

Cyphoderid Collembola of Sabah¹⁾

Ryozo YOSHII²⁾

Staying in Sabah for more than two years attached to the Forest Research Centre in Sandakan, East Malaysia (=North Borneo), I have paid special attention to the termitophilous collembola abundant in the nest of various termites in the forest. They were now compiled in 6 species belonging to 3 genera altogether. This number is rather small for a tropical country where more than 100 species of termites are to be found. Certainly more species may be found in future, but it would not exceed the number already recorded from Africa and it is assumed that the centre of distribution of the family Cyphoderidae may be in Africa and India from where many peculiar forms are already known.

Hearty thanks are due to Datuk Martyn, the conservator of the Forest Department and to the staffs of the Sabah Forest Research Centre for their constant supports.

The family Cyphoderidae has been treated by various authors. The most comprehensive work is given by Delamare-Deboutteville, 1948, in which the West African species have been dealt with and some new genera were established. Later on Christiansen, 1957 has pointed out the necessary revision of two genera *Cyphoda* and *Serrodorus*. The present paper is to deal with the species of the family living in Sabah and to make trial how they may be classified from the new taxonomic point of view.

We know very little about the mouth parts of Cyphoderidae, but apparently the family may be divided into two groups, one of which has smooth prelabral setae (*Cyphoderus*, *Setoderus*, *Mimoderus*), while in the other they are barbed (*Pseudocyphoderus*, *Delamarerus*, *Cyphoderodes*...) which are rather advanced termitobionts than the first group. Inspection of the mouth parts in detail is desirable in the future works.

All examples I have collected in Sabah belong to the first group which has smooth prelabral setae and they may be divided into 3 genera in the following way:

1. Lateral flap of ventral tube with 2 setae each.....*Cyphoderus*
Lateral flap of ventral tube with more than 5 setae each.....2
2. Dens ventrally with round scales. Mucro multidentate. Tibiotaruss with a posterior row of smooth setae.....*Mimoderus* g.n.
Dens ventrally with narrow scales. Mucro tri- or quadridentate usually. Tibiotarsus without smooth setae*Setoderus*

During the course of the study some characters hitherto not used for the diagnosis have been adopted. First of all it is the mouth parts with labrum, mandible and

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2) Formerly, Riozo Yosii.

maxilla and even in such species as *M. saikehi* sp. n., which is not much modified in outlook its labrum and maxillar head are not normally built. Labial setae are also inspected, but they are either $mmre/1(1)$ or $m-re/1(1)$ and l_2 is vestigial or turned to the minute sensilla. On the head along the fore margin of the frontal area just near the antennal basis there is a row of macrosetae f_1-f_5 continuous from one side to another. The median $a-o$ is always turned to small sensilla and others are either smooth or barbed. The location of smooth ones among barbed setae was inspected, but the result is not constant there being many exceptional forms even in the examples from the same lot. Marginal setae of th. II is of some interest. In *Setoderus* spp. the median pair is longer than others. The form of unguis, unguiculus and trochanteral organ is not very interesting and the presence or absence of inner tooth of unguis is sometimes too difficult to observe properly. Tenent hair is spatulate or pointed apically according to species or sometimes variable. In *Cyphoderus* and *Mimoderus* the tibiotarsus of all legs are provided with smooth setae along the posterior face, while those setae are feathered in *Setoderus*.

Special attention has been paid to the ventral tube. Typically *Cyphoderus* spp. has 2 distal setae of the posterior face, while in other genera here treated there are 4 of them, although the plurichaetosis may appear very often. Lateral flap has only 2 setae in *Cyphoderus* and more than 5 in others. S.s. are distributed $1+1$ on the head and in 2,3,3, pairs on abd. II–IV respectively. The accessory scales are present together with macrosetae as in case of *Lepidocyrtus*. The typical arrangement of them is given in Fig. 2, on *S. sabahmus* sp. n., but I could not find any constant difference of their arrangement between the different species. Only in *Mimoderus* spp. the accessory setae of s.s.-2 of abd. II are more numerous than in *Setoderus* spp. The chaetal arrangement of abd. V and VI seems to have some significance, but I am not yet clear about this point. In *Mimoderus saikehi* m. however, the upper anal flap bears 1 long smooth seta and 3 of them on lateral flaps, while they are quite absent in *M. diusi* m. Dorsal side of manubrium may have some significance, but not easily to be investigated.

***Cyphoderus* Tullberg, 1871**

Genotypical Species: *Cyphoderus albinus* Nicolet, 1841

I have not yet investigated the European examples of the type species. Provided that my previous report from India (Yosii, 1966) of the genotype species is rightly identified the genus may be defined as follows.

The genus *Cyphoderus* has the peculiar arrangement of setae on the posterior face of the ventral tube. The distal setae are 2 in number compared to 4 of other genera treated here. Lateral flap has only 2 small setae instead of more than 5 setae of others. In the chaetal arrangement of dens the species belonging to *Cyphoderus* has a row of either smooth or plumose setae dorsally between the outer and inner row of feathered scales, while it is absent in others.

Since these features indicate the retarded state of chaetotaxy compared to other genera, it may be assumed the genus is rather well differentiated within the family.

Many species have been described already from various parts of the tropical and sub-tropical countries based on slight difference of unguis, unguiculus and of furca and all of them, especially the *albinus*-group with two mucronal teeth, must be groundly reviewed before we describe the new species with certainty. The following new species is also a provisorial and tentative one.

