

**Studies on the Genus *Atheta* THOMSON and Its Allies
(Coleoptera, Staphylinidae)**

IV: Three New Species from Japan

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***Atheta (Datostiba) nikkoana*, n. sp.**

Fig. 1

Male: Ground colour dark brown to black, weakly shining; fore-parts uniformly pigmented, but the abdomen is brown towards the basis; antennae evenly blackish and legs are slightly paler in colour. Body is narrowly elongate. Head is small for the corpus, weakly convex above and with a faint depression along the middle; the surface is beset with numerous rough granules throughout. Cervical carina is clearly diverged. Antenna is long; segm. I is stout compared to II; III is apparently short; IV is much smaller than V; IX, X are moderately wider than long, while XI is long, fully as long as 2 precedings together. Labrum (Fig. A) is emarginate in front; *p-1* is widely separating from medial row of setae, but *m-2* is close to distal row; 2+2 secondary setae are present. *a*-sensilla of labral margin (Fig. B) is setaceous, converging and broad basally; *b* is truncate, *c* is rather pointed at apex. Mandibles are narrowly elongate and gently curved to form a weak apical hook; the right mandible (Fig. C) has a toothlet in the middle. On labial palpus (Fig. D) setula *α* is normal, *β* is on the level of *tp* and *γ* is very close to *b*; *δ* is on the level of *g*; *a* is on the same level with *b*, *e* is clearly anterior to *f*, and on the level of *mp*; segm. III is fairly dilated apically. Glossa (Fig. E) is long, forked from the middle into two nearly fusiform arms. Median area of prementum (Fig. E) fairly contiguous posteriorly and with several large pseudopores. Lateral area has up to 4 pseudopores and the posterior real pore is separating from the median area. Mentum (Fig. F) is clearly emarginate in front; *v* is situated close to *u*. Pronotum is gently convex above, with a faint depression along the middle; the side are broadly rounded in front and weakly narrowed behind; the lateral erecting setae are relatively long; the surface is much more finely granulated than on the head; secondary setae along the middle are directed anteriorly. Elytron is apparently short and weakly emarginate postero-externally. Flabellum of hind wing (Fig. G) bears 3 long and 2 short setae. Macrochaetal arrangement as 02-03-13-13-13-33-. Abdominal tergites with fine granules. Terg. VIII (Fig. H) is with 4 obtuse teeth; the external ones are a little larger than the others. Among 4+4 major setae *a-2* is strongly anterior to the level of *a-1*; *p-1* is less distinctly shorter than others; microsculpture is imbricate in pattern. Stern. VIII is acuminate posteriorly. Median lobe of aedeagus (Fig. I) is 0.24 mm

long; in ventral view the apical lobe is more or less spatulate and with a broadly rounded apical margin; in lateral view the apical lobe is stout and its ventral margin is gently convex behind the middle and then deeply constricted basally. Costa *ar. c.* are extremely remote from each other and distinctly recurved to form a thin ventral plate (*p*); *m. c.* is nearly completely reduced, and *p. c.* is short. From the inner armature of aedeagus the copulatory piece (Fig. J) is broad, with a short apical process, which is gently raised upwards; there is a long, filiform dorsal pick on each side, fairly effaced posterior-

