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Under Species Included read *D. coreanus* Watanabe for Watande

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INTRODUCTION

A REEXAMINATION of the higher classification of the Staphylinidae on a broad geographic and taxonomic scale is badly needed. With a few notable exceptions, work on the Staphylinidae has been merely the accumulation of newly described taxa, with little or no attempt at synthetic or revisionary studies. Usually, relationships between taxa either were not considered or, if expressed, were not supported by an analysis of characters. Although a considerable portion of the work on the Staphylinidae is still simply the description of new genera and new species, an increasing number of individuals are engaging in revisionary and monographic studies that include discussions of phylogenetic relationships.

Erichson (1839b, 1840) was the last person to attempt a treatment of all the taxa of the Staphylinidae. Of the four subtribes that he included in the Oxytelinae (then called a tribe), two have been elevated to subfamilies, and the other two, the Oxytelini genuini and the Coprophilini, have remained in the Oxytelinae. Erichson included in these latter two subtribes 11 genera. The number of genera and subgenera included in the Oxytelinae has increased to 99 prior to the present work. The descriptions of these additional genera are often inadequate for identification, and many unrecognized synonyms and some undescribed genera exist. The phylogenetic relationships were not discussed, and the relationships indicated were often phenetic.

The present study of the Oxytelinae covers all the known genera. Special emphasis is placed on the presentation of hypotheses of phylogenetic relationships of the genera, on delimitation of the higher taxa, on identification of genera, and on new generic synonyms. A more exacting circumscription of the subfamily and genera has resulted in the subfamilial reassignment of many genera and species; redefinition of the tribes forces the transfer of many genera to other tribes. The status of the species is not considered except as regards their generic assignments. In the lists of included species the junior synonyms are not listed except when a homonym is newly recognized, in which case a replacement name is proposed and the preoccupied name is listed under it.

The characters used in this work were derived almost exclusively from study of the external anatomy of adults. Although there are many useful aedeagal characteristics in the species of the Oxytelinae, no attempt was made to use these characteristics systematically. The separation of *Anotylus* and *Oxytelus* is the only instance in which the aedeagus is employed specifically to lend support to the recognition of genera.

Approximately 1700 species are currently listed as valid in the Oxytelinae. This large number necessitated an approach that did not require me to identify the species but did permit me to delimit genera, to study the variation of generic characters, and to assign species to the correct genera. For generic delimitation, intraspecific variation was disregarded; the interspecific variation is more important, and most of that can be ascertained from comparisons of a single specimen of each species. Whenever possible, the holotype was chosen for the determination of correct generic assignments and for studying variation between species. When the holotype was unavailable, paratypes and cotypes were used. Specimens determined as to species by previous workers were used when type material was unavailable. The kind of specimens on which the assignments were based is indicated for each species examined, so that subsequent investigators can judge the reliability of my generic assignments.

Although characters for delimiting taxa should be non-intergrading and derived, some authors state that the gap separating taxa should be inversely proportional to the size of the taxon. This idea should be taken to be not a theoretical consideration on which higher taxa can be based, but rather a strictly practical consideration. Such a criterion is best applied to limit the number of monotypic genera rather than to justify the atomization of large genera.

I studied type material on extended visits to the Field Museum of Natural History, the United States National Museum of the Smithsonian Institution, and the British Museum (Natural History). Visits of shorter duration were made to the Institut des Parcs Nationaux du Congo Belge and the Museum of Comparative Zoology at Harvard University. I am grateful to the Smithsonian Institution for a Predoctoral Fellowship awarded to me during

1966–1967. This fellowship provided the funds necessary for study at the above institutions. I am grateful to Sigma Xi which provided funds for partial payment of a Leitz stereoscopic microscope.

I am indebted to Dr. R. H. Arnett of Purdue University; Mr. O. L. Cartwright of the United States National Museum, Smithsonian Institution; Dr. R. A. Davidson of Catholic University of America; Dr. L. D. Miller of the Allyn Foundation, Inc.; and Dr. W. O. Steel of the Imperial College of Science and Technology of London for many important discussions and encouragement. Thanks are due to Dr. R. L. Wenzel (Field Museum of Natural History, Chicago), Mr. J. Balfour-Browne [British Museum (Natural History)], Mr. O. L. Cartwright (United States National Museum of the Smithsonian Institution), Mr. G. Fagel (Institut des Parcs Nationaux du Congo Belge, Brussels), the Reverend R. E. Tottenham (University Museum of Zoology, Cambridge University), and Dr. J. D. Lawrence (Museum of Comparative Zoology at Harvard University) for permission to study the collections under their care. I am indebted to Dr. A. Descarpentries (Museum National d'Histoire Naturelle, Paris), Dr. F. Hieke (Institut für Specielle Zoologie und Zoologisches Museum, Berlin), and Dr. A. Neboiss (National Museum of Victoria, Melbourne, Australia) who lent me holotypes important to this investigation.

Special thanks are extended to Miss Mary Ellen Gastka who typed the final draft of this manuscript.

These abbreviations are used in the lists of species following the generic descriptions to denote the status of the specimens examined:

Co, cotype
H, holotype
P, paratype
Sp, specimen
Syn, syntype
T, type

NOTES ON ANATOMY

OF THE NUMEROUS anatomical variations occurring in the Oxytelinae most require no treatment beyond that presented in the descriptions and discussion of each genus. Several features, however, need further elaboration because of published misunderstandings and misinterpretations.

Because ocelli are absent from the Oxytelinae, their presence in the Omaliinae is used to support the separation of these subfamilies. In several publications the presence of ocelli in the Omaliinae is repudiated. Lohse (1964) and Moore (1964b, 1966) considered the ocelli of the Omaliinae to be the points of attachment of the dorsal arms of the tentorium ("frontal calluses" of Moore, *op. cit.*). This interpretation is an extrapolation of work on the Leptotyphlinae (Coiffait, 1959) in which the structures formerly considered to be ocelli were shown to be the tentorial maculae.

A few simple dissections clearly demonstrate that the tentorial maculae of the Leptotyphlinae and the ocelli of the Omaliinae are not homologous. In the Leptotyphlinae the tentorial maculae are small pits, not convex mounds. Dissection of the convex mounds of the omaliine head reveals them to be the lens-shaped ocelli; the adjacent, broad depressions are the tentorial maculae. The ocelli and tentorial maculae of the Omaliinae never coincide. I do not know if the ocelli of the Omaliinae are functional.

Major modifications have occurred in the prothorax of the Oxytelinae. In the Coprophilini, gradual reduction of the procoxal fissure and the protergosternal suture are correlated with phyletic advance, and both are absent from some genera of the tribe. In the Oxytelini, on the other hand, the procoxal fissure and protergosternal suture are absent from all the genera, and the prohypomeron is more strongly deflexed. The loss of the procoxal fissure and protergosternal suture apparently arose independently in the two tribes.

The pterothoracic sterna of the Oxytelinae exhibit several modifications. The elongate, spiniform mesosternal process, considered to be primitive, is present in only a few of the Oxytelinae; in others it is reduced or absent. In the Coprophilini and a few genera of the Oxytelini the short, cariniform mesosternal process extends only slightly between the mesocoxae and is ventrad of the metasternum. The mesocoxae are either separated by the mesosternal process or contiguous, and the metasternal process is not developed, although the metasternum may exhibit a median ridge between the mesocoxae. In most genera of the Oxytelini the mesosternal process is absent or severely reduced, with accompanying increased development of the metasternal process. The mesosternum and metasternal process in these genera are at the same dorsoventral level, and the mesocoxae are widely separated by the metasternal process. The functional differences that result from the divergent prothoracic and pterothoracic structures are not known, but investigation in this area will be interesting.

Within the Oxytelinae, the tarsi vary not only in number but also in structure. The tarsus may have two, three, four, or five articles. *Manda* has four distinct tarsomeres, but between articles 1 and 2 a "pseudoarticle" is delimited by two shallow grooves. This additional "article" is not movable or completely separated and, contrary to the situation for the other articles, has no lateroventral bristles. The significance of this "article" is not known.

The species of *Pareiobledius*, *Blediotrogus*, *Teropalpus*, *Xerophygus*, *Ochthephilus*, *Mimopaederus*, *Thinodromus*, *Apocellagria*, and *Trogactus* all have the basal three articles (two in *Pareiobledius*) so small, closely associated, and compressed that these genera were previously considered to have three tarsomeres. The tarsus must be treated in potassium hydroxide before the basal articles can be seen. This close association of the basal tarsomeres may be a step in the direction of complete consolidation of these articles and the origin of species with only three tarsomeres.

Another interesting structure, the function of which is unknown, is the long, slender, membranous lobes arising from the ventral apex of the basal tarsomeres. The lobes are found on some of the species of the Coprophilini and on all those of the Oxytelini.

Hood (1958) pointed out that coleopterists should use "tergum" and "sternum" rather than "tergite" and "sternite" for the dorsal and ventral sclerites of abdominal segments of beetles. The Staphylinidae represent a special situation with

regard to the sclerites of the abdominal segments; the sclerites cannot be regarded as simply tergum and sternum.

The abdominal segments of this family are typically composed of six sclerites each. Some species have only four sclerites (e.g., Omaliinae, *Deleaster*, *Syntomium*), some only two (e.g., *Eumalus*), and others have only one continuous, sclerotized ring for most segments (e.g., Osoriinae, *Palaminus* and some species of *Stenus*). In the species with four or six sclerites per segment, the spiracle is on the lateral edge of the large, curved sclerite. Interposed between the lateral ends of the large dorsal and ventral elements are the smaller laterosclerites. There are a total of four laterosclerites between the tergal and sternal elements in the species of which the abdominal segments are composed of six sclerites, and two laterosclerites in the species with four sclerites in the abdominal segments.

Snodgrass (1935, pp. 71, 72, 248) stated that there is reason to believe that the spiracles are situated in the tergum and that they are often near the lower part (or lateral margins) of the tergum. If this criterion is used to delimit the tergum, then in the Staphylinidae with abdominal segments of two or more sclerites per segment, the tergum is the large median dorsal sclerite that contains the spiracles. The remaining sclerites of the segment (one, three, or five) form the sternum. The hypothesis that the smaller sclerites are sternal elements is supported by study of some species of the closely related family Silphidae (Crowson, 1955; Paulian, 1941) and by a comparison of them with the Omaliinae and *Apatetica*. The silphid genera *Lyrosoma*, *Silpha*, *Pteroloma*, *Necrodes*, *Nicrophorus*, and *Necrophilus* have only two sclerites per abdominal segment. The lateral edges of the sternum extend dorsally and are sharply folded so that a narrow edge extends downward. This narrow strip is not separated from the sternum. On the basal segments the spiracle is in membrane between the tergum and sternum; toward the apex of the abdomen the spiracles are surrounded in part or completely by sclerotization continuous with the tergum. In all the Omaliinae studied, the third to seventh segments have the spiracles in the tergum; the sclerite mesiad of the sternite is similar to the folded lateral edge of the sternum in the silphids but is separated from the sternum.

Based on the criterion given by Snodgrass (1935) for the delimitation of the tergum and on data from the silphids and staphylinids, the large, dorsal, median sclerite, which contains the spiracle, is the tergum, and the remaining sclerites of abdominal segments II (or III) to VII are sternal elements. Thus in the Oxytelinae there is one large, median sternite and four laterosternites. The median sternite is designated the "sternite." The laterosternites are called the "parasternite" and "paratergite." The parasternite is adjacent to the sternite, and the paratergite is beside the tergum. The term "paratergite" should not be construed to suggest or imply a tergal origin of the sclerite.

The eighth abdominal segment is composed of two large sclerites, the tergum and sternum. The ninth and tenth segments have a more complex interrelationship. In the Oxytelinae (Eichelbaum, 1913–1916), the ninth tergum is longitudinally divided into two large, lateral tergites by a broad, median, tenth tergum (figs. 67, 72, 73). The sternum, when present, is an elongate, narrow sclerite between the ventral edges of the ninth tergites. The sternum of the tenth segment has apparently been lost.

Associated with the ninth and tenth segments are a pair of large abdominal glands (figs. 72, 73). The positions of the external openings of these glands are in the ninth tergites in all genera of the Oxytelinae except *Paraploderus*. The function of the glands is not known.

Finally, throughout the present paper, the abdominal segments are numbered according to their morphological origin, i.e., references to the second sternum denote the morphologically second sternum.

PHYLOGENY OF THE OXYTELINAE

MANY PROBLEMS need investigation before a coherent statement can be made concerning the phylogeny of the higher taxa of the Staphylinidae and the Staphylinoidea. The phylogenetic arrangement of the genera of the Oxytelinae presented here is an attempt to elicit further cogitation, discussion, and investigation of the evolutionary relationships throughout this entire large family. Some of the relationships formulated here will perhaps be modified as further studies are completed on taxa throughout the Staphylinoidea. In general the most significant features of this discussion lie in the establishment of a number of presumably monophyletic genera and groups of genera that are based on the presence of derived characters. A few genera are the result of a grouping on the basis of anatomical similarity rather than the presence of derived characters and will require further investigation for the phylogenetic accuracy of the expressed phenetic relationships to be determined. The phylogenetic discussion and arrangement presented here should be regarded as a series of hypotheses representing my conclusions as to a possible evolutionary history in this subfamily. In virtually all instances, the functional or adaptive significance of the characters is not known, and little information is recorded concerning features of speciation, development, physiology, internal anatomy, habits, habitats, vagility, and immature stages. The information of any kind that has been published is not sufficiently comparative to be of value for the reconstruction of the evolutionary history of the subfamily.

The relationships presented here are based on the presence of derived characters of the external anatomy of the adults. The relative plesiomorphy and apomorphy of the characters employed were determined by a comparison of the Silphidae, particularly *Pteroloma*, *Lyrosoma*, *Necrodes*, *Necrophilus*, and the subfamilies of the Staphylinidae, especially the Omaliinae, Piestinae, and Proteininae. The characters shared

TABLE 1

RELATIVE PLESIOMORPHY AND APOMORPHY OF CHARACTERS USED FOR THE PHYLOGENY OF THE OXYTELINAE

Primitive Characters	Derived Characters
1A. Clypeus rectangulate (fig. 5)	1B. Clypeus reduced to narrow strip or with anterior margin broadly rounded (figs. 3, 4, 12, 13)
2A. Clypeus with nearly rectangulate anterior margin (fig. 5)	2B. Clypeus evident as circular depression (fig. 4)
3A. Epistomal suture present (figs. 2, 3, 5)	3B. Epistomal suture absent
4A. Eyes not extending onto ventral portion of head (figs. 8–11)	4B. Eyes extending onto ventral portion of head (fig. 7)
5A. Gular sutures separated entirely (figs. 7, 11)	5B. Gular sutures confluent; separated from middle (figs. 8–10)
6A. Neck absent (fig. 5)	6B. Neck strongly constricted
7A. Labral lobes short, not prominent	7B. Labral lobes prominent (fig. 20)
8A. Labrum with anterior margin shallowly emarginate (fig. 13)	8B. Labrum with anterior margin deeply emarginate (fig. 19)
9A. Mandibles not bifurcate at apex	9B. Mandibles with apex bifurcate
10A. Fourth segment of maxillary palpus stout and elongate (fig. 14)	10B. Fourth segment of maxillary palpus subulate; acicular (figs. 15–18, 22)
11A. First antennomere normal	11B. First antennomere elongate (fig. 23)
12A. Apex of antennomeres unmodified	12B. Antennomeres 2–10 with ridges on apex
13A. Antennae with long tactile setae	13B. Antennae without long, tactile setae
14A. Pronotal lateral marginal bead present (figs. 24, 25, 27)	14B. Pronotal lateral marginal bead absent (figs. 29–31)
15A. Pronotal lateral marginal bead not extending onto prohypomeron (figs. 24, 25, 27)	15B. Pronotal lateral marginal bead with anterior portion on prohypomeron

TABLE 1—(*Continued*)

Primitive Characters	Derived Characters
16A. Prohypomeron well developed (figs. 24, 25, 27, 29, 31)	16B. Prohypomeron of reduced width (figs. 30, 32)
17A. Procoxal fissure open (fig. 25)	17B. Procoxal fissure closed (fig. 24)
18A. Procoxal fissure present (figs. 24, 25)	18B. Procoxal fissure absent (figs. 27, 29)
19A. Protergosternal suture evident as groove	19B. Protergosternal suture evident as ridge
20A. Protergosternal suture present (figs. 24, 25)	20B. Protergosternal suture absent (figs. 27, 29–32)
21A. Scutellum without distinctly patterned impression	21B. Scutellum with distinctly patterned impression (figs. 41, 44–46)
22A. Scutellum without distinctly patterned impression	22B. Scutellum with rectangulate or diamond-shaped impression (fig. 46)
23A. Scutellum without distinctly patterned impression	23B. Scutellar impression trilobed (figs. 41, 44, 45)
24A. Scutellum without pubescence	24B. Scutellum densely pubescent
25A. Mesosternal process elongate and separating mesocoxae (fig. 34)	25B. Mesosternal process reduced and mesocoxae contiguous
26A. Mesocoxae separated by mesosternal process (fig. 34)	26B. Mesocoxae separated by mesosternal and metasternal processes (fig. 36)
27A. Mesocoxae contiguous	27B. Mesocoxae separated by metasternal process (figs. 35, 37)
28A. Elytral striae present	28B. Elytral striae absent
29A. Elytra elongate	29B. Elytra shortened
30A. Elytra not overlapping (fig. 40)	30B. Elytra overlapping (fig. 42)
31A. Elytral suture not dehiscent at apex	31B. Elytral suture with apex dehiscent (fig. 40)
32A. Elytra with short setae at apex	32B. Elytra with long setae at apex
33A. Elytral epipleural ridge present (fig. 39)	33B. Elytral epipleural ridge modified as groove or absent (figs. 38, 43)
34A. Second abdominal sternite well developed	34B. Second abdominal sternum weakly sclerotized or reduced (figs. 66, 69)
35A. Abdomen with one pair of laterosclerites per segment (fig. 71)	35B. Abdomen with two pairs of laterosclerites per segment (fig. 68)
36A. Abdominal laterosternites of nearly equal size (fig. 68)	36B. Abdomen with parasternites reduced
37A. Abdomen with tergal basolateral ridge absent	37B. Abdomen terga with basolateral ridge present (fig. 68)
38A. Seventh tergum with spinulate or membranous fimbriate strip on posterior margin	38B. Seventh tergum with spines on posterior margin (fig. 70)
39A. Protibiae slender	39B. Protibiae expanded
40A. Tibial spinous row present	40B. Tibial longitudinal spinous row absent
41A. Metatibial longitudinal ctenidium present (fig. 57)	41B. Metatibial longitudinal ctenidium absent
42A. Tibiae without longitudinal grooves	42B. Tibiae with longitudinal grooves (figs. 53, 54)
43A. Tarsomeres each distinct (figs. 47, 50–53, 57)	43B. Tarsi with basal articles compressed and closely associated (figs. 48, 49, 55, 56)
44A. Tarsi 5-5-5 (figs. 47, 52)	44B. Tarsal formula reduced
45A. Tarsomeres 1 and 2 of approximately equal length (figs. 61–64)	45B. Tarsomere 1 longer than 2 (figs. 57, 60)
46A. Tarsomere 1 cylindrical (figs. 60–64)	46B. Tarsomere 1 flattened
47A. Last tarsomere with scattered, sparse, long setae (fig. 56)	47B. Last tarsomere with dense, short pubescence (fig. 55)
48A. Tarsi without membranous lobes on ventral surface (figs. 47, 50, 52)	48B. Tarsi with membranous lobes on ventral surface (fig. 58)
49A. Body without prominent, longitudinal carinae	49B. Body with prominent, longitudinal carinae
50A. Body without prominent protuberances	50B. Body with prominent protuberances
51A. Body subcylindrical	51B. Body strongly depressed

by the Silphidae, Omaliinae, Proteininae, Piestinae, and Oxytelinae are considered to be primitive in the Oxytelinae and the modified conditions of these characters in the Oxytelinae to be derived.

Table 1 presents the relative plesiomorphy and apomorphy of the characters used in this discussion. In the following discussion the number and letter in parentheses (e.g., 10A) refer to the characters in table 1. The A refers to primitive characters; the B, to derived characters. The discussion is presented in diagrammatic form (fig. 1); the numerals and letters in figure 1 refer to table 1.

If we accept the hypothesis that the presence of completely developed second abdominal sternites is a primitive condition, then the subfamily Oxytelinae has been recognized on the basis of a plesiomorphic character. If the presence of the second abdominal sternite were the only character on which we could circumscribe the subfamily, then, under a strict application of phylogenetic principles, this taxon could not be recognized on such a basis. Another group of characters involving the last two abdominal segments is found to be common to all the genera of the Oxytelinae with only one exception. The tergites of the ninth segment are divided medially by the tenth tergum, and the lateral margins of the tenth tergum are united to the mesial margins of the ninth tergites. Near the mesial margins of the ninth tergites are a pair of openings that are the external openings for secretions contained in a pair of sacs at the apex of the abdomen. Preliminary studies indicate that this position of the openings is confined to the Oxytelinae. Nearly all the genera in this subfamily have the ninth and tenth tergal elements arranged in the manner described above. The females have this pattern somewhat modified. Preliminary investigations indicate that these characters do not occur in other staphylinids in the same combination. I have begun studies to elucidate the significance of these abdominal characters in terms of the relative plesiomorphy and apomorphy.

The major evolutionary trends occurring in the Oxytelinae are associated with characters of the thorax. Two major branches, designated as the tribes Coprophilini and Oxytelini, are discernible by different trends of the prothoracic sterna. In both instances there is a consolidation of the prothorax and reduction of the mesosternal process. Here, however, the similarity ceases. In the Coprophilini the loss of the procoxal fissure, protergosternal suture, and mesosternal process is correlated with phyletic advance. In the Coprophilini the loss of the mesosternal process, a derived character, results in the contiguity of the mesocoxae. In the Oxytelini there is a total absence of the procoxal fissure and protergosternal suture and a reduction of the mesosternal process. The loss of the mesosternal process and increased development of the mesosternal process result in a separation of the mesocoxae. These changes in the Oxytelini are highly derived characters.

The presence of the protergosternal suture, although a primitive characteristic, is found in a relatively derived condition in the most primitive of the Oxytelinae. A more primitive condition of the suture can be found in genera of the Omaliinae, Proteininae, and Piestinae; in these taxa the suture is an invagination of the body wall (19A) and a line at which the sternal tergal elements can be easily separated.

The largest number of primitive characteristics are found in *Deleaster* and the branch containing *Coprophilus* (fig. 1). In these genera the suture is present but is evident only as a ridge externally (19B) and is evident internally only near the procoxal fissure. *Deleaster*, considered here to represent a primitive member of the tribe, exhibits primitive conditions of the maxillary palpus (10A), protergosternal suture (20A), procoxal fissure (18A, 17A), clypeus (1A), elytra (29A, 33A), tarsi (44A), and abdominal laterosclerites (35A). The poorly sclerotized condition of the second abdominal sternite (34B), the reduction of the mesosternal process (25B), and the confluent gular sutures (5B) are surmised to represent derived conditions. *Deleaster* is a rather primitive, omaliinoid beetle but displays the oxyteline characteristics of the ninth tergites of the abdomen, lacks the median lobe of the eighth sternum, and lacks ocelli. The disjunct, montane, and cool-temperate distribution of the species of *Deleaster* suggest that the genus is old.

The *Coprophilus* line (fig. 1) represents the next most primitive group of genera. In this branch all the genera have the derived characteristic of the reduced second sternite which is apparently immovable and is closely associated with the third (34B). The sternite is reduced to a poorly sclerotized, narrow strip preceding the third. In each of the genera in this line there is a narrow

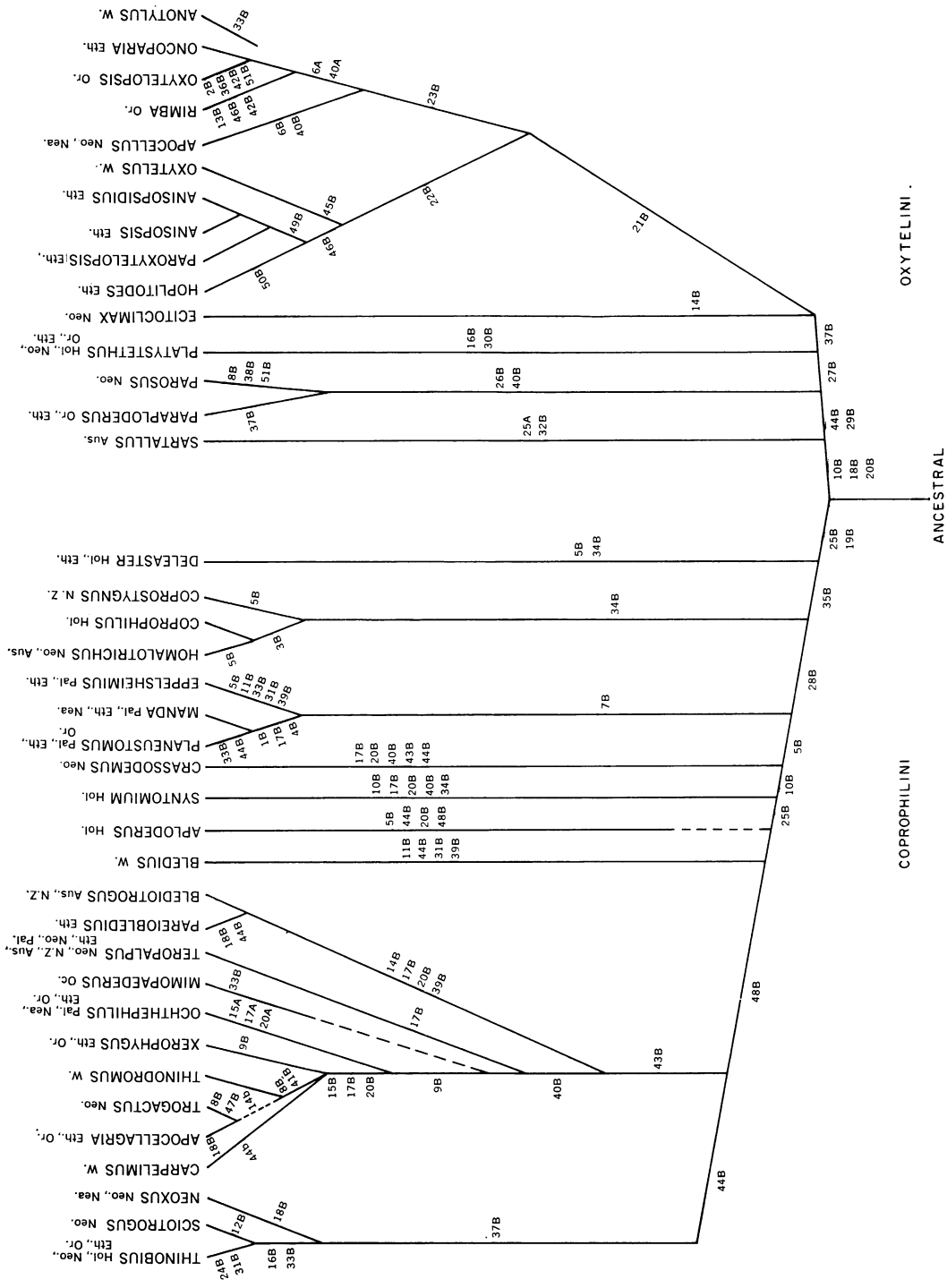

FIG. 1. A possible phylogeny of the genera of the Oxytelinae.
Abbreviations: Aus., Australian; Eth., Ethiopian; Hol., Holarctic; Nea., Nearctic; Neo., Neotropical; N.Z., New Zealand; Oc., Oceania; Or., Oriental; Pal., Palearctic; W., World. Numerals and letters on branches refer to the characters listed in table 1.

sclerite anterior to the second sternite and separated from it by membrane. The morphological or functional significance of this small sclerite is unknown, but it is not found in other genera of the Oxytelinae. The genera of the *Coprophilus* line also display the advanced condition of the laterosclerites (35B). This line is now represented by three genera. *Coprostygnus*, the first branch and the most divergent genus of this line, developed confluent gular sutures (5B) but retained the epistomal suture (3A). The genera of the other branch, which is represented by *Coprophilus* and *Homalotrichus*, retained the completely or partially separated gular sutures (5A) but lost the epistomal suture (3B). These three genera are likely to have been derived from a common ancestor that was adapted to cool-temperate regions, because they are now all confined to such areas in both the Northern and Southern hemispheres.

Most of the other genera lost the elytral striae (28B), or they became obsolete. The genera of the next line arose with elongate, prominent labral lobes (7B). One branch is represented by *Eppelsheimius*, which developed a geniculate first antennomere (11B), has confluent gular sutures (5B) and expanded protibiae (39B), and has lost the elytral epipleural ridge (33B). *Eppelsheimius* has the elytral suture dehiscent at the apex (31B) but retains many other primitive characteristics of the thorax (18A, 17A, 20A, 14A, 25A) and clypeus (1A). The geniculate antennae and the expanded protibiae suggest that the species of *Eppelsheimius* may burrow into the soil. The genera of the other branch developed a very narrow clypeus (1B), the eyes extended onto the ventral portion of the head (4B), and the procoxal fissure became closed (17B). This branch is now represented by *Planeustomus*, which has a punctiform groove (33B) in place of the elytral epipleural ridge (33A) and four tarsomeres, with a pseudoarticle between articles 1 and 2 (44B; see also fig. 50), and by *Manda*, which has an elytral epipleural ridge (33A) and five tarsomeres (44A). The species of *Manda* have a curious, disjunct geographical distribution.

The next two lines are isolated, but each shows increased reduction of the procoxal fissure (17B), and both have lost the protergosternal suture (20B) and tibial spines (40B) and have confluent gular suture (5B). *Crassodemus* lost one tarsomere (44B) and developed peculiar tarsi in which the basal three articles are flattened and closely associated (43B) to one another (see Herman, 1968, fig. 9). *Syntomium* has a subulate fourth segment of the maxillary palpus (10B), and the second abdominal sternite is reduced (34B). *Crassodemus* and *Syntomium* have uncertain positions within the tribe.

The next branch is represented by *Aploderus*. The tarsi are reduced to three articles (44B), and the structure of the thorax is primitive (18A, 17A, 20A). The form of the species of this genus is similar to that of species of *Platystethus*, but, because derived characters that will satisfactorily place it in Oxytelini were not found, *Aploderus* is left in the Coprophilini. In *Aploderus* the mesosternal process is prominent but shortened so that the mesocoxae are contiguous (25B).

The next major line is based on the reduced tarsal formula (44B), the expanded protibiae (39B), the dehiscent elytra (31B), and the geniculate antennae (11B), and is represented by the large and variable genus *Bledius*. All the remaining lines of divergence in the Coprophilini exhibit long membranous lobes arising from the ventral surface of the penultimate tarsomere (48B), and most have the basal two or three articles compressed together (43B).

The first branch of the next major line, in which all the genera have the basal three tarsomeres closely associated (43B), is represented by two genera, *Blediotrogus* and *Pareiobledius*. *Pareiobledius* and *Blediotrogus* diverged with expanded protibiae (39B) and the loss of the procoxal fissure (17B) and protergosternal suture (20B). *Pareiobledius* further diverged with the loss of one tarsomere (44B) and the loss of the small notch on the ventral margin of the prohypomeron that is present in *Blediotrogus*. The remaining genera all lack longitudinal rows of spines on the tibiae (40B). The first branch to diverge is represented by *Teropalpus* which has a closed procoxal fissure (17B) and stout fusiform tibiae. The next branch that may have arisen is now represented by *Mimopaederus* which has lost the elytral epipleural ridge (33B). The remaining genera in this branch all have the apex of the mandibles bifurcate (9B). The first branch of this series is represented by *Ochthephilus* in which the fourth segment of the maxillary palpus is subulate (10B), the procoxal fissure open (17A), and the protergosternal suture present (20A). The pronotal lateral marginal bead of *Ochthephilus* does not extend onto the prohypomeron.

None of the apomorphic characteristics used in this discussion is found exclusively associated with *Ochthephilus*, but some may have been overlooked. The remaining genera in this line have the procoxal fissure closed (17B), the protergosternal suture absent (20B), and the pronotal lateral marginal bead extending onto the prohypomeron (15B). The next branch exhibited three tarsomeres (44B) and is represented by *Carpelimus*. *Xerophygus* arose with the apex of the mandibles prominently bifurcate (9B). The genera in the remaining branch have lost the metatibial spinules (41B) and have a tendency to have the anterior margin of the labrum deeply emarginate (8B).

Thinodromus arose and is a highly variable genus, but no apomorphic characters among those used for this discussion are possessed exclusively by the species of *Thinodromus*. The next two genera have a similar habitus, but, other than the virtual absence of the pronotal lateral marginal bead (14B), there are no apomorphic characters in table 1 that suggest a close relationship of *Apocellagria* and *Trogactus*. In both these genera the pronotal lateral marginal bead is poorly developed. *Apocellagria* arose with a loss of the procoxal fissure (18B), and *Trogactus* arose with the last tarsomere densely pubescent (47B) and with the anterior margin of the labrum very deeply emarginate (8B).

The last major line in this tribe gave rise to *Neoxus*, *Sciotrogus*, and *Thinobius*, all of which have basolateral ridges on the abdominal terga (37B) and two tarsomeres per leg (44B). *Neoxus* has lost the procoxal fissure (18B). *Sciotrogus* and *Thinobius* both have a reduced prohypomeron (16B) and have lost the elytral epipleural ridge (33B). *Sciotrogus* has the second to tenth antennomeres ridged at the apex (12B), and *Thinobius* has the antennomeres unmodified (12A), the scutellum densely pubescent (24B), and the apex of the elytral suture dehiscent (31B).

Because the structure of the prothorax (18B, 20B) and pterothorax (26B or 27B) is so modified from the conditions considered to be primitive, the Oxytelini are considered to be the more derived group of the Oxytelinae. In addition to modifications of the prothorax and pterothoracic sterna the fourth segment of the maxillary palpus is subulate (10B), the tarsi are usually reduced to three articles (44B), and the species are in many cases dorsoventrally depressed (51B).

Sartallus has long setae (32B) on the posterior margin of the elongate elytra (29A) and is considered to be the most primitive member of the Oxytelini. *Sartallus* is included in this tribe because of the highly derived condition of the prothorax (18B, 20B). The pterothoracic sterna are very primitive, with the mesocoxae separated by the mesosternal process (25A). Previously *Sartallus* had been considered to be near *Bledius* because of the similarity of form, or a member of the Coprophilini because of the presence of five tarsomeres (44A), a condition that is plesiomorphic. The form of *Sartallus* is not particularly similar to that of *Bledius* and additionally is a difficult character to define.

The next two genera of the Oxytelini arose with the mesocoxae separated by a combination of the mesosternal and metasternal processes (26B), the apices of which are acute. *Paraploderus* arose with the external openings of abdominal glands in the membrane between the tergites and sternum of the ninth segment, with basolateral ridges on the abdominal terga (37B) and with the loss of tibial spines (40B). *Parosus* arose with a deeply emarginate labrum (8B), with spines on the posterior margin of the seventh tergum (38B), with the body strongly depressed (51B), and with the loss of tibial spines (40B). The remaining genera have the mesocoxae separated by only the metasternal process (27B). *Platystethus* then arose with one elytron overlapping the other (30B) and the reduction of the width of the prohypomeron (16B) so that the protrochantin is exposed. The remaining genera all have basolateral ridges on the abdominal terga (37B). *Ecitoclimax* arose with the loss of the pronotal lateral marginal bead (14B). All the remaining genera have a patterned impression on the scutellum (21B).

Members of the next line possess the apomorphic characteristic of the diamond-shaped scutellar impression (22B). Within the line, the first branch occurs when the ridges of the head, pronotum, and elytra become extremely well developed (49B); the other branch contains *Oxytelus* the species of which have less prominent ridges of the head and thorax but which have the first tarsomere very elongate (45B). Within the first branch, one genus, *Hoplitodes*, has, instead of ridges on the head, pronotum, and elytra, prominent, conical protuberances (50B), whereas *Paroxytelopsis* and, to a lesser extent *Anisopsis* and *Anisopsidius*, have cariniform ridges.

The remaining genera have a trilobed scutellar impression (23B). *Apocellus* arose with the loss of tibial spines (40B) and a strongly constricted neck (6B). The last major line has lost the basolateral ridges of the first abdominal tergum. *Oxytelopsis* appears to have diverged with the development of prominent tibial carinae (42B), the rounded clypeal depression (2B), the strongly explanate lateral margins of the pronotum and elytra, and reduced abdominal parasternites (36B). *Rimba* diverged with a loss of the prominent, stout, elongate setae of the antennae and a flattening of the first tarsomere (46B). *Oncoparia* diverged with a loss of the elytral epipleural ridge (33B). *Anotylus* is a large genus that is "left over"; among the characters used in this phylogeny, none is found exclusively in the species of *Anotylus*.

THE SUBFAMILY OXYTELINAE

THE GROUP NAME OXYTELINAE was used first by Stephens (1833) as Oxytelidae. When he discussed the Stenidae, he stated that it was possible to split from them another group, the Oxytelidae. In this latter group Stephens included *Bledius*, *Hesperophilus*, *Trogophloeus*, *Platystethus*, *Oxytelus*, *Aploderus*, *Carpalimus*, and *Taenosoma*. When Erichson published his classical works (1839a, 1839b, 1840) the Oxytelidae were treated as a tribe, the Oxytelini, with four subtribes: Megalopini (*Megalops*), Osorini (*Osorius*, *Holotrochus*), Oxytelini geniuni (*Bledius*, *Platystethus*, *Oxytelus*, *Phloeonaeus*, *Apocellus*, *Trogophloeus*), and Coprophilini (*Acrognathus*, *Coprophilus*, *Deleaster*, *Micralymma*, *Syntomium*). The Piestini, the Omaliini, and the Proteinini were considered to be separate tribes. Erichson's work was the first significant classification of the subfamily.

Kraatz (1858) followed essentially the same higher classification for the European species while he and others continued to add genera to the Oxytelini (*sensu lato*). LeConte (1861) listed three subfamilies under the Staphylinidae: Staphylininae, Piestinae, and Micropeplinae. The nominal subfamily had nine tribes and included the Oxytelini which had the subgroups Osorii, Oxypori, and Oxyteli. LeConte and Horn (1883) used a similar classification, with some shuffling of groups. Sharp (1887) used Oxytelinae with the subgroups Osoriina, Oxytelina, Thinobiina, Phloeocharina, Piestina, Eleusinina, Leptocharina, and Proteinina. Bernhauer and Schubert (1910, 1911) adhered closely to Sharp's groupings but also included the Omaliinae as a tribe. For the most part such was the classification until Blackwelder's work (1942, 1943) in which many of the tribes were elevated to subfamilies and the Oxytelinae included only Coprophili, Actochari, Toxoderi, Oxyteli, and Thinobii, each of which had been included in the Oxytelini by Bernhauer and Schubert (1911). With only a few exceptions, a classification of the Staphylinidae similar to that proposed by Blackwelder has been used to the present time, although some authors still adhere to that used by Bernhauer and Schubert.

The number of tribes has varied from two (Coprophilini and Oxytelini) to 11 (Coprophilini, Actocharini, Toxoderini, Oxytelini, Thinobini, Apocellini, Neophonini, Deleasterini, Acrognathini, Carpelimini, and Syntomini). Concurrent with the shifting of subtribes, tribes, and subfamilies, the number of genera and subgenera of the Oxytelinae has increased from seven to 99. As of this writing, 1738 valid species are listed in the subfamily.

CHARACTERISTICS OF THE OXYTELINAE

Shape variable, usually broad and moderately flattened dorsoventrally to being nearly cylindrical. Size range, approximately 0.5 mm. to 10.0 mm. long; width approximately one-fourth of length. Color variable.

HEAD: Shape variable from dorsoventrally flattened to nearly cylindrical. Gular sutures separated, entirely confluent or confluent on anterior half and separated on posterior half (figs. 6–11). Supra-antennal ridge present and prominent to flat and obsolete. Epistomal suture present (fig. 5) or absent. Labrum well developed; anterior margin with or without anteriorly directed processes arising from ventral surface; processes, when present, membranous and fimbriate on mesial edge (fig. 20). Mandibular prostheca present and usually well developed; denticles present or absent. Maxillary palpus with four segments; first segment reduced; second segment variable but usually elongate, slender, and apically incrassate; third segment variable but usually elongate and stout; fourth segment subulate (figs. 15–18) or acicular (fig. 22) or elongate, stout, and robust (fig. 14). Labial palpus with three segments variously developed. Mentum and submentum variable in shape and separated by suture. Antennae with insertion anterior to anterior margin of compound eyes; with 11 variously developed articles; apex usually without club, but in some cases with last three articles forming feeble, loose club. Tentorial maculae present and distinct or not evident. Ocelli absent. Compound eyes well developed and prominent to nearly absent. Base of head constricted to form distinct neck (fig. 2) to complete absence (fig. 5) of neck. Cervical sclerites slender, not flat and expanded.