***Cyphoderus borneensis* sp. n.**

Fig. 1

Sepilok Forest (5 ex. 20. X 1979, Dius Tadong leg. In the Humus Layer of the Forest).

Body length up to 1.8 mm., white. ant.: head as 156 : 80. ant. segm. ratio as 16 : 52 : 28 : 70. Antennae with normal arrangement of sensillate elements. Labrum with setae 4/5.5.4, all smooth and median intrusion is broad. Labral margin without structures. Mandible and maxilla not modified. Labial setae as $m-e/1(1)$, so that there are fewer number of setae and l_2 is vestigial. Frontal setae as in Fig. 1B, where a is represented by small sensilla and f_2 is shorter than others. f_5 is smooth. Unguis is carinate, with one inner tooth and with a pair of basal teeth, the outer one of which is very large and broad. Unguiculus with a broad outer tooth. Tenent hair is blunt ending. Trochanteral organ is composed of ca 18 spiny setae. Ventral tube anteriorly with 2+2 slender smooth setae. Posterior face has typical arrangement of setae of the genus from which the proximal 5 setae (M, L-1 and L-2) are ciliate and accompanied with 2+2 or 3+3 small peg-like setulae. Lateral lobe bears 2 small setae each. Tenaculum normal. Furca in ratio as 10 : 5.6 : 3.0. Manubrium and dens are ventrally with many hyaline scales of equal form. Manubrium is dorsally with many ciliate and a few basal smooth setae, none of them are especially large nor clavate. Dens bears 6 feathered scaly setae of the outer row and 5 of the inner row, the most distal one of the inner row is the largest and attaining apically to 4/5 the mucro. There are 3-4 hirsute setae between them and besides 3 setae basally, one of which is smooth and others are hirsute. Mucro is elongate, bidentate apically and with a small lateral tooth.

The species is, without doubt, a near relative of *Cyphoderus javanus* Börner (sensu Yosii, 1966) and may be distinguished by the setae of the posterior face of the ventral tube. In this new species the proximal setae (L-1, 2 and M) are decidedly barbed, while they are smooth in the cited ones. Dorsal setae of dens are smooth in *C. javanus*, whereas they are ciliate in this new species. For the exact orientation of the *albinus*-group to which this species belongs, however, further researchers of various known species of the world must be made. The nearest ally may be *Cy. hrnyi* Rusek, 1971 from Canton, China in that the dorsal setae of dens are ciliate. But as the feature of the ventral tube is unknown, it is tentatively separated as a new species.

***Setoderus*, Yosii, 1959**

Genotypical Species: *Setoderus alfredi* Yosii, 1959

When I have established the genus by one single example from Singapore, I have not imagined that it is the representative of a large group widely distributed in the

termite nest of tropical countries. Actually the genus has the wide range of distribution and diverged specifically into number of species, each of which are separated only by trivial characters not easy to observe. As the diagnostic character of *Setoderus* to separate it from *Cyphoderus*, I have stressed the presence of setae on ventral side of

