

## A revision of the African Ochodaeidae (Coleoptera: Scarabaeoidea)

by

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Four genera of Ochodaeidae occur in Africa, *Ochodaeus* Serville, *Chaetocanthus* Péringuey, *Namibiotalpa* **gen. nov.** and *Synochodaeus* Kolbe. Eight new species of *Ochodaeus*, one of *Chaetocanthus*, one of *Namibiotalpa* and two of *Synochodaeus* are described. They are *O. alius*, *O. corniger*, *O. femoratus*, *O. quadridentatus*, *O. rectus*, *O. singularis*, *O. stridulatus*, *O. unicornis*, *C. arenarius*, *N. fossilis*, *S. costatus* and *S. cucullus*. Keys are provided to the genera and species and all species are described and their distribution mapped.

### INTRODUCTION

The species of the African genera of the Ochodaeidae (Crowson's 1981 family classification was followed) have not been revised and the most recent descriptions of species were published in the 1920's. The genera have not been well defined and no key to them exists. Consequently, and because of the availability of a considerable amount of museum material, it was considered worthwhile revising the genera.

Four genera of Ochodaeidae occur in Africa. The virtually cosmopolitan genus *Ochodaeus* Serville is widespread in Africa, occurring throughout the continent, *Chaetocanthus* Péringuey is restricted to Africa south of the equator, *Synochodaeus* Kolbe has a smaller area of distribution, being limited to south-western Africa, and the new genus, *Namibiotalpa*, occurs only in areas of deep sand in the Namib Desert. *Ochodaeus* is represented in Africa by 13 known species, *Chaetocanthus* by three, *Synochodaeus* by three and *Namibiotalpa* by one.

Very little is known about the biology of the Ochodaeidae. Adults are attracted to light and have occasionally been taken in traps baited with cattle dung and carrion but also in unbaited traps so it seems likely they may have fallen into the traps by chance.

The supposed larva of *Pseudochodaeus estriatus* (Schaeffer) from the western United States of America was described by Carlson & Ritcher (1974). They also dissected adults and found spores of Basidiomycete fungi in the mid- and hindgut.

Nothing is known about immature stages of African species.

Abbreviations for museums containing material studied and the curators responsible for loans are as follows:

BMNH – British Museum (Natural History), London. M. E. Bacchus, L. Jessop.

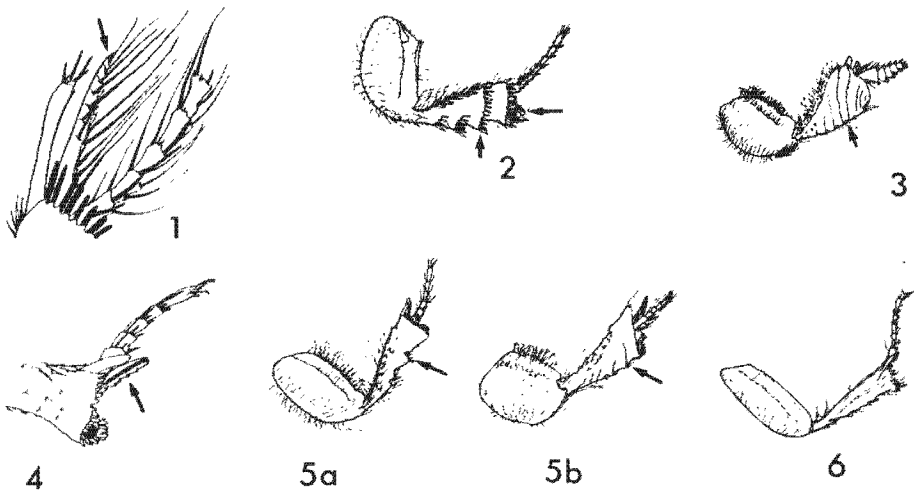
HAHC – H & A Howden Collection, Carleton University, Ottawa. H. F. Howden.

- IRSN – Institut Royal des Sciences Naturelles de Belgique, Brussels. G. Demoulin.  
 MNHN – Muséum National d'Histoire Naturelle, Paris. Y. Cambefort.  
 MRAC – Musée Royal de l'Afrique Centrale, Tervuren. J. Decelle.  
 NCI – National Collection of Insects, Pretoria. R. G. Oberprieler.  
 NMB – National Museum, Bloemfontein. S. Louw.  
 SAM – South African Museum, Cape Town. V. B. Whitehead.  
 SM – State Museum, Windhoek. J. A. Irish.  
 TM – Transvaal Museum, Pretoria. S. Endrödy-Younga.  
 UP – University of Pretoria.  
 ZMB – Zoologisches Museum, Berlin. M. Uhlig.

### SYSTEMATICS

The African Ochodaecidae can be characterized by the following characters: clypeus and labrum large, mandibles visible from above; antennae 9- or 10-segmented, basal club segment more or less cupuliform; eyes not divided by the genal canthus; longer mesotibial spur crenulate or pectinate; male genitalia consist of divided basal piece, symmetrical parameres, partially sclerotized membranous median lobe and large internal sac.

The species can usually be distinguished by clypeal, labral and mandibular characters, striation and punctation on the pronotum and elytra and various characters on the legs. The internal sac is useful for species identification in fresh (live) specimens in which it can be everted but is practically useless in dry material.



Figs 1–6. Ochodaecidae, diagnostic characters (schematic); 1. *Chaetocanthus insuetus*, pectinate spur (arrow). 2. *C. insuetus*, metafemur and -tibia, illustrating complete subapical carina and dentiform process (arrows). 3. *Namibiotalpa fossilis*, metafemur and -tibia, illustrating two subapical carinae (arrow) and absence of dentiform process. 4. *Synochodaeus modestus*, crenulate spur (arrow). 5. *Synochodaeus* species, metafemur and -tibia, illustrating carinae on tibia (arrows); (a) *S. modestus*, (b) *S. cucullus*. 6. *Ochodaenus gigas*, metafemur and -tibia, illustrating absence of carinae on latter.

## Key to the genera of African Ochodaeidae

- 1 Antennae 9-segmented; protibiae bidentate; mesotibial spurs pectinate (Fig. 1); metafemora with complete (or nearly so) subapical carina (Figs 2 & 3) ..... 2
- Antennae 10-segmented; protibiae tri- or quadridentate (basal tooth sometimes weakly developed, rarely absent); mesotibial spurs crenulate (Fig. 4); metafemora without complete subapical carina (Figs 5 & 6) ..... 3
- 2 Metatibia with one complete subapical carina; metatibial dentiform process (Fig. 2) present; tarsal segments cylindrical; head and pronotum granulate; tarsal claws present ..... *Chaetocanthus* Péringuey.
- Metatibia with two complete subapical carinae; metatibial dentiform process absent (Fig. 3); tarsal segments transverse, flattened; head and pronotum punctate; tarsal claws absent ..... *Namibiotalpa* gen. nov.
- 3 Metatibia with median or subapical, spinose carina (Fig. 5); meso- and metatibia with crenulate spur; body shape elongate ..... *Synochodaeus* Kolbe
- Metatibia without carina (Fig. 6); only mesotibia with crenulate spur; body shape globose ..... *Ochodaeus* Serville.

Genus *Ochodaeus* Serville, Figs 7, 8

***Ochodaeus*** Serville, 1828: 360; Kolbe 1907: 27; Arrow 1912: 21.

Type-species: *Scarabaeus chrysoloides* Schrank.

Body robust, convex, pale testaceous to dark brown, 3.5–7.0 mm long; head, pronotum and elytra granulate or punctate, setose.

*Head* transverse; mandibles, which are alike in the sexes in most species, and labrum visible from above; labrum transverse with anterior margin straight to deeply emarginate, setose; clypeus transverse, anterior margin straight, irregular or rounded; clypeal surface with or without horn; fronto-clypeal suture distinct to obsolete; antennae 10-segmented, scape expanded, triangular, setose; segments 8 & 9 cupuliform but not receiving segment 10.

*Pronotum* subquadrate, evenly convex, surface granulate or punctate, setose.

*Elytra* with 6 punctate striae between suture and base of humeral callus; interstriae punctate or granulate, setose; wings well developed.

*Abdomen*: Propygidium modified to accept elytra or not; pygidium and six visible sternites setose, sternites free; fifth sternite with or without dorso-lateral stridulatory peg.

*Legs*: Protibia tri- or quadridentate, basal tooth always smaller than the others; mesotibia with longest spur crenulate.

*Male genitalia* with symmetrical parameres, large basal piece and very large, membranous internal sac with species-specific armature (Fig. 8).

Remarks: There is considerable confusion in the existing literature about the validity of the name *Ochodaeus*, as it is antedated by several names which are enigmatically listed as junior synonyms of the former in all catalogues (see Woodruff 1973). Consequently, only the literature pertaining to the African species is listed here and the problem of the validity of the different names is being investigated in a separate study of the phylogeny of the genera in the family (in preparation).

The genus *Ochodaeus* is widespread, occurring mainly in arid and semi-arid regions of the New World, Africa, Madagascar and the Palaearctic and Oriental Regions. It is absent from Australia. In Africa, members of the genus are known from as far south as Cape Town and as far north as the mediterranean coast of Tunisia. Most species, however, have relatively small areas of distribution.

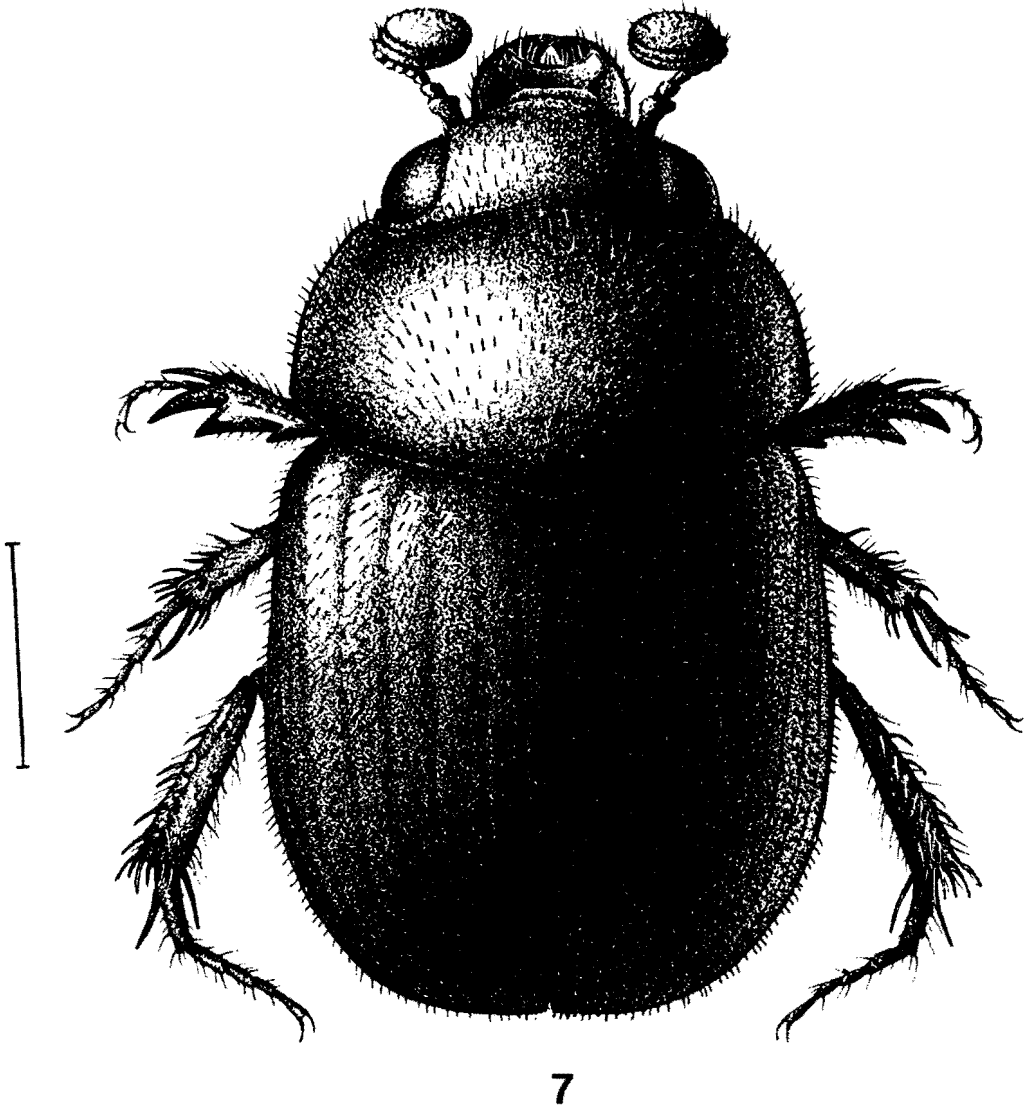


Fig. 7. *Ochodaeus congoensis*, habitus. Scale line = 1 mm.