THORAX: Pronotal shape variable, from being strongly flattened dorsoventrally with strongly alate lateral margins (fig. 26) to being nearly

cylindrical; shape in dorsal aspect variable but usually wider than long. Pronotal lateral marginal bead variously developed (fig. 24) or entirely absent (fig. 29). Prohypomeron usually well developed. Protergosternal suture present (fig. 24), absent (fig. 29), or obsolete. Procoxal fissure present (fig. 24) or absent (fig. 29); fissure open (fig. 25) or closed (fig. 24); protrochantin exposed (fig. 25) or concealed (fig. 24). Prosternal process present or absent. Postprocoxal lobe present (fig. 24) or absent (fig. 29). Procoxal cavities open behind. Mesothoracic spiracle not surrounded by well-developed sclerite.

Scutellum partially exposed or concealed. Elytra with longitudinal striae present or absent; elytral length variable but not covering abdomen. Elytral epipleural ridge present (fig. 39) or absent (fig. 38); ridge in some cases modified to punctiform groove (fig. 43). Mesosternum and metasternum separated laterad of mesocoxa by mesepimeron's reaching coxae (fig. 37). Mesepisternum and mesosternum usually not delimited from each other. Mesocoxae separated (fig. 35) or contiguous; separation by extension of mesosternal (fig. 34) or metasternal (fig. 35) processes. Mesosternal process overriding metasternum (fig. 34) or on the same dorsoventral level with metasternum (fig. 35).

Procoxa conical, prominent, and exserted. Mesocoxa spherical or hemispherical and oval or round. Metacoxa transversely triangular. Femur usually longer than tibia, spindle-shaped, and moderately flattened. Tibia with longitudinal row of spines present or absent; usually cylindrical, long and slender, or robust and variously flattened. Tarsal formula 2-2-2 (fig. 59), 3-3-3 (fig. 58), 4-4-4 (figs. 50, 51), or 5-5-5 (figs. 52, 55, 56).

ABDOMEN: Shape broad and elongate, occasionally short and stout; dorsal surface flattened and ventral surface strongly rounded. First tergum weakly sclerotized; second to ninth terga strongly sclerotized. Seventh tergum with posterior margin fimbriate or membranous, or both. First sternite absent. Second sternite usually broad, well developed, and strongly sclerotized; occasionally reduced, narrow, poorly sclerotized, and closely associated with third sternite (fig. 69). Third to ninth sternal elements strongly sclerotized. Second and third sternites with prominent, midlongitudinal carinae absent; occasionally second and third sternites with low, fine, midlongitudinal carina (see *Apocellagria*). Segments 2 to 7 with at least one laterosclerite on each side (fig. 71) and usually with two (fig. 68). Eighth sternum with lobe on anterior margin absent. Ninth segment with abdominal glands; abdominal glands with external openings usually present in ninth tergites (fig. 72); occasionally openings present in membrane between ninth and tenth tergal elements (fig. 73). Ninth tergites of male with anteriorly directed, slender struts (fig. 72). Tenth tergum separating ninth tergum into two equal parts (figs. 67, 72, 73).

AEDEAGUS: Parameres present or absent; when present, variable in shape, size, and length. Median lobe with bulbous base.

DIAGNOSTIC FEATURES: This subfamily is readily distinguished from all other staphylinid subfamilies by the presence in most species of a well-developed second abdominal sternite, by the presence of distinct openings of the abdominal glands in the tergites of the ninth segment, and by the entirely separated ninth tergites.

Syntomium, *Homalotrichus*, *Coprophilus*, and *Coprostygnus* are the only included genera in which the second sternite is narrow and poorly sclerotized (figs. 66, 69), but in these genera there is no midlongitudinal carina on the sternite as is the case with other subfamilies in which there is a narrow sternite. This narrow second sternite is closely associated with the third in these four genera and is more poorly sclerotized anteriorly than posteriorly. In each of these genera, however, the abdominal glands are well developed, and their exits are in the ninth tergites. Although *Deleaster* has the second sternite weakly sclerotized anteriorly, the other oxyteline abdominal characters are present and no midlongitudinal carina is present. The only exception to the presence of the abdominal gland openings in the ninth tergites is *Paraploderus*, in which the openings are found in the membrane between tergal elements IX and X, but the species of this genus have the second sternite well developed and strongly sclerotized. *Apocellagria* is the only genus in which the species have a basal, midlongitudinal carina on tergites II and III, but in this case the carinae are not prominent, sternite II is well developed and strongly sclerotized, and the abdominal glands exit in tergite IX.

The absence of ocelli helps to separate the Oxytelinae from the Omaliinae. The presence of

strongly exserted, conical procoxae helps to separate the Oxytelinae from the Piestinae, in which the procoxae are "globose" and only slightly exserted. The presence of abdominal laterosclerites helps to separate the Oxytelinae from the Osoriinae. The absence of the lobed anterior margin of the eighth abdominal sternum and the absence of the well-developed, mesospiracular peritreme separate the Oxytelinae from the Proteininae. The presence of the insertion of the antennae anterior to the anterior margin of the compound eyes and the slender, cervical sclerites separate the Oxytelinae from the Aleocharinae. In the Aleocharinae the antennal insertions are posterior to the anterior margin of the compound eyes and the cervical sclerites are often flattened and expanded.

The species of the Staphylinidae in other subfamilies are also deficient in the development of a movable second abdominal sternite. Most of the genera of other subfamilies have a partially developed second sternite, but there is a prominent, midlongitudinal carina on the second sternite and on the anterior portion of the third sternite. If chemical secreting glands are present in the members of other subfamilies, then the external openings are apparently found in positions other than the tergites of the ninth segment. The results of preliminary investigations indicate that the separation of the ninth tergites by the tenth tergum is useful for the further delimitation of the Oxytelinae but cannot be used in all cases to separate the subfamily from other subfamilies.

KEY TO THE GENERA OF THE OXYTELINAE OF THE WORLD

This key is based not on the use of published descriptions but on a study of specimens of the species of each genus that is included herein. Each genus was studied from most parts of its known geographical range. Nearly all the species described and currently included in the Oxytelinae can be assigned generically through the use of this key, but, because examination of all the described species was not possible, some of the species not studied may still be in the wrong genus. Some genera are brought out in more than one couplet because of potential misinterpretation or variation of key characters.

Crymus, *Typhlobledius*, *Anotylops*, and *Gardnerianus* have not been included in the key because specimens were not available for study and the published descriptions of them are not sufficiently detailed for the placement of these genera in the key.

1. Procoxal fissure absent (figs. 27, 29) . . . 30
   Procoxal fissure present (figs. 24, 25, 31) . 2
2 (1). Maxillary palpus with fourth article elongate and stout (fig. 14) 3
   Maxillary palpus with fourth article short and subulate (figs. 15, 17, 18) or acicular (fig. 22) 11
3 (2). Procoxal fissure open, protrochantin well exposed (fig. 25) 4
   Procoxal fissure closed, protrochantin not or only slightly exposed (fig. 24) 8
4 (3). Elytral epipleural ridge absent (fig. 38); Ethiopian and Palearctic . . . . . *Eppelsheimius* (part)
   Elytral epipleural ridge present (fig. 39). . 5
5 (4). Abdominal segments III to VI with two laterosclerites present per segment (fig. 71); Nearctic, Palearctic, and Ethiopian. . . . . *Deleaster*
   Abdominal segments III to VI with four laterosclerites per segment (fig. 68) . . 6
6 (5). Gular sutures separated along entire length (fig. 11); temperate Northern Hemisphere; Palearctic and Nearctic . . . . . *Coprophilus*
   Gular sutures confluent on anterior portion (fig. 9); temperate Southern Hemisphere 7
7 (6). Epistomal suture present (fig. 5); New Zealand . . . . . *Coprostygnus*
   Epistomal suture absent; Neotropical and Australian. . . . . *Homalotrichus*
8 (3). Elytral epipleural line present as ridge (fig. 39); gular sutures confluent (figs. 8, 10) or separated (figs. 7, 11) 9
   Elytral epipleural line present as punctate stria (fig. 43); gular sutures very narrowly separated along entire length (fig. 7); Palearctic, Ethiopian, and Oriental . . . . . *Planeustomus*
9 (8). Tarsal formula 5-5-5; tarsal articles distinct (figs. 47, 52) 10
   Tarsal formula 4-4-4; basal three tarsal articles compressed and closely associated (fig. 48); gular sutures confluent except at base (fig. 10); Neotropical . . . . . *Crassodemus*
10 (9). Abdominal segments III to VI with two laterosclerites per segment (fig. 71); gular sutures confluent except at base (fig. 10); Holarctic . . . . . *Syntomium* (part)
   Abdominal segments III to VI with four laterosclerites per segment (fig. 68); gular segments narrowly separated along entire

length (fig. 7); Palearctic and Nearctic . . . . . *Manda*

11 (2). Abdominal segments III to VI with two laterosclerites per segment (fig. 71); Holarctic . . . . . *Syntomium* (part)
Abdominal segments III to VI with four laterosclerites per segment (fig. 68) . . 12

12 (11). Mesocoxae contiguous or narrowly separated by mesosternal process and in some cases by narrow metasternal carina; mesosternal process acute at apex (fig. 34). . 13
Mesocoxae widely separated by broad, elongate metasternal process; mesosternal process truncate at apex (fig. 37); Holarctic, Ethiopian, and Neotropical . . . . . *Platystethus*

13 (12). Protibia with longitudinal row of spines. . 14
Protibia without longitudinal row of spines 19

14 (13). Fourth segment of maxillary palpus acicular (fig. 22); Oriental and Ethiopian . . . . . *Xerophygus* (part)
Fourth segment of maxillary palpus subulate (figs. 17, 18) 15

15 (14). Tarsal formula 3-3-3 16
Tarsal formula 4-4-4 or 5-5-5 17

16 (15). Seventh abdominal tergum with posterior margin serrate (fig. 70); Neotropical. . . . . *Parosus* (part)
Seventh abdominal tergum with posterior margin fimbriate; Holarctic . . *Aploderus*

17 (15). Tarsal formula 4-4-4 (fig. 51); procoxal fissure distinct and well developed (figs. 24, 25); cosmopolitan . . . . . *Bledius*
Tarsal formula 5-5-5; procoxal fissure reduced 18

18 (17). Elytral epipleural ridge absent (fig. 38); procoxal fissure short and closed but distinct; Palearctic and Ethiopian . . . . . *Eppelsheimius* (part)
Elytral epipleural ridge present (fig. 39); procoxal fissure reduced to small notch on ventral margin of prohypomeron (fig. 31); New Zealand and Australian . . . . . *Blediotrogus* (part)

19 (13). Abdominal terga with basolateral ridges (fig. 68) 29
Abdominal terga without basolateral ridges 20

20 (19). Elytral epipleural ridge absent (fig. 38); Oceania . . . . . *Mimopaederus*
Elytral epipleural ridge present (fig. 39). . 21

21 (20). Tarsal formula 3-3-3; cosmopolitan . . . . . *Carpelimus* (part)
Tarsal formula 5-5-5 (the basal three segments are compressed and closely associated but can be exposed by treatment in potassium hydroxide) (figs. 49, 55, 56) . 22

22 (21). Metatibia with longitudinal ctenidium of closely spaced spinules (fig. 57); Ethiopian and Oriental. . . . . *Xerophygus* (part)
Metatibia without longitudinal ctenidium of spinules 23

23 (22). Abdominal tergum and sternite II with distinct midlongitudinal carina present at base; Ethiopian and Oriental. . . . . *Apocellagria* (part)
Abdominal tergum and sternite II without midlongitudinal carina 24

24 (23). Labrum with anterior margin deeply bilobed (fig. 19) 25
Labrum with anterior margin broadly and moderately deeply emarginate (fig. 13) 26

25 (24). Last tarsomere with dense, short pubescence (fig. 55); Neotropical . . *Trogactus* (part)
Last tarsomere with scattered, long setae (fig. 56); cosmopolitan . . *Thinodromus*

26 (24). Procoxal fissure long, well developed, and open (fig. 25) or closed (fig. 24); Holarctic . . . . . *Ochthephilus*
Procoxal fissure short, reduced, and closed 27

27 (26). Metatibia with longitudinal ctenidium of spinules (fig. 57); Ethiopian and Oriental . . . . . *Xerophygus* (part)
Metatibia without longitudinal ctenidium of spinules 28

28 (27). Tergum VIII with posterior margin broadly rounded; Neotropical, Nearctic, New Zealand, Australian, and Ethiopian. . . . . *Teropalpus*
Tergum VIII with posterior margin emarginate, nearly truncate; cosmopolitan . . . . . *Thinodromus* (part)

29 (19). Scutellum pubescent; Holarctic, Neotropical Ethiopian, and Oriental. . . . *Thinobius*
Scutellum without pubescence; Neotropical . . . . . *Sciotrogus*

30 (1). Metatibia with longitudinal ctenidium of closely spaced spinules (fig. 57); ctenidium may be very short 38
Metatibia without longitudinal ctenidium although longitudinal row of widely spaced spines or spinules may be present 31

31 (30). Elytra elongate and with long setae on posterior margin; Australian . . *Sartallus*
Elytra short and without long setae on posterior margin 32

32 (31). Abdominal terga with basolateral ridge (fig. 68); New World . . . . . *Neoxus*
Abdominal terga without basolateral ridge 33

33 (32). Protibia spinous 34
Protibia not spinous 35

34 (33). Tarsal formula 5-5-5 (fig. 44); procoxal fissure reduced to very small notch on ventral margin of prohypomeron (fig. 31); New Zealand and Australian . . . . . *Blediotrogus* (part)
Tarsal formula 4-4-4 (fig. 48); procoxal fissure absent (fig. 29); Ethiopian . . . . . *Pareiobledius*

35 (33). Tarsal formula 3-3-3 36
Tarsal formula 5-5-5 (the basal three articles are compressed and closely associated but can be exposed by treatment with potassium hydroxide (figs. 55, 56) 37

36 (35). Tergum VII with posterior margin serrate (fig. 70); labrum with U-shaped emargination of anterior margin (fig. 21); Neotropical . . . . . *Parosus* (part)
Tergum VII with posterior margin fimbriate; labrum with broad, shallow emargination of anterior margin; cosmopolitan. . . . . *Carpelimus* (part)

37 (35). Abdominal sternite and tergum II with midlongitudinal, basal, carina; Oriental and Ethiopian . . . . . *Apocellagria* (part)
Second abdominal sternite and tergum II without midlongitudinal carina; cosmopolitan . . . . . *Thinodromus* (part)

38 (30). Abdominal terga III to VI without basolateral ridge; Neotropical . *Parosus* (part)
Abdominal terga III to VI with basolateral ridge (fig. 68) 39

39 (38). Protibia and mesotibia without longitudinal row of spines or spinules 40
Protibia and mesotibia with longitudinal row of spines or spinules 43

40 (39). Mesosternal process acute at apex, prominent and extending between mesocoxae; (fig. 36); abdominal glands with external opening in membrane between ninth and tenth tergal elements (fig. 73); Oriental and Ethiopian . . . . . *Paraploderus*
Mesosternal process truncate at apex, not prominent and extending only slightly between mesocoxae (figs. 35, 37); abdominal glands with external openings in ninth tergites (figs. 67, 72) 41

41 (40). Neck width one-half of postocular width of head or less; New World. *Apocellus* (part)
Neck width more than one-half of postocular width of head 42

42 (41). Antennal articles 3–11 with long, prominent setae and short dense pubescence; cosmopolitan . . . . . *Anotylus* (part)
Antennal articles 3–11 without long, prominent setae but with very dense, short pubescence; Oriental . . . *Rimba* (part)

43 (39). Abdominal tergum II without basolateral ridge 44
Abdominal tergum II with basolateral ridge (fig. 68) 48

44 (43). Elytral epipleural ridge absent (fig. 38); Ethiopian . . . . . *Oncoparia*
Elytral epipleural ridge present (fig. 39) .45

45 (44). Neck width one-half of postocular width of head or less; New World . *Apocellus* (part)
Neck width more than one-half of postocular width of head 46

46 (45). Antennal articles 3–11 without long, prominent setae, but with dense, short pubescence; Oriental . . . . . *Rimba* (part)
Antennal articles 3–11 with long, prominent setae in addition to usually dense, short pubescence 47

47 (46). Tibia with distinct longitudinal grooves (fig. 53); pronotum with lateral margin strongly explanate and hypomeron extremely deflexed (fig. 26); Oriental . . . . . *Oxytelopsis*
Tibia without distinct longitudinal grooves; if grooves present, then poorly developed and pronotum not strongly explanate and hypomeron not extremely deflexed; cosmopolitan . . . . . *Anotylus* (part)

48 (43). Tibia with base strongly constricted; head and prothorax with conical protuberances; Ethiopian . . . . . *Hoplitodes*
Tibia without strong basal constriction; head and prothorax without conical protuberances 49

49 (48). Tarsus with first and second articles of nearly equal length (figs. 61–65) 50
Tarsus with first article longer than second (figs. 57, 60); cosmopolitan . . *Oxytelus*

50 (49). Pronotal lateral marginal bead present (fig. 27) 51
Pronotal lateral marginal bead absent (fig. 29); Neotropical . . . . . *Ecitoclimax*

51 (50). Elytra with prominent longitudinal carinae; Ethiopian . . . . . *Paroxytelopsis*
Elytra without longitudinal carinae . . .52

52 (51). Metasternal process with three longitudinal carinae; Ethiopian . . . . . *Anisopsis*
Metasternal process with one longitudinal carinae; Ethiopian . . . . *Anisopsidius*

COPROPHILINI

Coprophilini Erichson, 1839b, p. 30; 1840, p. 814. Type genus: *Coprophilus* Latreille.

Diagnosis

The presence in most genera of the procoxal fissure and the normally contiguous mesocoxae are useful for the recognition of this tribe. In some cases the mesocoxae are separated by the

mesosternal process, but in all cases the mesosternal process is prominent and has a carinate apex. The metasternal process is absent or, if present, is only a very narrow carina.

Description

HEAD: Labrum with labral lobes well developed (fig. 20) or poorly developed. Clypeus usually well developed, rectangulate and with anterior margin truncate (fig. 5). Maxillary palpus with fourth segment elongate and robust (fig. 14), subulate (figs. 15–18), or acicular (fig. 22). Mandibles denticulate or edentate. Gular sutures separated (figs. 7, 11) or confluent (figs. 6, 9, 10), usually separated at base. Neck of variable width. Antennomeres with long, tactile setae.

THORAX: Protergosternal suture present (figs. 24, 25) or absent (figs. 29–31); fissure open (fig. 25) or closed (fig. 24); fissure long and prominent (fig. 25) or short and more inconspicuous (fig. 24). Protrochantin exposed (figs. 25, 30) or concealed (figs. 24, 29, 31). Postprocoxal lobe present (figs. 24, 25) or absent (figs. 29, 31). Scutellum with apex exposed or concealed. Elytral epipleural ridge usually present (fig. 39); occasionally absent (fig. 38), occasionally modified as groove (fig. 43). Mesosternal process long, slender, and spiniform or shorter with apex carinate and prominent (figs. 33, 34). Metasternal process absent or represented by low, narrow carina (fig. 33). Mesocoxae separated by mesosternal process or contiguous. Tarsal formula 2-2-2 (fig. 59), 3-3-3 (fig. 58), 4-4-4 (figs. 48, 50, 51), or 5-5-5 (figs. 47, 49, 52, 55, 56); articles distinct and well defined or compressed together and indistinct (figs. 55, 56); penultimate article with long, membranous lobes present (fig. 58) or absent (fig. 52). Tibia with longitudinal row of spines present or absent.

ABDOMEN: First abdominal sternum absent. Second abdominal sternite present and narrow (figs. 66, 69) or wide; sclerite strongly or weakly sclerotized; sternite freely movable or closely associated (figs. 66, 69) with third sternite; second and third sternites with basal mid-longitudinal carina usually absent, but occasionally present but weak. Abdominal segments II to VII with two laterosternites (as in fig. 68) per segment; occasionally with only one laterosternite (fig. 71). Abdominal glands with external openings in ninth tergites (figs. 67, 72).

Discussion

Most authors have included in the Coprophilini only those genera of the Oxytelinae with five tarsomeres (in some cases four tarsomeres) as opposed to the presence of three tarsomeres in members of the Oxytelini. Such a tribal classification of the Oxytelinae is artificial and erroneous for two reasons: many of the genera previously included in the Oxytelini on the basis of the presence of three tarsomeres have either two, four, or five articles per tarsus, and, secondly, the presence of five distinct tarsomeres is a plesiomorphic character. The use of derived characters is the only means of establishing a phylogenetically sound tribal classification of the Oxytelinae. *Aploderus*, *Bledius*, *Blediotrogus*, *Pareiobledius*, *Teropalpus*, *Ochthephilus*, *Xerophygus*, *Mimopaederus*, *Thinodromus*, *Trogactus*, *Apocellagria*, *Carpelimus*, *Thinobius*, and *Sciotrogus* are herein transferred to the Coprophilini.

Almost all the genera of the Coprophilini possess the procoxal fissure and have the mesocoxae contiguous or slightly separated by the mesosternal process. In none of the genera are the mesocoxae separated by the metasternal process. In those instances in which the procoxal fissure is absent, the genera are demonstrably related to genera in the Coprophilini, this relationship being based on other characters.

DELEASTER

Deleaster ERICHSON, 1839a, p. 610. Type species: *Deleaster dichroa* (Gravenhorst).

Diagnosis

This genus can be readily recognized by the combination of the open procoxal fissure (as in fig. 25), the exposed scutellum, the contiguous mesocoxae, the presence of two abdominal laterosternites (fig. 71), and the long slender legs.

Description

Length, 6.0 to 9.0 mm. Color rufotestaceous to piceus. Form broad and elongate; elytra and abdomen broader than head and prothorax. Body moderately strongly sclerotized. Head and prothorax with sparse pubescence; elytra, abdomen, and legs with more dense pubescence.

HEAD: Dorsum with prominent groove extending anterolaterally from base of head to compound eye. Epistomal suture evident as strong, prominent groove even with anterior

margin of supra-antennal ridges. Base of head strongly constricted to form distinct neck. Gular sutures confluent anteriorly, then sharply and widely divergent near middle and nearly parallel on neck (fig. 6). Labrum with anterior margin broadly and deeply emarginate; labral lobe short. Mandible stout, short, and edentate. Maxillary palpus with fourth segment parallel at base and nearly as broad as apex of third segment; fourth segment acuminate apically; fourth segment longer than third. Compound eyes prominent but not extending onto ventral portion of head.

THORAX: Pronotum wider near apex than at base; with lateral margin sinuate. Pronotum with prominent lateral and basal depressions. Lateral marginal bead present and entire; bead not on hypomeron. Prohypomeron broad and feebly deflexed. Protergosternal suture present but incomplete; suture absent or obsolete a short distance from procoxal fissure. Procoxal fissure present and open (as in fig. 25). Protrochantin exposed (as in fig. 25). Postprocoxal lobe present (as in fig. 25).

Scutellum with apex exposed from under pronotum; surface with diamond-shaped impression. Elytra prominent, broad, and elongate; with apical margin angulate at middle; elytral epipleural ridge present (as in fig. 39); elytra with longitudinal striae absent. Mesosternal process short; with apex carinate; process extending short distance between coxae (fig. 33). Mesocoxae contiguous. Mesosternum with low, broadly rounded ridge between mesocoxae (as in fig. 33); metasternal process absent.

Legs long and slender. Protibia with weakly defined row of spinules. Mesotibia and metatibia with distinct, well-defined ctenidium of spinules; with moderately dense, spinulate pubescence present. Tarsal formula 5-5-5. Protarsus with basal four articles expanded (fig. 47) and with dense pubescence on ventral surface. Mesotarsus with articles slightly expanded and dense pubescence on ventral surface. Metatibia slender. Tarsus with last segment longest.

ABDOMEN: Second sternite narrow and more poorly sclerotized anteriorly than posteriorly. Second and third sternites without basal midlongitudinal carina. Segments II to VII each with one pair of laterosternites (fig. 71). Eighth tergum with posterior margin serrate and broadly rounded.

Aedeagus trilobed. Paramere strongly sclerotized and slender. Median lobe membranous, subbasal ring nearly encircling median lobe to set off "pressure plate" at base.

DISTRIBUTION

Palearctic: Albania, Austria, Belgium, Bulgaria, China, Czechoslovakia, Denmark, England, Finland, France, Germany, Greece, Hungary, Iran, Ireland, Italy, Japan, Morocco, Netherlands, Norway, Poland, Romania, Scotland, Soviet Union, Spain, Sweden, Switzerland Syria, Yugoslavia. *Nearctic:* Canada, Mexico, United States. *Ethiopian:* Ethiopia.

DISCUSSION

The species of *Deleaster* have been taken in the United States in caves and under rocks along cold streams. The Old World species have been collected along streams and in leaf litter. Although the species are apparently secretive and hide under rocks during the day, they probably wander about on the surface at night. *Deleaster trimaculatus* has been observed eating the soft parts of freshly killed insects (Herman, unpublished observation).

Most of the species are found in widely scattered localities in the temperate Holarctic Region. Two species are found in Africa, one in montane northern Africa, and one in montane Ethiopia. The presence of the species in mountainous regions in the southern part of the range of the genus, with the other species more generally distributed in the northern areas, suggests that the species are cold-adapted.

The form of *Deleaster* is more suggestive of the Omaliinae than of the Oxytelinae. The presence of only one of the abdominal laterosternites in *Deleaster* is characteristic of the Omaliinae. *Deleaster* is excluded from the Omaliinae because of the absence of the ocelli and the median lobe of the eighth sternite. The inclusion of *Deleaster* in the Oxytelinae is based on the presence of the second abdominal sternite and the presence of the openings of the abdominal gland in the ninth tergites. The second sternite of this genus is not strongly sclerotized throughout, but the segment is separated from the third by an intersegmental membrane, and there is no midlongitudinal carina on the second and third sternites.

SPECIES INCLUDED

D. bactrianus Semenow; Sp
D. concolor LeConte; H

D. dichrous (Gravenhorst); Sp
D. pectinatus Fauvel; Sp
D. pekinensis Fairmaire
D. trimaculatus Fall; H
D. yokoyamai Adachi; Sp

COPROSTYGNUS

Coprostygnus SHARP, 1886, p. 380. Type species: *Coprostygnus sculptipennis* Sharp.

DIAGNOSIS

This genus can be recognized by the combination of the strongly sclerotized body, the stout fourth segment of the maxillary palpus (as in fig. 14), the confluent gular sutures, the presence of the epistomal sutures, the open procoxal fissure (as in fig. 25), the separation of the mesocoxae by the mesosternal process, and the weakly sclerotized second abdominal sternum which is closely associated with the third (as in fig. 69).

DESCRIPTION

Length, 5.0 to 8.0 mm. Color testaceous to piceous. Form stout, elongate, and subcylindrical. Elytra and abdomen slightly wider than head and prothorax. Body strongly sclerotized; with prominent punctation and scattered setae.

HEAD: Epistomal suture present; suture strongly arcuate. Base of head moderately constricted to form broad, distinct neck. Gular sutures confluent; sutures gradually separating basally. Clypeus well developed. Labrum with anterior margin broadly emarginate; labral lobe short. Mandible stout and denticulate. Maxillary palpus with fourth segment robust and well developed; segment as wide at base as apex of third segment, then expanding medially before becoming acuminate apically (as in fig. 14); fourth segment longer than third; second longer than third. Compound eyes moderately large, not extending onto ventral portion of head.

THORAX: Pronotum with lateral margin broadly sinuate. Prohypomeron broad and moderately deflexed. Pronotal lateral marginal bead present (as in fig. 25); bead not on hypomeron. Pronotum with lateral, basal, and median depressions. Protergosternal suture present (as in fig. 25); suture well developed near coxal fissure and becoming weaker anteriorly. Procoxal fissure present and open (as in fig. 25). Protrochantin exposed. Postprocoxal lobe present (as in fig. 25). Prosternal process carinate and extending short distance between coxae.

Scutellum without surface impression; with surface punctate; with apex slightly exposed from under pronotum. Elytra with prominent, longitudinal, punctate striae; epipleural ridge present (as in fig. 39). Mesosternal process extending between coxae; process prominent and carinate at apex (as in fig. 34). Metasternum with rounded ridge between coxae (as in fig. 34). Mesocoxae narrowly separated by mesosternal process. Legs moderately elongate. Coxa and femur with scattered setae. Tibia with longitudinal row of spines. Tarsal formula 5-5-5; apical article longest; basal four articles with stout setae on under surface; fifth article longest; articles distinct and well defined.

ABDOMEN: Second sternite not so strongly sclerotized as third and less strongly sclerotized anteriorly; second sternite closely associated with third and apparently not movable on third (as in fig. 69); second and third sternites without midlongitudinal carina; narrow sclerite present anterior to second sternite. Second tergum less strongly sclerotized than third. Abdominal terga with basolateral ridges absent. Segments II to VI each with two pairs of laterosclerites (as in fig. 68); seventh segment with one pair of laterosclerites.

Aedeagus trilobed. Median lobe with basal portion bulbous; with circular depression near middorsal region. Paramere expanded apically; with long setae on apex. Median lobe with apical portion cylindrical.

DISTRIBUTION

Oceania: New Zealand.

DISCUSSION

Coprostygnus optandus has been collected from decayed wood and under logs in beech forests (Hudson, 1934).

Coprostygnus can be separated from *Coprophilus*, *Homalotrichus*, and *Toxoderus* by the presence of the epistomal suture, by the confluence of the gular sutures, and by characteristics of the aedeagus.

SPECIES INCLUDED

C. curvipes Broun; H
C. optandus Broun; H
C. picipennis Broun; H
C. sculptipennis Sharp; H

COPROPHILUS

Coprophilus LATREILLE, 1829, p. 439. Type species: *Coprophilus rugosus* (Olivier).

Zonoptilis Solsky, 1867, p. 85. Type species: *Zonoptilis pennifer* Solsky.

Diagnosis

This genus can be recognized by the combination of the strongly sclerotized body, the stout fourth segment of the maxillary palpus (fig. 14), the absence of the epistomal suture, the separation of the gular sutures for the entire length (fig. 11), the open procoxal fissure, the striate elytra, the separation of the mesocoxae by the mesosternal process, the presence of two abdominal laterosternites (as in fig. 68), and its restriction to the Northern Hemisphere.

Description

Length of body, 3 to 9 mm. Color rufopiceous to black. Form stout, elongate, subcylindrical to moderately flattened dorsoventrally. Elytra and abdomen wider than head and prothorax. Head, prothorax, and elytra with setae scattered sparsely over surface. Abdomen with more dense pubescence.

Head: Epistomal suture absent; present only on anterior, mesial angle of the supra-antennal ridge; in some cases slight transverse impression present. Base of head not constricted to form distinct neck; with transverse groove even with posterior margin of eyes on dorsum. Gular sutures distinctly and narrowly separated along entire length and strongly divergent at base (fig. 11). Labrum with anterior margin broadly emarginate; labral lobe short and broad. Mandible denticulate. Maxillary palpus with fourth segment stout; fourth segment with base as broad as apex of third segment, then gradually acuminate to apex; fourth segment longer than third (fig. 14). Compound eyes small and not extending onto ventral portion of head (fig. 11).

Thorax: Pronotum with lateral margin broadly arcuate to sinuate; with lateral, basal, and median depressions present or absent. Pronotal lateral marginal bead present (fig. 25); bead not on hypomeron. Prohypomeron strongly deflexed and broad. Protergosternal suture present (fig. 25). Procoxal fissure present and open (fig. 25). Protrochantin exposed (fig. 25). Postprocoxal lobe present (fig. 25). Prosternal process carinate and extending between coxae.

Scutellum with apex partly exposed or completely concealed by pronotum; surface punctate and with oval impression. Elytral epipleural ridge present (fig. 39); elytra with longitudinal, punctate striae. Mesosternal process prominent, elongate, spiniform, and extending strongly between mesocoxae (fig. 34). Mesocoxae narrowly separated by mesosternal process. Metasternum with low ridge between mesocoxae (fig. 34). Metasternal process absent.

Femur with fine pubescence. Tibia with longitudinal row of spines; with numerous stout setae. Mesocoxa not strongly exposed from mesocoxal depression. Tarsal formula 5-5-5; basal articles with long, spinulate setae on under surface; with fifth article longest; articles distinct.

Abdomen: Second sternite not so strongly sclerotized as third and less strongly sclerotized anteriorly; second sternum closely associated with third and apparently not movable on third; second and third sternites without midlongitudinal carina; narrow sclerite present anterior to second sternite (fig. 69). Segments III to VI with two pairs of laterosternites per segment (as in fig. 68). Eighth tergum with posterior margin emarginate.

Aedeagus trilobed. Paramere stout and elongate. Median lobe with dorsal "pressure plate" completely surrounded by membrane; with median longitudinal strip membranous to apex and continuous with membrane surrounding pressure plate.

Distribution

Palearctic: Afghanistan, Austria, Belgium, Bulgaria, China, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, India, Iran, Iraq, Ireland, Italy, Japan, Kashmir, Korea, Manchuria, Mongolia, Netherlands, Norway, Poland, Romania, Scotland, Soviet Union, Sweden, Switzerland, Tibet, Turkey, Yugoslavia. *Nearctic:* Canada, United States.

Discussion

Coprophilus striatulus (Fabricius) is found in compost, at manure boxes and under rotting plants in gardens, and in woods under leaves. The beetles are often found crawling on walls of houses, especially in the autumn (Johansen, 1914).

All the species of the genus are found in the temperate regions of the Northern Hemisphere. The species are associated with mountains in the southern parts of the geographical range of the genus. The presence of the species of *Coprophilus*

in temperate regions and mountains suggests that the members of this genus are cold-adapted.

Some authors (Tottenham, 1954; Arnett, 1963; Moore, 1964a; Watanabe and Shibata, 1961) used the name *Elonium* for the species that I have included in *Coprophilus*. Until 1949 the name used most often for this genus was *Coprophilus*, but Tottenham (1949) and Blackwelder (1952) gave reasons for believing *Elonium* to be the valid name. I believe the correct name of the genus is *Coprophilus*.

Leach (1819, p. 175) published *Elonium* and included one species, *Omalium striatum* [*sic*]. *Elonium* had no formal description but can be construed to have been made available by its inclusion in an arrangement of previously described genera and species, by inclusion of a reference to a description of the type species, and by inclusion of characteristics for two different groups of species (pp. 173 and 175) one of which contained *Elonium*. By original designation, Leach (1819) fixed *Omalium striatum* as the type species of *Elonium*. Samouelle (1819, p. 375) listed *Omalium striatum* in a table with a reference to a redescription by Gyllenhall (1810) of *O. striatum* Gravenhorst.

Stephens (1829) listed *Elonium* with one species, *Elonium striatulus* (Fabricius) (=*Staphylinus*). Under *Elonium striatulus* he listed two junior synonyms, *Elonium rugosus* (Olivier), the type species of *Coprophilus* Latreille (1829), and *Elonium striatum* (Samouelle) [*sic*]. Without giving reasons, Stephens considered the *Omalium striatum* listed in Samouelle (1819) under *Elonium* to be different from *Omalium striatum* Gravenhorst but the same as *Elonium striatulus* (Fabricius). He presented no evidence to indicate that *Omalium striatum* was a misindentification or misspelling in Samouelle (*op. cit*).

Stephens used *Coprophilus* as the valid name, with *Elonium* listed as the junior synonym, although the latter genus bears the older name. Stephens' interpretation of *Elonium* was perpetuated in the literature until 1949. Tottenham (1949) accepted the type species of *Elonium* as *Elonium striatulum* (Fabricius), not *Elonium striatum* (Gravenhorst), but noted that *Elonium* was older than *Coprophilus* and should therefore be the senior synonym. Tottenham drew attention to the discrepancy between the spelling of the species listed by Leach (1819) and the spelling listed by Stephens (1829) but accepted the decisions of Stephens.

Acrolocha Thomson (1858) was described with one species, *Acrolocha striatum* (Gravenhorst) (=*Omalium*). If the type species of *Elonium* Leach (1819) is accepted as originally published, then *Acrolocha* and *Elonium* are isogenotypic synonyms. Tottenham, in supporting his acceptance of *Elonium striatulus* as the type species of *Elonium*, stated that ". . . it is inconceivable that at that date Samouelle should have separated *striatum* Gravenhorst from the genus *Omalium*." Unfortunately, this conjecture about the discriminatory powers of Leach is not supported by other evidence. Tottenham (1949) further mentioned that *Acrolocha striatum* Gravenhorst (=*Omalium*) had never been taken in Britain, but later Tottenham (1954, p. 19) recorded *Acrolocha striata* (Gravenhorst) and Steel (1957) confirmed the occurrence of the species in Britain. Blackwelder (1952) accepted Tottenham's and Stephens' interpretation of the type species of *Elonium*. I can find no evidence that the name listed under *Elonium* by Leach (1819) was in any way an error, and there seems to be evidence that the name cited is the correct one. The type species of *Elonium* is *Elonium striatum* (Gravenhorst); it is an objective isogenotypic synonym of *Acrolocha*. *Elonium*, the senior synonym, is now in the Omaliinae. *Coprophilus* has as its type species *Coprophilus rugosus* (Olivier) [a junior synonym of *Elonium striatulus* (Fabricius)] and should be applied in its traditional sense.

A further nomenclatural change is the reelevation of *Homalotrichus* to the generic level. All the species of *Coprophilus* listed as South American should be included in *Homalotrichus*.

The absence of the epistomal suture, the separation of the gular sutures, and the differences of the geographical distributional patterns separate *Coprophilus* from *Coprostygnus*. The gular sutures of *Coprophilus* are separated along their entire length, but in *Homalotrichus* they meet near the submental suture. These slight differences, combined with the distribution of *Coprophilus* in the Northern Hemisphere and that of *Homalotrichus* in the Southern Hemisphere separate these genera.

Species Included

C. adachii (Watanabe and Shibata)
C. alticola Fauvel; Syn
C. burphuensis Champion; H
C. impressus Sharp; H

C. kashmiricus Cameron; H
C. longicollis Cameron; H
C. longicornis Bernhauer; H
C. pennifer Motschulsky; Sp
C. pentatoma Fauvel; Sp
C. piceus Slosky; Sp
C. rufipennis (Reitter); Sp
C. schuberti (Motschulsky)
C. sexualis Leech; Sp
C. sibiricus Bernhauer; H
C. simplex Sharp; H
C. solskyi Bernhauer; H
C. striatulus (Fabricius); H
C. subplagiatus Cameron; H
C. vandykei Hatch

HOMALOTRICHUS

Homalotrichus SOLIER, 1849, p. 321. Type species: *Homalotrichus striatus* Solier.

Toxoderus FAUVEL, 1900, p. 189; new synonym. Type species: *Toxoderus banksi* (Fauvel).

Sharpia FAUVEL, 1878b, p. 488; preoccupied; objective synonym of *Toxoderus*. Type species: *Sharpia banksi* Fauvel.

DIAGNOSIS

This genus can be recognized by the combination of the stout fourth segment of the maxillary palpus (as in fig. 14), the absence of the epistomal suture, the confluence of the gular sutures near the submental suture (fig. 9), the open procoxal fissure (as in fig. 25), the presence of the elytral epipleural ridge, the reduction of abdominal sternite II, the presence of two abdominal laterosternites on each segment (as in fig. 68), and the five tarsomeres.

DESCRIPTION

Length, about 2.0 to 4.0 mm. Color testaceous to piceous. Form slender and subcylindrical. Head, prothorax, and elytra with scattered setae. Abdomen with moderately dense pubescence.

HEAD: Epistomal suture absent. Supraantennal ridge distinct. Base of head gradually constricted, forming broad neck; with transverse, dorsal groove posterior to eye. Gular sutures confluent anteriorly (fig. 9); occasionally meeting only near juncture with submental suture; sutures sharply divergent basally. Labrum with anterior margin moderately deeply emarginate; labral lobe short. Mandible denticulate. Maxillary palpus with fourth segment robust, elongate, and with base as wide as apex of third (as in fig. 14); fourth segment longest, attenuate apically from base but with apex obtuse. Third segment shorter than fourth or second and broader apically than basally. Second segment incrassate from base to apex. Compound eyes small and not extending onto ventral portion of head (fig. 9).

THORAX: Pronotum broadest near apex; lateral margin broadly sinuate; surface with broad depressions. Pronotal lateral marginal bead present (as in fig. 25); bead not on hypomeron. Prohypomeron broad and moderately deflexed. Protergosternal suture present (as in fig. 25). Procoxal fissure present and open (as in fig. 25). Protrochantin exposed (as in fig. 25). Postprocoxal lobe present. Prosternal process carinate and extending short distance between coxae.

Scutellum with apex exposed; surface without patterned impression and extending between coxae (as in fig. 34); ventral surface with spiniform appearance and with lateral margins reflexed. Mesocoxae narrowly separated by mesosternal process. Metasternum with low, midlongitudinal carina between mesocoxae (as in fig. 34); metasternal process absent.

Femur with fine pubescence. Tibia with longitudinal row of spines and spinules; with many setae. Tarsal formula 5-5-5; fifth article longest. Mesocoxa not prominently exserted from mesocoxal depression.