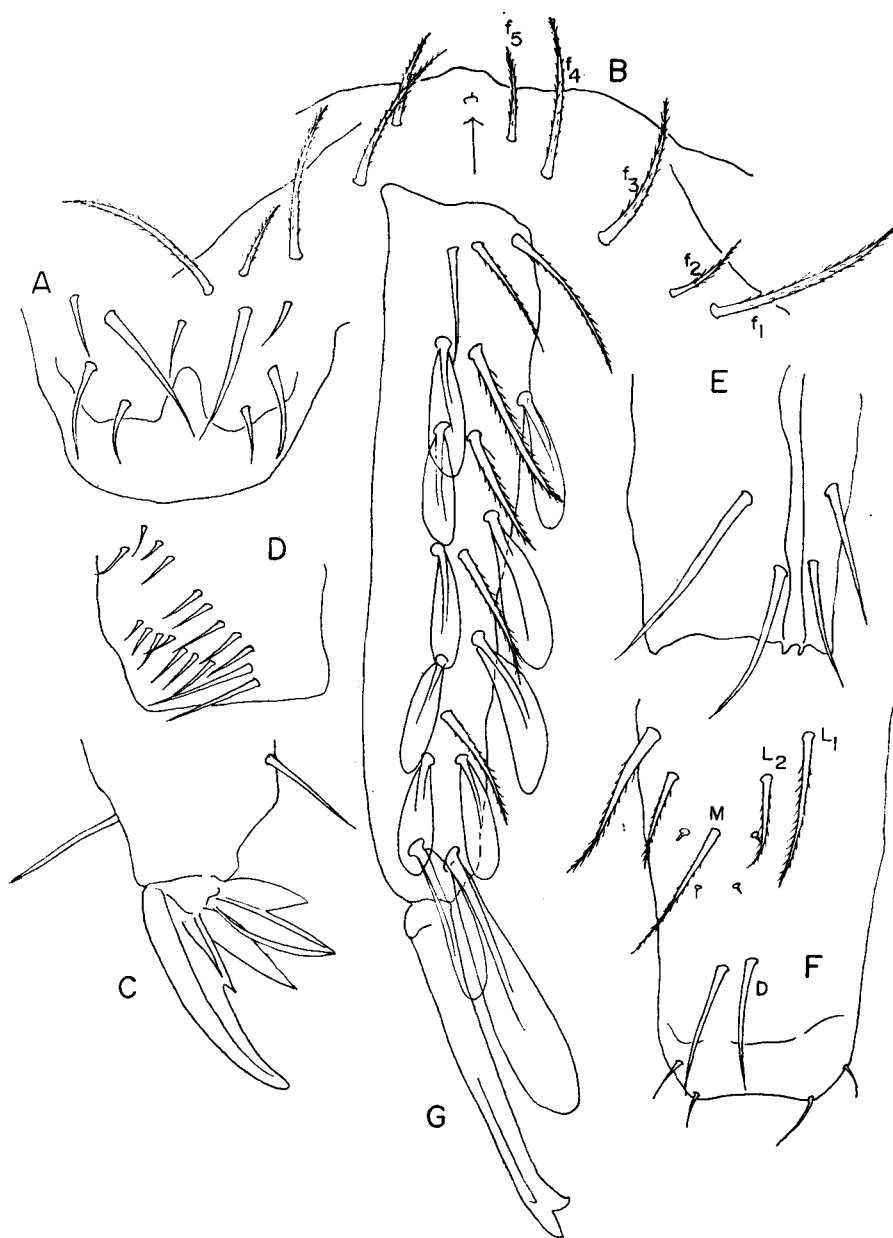


Fig. 1. *Cyphoderus borneensis* sp. n. A: Labral margin, B: Frontal setae, C: Hind claw, D: Trochanteral organ, E, F: Ventral tube, anterior and posterior face, G: Dens and mucro.

dens instead of scales. But actually, there are some other significant characters to separate them. First of all the difference of chaetal arrangement in the posterior face of the ventral tube is to be pointed out. Secondly dens of *Cyphoderus* spp. has some either smooth or ciliate setae between two rows of dental scales dorsally, while they are quite absent in *Setoderus*. Tibiotarsus bears many ciliate setae, but there are no smooth setae on the posterior face.

As the nearly related genus *Serroderus* Delamare, 1948 must be reckoned. But since this genus is established from other reasons, i.e. by the fewer number of dental scales of the inner row, the revision of the African type species, *C. distinctus* (Denis, 1942) is necessary before we conclude about the identity of them.

1. Ventral tube anteriorly with 2+2 setae.....*S. dicuspiditermitis* sp. n.
Ventral tube anteriorly with more than 5+5 setae.....2
2. Ventral tube posteriorly with all setae smooth.....3
Ventral tube with 5 basal setae barbed.....*S. alfredi* Yosii
3. Mucro quadridentate.....*S. sabahnus* sp. n.
Mucro tridentate.....*S. hozawai* (Kinoshita)

***Setoderus sabahnus* sp. n.**

Figs. 2, 3

Gum-Gum Plantation (33 ex. from the nest of *Nasutitermes* sp. in the fallen log of *Swietenia macrophylla*. 20.X 1979, R. Yoshii leg.), Sepilok (3 ex. 19. X 1979, Saikoh Lantoh leg.)

Body length up to 1.3 mm., white. ant.: head as 20 : 17. ant. segm. ratio as 30 : 55 : 32 : 90. Antennal characters as in others. Frontal setae are as in fig. 3D, where f_5 is smooth and others are barbed, but sometimes both f_4 and f_5 are smooth. a-o is turned to a sensilla. Labrum with setae as 4/5,5,4 all smooth and thickening is in horse-shoe form. Mandible with molar part well developed. Maxilla not modified. Labial setae as mmre/1(1), all smooth and l_2 is vestigial. Unguis is without inner tooth, but with unequally large basal teeth well developed. Unguiculus broad and with a large outer tooth. Tenent hair slightly spatulate on apex. Trochanteral organ is an assembly of ca. 12 spiny setae in a narrow V-shape. Tibiotarsus of all legs is without smooth setae on posterior face. Ventral tube anteriorly with ca. 6+6 smooth setae and posteriorly with typical arrangement of all smooth setae together with 3+3 peg-like setulae. Tenaculum normal. Furca in ratio as 50 : 35 : 18. Manubrium is ventrally scaled and dorsally with many smooth and with 3+3 or 4+4 large feathered setae arranged in two rows on its distal half. Dens converging, with 5 outer and 3 inner dental feathered scales, the terminal one of the inner row is the largest and attaining to half of the mucro. Outer row has one barbed seta and inner row has a small spiny seta proximally. Near the manubrial basis there are three small ciliate and one large barbed seta. Ventrally the dental scales are almost setose, the terminal one is elongate enormously. Mucro is quadridentate, not lamellate and with a faint lateral tooth.