Key to species of *Ochodaeus*

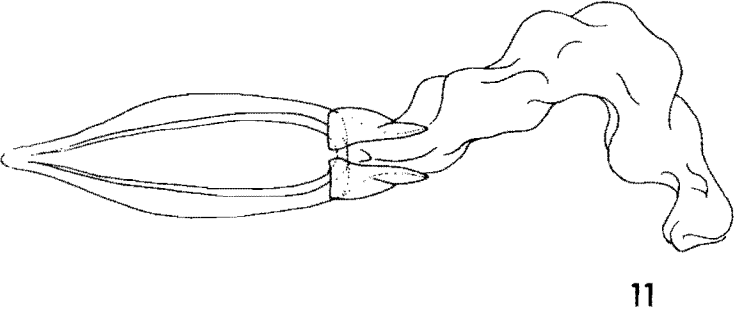
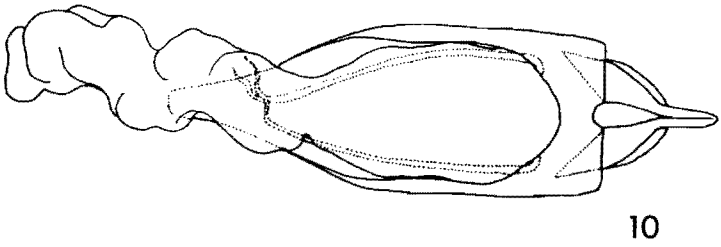
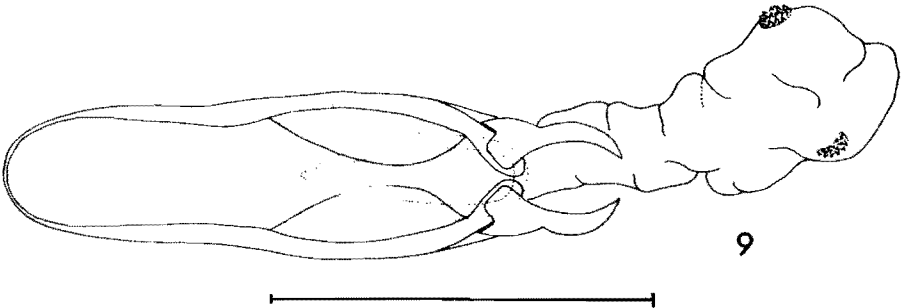
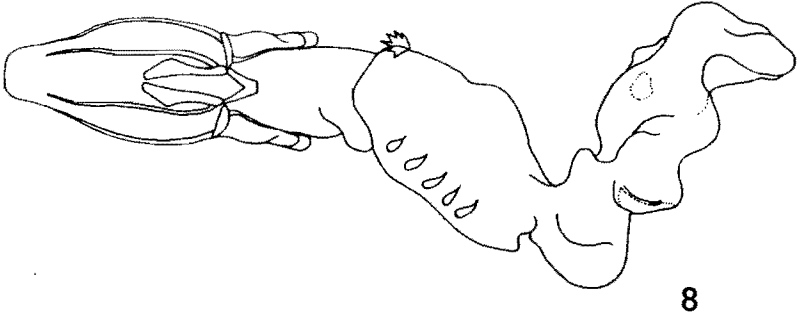
- 1 Clypeus with horn ..... 5  
 — Clypeus without horn ..... 2  
 2 Clypeus entire ..... 3  
 — Clypeus emarginate or with interrupted ridge ..... 4  
 3 Fronto-clypeal suture a distinct, thin line; central African ..... *stridulatus* sp. nov.  
 — Fronto-clypeal suture obsolete; South African ..... *capicola* Péringuey.  
 — Fronto-clypeal region deeply depressed; West African ..... *alius* sp. nov.  
 4 Clypeus emarginate; metafemur with broad triangular plate; metatibia explanate; propygidium and elytral apex without interlocking hooks: south-west African ..... *adsequa* Kolbe.  
 — Clypeus with interrupted ridge; metafemur without broad plate; metatibia normal; propygidium and elytral apex with corresponding interlocking hooks; north-east African ..... *carinatus* Benderitter.  
 5 Protibia quadridentate; abdominal sternites membranous, without distinct dorso-lateral margin against which elytra close; stridulatory peg absent; southern African ..... 6  
 — Protibia tridentate; abdominal sternites sclerotized, with distinct dorso-lateral margin; stridulatory peg present; mostly central to north African ..... 9  
 6 Labrum straight ..... 7  
 — Labrum emarginate ..... 8  
 7 Right mandible as in Fig. 16 ..... *rectus* sp. nov.  
 — Right mandible as in Fig. 17 ..... *corniger* sp. nov.  
 8 Right mandible as in Fig. 18 ..... *unicornis* sp. nov.  
 — Right mandible as in Fig. 19 ..... *quadridentatus* sp. nov.  
 9 Fronto-clypeal suture visible as a line or depression ..... 11  
 — Fronto-clypeal suture obscured by base of clypeal horn ..... 10  
 10 In lateral view clypeal horn forms a ridge with anterior clypeal margin; north African ..... *gigas* Marseul.  
 — In lateral view clypeal horn does not form a ridge with anterior clypeal margin; east African ..... *singularis* sp. nov.  
 11 Restricted to southern Africa; stridulatory peg very small, lightly sclerotized ..... *femoratus* sp. nov.  
 — Restricted to central and west Africa; stridulatory peg distinct ..... *congoensis* Benderitter.

***Ochodaeus stridulatus* sp. nov.**, Figs 12, 23, 31.

*Description*: 6 mm long, rufo-brunneous. *Head* with labrum slightly emarginate; mandibles as in Fig. 12; clypeal margin entire; fronto-clypeal suture distinct, visible as a thin dark line; surface of head coarsely granulate, setigerous. *Pronotum* surface coarsely granulate, setigerous. *Elytra* with large humeral calli; striae with distinct, large deep punctures; interstriae with small setigerous tubercles. *Abdomen* with sternites strongly sclerotized and distinct dorso-lateral margin with distinct processes; stridulatory peg very large, recurved (Fig. 23). *Legs*: Protibia tridentate, basal tooth smaller than others; femora with small projecting lateral plate. *Distribution*. Fig. 31.

**MATERIAL EXAMINED**: Holotype. Congo Francais, Boda. P. Charleuf. Coll. H. du Buysson (MNHN).

This new species is similar to *O. capicola* Péringuey and to *O. alius* sp. nov. However, it can be distinguished from both by the unique, large curved stridulatory peg. The peg is smaller and less curved in the other two species. Furthermore, the fronto-clypeal suture varies between the species; it is obsolete in *O. capicola*, a thin dark line in *O. stridulatus* and the clypeo-frontal area is depressed in *O. alius*. The species are geographically widely separated; *O. capicola* occurs in South Africa, *O. stridulatus* in central Africa and *O. alius* in West Africa.



*Ochodaeus capicola* Péringuey, Figs 13, 24, 30.

**Ochodaeus capicola** Péringuey, 1900: 505; Arrow 1912: 21.

*Description:* 4,5–6,0 mm long, pale testaceous to dark rufo-brunneous. *Head* with labrum emarginate, ridged, setose; mandibles as in Fig. 13; clypeus triangular, anterior margin entire; fronto-clypeal suture obsolete; surface of head coarsely granulate, setigerous. *Pronotum* surface coarsely granulate, setigerous, occasionally with a shallow median longitudinal impression. *Elytra* with large humeral calli; surface with small setigerous tubercles. *Abdomen* with stridulatory peg present (Fig. 24). *Legs:* Protibia tridentate, basal tooth smaller than others; metatrochanter small; pro-, meso- and metafemur with projecting lateral plate. *Distribution.* Fig. 30.

**MATERIAL EXAMINED:** Holotype, without data (SAM). CAPE PROVINCE. Algeria Forest Reserve, Cederberg (2 TM); Algoa Bay [Port Elizabeth] (1 TM); Assegaaibosch (1 BMNH); Camps Bay (2 TM); Cederberg (1 TM); Citrusdal (1 TM); Devils Kloof, Cedarberg (1 TM); Rondebosch (2 SAM); Stellenbosch (2 TM); Zeekoei Vlei (1 SAM). Specimens have been collected throughout summer.

*Ochodaeus capicola* is most similar to *O. alius* sp. nov. and to *O. stridulatus* sp. nov. but can easily be distinguished from both by the absence of a distinct fronto-clypeal suture.

*Ochodaeus alius* sp. nov., Figs 25, 31.

*Description:* 4,5 mm long, rufo-brunneous. *Head* with labrum emarginate, ridged, setose; clypeal margin entire; fronto-clypeal region deeply depressed; surface of head coarsely granulate, setigerous. *Pronotum* surface granulate, setigerous. *Elytra* with humeral calli barely raised; surface with very small setigerous tubercles. *Abdomen* with stridulatory peg present (Fig. 25). *Legs:* Protibia tridentate, basal tooth very small; pro-, meso- and metafemur with projecting lateral plate. *Distribution.* Fig. 31.

