

Boundary of South and Southwest Africa
Boundary of Countries of South Africa
Boundary of the neighbouring countries
River
Capital
Bigger towns

- '13 (4) Elytra either with more or less than 10 striae.
- 14 (15) Elytra with 9 striae. Surface setose. Genae produced beyond eyes. Front without tubercle. Basis of pronotum without or with indistinct border. Scutellum narrow, triangular. Both lateral striae of elytra connected at about the middle, only eight reaching the apex. Anterior tibiae tridentate. Hind metatarsi much longer than upper thorn of hind tibiae and longer than next three joints together. 5-6 mm
- 6. Genus: Neoheptaulacus Paulian, 1943
  15 (14) Elytra with 12-20 striae. Frontal suture raised, without tubercle. Genae strongly produced beyond eyes. Basis of pronotum bordered. Elytra with a denticle on each shoulder. Pygidium not entirely covered by elytra. Abdominal segments united. Bristles on apical margin of hind tibiae unequal (Fig. 14). 3-7 mm (= Odontaphodius Schmidt, 1907)
- 7. Genus: <u>Harmogaster</u> Harold, 1861
  16 (3) Intervals carinated, all ribs reaching basis of elytra, also on the sides. Basis of pronotum with bristles. Genae produced. Front without tubercles. Pronotum with or without longitudinal furrow. Anterior tibiae normal, with three teeth. Hind tarsi short, strongly dilated (Fig. 15), 4-5,5 mm

  8. Genus: Oxyomus Stephens, 1839
- 17 (2) Inside of anterior tibiae in males dilated at about the middle, or angulated before apex.
- 18 (19) Inside of anterior tibiae in males obtusely angulated before apex, apical tooth strongly prolonged and truncated on apex, apical thorn absent (Fig. 16); anterior tibiae in females normal. Surface setose or bare. Genae small, rounded, eyes scarcely visible from above. Front without tubercle. Pronotum contracted backwards, basis either bordered or not, hind angles either emarginated or not. Intervals of elytra flat or convex. Apical bristles of posterior tibiae unequal. 3-5 mm
  9. Genus: Coptochirus Harold, 1859
- 19 (18) Inside of anterior tibiae in males dilated about in anterior half (Fig. 17).
- 20 (21) Pronotum contracted backward. Anterior tibiae tridentate. Elytra either setose or not. Clypeus deeply emarginate, genae produced beyond eyes. Hind angles of pronotum truncated or emarginated, basis bordered, with bristles. Elytra with broad striae and narrow ribs. Hind metatarsi falciform (Fig. 18). 3-5 mm
- 10. Genus: <u>Drepanocanthus</u> Péringuey, 1901
  21 (22) Pronotum not contracted to basis. Anterior tibiae in males curved inward with two teeth on outer side, basal one small, apical one bidentate, apical thorn at about the middle placed inside. Clypeus shallowly emarginate, genae strongly produced beyond eyes.

  5.5 mm

  11. Genus: <u>Harmodactylus</u> Péringuey, 1901
- 22 (1) Epipleura broad and not placed ventrally (Fig. 19).
- 23 (24) Elytra with 10 sharp ribs, epipleura broad, vertical, abruptly narrowed to apex. Clypeus emarginate, genae produced, front with indistinct carina. Sides and basis of pronotum with rather sparse and long setae, hind angles broadly rounded, basis indistinctly bordered, surface pale, densely punctate. Anterior tibiae normal, tridentate, hind tibiae not strongly dilated to apex, apical bristles very short, but not all of equal length. Hind metatarsi shorter than the upper thorn, about as long as next two joints together, claws very small, 3-4 mm
  12. Genus: Pseudoxyomus Petrovitz, 1962
- 24 (23) Intervals of elytra flat or weakly convex.
- 25 (26) Pygidium free, not covered by elytra. Clypeus rounded, apex slightly emarginate. Genae not produced beyond eyes. Front without tubercle, suture very fine. Pronotum broadest at about the middle, sides curved, basis without border, surface rather densely punctate, punctures unequal. Elytra with 10 punctured striae, intervals lightly convex, apices broadly rounded. Anterior tibiae tridentate, teeth in males near to each other, apical thorn very big, anterior tibiae in female normal. Middle tarsi in males strongly thickened, outer claw shell-shaped, in female both claws simple. 3.5-4 mm
  - 13. Genus: Macroretrus Péringuey, 1908
- 26 (25) Pygidium covered by elytra, or other characters different from above.
- 27 28) Surface setose, oily, yellowish to dark brown, elytra often with darker marking. Front without tubercle, gense produced. Antennae 9-jointed. Basis of pronotum without border. Elytra with punctate striae. Anterior tibiae tridentate. Apical bristles of hind tibiae unequal. 4.5-7 mm
  14. Genus: Lorditomaeus Péringuey, 1901
- 28 (27) Surface bare, shining, mostly yellow. Body flat. Head with a strong knob. Genae produced. Pronotum with various unevennesses. Scutellum very narrow. Elytra with three or four ribs, intervals flat. Anterior tibiae tridentate, both apical teeth often united. 7 mm 15. Genus: Sybax Boheman, 1857

# 1. Genus: Colobopterus Mulsant, 1842\*

### Key to groups

1 (2) Elytra very short, scarcely longer than prothorax (Fig. 20). Body strongly convex, surface bare. Elytra black with yellow marking. Front with three tubercles, genae shmall. Basis of pronotum bordered, posterior angles truncate or weakly emarginate. 3.5-4.5 mm. (The species of group Megatelus Reitter does not occur in South Africa)

Group 1: Megateloides

2 (1) Elytra distinctly longer than prothorax.

3 (6) Scutellum impressed.

- 4 (5) Clypeus deeply emarginate, both sides with long, in females with short lobes. 8-9 mm Group 2: Neocolobopterus
- 5 (4) Clypeus at most weakly emarginate, both sides simply rounded. Elytra mostly flattened. Front with a tubercle or (in females) with a more or less distinct knob. Elytra with punctate rows, or with finely carinated striae, 5-16 mm Group 3: Colobopterus
- 6 (3) Scutellum not impressed. Elytra convex. Front of males with three tubercles or almost simply convex. Punctate rows of elytra never edged on sides. 4.5-10 mm Group 4: Teuchestes

#### Group 1: Megateloides

Only one species. Elytra black, a small humeral spot and broad apex yellow. Hind meta-tarsi much longer than upper thorn of hind tibiae and shorter than next three joints to-gether. 3.5-4.5 mm. RSA (Transvaal), (= diadimitus Petrovitz, 1951)
 dimidiatus Roth, 1851

#### Group 2: Neocolobopterus

Only one species. Genae distinctly separated from clypeus. Elytra black, intervals weakly convex. Hind metatarsi longer than upper thorn of hind tibiae and as long as next three joints together. 8-9 mm. RSA, (= ballioni Schmidt, 1906, senegalensis Reiche, 1852, non Klug, 1835, thoracicus Roth, 1851 part.)
abessinicus Harold, 1861

Group 3: Colobopterus

1 (2) Striae of elytra finely, but distinctly edged on both sides, intervals reticulated, oily. Genae small, rounded. Basis of pronotum in middle mostly without border. 5-8 mm. - RSA (Cape Province, Natal, Transvaal), SWA, Angola, Zimbabwe-Rhodesia maculicollis Reiche, 1847

## Aberrative forms:

- Pronotum dark, sides broadly yellow, elytra yellow to brownish yellow forma typica
- Pronotum as in forma typica, elytra entirely or near entirely dark or black ab. nigricans Paulian, 1934
- 3. Sides of elytra very narrowly yellow, elytra dark or black

ab. marginicollis Harold, 1859

- 2 (1) Striae of elytra simply punctate, intervals not or indistinctly reticulated, more shiny. Middle of pronotal basis without border.
- 3 (4) Striae of elytra very fine, intervals flat, broad, nearly smooth. Elytra weakly contracted to apex. Reddish yellow, disc of pronotum and scutellum black. Hind metatarsi somewhat shorter than upper thorn of hind tibiae and longer than next two joints together. 9-11 mm. RSA (Cape Province)
  senegalensis Klug, 1835
- 4 (3) Striae of elytra strongly furrowed, intervals convex, distinctly punctate. Elytra rather strongly contracted to apex. Reddish yellow, head, disc of pronotum, scutellum and suture of elytra dark. Hind metatarsi as long as upper thorn and as next three joints together. 8-16 mm. RSA (Cape Province) principalis Harold, 1865

<sup>\*</sup> I regard the "subgenera" only as groups of species, because the characters of many "subgenera" are considerably heterogenous. The short diagnoses of genera and groups of species will be given only in the keys to genera and groups.

Aberrative forms:

1. Not only suture, but also a long discal band of elytra dark

ab. decoratus Endrődi, 1960

2. Elytra entirely or near entirely black

ab. atripennis Endrődi, 1957

Group 4: Teuchestes

1 (2) Scutellum with a deep longitudinal furrow. Black, shiny, apex of elytra yellow, with or without dark spot. Hind metatarsi much longer than upper thorn of hind tibiae and longer than next three joints together. 8 mm. - RSA (Cape Province)

dejeani Harold, 1862

2 (1) Scutellum without furrow. Black, elytra yellow or black or bicoloured. Hind metatarsi shorter than upper thorn and almost as long as next three joints together. 9-10 mm. -RSA (Transvaal, Cape Province), (= sorex Fabricius, 1792)

analis Fabricius, 1787

Aberrative forms:

- 1. Elytra black with broad yellow apex
- 2. Elytra entirely black

forma typica

ab. caffer Wiedemann, 1823

#### 2. Genus: Aphodius Illiger, 1789

### Key to groups

- 1 (2) Sides of elytral striae more or less distinctly carinated, or with a row of punctures on each side of intervals (Fig. 35) (except head strongly declivous with a transversal carina (Ammoecius), surface with dense, short erect setae (Trichonotulus), head granulated, clypeus bidentate (Mendidaphodius), transversal carinae of posterior tibiae reduced (Paradidactylia), rarely (Cinacanthus) upper thorn of hind tibiae longer than metatarsus. 2-3.5 mm
  Group 1: Pleuraphodius
- 2 (1) Striae of elytra consisting of simple puncutres, or simple furrows, somewhat carinated only in groups specially referred to in couplet 1 (2).
- 3 (4) Head granulated, apex of clypeus with two sharp denticles (Fig. 21). 2.5-5 mm Group 2: Mendidaphodius
- 4 (3) Head punctate (rarely somewhat rugulose), apex of clypeus convex or emarginate, both side rounded or angulated, but without denticles.
- 5 (6) Head strongly declivous, in anterior third mostly with strong transversal carina (Fig. 22), clypeus punctate or rugulose. Basis of pronotum bordered. 3.5-6.5 mm Group 3: Ammoecius
- 6 (5) Head never strongly declivous, frontal carina absent, or exceptionally present but very fine.
- 7 (8) Intervals of elytra convex, on apex often rib-shaped, striae here deeper than on disc, on apex mostly disconnected. Upper surface bald. 2.5-9 mm
  - Group 4: Pharaphodius Intervals of elytra flat or convex, striae not deeper furrowed on apex than on disc,
- mostly connected here.