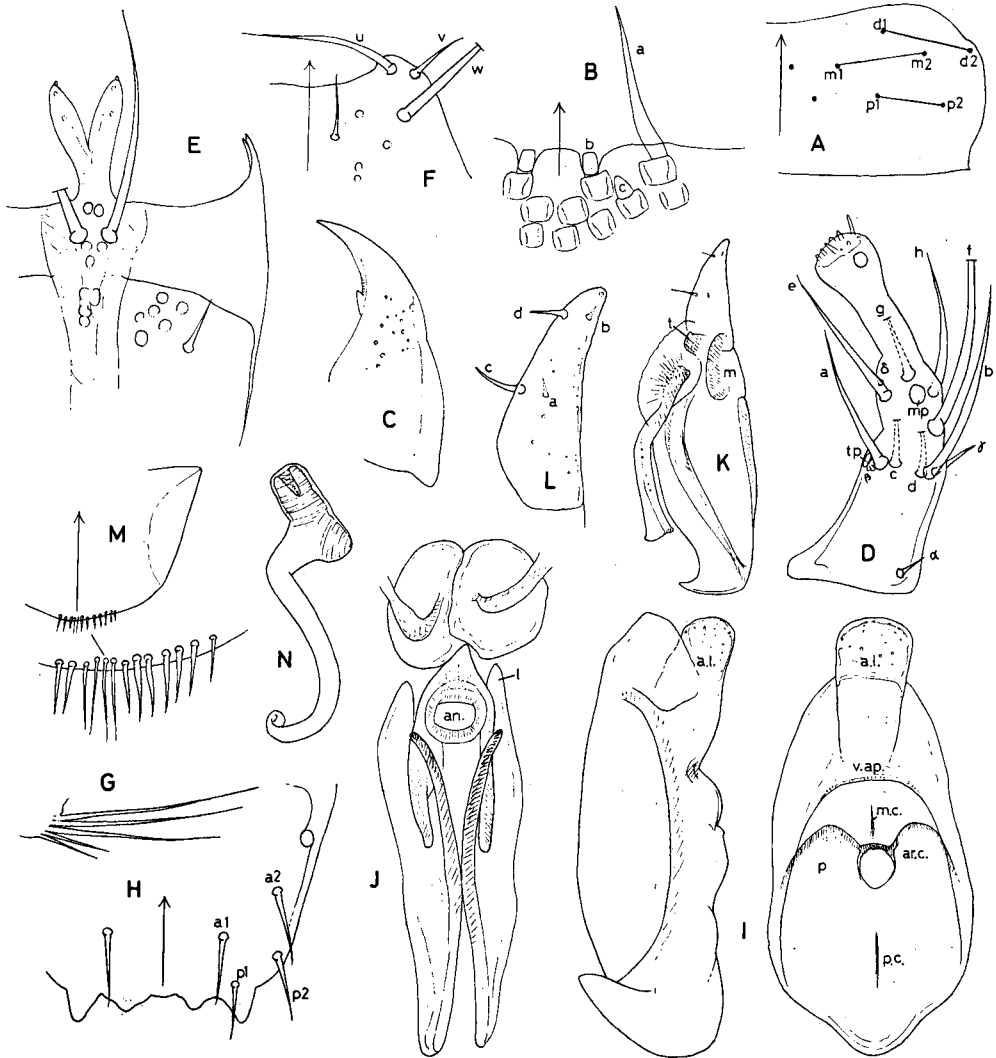


Fig. 1. *Atheta (Datostiba) nikkoana*, n. sp. A: Labral chaetotaxy. B: Labral margin. C: Right mandible. D: Labial palpus. E: Glossa & prementum. F: Mentum. G: Flabellum. H: ♂ terg. VIII. I: Median lobe. J: Inner armature of aedeagus. K, L: Lateral lobe & its distal segment. M: ♀ stern. VIII. N: Spermatheca.

ly; lateral to the corpus there is a very thin lobe (*l*) to be regarded a suspensorium. Distal apodeme is consisting of large, rounded, thin plate standing side by side. Lateral lobe (Fig. K) has distal part of the proximal segment converted to an elongated, strong sclerite, whose apex is fairly wide. Anterior to it there is a thickening (*t*) derived from the outer margin of the medial segment. Middle apodeme (*m*) is elongate alike to that of *A. lewisiana* CAM. Distal segment (Fig. L) is fairly elongate and lightly deflected distally; among 4 major setae *a* is strongly reduced to a setula and on the level of *c*; *b* is also minute and close to *d*; *c*, *d*. are on the inner margin of the segment, but they are far apart from each other.