**MATERIAL EXAMINED.** Holotype: Ivory Coast, Bouaké, 350 m, 7.41 N 5.02 W, 7–28.V.80, O. Kukal, u.v. light (HAHC).

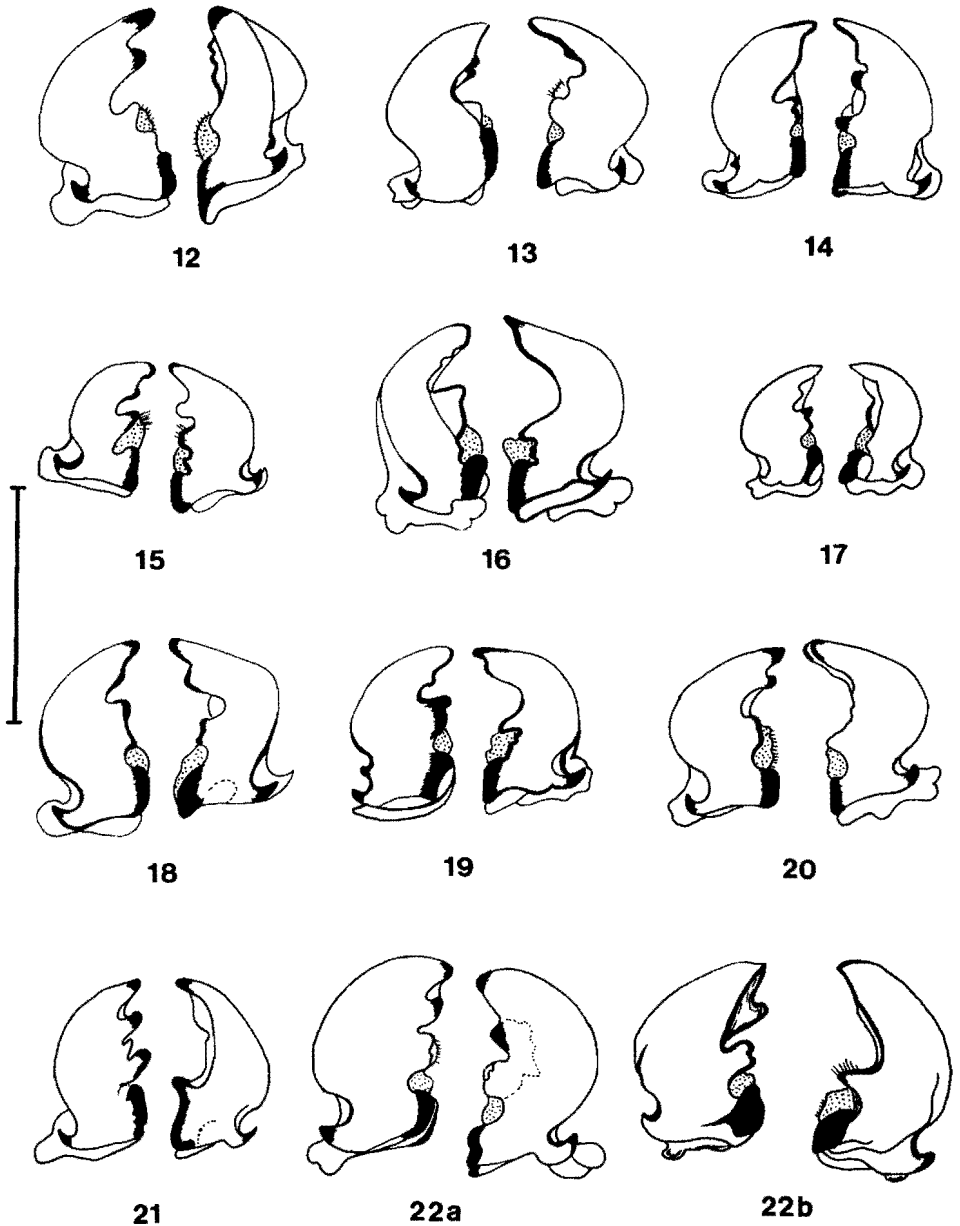
This new species is similar to *O. capicola* and *O. stridulatus* but has the fronto-clypeal region deeply depressed; the fronto-clypeal suture is obsolete in *O. capicola* and visible as a thin dark line in *O. stridulatus*.

*Ochodaeus adsequa* Kolbe, Figs 14, 26, 30.

**Ochodaeus adsequa** Kolbe, 1907: 28; Péringuey 1908: 649.

*Description:* 3,5–6,0 mm long, rufo-brunneous. *Head* with labrum emarginate, ridged, setose; mandibles as in Fig. 14; clypeus emarginate; fronto-clypeal suture visible as transverse depression; surface of head coarsely granulate, setigerous. *Pronotum* surface coarsely granulate, setigerous. *Elytra* with large humeral calli; surface with small setigerous tubercles. *Abdomen* with stridulatory peg present (Fig. 26). *Legs:* Protibia tridentate, basal tooth smaller than others; metafemur with large, projecting triangular plate; metatibia broad and flat. *Distribution.* Fig. 30.

Figs 8–11. Ochodacidae, male genitalia in dorsal view; 8. *Ochodaeus carinatus*. 9. *Synochodaeus cuculus*. 10. *Chaetocanthus insuetus*. 11. *Namibiotalpa fossilis*. Scale line = 1 mm.



Figs 12–22. *Ochodaeus* species, mandibles; 12. *O. stridulatus*. 13. *O. capicola*. 14. *O. adsequa*. 15. *O. carinatus*. 16. *O. rectus*. 17. *O. corniger*. 18. *O. unicornis*. 19. *O. quadridentatus*. 20. *O. gigas*. 21. *O. singularis*. 22. *O. congoensis*, (a) female, (b) male. Scale line = 0,5 mm.



**MATERIAL EXAMINED.** Holotype. D.S.W-Afrika, Gobabis am . . . [illegible], Nosob Fluss, Ende III-IV.02, Gentz, S. G. 97730 (ZMB). BOTSWANA. Boro River (1 TM). SWA/NAMIBIA. Grootfontein, 12 mls N, (3 BMNH). Narebis (1 SAM); Nauwkluft (1 TM); Okahandja (3 SM, 2 TM); Okaukuejo (1 SM); Otavi, 18 mls SW (4 BMNH); Tsumeb, Ghaub 47 (2 SM); Tsumkwe, Kungveld (2 TM); Windhoek (1 SAM, 5 TM). Specimens have been collected in January, March, April, May, August and November.

*Ochodaeus adsequa* can easily be distinguished from any other species by the emarginate clypeus and the large, projecting triangular plate on the metafemur.

*Ochodaeus carinatus* Benderitter, Figs 15, 31.

**Ochodaeus carinatus** Benderitter, 1913: 359.

**Ochodaeus ciliatus** Benderitter, 1921: 113. **syn. nov.**

**Ochodaeus minutus** Benderitter, 1923: 5. **syn. nov.**

**Description:** 3.5-6.0 mm long, pale testaceous to dark rufo-brunneous. *Head* with labrum emarginate, ridged, setose; mandibles as in Fig. 15; clypeus with interrupted ridge; fronto-clypeal suture faint; surface of head granulate, setigerous. *Pronotum* surface punctate, setigerous. *Elytra* with humeral calli barely raised; surface with small setigerous tubercles; apex with hooks that interlock with corresponding hooks on propygidium. *Abdomen* without stridulatory peg. **Distribution.** Fig. 31.

**MATERIAL EXAMINED.** Holotype, *carinatus*: Obok, Coll. Pic (MNHN); holotype, *ciliatus*: Ethiopie: Erythrée ex coll. J. Gillet (IRSN), paratype no data (MNHN); holotype, *minutus*: Abesynia, ex coll. J. Gillet (IRSN); 'types', *castaneus*: B.E.A. Campi Simba, 3/7.VI.1913, Dr Bayer (1 MNHN); B.E.A. Tsavo R. 4/21.V.1913, Dr Bayer (2 MNHN). DJIBOUTI. Djibuti (IRSN); Obok (MNHN). ETHIOPIA. Awash Park, Shoa Prov., (11 MRAC); Awash station (4 MRAC); Dire-Dawa (4 MNHN, 4 MRAC); Errer (1 MRAC); Ghed-do, Siro Wells (1 MRAC); Hawash Station (1 BMNH); Neghelli, 52 km E (5 MRAC); Nura (1 MRAC). Without data, 7. Specimens have only been collected between May and September.

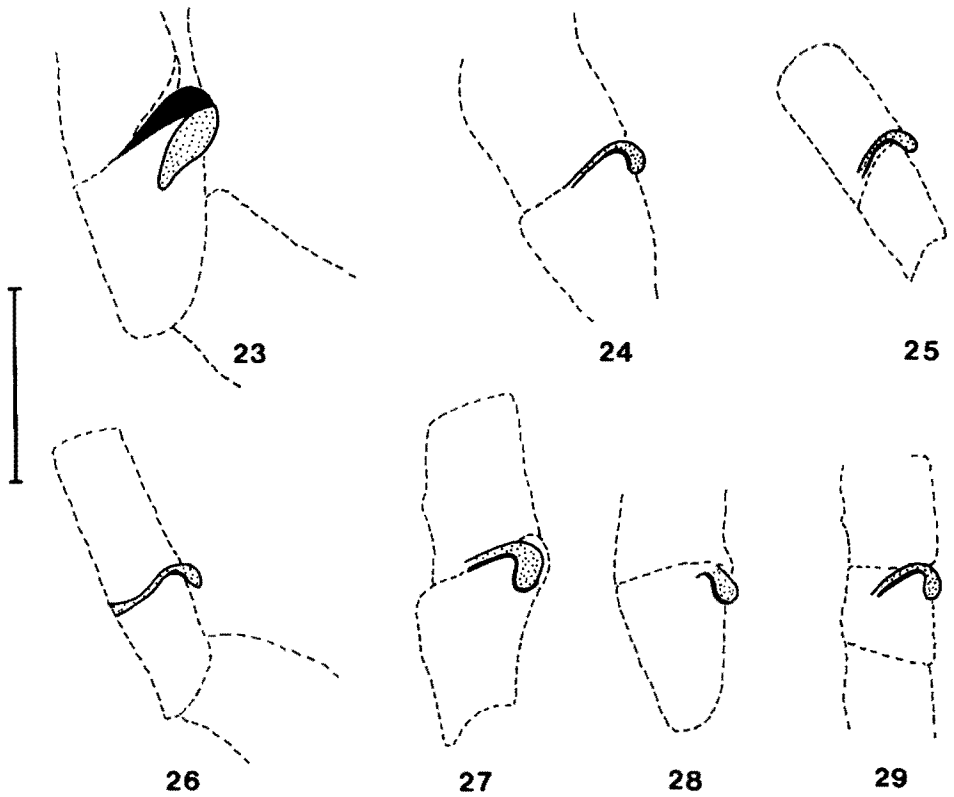
*Ochodaeus carinatus* is rather variable but is easy to distinguish from any other species by the very characteristic hooks on the elytral apices and corresponding hooks on the propygidium as well as by the absence of a stridulatory peg. It is the only African species with the abovementioned features.

The two Benderitter species, *O. ciliatus* and *O. minutus*, are indistinguishable from *O. carinatus*. Both occur within the distribution range of *O. carinatus* and have the characteristic elytral locking mechanism and the absence of a stridulatory peg. Consequently we regard them as synonymous with *O. carinatus*.

The "types" of another Benderitter species, *O. castaneus*, are housed in the MNHN but no publication in which this species was described could be traced so it seems likely that the "species" was never described, with the result that the name is merely a manuscript name. However, the three specimens labelled "types" are merely dark forms of *O. carinatus* and in the event of the species having been described in an obscure publication it would be synonymous with *O. carinatus*.

*Ochodaeus rectus* sp. nov., Figs 16, 32.

**Description:** 6.0-7.0 mm long, testaceous. *Head* with labrum straight, setose; mandibles as in Fig. 16; clypeus with distinct horn, margin straight; fronto-clypeal



Figs 23-29. *Ochodaeus* species, stridulatory pegs; 23. *O. stridulatus*. 24. *O. capicola*. 25. *O. alius*. 26. *O. adsequa*. 27. *O. gigas*. 28. *O. singularis*. 29. *O. congoensis*. Scale line = 0,25 mm.

suture visible laterally; surface of head punctate, setigerous. *Pronotum* surface punctate, setigerous. *Elytra* with large humeral calli; surface punctate, setigerous. *Abdomen* with membranous sternites, without distinct dorso-lateral margin; stridulatory peg absent. *Legs*: Protibia quadridentate, basal tooth very small, metafemur broad, parallel-sided; metatibia stout, flared, not distinctly ridged. *Distribution*. Fig. 32.

**MATERIAL EXAMINED:** Holotype. S. Afr. Richtersveld, Stinkfontein, 4 km SW, 28.49 S - 17.13 E, 8.9.1976; E-Y:1237 ground traps, 32 days leg. Endrödy-Younga (groundtraps with meat bait) (TM). Paratypes. 3 with same data as holotype (TM).

