

Further new Aphodiinae from tropical
and South Africa (Coleoptera: Scarabaeidae)

By

S. ENDRÓDI

(Received October 19, 1982)

Abstract: The description of several new Aphodiinae from tropical and from South Africa is given: Aphodius (Pharaphodius) pongensis sp.n., A. (Blackburneus) agullasi sp.n., A. (Koshantschikovius) erytoides sp.n., Orocantus group n. of Aphodius, A. (Bodilus) karrooensis sp.n., A. (Bodilus) holgati sp.n., Aphodoharmogaster costata gen.n., sp.n. from the Transvaal Museum in Pretoria and Aphodius (Koshantschikovius) holmi sp.n. and Sugrames capensis sp.n. from the Entomological Department, University of Pretoria. Odontolochus paucus Schmidt is new for South Africa.

Aphodius (Pharaphodius) pongensis sp.n.

Head, pronotum without the yellow sides, suture of elytra and underside black or dark brown, elytra yellowish brown.

Apex of clypeus rather deeply emarginated, both sides of emargination rounded. Sides straight, genae obtuse, distinctly produced beyond eyes. Frontal suture very fine mostly with indistinct tubercles. Clypeal knob weak, but visible. Punctuation of surface fine and dense.

Pronotum broader than long, broadest on basis, sides almost straight, basis finely bordered. Surface densely covered with big punctures.

Elytral striae very deep with fine punctures, striae on apex (excepting lateral ones) connected. Intervals convex, densely reticulated.

Anterior tibiae tridentate, posterior ones with two distinct oblique carinae and with unequal apical bristles. Basal joint of posterior tarsi about as long as upper thorn and as three following joints together.

Length: 3.5-4 mm. - Examined material 48 specimens.

Types: Holotype and 22 paratypes: Ghana, Northern Reg., Pong-Tamale, 9°34' N, 0°49' W, cattle dung, 20.6.1971, No. 465, leg. ENDRÓDY-YOUNGA. 25 paratypes: Ghana, Northern Reg., Tamale, woody sav. 9°25' N, 0°53' W, cattle dung, 20.6.1971, No. 465, leg. ENDRÓDY-YOUNGA. Types preserved in the Transvaal Museum in Pretoria, paratypes also in the Hungarian Natural History Museum, Budapest.

Related to A. koshantschikovi Paulian 1934, but posterior angles of pronotum not emarginated, basis bordered, posterior metatarsi about as long as upper thorn, etc.

Aphodius (Blackburneus) agullasi sp.n.

Yellow, moderately shiny, only disc of pronotum and sutural intervals of elytra somewhat darker, end of wings darker transparent in last third. Knob of antennae black.

Apex of clypeus more or less strongly rounded. Genae sharply angular, strongly produced beyond eyes. Surface very finely punctate. Frons with a small tubercle.

Pronotum broader than long, apex and basis without margin. Sides almost straight, finely emarginated, almost parallel. Surface simply convex, very finely punctate, mixed with somewhat bigger punctures.

Elytra distinctly longer than broad together, sides almost parallel, almost straight. Striae fine, striae punctures very small.

Pygidium mostly covered by elytra.

Anterior tibiae tridentate. Both oblique carinae of posterior tibiae very distinct, apical bristles unequal. Basal joint of posterior tarsi much longer than upper thorn and somewhat longer than three following joints together.

Length: 3-4 mm. Examined material 90 specimens.

Types: Holotype and 89 paratypes: S. Africa, Cape Agullas, 34°S, 20°E, 24.2.1981, E-Y No. 1748, leg. ENDRÓDY-YOUNGA. Types preserved in the Transvaal Museum in Pretoria, paratypes also in the Hungarian Natural History Museum, Budapest.

The new species is related to *A. gnu* Endrődi, separable from it in my key (ENDRŐDI, 1984, in press) as follows:

12 (11) Elytral striae

12a (12b) Upper side yellow, only disc of pronotum and sutural interval somewhat darker. Apex of clypeus rounded, genae strongly produced. Pronotum very finely punctate, mixed with somewhat bigger punctures, punctures of elytral striae also very small. Metatarsi of posterior tarsi much longer than upper thorn and somewhat longer than three following joints together. RSA (Cape Prov.) *agullasi* sp.n.

12b (12a) Combination of characters not as above.

13 (14) Sutural interval darker....

