culmis caespitosis 10-40 cm altis obsolete trigonis mollibus vix robustis remote 2-3-nodis praetertim superne cum foliis vaginisque pilosis erectis basi non incrassatis, foliis brevilinearibus planis mollibus breviacuminatis 3-7 mm latis subtrinervis vel plurinervulosis 5-15 cm longis, inferioribus brevioribus, vaginis viridulis 15-30 mm longis, ligula tenuimembranacea 1-2 mm longa ferruginea truncata, glomerulis 1-2, 1-2 cm longis dense 3-10-spiculatis approximatis vel remotis, pedunculo incluso, bractea ima folii simili, summa setacea evaginata, spiculis ovatis vel oblongis 4-7 mm longis ca. 3 mm latis atro- vel brunneo-viridibus teretibus comosis dense multifloris, squamis ellipticis 1.5 mm longis tenuimembranaceis integris concavis praesertim superne pilosis apice rotundatis vix carinatis, dorso late viridi trinervis, lateribus superne nigricantibus, paullo infra apicem exserentibus aristam excurvam ca. 1 mm longam patule pilosam, achenio lucido acute triquetro subrotundato $\frac{3}{4}$ mm longo substipitato pallido demum pallide brunnescente apice mucronato, stylo achenio sesquiplo longiore ferrugineo superne papuloso, superne $\frac{1}{2}$ trifido, setis hypogynis 6, exterioribus 3 subulatis minutissimis vel fere nullis, interioribus 3 achenio subaequilongis longiuscule stipitatis, limbo quadrato crasso glabro trinervi, basi subcordato, apice truncato et obtuse brevicuspidato, staminum (3) antheris brevibus oblongis muticis.

Nom. Jap. Kuro-tamayatsuri.

Hab.

Hondo; Kuroimura in Nagato (S. MURATA), Ichimura in Aki (S. HASHIOKA).

Shikoku: fide MATSUMURA.

Kiushiu: Oguchi in Satsuma (S. MURAMATSU), Kitazakihanto in Chikuzen (K. NAKASHIMA), Kinoue in Higo (K. MAYEBARA), Kawabe in Satsuma (M. SHIMAGAWA), Tarumi (Z. TASHIRO), Johokumura in Higo (SATO), Akune in Satsuma (J. OHWAI).

Korea: Kyurei in Zennan (M. K. BOKU).

Riukiu: ins. Tanegashima (Z. TASHIRO), ins. Amami-oshima (H. OHBA), ins. Okinawa (S. SAKAGUCHI; S. TAWADA; T. KANASHIRO; Y. TAIRA).

Formosa: Tamsui (U. FAURIE n. 56), Shimotansuigawa (S. MIKI).

2. *Fuirena umbellata* ROTTB.

Fuirena umbellata ROTTB. Descr. et Icon. (1773) 70, t. 19, f. 3; KUNTH, Enum. Plant. 2 (1837) 185; STEUD. Synops. 2 (1855) 126; BÜCKL. in Linnaea 37 (1871) 110; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 666 et in Journ. Linn. Soc. 36 (1903) 256; MATSUM. Ind. Plant. Japon. 2:1 (1905) 153; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 491; E. G. CAMUS in LÉCOMTE, Fl. Génér. Indochin. 7 (1912) 141; MERR. Enum. Philipp. Fl. Pl. 1 (1922) 116.

Perennis, rhizomate brevissimo, culmis validis subpentagonis 50-100 cm altis striatis, praeter superiorem pilosam glabris, remote 5-7-foliatis erectis, basi incrassatis, foliis planis late linearibus rigidulis glabris sensim acutissimis 5-10 mm latis 10-20 cm longis subtus elevato-5-nervis, inferioribus sensim brevioribus, vaginis angulatis viridulis glabris 2-5 cm longis, glomerulis 3-10 solitariis vel geminis simplicibus vel ramosis 5-10-spiculatis, pedunculis subexsertis albobillosis, spiculis ovatis vel oblongo-ovatis acutiusculis teretibus multifloris 4-7 mm longis atro- vel brunneo-viridibus, squamis ellipticis 2 mm longis rotundatis pilosulis et superne sparse pilosis ciliolatis, leviter concavis, dorso vix carinato late viridi-tricostatis, margine superne nigro-tinctis, paullo infra apicem exsertentibus aristam excurvam ca. 1 mm longam parce patule pilosam, achenio lucido triquetro 3 mm longo latissime obovato obsolete undulato breviter crasse stipitato, apice mucronato, stylo ferrugineo superne papuloso, ultra medium usque trifido, setis hypogynis exterioribus nullis, interioribus 3 planis membranaceis obovatis vel oblongis achenium parum superantibus apice subtruncato undulato brevimucronatis, basi brevissime stipitatis, trinervis, basi obtusis, apice ciliolatis, staminibus 3, antheris linearibus apice mucronatis.

Nom. Jap. Hirohano-kurotamagayatsuri, Yaeyama-susuki.

Hab.

Riukiu: ins. Iheya (T. TAMAYOSE), ins. Okinawa (S. SAKAGUCHI; T. KANASHIRO), ins. Miyako (Y. TAIRA; Y. NAKAZONE), ins. Iriomote (G. KOIDZUMI; Y. DOI), ins. Ishigaki (G. KOIDZUMI; S. TAWADA; E. TAKAMINE).

Formosa: Shimotansui-gawa (S. MIKI), Hokuto (U. FAURIE n. 52).

Gen. 16. *Scirpus* LINN.

Scirpus LINN. Sp. Plant. (1753) 47; KUNTH, Enum. Plant. 2 (1837) 157; STEUD. Synops. 2 (1855) 85; BÜCKL. in Linnaea 36 (1870) 475; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1049; ENGLER et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 111; DALLA TORRE et HARMS, Gen. Siphon. (1900) 31; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 111.

Trichophorum PERS. Synops. 1 (1805) 69.

Isolepis R. Br. Prodr. (1810) 221.

Pterolepis SCHRAD. in Goett. Gel. Anzeig. (1821) 2071.

Nemum DESV. in HAMILT. Prodr. Pl. Ind. Occid. (1825) 13.

- Seidlia* OPIZ, Naturaliensammler, n. 11 (1826) 349.
Clavula DUMORT. Fl. Belg. (1827) 143 p.p.
Eleogiton LINK, Hort. Berol. 1 (1827) 293.
Malachochaete NEES in Linnaea 9 (1834) 293.
Actaeogeton STEUD. Nom. Bot. ed. 2 (1840) 22.
Taphrogeton MONTANDON, Guid. Bot. (1868) 346.
Schoenoplectus PALLA in Sitzb. Zool.-Bot. Ges. Wien 37 (1888) 49 et in ENGL. Bot. Jahrb. 10 (1888) 298.
Bolboschoenus PALLA in KOCH, Synops. ed. 3, 3 (1907) 2531.

Herbae habitu vario, nunc parvae vel fluitantes nunc elatae validae perennes rhizomatosae, culmis nudis vel nodosis, foliis elongatis vel ad vaginas reductis, inflorescentia nunc laterali capitata vel umbellata uni-bracteata nunc terminali composita saepe pluribracteata, raro unispiculosa, spiculis pluri-multi-floris, floribus hermaphroditis, glumis undique imbricatis omnibus vel nisi infima floriferis, setis hypogynis 3-8 vel nullis, staminibus 1-3, stylo cum ovario continuo deciduo, ramis 2-3, achenio obovato trigono vel compresso.

1. Inflorescentia terminalis, bractee plures vel unicae vel subnullae.
2. Bractee nullae vel unicae squamiformes.
3. Folia omnia in vaginam aphyllam vel brachyphyllam reducta.
 Subgen. *Trichophorum*.
3. Folia saltem partim longe laminata.
 Subgen. *Eleogiton*.
2. Bractee plures foliaceae, culmi foliati.
3. Spiculae numerosae vel subnumerosae minores, achenia 0.7-1.3 mm longa.
4. Culmi pauci-nodosi.
 Subgen. *Taphrogeton*.
4. Culmi enodosi.
 Subgen. *Schoenoplectus*.
3. Spiculae unicae vel plures majores, achenia 3-4 mm longa.
 Subgen. *Bolboschoenus*.
1. Culmi nudi, inflorescentia saepe pseudolateralis, bractea plerumque unica teres vel culmum trigona continuans.
 Subgen. *Schoenoplectus*.

Subgenus *Trichophorum* (PERS.) ASCHERS. et GRAEBN.

1. Sect. *Eutrichophorum* OHWI, Sect. nov.—Culmi unispiculosi, squamae vix carinatae, antherae longe-productae.
2. Rhizoma ascendens ramosum, culmi laeves teretiusculi, vaginae lucidae coriaceae, setae hypogynae setaceae vix exsertae.
 Sc. *caespitosus*.
2. Rhizoma horizontaliter brevirepens, culmi triquetri, angulis scabri, vaginae membranaceae opacae, setae hypogynae filamentosae longe exsertae usque ad 2 cm longae.
 Sc. *hudsonianus*.
1. Sect. *Anthelophorum* OHWI, sect. nov.—Culmi uni- vel pauci-spiculosi, squamae subcarinatae.
 Sc. *subcarinatus*.

Subgenus *Eleogiton* (LINK) ASCHERS.

Species unica.

Sc. *pseudo-fluitans*.

Subgenus *Taphrogeton* REICHB. (*Seidlia* OPIZ, pro gen.).

1. Styli rami 3, achenia trigona.

2. Culmi striati, superne triquetri vel vere trigoni ad angulos saepe scabri, vaginae culmorum laxiusculae.
3. Planta elata, folia culmorum elongata, anthela multispiculata, squamae minus quam 2 mm longae.
4. Spiculae 5-7 mm longae, setae hypogynae saepe plicato-flexuosae achenio longiores.
5. Setae hypogynae fere a basi retroscabrae, achenio paullo longiores, radii radiolique superne scabri. *Sc. orientalis.*
5. Setae hypogynae achenio 3-4-plo longiores apice tantum patule vel antrorse spinulosae, radii radiolique laeves. *Sc. radicans.*
4. Spiculae 2-2.5 mm longae 8-40-agglomeratae, setae hypogynae rectae achenio breviores. *Sc. Hattorianus.*
3. Planta humilis, folia culmorum brevina, anthela plurispiculosa, squamae 3.5-4 mm longae. *Sc. Maximowiczii.*
2. Culmi obsolete trigoni vix striati laeves, superne interdum uno latere leviter sulcati, vaginae culmorum arctiusculae.
3. Folia vix septato-nodulosa margine crebre scabra, anthelae radii radiolique laeves vel angulo tantum superne parcissime spinulosi, spiculae in glomerulum aggregatae griseo-tinctae, setae hypogynae plerumque inclusae.
4. Folia culmorum 4-8 mm lata, anthelae (terminales) compositae, squamae lanceolatae $\frac{2}{3}$ mm latae. *Sc. Mitsukurianus.*
4. Folia culmorum 3-6 mm lata, squamae ovatae vel oblongoovatae basi 1-1.3 mm latae.
5. Anthelae laterales 5-10-glomerulatae, terminalis composita, radii anthelae tenues. *Sc. karuizawensis.*
5. Anthelae laterales 1-2-glomerulatae, terminalis simplex 3-6-radiata, radii anthelae crassi. *Sc. fuirenoides.*
3. Folia subtus cum vaginis conspicue septato-nodulosa, margine scabra, anthelae radii radiolique crebre scabri, spiculae solitariae vel 2-5-aggregatae nec griseo-tinctae, setae hypogynae subexsertae. *Sc. Wichurii.*
1. Styli rami 2, achenia biconvexa.
2. Planta valida, vaginae culmorum saepe inferne castaneotinctae, anthelae radii radiolique laeves, spiculae late ellipticae vel ovatae 4-10-aggregatae 2.5-3.5 mm latae, squamae dorso concolore uninerviae vel obsolete nervulosae. *Sc. ternatanus.*
2. Planta validula, vaginae culmorum viridulae, anthelae radii radiolique superne scabri, spiculae 2-5-aggregatae ca. 1.5 mm latae oblongae, squamae dorso fascia late viridi notatae. *Sc. kiushuensis.*

Subgenus *Bolboschöenus* ASCHERS.

1. Culmi subvalidi vel subtenues, anthela saepe capitato-contracta paucispiculosa, spiculae breves, squamae apice brevius et minus recurvato-aristatae, stylus bifidus, achenia compressa, 3 mm longa, faciebus subconcavis, late obovata. *Sc. biconcavus.*
1. Culmi validi, anthela radiata plurispiculata, spiculae longiores, squamae apice longius et recurvato-aristatae, stylus trifidus, achenia subaequaliter trigona obovata 3.5-3 mm longa. *Sc. Yagara.*

Subgenus *Schoenoplectus* REICHB.

1. Bracteae 1 culmum continuantes, anthela pseudo lateralis.
2. Rhizomata (excl. *Sc. lineolatus*), nulla vel subnulla estolonifera, inflorescentia capitato-contracta (excl. *Sc. oryzetorum*) squamae plerumque plurinervulosae integrae mucronulatae subcoriaceae vel submembranaceae, achenia plerumque transversa rugulosa. Sect. *Actaeogiton* REICHB.
3. Rhizomata tenuiter longe repentia non caespitosa, inflorescentia unispiculosa.
Sc. lineolatus.
3. Rhizomata nulla vel brevissima estolonifera caespitosa, inflorescentia paucipluri-spiculosa.
4. Culmi tenues teretes vel angulati vel striati, nec triquetri.
5. Inflorescentia saepe breviradiata, spiculae plus minus angulatae, setae hypogynae nullae, achenia facie conspicue undulato-rugulosa.
Sc. oryzetorum.
5. Inflorescentia semper capitata exradiata, spiculae teretiusculae, setae hypogynae semper evolutae.
6. Squamae subcoriaceae vel submembranaceae, achenia ca. 2 mm longae.
7. Culmi tenues, spiculae viridulae acutae oblongo-ovatae, setae hypogynae 4 achenia plano-convexa compressa conspicue superantes.
Sc. Wallichii.
7. Culmi tenues vel subtenues, spiculae viridulae vel brunnescentes obtusae vel acutiusculae, setae hypogynae 5-6 achenio breviores vel sublongiores.
Sc. juncoides.
6. Squamae membranaceae, setae hypogynae achenio sesquilingiores, achenia 1.2-1.5 mm longae.
7. Rhizoma brevissime repens subignosum, spiculae nitidulae 4-4.5 mm. latae, squamae dorso late virides.
Sc. hondensis.
7. Rhizoma nullum, spiculae 3-4 mm latae, squamae dorso latissime virides.
Sc. Komarovii.
4. Culmi triquetri robusti.
5. Culmi triquetri robustiores, facie concaviusculi, spiculae longiores, teretes, achenia obsolete rugulosa, styli ca. 4 mm longi, antherae 2.5 mm longae.
Sc. Preslii.
5. Culmi tenuiores acute triquetri, facie eximie concavi, spiculae angulosae, achenia distincte rugulosa, stylus ca. 2.5 mm longus, antherae $\frac{2}{3}$ mm longae.
Sc. mucronatus.
2. Rhizomata (excl. *Sc. subulato*) repentia vel stolonifera, inflorescentia anthelata vel umbellato-cymosa raro abortu capitatocontracta, squamae praeter carinas enerviae apice plerumque exciso longius mucronatae tenuiter membranaceae, achenia plerumque laevia.
3. Setae hypogynae retroso-scabrae.
4. Culmi flaccidi, folia basalia longe laminata, culmum saepe superantia, inflorescentia umbellato-cymosa, stylus 6-8 mm longus.
Sect. *Micogiton* OHWI, Sect. nov. *Sc. nipponicus*.
4. Culmi molles vel rigiduli, folia basalia vaginam aphyllam vel brachyphyllam reducta, inflorescentia anthelata, stylus 2-6 mm longus. Sect. *Euthryon* Ross.
5. Rhizoma tenuiusculum longe repens, culmi triquetri.
Sc. triquetra.

5. Rhizoma validum breviter repens, culmi teretes.
Sc. Tabernaemontani.
3. Setae hypogynae plumoso-pilosae.
 Sect. *Pterolepis* SCHRAD. *Sc. subulatus.*
1. Bracteae plures, anthela terminalis.
 Sect. *Actinoscirpus* OHWI, nov. sect. *Sc. grossus.*

1. *Scirpus caespitosus* LINN.

Scirpus caespitosus LINN. Spec. Plant. (1753) 48; KUNTH, Enum. Plant. 2 (1837) 159; REICH. Icon. Flor. German. 8 (1846) f. 710; ANDERSS. Cyper. Scand. (1849) 8; LEDEB. Flor. Ross. 4 (1853) 246; STEUD. Synops. 2 (1855) 83; FR. SCHM. Reis. Amurl. u. Sachal. (1868) 190; BÜCKL. in Linnaea 36 (1859-70) 488; MAKINO in Bot. Mag. Tokyo 10 (1896) 313; MEINSH. in Act. Hort. Petrop. 18 (1901) 256; OSTENF. Flor. Arct. 1 (1902) 43; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 299, subspp. *germanicus* (PALLA) ASCHERS. et GRAEBN. et *austriacus* (PALLA) ASCHERS. et GRAEBN.; C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 201; MATSUM. Ind. Plant. Japon. 2:1 (1905) 160; KUDO, Flor. Paramush. (1922) 76; HULT. Flor. Kamtsch. 1 (1927) 164; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 202; TATEW. Phytogeogr. Middl. Kuriles (1933) 217, 241, 261, et 290.

Trichophorum caespitosum (LINN.) HARTM. Handb. 5 (1849) 259; PALLA in ENGL. Bot. Jahrb. 10 (1889) 296; ROSHEV. in KOMAR. Flor. URSS. 3 (1935) 37.

Rhizomate brevi ascendente ramoso, foliis emortuis dense tecto densissime caespitoso, culmis 5-30 cm altis teretibus strictis nudis striatis laevibus, apice unispiculosis, basi vaginatis, vaginis persistentibus straminescentibus vel inferioribus cinereo-brunneis nitidis laevibus coriaceis 7-20 mm longis lanceolatis vel late lanceolatis antice fissis, apice acutis vel brevi-mucronatis, summa culmum arcte amplexente tubulosa apice plus minus oblique fissa, lamina setacea laevi 3-5 mm longa erecta calloso-obtusa terminata, spicula primo lanceolata demum ovata 3-5 mm longa 2-5-flora fulvo-castanea erecta, ebracteata, squamis inferioribus 2 triangulato-late-ovatis 3-4 mm longis deciduis fulvobrunneis nitidis submembranaceis fertilibus, e dorso lato trinervi superne viridulo conspicue mucronatis, mucrone recto laevi calloso-obtuso, squamis superioribus ovatis obtusulis vel acutiusculis membranaceis 2.5-3 mm longis muticis, margine dilutioribus, dorso uni- vel indistincte tri-nervis, achenio 1.5 mm longo late obovato cinereo-brunneo nitido trigono, facie intus planiusculo, apice mucronato, stylo achenio paullo longiore subtenui superne $\frac{1}{2}$ trifido, lobis papulosis, setis hypogynis 6 achenio sesquolongioribus rectis tenuibus laevibus vel laeviusculis, staminum (3) antheris linearibus apice setaceo-productis.

If this species split up into the two varieties or subspecies, *germanicus* ASCHERS. et GRAEBN. and *austriacus* ASCHERS. et GRAEBN., all of our plants belong to the latter form. It is characterised by the smaller habits, the uppermost sheath slightly obliquely truncate at the pallescent mouth, and the almost smooth hypogynous bristles.

Nom. Jap. Mine-harii.

Hab.

Kuriles: ins. Paramushir (K. KISHIKAWA; T. OHASHI; J. OHWI et R. YOSHII n. 5415), ins. Shumushu (J. OHWI et R. YOSHII n. 5586).

Saghalien; Nairo (A. HIRUTA), Aba (G. KOIDZUMI), Shiska (H. TOBITA; J. OHWI).

Yezo: m. Taisetsu (J. OHWI), m. Yubari (J. OHWI n. 5176).

Hondo: Ose in Kotsuke (J. OHWI et M. TAGAWA n. 252), m. Shibutsu in Kotsuke (J. OHWI et M. TAGAWA n. 7601, 7922), m. Naeba (J. OHWI), m. Hachimantai in Ugo (E. IISHIBA), m. Chokaisan (U. FAURIE n. 2690), m. Kurikoma in Rikuchu (H. KURIYAMA), m. Hakkoda (G. TOBA; S. MURAI; K. NAOHARA), m. Adzuma in Uzen (S. OKUYAMA), m. Iide (U. FAURIE n. 1837), m. Miyokosan (U. FAURIE n. 997), m. Torake-yama in Ugo (S. MURAMATSU), m. Tateyama (T. OTAYA).

2. *Scirpus hudsonianus* (MICHX.) FERNALD

Scirpus hudsonianus (MICHX.) FERNALD in Rhodora, 8 (1906) 161.

Eriophorum alpinum LSNN. Spec. Plant. (1753) 53; KUNTH, Enum. Plant. 2 (1837) 176; REICHB. Icon. Flor. German. 8 (1846) f. 633-4; LEDEB. Flor. Ross. 4 (1853) 252; BÜCKL. in Linnaea 37 (1871) 92; FR. SCHM. Reis. Amurl. u. Sachal. (1868) 66; MEINSH. in Act. Hort. Petrop. 18 (1901) 265; KOMAR. Flor. Mansh. 1 (1901) 337; C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 203; MATSUM. Ind. Plant. Japon. 2:1 (1905) 147; KOIDZ. in Bot. Mag. Tokyo 25 (1911) 204; MIYABE et KUDO, in Trans. Sapporo Nat. Hist. Soc. 5 (1914) 66 et Flor. Hokk. a. Saghal. 2 (1931) 158; TATEW. in Phytogeogr. Middl. Kuriles (1933) 217; MIYABE et TATEWAKI in Trans. Sapp. Nat. Hist. Soc. 13 (1933) 71; KITAG. Lineam. Fl. Mansh. (1939) 116.

Trichophorum alpinum (LINN.) PERS. Synops. 1 (1805) 70; PALLA in Mond. Plant. (1910) 40; KOMAR. Flor. Penins. Kamtsch. 1 (1927) 205; KOMAR. et ALIS. Key Pl. Far East. Reg. USSR. 1 (1931) 253; ROSHEV. in KOMAR. Flor. URSS. 3 (1935) 38.

Scirpus Trichophorum (PERS.) ASCHERS. et GRAEBN. Synops. 2:2 (1903) 302.

Eriophorum Hudsonianum MICHX. Flor. Boreal. Americ. 1 (1803) 34.

Rhizomate breviter repente horizontale, culmis approximatis 10-30 cm altis triquetris angulis fere a basi scabris nudis tenuibus, apice unispiculatis, ebracteatis, basi tantum 4-5-vaginatibus, vaginis membranaceis opacis ferruginescentibus sursum sensim longioribus ad 3-7 mm longis culmum arcte tegentibus inferioribus aphyllis, summa tubulosa truncata setam rectam 5-8 mm longam margine parce scabram abeunte, spicula singula simplici late lanceolata demum oblongo-ovata 5-7 mm longa ebracteata 5-10-flora, rufo-ferruginea, squamis deciduis membranaceis obtusis vix carinatis rufo-ferrugineis, sursum pallescentibus, infima 4-5 mm longa elliptica trinervi apice conspicue mucronata, mucrone recto conspicuo obtusulo viridulo margine scabriusculo, squamis superioribus anguste oblongis 4-5 mm longis, dorso nervo unico tenui pallidiore ante apicem evanido percursis, achenio 1.3 mm longo obovato-oblongo pallide, demum nigrescente brunneo compresso trigono, apice mucronato, stylo tenui 4 mm longo superne $\frac{1}{2}$ trifido, lobis papulosis, setis hypogynis 6 filiformibus albidis ad 2 cm longis laevibus, staminum (3) antheris linearibus apice conspicue setoso-productis.

Nom. Jap. Hime-watasuge. Miyama-sagisuge.

Hab.

Korea: m. Hakutosan in Kampoku (T. ISHIDOYA; K. T. CHO), Gempori in Kanan (J. OHWI).

Kuriles: ins. Kunashiri (J. OHWI n. 964), ins. Shikotan (J. OHWI n. 679), ins. Paramushir (J. OHWI et R. YOSHII n. 5503, 5761, 5981).

Yezo: Yubutsu (U. FAURIE n. 7213), Tomakomai (U. FAURIE n. 1850. 10337).

3. *Scirpus subcapitatus* THW.

Scirpus subcapitatus THW. Enum. Pl. Zeyl. (1864) 351; BECKLR. in Linnaea 36 (1870) 704; C. B. CLARKE in HOOK. f. Flor. Brit. Ind. 661 et in Journ. Linn. Soc. 33 (1903) 254.

Trichophorum subcapitatum (THW.) OHWI, hoc loco.

var. *morrisonensis* (HAYATA) OHWI, comb. nov.

Scirpus morrisonensis HAYATA Flor. Montan. Formos. (1903) 230 et Icon. Plant. Formos. 6 (1916) 115, f. 32.

Trichophorum morrisonense OHWI, hoc loco.

Rhizomate abbreviato repente ramoso dense caespitoso, culmis 25-60 cm altis striato-angulatis viridulis erectis tenuibus laevibus vel sursum par-sissime scabriusculis nudis 1-3-spicuosus, basi tantum 5-6-vaginatibus, vaginibus membranaceis culmum arcte tegentibus opacis cinnamomeo-brunneis oblique fissis sursum sensim longioribus ad 5-15 cm longis, inferioribus brevissime setaceo-productis, summa apice in laminam setaceam 5-15 mm longam margine scabram abeunte, spiculis 2-3 anthelam laxam simplicem braceatam formantibus vel saepius unicus et ebracteatis, late lanceolatis vel oblongis acutiusculis laxae 5-10-floris 5-9 mm longis, terminali sessili, lateralibus pedicellatis, pedicellis laevibus tenuibus 5-30 mm longis, bracteis squamiformibus suberectis 5-8 mm longis lanceolatis membranaceis obtusis tenuinervis, apice brevisetaceis, squamis oblongis vel anguste oblongis deciduis obtusulis 3 mm longis subcarinato-navicularibus membranaceis ferrugineobrunnescens-tibus muticis, dorso fascia latiuscula viridula crassiuscula notatis, margine inferne subalato-decurrentibus, achenio oblongo vel elliptico trigono cinereo-fusco opaco punctulato 1.3 mm longo mucronato, stylo achenio duplo longiore infra medium usque profunde trifido, lobis papillosis, setis hypogynis 6 tenuibus flexuosis achenio longioribus vel rarius brevioribus rufescentibus superne tantum spinulis patentibus ornatis, staminum (3) antheris linearibus subapiculatis. A typo, spiculis 1-3 laxis, setis hypogynis brevioribus differt.

Nom. Jap. Niitaka-harii.

Hab. Formosa: m. Rarasan (J. OHWI n. 906), m. Taiheizan (J. OHWI n. 2410), m. Niitaka (M. TAGAWA n. 452), m. Nokogoe (J. OHWI n. 3390, 3180), m. Arisan (J. OHWI n. 3424; U. FAURIE n. 51), m. Daikanzan (S. OKAMOTO), Hinan-shuzan (S. OKAMOTO).

4. *Scirpus pseudo-fluitans* MAKINO

Scirpus pseudo-fluitans MAKINO in Bot. Mag. Tokyo 19 (1905) 28.

Eleogiton pseudo-fluitans (MAK.) OHWI, hoc loco.

Cinereo-virens, culmis steribus caespitosis ramosis decumbentibus et radicantibus elongatis flaccidis plurinodis teretibus laevibus, foliis remote sed sub apice approximate dispositis linearibus laevibus subteretibus 5-10

cm longis 1-2 mm latis, vaginis membranaceis tubulosis et antice fissis, 15-20 mm longis, ore primo truncatis, culmis fertilibus erectis nudis teretibus laevibus 5-15 cm longis, terminalibus basi foliis 2-3 longe laminatis cinctis, lateralibus basi vagina unica 15-25 mm longa apice subaphylla cinctis, spicula unica terminali oblonga vel elliptica acutiuscula, 5-7 mm longa pluri-flora ebracteata cinereo-verente, squamis ovatis vel ovato-oblongis obtusis muticis tenuimenbranaceis, dorso crassiore late viridulis, indistincte pluri-nervulosis 4-4.5 mm longis, achenio obovato-oblongo 1.5 mm longo compresso plano-convexiusculo cinerascens-brunneo dense punctulato, apice mucronato, stylo tenui 5.5 mm longo superne $\frac{2}{3}$ profunde trifido, lobis papulosis, setis hypogynis nullis, staminum (3) antheris linearibus apice acuto-productis.

Nom. Jap. Biakko-i.

Hab. Hondo: Kanayama in Iwaki (N. IMAI; D. SHIMIDZU), Kosekimura in Iwaki (N. IMAI).

5. *Scirpus orientalis* OHWI

Scirpus orientalis OHWI in Act. Phytotax. et Geobot. 1 (1932) 76; OKUYAMA in Journ. Japan. Bot. 11 (1935) 591; KITAG. Lineam. Fl. Manshur. (1939) 123.

Scirpus sylvaticus (non LINN.) MATSUM. Ind. Plant. Japon. 2:1 (1905) 164; KOMAR. et ALIS. Key Pl. Far E. Reg. USSR. 1 (1931) 253.

Scirpus sylvaticus var. *Maximowiczii* REGEL, Tent. Flor. Ussur. (1861) 161.

Scirpus radicans (non SCHK.) MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 206 pro max. pte.

Rhizomate stolones breves agente, innovationibus vix elongatis, culmis 80-120 cm altis trigonis sub anthela triquetris et angulis scabris, remote 6-8-nodis, foliis culmorum planis 5-10 mm latis rigide herbaceis subtus septatodulosus, apice sensim angustato breviter triquetris 20-40 cm longis, margine et subtus in costa superne scabris, vaginis laxiusculis 5-10 cm longis teretibus septatodulosus, antice ore saepe paullo producto ferrugineo-scariosis, inferioribus saepe rubescentibus, anthela terminali supradecomposita saepe ampla pluriradiata, bracteis 2-3 anthelam saepe superantibus, radiis ad 15 cm longis suberectis vel ascendentibus versus apicem cum radiolis pedicellisque scabris, antherulis subbracteolatis, radiolis suberectis vel ascendentibus, spiculis solitariis vel 2-3-aggregatis griseo-nigrescentibus vel griseo-brunneis anguste ovatis vel ovatis acutiusculis vel obtusulis 4-7 mm longis dense pauciplurifloris, squamis oblique erectis 1.5 mm longis late ovatis muticis vel brevissime mucronatis subeciliatis vel obtusulis acutis, dorso viridi distincte trinervis, achenio 1 mm longo obovato vel elliptico compresso trigono pallide stramineo mucronato, stylo achenio parum longiore superne $\frac{1}{2}$ trifido, lobis papulosis, setis hypogynis 5-6 erectis tenuibus albidis achenio parum longioribus, a basi retroso-spinulosis, staminum antheris breviter linearibus muticis.

Nom. Jap. Kuro-aburagaya, Yama-aburagaya.

Hag.

Hondo: Shomotomura in Yetchu (H. TAKAGI), Kuroishi (U. FAURIE n. 789), Ose

(T. SUZUKI; J. OHWI et M. TAGAWA n. 8915), Ganju (U. FAURIE s. n.), Morioka (G. TOBA), Otarionsen in Yetchigo (J. OHWI), Hinoemata in Iwashiro (Z. TASHIRO; J. OHWI et M. TAGAWA n. 46), Okunaimura in Mutsu (Z. TASHIRO), Nodamura in Rikuchu (G. TOBA).

Yezo: m. Moiwa (S. SAKAGUCHI), Yoichi (I. YAMAMOTO), Urakawa (U. FAURIE n. 10605), Kanayama in Ishikari (J. OHWI n. 5305).

Saghalien: Tofutsu (G. YAMADA), Soriofka (U. FAURIE n. 847).

Korea: m. Nankasekisan in Kampoku (K. T. CHO), Tokamen in Kannan (N. NOMURA), Enjomen in Kampoku (S. HATSUSIMA), m. Hakutosan (T. ISHIDOYA), Kyonson (J. OHWI n. 2223), Kanko in Kannan (N. NOMURA), Kodairi in Kannan (G. KOIDZUMI), Gosompo in Kampoku (R. SAITO n. 537).

6. *Scirpus radicans* SCHK.

Scirpus radicans SCHK. in USTERI, Ann. 4 (1793) 48; KUNTH, Enum. Plant. 2 (1837) 171; REICH. Icon. Flor. Germ. 8 (1847) f. 732; LEDEB. Flor. Ross. 4 (1853) 250; STEUD. Synops. 2 (1855) 89; MAXIM. Prim. Flor. Amur. (1859) 299; BÜCKL. in Linnaea 36 (1870) 727; KOMAR. Flor. Manshur. 1 (1901) 240; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 327; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 252; NAKAI, Flor. Korean. 2 (1911) 294; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 205 ex pte; KOMAR. et ALIS. Key Plant. Far E. Reg. URSS. 1 (1931) 258; OKUYAMA in Journ. Japan. Bot. 11 (1935) 591; ROSHEV. in KOMAR. Flor. URSS. 3 (1935) 45; KITAG. Lineam. Fl. Manshur. (1939) 123.

Scirpus sylvaticus var. *radicans* (SCHK.) WILLD. Spec. Plant. 1 (1798) 303; REGEL, Tent. Flor. Ussur. (1861) 177

Rhizomate innovationes elongatas demum decumbentes et radican-
te agente, culmis validis trigonis sub anthela triquetris et ad angulos scabris,
1-1.5 m altis 7-10-nodis, foliis culmorum planis crasse herbaceis 7-10 mm
latis apice sensim attenuatis breviter triquetris, subtus septato-nodulosis,
marginibus et costa subtus scabris, 20-35 cm longis, vaginis laxiusculis
teretibus 3-7 cm longis septatonodulosis viridulis, ore antice truncatis vel
convexis scariosis, anthela terminali diffusa 10-20 cm longa et lata supra-
decomposita polystachya 5-8-radiata, bracteis 2-3 foliaceis anthelam pler-
umque superantibus, radiis cum radiolis patentibus, pedicellisque laevibus,
bracteolis subnullis, spiculis solitariis anguste oblongo-ovatis 5-7 mm longis
acutiusculis griseo-nigrescentibus subdense plurifloris, squamis suberectis
ovatis vel oblongis ca. 2 mm longis membranaceis griseis superne ciliolatis
muticis obtusulis, dorso viridi uninervis, achenio $\frac{1}{2}$ squamae paullo majore
pallido obovato compresso trigono apice conspicue mucronato, stylo achenio
paullo longiore superne $\frac{1}{2}$ trifido, lobis papillosis, setis hypogynis 6 achenio
3-4-plo longiore pertenuibus plicato-flexuosis inclusis pallidis, versus apicem
tantum spinulis patentibus laxae ornatis, staminum antheris ca. 1 mm longis
linearibus acutis.

Nom. Jsp. Tsuru-aburagaya, Kenashi-aburayaya.

Hab. Japonia (M. NAKAMURA in U. FAURIE n. 4381, probabl. in Yezo collecta).

Saghalien: Shiska (H. TOBITA), Keton (J. OHWI).

Hondo: Tsuruoka in Uzen (T. MURAI), Akayu in Uzen (M. KATO).

Korea: Syou-en (U. FAURIE n. 965), Suigen (S. SAKAGUCHI).

7. *Scirpus Hattorianus* MAKINO

Scirpus Hattorianus MAKINO in Journ. Japan. Bot. 8 (1933) 44.

Culmis validis 1 m vel ultra altis trigonis superne subtriquetris laevibus ad apicem usque plurinodis, foliis culmorum linearibus planis 8-10 mm latis herbaceis atroviridibus, subtus cinerascentibus, 20-30 cm longis acuminato-acutis vel obtusulis, costa subtus cum marginibus scabris, subtus tenuiter septato-nodulosis, vaginis viridulis teretibus laevibus 4-5 cm longis subarctis, ore antice subtruncato scariosis, anthela terminali 5-10 cm longa pluriradiata, bracteis 2-3 anthelam sesqui-duplove superantibus, foliiformibus, radiis valde inaequalibus fere ad 10 cm longis subteretibus laevibus sed firmulis, simplicibus vel breviter pauciradiolatis, spiculis 8-40 sessilibus glomerulum globosum vel triangulato-globosum 7-10 mm latum densum ebracteolatum formantibus late ovatis obtusulis 2-2.5 mm longis dense plurifloris griseonigrescentibus, squamis ellipticis vel obovatis ca. 1 mm longis membranaceis subconvexis obtusissimis, e dorso late viridi uninervi breviter recti-cuspidatis, achenio $\frac{1}{2}$ squamae aequante elliptico pallido compresse trigono apice subsensim conspicue mucronato, stylo achenio subbrevis superne $\frac{1}{2}$ trifido, lobis papulosis, setis hypogynis 4-5 inaequilongis pertenuibus erectis, versus apicem spinulis paucis subreflexis ornatis, staminum antheris $\frac{3}{4}$ mm longis lanceolatis muticis. *Sc. atrovirente* MUHL. valde affinis.

Nom. Jap. Iwaki-aburagaya.

Hab. Hondo: Miharu in Iwaki (Y. HATTORI), Koriyama in Iwashiro, culta (D. HOSHI).

8. *Scirpus Maximowiczii* C. B. CLARKE

Scirpus Maximowiczii C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 30; MIYABE et KUDO in Trans. Sapporo Nat. Hist. Soc. 5 (1914) 63 et Flor. Hokk. a. Saghal. 2 (1931) 205.

Eriophorum japonicum MAXIM. in Mém. Biol. 12 (1887) 553; KOMAR. Flor. Manshur. 1 (1901) 339; MATSUM. Ind. Plant. Japon. 2:1 (1905) 147; NAKAI, Flor. Korean. 2 (1911) 513 et in Bot. Mag. Tokyo 33 (1919) 4; KOMAR. et ALIS. Key Pl. Far E. Reg. USSR. 1 (1931) 257; JUZEPCZ. in KOMAR. Flor. URSS. 3 (1935) 23; KITAG. Lineam. Fl. Mansh. (1939) 116.

Scirpus japonicus (MAXIM.) FERNALD in Rhodora 7 (1905) 130, non FR. et SAV.