This new species is most similar to *O. corniger* sp. nov. It can most easily be distinguished from the latter by the differences in size and shape of the right mandible (Figs 16 & 17).

***Ochodaeus corniger* sp. nov.**, Figs 17, 32.

*Description:* 5.0 mm long, testaceous. *Head* with labrum straight, setose; mandibles as in Fig. 17; clypeus with distinct horn, margin straight; fronto-clypeal suture visible laterally; surface of head densely setigerous. *Pronotum* surface punctate, densely setigerous. *Elytra* with large humeral calli; surface punctate, densely setigerous. *Abdomen* with membranous sternites, without distinct dorso-lateral margin; stridulatory peg absent. *Legs:* Protibia quadridentate, basal tooth very small; metafemur broad, parallel-sided; metatibia slender, distinctly ridged. *Distribution.* Fig. 32.

**MATERIAL EXAMINED:** Holotype. Kuruman N.W. Cape, RSA SE 2723 Ad. 21–22 Feb. 1980. S. Louw, M-L. Penrith (SM). Paratype. Mukorob 14 Namaland, SE 2518 Ac, 12–14 Apr. 1974 (SM).

This new species is similar to *O. rectus* and *O. unicornis*. It can be distinguished from both by the size and shape of the right mandible (Figs 16, 17 & 18) and from *O. unicornis* by the emarginate labral margin in the latter; *O. corniger* has it straight.

***Ochodaeus unicornis* sp. nov.**, Figs 18, 32.

*Description:* 6.0 mm long, testaceous. *Head* with labrum emarginate, setose; mandibles as in Fig. 18; clypeus with distinct horn, margin straight; fronto-clypeal suture visible laterally; surface of head punctate, densely setigerous. *Pronotum* surface punctate, setigerous. *Elytra* with large humeral calli; surface with large, sparsely setigerous punctures. *Abdomen* with membranous sternites, without distinct dorso-lateral margin; stridulatory peg absent. *Legs:* Protibia quadridentate, basal tooth very small; metafemur attenuated distad; hind tibia slender, with spinose ridges. *Distribution.* Fig. 32.

**MATERIAL EXAMINED.** Holotype. Ovita [Okahandja] 6.4.53 (SM).

This new species is similar to *O. corniger* (see above) and *O. quadridentatus* sp. nov. It can be distinguished from *O. corniger* as discussed above and from *O. quadridentatus* mainly by the differences in shape of the right mandible (Figs 18 & 19).

***Ochodaeus quadridentatus* sp. nov.**, Figs 19, 32.

*Description:* 5.5–6.0 mm long, testaceous. *Head* with labrum emarginate, scotose; mandibles as in Fig. 19; clypeus with distinct horn, margin straight; fronto-clypeal suture visible laterally; surface of head punctate, densely setigerous. *Pronotum* surface punctate, densely setigerous. *Elytra* with large humeral calli; surface with large, setigerous punctures. *Abdomen* with membranous sternites, without distinct dorso-lateral margin; stridulatory peg absent. *Legs:* Protibia quadridentate, basal tooth very small. *Distribution.* Fig. 32.

**MATERIAL EXAMINED.** Holotype. 32 m SW Louis Trichardt, N. Tvl. S. Afr.; 23.03 S – 29.54 E, 28.3.1967, II A, – 20 (NCI). Paratypes. 3 with same data as holotype (NCI).

This new species is externally very similar to *O. unicornis* but can be distinguished from the latter by the very different shape of the right mandible (Figs 18 & 19).

*Ochodaeus gigas* Marseul, Figs 20, 27, 34.

**Ochodaeus gigas** Marseul, 1878: 58; Arrow 1912: 21.

*Description:* 4.0–7.0 mm long, testaceous to rufo-brunneous. *Head* with labrum deeply emarginate, setose; mandibles as in Fig. 20; clypeus wide, with large horn which forms a ridge between it and anterior clypeal margin; margin slightly irregular; fronto-clypeal suture obscured by base of clypeal horn; surface of head faintly punctate, setigerous. *Pronotum* surface faintly punctate, setigerous. *Elytra* with large humeral calli; striae with distinct, small punctures; interstriae with short setae. *Abdomen* with sclerotized sternites, with distinct dorso-lateral margin; stridulatory peg present (Fig. 27). *Legs:* Protibia tridentate, basal tooth smaller than others; metafemur with small projecting triangular plate; metatibia slender, with median row of spines. *Distribution.* Fig. 34.

**MATERIAL EXAMINED.** TUNISIA. Bou-Medma (5 MNHN); Gafsa (1 MNHN); Maknassy (2 MHMN); Ouargla, El Goléa Ghardala (2 MNHN); Sfax (1 MNHN); Tozeur (2 MNHN). Without data, 9.

This species, the type of which could not be traced, is very distinctive and not easily confused with any other. The most distinctive character is the large clypeal horn which forms a distinct ridge with the anterior margin of the clypeus and which appears triangular in profile.

*Ochodaeus singularis* sp. nov., Figs 21, 28, 33.

*Description:* 5.0 mm long, rufo-brunneous. *Head* with labrum emarginate, setose; mandibles as in Fig. 21; clypeus narrow, with distinct horn, margin arcuate; fronto-clypeal suture visible as a dark line; surface of head faintly punctate, setigerous. *Pronotum* surface faintly punctate, densely setigerous. *Elytra* with large humeral calli; striae with distinct, large punctures; interstriae setigerous. *Abdomen* with sclerotized sternites, with distinct dorso-lateral margin; stridulatory peg present (Fig. 28). *Legs:* Protibia with two large teeth and basally one, very much smaller; metafemur with large, projecting triangular plate; metatibia very broad. *Distribution.* Fig. 33.

**MATERIAL EXAMINED:** Holotype. Kenya Colony, Northern Frontier District, Juba River, 1922. Dr. J. O. Beven (BMNH).

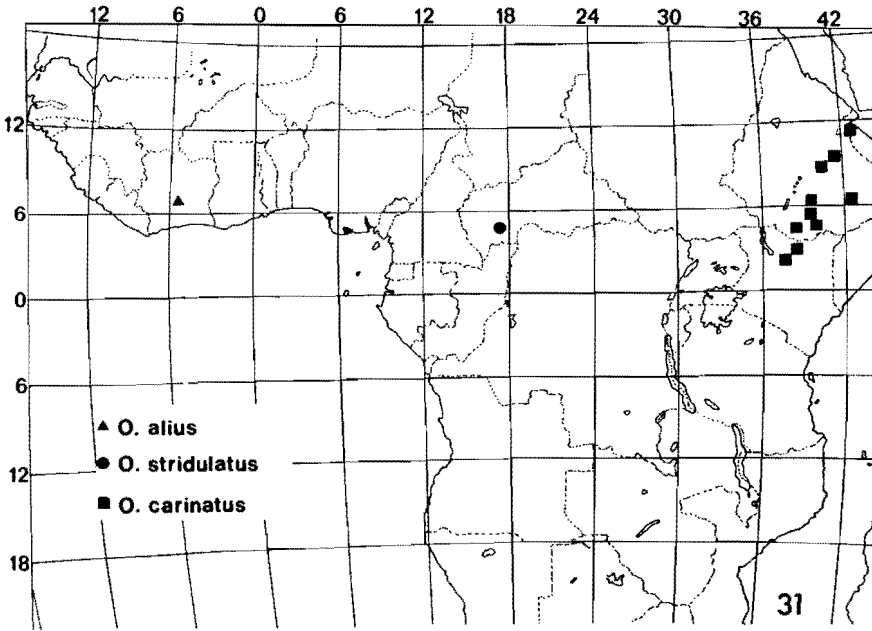
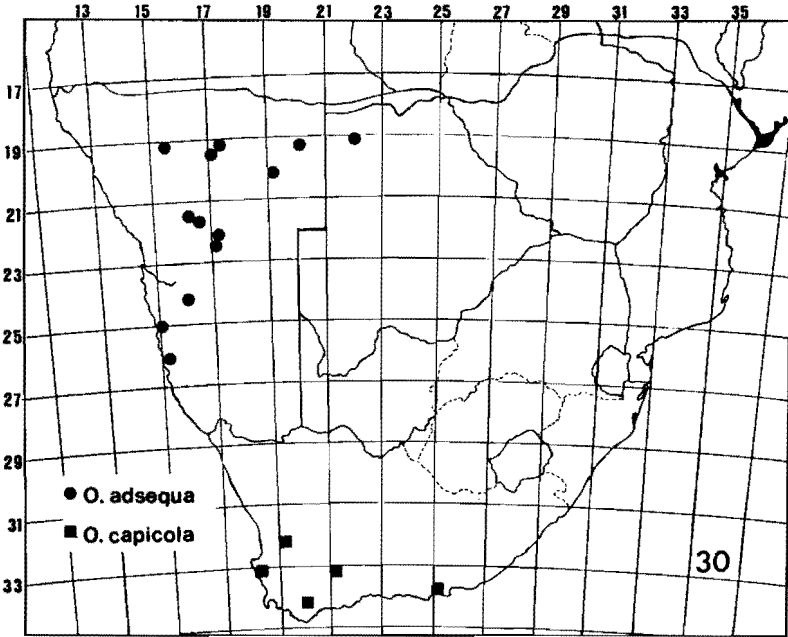
This new species is very distinctive and not easily confused with any other. The shape of both mandibles is unique (Fig. 21) as is the shape of the metafemur and metatibia.

*Ochodaeus femoratus* sp. nov., Fig. 32.

*Description:* 5.5 mm long, pale testaceous. *Head* with labrum deeply emarginate, setose; clypeus wide, with small horn, margin irregular; fronto-clypeal margin visible as a deep, wide depression; surface of head faintly punctate, setigerous. *Pronotum* surface faintly punctate, setigerous. *Elytra* with large humeral calli; striae with distinct, large punctures; interstriae with short setae. *Abdomen* with sclerotized sternites, with

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Figs 30–31. Distribution of *Ochodaeus* species; 30. *O. adsequa* and *O. capicola*. 31. *O. alius*, *O. stridulatus* and *O. carinatus*.



distinct dorso-lateral margin; stridulatory peg present but very small and lightly sclerotized. *Legs*: Protibia tridentate, basal tooth much smaller than others; pro-, meso- and metafemur with broad, projecting triangular plate; metatibia gradually widening apically, with lateral, widely spaced spines. *Distribution*. Fig. 32.

**MATERIAL EXAMINED**: Holotype. Grootdraai, Olifants Riv. N.E.Tvl. 33.41 S - 21.43 E, Oct. 1927, H. Lang (TM).

This new species is very similar to *O. congoensis* Benderitter but can most reliably be distinguished from the latter by the considerably smaller clypeal horn, the different shapes of the stridulatory pegs and by their wide geographic separation.

*Ochodaesus congoensis* Benderitter, Figs 7, 22, 29, 33.

**Ochodaesus congoensis** Benderitter, 1913: 359.

*Description*: 4.0-6.0 mm long, testaceous. *Head* with labrum deeply emarginate, setose; mandibles sexually dimorphic, as in Fig. 22; clypeus with distinct horn, margin slightly irregular; fronto-clypeal suture visible as deep depression; surface of head setigerous, without distinct punctures. *Pronotum* surface setigerous, without distinct punctures. *Elytra* with large calli; striae with distinct, large punctures; interstriae setigerous. *Abdomen* with sclerotized sternites, with distinct dorso-lateral margin; stridulatory peg present (Fig. 29). *Legs*: Protibia with two large teeth and third basal one much smaller; pro-, meso- and metafemur parallel-sided to having projecting triangular plates; metatibia flared, with median row of spines. *Distribution*. Fig. 33.