The long series, collected by my son, deriving from sand dunes of the southernmost part of the peninsula Agullas, are probably phyto-saprophagous, as are many Psammobiini and also Tenebrionids.

Aphodius (Koshantschikovius) erytoides sp.n.

Yellowish brown, vertex, middle of pronotum and suture of elytra sometimes darker. Shiny. Apex of clypeus broadly and deeply emarginated, both sides of emargination obtusely angulated, almost as in the group *Allobodilus*. Sides strongly converging to apex, straight, genae not delimited and not produced beyond eyes. Frontal suture fine, clypeal knob weak. Punctuation of head very fine and rather sparse.

Pronotum broader than long, rather strongly convex, sides slightly curved, basis finely emarginated. Surface similarly punctured as head. Scutellum triangular.

Elytral striae fine with very small punctures, latter often indistinct. Striae on apex somewhat deeper. Intervals flat, smooth, more convex only on apex.

Anterior tibiae tridentate, oblique carinae of posterior ones distinct, apical bristles unequal. Basal joint of posterior tarsi about as long as upper thorn and somewhat shorter than three following joints together.

Length: 5-5.5 mm. - Examined material 43 specimens.

Types: Holotype and 8 paratypes: S. Africa, Namaq coast., Hondeklip bay, 12 km E, 30°21' - 17°25' E, 30.8.1977, E-Y. 1359, ground trap 58 days baited with feces, leg. ENDRÓDY-YOUNGA; 2 paratypes: S. Africa, Namaq coast, Gembok vlatke farm, 30°30' S - 17°25' E, 2.9.1977, E-Y. 1370, ground trap 56 days baited with feces, leg. ENDRÓDY-YOUNGA; 2 paratypes: S. Africa, Namaqualand, Kotresrus, 30°57' S - 17°50' E, 25.10.1979, E-Y. 1654, leg. ENDRÓDY-YOUNGA; 1 paratype: Gembok vlatke farm, 30°30' S - 17°29' E, 28.10.1977, E-Y. 1400, at light, leg. ENDRÓDY-YOUNGA; 1 paratype: Namaqualand, Harslagkop, 730 m, 30°40' S 18°47' E, 6.9.1977, E-Y. 1391, ground trap 54 days baited with feces, leg. ENDRÓDY-YOUNGA;

4 paratypes: S. Africa, Namaqualand, Rooidam farm, 31°04' S - 17°48' E, 26.8.1979, E-Y. 1600, ground trap baited with feces, leg. ENDRÓDY-YOUNGA; 9 paratypes: S. Africa, Namaqualand, Hoekbasi 2 km ENE, 30°11' S - 17°47' E, 28.8.1979, E-Y. 1613, light collection, leg. ENDRÓDY-YOUNGA; 1 paratype: S. Africa, Namaqualand, Kotzezzrus, 30°57' S - 17°50' E, 23.8.1979, E-Y. 1584, ground trap 64 days baited with meat, leg. ENDRÓDY-YOUNGA; 3 paratypes: S. Africa, Namaqualand, Klein Kogel Fountain, 31°10' S - 17°50' E, 28.8.1979, E-Y. 1606, ground trap 62 days baited with banana, leg. ENDRÓDY-YOUNGA; 1 paratype: S. Africa, Cape-Karoo farm, Zwartz Kraal, 33°10' S - 22°32' E, 5.8.1979, E-Y. 1640, ground trap 50 days baited with feces, leg. ENDRÓDY-YOUNGA; 4 paratypes: S. Africa, Namaqualand, Hoekbasi, 2 km ENE, 31°11' S - 17°47' E, 1979, E-Y. 1609, ground trap 62 days baited with meat, leg. ENDRÓDY-YOUNGA; 1 paratype: S. Africa, Namaqua Coast, Rondabel farm, 30°47' S - 17°50' E, 4.9.1977, E-Y. 1380, ground traps 58 days baited with feces, leg. ENDRÓDY-YOUNGA; 5 paratypes: S. Africa, Namaqualand, Katdoringvlei, 31°07' S - 17°52' E, 28.8.1979, E-Y. 1605, ground traps 62 days baited with feces, leg. ENDRÓDY-YOUNGA.

Types preserved in the Transvaal Museum in Pretoria, paratypes also in the Hungarian Natural History Museum, Budapest.