  9 (10) Apical thorn of anterior tibiae in both sexes strongly curved in ward. Upper surface setose. Clypeus truncated, genae small, front without tubercle. Prothorax nearly broader than elytra. 3.5-4 mm

  Group 5: Aphodobius
- 10 (9) Apical thorn of anterior tibiae almost straight.
- 11 (18) Surface distinctly setose.
- 12 (13) Sparse setae of elytra erect, springing from big punctures beside striae. Front without tubercle, genae small or little produced. Basis of pronotum without border. Apical

8 (7)

RETROVITZ (1969) described A. (Agrilinus) devotus on the basis of one specimen having a short transverse carina on clypeus: black, shiny, bald. Clypeus weakly emarginate, genae produced, front with a tubercle. Basis of pronotum bordered, the fine punctures mixed on sides with bitter punctures. Punctures of clytral strike strongly notching intervals on disc. Apical bristles of hind tibiae short, equal, hind metatarsi as long as upper thorn and somewath longer than next two joints together. 5 mm. - RSA (Transvaal).

bristles of hind tibiae equal. 3.2-7 mm Group 6: Aganocrossus

13 (12) Setae of elytra sparse or dense, decumbent, not springing from big punctures.

14 (15) Body very long. Clypeus deeply emarginate, genae strongly produced beyond eyes. Head and pronotum strongly punctate, sparsely, decumbent setose. Elytra dilated to apex, on sides with short, on apices with long setae. Hind metatarsi scarcely longer than upper thorn of hind tibiae and almost as long as next two joints together. 5-5.5 mm

Group 7: Longaphodius

15 (14) Characters different.

- 16 (17) Setae of elytra short, dense, almost erect. Clypeus, in the single South African species, broadly emarginate, both sides rounded. Head flat. Elytra strongly striated, the four innermost striae free on apex. 3-6 mm Group 8: Trichonotulus
- 17 (16) Setae of upper surface decumbent. Elytra mostly with a very distinct dark anteapical pattern. Head big, flat, clypeus rounded or slinghtly emarginate (Fig. 23), genae mostly produced beyond eyes. Apical bristles of hind tibiae unequal. Hind metatarsi often very long. 2.5-7 mm
  Group 9: Trichaphodius
- 18 (11) Upper surface bald, or only on sides and apex of elytra with more or less indistinct pubescence.

19 (44) Basis of pronotum without border.

20 (21) Apical bristles of hind tibiae equal in length (Fig. 13). Black, yellow or bicoloured species. Front with or without tubercle. 3-8 mm Group 10: Nialus

21 (20) Apical bristles of hind tibiae more or less unequal (Fig. 14).

22 (23) Posterior angles of pronotum truncate (as Fig. 24). Clypeus emarginate, frontal knob distinct, genae big. Basis of pronotum without border. Apex of middle tibiae in male excised. Hind metatarsi as long as upper thorn, below densely setose. 7.5-7.6 mm

Group 11: Nolicus

23 (22) Combination of characters different.

24 (25) Head big, clypeus semicircular. Hind angles of pronotum distinct, not truncate. 8 mm Group 12: Acrossus

25 (24) Head much smaller, not semicircular, or genae not produced beyond eyes.

26 (27) Hind angles of pronotum truncate and often deeply emarginate (Fig. 25), basis without border, but sometime with a transversal row of bigger punctures. Hind tibiae only with reduced oblique carinae. 2.5-4 mm Group 13: Paradidactylia

27 (26) Hind angles of pronotum obtuse or rounded, or other characters not as above.

- 28 (31) Apical margin of pronotum bordered (only in the middle of males of the group Craterocyphus: border indistinct).
- 29 (30) Anterior part of pronotum in males declivous (Fig. 27), behind with a big knob, in females pronotum simply convex. Front of males with a short horn, females with an obtuse knob. Reddish brown, disc of pronotum darker. 8-11 mm Group 14: Craterocyphus
- 30 (29) Pronotum and front also in males simply convex. Colour similar as in preceding group.
  7-8 mm
  Group 15: Hauserius

31 (28) Apical margin of pronotum without border.

32 (33) Seventh and ninth intervals connected before apex of elytra, forming a short ridge. 4 mm
Group 16: Plagiogonus

33 (32) Seventh and ninth intervals disconnected, or at least not forming a ridge.

34 (35) Elytra with short, sharply limited black spots (Fig. 28). Clypeus truncate, genae rounded, only weakly produced beyond eyes. Front with very weak knob. Hind metatarsi longer than upper thorn and about as long as next three joints together. 4.5-7 mm

Group 17: Calaphodius

35 (34) Elytra without small black spots.

- 36 (37) Hind metatarsi shorter than upper thorn of hind tibiae. Apical thorn of anterior tibiae in males springing mostly opposite to middle outer tooth, in female normal. Clypeus emarginate, genae small, knob on head distinct. Pronotum simply convex, mostly with a round discal spot. 4-6 mm
  Group 18: Cinacanthus
- 37 (36) Hind metatarsi longer than upper thorn, rarely as long, or other characters not as above.

38 (41) Big species, 8-20 mm long.

39 (40) Genae big, angular, strongly produced beyond eyes (Fig. 47). Pronotum of males behind anterior margin deeply impressed, in females simple. Front without tubercle, clypeal knob distinct. Hind metatarsi about as long as upper thorn of hind tibiae and about as long as next three joints together. 13-15 mm Group 19: Paradeloparius

- 40 (39) Genae very small, not or scarcely produced. Pronotum in both sexes simply convex.

  Hind metatarsi about as long as upper thorn, but always shorter than next three joints together. 9-20 mm

  Group 20: Adeloparius
- 41 (38) Much smaller species, 2-6 mm long.
- 42 (43) Elytra dark with not sharply limited basal and apical spot, or red with more or less extensive dark pattern. Clypeus rounded, genae small or big, clypeal knob indistinct. Hind metatarsi longer than upper thorn and as long as next three joints together. 4-5.5 mm

  Group 21: Emadiellus
- 43 (42) Elytra unicoloured red. Clypeus truncate or emarginate, genae small, clypeal knob very flat. Hind metatarsi longer than upper thorn and as long as next two or three joints together. 4-5.5 mm Group 22: Blackburneus
- 44 (19) Basis of pronotum finely or strongly bordered.
- 45 (46) Apical margin of pronotum also bordered. Clypeus lightly emarginate, genae mostly small, frontal suture carinated with three tubercles, clypeal knob flat. Hind metatarsi about as long as upper thorn and as long as or shorter than next three joints together.

  8-11 mm Group 23: Alocoderus
- 46 (45) Apical margin of pronotum without border.
- 47 (48) Genae strongly separated from sides of clypeus by a deep incision (Fig. 29). Clypeus emarginate, front with a tubercle. Striae of elytra furrowed, punctures fine. Hind metatarsi distinctly longer than upper thorn and scarcely longer than next two joints together. Apical bristles of hind tibiae short, equal in length. 3.5-5 mm

Group 24: Loboparius

- 48 (47) Genae not or weakly separated from sides of clypeus.
- 49 (50) Upper surface unicoloured yellowish red, at most vertex and disc of pronotum darker. Body long, parallel, flattened above. Clypeus emarginate, genae small. Apical bristles of hind tibiae equal or unequal. Tarsi very long. Hind metatarsi longer than upper thorn and hollowed along side. 4-6 mm Group 25: Erytus
- 50 (49) Upper surface not unicoloured yellowish red, or other characters different.
- 51 (58) Apical bristles of hind tibiae short, equal (Fig. 13) or almost so (cf. also Group 18: Cinacanthus).
- 52 (53) Scutellum narrow, on basis parallel (Fig. 30). Black. Clypeus emarginate, genae lightly produced. Hind metatarsi as long as upper thorn and shorter than next two joints together.
  5-5.5 mm
  Group 26: Calamosternus
- 53 (52) Scutellum triangular, not parallel on basis (Fig. 31). Elytra brown.
- 54 (55) Clypeus lightly emarginate, both sides rounded (Fig. 32). Genae distinctly produced beyond eyes. Front with tubercles. Relation of tarsal joints very variable. 5.5-7 mm Group 27: Bodilus
- 55 (54) Clypeus different.
- 56 (57) Clypeus emarginate, both sides of emargination with an upturned tooth, or a sharp angle (Fig. 33). Very similar to Bodilus. 4-6 mm Group 28: Allobodilus
- 57 (56) Clypeus emarginated five times, deepest in the middle, on both sides shallow (Fig. 34).

  Frontal suture finely carinated, clypeal knob distinct. Pronotum with sparse, irregular punctures. Hind metatarsi somewhat shorter than upper thorn of hind tibiae and about as long as next three joints together. 5.5 mm

  Group 29: Dibolus
- 58 (51) Apical bristles of hind tibiae unequal in length.
- 59 (66) Hind angles of pronotum truncate or emarginate (Figs. 24, 25).
- 60 (61) Oblique carinae of hind tibiae reduced. Upper surface reticulated. Small species (2.5-4 mm) of Group 13: Paradidactylia, with a transversal row of punctures along basis of pronotum.
- 61 (60). Oblique carinae of hind tibiae normal, strongly developed.
- 62 (63) Upper surface unicoloured yellowish red, shining: some species of Group 33: Koshantschikovius.
- 63 (62) Upper surface not unicoloured yellowish red.
- 64 (65) Elytra yellowish brown, sutural interval dark. Clypeus truncate, genae not produced beyond eyes: Mesontoplatys zavadili Balthasar (see Group 36).
- 65 (64) Elytra coloured otherwise. Clypeus emarginated, genae produced beyond eyes. Scutellum narrow. Basal joint of hind tarsi mostly longer than upper thorn. 3-6 mm
  - Group 30: Phaeaphodius
- 66 (59) Hind angles of pronotum angulated or rounded.