Rhizomate brevi subrepente estolonifero, surculos breves ascendentes agente, culmis solitariis trigonis 1-3-nodis 15-40 cm altis sub anthela triquetris et angulis scabris, basi conferte plurifoliatis, foliis radicalibus culmo multo brevioribus 3-6 mm latis rigidulis planis vel margine recurvis, subtus remote septato-nodulosis, apice abrupte attenuato breviter triquetro-obtusulis, marginibus et costa subtus superne scabris, vaginis brunnescentibus demum fibrosis, foliorum culmorum vaginis laxiusculis viridulis 3-4 cm longis, summa superne saepe nigrescentibus, laminis lanceolato-linearibus 3-7 cm longis planis, anthela solitaria effusa, saepe subsecunda densiucula pluristachya subcomposita simplicive (rarius in forma *congesta* OHWI, forma nov. capitato-

congesta), raro anthela altera brevi remota addita, bracteis 1-2 suberectis 1-2 cm longis ex toto vel supra medium usque griseo-nigricantibus, anthela multo brevioribus, radiis ad 5 cm longis cum radiolis tenuibus et conspicue scabris, spiculis solitariis vel 2-3-aggregatis oblongis vel ovatis 7-10 mm longis 3-4 mm latis obtusis, griseo-nigrescentibus vel nigricantibus subdense plurifloris, squamis oblongis vel anguste oblongis suberectis 3.5-4 mm longis vix carinatis membranaceis superne griseo-tinctis apice obtusissimo vel subrotundato ciliolatis muticis, dorso subconcolore unicos-tatis, achenio late obovato leviter compresso 1.3 mm longo pallide brunnescente breviter apiculato, stylo 4-5 mm longo rufescente tenui, superne $\frac{1}{2}$ trifido, lobis sparse papulosis, setis hypogynis 6 valde flexuosos 5-6 mm longis tenuibus subinclusis albidis, superne (ca. 1-2 mm) parcissime patule spinulosis, staminum antheris linearibus 2-3 mm longis vix apiculatis.

Nom. Jap. Takane-kurosuge, Miyama-watasuge.

Hab.

Saghalien: m. Tosso (J. OHWI).

Kuriles: ins. Etorofu et Urup (fide MIYABE et KUDO l. c.).

Yezo: m. Yubari (J. OHWI n. 5163), m. Taisetsu (J. OHWI).

Hondo: m. Hayachine (U. FAURIE n. 13469; C. WAGAWA), m. Tsurugisan (U. FAURIE n. 13452), m. Hakkoda (S. MURAI), m. Sukawa in Rikuchu (A. YASUDA), m. Hachimantai in Ugo (S. MURAMATSU), m. Shibutsu (J. OHWI et M. TAGAWA n. 338; Z. TASHIRO; F. NEMOTO; D. HOSHI),

Korea: m. Diamantino (U. FAURIE n. 1401; J. OHWI), Hakutosan (T. ISHIDOYA), m. Kamboho (J. OHWI), m. Shajitsuho in Kannan (G. KOIDZUMI), m. Toseizan in Kam-poku (R. SAITO n. 375—type of forma *congest*; H. ITO).

9. *Scirpus Mitsukurianus* MAKINO

Scirpus Mitsukurianus MAKINO in Bot. Mag. Tokyo 17 (1903) 7; MATSUM. Ind. Plant. Japon. 2:1 (1905) 163.

Rhizomate subcaespitoso estolonifero, culmis 1-1.5 m altis validis rigidis obsolete trigonis vel subteretibus, superne interdum uno latere leviter sulcato, laevibus remote 5-7-nodis, basi incrassata conferte foliatis, foliis radicalibus culmo brevioribus, culmorum planis vel conduplicato-planis 4-8 mm latis superioribus culmo longioribus, apice sensim attenuatis longiuscule triquetris, margine et costa subtus superne scabris, vaginis 3-10 cm longis arctis teretibus viridulis, ore antice interdum subconvexis, vaginis basilaribus brunnescentibus, anthelis 2-5 subremote dispositis, terminali maxima 5-10 cm longa composita pauci- vel pluri-radiata pluri-glomerulata, bracteis 3-5, suberectis, inferioribus 2-3 anthelam superantibus, anthelis lateralibus simplicibus pauciradiatis, vel semicompositis, radiis suberectis ad 10 cm longis rigidis laevibus vel superne parcissime spinulosis, bracteolis setaceis vel subnullis anthelulam interdum superantibus, anthelulis indivisis vel breviter pauci-radiolatis, spiculis 10-20, glomerulum globosum 1-1.5 cm crassum formantibus sessilibus oblongis vel ellipticis obtusis ca. 3 mm crassis perdense multifloris, 4-6 mm longis griseo-brunneis vel brunneis, squamis lanceolatis

3 mm longis rufo-brunneis et griseo-suffusis membranaceis acuminatis viridicostatis, $\frac{2}{3}$ mm latis, achenio trigono valide compresso 1 mm (absque mucrone $\frac{1}{2}$ mm longo) longo pallide stramineo obovato, stylo 2 mm longo, superne $\frac{1}{2}$ trifido, lobis papulosis, setis hypogynis 5-6 leviter exsertis pallide rufo-suffusis ca. 5 mm longis versus apicem spinulis antrorsis parce ornatis, staminum antheris liaearibus muticis ca. 1 mm longis.

Nom. Jap. Matsukasa-susuki.

Hab.

Hondo: Akita et Shonai (U. FAURIE n. 996), Banyu in Sagami (K. HISAUCHI), Konodai in Shimosa (I. OKUBO), Abiko in Shimosa (J. OHWI), Ogura in Yamashiro (S. TAN; J. OHWI n. 76), Tadehara in Tamba (Y. ARAKI), Koshien in Settsu (E. ISHIKAWA).

Shikoku: Tokushima (T. MURAI).

Kiushiu: Higashiyabakei in Buzen (T. YAMAZAKI), Shinirimura in Chikuzen (S. HIDAHA), Higashi-innai in Buzen (Z. TASHIRO), Imagawamura in Buzen (R. NAKATANI).

10. *Scirpus karuizawensis* MAKINO

Scirpus karuizawensis MAKINO in Bot. Mag. Tokyo 18 (1904) 119.

Scirpus coreanus PALLA in Oesterr. Bot. Zeitschr. 59 (1909) 188 et in Mond. Plant. (1909) 10.

Scirpus fuirenoides var. *jaluanus* KOMAR. Flor. Manshur. 1 (1901) 341; NAKAI, Flor. Korean. 2 (1911) 293.

Scirpus jaluanus NAKAI ex MORI, Enum. Plant. Corea (1922) 77 nomen.; KITAG. Lineam. Fl. Manshur. (1939) 122, cum syn.

Scirpus fuirenoides f. *minor* C. B. CLARKE in Bull. Geogr. Bot. 14 (1909) 200, quoad U. FAURIE n. 967.

Scirpus fuirenoides var. *karuizawensis* (MAKINO) HARA in Journ. Japan. Bot. 9 (1933) 125.

Scirpus cyperinus KUNTH form. *karuizawensis* (MAKINO) MAKINO, Ill. Fl. Nipp. (1940) 812.

Rhizomate estolonifero, culmis 80-150 cm altis obsolete trigonis validulis rigidis remole 5-7-nodis, superne uno latere interdum leviter sulcatis laevibus, basi foliatis, vaginis basilaribus brunnescentibus, foliis culmorum planiusculis vel conduplicato-planis 3-6 mm latis rigidis sensim sursum attenuatis apice triquetris superioribus saepe culmum superantibus, margine et costa subtus superne scabris, vaginis arctis teretibus 3-10 mm longis ore subtruncatis, anthelis 2-3 vel 1 distantibus, lateralibus simplicibus 5-10-glomerulatis, terminali composita pluri-(10-30)-glomerulatis pluri-radiatis, bracteis 1-3 anthelam superantibus suberectis, radiis ad 7 cm longis tenuibus sed firmulis laevibus vel angulis sursum spinulosis, anthelulis breviter radiolatis 2-10-glomerulatis breviter setaceo-bracteolatis, radiolis laevibus, spiculis 5-10 sessilibus glomerulis 6-8 mm crassis congestis, oblongis vel ovatis obtusulis griseo-brunneis 5-7 mm longis dense plurifloris 2.5-3 mm latis, squamis ovatis vel oblongo-ovatis membranaceis 2-2.5 mm longis pallide ferruginescentibus et sursum griseo-tinctis acutis 1-1.2 mm latis acutis saepe brevissime mucronatis, dorso pallidioribus unicostatis, achenio (absque mucrone

$\frac{1}{2}$ mm longo) 1 mm vix longiore pallido compressotrigono obovato, stylo ca. 1.5 mm longo tenui superne $\frac{1}{2}$ trifido, setis hypogynis plicato-flexuosis inclusis pertenuibus albidis ca. 5 mm longis sursum (ca. 1 mm.) paullo cras-sioribus et spinulis perparcis antrorsis parce ornatis, staminum antheris linearibus vix apiculatis.

Nom. Jap. Hime-matsukasasusuki, Chosen-matsukasasusuki.

Hab.

Hondo: Karuizawa (S. OKUYAMA).

Korea: Ranan (R. SAITO n. 263), Hoyori in Kannan (N. NOMURA), m. Kangaku-san (G. KOIDZUMI), Chinampo (U. FAURIE n. 1384), Ouen-san (U. FAURIE n. 967), Umpo in Zenhoku (S. OKAMOTO), Tobiratoge in Zenhoku (S. OKAMOTO).

11. *Scirpus fuirenoides* MAXIM.

Scirpus fuirenoides MAXIM. in Mél. Biol. 12 (1887) 555; MAKINO in Bot. Mag. Tokyo 17 (1903) 9; C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 200; MATSUM. Ind. Plant. Japon. 2:1 (1905) 161;

Rhizomate caespitoso abbreviato, culmis 80-120 cm altis validulis rigidis obsolete trigonis remote 4-5-nodis superne uno latere leviter sulcatis, laevibus, basi foliatis, foliis radicalibus culmum subaequantibus, vaginis brunnescentibus, foliis culmorum planis vel conduplicato-planis 3-4 mm latis culmo saepe longioribus planis vel conduplicato-planis sensim attenuatis superne triquetris margine et subtus ad costas superne scabris, vaginis arctis 4-7 cm longis teretibus ore subtruncatis, anthelis 4-6 distantibus, lateralibus in glomerulis 1-2 reductis, terminali 3-6-radiata simplici, bracteis 1-2 anthelam superantibus suberectis, radiis ad 5 cm longis validulis suberectis compressis laevibus vel angulis sursum scabrospinulosis, uniglomerulatis, spiculis 10-20, sessilibus, glomerulis hemisphaericis 10-15 mm crassis congestis oblongis 5-7 mm longis 2.5-3 mm latis obtusis dense multifloris, griseo-brunneis, squamis triangulato-ovatis vel ovatis suberectis 2.5-3 mm longis 1-1.2 mm latis ferrugineobrunneis et sursum griseo-suffusis membranaceis acutis saepe brevissime cuspidatis, subcarinato-convexis, dorso stramineo unicostatis, achenio (absque mucrone $\frac{1}{2}$ mm longo) compresse trigono pallide straminescente obovato, stylo ca. 2 mm longo tenui superne $\frac{1}{2}$ trifido, lobis papulosis, setis hypogynis 6 plicato-flexuosis subinclusis pallide rufescentibus ca. 5 mm longis pertenuibus superne (ca. 1 mm longis) subincras-satis et spinulis antrorsis scabris, staminum antheris linearibus muticis ca. 1 mm longis.

Nom. Jap. Ko-matsukasasusuki.

Hab.

Hondo: Kyoto (G. KOIDZUMI), Araimura in Iga (T. HATTORI), Morioka (G. TOBA), Tanabu (U. FAURIE n. 5232), Sendai (U. FAURIE n. 1831), Osadano in Tamba (Y. ARAKI), Kamimura in Bitchu (I. OKUBO), Wakamatsu (U. FAURIE n. 1832), Tokusa in Nagato (T. ODA), Tomidamura in Bitchu (K. YOKOMIZO), Hikiumamura in Totomi (G. HASHIMOTO), Kosekimura in Iwaki (N. IMAI), Mizoro, urbe Kyoto (J. OHWI n. 77).

Kiushiu: Miikemachi in Chikugo (T. SUGINO), Senchomuda in Bungo (Z. TASHIRO), Yawatamura in Bungo (Z. TASHIRO), Yawatamura in Bungo (K. IKEBE), Takatori-

yama in Chikugo (T. SUGINO), Nishifutoramura in Satsuma (Y. DOI), Yamano in Satsuma (S. MURAMATSU), Hatsukimura in Satsuma (Z. TASHIRO).

12. *Scirpus Wichurai* BÖCKLR.

Scirpus Wichurai BÖCKLR. in Linnaea 36 (1869-70) 729; MAXIM. in Mél. Biol. 12 (1887) 557; KOMAR. Flor. Manshur. 1 (1901) 339; ROSHEV. in KOMAR. Flor. URSS. 3 (1935) 45; KITAG. lineam. Fl. Mansh. (1939) 123 (var. *borealis* OHWI).

Scirpus Eriophorum (non MICHX.) MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 143; BÖCKLR. in ENGL. Bot. Jahrb. 6 (1885) 51; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 249; NAKAI, Flor. Korean. 2 (1911) 293; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 205.

Scirpus cyperinus (non KUNTH) MAKINO in Bot. Mag. Tokyo 18 (1904) 120, incl. varr. *Eriophorum, concolor* (MAXIM.) MAKINO, *Wichurai* (BÖCKLR.) MAKINO Ill. Fl. Nipp. (1940) 812 cum f. *cylindricus* MAKINO; Matsum. Ind. Plant. Japon. 2:1 (1905) 160, incl. varr.

Scirpus Eriophorum var. *nipponicus* FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 114 et 545; MEINSH. in Act. Hort. Petrop. 18 (1901) 249.

Scirpus concolor MAXIM. in Mél. Biol. 12 (1887) 556.

Scirpus furenooides form. *minor* C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 200, quoad pl. FAURIE n. 4918.

Rhizomate subcaespitoso estolonifero, culmis 1-1.5 m altis validis vel subvalidis rigidis obtuse trigonis laevibus superne uno latere interdum leviter sulcatis, remote 5-8-nodis, basi foliatis, vaginis basilaribus brunnescentibus, foliis culmorum culmo brevioribus 30-40 cm longis planis subrigidis 5-15 mm latis acuminatis apice breviter triquetris, subtus cum vaginis conspicue septato-nodulosis, margine et costa subtus scabris, vel demum sublaevibus, vaginis arctis obsolete trigonis 3-10 cm longis, ore antice interdum convexis, anthelis 1-4 distantibus, lateralibus minoribus, terminali ampla supradecomposita multispiculata pluriradiata saepe effusa, bracteis 2-3 anthela brevioribus vel longioribus, radiis suberectis arcuatis ad 15 cm longis, cum radiolis pedicellisque perscabris, anthelulis subbracteolatis, pluriradiolatis, radiolis tenuibus semel vel bis ramosis, spiculis solitariis vel 2-4-aggregatis oblongis ellipticis vel subglobosis 3-4 mm latis 4-8 mm longis obtusis dense vel subdense pluri-multi-floris, brunneis vel rufo-brunneis, squamis ovatis vel oblongo-ovatis membranaceis rufo-brunnescentibus 2-2.5 mm longis acutis et saepe brevissime mucronatis, dorso pallide viridi unicostatis, achenio 0.8-1 mm longo pallido obovato compresse trigono, apice mucronato, stylo achenio paullo longiore superne $\frac{1}{2}$ trifido, lobis papulosis, setis hypogynis 6 subexsertis ca. 4 mm longis pertenuibus, superne subrufescentibus, plicatoflexuosis, superne non incrassatis et parcissime antrorse scabris, staminum antheris linearibus muticis.

Species valde polymorpha, formae memorabiles sunt: forma 1. *typica* OHWI, nov. f. (anthelis terminalibus et axillaribus, spiculis solitariis oblongis, squamis oblongo-ovatis.—Nom. Jap. Aibaso)—forma 2. *concolor* (MAXIM.) OHWI, comb. nov. (Anthelis 1-3, spiculis 1-3-aggregatis oblongis, squamis oblongo-ovatis.—Nom. Jap. Abura-gaya)—forma 3. *borealis* OHWI, f. nov. (Anthela plerumque terminali solitaria, spiculis 1-4-

aggregatis ellipticis vel subglobosis, squamis ovatis vel late ovatis.—Nom. Jap. Yezo-aburagaya—forma 4. *cylindricus* (MAKINO in Journ. Japan. Bot. 8:46, sub *S. cyperino*) NEMOTO, Fl. Jap. Suppl. 1023 (1933) (Differt a forma *concolori* spiculis subcylindricis.—Nom. Jap. Shide-aburagaya).

Nom. Jap. Aiba-so, Abura-gaya, Yezo-aburagaya, Shide-aburagaya.

Hab.

Yezo: Nishiwada, prope Nemuro (J. OHWI), Yoichi (I. YAMAMOTO), Hakodate (U. FAURIE sin. num.), Kami-otoineppu (G. KOIDZUMI).

Hondo: Morioka (G. TOBA; Y. FUKUDA), Kuzakai in Rikuchu (G. TOBA; Y. FUKUDA), Kyoto (N. KINASHI; J. OHWI n. 9966), Iijimura in Mino (K. SHIODA), Nameratsu in Iwaki (T. SAITO), m. Koyasan (U. FAURIE n. 179; S. FUSHIMI), Iwamimura in Iwami (H. TAMURA), Kirigamine in Shinano (H. TOBITA; J. OHWI n. 8233), Kamisabaramura in Mimasaka (Z. TASHIRO; O. KAJITANI), Wakamatsu (U. FAURIE n. 1333), Hokunomura in Mino (K. SHIODA), Dake (U. FAURIE sin. num.), Otanimura in Hitachi (H. TSURUMACHI), Ubayu, m. Adzuma in Uzen (G. KOIDZUMI), m. Funagata (S. MURAI), Otariosen in Yechigo (J. OHWI), Obuke in Rikuchu (G. TOBA), Yasukawa in Omi (C. HASHIMOTO), Kozojimura in Owari (K. SHIODA), Numasaki (U. FAURIE sin. num.), Narai et Manigata in Bitchu (Z. YOSHINO), Ontake (U. FAURIE n. 7214), m. Mayasan (U. FAURIE n. 4918), Tsukiwamura in Iwashiro (T. SUZUKI).

Shikoku: m. Odamiyama in Iyo (Z. TASHIRO; K. YAMASHITA; Y. DOI), Iokimura in Tosa (M. TAGAWA), Onogahara in Iyo (I. OKUBO), Kurodani in Iyo (I. YOGO), Yasui in Iyo (I. YOGO).

Kiushiu: Unzen in Hizen (K. MAYEBARA), Senchomura in Bungo (Z. TASHIRO), Kawamura in Higo (K. MAYEBARA), Yawatamura in Bungo (K. IKEBE), Miikemura in Chikugo (T. SUGINO), Imutaike in Satsuma (Z. TASHIRO), Yamashitaike in Bungo (Z. TASHIRO), Karimatayama in Buzen (T. YAMAZAKI), m. Kirishima in Osumi (Z. TASHIRO; Y. DOI), Aritamachi in Hizen (Z. TASHIRO), Hiroishitoge in Chikuzen (S. HATUSIMA), Minamata in Hiao (Y. DOI), Koishihara in Chikuzen (Z. TASHIRO).

Korea: Koryo (G. KOIDZUMI), Ouen-san (U. FAURIE n. 966), Chinampo (U. FAURIE n. 1335), Umpo in Zenhoku (S. OKAMOTO), Kankoku in Kampoku (R. SAITO n. 6443), Onjo in Kampoku (R. SAITO n. 7834), Seireitoge in Zenhoku (S. OKAMOTO).

13. *Scirpus ternatanus* REINW.

Scirpus ternatanus REINW. ex MIQ. Flor. Ind. Bat. 3 (1856) 307; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 254 et in Philipp. Journ. Sci. 2 (1907) 100 errore *tern-tensis*; MATSUM. Ind. Plant. Japon. 2:1 (1905) 164; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 490; MERR. Enum. Philipp. Fl. Pl. 1 (1922) 118.

Scirpus chinensis (non OSB.) MUNRO in SEEM. Bot. Voy. Herald (1857) 423; BENTH. Flor. Hongk. (1861) 395; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 662.

Culmis 60-100 cm altis trigonis plurinodis sub anthela triquetris laevibus validis, basi foliatis, vaginis basilaribus exterioribus aphyllis coriaceis castaneis vel spadiceis nitidis, interioribus sensim longius laminiferis, foliis culmorum culmo longioribus brevioribusve rigidis planis 8-15 mm latis apice sensim attenuatis breviter triquetris, margine et costa subtus scabris, vaginis laxiusculis 4-8 cm longis superne minute septato-nodulosis, inferne saepe castaneo-tinctis, ore antice subconcavis, anthela solitaria composita vel decomposita ampla effusa pluriradiata multispiculosa, bracteis 3-5 anthelam superantibus, radiis crassis ad 10 cm longis cum radiolis radiolulisque laevi-

bus, spiculis 4-10 sessilibus in glomerulis 7-10 mm crassis collectis late ellipticis vel ovatis 3-5 mm longis 2.5-3.5 mm latis perdense multifloris obtusis brunneis vel fuscocastaneis opacis, squamis 1-1.2 mm longis late deltoideo-ovatis obtusulis brevissime apiculatis brunneis membranaceis vix carinatis, dorso concolore vel pallidiore tenuiter uninervis vel obsoletissime nervulosis, achenio squamae brevioris compresso obovato vel late obovato pallido vel pallide brunnescente inaequaliter biconvexo vix mucronato, stylo achenio ca. sesquiplo longiore tenui superne $\frac{1}{2}$ bifido, lobis sparse papulosis, setis hypogynis nullis vel 2-3 achenio sublongioribus rectis albidis pertenuibus supra medium usque sparse antrorse spinulosis.

Nom. Jap. O-aburagaya, Inugaya.

Hab.

Bonin: sin. loc. (S. NISHIMURA).

Kiushin: Minaminomura in Hiuga (Z. TASHIRO).

Riukiu: ins. Tanegashima (Y. DOI), ins. Tokunoshima (H. OHBA), ins. Amami-oshima (G. KOIDZUMI), ins. Iheya (S. SAKAGUCHI), ins. Okinawa (G. KOIDZUMI: S. SAKAGUCHI; S. TAWADA; K. MIYAZATO), ins. Iriomote (G. KOIDZUMI),

Formosa: m. Taiheizan in Taihokushu (J. OHWI n. 2303), sin. loc. (U. FAURIE n. 804), Baibara (M. TATEWAKI), Korisho (U. FAURIE n. 49), Keelung (S. NAGASAWA), Sirin (TANAKA et SHIMADA n. 17812).

14. *Scirpus kiushuensis* OHWI

Scirpus kiushuensis OHWI in Fedde Repert. 36 (1934) 44.

Rhizomate vix elongato, culmis erecto-ascendentibus validulis subcaespitosi 60-100 cm altis laevibus trigonis inferne altius 5-7-nodis, sub anthela triquetris, vaginis basilaribus stramineo-brunneis membranaceis, foliis culmorum subrigidis culmo brevioribus planis 15-20 cm longis 6-8 mm latis subtus cum vagina conspicue septato-nodulosis, apice sensim acuminatis, margine et costa subtus scabris, vaginis laxiusculis 4-6 cm longis, ore antice subtruncatis, anthela terminali effusa ad 10 cm lata pluriradiata multispiculata decomposita, bracteis 3-4 anthelam subaequantibus patentibus, radiis ad 5 cm longis, cum radiolis radiolulisque sub apice scabris, spiculis 2-5-aggregatis oblongis sessilibus 3-4 mm longis ca. 1.5 mm latis, dense plurifloris obtusis, squamis ovatoorbiculatis membranaceis sordide stramineis vel brunnescentibus vel pallidis obtusissimis muticis 1 mm longis dorso fascia late viridi trinervi notatis, achenio parum brevioris late ovato pallido compresso inaequaliter biconvexo 0.7 mm longo abrupte brevimucronato, stylo achenio subaequilongo superne ca. $\frac{1}{2}$ trifido, lobis papulosis, setis hypogynis nullis, staminum antheris linearibus 1 mm longis.

Nom. Jap. Tsukushi-aburagaya.

Hab. Kiushiu: Aida in Higo (K. MAYEBARA), Nishimura in Higo (K. MAYEBARA), m. Kirishima (Z. TASHIRO; T. SUGINO), Onamikeyama in Osumi (Z. TASHIRO), Masaki in Hiuga (K. MAYEBARA), Maruo in Osumi (K. MAYEBARA), Kurino (S. MURAMATSU).

15. *Scirpus biconcavus* OHWI

Scirpus biconcavus OHWI, sp. nov.

Scirpus maritimus var. *affinis* (non C. B. CLARKE) C. B. CLARKE in LÉVEILLÉ in Bull. Intern. Géogr. Bot. 14 (1904) 200; MATSUM. Ind. Plant. Japon. 2:1 (1905) 163.

Scirpus affinis (non ROTH) NAKAI, Flor. Korean. 2 (1911) 291.

Scirpus maritimus (vix LINN.) MATSUM. l. c. (1905) 163 partim.

Scirpus maritimus var. *compactus* (non MEY.) KOIDZ. Plant. Sachal. Nakahar. (1910) 27; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 205.

? *Scirpus pl. niculmis* FR. SCHM. Reis. Amurl. u. Sachal. (1868) 190, t. 8, f. 1-7, ex descr.; MIYABE et KUDO, l. c. (1931) 205.

Rhizomate longe stolonifero, culmis 40-100 cm altis subtenuibus triquetris, angulis superne scabris vel laeviusculis, remote foliatis, basi subterascenscentibus, foliis elongatis planis 2-5 mm latis, superioribus anthelam superantibus, apice sensim attenuatis, margine scabris, vaginis subtrigonis laevibus, ore antice tenuimembranaceo leviter convexis, anthela capitato-contracta vel pauciradiata 1-6-spiculosa, bracteis 2-3 vel 1, anthelam multo superantibus, spiculis late ovatis vel oblongoovatis 8-15 mm longis 6-8 mm latis dense plurifloris ferrugineobrunnescentibus vel rufo-brunnescentibus, squamis 5-6 mm longis oblongis vel ellipticis membranaceis rufo-ferrugineis, extus parce puberulis, dorso clarius unicastis, apice excisosublacerato aristatis, arista leviter recurvata 1-2 mm longa, achenio late obovato compresso ca. 3 mm longo mucronato flavobrunneo demum fusco nitido, facie concavisculo angulo obtuso, stylo 7-8 mm longo superne $\frac{1}{2}$ bifido, staminum (3) antheris 3-3.5 mm longis linearibus, apice cuspe saepe setuloso terminatis.

Nom. Jap. Yezo-ukiyagara, Ko-ukiyagara.

Hab.

Saghalien: Kaitsuka (G. KOIDZUMI), Rutakagawa (S. TAKAHASHI), Soriofka (U. FAURIE n. 844), Habomai (H. TOBITA).

Yezo: Nemuro (J. OHWI. Typus), Akkeshi (U. FAURIE n. 8708).

Hondo: Sendai (U. FAURIE n. 4324), Otosezaki in Mutsu (S. MURAMATSU), Aomori (U. FAURIE n. 5233), in Ugo (S. MURAMATSU), Hekurajima in Noto (J. KIKKAWA), Funakoshi in Ugo (S. MURAMATSU).

Shikoku: Kochi (T. YOSHINAGA).

Kiushiu: Nakatsu (T. YAMAZAKI), Tanoura in Higo (K. MAYEBARA), Matsunra in Hizen (T. KODA), Kajiki in Osumi (Z. TASHIRO), Oita (U. FAURIE n. 2718), Hakata (T. SUGINO), ins. Tsushima (K. NAKASHIMA), Fukuoka (K. NAKASHIMA), ins. Koshiki (Y. DOI), Kashiimura in Chikuzen (K. NAKASHIMA).

Korea: ins. Quelpaert (J. OHWI n. 9309; E. TAQUET n. 3484, 4812), Seoul (U. FAURIE n. 1389), Hpyeng-yang (U. FAURIE n. 1389 ex pte.), Hokitsuto in Zennan (K. T. CHO).

Riukiu: ins. Iheya (S. SAKAGUCHI), ins. Ishigaki (E. TAKAMINE).

16. *Scirpus Yagara* OHWI

Scirpus Yagara OHWI, sp. nov.

Scirpus maritimus (non LINN.) MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 143 partim; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 114; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 251 partim et ex LÉVEILLÉ in Bull. Intern. Géogr. Bot. 14 (1904) 200; MATSUM. Ind. Plant. Japon. 2:1 (1905) 163 ex pte; MATSUM. et HAYATA, Enum.

Plant. Formos. (1906) 489; NAKAI, Flor. Korean. 2 (1911) 294; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 204; KITAGAWA, Lineam. Flor. Manshur. (1929) 122.

Rhizomate longe stolonifero, culmis 70-150 cm altis validis triquetris laevibus sed angulo sub anthela saepe scabris, remote foliatis, basi tuberascentibus, foliis culmorum planis linearibus 5-10 mm latis subrigidis, superioribus culmum superantibus apice sensim attenuatis margine et costa subtus superne scabris, vaginis 5-20 cm longis trigonis laevibus, ore antice vix membranaceo truncatis, anthela simplici plurispiculata 3-8-radiata, bracteis 2-4 planis, inferioribus 1-2 anthelam multo superantibus demum patentibus, radiis ad 7 cm longis compressiusculis laevibus, spiculis solitariis vel 2-3-aggregatis oblongis vel ovatis fusco-brunnescentibus 10-20 mm longis 6-8 mm latis dense plurifloris, squamis oblongis vel oblongo-ovatis membranaceis brunnescentibus 5-7 mm longis extus parce puberulis, dorso clariore unicostatis, apice exciso-lacerato longe (2-3 mm) recurvato-aristatis, achenio obovato opaco 3.5-4 mm longo vere trigono mucronato basi cuneato, demum nigricante, facie interne paullulo latiore, stylo 7-8 mm longo tenui superne $\frac{1}{2}$ trifido, lobis parce papulosis, setis hypogynis 6 achenio brevioribus minute retroso-scabris, staminum (3) antheris linearibus ca. 4 mm longis, connectivo apice lanceolato-producto setuloso. Affinis *Sc. fluviatili* A. Gray.

Nom. Jap. Uki-yagara, Yagara.

Hab.

Yezo: fide MIYABE et KUDO, l. c.

Hondo: Omori in Ugo (M. HEMMI), Gongenzaki (U. FAURIE n. 13338), Funakoshi in Ugo (S. MURAMATSU), Shigisan in Yamato (Z. TASHIRO), Sakaiwaimura in Mino (K. SHIODA), Inau in Ise (T. HATTORI), Nishi-shikatomura in Harima (G. KOIDZUMI), Shimomoseki (U. FAURIE n. 2717), Kawasakimura in Iwaki (T. SUZUKI), Fusemura in Shimosa (J. OHWI), Tateoka in Mutsu (Y. IKEGAMI), Kyoto (J. OHWI. Typus).

Shikoku: Oshima in Iyo (T. IMAIDZUMI).

Kiushiu: Yagamimura in Hizen (T. KODA), Tanokumayama in Hizen (K. YAMASHITA), urbe Kumamoto (M. SHIMIDZU), Moji (Z. TASHIRO).

Korea: Chemulpo (M. K. BOKU), Hpyeng-yang (U. FAURIE n. 1389 ex pte), Sui-gen (S. SAKAGUCHI), Seoul (U. FAURIE n. 973).

Formosa: Takao (fide CLARKE, l. c.).

17. *Scirpus lineolatus* FRANCH. et SAVAT.

Scirpus lineolatus FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 112 et 544; MAKINO in Bot. Mag. Tokyo 8 (1894) 330; MATSUM. Ind. Plant. Japon. 2:1 (1905) 163.

Schoenoplectus lineolatus (FRANCH. et SAVAT.) OHWI. hoc loco.

Rhizomate tenuissimo longe repente, tempore autumnali apice turiones fusiformes formante, culmis remote dispositis teretibus striatis 7-30 cm longis laevibus mollibus vix 2 mm crassis nudis, basi 1-2-vaginatibus, vaginis pertenuibus arctis 1-5 cm longis oblique truncatis muticis, spicula pseudo-laterali solitaria oblonga vel late lanceolata 7-10 mm longa ca. 3 mm lata acutiuscula sessili subdense pluriflora, bractea unica culmum continuante erecta tereti 1-4 cm longa basi paullo dilatata, pallida vel flavo-suffusa vel pallida vel flavo-suffusa vel pallide brunnescente subnitida, squamis oblongis

obtusis submembranaecis 4-4.5 mm longis suberectis vel adpressis pallidis et saepe flavescentibus demum fusco-striolatis vix carinatis plurinervulosis superne ciliolatis mucronulatis, achenio late obovato nigricante cum mucrone brevi 2 mm longo plano-convexo laeviusculo compresso nitido, stylo 4-5 mm longo rufidulo praeter basin parce papuloso superne $\frac{1}{2}$ bifido, setis hypogynis 4-5 achenio subduplo longioribus rectis ferruginescentibus retroso-spinuloso-scabris, staminum (2-3) antheris linearibus 2.5 mm longis apice glabro globosoproductis.

Nom. Jap. Hime-hotarui.

Hsb.

Yezo: lac. Akan in Kushiro (M. TATEWAKI).

Hondo: Ujiyamada (T. ITO), Togomura in Uzen (Y. YUKI), Ninomegata in Ugo (S. MURAMATSU), Kamimura in Bizen (I. OKUBO), Nogimura in Idzumo (M. HAYASHI), Hakone-ashinoko in Sagami (Y. ARAKI), Yoshida in Rikuzen (S. MURAI), Takaonuma in Iwashiro (T. SAITO), Abemiyama in Bitchu (Z. YOSHINO), Sambonginuma in Uzen (S. OKUYAMA), Nakahatamura in Iwaki (S. SUZUKI), Sendai (E. ISHIBA), urbe Matsumoto (G. KOIDZUMI), Setagawa in Omi (C. HASHIMOTO), Aritoshimura in Harima (Z. TASHIRO).

Shikoku: Namikatamura in Iyo (H. YAMAMOTO).

Kiushiu: Yakatabaru in Chikuzen (K. NAKASHIMA), Kajiki in Osumi (Z. TASHIRO), Kawamura in Higo (K. MAYEBARA), Yawatamura in Bungo (K. IKEBE), Shigetomimura in Satsuma (Z. TASHIRO), Tsutamimura in Buzen (Y. YAMAZAKI), Hatsukimura in Satsuma (Z. TASHIRO).

Formosa: Suwo in Taihokushu (Y. SHIMADA n. 5453).

18. *Scirpus oryzetorum* OHWI

Scirpus oryzetorum (STEUD.) OHWI, comb. nov.

Isolepis oryzetorum STEUD. Synops. 2 (1855) 96, errore *oryectorum*.

Schoenoplectus oryzetorum (STEUD.) OHWI, hoc loco.

Scirpus supinus (non LINN.) C. B. CLARKE in Philipp. Journ. Sci. 2 (1907) 99, incl. var. *uninodis*; MERR. Flor. Manila (1912) 118 et Enum. Philipp. Fl.-Pl. 1 (1922) 118.

Scirpus erecto-gracilis HAYATA, Icon. Plant. Formos. 6 (1916) 114, f. 31.

Rhizomate non evoluto, culmis dense caespitosis 7-30 cm altis obsolete vel obtuse trigonis laevibus striatis erectis, pallide viridibus mollibus tenuibus, basi 2-3-vaginatibus, vaginis usque ad 5-15 cm longis flaccidis brunnescentibus opacis sursum laxiusculis, apice oblique fisso mucronatis vel breviter (3-4 mm long.) setaceis vel summis interdum apice in laminam abrupte obtusulam trigono-planam culmum saepe superantem laevem supra late concavam desinentibus, anthela pseudo-laterali capitato-contracta vel saepius plus minus soluta pauciradiata pauci- vel plurispiculosa, bractea unica culmum continuante tereti 3-10 cm longa erecta antice late sulcata, apice calloso-obtusula, interdum basi altera brevi suberecta usque ad 4 cm longa addita, radiis usque ad 2 cm longis triquetris laevibus, spiculis 3-7-aggregatis plerumque sessilibus oblongo-ovatis 4-8 mm longis 2.5 mm latis angulatis saepe sanguineo-variegatis acutiusculis densiuscule plurifloris, squamis ovatis vix 2 mm longis carinato-concavis membranaceis ferruginescentibus et sangui-

neo-variegatis, margine late hyalinis, apice obtusissimis et subrecte mucronatis, lateribus subenervulosis, dorso crassiore unicostatis, achenio late obovato 1 mm longo leviter compresso trigono demum nigricante conspicue undulatoruguloso apiculato, faciebus planiusculis, stylo facile deciduo 1.5 mm longo superne $\frac{1}{2}$ trifido, lobis glabriusculis, staminum (3) antheris late lanceolatis 0.4 mm longis breviapiculatis. Differt a *Sc. supino* LINN. inflorescentia saepe soluta, radiata, squamis membranaceis lateribus subenervibus.

Nom. Jap. Hosogata-hotarui.

Hab. Formosa: Manshiu (S. KITAMURA n. 1105, 1107, 1110), Takao (Y. SHIMADA n. 4471), Shimotansui in Shinchikushu (Y. SHIMADA), Rokki in Takaoshu (S. OKAMOTO).

19. *Scirpus Wallichii* NEES

Scirpus Wallichii NEES in WIGHT, Contrib. Bot. Ind. (1834) 112; KUNTH, Enum. Plant. 2 (1837) 160.

Schoenoplectus Wallichii (NEES) OHWI, hoc loco.

Scirpus Sasaki HAYATA, Icon. Plant. Formos. 6 (1916) 115.

? *Scirpus erectus* var. *angustus* MAKINO in Journ. Japan. Bot. 8 (1933) 46.