Similar to *A. haematicus* Boheman, but genae rounded and not produced beyond eyes. Basal joint of posterior tarsi about as long as three following joints together, etc.

Orocanthus group n. of Aphodius

Clypeus deeply emarginated on apex, both sides beside emargination rounded. Head simply convex, without tubercle or carina, surface not granulated. Pronotum punctate, posterior angles not emarginated, basis bordered. Scutellum triangular, on basis not parallel. Striae of elytra deep, but on apex not distinctly deeper than on disc.

This new group may be fitted in my key of groups (*Folia ent.hung.*, 42, 1980: 36-39) after couplet 64 (52), but differing in form of clypeus, in sculpture of elytra, also in small body-size and dark colour, etc.

Type of group: *Aphodius helenae* sp.n.

Aphodius (Orocanthus) helenae sp.n.

Black, shiny, apex of clypeus, antennae (excepting a black knob), sides of elytra and legs extensively light.

Clypeus strongly emarginated on apex, beyond emargination rounded, genae not separated from sides of clypeus, rounded, indistinctly produced beyond eyes. Frontal suture very distinct, without tubercle, surface finely reticulated and very finely punctated.

Pronotum broader than long, sides slightly rounded, broadest at posterior angles. Basis strongly bordered. Surface everywhere densely covered with rather big punctures mixed with very fine ones. Scutellum elongate triangular.

Elytra rather short, distinctly shorter than twice breadth together, oval, also sides slightly rounded. Striae deep everywhere, on apex not deeper than on disc, with rather strong punctures. Intervals convex, reticulated and finely punctated.

Anterior tibiae tridentate, posterior ones with two distinct oblique carinae, apex strongly enlarged with strong bristles of equal length. Basal joint of posterior tarsi somewhat shorter than upper thorn and about as long as three following joints together.

Length: 2.5-3 mm. - Examined material 11 specimens.

Types: Holotype and 10 paratypes: S. Africa, Cape Prov., Elandsdrift, 34°39' S - 19°53' E, E-Y. 1747, 24.2.1981, leg. ENDRÓDY-YOUNGA. Types preserved in the Transvaal Museum in Pretoria, two paratypes in the Hungarian Natural History Museum, Budapest.

I dedicate this new species to the excellent collaborator of my son, Miss Elaine Labachange assistant in Pretoria.

Aphodius (Bodilus) karrooensis sp.n.

Reddish brown, shiny, vertex and disc of pronotum darker.

Clypeus slightly but broadly emarginated on apex. Genae rounded and distinctly produced beyond eyes, distinctly separated from the straight and convergent sides of clypeus. Sutural ridge strong, clypeal knob rounded and weak. Surface very finely and very densely punctate, only knob smooth and shiny.

Pronotum broader than long. Sides convergent to apex and slightly curved. Basis finely bordered. Punctuation stronger and less dense than on head, on sides somewhat denser than on disc. Scutellum broadly triangular.

Striae of elytra narrow, fine, covered with dense and small punctures, being stronger on the sides than on disc. Intervals flat, very finely and densely punctate.

Anterior tibiae tridentate, posterior ones with two strong oblique carinae and with short apical bristles of equal length. Basal joint of posterior tarsi about as long as upper thorn and shorter than three following joints together.

Length: 7-8 mm. - Examined material 3 specimens.

Types: Holotype: S. Africa, Cape-Karoo, Farm Zwartzkraal, 33°10' S - 22°32' E, 30.4. 1978, E-Y. 1572, ground traps baited with meat 42 days, leg. ENDRÓDY-YOUNGA. 2 paratypes: with the same data, but 22.9.1980, E-Y. 1716a and 47 days. Types preserved in the Transvaal Museum in Pretoria, one paratype in the Hungarian Natural History Museum, Budapest.

Closely related to *A. nylsvleyicus* Endrődi, but genae distinctly separated from sides of clypeus, head and pronotum more strongly and densely punctate, intervals of elytra more flat, also on apex less convex. Separated from *A. holgati* sp.n. by its broad body and the strongly, including disc of pronotum, and densely punctate pronotum, etc.

Aphodius (Bodilus) holgati sp.n.

Body long, uniformly yellowish brown, only sutural canti of elytra dark.

Clypeus broad, on apex rather deeply emarginated, both sides of emargination rounded. Sides straight. Genae obtusely angulated, produced beyond eyes. Frontal suture fine, straight. Clypeal knob very weak. Surface finely and rather densely punctate.