67 (68) Pronotum and elytra almost entirely smooth, unicoloured brown. Clypeus emarginated, genae not produced. Striae of elytra indistinctly punctate, Hind metatarsi somewhat longer than upper thorn and as long as next three joints together. 7-8 mm

Group 31: Aphodiellus

- 68 (67) Pronotum and elytra always distinctly punctate.
- 69 (70) Hind metatarsi shorter than upper thorn of hind tibiae. Apical thorn of anterior tibiae in males opposite to middle outer tooth: species of Group 18: Cinacanthus, with a weak basal border on pronotum.
- 70 (69) Hind metatarsi always longer than upper thorn of hind tibiae.
- 71 (72) Elytra strongly reticulated, mostly also punctated, almost dull, black, rarely reddish brown. Clypeus emarginate, both sides rounded or denticulated. Genae mostly produced, front at most with a weak tubercle. Hind metatarsi as long as upper thorn. 4-7 mm Group 32: Amidorus
- 72 (71) Elytra shiny, at most finely reticulate and punctate.
- 73 (76) Upper surface unicoloured yellowish red or brown, at most disc of pronotum and of elytra darker.
- 74 (75) Front without tubercles, suture distinct. Clypeus emarginate, genae either produced or not. Hind angles of pronotum mostly obtuse, rarely lightly truncated or weakly emarginate. Scutellum narrow. 2-5.5 mm Group 33: Koshantschikovius
- 75 (74) Front with three small tubercles (both lateral elevations sometimes weak or absent). Clypeus either shallowly emarginate or not, genae distinctly produced. Hind angles of pronotum obtuse. 6-7 mm Group 34: Pseudacrossus
- 76 (73) Upper surface black, elytra often yellow with various dark pattern, or black with yellow spots.
- 77 (78) Elytra black with or without bright spots on shoulders and on apex. Clypeus emarginate, genae produced beyond eyes. Frontal suture very fine or absent. 2-4.5 mm Group 35: Orodalus
- 78 (77) Elytra yellowish with various dark pattern.
- 79 (80) Elytra with black suture and mostly with a triangular scutellar spot. Clypeus deeply emarginate, both sides of emargination lobed and distinctly upturned. Genae not or weakly produced. Frontal suture very fine, without tubercles. Scutellum narrow, 2-5 mm Group 36: Mesontoplatys
- 80 (79) Elytra with a nebulous spot on disc, sides and apical part more bright, Clypeus weakly or not emarginate, both sides rounded, genae small, not or scarcely produced beyond eyes. Frontal suture very fine or absent, only in A. hepaticus Roth with a tubercle. Scutellum triangular. 2.5-5.5 mm Group 37: Nobius

#### Group 1: Pleuraphodius

- Disc of pronotum not or scarcely with sparser and finer punctures than sides (cf. also A.levis Schmidt, No.29).
- 2 (3) Very small species. Reddish yellow, shiny, elytra shortly setose. Genae not produced beyond eyes, clypeus weakly emarginate. Hind metatarsi longer than upper thorn of hind tibiae and somewhat shorter than next three joints together. 2.5 mm. - Botswana (pusio Kolbe, 1908)
- Bigger species, 3-4.5 mm long, Elytra bald, 3 (2)
- 4 (7) The broad primary intervals obtusely carinated, the secondary ones linear.
- 5 (6) Punctation of head fine, very dense, most distances between punctures smaller than diameter of punctures. Brown. Clypeus broad, broadly emarginate. Basis of pronotum with short bristles. Hind metatarsi much longer than upper thorn and almost as long as next three joints together. 3-3.5 mm. - RSA (Natal) mutilus Schmidt, 1911
- Punctation of head distinctly stronger, most distances between punctures as broad or 6 (5) broader than diameter of punctures. Reddish brown, elytra more yellow. Apex of clypeus narrower, emargination less broad. Basis of pronotum without bristles. Hind legs about as in preceding species. 3-3.2 mm. - RSA (Transvaal), Zimbabwe-Rhodesia stehliki Endrődi, 1977
- 7 (4) Primary intervals only convex.
- Clypeus weakly emarginate, genae distinctly produced beyond eyes. Reddish brown. Basis 8 (9)

of pronotum strongly bordered, posterior angles lightly emarginate. 4.5 mm. - RSA (Transvaal) hanstroemi Landin, 1957

9 (8) Clypeus deeply emarginate. Hind angles of pronotum obtuse, not emarginate. Punctures of elytral striae not notching intervals. Apical bristles of hind tibiae unequal, metatarsi much longer than upper thorn and shorter than next three joints together. 3.5 mm. RSA (Natal)

10 (1) Disc of pronotum distinctly with finer and sparser punctures than sides.

11 (12) Clypeus deeply emarginate, both sides rather narrowly lobed. Yellowish brown. Genae scarcely produced. Basis of pronotum without border. Elytra deeply furrowed. Hind metatarsi longer than upper thorn and as long as next two joints together. 2.8-3.5 mm - RSA (Transvaal) bibatillatus Petrovitz, 1958

12 (11) Clypeus not or weakly emarginate, both sides rounded.

13 (22) Primary intervals of elytra carinated or roof-shaped, only edge shiny.

14 (15) Very small reddish yellow species. Clypeus truncate, genae lightly produced. Head and pronotum finely punctate. Hind metatarsi much longer than upper thorn and about as long as next two joints together. 2.5 mm. - RSA (Transvaal), (= costatulus Endrődi, 1964) burorum Endrődi, 1981

15 (14) Bigger species, 2.8-6 mm, combination of characters different.

16 (17) Black, anterior angles of pronotum reddish. Genae scarcely produced. Head and pronotum strongly, not very densely punctate. 2.8-3.5 mm. - RSA (Cape Province), (= ? jucundulus Péringuey, 1901)
brunneus Thunberg, 1818

17 (16) Bright red to brown species.

18 (19) 6 mm long. Posterior part of elytra with very fine pubescence. Pronotum aciculate, aciculation denser and deeper on sides. Elytral striae geminate, costae more sharply carinate and more distinctly punctate on sides. - RSA (Cape Province)

medioximus Péringuey, 1901

19 (18) 3.4-4.3 mm.

- 20 (21) Clypeus scarcely emarginate, genae not produced, head very finely and sparsely punctate. Sides of pronotum with sparse setae, disc finely punctate, on sides mixed with bigger punctures. Intervals obtusely carinated with reticulated sides. Hind metatarsi longer than upper thorn and almost as long as next three joints together. 4-4.3 mm. - RSA (Natal) dingaani Petrovitz, 1964
- 21 (20) Very similar to preceding, but head densely punctate, distance between punctures as short as a puncture. Sides of pronotum without setae, surface everywhere densely punctate, on sides with bigger punctures. 3.4-3.9 mm. RSA (Cape Province) simillimus Petrovitz, 1964

22 (13) Primary intervals weakly or strongly convex, not carinated.

- 23 (26) Basis of pronotum bordered (in A. rotschildi Schm. interrupted in the middle, in A. reticulatus Endr. very fine or indistinct, cf. in antithesis).
- 24 (25) Disc of pronotum not very densely micropunctate with a few big punctures, latter dense on sides, hind angles emarginate. Reddish brown. Primary intervals strongly reticulated. Hind metatarsi much longer than upper thorn and almost as long as next three joints together. 4 mm. RSA (Transvaal) paranceps Endrödi, 1979
- 25 (24) Disc of pronotum uniformly, very finely punctate, punctures on sides much denser, hind angles scarcely truncate. Primary intervals finely reticulated. Hind metatarsi much longer than upper thorn and distinctly shorter than next three joints together. 4-5 mm. RSA (Transvaal)

26 (23) Basis of pronotum without border.

27 (28) Primary intervals everywhere with very short setae, weakly convex, reticulated, dull brown. Clypeus emarginate, genae weakly produced. Hind metatarsi longer than upper thorn and longer than next two joints together. 3.5-4 mm. - RSA (Transvaal) letabus Landin, 1957

28 (27) Primary intervals without Betae.

29 (30) Brownish yellow, shiny. Clypeus weakly emarginate, genae scarcely produced beyond eyes. Sides of pronotum somewhat more densely punctate than disc. Primary intervals of elytra weakly convex. Hind legs about as in preceding species. 2.5-3 mm. - RSA (Transvaal)
<u>levis</u> Schmidt, 1908

Aberrative form:

1. Primary intervals entirely or almost flat

ab. leviplanus Endrődi, 1981

- 30 (29) Characters different and mostly bigger species.
- 31 (32) Primary intervals lightly convex, nearly smooth, shiny. Clypeus weakly emarginate, genae produced. Pronotum on disc rather, on sides very densely punctate, hind angles emarginate. Reddish brown. Hind metatarsi longer than upper thorn and about as long as next (chaboti Paulian, 1944)XX two joints together. 4-5 mm. - Angola
- 32 (31) Primary intervals strongly convex, or reticulated, or other characters different. Reddish brown species.
- 33 (36) Primary intervals reticulated also in the middle.
- 34 (35) Primary intervals (Fig. 35) very finely reticulated in the middle. Genae produced. Disc of pronotum very distinctly, rather uniformly, on sides unequally punctate. Hind metatarsi much longer than upper thorn of hind tibiae and about as long as next two and half joints together. 3.5-4.5 mm. - RSA (Transvaal, Natal, Cape Province), Zimbabwe-Rhodesia (Mosambique) (= sulcipennis Boheman, 1857, lineatosulcatus Harold, 1859, purkyney Balthasar, 1933, pulverulentus Balthasar, 1933) teter Roth, 1851
- 35 (34) Primary intervals along the middle strongly reticulated, oily. Genae produced beyond eyes. Punctation on disc of pronotum extremely fine, rather sparse, on sides much denser, basis very finely bordered, border in the middle broadly interrupted. Hind metatarsi as long as next two joints together. 5-5.5 mm. - RSA (Transvaal), SWA
  - reticulatus Endrődi, 1981

adustus Klug, 1855

forma typica

- 36 (33) Primary intervals along the middle smooth or indistinctly reticulate, sometimes also sides smooth.
- 37 (38) Sides of primary intervals distinctly reticulate. Hind angles of pronotum weakly truncated: A.teter Roth, cf. No.34.
- 38 (37) Also sides of primary intervals smooth, both sides of striae finely carinated, besides with a row of punctures. Clypeus weakly emarginate, genae produced. Pronotum rather strongly, on sides more densely punctate, basal border in broad middle interrupted. Hind metatarsi much longer than upper thorn and as long as next three joints together, 3.5-5 mm. - RSA (Transvaal), (= kivuensis Paulian, 1939, africanus Endrődi, 1955) rotschildi Schmidt, 1911

## Group 2: Mendidaphodius

- Basis of pronotum bordered. Genae produced beyond eyes. Pronotum sparsely punctate, 1 (2) hind angles rounded. Hind metatarsi about as long as upper thorn of hind tibiae and as next two joints together. 5-6 mm. - SWA-Namibia ganabi Endrődi, 1977
- 2 (1) Basis of pronotum without border.
- Elytra black, with or without red pattern. Sides of pronotum red. Hind metatarsi longer 3 (4) than upper thorn and somewhat longer than next two joints together. 3-4.5 mm. - RSA (Transvaal), SWA-Namibia (= rubroplagiatus Balthasar, 1935)

# Aberrative forms:

- 1. Elytra black with a red spot before apex
- 2. Elytra black with an oblique red band from shounder to apical knob
- ab. porrectus Schmidt, 1913
- 3. Elytra entirely black ab, ruandanus Endrődi, 1955 Surface yellowish brown. Elytral striae deeper, intervals higher than in preceding species. Hind metatarsi as upper thorn and somewhat shorter than next two joints together.
- 5-5.5 mm. SWA-Namibia psammophilus Endrődi, 1977

Somewhat similar is the to me unknown A.pygmaeus Boheman, 1857. Clypeus not emarginate, rounded, head flat, very finely and densely punctate. 2,75 mm. - S.Africa, Gariep River.

Very similar is A. mashunensis Péringuey, 1901, but clypeus on both sides of shallow emargination distinctly angulated, discal intervals flat, on sides convex. 3.5 mm. - Zimbabwe-Rhodesia.