Rhizomate nullo, culmis dense caespitosis 10-40 cm altis 4-5-angulatostratis viridibus tenuibus laevibus nudis erectis, basi 2-3-vaginat, vaginis submembranaceis viridescentibus tubulosis usque ad 3-7 cm altis apice subscarioso oblique secto muticis vel breviapiculatis, inflorescentia capitatocontracta 2-5-spiculosa pseudo-laterali, bractea unica culmum continuante 5-13 cm longa erecta apice acuminata, spiculis oblongo-ovatis teretiusculis 8-17 mm longis 3-3.5 mm longis acutis dense pluri-multi-floris sessilibus, pallide viridibus, squamis ellipticis 3.5-4 mm longis submembranaceis pallidis obsolete plurinervulosis vix carinatis leviter concavis, dorso late viridi crassiusculis, apice obtuso mucronatis, achenio cum mucrone fere 2 mm longo late obovato planoconvexo fusco nitido leviter ruguloso, stylo achenio sublongiore tenui parce papuloso superne $\frac{1}{2}$ bifido, setis hypogynis 4 achenio conspicue superantibus rectis retroscabris albidis, staminum (3) antheris linearibus 0.8-1.2 mm longis mucronatis.

Nom. Taiwan-yamai.

Hondo: Toyonaka in Settsu (N. UI), Keyaki in Bitchu (Z. YOSHINO), Fujieda in Suruga (S. SUGINOTO), Midzusawa in Rikuchu (H. IWABUCHI), Kanaido, Ogura in Kyoto (J. OHWI et M. TAGAWA).

Kiushiu: Nishimura in Higo (K. MAYEBARA).

Shikoku: Haramachimura in Iyo (Z. TASHIRO).

Korea: Chemulpo (U. FAURIE sin. num.), m. Mutosan in Zennan (R. T. CHO).

Formosa: Tamsui (U. FAURIE n. 105), Taipeh (U. FAURIE n. 805).

20. *Scirpus juncoides* ROXB.

Scirpus juncoides ROXB. Hort. Beng. (1814) 81 et Flor. Ind. 1 (1820) 216; KUNTH, Enum. Plant. 2 (1837) 160; STEUD. Synops. 2 (1855) 84; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 112.

Schoenoplectus juncoides (ROXB.) OHWI, hoc loco.

Scirpus erectus (vix POIR.) C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 248 et in

Bull. Geogr. Bot. 14 (1904) 201; KOMAR. Flor. Manshur. 1 (1901) 354; MATSUM. Ind. Plant. Japon. 2:1 (1905) 161; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 488; NAKAI, Flor. Korean. 2. (1911) 292; MIYABE et KUDO, Flor. Hokk. a. Sachal. 2 (1931) 203.

Scirpus Hotarui OHWI, in Fedde Repert. 36 (1934) 44; KITAG. Lineam. Fl. Manshur. (1939) 122.

Rhizomate non evoluto, culmis dense caespitosis 15-60 cm altis tenuibus vel subtenuibus erectis viridulis laevibus striatis vel subangulatis nudis, basi 2-3-vaginat, vaginis viridulis membranaceis teretibus laevibus 5-20 cm longis, apice oblique fisso plerumque muticis, inflorescentis capitato-contracta (1-) 2-7-spiculosa pseudolaterali, bractea unica culmum continuante erecta 5-15 cm longa antice sulcata, spiculis ovatis usque oblongo-ovatis (vel in var. *Hotarui* OHWI, l. c. pro sp.; late ovatis obtusis et achenio compressotrigono, stylo aequaliter trifido), 8-15 mm longis 5-6 mm latis acutiusculis dense plurifloris pallide viridibus vel fulvo-suffusis vel brunnescentibus, squamis ovatis usque orbiculato-ovatis 3-4 mm longis subconcavis plurinervulosis rotundatis vel obtusis et rectomucronulatis concavis vix carinatis, dorso viridi-unicostatis, lateribus fusco-striolatis et interdum fulvo-suffusis, margine superne breviter ciliolatis, achenio late obovato atrofusco nitido plerumque convexo-plano 2 mm longo leviter ruguloso mucronato, stylo 2 mm longo ferrugineo glabriusculo superne $\frac{1}{2}$ bifido vel ramo tertio brevi addito, setis hypogynis 5-6 achenio brevioribus vel sublongioribus erectis tenuibus retroscabris, staminum (3) antheris linearibus 1-1.5 mm longis apice apiculatis.

Nom. Jap. Hotarui, Inu-hotarui.

Hab.

Yezo: Kushiro-hamanaka (S. MIKI), Erimo (U. FAURIE n. 10556), Tsuishikari (G. KOIDZUMI), Kaributo (I. YAMAMOTO), Onenai (I. YAMAMOTO).

Hondo: urbe Kyoto (M. TAGAWA n. 644), urbe Hiroshima (S. SUZUKI), Kamitsumura in Settsu (N. UI), Yamashitamura in Rikuzen (S. MURAI), Fuseike in Omi (C. HASHIMOTO), Kurikomamura in Rikuzen (S. MURAI), Nita in Ugo (S. MURAMATSU), Hikiumamura in Totomi (G. HASHIMOTO), Morioka (U. FAURIE n. 6227; G. TOBA), Nonobori in Ise (T. HATTORI), Kosekimura in Iwaki (T. SUZUKI), m. Nadera, urbe Yonezawa (G. KOIZUMI), Ouchidani in Kii (T. NAKAJIMA), Takenamimura in Mino (K. SHIODA), Tokyo (G. KOIDZUMI), Mizoro in Kyoto (S. MIKI), m. Azuma in Uzen (G. KOIDZUMI), Tajimi in Mino (K. SHIODA), Maniogata in Bitchu (Z. YOSHINO), Chikuzenji in Aki (Z. TASHIRO), Kaminutobe in Tamba (E. ARAKI), Toyonaka in Settsu (N. UI), Sambongi (U. FAURIE n. 26, 44), Kawadamura in Hitachi (H. TSURUMACHI), Fukaura-Iwasaki in Mutsu (S. MURAMATSU).

Shikoku: Susuichi in Iyo (M. OGATA), Mikazuki, urbe Kochi (I. OKUBO), Fukui in Kochi (T. YOSHINAGA).

Kiushiu: Rozuike in Chikuzen (S. HATUSIMA), Noma in Chikuzen (K. NAKASHIMA), Takuma in Chikuzen (Y. DOKI), Hiranoyama in Chikugo (T. SUGINO), Suigenmura in Higo (S. TOKUNAGA), Iwado in Hiuga (M. OGATA), Akama in Chikuzen (S. HATUSIMA), ins. Tsushima (K. NAKASHIMA), Minomata in Higo (H. KANETA).

Korea: Ouen-san (U. FAURIE n. 972), Chemulpo (U. FAURIE sin. num.), Hosairi

in Kannan (N. NOMURA), m. Mutosan in Zennan (R. T. CHO), ins. Quelpaert (E. TAQUET n. 3478; M. K. BOKU), Rokodan in m. Chiisan (M. K. BOKU), Chinampo (U. FAURIE n. 1388 ex pte), Rahoku in Kampoku (R. SAITO).

Riukiu: ins. Yakushima (U. FAURIE n. 4344; M. TAGAWA n. 1890), ins. Tanegashima (Y. YOSHII, Z. TASHIRO; Y. DOI), ins. Tokunoshima (H. OHBA), ins. Iheya (S. TAWADA), ins. Okinawa (S. SAKAGUCHI), ins. Ishigaki (E. TAKAMINE), ins. Miyako (G. KOIDZUMI; Y. NAKAZONE), ins. Yonakuni (G. KOIDZUMI).

Formosa: Hokuto (U. FAURIE n. 170, 171), Maushu (S. KITAMURA n. 1131), Shirin (E. KUROSAWA), Shimotansuiki in Takaoshu (S. MIKI).

var. *triangulatus* (HONDA) OHWI, comb. nov.

Scirpus tr. pezoideus KOIDZ. in Bot. Mag. Tokyo 39 (1925) 26.

Scirpus erectus var. *triangularis* HONDA in Bot. Mag. Tokyo 45 (1931) 45.

? *Scirpus subquadrangulus* MAKINO in Jour. Jap. Bot. 7 (1931) 8.

Omnibus partibus robustioribus, culmis inaequaliter 3-5-angulatis, antheris 1.7-2 mm longis.—An ? *Sc. juncoides* × *Sc. Preslii*.

Nom. Jap. Shikaku-hotarui, Sankaku-hotarui.

Hab.

Hondo: Midorigaoka in Hitachi (H. TSURUMACHI), Fuseike in Omi (C. HASHIMOTO), Kawaradamura in Hitachi (H. TSURUMACHI), Ippékiko in Idzu (J. SUGIMOTO).

Kiushiu: Yakatabaru in Chikuzen (K. NAKASHIMA), Takumamura in Chikuzen (Y. DOKI), Fukada in Higo (K. MAYEBARA), Noma in Chikuzen (K. NAKASHIMA).

21. *Scirpus hondoensis* OHWI

Scirpus hondoensis OHWI in Bot. Mag. Tokyo 45 (1931) 189.

Schoenoplectus hondoensis (OHWI) OHWI, hoc loco.

Rhizomate abbreviato sublignoso brevissime repente, estolonifero, culmis caespitosis mollibus erectis 15-40 cm altis teretibus viridibus tenuibus vix striatis, laevibus nudis, basi 1-2-vaginatibus, vaginis pallide viridibus vel brunnescentibus laevibus teretibus membranaceis usque ad 3-7 cm longis, inferioribus aphyllis, summa apice in setas 1-10 mm longas excurrente, inflorescentia pseudolaterali capitato-contracta (1-2-4-stachya, bractea unica culmum continuante 3-5 cm longo erecto tereti antice leviter sulcato, apice angustato, spiculis late ovatis sessilibus 5-6 mm longis 4-4.5 mm latis, pallide viridibus et demum brunneo-suffusis, obtusulis dense plurifloris, squamis late ovatis pallidis et demum ferrugineosuffusis fuscostriolatis, vix carinatis membranaceis tenerrime multinervulosis, dorso lato viridi unicostatis, apice obtuso mucronatis, 3 mm longis, achenio 1.5 mm longo mucronato late obovato compressotrigono nitido obsolete ruguloso fusco, stylo 2.5 mm longo parce papuloso superne $\frac{1}{2}$ trifido, setis hypogynis 5-6 achenio sesquialongioribus albidis tenuibus erectis retroscabris, staminum (3) antheris oblongo-linearibus 0.7-1.0 mm longis, apice mucronatis.

Nom. Jap. Miyama-hotarui.

Hab. Hondo: Ose in Kotsuke (S. OKAMOTO; J. OHWI et M. TAGAWA), m. Adzuma in Uzen (M. KATO), m. Asahi in Uzen (Y. YUKI), m. Zao in Rikuzen (S. MURAI), m. Tateyama in Yetchu (Z. TASHIRO), m. Shirouma (J. OHWI), m. Gassan in Uzen (M. KATO), m. Naeba in Yechigo (S. OKUYAMA), m. Sukawa in Rikuzen (H. IWABUCHI).

22. *Scirpus Komarovii* ROSHEV.

Scirpus Komarovii ROSHEV. in KOMAR. Flor. URSS. 3 (Apr. 1935) 54, et 579.

Schoenoplectus Komarovii (ROSHEV.) OHWI, hoc loco.

Scirpus supinus var. *leiocarpus* KOMAR. Fl. Mansh. 1 (1901) 345.

Scirpus hondoensis var. *leiocarpus* (KOMAR.) OHWI in Act. Phytotax. et Geobot. 3 (1934) 116, quoad syn.

Scirpus Okuyamae OHWI in Act. Phytotax. et Geobot. 4 (May, 1935) 64.

Scirpus Sasakii var. *leiocarpus* (KOMAR.) KITAG. in Rep. Sci. Inst. Res. Manch. 1 (1937) 320.

Rhizomate abbreviato dense caespitoso, estolonifero, culmis 20-50 cm altis tenuibus erectis striatis teretibus laevibus nudis, basi tantum 2-3-vaginat, vaginis viridulis arctiusculis usque ad 5-10 cm longis teretibus flaccidis ore scarioso oblique truncatis muticis vel summa in setas 2-3 mm longas excurrente, inflorescentis pseudolaterali capitato-contracta 3-10-spiculosa, bractea unica culmum continuante tereti 7-10 cm longa antice leviter sulcata, apice sensim angustato-acuta, spiculis sessilibus ovatis vel oblongo-ovatis 5-8 mm longis 3-4 mm latis obtusulis teretibus pallide viridibus dense plurifloris, squamis ellipticis membranaceis 2.5-3 mm longis levissime concavis plurinervulosis pallidis dorso latissime viridibus, apice vix mucronatis, achenio 1.2-1.5 mm longo late obovato valide compresso nitido atrofusco planiusculo-convexo obsoletissime ruguloso vel sublaevi mucronato, stylo 2 mm longo tenui superne $\frac{1}{2}$ bifido, lobis subglabris, setis hypogynis 4-5 rectis pallidis achenio sesquolongioribus retrosocabr, staminum (3) antheris lanceolato-oblongis $\frac{1}{2}$ mm longis apice brevi-mucronatis.

Nom. Jap. Ko-hotarui, Manshu-hotarui.

Hab.

Yezo: Kaributo in Shiribeshi (I. YAMAMOTO), Bieimura in Ishikari (H. IWAMOTO), Yoichi (I. YAMAMOTO).

Hondo: lac. Kawaguchiko in Kai (S. OKUYAMA).

Korea: Koryo in Keiki (M. K. BOKU).

23. *Scirpus Preslii* DIETR.

Scirpus Preslii DIETR. Sp. Pl. 2 (1833) 175; KUNTH, Enum. Plant. 2 (1837) 161; STEUD. Synops. 2 (1855) 84; MIQ. Fl. Ind. Bat. 3 (1856) 305.

Schoenoplectus Preslii (DIETR.) OHWI, hoc loco.

Scirpus acutus (non MUHL.) PRESL, Reliq. Haenk. 1 (1828) 192.

Scirpus mucronatus (non LINN.) C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 252 ex pte et in Bull. Geogr. Bot. 14 (1904) 201 et in Philipp. Journ. Sci. 2 (1907) 100; MERR. Fl. Manila (1912) 118 et Enum. Philipp. Fl. Pl. 1 (1922) 118; MATSUM. Ind. Plant. Japon. 2:1 (1905) 165 saltem pro pte; MATSUM. et HAYATA, Enum. Pl. Formos. (1906) 489; NAKAI Flor. Korean. 2 (1911) 294; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 202.

Scirpus cognatus HANCE in Ann. Sci. Nat. Sér. 4, 15 (1861) 228.

Scirpus mucronatus var. *robustus* MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 143.

Scirpus mucronatus var. *subleiocarpa* FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 112.

Rhizomate brevi dense caespitoso estolonifero, culmis 50-120 cm altis triquetris facie p. m. concavis laevibus viridulis sub apice 3-6 mm latis nudis, basi tantum 1-2-vaginat, vaginis 10-25 cm longis arctiusculis trigonis submembranaceis tubulosis, apice scarioso oblique fissis acutis vel acutiusculis muticis, anthelis capitato-contracta pseudolaterali 4-20-spiculosa, spiculis oblougo-ovatis vel oblongocylindricis 10-20 cm longis 4-6 mm latis teretibus dense pluri-multi-floris acutis pallide viridibus vel brunnescentibus, bractea unica culmum continuante triquetra 3-10 cm longa erecta vel oblique ascendente apice angustato-obtusula, squamis oblongis vel ovatis 4-5 mm longis subcoriaceis superne minutissime ciliolatis acutiusculis et mucronulatis, pallidis et saepe margine castaneo-tinctis, vel ex toto ferrugineis et fusco-striolatis, plurinervulosis vix concavis dorso superne unicastatis, achenio latissime obovato 2-2.5 mm longo compresso trigono atrofusco nitido obsoletissime undulato mucronato, stylo ca. 4 mm longo superne $\frac{2}{3}$ trifido, stigmatibus parce papulosis, setis hypogynis 5-6 achenio sesqui-duplove longioribus rigidulis saepe rufo-suffusis praeter basin retrorse spinuloso-scarbris, staminum (3) antheris linearibus ca. 2.5 mm longis apice connectivo ovato-acuto producto.

Scirpus muticus DON and *Scirpus triangulatus* ROXB. may belong to the present species. But the descriptions of the both species are very meagre, and I am not able to identify them without examining the original specimens.

Nom. Jap. Kangare-i.

Hab.

Yezo: Onenai in Shiribeshi (I. YAMAMOTO).

Hondo: Urbe Kyoto (G. KOIDZUMI; J. OHWI; N. KINASHI), Tsu in Ise (T. HATTORI), Akita (U. FAURIE n. 996), Aomori (U. FAURIE n. 2716), Hananoki in Iga (T. HATTORI), Kurikomamura in Rikuchu (S. MURAI), ins. Miyake in Idzu (K. HAYASHI), Ok-kaiji in Yamashiro (H. YAMAMOTO).

Shikoku: Kochi (T. YOSHINAGA).

Kiushiu: Yakatabaru in Chikuzen (K. NAKASHIMA), Imutaike in Satsuma (Z. TASHIRO), Hatsukimura in Satsuma (Z. TASHIRO), Minamata in Higo (H. KANETA).

Korea: ins. Quelpaert (E. TAQUET n. 4024), Chinampo (U. FAURIE n. 1338 ex pte).

Riukiu: ins. Okinoerabu (H. OHBA), ins. Amami-oshima (U. FAURIE n. 4342; G. KOIDZUMI), ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI), ins. Iheya (S. SAKAGUCHI), ins. Iriomote (G. KOIDZUMI; Y. DOI), ins. Yonakuni (G. KOIDZUMI).

Formosa: in m. Taiheizan (J. OHWI 2395, forma rhizomate breviter repente insignis), Tamsui (U. FAURIE n. 807), Karenko (T. ITO), Hokuto (U. FAURIE n. 169).

24. *Scirpus mucronatus* LINN.

Scirpus mucronatus LINN. Spec. Plant. (1753) 50; KUNTH, Enum. Plant. 2 (1837) 161 ex pte; REICHB. Icon. Fl. German. 8 (1846) f. 716; STEUD. Synops. 2 (1855) 84; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 252 ex pte; ASCHERS. et GRAEBN. Synops. 2: 2 (1903) 310.

Scirpus mucronatus L. var. *abactus* (OHWI) OHWI, Sched.

Scirpus abactus OHWI in Bot. Mag. Tokyo 45 (1931) 186.

Schoenoplectus mucronatus PALLA in Engl. Bot. Jahrb. 10 (1889) 299.

Rhizomate abbreviato caespitoso estolonifero, culmis 40-70 cm altis acute triquetris facie concaviusculis, nudis, sub apice 3-5 mm latis laevibus, basi 1-2-vaginat, vaginis membranaceis ad 13-15 cm longis laxiusculis trigonis laevibus apice oblique fisso scariosis acutis vix mucronatis, anthela capitatocontracta pseudolaterali 5-10-spiculosa, spiculis ovatis vel oblongo-ovatis vel late ovatis 6-10 mm longis sessilibus 4-5 mm latis obtusulis vel subacutis paullo angulatis dense plurifloris, bractea unica culmum continuante erecta vel patente triquetra 3-6 cm longa apice acuminatoobtusula, pallide viridibus vel saepius brunnescentibus, squamis orbiculato-ovatis 3.5 mm longis subcoriaceis opacis pallidis vel ferrugineis et fuscostriolatis plurinerviis apice obtuso mucronatis dorso convexis, superne unicostatis, achenio compresso trigono late obovato 2 mm longo atrofusco vel nigricante nitido transverse rugulosomucronato, stylo 2.5 mm longo superne $\frac{1}{2}$ trifido, setis hypogynis 6 rigidiusculis rectis rufescentibus, spinulis brevibus retroscabris, achenio subbrevioribus, staminum (3) antheris lanceolatis vix $\frac{2}{3}$ mm longis apice cuspidem laevem acutam abeuntibus.

Nom. Jap. Hime-kangarei.

Hab.

Shikoku: Mimakimura in Iyo (M. OGATA).

Kiushiu: Yamano in Satsuma (S. MURAMATSU), Segawamura in Hizen (T. CHIBA), Senchomuda in Higo (H. KODZUMA), Takaya-sanryo in Osumi (Z. TASHIRO).

Korea: Chinampo (U. FAURIE n. 1338 ex pte), Juntan (M. K. BOKU).

25. *Scirpus nipponicus* MAKINO

Scirpus nipponicus MAKINO in Bot. Mag. Tokyo 9 (1895) 311 nom. et 18 (1904) 112; MATSUM. Ind. Plant. Japon. 2: 1 (1905) 164; HONDA, ibid. 44 (1930) 318; HARA in Journ. Japan. Bot. 9 (1933) 520; HISAUCHI, ibid. 10 (1934) 183.

Schoenoplectus nipponicus (MAK.) OHWI, hoc loco.

Scirpus depauperatus (non POIR.) KOMAR. Flor. Manshur. 1 (1901) 345; KOMAR. et ALIS. Key Pl. Far E. Reg. USSR. 1 (1931) 153, t. 75, f. dextr.; ROSHEV. in KOMAR. Flor. URSS. 3 (1935) 52.

Culmis vix caespitosis sed basi stolones pertenuis longos agentibus, 40-60 cm altis triquetris laevibus flaccidis superne ca. 2 mm latis, faciebus concaviusculis, sicco compressis, inferne foliis altius tectis, foliis basalibus culmum subsuperantibus erectis flaccidis triquetris laevibus 2-3 mm latis septulatis, apice obtusulis, vaginis mollibus crassiusculis septulatis, antice pertenuiter membranaceis et facile subfibroso-solutis, 10-15 cm longis, cymis pseudolateralibus, laxe 5-8-spiculosis a basi dichotome vel trichotome ramosis, bractea culmum continuante erecta 10-20 cm longa triquetra apice acuminato-acutissima, bracteolis 1-2 linearibus 8-20 mm longis, pedicellis triquetris laevibus, spiculis oblongis vel primo late lanceolatis rufo-ferrugineis vel stramineoferrugineis sessilibus vel pedicellatis 10-15 mm longis 5-6 mm latis acutiusculis laxiuscule plurifloris, squamis anguste oblongo-ovatis suberectis 4-5 mm longis obtusis tenuimembranaceis superne erosulis, e dorso anguste viridulo uninervi ultra apicem saepe mucronatis, achenio

late obovato crasse biconvexo 2 mm longo stramineo demum fusco opaco mucronato, stylo 6-8 mm longo tenui superne $\frac{1}{2}$ bifido, lobis parcissime papulosis, setis hypogynis 4 rectis achenio subduplo longioribus rigidulis setaceis ferruginescentibus inferne paullo latioribus, praeter basin retrorse spinuloso-scabris, staminum (2) antheris linearibus, apice late breviproductis.

Nom. Jap. Shizu-i, Mizu-i, Teganuma-i.

Hab.

Yezo: Tomakomai (fide H. HARA l. c.).

Hondo: Fuseike in Omi (Ch. HASHIMOTO), Kawakami-mura in Mimasaka (T. TOMOKANE), Iwatomura in Kii (S. SAKAGUCHI), Kawasakimura in Ise (T. MATSUYAMA), basi m. Taiheizan in Shimotsuke (K. NUMAJIRI), Imaizumi in Rikuzen (G. TOBA), Kotomo in Rikuzen (G. TOBA), Surisawa in Rikuzen (G. TOBA), Tateoka in Mutsu (Y. IKEGAMI), Harugoyachi in Rikuchu (Y. FUKUDA), Nanai (U. FAURIE n. 5720), Aomori (U. FAURIE n. 979), Yamasemura in Ugo (M. MATSUDA), Osadaike in Tamba (Y. ARAKI).

Shikoku: Mimakimura in Iyo (C. WATANABE; T. IMAIDZUMI).

Kiushiu: Fukuoka (K. NAKASHIMA), Shinokurimura in Chikuzen (S. HATUSIMA), Shimohirokawa in Chikugo (K. NAKASHIMA), Kawamura in Higo (K. MAYEBARA), Imawamura in Buzen (R. NAKATANI).

26. *Scirpus triqueter* LINN.

Scirpus triqueter LINN. Mant. 1 (1767) 29; KUNTH, Enum. Plant. 2 (1837) 163; REICHB. Icon. Fl. German. 8 (1846) f. 719-21; LEDEB. Flor. Ross. 4 (1853) 243; STEUD. Synops. 2 (1855) 85; REGEL, Tent. Fl. Ussur. (1861) 163; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 658 et in Journ. Linn. Soc. 36 (1902) 255; et in Bull. Geogr. Bot. 14 (1904) 201 et in Philipp. Journ. Sci. 2 (1907) 100; MAKINO in Bot. Mag. Tokyo 9 (1895) 380 et 434; MEINSH. in Act. Hort. Petrop. 18 (1901) 253 excl. syn.; KOMAR. Flor. Manshur. 1 (1901) 343; MATSUM. Ind. Plant. Japon. 2:1 (1905) 164; MATSUM. et HAYATA, Enum. Pl. Formos. (1906) 490; NAKAI Flor. Korean. 2 (1911) 295; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 203; KOMAR. et ALIS. Key Pl. Far. E. Reg. USSR. 1 (1931) 265; ROSHEV. in KOMAR. URSS. 3 (1935) 48; KITAG. Lineam. Fl. Mansh. (1939) 123.

Scirpus Pollichii GODR. et GR. Flor. Franc. 3 (1856) 374; BÜCKL. in Linnaea 36 (1869-70) 711; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 113, var. *coriacea* FRANCH. et SAVAT.

Schoenoplectus triqueter (LINN.) PALLA in ENGL. Bot. Jahrb. 10 (1889) 299 et in Mond. Plant. (1910) 40.

Rhizomate tenuiculo longe repente, culmis remote vel subapproximate dispositis subvalidis 50-100 cm altis a basi ad apicem usque triquetris laevibus viridulis supra basin 2-7 mm latis nudis, basi tantum 2-3-vaginatiss, vaginis membranaceis angulatotubulosis aphyllis vel summa breviter (1-5 cm) laminata, anthela pseudolaterali 4-15-stachya pauciradiata vel rarius capitatocontracta, bractea unica culmum continuante erecta triquetra 2-5 cm longa anthela brevior vel sublongior abrupte acutiuscula, radiis crassiusculis brevibus planiusculo-convexis margine superne scabriusculis, spiculis oblongis vel ovatis 2-3-agglomeratis vel solitariis 7-12 mm longis 5-7 mm latis obtusis, dense plurifloris ferrugineis, squamis oblongis membranaceis

convexis ferrugineo-suffusis et maculis fuscis striolatis ca. 4 mm longis parce ciliatis, dorso viridi unicostatis, apice exciso vel rotundato brevimucronatis, achenio compresso inaequaliter biconvexo late obovato mucronato 2-2.5 mm longo nitido brunneo vix ruguloso, stylo 5-6 mm longo ad medium usque bifido, lobis parce papulosis, setis hypogynis 3-5 achenio subaequilongis rufidulis rectis praeter basin retroso-aculeolato-scabris, staminum (3) antheris linearibus, connectivo apice breviter lateproducto saepe papuloso.

Nom. Jap. Sankaku-i.

Hab.

Yezo: Monbetsu (U. FAURIE n. 824), Urakawa (U. FAURIE n. 10589).

Hondo: Sambongi (U. FAURIE n. 91), Onikobe in Rikuzen (T. KIMURA), Kurikomamura in Rikuchu (S. MURAI), urbe Sendai (K. NAOHARA), Aomori (U. FAURIE n. 2715, 4350), Numasaki (U. FAURIE n. 995), Sado (U. FAURIE n. 1836), Shiraoka in Musashi (T. SUZUKI), Niigata (U. FAURIE n. 1835), basi m. Iide (U. FAURIE n. 1834), Utsunomiya (U. FAURIE n. 2719), Arimaiki in Kii (J. OHWI et M. TAGAWA), urbe Kyoto (J. OHWI et M. TAGAWA), Taito in Kazusa (T. OKUBO), Ichinomiya in kadzusa (M. TAGAWA n. 2492).

Shikoku: urbe Uwajima (T. IMAIDZUMI), Kotakaza in Kochi (I. OKUBO).

Kiushiu: Komoda, ins. Tsushima (K. NAKASHIMA), Oomura in Higo (K. MAYEBARA), Masaki in Hiuga (Z. TASHIRO).

Korea: Chinnampo (U. FAURIE n. 971, 1388 ex pte, 1391), Kyojo in Kampoku (J. OHWI n. 2309); ins. Quelpaert (E. TAQUET n. 2107), Keijo (M. K. BOKU).

Riukiu: ins. Ishigaki (S. SAKAGUCHI), ins. Iheya (S. TAWADA), ins. Okinawa (S. TAWADA n. 835).

27. *Scirpus Tabernaemontani* GMEL.

Scirpus Tabernaemontani GMEL. Fl. Bad. 1 (1805) 101; KUNTH, Enum. Plant. 2 (1837) 164; REICHB. Icon. Fl. German. 8 (1856) f. 723; LEDEB. Flor. Ross. 4 (1853) 248; MAXIM. Prim. Flor. Amur. (1859) 298; REGEL, Tent. Fl. Ussur. (1861) 160; MIQ. Ann. Mus. Bot. Lugd. Bat. 2 (1865) 143, form. *luxurians* MIQ. et form. *normalis* MIQ.; FR. SCHM. Reis. Amurl. u. Sachal. (1863) 190; KOMAR. Fl. Manshur. 1 (1901) 342; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 313; KOIDZ. Pl. Sach. Nakahar. (1910) 27; HULT. Fl. Kamtch. 1 (1927) 210; MIYABE et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 203; KOMAR. et ALIS. Key Pl. Far E. Reg. USSR. 1 (1931) 253, t. 76; ROSHEV. in KOMAR. Flor. URSS. 3 (1935) 47; KITAG. Lineam. Fl. Mansh. (1939) 1231.

Scirpus lacustris var. *Tabernaemontani* (GMEL.) DELL. Fl. Bad. (1843) 165; MAKINO in Bot. Mag. Tokyo 8 (1894) 380; MATSUM. Ind. Plant. Japon. 2:1 (1905) 162.

Scirpus ciliatus STEUD. Synops. 2 (1855) 86.

Scirpus lacustris (non LINN.) FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 114; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 251 et in Bull. Geogr. Bot. 14 (1904) 200; MAKINO in Bot. Mag. Tokyo 9 (1895) 434; NAKAI Flor. Korean. 2 (1911) 293.

Schoenoplectus Tabernaemontani (GMEL.) PALLA in ENGL. Bot. Jahrb. 10 (1889) 299 et Mond. Plant. (1910) 40.

Rhizomate valido repente subapproximate culmifero, culmis robustis glaucis teretibus nudis laevibus cinereovirentibus 100-200 cm altis erectis, basi paucivaginatibus, vaginis 10-30 cm longis teretibus tubulosis arctis antice tenui-membranaceis et facile solutis, summa apice lamina setacea usque

ad 10 cm longa erecta terminata vel aphylla, anthela pseudo-laterali simplici vel composita densiuscula plurispiculosa 4-7-radiata, bractea unica culmum continuante erecta 1-3 cm longa subulata antice sulcata apice attenuato-obtusula anthelam plerumque non superante, radiis arcuatis vel suberectis 1-5 cm longis concavo-convexis superne praesertim in angulo scabris, 1-7-spiculosis, bracteolis ovatis vel oblongo-ovatis membranaceis dorso saepe sanguineo-papillois, spiculis 2-3-aggregatis vel solitariis ovatis usque oblongis 5-10 mm longis acutiusculis vel obtusulis teretiusculis dense plurifloris saepe sanguineo-brunnescentibus, squamis ellipticis vel latiovatis ca. 3 mm longis membranaceis ciliatis ferrugineis et lateribus sanguineovariegatis, dorso plus minus punctis sanguineis scabris, dorso pallidiore uncostatis, apice exciso cuspidatis, achenio 2 mm longo obovato inaequaliter biconvexo vel rarius trigono (et styli ramis 3) mucronato cinereobrunneo laevi punctulato, stylo achenio subaequilongo rufidulo, superne $\frac{2}{3}$ bifido, lobis parce papulosis, setis hypogynis achenio aequilongis rufescentibus rectis vel vix flexuosis rigidulis praeter basin setulis oblique retrosis scabris, staminum (3) antheris linearibus, connectivo brevi lato producto saepe setuloso.

Nom. Jap. Futo-i.

Formae distinguitur:

f. 1. *normalis* MIQ. l. c.—spiculis plerumque plus minus agglomeratis saturatis coloratis et sanguineo coloratis et maculatis. Nom. Jap. Kita-kutoi. Hab. in Japonia boreali frequentior.

f. 2. *luxurians* MIQ. l. c.—spiculis numerosioribus plerumque solitariis dilutius coloratis et maculis sanguineis subcarentibus. Nom. Jap. Nami-futoi. Hab. in Japonia media frequentior.

f. 3. *zebrinus* (HORT.) ASCHERS. et GRAEBN. l. c.—culmis variegatis. Nom. Jap. Shimafutoi. Hab. in Japonia culta.

f. 4. *australis* OHWI, f. nov.—spiculis plerumque dense dispositis solitariis vel aggregatis, dilute coloratis et maculis sanguineis plerumque carentibus, oblongis usque oblongo-cylindricis 10-15 mm longis. Nom. Jap. Nagabo-futoi. Hab. in Japonia australi copiosior.

f. 5. *? pictus* HONDA in Bot. Mag. Tokyo 52 (1938) 140, sub *S. lacustre*.—Robusta, culmis lineatim pictis. Nom. Jap. Tatejima-hutoi.—in Japonia culta (fide HONDA, l. c.). Hab.

Kuriles: ins. Shikotan (J. OHWI n. 790).

Saghalien: Sakaehama (G. KOIDZUMI), Kaitsuka (G. KOIDZUMI), Tonaichan (U. FAURIE n. 845).

Yezo: Hakodate (U. FAURIE sin. num.), Mombetsu (U. FAURIE n. 702).

Hondo: Ose (J. OHWI et M. TAGAWA n. 62), m. Hakkoda (S. MURAI), Tagamura in Hitachi (H. TSURUMACHI), Kasaoka in Bitchu (Z. TASHIRO), Hinoemata in Iwashiro (J. OHWI et M. TAGAWA n. 527), Ogura, urbe Kyoto (J. OHWI et M. TAGAWA), Tayomura in Hitachi (H. TSURUMACHI).

Kiushiu: Omuda in Chikugo (T. SUGINO).

Korea: Gensuidai, urbe Kyojo in Kampoku (J. OHWI n. 2308), Chinampo (U. FAURIE n. 970, 1390. 1393), Ouen-san (U. FAURIE n. 969), ins. Quelpaert (E. TAQUEI n. 2103).

Riukiu: ins. Amami-oshima (U. FAURIE n. 4343; G. KOIDZUMI), ins. Iheya (T. TAMAYOSE), ins. Okinawa (S. TAWADA), ins. Iriomote (G. KOIDZUMI).

Formosa: Biyoritsu (U. FAURIE n. 813), Tchikutoki (U. FAURIE n. 224), Korisho (U. FAURIE n. 55), Chuko (S. NAGASAWA).

28. *Scirpus subulatus* VAHL

Scirpus subulatus VAHL, Enum. Plant. 2 (1806) 268; KUNTH, Enum. Plant. 2 (1837) 165; STEUD. Synops. 2 (1855) 86; MIQ. Fl. Ind. Batav. 3 (1856) 306; BÉCKL. in Linnaea 36 (1869-70) 715.

Schoenoplectus subulatus (VAHL) OHWI, hoc loco.

Scirpus littoralis (vix SCHRAD.) C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 659; OHWI in Act. Phytotax. et Geobot. 3 (1934) 81.

Rhizomate vix evoluto, culmis teretibus sub anthela tantum obtuse trigonis validis laevibus 50-100 cm altis nudis basi paucivaginatibus, vaginis submembranaceis teretibus nodulosis, demum antice subfibroso-solutis, usque ad 8-20 cm altis apice in setas breves laeves excurrentibus, anthela subcomposita vel simplici plurispiculata pseudolaterali 5-7-radiata, bractea unica culmum continuante erecta subulata subcompressa 3-5 cm longa anthelam subaequante attenuato-obtusula, basi utrinque membranaceo-dilatata, radiis subtenuibus plano-convexis margine scabris, bracteolis ovato-oblongis membranaceis plurinervulosis squamiformibus, spiculis solitariis vel geminis ovatis vel oblongo-ovatis 7-10 mm longis 3-4 mm latis acutiusculis sanguineo-variegatis dense plurifloris, squamis oblongis vel ellipticis membranaceis dorso superne sanguineosuffusis et ferrugineostriolatis vix carinatis 3-4 mm longis apice rotundato suberosociliatis, lateribus enervis, dorso unicostatis, costa apice excurrente in cuspidem brevem recurvam, achenio orbiculato-obovato inaequaliter biconvexo compresso cum mucrone breviusculo 2 mm longo subnitido castaneobrunneo, stylo 2.5 mm longo glabriusculo superne $\frac{1}{2}$ bifido, setis hypogynis 3 vel 4 achenium leviter superantibus planis linearibus ferruginescentibus, inferne papulosis, superne pilis albis pluricellulatis ciliato-pubescentibus, staminum (3) antheris linearibus 2 mm longis apice connectivo ovato setuloso appendiculatis. Culmo tereti a *Sc. littoralis* SCHRAD. satis distinctus videtur.

Nom. Jap. Inu-futoi.

Hab. Riukiu: Awase, ins. Okinawa (S. TAWADA n. 745), Misatomura, ins. Okinawa (ex Hb. T. Ito).

29. *Scirpus grossus* LINN. fil.

Scirpus grossus LINN. f. Suppl. (1781) 104; STEUD. Synops. 2 (1855) 87; MIQ. Fl. Ind. Batav. 3 (1856) 307; BÉCKL. in Linnaea 723; C. B. CLARKE in Hook. f. Fl. Brit. Ind. 6 (1893) 659; MERR. Enum. Philipp. Fl. Pl. 1 (1922) 117; TUYAMA in Bot. Mag. Tokyo 51 (1937) 129.

Scirpus maximus ROXB. Fl. Ind. 1 (1820) 231.

Schoenoplectus grossus (LINN. f.) PALLA in Allg. Bot. Zeitschr. 17 (1911) Beil. 3.