ABDOMEN: Second sternite not so strongly sclerotized as third and less strongly sclerotized anteriorly; second sternite closely associated with third and apparently not movable on third (as in fig. 69); second and third sternites without midlongitudinal carina; narrow sclerite anterior to second sternite present (as in fig. 69). Segments II to VI with two laterosternites per segment (as in fig. 68); segment VII with only one laterosternite. Terga with basolateral ridges absent. Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin emarginate.

Aedeagus trilobed. Median lobe with bulbous base; with apical portion cylindrical and slender; with ostium at apex.

DISTRIBUTION

Australian: Australia. *Neotropical:* Argentina, Chile, Peru.

DISCUSSION

Homalotrichus, originally treated as a genus and later considered to be a subgenus of *Coprophilus*, has herein been re-elevated to the generic level.

Characteristics of the gular sutures coupled with the disjunct geographical distribution support the recognition of *Homalotrichus* and *Coprophilus* as separate genera.

Toxoderus was originally compared with *Planeustomus* and was considered to have four tarsomeres per tarsus. Careful examination of the only species in the genus reveals that there are actually five tarsomeres per tarsus, and further, that the species is related to *Coprophilus*, *Homalotrichus*, and *Coprostygnus*. Comparison of *Toxoderus banksi* with the other species of *Homalotrichus* discloses no characters other than the disjunct geographical distribution that will support the continued separation of *Homalotrichus* and *Toxoderus*.

Species Included

H. banksi (Fauvel); H; new combination, transferred from *Toxoderus*
H. impressicollis Solier
H. substriatus Kraatz; Sp; new status
H. striatus Solier; Sp
H. weiseri (Bernhauer); H; new combination, transferred from *Coprophilus*

EPPELSHEIMIUS

Eppelsheimius Bernhauer, 1915a, p. 270. Type species: *Eppelsheimius pirazzolii* (Eppelsheim).

Oncophorus Eppelsheim, 1885, p. 46; preoccupied. Type species: *Oncophorus pirazzolii* Eppelsheim.

Oncogenys Champion, 1919, p. 154. Type species: *Oncogenys pirazzolii* (Eppelsheim); isogenotypic synonym.

Diagnosis

This genus can be recognized by the long, slender fourth segment of the maxillary palpus, the elongate labral lobes, the confluent gular sutures, the open procoxal fissure, the absence of the elytral epipleural ridge, and the five tarsal articles.

Description

Length, 4.0 to 5.5 mm. Color testaceous to rufopiceous. Form slender and approximately cylindrical. Body weakly sclerotized.

Head: Clypeus longer than wide or wider than long (as in figs. 12, 13). Epistomal suture straight; suture even with anterior margin of supra-antennal ridge. Antenna with first article elongate (as in fig. 23); with last three articles expanded to form well-defined, loose club. Base of head gradually narrowed, not sharply constricted, to form distinct neck. Submentum with stout, anteriorly directed, spiniform process on lateral angle. Gular sutures confluent; sutures sharply divergent at base. Labrum with anterior margin truncate; with several long, stout, prominent setae on lateral, anterior margin; with long, anteriorly directed, mesially fimbriate lobe arising near lateral portion beneath labrum (as in fig. 20). Mandible edentate. Maxillary palpus with fourth segment elongate and slender or moderately stout and short; with base as wide as apex of third, then strongly attenuate; length of fourth article approximately equal to length of third. Compound eyes not extending onto ventral portion of head (as in fig. 9).

Thorax: Pronotum with lateral margins gradually convergent posteriorly. Pronotal lateral marginal bead present and entire (as in fig. 25) or interrupted; bead not on hypomeron. Prohypomeron broad and weakly deflexed. Protergosternal suture present (as in fig. 25). Procoxal fissure present and open (as in fig. 25). Protrochantin exposed (as in fig. 25). Postprocoxal lobe absent but with prohypomeron triangular posterior to fissure. Prosternal process carinate and extending between coxae.

Scutellum with apex slightly exposed to concealed under pronotum; surface with elongate, oval impression. Elytra elongate; suture dehiscent at apex (as in fig. 40); epipleural ridge absent (fig. 38). Mesosternal process short but extending between coxae; process broad and becoming narrower to blunt point apically; process prominent (as in fig. 33). Mesocoxae separated by mesosternal process and metasternal ridge. Metasternum with broad, rounded prominent ridge between coxae.

Procoxa strongly expanded. Protibia strongly expanded. Tibia with longitudinal rows of spines. Metatibia with spinulose row. Tarsal formula 5-5-5; articles 1 to 4 with long setae on ventrolateral surface (as in fig. 52); with apical article longest.

Abdomen: Second sternite well developed; midlongitudinal carina absent. Tergal basolateral ridges absent. Seventh tergum with posterior margin fimbriate. Segments II to VI each with two pairs of laterosternites (as in fig. 68); seventh segment with only one pair. Eighth tergum with posterior margin truncate.

Distribution

Palearctic: Algeria, Egypt, Iran, Iraq, Soviet Union, Sudan.

Discussion

Eppelsheimius can be distinguished from *Planeustomus* and *Manda* by the open procoxal fissure with the protrochantin exposed, the confluent gular sutures, the anteriorly directed, lateral spiniform process on the submentum, and the absence of the elytral epipleural ridge. The five tarsomeres of *Eppelsheimius* also aid in the separation from *Planeustomus*.

Species Included

E. miricollis (Fauvel); Sp
E. persicus Scheerpeltz; Sp
E. pirazzolii (Eppelsheim); Sp

MANDA

Manda Blackwelder, 1952, p. 230. Type species: *Manda mandibularis* (Gyllenhal).

Acrognathus Erichson, 1839a, p. 607; preoccupied. Type species: *Acrognathus mandibularis* (Gyllenhal).

Diagnosis

This genus can be recognized by the elongate fourth segment of the maxillary palpus, the narrow clypeus (figs. 12, 13), the separated gular sutures (fig. 7), the presence of the protergosternal suture, the closed procoxal fissure (as in fig. 24), the presence of the elytral epipleural ridge (as in fig. 39), and the five tarsomeres (fig. 52).

Description

Length, 3.5 to 8.0 mm. Color testaceous to piceous. Form slender and subcylindrical. Body moderately strongly sclerotized; with pubescence of long, moderately stout setae.

Head: Clypeus narrow and depressed from anterior portion of dorsum of head (figs. 12, 13). Epistomal suture evident only as prominent, transverse groove even with supra-antennal ridge (figs. 12, 13). Base of head weakly to strongly constricted to form broad, distinct neck (fig. 13). Gular sutures narrowly separated along entire length (fig. 7). Labrum with anterior margin broadly emarginate; with long, slender, membranous lobes; lobes arising from lateral portion; lobes anteriorly directed and mesially curved, with base broad and becoming attenuate anteriorly and with mesial margin fimbriate (fig. 20). Mandible denticulate or edentate. Maxillary palpus with fourth segment long and slender; with fourth segment longer than third and with base of fourth nearly as wide as apex of third; fourth segment with sides parallel to middle, then becoming acuminate apically; second and third segments of nearly equal length. Compound eyes large and extending onto ventral surface of head nearly to base of maxilla (fig. 7).

Thorax: Pronotum with lateral margins straight or weakly sinuate and gradually convergent posteriorly; basal angles present and rounded. Pronotal lateral marginal bead present (as in figs. 24, 25); bead not on hypomeron. Prohypomeron broad and moderately deflexed. Protergosternal suture present (as in figs. 24, 25). Procoxal fissure present, short and closed (as in fig. 24). Protrochantin concealed (as in fig. 24). Postprocoxal lobe absent. Prosternal process strongly carinate and extending between coxae.

Scutellum with poorly defined, heart-shaped impression; apex slightly exposed. Elytra with weak striae present or absent; epipleural ridge present (as in fig. 39). Mesosternal process prominent, short, and not extending very far between coxae; apex carinate; apex of mesosternal process abutting base of higher metasternal ridge. Metasternal ridge narrow, rounded, and extending between mesocoxae (as in figs. 33, 34). Mesocoxae narrowly separated by mesosternal process and metasternal ridge.

Femur with long, sparse pubescence. Tibia pubescent and with longitudinal row of spines. Tarsal formula 5-5-5; with basal four articles distinct; apical segment longest; basal four articles each with ventrolateral, stout setae (fig. 52).

Abdomen: Second sternite well developed; midlongitudinal carina absent. Terga without basolateral ridges. Segments II to VI each with two pairs of laterosternites per segment (as in fig. 68); seventh segment with one laterosternite but with second laterosternite partially separated. Eighth tergum with posterior margin emarginate.

Distribution

Palearctic: Algeria, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Greece, Hungary, Italy, Morocco, Netherlands, Norway, Romania, Soviet Union, Sweden, Switzerland, Tunisia. *Nearctic:* United States.

Discussion

Manda mandibularis is reported to live on damp, swampy ground and flies during the evening (Johansen, 1914).

Manda is distinguishable from *Planeustomus* by the presence of five distinct tarsomeres, the elytral epipleural ridge that is represented by a distinct ridge, the distinct delimitation of the abdominal laterosternites from the sternites, and the distinct, well-developed protergosternal suture.

Species Included

M. africana (Fairmaire); Sp
M. mandibularis (Gyllenhal); Sp
M. nearctica Moore; Sp

PLANEUSTOMUS

Planeustomus Jacquelin du Val, 1857, p. 58. Type species: *Planeustomus palpalis* (Erichson).

Compsochilus Kraatz, 1858, p. 895; isogenotypic synonym. Type species: *Compsochilus palpalis* (Erichson).

Diagnosis

This genus is recognized by the elongate, slender maxillary palpus, the narrow clypeus (as in figs. 12, 13), the separated gular sutures (as in fig. 7), the closed procoxal fissure, with protrochantin concealed (as in fig. 24), the punctiform striae of the elytra, the presence of an elytral epipleural groove rather than a ridge (fig. 43), and the presence of four articles (fig. 50) on the tarsi.

Description

Length, 2.0 to 5.0 mm. Color testaceous to rufous. Body moderately strongly sclerotized; with sparse, long pubescence.

Head: Clypeus reduced to narrow postlabral strip; clypeus depressed ventrad of dorsum of head (as in figs. 12, 13). Epistomal suture present and straight; suture even with anterior margin of supra-antennal ridge; suture evident as transverse groove (as in figs. 12, 13). Gular sutures narrowly separated and parallel along most of length; sutures sharply divergent near base (as in fig. 7). Base of head gradually narrowed; some species with broad distinct neck. Labrum with anterior margin broadly emarginate; with long, slender, labral lobes arising from under anterior, lateral margin; lobe with fimbriate mesial margin and broad at base, becoming attenuate apically (as in fig. 20). Mandible edentate. Maxillary palpus with fourth segment elongate; base of fourth segment as broad as apex of third, then usually strongly attenuate apically; fourth segment longer than third. Compound eyes large and extending onto ventral side of head (as in fig. 7).

Thorax: Pronotum broader near apex than base; gradually narrower toward base; basal angles present and rounded; with punctiform stria laterad of midline. Pronotal lateral marginal bead present (as in figs. 24, 25); bead not on hypomeron. Prohypomeron broad and strongly deflexed. Protergosternal suture absent to obsolete. Procoxal fissure present and closed; protrochantin concealed (as in fig. 24). Postprocoxal lobe absent. Prosternal process present and carinate.

Scutellum with oval impression; usually with apex slightly exposed. Elytra with longitudinal, punctiform striae; striae with setae; setae on mesial half of elytron directed toward midline; setae on lateral half directed toward epipleural ridge. Epipleural ridge evident as setigerous, longitudinal groove (fig. 43). Mesosternal process acute at apex; process extending between coxae; process prominently developed (as in figs. 33, 34). Metasternum with low ridge between mesocoxae (as in figs. 33, 34). Mesocoxae narrowly separated by mesosternal process. Metasternal process absent.

Protibia and mesotibia with longitudinal row of spines; metatibia usually spinulose. Tarsal formula 4-4-4; basal three articles with stout lateroventral bristle; with two encircling sulci delimiting pseudoarticle between articles 1 and 2; pseudoarticle without lateroventral bristle; remaining articles distinct and well delimited; tarsus with apical article longest (fig. 50).

Abdomen: Second sternite well developed; midlongitudinal carina absent. Segments II to VI each with two pairs of laterosternites (as in fig. 68); laterosternites poorly delimited from sternite. Tergal basolateral ridges absent. Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin emarginate.

Aedeagus trilobed. Median lobe with dorsal surface of basal portion entirely membranous.

Distribution

Palearctic: Albania, Algeria, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, France, Germany, Greece, Hungary, Israel, Italy, Morocco, Poland, Romania, Soviet Union, Spain, Sweden, Switzerland, Syria, Tunisia, Turkey, Yugoslavia. *Ethiopian:* Congo, Kenya, Rhodesia, Tanzania. *Oriental:* Burma, India.

Discussion

The species of this genus live in damp places in galleries and are frequently attracted to lights (Cameron, 1930).

As noted above, *Planeustomus* and *Toxoderus* were incorrectly considered to be related by Fauvel (1878b). In 1904 Fauvel described *Crymus* and considered it to be near *Planeustomus*, but, because I have not studied specimens of *Crymus*, this relationship is unconfirmed.

Species Included

P. bengalensis Champion; H
P. bonnairei Fauvel
P. cephalotes (Erichson); Sp
P. congoensis Fauvel; T
P. curtipennis Fauvel; Sp
P. elegantulus (Kraatz); Sp
P. flavicollis Fauvel; Sp
P. grandis Reitter
P. heydeni Eppelsheim; Sp
P. indicus Fauvel; H
P. kahri (Kraatz); Sp
P. longiceps Champion; H
P. lucens Peyerimhoff
P. microphthalmus Fauvel
P. miles (Scriba); Sp
P. palpalis (Erichson); Sp
P. pancici Matits
P. perroti Peyerimhoff
P. rosti Reitter; Sp
P. schoutedeni Bernhauer; Co
P. seydeli Cameron; H
P. splendidicollis Bernhauer; H
P. subcarinatus Champion; H
P. tropicus Bernhauer; Co

CRASSODEMUS

Crassodemus Herman, 1968, p. 1. Type species: *Crassodemus foraminosus* Herman.

This genus was adequately described by Herman (1968); consequently only a brief diagnosis is presented here.

Diagnosis

Crassodemus is readily separated from all other genera of the Oxytelinae covered in this paper by the presence of four tarsomeres, the elongate fourth article of the maxillary palpus, the confluent gular sutures, and the lack of longitudinal rows of tibial spines. Additional characters useful for recognition of the genus are the short, closed procoxal fissure, the absence of the protergosternal suture, and the elongate mesosternal process that separates the mesocoxae.

Distribution

Neotropical: Brazil.

Species Included

C. foraminosus Herman; H.

SYNTOMIUM

Syntomium Curtis, 1828, pl. 228. Type species: *Syntomium nigroaeneum* Curtis.

Eunonia Casey, 1904, p. 313; subjective synonym. Type species: *Eunonia keeniana* Casey.

Diagnosis

This genus can be recognized by the combination of the heavily sclerotized body, the nearly subulate but robust fourth segment of the maxillary palpus (fig. 16), the confluent gular sutures, the presence of the epistomal suture, the absence or obsolescence of the protergosternal suture, the presence of the short, closed procoxal fissure that conceals the protrochantin, the short mesosternal process, the reduced, poorly sclerotized, second abdominal sternite, the absence of one pair of abdominal laterosternites (as in fig. 71), and the five tarsomeres.

Description

Length, 2.0 to 3.0 mm. Color rufopiceous to piceous. Body form ovoid in dorsal aspect, and subcylindrical. Body strongly sclerotized; surface shining; with moderately dense pubescence. Head, pronotum, and elytra with dense, coarse punctation.

Head: Clypeus well developed. Epistomal suture broadly and shallowly arcuate; suture approximately even with anterior margin of supra-antennal ridge. Gular sutures confluent; sutures divergent at base (as in fig. 10). Base of head obsoletely constricted to form broad neck. Labrum with anterior margin broadly and moderately deeply emarginate; emargination rounded. Labrum with prominent labral lobes absent. Mandible edentate. Maxillary palpus with fourth segment stout and nearly subulate (fig. 16); fourth segment with base as broad as apex of third and becoming acuminate apically; third and fourth segments of nearly equal length; second segment shorter than third. Antenna with last three articles expanded to form feeble, loose club.

Thorax: Pronotum with lateral margin strongly sinuate; broadest near apex; with basal angle notched. Prohypomeron broad and weakly deflexed. Pronotal lateral marginal bead present

(as in fig. 24); bead not on hypomeron. Protergosternal suture absent or suture evident as obsolete groove. Procoxal fissure present and slightly open. Protrochantin concealed (as in fig. 24). Postprocoxal lobe present but not well developed. Prosternal process extending shortly between coxae and carinate.

Scutellum with apex slightly exposed to concealed under pronotum; surface with circular to transverse oval impression near apex. Elytral epipleural ridge present (as in fig. 39). Mesosternal process extending shortly between mesocoxae; process spiniform in ventral aspect (fig. 33). Metasternal process absent. Metasternum with median, longitudinal, low, rounded ridge between coxae (fig. 33). Mesocoxae separated by mesosternal process.

Femur with sparse pubescence. Tibia with longitudinal row of spines absent; with sparse pubescence. Tarsal formula 5-5-5; apical article longest.

ABDOMEN: Second sternite represented by narrow sclerotized strip; wider laterally than medially (fig. 66); with weakly developed, broadly rounded, median, longitudinal ridge (fig. 66). Segments II to VII each with one pair of laterosternites (as in fig. 71). Terga with basolateral ridges absent. Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin emarginate.

DISTRIBUTION

Palearctic: Algeria, Austria, Belgium, Czechoslovakia, Denmark, England, Finland, France, Germany, Hungary, Italy, Japan, Netherlands, Norway, Poland, Romania, Scotland, Soviet Union, Sweden, Switzerland, Yugoslavia. *Nearctic:* Canada, United States.

DISCUSSION

Species of this genus are found on marshy and damp forest ground under moss and leaves. The species are rare and most often found singly. The larvae and adults are found in the same habitat (Johansen, 1914).

Syntomium is often considered to be related to *Deleaster*. Both genera have five tarsomeres and only one pair of abdominal laterosternites per segment; both characters are often mentioned as demonstrating the close relationship of these genera. In the Oxytelinae, five tarsomeres and one pair of abdominal laterosternites are considered to be plesiomorphic conditions and consequently cannot be used to support suggested relationships. *Syntomium* has a number of relatively derived characters that are not possessed by *Deleaster*. I am unable to find apomorphic characters that will support a close relationship between *Syntomium* and *Deleaster*. The narrow second abdominal sternite suggests a link to *Coprophilus*, but this hypothesis is supported by no other characters. *Syntomium* has relatively derived characters of the fourth segment of the maxillary palpus, gular sutures, protergosternal suture, and procoxal fissure, and, although these are apomorphic characters shared with *Thinodromus*, *Carpelimus*, and allies, the position of *Syntomium* is uncertain and for the present the genus is considered to represent an isolated line within the tribe.

The form of the larvae (Ganglbauer, 1895, p. 680) of *Syntomium* is different from the other known larvae of the Oxytelinae. Böving and Craighead (1930–1931) noted this difference when they concluded that *Syntomium* should be a separate subfamily. Paulian (1941) and Kasule (1966), in their studies of the staphylinid larvae, retained *Syntomium* in the Oxytelinae. Obviously further studies are necessary to elucidate the position of *Syntomium*.

Although the second abdominal sternite of *Syntomium* is narrow, it is complete and well developed, and the second and third sternites do not have midlongitudinal carinae. The openings of the abdominal glands are in the ninth tergites. The adults of *Syntomium* share these characters with other members of the Oxytelinae and are therefore being retained in this subfamily.

The only other member of the Oxytelinae lacking one of the abdominal parasternites is *Deleaster*, from which *Syntomium* is readily separated by the short, closed, procoxal fissure that conceals the protrochantin.

SPECIES INCLUDED

S. aeneum (Muller); Sp
S. confragosum Maklin; Sp
S. grahami Hatch
S. japonicum Watanabe and Shibata
S. keeniana (Casey); H
S. longicorne Peyerimhoff
S. malkini Hatch

APLODERUS

Aploderus STEPHENS, 1833, p. 273; 1834, p. 322. Type species: *Aploderus brachypterus* (Marsham).

Phloeonaeus ERICHSON, 1839a, p. 597; subjective

objective synonym. Type species: *Phloeonaeus caelatus* (Gravenhorst).

Haploderus (AGASSIZ, 1846, p. 29; KRAATZ, 1858, p. 863; GEMINGER AND HAROLD, 1868, p. 651); emendation. Type species: *Haploderus brachypterus* (Marsham).

DIAGNOSIS

This genus can be recognized by the subulate fourth segment of the maxillary palpus (as in figs. 17, 18), the open procoxal fissure with the protrochantin exposed (as in fig. 25), the nearly contiguous mesocoxae, the longitudinal, spinous row on the protibia and mesotibia, and the three tarsomeres.

DESCRIPTION

Length, 2.5 to 4.5 mm. Color piceous to rufous to testaceous. Body with moderately dense pubescence. Form moderately broad and dorsoventrally flattened.

HEAD: Epistomal suture broadly arcuate, with middle portion behind anterior margin of supra-antennal ridge; lateral ends even with anterior margin of supra-antennal ridge. Gular sutures confluent anteriorly; sutures narrowly separated from middle posteriorly, then sharply divergent on neck (as in fig. 8). Base of head moderately constricted to form broad, distinct neck. Labrum with anterior margin broadly emarginate; with inconspicuous, moderately long, labral lobe arising from beneath lateral portion; lobe anteriorly directed and with mesial margin fimbriate (as in fig. 20). Mandible denticulate. Maxillary palpus with fourth segment subulate (as in figs. 15, 17, 18); fourth segment with base swollen and nearly as wide as apex of third; fourth segment strongly acuminate apically; third segment longer than fourth and approximately equal to length of second.

THORAX: Pronotum with anterior portion of lateral margin arcuate; posterior half convergent to rounded basal angles. Pronotal lateral marginal bead present (as in figs. 24, 25); bead not on hypomeron. Prohypomeron strongly deflexed and broad. Protergosternal suture absent or obsolete. Procoxal fissure present and open (as in fig. 25). Protrochantin feebly to strongly exposed (as in fig. 25). Postprocoxal lobe feeble and short or absent. Prosternal process extending between coxae and strongly carinate.

Scutellum with transverse, arcuate ridge forming oval impression near apex or with crest-shaped impression; scutellum concealed under pronotum. Elytral epipleural ridge present (as in fig. 39). Mesosternal process extending between coxae; process carinate at apex. Metasternum with well-developed, carinate ridge between coxae. Mesocoxae contiguous.

Protibia and mesotibia with longitudinal row of spines. Metatibia with longitudinal ctenidium of closely associate spinules (as in fig. 57). Tarsal formula 3-3-3; basal article stout; second article with long, flat, apically directed, membranous lobes (as in fig. 58).

ABDOMEN: Second sternite well developed; midlongitudinal carina absent. Terga with basolateral ridges absent. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Tergum VII with posterior margin fimbriate; median spiniform processes absent.

DISTRIBUTION

Palearctic: Algeria, Austria, Bulgaria, Czechoslovakia, Denmark, England, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Soviet Union, Spain, Sweden, Switzerland, Tunisia, Yugoslavia. *Oriental:* China, India. *Nearctic:* Canada, United States.

DISCUSSION

The position of *Aploderus* is not certain. The genus has usually been placed near *Oxytelus* and *Carpelimus*, presumably because all have three tarsomeres. When used alone, the number of tarsomeres has not been found to be a particularly reliable indication of phylogenetic affinity in the Oxytelinae. The form of *Aploderus* resembles that of *Oxytelus* and *Platystethus*, but the only apomorphic character that I can find to support the inclusion of *Aploderus* in the Oxytelini is the peculiar condition of the gular sutures (as in fig. 8), which is found in most of the genera of the Oxytelini but is also found in some of the Coprophilini. The structure of the prothorax and the pterothoracic sterna is similar to that found in members of the Coprophilini.

SPECIES INCLUDED

A. annectens (LeConte); H
A. caelatus Gravenhorst; Sp
A. caesus (Erichson); Sp
A. cephalotes Casey; H
A. flavipennis Casey; H
A. indicus Cameron; H
A. linearis LeConte; H
A. mimeticus Fall; H

A. princeps Casey; H
A. szechuanensis Bernhauer; H
A. trinifer Fall; H
Aploderus japonicus Bernhauer transferred to *Platystethus*
Aploderus speculiventris (Fauvel) transferred to *Paraploderus*
Aploderus cordicollis Broun transferred to *Blediotrogus*

BLEDIUS

Bledius LEACH, 1819, p. 174. Type species: *Bledius armatus* (Panzer).

Hesperophilus CURTIS, 1829, p. 29; subgenus. Type species: *Hesperophilus fracticornis* (Paykull).

Dicarenus GISTEL, 1834, p. 9; subgenus. Type species: *Dicarenus arenarius* (Paykull).

Astycops THOMSON, 1859, p. 43; subgenus. Type species: *Astycops talpa* (Gyllenhal).

Tadunus SCHIØDTE, 1866, p. 147 (=*Hesperophilus*). Type species: *Tadunus fracticornis* (Paykull).

Bargus SCHIØDTE, 1866, p. 148 (=*Hesperophilus*). Type species: *Bargus pallipes* (Gravenhorst).

Elbidus MULSANT AND REY, 1878, p. 572; subgenus. Type species: *Elbidus bicornis* (Ahrens).

Blediodes MULSANT AND REY, 1878, p. 576 (=*Hesperophilus*). Type species: *Blediodes fracticornis* (Paykull).

Pucerus MULSANT AND REY, 1878, p. 654; subgenus. Type species: *Pucerus verres* (Erichson).

Belidus MULSANT AND REY, 1878, p. 657; subgenus. Type species: *Belidus angustus* (Mulsant and Rey).

Euceratobledius ZNOJKO, 1929, p. 203; subgenus. Type species: *Euceratobledius furcatus* (Olivier).

Cotysops TOTTENHAM, 1939, p. 225 (=*Dicarenus*). Type species: *Cotysops arenarius* (Paykull).

Pareiobledius BERNHAUER, previously considered to be a subgenus of *Bledius*, elevated to generic level.

DIAGNOSIS

This genus is readily recognized by the subcylindical form, the geniculate antennae (fig. 23), the presence of the procoxal fissure (fig. 24, and also as in fig. 25), the spinous tibiae (fig. 51), and the four tarsomeres (fig. 51).

DESCRIPTION

Length, 2.0 to 7.5 mm. Body form subcylindrical. Body with sparse to dense pubescence. Color variable from black to pale testaceous.

HEAD: Epistomal suture present (fig. 5); suture straight or broadly arcuate. Supraantennal ridge obsolete to prominent and well developed. Gular sutures confluent to near posterior margin of neck, then sharply divergent (as in fig. 10), occasionally with sutures separated. Base of head gradually narrowed to form broad, poorly defined neck, or neck absent (fig. 5). Labrum with anterior margin truncate or with acute, median notch or broadly and shallowly emarginate or bilobed; anterior margin reflexed or unmodified; labral lobes poorly developed. Maxillary palpus with fourth segment subulate (as in fig. 18); second segment strongly curved. Mandible denticulate or edentate. Antenna geniculate (fig. 23).

THORAX: Pronotum usually wider than long. Pronotal lateral marginal bead present and entire (fig. 24) or incomplete or absent (as in figs. 29–31); bead usually not on hypermeron. Prohypomeron slightly deflexed and broad. Protergosternal suture present (fig. 24), absent (as in figs. 29, 31), or obsolete. Procoxal fissure present and open (as in fig. 25) or closed (fig. 24). Protrochantin concealed (fig. 24) or exposed (as in fig. 25). Postprocoxal lobe present (fig. 24) and usually well developed. Prosternal process present or absent; process, when present, elongate and slender and extending completely between coxae or short and carinate and not extending between coxae.

Scutellum concealed by pronotum. Elytral suture dehiscent at apex (fig. 40). Elytral epipleural ridge present (fig. 39) or absent (as in fig. 38); ridge entire or incomplete when present. Mesosternal process prominent and carinate at apex (as in fig. 33). Metasternal process absent; metasternum with low, longitudinal carina between coxae. Mesocoxae contiguous. Protibia and mesotibia with longitudinal row of spines; metatibia with longitudinal row of weakly developed spinules. Tarsal formula 4-4-4; basal article reduced; fourth article elongate, slender, and apically incrasate (fig. 51).

ABDOMEN: Second sternite well developed. Terga and sternites without midlongitudinal, basal carina. Terga without basolateral ridges; with basal, transverse ridge. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Seventh segment with posterior margin fimbriate; fimbriation of varying length. Eighth tergum with posterior margin truncate or emarginate.

Aedeagus trilobed or without parameres. Parameres, when present, variable in size and shape. Median lobe bulbous at base, more slender apically.

Distribution

Cosmopolitan.

Discussion

Blediotrogus and *Teropalpus* are separated from *Bledius* by the tarsal formulas and the procoxal fissure; *Teropalpus* lacks protibial spines. *Pareiobledius* is separated from *Bledius* by the absence of the procoxal fissure.

Many species have been described in *Bledius*, and there is a high degree of variation of the head, prothorax, and elytra. The aedeagus is represented by several major types, and in most cases the groups of species that are characterized by the major aedeagal types can be further sorted into groups based on other apomorphic characters. The phylogenetic relationships between the species and the relationships between the external characteristics and the aedeagal types appear to be complex. Investigations are under way to elucidate the evolution within the genus.

Species Included

B. actus, new name
  B. lecontei Sharp, 1887, H; not Duvivier, 1883
B. aculeatus Fauvel; Syn.
B. acuticollis Bernhauer; H
B. addendus Sharp; H
B. adustus Casey; H
B. aequatorialis Mutchler; H
B. aethiops Bernhauer; T
B. affinis Motschulsky
B. afghanicus Scheerpeltz
B. africanus Cameron; H
B. afrus, new name
  B. africanus Cameron, 1948; not Cameron, 1933c
B. agonus Casey; H
B. akinini Eppelsheim; Sp
B. albidipennis Bernhauer; H
B. albidus Sharp; H
B. albipennis Bernhauer; H
B. albomaculatus Bernhauer; T
B. albomarginatus Bernhauer; H
B. albonotatus Mäklin; H
B. albopubescens Cameron; H
B. alfierii Koch
B. amplicollis Fauvel; Syn
B. analis LeConte; H
B. angustus Mulsant and Rey; Sp
B. annae Sharp; H
B. annularis LeConte; H
B. apfelbecki Koch; Co
B. apicalis Fall; H
B. arcticus J. Sahlberg; Sp
B. arenicola Fauvel; Syn
B. arenoides Tottenham; Sp
B. argentinus Bernhauer; H
B. arizonensis Fall; H
B. assimilis Casey; H
B. aterrimus Fauvel; Syn
B. atratus Fauvel
B. atricapillus Germar; Sp
B. auriculicollis Bernhauer; T
B. australis Oke
B. austrinus, new name
  B. mandibularis MacLeay, 1873, sp.; not Erichson, 1840
B. basalis LeConte; H
B. baudii Fauvel; Sp
B. beattyi Blackwelder; H
B. bedeli Fauvel
B. beesoni Cameron; H
B. bellicosus Fauvel; Sp
B. bellicus Blackwelder; H
B. berlandi Cameron; P
B. bernhaueri Poppius; Co
B. bicolor Casey; H
B. bicornis Germar; Sp
B. bidentifrons Broun; H
B. bifasciatus Sharp; H
B. bipustulatus Bernhauer; T
B. birmanus Cameron; H
B. bison Cameron; H
B. bispinus Kraatz; Sp
B. bituberculatus Cameron; H
B. boddyi Hatch; P
B. bonariensis Bernhauer; H
B. borealis Blatchley; H
B. bos Fauvel; Sp
B. bowronensis Hatch
B. bredoi Bernhauer; T
B. breretoni Hatch
B. bruchi Bernhauer; H
B. brunnipennis (Fabricius); Sp
B. buehleri Scheerpeltz
B. canaliculatus Notman; H
B. capensis Cameron; H
B. capicola Cameron; H
B. capra Fauvel; Sp
B. caribbeanus Blackwelder; H
B. cariniceps Bernhauer; T
B. carinicollis Fauvel; Sp
B. caroli Blackburn; H
B. cavus Eppelsheim
B. cedarensis Hatch
B. ceratus Blackwelder; H
B. championi Bernhauer; H
B. chinensis Bernhauer; H
B. chinkiangensis Bernhauer; H
B. circularis Fauvel; H
B. clarus Fall; H
B. clavatus Eppelsheim
B. claviventris Fairmaire and Laboulbène; Sp

B. compressicollis Bernhauer; H
B. cognatus LeConte; H
B. condonensis Hatch; P
B. confinis Fall; H
B. confusus LeConte; H
B. congoensis Cameron; P
B. conicicollis Fauvel; H
B. consimilis Fall; H
B. convexicollis Bernhauer; H
B. convexifrons Fauvel; H
B. cordatus Say; Sp
B. cordicollis Motschulsky
B. corniger Roshenhauer; Sp
B. coulteri Hatch; Sp
B. cowleyi Blackburn; H
B. crassicollis Boisduval and Lacordaire; Sp
B. cribratus Sharp; H
B. cribricollis Heer; Sp
B. cubensis Blackwelder; H
B. curticornis Fauvel; Syn
B. curtipennis Bernhauer; H
B. curvicornis Sharp; H
B. cuspidatus LeConte; H
B. dartevellei Bernhauer; T
B. debilis Erichson; Sp
B. deceptivus Fall; H
B. decorsei Cameron
B. defensus Fauvel; Sp
B. denticollis Fauvel; Sp
B. dehnerti Korge
B. derasus Sharp; H
B. devillei Bondroit; Sp
B. diagonalis LeConte; H
B. dickersoni Notman
B. diffinis Baudi
B. dilutipennis Motschulsky; Sp
B. dimidiatus LeConte; H
B. dinoceros Znojko; Sp
B. diota Schiødte; Sp
B. dissimilis Erichson; Sp
B. distans Fauvel; Syn
B. doderoi Bondroit; Sp
B. ealanus Cameron; P
B. elongatus Mannerheim; Sp
B. emarginatus (Say); Sp
B. ensifer Fauvel
B. episcopalis Fall; H
B. erraticus Erichson; Sp
B. erythraeanus Bernhauer; H
B. esposus Blackwelder; H
B. exiguus Scheerpeltz; H
B. eximius Casey; H
B. externus Lynch; Sp
B. fasciatus (Say)
B. femoralis Gyllenhal; Sp
B. fennicus Kangas
B. fenyesi Bernhauer and Schubert; H
B. fernandezi Bernhauer; H
B. ferratus LeConte; H
B. filipes Sharp; H
B. flavipennis LeConte; H
B. fontinalis Bernhauer; H
B. foraminosus Casey; H
B. forcipatus LeConte; H
B. formosae Bernhauer; H
B. formosanus Bernhauer; H
B. fortis LeConte; H
B. fossiventris Fauvel; Syn
B. fossor Heer; Sp
B. fracticornis Paykull; Sp
B. fragilis Sharp; H
B. fratellus Eppelsheim; Sp
B. frater Kraatz; Sp
B. fraterculus Cameron; H
B. fraternus Cameron
B. fumatus LeConte; H
B. furcatus Olivier; Sp
B. fuscicornis Cameron; H
B. gabonensis Fauvel; H
B. ganglbaueri Bernhauer; Sp
B. gebieni Bernhauer; H
B. gemellus Eppelsheim; Sp
B. gentilis Casey; H
B. gigantulus Bernhauer; H
B. glasunovi Luze; Sp
B. gomezi Bernhauer; H
B. gracilicornis Kraatz; Sp
B. gracilis Casey; H
B. gradatus Fall; H
B. gradensis Bernhauer; H
B. graëllsi Fauvel; Sp
B. gravidus Casey; H
B. gregarius Sharp; H
B. gularis LeConte; H
B. gyotokoi Nakane
B. haarlovi Scheerpeltz
B. hamifer Fauvel
B. hasticeps Bernhauer; T
B. hauseri Eppelsheim
B. helferi Fauvel; Sp
B. heterocerus Eppelsheim
B. hindustanus Cameron; H
B. hinnulus Erichson; Sp
B. hlisnikowskii Roubal
B. honestus Casey; H
B. hoplites Fauvel; Syn
B. husseini Quedenfeldt; Sp
B. ignavus Casey; H
B. ignobilis Eppelsheim
B. immarginatus Koch
B. immaturus Eppelsheim; Sp
B. indicus Cameron; H
B. incertus Cameron; P
B. ineptus Casey; H
B. infans Rottenberg; Sp
B. infantilis Sharp; H

B. injucundus Blackburn; H
B. inornatus Sharp; H
B. insignicornis Blackburn; H
B. iwencus Erichson
B. jacobinus LeConte; H
B. jacobsoni Cameron; H
B. jadarensis Heller
B. jamaicensis Blackwelder; H
B. japonicus Bernhauer; H
B. johnstoni Cameron; H
B. konigsbaueri Scheerpeltz
B. kosempoensis Bernhauer; H
B. kincaidi Hatch
B. kochi Cameron; H
B. kutsae Kangas
B. lacustris Bernhauer; H
B. lamelliceps Bernhauer; H
B. larseni Hansen
B. lateralis Erichson
B. lateripennis Bernhauer; H
B. laticollis LeConte; H
B. latior Bernhauer; T
B. lativentris Jansson; Co
B. latus Bernhauer
B. leai Scheerpeltz; Sp
B. lectus Casey; H
B. lepineyi Scheerpeltz; Sp
B. limbatus Hochhuth; Sp
B. limicola Tottenham
B. lindbergianus Scheerpeltz
B. litoralis Heer; Sp
B. lividipes Fairmaire and Germain; Sp
B. longipennis Mäklin; H
B. longulus Erichson; Sp
B. louwerensi Cameron; P
B. lucens Cameron; H
B. lucidulus Cameron; H
B. lucidus Sharp; H
B. lugubris Fauvel
B. luteipennis LeConte; H
B. maculipennis Solier; Sp
B. madagascariensis Bernhauer; T
B. magniceps Reitter; Syn
B. maindroni Fauvel; Syn
B. mandibularis Erichson; Syn
B. marginalis Cameron; H
B. marinus Bernhauer; H
B. maritimus Bernhauer; Co
B. medialis Fall; H
B. melanocephalus (Say); Sp
B. michaelseni Bernhauer; T
B. microcephalus Fauvel
B. miles Bernhauer; H
B. militaris Oke
B. minarzi Bernhauer; H
B. minarzianus Bernhauer; H
B. minax Blackburn; Sp
B. minusculus Motschulsky
B. minutissimus Bernhauer; H
B. minutis Bernhauer; H
B. misellus Casey; H
B. missionensis Hatch
B. mixtus Notman
B. modestus Sharp; H
B. monstratus Casey; H
B. monticola Casey; H
B. morio Heer; Sp
B. muticus Sharp; H
B. mysticus Fall; H
B. naja Koch
B. nanus Erichson; Sp
B. naxius Bernhauer; H
B. nebulosus Casey; H
B. neglectus Casey; H
B. nelsoni Hatch; P
B. newelli Hatch; P
B. niger Cameron; H
B. nigriceps Notman; H
B. niloticus Erichson; Sp
B. nitidiceps LeConte; H
B. nitidicollis LeConte; H
B. nodieri Cameron; P
B. obihiroensis Nakane
B. obscurus Motschulsky; Syn
B. obsoletus Fauvel; Sp
B. obtusus Sharp; H
B. occidentalis Bondroit; Sp
B. opacicollis Eppelsheim
B. opacifrons LeConte; H
B. opacinus Scheerpeltz
B. opaculus LeConte; H
B. opacus (Block); Sp
B. oregonensis Hatch; P
B. orientalis Bernhauer
B. orion Normand
B. ornatus LeConte; H
B. orphanus Sharp; H
B. osiris Normand
B. ovensensis Blackburn; H
B. palliatus Fauvel; Syn
B. pallidipennis Bernhauer; H
B. pallipennis (Say); Sp
B. pallipes Gravenhorst; Sp
B. papuanus Cameron; H
B. paradoxus Gridelli
B. parcissimus Bernhauer; H
B. parens Cameron; H
B. parisii Koch
B. parvicollis Casey; H
B. parvulus Erichson
B. pechlaneri Benick
B. peraffinis Cameron; H
B. perplexus Cameron; H
B. perrieri Fauvel; Syn
B. persicus Bernhauer; H
B. persimilis Fall; H

B. petzi Bernhauer; T
B. philadelphicus Fall; H
B. philippinus Bernhauer; H
B. phytosinus LeConte; H
B. piceus Fall; H
B. picipennis Hochhuth; Sp
B. pilicollis Bernhauer; T
B. pleuralis LeConte; H
B. politus Erichson; H
B. ponticus Znojko
B. pontilis Blackburn; H
B. poppiusi Bernhauer; H
B. porcellus Bernhauer; H
B. praetermissus Williams; Sp
B. procerulus Erichson; Sp
B. pruinosulus Bernhauer; H
B. pueches Fauvel
B. pulchellus Kraatz
B. pumilio Erichson; Sp
B. punctatissimus LeConte; H
B. pusillus Erichson; Sp
B. pygmaeus Erichson; Sp
B. quadricornis Bernhauer; H
B. rarus Sharp; H
B. rastellus Schiødte; Sp
B. rectangulus Eppelsheim; Sp
B. regularis Fall; H
B. relictus Fall; H
B. renominatus Cameron; Co
B. rhinoceros Cameron; H
B. richteri Scheerpeltz
B. roettgeni Bernhauer; H
B. rossicus Bernhauer and Schubert
B. rotundicollis LeConte; H
B. roubali Scheerpeltz; Sp
B. rubiginosus Erichson; T
B. ruficornis LeConte; H
B. rufipes Germain; Sp
B. rugosicollis Bernhauer; H
B. rugosulus Eppelsheim
B. rusticus Fall; H
B. salsus Miyatake; P
B. salinus Cameron; Co
B. sanguinicollis Bernhauer; H
B. sanguinithorax Bernhauer; T
B. santschii Bondroit
B. sarmaticus Znojko
B. sauteri Bernhauer; H
B. scheerpeltzi Koch; Co
B. schoutedeni Cameron; Co
B. secessus Bondroit
B. sellatus Sharp; H
B. semicircularis Lea; Sp
B. semiferrugineus LeConte; H
B. semiopacus Bernhauer; H
B. setonis Miyatake
B. similis Sharp; H
B. simplex Sharp; H
B. simplexiventris Apfelbeck; Sp
B. simulator Eppelsheim; Sp
B. sinuatus LeConte; H
B. somalianus Cameron; H
B. spectabilis Kraatz; Sp
B. specularis Fall; H
B. splendens Bernhauer; T
B. stabilis Casey; H
B. strenuus Casey; H
B. strictus Fauvel; Sp
B. subopacus Bernhauer; T
B. subterraneus Erichson; Sp
B. suturalis LeConte; H
B. tallaci Fall; H
B. talpa Gyllenhal; Sp
B. tarandus, new name
B. divisus LeConte, 1863; Sp; not Marsham, 1802
B. taruensis Cameron; H
B. tau LeConte; H
B. tenenbaumi Bernhauer; H
B. tenuis Casey; H
B. terebrans Schiødte; Sp
B. testaceipennis Lynch
B. tibialis Heer; Sp
B. transcaspicus Bernhauer; H
B. transitus Fall; H
B. transversemaculatus Koch; Co
B. transversus Cameron; H
B. tricornis Herbert; Sp
B. trinidadensis Blackwelder; H
B. tristis Aube; Sp
B. tuberculatus Fabricius; Sp
B. turbulentus Casey; H
B. turgidus Casey; H
B. ugandae Bernhauer; H
B. unicornis Germar; Sp
B. verres Erichson; Sp
B. verticalis Notman
B. victoriae Bernhauer and Schubert; H
B. vilis Mäklin; Sp
B. villosus Casey; H
B. vitaensis Bernhauer; H
B. vitulus Erichson; Sp
B. washingtonensis Hatch; P
B. weiseri Bernhauer; H
B. withycombei Bernhauer; H
B. wombaliensis Bernhauer; T
B. xiphias Koch
B. yezoensis Nakane

BLEDIOTROGUS

Blediotrogus SHARP, 1900, p. 234. Type species: *Blediotrogus guttiger* Sharp.