#### Group 3: Ammoecius

- 1 (4) Apical margin of clypeus with four sharp denticles.
  2 (3) Pronotum strongly, densely punctate. Elytral striae deeply furr
- 2 (3) Pronotum strongly, densely punctate. Elytral striae deeply furrowed, intervals highly convex. 5 mm. RSA (Cape Province) armaticeps Péringuey, 1901
- 3 (2) Pronotum finely punctate, elytral striae weakly incised, intervals nearly flat. 4-5 mm. -RSA (Transvaal) dentinus Péringuey, 1901
- 4 (1) Both sides of clypeal emargination dentate or rounded.
- 5 (10) Intervals of elytra carinated, carinae on disc rarely somewhat indistinct.
- 6 (7) Each interval with three fine carinae, middle carina a little more raised than lateral ones, from striae only fifth and seventh reaching apex. Apex of clypeus deeply emarginate, both sides obtusely angulated. 5-5.5 mm. RSA (Transvall, (= carinulatus Péringuey, 1901)
- 7 (6) Intervals of elytra only with one carina.
- 8 (9) Genae not produced beyond eyes. From elytral striae fourth, fifth and eight not reaching apex. Emargination of clypeus narrow, both sides obtusely angulated. 4-5 mm. RSA (Cape Province) mimus Péringuey, 1901
- 9 (8) Genae strongly produced. From striae also seventh not reaching apex. Striae rather deeply furrowed, intervals roof-shaped. 5-6 mm. - RSA (Cape Province) spectabilis Péringuey, 1901
- 10 (5) Intervals of elytra more or less convex, not or carinated at most only on apex.
- 11 (12) Elytra with double rows of punctures (20 rows). Clypeus moderately deeply emarginate, both sides almost boradly rounded. Hind angles of pronotum emarginate. 6-6.5 mm. RSA (Namaqua Coast) cribripennis Petrovitz, 1964
- 12 (11) Elytra with ten rows of punctures.
- 13 (18) Clypeus between apical margin and clypeal carina finely and more or less sparsely punctate.
- 14 (15) Elytral striae very fine, intervals on disc very broad, flat, behind convex. Angles of clypeal emargination on both sides sharp. Pronotum strongly punctate, without micropunctures. 3.5-5 mm. RSA (Namaqua Coast) orycis Endrödi, 1981
- 15 (14) Elytral striae deep.
- 16 (17) Lateral angles of clypeus sharp, Hind angles of pronotum rounded, surface everywhere rather strongly and rather densely punctate. Hind metatarsi shorter than upper thorn of hind tibiae and longer than next three joints together. 4.5-5.5 mm. RSA (Namaqua Coast)
- 17 (16) Lateral angles of clypeus angulately rounded. Hind angles of pronotum obtuse, disc with sparse micropunctures, mixed with sparse bigger punctures. 3.5 mm. RSA (Cape Province), (= ?catulus Balthasar, 1946)
  brevitarsis Péringuey, 1901
- 18 (13) Clypeus between apical margin and clypeal carina granulated or strongly punctate.
- 19 (22) Apex of clypeus with two denticles to obtusely angulated.
- 20 (21) Frontal carina long, fine, reaching not very far from eyes, clypeal denticles very sharp, genae produced. Head and pronotum strongly, not very densely punctate. Elytral striae lightly furrowed, finely punctate, punctures of intervals very fine. 4.5 mm. RSA (Cape Province), (= terminatus Harold, 1869, incultus Petrovitz)
- 21 (20) Frontal carina short, reaching far from eyes, genae weakly produced. Punctures of fine or stronger elytral striae more or less big, notching sides of the more or less convex intervals. Punctation of pronotum rather fine, punctures almost equal. 4.5-5 mm.

   RSA (Transvaal, Cape Province) bidentulus Harold, 1871
- 22 (19) Apex of clypeus on both sides of emargination broadly rounded.
- 23 (26) Elytral striae simply punctate, surface shiny.
- 24 (25) Clypeus granulated. Disc of pronotum sparsely punctate. Intervals of elytra on disc flat, on apex convex. 4-4.5 mm. RSA (Transvaal, Cape Province)
- kochi Petrovitz, 1964
  25 (24) Clypeus wrinkled-punctate, Punctation of pronotum dense. Intervals of elytra on disc
- 25 (24) Clypeus wrinkled-punctate. Punctation of pronotum dense. Intervals of elytra on disc lightly, on apex strongly convex. 4-5 mm. - RSA (Cape Province), (Head Fig. 20) dukei Endrődi, 1964
- 26 (23) Striae of elytra with primary and secondary intervals, surface reticulate, less shiny.
- 27 (28) Hind angles of pronotum emarginate, surface everywhere very finely punctate, only on

disc mixed with bigger punctures. Elytral striae and primary intervals broad, secondary ones very narrow. 4 mm. - RSA (Cape Province) sparsepunctatus Petrovitz, 1964

28 (27) Hind angles of pronotum rounded, basis not or indistinctly emarginate.

29 (30) Smaller. Hind metatarsi about as long as upper thorn of hind tibiae. Elytra very finely reticulate, rather shiny. 4-5 mm. - RSA (Cape Province) oreotragi Endrödi, 1978

30 (29) Bigger. Hind metatarsi much longer than upper thorn of hind tibiae. Elytra strongly reticulate, dull. 5-6 mm. - RSA (Cape Province) tonderae Endrődi, 1981

#### Group 4: Pharaphodius

1 (10) Apex of clypeus on each side of emargination with a sharp denticle or with a more or less obtuse angle.

2 (9) Front without tubercle.

3 (4) Scutellum strikingly narrow, about 2-2.5 times as long as broad on basis. Genae strongly produced beyond eyes. Hind metatarsi as long as upper thorn of hind tibiae and somewhat shorter than next three joints together. 4 mm. - Botswana (hastulifer Petrovitz, 1958)

4 (3) Scutellum normal, on basis parallel or triangular.

5 (6) Head densely pilose. Clypeus deeply emarginate, both sides of emargination very sharp and projecting laterally. Pronotum very densely punctate. 3 mm. - RSA (Cape Province) hirticeps Péringuey, 1901

6 (5) Head glabrous. Pronotum not very densely punctate.

7 (8) Pronotum with rather sparse and big punctures, mixed with micropunctures. Clypeus with two sharp denticles or obtuse angles. Genae lightly produced. Hind metatarsi about as long as upper thorn and almost as next three joints together. 3.5-5 mm. RSA (Transvaal, Cape Province), SWA-Namibia

Aberrative forms:

1. Clypeus with two obtuse angles

Elytra without humeral denticle
 Elytra shorter, sides curved
 Elytra reticulated, oily
 Elytra reticulated, oily
 Endrődi, 1960
 rugulosus Endrődi, 1964

8 (7) Pronotum with very small and with only somewhat bigger punctures. Sides of clypeus straight, genae strongly produced. Elytra twice longer than both together. Hind metatarsi somewhat shorter than upper thorn and as long as next two joints together. 3.5-4.5 mm. - RSA (Transvaal), Bechuanaland hetaerus Petrovitz, 1958X

9 (2) Front with a distinct tubercle. Clypeus with two sharp denticles, genae produced.

Proportim in male almost without punctures, in female rather densely punctate. Hind metatarsi shorter than upper thorn and shorter than next three joints together. 5-6 mm.

- RSA discolor Erichson, 1859

10 (1) Apex of clypeus rounded beside emargination.

11 (26) Front with a sharp middle tubercle and mostly with two smaller lateral tubercles.

12 (13) Lateral tubercles of head connected by a carina with the apical margin of clypeus (Fig. 36). Reddish brown. Pronotum with a small impression behind apical margin, basis without border. Posterior legs about as in preceding species. 5-6 mm. - RSA (Transvaal, Oranje), (= ferrugineus Boheman, 1857, bohemani Harold, 1862)

guineensis Klug, 1855

ab. merula Balthasar, 1941

13 (12) Lateral tubercles not connected with the apical margin of clypeus (Fig. 37).

14 (15) Posterior tibiae thickened in the middle (Fig. 38). Yellowish brown. Genae produced, front with three tubercles. Pronotum very sparsely punctate, basis without border. Hind metatarsi shorter than upper thorn of hind tibiae and as long as next two joints together. 6 mm. - RSA <a href="mailto:curvodilatatus">curvodilatatus</a> Schmidt, 1909

15 (14) Posterior tibiae normal, successively thickened to apex (Fig. 39).

16 (25) Hind mistatarsi as long as or scarcely longer than next two joints together and always shorter than next three joints.

A. vividus Petrovitz, 1964 is (after diagnosis) very similar to A. hetaerus Petrovitz, but sides of clypeus convexly curved, elytra 1.5 times longer than broad together, punctures in elytral striae finer, sparser, less distinctly notching.

- 17 (22) Black or blackish red species.
- 18 (19) Intervals of elytra on apex much narrower than on basis. Scutellum very long and narrow. Clypeus with two obtuse angles. Hind metatarsi somewhat shorter than upper thorn and as long as next two joints together.5 mm. RSA (Cape Province)

rubricosus Boheman, 1857

- 19 (13) Intervals of elytra on apex much narrower than on basis.
- 20 (21) Basis of pronotum without a dense row of big punctures. Genae dinstinctly produced beyond eyes. Disc of pronotum with unequal punctures. Hind metatarsi shorter than upper thorn and somewhat longer than next two joints together. 5-6.5 mm. RSA (Transvaal, Natal, Cape Province), SWA-Namibia (= picipes Klug, 1855)

impurus Roth, 1851

1 (20) Basis of pronotum with a dense row of big punctures. Genae not produced. Disc of pronotum with equal punctures. Legs similar as in preceding species. 5 mm. - RSA (Natal) tschakai Petrovitz, 1964

- 22 (17) At least elytra yellow or yellowish brown.
- 23 (24) Genae rounded, weakly produced beyond eyes. Posterior angles of pronotum lightly truncated, but not emarginated. Elytra shiny, sides often dark. Paramera broader, on apex incised. 5-6 mm. RSA (Transvaal), (= posticus Boheman, 1857)

24 (23) Genae big, strongly produced. Posterior angles of pronotum emarginate. Elytra reticulate, oily. Paramera narrow, on apex not incised. 6 mm. - RSA (Transvaal, Natal), Bechuanaland, (= pseudorussatus Petrovitz, 1967) dubiosus Péringuey, 1901

- 25 (16) Hind metatarsi as long as next three joints together or scarcely shorter. Frontal tubercles small. Find angles of pronotum emarginate, basis without border. Hind metatarsi longer than upper thorn. 7-9 mm. RSA koshantschikovi Paulian, 1934
- 26 (11) Front only with a blunt knob.
- 27 (28) Basis of elytra finely carinated. Hind metatarsi much longer than upper thorn. 3.8 mm.
   Angola (ferreirae Petrovitz, 1971)
- 28 (27) Basis of elytra not carinated.
- 29 (30) Frontal knob (between frontal suture and apical margin) distinctly raised, because surface on both sides of knob impressed. Reddish brown, head and pronotum darker. Genae weakly produced. Apical bristles of hind tibiae unequal, hind metatarsi about as long as upper thorn and as next three joints together. 5-6 mm. RSA (Cape Province), SWA-Namibia, (= impressipennis Schmidt, 1908), Cf. also in group Cinacanthus: intercalaris Péringuey, 1901.
- 30 (29) Frontal knob weak, without impressions beside.
- 31 (34) Intervals 4, 6, 8 and 10 strongly abbreviated behind.
- 32 (33) Black shiny. Clypeus weakly emarginate. Only sides of pronotum with small punctures. Apical bristles of hind tibiae equal, hind metatarsi as long as upper thorn and about as next three joints together. 6.5-7 mm. - RSA?
  neghellinus Balthasar, 1939
- 33 (32) Reddish yellow, elytra yellow, sides often dark. Clypeus distinctly emarginate. Fourth interval of elytra not abbreviated. Apical bristles of hind tibiae unequal, tarsal joints as in preceding species. 5.5-7 mm. RSA (Transvaal) discoidalis Boheman, 1857

  Aberrative forms:

  1. Elytra yellow or sides and apex black forma typica
  - 2. Elytra black or almost black

ab. satanas Paulian, 1944

- 34 (31) Intervals 4, 6, 8 and 10 not abbreviated.
- 35 (38) Punctures of elytral striae notching sides of intervals.
- 36 (37) Black to dark reddish brown, legs red. Clypeus scarcely emarginate, finely bordered.