Culmis 1.5 m altis acute triquetris, sub apice 1 cm circ. latis, facie concavis, ex toto septato-nodulosis laevibus strictis, foliis culmum subaequan-

tibus carinato-planis septato-nodulosis 15-30 mm latis crassiusculis sensim sursum angustatis, vaginis spongiosis valde septato-nodulosis, anthela corymbosa multi-spiculosa decomposita vel supra-decomposita densiuscula 8 cm et ultra lata et longa, bracteis 4 anthelam superantibus planis, ima maxima longissima, radiis pluribus compressis radiolisque scabris, anthelulis basi bracteis brevibus squamiformibus suffultis, spiculis pedicellatis vel terminali sessili, omnibus oblongis vel ellipticis 7-10 mm longis 4 mm latis dense multifloris obtusis, squamis ellipticis clare brunneis membranaceis obtusissimis carina viridi interdum mucronatis, lateribus enervibus, margine obsolete ciliolatis, achenio late obovato brunneo nitido trigono subcompresso laevi 1 mm vix superante apiculato, setis hypogynis 6 vel 5 achenio sublongioribus retroso-aculeolatis ferrugineis rigidulis apice incurvis, stigmatibus 3, staminibus 3, antheris linearibus, connectivo breviter late producto rubro subtruncato terminatis.

Nom. Jap. O-sankakui.

Hab. Ins. Bonin: Chichijima (T. TUYAMA in Hb. Tokyo Imp. Univ.).

Hybrida Naturalis

Scirpus Tabernaemontani × *Scirpus triqueter*—*Scirpus lacustris* subsp. *carinatus* (vix SYME) MAKINO in Bot. Mag. Tokyo 13 (1899) 240.—Nom. Jap. Ko-sankakui.

Gen. 17. *Cyperus* LINN.

Cyperus LINN. Sp. Plant. (1753) 74; KUNTH, Enum. Plant. 2 (1837) 2 et 115; STEUD. Synops. 2 (1855) 2 et 59; BUCKL. in Linnaea 35 (1868) 436 et 36 (1870) 271; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1043; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 107; DALLA TORRE et HARMS, Siphon. (1900) 30; KÜKENTH. in ENGL. Pflanzenr. Heft 101 (1936); C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 96.

Mariscus GAERTN. Fruct. 1 (1788) 11; VAHL, Enum. Plant. 2 (1806) 372; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 101.

Pycnus BEAUV. Fl. d'Owar. 2 (1807-18) 48; C. B. CLARKE, l. c. (1908) 94.

Papyrus WILLD. in Abh. Akad. Berlin. (1812-13) 70.

Torulinium DESV. in HAMILT. Prodr. Pl. Ind. Occid. (1825) 15; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 104.

Dichostylis NEES in Linnaea 9 (1834) 289, non BEAUV.

Anosporum NEES, l. c. 289.

Juncellus C. B. CLARKE in Hook. f. Flor. Brit. Ind. 6 (1893) 594 et in Kew Bull. add. ser. 8 (1908) 95.

Chlorocyperus RIKLI in PRINGSH. Jahrb. 27 (1895) 563.

Herbae perennes vel annuae, culmis erectis praeter basin nudis, foliis saepe elongatis basi vaginatis, spicis pluri-pauci-spiculosis umbellam terminalem bracteata simplicem vel compositam rarius capituliformem dispositis, spiculis pluri-multifloris, floribus omnibus hermaphroditis, glumis distichis rarissime undique imbricatis navicularibus vel concavis, infima 1-2 saepe vacuis, reliquis floriferis, setis hypogynis nullis, staminibus 1-3, stylo cum ovario continuo basi vix incrassato deciduo, ramis 2-3, achenio trigono vel biconvexo.

1. Spicularum rhachilla continua.
2. Styli trifidi. Subgen. *Eucyperus*.
2. Styli bifidi.
3. Achenia a dorso compressa, facie versus rhachillam spectante. Subgen. *Juncellus*.
3. Achenia a latere compressa, angulo versus rhachillam spectante. Subgen. *Pycreus*.
1. Spicularum rhachilla articulata.
2. Rhachilla super basin semel articulata. Subge. *Mariscus*.
2. Rhachilla in internodio quoque articulata. Subgen. *Torulinum*.

Subgenus 1. **Eucyperus** C. B. CLARKE

- A. **Choristachys** C. B. CLARKE.—Spiculae spicatae, rhachis elongata.
1. Rhachilla spicularum conspicue alata, styli longi vel mediocres (plantae praeter *C. glomeratum* et *C. Iwasakii* perennes in speciebus Japonensibus).
 2. Spicae ambitu cylindricae sicut spiculae numerosae (rhizomata brevia estoloni-fera).
 3. Spiculae teretes vel subteretes, rhachilla late alata, alae lanceolatae mox ca-ducae. (§. *Fastigiati*).
 4. Spiculae divaricatae laxius spicatim dispositae. *C. digitatus*.
 4. Spiculae ascendentes vel patentes, perdense spicatim dispositae. *C. Ohwii*.
 3. Spiculae compressae, rhachillae ala lineari diu persistente cinctae. (§. *Exaltati*).
 4. Rhachis spicae ob spiculas perdense dispositas non visibilis, achenia com-presse trigona, stylus (excl. stigm.) achenio brevior, antherae oblongo-lanceo-latae. *C. imbricatus*.
 4. Rhachis spicae ob spiculas minus dense dispositas visibilis, achenia trigona vix compressa, stylus (excl. stigm.) achenio longior, antherae lineares. *C. Iwasakii*.
 2. Spicae ambitu latiores late ovatae vel turbinatae, sicut spiculae haud numerosae.
 3. Rhizomata longe repentia vel stolones longos emittentia, squamae plus minus dense imbricatae. (§. *Rotundi*).
 4. Folia bracteaeque anguste sulcato-conduplicata, spiculae lanceolatae subtu-midae densiflorae, squamae 2.5 mm longae textura firmiores et crassiores concavae. *C. stoloniferus*.
 4. Folia bracteaeque planiuscula latiora, spiculae lineares compressae, squamae 3-3.5 mm longae textura tenues.
 5. Squamae plus minus sanguinescentes. *C. rotundus*.
 5. Squamae non sanguinescentes. *C. tuberosus*.
 3. Rhizomata brevia haud stolonifera, squamae remotiusculae.
 4. Spiculae demum divergentes vel patulae subteretes, culmi tenues. (§. *Subquadrangulares*). *C. Zollingeri*.
 4. Culmi robusti, spiculae suberectae subcompressae. (§. *Distantes*).
 5. Spiculae maturitate divaricatae perlaxiflorae vix 1 mm latae, squamae muticae. *C. distans*.
 5. Spiculae suberectae plus quam 1 mm latae densiuscule floriferae.
 6. Plantae perennes rhizomatosae, squamae apice excurvato-cuspidatae. *C. eleusinoides*.
 6. Plantae annuae erhizomatosae, squamae muticae. *C. glomeratus*.

1. Rhachilla spicularum exalata vel anguste hyalino-marginata, stylus brevis (praeter Sect. *Proceros* annuae in speciebus Japonensibus).
2. Plantae stoloniferae perennes, squamae concavae dorso vix carinatae apice rotundatae muticae. (§ *Proceri*).
3. Culmi basi longe foliati.
 4. Rhachis spicae laeviuscula, spiculae 3 mm latae. *C. procerus*.
 4. Rhachis spicae hispidae, spiculae vix super 2 mm latae. *C. pilosus*.
3. Culmi basi brevifoliati vel vaginis aphyllis cincti. *C. monophyllus*.
2. Plantae estoloniferae annuae, squamae plerumque vere carinatae mucronatae.
3. Spiculae laxae spicato-dispositae, rhachis plerumque elongata, achenia squamam subaequantia. (§ *Iriae*).
4. Rhachis spicae ciliatae, squamae sanguineo-purpureae apice rotundatae muticae. *C. orthostachyus*.
4. Rhachis spicae glabrae, squamae pallide flavae vel fuscescentes, apice mucronatae.
5. Rhachides spicae et rhachillae spicularum subexalatae, squamae flavae, ex apice emarginato in mucronem brevissimum squamarum apicem non excedentem excurrentes. *C. Iria*.
5. Rhachides spicae et rhachillae spiculae alatae, squamae apice longius mucronatae.
6. Rhachillae spicularum lineari-alatae, squamae flavae vel fulvae, mucrone brevi recto. *C. microiria*.
6. Rhachillae spicularum lanceolato-alatae, squamae rufae, apice longius et subexcurvato-mucronatae. *C. amuricus*.
3. Spicae dense dispositae, rhachis abbreviata, achenia $\frac{1}{2}$ squamae aequantia. (§ *Compressi*). *C. compressus*.
- B. *Pycnostachys* C.B. CLARKE.—Spiculae digitatae vel glomeratae, rhachi nulla evoluta.
1. Plantae perennes, rhizomata brevia, culmi rigidi, rhachilla compressa.
2. Plantae in aqua natantes, squamae praeter carinas enerves, achenia angulis spongioso-incrassata. (§ *Pseudoanosporum*). *C. platystylis*.
2. Plantae terrestres, squamae lateribus nervosae, achenia nunquam spongioso-incrassata. (§ *Diffusi*).
3. Culmi elati, anthela decomposita, spicae paucispiculosae. *C. diffusus*.
3. Culmi intra folia subabsconditi, anthela simplex, spicae multispiculosae. *C. radians*.
1. Plantae annuae estoloniferae vel stolones tenues longos emittentes, culmi graciles.
2. Spiculae compressae dorso carinatae, semper distiche dispositae.
3. Squamae obtusiusculae non vel brevissime mucronulatae.
4. Plantae annuae estoloniferae, achenia $\frac{1}{2}$ – $\frac{3}{5}$ squamae aequantia acute triangularia brunnescentia. (§ *Fusci*). *C. difformis*.
4. Plantae annuae vel stoloniferae, achenia $\frac{1}{4}$ – $\frac{1}{3}$ squamae aequantia obtuse trigona albida. (§ *Haspani*).
5. Culmi caespitosi non stoloniferi, rhachilla visibilis, squamae minus quam 1 mm longae, apice mucronem brevissimum subexcurvum quam apice squamae paullo brevioribus excurrentes, antherae apice non setosae, achenia 0.4 mm longa. *C. tenuispica*.
5. Culmi caespitosi et stolones tenues remote vel approximate culmigeros agentes, rhachilla haud visibilis, squamae 1 mm vel paullo ultra longae

apice mucronem brevem sed apicem squamae paullo excedentem excurrentes, antherae apice albo-setosae, achenia 0.5 mm longa.

C. Haspan.

3. Squamae rotundatae vel truncatae conspicue recurvatomucronatae.
 4. Squamae rigidiusculae saepe sanguinescentes. (*§ Amabiles*). *C. cuspidatus.*
 4. Squamae membranaceae pallescentes. (*§ Graciles*). *C. hakonensis.*
2. Spiculae subcompressae subdistiche dispositae vel spirale imbricatae, dorso vix carinatae. (*§ Dichostylis*).
 3. Squamae latiores et firmiores ovatae vel orbiculato-ovatae plurinervosae, achenia elliptica vel obovata, marginibus obtusa.
 4. Squamae obtusae muticae orbiculato-ovatae distiche imbricatae. *C. nüगतensis.*
 4. Squamae ovatae acutiusculae vel cuspidatae. *C. nipponicus.*
3. Squamae oblongae vel lanceolatae tenuiter membranaceae 3-5-nerviae, achenia oblonga vel oblongo-cylindrica, marginibus acutis non vel anguste marginata.
 4. Squamae saltem maturitate distiche dispositae, cuspidae laevi vel microscopice sparse spinuloso, achenia non hyalino-marginata. *C. extremiorientalis.*
 4. Squamae obsolete distiche imbricatae, cuspidae laevi vel microscopice parce papilloso, achenia anguste hyalino-marginata. *C. pacificus.*

Subgenus **Juncellus** C. B. CLARKE

Species unica (*§ Serotini*).

C. serotinus.

Subgenus **Pycreus** C. B. CLARKE

1. **Isodiametrici.** Cellulae extimae superficie achenii isodiametricae hexagonales, achenia sub lente reticulata vel punctulata.
2. Squamae muticae.
3. Squamae majusculae plus quam 2 mm longae dorso subfalcatae.
 4. Culmi basi saepissime decumbentes in nodis radicanter, altiuscule foliati, squamae utroque latere profunde sulcatae sanguinescentes. (*§ Sulcati*). *C. sanguinolentus.*
 4. Culmi basi stricti nec radicanter, spiculae majores, squamae vix sulcatae brunnescentes vel dilutiores. (*§ Lancei*). *C. uniolooides.*
3. Squamae minores, plerumque minus quam 2 mm longae, dorso rectiusculae.
 4. Spiculae divergentes. (*§ Globosi*). *C. globosus.*
 4. Spiculae fasciculatae suberectae. (*§ Polystachyi*). *C. polystachyos.*
2. Squamae apice excurvato-cuspidatae. (*§ Pumili*) *C. pumilus.*
1. **Zonati.** Cellulae extimae rectangulae oblongae ob margines cellularum versus apicem et basin prominentes transversim undulata. (*§ Latespicati*). *C. setiformis.*

Subgenus **Mariscus** C. B. CLARKE

1. Spiculae lineares vel lineari-lanceolatae teretes vel angulatae, achenia oblonga vel oblongo-cylindrica.
2. Spicae subglobosae, squamae nucem vix vel haud arcte involventes. (*§ Subulati*). *C. compactus.*
2. Spicae cylindricae (in speciebus nostris), squamae nucem arcte involventes. (*§ Umbellati*).

3. Culmi basi tantum conferte foliati, ligula antice basin laminae non excedens.
4. Spicae dense spiculosae basi aequilatae, spiculae demum divaricatae vel horizontaliter patentem pallide virides vel aureo-suffusae.
C. cyperoides.
4. Spicae basi angustatae, spiculae oblique patentem vel suberectae obscuriter virides rufescentes vel griseo-brunneae.
C. cyperinus.
3. Culmi inferne remotiuscule foliati, ligula antice basin laminae excedens, semi-rotundata.
C. boninensis.
1. Spiculae turgido-teretes oblongae vel oblongo-lanceolatae.
(§ *Turgiduli*).
C. javanicus.

Subgenus *Torulinium* C. B. CLARKE.

Species unica.

C. ferax.

1. *Cyperus digitatus* ROXB.

Cyperus digitatus ROXB. Hort. Beng. (1814) 81 et Fl. Ind. 1 (1832) 205; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 618 et in Journ. Linn. Soc. 36 (1903) 211 et in Philipp. Journ. Sci. 2 (1907) 86; MATSUM. Ind. Plant. Japon. 2:1 (1905) 140; E. G. CAMUS in Lecomte Fl. Gén. Indochin. 7 (1912) 74; KÜKENTH. in ENGL. Pfl. Reich Heft 101 (1930) 55.

Rhizomate lignoso brevissimo, culmis triquetris robustis laevibus inferne foliatis, foliis planis vel plicato-planis 5-10 mm latis rigidulis subtus striatis, vaginis basilaribus brunneopurpureis, anthela ampla 20 cm longa atque lata laxa, bracteis 2-3 foliaceis anthelam superantibus, radiis ca. 7, rigidis inaequilongis laevibus 1-5-spicatis vel pauciradiolatis, basi ochrea tubulosa bicuspidata laeviuscula ferruginescente cinctis, late cylindricis sessilibus 13-16 mm latis ca. 3 cm longis subaxe plurispiculatis, spiculis subdivaricatis linearibus 6-8 mm longis subcompressis, straminescentibus, squamis oblongoellipticis utrinque obsolete 1-2-nervis, dorso recto, apice acutissimis, achenio $\frac{1}{2}$ sq. aequilongo oblongo cinereo trigono, stylo achenio 3-plo longiore tenui, supra medium usque trifido, antheris (3) linearibus apice vix mucronatis.

Nom. Jap. O-hokigayatsuri.

Hab. Formosa: Koshun (S. MIKI).

2. *Cyperus Ohwii* KÜKENTH.

Cyperus Ohwii KÜKENTH. in Fedde Repert. 29 (1931) 197 et in ENGL. Pfl.-Reich Heft 101 (1936) 60, f. 8, A-E.

Rhizomate abbreviato dense caespitoso estolonifero, culmis robustis 100-150 cm altis trigonis laevibus basi ca. $\frac{1}{2}$ foliatis, foliis plicato-planis 10-15 mm latis bicostatis et superne asperulis, subtus striatis, laevibus, margine scabris, vaginis basilaribus cinnamomeobrunneis et interdum partim rubrosuffusis, anthela ampla 10-20 cm longa ac lata, bracteis 3-5 foliaceis anthelam longe superantibus, radiis 5-7 ascendentibus rigidis laevibus, ochea tubulosa truncata inferne ferruginea apice brevibicuspidata, carina laeviuscula, anthelulis plurispicatis densis subulatobracteolatis, rarius in radiolos

paucos paucispicatos breves agentibus, spicis anguste cylindricis perdense multispiculatis 2-3 cm longis 6-8 mm latis sessilibus vel brevipedunculatis, spiculis modice compressis stramineis oblique patentibus 4-6 mm longis 10-12-floris, squamis ellipticis fere 2 mm longis praeter costam subconcolorem latam apice recto acutam vix mucronatam subenervis, achenio $\frac{1}{2}$ sq. aequante oblongoovato cinereobrunneo concavo-convexe, angulo mediano superne tantum distincto, stylo achenio sublongiore tenui, infra medium usque trifido, antheris (3) linearibus apice conspicue mucronatis.

Nom. Jap. Tsukushi-ogayatsuri.

Hab. Kiushiu: Fukuoka (Y. DOKI, cult. in Kyoto; Z. TASHIRO).

3. *Cyperus imbricatus* RETZ.

Cyperus imbricatus RETZ. Observ. 5 (1789) 12; C. E. C. FISCHER in GAMBLE, Fl. Madr. 9 (1931) 1641; KÜKENTH. in ENGL. Pf.-Reich Heft 101 (1936) 69, excl. pl. hon-doens.

Cyperus radiatus VAHL Enum. 2 (1806) 369; KUNTH Enum. 2 (1837) 71; STEUD. Synops. 2 (1855) 37; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 617 et in Journ. Linn. Soc. 36 (1903) 216 et in Philipp. Journ. Sci. 2 (1907) 85; MATSUM. Ind. Plant. Japon. 2:1 (1905) 143; E. G. CAMUS in LECOMTE, Fl. Gén. Indochin. 7 (1912) 72, f. 9. 1-4; HAYATA Enum. Plant. Formos. (1906) 474 et Mater. Flor. Formos. (1911) 373.

Cyperus mediorubescens HAYATA Icon. Plant. Formos. 6 (1916) 106, f. 23, e-g; KÜKENTH l. c. (1936) 95.

Culmo robusto 80-120 cm alto erecto laevi triquetro basi paucifoliato, foliis culmo brevioribus plicatis rigidis 5-8 mm latis crassiusculis, subtus septatonodulosis, supra bicostatis, vaginis basilaribus atrobrunneis interdum partim sanguineotinctis, anthela ampla 10-20 cm longa atque lata, bracteis 3-5 anthelam valde excedentibus foliaceis, radiis ascendentibus rigidis laevibus ad 15 cm longis, basi ochrea tubulosa inferne sanguinescente, carina (2) supeme scabra apice setaceoexcurrente cinctis, antherulis 2-7-spicatis, rarius radiolis paucos 1-2-spicatos gerentibus, spicis sessilibus perdense multispiculatis cylindricis 6-10 mm latis 2-3 cm longis, spiculis 4-6 mm longis dense sub-20-floris ascendentibus, facie medio saepe rubro-vel fulvo-tinctis, squamis obovatis dense imbricatis, 1.7 mm longis praeter carinam viridulam laevem apice subrecurvatocuspidadam subenervis, achenio $\frac{1}{2}$ sq. aequante compressotrigono pallide straminescente elliptico, stylo achenio sublongiore ultra medium usque trifido, antheris (3) oblongolanceolatis achenio duplo brevioribus apice conspicue mucronatis.

Nom. Jap. O-hanabigayatsuri, Ogayatsuri.

Hab. Formosa: Kozan in Takaoshu (Y. SHIMADA n. 281), Koshun (S. MIKI), in paludibus Kagi (U. FAURIE n. 221).

var. **dense-spicatus** (HAYATA) OHWI.

Cyperus dense-spicatus HAYATA Icon. Plant. 6 (1916) 105; KÜKENTH. in ENGL. Pf. Reich Heft 101 (1936) 95.

Cyperus imbricatus var. *multiflorus* KÜKENTH. l. c. (1936) 71, quoad pl. formos.

Spicis 10-12 mm latis stramineo-viridulis, spiculis 6-8 mm longis 20-30-floris a typo diversus.

Nom. Jap. O-kogome-gayatsuri.

Formosa: Sirin (K. ODASHIMA in TANAKA et SHIMADA n. 17838), Maruyama (U. FAURIE n. 790).

4. *Cyperus Iwasakii* MAKINO

Cyperus Iwasakii MAKINO in Bot. Mag. Tokyo 6 (1892) 47, nom. sol. et 17 (1903) 49; MATSUM. Ind. Plant. Japon. 2:1 (1905) 141.

Cyperus exaltatus (non RETZ.) C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 201; NAKAI in Bot. Mag. Tokyo 26 (1912) 193; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 64 ex pte.

Cyperus tokiensis C. B. CLARKE in Kew Bull. add. ser. (1908) 9.

Cyperus imbricatus (non RETZ.) KÜKENTH. l. c. (1936) 101, quoad pl. korean.

Rhizomate abbreviato estolonifero bienni (?), culmis caespitosis erectis robustis obtuse triquetris laevibus, basin versus tantum paucifoliatis, foliis culmo brevioribus planis 8-15 mm latis subcoriaceis, supra bicostatis, subtus conspicue septatonodulosis, costa subtus superne valde acutolevata, vaginis basilaribus foliiferis pallide brunneis saepe rufosuffusis, anthela ampla 10-30 cm longa atque lata, bracteis 4-5 anthelam valde excedentibus, radiis 5-10 oblique patentibus ad 20 cm longis laevibus, basi ochrea tubulosa oblique secta apice bicuspidata carinis superne scabrida cinctis, anthelulis breviter bracteolatis densis inaequaliter radiolatis, radiolis 1-5-spicatis, spicis 2-4 cm longis 10-15 mm latis dense multispiculosis, spiculis oblique patentibus 5-7 mm longis facie medio saepe fulvescentibus 10-20-floris, squamis ascendentibus ovatis 1.7-2 mm longis laevibus praeter carinam enervis, carina viridi apice excurvatocuspидatis, achenio $\frac{1}{2}$ sq. aequilongo elliptico trigono pallide stramineo, stylo achenio subduplo longiore tenui ad $\frac{1}{2}$ ab apice trifido, antheris (3) linearibus $\frac{3}{4}$ mm longis apice pallide globoso-productis.

Mom. Jap. Kwan'yen-gayatsuri.

Hab. Hondo: Tokyo (fide T. MAKINO l. c.).

Korea: saepe in cult.: Shuhoku, prov. Kampoku (R. SAITO n. 2750), Chemulpo (U. FAURIE n. 981), ins. Quelpaert (E. TAQUET n. 2062, 2064), Koryo in Keiki (G. KODZUMI), basi m. Chiisan in Keinan (S. OKAMOTO).

5. *Cyperus stoloniferus* Retz.

Cyperus stoloniferus RETZ. Obs. 4 (1786) 10; NEES in WIGHT Contrib. (1831) 81; STEUD. Synops. 2 (1855) 13; BICKLER in Linnaea 35 (1863) 489; C. B. CLARKE in Journ. Linn. Soc. 20 (1833) 286 et 21 (1884) 172 et 36 (1903) 217 et in Hk. f. Fl. Brit. Ind. 6 (1893) 615; MATSUM. Ind. Plant. Japon. 2:1 (1905) 143; HAYATA Enum. Plant. Formos. (1906) 4; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 106.

Rhizomate repente longe et tenuiter stolonifero, stolonibus apice bulbosoincrassatis, culmis vix caespitosis triquetris laevibus 10-30 cm altis tenuibus sed firmis inferne foliatis, basi bulbosoincrassatis, foliis culmum superantibus vel subaequantibus rigidis crassiusculis, 2-3 mm latis, margine involuto sulcatoconduplicatis sursum longe sensim attenuatis, vaginis brunneis demum in fibris parallelis facile solutis, anthela simplici 4-6 cm longa

densa subsecunda, bracteis 2-3 culmum longe superantibus, ima saepe erecta, radiis 0-3 rigidis compressis laevibus saepe leviter arcuatis ad 5 cm longis, spicis 15-25 mm longis ac latis dense 2-7-spiculatis, spiculis linearilanceolatis acutis modice compressis dense 16-20-floris 2-2.5 mm latis 7-15 mm longis oblique patentibus sanguineis vel pallidis vel variegatis lucidulis, squamis late ovatis obtusulis duriuscule membranaceis 2.5 mm longis utrinque tenuiter 2-3-nervis concavis, carina viridi vix mucronatis, achenio $\frac{3}{4}$ squamae aequante ovato nitido planoconvexo atrobrunneo, angulo mediano obsoleto, stylo achenio sublongiore dense rubromaculato $\frac{3}{4}$ superne trifido, antheris (3) 1.5 mm longis linearibus apice rubro mucronatis.

Nom. Jap. Sunahama-suge.

Hab.

Riukiu: ins. Iriomote (G. KOIDZUMI).

Formosa: Chikunan in Shinchikushu (Y. SHIMADA n. 3212), Kyuko in Shinchikushu (Y. SHIMADA n. 4430), Tamsui (U. FAURIE n. 80).

6. *Cyperus rotundus* LINN.

Cyperus rotundus LINN. Spec. Plant. (1753) 45; THUNB. Flor. Japon. (1784) 36; KUNTH Enum. Plant. 2 (1837) 58; STEUD. Synops. 2 (1855) 32; MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 141; BÖCKL. in Linnaea 36 (1869) 293; C. B. CLARKE in Journ. Linn. Soc. 20 (1883) 614 et 36 (1903) 217 et in Hk. f. Flor. Brit. Ind. 6 (1893) 615; et in Bull. Geogr. Bot. 14 (1904) 202; MATSUM. Ind. Plant. Japon. 2:1 (1905) 221; MEINSH. in Act. Hort. Petrop. 18 (1901) 241; HAYATA Enum. Plant. Japon. (1906) 475; NAKAI, Flor. Korean. 2 (1911) 287; KÜKENTH. in ENGL. Pfl.-Reich 101 (1936) 107; KITAG. Lineam. Fl. Manshur. (1939) 116.

Cyperus laevissimus STEUD. Synops. 2 (1855) 32.

Rhizomate tenuiter et longe stolonifero, culmis vix caespitosis tenuibus 20-40 cm altis triquetris laevibus basi bulbosoincrassatis, foliis culmo plerumque brevioribus planis vel margine recurvis 2-6 mm latis subrigidis, anthela simplici vel subcomposita ad 10 cm longa atque latis, bracteis 1-2 anthelam vix vel modice superantibus, radiis 1-7, tenuibus laevibus ascendentibus, spicis 3-5 cm latis atque longis laxae vel dense 3-10-spiculatis, spiculis tenuibus linearibus 1.5-3 cm longis oblique patentibus 1.5-2 mm latis lucidulis plus minus sanguinescentibus laxiuscule 20-40-floris, squamis ascendentibus ovatis vel oblongoovatis 3-3.5 mm longis membranaceis obtusulis utrinque obsolete subbinervis, dorso viridi recto apice vix mucronatis, achenio $\frac{3}{4}$ squamae aequante oblongo compresse trigono lucidulo punctulato atrobrunneo, angulo mediano obtusiusculo, stylo achenio subtriplo longiore superne $\frac{3}{4}$ trifido, antheris (3) linearibus apice rubromucronatis.

Nom. Jap. Hama-suge.

Hab.

Korea: ins. Quelpaert (E. TAQUET n. 2007, 2044; S. MIKI; M. K. BOKU).

Hondo: Takamatsumura in Idzumo (M. HAYASHI), Goyu in Mikawa (K. SHIODA), Kamakura (U. FAURIE n. 6462), basi m. Fujiyama (U. FAURIE n. 6539), Kyoto (G. KOIDZUMI), Tajima in Mino (K. SHIODA), Sakai in Idzumi (T. YAMADA), ins. Miyake (K. HAYASHI).

Shikoku: Enokuchi in Tosa (I. OKUBO), Kochi (T. YOSHINAGA; OKUBO).

Kiushiu: Isshochi in Higo (K. MAYEBARA), Kawamura in Higo (K. MAYEBARA), ins. Koshiki (J. OHWI), Kikuchimura in Higo (S. TOKUNAGA), Shiromura in Buzen (T. YAMAZAKI), Fukushima in Chikugo (S. SEO).

Riukiu: ins. Yakushima (G. KOIDZUMI), ins. Tokunoshima (H. OHBA), ins. Amami-oshima (U. FAURIE n. 4354), ins. Okinawa (G. KOIDZUMI; S. TAWADA), ins. Iheya (S. SAKAGUCHI), ins. Miyako (Y. NAKAZONE).

Formosa: Tamsui (U. FAURIE n. 64, 785, 785bis; E. KUROSAWA), Taihoku (J. OHWI n. 2163; E. KUROSAWA; S. NAGASAWA).

var. *Yoshinagae* (OHWI) OHWI, comb. nov.

Cyperus Yoshinagae OHWI in Journ. Japan. Bot. 13 (1937) 332.

Spiculis brevibus lanceolatis 2.5 mm latis densius floriferis.

Nom. Jap. Tosano-hamasuge.

Hab. Shikoku: Kochi (T. YOSHINAGA).

7. *Cyperus tuberosus* ROTTB.

Cyperus tuberosus ROTTB. Descr. et Icon. (1773) 28, t. 7. f. 1; STEUD. Synops. 2 (1855) 18; BECKLR. in Linnaea 36 (1869) 285; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 616 et in Journ. Linn. Soc. 36 (1903) 219; MATSUM. Ind. Plant. Japon. 2:1 (1905) 144; HAYATA Enum. Plant. Formos. (1906) 476;

Cyperus rotundus ssp. *tuberosus* (ROTTB.) KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936).

Rhizomate longe tenuiter stolonifero, culmis 30-60 cm altis triquetris laevibus basi tuberosoincrassatis, foliis culmo plerumque brevioribus planiusculis 3-6 mm latis, vaginis brunnescentibus, anthela composita vel simplicis usque 10 cm longa ac lata, bracteis 2-3, ima culmum superante, radiis 3-6 tenuibus laevibus oblique ascendentibus, spicis laxiuscule 5-10-spiculatis 2-3 cm longis ac latis, spiculis compressis 1-2 cm longis 2 mm latis densiuscule 10-20 floris, pallide flavescentibus demum ferrugineis, squamis oblongo-ovatis obtusulis utrinque tenuiter sub-3-nervis, achenio obovato trigono, stylo longo profunde trifido.

Nom. Jap. Takao-gayatsuri.

Hab. Formosa: Kyujo in Takao (Y. SHIMADA n. 4425), Hokuto (U. FAURIE n. 76; T. Iro), Taito (Y. SHIMADA n. 4431).

8. *Cyperus Zollingeri* STEUD.

Cyperus Zollingeri STEUD. in ZOLLING. Verz. Ind. Archip. 2 (1854) 62, nom. sol. et in Synops. 2 (1855) 17; BECKLR. in Linnaea 36 (1870) 352; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 613 et in Journ. Linn. Soc. 36 (1903) 219 et in Philipp. Journ. Sci. 2 (1907) 85 et Illustr. (1909) t. 18, f. 1-2; HAYATA Mater. Flor. Formos. (1911) 374; E. G. CAMUS in Lecomte Fl. Gèn. Indochin. 7 (1912) 67, f. 7, 3-5; RIDL. Fl. Mal. Penin. 5 (1925) 144.

Rhizomate breve repente sublignoso, culmis subcaespitosis 30-40 cm altis tenuibus basi tantum foliatis triquetris laevibus, foliis carinatoplanis 2-3 mm latis culmo brevioribus, vaginis basilaribus rubrobrunneis, ima aphylla, sursum longius foliatis, anthela 5-15 cm longa laxa, bracteis 2-3

antheram subsuperantibus ascendentibus, radiis 2-4 tenuibus suberectis, apice spicatis, spicis obovatis vel primo angustioribus laxiuscule 4-10-spiculatis 2-3 cm longis, spiculis primo suberectis demum oblique patentibus subcompressis 1.5-2.5 cm longis 1.5 mm latis 10-15-floris, fulvescentibus et rubro-variegatis vel -suffusis, squamis laxiuscule imbricatis ovatis obtusulis utrinque elevato-2-3-nervis ca. 3.5 mm longis, dorso viridulo rectis, achenio $\frac{1}{2}$ sq. aequante lateribus concavis, triquetro elliptico, stylo tenui 2.5 mm longo paullo infra medium usque trifido, antheris (3) linearibus ca. 1.5 mm longis apice breviproductis.

Nom. Jap. Zollinger-gayatsuri, Zoringeru-gayatsuri.

Hab. Formosa: Hokansha in Taitocho (fide HAYATA l. c.), Rokki in Takaoshu (S. OKAMOTO).

9. *Cyperus distans* LINN. f.

Cyperus distans LINN. f. Suppl. (1781) 103; NEES in WIGHT Contrib. (1834) 88; KUNTH Enum. Plant. 2 (1837) 93; BÖCKL. in Linnaea 35 (1868) 612; et in Engl. Bot. Jahrb. 6 (1885) 51; C. B. CLARKE in Journ. Linn. Soc. 20 (1883) 290 et 21 (1884) 144 et 36 (1903) 211 et in Hk. f. Flor. Brit. Ind. 6 (1893) 607; MATSUM. Ind. Plant. Japon. 2:1 (1905) 140; HAYATA Enum. Plant. Formos. (1906) 472; E. G. CAMUS in Lecomte Flor. Génér. Indochin. 7 (1912) 60; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 138.

Rhizomate brevistolonifero, culmis 30-70 cm altis subtenuibus vel validulis laevibus triquetris basi lignoso incrassatis, foliis planis vel subrevolutis 3-10 mm latis supra bicostatis, vaginis brunneosuffusis demum parce solutis, anthela decomposita ampla laxa vel densiuscula 10-20 cm longa ac lata diffusa, bracteis 4-6, inferioribus 2-3 antheram modice superantibus oblique patentibus, radiis 5-10 usque ad 5-15 cm longis subtenuibus, laevibus, basi ochrea tubulosa dorso interdum in laminam brevifoliaceam apice bifidam abeunte cinctis, anthelulis densis breviter vel brevissime 3-5-radiolatis, bracteolis anthelulam vix superantibus, spicis primo obovatis densis demum effusis 4 cm longis ac latis multispiculatis basi saepe ramosis, spiculis 15-20 mm longis primo suberectis demum divaricatis vel patentissimis angustissime linearibus teretiusculis rubroanguinescentibus perlaceo 10-30-floris, rhachilla flexuosa, squamis membranaceis adpressis maturitate ascendentibus 1.5 mm longis ellipticis utrinque obsolete 2-nervis apice alboscarioso rotundatis, carina viridi obtusulis, achenio $\frac{3}{4}$ squamae aequante cinereo-brunneo cylindricooblongo obtuse trigono vix compresso, stylo achenio sublongiore tenui ad $\frac{3}{4}$ usque trifido, antheris (3) breviter linearibus apice rubro breviter globoso-productis.

Nom. Jap. Hoki-gayatsuri.

Hab. Shikoku: Kochi (T. YOSHINAGA).

Riukiu: ins. Amami-oshima (S. KUWABATA), ins. Okinawa (T. TAIRA), ins. Miyako (G. KOIDZUMI; S. SAKAGUCHI), ins. Iriomote (G. KOIDZUMI; E. TAKAMINE), ins. Ishigaki (G. KOIDZUMI; S. SAKAGUCHI; S. TAWADA), ins. Yonakuni (G. KOIDZUMI; S. TAWADA).

Formosa: Koko, Ratogun in Taihokushu (E. KUROSAWA), Taihoku (T. ITO), Shi-

zangan in Taihokushu (S. NAGASAWA), Tainan (S. NAGASAWA), Kushaku (U. FAURIE n. 780), Botansya (M. TAGAWA n. 993), Rokki in Takaoshu (S. OKAMOTO).

10. *Cyperus eleusinoides* WALL.

Cyperus eleusinoides WALL. ex KUNTH Enum. Plant. 2 (1837) 39; STEUD. Synops. 2 (1855) 24; B^YCKLR. in Linnaea 35 (1868) 596; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 142 et 36 (1903) 212 et in Hook. f. Flor. Brit. Ind. 6 (1893) 608 et in Philipp. Journ. Sci. 2 (1907) 84; MATSUM. Ind. Plant. Japon. 2:1 (1905) 140; HAYATA Enum. Plant. Formos. (1906) 472; E. G. CAMUS in Lecomte Flor. Génér. Indochin. 7 (1912) 60; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 145.

Rhizomate brevi lignoso nodoso, culmis 50-100 cm altis validis triquetris laevibus basi incrassatis, foliis culmo brevioribus remotiuscule dispositis 5-10 mm latis rigidis, vaginis rubrobrunneis superne interdum flavescentibus, anthela composita 10-20 cm longa, bracteis 2-4 anthelam longe superantibus ascendentibus, radiis 5-10 laevibus suberectis ad 15 cm longis, basi ochrea membranacea brunneostriolata cinctis, anthelulis brevibracteolatis dense spicatis, breviter 5-7-radiolatis, spicis cylindricis 2-3 cm longis 5-10 mm latis dense pauci- vel pluri-spiculatis, spiculis adpressis linearibus 5-10 mm longis 2-2.5 mm latis subcompressis laxiuscule 10-16-floris opacis ferruginescentibus, squamis primo adpressis demum ascendentibus oblongo-ovatis obtusis utrinque sub-3-nervis 2 mm longis, margine late scariosis, e dorso viridi in mucronem longum subcurvum abrupte abeuntibus, achenio $\frac{3}{4}$ squamae aequante anguste oblongo subcompresso trigono atrobrunneo dense papuloso-punctato, stylo achenio subaequilongo tenui rubescente ad $\frac{3}{4}$ usque trifido, antheris (3) brevibus brevilinearibus, apice rubro ovato-productis.

Nom. Jap. Hime-hokigayatsuri.

Hab.

Riukiu: ins. Miyako (G. KOIDZUMI), ins. Ishigaki (S. TAWADA; E. TAKAMINE), ins. Iriomote (G. KOIDZUMI).

Formosa: Takao (U. FAURIE n. 72), Biyoritsu (Y. SHIMADA n. 673).

11. *Cyperus glomeratus* LINN.