DIAGNOSIS

This genus is distinguished by the subulate fourth segment of the maxillary palpus (as in

fig. 18), the notch on the ventral margin of the prohypomeron (fig. 31), the five tarsomeres, the basal three of which are closely associated with one another (fig. 49), and the longitudinal row of spines on the protibiae (fig. 49).

Description

Length, approximately 3.0 to 4.5 mm. Form moderately slender. Body moderately densely pubescent.

Head: Epistomal suture distinct; moderately strongly arcuate. Gular sutures confluent (as in fig. 10); sutures with longitudinally elongate fovea or depression near neck; sutures sharply divergent near posterior margin of neck (as in fig. 10). Supra-antennal ridge low but distinct. Base of head gradually but distinctly constricted forming broad neck; head encircled by strong, broad groove. Labrum moderately deeply emarginate; not bilobed; labral lobes poorly developed. Mandible denticulate; with subapical denticles but apex not dorsoventrally bifid. Maxillary palpus with fourth segment subulate (as in fig. 18); with third segment longest and incrassate apically; second segment incrassate apically from narrow base; first segment reduced. Antenna not geniculate.

Thorax: Pronotum in dorsal aspect slightly wider than long; widest near apex; lateral margins convergent to base. Prohypomeron broad and moderately strongly deflexed. Pronotal lateral marginal bead weakly developed or obsolete; evident as weak, strongly serrate ridge; bead not on hypomeron. Protergosternal suture absent (fig. 31). Procoxal fissure evident as small, obtusely angulate notch above coxa (fig. 31). Postprocoxal lobe obsoletely developed. Prosternal process carinate; process extending short distance between coxae.

Scutellum concealed under pronotum; with shallowly angulate, transverse ridge; with transverse scutellar impression. Elytral epipleural ridge present (as in fig. 39). Mesosternal process prominent and carinate at apex; process extending short distance between coxae (as in fig. 33). Mesocoxae contiguous. Metasternal process absent. Metasternum with low, midlongitudinal carina between mesocoxae.

Tarsal formula 5-5-5; last article elongate and well developed; basal three articles of nearly equal length and closely associated; fourth article longer and more distinct than basal three articles; fourth article with long, slender, membranous lobes arising from apex (fig. 49). Protibia with well-developed, longitudinal row of spines (fig. 49). Mesotibia with distinctly arranged rows of spines and with many setae. Metatibia with sparse, longitudinal row of spinules; longitudinal row of spinules not arranged into well-defined ctenidium; with many additional, scattered setae and spinules.

Abdomen: Second sternite well developed. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Terga with basolateral ridges absent. Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin truncate.

Aedeagus trilobed. Parameres separated and well developed. Median lobe bulbous at base and slender apically.

Distribution

Australian: Australia, Tasmania. *Oceania:* New Zealand.

Discussion

This genus is separated from the very similar *Pareiobledius* by the disjunct geographical distribution, by the presence of five tarsomeres, and by the notch on the ventral margin of the prohypomeron. The notch probably represents the remnant of the procoxal fissure. *Blediotrogus* can be distinguished from *Teropalpus* by the presence of tibial spines and less distinct basal articles of the tarsi. The absence of a well-developed procoxal fissure, the presence of tibial spines, and the subulate fourth segment of the maxillary palpus separate *Blediotrogus* from *Thinodromus*. The five tarsomeres separate *Blediotrogus* from *Bledius* and *Carpelimus*.

Species Included

B. cordicollis (Broun); H; new combination, transferred from *Aploderus*
B. cribricollis Fauvel; H
B. fauweli (Bernhauer and Schubert); H; new combination, transferred from *Bledius*
B. guttiger Sharp; H

PAREIOBLEDIUS, NEW STATUS

Pareiobledius Bernhauer, 1934, p. 495. Type species: *Pareiobledius alutellus* (Bernhauer).

Diagnosis

This genus can be recognized by the subulate fourth segment of the maxillary palpus (as in fig. 18), the absence of the procoxal fissure

(fig. 29), the four tarsomeres, of which the basal two are closely associated (fig. 48), and the spinous protibiae.

Description

Length, approximately 2.0 to 3.0 mm. Form slender and moderately flattened dorsoventrally. Body densely pubescent.

Head: Clypeus rectangulate; anterior margin truncate. Epistomal suture present (as in fig. 5). Supra-antennal ridge low but distinct. Base of head gradually constricted to form broad, distinct neck; head with indistinct groove separating neck from head. Gular sutures confluent along most of length, then sharply divergent at base (as in fig. 10); with depression at posterior tentorial pits. Labrum with anterior margin moderately deeply emarginate; labral lobe weakly developed. Mandible denticulate; not bifid apically. Maxillary palpus with fourth segment subulate (as in fig. 18); fourth segment not swollen at base; third segment swollen and incrassate apically; second segment incrassate apically. Antenna geniculate (as in fig. 23) or not.

Thorax: Prothorax widest near apex; lateral margins gradually convergent toward posterior margin. Prohypomeron broad and moderately deflexed. Pronotal lateral marginal bead weakly developed and serrate; bead not on hypomeron. Protergosternal suture absent (fig. 29). Procoxal fissure absent (fig. 29). Protrochantin concealed (fig. 29). Postprocoxal lobe absent or obsolete. Prosternal process short and carinate.

Scutellum concealed under pronotum; surface with basal, transverse ridge. Elytral epipleural ridge present (as in fig. 39). Mesosternal process short, carinate, and prominent (as in fig. 33). Metasternum with low, midlongitudinal carina between mesocoxae. Mesocoxae contiguous. Metasternal process not developed.

Protibia, mesotibia, and metatibia with longitudinal row of spines and with many additional spinules and setae. Tarsal formula 4-4-4; with basal article very reduced; with basal two articles closely associated; third article more prominent and with long membranous lobes arising from apex (fig. 48).

Abdomen: Second sternite well developed. Terga and sternites with basal midlongitudinal carinae absent. Terga with basolateral ridges absent. Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin truncate. Segments II to VI each with two pairs of laterosternites (as in fig. 68).

Aedeagus trilobed. Median lobe bulbous at base and slender apically.

Distribution

Ethiopian: South Africa.

Discussion

According to Article 68(a)(i) of the International Code of Zoological Nomenclature, the method by which Blackwelder (1952, p. 294) stated the type species of *Pareiobledius* to have been fixed (as "n. sp. n.g.") cannot be used after 1930, and Blackwelder must be considered to have fixed the type species by subsequent designation.

Pareiobledius, previously considered to be a subgenus of *Bledius*, is herein elevated to the generic level. The two species in the genus were described in two different genera. *Trogophloeus* and *Bledius*, but the former species has subsequently been moved to *Bledius*.

Pareiobledius is similar to *Blediotrogus* but can be distinguished by the four tarsal articles and by the absence of a procoxal fissure, which is evident in *Blediotrogus* as a notch on the ventral margin of the prohypomeron. In addition to the above characters, *Pareiobledius* is distinguishable from *Teropalpus* by the truncate posterior margin of the eighth tergum, the foveate, confluent gular sutures, and the spinous tibiae. Members of *Pareiobledius* and *Bledius* both have four tarsomeres per tarsus, but *Pareiobledius* is distinguishable by the absence of the procoxal fissure, which is characteristically present in all the species of *Bledius*.

Species Included

P. alutellus (Bernhauer); Syn; new status, transferred from *Bledius*

P. pruinosus (Bernhauer); Syn; new status, transferred from *Bledius*

TEROPALPUS

Teropalpus Solier, 1849, p. 330. Type species: *Teropalpus suturalis* Solier.

Trogolinus Sharp, 1900, p. 231. Type species: *Trogolinus unicolor* (Sharp).

Diagnosis

This genus can be distinguished by the subulate fourth segment of the maxillary palpus (as in fig. 18), the partially confluent gular sutures (as in fig. 8), the presence of a short, closed pro-

coxal fissure (as in fig. 24), the absence of the protergosternal suture (as in fig. 31), the broadly rounded posterior margin of the eighth tergum, the five tarsomeres with the basal three articles closely associated (as in figs 49, 55, 56), the lack of a longitudinal row of spines on the tibiae, and the densely pubescent body.

Description

Length, approximately 2.5 to 4.0 mm. Form broad and moderately flattened dorsoventrally. Body densely pubescent.

Head: Epistomal suture present. Clypeus rectangular, with apex truncate. Gular sutures confluent anteriorly; sutures sharply separated and narrowly parallel from near anterior margin of neck, then sutures sharply and continuously divergent to posterior margin of head (as in fig. 8). Base of head constricted to form broad neck. Labrum with moderately deep, broad emargination. Mandible denticulate; apex obsoletely bifurcate, with small denticle near apex on mesial edge. Maxillary palpus with fourth segment subulate (as in fig. 18).

Thorax: Pronotum broadest near apex. Prohypomeron well developed and moderately strongly deflexed. Pronotal lateral marginal bead present (as in fig. 24); bead on hypomeron anteriorly. Protergosternal suture absent (as in fig. 31). Procoxal fissure present, short, and closed (as in fig. 31). Postprocoxal lobe absent. Prosternal process short and carinate.

Scutellum concealed under pronotum; basal, transverse ridge present on surface; with ovate impression on posterior portion. Elytral epipleural ridge present (as in fig. 39). Mesosternal process extending short distance between coxae; process with apex carinate and prominent (as in fig. 33). Mesocoxae contiguous. Metasternal process not well developed. Metasternum with low, midlongitudinal carina between coxae.

Tibia stout, fusiform, and densely pubescent; longitudinal row of spines absent; metatibia without longitudinal ctenidium. Tarsal formula 5-5-5; basal four articles reduced but distinct and well defined; basal three articles compressed and closely associated (as in figs. 55, 56); fourth article with long, slender, membranous lobes arising from apex; last segment long, slender, and apically incrassate and without dense pubescence but with scattered setae (as in fig. 56); basal four articles with long setae on ventral surface.

Abdomen: Second sternite well developed; midlongitudinal carina absent. Terga without midlongitudinal carinae. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Terga with basolateral ridges absent. Seventh tergum with posterior margin fimbriate; fimbriation stout and increasingly long toward middle. Eighth tergum with posterior margin broadly and strongly rounded.

Distribution

Neotropical: Chile. *Oceania:* New Zealand. *Australian:* Australia. *Ethiopian:* South Africa. *Palearctic:* England (introduction). *Nearctic:* United States.

Discussion

Teropalpus has previously been considered to be a subgenus of *Trogophloeus* but is herein elevated to the generic level.

Teropalpus is separated from *Thinodromus* by the broadly rounded posterior margin of the eighth tergum, the stout, fusiform tibiae, and the five tarsomeres which have the basal four articles more distinct than they are in *Thinodromus*. *Teropalpus* has five tarsomeres per tarsus; *Carpelimus*, three.

Species Included

T. coloratus (Sharp); H; new status
T. lithocharinus (LeConte); H; new combination, transferred from *Carpelimus*
T. luniger (Fauvel); Sp; new status
T. maritimus (Broun); H; new status
T. pictipes (Lea); Sp; new status
T. senex (Fauvel); new status
T. skottsbergi (Bernhauer); new status
T. suturalis (Solier); Sp; new status
T. unicolor (Sharp); H; new status

MIMOPAEDERUS

Mimopaederus Cameron, 1936, p. 4. Type species: *Mimopaederus insularis* Cameron.

Diagnosis

This genus can be recognized by the subulate fourth segment of the maxillary palpus (as in fig. 18), the absence of the protergosternal suture (as in fig. 31), the short, closed, procoxal fissure, the absence of the elytral epipleural ridge (as in fig. 38), the five-segmented tarsus, and the lack of tibial spines.

Description

Length, 3.5 to 3.75 mm. Body subcylindrical,

moderately stout, and becoming broader toward apex. Body with short, sparse pubescence.

HEAD: Clypeus rectangular. Epistomal suture present. Supra-antennal ridge low and distinct. Gular sutures confluent along almost entire length; sutures sharply divergent at base (as in fig. 10). Base of head gradually constricted to form well-defined neck; neck delimited from head by groove encircling head. Labrum with broadly V-shaped, moderately deep emargination of anterior margin; labral lobe weakly developed. Mandible denticulate; apex not bifid. Fourth segment of maxillary palpus subulate (as in fig. 18); third segment incrassate apically and longest of segments. Antenna not geniculate.

THORAX: Pronotum slightly longer than wide; widest near apex. Prohypomeron well developed and moderately deflexed. Pronotal lateral marginal bead present (as in fig. 24). Protergosternal suture absent (as in fig. 31). Procoxal fissure present (as in fig. 24), but very short and poorly developed; with fissure closed (as in fig. 24) and anteriorly directed. Postprocoxal lobe obsolete; prosternum with transverse impression anterior to coxae. Prosternal process short and carinate.

Scutellum concealed under pronotum; with transverse, medially angulate ridge across apex; with longitudinal, spindle-shaped impression anterior to ridge. Elytral epipleural ridge absent (as in fig. 39); hypopleural ridge present. Mesosternal process short; apex acute; process not extending far between mesocoxae; process prominent (as in fig. 33). Mesocoxae contiguous. Metasternal process not developed; metasternum with midlongitudinal carina between coxae.

Tibia with longitudinal row of spines absent; with dorsal surface sparsely pubescent; ventral surface densely spinulate and pubescent; with ctenidium encircling apex. Tarsal formula 5-5-5; basal article reduced; basal three articles compressed together and apparently non-articulating; fourth article more distinctly separated and articulating on third; fifth article elongate, incrassate, and articulating; basal four articles with long setae and membranous lobes on ventral surface (as in fig. 56).

ABDOMEN: Second sternite well developed; midlongitudinal carina absent. Terga with basal, midlongitudinal carina absent; basolateral ridge absent; strong, transverse ridge present. Segments II to VI each with two pairs of lateroscleres (as in fig. 68). Seventh tergum with posterior margin distinctly fimbriate with short setae; setae associated in pairs and slightly longer near middle. Eighth tergum with posterior margin arcuatotruncate. Fifth segment widest. Abdomen tapered anteriorly and posteriorly from fifth segment.

DISTRIBUTION

Oceania: Rapa Island.

DISCUSSION

Mimopaederus is poorly separated from *Thinodromus*, and eventually the species may be found to be congeneric. The only derived characters that are evident for the separation of *Mimopaederus* from *Thinodromus* are the lack of of an elytral epipleural ridge and the lack of apically bifid mandibles in the former genus and the emarginate posterior margin of the eighth tergum and presence of apically bifid mandibles in *Thinodromus*. The loss of the elytral epipleural ridge might be associated with the reduction of the metathoracic wings and shortened elytra. The subulate fourth segment of the maxillary palpus in *Minopaederus* is also useful for separation from *Thinodromus*, but in the latter genus some species have a rather stout fourth segment of the maxillary palpus. The abdomen is fusiform and that of *Thinodromus* is parallel-sided or convergent apically. The tarsomeres of *Mimopaederus* are not so closely associated as they are in *Thinodromus*, but this difference is only relative. For the present the above characteristics are used to support the separation of *Mimopaederus* and *Thinodromus*.

SPECIES INCLUDED

M. insularis Cameron; H

OCHTHEPHILUS

Ochthephilus MULSANT AND REY, 1856, p. 1. Type species: *Ochthephilus flexuosus* Mulsant and Rey.

Ancyrophorus KRAATZ, 1858, p. 886; subjective synonym. Type species: *Ancyrophorus omalinus* (Erichson).

Misancyrus DES GOZIS, 1886, p. 15; subgenus. Type species: *Misancyrus emarginatus* (Fauvel).

Psilotrichus LUZE, 1904a, p. 69; (=*Misancyrus*). Type species: *Psilotrichus elegans* Luze.

Ochthephilinus EICHELBAUM, 1915, p. 104; isogenotypic synonym. Type species: *Ochthephilinus flexuosus* (Mulsant and Rey).

Stictancyrus SCHEERPELTZ, 1950, p. 65; isogenotypic synonym. Type species: *Stictancyrus flexuosus* (Mulsant and Rey).

DIAGNOSIS

This genus can be recognized by the subulate fourth segment of the maxillary palpus (fig. 15), the presence of the procoxal fissure, which is open or closed (as in fig. 24, 25), the presence of the elytral epipleural ridge, the lack of a longitudinal row of tibial spines, and the five tarsomeres, of which the basal three articles are closely associated (as in fig. 56).

DESCRIPTION

Length, 2.0 to 5.0 mm. Body robust and flattened dorsoventrally; with dense, short pubescence on surface. Color black to rufopiceous and occasionally testaceous.

HEAD: Clypeus rectangulate; anterior margin truncate. Epistomal suture straight. Gular sutures confluent; sutures sharply and widely divergent on neck. Base of head constricted to form broad, distinct neck. Labrum with anterior margin broadly and moderately deeply emarginate; labral lobe weakly developed. Maxillary palpus with fourth segment subulate (fig. 15); base of fourth segment enlarged and as broad as apex of third segment (fig. 15). Mandible with apex bifid.

THORAX: Prothorax usually widest near apex; lateral margin sinuate and gradually convergent to base. Pronotal lateral marginal bead present (as in figs. 24, 25). Prohypomeron well developed, strongly deflexed. Protergosternal suture present or obsolete. Procoxal fissure present; fissure open or closed (as in figs. 24, 25). Protrochantin exposed or concealed (as in figs. 24, 25). Postprocoxal lobe absent. Prosternal process carinate but extending strongly between coxae.

Scutellum with apex usually exposed; surface with ovate impression. Elytra elongate; epipleural ridge present (as in fig. 39). Mesosternal process short and prominent and extending short distance between mesocoxae; process with apex carinate. Metasternum with low carina between mesocoxae. Mesocoxae contiguous. Metasternal process not developed.

Tibia densely pubescent; protibia and mesotibia with longitudinal row of spines absent; tibia occasionally with weak spinules. Metatibia with longitudinal row of widely spaced spinules weakly developed or absent. Tarsal formula 5-5-5; basal three articles compressed and closely associated (as in fig. 56); fourth article with long, membranous lobes on apex.

ABDOMEN: Second sternite well developed; midlongitudinal carina absent. Terga and sternites with midlongitudinal carinae absent. Seventh tergum with posterior margin fimbriate. Segment II to VI each with two pairs of laterosternites (as in fig. 68). Eighth tergum with posterior margin emarginate.

DISTRIBUTION

Palearctic: Albania, Algeria, Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, England, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Scotland, Soviet Union, Spain, Sweden, Switzerland, Tunisia, Yugoslavia. *Oriental:* India. *Nearctic:* Canada, United States.

SPECIES INCLUDED

O. andalusiacus (Fagel)
O. angustatus (Erichson); Sp
O. antennatus (Watanabe and Shibata)
O. aureus (Fauvel); Sp
O. aurorans (Peyerimhoff)
O. basicornis (Cameron); H
O. biimpressus (Mäklin); Sp
O. brachypterus (Jeannel)
O. carnicus (Scheerpeltz)
O. championi (Bernhauer); H
O. columbiensis (Hatch)
O. confinis Smetana
O. corsicus (Fagel)
O. curtipennis (Eppelsheim); Sp
O. emarginatus (Fauvel); Sp
O. filum (Fauvel); Sp
O. flexuosus (Mulsant and Rey); Sp
O. forticornis (Hochhuth)
O. gracilis (Fagel)
O. grigolettoi (Fagel)
O. jailensis (Scheerpeltz)
O. japonicus (Watanabe and Shibata)
O. kashmiricus (Cameron); H
O. laevis (Watanabe and Shibata)
O. legrosi (Jarrige)
O. lenkoranus (Scheerpeltz)
O. longipennis (Fairmaire and Loboulbène); Sp
O. lucifugus (Fagel)
O. mediterraneus (Scheerpeltz)
O. monticola (Cameron); H
O. nigerrimus (Cameron); H
O. nitidus (Cameron); H
O. omalinus (Erichson); Sp
O. planus (LeConte); H

O. proximus (Cameron); H
O. rosenhaueri (Kiesenwetter); Sp
O. ruteri (Jarrige)
O. scheerpeltzi (Fagel)
O. sericinus (Solsky)
O. strandi (Scheerpeltz)
O. vulgaris (Watanabe and Shibata)

XEROPHYGUS

Xerophygus KRAATZ, 1859, p. 178. Type species: *Xerophygus pallipes* (Motschulsky).

DIAGNOSIS

This genus can be recognized by the shallowly emarginate anterior margin of the labrum, the prominently bifurcate mandible, the acicular fourth segment of the maxillary palpus (fig. 22), the absence of the protergosternal suture (as in fig. 31), the short, closed procoxal fissure, the presence of a longitudinal row of spinules on the tibia, the five tarsomeres, and the absence of a midlongitudinal carina on the abdominal terga and sternites.

DESCRIPTION

Length, approximately 3.0 to 5.0 mm. Form slender and moderately flattened dorsoventrally. Body with dense, short pubescence.

HEAD: Clypeus rectangulate, with anterior margin truncate. Epistomal suture present. Gular sutures confluent, then strongly divergent near base (as in fig. 10). Head constricted at base to form broad, well-defined neck. Supraantennal ridge prominent. Labrum with anterior margin broadly and shallowly emarginate; labral lobe weakly developed. Mandible strongly bifurcate near apex. Maxillary palpus with fourth segment acicular (fig. 22); third segment prominent and fusiform.

THORAX: Prothorax wider near anterior end than at basal end. Prohypomeron broad and strongly deflexed. Pronotal lateral marginal bead present but weak or obsolete; with anterior portion on prohypomeron. Protergosternal suture absent (as in fig. 31). Procoxal fissure present, short, and slightly open. Protrochantin concealed (as in fig. 24). Postprocoxal lobe absent.

Scutellum with broad impression on surface; with sinuate transverse ridge along anterior region. Elytral epipleural ridge present (as in fig. 39). Mesocoxae contiguous. Mesosternal process extending between coxae; process prominent and carinate at apex (as in fig. 33). Metasternum with carina between mesocoxae.

Tibia with dense pubescence; with longitudinal row of spinules on protibia and mesotibia. Metatibia with longitudinal ctenidium of spinules. Tarsal formula 5-5-5; with first three articles compressed and closely associated (as in fig. 56); fourth article with long, slender, membranous lobes on apex; last article lacking dense pubescence but with scattered, long setae.

ABDOMEN: Second sternite well developed; midlongitudinal carina absent. Terga and sternites without midlongitudinal carina. Terga without basolateral ridges. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Seventh tergum with posterior margin fimbriate with spinules; fimbriation increasingly long medially. Eighth tergum with posterior margin rounded.

DISTRIBUTION

Oriental: Burma, Ceylon, India, Sumatra. *Ethiopian:* Tanzania.

SPECIES INCLUDED

X. africanus Bernhauer; H
X. flavipes Motschulsky
X. malaisei Scheerpeltz
X. ocularis Fauvel; Syn
X. pallipes (Motschulsky); Sp

THINODROMUS

Thinodromus KRAATZ, 1858, p. 866. Type species: *Thinodromus dilatatus* (Erichson).

Amisammus DES GOZIS, 1886, p. 15; subgenus. Type species: *Amisammus arcuatus* (Stephens).

Warburtonia OKE, 1933, p. 104; new synonym. Type species: *Warburtonia inflatipes* Oke (1933, p. 105).

Paracarpalimus SCHEERPELTZ, 1937, p. 105; subgenus. Type species: *Paracarpalimus luteipes* (Solier).

DIAGNOSIS

This genus can be recognized by the acicular fourth segment of the maxillary palpus (as in fig. 22), the absence of the protergosternal suture, the short, closed procoxal fissure, the lack of longitudinal rows of tibial spines, the five tarsomeres, of which the basal three are closely associated (fig. 56), and the absence of the midlongitudinal carina on the abdominal terga and sternites.

DESCRIPTION

Length, approximately 2.0 to 4.0 mm. Form broad to slender and moderately flattened dorsoventrally to subcylindrical. Body very densely to

moderately densely pubescent.

HEAD: Clypeus rectangulate; anterior margin truncate. Epistomal suture present. Supraantennal ridge low but distinct. Gular sutures confluent to near base, then sharply and continuously divergent to base of head or with gular sutures confluent on anterior portion and very narrowly separated to near base, then sharply and continuously divergent to base of head (as in fig. 10). Base of head constricted to form broad, distinct neck. Labrum with anterior margin broadly emarginate to bilobed; labral lobe weakly developed. Mandible denticulate; apex bifid. Maxillary palpus with fourth segment acicular (as in fig. 22); fourth segment slender to stout.

THORAX: Pronotum widest near apex; lateral margins convergent to base and slightly to strongly sinuate. Prohypomeron well developed and strongly deflexed. Pronotal lateral marginal bead present; with anterior portion extending onto prohypomeron. Protergosternal suture absent. Procoxal fissure present and closed or absent. Postprocoxal process short and carinate.

Scutellum completely concealed under pronotum or with apex slightly exposed; surface with basal, arcuate, transverse ridge or with rounded impression. Elytral epipleural (as in fig. 39) and hypopleural ridges present. Mesosternal process extending short distance between coxae; process prominent and carinate at apex (as in fig. 33). Mesocoxae contiguous. Metasternal process not developed; low, midlongitudinal carina present between mesocoxae.

Tibia densely pubescent; longitudinal row of spines or scattered spines absent. Tarsal formula 5-5-5; basal three articles very closely associated and compressed (fig. 56); fourth article moderately well defined; fourth article with long, slender, membranous lobes on apex of ventral surface; last article long, slender, apically incrassate, and with long, scattered setae (fig. 56), but not densely pubescent.

ABDOMEN: Second sternite well developed; with midlongitudinal carina absent. Terga and sternites without midlongitudinal carina; terga without basolateral ridges; with transverse, basal ridge. Segments II to VI each with two pairs of laterosternites per segment (as in fig. 68). Seventh tergum with posterior margin fimbriate; fimbriation at middle either long or short. Eighth tergum with posterior margin emarginate or truncate.

DISTRIBUTION

Cosmopolitan.

DISCUSSION

Thinodromus was considered to be a subgenus of *Trogophloeus*, but is herein elevated to the generic level. The subgenera now listed under *Thinodromus* were formerly listed as subgenera of *Trogophloeus*.

When Oke described *Warburtonia*, he emphasized the presence of membranous lobes on the fourth article of the tarsi. These lobes are present on the tarsi of the species of many genera of the Oxytelinae. Although the presence of the membranous lobes is useful, it cannot be used as the sole basis for the establishment of genera within the Oxytelinae. Oke did not compare *Warburtonia* with other genera and emphasized no other characters that might be useful for the recognition of the genus. In the illustrations of *W. inflatipes*, the pronotum is depicted as having a circular depression, but this depression is an artifact of the partially collapsed, poorly sclerotized prothorax of the holotype. All the characters of *Warburtonia inflatipes* indicate that it is related to some of the species of *Thinodromus*. I can find no characters to support the continued recognition of *Warburtonia* as a separate genus.

Oke stated that *Warburtonia* had five tarsomeres per leg. This statement is true for *Warburtonia inflatipes* but not for *Warburtonia rufipes* which has three articles per tarsus. The latter species is transferred to *Carpelimus*.

Thinodromus can be separated from *Teropalpus* by the emarginate or truncate posterior margin of the eighth tergum, the parallel-sided to conical fourth segment of the maxillary palpus, the less pubescent body, and the less distinctly delimited, basal three articles of the tarsus.

Some species of *Thinodromus* have a deeply emarginate, anterior margin of the labrum, similar to that found in *Trogactus*. The last article of the tarsus of *Thinodromus* lacks dense pubescence but has long, scattered setae (fig. 56), whereas this article is densely pubescent in *Trogactus* (fig. 55). *Thinodromus* has five tarsomeres, but the basal three articles are so closely associated that the tarsus must be treated in potassium hydroxide before all the articles can be seen.

SPECIES INCLUDED

T. abnormalis (Cameron); H; new status

T. acuticollis (Bernhauer); T; new status
T. alluaudi (Fauvel); new status
T. americanus (Bernhauer and Schubert); H; new status
T. angulicollis (Fauvel); new status
T. anarcticus (Bernhauer); H; new status
T. araucanus (Fauvel); new status
T. arcifer (LeConte); H; new status
T. arcitenens (Fauvel); new status
T. arcuatus (Stephens); Sp; new status
T. armicollis (Fauvel); new status
T. assamensis (Cameron); H; new combination, transferred from *Apocellagria*
T. bernhaueri (Klima); T; new status
T. binotatus (Bernhauer); T; new status
T. bodemeyeri (Bernhauer); Syn; new status
T. borinquensis (Blackwelder); H; new combination, transferred from *Carpelimus*
T. brasilianus (Bernhauer); Syn; new status
T. brasiliensis (Bernhauer); Syn; new combination, transferred from *Carpelimus*
T. brevicornis (Luze); new status
T. bruchi (Bernhauer); T; new status
T. bruchianus (Bernhauer); T; new status
T. caloderinus (LeConte); H; new status
T. cameroni (Bernhauer); T; new status
T. capensis (Bernhauer); Syn; new status
T. catamarcanus (Bernhauer); H; new status
T. centralis (Sharp); H; new status
T. chagosanus (Bernhauer); Syn; new status
T. circularus (Bernhauer); new status
T. corsicus (Klima); Sp; new status
T. corvinus (Casey); H; new combination, transferred from *Carpelimus*
T. croceipes (Fauvel); Sp; new status
T. deceptor (Sharp); H; new status
T. decorsei (Cameron); H; new status
T. diffusus (Casey); H; new combination, transferred from *Carpelimus*
T. dilatatus (Erichson); Sp; new status
T. dilaticollis (Eppelsheim); T; new status
T. distinctus (Fairmaire and Laboulbène); Sp; new status
T. eminens (Sharp); H; new status
T. episcopalis (Bernhauer); T; new status
T. fortepunctatus (Bernhauer); T; new status
T. grandipennis (Bernhauer); T; new status
T. gravelyi (Bernhauer); T; new status
T. guttula (Bernhauer); T; new status
T. hirticollis (Mulsant and Rey); Sp; new status
T. hispaniolus (Blackwelder); H; new combination, transferred from *Carpelimus*
T. impressipennis (Fairmaire and Germain); Sp; new status
T. inflatipes (Oke); H; new combination, transferred from *Warburtonia*
T. kiesenwetteri (Hochhuth); Sp; new status
T. lapsus (Casey); H; new combination, transferred from *Carpelimus*
T. latipennis (Fauvel); Syn; new status
T. lewisi (Cameron); H; new status
T. lunatus (Motschulsky); Sp; new status
T. luteipes (Solier); Sp; new combination, transferred from *Carpelimus*
T. mannerheimi (Kolen); Sp; new status
T. mollis (Sharp); H; new status
T. nitidifrons (Fauvel); new status
T. multivittatus (Bernhauer); T; new status
T. obsolescens (Blackwelder); H; new combination, transferred from *Carpelimus*
T. ogloblini (Bernhauer); Syn; new status
T. palustris (Bernhauer); new status
T. pauloensis (Bernhauer); T; new status
T. perrieri (Fauvel); Sp; new status
T. pilosellus (Eppelsheim); T; new status
T. puncticollis Solier; Sp; new combination, transferred from *Carpelimus*, resurrection of a junior synonym of *T. obscurus* Solier, 1849, a junior homonym of *Carpelimus obscurus* Stephen, 1833
T. pustulatus (Bernhauer); Syn; new status
T. reitterianus (Bernhauer); T; new status
T. renominatus, new name
T. glabricollis (Bernhauer), 1915b; T; new status; not Motschulsky, 1860, a name in *Carpelimus*
T. ripicola (Cameron); H; new status
T. segnis (Erichson); new status
T. sericatus (Sharp); H; new status
T. signatus (Erichson); Sp; new status
T. smithianus (Scheerpeltz); H; new status
T. socius (Bernhauer); T; new status
T. spectabilis (Bernhauer); Syn; new status
T. splendidus (Bernhauer); Syn; new status
T. sumatrensis (Bernhauer); Syn; new status
T. tibialis (Fauvel); Syn; new status
T. transversalis (Wollaston); H; new status
T. triangulum (Sharp); H; new status
T. unipustulatus (Cameron); H; new status
T. vittatus (Sharp); H; new status
T. vulneratus (Bernhauer); T; new status

TROGACTUS

Trogactus SHARP, 1887, p. 702. Type species: *Trogactus championi* Sharp.

DIAGNOSIS

This genus can be recognized by the deeply bilobed anterior margin of the labrum (fig. 19), the acicular fourth segment of the maxillary palpus (as in fig. 22), the absence of the protergosternal suture, the presence of the closed procoxal fissure (as in fig. 24), the exposed apex of the scutellum, the absence of a longitudinal row of spines or spinules on the tibia, the five tarsomeres, the densely pubescent fifth article of

the tarsus (fig. 55), and the absence of a midlongitudinal carina on the abdominal terga and sternites.

Description

Length, 3.5 to 7.0 mm. Form stout and subcylindrical. Body densely pubescent; pubescence not prominent.

Head: Clypeus rectangulate; anterior margin truncate. Epistomal suture present. Gular sutures confluent; sutures sharply separated near base. Head strongly constricted at base, forming narrow, distinct neck. Labrum bilobed (fig. 19); labral lobe poorly developed. Maxillary palpus with third segment slender, elongate, and fusiform; fourth segment acicular (as in fig. 22). Mandible bifid at apex. Antenna long and slender; first article robust.

Thorax: Prothorax wider near anterior end; lateral margin sinuate and convergent to base. Pronotal lateral marginal bead present or absent; when present, with anterior portion on prohypomeron. Prohypomeron well developed and weakly deflexed. Protergosternal suture absent. Procoxal fissure present (as in fig. 24), short, and closed. Protrochantin concealed (as in fig. 24). Prosternal process reduced and carinate. Postprocoxal lobe absent.

Scutellum exposed apically; with transverse ridge across anterior portion; without further impression on surface; surface pubescent. Elytral epipleural ridge present (as in fig. 39). Mesosternal process extending short distance between mesocoxae; process prominent and carinate at apex (as in fig. 33). Mesocoxae contiguous. Metasternal process not developed. Metasternum with low carina between mesocoxae.

Tibia without longitudinal row of spines or spinules; with dense pubescence. Metatibia with longitudinal ctenidium of spinules absent. Tarsal formula 5-5-5; basal three articles closely associated and compressed (fig. 55); fourth article more distinctly separated and with long, slender, membranous lobes extending from apex; last article densely pubescent (fig. 55).

Abdomen: Second sternite well developed. Sternites without midlongitudinal carina. Terga with rounded, midlongitudinal, basal ridge; without basolateral ridges. Seventh tergum with posterior margin fimbriate. Segments II to VI each with two pairs of laterosternites (as in fig. 68); laterosternites poorly separated from each other. Eighth tergum with posterior margin emarginate.

Distribution

Neotropical: Bolivia, Costa Rica, Mexico, Panama, West Indies.

Discussion

From most of the Coprophilini, the deeply, bilobed anterior margin of the labrum suffices to separate *Trogactus*. Some species in *Thinodromus* have a deeply emarginate to bilobed anterior margin of the labrum [e.g., *Thinodromus assamensis* (Cameron)], but *Trogactus* can be distinguished from them by the densely pubescent fifth segment of the tarsus. From *Apocellagria*, *Trogactus* can be distinguished by, in addition to the labral, scutellar, and tarsal characters, the absence of a midlongitudinal carina of the second sternum. Some species of *Trogactus* may have a midlongitudinal ridge on terga II to V, but they are not so strongly carinate as those on the terga of *Apocellagria*.

Species Included

T. championi Sharp; H
T. cornucopius (Blackwelder); H; new combination, transferred from *Carpelimus*
T. elegans Sharp; H
T. funebris Sharp; H
T. godmani Sharp; H
T. mirabilis Bernhauer; H
T. tristis Bierig; H

APOCELLAGRIA

Apocellagria Cameron, 1920, p. 143. Type species: *Apocellagria indica* Cameron.

Diagnosis

This genus can be recognized by the moderately deeply emarginate, anterior margin of the labrum, the acicular fourth segment of the maxillary palpus (as in fig. 22), the absence of the protergosternal suture and procoxal fissure, the slight apical exposure of the scutellum, the five tarsomeres, with the basal three articles closely associated (as in figs. 55, 56), the presence on the fifth tarsal article of long, scattered setae (as in fig. 56), and the presence on the second and third abdominal sternites and terga of a midlongitudinal carina.

Description

Length, approximately 3.0 mm. Form slender and subcylindrical. Body with moderately dense, short, inconspicuous pubescence.

Head: Clypeus rectangulate; anterior margin

fruncate. Epistomal suture present and straight. Supra-antennal ridge low and distinct but not prominent or well developed. Gular sutures confluent; sutures strongly and sharply divergent at base (as in fig. 10). Head strongly constricted at base to form broad, well-defined neck. Labrum with shallow to deep, broad, obtusely V-shaped emargination of anterior margin; anterior margin not bilobed; labral lobe poorly developed. Mandible denticulate; apex dorsoventrally bifid. Maxillary palpus with fourth segment reduced and acicular; third segment stout and prominent (as in fig. 22). Antenna long and slender.

THORAX: Prothorax wider near anterior end than at base; lateral margin sinuate and convergent basally. Prohypomeron well developed and weakly deflexed. Pronotal lateral marginal bead present on anterior half, absent on posterior half of pronotum; anterior portion of bead on prohypomeron. Protergosternal suture absent. Procoxal fissure absent, evident only as groove. Protrochantin concealed (as in fig. 29). Postprocoxal lobe absent. Prosternal process short and carinate.

Scutellum with bituberculate apex very slightly exposed from under pronotum; surface with transverse, sinuate ridge near base. Elytral epipleural (as in fig. 39) and hypopleural ridges present. Mesosternal process short and prominent; apex carinate, extending short distance between mesocoxae (as in fig. 33). Mesocoxae contiguous. Metasternal process not developed; metasternum with low, rounded, midlongitudinal carina between mesocoxae.