  Genae scarcely produced. Pronotum with big, rather sparse punctures. Hind metatarsi longer than upper thorn of hind tibiae and as long as next three joints together. 3-4 mm. RSA (Transvaal, Natal)

  anthrax Gerstäcker, 1871

37 (36) Yellow to brown, head and pronotum black. Clypeus weakly emarginate and very broadly upturned. After diagnosis: "The longer thorn of posterior tibiae longer than two next joints together." 4-4.5 mm. - SWA-Namibia okatumbanus Balthasar, 1946

- 38 (35) Punctures of elytral striae not notching sides of intervals (viewed from above).
- 39 (42) Ground colour yellow, surface partly dark.
- 40 (41) Clypeus weakly emarginate, genae angulated. Sides of pronotum straight and diverging backward, surface finely punctate, mixed with bigger punctures. Hind metatarsi as long

- as upper thorn and shorter than next three joints together. 4-5 mm. RSA (Transvaal) atroscutellatus Schmidt, 1909
- 41 (40) Clypeus scarcely emarginate, genae rounded. Sides of pronotum curved, posterior angles emarginate, surface about as in preceding species. Hind metatarsi longer than upper thorn and somewhat longer than next three joints together. 4 mm. RSA (Natal) ditus Péringuey, 1901
- 42 (39) Surface black or dark, at most only small parts red.
- 43 (44) Black, margins of clypeus, anterior angles of pronotum and legs reddish. Hind angles of pronotum rounded. Apical bristles of hind tibiae unequal, hind metatarsi somewhat shorter than upper thorn and somewhat longer than next two joints together. 3.5-4 mm. 
  Botswana (bechuanus Petrovitz, 1958)
- 44 (43) Dark reddish brown, vertex and disc of pronotum black. Hind angles of pronotum truncate and weakly emarginate. Apical bristles of hind tibiae short, equal, in the middle at most with 1-2 somewhat longer bristles. Hind metatarsi as long, or somewhat longer than upper thorn of hind tibiae and as long as next three joints together.

  4.5-5 mm. RSA, SWA-Namibia (Farm Chausib) chausibensis Endrődi, 1981

### Group 5: Aphodobius

- 1 (2) Upper surface glabrous. Intervals of elytra tectiform and impunctate, yellowish red, third and fourth intervals each and shoulder with a darker spot. Disc of pronotum uniformly, distinctly punctate. 3.5 mm. RSA (Natal) misellus Boheman, 1857
- 2 (1) Upper surface pubescent. Intervals of elytra costate and having a double row of setiferous punctures, without dark spots. Disc of pronotum very densely punctate, except a small median area. 4 mm. - Zimbabwe-Rhodesia (villosulus Péringuey, 1901)

## Group 6: Aganocrossus

1 (2) Elytra also on disc from basis to apex with setiferous punctures, setae long, erect. Yellow, suture, broad sides, apex and a big discal spot of elytra dark brown or black. Hind metatarsi longer than upper thorn of hind ubiae and as long as next three joints together. 4-5 mm. - RSA (Transvaal, Natal, Cape Province), (= centralis Harold, 1868) amoenus Boheman, 1857

#### Aberrative forms:

3. Elytra entirely black

- 1. Elytra yellow, at most with a weak dark discal spot
- 2. Elytra black, only basis and a longish apical spot red ab. impugnans Schmidt, 1907
- ab. vestitus Boheman, 1857
  - ab. impugnans Schmidt, 19 ab. fuscus Petrovitz, 1962
- 2 (1) Elytra only on sides and apex with setiferous punctures.
- 3 (4) Intervals 2, 4, 6 yellow, 1, 3, 5 darker reddish brown. Genae entirely rounded, not produced beyond eyes. Legs as above. 5-6 mm. RSA (Transvaal, Cape Province), (= zebrinus Petrovitz, 1958)
  fugitivus Péringuey, 1901
- 4 (3) Elytra black to dark reddish brown, shiny, sides of pronotum yellowish brown. Head without knob, genae scarcely produced. Legs as in A. amoenus Boheman. 3,2-3.6 mm. Zimbabwe-Rhodesia (cipriani Balthasar, 1939)

### Group 7: Longaphodius

Yellow, whole surface sparsely pubescent. Body strikingly elongate. Clypeus deeply emarginate, both sides rounded. Pronotum densely, strongly punctate, basis bordered. Elytra very long (about 4:2.5 together). Hind metatarsi as long as upper thorn of hind tibiae and about as long as next two joints together. 5-6 mm. - RSA (Namaqua Coast) namaquarum Endrődi, 1981

#### Group 8: Trichonotulus

-- Dark brown to black, beneath and legs reddish brown. Surface covered with bright setae. Genae not produced, front without tubercle. Hind angles of pronotum distinctly emarginate, punctures dense, to basis successively bigger. Apical bristles of hind tibiae unequal, upper thorn somewhat longer than hind metatarsi, latter as long as next three joints together. 3.5-3.6 mm. - Pondoland stueckenbergi Petrovitz, 1967

#### Group 9: Trichaphodius

1 (2) Setiferous punctures on disc of pronotum similarly dense as on sides. Elytra yellow with dark apical pattern. Hind metatarsi much longer than upper thorn of hind tibiae and as long as next three joints together. 3-4 mm. - RSA (Transvaal, Natal) humilis Roth, 1851

Aberrative forms:

Elytra yellow, without anteapical spot
 Elytra strongly darkened
 ab. <u>flavus</u> Endrődi, 1955
 <u>fumosulus</u> Endrődi, 1951

2 (1) Disc of pronotum with finer and much sparser punctures than sides.

3 (12) Elytra also on disc setose, at most a small triangular spot around scutellum bald.

4 (9) Hind metatarsi about as long as upper thorn of hind tibiae.

5 (6) Apex of clypeus truncate and mostly weakly emarginate. Anteapical spot of elytra distinct, striae strong, very finely punctate, intervals strongly reticulated with rather big punctures. Hind metatarsi longer than next three joints together. 5-6 mm. - Mosambique (cinerascens Klug, 1855)

6 (5) Apex of clypeus rounded, smaller species.

- 7 (8) Hind metatarsi much longer than next three joints together. Punctation of pronotum fine, mixed with sparse, on sides with dense, big punctures. Intervals lightly convex. 4-4.5 mm. RSA (Natal) <u>manifestus</u> Schmidt, 1911
- 8 (7) Hind metatarsi as long as next three joints together. Punctation of pronotum finer and sparser. In other characters very similar to preceding species. 4 mm. - Angola, Mosambique (seminitidus Quedenfeldt, 1884)

9 (4) Hind metatarsi much longer than upper thorn.

- 10 (11) Elytra with rich black pattern, also pronotum almost black, but sides all yellow. Clypeus broadly truncate, in male lightly emarginate. 4 mm. SWA-Namibia pseudocalcaratus Paulian, 1954
- 11 (10) Surface yellow, disc of pronotum and suture of elytra weakly darkened. Clypeus rounded, 4 mm. RSA (Mashonaland) leoninus Schmidt, 1911

12 (3) Elytra setose only on sides.

13 (14) Fourth interval behind much broader than third and fifth. Elytra with a nebulous and an anteapical spot. Clypeus deeply emarginate, both sides rounded. Middle and hind tibiae and tarsi thickened. Hind metatarsi as long as upper thorn and longer than next three joints together. 5-5.5 mm. - RSA (Oranje) simoni Petrovitz, 1959

14 (13) Fourth interval not or scarcely broader than neighbouring ones.

15 (16) Big species (6-7 mm). Uniformly dark to reddish brown, without pattern. Clypeus rounded, genae weakly produced beyond eyes. Striae of elytra fine, intervals reticulated. Hind metatarsi somewhat longer than upper thorn and longer than next three joints together. - Angola (hepaticolor Quedenfeldt, 1884)

16 (15) At most 5 mm long. Apex of clypeus lightly truncate.

- 17 (20) Dark discal spot of pronotum interrupted in the middle by a yellow longitudinal line.
- 18 (19) Hind angles of pronotum lightly truncated. Setae of elytra long, punctation of intervals dense. Hind metatarsi in female somewhat, in male much longer than next three joints together. 5 mm. - RSA (Transvaal) divisus Schmidt, 1908
- 19 (18) Hind angles of pronotum in male more rounded than in female. Setae on sides and on apex of elytra extremely fine, short and sparse. Hind metatarsi somewhat longer than next three joints together. RSA paradivisus Balthasar, 1960

20 (17) Dark discal spot of pronotum not divided in the middle.

21 (22) Pronotum densely and uniformly punctate (but not setose as in A. humilis Roth). Elytra with widened black pattern, yellow anteapical spot with sharp black limits. 3-4 mm. - Mosambique (copulatus Schmidt, 1913)

22 (21) Disc of pronotum more sparsely punctate than sides.