Cyperus glomeratus LINN. Cent. Plant. 2 (1756) 5 et Spec. Plant. ed. 2 (1762) 68; KUNTH Enum. Plant. 2 (1837) 77; REICHB. Icon. Flor. Germ. 8 (1816), f. 675; STEUD. Synops. 2 (1855) 45; MAXIM Prim. Fl. Amur. (1859) 298; B^YCKLR. in Linnaea 35 (1863) 592; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 607 et in Journ. Linn. Soc. 21 (1884) 141 et 26 (1903) 213 et in Bull. Geogr. Bot. 14 (1904) 201; MEINSH. in Act. Hort. Petrop. 18 (1901) 240; MATSUM. Ind. Plant. Japon. 2:1 (1905) 140; NAKAI Flor. Korean. 2 (1911) 287; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 18; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 147; KITAG. Lineam. Fl. Mansh. (1939) 114.

Chlorocyperus glomeratus (LINN.) PALLA in Allgem. Bot. Zeitschr. 6 (1900) 201 et in Mond. Plant. (1910) 40.

Rhizomate nullo, radicibus fibrosis, culmis caespitosis 20-60 cm altis triquetris laevibus, foliis culmo brevioribus planis 3-7 mm latis rigidiusculis, vaginis exterioribus brunneis membranaceis, interioribus straminescentibus, anthela simplici vel composita dense vel laxe spicata 3-10 cm longa, brac-

teis 3-4 anthelam longe superantibus, radiis 3-5 brevissimis vel usque ad 10 cm longis laevibus, suberectis, anthelulis ovatodeltoideis densis 3-4 cm longis ac latis dense 3-5-spicatis, radiolis nullis vel brevissimis, spicis ovatis vel oblongocylindricis 10-20 mm longis perdense et permultispiculatis 8-15 mm longis, terminali lateralibus majore, spiculis primo suberectis demum oblique ascendentibus linearibus compressis dense 10-20-floris 5-10 mm longis 1.5 mm latis ferrugineobrunneis, squamis utrinque latere obsolete 2-nervis, carina acutiuscula, achenio $\frac{1}{2}$ aquamis aequante cylindricooblongo trigono leviter compresso cinereobrunneo punctulato, stylo achenio subaequilongo rubescente, ad medium usque trifido, antheris (3) brevibus anguste oblongis apice rubro-mucronulatis.

Nom. Jap. Numa-gayatsuri.

Hab.

Hondo: Niigata (U. FAURIE n. 1818), Hiratsuka in Sagami (I. OKUBO), Nikko (K. KODA), Akabane in Musashi (T. SUZUKI).

Korea: Chinampo (U. FAURIE n. 1410), Seoul (U. FAURIE n. 978).

12. *Cyperus procerus* ROTTB.

Cyperus procerus ROTTB. Descr. et Icon. (1773) 29, t. 5, f. 3; KUNTH Enum. Plant. 2 (1837) 72; STEUD. Synops. 2 (1855) 37; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 152 et 36 (1903) 215; HAYATA Icon. Plant. Formos. 6 (1916) 105; E. G. CAMUS in Lecomte Flor. Génér. Indochin. 7 (1912) 62; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 91.

Rhizomate longe stolonifero, culmo ca. 50-80 cm alto validulo triquetro inferne foliato, foliis culmum subaequantibus 7-10 mm latis planiusculis, vaginis sordide purpurascensibus, anthela 10-15 cm longa laxiuscula, bracteis 2-3 oblique patentibus, ima tantum (vel rarius 2) anthelam longe excedente, radiis ascendentibus subquinis laevibus, ex ochrea tubulosa rubro-purpurascens truncata enatis, simplicibus vel rarius pauciramosis, spicis late ovatis laxae 5-15-spiculatis 2-3 cm longis atque latis, rhachi parce scaberula, spiculis linearibus compressis horizontaliter patentibus 1-2 cm longis 3 mm latis densiuscule 20-30-floris pallidis et saepe rubrosuffusis, squamis late ovatis ca. 3 mm longis obtusis concavis, carina viridi superne tantum acutiusculis, utrinque elevato-2-3-nervis, achenio quam squamae duplo brevior late elliptico triquetro brunnescente opaco, stylo achenio aequilongo tenui rubromaculato ad medium usque trifido, antheris (3) linearibus fere 2 mm longis, apice rubro globoso-productis. (descr. ex specim. malayensibus).

Nom. Jap. Hokuto-gayatsuri.

Hab. Formosa: Hokuto (leg. T. SOMA, Nov. 1914, sec. B. HAYATA).

13. *Cyperus pilosus* VAHL

Cyperus pilosus VAHL Enum. 2 (1806) 354; KUNTH Enum. Plant. 2 (1837) 80; STEUD. Synops. 2 (1855) 44; BÜCKL. in Linnaea 35 (1868) 598; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 609 et in Journ. Linn. Soc. 21 (1834) 148 et 36 (1903) 215;

MATSUM. Ind. Plant. Japon. 2:1 (1905) 142; HAYATA Enum. Plant. Formos. (1906) 474; NAKAI in Bot. Mag. Tokyo 26 (1912) 188; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 92.

Cyperus subalatus STEUD. Synops. 2 (1855) 31.

Cyperus piptolepis STEUD. l. c. (1855) 40.

Cyperus marginellus NEES in WIGHT Contrib. (1834) 83; MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 141; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 107.

Rhizomate vix caespitoso tenuiter longe stolonifero, culmis 30-80 cm altis robustiusculis triquetris basi paucifoliatis, angulo acuto superne scabriusculis, foliis planiusculis 5-10 mm latis culmo subbrevioribus subrigidis, vaginis straminescenti-brunneis, anthela 5-15 cm longa ac lata densa vel laxiuscula, bracteis 2-3 anthelam longe excedentibus, radiis 3-5 usque ad 15 cm longis laevibus oblique patentibus 3-5-spicatis, interdum abortu omnibus abbreviatis et capitulum densiusculum congestis, ochrea tubulosa membranacea rubescente laevi truncata, spicis sessilibus ovatis dense plurispiculatis 2-3 cm longis 15-20 mm latis, rhachi hispidula, spiculis linearibus 7-20 mm longis 1.5-2 mm latis compressis 16-40-floris pallidis et margine brunnescentibus vel saepius partim vel facie ex toto sanguineosuffusis, squamis densiuscule imbricatis late ovatis ca. 2 mm longis acutiusculis utrinque 2-nervis, carina viridi rectiuscula apice vix mucronatis, achenio $\frac{3}{4}$ squamae aequante late ovali brunneo opaco trigono, facie concaviuscolo, stylo achenio sublongiore parce ferrugineomaculato supra basin usque trifido, antheris (3) brevibus lineari-oblongis, apice breviter rubro-productis.

Nom. Japon. Oni-gayatsuri.

Hab. in pratis humidis vel in paludibus.

Hondo: urbe Osaka (N. UI), urbe Gifu (S. KAWADA), Kyoto (S. MIKI; J. OHWI), Kamimutobe in Tamba (Y. ARAKI), Kanemitsu in Bitchu (T. WATANABE), Mitogawa in Kii (M. TAGAWA), urbe Hiroshima (S. SUZUKI), Tanabe in Kii (T. NAKAJIMA), Ono in Harima (K. MATSUSHIMA), Zeze in Omi (CH. HASHIMOTO), Katsuura in Kii (J. OHWI et M. TAGAWA n. 96), Otani, Asaguchigun in Bitchu (T. WATANABE).

Shikoku: Nagahama in Tosa (T. YOSHINAGA), Mikazuki, urbe Kochi (I. OKUBO), Mitsuma in Iyo (CH. WATANABE), Mitushomura in Iyo (T. IMAIZUMI), Kawakami in Awa (T. MURAI), Midorisozu in Iyo (M. OGATA), Matsuyama (U. FAURIE n. 11695), Kochi (U. FAURIE n. 11950).

Kiushiu: basi m. Nukisan in Buzen (S. YOSHIOKA), Sone in Buzen (S. YOSHIOKA), Kajiki in Osumi (Z. TASHIRO), Kikitsu in Hizen (Z. TASHIRO), Yunomae in Higo (K. MAYEBARA), Omayama in Chikugo (T. SUGINO), Amagimachi in Chikuzen (Y. NABESHIMA).

Riukiu: ins. Yakushima (G. KOIDZUMI; Z. TASHIRO), ins. Tanegashima (Z. TASHIRO), ins. Amami-ohsima (H. OHBA), ins. Kumesima (S. TAWADA), ins. Tokunoshima (H. OHBA), ins. Okinawa (S. SAKAGUCHI; S. TAWADA; H. TOMYOSE), ins. Ishigaki (S. TAWADA; S. TAKAMINE), ins. Iriomote (G. KOIDZUMI), ins. Yonakuni (G. KOIDZUMI).

Formosa: Sekiteiko-kanko in Taihokushu (S. HATUSIMA), Sirin, urbe Taihoku (Y. SHIMADA n. 5453), Sankyaku in Taihokushu (E. KUROSAWA), Hokuto (U. FAURIE n. 77; S. MIKI), Tamsui (U. FAURIE n. 137, 67 p.p., 65 ex pts), Bioritsu (U. FAURIE n. 789), Taihoku (J. OHWI n. 2131; E. KUROSAWA), Botansya (M. TAGAWA n. 1000).

14. *Cyperus monophyllus* VAHL

Cyperus monophyllus VAHL, Enum. Plant. 2 (1806) 352; ROEM. et SCHULT. Syst. 2 (1817) 209; SPRENG. Syst. 1 (1825) 225.

Cyperus tegetiformis (non ROXB.) C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 218; MATSUM. Ind. Plant. Japon. 2:1 (1905) 143; HAYATA Enum. Plant. Formos. (1906) 476.

Cyperus malaccensis var. *brevifolius* BÜCKLER. in Linnaea 35 (1868) 604; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 539; MATSUM. l. c. (1905) 142.

Cyperus enodis (non BÜCKLER.) FRANCH. et SAVAT. l. c. (1879) 540.

Cyperus malaccensis (non LAM.) NAKAI in Bot. Mag. Tokyo 26 (1912) 187.

Rhizomate validulo longe repente, culmis approximatis vel remotiusculis 1-1.5 m altis superne triquetris inferne obtusangulis, apice 2.5-4 mm diam., basi tantum 2-3-foliatis, foliis vaginam membranaceam brachyphyllum reductis, vaginis rubescentibus et brunneis, summa ad 30 cm longa a ceteris longe remota, anthela densa vel laxa composita vel rarius simpliciter 7-15 cm lata, bracteis 2-4, ad 7 cm longis planis anthelam plerumque non superantibus, radiis 5-10 effusis ad 7 cm longis tenuibus laevibus, anthelulis 2-5-radiolatis effusis, radiolis tenuibus, spiculis 3-10-digitato-aggregatis linearibus angulato-subteretibus 1-3 cm longis 1-1.5 mm latis ferrugineis laxiuscule 20-40-floris, squamis oblongis convexis non carinatis rectis 2-2.5 mm longis obtusissimis suberectis, in sicco valide incurvis et facile deciduis, dorso crassiusculo fascia lata dense brunneostriato notatis, medio viridi subtrinervis, lateribus utrinque tenuiter 2-3-nervis, margine membranaceis, achenio squamis paullo brevioribus raro atrobrunneo concavo-convexo, angulo dorsali obtusissimo evolutis, linearioblongo punctulato opaco, stylo achenio brevioribus tenuibus rubescentibus trifido, antheris (3) linearibus squamulae subaequilongis apice rubro-globoso-appendiculatis. — Species satis distincta videtur a *C. malaccensi* LAM. (Illustr. 1, 146, 1791; C. B. CLARKE in Journ. Linn. Soc. 36, 214, 1903 — Nom. Jap. O-shichito), qui etiam rarissime colitur in Formosa (U. FAURIE n. 788 p.p.!) et in ins. Riukiu (DICKINS, fide CLARKE).

Nom. Jap. Shichito, Shichito-i, Riukiu-i.

Hab.

Hondo: Tanabe in Kii (N. UI), Onomichi (U. FAURIE n. 11499), Matsubara in Kii (Y. TSUCHIGA).

Shikoku: Kochi (I OKUBO).

Kiushiu: m. Fudo in Hizen (K. YAMASHITA), ins. Koshiki (J. OHWI), Yatsushiro (Y. SHIMADA n. 5078), Funama in Osumi (Z. TASHIRO), Odumari in Osumi (S. MURAMATSU), Sakiyama in Hiuga (T. NOZU).

Riukiu: ins. Yakushima (G. KOIDZUMI; Z. TASHIRO), ins. Oshima (U. FAURIE n. 4341), ins. Tokunoshima (H. OHBA), ins. Okinawa (C. KUBA).

Formosa: Hokuto (Y. SHIMADA n. 5400, 283; S. NAGASAWA; U. FAURIE n. 63, 788 p.p.), Tamsui (U. FAURIE n. 62; S. NAGASAWA), Shinchiku (Y. SHIMADA n. 4426), Inrin in Taichushu (Y. SHIMADA n. 4427).

15. *Cyperus orthostachyus* FRANCH. et SAVAT.

Cyperus orthostachyus FRANCH. et SAVAT. l. c. (1879) 106 et 539; HARA in Journ.

Japan. Bot. 14 (1938) 338, cum varr. *robustus* (NAK.) HARA et *dahuricus* HARA; KITAG. Lineam. Fl. Manshur. (1939) 115.

Cyperus truncatus (non RICH.) TURCZ. in Bull. Soc. Natur. Mosc. (1833) 103, nom. sol: LEDEB. Flor. Ross. 4. (1853) 241; STEUD. Synops. 2 (1855) 23; TURCZ. Flor. Baic. Dahur. (1856) n. 1202; БУЧКЛР. in Linnaea 35 (1868) 604; MAXIM. Prim. Flor. Amur. (1859) 297; MEINSH. in Act. Hort. Petrop. 18 (1901) 242; KOMAR. Flor. Manchur. 1 (1901) 329; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 218 et in Bull. Geogr. Bot. 14 (1904) 202; MATSUM. Ind. Plant. Japon 2:1 (1905) 143; NAKAI Flor. Korean. 2 (1911) 289 et in Bot. Mag. Tokyo 26 (1912) 192 et 47 (1933) 239 incl. varr.; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 18; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 153.

Cyperus fimbriatus (non NEES) MIQ. Ann. Mus. Bot. Lugd. Bat. 2 (1865) 142; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 107.

Cyperus truncatus var. *orthostachys* (FRANCH. et SAVAT.) C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 218; MATSUM. Ind. Plant. Japon. 2:1 (1905) 143; NAKAI in Bot. Mag. Tokyo 26 (1912) 193; MIYABE et KUDO Flor. Hokk. a. Saghal. 2 (1931) 196.

Rhizomate nullo, radicibus fibrosis, culmis caespitosis molliusculis triquetris laevibus 20-70 cm altis basi foliatis, foliis culmum subsuperantibus planis molliusculis 2-8 mm latis, vaginis membranaceis brunnescentibus, anthela plerumque ampla composita 5-20 cm longa laxa, bracteis 3-4, ima anthelam excedente, radiis 4-7 valde inaequilongis tenuibus ad 25 cm longis oblique patentibus, superne saepe scaberulis, ochrea tubulosa membranacea inferne rubrosuffusa, anthelulis 1-3-spicatis, eradiolatis subebracteatis, spicis oblongis vel ovatis obtusis subdense plurispiculatis 2-3 cm longis ad 2 cm longis ad 2 cm latis obtusis, lateralibus minoribus demum patentibus, spiculis vere vel oblongo-linearibus subcompressis sed subtumidis 5-10 mm longis 1.5 mm latis dense 8-20-floris primo suberectis demum patentibus sanguineo-purpurascentibus, squamis late ellipticis membranaceis ca. 1.2 mm longis utrinque latere subbinervis, apice truncato-rotundatis, muticis, carina acutiuscula, apice non producto, achenio paullulo brevior obovato obsolete compresso subtriquetro atrobrunneo cinereosuffuso punctulato, stylo tenui achenio subaequilongo ultra medium usque trifido, antheris brevibus oblongis apice brevissime productis.

Nom. Jap. Ushi-kugu.

Hab.

Yezo: Biro (U. FAURIE n. 4833), Hakodate (U. FAURIE n. 3342), Mombetsu (U. FAURIE n. 1003).

Hondo: Aomori (U. FAURIE n. 1152, 4361), Morioka (G. TOBA; Y. FUKUDA), Maniogata in Bitchu (Z. YOSHINO), Hirano, Suwa in Shinano (M. TAKAHASHI), Itemura in Rikuchu (C. WAKAWA), Akaho in Shinano (H. SUZUKI), Akatsumura in Owari (K. SHIODA), Tajimi in Mino (K. SHIODA), Kayanomura in Settsu (N. U₁), Akitsugawa in Kii (N. U₁), Niigata (U. FAURIE n. 1816), Sendai (U. FAURIE n. 1809, 1830) Akita (U. FAURIE n. 1008), Matsushima (U. FAURIE n. 1810), Miyazu (U. FAURIE n. 4921), Wakamatsu (U. FAURIE n. 1811), Setonoyamura in Suruga (D. SHIMIDZU), ins. Sado (U. FAURIE n. 1863), Kosekimura in Iwaki (T. SUZUKI), basi m. Myokosan in Tamba (Y. ARAKI), Akasaka in Mino (S. KAWADA), Imaizumi in Rikuzen (G. TOBA), m. Kirigamine in Shinano (J. OHWI n. 8332).

Shikoku: m. Odamiyama in Iyo (Y. DOI).

Kiushiu : Yamano in Satsuma (S. MURAMATSU), Shirakimura in Chikugo (S. Seo), m. Kurokami in Hizen (Y. TASHIRO), m. Fudo in Hizen (K. YAMASHITA), Senchomuda in Higo (H. KODZUMA), Tsutamimura in Buzen (T. YAMAZAKI), Fukushima in Chikugo (T. SUGINO), m. Inunakiyama in Buzen (Y. YAMAZAKI), Uchino in Chikuzen (Y. NABESHIMA), ins. Tshshima (T. HARA), Shikakawa in Hiuga (M. OGATA), Kume in Higo (K. MAYEBARA).

Korea : Ranan (R. SAITO n. 220, 388, 1785), Hosairi in Kannan (N. NOMURA), ins. Quelpaert (E. TAQUET n. 1997, 2043), Ouen-san (U. FAURIE n. 977; S. KITAMURA n. 1838), Umpo in Zempoku (S. OKAMOTO), Kyurei in Zennan (M. K. BOKU), Reigisan in Keiki (T. SAKATA).

16. *Cyperus Iria* LINN.

Cyperus Iria LINN. Spec. Plant. (1753) 45; KUNTH Enum. Plant. 2 (1837) 38; STEUD. Synops. 2 (1855) 23; BÜCKL. in Linnaea 35 (1868) 595 et in ENGL. Bot. Jahrb. 6 (1885) 51; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 103; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 606 et in Journ. Linn. Soc. 21 (1884) 137 et in Bull. Geogr. Bot. 14 (1904) 201 et in Philipp. Journ. Sci. 2 (1907) 83; KOMAR. Flor. Manch. 1 (1901) 334; MATSUM. Ind. Plant. Japon. 2:1 (1905) 141 excl. syn.; HAYATA Enum. Plant. Formos. (1906) 473; NAKAI Flor. Korean. 2 (1911) 288 et in Bot. Mag. Tokyo 26 (1912) 191; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 18; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 250; KITAG. Lineam. Fl. Mansh. (1939) 114.

Cyperus paniciformis FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 537.

Cyperus Iria var. *paniciformis* (FRANCH. et SAVAT.) C. B. CLARKE in Hook. f. l. c. (1893) 607; MATSUM. Ind. Plant. Japon. 2:1 (1905) 141; NAKAI in Bot. Mag. Tokyo 26 (1912) 192 pro forma.

Rhizomate nullo, radicibus fibrosis, culmis caespitosis 20-60 cm altis tenuibus molliculis triquetris laevibus, inferne foliatis, foliis culmo brevioribus 2-6 mm latis planis mollibus, vaginis membranaceis sordide brunnescentibus saepe partim rubrosuffusis, anthela densa vel laxa composita vel simplici 5-15 cm longis, bracteis 4-5, inferioribus 2-3 anthelam superantibus oblique ascendentibus, radiis 3-5 oblique patentibus tenuibus ad 15 cm longis laevibus, ex ochrea tubulosa membranacea purpurascente truncata bicuspidata enatis, spicis demum oblique patentibus oblongoovatis 2-4 cm longis dense plurispiculatis, spiculis linearibus vel oblongolinearibus 5-10 mm longis compressis ascendentibus dense 10-30-floris 1.5 mm latis flavescenscentibus, squamis late obovatis compressis membranaceis 1-1.5 mm longis, dorso late viridi arcuato-carinatis, apice scarioso emarginatis cum mucrone recto marginem non superante, utrinque latere uninervis, achenio squamis paullo brevioribus oblongoobovatis subtriquetro brunneo obsolete punctulato, stylo triplo quam achenium brevioribus supra basin usque trifido, antheris (3) brevibus oblongis apice breviter rubro-productis.

Nom. Jap. Kogome-gayatsuri, Ko-kogomegayatsuri.

Hab.

Hondo : Hiroshima (S. HORIE), Kyoto (G. KOIDZUMI; N. KINASHI), Sakai in Idzumi (I. YAMADA), Takadake in Tamba (Y. ARAKI), Tanabe in Kii (N. UI), Nakajima in Iwami (H. TAMURA), Kawagoe in Musashi (Y. NARITA), Kitamaekawa in Yechizen (C. IMAI), Tajimi in Mino (K. SHIDA), ins. Bonin (S. NISHIMURA), Niigata (U. FAURIE n.

1812), Aomori (U. FAURIE n. 4902), Okayama (K. FAURIE n. 11480 et 11481), Tokyo (U. FAURIE n. 6416), Jingojiyama in Idzu (I. YAMADA), Matsubara in Kii (Y. TSUCHIGA), Iwagasaki in Rikuzen (S. MURAI), Shonai (U. FAURIE n. 1011).

Shikoku: Kochi (T. YOSHINAGA; I. OKUBO), Mitsumamura in Iyo (C. WATANABE), Osemura in Iyo (T. IMAIDZUMI), Mitsuhomura in Iyo (T. IMAIDZUMI).

Kiushiu: m. Miikeyama in Chikugo (T. SUGINO), Iwado in Hiuga (M. OGATA), Tsutamimura in Buzen (T. YAMAZAKI), proppe Oita (Y. YAMAMOTO), Fukamimura in Hizen (H. YOKO), Nakatsu (T. YAMAZAKI).

Korea: Kyurei in Zennan (M. K. BOKU), Doyomen in Zennam (G. RO), Hosairi in Kannan (N. NOMURA), Kokyozan in Keiki (T. SAKATA), Ouen-san (U. FAURIE n. 974 ex pte), ins. Quelpaert (E. TAQUET n. 695).

Riukiu: ins. Yakushima (G. KOIDZUMI; Z. TASHIRO; U. FAURIE n. 4357), ins. Okinoerabu (G. OKI), ins. Amami-oshima (U. FAURIE n. 4358), ins. Okinawa (G. KOIDZUMI; S. TAWADA; Y. TAIRA; H. TOMOYOSE), ins. Miyako (Y. TAIRA; H. TOMORI).

Formosa: Taihoku (J. OHWI n. 2134 et 2133; E. KUROSAWA), Sirin, rube Taihoku (TANAKA et SHIMADA n. 1105), Nokogoe in Karenkocho (J. OHWI n. 2944), Koko, Rato-gun in Taihokushu (E. KUROSAWA), Hokuto (U. FAURIE n. 786; S. NAGASAWA), Rokki in Takaoshu (S. OKAMOTO).

17. *Cyperus microiria* STEUD.

Cyperus microiria STEUD. Synops. 2 (1855) 23, partim (quoad ZOLLINGER n. 75 ex pte, teste KOIDZUMI); NAKAI in Bot. Mag. Tokyo 47 (1933) 273; KITAG. Lineam. Fl. Mansh. (1939) 114.

Cyperus Textori MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 141; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 105 et 539; NAKAI in Bot. Mag. Tokyo 26 (1912) 194.

Cyperus Iria var. *microiria* (STEUD.) FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 103.

Cyperus japonicus (non MIQ.) MAKINO in Bot. Mag. Tokyo 18 (1904) 53 excl. syn.

Cyperus amuricus var. *Textori* (MIQ.) KÜKENTH. in Sinensia 2 (1933) 80.

Cyperus amuricus var. *subirioides* KÜKENTH. in FEDDE Repert. 27 (1929) 107.

Chlorocyperus Francheti PALLA in Oesterr. Bot. Zeitschr. 59 (1909) 193, f. 6.

Cyperus amuricus var. *japonicus* (non MIQ.) KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 153.

Rhizomate non evoluto, radicibus fibrosis, culmis caespitosus, 20-60 cm altis tenuibus triquetris laevibus, basi foliatis, foliis culmo brevioribus planiusculis 2-5 mm latis mollibus, vaginis pallide brunneis partim saepe rubescentibus membranaceis, anthela composita densiucula vel laxa 5-10 cm longa, bracteis 3-4 anthelam longe superantibus, radiis 5-10 tenuibus ad 10 cm longis laevibus, ochrea tubulosa membranacea laevi inferne sanguinescente, apice truncata, anthelulis ovatoeloides 2-4 cm longis dense subtrispicatis exradiolatis, spicis ovatis (vel terminali oblongo) obtusis 2-4 cm longis dense multispiculatis 10-15 mm latis, lateralibus demum patentibus, spiculis linearibus 7-12 mm longis densiuscule 10-16-floris ca. 1.5 mm latis compressis ascendentibus vel patentibus flavescentibus et saepe rufosuffusis, squamis late obovatis 1.5 mm longis suberectis membranaceis, apice rotundatis, latere utrinque 1-2-nervosis, dorso viridi carina acuta leviter arcuata

apice excurrente in mucronem acutum rectum, rhachillae ala lineari, achenio 1 mm parum longiore obovato triquetro brunneo obsolete punctulato, stylo achenio triplo brevior ultra medium usque trifido, antheris brevibus oblongis vix mucronatis.

Nom. Jap. Ki-gayatsuri, Kayatsuri-gusa.

Hab.

Hondo: Sendai (U. FAURIE n. 1813), Tajimi in Mino (K. SHIODA), Kyoto (J. OHWI; S. MIKI; M. KINASHI), Eboshidake in Tamba (Y. ARAKI), Akita (U. FAURIE n. 1006), Namerayama in Suwo (T. ODA), Nakajima in Iwami (H. TAMURA), Matsue (M. HAYASHI), Tobishima in Ugo (G. KOIDZUMI), Tarumi in Idzumo (I. TAKAGI), Onsen-mura in Tajima (Y. ARAKI), Imaizumi in Rikuzen (G. TOBA), Tanabe in Kii (Z. TASHIRO; N. U.), Morioka (G. TOBA), Amanomura in Kii (N. UI).

Shikoku: Matsuyama (U. FAURIE n. 11623), Mitsumamura in Iyo (C. WATANABE), Ushijima in Awa (Y. FUJII), Kawashima in Awa (Y. FUJII), Misatomura in Tosa (I. OKUBO), Otsumura in Tosa (T. YOSHINAGA).

Kiushiu: Tsutamimura in Buzen (T. YAMAZAKI), Sakurajima (U. FAURIE n. 4353 ex pte), ins. Tsushima (T. HARA), Osadaike in Buzen (T. YAMAZAKI), Nagauramura in Hizen (T. CHIBA).

Korea: Chinampo (U. FAURIE n. 1413), Ouen-san (U. FAURIE n. 974 ex pte, 975, 988; S. KITAMURA n. 728), Hokkansan, urbe Seoul (G. KOIDZUMI), Kangakusan (G. KOIDZUMI), Kaijin in Chuhoku (S. YANO), ins. Qnelpaert (E. TAQUET n. 2014), Kyojo in Kampoku (R. SAITO n. 1334), Kyurei in Zennan (M. K. BOKU), Kan-yo in Keinan (S. OKAMOTO).

18. *Cyperus amuricus* MAXIM.

Cyperus amuricus MAXIM. Prim. Flor. Amur. (1859) 296; BÜCKLER in Linnaea 35 (1863) 637; MEINSH. in Act. Hort. Petrop. 18 (1901) 242; KOMAR. Flor. Manshur. 1 (1901) 330; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 208 et in Bull. Geogr. Bot. 14 (1904) 202; NAKAI Flor. Korean. 2 (1911) 286 et in Bot. Mag. Tokyo 26 (1912) 194 et 47 (1933) 236 incl. varr.; SCHISCHK. in KOMAR. Fl. URSS. 3 (1935) 21; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1935) 152; KITAG. Lineam. Fl. Mansh. (1939) 113.

Cyperus amuricus var. *japonica* MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 141; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 104 et 538.

Cyperus krameri FRANCH. et SAVAT. l. c. (1879) 104.

Cyperus textori var. *laxa* FRANCH. et SAVAT. l. c. (1879) 538.

Cyperus pterygorrhachis C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 202.

Cyperus amuricus var. *pterygorrhachis* (C. B. CLARKE) OHWI in Bot. Mag. Tokyo 45 (1931) 184.

Rhizomate nullo, radicibus fibrosis, culmis caespitosis 10-60 cm altis molliusculis, vaginis membranaceis, anthela composita vel simplici 4-10 cm longa atque lata laxa vel densa, bracteis 3-4, inferioribus 1-2 anthelam superantibus, radiis oblique patentibus ad 10 cm longis tenuibus laevibus, ochrea tubulosa membranacea laevi inferne saepe rubescente, anthelulis subbracteolatis late ovatis 1.5-4 cm longis ac latis dense 1-3-spicatis, radiolis nullis vel brevissimis, spicis late ovatis dense plurispiculatis 15-25 mm longis ad 25 mm latis, lateralibus minoribus, spiculis linearibus compressis 7-13 mm longis 1.5-2 mm latis densiuscule 10-20-floris rufis vel fuscoferru-

gineis maturitate patentibus, squamis ascendentibus late obovatis 1.5 mm longis membranaceis, apice rotundatis, latere utrinque 1-2-nervis, dorso viridi carinatis vix arcuatis, superne mucronem longiusculum subrecurvum excurrentibus, ala rhachillae lanceolata, achenio squamis paullo brevior triquetro obovato-oblongo fusco punctulato, stylo triplo brevior ultra medium usque trifido terminato, antheris (3) anguste oblongis brevibus apice breviter ovato-productis.

Nom. Jap. Cha-gayatsuri.

Hab.

Hondo: fl. Kinugawa in Shimotsuke (ex Herb. Z. TASHIRO), Momonoki in Kai (J. OHWI), Hinoemata in Iwashiro (J. OHWI et M. TAGAWA n. 534), Tokura in Kotsuke (J. OHWI et M. TAGAWA n. 725), ins. Niijima in Idzu (H. TOBITA), Inuyama in Mino (S. KAWADA), Sakurajima in Osaka (Z. YOSHINO), Morioka (Y. FUKUDA), Tanei in Bitchu (Y. YOSHINO), Hokokurin in Bitchiu (Z. YOSHINO), Kamishiyamamura in Kii (T. KOIDE), Niigata (U. FAURIE n. 1821), Kunikane in Harima (K. MATSUSHIMA), Nishikawanemura in Hitachi (H. TSURUMACHI), Aomori (U. FAURIE n. 1344, 2714, 4360), Oginohama (U. FAURIE n. 6367), Ashiu in Tamba (S. OKAMOTO), Akita (U. FAURIE n. 1005), Asamayama (U. FAURIE n. 1822), ins. Miyakejima in Idzu (K. HAYASHI), Imaizumi in Rikuzen (G. TOBA).

Shikoku: Nanokawa in Tosa (I. OKUBO), ins. Okinoshima in Tosa (M. TAGAWA), Nishitoyonagamura in Tosa (G. KOIDZUMI), Kawa-higashimura in Awa (T. MURAI), Iyo (U. FAURIE n. 11716).

Kiushiu: m. Kurokami in Hizen (Z. TASHIRO), Iwadomura in Hiuga (M. OGATA), Sakurajima (U. FAURIE n. 4356 ex pte).

Korea: Kyurei (M. K. BOKU), Gensan (S. KITAMURA n. 732), Tan-yo (M. K. BOKU).

Formosa Tamsui (U. FAURIE n. 69).

19. *Cyperus compressus* LINN.

Cyperus compressus LINN. Spec. Plant. (1753) 46; KUNTH Enum. Plant. 2 (1837) 23; STEUD. Synops. 2 (1855) 15; MIQ. in Ann. Mus. Bot. Lugd. Bat. 263; ECKLR. in Linnaea 35 (1868) 517; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 105; C. B. CLARKE in Journ. Linn. Soc. 20 (1883) 284 et 21 (1884) 97 et 36 (1903) 210 et in Hook. f. Flor. Brit. Ind. 6 (1893) 605; MATSUM. Ind. Plant. Japon. 2:1 (1905) 140; NAKAI in Bot. Mag. Tokyo 26 (1912) 190; E. G. CAMUS in Lecomte Flor. Génér. Indochin. 7 (1921) 57; BRITT. et BR. Illustr. Flor. ed. 2, 1 (1913) 300; KÜENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 156; KITAG. Lineam. Fl. Manshur. (1939) 113.

Rhizomate nullo, radicibus fibrosis, culmis caespitosis trigonis laevibus pro planta vix tenuibus 10-40 cm altis compressis, basi foliatis, foliis culmo brevioribus molliculis 1-3 mm latis planis, vaginis rubrobrunneis membranaceis multistriatis, anthela simplici ad 10 mm lata densa, bracteis 2-3 anthelam superantibus, radiis 0-5 ad 5 cm longis laevibus patentibus compressis rigidulis unispicatis, spicis subflabellatis vel rotundatis ad 3 cm longis et ad 5 cm latis dense 3-10-spiculatis, rhachi abbreviata, spiculis linearibus vel lineari-oblongis 10-25 mm longis 2.5-3 cm latis compressis sed media angulatosubtumidis, dense 15-40-floris, facie pallidis et flavescentibus lucidusculis, lateralibus maturitate subdeflexis, rhachilla exalata, squamis late ovatis vel ovatis suberectis obtusulis cum mucrone 3-3.5 mm longis, utrin-

que latere subtrinervis, carina crassa acuta recta lata viridula obsolete plurinervi, apice excurrente in mucronem $\frac{3}{4}$ mm longum acuminatum subrecurvum, achenio $\frac{1}{2}$ squamae aequante late obovato lucido triquetro obsolete punctulato, angulo obtuso, facie subconcavo, stylo achenio sesquiplo longiore tenui superne $\frac{1}{2}$ trifido, antheris (3) breviter linearibus brevibus, apice flavido minute ovato-productis.

Nom. Jap. Kugu-gayatsuri.

Hab.

Hondo: Kyoto (G. KOIDZUM; N. KINASHI; S. MIKI; Z. TASHIRO), Miyazu (U. FAURIE n. 4917), Tokyo (U. FAURIE n. 6610), Yoshidamura in Shimotsuke (H. SEKIMOTO), ins. Bonin (S. NISHIMURA), Hamamatsu (G. HASHIMOTO), ins. Miyake (K. HAYASHI), Ikedamura in Kai (S. FUNO).

Shikoku: Kochi (T. YOSHINAGA; I. OKUBO; U. FAURIE n. 11881).

Kiushiu: Yokokawa in Osumi (T. SUGINO), Yabakei in Buzen (T. YAMAZAKI) Soeda in Chikuzen (Z. TASHIRO), Okuchi in Satsuma (S. MURAMATSU).

Riukiu: ins. Yakushima (Z. TASHIRO; Y. FUKUDA), ins. Amami-oshima (U. FAURIE n. 4355), ins. Okinawa (S. TAWADA; Y. TAIRA; H. TOMOYOSE), ins. Ishigaki (E. TAKAMINE).

Formosa; Tamsui (U. FAURIE n. 60, 783; S. NAGASAWA), Datetsusan in Taichu-shu (T. IRO), Shinchiku (Y. SHIMADA n. 321), Nokogoe in Karenkocho (J. OHWI n. 2948).

20. *Cyperus platystylis* R. BR.

Cyperus platystylis R. BR. Prodr. Flor. Nov. Holl. (1810) 214; KUNTH Enum. Plant. 2 (1837) 111; STEUD. Synops. 2 (1855) 53; BENTH. Flor. Austral. 7 (1878) 261; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 27 et 117, f. 7-9 et in Hook. f. Flor. Brit. Ind. 6 (1893) 598; KOORDERS Exkursionsfl. Java 1 (1911) 189 et 4:2 (1922) 92; f. 214; RIDL. Flor. Mal. Penins. 5 (1925) 141; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 185, f. 21.

Anosporum pallidum BÖCKL. in Linnaea 36 (1870) 412.

Rhizomate vix evoluto, culmis solitariis vel 2-3 subcaespitosis 30-50 cm altis validis et rigidis triquetris, angulis superne scabris, basi foliatis, foliis culmum aequantibus planis 5-8 mm latis rigidis margine scaberrimis, vaginis cinnamomeis et partim purpureotinctis, anthela ampla decomposita 7-13 cm lata densiuscula, bracteis 3-5 anthelam longe superantibus patentibus, radiis pluribus rigidis compressis laevibus patentibus ad 5 cm longis, basi ochrea tubulosa inferne sanguinescente superne ampliata interdum fissa vaginatis, anthelulis interdum brevisetaceo-bracteolatis breviter pluriradiolatis, radiolis simplicibus vel semel vel rarius bis ramosis divaricatis, spicis flabellato-3-6-spiculatis densis, spiculis oblongolanceolatis 5-7 mm longis ca. 2.5 mm latis subcompressis dense 15-20-floris, acutis flavostramineis et aureo-vel atro-rufotinctis, squamis late ovatis duriusculis membranaceis 2-2.5 mm longis ascendentibus obtusulis lateribus enervis, carina plana lata viridi trinervi apice mucronata, achenio $\frac{3}{4}$ squamae aequilongo oblongo-obovato compresso, ventre concavo, dorso convexo-angulato, cinereo-brunnescente, punctulato, angulis obtusis spongiosoincrassato, pallidis, stylo achenio brevior fusco compresso margine ciliato-papilloso, superne $\frac{1}{2}$ trifido, an-

theris (3) brevibus anguste oblongis apice appendiculo brevi pancisetuloso ornatis.

Nom. Jap. Uki-gayatsuri.

Hab. Formosa: Jitsugetsutan in Taichushu (S. MIKI; S. KITAMURA n. 1346).