Tibia with longitudinal row of spines or spinules absent; with dense pubescence; tibia long and slender. Tarsal formula 5-5-5; basal three articles closely associated and compressed (as in fig. 56); fourth article more distinctly separated, and with long, slender membranous lobe extending from apex; fifth article long, slender, apically incrassate and without dense pubescence but with scattered, long setae (as in fig. 56).

ABDOMEN: Second sternum well developed. Second and third sternites and terga with basal midlongitudinal carina; with fourth and fifth terga less distinctly carinate. Terga with basolateral ridge absent. Segments II to VI with two pairs of laterosternites per segment (as in fig. 68). Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin emarginate.

DISTRIBUTION

Oriental: Ceylon, India. *Ethiopian:* Tanzania.

DISCUSSION

This genus is similar to some species in *Thinodromus* and *Trogactus*. From these genera, *Apocellagria* is separated by the carinae on the abdominal terga and sternites, the poorly exposed scutellum, the moderately deeply emarginate anterior margin of the labrum, and the absence of the procoxal fissure. An impression at the probable former position of the procoxal fissure may be mistaken for a fissure in *Apocellagria*.

SPECIES INCLUDED

A. amplipennis Cameron; H
A. fuscipalpis (Fauvel); Syn
A. indica Cameron; H
A. pubicollis (Cameron); H
A. singularis (Fauvel); Syn; new combination, transferred from *Trogophloeus*
A. tenuicornis Cameron; H
A. assamensis Cameron transferred herein to *Thinodromus*

CARPELIMUS

Carpelimus LEACH, 1819, p. 174. Type species: *Carpelimus fuliginosus* (Gravenhorst).

Trogophloeus MANNERHEIM, 1831, p. 463; subjective synonym. Type species: *Trogophloeus corticinus* (Gravenhorst).

Taenosoma MANNERHEIM, 1831, p. 464; subjective synonym. Type species: *Taenosoma pusilla* (Gravenhorst).

Batychrus GISTEL, 1834, p. 9; isogenotypic synonym of *Trogophloeus*. Type species: *Batychrus corticinus* (Gravenhorst).

Glomus GISTEL, 1848, p. xi; isogenotypic synonym of *Taenosoma*. Type species: *Glomus pusillus* (Gravenhorst).

Troginus MULSANT AND REY, 1878, p. 758; subgenus. Type species: *Troginus exiguus* (Erichson).

Boopinus KLIMA, 1904, p. 46; subjective synonym. Type species: *Boopinus memnonius* (Erichson).

Corynocerus EICHELBAUM, 1915, p. 104; isogenotypic synonym of *Trogophloeus*. Type species: *Corynocerus corticinus* (Gravenhorst).

Oxytrogus WENDELER, 1930, p. 183; new synonym. Type species: *Oxytrogus oculatus* (Wendeler).

Nanolobus CAMERON, 1933a, p. 74; new synonym. Type species: *Nanolobus pacificus* (Cameron).

Bucephalinus KOCH, 1934, p. 42; subgenus. Type species: *Bucephalinus priesneri* (Koch).

Paraboopinus SCHEERPELTZ, 1937, p. 109; subgenus. Type species: *Paraboopinus nitidus* (Baudi).

Thoracoplatynus SCHEERPELTZ, 1937, p. 109; isogenotypic synonym. Type species: *Thoracoplatynus fuliginosus* (Gravenhorst).

Myopinus SCHEERPELTZ, 1937, p. 116; subgenus. Type species: *Myopinus elongatulus* (Erichson).

Paratrogophloeus HATCH, 1957, p. 91; subgenus. Type species: *Paratrogophloeus bilineatus* (Stephens).

Typhlopinus COIFFAIT, 1967, p. 265; subgenus. Type species: *Typhlopinus anophtalmus* (Coiffait).

DIAGNOSIS

This genus can be recognized by the moderately deeply emarginate labrum, the acicular fourth segment of the maxillary palpus (as in fig. 22), the absence of the protergosternal suture, the presence of the short, closed procoxal fissure, the absence of a longitudinal row of spines on the tibia, the tarsal articles (fig. 58), and the absence of the basolateral ridges on the abdominal terga.

DESCRIPTION

Length, 1.0 to 4.0 mm. Form slender to broad; moderately flattened dorsoventrally. Body densely to sparsely pubescent.

HEAD: Clypeus rectangulate; anterior margin truncate. Epistomal suture present. Suprantennal ridge present and low but distinct. Gular sutures confluent to near base, then sharply divergent (as in fig. 10). Head with base constricted to form broad, distinct neck or with head more gradually narrowed to form broad, poorly defined neck. Labrum with anterior margin nearly truncate; with shallow, acute, median emargination or with broad, shallow emargination; labral lobe poorly developed. Mandible denticulate; apex bifid. Maxillary palpus with fourth segment acicular; third segment swollen and prominent (as in fig. 22).

THORAX: Prothorax widest near apex; lateral margin sinuate or broadly rounded and gradually convergent to base. Pronotal lateral marginal bead present; anterior portion usually extending onto hypomeron. Prohypomeron well developed and moderately deflexed. Protergosternal suture absent. Procoxal fissure present, short, and closed. Protrochantin concealed (as in figs. 24, 29). Postprocoxal lobe absent. Prosternal process short and carinate.

Scutellum concealed under pronotum; surface with arcuate ridge and impression; with midlongitudinal, spindle-shaped impression anterior to ridge. Elytral epipleural ridge present (as in fig. 39). Mesosternal process prominent; process extending short distance between coxae; apex carinate (as in fig. 33). Metasternum with low carina between mesocoxae. Mesocoxae contiguous. Metasternum with process poorly developed.

Tibia with longitudinal row of spines absent; with dense pubescence. Metatibia with longitudinal ctenidium of spinules absent. Tarsal formula 3-3-3; basal two articles closely associated; apical article elongate, slender and apically incrassate and not densely pubescent; basal two articles with long, membranous lobes and setae on ventral surface (fig. 58).

ABDOMEN: Second sternite well developed, with midlongitudinal carina absent. Terga with basolateral ridge absent; midlongitudinal carina absent. Seventh tergum with posterior margin fimbriate; fimbriation short. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Tergum VIII with posterior margin truncate or slightly rounded.

DISTRIBUTION

Cosmopolitan.

DISCUSSION

Carpelimus was established by Leach (1819), but no species were included. Curtis (1829) included the first species under the name *Carpalimus*, but later the name *Carpalimus* was widely regarded to have been described by Stephens in 1834. Mannerheim in 1831 described *Trogophloeus*. These genera were later considered to be synonyms, with *Trogophloeus* Mannerheim having priority. Obviously, if Stephens is considered to have established *Carpalimus* in 1834, then *Trogophloeus* has priority. Tottenham (1949) found that *Carpelimus* was first used in 1819 and its type species fixed by Curtis (1829); therefore *Trogophloeus* must be considered to be the junior synonym.

Teropalpus, *Thinodromus*, *Amisammus*, *Trogolinus*, and *Paracarpalimus* have been removed from *Carpelimus*.

Nanolobus pacificus Cameron was separated from *Carpelimus* by the "... course uneven sculpture of the prothorax and elytra, the second joint of the tarsi produced into a narrow lobe underlying the third." These characters and several others also included in the original description are found throughout *Carpelimus* but are not distributed in a manner that will define additional genera within *Carpelimus*. I can find no

other characters to support the separation of *Nanolobus pacificus* as a genus.

When Wendeler (1930) described *Oxytrogus*, the diagnostic characters for the genus were obtained from a comparison with *Oxytelus*. Upon examination of the type species, I found it actually nearer *Carpelimus*, and study of the specimen revealed no characters that would support the separation of *Oxytrogus* and *Carpelimus*.

As defined here, *Carpelimus* includes only those species formerly included in the genus that have three-segmented tarsi.

Species Included

C. abdominalis (Sharp); H
C. adelaidae (Blackburn); H; new combination, transferred from *Bledius*
C. aeolus Blackwelder
C. aequalis (Jacquelin du Val); Sp
C. aequithorax (Bernhauer); P
C. agonus (Casey); H
C. alutaceus (Fauvel); Sp
C. aluticollis (Bernhauer); H
C. anceps (Fauvel); Syn
C. angulatus (Erichson)
C. angusticollis (Bernhauer)
C. anophtalmus (Coiffait)
C. antennarius (Bernhauer); T
C. anthracinus (Mulsant and Rey); Sp
C. apacheanus (Casey); H
C. apicalis (Eppelsheim); Sp
C. apicirufus (Lea)
C. apicornis (Fauvel); Syn
C. argentinus (Bernhauer); T
C. argutus (Sharp); H
C. aridus (Jacquelin du Val); Sp
C. arizonae (Casey); H
C. armatus (Casey); H
C. atramentarius (Lynch)
C. augustae (Bernhauer)
C. basicornis (Notman)
C. beattyi Blackwelder; H
C. bengalensis (Cameron); H
C. bernensis (Cameron); H
C. bicolor (Cameron); H
C. bicyclus Fauvel; Syn
C. biimpressus (Cameron); H
C. bilineatus (Stephens); Sp
C. bipuncticollis (Casey); H
C. blediinus (LeConte); H
C. boops (Fauvel); Syn
C. bonariensis (Bernhauer); T
C. bonnelli (Hatch)
C. borneensis (Bernhauer)
C. bovinus (Bernhauer); T
C. bredoi (Bernhauer)
C. breviceps (Sharp); H
C. calcuttanus (Bernhauer); Sp
C. calidus (Bernhauer)
C. cameronianus (Paulian)
C. carbonarius (Fauvel); H
C. caseyi (Bernhauer)
C. championi (Cameron); H
C. chapini Blackwelder; H
C. chatterjeei (Cameron); H
C. chopardi (Cameron); P
C. clavulus (Cameron); Sp
C. collarti (Cameron); Co
C. coloripennis (Scheerpeltz)
C. confinis (Casey); H
C. conformis Blackwelder
C. confusus (Casey); H
C. congener Casey; H
C. congoensis (Fauvel); Syn
C. congruus (Cameron); H
C. conjunctus (Casey); H
C. convexulus (LeConte); H
C. cooperi (Cameron); H
C. cordovensis (Bernhauer)
C. coriaceus (Cameron); H
C. correctus Blackwelder; H
C. corticinus (Gravenhorst); Sp
C. corumbanus (Bernhauer); Co
C. costaricensis (Bernhauer)
C. cubensis (Bierig); Sp
C. curtulus (Sharp); H
C. curtus (Bernhauer)
C. danforthi Blackwelder; H
C. darlingtoni Blackwelder; H
C. debilis (Casey); H
C. decoloratus (Casey)
C. delicatus (Casey); H
C. demmeli (Bierig)
C. dentiger (Casey); H
C. desertus (Koch); Sp
C. despectus (Baudi); Sp
C. detractus (Casey); H
C. dieganus (Fauvel); Syn
C. difficilis (Casey); H
C. dilutus (Wollaston); H
C. discipennis (Bierig); Sp
C. dispersepunctatus (Scheerpeltz)
C. dissonus (Bierig); Sp
C. dundoensis (Cameron); H
C. duplex (Fauvel); H
C. ealanus (Bernhauer); Sp
C. egregius (Casey); H
C. elongatulus (Erichson); Sp
C. excellens (Sharp); H
C. exiguus (Erichson); Sp
C. facetus (Casey); H
C. fenderi (Hatch)
C. ferrugineus (Erichson)
C. filarius (Sharp); H

C. filum (Casey)
C. fimbriolatus (Cameron); P
C. flavipennis (Cameron); H
C. flavipes (Erichson); Sp
C. flavomarginatus (Lindberg); P
C. fontinalis (Sharp); H
C. formicophilus, new name
C. myrmecophilus Lea, 1910; not Scriba, 1855
C. formosae (Cameron); H
C. formosanus (Cameron); H
C. forteimpressus (Cameron); P
C. foveicollis (Kraatz); H
C. foveolatus Sahlberg; Sp
C. freyi (Koch)
C. fuliginosus (Gravenhorst); Sp
C. fulvipes (Erichson); Sp
C. funeralis (Cameron); Co
C. funereus (Cameron); P
C. funestus (Cameron); H
C. ganglbaueri (Bernhauer); Sp
C. gedyei (Cameron); H
C. genalis (Fauvel); Syn
C. gerardianus (Bernhauer)
C. ghesquierei (Bernhauer)
C. gilae (Casey); H
C. globicollis (Eppelsheim); Sp
C. globulicollis (Bernhauer); Co
C. gracilis (Mannerheim); Sp
C. grandensis (Bernhauer); Sp
C. granulatus (Cameron); H
C. graphicus (Casey); H
C. gratus (Cameron); H
C. halophiloides (Cameron); H
C. halophilus (Kiesenwetter); Sp
C. haplomus Blackwelder; H
C. harneyi (Hatch)
C. heidenreichi (Benick)
C. heydeni (Klima)
C. hilaris (Sharp); H
C. imbellis (Casey); H
C. imitator (Bierig); Sp
C. impressus (Boisduval and Lacordaire); Sp
C. impunctatus Blackwelder; H
C. incertus (Casey); H
C. indicus (Kraatz); Sp
C. inquisitus (Casey); H
C. insignellus (Sharp); H
C. insolitus (Casey); H
C. iraniensis, new name
C. richteri (Scheerpeltz), 1961; not Bernhauer, 1927
C. isonomenus, new name
C. robustulus Koch, 1934; not Casey, 1889
C. japonicus (Cameron); H
C. javanicus (Cameron); H
C. javanus (Cameron); H
C. klimai (Bernhauer)
C. kochi (Bernhauer)
C. koppi (Eppelsheim); Sp
C. kreyenbergi (Bernhauer); Sp
C. lacustris (Notman)
C. laetipennis (Cameron); H
C. languidus (Casey); H
C. lasti (Scheerpeltz); Sp
C. laticeps (Cameron); H
C. latifrons (Sharp); H
C. lepidicornis (Fauvel)
C. lepidus (Casey); H
C. lgockii (Bernhauer)
C. lindbergi (Scheerpeltz)
C. lindrothi (Palm)
C. linearis (Bernhauer)
C. lisfranci (Bernhauer); Sp
C. littoralis (Cameron); H
C. longicollis (Bernhauer); Sp
C. longiventris (Cameron); Co
C. louwerensi (Cameron); H
C. lucens (Cameron); H
C. lucidus (Cameron); H
C. machadoi (Cameron); P
C. macropterus (Fauvel)
C. maculicollis (Notman)
C. mafingensis (Bernhauer)
C. magniceps (Bernhauer); H
C. magnipennis (Bernhauer)
C. malayanus (Cameron); H
C. malgaceus (Fauvel); Syn
C. manchuricus (Bernhauer)
C. mediocris (Bernhauer and Schubert); H
C. megacephalus (Cameron); P
C. memnonius (Erichson)
C. mendox (Smetana)
C. mexicanus (Casey); H
C. microcephalus (Bernhauer)
C. mimus (Cameron); H
C. misellus (Sharp); H
C. modestus (Casey); H
C. monachus (Bernhauer); Sp
C. morio (Erichson); Sp
C. mumfordi (Cameron); P
C. mundus (Sharp); H
C. nanuloides (Hatch)
C. nanulus (Casey); H
C. nesiotus, new name
C. pacificus (Cameron); 1933a; H; transferred from *Nanolobus*; not Casey, 1889
C. nigerrimus (Cameron)
C. nigrellus (Sharp); H
C. nigrinus (Smetana)
C. nigripes (Cameron); P
C. nigrita (Wollaston); H
C. nigrorufus (Cameron); H
C. niloticus (Erichson); Sp
C. nitidicollis (Bernhauer); Sp
C. nitidipennis (Cameron); H
C. nitidiventris (Fairmaire and Germain)
C. nitidus (Baudi); Sp

C. noctivagus (Lea); Sp
C. obesus (Kiesenwetter); Sp
C. obliquus (Casey); H
C. occiduus (Casey); H
C. opacellus (Bernhauer)
C. opacus (Baudi); Sp
C. orientalis (Cameron); H
C. pacificus (Casey); H
C. padangensis (Cameron); H
C. pakeanus (Cameron); H
C. palitans (Cameron); H
C. pallidicornis (Bernhauer)
C. pallidulus (Casey); H
C. paludicola (Blackburn); H
C. papuensis (Fauvel); Syn
C. parcepunctatus (Bernhauer); H
C. parcipennis (Bernhauer)
C. parvulus (Mulsant and Rey); Sp
C. pauliani (Cameron); Co
C. pauperculus (Casey); H
C. pendleburyi (Cameron); H
C. peregrinus (Cameron)
C. persimilis (Cameron); H
C. pertenuis (Casey); H
C. petomus Blackwelder; H
C. phaios Blackwelder; H
C. phloeoporinus LeConte; H
C. piceicollis (Cameron); H
C. planellus (Sharp); H
C. planicollis (Bernhauer); Sp
C. politus (Kiesenwelter); Sp
C. poppiusi (Bernhauer and Schubert)
C. porosus (Cameron); H
C. poseyensis (Blatchley)
C. praelongus (Bernhauer); H
C. priesneri (Koch); Co
C. probus (Casey); H
C. prolixus (Bierig); Sp
C. prominens (Casey); H
C. providus (Casey); H
C. proximus (Cameron); Co
C. pseudorivularis (Bernhauer); Co
C. pudicus (Casey); H
C. pueblanus (Bernhauer)
C. punctatellus (Erichson); Sp
C. punctatus (Fauvel); H
C. punctiger (Bernhauer); H
C. punctipennis (Kiesenwetter); Sp
C. punctus (Bernhauer)
C. pusae (Cameron); Sp
C. pusillus (Gravenhorst); Sp
C. quadripunctatus (Say); Sp
C. reitteri (Klima)
C. republicanus (Bernhauer)
C. richteri (Bernhauer)
C. rivularis (Motschulsky); Sp
C. robustulus (Casey); H
C. rondaensis (Fagel)
C. ruandanus (Cameron)
C. rudicollis (Bernhauer)
C. ruficornis (Cameron); H
C. rufipes (Oke); H; new combination, transferred from *Warburtonia*
C. rufitarsis (Fauvel); Syn
C. rufoniger (Cameron); H
C. rufotestaceus (Cameron); H
C. rulomus Blackwelder; H
C. sadiyanus (Cameron)
C. saigonensis (Cameron)
C. salicola (Casey); H
C. sanguinicollis (Bernhauer)
C. scabrosus (Kraatz); Sp
C. schneideri (Ganglbauer); Sp
C. schoutedeni (Cameron); P
C. schuberti (Scheerpeltz)
C. schwabei (Bernhauer)
C. scrobiger (Cameron); H
C. scrupulus (Casey); H
C. sculptilis (Casey); H
C. sedatus (Sharp); H
C. semilividus (Bernhauer)
C. semiopacus (Cameron); P
C. semirudis (Bernhauer)
C. senilis (Sharp); H
C. sericeipennis (Bernhauer)
C. sericeus (Cameron); H
C. seydeli (Cameron); P
C. sharpi (Bernhauer); H
C. sharpianus (Cameron); H
C. siamensis (Fauvel); Syn
C. siculus (Mulsant and Rey); Sp
C. silvestris (Cameron); H
C. similis Smetana
C. simplex (Motschulsky); Sp
C. simplarius (LeConte); H
C. smithi (Bernhauer)
C. sodalis (Bernhauer)
C. sordidus (Cameron); H
C. strandi (Bernhauer)
C. stricticollis (Fairmaire and Germain); Sp
C. subdenticulatus (Bernhauer); Sp
C. subterraneus (Smetana)
C. subtilicornis (Roubal)
C. subtilior (Cameron); H
C. subtilis (Erichson); Sp
C. suffusus (Sharp); H
C. sumbaensis (Scheerpeltz)
C. tagus, new name
C. pallidicornis Cameron, 1945b; not Bernhauer, 1935
C. taprobanae (Walker); H
C. tautus, new name
C. rufipennis Eppelsheim, 1878; not Stephens, 1834
C. temporalis (Casey); H
C. tener (Bernhauer); Sp
C. tenuipunctus (Bernhauer)

C. terminalis (Cameron); H
C. terraneus (Smetana)
C. testaceipennis (Cameron); H
C. thessalonicensis (Scheerpeltz)
C. torrentum (Cameron); Sp
C. transmarinus (Fauvel); Syn
C. transversicollis (Scheerpeltz)
C. tremolerasi (Bernhauer); Co
C. trivialis (Cameron); H
C. troglodytes (Erichson); Sp
C. tunapunae Blackwelder; H
C. uniformis (LeConte); H
C. usingeri (Bernhauer)
C. vagans (Cameron); H
C. vagus (Sharp); H
C. vancouverensis Hatch
C. varicornis (Bernhauer)
C. variegatus (Cameron)
C. velutinus (Sharp); H
C. vespertinus (Notman)
C. vianai (Bernhauer)
C. vicinus (Sharp); H
C. vitalei (Bernhauer)
C. volans (Notman); P
C. weberi Blackwelder; H
C. weissi (Notman)
C. wendleri, new name
C. oculatus Wendeler, 1930, new combination, transferred from *Oxytrogus*, not Wollaston, 1865
C. zealandicus (Sharp); H
C. zellichi (Bernhauer)

NEOXUS, NEW GENUS

TYPE SPECIES: *Neoxus crassicornis* (Casey), designated here; species transferred from *Thinobius*.

DIAGNOSIS

This genus can be recognized by the acicular fourth segment of the maxillary palpus (as in fig. 22), the absence of the protergosternal suture (as in fig. 29), the absence of the procoxal fissure (as in fig. 29), the scutellum with the apex slightly exposed, the two-segmented tarsi (as in fig. 59), the lack of a longitudinal row of spines on the tibia, and the presence of a basolateral ridge on the abdominal terga (as in fig. 68).

DESCRIPTION

Length, 1.0 to 1.5 mm. Form slender, small, and strongly depressed. Body densely pubescent.

HEAD: Clypeus rectangulate; anterior margin truncate. Epistomal suture present. Tentorial maculae present as black spots on dorsum. Supra-antennal ridge moderately developed. Gular sutures confluent through most of length; sutures gradually divergent at base (as in fig. 10). Base of head sharply constricted to form well-defined neck. Labrum with anterior margin shallowly emarginate; labral lobe poorly developed. Maxillary palpus with last segment acicular (as in fig. 22); third segment longest and prominent; second segment shorter than third. Antennal segments with or without distinct carinae encircling apex of articles.

THORAX: Pronotum with lateral margins parallel and straight to rounded basal angles. Prohypomeron broad and moderately deflexed. Pronotal lateral marginal bead present and weakly developed; bead not on hypomeron. Protergosternal suture absent (as in fig. 29). Procoxal fissure absent (as in fig. 29). Protrochantin concealed (as in fig. 29). Postprocoxal lobe absent. Prosternal process well developed and extending between coxae; apex carinate.

Scutellum with apex slightly exposed; surface not sculptured; surface pubescent. Elytral epipleural ridge present (as in fig. 39). Mesosternal process short and prominent; apex carinate. Metasternal process not developed. Metasternum with midlongitudinal carina present between mesocoxae.

Tibia with longitudinal row of spines absent; with dense pubescence. Tarsal formula 2-2-2; basal article robust and with apical membranous lobes (as in fig. 59).

ABDOMEN: Second sternite well developed; midlongitudinal carina absent. Terga with midlongitudinal carinae absent; with basolateral ridges on terga II to VII (as in fig. 68). Segments II to VI each with two pairs of laterosternites (as in fig. 68). Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin emarginate.

DISTRIBUTION

Neotropical: Panama. *Nearctic:* United States.

DISCUSSION

This genus is separated from both *Sciotrogus* and *Thinobius* by the presence of a broad prohypomeron which conceals the protrochantin and by the presence of the elytral epipleural ridge.

SPECIES INCLUDED

N. crassicornis (Casey); H; new combination, transferred from *Thinobius*
N. dissimilis (Sharp); H; new combination, transferred from *Thinobius*

SCIOTROGUS

Sciotrogus SHARP, 1887, p. 707. Type species: *Sciotrogus opacus* Sharp.

DIAGNOSIS

This genus can be recognized by the acicular fourth segment of the maxillary palpus (as in fig. 22), the strongly constricted neck, the narrow prohypomeron that exposes the protrochantin (as in fig. 30), the absence of scutellar pubescence, the absence of a longitudinal row of spines on the tibia, the presence of two tarsomeres per tarsus (as in fig. 59), and the presence of basolateral ridges on the abdominal terga (as in fig. 68).

DESCRIPTION

Length, approximately 2.5 mm. Form slender, small, and dorsoventrally flattened. Body with dense pubescence.

HEAD: Clypeus well developed. Epistomal suture present, distinct, and arcuate. Supraantennal ridge moderately elevated. Gular sutures confluent anteriorly; sutures sharply divergent at anterior portion of neck to base of neck (as in fig. 10). Labrum with anterior margin shallowly emarginate; labral lobe absent. Mandible denticulate. Maxillary palpus with third segment robust; fourth segment short and acicular (as in fig. 22). Antenna with articles 1 to 3 strongly ridged at apices; articles 3 to 11 each with basal ridge.

THORAX: Pronotal lateral marginal bead present; bead not on hypomeron. Prohypomeron very narrow (as in fig. 30). Protergosternal suture absent (as in fig. 30). Procoxal fissure absent (as in fig. 30). Protrochantin strongly exposed (as in fig. 30). Postprocoxal lobe absent. Prosternum with moderately developed, midlongitudinal carina between coxae. Prohypomeron with anterior portion strongly deflexed; anterior portion weakly deflexed.

Scutellum with oval impression on surface; surface with pubescence absent; scutellum concealed under pronotum. Elytral epipleural ridge absent (as in fig. 38); suture not dehiscent. Mesosternal process prominent and carinate at apex; process not extending far between coxae. Metasternum with low, longitudinal ridge between coxae. Mesocoxae contiguous.

Tibia densely pubescent; longitudinal row of spines absent. Metatibia with short, longitudinal ctenidium of spinules. Tibia tapered proximally and distally from near middle. Tarsal formula 2-2-2; basal article swollen and with long, slender, ventroapical, membranous lobes; apical article slender at base and strongly enlarged toward apex (as in fig. 59).

ABDOMEN: Second sternite well developed; with midlongitudinal carina absent. Terga II to VII with basolateral ridges (as in fig. 68). Tergum VII with posterior margin fimbriate. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Eighth tergum with posterior margin truncate.

DISTRIBUTION

Neotropical: Panama, West Indies.

DISCUSSION

This genus can be separated from *Thinobius* by the lack of scutellar pubescence, and the concealment of the scutellum under the pronotum, and from *Neoxus* by the presence of the narrow prohypomeron, the exposed protrochantin, and the absence of the elytral epipleural ridge.

SPECIES INCLUDED

S. opacus Sharp; H

S. tenebrosus (Blackwelder); H; new combination, transferred from *Torrentomus*

THINOBIUS

Thinobius KIESENWETTER, 1844, p. 355. Type species: *Thinobius ciliatus* Kiesenwetter.

Thinophilus MULSANT AND REY, 1878, p. 764; preoccupied; subjective synonym. Type species: *Thinophilus linearis* (Kraatz).

Thinobiellus BERNHAUER, 1909, p. 198; subgenus. Type species: *Thinobiellus rossicus* (Bernhauer).

Torrentomus BIERIG, 1934, p. 213; new synonym. Type species: *Torrentomus torrei* Bierig.

Thiphonilus TOTTENHAM, 1939, p. 225; subgenus; isogenotypic synonym of *Thinophilus*. Type species: *Thiphonilus linearis* (Kraatz).

Myopothinophilus SCHEERPELTZ, 1959, p. 58; subgenus. Type species: *Myopothinophilus klimai* (Bernhauer).

Platyderothinophilus SCHEERPELTZ, 1959, p. 58; subgenus. Type species: *Platyderothinophilus major* (Kraatz).

Bracharthrothinophilus SCHEERPELTZ, 1959, p. 60; subgenus. Type species: *Bracharthrothinophilus nitens* (Fauvel).

Oedarthrothinophilus SCHEERPELTZ, 1959, p. 60; subgenus. Type species: *Oedarthrothinophilus nodicornis* (Eppelsheim).

DIAGNOSIS

This genus can be recognized by the following characters: the acicular fourth segment of the

maxillary palpus (as in fig. 22), the narrow prohypomeron that exposes the protrochantin (fig. 30), the slight exposure of the apex of the scutellum which has the surface covered with setae, the absence of the elytral epipleural ridge (as in fig. 38), the dehiscent elytral suture (as in fig. 40), the lack of a longitudinal row of tibial spines, the two tarsomeres per tarsus (fig. 59), and the presence of basolateral ridges on the abdominal terga (as in fig. 68).

Description

Length, 0.5 to 5.0 mm. Form slender, small, and dorsoventrally flattened. Body densely pubescent.

Head: Clypeus well developed. Epistomal suture distinct and well developed. Supraantennal ridge only slightly elevated. Base of head gradually or sharply constricted to form broad neck of varying distinctness. Gular sutures confluent anteriorly; sutures sharply and strongly divergent near base of head (fig. 10). Labrum with anterior margin broadly arcuate to truncate. Mandible denticulate. Maxillary palpus with third segment robust and fusiform; fourth segment acicular (as in fig. 22). Antennal articles not carinate at apices.

Thorax: Pronotal lateral marginal bead present or absent (fig. 30); bead not on hypomeron. Prohypomeron strongly deflexed; width very reduced (fig. 30). Protergosternal suture absent (fig. 30). Procoxal fissure absent (fig. 30). Protrochantin strongly exposed (fig. 30). Postprocoxal lobe absent, but with posterior portion of hypomeron lobed as result of narrow anterior portion of prohypomeron. Prosternal process present or absent.

Scutellum with surface densely pubescent; apex slightly exposed or completely concealed under pronotum. Elytral epipleural ridge absent (as in fig. 38); suture strongly to weakly dehiscent at apex (as in fig. 40). Mesosternal process short and extending feebly between coxae; apex of process rounded; mesosternal process prominent. Mesocoxae contiguous. Metasternal process not developed. Metasternum with low, narrow carina between mesocoxae.

Tibia with dense pubescence; longitudinal row of spines or spinules absent. Metatibia with weakly spinulose, longitudinal ctenidium present or absent. Tarsal formula 2-2-2; basal article swollen; apical article long and slender, gradually incrassate; basal article with long, slender, ventroapical membranous lobes (fig. 59).

Abdomen: Second sternite well developed; midlongitudinal carina absent. Terga II to VII with basolateral ridge (as in fig. 68). Tergum VII with posterior margin fimbriate. Segments II to VII each with two pairs of laterosternites (as in fig. 68). Eighth tergum with posterior margin emarginate.

Aedeagus trilobed. Median lobe bulbous basally and slender apically. Parameres stout or long and slender.

Distribution

Palearctic: Asia, Europe. *Ethiopian:* Algeria, Morocco, Tunisia. *Nearctic:* Canada, Mexico, United States. *Neotropical:* Argentina, Bolivia, Chile, Guatemala, Mexico, Panama, Paraguay, West Indies. *Oriental:* India, Malaya.

Discussion

The antennal characters emphasized by Bierig to support the segregation of *Torrentomus* from *Thinobius* are variable in the latter genus, and I was unable to find additional characters that would serve to separate *Torrentomus* and *Thinobius*.

This genus is readily distinguishable from most other genera of the Coprophilini by the presence of only two tarsal articles and the presence of basolateral ridges on terga II to VII. From *Neoxus*, *Thinobius* can be recognized by the exposed protrochantin. *Sciotrogus* can be separated by the lack of scutellar pubescence and the completely concealed scutellum.

Species Included

T. aegyptiacus Cameron; H
T. afer Peyerimhoff
T. agilis Sharp; H
T. alaskanus (Fall); H; new combination, transferred from *Carpelimus*
T. algiricus Fauvel; Sp
T. allocerus Eppelsheim
T. amphibius Notman
T. anatolicus Smetana
T. angusticeps Fauvel
T. antennarius Fauvel; Sp
T. apfelbecki Bernhauer
T. apicornis Notman
T. appendiculatus Sahlberg
T. atomus Fauvel; Sp
T. bacilliformis Bernhauer
T. bacillus Bernhauer
T. benicki Smetana
T. bicolor Joy

T. biimpressus Bernhauer
T. brachypterus (LeConte); H; transferred from *Carpelimus*
T. brevicornis Bernhauer
T. brevipennis Kiesenwetter; Sp
T. breyeri Bernhauer
T. brundini Scheerpeltz
T. brunneipennis Kraatz; Sp
T. caseyi Notman
T. comes Smetana
T. crinifera Smetana
T. curtellus Sharp
T. cuspifer Smetana
T. delicatulus Kraatz; Sp
T. diversicornis Fauvel
T. ernesti Bernhauer
T. exasperatus Blackwelder; Sp
T. fageli Smetana
T. fimbriatus LeConte; H
T. flavicornis LeConte; H
T. flavipennis Cameron; H
T. franzi Scheerpeltz
T. frizzelli Hatch
T. garreisi Bernhauer; H
T. gilvus Fauvel; Sp
T. gracilicornis Casey; H
T. grandicollis Notman
T. grossulus Casey; H
T. hesperinus Casey; H
T. heterocerus Fauvel; Sp
T. heterogaster Fauvel; Sp
T. himalayicus Cameron; H
T. holdhausi Scheerpeltz
T. hummleri Bernhauer
T. iridipennis Fauvel; Sp
T. iridiventris Bernhauer; H
T. jamaicensis Blackwelder; Sp
T. klimai Bernhauer
T. konecznii Scheerpeltz
T. ligeris Pyot; Sp
T. linkei Scheerpeltz
T. linearis Kraatz, Sp
T. longicollis Bernhauer; Sp
T. longipennis Heer; Sp
T. macrocerus Joy
T. macropterus LeConte; H
T. major Kraatz
T. marinus Cameron; H
T. micros Fauvel
T. minor Mulsant and Rey
T. minutissimus Fauvel; Sp
T. miricornis Cameron; H
T. munsteri Scheerpeltz
T. newberyi Scheerpeltz
T. nigricans Sharp; H
T. nitens Fauvel
T. nitidulus Bernhauer; H
T. nodicornis Eppelsheim
T. obscurus Eppelsheim
T. ocularis Fauvel
T. opaculus Cameron; H
T. orientalis, new name
T. antennarius Cameron, 1924; not Fauvel, 1878c
T. ornatus Cameron; H
T. oxytelinus LeConte; H
T. pallidicornis Casey; H
T. pallidus Casey; H
T. pauxillus Scheerpeltz
T. peezi Scheerpeltz
T. perpusillus Rambousek
T. petzi Bernhauer; H
T. peyerimhoffi Koch; P
T. piceus Cameron
T. praetor Smetana
T. procerus Eppelsheim
T. pruinosus Cameron; H
T. pugio Smetana
T. pulchripennis Bernhauer
T. pygmaeus Casey; H
T. quadricollis Eppelsheim
T. rambouseki Smetana
T. richteri Bernhauer
T. rossicus Bernhauer; H
T. sahlbergi Scheerpeltz
T. scheerpeltzi Smetana
T. seminiger Fairmaire and Germain; Co
T. silvaticus Bernhauer; H
T. simlaensis Cameron; H
T. sonomae Casey; H
T. speciosus Bernhauer
T. strandi Smetana
T. tardus Notman
T. tenuis Sharp; H
T. teres (Fall); H; new combination, transferred from *Carpelimus*
T. thripsoides Sharp; H
T. tingitanus Peyerimhoff
T. torrei (Bierig); H; new combination, transferred from *Torrentomus*
T. trivialis Cameron; P
T. validus Casey; H

Scheerpeltz (1959) listed an additional 23 names of species but without descriptions.

CRYMUS

Crymus FAUVEL, 1904, p. 92. Type species: *Crymus antarcticus* Fauvel.

Specimens of this genus have not been studied, but in the original description it was placed near *Planeustomus*, presumably because both have four tarsomeres, but there was no discussion.

DISTRIBUTION

Oceania: Solomon Islands.

Species Included

C. antarcticus Fauvel

TYPHLOBLEDIUS

Typhlobledius Lea, 1906, p. 200. Type species: *Typhlobledius cylindricus* Lea.

Material for this genus has not been studied, but the original description indicated that it is near *Blediotrogus*.

The types of the species described by Lea are supposed to be in the South Australian Museum, but Dr. G. F. Gross informs me that he is unable to find *Typhlobledius cylindricus*.

Species Included

T. cylindricus Lea

OXYTELINI

Oxytelini Stephens, 1833, p. 273. Type genus: *Oxytelus* Gravenhorst.

Diagnosis

Most of the genera of this tribe can be separated from those of the other tribes by the absence of the protergosternal suture (fig. 27), the absence of the procoxal fissure (fig. 27), the separation of the mesocoxae by the well-developed metasternal process (figs. 35, 37), the three tarsal articles (figs. 53, 57, 60–65), and the presence of basolateral ridges on the abdominal terga (fig. 68). The exceptions to one or more of these characteristics are discussed following the tribal characters.

Description

Head: Clypeus variable. Gular sutures with anterior portion confluent; usually with basal portion separated (fig. 8). Maxillary palpus with fourth segment subulate (figs. 17, 18). Labral lobe weakly to moderately developed.

Thorax: Pronotal lateral marginal bead present (fig. 27) or absent; bead not on hypomeron. Protergosternal suture absent (fig. 27). Procoxal fissure absent (fig. 27). Protrochantin concealed (fig. 27) or exposed (fig. 32). Mesosternal process usually absent; occasionally short and extending slightly between mesocoxae (figs. 35, 37); occasionally elongate and spiniform (as in fig. 34). Mesocoxae usually separated by metasternal process (figs. 35, 37); coxae occasionally contiguous, or separated by mesosternal process. Metasternal process usually broad (figs. 35, 37); occasionally narrow and carinate or nearly absent.

Tarsal formula 3-3-3 or 5-5-5; penultimate article usually with long membranous lobe arising from apex. Tibia with longitudinal row of spines present (figs. 60–65) or absent (fig. 53).

Abdomen: Second sternite well developed; midlongitudinal carina absent. Terga and sternites with midlongitudinal carinae absent. Terga with basolateral ridges present (fig. 68) or absent. Segments II to IV each with two pairs of laterosternites (fig. 68). Ninth segment with abdominal gland openings present in tergites (figs. 67, 72); occasionally openings present in membrane between ninth and tenth tergal elements (fig. 73).

Discussion

Many genera that were previously considered to be members of this tribe have been transferred to the Coprophilini. The reassignments were based on derived characteristics of the prothorax and pterothoracic sterna.

This tribe is distinguished from the Coprophilini by the subulate fourth segment of the maxillary palpus, by the absence of the procoxal fissure, and by the short, poorly developed mesosternal process that usually has its ventral surface at the same dorsoventral level as the metasternal process. The mesocoxae are usually separated, but occasionally they are contiguous (see *Paroxytelopsis lutea* and *P. tuberculata*). These latter species are placed in the tribe because of the absence of the procoxal fissure and, although the metasternal process is carinate, it is elongate and extends strongly between mesocoxae; the mesosternal process is not developed. *Hoplitodes echidne*, *Anotylus scotti*, *Parosus* spp., *Sartallus signatus*, and *Paraploderus* spp. all have the mesosternal process developed, but the procoxal fissure is absent, the fourth segment of the maxillary palpus is subulate, and the tarsus has three articles, except for *Sartallus* which has five tarsomeres.

Most of the genera of this tribe are represented in the tropical regions. Only one genus, *Sartallus*, is represented solely in the temperate regions, but many of the other genera have species in the temperate areas.

SARTALLUS

Sartallus Sharp, 1871, p. 217. Type species: *Sartallus signatus* Sharp.

Diagnosis

This genus is distinguished from the other members of this tribe by the well-developed, spiniform mesosternal process, the absence of the metasternal process, and the presence of five tarsomeres.

Description

Length, 5.0 to 6.5 mm. Color rufotestaceous to testaceous. Body broad and fusiform; moderately flattened dorsoventrally and strongly sclerotized. Body with sparse, short pubescence.

Head: Clypeus well developed. Epistomal suture present and posterior to anterior margin of supra-antennal ridge; suture with median portion broadly, shallowly arcuate, and lateral ends strongly angulate at supra-antennal ridge. Gular sutures confluent; sutures sharply divergent at base (as in fig. 10). Base of head sharply constricted to form broad, distinct neck. Labrum with anterior margin broadly emarginate; labral appendages absent. Mandible denticulate. Maxillary palpus with fourth segment subulate (as in fig. 18); base of fourth segment not swollen; fourth segment shorter than third. Antennomeres with long, tactile setae.

Thorax: Pronotum broader than long; wider near apex than at base; lateral margin broadly and strongly sinuate. Pronotal lateral marginal bead present (as in fig. 27). Prohypomeron well developed and strongly deflexed. Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prosternal process reduced and carinate.