**MATERIAL EXAMINED**. Holotype, Fort Crampel, Congo-Francais (MNHN). BURKINA FASO. Bobo-Dioulasso (2 MRAC). CENTRAL AFRICAN REPUBLIC. Fort Sibut (1 MNHN). IVORY COAST. Lamto (Toumodi) (1 MNHN). MALI. M'Pesoba (1 MRAC). TANZANIA. Kilimandjaro (2 MNHN). ZAIRE. Haut-Uelle, Yebo Moto (2 MRAC); Mayidi (2 MRAC); Parc National Garamba (4 MRAC); Upper Uelle River, Dunga (BMNH). ZAMBIA. Kashitu, N of Broken Hill (1 BMNH); Mwenga (1 BMNH, 1 HAHC).

*Ochodaesus congoensis* is most similar to *O. femoratus* sp. nov. (see above).

#### *Incertae sedis*

*Ochodaesus rufus* Guérin-Méneville, 1844: 83.

This species, described from Senegal, could not be identified from the description, neither could the type be traced. It is consequently placed *incertae sedis*.

#### Genus *Synochodaesus* Kolbe, Figs 9, 35, 36.

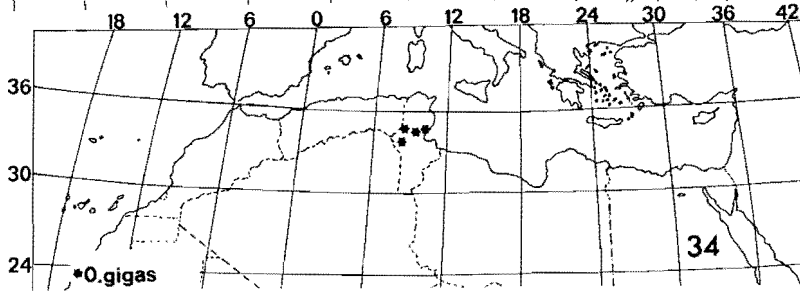
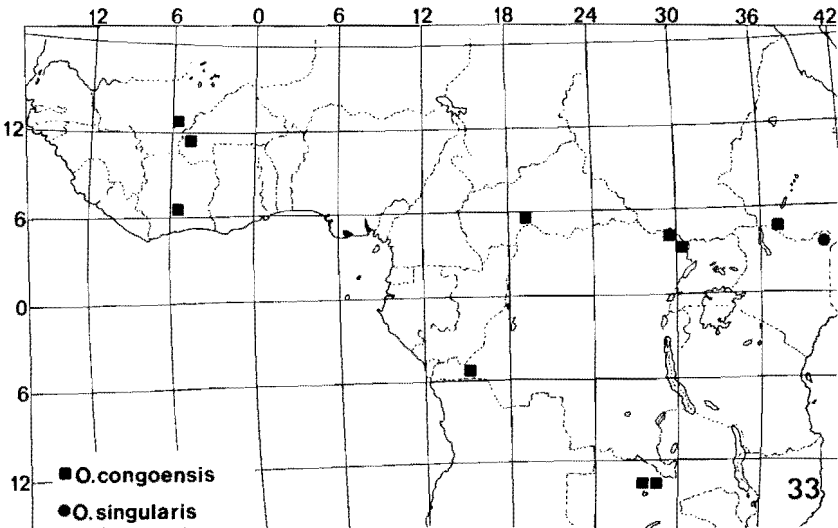
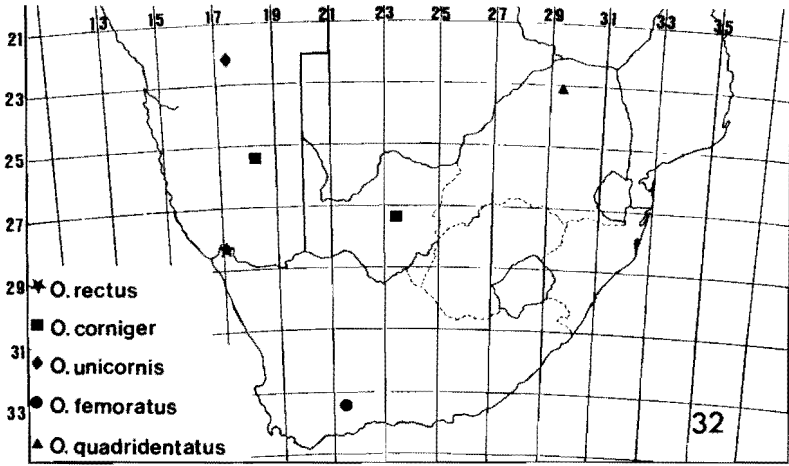
**Synochodaesus** Kolbe, 1907: 27, Arrow 1912: 24.

Type-species: *Synochodaesus modestus* Kolbe, by monotypy.

*Description*: Body oblong, somewhat convex; head, pronotum, and elytra densely setose; ventral surfaces and legs with long dense setae.

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Figs 32-34. Distribution of *Ochodaesus* species; 32. *O. rectus*, *O. corniger*, *O. unicornis*, *O. femoratus* and *O. quadridentatus*. 33. *O. congoensis* and *O. singularis*. 34. *O. gigas*.



*Head* transverse, mandibles (Fig. 36) and labrum visible from above; labrum transverse, impunctate, glabrous, with anterior margin slightly rounded, setose; clypeus transverse, quadrate; anterior clypeal margin shallowly reflexed; clypeal suture sulcate medially; antennae 10-segmented, the first segment greatly expanded, pyriform, densely setose; second segment subequal to segments 3–7 combined; eighth segment cupuliform, receiving segments 9 and 10.

*Pronotum* subquadrate, broadest medially; evenly convex, anterior margin shallowly and evenly emarginate with a broad membranous border; posterior margin slightly sinuate before middle; marginal bead complete.

*Scutellum* punctured, apex narrowly rounded.

*Elytra* long; abdominal segments not visible from above; humeral angles distinct, not raised; elytral declivity not sharply defined; posterior angles simple, not produced or serrate; metathoracic wings fully developed.

*Abdomen*: Propygidium not modified to accept elytra; pygidium and six visible sternites setose, sternites free; fifth sternite lacking stridulatory peg.

*Legs*: Protibia tridentate, basal tooth weakly developed, spur distinctly shorter than apical tooth; protibial spurs simple or setose; larger meso- and metatibial spurs crenulate or setose; metatrochanter spinose, not produced beyond posterior edge of metafemora; corbulae of metatibiae with dentiform processes possessing apical spines and associated sockets; all claws long, slender, distinct.

*Male genitalia* with symmetrical parameres, large basal piece and large, armed internal sac (Fig. 9).

#### Key to the species of *Synochodaeus*

- 1 Dorsal surface with short recumbent setae; membranous border of anterior pronotal margin narrow; pronotal punctures separated by 1–2 times their own diameter; elytral intervals with occasional minute tubercles ..... *modestus* Kolbe
- Dorsal surface glabrous or nearly so; membranous border of anterior pronotal margin broad; pronotal punctures separated by 2–3 times their own diameter; elytral intervals never with tubercles ..... 2
- 2 Pronotum with broad triangular impression with a darkened callosity; elytra with three punctostriae; lateral margins of elytra and venter densely pilose; species larger (6.0–8.0 mm long) ..... *cucullus* sp. nov.
- Pronotum broadly impressed (occasionally with only a shallow linear impression), without callosity; elytra with 3–5 punctostriae; lateral margins of elytra and venter moderately pilose; species smaller (4.0–6.0 mm long) ..... *costatus* sp. nov.

*Synochodaeus modestus* Kolbe, Figs 35, 39.

*Synochodaeus modestus* Kolbe, 1907: 27.

*Description*: 4.0–5.5 mm long, testaceous. *Head* with a few small scattered tubercles; frons scabrous; vertex with transverse medial impunctate spot, fine shallow punctures laterally. *Pronotum* with large deep setigerous punctures separated by 1–2 times their own width; setae short, pale, recumbent. *Elytra* with 2–5 shallow punctostriae; interstriae with scattered setigerous tubercles, setae short, pale, recumbent; lateral margins with semierect flavous setae. *Distribution*: Fig. 39.

**MATERIAL EXAMINED.** Holotype. D.S.W.–Afrika, Langheld, S. (ZMB). SOUTH AFRICA: CAPE. Goodhouse, 11 km S (1 SM). SWA/NAMIBIA. Asab (1 SAM); Gobabeb (4 HAHC); Karibib, Bloemhof 109 (5 SM); Karibib, Vlakplaas 110 (10 SM); Keetmanshoop, Koës 20 (1 SM); Klein Spitzkoppe (6 TM); Lüderitz, Ka-



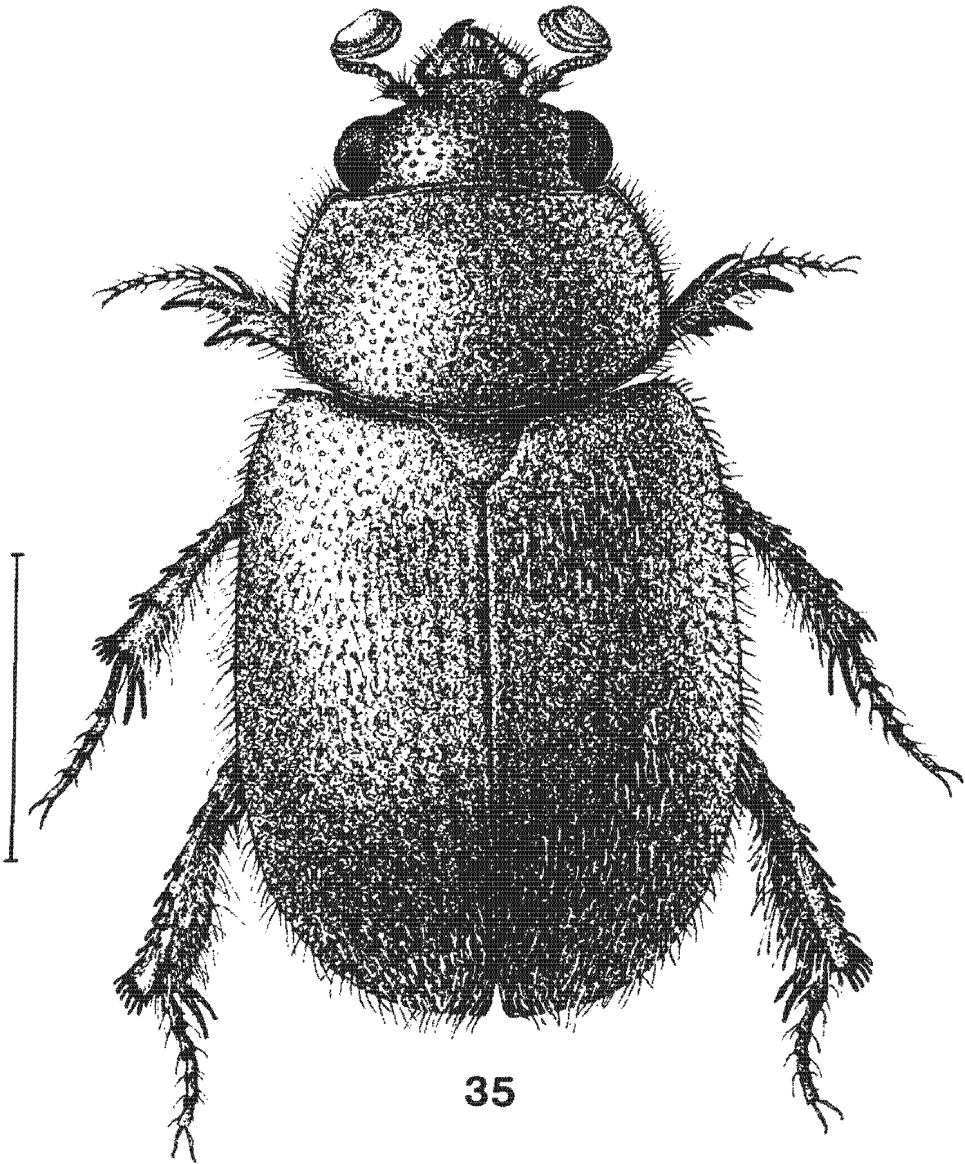


Fig. 35. *Synochodaeus modestus*, habitus. Scale line = 1 mm.

naän 104 (2 SM); Munitum R., Kaokoveld (1 TM); Namaland, Mukorob 14 (1 SM); Obib Mts (1 SM); Sesriem Plain (16 TM); Windhoek Distr., Valencia Ranch 42 (1 TM). Specimens have been collected in April, May, June, September, October and December.