21. *Cyperus diffusus* VAHL

Cyperus diffusus VAHL Enum. Plant. 2 (1806) 321; C. B. CLARKE in HOOK. f. Flor. Brit. Ind. 6 (1893) 603 et in Journ. Linn. Soc. 36 (1903) 211; KOORDERS. Exkursionsfl. Jav. 1 (1911) 189 et 4:2 (1922) 92, f. 213; HAYATA Mater. Flor. Formos. (1911) 373; E. G. CAMUS in LECOMTE Flor. Génér. Indochin. 7 (1912) 54; RIDL. Flor. Mal. Pen. 5 (1925) 142; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 208.

Rhizomate brevissimo caespitoso sublignoso, culmo 20-40 cm alto sub-alatotriquetro laevi basi foliato, foliis planis culmum subsuperantibus molliusculis 6-10 mm latis supra manifeste bicostatis, vaginis brunnescentibus, anthela decomposita laxa vel laxiuscula 5-10 cm longa et lata, bracteis 3-4 anthelam multo superantibus patulis, radiis diffusis pluribus laevibus, anthelulis diffuse pluriradiolatis brevisetaceo-bracteolatis, radiolis simplicibus vel ramosis, spiculis 1-3 digitatoaggregatis oblongolanceolatis vel oblongis acutis 3-5 mm longis 1.5-2 mm latis subtumidis compressis opacis griseofuscis dense 8-10-floris, squamis ascendentibus late ovatis 2 mm longis acutiusculis lateribus 2-3-nervis, carina acutiuscula late viridi trinervi leviter arcuata, apice excurrente in cuspidem conspicuum subexcurvatum, achenio $\frac{2}{3}$ squamae aequante obovato pallide brunneo punctulata, angulo oatusulo, triquetro, stylo achenio aequilongo tenui rubescente supra basin usque trifido, antheris (3) linearibus appendiculo rubro ovato albosetuloso terminatis.

Nom. Jap. O-noshisuge.

Hab. Formosa: Hokuzanko in Taichushu (T. ITO), Sangokei, Kizangun in Takao-shu (S. OKAMOTO).

22. *Cyperus radians* NEES et MEYEN

Cyperus radians NEES et MEYEN in Linnaea 9 (1835) 285 nomen; KUNTH Enum. Plant. 2 (1837) 95, lapsu calami *radicans*; NEES in Nov. Act. Acad. Nat. Cur. 19, Suppl. 1 (1843) 63; STEUD. Synops. 2 (1855) 50; BENTH. Flor. Hongkong. (1861) 386; C. B. CLARKE in Hk. f. Flor. Brit. India, 6 (1893) 635 ex pte; et in Journ. Linn. Soc. 36 (1903) 216; KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 214.

Cyperus sinensis DEVEAUX, in Act. Soc. Linn. Bord. 31 (1877) 14, t. 12; E. G. CAMUS in LECOMTE, Flor. Génér. Indochin. 7 (1912) 52, f. 6; 1-3.

Cyperus Shimadai OHWI in Act. Phytotax. et Geobot. 1 (1932) 300.

Rhizomate haud evoluto, culmis subcaespitosis surculos breves paucos agentibus 1-5 cm altis, intra folia subabsconditis laevibus trigonis, foliis culmo multo longioribus planis vel marginibus revolutis sensim attenuatis, vaginis rubro-brunneis, membranaceis, anthela laxa simplici, bracteis 5-7, inferioribus ad 15 cm longis, radiis 5-10 inaequalibus laevibus ad 10 cm longis, apice 1-3-spicatis, bracteolis setaceis deflexis spicam globosam ca. 10 mm longam et latam dense plurispiculatam plerumque superantibus, spiculis

ovato-oblongis inflato-subcompressis patentibus vel deflexis acutis 4-5 mm longis dense 3-5-nucigeris, rhachilla ala angusta lanceolata cincta, squamis ascendentibus latissime ovatis ca. 2.5 mm longis subcoriaceis plurinervis opacis stramineis vel interdum rufo-suffusis, dorso vix carinatis, apice rotundato longe rectiuscule mucronatis, achenio $\frac{3}{4}$ squamae aequante late ovato trigono fusco punctulato, stylo achenio subaequante infra medium papilloso-ciliato, superne $\frac{1}{2}$ trifido, antheris (3) brevilinearibus appendiculo brevi lato rubro apiculatis.

Nom. Jap. Shinchiku-kugu.

Hab. Formosa: Littore Senkyaku-seki in Shinchikushu (Y. SHIMADA n. 4396).

23. *Cyperus difformis* LINN.

Cyperus difformis LINN. Cent. Pl. 2 (1756) 6, Amoen. Acad. 4 (176) 302 et Spec. Plant. ed. 2 (1762) 67; KUNTH Enum. Plant. 2 (1837) 38; REICHB. Icon. Flor. Germ. 8 (1846) f. 674; STEUD. Synops. 2 (1855) 23; MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 141; BUCKL. in Linnaea 35 (1868) 586; FRANCH. et SAVAT. Enum. Plant. 2 (1879) 104; BENTH. Flor. Austral. 7 (1878) 268; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 133 et 36 (1903) 210 et in Hk. f. Flor. Brit. Ind. 6 (1893) 599 et in Bull. Geogr. Bot. 14 (1904) 201; KOMAR. Flor. Manchur. 1 (1901) 331; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 277; MATSUM. Ind. Plant. Japon. 2:1 (1905) 140; HAYATA Enum. Plant. Formos. (1906) 471; E. G. CAMUS in LECOMTE Flor. Génér. Indochin. 7 (1912) 50; NAKAI Flor. Korean. 2 (1911) 286 et in Bot. Mag. Tokyo 26 (1912) 190; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 16; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 237; KITAG. Lineam. Fl. Manchur. (1939) 113.

Rhizomate nullo, radicibus fibrosis, culmis caespitosis 15-40 cm altis flaccidis triquetris laevibus, foliis planis mollibus culmo brevioribus 2-5 mm latis dorso anguste carinato-acutis, vaginis membranaceis stramineobrunneis striatis interdum rubescentibus, anthela subsecunda simplici vel composita vel capitato-glomerata densa, ad 7 cm lata, bracteis 2-3, ima anthelam longe superante, radiis 1-6 inaequilongis ad 5 cm longis laevibus patentibus, anthelulis capitato-glomeratis perdense spicatis 6-15 mm latis et longis ebracteolatis, spiculis 3-10 mm longis linearibus vel lineari-oblongis ca. 1 mm latis subtumidocompressis obtusis densiuscule 10-20-floris fusco-purpureis vel depallescentibus opacis, squamis orbiculato-obovatis $\frac{1}{2}$ mm longis muticis, utrinque latere subinflatis et enervis, apice rotundatoemarginatis, carina viridi acutiuscula arcuata subtrinervi, achenio squamas subaequante vere trigono obovato pallido parce granuloso-punctulato, stylo $\frac{1}{2}$ achenio aequilongo tenui albido ad medium usque trifido, antheris (2) ellipticis perbrevibus muticis.

Nom. Jap. Tama-gayatsuri.

Hab.

Yezo: Yoichi (I. YAMAMOTO).

Hondo: Hachinohe (C. WAGAWA), Nakashima in Iwami (H. TAMURA), Akita (U. FAURIE n. 1001), Aomori (U. FAURIE n. 1002, 4399), Tanabe (U. FAURIE n. 6247), Hiro-saki (U. FAURIE n. 1323), Kuroishi (U. FAURIE n. 1224), Kosekimura in Iwaki (N. IMAI),

ins. Bonin (S. NISHIMURA), Ariimura in Kii (T. KOIDE), Tajimi in Mino (S. SHIODA), Tsu in Ise (T. HATTORI), Kyoto (S. MIKI).

Shikoku: Mikazuki, urbe Kochi (I. OKUBO), Sakawa in Tosa (T. YOSHINAGA), Nagonooka, Minamiuwagun in Iyo (M. OGATA), Ozu in Iyo (Z. TASHIRO).

Kiushiu: Tsutamimura in Buzen (T. YAMAZAKI), Mizobemura in Buzen (T. YAMAZAKI), in pratis Saga (T. YAMAZAKI), Osadaike in Buzen (T. YAMAZAKI), Iwadomura in Hiuga (M. OGATA).

Korea: ins. Quelpaert (E. TAQUET n. 2065, 2139), Suigen (T. SAKATA), Reigisan in Keiki (T. SAKATA), Fusan (U. FAURIE n. 983), Kyurei in Zennan (M. K. BOKU), Rahoku in Kampoku (R. SAITO n. 1562), Kampeimen in Zennan (OKUGAWA), Hoseiri in Kannan (N. NOMURA).

Riukiu: ins. Yakushima (Z. TASHIRO), ins. Okinawa (G. KOIDZUMI; Y. TAIRA; H. TOMOYOSE), ins. Miyako (G. KOIDZUMI; Y. NAKAZONE).

Formosa: Tamsui (U. FAURIE n. 109), Hokuto (U. FAURIE n. 59), Okaseki (U. FAURIE n. 787), Manshu (S. KITAMURA n. 1106, 1109), Taihoku (S. NAGASAWA; Y. SHIMADA n. 313; E. KUROSAWA; J. OHMI n. 2132), Shinchiku (Y. SHIMADA n. 4428).

24. *Cyperus tenuispica* STEUD.

Cyperus tenuispica STEUD. Synops. 2 (1855) 11; C. E. C. FISCHER in Kew Bull. (1931) 261; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 245.

Cyperus flavidus (non RETZ.) C. B. CLARKE in Journ. Linn. Soc. 20 (1883) 287 at 21 (1884) 122 et in Hk. f. Flor. Brit. Ind. 6 (1893) 600 et in Bull. Geogr. Bot. 14 (1904) 201 et in Philipp. Journ. Sci. 2 (1907) 82; MATSUM. Ind. Plant. Japon. 2:1 (1905) 140; HAYATA Enum. Plant. Formos. (1906) 472; MAKINO in Bot. Mag. Tokyo 19 (1905) 144; NAKAI in Bot. Mag. Tokyo 26 (1912) 189; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 17.

Cyperus pseudo-Haspan MAKINO in Bot. Mag. Tokyo 6 (1892) 47 nom. nud.

Radice fibrosa, culmis dense caespitosis flaccidis laevibus 20-40 cm altis triquetris, sicco valde compressis, basi paucifoliatis, foliis culmo plerumque brevioribus flaccidis planis 2-4 mm latis laeviusculis, anthela laxa diffusa 3-7 cm lata, bracteis 1-2 culmum superantibus vel vel subaequilongis, radiis 5-10 tenuibus flaccidis laevibus patentibus, anthelulis unispicatis vel breviter 5-7-radiolatis ebracteolatis, radiolis patentibus, spiculis digitato-5-8-fasciculatis compressis linearibus vel lineari-lanceolatis 1-1.5 mm latis 3-8 mm longis dense 15-40-floris rubrosanguinescentibus vel pallescentibus, squamis oblongis vel oblongo-lanceolatis vix 1 mm longis obtusis, lateribus enervis, carina acuta late viridi trinervi, superne recta, sub apice squamae in mucronem brevissimum subexcurvum deltoideum excurrente, achenio squamis plus duplo brevioribus pallido late obovato trigono nitido facie concaviusculo, angulo obtuso, stylo achenio sesquialtero longiore tenui rubescente fere ad medium usque trifido, antheris (1) oblongis muticis.

Nom. Jap. Hime-gayatsuri, Midzu-hanabi (MAKINÔ).

Hab.

Hondo: Kamamura in Bizen (I. OKUBO), Goto in Totomi (G. HASHIMOTO), Hamamatsu (G. HASHIMOTO), Iwakuni in Suwo (S. ONO), Tomomura in Hitachi (H. TSURUMACHI), Ishioka in Hitashi (H. TSURUMACHI), Isozaki in Yechigo (Z. TASHIRO).

Shikoku: Mikazuki in Tosa (I. OKUBO), Uradomura in Tosa (I. OKUBO), Hashiue-mura in Tosa (H. YAMAGUCHI).

Kiushu: Imayadomura in Chikuzen (Y. DOKI), Fukiagehama in Satsuma (Y. DOI), ins. Koshiki (J. OHWI), Omura in Higo (K. MAEBARA), Oguchi in Satsuma (S. MURAMATSU), Iwado in Hiuga (M. OGATA), Kiire in Satsuma (C. KAWAHARA), Kajiki in Osumi (Z. TASHIRO), Isakumachi in Satsuma (Y. DOI), Kawamura in Higo (K. MAYEBARA), Osadaike in Buzen (T. YAMAZAKI).

Korea: ins. Quelpaert (E. TAQUET n. 2059; U. FAURIE n. 1406), Koko penins. in Zennan (K. T. CHO).

Riukiu: ins. Yakushima (Z. TASHIRO; M. TAGAWA), ins. Amami-oshima (U. FAURIE n. 4352; Z. TASHIRO), ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI; S. TAWADA), ins. Iriomote (G. KOIDZUMI; Y. DOI), ins. Ishigaki (E. TAKAMINE), ins. Yonakuni (S. TAWADA).

Formosa: Taipeh (U. FAURIE n. 791), San-kyaku, Shinsogun in Taihokushu (E. KUROSAWA), Taihoku (J. OHWI n. 2156), Koko, Ratogun in Taihokushu (E. KUROSAWA), Shinchiku (Y. SHIMADA n. 4468), Tamsui (U. FAURIE n. 61).

25. *Cyperus Haspan* LINN.

Cyperus Haspan LINN. Spec. Plant. (1753) 45; KUNTH Enum. Plant. 2 (1837) 34; STEUD. Synops. 2 (1855) 21; BÉCKL. in Linnaea 35 (1868) 574; BENTH. Flor. Austral. 7 (1878) 270; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 119 et 36 (1903) 213 et in Hk. f. Flor. Brit. Ind. 6 (1893) 607 et in Bull. Geogr. Bot. 14 (1904) 201; MATSUM. Ind. Plant. Japon. 2:1 (1905) 141; MAKINO in Bot. Mag. Tokyo 19 (1905) 145, var. *micro-Haspan* MAKINO in nota; HAYATA Enum. Plant. Formos. (1906) 473; NAKAI in Bot. Mag. Tokyo 26 (1912) 186; SCHISCHK. in KOMAR. Fl. URSS. 3 (1935) 16; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 247.

Radicibus fibrosis, culmis saepe stolones tenues distanter vel approximate culmiferos agentibus interdum caespitosis, 20-60 cm altis flaccidis triquetris in sicco valde compressis laevibus, basi paucifoliatis, foliis culmo brevioribus (in culmis stolonum perbrevibus) planis 2-6 mm latis flaccidis, anthela composita vel simplici laxa diffusa ad 15 cm lata, bracteis 1-2 foliaceis anthelam non vel leviter superantibus, radiis pluribus demum subpatentibus flaccidis levibus, anthelulis effusis breviter 2-10-radiolatis e-bracteolatis, spicis digitato-4-5-spiculatis, spiculis linearibus vel oblongo-linearibus obtusis 5-15 mm longis compressis densiuscule 10-30-floris 1.5-2 mm latis sanguineo-rubrescentibus, squamis suberectis membranaceis oblongis vel oblongo-lanceolatis ca. 1.5 mm longis obtusis, lateribus enervis, carina acuta late viridi trinervi rectiuscula excurrente in mucronem brevem rectum vel subrectum, achenio squamis triplo brevior trigono albido elliptico nitido quasi granuloso-punctulato, stylo achenio sesquiplo longiore tenui rubescente fere ad medium usque trifido, antheris (3) linearioblongis apice albosetulosus.—Plantae Japonicae bracteis paullo longioribus insignes.

Nom. Jap. Ko-azegayatsuri, Mizu-hanabi (MATSUMURA).

Hab.

Hondo: Kameoka in Tamba (S. MIKI), Yatsumi in Kazusa (S. OKUYAMA), Tate-okamura in Mutsu (Y. IKEGAMI), Oga penins. in Ugo (S. MURAMATSU), Kinkasan in Mino (S. KAWADA), Kosekimura in Iwaki (N. IMAI), Araimura in Iga (T. HATTORI), Morioka (G. TOBA), Kyoto (G. KOIDZUMI; N. KINASHI; Z. TASHIRO), Kamihisamura in

Tamba (Y. ARAKI), Noharabe in Bitchu (Z. TASHIRO), Hamadagawa in Iwami (H. TAMURA), Tajimi in Mino (K. SHIODA), Tokusa in Nagato (T. ODA), Kanera in Bitchu (G. MORIYA), Aomori (U. FAURIE n. 1374). Hirosaki (U. FAURIE n. 4904), ins. Sado (U. FAURIE n. 1009, 1819), Kaminoyama in Uzen (M. KATO).

Shikoku: Mikazuki, urbe Kochi (I. OKUBO), Narimiyomura in Iyo (C. WATANABE), Setsuzaki in Iyo (M. OGATA).

Kiushiu: Nagaura in Hizen (T. CHIBA), Takema in Higo (K. MAYEBARA), ins. Tsushima (T. HARA), Kiyamura in Chikugo (Y. NABESHIMA), Kimposan in Satsuma (Y. DOI), Tsutamimura in Buzen (T. YAMAZAKI), Osadaike in Buzen (T. YAMAZAKI), Kokubu in Osumi (T. FUKAZAWA).

Korea: ins. Quelpaert (U. FAURIE n. 1408; E. TAQUET n. 2051), Tan-yo (M. K. BOKU).

Formosa: Tamsui (U. FAURIE n. 61 ex pte).

26. *Cyperus cuspidatus* HUMB. BONPL. et KUNTH

Cyperus cuspidatus HUMB. BONPL. et KUNTH Nov. Gen. Spec. 1 (1815) 24; KUNTH Enum. Plant. 2 (1837) 22; STEUD. Synops. 2 (1855) 14; BECKLER. in Linnaea 35 (1868) 496; BENTH. Flor. Austral. 7 (1878) 267; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 88 et in Hk. f. Fl. Brit. Ind. 6 (1893) 598; KOORDERS Exkursions fl. Java 1 (1911) 186; SMALL, Man. Southeast. Fl. (1933) 147; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 261; MASAMUNE in Journ. Japan. Bot. 18 (1942) 279.

Cyperus angustifolius NEES in WIGHT Contrib. Bot. Ind. (1834) 79.

Cyperus solutus STEUD. Synops. 2 (1855) 14.

Cyperus uncinatus (non POIR.) C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 219 et in Philipp. Journ. Sci. 2 (1907) 82; HAYATA Mater. Flor. Formos. (1911) 374; E. G. CAMUS in LECOMTE Flor. Gén. Indochin. 7 (1912) 47, f. 4, 5-7.

Radice fibrosa, culmis caespitosis estoloniferis obtusangulis 3-7 cm longis gracilibus laevibus, foliis culmum superantibus suberectis planis 0.5-1.5 mm latis, anthela capitato-glomerata vel breviter pauciradiata 1-2 cm lata dense 5-20-spiculata, bracteis 3-5 anthelam longe superantibus, radiis laevibus, spiculis linearioblongis vel lanceolatis 4-10 mm longis, sine arista 1.5 mm latis dense 10-30-floris subangulato-compressis, plus minus fusciscentibus vel pallescentibus lucidulis, rhachilla a latere compressa, squamis oblongis vel ellipticis membranaceis oblique patentibus rotundatis vel emarginatis absque arista 1 mm longis, lateribus enervis, dorso carinato, carina viridulo valide trinervi, apice excurrente in aristam $\frac{1}{2}$ mm longam excurvam, achenio $\frac{1}{2}$ squamae aequante obovato trigono punctulato rufo-brunneo nitido, stylo achenio paullo longiore tenui, supra medium usque trifido, antheris (2) ellipticis brevibus, apice rubro apiculatis.

Nom. Jap. Hime-azegayatsuri.

Hab. Formosa: Tsusho in Shinchiku (T. ITO).

27. *Cyperus hakonensis* FRANCH. et SAVAT.

Cyperus hakonensis FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 105 et 538, incl. var. *vulcanica* FR. et SAV.; MAKINO in Bot. Mag. Tokyo 4 (1890) 229; C. B. CLARKE in Bull. Geogr. Bot. 14 (1914) 201; MATSUM. Ind. Plant. Japon. 2:1 (1905) 140; PALLA

in Mond. Plant. (1910) 40; NAKAI Flor. Korean. 2 (1911) 288 et in Bot. Mag. Tokyo 26 (1912) 189; KITAG. Lineam. Fl. Manshur. (1939) 114.

Cyperus trinervis var. *flaccidus* KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 294.

Stricte annuus, radice tenui fibrosa, culmis dense caespitosis flaccidis, basi paucifoliatis, foliis saepe in vaginam membranaceam brachyphyllam reductis, anthela simplici vel subcomposita laxa vel laxiuscula, bractea 1 culmum continuante culmo sublongiore vel aequilonga erecta foliacea 1-2 mm lata, radiis 3-6 flaccidis effusis laevibus ad 6 vel raro 10 cm longis simplicibus vel breviter pauciradiolatis, spiculis 2-6 digitato-fasciculatis valde compressis pallide viridibus 5-12 mm longis 2 mm latis dense 12-40-floris, rhachilla compressa lata, exalata, squamis demum patulis absque arista 1 mm longis late ovatis, lateribus angustis valde membranaceo-scariosis e-nervis, carina valde compressa latissima alata viridi tenuiter trinervi, apice excurrente in aristam $\frac{1}{4}$ - $\frac{1}{2}$ squamae aequilongam excurvam, achenio $\frac{1}{2}$ squamae (cum arista) aequilongo late obovato vere trigono vix compresso lucido punctato pallide straminescente, facie levissime concavo, stylo achenio aequilongo tenui $\frac{2}{3}$ trifido, antheris brevissimis ellipticis muticis.

Nom. Jap. Hina-gayatsuri.

Hab.

Hondo: Tanabe (U. FAURIE n. 4663). Akita (U. FAURIE n. 1010, 13766), basi m. Ganju (U. FAURIE n. 13632, 13635 bis), Sambongi (U. FAURIE n. 16), ins. Sado (U. FAURIE n. 1817), Aomori (U. FAURIE n. 186, 2713), Kyoto (S. MIKI), Hiramatsu in Omi (S. MIKI), Obuke in Rikuchu (G. TOBA), Mimakimura in Shinano (K. CHINO), Nakajima in Iwami (H. TAMURA), Ono in Harima (K. MATSUSHIMA), Miwamura in Suruga (I. SUGIMOTO), Nishijomura in Omi (C. HASHIMOTO), Oga penins. in Ugo (S. MURAMATSU), Yunomata in Iwashiro (H. TOBITA), Ashiu (S. OKAMOTO), Morioka (G. TOBA), Takedamura in Tamba (S. HOSOMI), Nachi in Kii (J. OHWI et M. TAGAWA).

Shikoku: Sakade in Sanuki (ex Hb. Z. TASHIRO), Kochi (U. FAURIE n. 11850; I. OKUBO).

Kiushiu: Nishigoshimura in Higo (S. TOKUNAGA), Imutaike in Satsuma (Z. TASHIRO), Isaku in Satsuma (Y. DOI), Nakatsu in Buzen (T. YAMAZAKI).

Korea: ins. Quelpaert (E. TAQUET n. 2041, 1063; U. FAURIE n. 1407), Gensan (S. KITAMURA), Reigisan in Keiki (T. SAKATA), Shuchimen in Kannan (N. NOMURA), Kyurei in Zennan (M. K. BOKU), Fusan (U. FAURIE n. 986), Umpo in Zenhoku (S. OKAMOTO).

28. *Cyperus niigatensis* OHWI

Cyperus niigatensis OHWI in Fedde Repert. 36 (1934) 43.

Annuus caespitosus, culmis 10 ca. altis obtusangulis laevibus, basi paucifoliatis, foliis culmum parum superantibus planis mollibus laevibus 1-2 mm latis, vaginis rubescentibrunneis membranaceis, anthela capitato-glo-merata angulatohemisphaerica 10-15 mm lata et longa, perdense multispi-culata, bracteis 4-5 anthelam multo superantibus demum patentibus ad 10 cm longis basi vix dilatatis, spiculis ovatis 2-3 mm longis 1.5 mm latis compressiusculis dense 10-15-floris obtusis, pallide straminescentibus, squamis ascendentibus distiche imbricatis orbiculatoovatis obtusis muticis 1.5 mm longis membranaceis 5-7-nervis dorso fascia viridula vix carinata sub apice

evanida notatis, achenio $\frac{1}{2}$ - $\frac{3}{4}$ squamae aequante concavo-convexo brunnescente obovato, margine obtuso, angulo dorsali interdum leviter evoluto, stylo achenio parum longiore tenui glabro, ad medium 2-3-fido, antheris (2, raro 3) brevibus late lanceolatis, apice breviapiculatis.

Nom. Jap. Niigata-gayatsuri.

Hab. Hondo: Niigata (U. FAURIE n. 1823 p. p.).

29. *Cyperus nipponicus* FRANCH. et SAVAT.

Cyperus nipponicus FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 102 et 537; KITAG. Lineam. Fl. Manshur. (1939) 115.

Juncellus nipponicus (FRANCH. et SAVAT.) C. B. CLARKE in Bull. Geogr. Bot. 14 (1904) 202 et in Kew Bull. add. ser. 8 (1908) 3.

Juncellus pygmaeus (non C. B. CLARKE) MAKINO in Bot. Mag. Tokyo 17 (1903) 48; MATSUM. Ind. Plant. Japon. 2:1 (1905) 154 ex pte; NAKAI in Bot. Mag. Tokyo 26 (1912) 200 ex pte.

Dichostylis nipponica (FRANCH. et SAVAT.) PALLA in Mond. Plant. (1910) 40.

Annuus dense caespitosus estolonifer, radice fibrosa, culmis 5-25 cm altis obtuse triquetris laevibus, basi paucifoliatis, foliis culmo brevioribus vel sublongioribus planis vel planiusculis flaccidis vel mollibus 1-2.5 mm latis, vaginis membranaceis brunneis et saepe purpureostriatis, anthela capitatoglomerata 1-2.5 cm diam. dense multispiculata vel radiis paucis (1-5) patentibus ad 5 cm longis laevibus evoluta, subanthelata, spiculis 3-7 mm longis 1.5-2 mm latis compressis dense 10-30-floris lanceolatis vel ovato-oblongis acutis pallidis et interdum flavo-variegatis, margine viridulis, rachilla tenui exalata, squamis dense et distiche imbricatis ovatis 1.7-2 mm longis acutis, carina viridula superne tantum obvia tenuiter subtrinervi, apice producta in cuspidem brevem rectiusculum, lateribus tenuimembranaceis 2-3-nervis, achenio $\frac{1}{2}$ - $\frac{3}{4}$ squamae aequilongo obovato vel elliptico compresso subconcavo-convexo obtusangulo pallide brunneo, facie interdum angulo humili evoluto, stylo achenio sesquiplo longiore tenui rubescente, superne $\frac{1}{2}$ 2-3-fido, antheris (2) brevibus lineariblongis $\frac{1}{2}$ achenii aequilongis apice rubro-apiculatis.

Nom. Jap. Ao-gayatsuri, Otamagayatsuri.

Hab.

Hondo: Niigata (U. FAURIE n. 1823 p. p.), Morioka (Y. FUKUDA), Akita (U. FAURIE n. 1003, 1004), Ishikawa in Iwaki (N. IMAI); Kamyamura in Iwaki (NOZAKI), Kyoto (S. MIKI; Z. TASHIRO), Mikage in Settsu (S. KURIYAMA), Tokyo (I. OKUBO), Ono in Harima (MATSUSHIMA), Hanabuchi in Rikuzen (C. WAKAWA), Miharu in Iwaki (T. HATTORI) Sendai (U. FAURIE n. 6782), Kuroishi (U. FAURIE n. 1294), Shirakawa in Iwaki (T. SAITO).

Shikoku: Ozu in Iyo (M. OGATA), Niomachi in Sanuki (M. MITUI).

Kiushiu: Kamihirokawamura in Chikugo (K. NAKASHIMA), Yamanishimura in Higo (T. TAKAHASHI), Haramichi in Chikuzen (S. HATSUSIMA), Miyoshimura in Chikuzen (Z. TASHIRO).

Korea: Ranan (R. SAITO n. 1524), Chinampo (U. FAURIE n. 932 ex pte), Seoul (U. FAURIE n. 976 ex pte, 1409 ex pte), Gensan (S. KITAMURA n. 2095), Suigen (T. SAKATA), ins. Quelpaert (K. NAKASHIMA), Kyojo (R. SAITO n. 1390), Kan-yo (J. OHWI n. 9014).

var. *spiralis* OHWI in Act. Phytotax. et Geobot. 7 (1933) 137.

Scirpus Stauntoni C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 253.

Cyperus Stauntoni (C. B. CLARKE) OHWI in Fedde Repert 36 (1934) 43.

Spiculis teretibus, squamis etiam maturitate spirale dispositis dorso rotundatis non carinatis, culmo tenuiore a typo differt.

Nom. Jap. O-shirogayatsuri.

Hab.

Hondo: Toyonaka, urbe Osaka (Z. YOSHINO), Kyoto (S. MIKI), Ikeda in Settsu (K. MATSUYAMA), Ikedamura in Kii (Z. TASHIRO), Hata in Bitchu (C. TSUBOI), Wakayama (T. NAKASHIMA), Kyoto (J. OHWI).

Shikoku: Koromoyama, Onsegun in Iyo (ex Hb. Z. TASHIRO), Matsuyama (U. FAURIE n. 11630).

30. *Cyperus extremiorientalis* OHWI

Cyperus extremiorientalis OHWI, sp. nov.

Juncellus pygmaeus (non C. B. CLARKE) C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 207; MATSUM. Ind. Plant. Japon. 2:1 (1905) 154 ex pte; NAKAI in Bot. Mag. Tokyo 26 (1912) 200 ex pte.

Annuus dense caespitosus estolonifer, radicibus fibrosis, culmis 3-15 cm altis triquetris laevibus, basi paucifoliatis, foliis culmo brevioribus vel longioribus flaccidis 1-2 mm latis planis, vaginis brunneis membranaceis saepe partim purpurascentibus, anthela capitatoglomerata 9-15 mm lata et longa perdense multispiculata, spiculis 2-6 mm longis 1-1.2 mm latis distiche et dense 10-30-floris modice compressis lanceolatis vel ovatanseolatis acutis pallidis vel pallide stramineis margine viridulis, rhachilla tenui exalata, squamis oblongolanceolatis vel late lanceolatis tenuimembranaceis 1.5-2 mm longis subcarinatis tenuiter 3-5-nervis acutissimis, cum cuspe brevissimo recto laevi vel microscopice paucispinuloso, achenio $\frac{3}{4}$ - $\frac{1}{2}$ squamae aequante anguste oblongo vel oblongocylindrico plano-vel subconcavo-convexo pallide brunneo, margine acuto vix marginato, stylo achenio subduplo longiore tenui ad medium usque 2-fido, antheris (2) achenio 2-3-plo brevioribus linearibus muticis.

Nom. Jap. Hime-aogayatsuri.

Hab.

Hondo: Hata in Bitchu (C. TSUBOI), Bimmanji in Takamura, prov. Omi (C. HASHIMOTO. *Typus*), Yodo, urbe Kyoto (S. MIKI), Tamagakimura in Ise (T. MATSUYAMA), ad lac. Chinami, in Hitachi (H. TSURUMACHI), Ikedamura in Kii (Z. TASHIRO), Tottori (ex Hb. Z. TASHIRO).

Shikoku: Namikatamura in Iyo (H. YAMAMOTO), Narimiyomura in Iyo (C. WATANABE).

31. *Cyperus pacificus* OHWI

Cyperus pacificus OHWI, sp. nov.

Cyperus Michelianus (vix LINK) KÜKENTH. l. c. (1936) 311, quoad pl. ex Japonia.

Scirpus Michelianus (vix ROEM. et SCHULT.) C. B. CLARKE in Bull. Géogr. Bot. 14 (1904) 201; MATSUM. Ind. Plant. Japon. 2:1 (1905) 163; NAKAI, Flor. Korean. 2 (1911) 294.

Cyperus Michelianus var. *pacificus* OHWI in Act. Phytotax. et Geobot. 7 (1933) 137.
Isolepis Micheliana (vix ROEM. et SCH.) MIQ. in Ann. Mus. Bot. Bugd. Bat. 2 (1865) 143; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 116.

Annuus dense caespitosus estolonifer, culmis 3-20 cm altis obtusangulis laevibus molliusculis, basi foliatis, foliis culmum subexcedentibus planis 1-2 mm latis mollibus, vaginis saepe rubescentibus membranaceis, anthela capitatoglomerata 5-15 mm lata et longa eradiata perdense multispiculata, bracteis 3-6 longissimis ad 4-10 cm longis basi paullo dilatata margine utrinque anguste scariosis, spiculis 3-5 mm longis ca. 1.5 mm latis subcompressis subdistiche dispositis sed hic illic spirale dispositis dense plurifloris, squamis late lanceolatis tenuimembranaceis a latere leviter compressis 1.5 mm longis vix carinatis tenuiter 3-5-nervis acutissimis, cuspidate brevissimo recto vel rectiusculo glabris vel microscopice paucipapillois, achenio $\frac{3}{4}$ -squamae aequilongo oblongo vel ovato-cylindrico inaequaliter biconvexo vel angulo dorsali leviter evoluta, primo straminescente demum pallide brunneo, margine acuto, cellulis extimis hyalinis inflatis quasi submarginato, stylo achenio sesquiplo longiore tenui ad medium usque 2-3-fido, antheris (2) achenio 2-3-plo brevioribus linearibus muticis.—A *C. Micheliano* differt squamis subdistichis apice brevius et rectiuscule cuspidatis vel submuticis.

Nom. Jap. Shiro-gayatsuri.

Hab.

Yezo: Yubutsu (U. FAURIE n. 7213).

Hondo: Otsu n Omi (C. HASHIMOTO), Niigata (U. FAURIE n. 1823 ex pte), Hachinohe (U. FAURIE n. 1862), ad lac. Chinami in Hitachi (H. TSURUMACHI), Funakoshi in Ugo (S. MURAMATSU. *Typus*), Sendai (E. IISHIBA).

Korea: Seoul (U. FAURIE n. 976 p. p., 1409 ex pte).

32. *Cyperus serotinus* ROTTB.

Cyperus serotinus ROTTB. Progr. (1772) 18 et Descr. et Icon. (1773) 31; KUNTH Enum. Plant. 2 (1837) 19; BÖCKL. in Linnaea 35 (1863) 492; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 102, var. *depauperata* FRANCH. et SAVAT.; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 70; KOMAR. Flor. Manshur. 1 (1901) 332; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 316; KITAG. Lineam. Fl. Manshur. (1939) 116.

Cyperus Monti LINN. f. Suppl. (1781) 102; REICHB. Icon. Fl. Germ. 8 (1846) f. 666; STEUD. Synops. 2 (1855) 13.

Cyperus japonicus MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 140; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 103.

Cypeus nitens (non RETZ.) FRANCH. et SAVAT. l. c. 2 (1879) 100.

Cyperus Krebsii BÖCKL. Cyper. Nov. (1890) 2.

Juncellus serotinus (ROTTB.) C. B. CLARKE in Hook. f. Fl. Brit. Ind. 7 (1893) 594 et in Journ. Linn. Soc. 35 (1903) 208 et in Bull. Geogr. Bot. 14 (1904) 202; MATSUM. Ind. Plant. Japon. 2:1 (1905) 154; HAYATA Enum. Plant. Formos. (1906) 470; NAKAI Flor. Korean. 2 (1911) 286 et in Bot. Mag. Tokyo 26 (1912) 199; MIYABE et KUDO Flor. Hokk. a. Saghal. 2 (1931) 196; SCHISCHK. in KOMAR. Flor. URSS. 3 (1935) 10.

Duval-Jouvea serotina (ROTTB.) PALLA in KOCH Synops. 3, ed. 2 (1905) 2556 et in Mond. Plant. (1910) 40.

Cyperus Makinoi NAKAI in Bot. Mag. Tokyo 26 (1912) 137.

Rhizomate longe stolonifero, stolonibus tenuibus interdum hic illic fusiformi-incrassatis, culmis solitariis vel paucis 50-100 cm altis validis triquetris molliusculis vel rigidulis laevibus vel raro angulis sub apice parce scabris, inferne foliatis, foliis planis vel plicatis 5-8 mm latis crassiusculis, vaginis longiusculis brunnescentibus, anthela composita vel simplici ampliuscula laxa vel densiuscula, bracteis 3-4 patentibus, infima anthelam multo superante, radiis 5-8 laevibus oblique patentibus compressis validulis, ad 5-10 cm longis simplicibus vel breviter pauciradiolatis, spicis ovatis vel oblongis dense vel laxinscule 8-15-spiculosis 2-4 cm longis et latis, rhachi spicarum angulis ciliatoscabra vel laeviuscula, spiculis late linearibus vel lanceolatis 10-20 mm longis 2-2.5 mm latis deusiuscule 15-40-floris subinflatis sanguineis fusco-rubris vel rarius pallidis, squamis late ovatis demum oblique patulis 2-2.5 mm longis membranaceis obtusis concavis non carinatis margine involutis et late alboscariosis, dorso fascia angusta trinervi viridula ante apicem evanida percursis, lateribus tenuiter 1-2-nervis, achenio 1.5 mm longo orbiculato-elliptico biconvexo brunneo punctulato, stylo achenio sesquiplo longiore tenui rubromaculato $\frac{3}{4}$ bifido raro trifido, antheris (3) linearibus longis subapiculatis.

Nom. Jap. Mizu-gayatsuri, Ogayatsuri.

Hab.

Yezo: Yoichi (I. YAMAMOTO).

Hondo: Kyoto (G. KOIDZUMI; S. MIKI), Fukuchiyama (Y. ARAKI), Otani, Asaguchigun in Bitchu (T. WATANABE), Wajima in Noto (I. KIKKAWA), Toyonaka, urbe Osaka (N. UI), Itami in Settsu (N. UI), Yatsumi in Kazusa (S. OKUYAMA), Arima in Kii (Y. TSUCHIGA), Zeze in Omi (C. HASHIMOTO), Wakayama (U. FAURIE n. s.), Sado (U. FAURIE n. 1815), Aomori (U. FAURIE n. 95, 4359), Sendai (U. FAURIE n. 1814), Akita (U. FAURIE n. 1007, S. MURAMATSU), Takakuramura in Owari (K. SHIODA), Kuro'o in Bitchu (Z. YOSHINO).

Shikoku: Mimakimura in Iyo (M. OGATA), Ozu in Iyo (K. YAMASHITA), Tokushima in Awa (T. MURAI), Otsumura in Tosa (T. YOSHINAGA).