Scutellum concealed by pronotum; surface with broad, weakly heart-shaped impression. Elytral epipleural ridge present (as in fig. 39); posterior margin with long setae; elytra elongate. Mesosternal process elongate and spiniform; process with dorsal surface on metasternum; process narrow (as in fig. 34). Metasternum with weak, midlongitudinal ridge between mesocoxae. Mesocoxae narrowly separated by mesosternal process. Metasternal process not developed.

Femur with moderately dense pubescence. Tibia with longitudinal rows of spines and scattered spinules. Tarsal formula 5-5-5; basal article very reduced; next three articles very prominent; apical article longest.

Abdomen: Terga without basolateral ridges. Segments II to VII each with two pairs of laterosternites (as in fig. 68). Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin shallowly to deeply emarginate. Abdominal glands with external openings in ninth tergites (as in fig. 72).

Aedeagus trilobed. Parameres slender and well developed. Median lobe bulbous at base; with apex slender.

Distribution

Australian: Australia.

Discussion

The species is associated with sandy, coastal regions where it hides under seaweed and rubbish and feeds chiefly on dead barnacles (Froggatt, 1907, p. 137).

Based on the characters used in this paper to delimit the Oxytelinae, there is no question as to the subfamilial assignment of *Sartallus*, but there may be some uncertainty as to its tribal assignment.

Sartallus was originally considered to be allied to *Bledius* (Sharp, 1871), but Bernhauer and Schubert (1911) placed it between *Coprophilus* and *Eppelsheimius*. The inclusion of *Sartallus* with the *Coprophilini* was based on the plesiomorphic character of five tarsomeres.

Sartallus has a highly derived prothorax from which the protergosternal suture and the procoxal fissure are absent. Because *Sartallus* and other genera of the Oxytelini share apomorphic characteristics of the prothorax, it is logical to hypothesize a close phylogenetic relationship of *Sartallus* and the other genera of the Oxytelini. I consider *Sartallus* to represent a very primitive member of the Oxytelini because it has so many primitive characteristics. The pterothorax in most genera of the Oxytelini is highly derived, with the mesosternal process reduced and the metasternal process enlarged and separating the mesocoxae. *Sartallus* on the other hand has the mesocoxae slightly separated, but the separation is by the spiniform mesosternal process.

Species Included

S. signatus Sharp; H

PAROSUS

Parosus Sharp, 1887, p. 704. Type species: *Parosus hilaris* Sharp.

Diagnosis

This genus can be recognized by the U-shaped emargination of the labrum (fig. 21), the absence

of the pronotal lateral marginal bead, the concealed protrochantin (as in fig. 27), the spiniform mesosternal process, the separation of the mesocoxae by the mesosternal and metasternal processes (as in fig. 36), the lack of tibial spines, the absence of the basolateral ridges of the abdominal terga, and the presence of the median serration of the seventh tergum (fig. 70).

Description

Length, 2.0 to 2.8 mm. Form small, broad, and strongly depressed. Body moderately densely pubescent.

Head: Clypeus rectangulate; anterior margin truncate and anterior to supra-antennal ridge. Clypeus delimited from dorsum by feeble, arcuate depression. Epistomal suture obsolete; evident as broad, arcuate depression. Gular sutures confluent anteriorly; sutures gradually divergent posteriorly from middle; near base sutures strongly divergent (as in fig. 8). Base of head constricted to form broad neck. Labrum with lateral portion of anterior margin truncate; anterior margin near middle sharply and deeply emarginate; emargination rounded at base (fig. 70). Mandible denticulate. Maxillary palpus with fourth segment slender and subulate (as in fig. 18); third segment with apex broad; with third segment longer than second or fourth. Antenna apically incrassate; articles with long, tactile setae.

Thorax: Pronotum broadest near apex; lateral margins strongly convergent from middle to base. Pronotal lateral marginal bead absent. Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prohypomeron well developed and strongly deflexed. Prosternal process carinate and elongate, extending strongly between coxae.

Scutellum concealed under pronotum; surface with diamond-shaped impression. Elytral epipleural ridge present (as in fig. 39). Mesosternal process elongate and extending strongly between mesocoxae; process moderately prominent and spiniform (as in fig. 36). Metasternal process moderately well developed; surface slightly convex; base arcuate; lateral margins convergent anteriorly (as in fig. 36). Mesocoxae separated by mesosternal and metasternal processes (as in fig. 36).

Tibia with dense pubescence; longitudinal rows of spines and longitudinal carinae absent. Tarsal formula 3-3-3; apical article longer than basal two combined; second article with long, slender, membranous lobes arising from ventral side of apex.

Abdomen: Terga without basolateral ridges. Seventh tergum with posterior margin fimbriate; median region strongly serrate (fig. 70). Segments II to VI each with two pairs of laterosternites (as in fig. 68). Abdominal gland openings in ninth tergites (as in fig. 72).

Distribution

Neotropical: Panama, West Indies.

Discussion

When Sharp (1887) described this genus, he mentioned possible relationships to many genera in different subfamilies. He finally concluded that the genus should be included with the Oxytelinae. *Parosus* is dorsoventrally depressed, and most of the genera in other subfamilies that Sharp suggested were possibly related to *Parosus* are also dorsoventrally flattened.

Species Included

P. antillarum Wendeler
P. hilaris Sharp; H
P. skalitzkyi Bernhauer; H

PARAPLODERUS, NEW GENUS

Type Species: *Paraploderus speculiventris* (Fauvel), designated here; the species is transferred from *Aploderus*.

Diagnosis

This genus can be recognized by the well-defined neck, the spiniform mesosternal process (fig. 36), the lack of tibial spines, the presence of basolateral ridges on the abdominal terga (as in fig. 68), and the presence of the external openings of the abdominal glands between the ninth and tenth tergal elements (fig. 73).

Description

Length, 2.5 to 3.5 mm. Form short, broad, and moderately strongly depressed. Body shining and sparsely pubescent.

Head: Clypeus rectangulate; anterior margin truncate. Epistomal suture present as prominent arcuate groove. Gular sutures (as in fig. 8) confluent anteriorly; sutures narrowly separated and parallel at apex of neck, then sharply divergent from middle to base of neck. Base of

head strongly constricted to form broad, well-defined neck. Labrum with anterior margin broadly emarginate; short, lateral, anteriorly directed, mesially curved, slender lobes present; lobes with mesial margin fimbriate (as in fig. 20). Mandible denticulate. Maxillary palpus with fourth segment subulate (as in fig. 18); fourth segment shorter than third; fourth segment nearly as broad at base as apex of third. Antennomeres with long, tactile setae.

THORAX: Pronotum widest near apex; lateral margins straight and convergent basally. Pronotal lateral marginal bead present (as in fig. 27). Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prohypomeron broad and strongly deflexed. Prosternal process carinate and extending shortly between coxae.

Scutellum with transverse, diamond-shaped impression (as in fig 46); with median, longitudinal, spindle-shaped impression extending from anterior margin. Elytral epipleural ridge present (as in fig. 39). Mesosternal process triangular and acute at apex (fig. 36); process prominent; with surface lower than surface of metasternum. Metasternal process with surface slightly elevated and triangular (fig. 36). Mesocoxae separated by mesosternal and metasternal processes (fig. 36).

Protibia and mesotibia with prominent pubescence; longitudinal rows of spines absent. Metatibia with short, longitudinal ctenidium of spinules; longitudinal row of spines absent. Tarsal formula 3-3-3; first and second tarsomeres of equal length; last article longest and slender; first and second articles with long, slender, membranous, ventroapical lobes.

ABDOMEN: Terga II to VII with basolateral ridges (as in fig. 68). Segments II to VI each with two pairs of laterosternites (as in fig. 68). Seventh tergum with posterior margin fimbriate. Abdominal gland openings situated in membrane between ninth and tenth tergal elements (fig. 73).

Aedeagus trilobed. Parameres with many setae.

DISTRIBUTION

Oriental: Java, Sumatra. *Ethiopian:* Angola, Congo.

DISCUSSION

The positions of the external openings of the abdominal glands in *Paraploderus* is unique within the subfamily.

SPECIES INCLUDED

P. nigronitens (Cameron); H; new combination, transferred from *Trogophloeus*

P. notabilis (Cameron); H; new combination, transferred from *Trogophloeus*

P. oxyteloides (Cameron); H; new combination, transferred from *Trogophloeus*

P. parcepunctatus (Fauvel); H; new combination, transferred from *Oxytelus*

P. speculiventris (Fauvel); H; new combination, transferred from *Aploderus*

PLATYSTETHUS

Platystethus MANNERHEIM, 1831, p. 460. Type species: *Platystethus morsitans* (Paykull).

Pyctocraerus THOMSON, 1859, p. 43; isogenotypic synonym. Type species: *Pyctocraerus morsitans* (Paykull).

Craetopycrus TOTTENHAM, 1939, p. 225; subgenus. Type species: *Craetopycrus cornutus* (Gravenhorst).

DIAGNOSIS

This genus can be recognized by the depressed form, the narrow prohypomeron (fig. 32), the exposed protrochantin (fig. 32), the mesocoxal separation by the metasternal process (fig. 37), and the absence of the basolateral ridges on abdominal terga II to VII.

DESCRIPTION

Length, 2.0 to 6.0 mm. Form moderately stout and depressed. Body with sparse pubescence.

HEAD: Clypeus with spines present or absent on anterior margin; anterior margin truncate and, when spines absent, rectangulate. Epistomal suture absent medially; suture present on mesial side of supra-antennal ridge. Supra-antennal ridge low and moderately distinct to nearly indistinguishable. Gular sutures confluent anteriorly; sutures narrowly separated and parallel from middle of head to neck, then sharply and continuously divergent on neck (as in fig. 8). Base of head weakly constricted to form broad, poorly defined neck. Labrum with anterior margin broadly emarginate or nearly truncate; with lateral, anteriorly directed, mesially curved lobe; lobe stout and dorsoventrally flattened at base, then becoming attenuate apically with mesial margin fimbriate. Mandible edentate or denticulate. Maxillary palpus with fourth segment subulate (fig. 18); fourth segment nearly as wide at base as apex of third; second and

third segments of nearly equal length and both longer than fourth. Antennomeres with long, tactile setae.

THORAX: Pronotum with anterior lateral angles produced (as in fig. 32); with lateral margin broadly arcuate and convergent to base; base rounded or truncate. Pronotal lateral marginal bead present (fig. 32). Prohypomeron strongly deflexed and very narrow (fig. 32). Protergosternal suture absent (fig. 32). Procoxal fissure absent (fig. 32). Protrochantin exposed (fig. 32). Postprocoxal lobe absent. Prosternal process carinate and short.

Scutellum concealed under pronotum; surface with impression around margin. Elytral suture strongly to slightly overlapping (fig. 42). Elytral epipleural ridge present (as in fig. 39). Mesosternal process short, truncate or arcuate, and not extending far between coxae (fig. 37). Metasternal process well developed and extending between mesocoxae (fig. 37). Mesocoxae separated by metasternal process (fig. 37).

Tibia with longitudinal row of spines. Metatibia with longitudinal ctenidium of closely associated spinules. Protibia strongly constricted at apex. Tarsal formula 3-3-3; articles 1 and 2 of nearly equal length; last article longest; second article with long, flat, membranous lobe at apex.

ABDOMEN: Terga with basolateral ridges absent. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Seventh tergum with posterior margin fimbriate. Abdominal glands with external openings in ninth tergite (as in fig. 72).

Aedeagus trilobed.

DISTRIBUTION

Palearctic: Afghanistan, Albania, Austria, Belgium, Czechoslovakia, Denmark, Egypt, England, Finland, France, Germany, Greece, Hungary, India, Iran, Ireland, Israel, Italy, Japan, Kashmir, Lebanon, Libya, Lithuania, Mongolia, Netherlands, Norway, Poland, Romania, Soviet Union, Spain, Sweden, Switzerland, Syria, Yugoslavia. *Neotropical:* Argentina, Bolivia, Brazil, Colombia, Cuba, Dominican Republic, Ecuador, Guatemala, Hispaniola, Mexico, Panama, Puerto Rico, Uruguay, Venezuela, West Indies. *Ethiopian:* Algeria, Cameroun, Morocco, South Africa, Tunisia. *Oriental:* Burma, Ceylon, Taiwan, India, Java, Malaya, Philippine Islands, Sumatra. *Nearctic:* Canada, Mexico, United States.

DISCUSSION

Platystethus is readily separated from all other genera of the Oxytelini by the exposed protrochantin, the absence of the basolateral ridges on the abdominal terga, and the overlapping elytra.

Although the protrochantin is strongly exposed in all species of *Platystethus*, the separation of the mesocoxae by the metasternal process supports the inclusion of *Platystethus* in the Oxytelini. The exposure of the protrochantin in this genus appears to be the result of a reduction of the width of the prohypomeron, not the result of the presence of an open procoxal fissure.

SPECIES INCLUDED

P. afghanicus Scheerpeltz
P. alutaceus Thomson; Sp
P. americanus Erichson; Sp
P. arenarius Fourcroy; Sp
P. armatus Sachse; Sp
P. brevipennis Baudi; Sp
P. burlei Brisout; Sp
P. capito Heer; Sp
P. corniculatus Coiffait
P. cornutus Gravenhorst; Sp
P. crassicornis Motschulsky; Sp
P. crassus (Fauvel); Syn; new combination, transferred from *Oxytelus*
P. debilis Hochhuth; Sp
P. depravatus Eppelsheim; Sp
P. dilutipennis Cameron; H
P. ebneri Scheerpeltz
P. fallax Lynch
P. indicus Cameron; H
P. japonicus (Bernhauer); H; new combination, transferred from *Aploderus*
P. javanus Cameron; H
P. laesicollis Lokay
P. laevis Kiesenwetter; Sp
P. longicornis Cameron; H
P. luzei Bernhauer
P. malayanus Cameron; H
P. minutus Cameron; H
P. mülleri Scheerpeltz
P. natalensis Bernhauer; T
P. nitens Sahlberg; Sp
P. nodifrons Sahlberg; Sp
P. obscurus Sharp; H
P. ohausi Wendeler; T
P. operosus Sharp; Sp
P. oxytelinus Fauvel; Sp
P. pallidipes Lynch
P. praetermissus Eppelsheim; Sp
P. quedenfeldti Weise
P. rufospinus Hochhuth; Sp
P. rugifrons Bernhauer

P. similis Smetana
P. spectabilis Kraatz; Sp
P. spiculus Erichson; Sp
P. spinicornis Luze; Sp
P. spinosus Erichson; Sp
P. strigosulus Fauvel
P. sutteri Scheerpeltz
P. volgensis Csiki
P. wankowiczi Hochhuth
Platystethus longicornis Cameron is a junior homonym of a name established by Lucas. A new name will be proposed by Peter Hammond who is studying this genus.

ECITOCLIMAX

Ecitoclimax BORGMEIER, 1934, p. 452. Type species: *Ecitoclimax tarsalis* Borgmeier.

DIAGNOSIS

This genus can be recognized by the densely pubescent body, the well-defined neck, the absence of the pronotal lateral marginal bead, the heart-shaped scutellar impression, the presence of a few spines on the protibia, the presence of a basolateral ridge on abdominal terga II to VII (as in fig. 68), and the prominent, broadly rounded, transverse ridge on the abdominal terga.

DESCRIPTION

Length, approximately 3.5 mm. Form elongate, stout, and subcylindrical. Body densely pubescent.

HEAD: Clypeus short and rectangulate; anterior margin truncate. Epistomal suture short and straight at middle. Tentorial maculae evident as small dorsal pits at base of head even with posterior margin of compound eyes. Supra-antennal ridge prominent. Gular sutures confluent anteriorly; sutures narrowly separated and parallel near middle, then sharply and widely divergent near base (as in fig. 8). Base of head strongly constricted to form well-defined, narrow neck. Labrum short and reduced; anterior margin broadly emarginate. Mandible denticulate. Maxillary palpus with fourth segment subulate (as in fig. 18) and shorter than third. Antenna stout, with long tactile setae.

THORAX: Pronotum with lateral and basal margins broadly arcuate. Pronotal lateral marginal bead absent. Prohypomeron broad and weakly deflexed. Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Postprocoxal lobe absent. Prosternal process low, rounded ridge; not carinate, not extending between coxae.

Scutellum concealed under pronotum; surface with weak, elongate, heart-shaped impression. Elytral epipleural ridge present (as in fig. 39) but obsolete. Mesosternum truncate (as in fig. 35); surface at same level as metasternum. Metasternum with elongate process extending between mesocoxae (as in fig. 35); process moderately wide, with convex surface. Mesocoxae separated by metasternal process (as in fig. 35).

Protibia with short, longitudinal row of spines; many setae and spinules present. Mesotibia with longitudinal row of spinules present. Metabia with longitudinal ctenidium of spinules present. Tarsal formula 3-3-3; with apical article longest; first and second articles with apical, latero-ventral, elongate, slender, membranous lobe; first and second articles of nearly equal length.

ABDOMEN: Terga II to VII with basolateral ridges (as in fig. 68). Terga II to VI with well-developed, broad, transverse ridge on apical portion. Seventh tergum with posterior margin fimbriate. Sterna II to VII with distinct, basal constriction. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Tenth tergum without V-shaped setal pattern. Abdominal glands with external openings in ninth tergites (as in fig. 72).

Aedeagus trilobed.

DISTRIBUTION

Neotropical: Brazil.

SPECIES INCLUDED

E. tarsalis Borgmeier; Co

HOPLITODES

Hoplitodes FAUVEL, 1904, p. 109. Type species: *Hoplitodes echidne* Fauvel.

DIAGNOSIS

This genus can be recognized from other genera of the Oxytelini by the prominent, numerous, stout, conical processes on the head, pronotum, and elytra and by the spindle-shaped tibiae.

DESCRIPTION

Length, approximately 3.0 mm. Form subcylindrical, with numerous protuberances and sparse pubescence.

HEAD: Anterior margin of clypeus bilobed. Epistomal suture evident only at supra-antennal

ridge; suture longitudinally directed (as in fig. 3). Supra-antennal ridge enlarged with three dorsolaterally directed projections that conceal from dorsal view all but posterior margin of compound eyes. Gular sutures confluent anteriorly; sutures sharply separated, then narrowly parallel from middle of head to middle of neck, then sharply and continuously divergent to base of neck (as in fig. 8). Base of head distinctly and strongly constricted to form well-defined neck. Base of head with dorsally directed protuberance on each side of mesial, longitudinal line. Labrum with anterior margin broadly emarginate; concealed in dorsal aspect by anteriorly expanded anterior margin of clypeus. Mandible denticulate. Maxillary palpus with fourth segment subulate (as in fig. 18); third segment slender and apically incrassate; second segment strongly expanded apically. Antenna with first segment constricted near apex; articles with long, tactile setae.

THORAX: Pronotum with pair of laterally directed protuberances; with three dorsally directed protuberances near each lateral margin; with pair of dorsally directed protuberances on anterior and posterior margins; with one median, dorsally directed protuberance. Prohypomeron broad and moderately deflexed. Pronotal lateral marginal bead absent. Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prosternal process short and carinate.

Scutellum concealed under pronotum; with diamond-shaped impression on the surface (as in fig. 46). Elytral epipleural ridge present (as in fig. 39). Elytron with three longitudinal carinae; lateral carina modified by presence of laterally directed protuberance. Mesosternal process extending slightly between coxae; with apical margin arcuatotruncate; process prominent. Metasternal process well developed and extending strongly between mesocoxae. Mesocoxae narrowly separated.

Tibia constricted basally, then strongly expanded, then gradually narrowing to apex to become spindle shaped; several longitudinal rows of spines present; with stout spines on both sides of apex. Tarsal formula 3-3-3; penultimate article with two long, slender, apical, membranous lobes, third segment long, slender, apically incrassate, and laterally compressed at base.

ABDOMEN: Terga II to VII with basolateral ridges (as in fig. 68); terga II to VI with four dorsoposteriorly directed projections. Segments II to VII each with two pairs of laterosternites (as in fig. 68). Parasternite with dorsoposteriorly directed protuberance near posterior margin; projections increasingly reduced and increasingly posteriorly directed rather than dorsally directed from segments II through VII. Seventh tergum with posterior margin fimbriate. Abdominal glands with openings in ninth tergites (as in fig. 72).

DISTRIBUTION

Ethiopian: South Africa.

DISCUSSION

The species of this genus is reported to be a myrmecophile. This genus is separated from *Paroxytelopsis* and *Oxytelus* and most of the other members of the tribe by the basally constricted tibia, the prominent mesosternal process, the stout, conical protuberances on the head and pronotum, and the absence of the pronotal lateral marginal bead. The above characters plus the presence of the sensory setae, the diamond-shaped scutellar impression, the basolateral ridge on the second abdominal tergum, and the spinous tibia separate this genus from the other genera in the tribe.

SPECIES INCLUDED

H. echidne Fauvel; H

PAROXYTELOPSIS

Paroxytelopsis CAMERON, 1933b, p. 36. Type species: *Paroxytelopsis dorylinus* Cameron.

Paranisopsis CAMERON, 1938, p. 3; new synonym; subjective synonym. Type species: *Paranisopsis dorylinus* Cameron.

Anisopsodes FAGEL, 1960, p. 11; new synonym; subjective synonym. Type species: *Anisopsodes ornatus* Fagel.

DIAGNOSIS

This genus can be recognized by the prominent, longitudinal carinae on the elytra and pronotum, the well-defined neck, the diamond-shaped scutellar impression (as in fig. 46), the nearly equal length of the first and second articles of the tarsi, and the presence of basolateral ridges on abdominal terga II to VII (as in fig. 68).

Description

Length, 1.6 to 3.7 mm. Body slender and subcylindrical to depressed. Body sparsely pubescent and strongly sculptured.

Head: Clypeus with anterior margin expanded anteriorly to conceal labrum from dorsal view; anterior margin broadly arcuate or emarginate and reflexed. Epistomal suture present only near supra-antennal ridge and anteriorly directed; suture absent medially (as in fig. 3). Gular sutures confluent anteriorly; sutures sharply divergent at neck, then narrowly parallel to near middle of neck, then sharply and continuously divergent to base of neck (as in fig. 8). Base of head strongly constricted to form broad, distinct neck. Labrum with anterior margin broadly and moderately deeply emarginate. Mandible denticulate. Maxillary palpus with fourth segment subulate (as in fig. 18); third segment apically incrassate and longer than second. Antenna with first article constricted apically; articles 1 to 5 sparsely pubescent; articles 6 to 11 densely pubescent; basal encircling ridge on articles 5 to 11; articles with long, tactile setae. Compound eye visible in dorsal aspect. Head with low, obtuse protuberances on lateral and basal margins.

Thorax: Pronotum with prominent, longitudinal carinae on each side of midlongitudinal line; each carina with three small, dorsally directed protuberances. Pronotal lateral marginal bead present (as in fig. 27). Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prosternal process short and carinate. Prohypomeron broad and moderately strongly deflexed.

Scutellum concealed under pronotum; surface with diamond-shaped impression (as in fig. 46). Elytron with three prominent longitudinal carinae; sutural ridge prominent. Elytral epipleural ridge present (as in fig. 39) and carinate. Mesosternal process extending only slightly between coxae; with apex truncate and not prominent (as in fig. 35). Mesocoxae separated by metasternal process (as in fig. 35). Metasternal process elongate; process extending between coxae and with surface convex (as in fig. 35) and occasionally with feeble longitu dinal carina.

Protibia with longitudinal row of spines; tibia gradually or sharply constricted near apex; with row of scattered spines on constriction. Mesotibia and metatibia with scattered spines arranged in irregular longitudinal row. Tibia with one or more longitudinal ctenidia of spinules; longitudinal grooves or carinae absent. Tarsal formula 3-3-3; articles 1 and 2 of approximately equal length; basal two articles with long, membranous lobes on ventral surface; last article long, slender, and apically incrassate and with basal portion laterally compressed.

Abdomen: Terga II to VII with distinct basolateral ridges (as in fig. 68). Segments II to VII each with two pairs of laterosternites (as in fig. 68). Terga with varying number of processes. Seventh tergum with posterior margin fimbriate. Eighth tergum with middle of posterior margin produced. Abdominal glands with openings in ninth tergites (as in fig. 72).

Distribution

Ethiopian: Angola, Burundi, Cameroun, Kenya, Nigeria, Rhodesia, Republic of the Congo, South Africa, Tanzania, Zanzibar.

Discussion

The species of this genus are reported to be myrmecophilous.

Paroxytelopsis ornatus (Fagel) was set aside in a separate genus, *Anisopsodes*, primarily on the basis of the constricted apex of the mesotibia and the long spines preceding the constriction. This character and the tendency toward it are found in several species of *Paroxytelopsis* in a graded series through several species. No other characters were found to support the separation of *Anisopsodes*.

Paranisopsis and *Paroxytelopsis* were stated (Fagel, 1960) to be separated by the presence of a basal ridge on the fifth to eleventh or sixth to eleventh segments, respectively. Careful examination of *Paroxytelopsis dorylinus* Cameron reveals the presence of this ridge on the fifth segment as a strongly cupulate but less distinct ridge. The characters given by Cameron in the original description are only species-specific characters, and I am unable to find characters that would support the separation of *Paroxytelopsis* and *Paranisopsis* as separate genera.

This genus is separable from *Hoplitodes* by the lack of a basal constriction of the tibia and from *Anisopsis* by the prominent carinae on the pronotum and elytra in this genus.

Species Included

P. angolensis (Fagel); new combination
P. cameroni (Fagel); P; new combination
P. carinata (Fauvel); H; new combination
P. dorylinus Cameron; P
P. confusa (Fagel); H; new combination
P. congoensis (Fagel); H; new combination
P. eichelbaumi (Bernhauer); T; new combination
P. guineensis (Bernhauer); T; new combination
P. incerta (Fagel); H; new combination
P. leleupi (Fagel); new combination
P. longicornis (Cameron); Sp; new combination
P. lutea (Fagel); H; new combination
P. machadoi (Fagel); P; new combination
P. minima (Bernhauer); H; new combination
P. motoensis (Fagel); H; new combination
P. myrmecophilus (Fagel); Sp; new combination
P. nigeriensis (Fagel); H; new combination
P. ornatus (Fagel); P; new combination
P. rugulipennis (Bernhauer); T; new combination
P. sculptiventris (Fagel); T; new combination
P. stricta (Fagel); H; new combination
P. tottenhami; H; new combination
P. tuberculata (Cameron); H; new combination
P. uelensis (Bernhauer); P; new combination

ANISOPSIS

Anisopsis Fauvel, 1904, p. 108. Type species: *Anisopsis flexuosa* Fauvel.

Diagnosis

This genus can be recognized by the presence of the obsolete longitudinal carinae on the elytra, the presence of sensory setae on the antennae, the diamond-shaped scutellar impression (as in fig. 46), the presence of lateral and median longitudinal carinae on the metasternal process, the protibia having a strongly constricted apex that is preceded by spines, the tarsus having the first and second articles of nearly equal length, and the presence on abdominal terga II to VII of basolateral ridges (as in fig. 68).

Description

Length, 2.8 to 4.1 mm. Form slightly depressed and slender. Body strongly sculptured and sparsely pubescent.

Head: Clypeus with anterior margin emarginate, explanate, weakly reflexed, and with protuberances near epistomal suture. Epistomal suture present near supra-antennal ridge and longitudinally directed; suture absent medially (as in fig. 3). Supra-antennal ridge prominent; dorsal surface broadly rounded. Gular sutures confluent to near anterior margin of neck; sutures sharply divergent and narrowly parallel, then sharply and continuously divergent to base of head (as in fig. 8). Base of head sharply constricted to form broad, distinct neck. Labrum with anterior margin broadly emarginate; labrum in dorsal aspect partially exposed from under clypeus. Mandible denticulate. Maxillary palpus with fourth segment subulate (as in fig. 18); third segment longest. Compound eyes visible in dorsal aspect. Antenna with first article nearly parallel to apex; article 5 with cupulate basal ridge; articles 6 to 11 with basal ridge more flattened; articles with long, tactile setae.

Thorax: Pronotum wider than long; with two low, broadly rounded ridges on each side of midlongitudinal line. Prohypomeron broad and moderately strongly deflexed. Pronotal lateral marginal bead present (as in fig. 27). Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prosternal process short and carinate.

Scutellum concealed under pronotum; surface with diamond-shaped impression (as in fig. 46); lateral margins of impression rounded. Elytral sutural ridge well developed. Elytral disk not prominently carinate; with three very low, very broad, and obtusely rounded longitudinal ridges. Elytral epipleural ridge present (as in fig. 39) and not carinate. Mesosternal process extending only slightly between mesocoxae; apical margin emarginate; process not prominent (as in fig. 35). Mesocoxae separated by metasternal process (as in fig. 35). Metasternal process elongate; lateral longitudinal and midlongitudinal carinae present; basal end broadly rounded.

Protibia with longitudinal row of spines; with row extending to strong constriction of tibial apex; constriction with spines. Mesotibia with two rows of spines. Metatibia with longitudinal ctenidium of spinules (as in fig. 57); with longitudinal row of spines absent. Tarsal formula 3-3-3; articles 1 and 2 of approximately equal length; third article long, slender, apically incrassate; base of third article laterally compressed; basal two articles with long, membranous lobes and setae on ventral surface.

Abdomen: Segments II to VII each with two pairs of laterosternites (as in fig. 68). Terga without projections or protuberances on surface. Terga II to VII with basolateral ridges present

but poorly developed (as in fig. 68); ridges distinct laterally and increasingly indistinct toward middle. Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin broadly rounded. Ninth tergum without V-shaped setal pattern. Abdominal glands with external openings in ninth tergites (as in fig. 72).

Distribution

Ethiopian: Cameroun, Congo, Rhodesia, Zanzibar.

Discussion

The species of this genus is reported to be a myrmecophile.

The poorly delimited *Anisopsis* can be separated from *Paroxyetlopsis* by the absence of prominent elytral carinae and by the presence of longitudinal carinae on the metasternal process. The presence of the constricted apex of the protibia separates *Anisopsis* from *Anisopsidius*. The lack of prominent protuberances and the absence of a basal constriction of the tibia separate *Anisopsis* from *Hoplitodes*.

Species Included

A. flexuosa Fauvel; H

ANISOPSIDIUS

Anisopsidius Fagel, 1960, p. 8. Type species: *Anisopsidius quadricollis* (Bernhauer).

Diagnosis

This poorly delimited genus can be recognized by the lack of prominent, longitudinal carinae on the pronotum and elytra, the presence of only one longitudinal carina on the mesosternal process, the presence of a diamond-shaped scutellar impression (as in fig. 46), the absence of a strong apical constriction of the protibia, the nearly equally long first and second tarsal articles, and the presence of distinct basolateral ridges on abdominal terga III to VI (as in fig. 68).

Description

Length, 3.7 to 4.1 mm. Form slightly depressed and slender. Body sparsely pubescent and strongly sculptured.

Head: Clypeus with anterior margin broadly rounded. Epistomal suture absent medially; evident only at mesial, anterior angle of supraantennal ridge; suture separated into two parts and longitudinally aligned (as in fig. 3). Supraantennal ridge prominent. Gular sutures confluent anteriorly; sutures divergent, narrowly separated, and parallel at beginning of neck; sutures sharply and continuously divergent near middle of neck to base (as in fig. 8). Base of head sharply constricted to form well-defined neck. Labrum with anterior margin broadly emarginate; labral lobe present. Mandible denticulate. Maxillary palpus with fourth segment subulate and shorter than third (as in fig. 18). Antenna with articles 5 to 11 distinctly ridged at base; fourth article obsoletely ridged; articles with long, tactile setae.

Thorax: Pronotum with lateral margin sinuate. Prothorax with length and width nearly equal. Pronotum with several low carinae on disk. Prohypomeron broad and moderately strongly deflexed. Pronotal lateral marginal bead present (as in fig. 27). Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prosternal process short, carinate, and with median process extending shortly between coxae.

Scutellum with diamond-shaped impression (as in fig. 46) and concealed under pronotum. Elytral epipleural ridge present (as in fig. 39); elytra with pair of low, weak carinae on disk. Mesosternal process truncate; process not or only feebly extending between coxae; surface at same level as metasternum; process not prominent (as in fig. 35). Metasternal process extending prominently between coxae (as in fig. 35); with surface carinate. Mesocoxae separated by metasternal process (as in figs. 35, 37).

Protibia not strongly constricted apically, but slightly narrower toward apex; with longitudinal row of short, fine spinules. Mesotibia with longitudinal row of fine spinules present. Metatibia with longitudinal ctenidium of spinules (as in fig. 57). Tarsal formula 3-3-3; first and second articles with long, ventroapical, slender, membranous lobes; first and second tarsal articles of nearly equal length; last article longest.

Abdomen: Terga with distinct, basolateral ridges (as in fig. 68); tergum VII with ridge obsolete but with distinct ridges on terga III to VI; tergum II with ridge very obsoletely developed. Segments II to VII each with two pairs of laterosternites (as in fig. 68). Tergum VII with posterior margin fimbriate. Abdominal glands with external openings in ninth tergites (as in fig. 72).

Distribution

Ethiopian: Republic of the Congo, Rwanda.

Discussion

The species of this genus is reported to be a myrmecophile.

The lack of prominent elytral and pronotal carinae separates *Anisopsidius* from *Paroxytelopsis*; the presence of only one longitudinal carina on the metasternal process and the lack of an apical constriction of the protibia separate it from *Anisopsis*. The lack of a basal constriction of the tibia and the absence of prominent, stout protuberances on the head and prothorax separate *Anisopsidius* from *Hoplitodes*.

Species Included

A. quadricollis (Bernhauer); H

OXYTELUS

Oxytelus Gravenhorst, 1802, p. 101. Type species: *Oxytelus piceus* (Linnaeus).

Caccoporus Thomson, 1859, p. 43, isogenotypic synonym. Type species: *Caccoporus piceus* (Linnaeus).

Tanycraerus Thomson, 1859, p. 43; subgenus. Type species: *Tanycraerus luteipennis* (Erichson).

Epomotylus Thomson, 1859, p. 43; subgenus. Type species: *Epomotylus sculptus* (Gravenhorst).

Basilewskyorus Fagel, 1957a, p. 41; new synonym. Type species: *Basilewskyorus rugegensis* (Cameron).

Diagnosis

This genus can be recognized by the depressed form, the presence of a diamond-shaped scutellar impression (fig. 46), the elongate first tarsomere (figs. 57, 60), and the presence of basolateral ridges on abdominal terga II to VII (fig. 60).

Description

Length, 2.0 to 8.5 mm. Form stout and depressed. Body sparsely pubescent and variously sculptured.

Head: Clypeus with anterior margin broadly rounded, produced, emarginate, or truncate. Epistomal suture present near supra-antennal ridge and longitudinally directed; median transverse portion present or absent (fig. 3). Gular sutures confluent anteriorly; sutures sharply separated and parallel from middle to near anterior portion of neck, then sharply and continuously divergent to base (fig. 8). Base of head distinctly constricted to form broad, well-defined neck (fig. 3). Labrum with anterior margin broadly emarginate; labral lobe poorly developed. Mandible denticulate or edentate. Maxillary palpus with fourth segment subulate (as in fig. 18); third segment long, slender, and apically incrassate. Antenna with first segment constricted from middle to base or nearly parallel to base, with apex constricted, parallel, or occasionally slightly incrassate; articles with long, tactile setae.

Thorax: Pronotum transverse. Pronotal lateral marginal bead present (fig. 27). Prohypomeron strongly deflexed. Protergosternal suture absent (fig. 27). Procoxal fissure absent (fig. 27). Protrochantin concealed (fig. 27). Postprocoxal lobe absent. Prosternal process short and carinate.

Scutellum concealed under pronotum; surface with diamond-shaped impression (fig. 46). Elytral sutural ridge not grooved; with at best weak aciculations. Elytral epipleural ridge present (as in fig. 39). Mesosternal process short; apex truncate and not prominent (as in fig. 35). Metasternal process elongate and well developed (as in fig. 35). Mesocoxae separated by metasternal process (as in fig. 35).

Tibia with longitudinal row of spines. Metatibia with longitudinal ctenidium of spinules (fig. 57); usually with additional spines scattered along length. Protibia usually with more than one row of spines; row of spines usually interrupted before apex near constriction; constriction abrupt (fig. 60) or more gradual (as in fig. 62) or absent (as in figs. 63, 64). Mesotibia with two rows of spines. Tarsal formula 3-3-3; with first article longer than second (figs. 57, 60); second article with long, slender, membranous lobes on apex; third article long, slender and apically incrassate.

Abdomen: Terga II to VII with basolateral ridge (fig. 68). Segments II to VII each with two pairs of laterosternites (fig. 68). Seventh tergum with posterior margin fimbriate. Eighth tergum with posterior margin broadly rounded. Ninth tergum without V-shaped setal pattern. Abdominal glands with external openings in ninth tergite (as in fig. 72).

Distribution

Cosmopolitan.

Discussion

Basilewskyorus was separated from *Oxytelus* by one character, the presence of a continuous row

of spines on the protibia. Except for this character, all the other characters are the same as for *Oxytelus*, including the habitus. I regard this character to be nothing more than a species-distinguishing characteristic, because I can find no other characters to support the separation of this one species in *Basilewskyorus* as a genus.

Oxytelus as defined here is separated from *Anotylus* by the presence of a basolateral ridge on the second abdominal tergum, the diamond-shaped scutellar impression, and the tarsi having the first article longer than the second. The aedeagi of the species in this genus are quite different from those of the species of *Anotylus*. In *Oxytelus*, the first tarsomere is longer than the second. In *Anotylus*, the first tarsal article is equal to the second in length, but in a few species the tarsal structure is the same as that of *Oxytelus*; in these instances the scutellar and abdominal characters must be used for separation.