Pronotum broader than long, broadest at posterior angles. Basis bordered. Sides very weakly curved and weakly convergent to apex. Surface somewhat more strongly punctate than head, disc more finely and sparsely so than sides.

Elytra long, striae rather strong, finely punctate, intervals distinctly convex.

Anterior tibiae tridentate, longitudinal carina on underside without tooth. Both oblique carinae of posterior ones strong, apical bristles equal and short. Basal joint of posterior tarsi as long as upper thorn and about as long as two following joints together.

Length: 6-8 mm. - Examined material 5 specimens.

Types: Holotype and 3 paratypes: S. Africa, Richtersveld, Holgat camp, 28°56' S - 16°41' E, 2.9.1976, E-Y. 1210, singled at night, leg. ENDRÓDY-YOUNGA. 1 paratype: S. Africa, Richtersveld, Oranje valley flats, 28°28' S - 16°51' E, 3.9.1976, E-Y. 1213, ground traps 37 days baited with feces, leg. ENDRÓDY-YOUNGA. Types deposited in the Transvaal Museum in Pretoria, one paratype in the Hungarian Natural History Museum, Budapest.

Aphodius (Koshantschikovius) holmi sp.n.

Surface yellow, vertex and often also disc of pronotum somewhat darker, sutural interval of elytra black.

Apex of clypeus rounded, sides nearly straight, genae sharply angulated, distinctly produced beyond eyes. Frontal suture very fine, clypeal knob almost absent. Surface very finely and rather sparsely punctate, knob smooth.

Pronotum broader than long, broadest at posterior angles. Sides slightly curved. Apical and basal margins without border. Punctuation fine, on disc finer and sparser than on sides.

Elytral striae rather deep, distinctly covered with punctures, intervals slightly convex.

Anterior tibiae tridentate, posterior ones with two distinct oblique carinae and with unequal

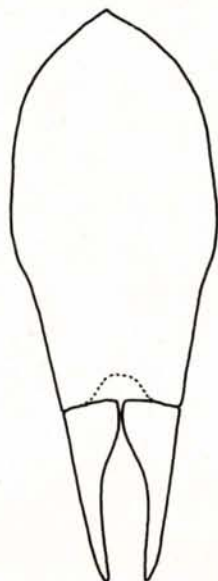


Fig.1. Aedeagus of *Sugrames capensis* sp.n.

apical bristles. Basal joint of posterior tarsi longer than upper thorn and somewhat shorter than three following joints together.

Length: 3-4 mm. - Examined material 2 specimens.

Types: Holotype: Botswana, Nata, SE 20, 26 Aa, 14.I.1978, leg. HOLM, TABACAS, KIRSTEN, SCHOLZ. 1 paratype: S. Africa, Marieskop, SE 24, 31 Ca, 25.III.1978, leg. HOLM. Holotype proeversed in the Department of Entomology, University of Pretoria, paratype in the Hungarian Natural History Museum, Budapest.

The new species is related to *A. neohaematicus* Landin, but the apex of clypeus is evenly rounded, genae produced and sharply angulated, etc.

Aphodius (Bodilus) kalaharicus Endrődi

The species is apparently very variable. In a long series from Gemsbok vlatke several specimens, have upper thorn of posterior tibiae only a little shorter than the basal joint of posterior tarsi. In some specimens the intervals of elytra are stronger and more densely punctate than in the types.

Sugrames capensis sp.n.

Moderately shiny, uniformly dark reddish brown.

Apex of clypeus broadly and rather deeply emarginated, both sides of emargination obtusely angulated. Sides straight, strongly convergent to apex. Genae not separated from sides of clypeus, rounded and weakly produced beyond eyes. Frontal suture impressed. Surface rather strongly and very

densely punctate, only vertex, behind frontal suture, almost smooth. Without clypeal and frontal tubercle.

Pronotum much broader than long. Sides strongly curved. Posterior angles broadly rounded. Basis bordered. Surface simply convex, very finely reticulated with very sparse micropunctures.

Elytra oval with 10 fine striae, punctures in here very fine and dense. Intervals flat and very finely reticulated.