Kiushiu: Yunomae in Higo (K. MAYEBARA), Kikitsu in Hizen (ex Hb. Z. TASHIRO), Yabakei in Buzen (T. YAMAZAKI), Tsutamimura in Buzen (T. YAMAZAKI), Shiroshima in Chikugo (T. SUGINO), ins. Tsushima (T. HARA), Nishikokubu in Osumi (Z. TASHIRO).

Korea: ins. Quelpaert (U. FAURIE n. 1415; E. TAQUET n. 1993, 2012, 2019, 2025, 2028, 2030, 2031), Seoul (U. FAURIE n. 930), Chinampo (U. FAURIE n. 1411), Umpo in Zennan (S. OKAMOTO).

Riukiu: ins. Oshima (U. FAURIE n. s.), ins. Iheya (S. SAKAGUCHI), ins. Okinawa (S. SAKAGUCHI; S. TAWADA; Y. TAIRA).

Formosa: Sirin (U. FAURIE n. 188), Koshun (S. MIKI), Rato (Y. SHIMADA n. 5466; Shinchiku (Y. SHIMADA n. 4422, 4423), Heito (S. MIKI), Takao (Y. SHIMADA n. 4424), Tamsui (U. FAURIE n. 65 ex pte).

var. *inundatus* (ROXB.) KÜENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 318.

Cyperus inundatus (non R. BR. nec NEES) BOXB. Hort. Bengh. (1814) 6 nomen et Flor. Indic. 1 (1832) 201.

Cyperus diluvialis ROEM. et SCHULTES System. 2 Mant. (1824) 124.

Juncellus inundatus (ROXB.) C. B. CLARKE in HOOK. f. Fl. Brit. Ind. 6 (1893) 595 et

in Journ. Linn. Soc. 36 (1903) 207; MATSUM. Ind. Plant. Japon. 2:1 (1905) 153; HAYATA Enum. Plant. Formos. (1906) 470.

A typo anthela laxiore, rhachi spicarum laevi diffiit.

Nom. Jap. Yabu-gayatsuri.

Hab.

Formosa: Takao (HENRY, fide C. B. CLARKE).

33. *Cyperus sanguinolentus* VAHL

Cyperus sanguinolentus VAHL, Enum. Pl. 2 (1806) 351; NEES in WIGHT, Contrib. Bot. Ind. (1834) 75; MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1875) 140; KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 385, incl. var. *Korshinskii* (MEINSH.) KÜKENTH.

Cyperus Eragrostis (non LAM.) VAHL, l. c. (1806) 322; KUNTH Enum. Plant. 2 (1837) 7; STEUD. Synops. 2 (1855) 5; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 102; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 57; KITAG. Lineam. Fl. Manshur. (1939) 114.

Pycnus sanguinolentus (VAHL) NEES in Linnaea 9 (1834) 283; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 590 et in Journ. Linn. Soc. 36 (1903) 206 et in Bull. Geogr. Bot. 14 (1904) 201; MATSUM. Ind. Plant. Japon. 2:1 (1905) 158; MATSUM. et HAYATA Enum. Plant. Formos. (1906) 469; NAKAI Flor. Korean. 2 (1911) 285 et in Bot. Mag. Tokyo 26 (1912) 202; MIY. et KUDO, Flor. Hokk. a. Saghal. 2 (1931) 197; HONDA in Bot. Mag. Tokyo 52 (1939) 50, f. *atropurpurea* HONDA.

Cyperus Eragrostis var. *spectabilis* MAKINO in Bot. Mag. Tokyo 6 (1892) 47, et 19 (1905) 144, sub *C. sanguinolento*.

Pycnus rubromarginatus E. G. CAMUS in Lecomte, Not. Syst. 1 (1910) 240.

Pycnus Eragrostis (VAHL) PALLA in Ann. Naturh. Hofmus. 23 (1909) 204 et in Mond. Plant. (1910) 40; SCHISCHK. in Komar. Flor. URSS. 3 (1935) 7.

Rhizomate non evoluto, radicibus fibrosis, culmis dense caespitosis 10-40 cm altis erectis vel basi ascendentibus interdum ad nodos subradicantibus triquetris mollibus inferne altiuscule et subremote foliatis, foliis culmo brevioribus planis 2-3 mm latis vel raro (f. *rubromarginatus* KÜKENTH. l. c. 386—Ito-kawarasugana) setaceis flaccidis, vaginis membranaceis viridulis, basilaribus rubro-brunnescentibus, anthela simplici pauciradiata (*typica* Nan-goku-kawarasugana) vel saepissime capitato-contracta (var. *nipponica* OHWI, var. nov. Kawara-sugana), bracteis 2-3 patentibus anthelam multo superantibus, radiis laevibus, apice unispicatis, spiculis patentibus 3-10 spicatis dense dispositis, oblongo-lanceolatis vel oblongis 2.5-3.5 mm (in var. *spectabilis* MAK. l. c. Shidegayatsuri, 4 mm) latis, 1-2 cm longis modice compressis dense 15-40-floris, sanguineo-variegatis vel omnino pallescentibus, rhachilla tetraquetra, facie sulcata, squamis late ovatis 2-2.5 mm longis membranaceis obtusis muticis modice compressis, prope marginem saepe sanguineopictis, praeter carinam subcutam angustam viridulam trinervem nervis vel utrinque latere tenuissime uninervis, achenio squamae plus duplo brevioris biconvexo fusco late obovato punctulato, stylo achenio subtriplo longiore tenui ad medium usque bifido, antheris (2) brevi-linearibus apice brevissime productis.

Nom. Jap. Kawara-sugana, Shide-gayatsuri.

Hab.

Yezo : Kushiro (U. FAURIE n. 8639).

Hondo : Nogimura in Idzumo (M. HAYASHI), Akita (U. FAURIE n. 1015, 1014, 13802), Matsushima (U. FAURIE n. 1826), Aomori (U. FAURIE n. 4898) Fujiyama (U. FAURIE n. 6531), Bandai (U. FAURIE n. 1829), Kuroishi (U. FAURIE n. 1280), Sado (U. FAURIE n. 1827), Akatsumura in Owari (K. SHIODA), Samekawa in Iwaki (T. SUZUKI), Tokusa in Nagato (T. ODA), Nachi in Kii (J. OHWI et M. TAGAWA), Kyoto (G. KOIDZUMI; N. KINASHI; S. MIKI; J. OHWI), Kawawatari in Rikuchu (S. MURAI), m. Mayasan (U. FAURIE 4920, ex pte), Togakushi (U. FAURIE n. 1825, ex pte).

Shikoku : Kochi (T. YOSHINAGA; U. FAURIE n. 11852), Ikku in Tosa (I. OKUBO), Midorisozu in Iyo (M. OGATA), Tokushima (T. MURAI), Asahi in Iyo (C. WATANABE).

Kiushiu : Kimmura in Chikuzen (Y. NABESHIMA), Tsutami in Buzen (T. YAMAZAKI), Fudoyama in Hizen (K. YAMASHITA), Kajiki (Z. TASHIRO), Takachiho in Hiuga (M. OGATA), Kikuchimura in Higo (S. TOKUNAGA), Fukushima in Chikugo (S. SEO), ins. Tsushima (Z. TASHIRO).

Korea : Umpo in Zenhoku (S. OKAMOTO), Hojo in Kamphku (R. SAITO n. 1239), Kyurei in Zennan (M. K. BOKU), ins. Quelpaert (U. FAURIE n. 1417; E. TAQUET n. 720, 2002, 2003), Fusan (U. FAURIE sin. num.), Seoul (U. FAURIE n. 934), Chinampo (U. FAURIE n. 1416), Ouen-san (U. FAURIE n. 935), m. Kangakusan in Keiki (G. KOIDZUMI), Hoseiri in Kannan (N. NOMURA), Reigisan in Keiki (T. SAKATA).

Riukiu : ins. Tanegashima (Z. TASHIRO), ins. Tokunoshima (H. OHBA), ins. Okinoerabu (H. OHBA), Oshima (U. FAURIE sin. num.), ins. Okinawa (G. KOIDZUMI), S. SAKAGUCHI; Z. TASHIRO; S. TAWADA).

Formosa : Rato (Y. SHIMADA n. 5165), Taihoku (J. OHWI n. 2174; E. KUROSAWA), Taipeh (U. FAURIE n. 784), Sankyaku (E. KUROSAWA), Komokan, Chikunan in Shinchikushu (Y. SHIMADA n. 320), Shinchiku (Y. SHIMADA n. 4465), Tamsui (U. FAURIE n. 186), Hokuto (U. FAURIE n. 70), Keelung (U. FAURIE n. 192).

34. *Cyperus unioides* R. Br.

Cyperus unioides R. Br. Prodr. Fl. Nov. Holl. (1810) 216; KUNTH Enum. Plant. 2 (1837) 112; STEUD. Synops. 2 (1855) 54; BENTH. Flor. Austral. 7 (1878) 260; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 60; ABRAMS Illustr. Flor. Pac. St. 1 (1923) 257; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 338.

Cyperus angulatus NEES in WIGHT Contrib. Bot. Ind. (1834) 73; STEUD. Synops. 2 (1855) 12; BÜCKL. in Linnaea 35 (1868) 565.

Pycnus angulatus (NEES) NEES in Linnaea 9 (1834) 283; C. B. CLARKE in Hook. f. Fl. Brit. Ind. 6 (1893) 593 et in Journ. Linn. Soc. 36 (1903) 202; MAKINO in Bot. Mag. Tokyo 9 (1895) 253; NAKAI in Bot. Mag. Tokyo 26 (1912) 202.

Cyperus tosaensis MAKINO in Bot. Mag. Tokyo 6 (1892) 47 nomen; MATSUM. Ind. Plant. Japon. 2:1 (1905) 143 nomen.

Rhizomate brevissimo, estolonifero, culmis 30-80 cm altis tenuibus sed firmis strictis triquetris laevibus, inferne paucifoliatis, foliis culmo brevioribus 2-3 mm latis conduplicatis vel planiusculis, margine superne spinulosocabris, vaginis longis atrobrunneis, anthela simplici, bracteis 2-3, infima anthelam longe superante, patentissima, radiis 1-4 vel 0, rigidis suberectis laevibus, ad 3-8 cm longis, spicis late ovatis vel orbiculato-deltoides 2.5-3 cm longis et 2.5-3 cm latis dense 4-10 spiculatis, rhachi brevi laevi, spiculis compressis 10-25 mm longis 4-5 mm latis late lanceolatis acutis

dense 14-30-floris patentibus pallidis vel stramineis et marginibus brunnescentibus, rhachilla tetraquetra flexuosa exalata, lateribus sulcata, ventre et dorso foveolata, squamis anguste ovatis 3.5-5 mm longis carinatocompressis acutis chartaceis lucidis, dorso fascia brunnea lata notatis, carina acuta valide trinervi, lateribus enervis, achenio vix 1.5 mm longo inflato-biconvexo nitido suborbiculato atrofusco grosse albo-celluloso-reticulato, stylo squamis aequilongo tenui rubro ultra medium usque bifido, antheris (3) dimidio squamae subaequilongis linearibus, connectivo breviter late-producto.

Nom. Jap. Mugigara-gayatsuri.

Hab.

Shikoku: Mimakimura in Iyo (K. YAMASHITA; M. OGATA), Miyoshimura in Iyo (M. OGATA).

Kiushiu: Ichibu in Higo (K. MAYEBARA), ins. Fukue in Hizen (Z. TASHIRO), Yamadamura in Osumi (Z. TASHIRO), Osadaike in Buzen (Z. TASHIRO), Kawamura in Hizo (K. MAYEBARA), Hazaukimura in Satsuma (Y. DOI; Z. TASHIRO), Kami-minemura in Hizen (Z. TASHIRO), Uchidamura in Higo (S. NAKAHARA), Oguchi in Satsuma (Z. TASHIRO; S. MURAMATSU), Akune in Satsuma (Z. TASHIRO).

35. *Cyperus globosus* ALL.

Cyperus globosus ALL. Flor. Pedem. Auctuar. (1789) 49; STEUD. Synops. 2 (1855) 3; BENTH. Flor. Austral. 7 (1878) 260; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 536; C. B. CLARKE in Journ. Linn. Soc. 20 (1883) 279 et 21 (1884) 47, incl. var. *nilagiricus* C. B. CLARKE; RICHT. Plant. Europ. 1 (1890) 133; ASCHERS. et GRAEBN. Synops. 2:2 (1903) 268; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 352.

Cyperus flavidus RETZ. Observ. 5 (1789) 13, non alior.

Pycnus capillaris NEES in Linnaea 9 (1834) 283; PALIB. Consp. Flor. Korea. 3 (1901) 20.

Cyperus trachyrhachis STEUD. Synops. 2 (1855) 3.

Pycnus globosus (ALL.) REICHB. Flor. German. Excurs. 2:2 (1830) 140; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 203 et in Bull. Geogr. Bot. 14 (1904) 201 et in Philipp. Journ. Sci. 2 (1907) 80; MATSUM. Ind. Plant. Japon. 2:1 (1905) 157; PALLA in Mond. Plant. (1910) 40; NAKAI in Bot. Mag. Tokyo 26 (1912) 203; E. G. CAMUS in Lecomte Flor. Génér. Indochin. 7 (1912).

Cyperus complanatus PRESL in Oken, Isis, 21 (1929) 270 nomen; STEUD. l. c. (1855) 3; FRANCH. et SAVAT. l. c. (1879) 100.

Cyperus flavescens (non LINN.) MIQ. Ann. Mus. Bot. Lugd. Bat. 2 (1865) 140.

Cyperus nilagiricus HOCHST. ex STEUD. l. c. (1855) 2; KITAG. Lineam. Fl. Manshur. (1939) 115.

Cyperus fusco-ater MEINSH. in Act. Hort. Petrop. 12 (1892) 406 et 18 (1901) 238; KOMAR. Flor. Manshur. 1 (1901) 332.

Rhizomate fere nullo, culmis erectis obtuse triquetris subcaespitosis tenuibus sed firmulis laevibus basi paucifoliatis, interdum innovationem brevissimum emittentibus, foliis culmo longioribus vel brevioribus 1-2 mm latis conduplicatis, vaginis membranaceis ferrugineo-brunneis, anthela simplici densa vel laxa, bracties 2-4, saltem inferioribus anthelam longe superantibus, radiis 0-5 tenuibus ad 8 cm longis laevibus, ochrea brevi tubulosa inferne atro-sanguinea, spicis flabellatis vel late ovatis 5-10-spiculosis, rhachi

angulata laevi, spiculis linearibus vel linearilanceolatis 2-2.5 mm latis compressis 10-25 mm longis 16-60-floris stramineobrunneis vel sordide brunneis (in var. *nilagirico* C. B. CLARKE, spiculis paullo angustioribus et atrocassaneotinctis, stylo achenio sublongiore.—Nom. Jap. Kuro-azegayatsuri), rhachilla a latere compressa, facie profunde septatosulcata, squamis oblongo-ovatis obtusis praeter carinam acutam sutrinervem enervis 1.5-2 mm longis muticis, achenio squamis 2.5-3-plo brevior biconvexo fusco opaco punctulato, saepe cinerascens obovato, stylo tenui achenio sesquiplo longiore ad medium usque bifido, antheris (2) brevibus oblongis apice breviter lateque productis.

Nom. Jap. Aze-gayatsuri.

Hab.

Hondo: Sanageyama in Owari (K. SHIODA), Akaho in Shinano (S. SUZUKI), Hama-da in Iwami (H. TAMURA), Toyohara in Shimotsuke (T. SUZUKI), ad ripas fl. Iwakuni in Suwo (S. ONO), Yamagata (S. OKUYAMA), Kyoto (G. KOIDZUMI), Morioka (Ch. WAGAWA), Nambu (U. FAURIE n. 6137), Kobe (U. FAURIE n. 12089), ins. Bonin (TOYOSHIMA), Sado (U. FAURIE n. 1824), m. Mayasan (U. FAURIE n. 4920 ex pte), Togakushi (U. FAURIE n. 1825 ex pte).

Shikoku: Kochi (T. YOSHINAGA), Narimiyomura in Iyo (C. WATANABE), Shiomidzu in Awa (T. INOBE).

Kiushiu: Yamao in Satsuma (S. MURAMATSU), Ogushi in Hizen (T. CHIBA), Tsutami in Buzen (T. YAMAZAKI), m. Kurokami in Hizen (K. YAMASHITA), ins. Koshiki in Satsuma (J. OHWI), Nakago in Hiuga (S. NOTSUTE), Kitagwa in Hiuga (M. OGATA).

Korea: Ranan (R. SAITO n. 217), Hosairi in Kannan (N. NOMURA), ins. Quelpaert (U. FAURIE n. 1412; E. TAQUET n. 1939, 1001, 2003), Chinampo (U. FAURIE n. 979), Kangakusan in Keiki (G. KOIDZUMI), basi m. Chiisan in Keinan (S. OKAMOTO).

Riukiu: ius. Yakushima (G. KOIDZUMI), ins. Tokunoshima (H. OHBA), ins. Amami-oshima (H. OHBA), ins. Iheya (S. SAKAGUCHI), ins. Okinawa (G. KOIDZUMI; K. MIYAZATO: S. SAKAGUCHI; S. TAWADA), ins. Ishigaki (K. TAKAMINE), ins. Miyako (Y. NAKAZONE), ins. Iriomote (G. KOIDZUMI).

Formosa: Korisho (U. FAURIE n. 75); in agris humidis (U. FAURIE n. 794), Hokuto (U. FAURIE n. 73), Sirin (TANAKA et SHIMADA n. 11107), Shinoku in Shinchikushu (Y. SHIMADA n. 4467), Kozan (Y. SHIMADA n. 4466).

36. *Cyperus polystachyos* ROTTE.

Cyperus polystachyos ROTTE. Descr. et Icon. (1773) 39, t. 11, f. 1; NEES in WIGHT Contrib. Bot. Ind. (1134) 75; KUNTH Enum. Plant. 2 (1837) 13; STEUD. Synops. 2 (1855) 8; BÖCKLER in Linnaea 35 (1868) 477; BENTH. Flor. Austral. 7 (1878) 261; C. B. CLARKE in Journ. Linn. Soc. 20 (1883) 280 et 21 (1884) 51, t. 3, f. 27; KOMAR. Flor. Manshur. 1 (1901) 333; KOORDERS Exkursionsfl. Java 1 (1911) 186 et 4:2 (1922) 85, f. 196; KÜKENTH. in Engl. Pfl.-Reich Heft 101 (1936) 367.

Cyperus teretifructus STEUD. Synops. 2 (1855) 3.

Pycnus polystachyos (ROTTE.) BEAUV. Fl. Owar. 2 (1807) 48; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 205 et in Bull. Geogr. Bot. 14 (1904) 201; MATSUM. Ind. Plant. 2:1 (1905) 153; HAYATA Enum. Pl. Formosan. (1906) 469; PALLA in Mond. Plant. (1910) 40; NAKAI in Bot. Mag. Tokyo 26 (1912) 201.

Rhizomate brevi dense caespitoso, culmis 10-50 cm altis obtuse tri-

gonis laevibus subtenuibus sed firmulis, basi foliatis, foliis culmo brevioribus involutis vel planis 1-3 mm latis, vaginis membranaceis brunneis et rubrosuffusis, anthela simplici pauciradiata vel saepius capitato-congesta, bracteis 3-5 anthelam multo superantibus oblique patentibus, radiis brevibus rectis laevibus ad 7 cm longis, spiculis fasciculatocongestis erectis linearibus modice compressis 1-2.5 cm longis 1.5 mm latis linearibus acutis dense 15-50-floris, rubroanguineis vel pallescentibus, rhachilla a dorso compressa anguste alata, squamis suberectis 1.5-2 mm longis oblongoovatis vel ovatis obtusis modice compressis muticis vel brevissime rectomucronulatis, praeter carinam acutam angustam trinervem enervis, achenio duplo brevior obovato-oblongo compresso biconvexo brunneo punctulato apice subtruncato, stylo subduplo longiore tenui ultra medium usque bifido, antheris (2) breviter lanceolatis rubromucronulatis.

Nom. Jap. Iga-gayatsuri.

Hab.

Hondo: Nagoya (K. SHIODA), Kanayama in Kii (K. TAKEUCHI), Onigajo in Kii (J. OHWI et M. TAGAWA n. 97), Aminomachi in Tamba (Y. ARAKI), Zeze in Omi (C. HASHIMOTO), Niigata (U. FAURIE n. 1820), ins. Bonin (S. NISHIMURA), urbe Hiroshima (S. SUZUKI), Yanai in Suwo (T. YAMAHARA), ins. Hachijo (S. TAMAKI), ins. Miyake (K. HAYASHI), Mitsumura in Mikawa (S. MURATA), Osaka (Z. YOSHINO), Gotomura in Tōtomi (G. HASHIMOTO).

Shikoku: Kochi (T. YOSHINAGA; I. OKUBO).

Kiushiu: Kikitsu (Z. TASHIRO), Fukuoka (Z. TASHIRO), Chijiwa in Higo (K. MAYEBARA), Kawajiri in Satsuma (Z. TASHIRO), Akune in Satsuma (J. OHWI).

Korea: ins. Quelpaert (U. FAURIE n. 1414; E. TAQUET n. 1998, 3462), Chinampo (U. FAURIE n. 982 ex pte).

Riukiu: ins. Yakushima (G. KOIDZUMI; M. TAGAWA n. 1892, Z. TASHIRO), Oshima (U. FAURIE n. 4353; G. KOIDZUMI), ins. Okinawa (G. KOIDZUMI; Y. TAIRA; H. TOMOYOSE), ins. Miyaka (G. KOIDZUMI), ins. Iriomote (G. KOIDZUMI).

Formosa: Taihoku (E. KUROSAWA; J. OHWI n. 2130), Hokuto (U. FAURIE n. 68, 222; S. MIKI; TAGAWA n. 669), Tamsui (U. FAURIE n. 67), Keelung (U. FAURIE n. 781), Korisho (U. FAURIE n. 66, 71), Shirin (U. FAURIE n. 189), Sharyoto (J. OHWI n. 163), Sansa in Shinchikushu (K. KUROSAWA), Chikunan in Shinchikushu (Y. SHIMADA n. 4470), Sankyaku (E. KUROSAWA).

37. *Cyperus pumilus* LINN.

Cyperus pumilus LINN. Cent. Pl. 2 (1756) 6 et Spec. Plant. ed. 2 (1762) 69; ROEM. et SCHULT. System. 2 (1817) 188; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 43; KOORD. Exkursiohsfl. Java 1 (1911) 186 et 4:2 (1922) 86, f. 197; KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 375.

Cyperus nitens RETZ. Observ. 5 (1789) 13.

Cyperus gymnoleptus STEUD. Synops. 2 (1855) 3.

Annuus, radicibus fibrosis, culmis 3-7 cm altis caespitosis molliusculis laevibus triquetris, basi foliatis, foliis culmum aequantibus planis 1-1.5 mm latis, vaginis membranaceis brunneorubrescentibus, anthela capitato-glomerata vel breviter pauci-radiata densa 2-3 cm lata, bracteis 3-4 anthelam

longe superantibus patulis, radiis brevibus tenuibus laevibus apice capitato-multispiculosis, spiculis linearibus vel lineari-oblongis 5-10 mm longis compressis 1.5-2 mm latis dense 10-20-floris stramineo-pallescentibus, rhachilla subtetraquetra, facie leviter excavata, squamis oblique patentibus 1.3 mm longis membranaceis ovato-ellipticis abrupte et conspicue subexcurvato-mucronatis compressis, praeter carinam late viridulam 3-5-nervem enervis, achenio $\frac{3}{4}$ - $\frac{1}{2}$ squamae aequante obovato biconvexo manifeste punctatis brunneis, stylo quam achenio sesquiplo longiore tenui ad medium bifido, anthera (1) brevi oblonga mutica.

Nom. Jap. Shiro-hinagayatsuri.

Hab. Formosa: Wannaisho in Tainanshu (T. Ito).

38. *Cyperus setiformis* KORSH.

Cyperus setiformis KORSH. in Act. Hort. Petrop. 12 (1892) 405; MEINSH. ibid. 18 (1900) 237; KOMAR. Flor. Manshur. 1 (1901) 328; NAKAI Flor. Korean. 2 (1911) 289; KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 393; KITAG. Lineam. Fl. Mansh. (1939) 116.

Pycnus setiformis (KORSH.) NAKAI in Bot. Mag. Tokyo 26 (1912) 201; SCHISCHK. in KOMAR. Fl. URSS. 3 (1935) 5.

? *Cyperus pratorum* KOROTK. in Fedde Repert. 13 (1914) 292, in syn.

? *Pycnus pratorum* KOROTK. l. c. (1914) 292.

Pycnus gratissimus KITAG. in Bot. Mag. Tokyo 49 (1935) 222.

Cyperus gratissimus KITAG. l. c. pro syn.

Cyperus latispicatus BICKLER. var. *gracilescens* (vix KÜKENTH.) KITAG. Lineam. Fl. Manshur. (1939) 114.

Annuus, radicibus tenuibus fibrosis, culmis 10-30 cm altis gracilibus laevibus trigonis, basi paucifoliatis, foliis angustissimis culmo brevioribus 1-1.5 mm latis planiusculis, vaginis brunnescentibus membranaceis interdum rufescentibus, anthela e spica unica sessili patule 1-3-spiculata formata, interdum radio unico laevi 2-3 cm longo 1-3-spiculato addita, spiculis spicatim dense dispositis late vel ovato-oblongis modice compressis 8-15 mm longis pallidis et saepe rubrosuffusis densiuscule 10-20-floris, rhachilla flexuosa compressa facie foveolata marginata, squamis oblongo-ovatis obtusis muticis ca. 3 mm longis submembranaceis, lateribus enervis fascia ferruginescente notatis, carina angusta viridi acuta trinervi, achenio $\frac{1}{2}$ squamae aequante orbiculatoobovato biconvexo demum nigricante, facie superne obsolete ruguloso-striolato, cellulis extimis elongatis, stylo achenio duplo longiore tenui ferrugineo $\frac{3}{4}$ bifido, antheris (2) linearibus ca. $\frac{3}{4}$ mm longis apice ovato-productis. *A. C. latispicatus* vix distincta species.

Nom. Jap. Tachi-gayatsuri, Hitori-gayatsuri.

Hab.

Korea: basi m. Chiisan in Keinan (S. OKAMOTO).

Hondo: Aomori (U. FAURIE sin. num.), ins. Bonin (WARBURG, fide KÜKENTH.).

39. *Cyperus compactus* RETZ.

Cyperus compactus RETZ, Observ. 5 (1789) 10; VAHL Enum. Pl. 2 (1806) 304; KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 423.

Cyperus dilutus VAHL, l. c. (1806) 357; KUNTH, Enum. Plant. 2 (1837) 92; STEUD. Synops. 2 (1855) 49; BECKL. in Linnaea 36 (1869) 354; C. B. CLARKE in Journ. Linn. Soc. 21 (1884) 193; KOORDERS, Exkursionsfl. Jav. 1 (1911) 187 et 4 (1922) 88, f. 22.

Mariscus microcephalus PRESL, Reliq. Haenk. 1 (1830) 182; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 221 et in Philipp. Journ. Sci. 2 (1907) 88; HAYATA Mater. Fl. Formos. (1911) 374.

Mariscus dilutus (VAHL) NEES in WIGHT Contrib. Bot. Ind. (1834) 90.

Mariscus compactus (RETZ.) DRUCE in Rep. Bot. Exch. Cl. Brit. Isl. 1916 (1917) 634.

Culmis 50–60 cm altis validis obsolete trigonis laevibus inferne altiuscule foliatis, foliis culmum superantibus planis vel conduplicatis 3–4 mm latis crassis valde septato-nodosis sensim attenuatis, vaginis longis subspongiosis valde septato-nodosis inferne fuscobubulentibus, anthela composita laxa vel densiuscula, bracteis 3–5 anthelam multo superantibus oblique erectis, valde septato-nodosis, radiis 3–8 rigidis suberectis, anthelulis radiatim breviter 3–7-radiolatis densis brevibracteatis, spicis globosis perdense multispiculosis 1–2 cm latis, spiculis horizontaliter patentibus vel inferioribus deflexis subulatis 5–7 mm longis subteretibus 3–6-floris rubroferrugineis vel griseo-rubris, angustis, rhachilla tenui recta, ala lanceolata cincta, squamis adpressis oblongolanceolatis obtusulis, dorso anguste viridi trinervis, lateribus utrinque subbinervis, achenio ca. $\frac{1}{2}$ squamae aequante linearioblongo ca. 1.5 mm longo triquetro dense punctulato, stylo achenio subduplo longiore tenui, superne $\frac{1}{2}$ trifido.

Nom. Jap. Bito-kugu.

Hab. Formosa: Kagi (Y. SHIMADA n. 4469).

40. *Cyperus cyperoides* O. KUNTZE

Cyperus cyperoides (LINN.) O. KUNTZE, Revis. Gen. Pl. 3:2 (1898) 333; KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 514.

Scirpus cyperoides LINN. Mant. 2 (1772) 181.

Cyperus strigosus (non LINN.) THUNB. Flor. Japon. (1784) 36, fide FRANCH. et SAVAT.

Cyperus Sieberianus (NEES) K. SCHUM. in ENGL. Pflanzenw. Afr. C. (1895) 122; DIELS in ENGL. Bot. Jahrb. 29 (1901) 227.

Mariscus Sieberianus NEES in Linnaea 9 (1834) 286, nomen; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 622 et in Journ. Linn. Soc. 36 (1903) 221 et in Philipp. Journ. Sci. 2 (1907) 88 et Illustr. (1909) t. 23, f. 5–6; MATSUM. Ind. Plant. Japon. 2:1 (1905) 156; MATSUM. et HAYATA Enum. Plant. Formos. (1906) 477; NAKAI in Bot. Mag. Tokyo 26 (1912) 196.

Cyperus umbellatus MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 142; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 107, non alior.

Mariscus cyperinus (non VAHL) C. B. CLARKE in Bull. Beogr. Bot. 14 (1904) 202; MATSUM. l. c. (1905) 156 p.p.; NAKAI, l. c. (1912) 196, ex pte.

Rhizomate abbreviato subcaespitoso, culmis 30–80 cm altis rigidulis

triangulatis laevibus, basi incrassata conferte foliatis, foliis culmo brevioribus planis 3-6 mm latis rigidulis, vaginis fusco- vel brunneorubrescentibus, anthela simplici vel capitato-contracta, bracteis 4-5 anthelam superantibus oblique patentibus, radiis 5-15 usque ad 8 cm longis laevibus indivisis rigidulis, spicis cylindricis vel oblongis dense multispiculosis 15-25 mm longis 7-10 mm latis, spiculis horizontaliter patentibus vel deflexis linearilanceolatis subtereto-triangulatis 4-5 mm longis pallide viridulis et interdum aureo- vel flavo-suffusis acuminatis 1-2-nucigeris $\frac{1}{2}$ - $\frac{3}{4}$ mm latis, roachilla lanceolatoalata, squamis anguste oblongis adpressis ca. 3 mm longis obtusis involventibus muticis, dorso recto anguste viriditrinervis, lateribus pallidis 3-4-nervis, achenio anguste oblongo $\frac{3}{4}$ squamae aequante obtuse triquetro subfalcato rufo-brunneo punctulato, stylo achenio duplo longiore tenui superne $\frac{3}{4}$ trifido, antheris (3) linearibus apice brevissime productis.

Nom. Jap. Kugu, Inu-kugu.

Hab.

Hondo: Tanabe in Kii (N. UI), ins. Bonin (S. NISHIMURA), ins. Oshima in Idzu (S. KAWADA), ins. Niijima in Idzu (H. TOBITA), Toba in Ise (S. MIKI), ins. Miyake in Idzu (K. HAYASHI), Hiroshima (H. OBAYASHI), Onomichi (U. FAURIE n. 11532), Ariimura in Kii (T. KOIDE).

Shikoku: Ioki in Tosa (M. TAGAWA n. 849), Heijo in Iyo (M. OGATA), Mikazuki in Kochi (I. OKUBO), Nagahama in Tosa (T. YOSHINAGA).

Kiushiu: Oshima in Hizen (Z. TASHIRO), Hirato in Hizen (I. KAWASAKI), ins. Koshiki (J. OHWI), Tsutami in Buzen (T. YAMAZAKI), Kajiki in Osumi (Z. TASHIRO), Sakurajima (Z. TASHIRO), Yamano in Satsuma (S. MURAMATSU), Maebara in Chikuzen (Y. NABESHIMA).

Korea: ins. Quelpaert (U. FAURIE n. 1405).

Riukiu: ins. Yakushima (U. FAURIE n. 4351; G. KOIDZUMI; Z. TASHIRO), ins. Amami-oshima (G. KOIDZUMI), ins. Okinawa (G. KOIDZUMI; S. TAWADA), ins. Ishigaki (E. TAKAMINE), ins. Miyako (Y. NAKAZONE).

Formosa: Taihoku (J. OHWI n. 2136), Ako (E. MATSUDA), Baibara (M. TATEWAKI), Karenko (S. KITAMURA n. 1566), Taroko (M. TATEWAKI et S. KITAMURA), sine loc. (U. FAURIE n. 792 ex pte), Sozan (E. KUROSAWA), Takkiri (S. KITAMURA n. 1804).

41. *Cyperus cyperinus* SURINGER

Cyperus cyperinus (RETZ.) SURINGER, Het Gesl. Cyp. Mal. Archip. (1893) 154, t. 6, f. 10; KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 518.

Kyllinga cyperina RETZ. Observ. 5 (1791) 21.

Mariscus cyperinus (RETZ.) VAHL, Enum. Pl. 2 (1806) 377; C. B. CLARKE in Hook. f. Flor. Brit. Ind. 6 (1893) 621 et in Journ. Linn. Soc. 36 (1903) 220 et in Philipp. Journ. Sci. 2 (1907) 87 et Illustr. (1909) t. 22, f. 3-4; MATSUM. Ind. Plant. Japon. 2:1 (1905) 156, ex pte; MATSUM. et HAYATA Enum. Plant. Formos. (1906) 477; NAKAI in Bot. Mag. Tokyo 26 (1912) 196 ex pte.

Rhizomate abbreviato subcaespitoso, culmis 20-80 cm altis triquetris laevibus, basi conferte foliatis, foliis planis subrigidulis 3-5 mm latis, vaginis fusco-rubrescentibus, anthela simplici saepe capitato-contracta subradiata, bracteis 5-10 anthelam multo superantibus subpatentibus, spicis 5-10 sessi-

libus vel breviradiatis cylindricis vel obovatis dense multispiculosis 7-10 mm latis 10-20 mm longis basi angustatis, spiculis oblique erectis vel oblique patentibus 2-3-nucigeris teretoangulatis 3-5 mm longis obscure viridibus subopacis acutis rufosuffusis, rhachilla lanceolatoalata, squamis adpressis 3 mm longis obtusulis involventibus muticis, dorso recto anguste viriditri-nervis, lateribus utrinque 3-4-nervis, achenio $\frac{3}{4}$ squamae aequante obtuse triquetro punctulato brunnescente subfalcato anguste oblongo, stylo achenio sublongiore tenui superne $\frac{1}{2}$ trifido, antheris (3) brevilinearibus apice brevi-apiculatis.

Nom. Jap. Shima-kugu.

Hab.

Riukiu: ins. Ishigaki (S. SAKAGUCHI; E. TAKAMINE), ins. Miyako (G. KOIDZUMI), ins. Yonakuni (G. KOIDZUMI).

Formosa: in herbis montium (U. FAURIE n. 792), Tamsui (U. FAURIE n. 185; S. NAGASAWA), Maruyama, Ratogun in Taihokushu (E. KUROSAWA), Maripa (E. MATSUDA), Hokuto (U. FAURIE n. 79), Tippon-onsen (M. TAGAWA n. 1012).

42. *Cyperus boninensis* OHWI

Cyperus boninensis OHWI, sp. nov.

Culmis 60-80 cm altis subrobustis acute trigonis laevibus, basi remotiuscule foliatis, foliis planis vel conduplicato-planis 5-7 mm latis culmum subaequantibus suberectis, vaginis fusco-rubrescentibus, ligula antice basin laminae excedente, anthela subcapitato-contracta 7-10-spicata, bracteis 5-10 anthelam multo superantibus oblique ascendentibus, spicis brevicylindricis 15-20 mm longis 7-8 mm latis dense multispiculatis obtusis, basi sessilibus vel radiis 1-2 cm longis validulis laevibus sustentis basi parum angustatis, spiculis linearilanceolatis teretoangulatis acutis 1-2-nucigeris 3-4 mm longis, rhachilla lanceolato-alata, squamis anguste oblongis obtusulis muticis 4 mm longis, dorso anguste viridi-trinervis, lateribus utrinque 3-5-nervis, achenio trigono punctulato $\frac{3}{4}$ squamae aequante brunneo anguste oblongo subfalcato, stylo achenio sesquiplo longiori tenui laevi superne $\frac{3}{4}$ trifido, staminibus 3.

Nom. Jap. Munin-kugu.

Hab. Bonin: ins. Chichijima (S. NISHIMURA).

43. *Cyperus javanicus* HOUTT.

Cyperus javanicus HOUTT. Nat. Hist. 2:13 (1782) t. 88, f. 1.

Cyperus pennatus LAM. Illustr. 1 (1791) 144; KUNTH, Enum. Plant. 2 (1837) 80; BENTH. Flor. Austral. 7 (1878) 284; C. B. CLARKE in Journ. Linn. 21 (1884) 194; HILLEBR. Flor. Haw. Isl. (1888) 463; KOORDERS Exkursionsfl. Jav. 1 (1911) 187 et 4 (1922) 187 et 4 (1922) 89, f. 203; KÜKENTH. in Engl. Pfl.-Reich, Heft 101 (1936) 476.

Mariscus albescens GAUDICH. in FREY. Voy. Bot. (1826) 415; C. B. CLARKE in Hk. f. Flor. Brit. Ind. 6 (1893) 623 et in Journ. Linn. Soc. 36 (1903) 220; MATSUM. Ind. Plant. Japon. 221 (1905) 156; HAYATA Enum. Pl. Formos. (1906) 476; NAKAI in Bot. Mag. Tokyo 26 (1912) 197.

Cyperus canescens VAHL, Enum. Plant. 2 (1806) 355; Hook. et ARN. Bot. Beech. Voy. (1841) 222.