Species Included

O. abessinus Bernhauer; T
O. aequicollis Bernhauer
O. afrus, new name
  O. africanus (Bernhauer) 1912; H; new combination transferred from *Delopsis*; not Luze, 1904b, now in *Anotylus*
O. akazawensis Bernhauer; T
O. alberti Cameron; P
O. almorensis Cameron; H
O. alutaceifrons Wollaston; Sp
O. alutellus Fauvel
O. aluticeps Bernhauer; H
O. andreinii Bernhauer; H
O. anisopsiformis Bernhauer; H
O. antennalis Fauvel; Syn
O. apicicornis Fauvel; Syn
O. approximatus Cameron; H
O. aquatilis Bernhauer; Sp
O. armiger Fauvel; Syn
O. articulatus Bernhauer; T
O. athenensis Dvorak
O. aurantiacus Fairmaire
O. awakubiensis Bernhauer
O. barbatus Fauvel; H
O. basilewskyi Cameron; Co
O. bellicosus Fauvel; Syn
O. bengalensis Erichson; Sp
O. bidentulus Fauvel; Syn
O. bohemani Bernhauer and Schubert
O. bonghensis Fagel; P
O. borealis Motschulsky
O. brasiliensis Sahlberg
O. bruchi Bernhauer
O. burambianus Cameron; H
O. burgeoni Bernhauer; T
O. burgeonianus Scheerpeltz; Sp
O. capensis Cameron; H
O. cavicola Bernhauer
O. celebensis Fauvel
O. cheesmani Bernhauer; H
O. cheesmanianus Cameron; H
O. clavatus Strand
O. claviger Fauvel; Syn
O. clypeatus Motschulsky
O. collaris Erichson
O. colonus Eppelsheim; Co
O. coloratus Cameron; H
O. confusus Fagel; P
O. congoanus Fagel; P
O. congoensis Fauvel; Syn
O. convergens LeConte; H
O. cordovensis Bernhauer; Sp
O. crebratus Schubert
O. crenulifer Fauvel; T
O. curticollis Fauvel; Syn
O. daressalamensis Bernhauer; T
O. demeilloni Scheerpeltz; P
O. depauperatus Wollaston; H
O. derasus Sharp; H
O. dilaceratus Bernhauer
O. discalis Cameron; H
O. dixoni Oke
O. dohertyi Cameron; H
O. dorylophila (Cameron); Sp; new combination, transferred from *Delopsis*
O. dundoanus Cameron; P
O. ealanus Cameron; Sp
O. ebonus Blackwelder; H
O. elephantulus Bernhauer; H
O. eremus Blackwelder; H
O. exiguus Erichson
O. fageli, new name
  O. basilewskyi (Fagel), 1957a; new combination, transferred from *Epomotylus*, not Cameron, 1956
O. fallax Fauvel; Sp
O. fauveli Bernhauer and Schubert; Sp
O. ferrugineus Kraatz; Sp
O. flavipennis Kraatz
O. foraminosus Fauvel; Syn
O. fortepunctatus Fagel; P
O. fortesculpturatus Scheerpeltz
O. foveicollis Scheerpeltz
O. fruhstorferi Cameron; H
O. fulgens Bernhauer; T
O. fulgidus Fauvel; Syn
O. fulvipes Erichson; Sp
O. fusciceps Fauvel; H
O. fuscipes Schubert; Sp
O. fuscicornis Fauvel; Syn
O. gabonensis Fauvel; Syn
O. galla Fauvel; Syn
O. gedyei Bernhauer; H

O. ghesquierei Cameron; P
O. gibbulus Eppelsheim
O. giganteus Cameron; P
O. gigantulus Fauvel; Syn
O. ginyünensis Bernhauer
O. glabratus Bernhauer; Sp
O. grandis Eppelsheim; Sp
O. gratellus Cameron; P
O. hamacenus Fauvel; Syn
O. hingstoni Cameron; H
O. incisicollis Fauvel; T
O. incisus Motschulsky; Syn
O. incognitus Bernhauer; H
O. incolumis Erichson; Sp
O. inconstans Lea
O. iners Weise; Sp
O. inexpectatus Fagel
O. interocularis Bernhauer; T
O. invenustus Casey; H
O. ixellensis Dvorak
O. javanus Cameron; H
O. jelskii Fauvel
O. jessoensis Bernhauer; Sp
O. kabarensis Fagel; P
O. kabashanus Cameron; P
O. kalisi Bernhauer; Sp
O. kalongeanus Cameron; Co
O. kaltenbachi Scheerpeltz
O. katangensis Fagel; P
O. kavirondoensis Bernhauer; H
O. kawaensis Cameron; P
O. kedirianus Cameron; H
O. kinazii Cameron; Co
O. kivuensis Cameron; P
O. kristenseni Bernhauer; H
O. laqueatus Marsham; Sp
O. lateralis Lea
O. lividus Motschulsky; Sp
O. lobatus Fauvel
O. longicollis Bernhauer
O. luberensis Fagel; P
O. lucens Bernhauer; T
O. lucidulus Cameron; H
O. machadoi Cameron; H
O. madagascariensis Erichson; Sp
O. magniceps Wendeler
O. malaisei Scheerpeltz
O. mammillatus Hochhuth
O. mandibularis Cameron; H
O. marginatus Weise
O. marlieri Fagel; P
O. megaceros Fauvel; Syn
O. megalomerus Fauvel; T
O. melevatus Lea
O. methnerianus Bernhauer
O. micans Kraatz; Sp
O. migrator Fauvel; Syn
O. minimus Erichson
O. mixtus Bernhauer
O. monardi Bernhauer; Sp
O. montanus Casey; H
O. morbosus Cameron
O. mutator Lohse
O. murecarius Bernhauer
O. myops Fauvel
O. nigriceps Kraatz; Sp
O. nilgiriensis Cameron; H
O. nimius Casey; H
O. nitescens Bernhauer
O. nitidicollis Fagel; P
O. nitidipennis Fauvel; T
O. nitidissimus Cameron; T
O. novaecaledoniae Scheerpeltz
O. oblongifer Lea
O. occidentalis Fauvel
O. occultus Eichelbaum
O. opacifrons Sharp; H
O. pallidipennis Cameron; H
O. pallidus Bernhauer; T
O. paradoxus Bernhauer; Sp
O. parasitus Motschulsky
O. parumpunctatus Blackburn; H
O. pedator Eichelbaum
O. pennsylvanicus Erichson; Sp
O. permixtus Fagel; P
O. persimilis Cameron; P
O. peruvianus Bernhauer
O. piceus (Linnaeus); Sp
O. planicollis Scheerpeltz
O. planus Fauvel; Syn
O. plumbeus Fauvel
O. pluvius Blackwelder
O. principalis Sharp; H
O. productifrons Cameron; H
O. proximus Cameron; H
O. pseudosculptus (Fagel); P; new combination, transferred from *Epomotylus*
O. pubiventris Fauvel; T
O. punctiger Scheerpeltz
O. punctipennis Fauvel; H
O. punctus Bernhauer; H
O. pusillus Boheman
O. quinquesulcatus Bernhauer
O. reductus Fauvel; Syn
O. rhinoceros Bernhauer; T
O. robusticornis Luze
O. robustus Schubert; Co
O. ruandae Bernhauer; Co
O. ruandanus Cameron; Sp
O. rufescens Cameron; Co
O. ruficornis Cameron; Co
O. rufulus Bernhauer; H
O. rugegensis Cameron; Co; new combination, transferred from *Basilewskyorus*
O. ruptus Fauvel; Syn
O. rutshuruensis Bernhauer; T

O. schoutedeni Cameron; H
O. schuberti Scheerpeltz
O. schubotzi Bernhauer; Sp
O. sculptus Gravenhorst; Sp
O. secretus Cameron; P
O. senegalensis Bernhauer; T
O. sericeiventris Fauvel; H
O. shangugensis (Fagel); P; new combination, transferred from *Epomotylus*
O. simplex Motschulsky
O. simulans Cameron; P
O. simulator Eppelsheim; Sp
O. spectabilis Bernhauer; T
O. speculum Fauvel
O. steelei Bernhauer; H
O. stricticollis Fagel
O. strigosiceps Bernhauer; T
O. styricola Strand
O. subferrugineus Cameron
O. subincisus Cameron; H
O. sublucidus Cameron; H
O. subsculptus Cameron; H
O. sutteri Scheerpeltz
O. tengoensis Bernhauer; T
O. tenuesculpturatus Scheerpeltz
O. termitophilus Cameron; H
O. tibetanus Bernhauer; T
O. trisulcicollis Lea
O. tuberculifrons Eichelbaum; Sp
O. ugandae Bernhauer; T
O. validus Cameron; Co
O. varipennis Kraatz; Sp
O. velevatus Lea
O. vermicularis Bernhauer; Sp
O. vicarius Fagel; H
O. vulneratus Fauvel; Sp
O. wittei Cameron; P
O. zavadili Roubal

APOCELLUS

Apocellus ERICHSON, 1839b, p. 30. Type species: *Apocellus sphaericollis* (Say).

Ocaleomorpha FLEISCHER, 1921, p. 114; subjective objective synonym. Type species: *Ocaleomorpha lacoi* Fleischer.

Pheidoloxenides WASMANN, 1925a, p. 122; new synonym; subjective synonym. Type species: *Pheidoloxenides dampfi* Wasmann.

DIAGNOSIS

This genus can be recognized by the width of the neck which is one-half of the postocular width of the head, the globose prothorax, the heart or crest-shaped scutellar impression, the mesocoxal separation by the metasternal process, the lack of longitudinal row of (occasionally present) tibial spines, and the presence of a basolateral ridge on abdominal terga III to VII.

DESCRIPTION

Length, 2.0 to 4.0 mm. Form myrmecoid; legs and antennae long. Body sparsely to moderately densely pubescent and surface shining to opaque.

HEAD: Clypeus rectangulate; anterior margin truncate. Epistomal suture well developed and prominent; with median portion broadly arcuate, then sharply angulate at supra-antennal ridge. Tentorial maculae either evident as prominent pits or poorly developed. Supra-antennal ridge well developed. Gular sutures confluent anteriorly; sutures separated near neck, then parallel to near base of neck and sharply divergent (as in fig. 8). Base of head abruptly and extremely constricted to form narrow neck; neck width one-half of postocular width of head or less. Labrum with anterior margin broadly emarginate; labral lobe poorly developed. Mandible denticulate. Maxillary palpus with fourth segment subulate (fig. 17); base of fourth nearly as wide as apex of third; fourth segment shorter than second. Antenna elongate, slender, and gradually expanded toward apex; articles with long, tactile setae.

THORAX: Prothorax globose or quadrate. Pronotum with lateral margin broadly arcuate or nearly straight and convergent to base. Pronotal lateral marginal bead present (as in fig. 27) or absent, entire or interrupted, and distinct or feeble. Prohypomeron broad and weakly to strongly deflexed. Protergosternal suture absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prosternal process feebly carinate; process short and not extending prominently between coxae.

Scutellum with a heart- or crest-shaped impression; midlongitudinal ridge present or absent. Elytral epipleural ridge present as (in fig. 39). Elytral sutural ridge without longitudinal groove. Mesosternal process absent; mesosternum not prominent (as in fig. 35). Metasternal process elongate and extending between mesocoxae; surface broad and at same elevation of mesosternum (as in fig. 35). Mesocoxae separated by metasternal process (as in fig. 35).

Tibia with many setae and spinules; longitudinal row of spines usually absent, occasionally present. Tibia cylindrical and not notched or constricted at apex. Metatibia with longitudinal ctenidium of spinules present. Tarsal formula 3-3-3; first and second tarsomeres with long, ventroapical, membranous lobe; last article longest; first and second articles of equal length.

ABDOMEN: Terga III to VII with basolateral ridges (as in fig. 68); tergum II with basolateral ridge absent or present. Segments II to VI each with two pairs of laterosternites (as in fig. 68). Seventh tergum with posterior margin fimbriate.

Aedeagus trilobed.

DISTRIBUTION

Nearctic: Mexico, United States. *Neotropical:* Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, West Indies.

DISCUSSION

Apocellus sphaericollis (Say) was reported feeding on violets, lilies, dahlias, pansies, forget-me-nots, and other succulent ornamentals (Chittenden, 1915).

Pheidoloxenides is considered to be a junior synonym of *Apocellus*. *Pheidoloxenides* was originally placed in the Aleocharinae and later moved to the Oxytelinae, in which it is properly included, but the characters originally considered to separate it as a genus were not reexamined relative to the characters of the genera of the Oxytelinae. After study of a paratype of the type species of *Pheidoloxenides*, I am unable to find characters that will support its continued separation from *Apocellus*.

A group of three species in this genus has a row of short spines or spinules on the protibia. The protibia is not constricted at the apex and is cylindrical. The pronotum is flattened and quadrate, and the surface is strongly sulcate. Other features of these three species are similar to those of the other species in the genus, including the strongly constricted neck. Further study of *Apocellus* has been begun.

SPECIES INCLUDED

A. agilipes Silvestri
A. albipes Erichson
A. analis LeConte; H
A. argentinus Bernhauer; H
A. barbatus Sharp; H
A. barbiellini Bernhauer; H
A. bernhaueri, new name
  A. dampfi Bernhauer, 1929, not Wasmann, 1925b
A. bicolor Casey; Sp
A. brevipennis Casey; H
A. cognatus Sharp; H
A. crassicornis Casey; H
A. curtipennis Bernhauer; H
A. dampfi (Wasmann); new combination, transferred from *Pheidoloxenides*
A. gracilicornis Casey; H
A. gracilis Sharp; H
A. laevis Sharp; H
A. longipennis Bernhauer; H
A. mendozanus Steinheil; Sp
A. moestus Sharp; H
A. muticus Sharp; H
A. myrmecobius Silvestri
A. niger Casey; H
A. obscurus Bernhauer; H
A. ogloblini Bernhauer; H
A. opacipennis Bernhauer; H
A. opacus Bernhauer; H
A. parvipennis Bernhauer; H
A. planus Sharp; H
A. praestans Sharp; H
A. schmidti Bernhauer; Co
A. sericeus Wasmann
A. solieri Bernhauer; Co
A. sordidus Sharp; H
A. sphaericollis (Say); Sp
A. stilicoides LeConte; H
A. trisulcatus Bernhauer; H
A. ustulatus Erichson; Sp
A. zirbus, new name
  A. globosus Wendeler, 1955; not Melsheimer, 1844

OXYTELOPSIS

Oxytelopsis FAUVEL, 1895, p. 199. Type species: *Oxytelopsis cimicoides* Fauvel.

DIAGNOSIS

This genus can be recognized by the circular impression on the anterior portion of the head (fig. 4), by the presence of tactile setae on the antennomeres, the alatiform, lateral region of the pronotum (fig. 26), the trilobed scutellar impression (as in figs. 41, 44), the presence of numerous longitudinal carinae and grooves on the tibia (fig. 53), and the absence on the second abdominal tergum of a basolateral ridge.

DESCRIPTION

Length, 2.0 to 4.0 mm. Form short, broad, and strongly depressed. Body sparsely pubescent, strongly sculptured, and strongly sclerotized.

HEAD: Clypeus with anterior margin broadly rounded or nearly truncate; anterior margin reflexed. Epistomal suture present and arcuate; suture and reflexed anterior margin of clypeus forming circular impression (fig. 4). Supraantennal ridge not prominent; usually nearly flat. Gular sutures confluent on anterior portion of venter to anterior portion of neck; sutures sharply divergent, then parallel on anterior portion of neck, then sutures sharply divergent (as in fig. 8). Base of head strongly constricted to

form narrow, well-defined neck. Labrum with anterior margin broadly emarginate; with anteriorly directed, mesially curved, fimbriate lobes. Mandible denticulate. Maxillary palpus with fourth segment long and slender; fourth segment subulate (as in fig. 18); base of fourth segment as wide as apex of third segment. Antenna short; outer articles forming long, loose club, articles with long, tactile setae.

THORAX: Pronotum with lateral margin broadly arcuate. Pronotum with lateral portion explanate and alatiform (fig. 26). Pronotal lateral marginal bead indistinguishable. Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Postprocoxal lobe absent. Prosternal process carinate; extending short distance between coxae. Prohypomeron broad and extremely deflexed. Prosternum with anteriorly directed ridge from anterior lateral coxal margin to near lateral base of neck.

Scutellum with crest-shaped impression (see figs. 41, 44). Elytral epipleural ridge present (as in fig. 39). Elytral suture bordered with ungrooved, longitudinal ridge. Mesosternal process reduced; posterior margin truncate to broadly rounded. Metasternal process elongate (as in fig. 35); surface at same level as mesosternum. Mesocoxae separated by metasternal process (as in fig. 35).

Protibia with continuous row of spinules on anterior and posterior margins. Mesotibia with poorly developed row of spines and many spinulose rows. Metatibia with longitudinal ctenidium of spinules (as in fig. 57). Tibia with several longitudinal carinae and grooves (fig. 53). Tarsal formula 3-3-3; first and second tarsal articles with long, slender, membranous lobe on ventrolateral apices; last article longer than first or second; first and second tarsomeres of nearly equal length (as in figs. 61–64).

ABDOMEN: Terga III to VII with basolateral ridges (as in fig. 68); second tergum without basolateral ridges. Seventh tergum with strongly to poorly developed, V-shaped impression. Segments II to VI with parasternites narrow and not well developed; seventh tergum with well-developed paratergite and with parasternite absent. Abdominal glands with external openings in ninth tergites (as in fig. 72).

DISTRIBUTION

Oriental: Burma, China, Taiwan, India, Indonesia, Malaya.

SPECIES INCLUDED

O. andrewesi Cameron; H
O. anguliceps Cameron; H
O. apicipennis Fauvel; Syn
O. borneensis Cameron; H
O. brevipennis Bernhauer; H
O. chapmani Cameron; H
O. cimicoides Fauvel; Syn
O. chinensis Bernhauer; H
O. excisicollis Bernhauer; H
O. gardneri Paulian
O. genalis Fauvel; Syn
O. lucidula Cameron; H
O. malaisei Scheerpeltz
O. nigricans Cameron; H
O. nigripennis Cameron; H
O. pseudopsina Fauvel; Syn
O. reitteri Bernhauer; H
O. rufotestacea Cameron; Co
Oxytelopsis plasoni Bernhauer and *Oxytelopsis madecassa* Fauvel transferred to *Anotylus*

RIMBA

Rimba BLACKWELDER, 1952, p. 342. Type species: *Rimba cornuta* (Fauvel).

Delopsis FAUVEL, 1895, p. 198. Type species: *Delopsis cornuta* Fauvel.

DIAGNOSIS

This genus can be recognized by the absence of the long, prominent, "sensory" setae of the antenna, the crest-shaped impression of the scutellum (as in figs. 41, 44), the long and flattened first segment of the tarsus, the presence of a longitudinal carinae on the tibia (fig. 54), and the presence of the basolateral ridges on terga III to VII (as in fig. 68).

DESCRIPTION

Length, approximately 3.0 to 4.0 mm. Form broad and depressed. Body sparsely pubescent and strongly sculptured.

HEAD: Clypeus with anterior margin truncate. Epistomal suture present. Supra-antennal ridge prominent. Gular sutures confluent anteriorly; sutures sharply separated and narrowly parallel from middle, then strongly and continuously divergent (as in fig. 8). Base of head constricted to form broad, well-defined neck. Labrum with anterior margin broadly emarginate. Maxillary palpus with fourth segment subulate (as in fig. 18). Antenna long and slender; articles without long, tactile setae; articles densely pubescent; articles 4 to 11 each with basal ridge.

THORAX: Pronotum wider than long; lateral margin serrate and convergent basally. Prohypomeron broad and strongly deflexed. Pronotal lateral marginal bead present (as in fig. 27). Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prosternal process short and carinate.

Scutellum concealed under pronotum; surface with crest-shaped impression (as in figs. 41, 44). Elytral epipleural ridge present (as in fig. 39). Mesosternal process short, truncate, not extending far between mesocoxae and not prominent (as in fig. 35). Mesocoxae separated by metasternal process (as in fig. 35). Metasternal process elongate; with base truncate (as in fig. 35).

Protibia with continuous, longitudinal row of short, fine spinules; tibia not constricted at apex; tibia gradually expanded apically. Metatibia with longitudinal ctenidium of spinules. Tibia with median, longitudinal carina and well developed (fig. 54). Tarsal formula 3-3-3; first article longer and wider than second; first article dorsoventrally flattened and with long setae extending laterally; second article with long, membranous lobes extending from apex; third article long and slender and apically incrassate.

ABDOMEN: Second tergum with basolateral ridges absent; terga II to VII with basolateral ridges (as in fig. 68). Segments II to VII each with pair of parasternites and paratergites; laterosclerites of nearly equal size (as in fig. 68). Seventh tergum with posterior margin fimbriate. Tenth tergum without V-shaped pattern of setae. Abdominal glands with external openings in ninth tergites (as in fig. 72).

DISTRIBUTION

Oriental: Burma, Indonesia, Malaya.

DISCUSSION

Rimba has been redefined herein, and as a result most of the species that were formerly included in this genus have been transferred to *Anotylus*, two have been transferred to *Oxytelus*, and the others remain in *Rimba*.

The tibial carinae are of little importance as the sole diagnostic character of this genus, although all the species have the carinae. The use of this tibial character without consideration of the other characters resulted in a heterogeneous assemblage of species under the name *Rimba*. A number of species now included in *Anotylus* either have been or could have been included in *Rimba* if only the presence or absence of the tibial ridge were used. In addition, the tibial ridge is not in every case clearly present or absent in some of the species.

If one does not depend solely on the presence or absence of the tibial ridge but applies two other characters as well, one can easily recognize *Rimba*, which is a smaller but monophyletic taxon.

SPECIES INCLUDED

R. birmana (Scheerpeltz)
R. cornuta (Fauvel); T
R. flavicornis (Cameron); H
R. microphthalma (Fauvel); Sp

ANOTYLUS

Anotylus THOMSON, 1859, p. 44. Type species: *Anotylus sculpturatus* (Gravenhorst).

Styloxys DES GOZIS, 1886, p. 15; subgenus. Type species: *Styloxys rugosus* (Fabricius).

Oxytelodes BERNHAUER, 1908, p. 290; new synonym. Type species: *Oxytelodes holdhausi* Bernhauer.

Emopotylus BERNHAUER, 1910, p. 359; subgenus. Type species: *Emopotylus cuernavacanus* (Bernhauer).

Boettcherinus BERNHAUER, 1936a, p. 82; subgenus. Type species: *Boettcherinus planaticollis* (Bernhauer).

Paracaccoporus STEEL. 1948, p. 188; subgenus. Type species: *Paracaccoporus ocularis* (Fauvel).

Oxytelosus CAMERON, 1950, p. 92; new synonym. Type species: *Oxytelosus abnormalis* (Cameron); fixed by Cameron, 1950, p. 92, by virtual monotypy, if the statement ". . . and also no doubt *O. mirus* . . ." is taken to be a doubtful inclusion of *Oxytelus mirus*. If the statement by Cameron is not construed to indicate some doubt about the inclusion of *O. mirus*, then the type species must be considered to have been fixed by Fagel (1956) by subsequent designation. Fagel also used *O. abnormalis* (Cameron) as the type species.

Oxytelops FAGEL, 1956, p. 270, 273; new synonym. Type species: *Oxytelops tetracarinata* (Block).

Microxytelus FAGEL, 1956, p. 270, 272; new synonym. Type species: *Microxytelus nitidifrons* (Wollaston).

Pseudodelopsis FAGEL, 1957b, p. 3; new synonym. Type species: *Pseudodelopsis scotti* Fagel.

DIAGNOSIS

This genus can be recognized by the presence of a strongly deflexed prohypomeron (not aliform), the presence of a crest-shaped impression on the scutellum (figs. 41, 44, 45), the lack of numerous longitudinal carinae on the tibia,

the presence of nearly equally long first and second tarsal articles (figs. 61–65), and the absence of basolateral ridges (as in fig. 68) on the second abdominal tergum.

Description

Length, 1.0 to 6.0 mm. Form broad to slender and depressed to subcylindrical. Body strongly to moderately sculptured and sparsely pubescent.

Head: Clypeus reduced; anterior margin broadly rounded, truncate (fig. 2), or emarginate. Epistomal suture not distinct or weakly developed except near supra-antennal ridge (fig. 2); occasionally with transverse median portion present; median portion usually absent (fig. 2). Supra-antennal ridge obsolete or low and distinct. Gular sutures confluent at anterior portion, then sharply divergent and parallel from middle to near anterior region of neck, then sharply and continuously divergent to base of neck (as in fig. 8). Base of head constricted to form broad, well-defined neck. Labrum with anterior margin broadly emarginate; labral lobe poorly developed. Mandible with denticulate mesial edge or with denticles absent. Antenna with first article constricted at base and parallel-sided at apex; articles 3 to 11 with long, tactile setae. Maxillary palpus with fourth segment subulate (as in fig. 18) and stout or slender to long and parallel-sided; third segment long, slender, and apically incrassate, or short and stout or swollen.

Thorax: Pronotum transverse. Pronotal lateral marginal bead present (as in fig. 27). Protergosternal suture absent (as in fig. 27). Procoxal fissure absent (as in fig. 27). Protrochantin concealed (as in fig. 27). Postprocoxal lobe absent. Prohypomeron broad and moderately strongly deflexed. Prosternal process short and carinate.

Scutellum concealed under pronotum; surface with crest-shaped impression (figs. 41, 44, 45). Elytral sutural ridge with longitudinal groove present or absent; groove well developed or poorly developed. Elytral epipleural ridge present (as in fig. 39). Mesosternal process short and truncate and usually not prominent (as in fig. 35). Metasternal process elongate and well developed (as in fig. 35). Mesocoxae separated by metasternal process (as in fig. 35).

Protibia and mesotibia with longitudinal row of spines (figs. 61–64); spines in some cases replaced by spinules (fig. 65). Metatibia with longitudinal ctenidium of spinules (as in fig. 57); usually with additional spines scattered along length. Tibial spines well developed; stout spines present and with gradation to spinules through various species. Protibia usually with one or more rows of spines; rows may end before apex of tibia (figs. 61–63), at tibial constriction, or spinous row continuous to apex of tibia (fig. 65). Protibial constriction present and prominent (fig. 61) or more gradually developed (figs. 62–64); constriction with continuous row of spines present or without spines. Mesotibia with two rows of spines or spinules. Tibia with longitudinal carina absent or weakly developed. Tarsal formula 3-3-3; first and second articles usually of nearly equal length (figs. 61–65); occasionally first article longer than second; basal two articles with long, slender, membranous, apical lobes.

Abdomen: Terga III to VII with basolateral ridges (as in fig. 68); tergum II with basolateral ridges absent. Segments II to VI each with two parasternites and two paratergites; laterosclerites of nearly equal width (as in fig. 68). Seventh tergum with posterior margin fimbriate. Tenth tergum with V-shaped pattern of setae present or absent. Abdominal glands with external openings in ninth tergites (as in fig. 72).

Distribution

Cosmopolitan.

Discussion

Fagel's (1956) classification for the dismemberment of *Oxytelus* is based on variations in the fourth article of the maxillary palpus, the antennomeres, the protibiae, and the elytral suture. An intergrading series can be found for each of the character states considered to be useful for the recognition of the genera. The fourth segment of the maxillary palpus varies gradually from a conically shaped article to a more slender, parallel-sided article. A basal ridge is present on the fourth, fifth, or sixth articles through the eleventh article of the antenna. On species said to be lacking the ridge on either the fourth or fifth articles, the ridge is actually present but is obsoletely developed. Fagel's classification does not consider instances in which the ridge is obsoletely developed nor those in which the ridge is well developed on the sixth but not on the fourth or fifth articles. Many species have the apex of the protibiae strongly

constricted (as in fig. 60) and others lack a constriction (figs. 63, 65), but there are many species in which the protibial constriction is intermediate between the two extremes (figs. 61, 62, 64). The well-developed protibial spines (figs. 61–64) often intergrade to spinules (fig. 65). The row of protibial spines may end subapically or intergrade to a row of spines or spinules that reaches the apex of the protibiae (figs. 61–65). On a ridge bordering the elytral suture a groove is present or absent, but many species have shallow, incomplete grooves on the ridge.

Application of the above characters to a classification of *Anotylus* results in many "genera" separated by gaps of one character that are bridged by intermediate states. Fagal assigned only nine of the 551 species of *Oxytelus* (*sensu lato*) to the nine genera in his classification. When an attempt is made to assign the remaining species, many are misassigned because they cannot be included in groups to which they are phylogenetically related; often even the similarity is not close, but the species in the group all happen to possess a particular character. Often the species simply cannot be assigned to any group, but it is doubtful that they represent monotypic genera.

The following discussion is an attempt to show some of the consequences of a classification based on characters used by Fagel.

Syxloxys and *Anotylus* are separated by the presence of the first basal ridge on antennal article 4 or 5. Some species do not have the ridge present until the sixth segment [e.g., *A. speculifrons* (Kraatz), *A. drescheri* (Cameron), *A. dispar* (Lea), *A. ocularis* (Fauvel), *A. flavior* (Blackburn)], but this difference was not considered in the classification. Others have the ridge well developed on the fifth and weakly developed on the fourth [e.g., *A. nitidulus* (Gravenhorst), *A. insecatus* (Gravenhorst), *A. strigiceps* (Lea), *A. aethiops* (Bernhauer)]. Many species have the ridge well developed on either the fourth or the fifth, but intergradations are evident, and, as alternative characters were not provided or discussed, many generic misassignments resulted, and it is often simply impossible to assign the species.

The basis for the separation of *Anotylus* and *Oxytelops* is the presence or absence of the protibial constriction. There are in Europe species that would be assigned to *Anotylus* [e.g., *A. syriacus* (Eppelsheim), *A. pumilus* (Erichson), *A. bernhaueri*, *A. sexualis* (Eppelsheim)] but based on other characters should be assigned to *Oxytelops*. In other parts of the world, as well as Europe, there are species that can be identified as *Oxytelops* or *Anotylus* (e.g., *A. latiusculus*) but belong to neither group.

The species similar to *A. planaticollis*, *A. insignatus*, *A. syriacus*, and *A. latiusculus* form a bridge between *Anotylus* and *Oxytelops*.

Similar statements can be made for *Microxytelus* and *Anotylus* in which the hypothesized gaps can be bridged by species allied to *A. uncifer*, *A. tenuistrigosus*, *A. helcopterus* and many others.

Oxytelosus Cameron provides an excellent example of the grouping of two unrelated and even dissimilar species because they both happen to possess a particular modification of the palpi. The type species of the genus has no characters that support the continued recognition of the genus. The other species, *O. mirus*, is related to other species in *Anotylus* but should not be separated as a genus without study of most of the species of *Anotylus*.

Oxytelodes Bernhauer has no characters that support its continued recognition as a genus separate from *Anotylus*. The major characters used by Bernhauer are the reflexed margins of the head, pronotum, and elytra, but I am not convinced that these reflexed margins are sufficient reason to maintain this species as a monotypic genus.

Pseudodelopsis Fagel was recognized primarily on the basis of the lack of protibial spines and the slight variation in form. The protibial spines are actually present but are reduced to small spinules. The habitus of the species is slightly different from that of other species of *Anotylus*, but form is much too difficult to define to be useful as a taxonomic character, and further plesiomorphic and apomorphic forms must be discussed before a taxon can be recognized on the basis of a "different form."

Ultimately *Anotylus* may have other genera separated from it, some of them involving the type species of Fagel's genera. If so, the classification will result from the use of different characters, and in many cases those used by Fagel must be disregarded or subordinated to other characters. During this study, I found a number of characters not used by Fagel and attempted to use these alone and in combination with those in Fagel's classification, but the

resulting groups were still not satisfactory.

Any future classification of *Anotylus* should attempt to base the groups, whatever their categorical level, on synapomorphic and autapomorphic characteristics. The classification should attempt to assign all the species, and detailed study should be made of the variation in the characters used for the classification.

Members of *Anotylus* are readily separated by the trilobed, crest-shaped scutellar impression, the absence of the basolateral ridges of the second tergum, the absence of long, tactile setae on the antennomeres, the absence of tibial carinae, and the nearly equal length of the first and second tarsal articles. Three species, *A. urundianus* (Cameron), *A. carinipennis* (Cameron) and *A. birmanus* (Cameron), each are exceptions to the tarsal character; they all have the first tarsal segment considerably longer than the second but are placed in *Anotylus* because of the scutellar and abdominal characters. Some species have the first segment very slightly longer than the second, or vice versa, but no species has been examined that presents an exception to the scutellar impression or the absence of the abdominal ridges. This genus is readily separated from *Rimba* by the presence of the sensory setae on the antennae and by the more cylindrical first segment of the tarsus. In general *Rimba* has the longitudinal tibial carina present and well developed, and members of *Anotylus* lack carinae, but although some members of *Anotylus* have a feebly developed carina they do not have the sensory setae on the antennal segments. *Apocellus* can be separated by the lack of protibial and mesotibial spines and the sharply constricted, narrow neck. Three species of *Apocellus* have protibial spines and can be separated from *Anotylus* only by the lack of a mesotibial row of spines or spinules and by the narrow neck, which is one-half or less of the postocular width of the head. The species of *Anotylus* on the other hand have a broad neck, which is wider than half the width of the head.

Species Included

Except where indicated otherwise, the species in this list have been transferred from *Oxytelus*.

A. abnormalis (Cameron); Sp; new combination
A. aciculatus (Bernhauer); H; new combination
A. aeneotinctus (Cameron); H; new combination
A. aethiops (Bernhauer); H; new combination
A. africanus (Luze); Sp; new combination
A. alienus (Cameron); H; new combination
A. aliiceps (Cameron); H; new combination
A. alpicola (Casey); H; new combination
A. alternans (Cameron); H; new combination
A. amicus (Bernhauer); T; new combination
A. andrewesi (Cameron); H; new combination
A. antennarius (Bernhauer); Sp; new combination
A. anticus (Fauvel); Sp; new combination
A. antipodum (Bernhauer); T; new combination
A. apicalis (Fauvel); H; new combination
A. arecae (Cameron); H; new combination
A. armatifrons (Sharp); H; new combination
A. armatus (Cameron); P; new combination
A. armifrons (Cameron); H; new combination
A. asperiventris (Fauvel); Syn; new combination
A. atriceps (Fauvel); H; new combination
A. bacillus (Bernhauer); T; new combination
A. bakeri (Bernhauer), 1915; H; new combination
A. balbalanensis (Bernhauer); H; new combination
A. barbiellinii (Bernhauer); Sp; new combination
A. bernhaueri (Ganglbauer); Sp; new combination
A. bidentatus (Bernhauer); T; new combination
A. bigemmatus (Fauvel); Sp; new combination
A. birmanus (Cameron); H; new combination
A. biroi (Steel); new combination
A. bispinosus (Bernhauer); T
A. borneensis (Cameron); H; new combination, transferred from *Delopsis*
A. breviceps (Casey); H; new combination
A. brevipennis (Fauvel); T; new combination
A. brunneipennis (MacLeay); Sp; new combination
A. brunneus (Bernhauer); Sp; new combination
A. bryanti (Cameron); H; new combination
A. bubalus (Fauvel); Syn; new combination
A. bururianus (Cameron); P; new combination
A. cadaverinus (Cameron); H; new combination
A. caffer (Erichson); Sp; new combination
A. cameroni (Scheerpeltz); H; new combination
A. carinipennis (Cameron); P; new combination
A. cephalotes (Eppelsheim); Sp; new combination
A. chapini (Blackwelder); H; new combination
A. championi (Fauvel); T; new combination
A. chinkiangensis (Bernhauer); H; new combination
A. christianae (Bernhauer); H; new combination
A. christopherseni (Brinck); Sp; new combination
A. clavicornis (Fauvel); Sp; new combination
A. clypeonitens (Pandellé); Sp; new combination
A. cognatus (Sharp); H; new combination
A. complanatus (Erichson); Sp; new combination
A. consanquinea (Cameron); H; new combination, transferred from *Delopsis*
A. contiguus (Cameron); H; new combination
A. coriaceus (Fauvel); H; new combination
A. cornutus (Bernhauer); T; new combination
A. crassicornis (Sharp); H; new combination
A. crenaticollis (Fauvel); Syn; new combination
A. crenulicollis (Bernhauer); H; new combination
A. cribriceps (Fauvel); Syn; new combination

A. cribrum (Fauvel); Syn; new combination
A. crookesi (Cameron); P; new combination
A. cuernavacanus (Bernhauer); T; new combination
A. currus, new name
A. monticola Cameron, 1942a, H; not Cameron, 1942b
A. curticornis (Cameron); H; transferred from *Delopsis*; new combination
A. curtusi (Bernhauer); T; new combination
A. darwini (Cameron); H; new combination
A. darwinianus (Cameron); H; new combination
A. deceptor (Cameron); H; new combination
A. decipiens (Cameron); H; new combination
A. delicatus (Cameron); H; new combination
A. delopsoideus, new name
A. bakeri (Cameron), 1941; H; transferred from *Rimba*; not Bernhauer, 1915d
A. densus (Casey); H; new combination
A. denticollis (Wendeler); new combination, transferred from *Oxytelodes*
A. dentifer (Fauvel); Syn; new combination
A. dentifrons (Fauvel); Syn; new combination
A. dilutipennis (Fauvel); Syn; new combination
A. discipennis (Fauvel); Syn; new combination
A. dispar (Lea); Sp; new combination
A. disparatus (Cameron); H; new combination
A. distincticollis (Cameron); H; new combination
A. drescheri (Cameron); H; new combination
A. elephantis (Bernhauer); H; new combination
A. emeritus (Sharp); Sp; new combination
A. exaratus (Sharp); H; new combination
A. exasperatus (Kraatz); Sp; new combination
A. extensicornis (Fauvel); Sp; new combination
A. externus (Sharp); H; new combination
A. fageli, new name
A. scotti Fagel, 1957b, p. 11; not Fagel, 1957b, p. 3; new combination, transferred from *Pseudodelopsis*
A. fairmairei (Pandellé); Sp; new combination
A. falsus (Cameron); H; new combination
A. flavior (Blackburn); H; new combination
A. foetidus (Cameron); H; new combination
A. fortipennis (Bernhauer); T; new combination
A. fragilis (Sharp); H; new combination
A. frater (Cameron); H; new combination
A. fraterculus (Cameron); H; new combination
A. fraternus (Cameron); H; new combination
A. frugicola (Cameron); H; new combination
A. funebris (Bernhauer); new combination
A. fusciventris (Cameron); Sp; new combination
A. gardneri (Cameron); H; new combination
A. glaber (Cameron); H; new combination
A. glareosus (Wollaston); L; new combination
A. gracilicornis (Cameron); H; new combination
A. granadillae (Cameron); H; new combination
A. grandiceps (Bernhauer); Sp; new combination
A. gratus (Cameron); H; new combination
A. gregarius (Sharp); H; new combination
A. gridellii (Bernhauer); Co; new combination
A. gughensis Fagel; H
A. hamatus (Fairmaire and Laboulbène); Sp; new combination
A. hamuliger (Fauvel); Syn; new combination
A. helcopterus (Bernhauer); T; new combination
A. herculis (Bernhauer); T; new combination
A. heterocerus (Fauvel); Syn; new combination
A. heterophthalmus (Fauvel); Syn; new combination
A. hirtulus (Eppelsheim); Sp; new combination
A. holdhausi (Bernhauer); Sp; transferred from *Oxytelodes*; new combination
A. hostilus (Bernhauer); Co; new combination
A. hybridus (Eppelsheim); Sp; new combination
A. impennis (Fauvel); Sp; new combination
A. impressifrons (MacLeay); Sp; new combination
A. inaequalis (Fauvel); Syn; new combination
A. incilis (Sharp); H; new combination
A. indica (Bernhauer); Sp; new combination
A. inornatus (Cameron); H; new combination
A. insecatus (Gravenhorst); Sp; new combination
A. insignitus (Gravenhorst); Sp; new combination
A. intermedius (Cameron); H; new combination
A. intricatus (Erichson); Sp; new combination
A. inustus (Gravenhorst); Sp; new combination
A. jacobsoni (Cameron); H; new combination
A. jamaicensis (Blackwelder); H; new combination
A. japonica (Cameron); H; new combination, transferred from *Delopsis*
A. kashmiricus (Cameron); H; new combination
A. kokodanus (Cameron); H; new combination
A. kraatzi (Bernhauer and Schubert); Sp; new combination
A. kraussi (Steel); H; new combination
A. laetus (Cameron); H; new combination
A. laevissimus (Fauvel); H; new combination
A. laticeps Fagel; H
A. laticornis (Sharp); H; new combination
A. latifrons (Sharp); H; new combination
A. latiusculus (Kraatz); Sp; new combination
A. lewisius (Sharp); H; new combination
A. liliputanus (Bernhauer); H; new combination
A. lippensi (Bernhauer); T; new combination
A. longicornis (Fauvel); Syn; new combination
A. lucidus (Sharp); H; new combination
A. lungwensis (Fagel); P; new combination, transferred from *Pseudodelopsis*
A. luzonicus (Bernhauer); H; new combination
A. madecassa (Fauvel); T; new combination, transferred from *Oxytelopsis*
A. magdalenae (Fauvel); Syn; new combination
A. malayanus (Cameron); H; new combination
A. manchuricus (Bernhauer); T; new combination
A. marmoratus (Cameron); H; new combination
A. mashonensis (Bernhauer); H; new combination
A. masuriensis (Cameron); H; new combination
A. media (Cameron); H; new combination, transferred from *Delopsis*
A. megacephalus (Fauvel); Sp; new combination

A. melas (Fauvel); Syn; new combination
A. mendus, new name
A. opacus (Kraatz), 1858; Sp; not Stephens, 1833; new combination
A. methneri (Bernhauer); H; new combination, transferred from *Delopsis*
A. micropterus (Lea); Sp; new combination
A. miles (Cameron); H; new combination
A. militaris (Bernhauer); T; new combination
A. mimulus (Sharp); H; new combination
A. minarzi (Bernhauer); H; new combination
A. minutus (Cameron); H; new combination
A. miriceps (Fauvel); Syn; new combination
A. mirus (Bernhauer); Sp; new combination
A. misellus (Cameron); P; new combination
A. modestus (Bernhauer); T; new combination
A. monodon (Fauvel); Syn; new combination
A. monticola (Cameron); H; new combination
A. mortuorum (Bernhauer); new combination
A. munitus (Casey); H; new combination
A. myrmecophilus (Cameron); H; new combination
A. nanus (Erichson); Co; new combination
A. neotomae (Hatch); new combination
A. niger (LeConte); H; new combination
A. nigripennis (Bernhauer); Co; new combination
A. nitidifrons (Wollaston); H; new combination
A. nitiduloides (Cameron); H; new combination
A. nitidulus (Gravenhorst); Sp; new combination
A. nitouensis (Bernhauer); T; new combination
A. novaeguineae (Steel); new combination
A. obliquestriatus (Steel); new combination
A. obscuratus (Cameron); H; new combination
A. obscurellus (Fauvel); Syn; new combination
A. obscurifrons (Fauvel); H; new combination
A. obscurus (Cameron); H; new combination
A. occipitalis (Fauvel); Sp; new combination
A. ocularis (Fauvel); Sp; new combination
A. okahandjanu (Bernhauer); H; new combination
A. opacellus (Cameron); H; new combination
A. opaciceps (Bernhauer); T; new combination
A. opacicollis (Fauvel); Sp; new combination
A. opacinus (Bernhauer); Sp; new combination
A. pagsanjanensis (Bernhauer); H; new combination
A. panaonensis (Cameron); H; new combination
A. papuanus (Cameron); H; new combination
A. pauper (Cameron); H; new combination
A. perrisi (Fauvel); Sp; new combination
A. petzi (Bernhauer); T; new combination
A. philippinus (Cameron); H; new combination
A. piceicollis (Fauvel); H; new combination
A. picticornis (Fauvel); H; new combination
A. placusinus (LeConte); H; new combination
A. plagiatus (Rosenhauer); new combination
A. planaticollis (Bernhauer); H; new combination
A. plasoni (Bernhauer); H; new combination, transferred from *Oxytelopsis*
A. politulus (Cameron); P; new combination
A. politus (Erichson); Sp; new combination
A. pumiloides (Cameron); H; new combination
A. pumilus (Erichson); Sp; new combination
A. pygmaeus (Kraatz); Sp; new combination
A. quadricarinatus (Bernhauer); H; new combination
A. raffrayi (Fauvel); Syn; new combination
A. rhophalocerus (Fauvel); T; new combination
A. rubeculus (Fauvel); H; new combination
A. ruber (Cameron); H; new combination
A. rubicundus (Cameron); H; new combination
A. rubidus (Cameron); H; new combination
A. rufinodis (Fauvel); H; new combination
A. rufotestaceus (Cameron); H; new combination
A. rufus (Kraatz); Sp; new combination
A. rugicollis (Bernhauer); T; new combination
A. rugifrons (Hochhuth); Sp; new combination
A. rugosus (Fabricius); Sp; new combination
A. rugulosus (Say); Sp; new combination
A. saulcyi (Pandellé); Sp; new combination
A. sauteri (Bernhauer); T; new combination
A. scabrellus (Fauvel); H; new combination
A. scabripennis (Fauvel); Syn; new combination
A. sceptus, new name
A. cameroni (Bernhauer), 1936a, preoccupied, not Scheerpeltz, 1933; T; new combination
A. schatzmayri (Koch); Sp; new combination
A. scorpio (Fauvel); Syn; new combination
A. scotti (Fagel); new combination, transferred from *Pseudodelopsis*
A. sculptiventris (Fauvel); T; new combination
A. sculpturatus (Gravenhorst); Sp; new combination
A. semipolitus (Cameron); Co; new combination
A. semiruber (Cameron); P; new combination
A. semirufus (Fauvel); Syn; new combination
A. sericeiceps (Bernhauer); T; new combination
A. serus, new name
A. flavipes Fauvel, 1878b; not Stephens, 1834, H
A. seticornis (Fauvel); T; new combination, transferred from *Delopsis*
A. sexualis (Eppelsheim); Sp; new combination
A. sharpi (Bernhauer); Sp; new combination
A. sharpianus (Cameron); H; new combination
A. sikkimi (Fauvel); Sp; new combination
A. similis (Cameron); H; new combination
A. simlaensis (Cameron); H; new combination
A. sobrinus (LeConte); H; new combination
A. sordidus (Cameron); H; new combination
A. sparsus (Fauvel); Sp; new combination
A. speculiceps (Fauvel); Syn; new combination
A. speculifrons (Kraatz); Sp; new combination
A. spinifer (Fauvel); Syn; new combination
A. spinifrons (Sharp); H; new combination
A. spinosus (Bernhauer); T; new combination
A. stanleyi (Cameron); H; new combination
A. stipes (Sharp); H; new combination
A. striatellus (Fauvel); H; new combination
A. striaticeps (Cameron); H; new combination
A. strigiceps (Lea); Sp; new combination
A. strigifrons (Hochhuth); Sp; new combination