Body chaetotaxy is as in fig. 2, where the presence of a pair of long feathered median setae on th. II is very conspicuous. Arrangement of s.s. is very constant, but the

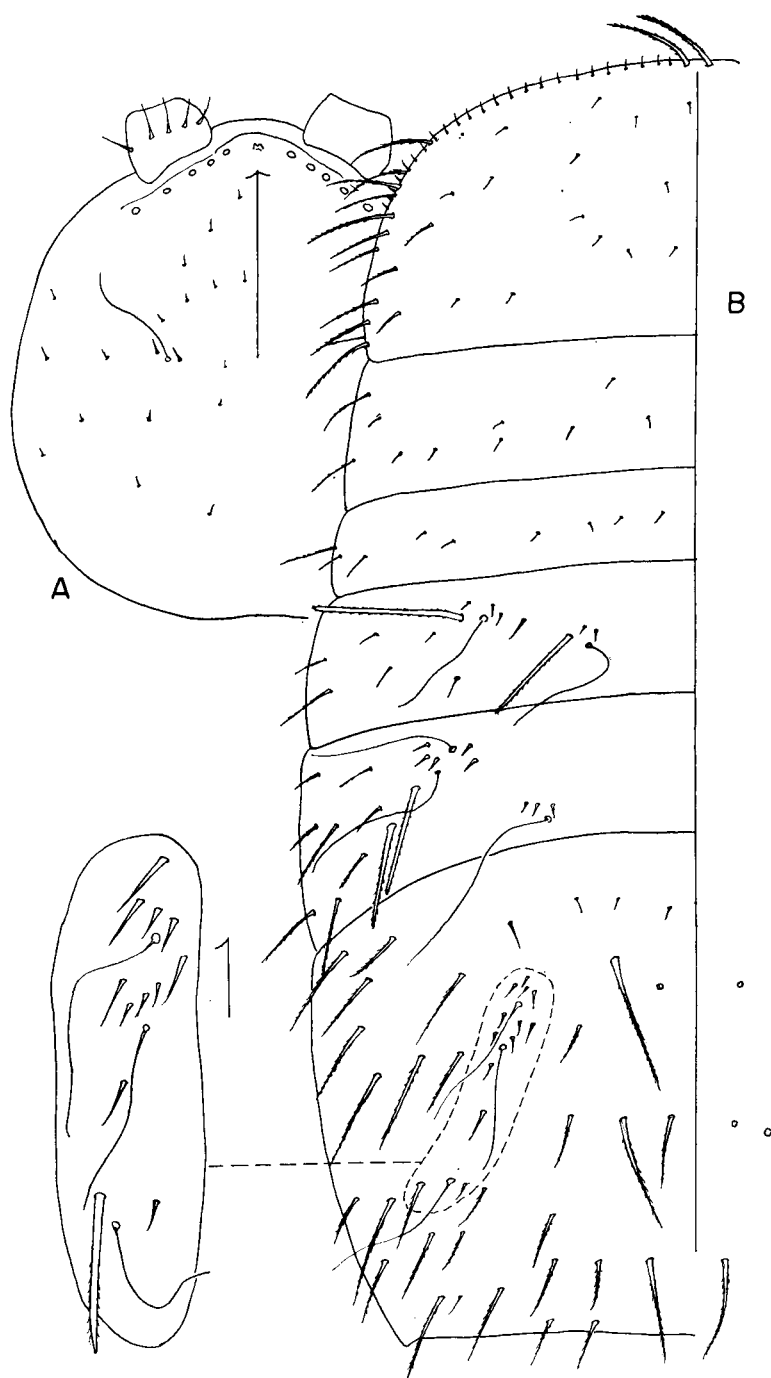


Fig. 2. *Setoderus sabahnus* sp. n. Chaetotaxy of the head (A) and trunk (B).



Fig. 3. *Setoderus sabahus* sp. n. A: Labrum, B: Maxilla, C: Labial setae, D: Frontal setae, E: Anterior marginal setae of th. II, F: Hind claw, G, H: Ventral tube, anterior and posterior face, I, J: Dens, dorsal and ventral view, K: Mucro.

distribution of accessory setae is a little variable. s.s. of the head has always two accessory setulae. On abd. II s.s.-2 has one or two of them on dorsal side. On abd. III s.s.-1 has often 4 acc. setae instead of usual 3 and there are always 2 macrosetae posterior to s.s.-3. Arrangement of acc. setae around s.s.-1,2 on abd. IV is almost constant.

This new species is allied to *S. alfredi* Ys., 1959 of Singapore. But in the cited species some of the setae (L-1,2 and M) on the posterior face of the ventral tube are barbed, while they are smooth in the present species. It is also alike to *C. tridenticulatus* Denis, 1948 of Vietnam. But this species has inner teeth of the unguis and with 4 dental scales of the inner row in the majority of individuals. Further researches of the cited species are to be made.

***Setoderus dicuspiditermitis* sp. n.**

Fig. 4

Sepilok Forest near Sandakan (66 ex. From the mound of *Dicuspiditermes* sp. on the ground. 21. X 1979, Dius Tadong leg.)

Body length up to 1.4 mm., white. ant.: head as 80 : 55. ant. segm. ratio as 10 : 23 : 18 : 32. Antennal characters as in other species here treated. Frontal setae as in figure, but f_5 may be either smooth or barbed. a-o is a small sensilla. Labrum with setae as 4/5.5.4. all smooth, and with broad intrusion. Mandible and maxilla not reduced. Labial setae as m-re/1(1), i.e. one seta is missing and 1-2 is vestigial. Th. II has small spiny marginal setae and median pair is large, but not so conspicuous as in *S. sabahnus* sp. n. and they are not feathered but blunt ending. Unguis with or without a large inner tooth and unequally large lateral basal teeth. Unguisculus broad and with a large outer tooth. Tenent hair distally inflated and truncate. Ventral tube has constantly 2+2 smooth setae anteriorly and with typical arrangement of setae posteriorly among which seta M is ciliate. Lateral lobe has 6 setae each. Tenaculum normal. Furca in ratio as 34 : 27 : 17. Manubrium is ventrally scaled and dorsally with setae arranged as in fig. 4F, where large feathered setae are almost clubbed distally. Dens tapering, with chaetal disposition as in fig. 4G, feathered dental scales are 5 in outer row and 3 in inner row as in *S. sabahnus* sp. n., but sometimes 6 in outer row or 2 in inner row asymmetrically. Mucro is quadridentate and with a faint lateral tooth. Body chaetotaxy is almost the same with *S. sabahnus* sp. n.