- 23 (24) Very small. Disc of pronotum rather densely punctate. Intervals of elytra convex, anterapical spot distinct. Hind metatarsi about as long as following joints together. 2-2.5 mm. Mosambique (calcaratoides Paulian, 1942)
- 24 (23) Much bigger. Disc of pronotum very sparsely punctate, in male almost smooth. Intervals of elytra flat or scarcely convex, dark pattern mostly weak. Hind tarsi as in preceding species. 4-5 mm. - RSA (Transvaal, Oranje), SWA-Namibia

calcaratus Boheman, 1857

Aberrative forms:

- 1. Pronotum scarcely punctate, intervals of elytra almost or entirely flat, dark pattern forma typica
- 2. Pronotum distinctly punctate, intervals of elytra lightly convex, very finely punctate
- 3. Pronotum and elytra distinctly punctate
- 4. Pronotum smooth, intervals convex
- 5. Pattern of elytra absent, only sutural interval dark
- 6. Dark pattern of elytra strikingly strong
- ab. zborniki Balthasar, 1935
- ab. pulchellus Müller, 1941
- ab. convexior Endrődi, 1960
- ab. albicans Endrődi, 1960
- ab. nero Endrődi, 1960

#### Group 10: Nialus

- 1 (4) Black or reddish black species.
- 2 (3) Small, 3-4 mm. Head with very dense and fine punctures. Elytral striae rather strongly furrowed, on apex somewhat more deeply, but most of them connected and here also punctated. Hind metatarsi somewhat longer than upper thorn of hind tibiae and about as long as next two joints together. - RSA (Transvaal), (= nigritulus Boheman, 1857, paivanus Wollaston, 1867, expertus Harold, 1871) nigritus Fabricius, 1801
- 3 (2) Much bigger, 4.5-6 mm. - Head with sparser and unequal punctures. Elytral striae very fine, on apex scarcely furrowed, punctures smaller than on disc. Hind legs as in preceding species. - RSA (Transvaal) bayeri Endrődi, 1956
- 4 (1) Surface yellow, elytra with or without a nebulous spot.
- 5 (6) Very big. Genae not produced, frontal tubercle incised on top. Elytra with a nebulous spot, intervals flat. Hind metatarsi longer than next three joints together. 8 mm. -RSA (Cape Province) fingo Petrovitz, 1971
- 6 (5) Smaller species, mostly 3-5 mm, very rarely 6 mm long.
- 7 (8) Scutellum narrow, sides on basis parallel. First interval and a nebulous spot on elytra mostly dark. Clypeus yellow or dark with two yellow spots. Hind metatarsi about as long as upper thorn and longer than next two joints together. 3-6 mm. - About in whole of RSA and SWA-Namibia lividus Olivier, 1789 South African races:
  - 1. Populations of RSA. Posterior tibiae mostly longer than tarsi, metatarsus longer than upper thorn (= sublividus Balthasar, 1941, partim)

lividus pseudolividus Balchasar, 1941

2. Populations of SWA-Namibia. Posterior tibiae mostly as long as tarsi, metatarsus shorter than upper thorn lividus witboi Petrovitz, 1961

Aberrative forms:

1. Nebulous spot of elytra absent

ab. limicola Panzer, 1798

2. Surface almost black, only second interval of elytra yellow

ab. anachoreta Fabricius, 1801

- 8 (7) Scutellum triangular, sides on basis not parallel. Elytra without a nebolous spot, only sutural interval dark.
- 9 (10) Front distinctly tuberculate. Micropunctures of pronotum mixed with big punctures, especially on sides. Hind metatarsi much longer than upper thorn and as long as next three joints together, 5 mm. - RSA ("South Africa"), /= dolosus Harold, 1871) consimilis Boheman, 1857
- 10 (9) Front without tubercle, clypeus with a blunt knob. Pronotum uniformly and finely punctate. Hind metatarsi somewhat shorter than upper thorn and somewhat longer than next two joints together. 5 mm. - RSA (Cape Province), (= fallax Harold, 1871, non Mulsant, 1942) alienus Schmidt, 1922

#### Group 11: Nolicus

Yellowish brown, vertex, disc of pronotum and suture of elytra dark. Front without tubercle, clypeal knob distinct, genae rounded. Pronotum micropunctate, mixed with a few big punctures. Elytral striae weak, only on disc punctate. Hind metatarsi as long as upper thorn of hind tibiae and as next three joints together. Apex of middle tibiae in male excised, 7.5 mm. - RSA (Cape Province) veteranus Petrovitz, 1962

### Group 12: Acrossus

- 1 (2) Bright brown. Even-number intervals shortened far from apex. Oblique carinae of posterior tibiae with very long setae. Pronotum almost without punctures. Elytra finely striated. Hind metatarsi as long as upper thorn and as next three joints together. 8 mm.

   Angola (longepilosus Schmidt, 1911)
- 2 (1) Dark brown to black. Odd-number intervals of elytra not shortened on apex. Pronotum very finely punctate with a few big punctures on sides and basis. Elytra and legs about as in preceding species. 11-13 mm. RSA (Cape Province), (= capicola Harold, 1862) rufipes Linné, 1758

#### Group 13: Paradidactylia

- 1 (2) Pronotum also on disc densely punctate, punctures very unequal. Bright reddish brown. Clypeus weakly emarginate. Intervals of elytra lightly convex, reticulated with very sparse micropunctures. Hind metatarsi much longer than upper thorn of hind tibiae and shorter than next three joints together. 3-4 mm. RSA (Transvaal)
- 2 (1) Disc of pronotum very sparsely, sides densely punctate. Clypeus broadly truncate, not or scarcely emarginate. Intervals of elytra flat, strongly reticulated, without punctures.

  Legs as in preceding species. 2.7 mm. RSA (Cape Province)

  umfolozicus Endrődi, 1976

## Group 14: Craterocyphus

Reddish brown, pronotum darker. Frontal horn simply acuminated. Anterior half of pronotum declivous, behind knob high. Front and pronotum of female simple. Hind metatarsi as long as upper thorn and as next two together. 9-10 mm. - RSA (Transvaal, Natal, Cape Province), (= armatus Roth, 1851) rhinoceros Reiche, 1847

### Group 15: Hauserius

Reddish brown, vertex and disc of pronotum darker. Clypeus weakly emarginate. Front of male with a sharp and strong tubercle, pronotum impressed anteriorly, limited behind by two angles. In female both simple. Elytral striae strong, intervals lightly convex.
 7.5-8 mm. - Mosambique, Zimbabwe-Rhodesia (unicornutus Schmidt, 1909)

### Group 16: Plagiogonus

-- Dark brown, elytra yellow, only sutural interval dark. Clypeus deeply emarginate, genae not produced beyond eyes. Basis of pronotum without border, punctures very unequal. Elytra finely striated, intervals convex, 7th and 9th united on apex, forming a weak carina. Hind metatarsi as long as upper thorn and as next three joints together. 4-4.2 mm. - RSA (Cape Province) separatus Petrovitz, 1962

## Group 17: Calaphodius

- -- Dark brown, elytra yellow, in fourth interval behind the middle and in sixth a longer spot black present, striae darkened (Fig. 28). Clypeus truncate, genae weakly produced. Punctation of pronotum dense, very fine, on sides mixed with bigger punctures. Hind metatarsi longer than upper thorn and longer than all following joints together. 6-7 mm.

   RSA (Transvaal), (= mutans Walker, 1858, madagascariensis Harold, 1859, subvittatus Fairmaire, 1896)

  Aberrative forms:
  - 1. Black spots of elytra absent
  - 2. Both black spots connected in fifth interval
- ab. innotatus Endrődi, 1960
- ab. connectens Endrődi, 1960

### Group 18: Cinacanthus

- 1 (4) Basis of pronotum bordered.
- 2 (3) Yellow, head, disc of pronotum, scutellum, suture of elytra dark. Clypeus distinctly emarginated, margins upturned. Punctation of pronotum dense, unequal. Elytra reticu-

lated, striae rather strong. Movable thorn of anterior tibiae also in male not very far from apex. Hind metatarsi somewhat shorter than upper thorn and scarcely longer than next two joints together, 4-6 mm. - RSA (Transvaal), SWA-Namibia

freudei Endrődi, 1957

3 (2) Colour as in preceding species, more shiny. Clypeus emarginate, margins scarcely upturned. Punctation of pronotum on disc much sparser and finer than on sides. Striae of elytra fine, punctures scarcely visible. Movable thorn of anterior tibiae opposed to middle outer tooth. Hind metatarsi about as long as upper thorn and scarcely longer than next two joints together. 4.7 mm. - RSA (Cape Province)

hottentotus Petrovitz, 1946

- 4 (1) Basis of pronotum without border.
- Yellow, shiny, suture and hind margin of elytra black. Clypeus deeply emarginate, genae not produced, frontal tubercle distinct. Elytral striae subcarinate in apical part, eighth strongly shortened behind. Apical tooth of anterior tibiae very long. 7 mm. RSA (Cape Province)
  anomalipus Péringuey, 1901
- 6 (5) Combination of characters different.
- 7 (8) Elytral striae fine, both sides very finely carinated, punctures very fine. Intervals weakly convex, in apical part nearly flat, reticulated with a few micropunctures. Genae rounded, but produced beyond eyes. Hind metatarsi much shorter than next three joints together. 5-7 mm. SWA-Namibia
  roeri Endrődi, 1977
- 8 (7) Elytral striae strong, with distinct simple punctures. Hind metatarsi only somewhat shorter than upper thorn.
- 9 (10) Hind angles of pronotum not emarginated, surface in male very finely punctate, on sides mixed with bigger punctures, in female much more strongly punctured, sides with long setae. Striae of elytra rather deep, intervals convex, but on apex not more convex than on disc. 5-7 mm. RSA (Cape Province), SWA-Namibia intercalaris Péringuey, 1901
- 10 (9) Hind angles of pronotum distinctly emarginate.
- 11 (12) Clypeus rather densely punctate, clypeal knob distinctly raised, genae strongly produced.

  Pronotum with very fine punctures, mixed with much bigger ones, sides without long setae. Striae of elytra on apex deeper than on disc, punctures also on apex visible. Intervals slightly, on apex more strongly convex. Under side of hind metatarsi in both sexes with sparse bristles. 6-7 mm. Central Africa (massaicus Gerstäcker, 1884)
- 12 (11) Sculpture and other characters of head and pronotum very similar to those of preceding species, genae more rounded and less produced. Striae of elytra on apex scarcely deeper than on disc, intervals more distinctly reticulated, less shiny. Underside of hind metatarsi in male with very dense und long bristles. 6.5-8 mm. SWA-Namibia rakovici Endrődi, 1981

# Group 19: Paradeloparius

- Yellow, vertex, disc of pronotum and elytra excepting margins black or dark reddish brown. Surface practically without punctures, also striae of elytra simply furrowed, interstriae flat or scarcely convex. 15-17 mm. "South Africa" (= valens Péringuey, 1901). (Head as in Fig. 47)
- 2 (1) Very similar to preceding, but striae of elytra finely and distinctly punctate. Somewhat smaller, 11-14 mm. Zimbabwe-Rhodesia (= excavaticollis Balthasar, 1939) (emeritus Péringuey, 1901)

## Group 20: Adeloparius

- Yellow, surface with various black spots. Clypeus rounded, genae produced. Pronotum micropunctate, on sides mixed with big punctures. Elytral striae fine, finely punctate, intervals flat. Hind metatarsi longer than upper thorn of hind tibiae and as long as next three joints together. 9-11 mm. RSA (Transvaal, Natal), (= coloratus Roth, 1851, nobilis Harold, 1874, nigrosignatus Péringuey, 1885) septemmaculatus Fabricius, 1781 Aberrative forms:
  - 1 (6) Head with one, pronotum with four black spots.
  - 2 (3) Elytra with a broad black transversal band and an apical spot, without humeral spot (Fig. 40) ab. wahlbergi Boheman, 1857
  - 3 (2) Apical half of elytra entirely or almost black.