Anterior tibiae tridentate, posterior ones short and strongly dilated to apex, both oblique carinae strong, apex with two thorns and fine hairs. Upper thorn strongly dilated to apex. Posterior tarsi very small and shorter than thorns. Apical joint with two fine hairs. Basal part of aedeagus very big, paramera much shorter and narrow (Fig. 1).

Length: 5-5,2 mm. Examined material 2 specimens.

Holotype and 1 paratype: S. Africa, SE 26.15, ad.4, 10.VII.1980. (near Lüderitz in SW-Africa), leg. Dept. Entomologie U.P. Holotype in the Entomological Department, University of Pretoria, paratype in the Hungarian Natural History Museum, Budapest.

The genus *Sugrames* has so far been unknown from South Africa. Three species inhabit the Sahara (South Algeria and South Tunis) and on other five the Palaearctic Region.

Aphodoharmogaster gen.n.

The new genus combin the characters of *Aphodius*, especially the 10 striae on each elytron, and those of *Harmogaster transitoria* Péringuey, which has 12 very similar elytral striae; differing from *Harmogaster* Harold by the frontal suture being absent, in the middle only with a very small tubercle and shoulders without a denticle, also differing from *Aphodius* Illiger in its whole habitus, especially in its sculpture of the elytra (broad striae, very narrow intervals), etc.

Type of genus: *Aphodoharmogaster costata* sp.n.

Aphodoharmogaster costata sp.n.

Black, mat, legs and antennae dark brown.

Apex of clypeus very weakly emarginated, almost straight, both anterior angles brown and broadly rounded. Clypeal knob and frontal suture absent, in the middle only with a very weak tubercle. Surface densely, in the middle with finer and sparser punctures.

Pronotum much (almost twice) broader than long, broadest at posterior angles, latter obtusely angulated, without an emargination. Sides weakly curved, moderately convergent to apex. Basis almost straight, without a border. Punctuation of surface distinctly stronger than on head, also in the middle almost as strong and dense as on sides. Scutellum small, triangular.

Elytra rather broad, oval, with ten broad striae, punctures in striae broad. Intervals very narrow, much narrower than striae, sharply carinated, unpaired, in apical part shortened.

Anterior tibiae tridentate, posterior ones with two very distinct oblique carinae, apical bristles equal. Basal joint of posterior tarsi somewhat longer than upper thorn and about as long as three following joints together.

Length: 5-6 mm. - Examined material 15 specimens.

Types: Holotype and 3 paratypes: S. Africa, Transkei, Davosa forest, 32°15' S - 28°49' E, 12.12.1979, E-Y. 1678, cattle dung, leg. ENDRÓDY-YOUNGA. 2 paratypes: S. Africa, South Cape, Marathon, 34°02' S - 23°19' E, E-Y. 1306, 9.12.1976, cattle dung, leg. ENDRÓDY-YOUNGA. 3 paratypes: S. Africa, Natal, Cathedral peak, 28°57' S - 29°12' E, 18 and 16.3.1976, E-Y. 1092, cattle dung, leg. ENDRÓDY-YOUNGA. 2 paratypes: S. Africa, South Cape, Harkerville forest, 34°04' S - 23°10' E, 7.3.1976, E-Y. 1321, light collection, leg. ENDRÓDY-YOUNGA. 1 paratype: S. Africa, Transvaal, Bergvliet for. farm, 25°05' S - 30°54' E, 4.11.1980, E-Y. 1721, at light, leg. ENDRÓDY-YOUNGA. 1 paratype: S. Africa, Transvaal, Rhenosterpoort, NE Bronkhorestspr., 15-17.12.1972, leg. SCHULZE. 2 paratypes: S. Africa, South Cape, Keurboomstrand, 30°00' S - 23°27' E, 6.12.1976, E-Y. 1297, light trap, leg. ENDRÓDY-YOUNGA. Types preserved in the Transvaal Museum in Pretoria, paratypes also in the Hungarian Natural History Museum, Budapest.

Odontolochus paucus Schmidt

This species is new for South Africa. Only one specimen has been found in Transvaal, Nietverdiend, 8.I.1978, leg. HOLM, JACOBS, KIRSTEN, SCHOLTZ. It is preserved in Entomological Department, University of Pretoria.

The specimen is reddish brown and its posterior denticle on the sides of pronotum is very small, almost absent.

Author's address: Dr. S. ENDRÓDI
Zoological Department
Hungarian Natural History Museum
Baross u. 13.
H-1088 Budapest
Hungary