*Synochodaeus modestus* is rather variable with regard to the degree of punctostriation, ranging from 2 to 5 shallow striae. This species may be distinguished from its congeners by its small size, pronotal and elytral sculpturing, and pilosity. The vertex is not covered by the membranous anterior margin of the pronotum.

***Synochodaeus cucullus* sp. nov., Fig. 40.**

*Description:* 6,0–8,0 mm long, dark testaceous to rufo-testaceous. *Head* with clypeus impunctate; frons scabrous with scattered minute granules, shallowly impressed medially; vertex covered by broad membranous border of anterior pronotal margin. *Pronotum* with a triangular anteromedian impression and a median darkened callosity; disc sparsely, shallowly punctate; lateral area with fine shallow punctures separated by 2–3 times their own diameter. *Elytra* with three distinct punctostriae between suture and humerus, remaining surface with large shallow punctures separated by 2–3 times their own diameter, glabrous; lateral margins with dense erect flavous setae. *Distribution.* Fig. 40.

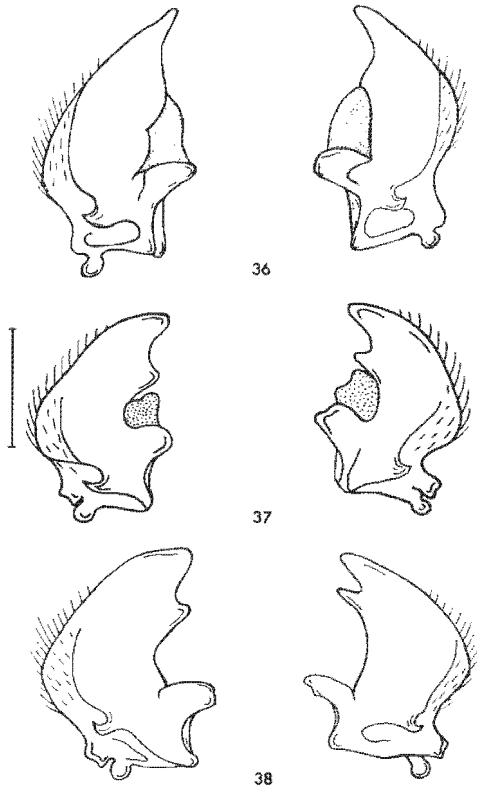
**MATERIAL EXAMINED:** Holotype male. SWA/NAMIBIA, W Guiniasibberg, SE 25.15 Ad2, 6.vii.1976 (TM); 5 paratypes, same data as holotype (UP); 1 paratype, N-Awasib, SE 25.15Bc3, 4.vii.1976 (UP); 1 paratype, Gobabeb, 70 mi. S. Walvis Bay, southern Namib Desert, sand dunes (UP); 1 paratype, dunes W. Sossusvlei, SE 24.15Cc, Lüderitz, 13/14.ix.1971 (TM); 4 paratypes, N. Uri Hauchab, SE 25.15 Ac, Lüderitz, 6.vii.1976, S. Louw (SM).

This species may be distinguished from its congeners by the broad membranous border of the anterior pronotal margin covering the vertex, impressed pronotum with a medial darkened callosity, three distinct punctostriae, and the long erect flavous setae on the lateral margins.

***Synochodaeus costatus* sp. nov., Fig. 41.**

*Description:* 4,0–6,0 mm long; testaceous. *Head* with clypeus impunctate, occasionally with minute scattered granules; frons scabrous, punctures large, deep, separated by their own diameter; vertex with transverse impunctate spot, finely punctate laterally. *Pronotum* occasionally shallowly impressed anteromedially; discal punctures separated by 2–3 times their own diameter; surface glabrous; lateral areas with fine pale recumbent setae. *Elytra* with 3–5 distinct punctostriae between suture and humerus; interstriae sometimes slightly raised with scattered punctures; disc glabrous; lateral areas sparsely clothed with recumbent or semierect setae; lateral margins with erect setae. *Distribution.* Fig. 41.

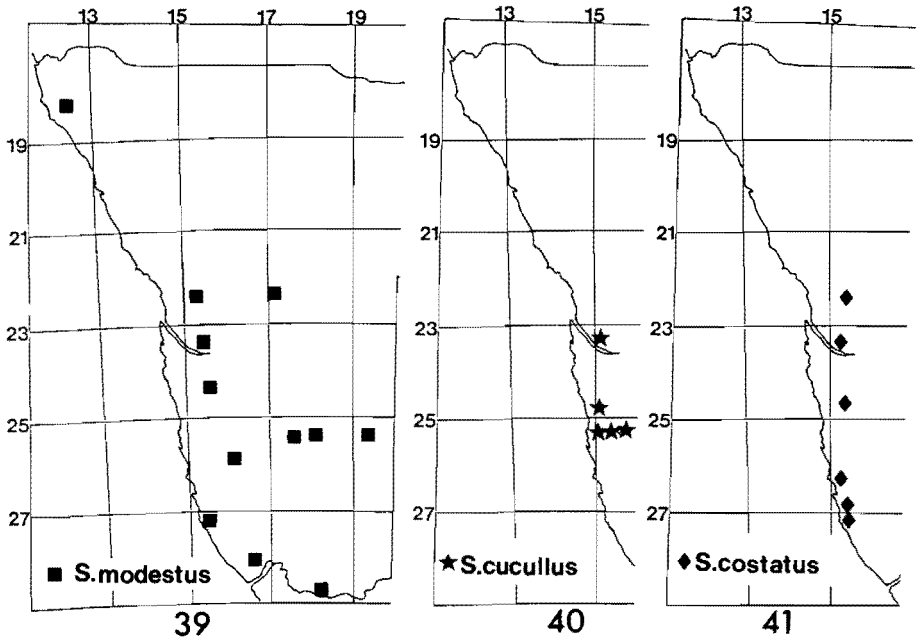
**MATERIAL EXAMINED:** Holotype male. SWA/NAMIBIA, Klinghardt Mts., 27.18 S–15.42 E, 29.viii.1981, E-Y: 1810, singled at night, Endrödy-Younga (TM); 4 paratypes, same data as holotype (TM); 5 paratypes, same data as holotype except 29/30.vii.1981, M-L. Penrith (SM); 1 paratype, Namib, Thomas Mt., 70 km E, 8.v.1972, Schulze & Prozesky (TM); 1 paratype, Grasplatz dunes, 26.41 S–15.17 E, Lüderitz, 31.vii/1.viii.1981, M-L. Penrith (SM); 5 paratypes, Sossusvlei, Namib Desert



Figs 36–38. Ochodaecidae, mandible types in various genera; 36. *Synochodaecus*. 37. *Chaetocanthus*. 38. *Namibiotalpa*. Scale line = 0.25 mm.

Park, SE 24.15Cb, 4/5.vii.1979, S. Louw, M-L. Penrith (SM); 1 paratype, Elizabethbaai, SE 26.15Cd3, vii.1982, E. Holm (UP); 10 paratypes, Vlakteplaas 110, Karibib, SE 22.15Ad, 10/11.vii.1979, S. Louw, M-L. Penrith (SM); 6 paratypes, Bloemhof 109, Karibib, SE 22.15Ad, 11/13.vii.1979, S. Louw, M-L. Penrith (SM); 4 paratypes, Gobabeb, in lamp shade, 1977–1979, B. Wharton (HAHC). SOUTH AFRICA: Cape; 1 paratype, Richtersveld, Port Nolloth, 19.14 S–16.57 E, 7.x.1976, E-Y: 1267, light collection, Endrödy-Younga (TM); 1 paratype, Richtersveld, Holgat Camp, 28.56 S–16.47 E, 2.ix.1976, E-Y: 1210, singled at night, Endrödy-Younga (TM); 2 paratypes, Rietfontein (Mier), SE 26.20Ba, 1/2.vi.1972 (SM); 1 paratype, Rooiberg, SE 24.15Dc, Lüderitz, 12.v.1969 (SM).

*Synochodaecus costatus* is quite variable. Additional material may prove this species to be a complex of closely related taxa. The distinctly punctostriate elytra will distinguish this species from all others in the genus. The possession of a glabrous elytral disc will serve to distinguish this species from *S. modestus*.



Figs 39–41. Distribution of *Synochodaeus* species; 39. *S. modestus*. 40. *S. cucullus*. 41. *S. costatus*.

Genus *Chaetocanthus* Péringuey, Figs 10, 37, 42.

**Chaetocanthus** Péringuey, 1900: 495; Péringuey 1908: 649; Arrow 1912: 24; Petrovitz 1968: 252.

Type-species: *Chaetocanthus insuetus* Péringuey, by monotypy.

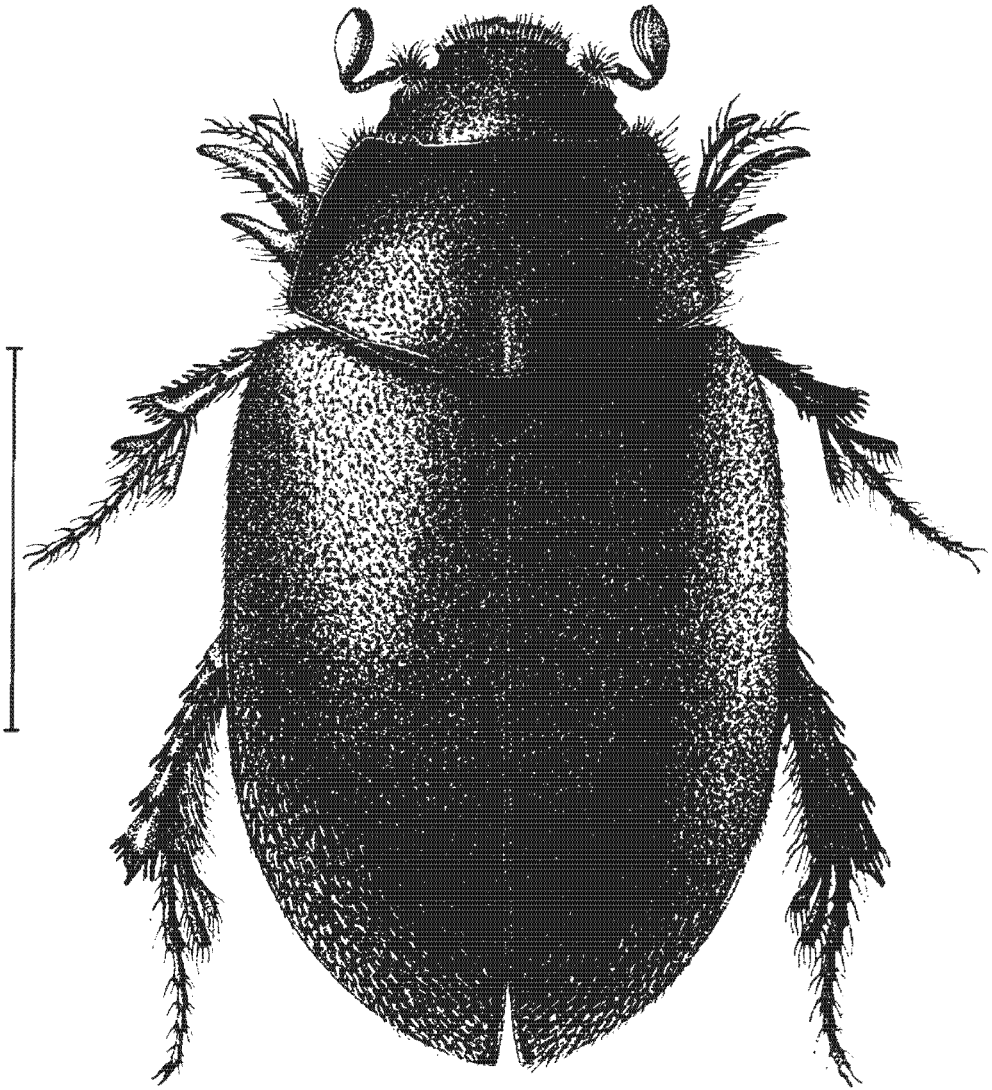
*Description*: Body elongate, convex; head, pronotum, and elytra densely setose; ventral surfaces and legs with long setae.