Length. ca. 2.0 mm (Head 0.24 mm long $\times$ 0.32 mm wide; pronotum 0.28 mm $\times$ 0.40 mm; elytra 0.30 mm $\times$ 0.50 mm).

Female: The posterior margin of terg. VIII is weakly emarginate in the middle, and stern. VIII (Fig. M) is not emarginate, but fringed with a row of short and long marginal setae. Spermatheca (Fig. N) is very similar to that of *lewisiana* CAM., having rectangular bursa with elongate umbilicus, and the curved duct terminating in very small coil.

Holo-(♂), allo- and paratypes (2♂, 3♀): TOCHIGI: Kōtoku Marsh in Nikko (ca. 1500 m alt.) (10. X 1977, K. SAWADA leg.)

Other specimens examined: NAGANO: Kumanoyu in Shiga-Heights, 4♂, 6♀ (5. VII 1972, R. YOSHII et K. SAWADA).

In many respects, particularly in the shape of spermatheca, this species is closely allied to *A. lewisiana* CAM., but clearly distinguishable in the costation of the median lobe and inner armature of aedeagus, the latter having long dorsal picks.

Atheta (Datostiba) poroshirica, n. sp.

Fig. 2

Male: Dark brown to black in glycerol; head and pronotum are uniformly pigmented, but elytra are tinged with brown and abdomen is obscurely paler basally; antennae are evenly blackish, but legs are paler in colour. Body is small and nearly parallel. Head is gently convex and broadly flat above, with a feeble depression in the middle, which is becoming deeper posteriorly; the surface is with numerous coarse granules except nearly glabrous central area. Eyes are moderate in size; post-genae are laterally convex and with some conspicuous setae. Antenna is gradually dilated distally; segm. I is robust as usual; II is much narrower and III is long in relation to II; IV is as long as wide and similar to V in form and size; VIII to X are slightly broader than long; XI is short. Cervical carina is normally diverged. *p-1* of labrum (Fig. A) is clearly anterior to the level of *p-2*; *m-2* is separating from the distal row of setae; 2+2 secondary setae occur. *a*-sensilla of labral margin (Fig. B) is broad at base, converging; *b* is truncate at apex, and *c* is small and pointed. Mandibles are short and briefly hooked at apices; the right mandible (Fig. C) has a toothlet. Peculiarly the distal half of the mandibles is obviously bright in colour when compared to the proximal half. Segm. III of maxil-

lary palpus (Fig. D) is normally dilated; IV is subulate and long in relation to III. Galea has a large distal lobe bearing many long and short cilia. Lacinia is abruptly dilated, with 2 isolated teeth on the inner margin. On labial palpus (Fig. E) α is normal, but β is lightly posterior to tp and γ is a little anterior to b ; δ is longer than usual; a is on the same level with b , but e is anterior to f ; mp is subequal to tp in size; segm.