4 (5) Black apical half including a yellow spot, humeral spot present

ab. smithi Shipp, 1897

- 5 (4) Apical half of elytra entirely black, humeral spot present (Fig. 41) ab. holubi Dohrn, 1883
- (1) Spots of pronotum longitudinally connected or disc entirely black.
- 7 (8) Disc of pronotum entirely black, elytra as in ab. wahlbergi (Fig. 42) ab. decorellus Endrődi, 1960
- 8 (7) Pronotum with two black longitudinal spots.
- 9 (10) Elytra with seven black spots together (Fig. 43) forma typica
- 10 (9) Elytra never with seven black spots.
- 11 (12) Lateral spots connected with apical spots, humeral and scutellar spots separate (Fig. 44)
  ab. decorus Endrődi, 1960
- 12 (11) Humeral and scutellar spots not separated.
- 13 (14) Elytra not entirely black (Fig. 45)
- ab. pulcherrimus Reiche, 1847
- 14 (13) Elytra entirely black (Fig. 46)
- ab. aequabilis Schmidt, 1908
- 2 (1) Surface yellowish, head, disc of pronotum, on elytra a lightly diagonal basal band and another, less defined one on posterior part on each side, and also sutural part greenish blue iridescent. Elytral striae not distinctly punctate, and not quite reaching the apex.
  8 mm. RSA (Natal)
  iridescens Péringuey, 1901

## Group 21: Emadiellus

Black, elytra with an oblique red band, beginning at humeral knob and reaching to apical knob. Clypeus rounded with small, scarcely produced genae. Elytral striae furrowed, strongly punctated. Hind metatarsi much longer than upper thorn and as long as next three joints together. 4-5 mm. - Mosambique (cruentus Klug, 1855)

### Group 22: Blackburneus

- 1 (2) Elytra shortly setose. Clypeus weakly emarginate. Basis of pronotum without border, surface finely and densely punctate. Scutellum triangular. 3 mm (unknown to me). Mosambique (badius Boheman, 1857)
- 2 (1) Elytra bald.
- 3 (6) Hind metatarsi as long as next two joints together (by A. bernoni Endr. not much longer, but this is 5 mm long).
- 4 (5) Hind metatarsi as long as upper thorn of hind tibiae. Yellowish brown, shiny. Clypeus emarginate. Pronotum uniformly covered with smaller and bigger punctures. Elytra very finely striated. 3 mm. South Africa calvus Schmidt, 1909
- 5 (4) Hind metatarsi longer than upper thorn, Yellow. Clypeus in middle straight or scarcely emarginate, Pronotum densely, uniformly punctate, punctures nearly equal, 2-2.7 mm. RSA (Transvaal)
  vixpunctatus Endrődi, 1981
- 6 (3) Hind metatarsi distinctly, often much longer than next two joints together, or much bigger.
- 7 (8) Black, at most sides of pronotum or of elytra dark reddish brown. Pronotum finely punctate, mixed with much bigger punctures especially on sides. Hind metatarsi much longer than upper thorn, but not much longer than next two joints together. 2.25-2.5 mm. 
  South Africa

  Aberrative form:
- Surface dark reddish brown
   Surface bright brown to yellow, at least elytra yellow.

ab. pallens Endrődi, 1960

- 9 (10) Head and pronotum black, only sides of latter red, elytra yellowish brown, sutural interval darkened. Clypeus emarginate, genae projected. Head and pronotum densely, uniformly punctured. Elytral striae fine, with very fine punctures. Legs about as in preceding species. 2.5-3 mm. RSA (Transvaal) cobi Endrődi, 1979
- 10 (9) Head and pronotum brown or yellow, at most vertex and disc of pronotum somewhat
- 11 (12) Elytral striae everywhere deep (on apex not deeper than on disc), strongly punctate. Clypeus truncate, genae strongly projected. Punctation of pronotum on disc very fine, very sparse, on sides stronger, dense. Hind metatarsi much longer than upper thorn and somewhat longer than next two joints together. 5 mm. - RSA (Transvaal) bernoni Endrödi, 1981

- 12 (11) Elytral striae shallow, on apex much finer, or other characters different.
- 13 (14) Sutural interval darker than others. Clypeus truncate, genae small. Pronotum with very fine punctures, on sides mixed with bigger punctures. Elytral striae sharp, distinctly punctate, intervals weakly convex, finely, sparsely punctate. Hind metatarsi longer than upper thorn and as long as next three joints together. 3-4 mm. SWA-Namibia gnu Endrödi. 1964
- 14 (13) Elytra yellow to reddish, at most the narrow suture darker.
- 15 (16) Head, sides of pronotum and elytra strongly reticulated, disc of pronotum very shiny.

  Apex of clypeus straight, genae not produced. Punctures of elytral striae anteriorly big, apically very obsolete. Hind metatarsi longer than upper thorn and as long as next three joints together. 3 mm. RSA (Transvaal) microreticulatus Landin, 1967
- 16 (15) Combination of characters different,
- 17 (18) Punctures of pronotum equal, on sides scarcely denser. Clypeus weakly emarginate, genae not produced beyond eyes. Elytral striae fine, very finely punctate, intervals convex, narrow sides reticulated with a row of punctures. Hind metatarsi longer than upper thorn, almost as long as next three joints together. 3.2 mm. SWA-Namibia koenigsbaueri Petrovitz, 1973
- 18 (17) Pronotum finely punctate, on disc with a few, on sides with numerous big punctures.

  Elytral striae strong, very distinctly punctate, intervals weakly convex. Hind metatarsi scarcely longer than upper thorn and almost as long as next three joints together.

  2.8-3 mm. Zimbabwe-Rhodesia (testaceicolor Balthasar, 1937)

#### Group 23: Alocoderus

Brownish red, shiny, vertex and disc of pronotum darker. Clypeus emarginate, genae produced, front of male with three tubercles, of female only raised. Pronotum finely punctate, mixed with much bigger punctures. Elytral striae fine with small punctures, intervals convex. Hind metatarsi as long as upper thorn and as next two joints together.
 8-10 mm. - South Africa process Harold, 1862

#### Group 24: Loboparius

- Yellowish brown, head and disc of pronotum dark. Clypeus deeply emarginate, genae strongly produced, front mostly with three small tubercles (Fig. 29). Hind angles of pronotum weakly emarginate, basis finely bordered, surface finely punctate, mixed with somewhat bigger punctures. Elytral striae fine, finely punctate, intervals flat. Hind metatarsi longer than upper thorn and as long as next three joints together. 3.5-5 mm.
   RSA (Transvaal, Natal)
  - Aberrative form:
    1. Elytra with dark lateral spot

ab. bimaculatopennis Schmidt, 1911

#### Group 25: Erytus

- Bright reddish brown. Clypeus weakly emarginate, genae produced. Pronotum very finely punctate. Elytral striae fine, intervals flat, on sides rather densely punctate, sutural interval strongly narrowed on apex. Hind metatarsi longer than upper thorn and as long as next three joints together. 5 mm. RSA (Transvaal), Botswana
- 2 (1) Very closely related to preceding species. PETROVITZ wrote: Sides of elytra bare, in auriculatus finely pubescens. Punctures of elytral striae very fine, not notching sides of intervals. Anterior tibiae beneath with a dense row of very long hairs, in gracilis normally setose. Hind metatarsi much longer than in gracilis. 5-5.4 mm. RSA (Transvaal)

  penicilarius Petrovitz, 1963

#### Group 26: Calamosternus

1 (2) Basal border of pronotum strong. Genae weakly produced. Black, shiny. Clypeus broadly emarginate, front with three tubercles (these in female small). Pronotum finely punctate, mixed with bigger punctures. Elytral striae deep, punctures in anterior half notching the sides of weakly convexing intervals. Hind metatarsi as long as upper thorn and shorter than next two joints together. 3-5 mm. - RSA (Cape Province)

granarius Linné, 1767

2 (1) Basal border of pronotum very fine. Genae not produced. Chestnut brown, elytra yellow, Clypeus not emarginate. Hind metatarsi longer than upper thorn and as long as next three joints together. Size not specified. - RSA (Grootmist)

subdolus Petrovitz, 1962

# Group 27: Bodilus X

- 1 (8) Hind metatarsi scarcely longer than second joint, distinctly shorter than next two joints together.
- 2 (3) Pronotum everywhere densely punctate. Head and pronotum dark brown, elytra yellow. Clypeus weakly emarginate, genae scarcely produced, frontal tubercles small. Fine punctures of pronotum mixed with bigger ones. Elytral striae sharp, finely punctate, intervals flat, rather strongly and densely punctate. Hind metatarsi scarcely longer than upper thorn of hind tibiae. 6 mm. RSA and SWA kububanus Kolbe, 1908
- 3 (2) Sides of pronotum much more densely punctate than disc.
- 4 (7) Body broad, stout, similar to a big Mesontoplatys.
- 5 (6) Pronotum everywhere finely punctate. Reddish brown, elytra yellow with dark sides and apex, intervals weakly convex. Hind metatarsi as long as upper thorn and somewhat shorter than next two joints together. 5 mm. RSA (Cape Province), (= splendidulus Harold, 1866)
- 6 (5) Micropunctures of pronotum mixed with sparse big punctures. Colour as in preceding species, but on elytra only sutural interval darker. Elytral striae sharp, intervals almost flat. Hind metatarsi shorter than upper thorn and distinctly shorter than next two joints together. 4 mm. RSA (Transvaal), (= transvaalensis Endrödi, 1979)
- 7 (4) More slender, brownish black, elytra unicoloured yellow. Head without tubercles. Intervals of elytra flat, striae fine. Hind metatarsi much shorter than upper thorn and scarcely longer than second joint. 4-5.5 mm. RSA (Transvaal, Cape Province) buxeipennis Harold, 1871
- 8 (1) Hind metatarsi at least as long as next two joints together.
- 9 (16) Upper thorn of hind tibiae distinctly shorter than hind metatarsi.
- 10 (11) Elytra bright brown, narrow basis and a line of big spots in intervals 3, 5, 7 and 9 dark. Hind metatarsi almost as long as next three joints together. 6 mm. RSA (Natal) pantherinus Petrovitz, 1963
- 11 (10) Elytra without spots in intervals 3, 5, 7 and 9.
- 12 (13) Elytral striae on apex strongly impressed, punctures notching the sides of intervals. Hind metatarsi as long as next three joints together. 4-5 mm. - Angola
- (flagrans Erichson, 1843)
  (13 (12) Elytral striae on apex not or scarcely deeper than on disc.
- 14 (15) Hind metatarsi scarcely shorter than next two joints together: buxeipennis Harold (cf. also No. 7).
- 15 (14) Hind metatarsi almost as long as next three joints together. Very similar to A. buxei-pennis, though somewhat smaller. 3-4.5 mm. RSA (Transvas), SWA (Damaraland) damarinus Kolbe, 1908
- 16 (9) Upper thorn of hind tibiae as long or longer than hind metatarsi.
- 17 (18) Elytral striae dark or black. Hind metatarsi as long as upper thorn and shorter than next joints together. 6-7 mm. South Africa (= lineellus Harold, 1866) strigilatus Roth, 1851
- 18 (17) Elytral striae not darkened,
- 19 (20) Sides and apex of elytra mostly very distinctly darkened. Frontal tubercles in male strong, in female small. Hind metatarsi as long as upper thorn and almost as next

1 1/

X PETROVITZ (Reichenb., 1964: 198) ranged "A. (Bodilus) carinifer nov. spec." in group Bodilus in spite of unequal bristles on apex of hind tiblae, and wrote this "unikum" cannot be ranged in an other group. Reddish brown. Clypeus truncated, genae produced, front with three tubercles. Punctures of pronotum not or scarcely unequal. Scutellum triangular. Punctures in elytral striae notching the convex intervals. Hind metatarsi longer than upper thorn and shorter than next three joints together. 6.4 mm - RSA (Cape Province).