*Head* transverse; mandibles (Fig. 37) and labrum visible from above; labrum transverse, impunctate, glabrous, with anterior margin straight, tuberculate, setose; clypeus transverse, quadrate, margins not reflexed; anterior clypeal margin straight, tuberculate; clypeal suture obscured medially; antennae 9-segmented, the first segment greatly expanded, flattened, pyriform, densely setose; second segment subequal in length to segments 3–6 combined; seventh segment slightly cupuliform, not receiving segments 8 and 9.

*Pronotum* subquadrate, broadest basally, evenly convex; anterior margin shallowly and evenly emarginate with a broad membranous border; posterior margin slightly sinuate before middle; marginal bead entire.

*Scutellum* setose, rounded apically.

*Elytra* long, abdominal segments not visible from above; humeral angles distinct, not raised; elytral declivity not sharply defined; apical angles simple, not serrate or produced; metathoracic wings fully developed.



42

Fig. 42. *Chaetocanthus insuetus*, habitus. Scale line = 2,5 mm.

*Abdomen:* Propygidium not modified to accept elytra; pygidium with six visible sternites setose; sternites free; fifth sternite without stridulatory peg.

*Legs:* Protibiae bidentate, teeth well developed, spur subequal to length of apical tooth; tibial spurs pectinate; metatrochanter with broad spine produced slightly beyond posterior edge of metafemora; corbulae of metatibiae with dentiform processes without apical spines or sockets; all claws long, slender, distinct.

*Male genitalia* with symmetrical parameres, large basal piece and large, unarmed internal sac (Fig. 10).

#### Key to the species of *Chaetocanthus*

- 1 Pronotum usually with a median longitudinal impression, occupying posterior third . . . . .  
    . . . . . *insuetus* Péringuey.
- Pronotum always with a median longitudinal impression occupying more than posterior half . . . . . 2
- 2 Rufo-testaceous; small species (5,0–8,0 mm long); elytral tuberculation fine, tubercles separated by twice their own diameter . . . . . *bechuanus* Péringuey
- Rufo-brunneous; larger species (8,0–9,0 mm long); elytral tuberculation coarse, tubercles separated by four times their own diameter . . . . . *arenarius* sp. nov.

*Chaetocanthus insuetus* Péringuey, Figs 42, 43.

***Chaetocanthus insuetus*** Péringuey, 1900: 496; Arrow 1912: 21.

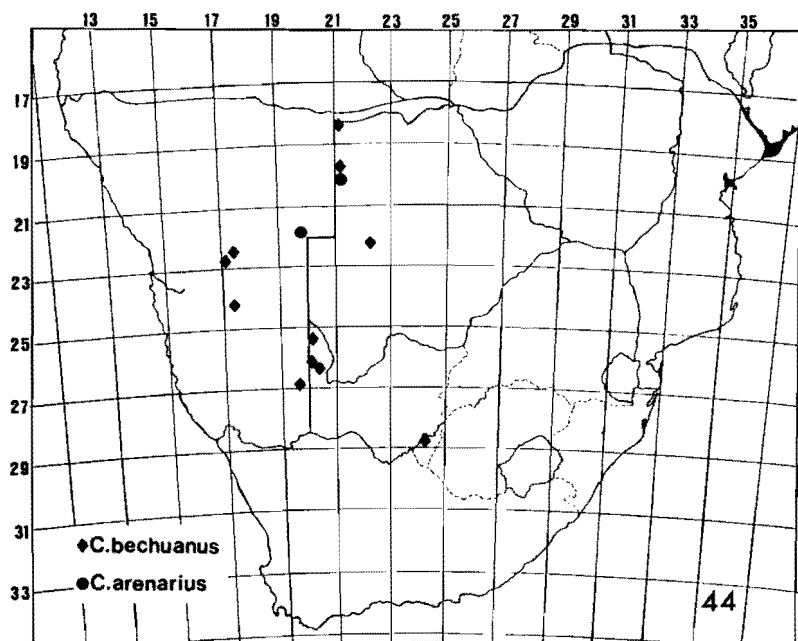
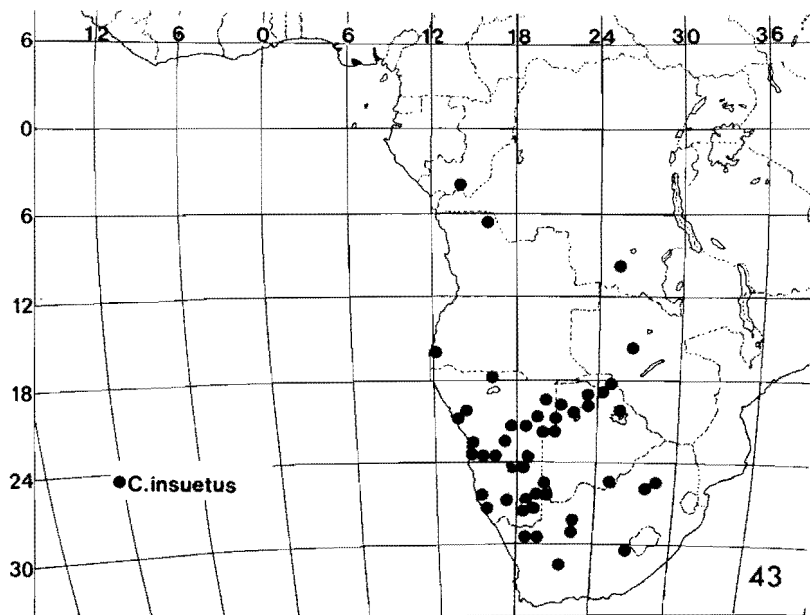
***Chaetocanthus suspectus*** Kolbe, 1908: 124. **syn. nov.**

***Chaetocanthus congoanus*** Petrovitz, 1968: 252. **syn. nov.**

*Description:* 7,0–9,0 mm long, rufo-brunneous to rufo-piceous. *Head* with clypeus coarsely granulate, setigerous; frons more finely granulate, setigerous; vertex finely, rugosely punctate. *Pronotal* surface coarsely granulate, setigerous, occasionally with a shallow longitudinal impression posteriorly. *Elytral* surface finely colliculate, setigerous, with scattered minute tubercles. *Distribution.* Fig. 43.

**MATERIAL EXAMINED:** Lectotype female (new designation), *insuetus*: Fraserburg, 1883 (SAM); paralectotype, Van Wyksvlei, 1892 (SAM); holotype, *suspectus*: S.W.Africa, Rooibank, V.05, L. Schultze S. (ZMB); holotype, *congoanus*: Bas Congo Kimwenza i–iv.1956 leg. R. P. van Eyen (MRAC); paratype, Lulaba, Kolwezi, 25.xi.1953, L. Gilbert (MRAC). **ANGOLA.** Baio Tigres (1 TM); Porto Alexandre (4 TM), Santa Cruz (1 NCI). **BOTSWANA.** Kabulabula, Chobe (1 TM); Kai-Kai, 15 mi. SE (1 TM); Kgorwe Pan (1 BMNH); Makarikari, N'Kate (1 TM); Maun (1 TM); Moremi Reserve (2 BMNH) Ngamiland, Drotsky's Cave (1 TM); Ngami Lake, 12 mi. NE Sehitwa (1 BMNH); Ngami Lake (1 TM); Savuti (1 UP). **SOUTH AFRICA:** CAPE. Achab (1 SM); Aggeneys (2 TM); Auob Riv. (8 TM); Auob-Nossob Junct. (1 TM); Benoni (1 NMB); Bingap 184 (5 NMB); Brulsand (3 SM); Chulon Farm, Kalahari (20 TM); Goodhouse, 11–17 km S (1 SM); Mata-Mata (5 TM), Tweerivieren (20 TM; 1 UP); Witsands 250, HAY (9 NMB); Witsands (1 TM). **TRANSVAAL.** Nylsvley, Nylstroom Dist. (1 NCI); Punda Maria (1 HAHC); Roodeplaat (1 TM). **SWA/NAMIBIA.** Bethanien, Sandverhaar 80 (2 SM); Bogenfels (1 SM); Cape Cross (1 TM); Elizabethbucht (1 SM); Gobabis, Alkmar 512 (4 SM); Gobabis, Vaalbank 319 (3 SM); Gobabeb (1 HAHC, 1 TM); Hereroland East, Resis Farm (3 SM); Karasburg, Höhedün 277 (17 SM) Keetmanshoop, Donkermodder 60 (6 SM); Keetmans-

Figs 43–44. Distribution of *Chaetocanthus* species; 43. *C. insuetus*. 44. *C. bechuanus* and *C. arenarius*.



hoop, Rotegab (1 SM); Keetmanshoop, Wildheim Ost 384 (41 SM); Khomashochland, Farm Hochenheim (1 TM); Kungveld (29 SM); Mariental, Narib Ost (3 SM); Namies Noord (3 SM); Okahandja (MRAC); Oshikango (1 TM); Otjnenu Farm, Hereroland (1 TM); Outjo, Bethanis 514 (1 SM); Popa Falls (3 SM); Rehoboth, Onze Rust 192 (2 SM); Swakopmund (1 UP); Talismanis 860, Hereroland East (1 SM); Talismanis (1 TM); Tsotsara, 18 km W (1 SM); Welwitschia, 50 m W (1 TM); Windhoek, Goheganas 218 (11 SM); Windhoek, Richthofen 126 (39 SM). ZAMBIA. Namwala (1 BMNH). ZAIRE. Mayumbe, Shibango riv. (1 BMNH). Specimens have been collected from March to November.

*Chaetocanthus insuetus* is quite variable in appearance. Colour ranges from brunneous to nearly piceous. The tuberculation of the head and pronotum are fairly constant in size and density. A short medial longitudinal impression may be found at the base of the pronotum. The greatest amount of variation is seen in the elytral sculpturing. Specimens may have sparse, scattered punctures or are distinctly punctostriate. In the latter group, the interstriae are often impunctate, with a few scattered setigerous punctures and are never distinctly raised. Although some populations exhibit a greater tendency towards one or the other elytral sculpturing, all conditions are encountered. The colliculate sculpturing of the head and pronotum is usually found only at the elytral bases, but may extend to cover the basal third.

*Chaetocanthus bechuanus* Péringuey, Fig. 44.

*Chaetocanthus bechuanus* Péringuey, 1908: 649.