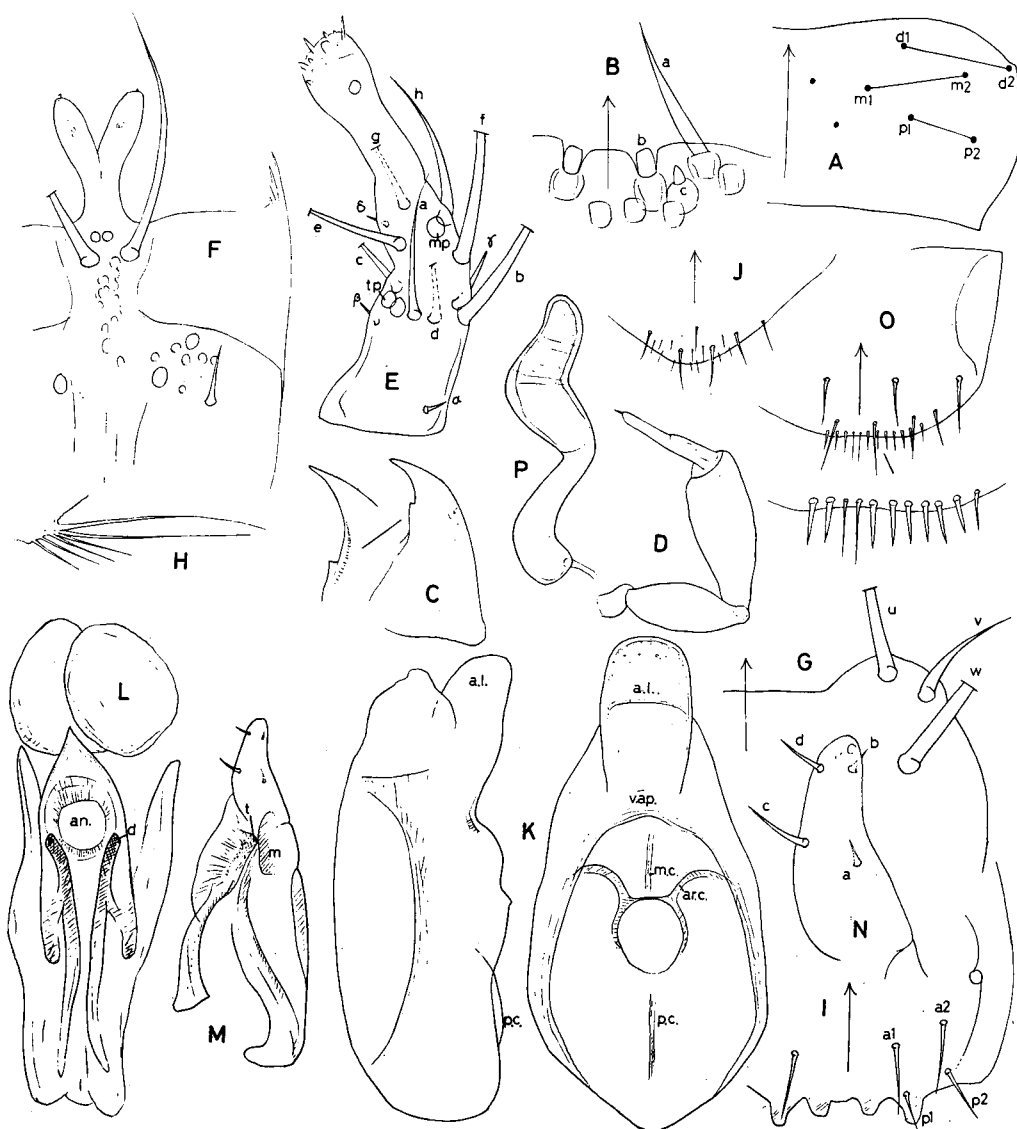


Fig. 2. *Atheta (Datostiba) poroshirica*, n. sp. A: Labral chaetotaxy. B: Labral margin. C: Right mandible. D: Maxillary palpus. E: Labial palpus. F: Glossa & prementum. G: Mentum. H: Flabellum. I: ♂ terg. VIII. J: ♂ stern. VIII. K: Median lobe. L: Inner armature of aedeagus. M, N: Lateral lobe & its distal segment. O: ♀ stern. VIII. P: Spermatheca.