The species is very alike to *S. sabahnus* sp. n. to which it is very nearly located. However, it is decidedly different by the setae of the ventral tube. The specimens are found in the conical termite mound of *Dicuspiditermes* sp. on the forest floor in large numbers. Probably it is the special form symbiotic with it.

***Setoderus hozawai* (Kinoshita, 1917) comb. nov.**

Fig. 5

Cyphoderus hozawai: Kinoshita, 1917, Uchida, 1944, Gapud, 1971

Tenompok Pass (16 ex. From the Nest of *Coptotermes* sp. 19.X.1979, Saiekh Lantoh leg.), Sepilok Forest (13 ex. 22. X 1979, R. Yoshii leg.), Sepilok Forest (5 ex. 7. XI 1979, From the mound of *Macrotermes gilvus*, Dius Tadong leg.).



Fig. 4. *Setoderus dicuspiditermitis* sp. n. A: Frontal setae, B: Anterior marginal setae of th. II, C: Hind claw, D, E: Ventral tube, anterior and posterior face, F: Manubrium, dorsal side, G: Dens, H: Mucro.

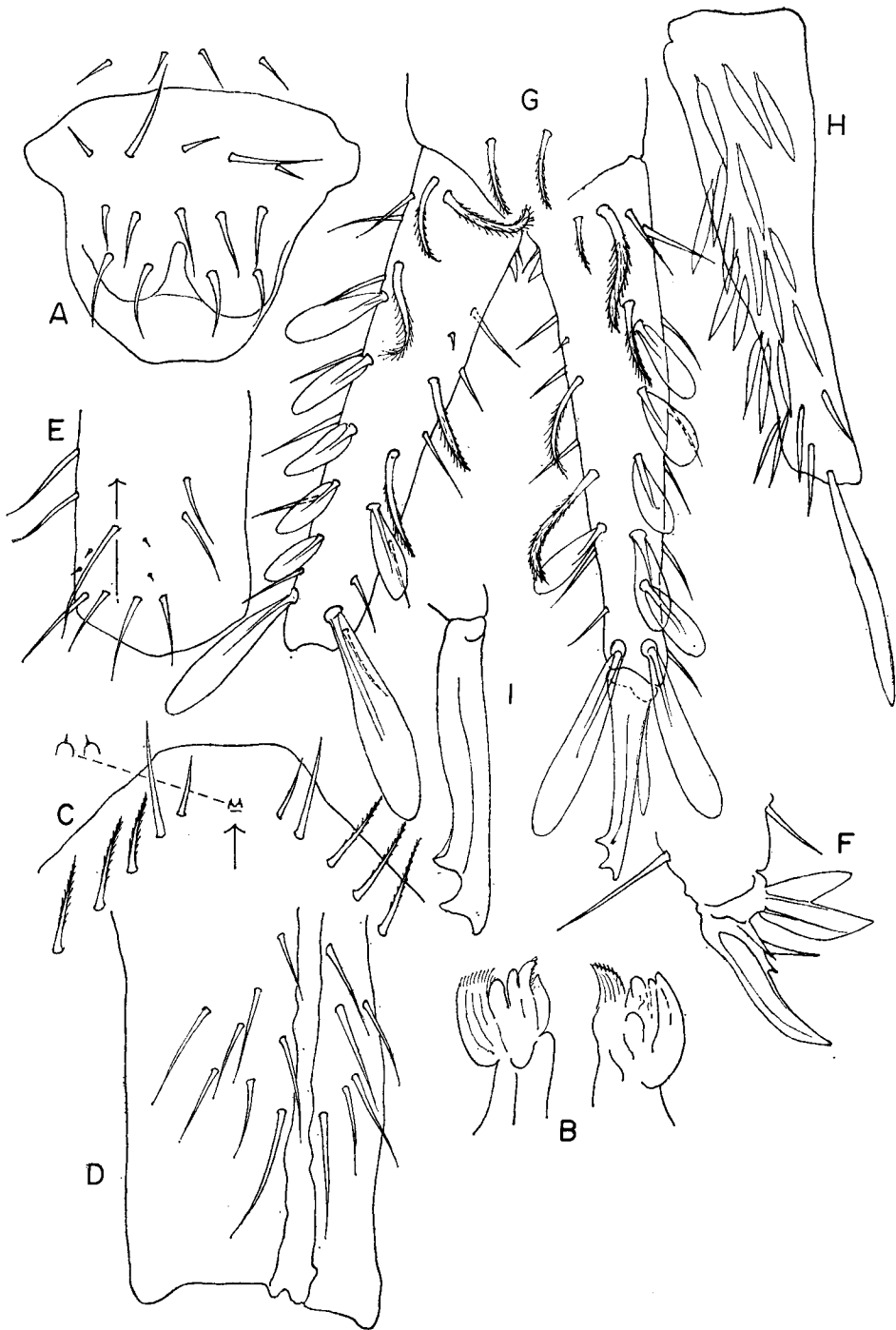


Fig. 5. *Setoderus hozawai* (Kinoshita). A: Labrum, B: Maxilla, C: Frontal setae, D, E: Ventral tube, anterior and posterior face, F: Hind claw, G: Dens and mucro, H: Dens, ventral view, I: Mucro.