*Description*: 5.0–8.0 mm long, pale brown. *Head* with clypeus slightly wider than labrum; clypeus and frons equally, coarsely granulate, setigerous; vertex finely, rugosely punctured. *Pronotal* surface setigerously granulate; disc with shallow longitudinal impression medially. *Elytral* surface alutaceous with setigerous tubercles separated by twice their own diameter; punctostriae evident, sometimes vaguely so, 6 striae between suture and humerus, lateral striae absent. *Distribution*. Fig. 44.

**MATERIAL EXAMINED**: Lectotype (new designation) and paralectotype, Vryburg Dist., 1907 (SAM). BOTSWANA: Kwia, 15 km S Kaikai (2 TM); Kuku Pan (1 TM). SWA/NAMIBIA: Popa Falls (1 SM); Richthofen 126, Windhoek (10 SM); Goheganas 26, Windhoek Dist. (1 SM); Kalahari, Fm Chulon (1 TM); Swartbaas West 276, Keetmanshoop (1 SM). SOUTH AFRICA: Vryburg Dist. (4 SAM); Mata Mata (16 TM); Auob-Nossob Junct. (1 TM); Twee Rivieren (1 TM); Auob (1 TM). Specimens have been collected from February to November.

This species is most similar to *C. arenarius*, but may be readily distinguished by its smaller size, denser elytral tuberculation, and shallower elytral punctures.

*Chaetocanthus arenarius* sp. nov., Fig. 44.

*Description*: 8.0–9.0 mm long; rufo-brunneous to brunneous. *Head* with clypeus slightly wider than labrum; clypeal granules larger than frontal granules; vertex deeply punctate. *Pronotal* surface setigerously granulate; disc with shallow, longitudinal medial impression. *Elytral* surface alutaceous with scattered setigerous tubercles separated by 3–4 times their own diameter; 6 punctostriae between suture and humerus, lateral striae absent. *Distribution*. Fig. 44.

**MATERIAL EXAMINED**: Holotype, Kungveld/Botswana border, 20.17 S–21.00 E, 29.vi–2.vii.1978, S. Louw, M-L. Penrith, pitfall traps (SM); 1 paratype, same data



as holotype; 3 paratypes, same data as holotype except 20.37 S; 3 paratypes, same data as holotype, except 20.47 S; 1 paratype, SWA/NAMIBIA, Rooiuidin, Oostenwald 447, SE 21 19Dd, Gobabis, 27.vi-3.vii.1978, pitfall. (SM).

This species and *C. bechuanus* may be separated from other members of the genus by their pale colour and elongate appearance resulting from the parallel elytral margins. *C. arenarius* may be distinguished from *C. bechuanus* by its larger size and less dense elytral tuberculation.

Genus *Namibiotalpa* gen. nov., Figs 11, 38, 45.

Type-species: *Namibiotalpa fossilis* sp. nov.

*Description:* Body elongate, convex; head, pronotum, and elytra nearly glabrous; ventral surfaces densely setose.

*Head* transverse; mandibles (Fig. 38) and labrum visible from above; labrum transverse, impunctate, glabrous, with anterior margin straight, densely setose; clypeus transverse, quadrate, margins not reflexed; anterior clypeal margin straight, sparsely setose; clypeal suture obscured medially; antennae 9-segmented, scape greatly expanded, flattened, triangular, densely setose; pedicel subequal in length to segments 3-6 combined; seventh segment cupuliform, not receiving segments 8 and 9.

*Pronotum* subquadrate, broadest basally, evenly convex; anterior margin shallowly and evenly emarginate with a broad membranous border; posterior margin straight before middle; marginal bead entire.

*Scutellum* coarsely punctured, rounded apically.

*Elytra* long; abdominal segments not visible from above; humeral angles distinct, not raised; elytral declivity not sharply defined; apical angles produced; metathoracic wings fully developed.

*Abdomen:* Propygidium not modified to accept elytra; pygidium and six visible sternites setose; sternites free; fifth sternite lacking stridulatory peg.

*Legs:* Protibiae bidentate, teeth well developed, spur subequal to length of apical tooth; all tibial spurs pectinate; metatrochanter with broad spine not produced beyond posterior edge of metafemora; corbulae of metatibiae obliterated, without dentiform processes; claws not readily distinguishable from apical tarsal spines.

*Male genitalia* with symmetrical parameres, large basal piece and large, unarmed internal sac (Fig. 11).

Remarks. This new genus is most similar to *Chaetocanthus* Péringuey but is much more derived than the latter, particularly in leg structure and shape and punctation of the head and pronotum. The name *Namibiotalpa* is based on Namib (after the Desert) and talpa, Latin for mole. The gender is feminine.

*Namibiotalpa fossilis* sp. nov., Figs 45, 46.

*Description:* 5.0-7.0 mm long, pale to dark rufo-brunneous, shining. *Head* with clypeal punctures large, deep, separated by 3-4 times their own diameter; frons and vertex with fine shallow punctures, separated by 3-5 times their own diameter. *Pronotal* disc with short longitudinal impression; punctures fine, shallow, separated by 3-5 times their own diameter; glabrous; lateral areas somewhat granulate, sparsely setose. *Elytral* disc punctostriate along suture, remaining surface confusedly punctate, punctures large, separated by 1-2 times their own diameter; lateral surfaces with scattered granules, sparsely setose. *Distribution.* Fig. 46.

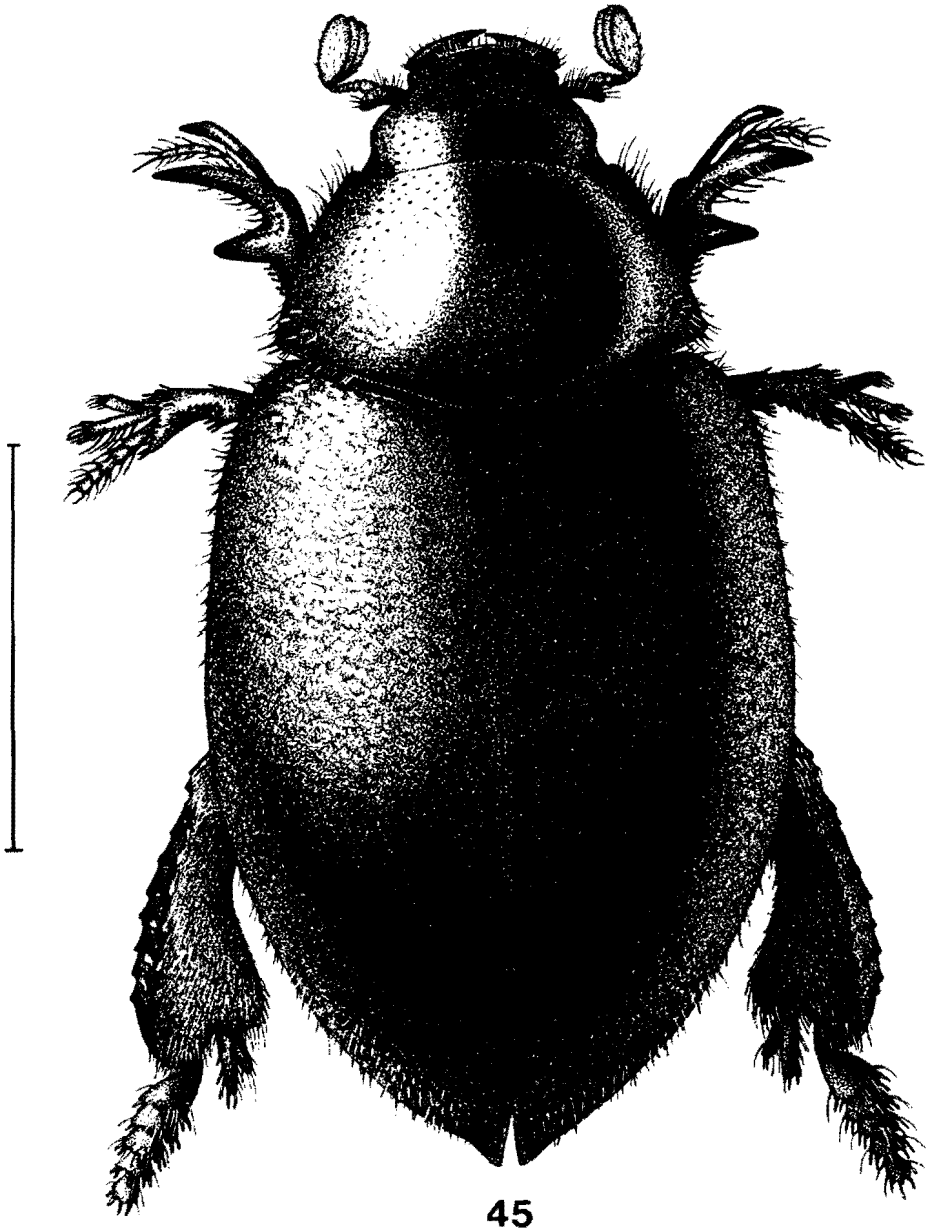


Fig. 45. *Namibiotalpa fossilis*, habitus. Scale line = 2 mm.

**MATERIAL EXAMINED:** Holotype male. SWA/NAMIBIA, Kaokoveld, Kunene R., W. Hartmbg., 17.12 S–12.10 E, 7–iv–1984, E-Y: 2098, at light, leg. Endrödy-Younga (TM); 2 paratypes, same data as holotype; 1 paratype, S. Namib, Oranjemund, 28.33 S–16.31 E, 27–vii–1981, E-Y: 1803, on dunes, day, leg. Endrödy-Younga (TM); 1 paratype, Namib, Natab, dune no. 3, 23.38 S–15.05 E, 10–x–1978, on dunes, leg. M. Seeley (TM); 1 paratype, Gobabeb, 20/26–iii–1979, B. Wharton (HAHC); 1 paratype, Namib, Gobabeb, dune no. 5, 23.35 S–14.46 E, 21–x–1978, on dunes, leg. M. Seeley (TM); 1 paratype, N-Uri-Hauchab, SE 25.15 Ac 2, 6–vii–1976 (UP); 1 paratype, Gobabeb Game Reserve No. 3, v–1959 (TM); 2 paratypes, Namib Expedition, SE 25.15 Cd 2, 1–1977, Holm, Kirsten, Scholtz (UP); 1 paratype, Sandwich Harbour, Walvisbaai, SE 23.14 Ad, 5/14–ix–1974 (SM); 1 paratype, Kuiseb Delta, SE 23.14 Ba, 6/16–viii–1976, S. Louw, M-L. Penrith (SM); 4 paratypes, 30 km N Lüderitz, SE 26.15 Ac, Holm & Scholtz (UP); 1 paratype, Koichab Pan, SE 26.15 Ba 3, vii–1978, E. Holm (UP).

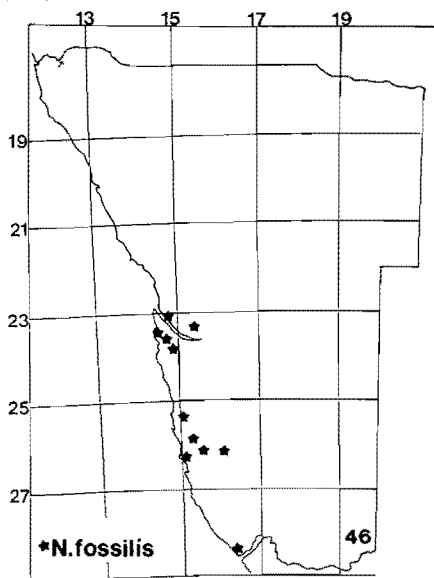


Fig. 46. Distribution of *Namibiotalpa fossilis*.

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