III is long and abruptly dilated apically. Glossa (Fig. F) is narrowly elongate and forked to two more or less fusiform arms and with 2 basal pores approximate together. Median area of prementum (Fig. F) is broad and with some 10 large pseudopores, which are longitudinally arranged and partly contiguous to one another; lateral area has 1 setal, 2 real and 6 pseudopores, from which the posterior real pore is placed at the border of the median area. Mentum (Fig. G) is emarginate and with setula *v* normally long and close to *u*. Pronotum is weakly convex and with a fine depression along the middle; the sides are broadly rounded anteriorly and nearly straight in the posterior half, so that the posterior corner is well defined; lateral erecting setae are short, and the surface is much more finely, densely granulated than on the head; secondary setae on the middle are directed anteriorly. Prosternum may be raised and carinate in the middle. Elytron is similarly sculptured to the pronotum and faintly emarginate postero-externally. Flabellum (Fig. H) is with 2 long and 4 short setae. Macrochaetal arrangement of abdomen as 02-03-13-13-13-33-. Terg. VIII (Fig. I) has the posterior margin broadly truncate and modified with 4 short dentition, whose lateral tooth is subtruncate at apex and a little longer than the intermediates; among 4+4 major setae *p-1* is much shorter than others and *a-2* is far remote from the stigma; microsculpture in the middle is of imbricate. Stern. VIII (Fig. J) is briefly narrowed behind and without conspicuous marginal setae. Median lobe of aedeagus (Fig. K) is 0.28 mm long; in lateral view the apical lobe is short, gently convex in the middle; in ventral view the apical lobe is broadly rounded at apex. Costa *ar. c.* are separating to each other; *m. c.* is entire and raised to form a low projection; *v. ap.* is inconspicuous. Copulatory piece (Fig. L) is elongate and shortly acuminate. There is a well sclerotized dorsal pick (*d*) on each side, which are apically truncate and fairly prolonged behind. Large, round distal apodeme is present. From the lateral lobe of aedeagus (Fig. M) the distal part of the proximal segment is terminating in a thickening (*t*), whereas the medial segment is narrowly elongate and with a hooked basis; the middle apodeme (*m*) is rather narrow, while the distal segment (Fig. N) is becoming broad basally and lightly twisted distally; seta *a* is strongly reduced and posterior to the level of normally long *c*; *b* is also reduced and on the same level with *d*.

Length. ca. 2.0 mm (Head 0.25 mm long $\times$ 0.35 mm wide; pronotum 0.32 mm $\times$ 0.45 mm; elytra 0.35 mm $\times$ 0.57 mm).

Female: Terg. VIII is not modified, but stern. VIII (Fig. O) is broadly rounded behind and with the posterior margin fairly emarginate in the middle, where there is a row of similarly short marginal setae. Spermatheca (Fig. P) is characteristic: it is not coiled, but distinctly contorted; the bursa is fairly large, without umbilicus and the duct is short having a rounded end.

Holo- (♂), allo- and paratypes (2♂, 2♀): HOKKAIDO: Poroshiridake in Hidaka Mts. (ca. 2000 m. alt.), (25. VII 1972, R. YOSII leg).

In the gross feature of the spermatheca this species may be referable to the European *A. dadopora* (THOMSON, 1867) sensu LOHSE 1974, but the shape of terg. VIII of male is apparently different. With regard to the aedeagus including lateral lobe this species

is closely allied to the foregoing *A. nikkoana* n. sp., but the copulatory piece is longer and with broad dorsal picks. Lateral lobe is also different.