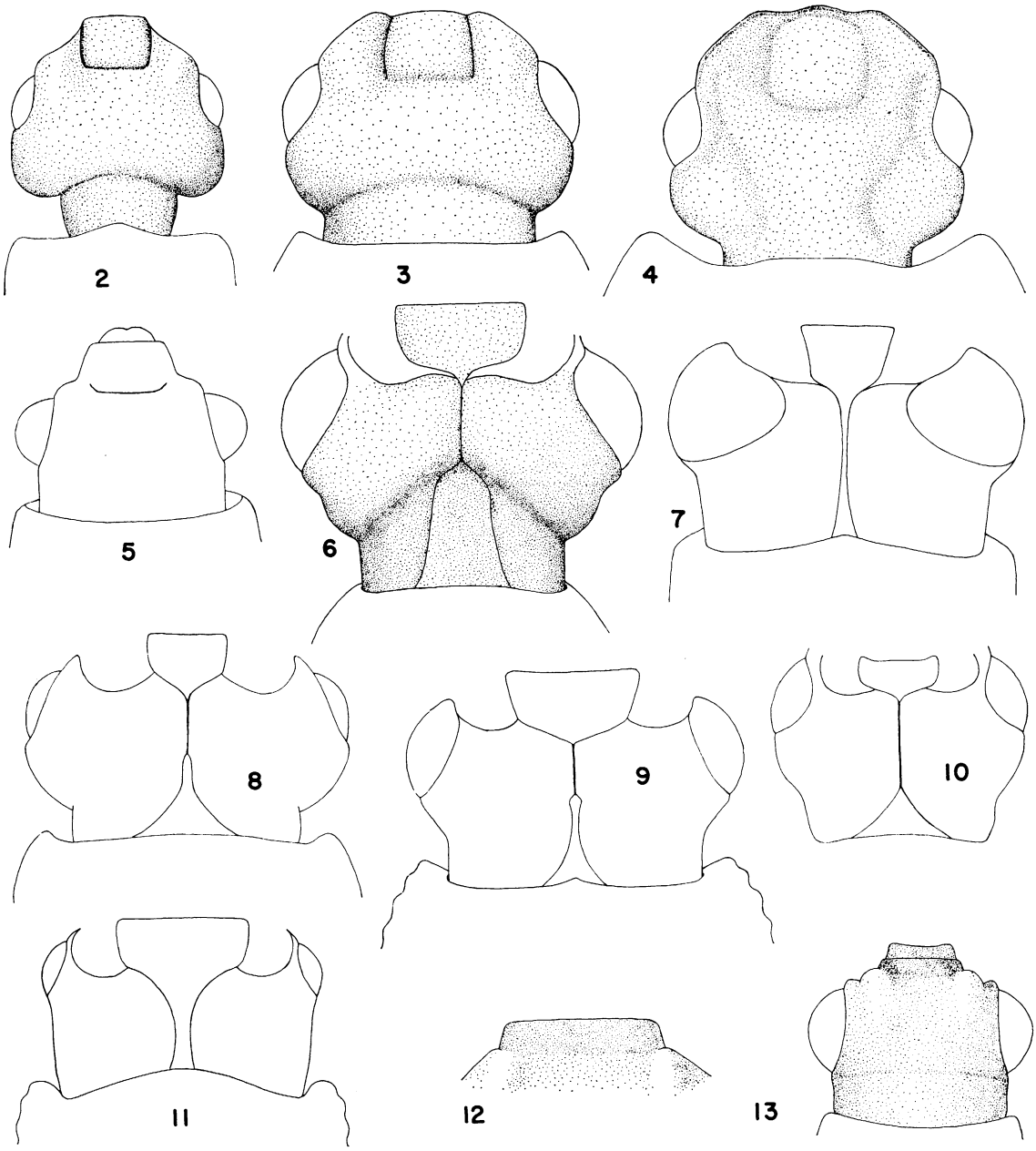

FIG. 2. *Anotylus exasperatus* (Kraatz); head, dorsal view.
FIG. 3. *Oxytelus* sp.; head, dorsal view.
FIG. 4. *Oxytelopsis* sp.; head, dorsal view.
FIG. 5. *Bledius coulteri* Hatch; head, dorsal view.
FIG. 6. *Deleaster trimaculatus* Fall; head, ventral view.
FIG. 7. *Manda nearctica* Moore; head, ventral view.
FIG. 8. *Oxytelus* sp.; head, ventral view.
FIG. 9. *Homalotrichus striatus* Solier; head, ventral view.
FIG. 10. *Thinobius* sp.; head, ventral view.
FIG. 11. *Coprophilus striatulus* (Fabricius); head, ventral view.
FIGS. 12, 13. *Manda nearctica* Moore. 12. Enlargement of clypeus, dorsal view. 13. Head, dorsal view.

A. strigicollis (Fauvel); Sp; new combination
A. strigosulus (Sharp); H; new combination
A. striolicollis (Fauvel); Syn; new combination
A. subaeneus (Fauvel); Syn; new combination
A. subnitidus (Bernhauer); T; new combination
A. subplagiatus (Cameron); H; new combination
A. subsculpturatus (Cameron); H; new combination
A. subsericeus (Bernhauer); Co; new combination
A. subtilis (Eppelsheim); Sp; new combination
A. sulciceps (Bernhauer); H; new combination
A. sulcicollis (Gemminger and Harold); Sp; new combination
A. sulcifer (Fauvel); Syn; new combination
A. sumatranus (Scheerpeltz); H; new combination
A. sumatrensis (Bernhauer); H; new combination
A. suspectus (Casey); H; new combination
A. syriacus (Eppelsheim;) Sp; new combination
A. szechuanensis (Bernhauer); H; new combination
A. tardus, new name
A. borneensis (Cameron), 1933d, p. 341, preoccupied, not Cameron, 1933d, p. 340; H; new combination, transferred from *Rimba*
A. tenuicornis (Fauvel); Syn; new combination
A. tenuistrigosus (Bernhauer); Sp; new combination
A. testaceus (Motschulsky); Sp; new combination; transferred from *Platystethus*
A. testaceicollis (Bernhauer); H; new combination
A. tetracarinatus (Block); Sp; new combination
A. tetratoma (Czwalina); Sp; new combination
A. thoracicus (Motschulsky); Co; new combination
A. tibialis (Brown); H; new combination
A. tinchialitensis (Steel); H; new combination
A. tolaensis (Fagel); new combination; transferred from *Pseudodelopsis*
A. torretassoi (Koch); Sp; new combination
A. toxopei (Cameron); Co; new combination
A. trivialis (Cameron); H; new combination
A. tuberculatus (Lea); Sp; new combination
A. turneri (Bernhauer); H; new combination
A. uncifer (Fauvel); Syn; new combination
A. urundianus (Cameron); H; new combination
A. varius (Fauvel); Syn; new combination
A. vegrandis (Casey); H; new combination
A. viator (Fauvel); Syn; new combination
A. vicinus (Sharp); H; new combination
A. vilis (Sharp); H; new combination
A. vinsoni (Cameron); H; new combination
A. vulcanus (Fauvel); Syn; new combination
A. wattsensis (Blackburn); H; new combination
A. witteanus (Cameron); P; new combination

ONCOPARIA

Oncoparia BERNHAUER, 1936b, p. 214. Type species: *Oncoparia parasita* Bernhauer. BLACKWELDER, 1952, p. 275.

DIAGNOSIS

This genus can be recognized by the lack of a distinctive scutellar impression, the absence of the elytral epipleural ridge (as in fig. 38), and the absence of the basolateral ridges on the second abdominal tergum.

DESCRIPTION

Length, approximately 7.5 mm. Form broad and depressed. Body sparsely pubescent and strongly sculptured.

HEAD: Supra-antennal ridge flat. Gular sutures confluent anteriorly; sutures strongly divergent, then narrowly parallel from near middle of head, then sharply and continuously divergent to base of neck (as in fig. 8). Base of head strongly constricted to form broad, distinct neck. Labrum with anterior margin broadly emarginate. Mandible denticulate. Maxillary palpus with fourth segment subulate (as in fig. 18); third and fourth segments of approximately equal length. Antenna with basal ridge obsolete on articles 4–6; articles 7–11 with ridge more strongly developed; articles with long, tactile setae.

THORAX: Pronotum wider than long. Pronotal lateral marginal bead present (as in fig. 27). Prohypomeron broad and moderately strongly deflexed. Procoxal fissure absent (as in fig. 27). Protergosternal suture absent. Protrochantin concealed. Postprocoxal lobe absent. Prosternal process very short, broadly rounded, and weakly carinate.

Scutellum concealed under pronotum; surface without distinct impression. Elytral epipleural ridge absent (as in fig. 38). Elytral sutural ridge weakly developed. Mesosternal process short, not extending far between coxae; apex acute; process prominent. Mesocoxae contiguous. Metasternal process not developed.

Protibia not constricted apically; with longitudinal row of spinules continuous to apex. Mesotibia and metatibia with longitudinal row of spinules. Tarsal formula 3-3-3; articles 1 and 2 of nearly equal length and with dense, short pubescence on ventral surface; article 2 with long membranous lobes.

ABDOMEN: Tergum II with basolateral ridges absent; terga III to VII with basolateral ridge present (as in fig. 68). Terga II to VII with row of short, stout spinules present on posterior margin membranous. Tenth tergum with V-shaped pattern of setae absent. Segments II to VI each with two paratergites and two parasternites of nearly equal width (as in fig. 68).

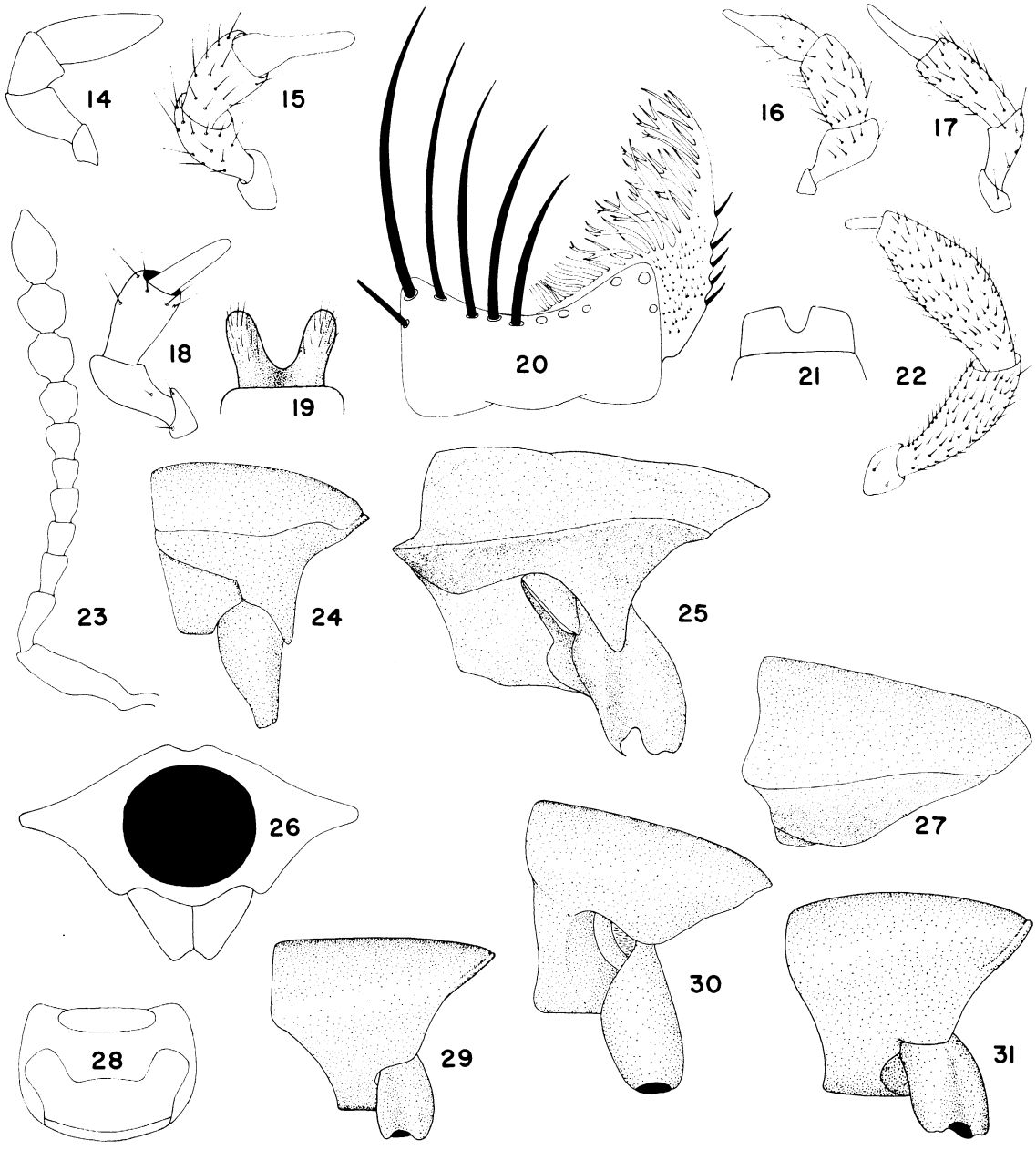

FIG. 14. *Coprophilus striatulus* (Fabricius); maxillary palpus, setae removed.
FIG. 15. *Ochthephilus* sp.; maxillary palpus.
FIG. 16. *Syntomium aeneum* Müller; maxillary palpus.
FIG. 17. *Apocellus* sp.; maxillary palpus.
FIG. 18. *Platystethus* sp.; maxillary palpus.
FIG. 19. *Trogactus godmani* Sharp; labrum, dorsal view.
FIG. 20. *Manda nearctica* Moore; labrum, dorsal view; left labral lobe removed, right setae removed.
FIG. 21. *Parosus hilaris* Sharp; labrum, dorsal view.
FIG. 22. *Xerophygus pallipes* (Motschulsky); maxillary palpus.
FIG. 23. *Bledius coulteri* Hatch; antenna.
FIG. 24. *Bledius coulteri* Hatch; prothorax, lateral view.
FIG. 25. *Coprophilus striatulus* (Fabricius); prothorax, lateral view.
FIG. 26. *Oxytelopsis* sp.; prothorax, anterior view.
FIG. 27. *Oxytelus* sp.; prothorax, lateral view.
FIG. 28. *Thinobius* sp.; prothorax, ventral view; procoxae and protrochantin removed.
FIG. 29. *Pareiobledius pruinosus* (Bernhauer); prothorax, lateral view.
FIG. 30. *Thinobius* sp.; prothorax, lateral view.
FIG. 31. *Blediotrogus guttiger* Sharp; prothorax, lateral view.

Abdominal glands with external openings in ninth tergites (as in fig. 72).

DISTRIBUTION

Ethiopian: Kenya, Tanzania.

DISCUSSION

Oncoparia is readily distinguished from other members of the Oxytelini by the prominent, apically acute, mesosternal process, which extends a short distance between the mesocoxae, and by the absence of the elytral epipleural ridge. The scutellum lacks a distinctive impression, and the protibia have a continuous, longitudinal row of spinules.

SPECIES INCLUDED

O. leleupi Fagel
O. parasita Bernhauer; H

ANOTYLOPS

Anotylops FAGEL, 1957b, p. 8. Type species: *Anotylops seydeli* Fagel.

Specimens of the only species in this genus have not been studied.

SPECIES INCLUDED

A. seydeli Fagel

GARDNERIANUS

Gardnerianus PAULIAN, 1941, p. 162. Type species: *Gardnerianus insolitus* Paulian.

The species was described from larvae; the adult was not described, but the existence of teneral adults was mentioned in the original description. I have not been able to study these specimens and do not know where the genus belongs.

SPECIES INCLUDED

G. insolitus Paulian

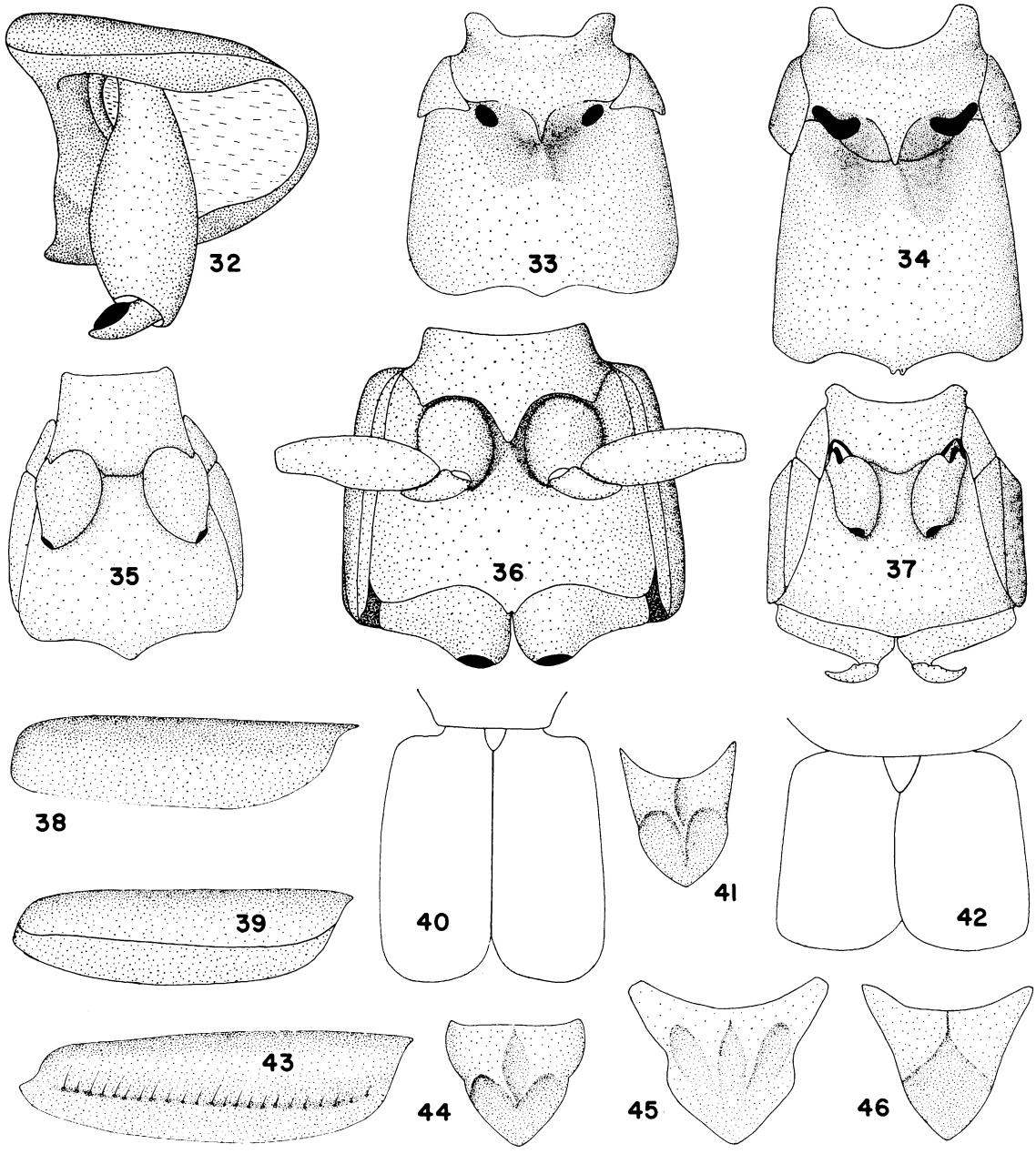

FIG. 32. *Platystethus* sp.; prothorax, ventrolateral view.
FIG. 33. *Syntomium* sp.; pterothoracic sterna, mesocoxae and metacoxae removed.
FIG. 34. *Coprophilus striatulus* (Fabricius); pterothoracic sterna; mesocoxae and metacoxae removed.
FIG. 35. *Apocellus* sp.; pterothoracic sterna.
FIG. 36. *Paraploderus speculiventris* (Fauvel); pterothoracic sterna.
FIG. 37. *Platystethus* sp.; pterothoracic sterna.
FIG. 38. *Eppelsheimius* sp.; elytron, lateral view.
FIG. 39. *Bledius coulteri* Hatch; elytron, lateral view.
FIG. 40. *Bledius ornatus* LeConte; elytra, dorsal view.
FIG. 41. *Anotylus* sp.; scutellar impressions.
FIG. 42. *Platystethus* sp.; elytra, dorsal view.
FIG. 43. *Planeustomus heydeni* Eppelsheim; elytron, lateral view.
FIG. 44. *Anotylus exasperatus* (Kraatz); scutellar impression.
FIG. 45. *Anotylus mirus* (Bernhauer); scutellar impression.
FIG. 46. *Oxytelus* sp.; scutellar impression.

TRANSFER OF GENERA FROM THE OXYTELINAE

SEVERAL GENERA have been included in the Oxytelinae that are actually species belonging in other subfamilies. Recently a few such transfers have been made.

In 1963 Moore transferred *Zalobius* LeConte and *Asemobius* Horn to the Piestinae. Tottenham (1954, pp. 6, 37) moved *Actocharis* Sharp to the Aleocharinae. Below are listed additional transfers.

PARACTOCHARIS

Paractocharis CAMERON, 1917, p. 154. Type species: *Paractocharis fucicola* Cameron.

A paratype of the type species has been studied, and the genus does not have any of the characteristics of the Oxytelinae. The genus should be transferred to the Aleocharinae and placed near *Actocharis*.

CORALLIS

Corallis FAUVEL, 1878a, p. 212. Type species: *Corallis polyporum* Fauvel.

The holotype of the type species has been studied, and the genus should be transferred to the Aleocharinae.

PSELAPHOMIMUS

Pselaphomimus BRUCH, 1942, p. 134. Type species: *Pselaphomimus amphiphilus* Bruch.

See the discussion following *Euctenopsia*.

DIROCEPHALUS

Dirocephalus SILVESTRI, 1938, p. 251. Type species: *Dirocephalus myrmecophilus* Silvestri.

See the discussion following *Euctenopsia*.

PARDIROCEPHALUS

Pardirocephalus BRUCH, 1942, p. 130. Type species: *Pardirocephalus cordobensis* Bruch.

See the discussion following *Euctenopsia*.

EUCTENOPSIA

Euctenopsia BRUCH, 1942, p. 137. Type species: *Euctenopsia ogloblini* Bruch.

DISCUSSION

The preceding four genera, *Dirocephalus*, *Pardirocephalus*, *Pselaphomimus*, and *Euctenopsia*, were placed in the Oxytelinae by Silvestri (1938) and Bruch (1942). Although specimens of *Euctenopsia*, *Pardirocephalus*, and *Direcephalus* were not studied, because these three genera and *Pselaphomimus*, for which material was available, are all considered to be related (Bruch, 1942), the following discussion pertains to all the genera.

Examination of a specimen of what I determined as *Pselaphomimus amphiphilus* Bruch reveals that the characters of this specimen together with those of *Dirocephalus* described and illustrated by Silvestri (1938) demonstrated clearly that these two genera are not members of the Oxytelinae. The members of both genera lack abdominal laterosclerites, a characteristic that is common to members of the Osoriinae and a few other species and genera of the Staphylinidae. The gular sutures are weakly developed anteriorly and well developed posteriorly (see Silvestri, 1938, p. 251, figs. 1, 4). The prothorax is compact, the antennal insertion is on the dorsal surface of the antennal acetabulum, the body is compact, and the abdomen is not flexible. These features are all characteristic of at least some genera of the Osoriinae, but they are also characteristic of some or all of the Pselaphidae.

The lack of abdominal laterosclerites is characteristic of the tribe Batrisini of the Pselaphidae and tends in that direction in a few other genera (Park, 1942). *Dirocephalus* and *Pselaphomimus* differ from the genera of the Batrisini by details of the tarsi (i.e. the number and relative length of articles and tarsal claws), by the concealment of the labial and maxillary palpi by the mentum, and by the absence of a longitudinal carina on the lateral side of the abdomen.

Dirocephalus has four-segmented maxillary palpi, which are small and inconspicuous, and small, three-segmented labial palpi (Silvestri, 1938). The Pselaphidae have four-segmented maxillary palpi, which are large, conspicuous, and strongly modified, and one- or two-segmented labial palpi (Park, 1942).

The head of the species of *Dirocephalus*, *Pselaphomimus*, *Pardirocephalus*, and *Euctenopsia* is compact, with many large depressions and ridges (Bruch, 1942; Silvestri, 1938). This

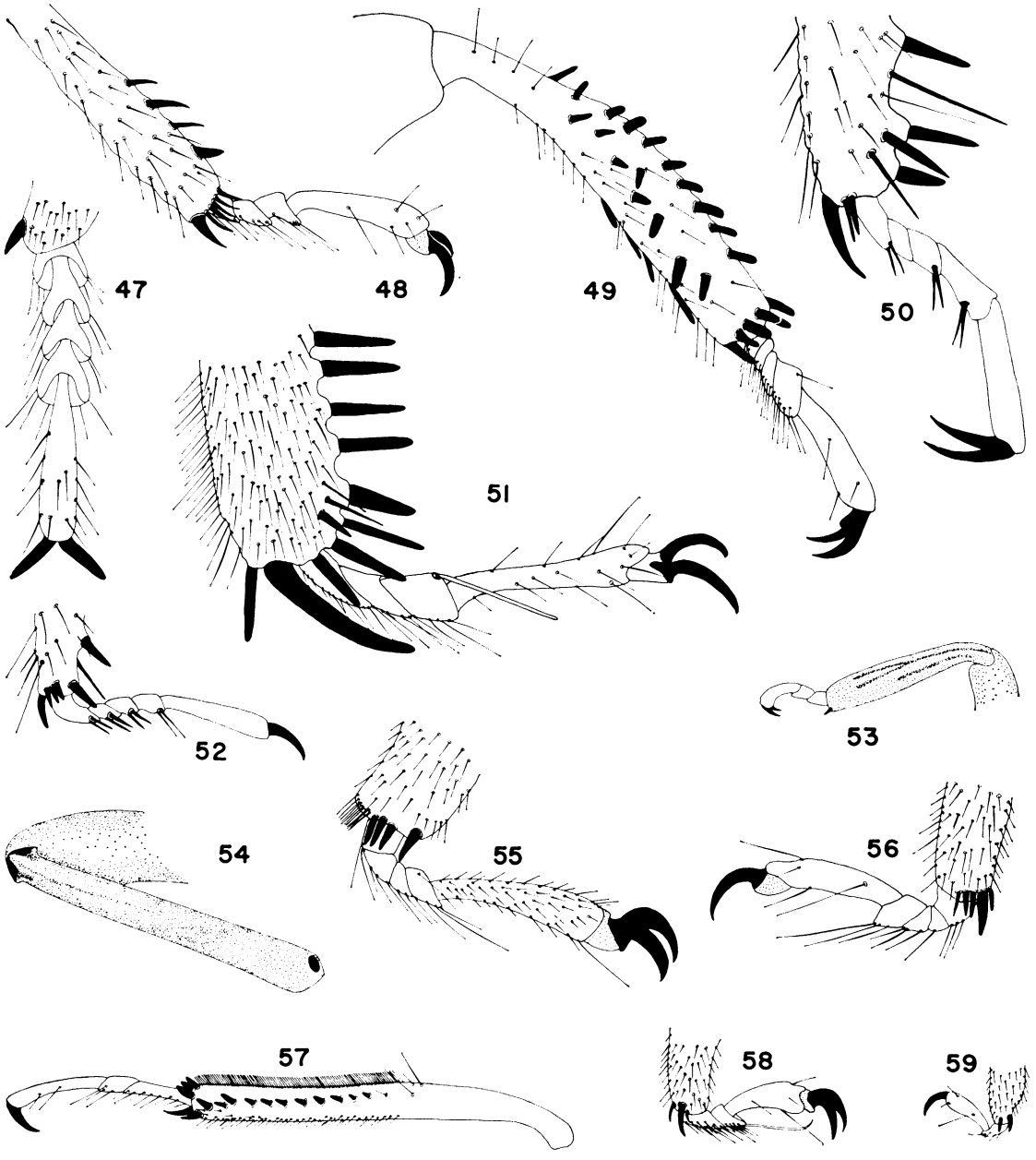

FIG. 47. *Deleaster trimaculatus* Fall; protarsus.
FIG. 48. *Pareiobledius pruinosus* (Bernhauer); metatarsus and apex of tibia.
FIG. 49. *Blediotrogus guttiger* Sharp; protarsus and tibia.
FIG. 50. *Planeustomus heydeni* Eppelsheim; protarsus and apex of tibia.
FIG. 51. *Bledius pallipennis* (Say); protarsus and apex of tibia.
FIG. 52. *Manda mandibularis* Moore; protarsus and apex of tibia.
FIG. 53. *Oxytelopsis* sp.; protarsus and tibia.
FIG. 54. *Rimba* sp.; protibia and apex of femur.
FIG. 55. *Trogactus* sp.; protarsus.
FIG. 56. *Thinodromus* sp.; protarsus.
FIG. 57. *Oxytelus* sp.; metatarsus and metatibia.
FIG. 58. *Carpelimus* sp.; protarsus.
FIG. 59. *Thinobius* sp.; mesotarsus.

strongly modified head is found in some pselaphids and some myrmecophilous staphylinids. The head, thorax, and elytra of these four genera are not foveate as is the case with most genera of the Pselaphidae.

All the characteristics that *Euctenopsia*, *Pselaphomimus*, *Dirocephalus*, and *Pardirocephalus* share with the Pselaphidae are also found in some genera of the Osoriinae. Characters that are common to the Pselaphidae but are not found in the Osoriinae are not found in these four genera; therefore they are herein transferred from Oxytelinae to the Osoriinae rather than the Pselaphidae.

EULIBIA

Eulibia CAMERON, 1945a, p. 66. Type species: *Eulibia albizziae* Cameron.

The holotype of the type species has been studied, and the genus should be transferred to the Osoriinae.

RIMULINCOLA

Rimulincola SANDERSON, 1946, p. 131. Type species: *Rimulincola divalis* Sanderson.

DISCUSSION

Rimulincola was moved from the Phloeocharinae, in which it had been placed by Sanderson (1946), to the Oxytelinae by Moore (1964a) because of the presence of a straplike second abdominal sternite. Many staphylinids have a reduced second sternite, but only the Oxytelinae have this sclerite fully developed and articulating on the third sternite. Members of the Oxytelinae do not have a midlongitudinal carina on the second and third sternites, whereas *Rimulincola* does. *Rimulincola* does not have the typical oxyteline features of openings to abdominal glands in the ninth tergites and the separation of the ninth tergum into two parts by the tenth tergum. For these reasons *Rimulincola* should not be included in the Oxytelinae. The closest relative of *Rimulincola* is *Derops*, which is included in the Phloeocharinae. For the present, *Rimulincola* should be transferred back to that subfamily.

DEROPS

Derops SHARP, 1889, p. 418. Type species: *Derops longicornis* Sharp (Blackwelder, 1952, p. 121).

Paraleaster CAMERON, 1930, p. 169; new synonym. Type species: *Paraleaster longipennis* Cameron (Blackwelder, 1952, p. 290).

DISCUSSION

Paraleaster was described in the Oxytelinae (Cameron, 1930). For the same reasons as are given under *Rimulincola*, *Paraleaster*, which is very close to *Rimulincola*, should be transferred from the Oxytelinae to the Phloeocharinae. Furthermore, *Paraleaster* is inseparable from *Derops*, and the two should be synonymized. *Derops* was originally placed in the Phloeocharinae.

SPECIES INCLUDED

D. coreanus Watande; new combination, transferred from *Paraleaster*
D. japonicus Sawada; new combination, transferred from *Paraleaster*
D. kasugaensis Sawada; new combination, transferred from *Paraleaster*
D. longicornis Sharp; H
D. longipennis (Cameron); H; new combination, transferred from *Paraleaster*

ELONIUM

Elonium LEACH, 1819, p. 175. Type species: *Elonium striatus* (Gravenhorst) Leach, 1819, p. 175.

Acrolocha THOMSON, 1858, p. 38; new synonym; isogenotypic. Type species: *Acrolocha striata* (Gravenhorst) Blackwelder, 1952, p. 36.

DISCUSSION

The type species of *Elonium* has long been stated to be *E. striatulus* (Fabricius) but is demonstrated herein to be incorrect. The correct type species is *E. striatus* which is the same type species for *Acrolocha*. For more detail, see the nomenclatural discussion under *Coprophilus*. The name *Elonium* is now in the Omaliinae.

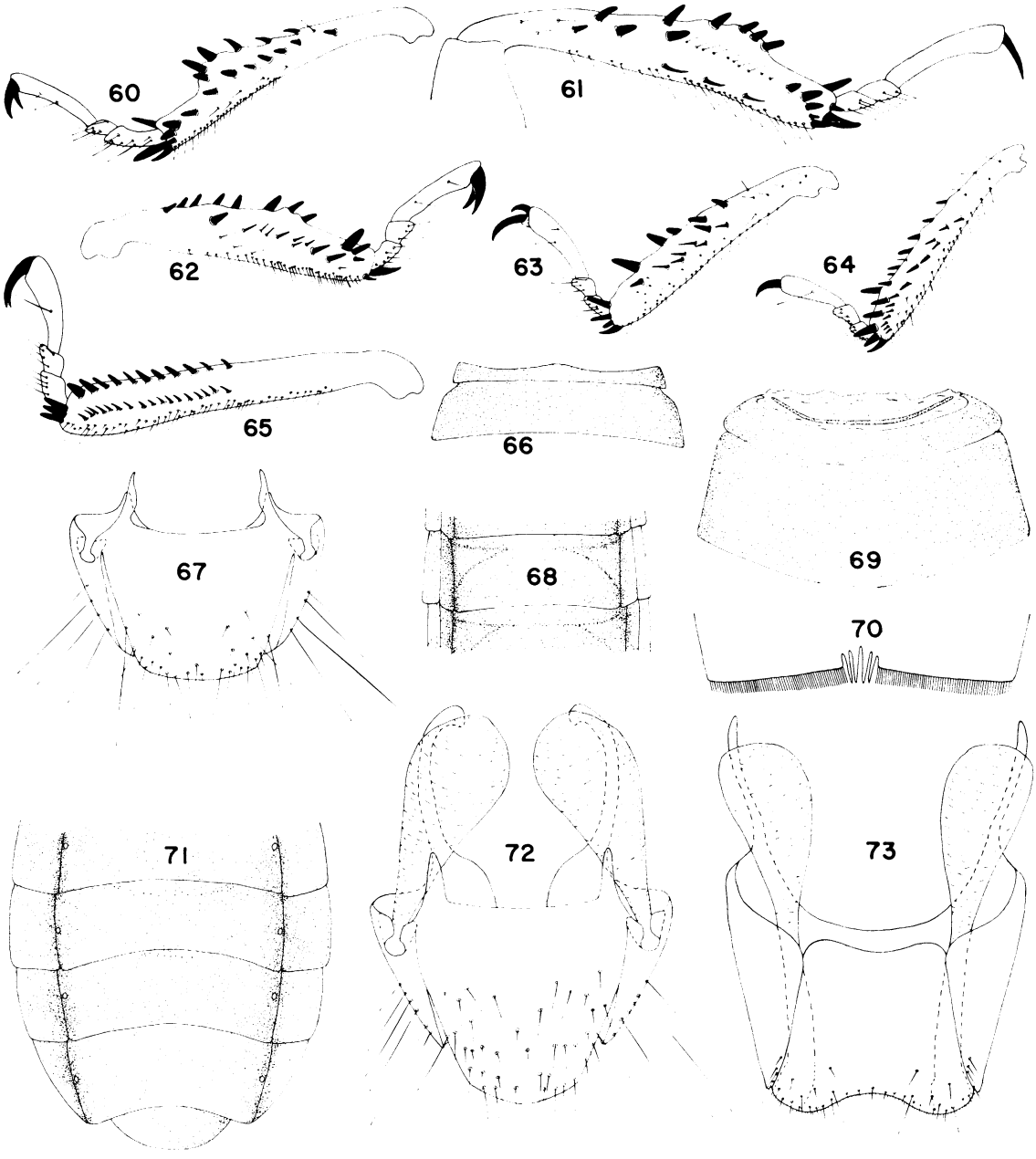

FIG. 60. *Oxytelus* sp.; protarsus and tibia.
FIGS. 61–64. *Anotylus* sp.; protarsi and tibiae.
FIG. 65. *Anotylus exasperatus* (Kraatz); protarsus and tibia.
FIG. 66. *Syntomium aeneum* Müller; abdomen, ventral view; sternites II and III.
FIG. 67. *Bledius ferratus* LeConte; abdomen, dorsal view; tergal elements IX and X; female.
FIG. 68. *Oxytelus* sp.; abdomen, dorsal view; terga and laterosternites V and VI.
FIG. 69. *Coprophilus striatulus* (Fabricius); abdomen, ventral view; sternites II and III.
FIG. 70. *Parosus hilaris* Sharp; abdomen, dorsal apex of tergum VII.
FIG. 71. *Deleaster trimaculatus* Fall; dorsal view; terga and laterosternites IV–VIII.
FIG. 72. *Bledius jacobinus* LeConte; abdomen, dorsal view; tergal elements IX and X; male.
FIG. 73. *Paraploderus* sp.; abdomen, dorsal view; tergal elements IX and X; male.

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ADDENDUM

SINCE COMPLETION OF the present paper, three papers important to this study have been published.

Kasule (1968) gave a subfamilial description of the larval Oxytelinae along with a key to the larvae of the subfamily known from Britain.

A description of *Bledioschema schweigeri*, a new genus and new species from Turkey was written by Smetana (1967). There was no detailed discussion of the relationships of this genus, but Smetana considered the genus to be near *Bledius*. The necessary characters for deducing the relationships were not included in the description, and I have not been able to study the specimens, so I cannot be certain that the suggested relationship is phylogenetically correct. The figure of the species shows what may be membranous lobes of the tarsi. If so, then *Bledioschema* may be closer to *Pareiobledius* and *Blediotrogus*.

Coiffait and Saiz (1968) completed a paper on the Staphylinidae of Chile in which they described some new species and a new genus in the Oxytelinae. The new genus, *Metoxytelus*, was erected to include one species, *Oxytelus sulcicollis* Gemminger and Harold. I have included this species under *Anotylus* and while studying the *Anotylus-Oxytelus* complex did not consider the species to be particularly different from other species in *Anotylus*. The characters used to separate *Anotylus* and *Metoxytelus* are not considered to be useful for separation of genera in *Anotylus* (see Discussion under *Anotylus*). It is probable that these genera can be easily bridged by several species and that *Metoxytelus* is congeneric with *Anotylus*.

INDEX OF SCIENTIFIC NAMES

Page numbers in boldface type refer to descriptions of the taxa.