Body length up to 1.6 mm., white. ant.: head as 112 : 65. ant. segm. ratio as 12 : 34 : 18 : 48. Ant. I and II dorsally with scales. Ant. III-organ not well defined. Ant. IV with many curving sensory setae on outer side. Labrum with setae as 4/5,5,4, prelabral setae smooth, median and outer pair of the first row is smaller than others. Median intrusion of distal smooth area is narrow. Labral margin without structures. Mandible and maxilla not modified, but the latter is with broad lamella. Labial setae smooth and arranged as m-re/1(1), so that one seta is missing and l_2 is vestigial. Frontal setae are as in fig. 5C, but f_5 may be either smooth or barbed and a-o is turned to sensilla. Th. II has the marginal setae almost spiny and median pair is not differentiated. Unguis has a faint inner tooth and with a pair of unequal basal teeth. Unguiculus with a conspicuous outer tooth. Tenent hair is either spiny or slightly spatulate. Trochanteral organ is composed of ca. 15 spiny setae in V-shape. Ventral tube is anteriorly with ca. 5+5 (up to 8+8) long setae and posteriorly with 2 pairs of lateral one plus one median and 4 distal setae all smooth, together with some 2-3 peg-like sensillae. Tenaculum typical. Furca in ratio as 50 : 33 : 13. Manubrium is ventrally with broad hyaline scales and dorsally with many smooth setae mingled with some (ca. 4+4) pairs of large ciliate ones, whose location is, however, not exactly to be orientated. Ventral side of dens bears slender scaly setae as characteristic to *Setoderus* and distal two of them are elongate to attain $1/3$ of the mucro. Dorsally dens bears well defined feathered scales in two rows, 6 in outer and 2 in inner row. Beside them there are 1 plumose seta in outer row and 2 such setae in inner row proximal to the scales and there is one spiny seta attached to the last row. Manubrial end bears 2 barbed and 2 smooth setae. Mucro is constantly with only 3 teeth and there is a trace of the lateral tooth. Often the third tooth is with lamella proximally.

Among many examples there may be found considerable variation of the characters. Tenent hair may be either pointed or spatulate. Inner tooth of unguis may be present or absent. Most conspicuous variation occurs in the dental chaetotaxy. The feathered scales of dentes may be 5 in outer row or 3 in inner row not symmetrically. In case when there are 3 scales in the inner row there is only one barbed seta to the row and possibly the first plumose seta must have turned to the scales. In the outer row no such thing occurs even when there are only 5 scales. Setae of the basal part is also variable in number although the presence of one plumose seta is always to be seen. Sometimes a small swelling may be found between two scales of the inner row or lateral to the position. But it seems to be not the constant character.

The species is widely distributed in tropical Asia, being already reported from Japan, Micronesia and Philippines. Everywhere the species is associated with termites.

***Mimoderus* gen. nov.**

Genotypical Species: *Mimoderus saikehi* sp. n.

This new genus is characterized above all by the dental feathered scales. They are not so well developed and not much differentiated from the usual pinnate setae and gradually transient to them proximally. Another character is the labral structure,