***Atheta (Microdota) inari*, n. sp.**

Fig. 3

Male: Reddish brown to brown in ground colour and weakly shining; head and pronotum are dark brown uniformly, but elytra are fairly reddish; abdomen is dark brown in most part. Antennae are reddish brown with lightly bright basal segments; legs totally paler. Body is narrow and subparallel. Head is small and suborbicular in outline and faintly sulcate on the middle; the surface is clearly granulated and distinctly sculptured to give an alutaceous appearance. Eyes are small for the rounded long postgenae. Cervical carina is diverged. Antenna is long and not dilated distally; segm. I is incrassate; II is much narrower; III is slightly shorter than II; IV is only longer than wide; V to X are as long as, or longer than, wide; XI is broad, shorter than 2 precedings together. Labrum (Fig. A) is entirely truncate in front; *p*-2 is on the level of *p*-1; *m*-2 is touching the distal row of setae; the proximal row is apparently short; 2+2 secondary setae are present. *a*-sensilla of labral margin (Fig. B) is normally setaceous and converging, but *b* is reduced and curved; *c* is inconspicuous. Mandibles are narrowly elongate and gently curved distally; the right mandible (Fig. C) has a toothlet smaller than usual and with serrulation on the inner margin. Maxillary palpus is 4-segmented; segm. III is more dilated than usual and IV is long. Galea with a large distal lobe and lacinia is abruptly dilated on its inner margin. Glossa (Fig. D) is short and forked to two short arms. Median area of prementum is normally broad and with a few pseudopores; in lateral area there are 2 real, 1 setal and up to 5 pseudopores. On labial palpus (Fig. E) β is close to *tp*; γ is on the level of *b*; δ is very close to *e*; *h* is on the same level with *mp*. Mentum (Fig. F) is fairly produced antero-externally and with the oblique margin; *v* is posterior to *u*. Pronotum is gently convex above, flat on the middle and then gradually depressed posteriorly; the sides are nearly straight and narrowed behind; the lateral erecting setae are long; the surface is similarly rough as the head. Prosternum is raised, but not carinate in the middle, while the mesosternum is prolonged to form an acute process and sharply carinate; metasternal process is distant from the mesosternal one. Elytron is longer than wide, not dilated behind and not emarginate postero-externally; the surface is less sculptured than on the pronotum. Flabellum is with 1 long seta. Macrochaetal arrangement as 01-02-12-12-12-34-. Abdominal tergites III to VI are fairly excavated at the basis. Secondary setae on terg. II to IV, and especially of III (Fig. G), are peculiar as they are directing medially, and not posteriorly as usual. Terg. VIII (Fig. H) is unmodified but broadly emarginate along the posterior margin; among 4+4 major setae *a*-1 is nearly on the level of *a*-2; microsculpture (Fig. I) is imbricate. Stern. VIII (Fig. J) is modified: there are 9+9 characteristically long major setae and those near the margin are 6 in number and directed horizontally. Median lobe of aedeagus (Fig. K) is 0.38 mm long; in lateral view the

apical lobe is directly produced and terminating in an obtuse apex and basally with a large, thin, triangular projection; in ventral view the median lobe is bulbous basally; apical lobe is rounded apically and with a knot of sclerite (*s*) on each side. Costa is well developed: *ar. c.* are raised proximally, approximate in the middle and then recurved distally forming a large ventral plate having some round markings; *v. ap.* is strong and entirely confluent to the stout framework of corpus, while *m. c.* is feeble on basal half; *p. c.* has a high projection. Copulatory piece (Fig. L) is narrowly elongate and ending in an acuminate apical process. Lateral to the corpus there is a narrow, heavily wrinkl-