Rhizomate brevissimo lignoso, culmis validis 50-100 cm altis obtuse trigonis sub lente papulosis, basi foliatis, foliis rigidis conspicue septatodosis 4-8 mm latis culmo longioribus sensim attenuatis conduplicatopanis, margine perscabis, vaginis coriaceis castaneis nitidulis, anthela composita 7-15 cm lata densa, bracteis 3-5 anthelam multo superantibus patulis, radiis crassiusculis rigidis patulis papulosis, ad 7 cm longis ebracteolatis dense 3-5-spicatis, spicis brevicylindricis 1.5-2 cm longis 10-15 mm latis spicatum dense plurispiculosum, lateralibus patentibus et paulo brevioribus, spiculis oblongoovatis vel late lanceolatis patentibus paulo compressis 6-8 mm longis 2-2.5 mm latis acutis albidis et saepe ferruginescentibus subopacis, rhachilla lata flexuosa late alata, squamis late ovatis subcoriaceis subobtusis 2.5-3 mm longis 7-9-nervis ferrugineomaculatis, dorso vix carinatis, achenio $\frac{1}{2}$ squamae aequante obovato vel late obovato opaco nigricante punctulato trigono vix compresso, stylo tenui achenio sesquiplo longiore fere usque ad medium trifido, antheris (3) brevilinearibus ferrugineomaculatis breviapiculatis.

Nom. Jap. Oni-kugu.

Hab. Bonin: ins. Chichijima (S. NISHIMURA).

Riukiu: ins. Senkakuto (H. KUROIWA), ins. Ishigaki (E. TAKAMINE), ins. Iriomote (G. KOIDZUMI; S. TAWADA), ins. Miyako (G. KOIDZUMI; S. SAKAGUCHI).

Formosa: Takao (U. FAURIE n. 78; S. MIKI).

44. *Cyperus ferax* L. C. RICH.

Cyperus ferax L. C. RICH. in Act. Soc. Hist. Paris, 1 (1792) 102; KUNTH, Enum. Plant. 2 (1837) 89; STEUD. Synops. 2 (1855) 48; BICKLER in Linnaea 36 (1870) 399; BENTH. Flor. Austral. 7 (1878) 286; C. B. CLARKE in Journ. Linn. Soc. 20 (1883) 295 et 21 (1884) 191; BRITT. et BR. Illustr. Flor. ed. 2, 1 (1913) 306; ABRAMS, Illustr. Flor. Pac. St. 1 (1923) 261; KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 615.

Cyperus bracteolatus STEUD. Synops. 2 (1855) 49.

Mariscus ferax (L. C. RICH.) C. B. CLARKE in Hook. f. Flor. Brit. Ind. 6 (1893) 624.

Torulinum confertum HAM. Prodr. Pl. Ind. Occid. (1825) 15; C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 222; MATSUM. Ind. Plant. Japon. 2:1 (1905) 478; NAKAI in Bot. Mag. Tokyo 26 (1912) 198.

Cyperus speciosus (vix VAHL) MAKINO in Bot. Mag. Tokyo 20 (1906) 8.

Torulinum ferax (L. C. RICH.) URB. Synb. Antill. 2 (1900) 165; OKUYAMA in Journ. Bot. 13 (1937) 33.

Rhizomate abbreviato subcaespitoso, radicibus rigidulis, culmis 20-60 cm altis robustis trigonis laevibus, basi subincrassatis, foliis culmo brevioribus 5-10 mm latis planis subrigidis, vaginis inferioribus subaphyllis brunnescentibus, anthela saepe ampla laxa vel densa composita vel decomposita, bracteis 5-8, inferioribus anthelam superantibus patentibus, radiis 5-10 ad 15 cm longis laevibus, anthelulis longe vel breve bracteolatis simplicibus vel pauciradiolatis, spicis oblongo-cylindricis vel brevioribus 2-3 cm longis 2-2.5 cm latis sublaxe multispiculatis, spiculis horizontaliter patentibus vel deflexis linearibus 10-15 mm longis 1 mm vel paulo crassioribus teretibus flexuosis 6-16-floris, rhachilla crassa rigida, ala late oblanceolata achenium

amplectente demum incrassata cincta, squamis remotis adpressis 3 mm longis ellipticis obtusis et raro mucronulatis crassiusculis concavis, dorso late viridi vix carinatis, lateribus lutescentibus tenuiter 3-4-nervis, achenio $\frac{1}{2}$ squamae aequante obovato-obolango trigono subcompresso brunneo punctulato, antheris (3) brevilinearibus.

Nom. Jap. Kin-gayatsuri, Mutsuore-gayatsuri, Hinerigayatsuri.

Hab.

Hondo: Nakomachi in Awa (ex Hb. Z. TASHIRO), ins. Bonin (Y. TOYOSHIMA).

Riukiu: ins. Tokunoshima (H. OHBA), ins. Okinawa (Z. TASHIRO), ins. Miyako (S. KOIDZUMI), ins. Yonakuni (S. TAWADA).

Formosa: Hokuto (U. FAURIE n. 74), Tamazato (S. KITAMURA n. 1708), Shimotansuiki in Takaoshu (S. MIKI), Toyen (Y. SHIMADA n. 663).

Gen. 18. *Kyllinga* ROTTB.

Kyllinga ROTTB. Descr. et Icon. (1773) 12, t. 4; KUNTH, Enum. Plant. 2 (1837) 127; STEUD. Synops. 2 (1855) 66; BOECKL. in Linnaea 35 (1863) 403; BENTH. et Hook. f. Gen. Plant. 3 (1883) 1045; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 109; DALLA TORRE et HARMS, Gen. Siphon. (1900) 30; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 93.

Herbae perennes rhizomate repente vel raro annuae, culmis tenuibus praeter basin nudis, foliis ad basin culmi confertis elongatis, spicis 3-5 sessilibus bracteatis apice culmi capitato-glomeratis multispiculosis, spiculis compressis minutis plerumque unifloris, squamis distichis 3-4, infima vacua, 2 majoribus subaequalibus, florem hermaphroditum vel rudimentarium glutinamque minimam includentibus, setis hypogynis nullis, staminibus 1-3, stylo cum ovario continuo basi haud incrassato, saepe deciduo, ramis 2, achenio compresso glumis majoribus arcte incluso, quibuscum maturitate deciduo, rhachilla basi articulata.

1. Carina squamae exalata.

2. Rhizoma lignosum abbreviatum; culmus basi bulbosoincrassatus; spica (centralis) oblongocylindrica vel oblonga 10-15 mm longa; achenia $\frac{3}{4}$ spiculae aequantia; styli breviusculi.

K. cylindrica.

2. Rhizoma vix lignosum longe repens elongatum; culmus basi non incrassatus; spica (unica) 5-10 mm longa; achenia $\frac{1}{2}$ spiculae aequantia; stylus satis longis.

K. brevifolia.

1. Carina squamae late alata; rhizoma elongatum haud lignosum; culmus basi non incrassatus; spica (unica) 5-10 mm longa; achenia $\frac{1}{2}$ spiculae aequantia; stylus satis longis.

K. monocephala.

1. *Kyllinga cylindrica* NEES

Kyllinga cylindrica NEES in WIGHT Contrib. Bot. Ind. (1834) 91; KUNTH Enum. Pl. 2 (1837) 133; STEUD. Synops. 2 (1855) 63; BOECKL. in Linnaea 35 (1863) 415; C. B. CLARKE in Hook. f. Flor. Brit. Ind. 6 (1893) 538 et in Journ. Linn. Soc. 36 (1903) 223 et in Philipp. Journ. Sci. 2 (1907) 79; HAYATA Mater. Fl. Formos. (1911) 375.

Cyperus sesquiflorus var. *cylindricus* (NEES) KÜKENH. in ENGL. Pfl.-Reich Heft 101 (1936) 593.

Perennis, rhizomate lignoso abbreviato, culmo caespitoso 10–30 cm alto tenui obtuse triquetro laevi, basi tantum 2–3-foliato, vaginis basilaribus paucis aphyllis brunneis, foliis 2–3 mm latis culmum non excedentibus planis breviacuminatis, superne margine et subtus in costa tantum parce spinuloscabris demum laeviusculis, spicis 1–3 arcte conglomeratis sessilibus, bracteis 3 foliaceis patentibus suffultis, lateralibus plerumque abbreviatis, terminali oblongo-cylindrica vel oblonga 10–15 raro ad 7 mm longa ca. 5 mm lata dense multispiculata, spiculis albostramineis 2 mm longis compressis ovatis acutis unifloris, squamis membranaceis carinatis laevibus glabris impunctatis, late ovatis rectis rectimucronulatis, inferiore $\frac{1}{2}$ minore 9-nervi, superiore 5-nervi, achenio 1.5 mm longo elliptico compresso biconvexo opaco atrobrunneo punctulato, stylo $\frac{1}{3}$ mm longo profunde bifido.

Nom. Jap. Taito-kugu.

Hab. Formosa: Hokuto (fide B. HAYATA l. c.).

Riukiu: ins. Iriomote (G. KOIDZUMI).

2. *Kyllinga brevifolia* ROTTB.

Kyllinga brevifolia ROTTB. Descr. et Icon. (1773) 13, t. 4, f. 3; NEES in WIGHT l. c. (1834) 91; KUNTH Enum. Plant. 2 (1837) 130; STEUD. Synops. 2 (1855) 67; BECKL. in Linnaea 35 (1868) 424; C. B. CLARKE in HOOK. f. Flor. Brit. Ind. 6 (1893) 588; et in Journ. Linn. Soc. 36 (1903) 223 et Illustr. Cyperac. (1909) t. 1, f. 1–4; HAYATA Enum. Plant. Formos. (1906) 479; MATSUM. Ind. Plant. Japon. 2:1 (1905) 154; NAKAI in Bot. Mag. Tokyo 26 (1912) 205; MIYABE et KUDO Flor. Hokk. a. Saghal. 2 (1931) 196; HONDA in Bot. Mag. Tokyo 47 (1933) 296, var. *gibbosa* HONDA; ROSHEV. in KOMAR. Flor. URSS. 3 (1935) 25; KITAG. Lineam. Fl. Manshur. (1939) 122.

? *Kyllinga monocephala* (non ROTTB.) THUNB. Flor. Japon. (1784), 35, specim. in Herb. Upsal. deest, fide G. KOIDZUMI.

Cyperus brevifolius (ROTTB.) HASSK. Cat. Hort. Bog. (1844) 24; KÜKENHH. in ENGL. Pfl. Reich. Heft 101 (1936) 600.

Kyllinga intermedia var. *oligostachya* C. B. CLARKE in Journ. Linn. Soc. 36 (1903) 224.

Kyllinga kamtschatica MEINSH. in Acta Hort. Petrop. 18 (1901) 229; ROSHEV. l. c. (1935) 25.

Rhizomate longe repente ramoso, vaginis membranaceis cincto, culmis dense vel remotiuscule dispositis erectis tenuibus mollibus 7–30 cm altis laevibus triquetris basi tantum 2–3-foliatis, vaginis basilaribus membranaceis aphyllis paucis brunnescentibus saepe purpureostriolatis, foliis culmo brevioribus planis 2–3 mm latis margine et subtus in costa tantum superne spinuloscabris demum laeviusculis, apice acuminatis, spica simplici (rarius 2–3) globosa vel ovatoglobosa 5–10 mm longa dense multispiculata chloroleuca vel parce stramineosuffusa, bracteis 3 foliaceis inaequilongis suffulta, spiculis 3–3.5 mm longis oblongo-lanceolatis compressis unifloris, squamis membranaceis carina spinulosa vel rarius laeviuscula cinctis, apice plerumque excurrentibus in cuspidem recurvum, albidis vel rubromaculatis rarius stramineofulvidis, inferiore paullo brevior 7-nervi, superiore 5-nervi,

achenio $\frac{1}{2}$ squamae aequante brunneo obovato punctulato, stylo longiusculo profunde bifido.

Nom. Jap. Aida-kugu, Taiwan-hemekugu.

Hab. Formosa: Tamsui (U. FAURIE n. 185), Musha (E. MATUDA), sine loco (U. FAURIE n. 808), Bunkiko (U. FAURIE n. 226) Takkiri in Taihokushu (S. KITAMURA n. 1802), Sankyaku in Taihokushu (E. KUROSAWA), m. Taiheizan in Taihokushu (J. OHWI n. 2211), Daijuri in Takaosha (J. OHWI n. 476), Rato, (Y. SHIMADA n. 5464).

Riukiu: ins. Iriomote (Y. DOI), Nakagusuku, ins. Okinawa (S. TAWADA n. 9), ins. Tokunoshima (H. OHBA), ins. Yakushima (G. KOIDZUMI).

Kiushiu: Shimazakimura in Higo (H. KODZUMA).

Shikoku: Kochi (T. YOSHINAGA; I. OKUBO).

Hondo: ins. Bonin (TOYOSHIMA), Kyoto (N. KINASHI), Gotomura in Totomi (G. HASHIMOTO), Tottori (K. SHIGOMOTO).

var. *leiolepis* (FRANCH. et SAVAT.) HARA in Journ. Japan. Bot. 14 (1938) 339.

Kyllinga monocephala var. *leiolepis* FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 108.

Kyllinga brevifolia var. *gracillima* (MIQ.) KÜKENTH. in Act. Hort. Gothoburg. 5 (1929) 107 et in Sinensia 3:3 (1932) 79.

Kyllinga gracillima MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1965) 142.

Cyperus brevifolius var. *gracillimus* (MIQ.) KÜKENTH. in ENGL. Pfl.-Reich, Heft 101 (1936) 603.

Spiculis paullo latioribus inflatoribus et apice obtusioribus lucidulis, squamis tenuiter nervosis crassioribus, carina laevissima apice recto vix mucronata a typo diversa.

Nom. Jap. Himekugu.

Hab. Korea: Ranan (R. SAITO n. 218, 239, 1531, 1532), Gensan (U. FAURIE n. 3 et 4; S. KITAMURA n. 1954), Seiko (T. SAKATA), ins. Quelpaert (U. FAURIE n. 1404; E. TAQUET, n. 711, 2131), Chemulpo (U. FAURIE n. 1400), Kinzanmen in Kokogun, Zennan (K. HINO).

Kiushiu: Tsutamimura in Buzen (T. YAMAZAKI), Oomura in Higo (K. MAYEBARA), Okushimura in Hizen (T. CHIBA).

Hondo: Takamura in Ohmi (CH. HASHIMOTO), Aomori (U. FAURIE n. 7217), m. Mayasan (U. FAURIE s. n.), Akaho in Shinano (H. SUZUKI), Matsudo in Shimoosa (J. OHWI), Kyoto (N. KINASHI; J. OHWI), Tajimi in Mino (K. SHIODA), Onomichi (U. FAURIE n. 11567), Tanabu (U. FAURIE n. 4662).

Yezo: Monbetsu (U. FAURIE n. 1007), Hakodate (U. FAURIE n. 3339).

3. *Kyllinga monocephala* ROTTE.

Kyllinga monocephala ROTTE. Descr. et Icon. (1773) 13, t. 4, f. 4; KUNTH Enum. Plant. 2 (1837) 129; STEUD. Synops. 2 (1855) 67; BECKLER. in Linnaea 35 (1863) 427; C. B. CLARKE in Hk. f. Fl. Brit. Ind. 6 (1893) 583 et in Journ. Linn. Soc. 36 (1903) 244 et in Philipp. Journ. Sci. 2 (1907) 77 et Illustr. Cyperac. (1909) t. 2, f. 1-2; MATSUM. Ind. Plant. Japon. 2:1 (1905) 155 incl. var.; HAYATA Enum. Plant. Formos. (1906) 479; NAKAI in Bot. Mag. Tokyo 26 (1912) 203.

Cyperus Kyllinga ENDL. Cat. Hort. Ac. Vind. 1 (1842) 94; KÜKENTH. in ENGL. Pfl.-Reich Heft 101 (1936) 6061.

Scirpus cephalotes (non LINN.) JACQ. Hort. Vind. 1 (1770) 42.

Rhizomate longe repente ramoso, culmis caespitosis vel paullo distan-

tibus 10-40 cm altis triquetris laevibus tenuibus basi tantum 2-3-phyllis, vaginis basilaribus aphyllis paucis tenuimembranaceis brunneis, foliis culmo brevioribus planis flaccidis 2-4 mm latis abrupte acuminatis margine et in costa subtus tantum superne spinuloso-scabris demum laeviusculis, spica simplici ovatoglobosa dense et multispiculata albescente 5-10 mm longa, basi bracteis 3 foliaceis stipata, spiculis compressis obovatis 2.5-3 mm longis, unifloris, squamis naviculatooblongis subrecurvatomucronulatis albidis et rubropunctulatis, dorso supra medium usque fere ad apicem ala crassiuscula margine ciliatoscabra cinctis, inferiore sub-7-nervi, superiorem subtrinervem aequante, achenio $\frac{1}{2}$ spiculae aequante oblongo compresso brunneo opaco punctulato, stylo longiusculo tenui apice bifido.

Nom. Jap. O-himekugu.

Hab. Formosa: Taroko (M. TATEWAKI et S. KITAMURA), Tainan (S. SHIMADA n. 4461), Maruyama, urbe Taihoku (S. NAGASAWA), prope Chippon in Taitocho (J. OHWI n. 1355), Sangokei, Takaoshu (S. OKAMOTO).

Riukiu: ins. Miyako (G. KOIDZUMI; Y. NAKAZONE), ins. Okinawa (G. KOIDZUMI; S. SAKAGUCHI; Y. SHIMABUKURO).

Gen. 19. *Lipocarpa* R. BR. (nom. conserv.)

Lipocarpa R. BR. in Tuckey, Congo (1818) 459; KUNTH, Enum. Plant. 1 (1837) 266; STEUD. Synops. 2 (1855) 129; BUCKLER in Linnaea 37 (1871) 114; BENTH. et HOOK. f. Gen. Plant. 3 (1883) 1054; ENGL. et PRANTL, Nat. Pflanzenfam. 2:2 (1889) 106; DALLA TORRE et HARMS, Gen. Siphon. (1900) 29; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 116.

Hypaelytrum VAHL, Enum. Plant. 2 (1806) 283 p. p.

Tung: ROXB. Fl. Ind. ed. Carey 1 (1820) 183 p. p.

Herbae annuae vel perennes, culmis praeter basin nudis, foliis confertis elongatis, spiculis saepe 3-5 in capitulo bracteato terminali collectis raro solitariis parvis dense multifloris infima interdum vacua excepta omnibus floriferis, floribus hermaphroditis, glumis undique imbricatis, prophyllis (vel squamulis hypogynis) 2 glumae parallelis hyalinis, staminibus 1-2, stylo cum ovario continuo basi haud incrassato, tenui, ramis 2-3, achenio anguste oblongo compresso erostrato, inter prophyllis persistentes incluso.

1. Planta firmior, culmi 20-50 cm alti, folia 2-4 mm lata, spiculae 4-7 albae nec comosae, squamae oblanceolato-cuneatae, apice subtruncato breviter obtuse recto-cuspidatae, achenia anguste oblonga, staminum antherae lineares.

L. senegalensis.

1. Planta mollis, culmi 5-30 cm alti, folia fere filiformia, usque ad 2 mm lata, spiculae ca. 3 pallide virides et saepe fuscousanguineo-tinctae comosae, squamae oblanceolatae sursum sensim acuminato-cuspidatae, cuspidate excurvo, achenia lanceolato-cylindrica, staminum antherae oblongae.

L. microcephala.

1. *Lipocarpa senegalensis* DANDY

Lipocarpa senegalensis (LAM.) DANDY in Journ. Bot. 70 (1932) 331.

Scirpus senegalensis LAM. Tabl. Encycl. 1 (1791) 140.

Lipocarpa argentea (VAHL) R. BR. in Append., Tuck. Congo (1818) 459; KUNTH,

Enum. Plant. 2 (1837) 266; STEUD. Synops. 2 (1855) 129; C. B. CLARKE in Hook. f. Fl. Brit. Ind. 6 (1893) 667 et in Journ. Linn. Soc. 36 (1903) 257; MATSUM. Ind. Japon. 2: 1 (1905) 155; MATSUM. et HAYATA, Enum. Plant. Formos. (1906) 487; KOORDERS, Exkursionsfl. Java, 1 (1911) 183; E. G. CAMUS in LECOMTE, Flor. Génér. 7 (1912) 143; MERR. Enum. Philipp. Fl. Pl. 1 (1922) 102.

Hypaelyptum argenteum VAHL, Enum. Pl. 2 (1806) 283.

Rhizomate vix evoluta, culmis caespitosis strictis obsolete trigonis 20-50 cm altis nudis basi tantum foliatis, foliis involutis vel planis rigidulis sensim attenuato-obtusulis inferne 2-4 mm latis culmo multo brevioribus, vaginis viridulis ore oblique fissis glabris, inferne rubrosanguinescentibus, capitula solitaria simplici angulatohemisphaerica, e spiculis 4-7 sessilibus ovatis obtusis teretibus albidis perdense multifloris 4 mm latis 5-8 mm longis composita, bracteis 2-3 demum deflexis capitulum multo superantibus, squamis oblanceolato-cuneatis membranaceis pallidis 1.5-2 mm longis concavis, lateribus saepe sanguineo-maculatis enervis, apice subtruncatis, e dorso anguste viridi vix carinato subtrinervi breviter obtuse recto-cuspidatis, achenio anguste oblongo stramineo obtuse trigono fere 1 mm longo leviter falcato abrupte mucronato, squamulis 2 pertenuimembranaceis squamas aequantibus late lanceolatis paucinervis involuto, stylo deciduo achenio breviora ad medium usque trifido, staminibus 2, antheris linearibus apiculatis.

Nom. Jap. O-hinjigayatsuri.

Hab.

Riukiu: ins. Amami-oshima (H. OHBA), ins. Okinawa (G. KOIDZUMI: T. KANASHIRO; S. SAKAGUCHI; Y. TAIRA), ins. Ishigaki (G. KOIDZUMI; E. TAKAMINE), ins. Iriomote (G. KOIDZUMI: DOI).

Formosa: Taito (fide MATSUMURA).

2. *Lipocarpa microcephala* (R. BR.) KUNTH

Lipocarpa microcephala (R. BR.) KUNTH, Enum. Plant. 2 (1837) 268; BENTH. Flor. Hongk. (1861) 388; MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 147; BOECKL. in Linnaea 37 (1871) 118; FRANCH. et SAVAT. Enum. Plant. Japon. 2 (1879) 120; C. B. CLARKE in Hook. f. Fl. Brit. Ind. 6 (1893) 668 et in Journ. Linn. Soc. 36 (1903) 257 et in Bull. Geogr. Bot. 14 (1914) 202; et in Philipp. Journ. Sci. 2 (1907) 109; MATSUM. Ind. Plant. Japon. 2: 1 (1905) 155; KOORDERS, Exk. Java, 1 (1911) 183; E. G. CAMUS in LECOMTE, Flor. Génér. Indochin. 7 (1912) 144; MERR. Enum. Philipp. Fl. Pl. 1 (1922) 102; KITAG. Lineam. Fl. Manshur. (1939) 122; SUZUKI et IIO in Journ. Japan. Bot. 16 (1940) 690.

Hypaelyptum microcephalum R. BR. Prodrum. Flor. Nov. Holl. (1810) 220.

Isolepis squarrosa (non ROEM. et SCH.) MIQ. in Ann. Mus. Bot. Lugd. Bat. 2 (1865) 211; FRANCH. et SAVAT. l. c. 2 (1879) 115.

Rhizomate nullo, culmis dense caespitosis tenuibus erectis 5-30 cm altis obtuse trigonis laevibus inferne paucifoliatis, foliis flaccidis planis vel conduplicato-involutis usque ad 2 mm latis saepe subfiliformibus culmo brevioribus, vaginis membranaceis brunnescentibus et interdum rubescentibus, capitulis parvis 5-8 mm latis solitariis saepe triangulatis 3-spicatis, bracteis 2 inaequalibus infima capitulum multo superantibus divergentibus, spiculis globoso-ovatis obtusis perdense multifloris 3-5 mm longis sessilibus,

squamis late oblanceolatis 1-1.3 mm longis glabris membranaceis pallidis et saepe fusco-sanguineovariegatis vix carinatis, dorso anguste viridi-subtrinervis, apice sensim angustatis in cuspidem laevem excurvum, achenio fere 1 mm longo lanceolato-cylindrico obtuse trigono straminescente punctulato, squamulis 2 achenio aequilongis pertenuimembranceis paucinervosis involuto, stylo $\frac{1}{2}$ achenium aequante tenui deciduo $\frac{1}{2}$ superne trifido, staminibus 2, antheris minutis oblongis muticis.

Nom. Jap. Hinji-gayatsuri.

Hab.

Hondo; Aomori (U. FAURIE n. 1352), Ganju (U. FAURIE n. 13635), Onomichi (U. FAURIE n. 11567), Tsurugisan (U. FAURIE n. 13818), Sambongi (U. FAURIE n. 1472), Ariimura in (T. KOIDE), Hokunomura in Mino (K. SHIODA), Kyoto (S. MIKI; R. YOSHII), Onigajo in Kii (J. OHWI et M. TAGAWA n. 93), Tokura in Kotsuke (J. OHWI et M. TAGAWA n. 724), Ashiu in Tamba (S. OKAMOTO).

Shikoku: Gojomura in Iyo (T. IMAIDZUMI), Mikazuki in Tosa (I. OKUBO), Kochi (T. YOSHINAGA).

Kiushiu: Kikuchimura in Higo (S. TOKUNAGA), m. Fudo in Hizen (K. YAMASHITA).

Korea: ins. Quelpaert (U. FAURIE n. 1426; E. TAQUET n. 697, 2135), in arenis maritimis (U. FAURIE n. 952), m. Reigisan in Keiki (T. SAKATA), Basen in Keinan (S. OKAMOTO), Ranan (R. SAITO n. 1526), Suigen (T. SAKATA).

Riukiu: ins. Yakushima (Z. TASHIRO), ins. Okinawa (T. KANASHIRO).

Formosa: Kozan in Shinchikushu (Y. SHIMADA n. 4163).

Gen. 20. *Hypolytrum* C. L. RICH.

Hypolytrum C. L. RICH. in PERS. Synops. 1 (1805) 70; KUNTH, Enum. Pl. 2 (1837) 269; STEUD. Synops. 2 (1855) 131; BÜCKLER in Linnaea 37 (1871) 120; BENTH. et HOOK. f. Gen. Plant. 3 (1883) 1054; ENGL. et PRANTL, Nat. Pflanzenfam. 2: 2 (1879) 106; DALLA TORRE et HARMS, Gen. Siphon. (1900) 30; C. B. CLARKE in Kew Bull. add. ser. 8 (1908) 128.

Hypaeelyptum VAHL, Enum. Plant. 2 (1806) 283 p. p.

Hypoelytrum HBK. Nov. Gen. Plant. 1 (1815) 218.

Tunga ROXB. Fl. Ind. ed. Car. 1 (1820) 187 ex pte.

Albikia J. et C. PRESL, in C. PRESL, Rel. Haenk. 1 (1830) 184, t. 34, 35.

Herba perennis saepe valida, culmo foliato, foliis radicalibus et culmorum saepe elongatis planis, spiculis numerosis in paniculam irregulariter corymbosam bracteata dispositis pluri-multifloris, floribus omnibus hermaphroditis, glumis undique imbricatis inferioribus nonnullis minoribus vacuis, prophyllis (squamis hypogynis) 2 lateralibus complicatis, carina acuta saepe ciliatis, interdum connatis, setis hypogynis nullis, staminibus 3 vel paucioribus, stylo cum ovario continuo basi haud incrassato, deciduo, ramis 2-3, achenio duro obtusangulo vel compresso laevi vel irregulariter rugoso.

Species unica.

H. formosanum,

1. *Hypolytrum formosanum* OHWI

Hypolytrum formosanum OHWI, sp. nov.

Hypolytrum latifolium MATSUM. Ind. Plant. Japon. 2: 1 (1905) 153, non L. C. RICH.

Rhizomate brevi repente lignoso estolonifero, culmo ca. 60 cm alto tenui strictulo laevi obsolete striolato trigono subbifoliato basi conferte foliato, foliis culmum superantibus glaucoviridibus rigidulis planis 7-10 mm latis acuminatis, basi sensim angustatis interdum subconduplicatis, supra bi- subtus tricostatis glabris laevibus praeter margines costasque sursum juventute spinuloso-scabras, vaginis brunneocinnamomeis opacis antice cito fissis, anthela corymbosa ca. 10-spicata ca. 3 cm longa densa, bracteis 2, infima 4-5 cm longa lineari-lanceolata 5 mm lata erecta, sequente subse-
tacea anthelam vix superante, spiculis erectis pedunculo brevi scaberulo sustentis ellipticis 3-4 mm longis, squamis ellipticis brunneotinctis opacis dure membranaceis dense imbricatis uninervis perobtusis glabris 1.5 mm longis, squamellis (prophyllis) 2 tenuimembranaceis, inferioribus quam squamae parum brevioribus late ellipticis bicarinatis perobtusis, carinis ciliolatis, superioribus lanceolatis minutis, achenio immaturo fuscescente glabro compresso ovato.

Nom. Jap. Suge-gaya.

Hab. Formosa: Sekiteisho-Kanko in Taihokushu (S. HATUSIMA).

Addenda ad "Cyperaceae Japonicae 2"

Post p. 9, No. 7, *Scleria Onoei*, insere:

8. *Scleria mutoensis* NAKAI

Scleria mutoensis NAKAI in Journ. Japan. Bot. 18 (1942) 421.

Rhizomate tenui brevi vix lignoso, culmis tenuibus 20-40 cm altis triquetris glabris laevibus paucinodosis, vaginis laevibus triquetris exalatis vel in planta robustiore plus minus angulis alato-extenuatis 2-4 cm longis arctiusculis, inferne interdum parce rubentibus, ore antice convexiusculo pilosulo, laminis 1.5-3 mm latis 5-10 cm longis scabriusculis glabris margine scabris, paniculis partialibus 2-3 inter se valde distantibus, superioribus 1-2 sessilibus, reliquis longe exserte pedunculatis erectis 1-1.5 cm longis dense paucispiculosis, pedunculis superne pilosulis vel scabris, bracteis setaceis paniculas partiales saepe superantibus 1-2 cm longis, spiculis masculis paucissimis, femineis distiche 3-squamis 4-5 mm longis pallide ferruginescentibus, squamis ovato-triangularibus viridi-unicostatis, acuminatis vel cuspidatis carinatis, dorso superne scaberulis, lateribus ferrugineo-striolatis glabris, achenio griseo-albido nitido obtusissime trigono ovoideo laevissimo obsoletissime apiculato, 2-2.5 mm longo 1.7-2 mm lato, disco adpresso obtusissime trigono 1.5 mm diam. pallido, margine parum incrassato integerrimo, lobis (3) obsoletissimis obtusissimis, disco inferiore obtuse trigono discoideo. Pedunculis non arcuatis, achenio ovoideo laevissimo subtrigono a *S. Onoei* diversa.

Nom. Jap. Mutosan-shinjugaya.

Hab.: Korea: m. Mutosan in Zennan (K. CHO).

**Corrigenda et Addenda Graviora ad
"Cyperaceae Japonicae 1"**

Carex Ramenskii KOMAR. in FEDDE Repert. 13 (1914) 164; V. KREZ. in KOMAR. Flor. URSS. 3 (1935) 235.—*Carex salina* OHWI, Cyperac. Japon. 1, in Mem. Coll. Sci., Kyoto Imp. Univ. Ser. B, XI: 5 (1936) 285, n. 52.—*Carex subspathacea* WORMSK.; OHWI, l. c. 282, ex pte, quoad syn. *C. Ramenskii* tantum.

Carex aequalta KÜENTH.; OHWI, l. c. 293, n. 79.—adde Hab. Hondo: Shinkawa-machi in Owari (K. INAMI).

Carex angarae STEUD. Synops. 2 (1855) 190; V. KREZ. l. c. 270; PORSILD in Rhodora 41 (1939) 203.—*Carex norvegica* OHWI, l. c. (1936) 311, n. 79, non RETZ.

Carex flavocuspis var. *paramushirensis* (KUDO) OHWI, comb. nov.—*Carex Tolmiei* var. *paramushirensis* (KUDO) OHWI, l. c. 319, n. 89.

Carex flavocuspis FRANCH. et SAVAT, Enum. Japon. 2 (1879) 574.—*Carex Tolmiei* var. *denticulata* OHWI, l. c. 320, n. 89.

Carex Morii HAYATA; OHWI, l. c. 339, n. 108.—adde syn. *Diplocarex Matsudai* HAYATA, Icon. Plant. Formos. 10 (1921) 70, t. 47, et *Carex Matsudai* HAYATA ex MAKINO et NEMOTO, Fl. Jap. (1925) 1353.

Carex genkaiensis OHWI in Act. Phytotax. et Geobot. 7 (1938) 31.—*Carex formosensis* var. *vigens* OHWI, Cyperac. Japon. 1 (1936) 346, n. 113.

Carex sabynensis LESS.; OHWI, l. c. 352, n. 119.—dele *Carex lucidula*.—adde syn. *Carex recticulmis* FRANCH. in Bull. Soc. Philom. Paris, 8 sér. 7 (1895) 48 et *Carex* As. Orient. (1897) n. 191; LÉV. in Mém. Soc. Nat. Sci. Cherb. 35 (1905) 219.

Carex sabynensis var. *rostrata* OHWI, l. c. p. 353, n. 119.—dele syn. *Carex recticulmis*.—adde syn. *Carex lucidula* FRANCH. in Bull. Soc. Philom. Paris, 8 sér. 7 (1895) 48.

Carex jacens C. B. CLARKE in Kew Bull. add. ser. 8 (1903) 80 ex pte; AKIYAMA in Journ. Jap. Bot. 16 (1940) 217.—*Carex genkha* OHWI: OHWI, l. c. 357, n. 122.

Carex clivorum OHWI: OHWI, l. c. (1936) 361, n. 127.—adde Hab. Hondo: Ikedamura in Mino (K. SHIODA), Akazawa in Owari (H. KATO), m. Hongu in Mikawa (K. INAMI).

Carex dolichostachya HAYATA; OHWI, l. c. 375, n. 143.—dele syn. *Diplocarex Matsudai* HAYATA et *Carex Matsudai* HAYATA.

Carex lasiolepis FRANCH.; OHWI, l. c. 394, n. 193.—adde Hab. Hondo: m. Kongosan in Yamato (Y. MURATA), et Kiushiu: m. Inugatake in Bungo (Y. NABESHIMA), et dele specim. korean.

Carex holotricha OHWI in Act. Phytotax. et Geobot. 7 (1938) 131.—*Carex lasiolepis* (vix FRANCH.) OHWI, Cyperac. Japon. 1 (1936) 394, n. 163, quoad pl. korean.

Carex poculisquama KÜENTH.; OHWI in Act. Phytotax. et Geobot. 6 (1937) 149. Nom. Jap. Akane-suge. Hab. Hondo: Akiyoshidai in Aki (Y. IREGAMI); m. Iwafune in Shimotsuke (H. SEKIMOTO).

Carex karafutoana OHWI, nom. nov.—*Carex lanceolata* var. *laxa* OHWI, Cyperac. Japon. 1 (1936) 402, n. 171.—*Carex floribunda* MEINSH. in Act. Hort. Petrop. 18 (1901) 402, excl. syn.

Carex dissitispicula OHWI in Act. Phytotax. et Geobot. 7 (1938) 35.—*Carex kujuzana* OHWI, Cyperac. Japon. 1 (1936) 422, quoad pl. korean.

Carex cruciata WAHL.; OHWI, l. c. (1936) 460, n. 232.—adde Hab. Kiushiu: Nagauramura in Hizen (T. CHIBA; T. BABA).

Carex ligulala NEES; OHWI, l. c. (1936) 504, n. 271.—adde syn. *Carex brunnea* var. *pallidior* MIQ., fide FRANCH. Carex. As. Orient. (1898) n. 245.

Post n. 273, pag. 498, insere :

173 b-, **Carex Nakasimae** OHWI

Carex Nakasimae OHWI, sp. nov. (*Physocarphae*).

Rhizomate longe tenuiter stolonifero, culmis tenuibus erectis trigonis sursum scabris, basi non incrassatis, foliis culmum subsuperantibus planis rigidiusculis sursum longe attenuatis crebre scabris septato-nodulosis viridulis 2-3 mm latis, supra bicostatis, vaginis basilaribus rigidulis rubescentibus brachyphyllis vel partim subaphyllis, reticulato-fibrillosis striatis, spiculis 4-5 erectis, superioribus 2 masculis linearibus 3-4 cm longis 2-2.5 mm latis laxiuscule plurifloris, inferiore breviori sessili ebracteata vel breviter setaceo-bracteata, inferioribus 2-3 femineis oblongis remotis erectis sessilibus vel brevipedunculatis (et basi laxius floratis) dense multifloris 3-5 cm longis ca. 10 mm latis, bracteis foliaceis culmum aequantibus basi evaginato, squamis femineis anguste oblongis albo-hyalinis partim saepe rubro-suffusis, e dorso viridi cuspidatis, masculis anguste oblongis obtusis margine hyalinis partim rubro-suffusis, costa ante apicem evanescente, utriculis ascendentibus squamas plus duplo superantibus lanceolatis tenuiter plurinervosis lucidis straminescentibus vel pallide viridibus, imprimis marginibus a medio sursum scabridulis 8-9 mm longis inflatis dure membranaceis, basi cuneatim angustatis, apice sensim attenuatis in rostrum rectum angustum longiusculum, ore profunde bifidum, cruribus arcuatis ascendentibus tenuibus scabris ca. 2.5 mm longis subulatis, stylo tenui, stigmatibus 3 breviter exsertis. Habitu *C. vesicariae* LINN., utriculis angustis, cruribus elongatis arcuatis valde distincta. Utriculorum forma similis *C. Michauxianae* BÖCKL., a qua diversissima habitu, stolonibus elongatis, bracteis evaginato, utriculis lucidulis minus nervosis, cruribus magis elongatis arcuatis.

Nom. Jap. Hashinaga-suge (K. NAKASIMA).

Hab. Korea : Kwazan in Keikido (K. NAKASIMA).

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Yagara	110		caespitosum	98	
yokoscensis	36		subcapitatum	100	
yokuhamensis	37		Trichophyllum	29	
Scleria	4		Triodon	15	
caricina	3		Tunga	166, 168	
coreana	8		Vincentia	10	