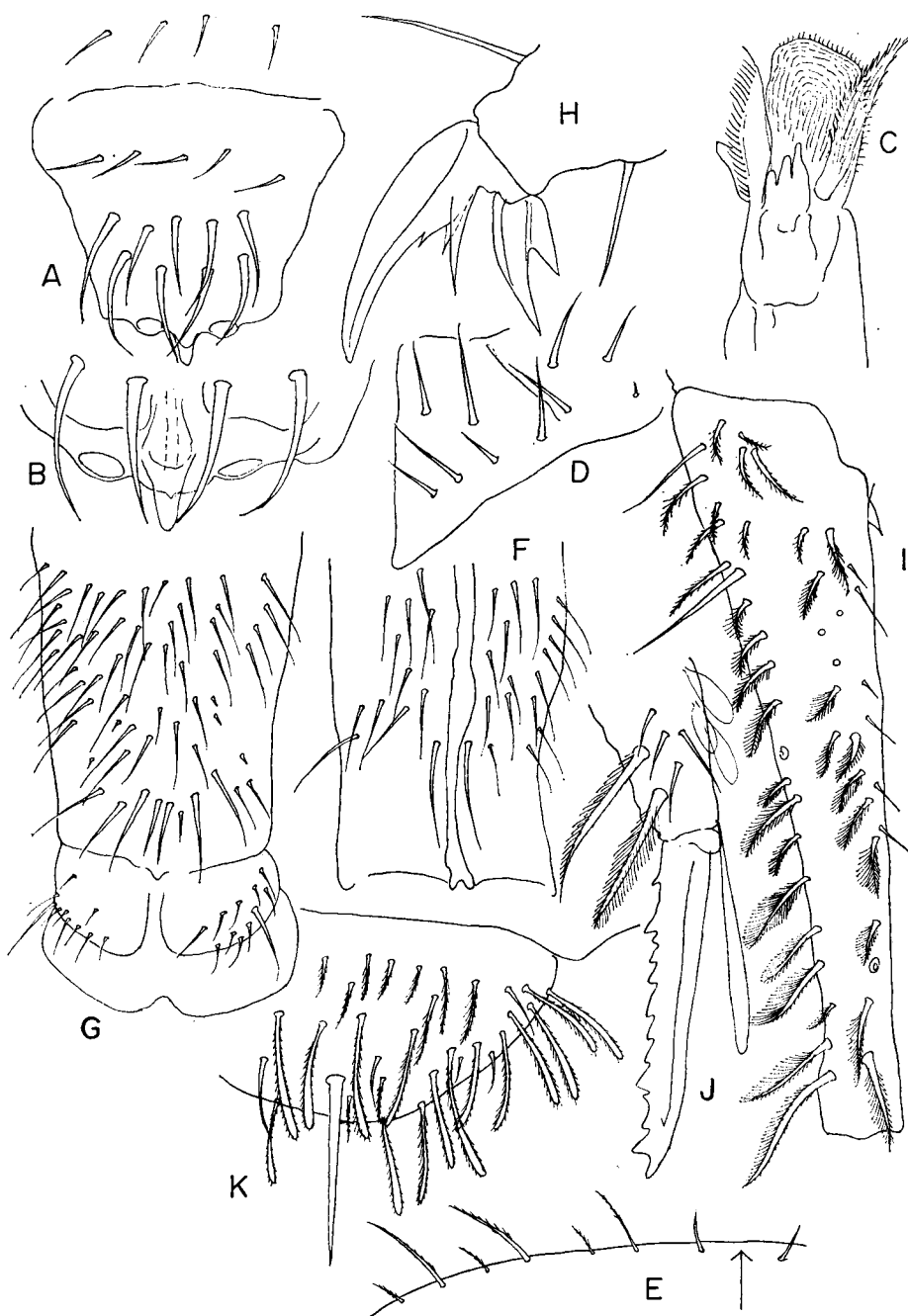


Fig. 6. *Mimoderus saikehi* sp. n. A: Labrum, B: Labral margin, C: Maxilla, D: Labial setae, E: Anterior marginal setae of th. II, F, G: Ventral tube, anterior and posterior face, H: Hind claw, I: Dens, J: Mucro, K: Abd. VI, dorsal view.

which is provided with a median ridge protruded to the end from the labral margin. Chaetal arrangement of ventral tube is near *Setoderus* and quite different from *Cyphoderus*. In contrast to *Setoderus* tibiotarsus of all legs are bearing many smooth setae along the posterior face of the segment.

The genus may be identical with *Borecus* Folsom, 1923. But the genotypical species, *B. pinnatus* is said to be polymorph with respect to the mucronal structure and probably based on more than two species (cf. Delamare, 1948, p. 358), so that the name must not be used at present.

1. Ventral tube with many setae on anterior face.....*M. saikehi* sp. n.
- Ventral tube with 2+2 setae on anterior face.....*M. diusi* sp. n.

***Mimoderus saikehi* sp. n.**

Fig. 6

Tenompok Pass (12 ex. 19. X 1979, From the Nest of *Coptotermes* sp. Saikeh Lantoh leg.), Sepilok (3 ex. 24. X 1979, Saikeh Lantoh leg.), Gum-Gum (15 ex. Dius Tadong leg.), Tawau (4 ex. 23. IX 1979, m.)

Body length up to 1.8 mm., white. ant.: head as 11 : 5, ant. segm. ratio as 15 : 30 : 20 : 45. Ant. I and II with scales dorsally. Ant. III-organ inconspicuous. Ant. IV with many small sensory setae on the outer side. Labrum with setae as 4/5,5,4, all smooth. Distal margin has a median ridge in form of a process well developed and protruded. Mandible is not modified, with well developed molar plate. Maxilla is somewhat modified, there being a broad lamella finely ciliated and with minute concentric corrugation. Galea is rather degenerated. Labial setae smooth and as mmre/1(1), as l_2 being vestigial. Setae of the frontal margin have some additional number of them and a-o is sensillate, f_5 and a'-o always smooth. Th. II without long median setae. Unguis dorsally carinate and with one minute inner tooth and a pair of unequally large basal teeth. Tenent hair is always spiny in all legs. Trochanteral organ is ca. 18 smooth setae in a narrow V-shape. Tibiotarsus with smooth setae posteriorly. Ventral tube is long, anterior face has many setae, the distal pair is stronger. Posterior face is also with many setae and with some peg-like setulae. Lateral flap has ca. 7 setae each. Tenaculum normal. Upper anal flap bears one median smooth seta longer than others. Lateral anal flap has some 3 such smooth setae. Furca in ratio, as 55 : 45 : 13, Manubrium and dens ventrally covered with equally round, hyaline scales. Dorsum of manubrium is beset with many smooth and serrate setae all of which are not much different in their length. Setae of dens are peculiar. Many feathered setae are not typically of *Cyphoderus*-type and transient to the pulmose setae. They are arrange in two rows, each composed of more than 15 such large and small setal scales. There are also many ciliate setae including 2 smooth setae near the basis. Mucro is multidentate, the serration is continuous up to near the dental basis, but apical, antepical, dorsal and basal teeth may be defined by their large size. Lateral tooth is small.