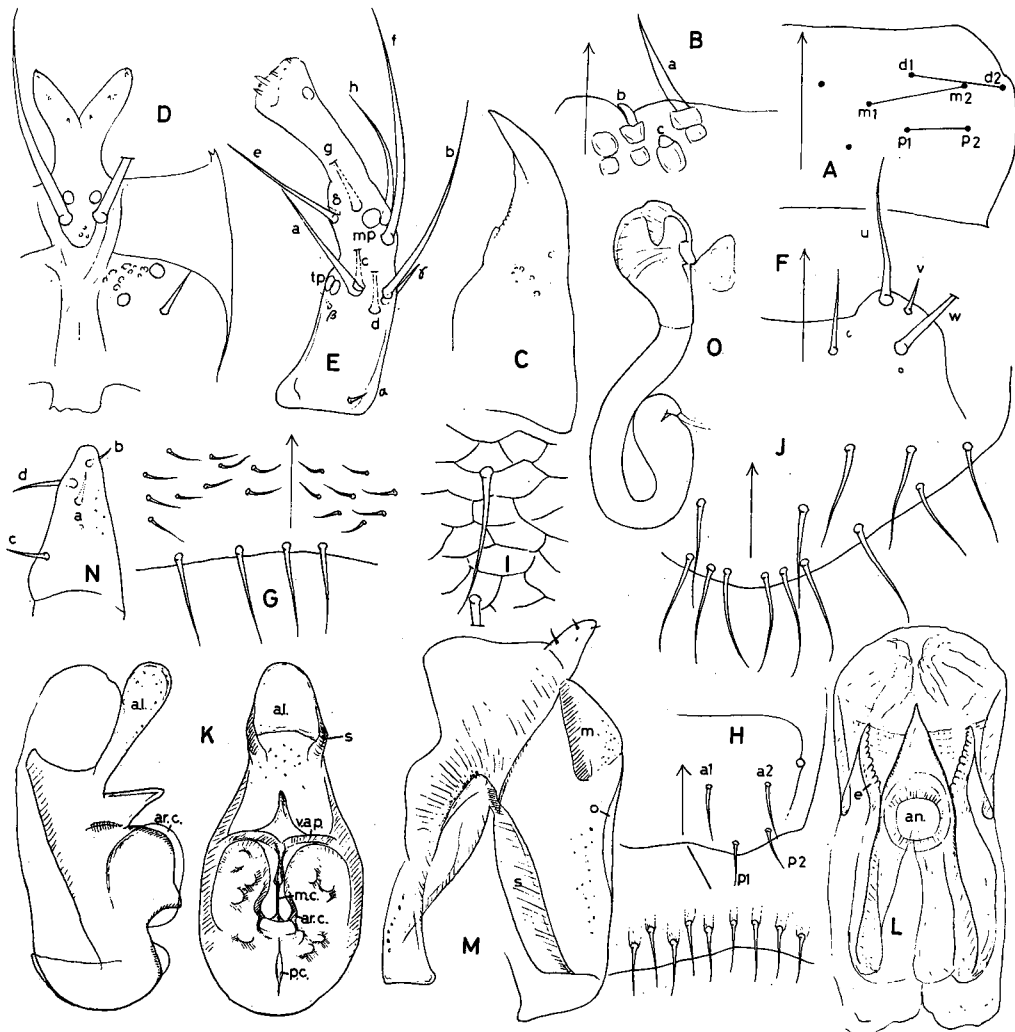


Fig. 3. *Atheta (Microdota) inari*, n. sp. A: Labral chaetotaxy. B: Labral margin. C: Right mandible. D: Glossa & prementum. E: Labial palpus. F: Mentum. G: Setae on terg. III. H: ♂ terg. VIII. I: ♂ stern. VIII. J: ♂ stern. VIII. K: Median lobe. L: Inner armature of aedeagus. M, N: Lateral lobe & its distal segment. O: Spermatheca.

ed body (*e*) which would represent the suspensorium. Distal apodeme is consisting of a large, distally curved, thin plate, whose apical part is fairly confluent to one another and with many corrugation. Vellum of lateral lobe (Fig. M) is deeply bisinuate with a stout proximal segment; outer margin of the medial segment (*o*) is narrow, but inner sclerite (*s*) is stouter than usual. Distal segment (Fig. N) is short for the corpus; setae *a*, *b* are strongly reduced and located distally, while *c*, *d*. are relatively long and widely separating.

Length. ca. 2.0 mm (Head 0.25 mm long $\times$ 0.29 mm wide; pronotum 0.30 mm $\times$ 0.35 mm; elytra 0.41 mm $\times$ 0.44 mm).

Female: Secondary setae of the proximal tergites are similar to the male; terg. VIII is alike to that of male. Stern. VIII is with similarly long setae as in the male, but they are 7 in number and not horizontally directed. Spermatheca (Fig. O) is elongate and coiled distally; bursa is rounded, with a large umbilicus.

Holo-(♂), allo- and paratypes (4♂, 6♀): KYOTO: Fushimi-Inari (9. XII 1972, R. YOSHII leg.).

Apically fused inner armature and large projection of median lobe of aedeagus are features peculiar to the present species. The body is narrowly parallel and fore-part of the body is roughly sculptured. Presence of many setae on abd. terg. VIII and pseudopores on the median area of prementum would indicate a special position of the species within *Microdota* and probably it would deserve a new subgenus of its own.

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