This new species is named after the collector Saikeh Lantoh of Bundu Tuhan. The species identified as *Cyphoderus serratus* Schött from G. Dulit in Sarawak (Schött, 1925,

pl. 5, fig. 41) may be identical with this species to judge from the mucronal structure. As the nominated species is very incompletely described from Queensland, the identity is to be retained until we are better informed about the species. The cited species is already reported from Vietnam (Denis, 1948) and West New Guinea (Uchida, 1949), both of them must be more exactly identified.

***Mimoderus diusi* sp. n.**

Fig. 7

Sepilok Forest (3 ex. 19. X 1979, In termite Nest, Dius Tadong leg.), Ditto (4 ex. 25. X 1979, R. Yoshii leg.), Ulu Sungai Segaliud (10 ex. 10. XI 1979, Saikhe Lantoh leg.).



Fig. 7. *Mimoderus diusi* sp. n. A: Labral margin, B: Maxilla, C: Labial setae, D, E: Ventral tube, anterior and posterior face, F: Dens, G: Mucro.

Body length up to 1.5 mm., white. ant.: head as 80 : 48. ant. segm. ratio as 10 : 25 : 13 : 32. Antennal characters as in the foregoing species. Labral setae 4/5,5,4, all smooth. Median intruded area is not developed, but there is no median ridge. Mandible and maxilla are not modified. Labial setae as mmre/1(1). Frontal setae without additional setae. a-o is a small sensilla, f₅ and a'-o are smooth, others feathered. Marginal setae of th.II are without median pair and all of them are rather long and ciliate. Unguis and unguiculus not different from *M. saikehi* sp. n. and tenent hair is either pointed or lightly spathulate. Trochanteral organ normal and hind tibiotarsus has a row of many smooth setae along the posterior face. Ventral tube is peculiarly with only 2+2 slightly ciliated setae anteriorly. Posterior face has 4 distal 1 or 2 median and 3 pairs of lateral setae together with some peg-like setulae. Often some additional setae are to the lateral ones. Lateral flap bears ca. 8 setae each. Tenaculum normal. Upper anal flap bears no median smooth seta in contrast to *M. saikehi* sp. n., but lateral flap has 2-3 of them. Furca in ratio as 50 : 50 : 15. Chaetal arrangement of dens is as in *M. saikehi* sp. n., but the plumose setae are arranged up to the manubrial basis and there is no long, smooth setae near the basis. Mucro is multidentate, but the serration is not attaining to near the basis.

The species is to be easily separated from *M. saikehi* sp. n. by the chaetal arrangement of the ventral tube. The head of maxilla is also different, having no corrugated lamella attached to it. The species is named after Dius Tadong of Kampung Takotan.

From the tropical Asia various species have been already reported, but many of them must be reviewed from the new standpoint of view. They are as tabulated below:

Cyphoderus Tullberg, 1871

<i>Cyphoderus albinus</i> Nicolet, 1841.....	Europe, (India)
<i>Cyphoderus javanus</i> Börner, 1906.....	Java, (India)
<i>Cyphoderus agnotus javanicus</i> Börner, 1906.....	Java
<i>Cyphoderus assimilis</i> Börner, 1906.....	Egypt, (Japan, Formosa)
<i>Cyphoderus simulans</i> Imms, 1912.....	Burma
<i>Cyphoderus insularum</i> Carpenter, 1916.....	Seychelles
<i>Cyphoderus handschini</i> Delamare, 1948.....	Hawaii, (Java)
<i>Cyphoderus rubiae</i> Baijal, 1959.....	India
<i>Cyphoderus antigone</i> Fernando, 1959.....	Ceylon
<i>Cyphoderus asiaticus</i> Yosii, 1959.....	Singapore, (China)
<i>Cyphoderus hrnyi</i> Rusek, 1971.....	S. China

Setoderus Yosii, 1959 (= ? *Serroderus* D.D. 1948)

<i>Setoderus hozawai</i> (Kinoshita, 1917).....	Japan, (Philippine, Borneo)
<i>Setoderus orientalis</i> (Folsom, 1924).....	Sumatra
<i>Setoderus tridenticulatus</i> (Denis, 1948).....	Vietnam
<i>Setoderus alfredi</i> Yosii, 1959.....	Singapore

Mimoderus m. (= ? *Borecus* Folsom, 1923)

<i>Mimoderus serratus</i> (Schött, 1916).....	Queensland, (Vietnam, Borneo)
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- Cyphoderodes* Silvestri, 1911
Cyphoderodes ceylonicus Silvestri, 1911.....Ceylon
Cyphoderodes dubius Börner, 1913.....India
Cyphoderodes punjabicus Yosii et Ashraf, 1969.....Pakistan
Pseudocyphoderus Imms, 1912
Pseudocyphoderus annandalei Imms, 1912.....India
Delamarellus Mitra, 1976
Delamarellus immsi Mitra, 1976.....India
Sulcuncus Mills, 1938
Sulcuncus ? *novaguinae* (Uchida, 1949)Irian

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Address of the author:

(Mr) Ryozi Yoshii, D Sc 吉井良三

Forest Research Centre, Sepilok, Sandakan, Sabah, EAST MALAYSIA

(Home address:

637-5, Shokokuji-Monzencho, Kamikyo, Kyoto, JAPAN 606 京都市上京区相国寺門前町637-5)