- three joints together. 5-6 mm. RSA (Transvaal) ardens Harold, 1866
- 20 (19) Elytra unicoloured reddish or yellowish brown, at most sutural interval darker.
- 21 (22) Clypeus smooth, without punctures, genae produced beyond eyes. Head with distinct knob, frontal suture raised into a carina. Punctures of pronotum fine, rather dense, almost equal. Eyltral striae very fine and very finely punctate. 6 mm. - RSA (Caffraria) apterus Schmidt, 1909
- 22 (21) Clypeus distinctly, often strongly and densely punctate.
- 23 (24) Carina on underside of anterior tibiae with a rather big tooth near the middle and an another one near the apex. Head and pronotum rather strongly and densely punctate. Elytral striae sharp, very finely punctate, intervals lightly convex. Hind metatarsi as long as upper thorn and shorter than next three joints together. 6-7 mm. RSA (Cape Province), (= productus Boheman, 1857, capensis Harold, 1866)
  - laetus Wiedemann, 1823
- 24 (23) Carina on underside of anterior tibiae at most near the middle with an indistinct tooth.
  25 (26) Bigger species, 6-8 mm. Reddish yellow, also vertex and disc of pronotum only scarcely darker. Clypeus emarginate, both sides shortly rounded. Pronotum rather strongly punctate. Elytral striae sharp, finely punctate, intervals flat, on sides often finely setose. Hind metatarsi as long as upper thorn and much shorter than next three joints together.
   RSA (Transvaal)
  nylsyleyicus Endrödi, 1981
- 26 (25) Smaller species, 4-5 mm long.
- 27 (28) Head and pronotum finely punctate, punctures almost equal, genae rounded, weakly produced beyond eyes. Vertex, disc of pronotum black. Clypeus truncate or only scarcely emarginate, frontal suture absent. Punctures of elytral striae not notching sides of flat intervals. Hind metatarsi shorter than upper thorn and shorter than next three joints together. 4.8 mm. RSA (Cape Province) comptifer Petrovitz. 1958
- 28 (27) Punctures of head and pronotum distinctly unequal or other characters different.
- 29 (30) Hind metatarsi much shorter than upper thorn and about as long as next three joints to-gether. Head and disc of pronotum only darkened. Front without tubercle. Elytral striae impressed, punctures notching sides of lightly convex intervals. 4-5.5 mm. RSA (Cape Province), (Head Fig. 32) kalaharicus Endrödi, 1976
- 30 (29) Hind metatarsi scarcely shorter than upper thorn and scarcely longer than next two joints together. Head and disc of pronotum black. Front with tubercle. Elytral striae fine, with indistinct punctures, intervals weakly convex. 4.5-5 mm. RSA (Transvaal, Natal), (= hammeri Petrovitz, 1958) amabilis Boheman, 1857

## Group 28: Allobodilus

- Emargination of clypeus narrow and deep, both sides with a sharp tooth. Reddish brown, head and pronotum scarcely darker. Genae produced beyond eyes. Pronotum with big and very small punctures. Elytral striae fine, finely punctate, intervals convex. Femora broad. Hind metatarsi scarcely shorter than upper thorn and almost as long as next two joints together. 6 mm. Botswana (notabilis Petrovitz, 1963)
- 2 (1) Both sides of clypeal emargination with a sharp angle (Fig. 33).
- 3 (4) Hind tarsi about as long as next three joints together and somewhat shorter than upper thorn. Reddish brown, elytra yellow with dark suture. Punctures of pronotum unequal, bigger ones on sides denser. Punctures of elytral striae strongly notching sides of highly convex intervals. 5.4 mm. - Angola (angolensis Petrovitz, 1958)
- 4 (3) Hind metatarsi distinctly shorter than next three joints together.
- 5 (6) Elytra bright reddish yellow, posterior half of sides more or less strongly darkened and setose. Elytral striae sharp, punctures not notching sides of almost flat intervals. 4.5-6.5 mm. RSA (Transvaal) fascinatus Endrődi, 1981
- 6 (5) Sides and apex of elytra not darkened.
- 7 (8) Intervals of elytra on disc flat, sutural interval in second third roof-like, before apex very narrow and strongly depressed, tenth interval with short setae. Punctures of elytral striae weakly notching sides of intervals. Hind metatarsi somewhat shorter than upper thorn. 4-5.2 mm. Botswana (acutifrons Petrovitz, 1958)
- 8 (7) Intervals of elytra convex, sutural interval not roof-like, on apex only weakly depressed, ninth and tenth intervals in posterior half pubescent. Punctures of pronotum unequal like in preceding species. Hind metatarsi shorter than upper thorn and scarcely longer than

next two joints together. 4.7-5.2 mm. - RSA (Cape Province)

laterosetosus Petrovitz, 1958

#### Group 29: Dibolus

Bright red, shiny. Clypeus with three emarginations anteriorly and also before strongly produced genae shallowly emarginate, both sides of innermost emargination with a sharp tooth. Basal border of pronotum very fine, surface unequally punctate. Elytral striae weak, intervals flat. Hind metatarsi somewhat shorter than upper thorn and as long as next three joints together. 5.5 mm. - RSA (Cape Province)

gobabensis Endrődi, 1976

### Group 30: Phaeaphodius

Black, shiny, elytra reddish brown. Clypeus emarginate, both sides rounded, genae strongly produced, frontal suture indistinct. Hind angles of pronotum truncate, surface densely punctate. Elytral striae fine, punctures notching sides of intervals. Hind metatarsi shorter than upper thorn and as long as next three joints together. 3-3.5 mm. - South Africa (= ambiguus Boheman, 1857, tarsalis Schmidt, 1907)

frenchi Blackburn, 1858

#### Group 31: Aphodiellus

 Bright red, shiny. Head impunctate, clypeus emarginate, genae rounded, median part of head with a knob. Pronotum without punctures. Elytral striae fine, indistinctly punctate, intervals flat, smooth. 7-8 mm. - RSA (Cape Province) genialis Péringuey, 1901

#### Group 32: Amidorus

- 1 (2) Basis of pronotum without border. Bright red, weakly shiny, surface setose. Clypeus emarginate, both sides rounded, surface, as also pronotum very densely punctate. Intervals of elytra convex, densely punctate with two rows of short setae. Hind metatarsi longer than upper thorn and as long as next three joints together. 3 mm. Mashonaland salebrosus Schmidt, 1911
- 2 (1) Basis of pronotum bordered.
- 3 (4) Elytra strongly reticulated, without punctures. Yellowish brown, surface very shortly setose. Clypeus weakly emarginate, both sides rounded, densely punctated. Punctures of pronotum very dense, confluent. Elytral striae fine, shiny. Hind metatarsi as long as upper thorn, 7 mm. RSA (Cape Province) granulatus Boheman 1857
- 4 (3) Elytra distinctly punctate. Reddish brown. Both sides of clypeal emargination toothed. Pronotum rather densely punctate. Intervals of elytra flat, on apex lightly convex, on sides decumbent setose. Hind metatarsi as long as upper thorn of hind tibiae and somewhat longer than next two joints together. 4-5 mm. - South Africa

dentellus Schmidt, 1908

#### Group 33: Koshantschikowius

1 (2) Sides of clypeus curved, apex emarginate, genae produced beyond eyes. Basis of pronotum sinuate. Elytral striae micropunctate, intervals flat, reticulated. Hind metatarsi as long as upper thorn and as next two joints together. 4-5.2 mm. - RSA (Transvaal, Cape Province), (= vaalensis Petrovitz, 1962, endroedyyoungai Endrődi, 1960) haematicus Boheman, 1857

Sides of clypeus straight, clypeus scarcely emarginate, genae not produced. Basis of pronotum straight. Punctures of elytral striae notching very finely reticulated intervals.

### Hind metatarsi longer than upper thorn and almost as long as next three joints together. 3-4 mm. - RSA (Cape Province), (= haematicus auct.) neohaematicus Landin, 1967

## Group 34: Pseudacrossus

-- Dark reddish brown, elytra more bright. Clypeus weakly emarginate, both sides rounded, genae produced, front with three tubercles. Pronotum finely punctate. Punctures in elytral striae weakly notching sides of lightly convex, almost smooth intervals. Hind metatarsi

2 (1)

scarcely longer than upper thorn and next two joints together. e-7 mm . - South Africa binodulus Harold,  $186e^X$ 

### Group 35: Orodalus

Black, strongly reticulated, oily, elytra with yellow spots, or rarely with black spots. Clypeus deeply emarginate, genae produced, front without tubercle (Fig. 48). Basis of pronotum very finely bordered, punctation on sides somewhat denser than on disc. Elytral striae very fine. Hind metatarsi somewhat longer than upper thorn of hind tibiae and much longer than next three joints together. 2.2-3 mm. - RSA (Transvaal) bredoi Endrödi, 1964

### Group 36: Mesontoplatys

- 1 (2) Elytra yellowish red, shiny, with a long black scutellar spot, on basis reaching to 3rd or 4th striae, on apex two innermost interval black. Head and disc of pronotum dark. Humeral tooth small. Clypeus weakly emarginate, genae not produced. Elytral striae very fine. Hind metatarsi longer than upper thorn and as long as next three joints together. 4-5 mm. RSA (Transvaal, Cape Province) triangularis Schmidt, 1907
- 2 (1) Scutellar spot smaller or absent. Elytra without humeral tooth.
- 3 (6) Punctures of elytral intervals arranged in rows.
- 4 (5) Punctures of intervals distinct, arranged in even-number intervals in one, in odd-number intervals in two rows. Genae not produced, clypeus scarcely emarginate. Elytra without scutellar spot, only sutural interval dark. Hind metatarsi as long as upper thorn and as next two joints together. 3 mm. SWA-Namibia zavadili Balthasar, 1941
- 5 (4) Punctures of intervals fine, arranged in all intervals in two rows. Genae produced beyond eyes. Head and pronotum black, elytra yellowish, shiny. Hind metatarsi distinctly longer than upper thorn and as long as next three joints together. 2.8-2.9 mm. RSA (Natal) zulu Petrovitz, 1962
- 6 (3) Punctures of intervals scarcely visible, if more distinct, irregularly dispersed.
- 7 (10) Femora abnormally broadened.
- 8 (9) Yellow, head, pronotum, scutellum and sutural interval of elytra darker. Clypeus weakly emarginated, genae produced. Punctures of pronotum unequal, in elytral striae indistinct. Hind metatarsi as long as upper thorn and shorter than next two joints together. 3.5 mm.

   SWA (Ovamboland) ovamboensis Petrovitz, 1962
- 9 (8) Colour similar, but sides of elytra with a longitudinal spot. Clypeus distinctly emarginate. Punctures of pronotum very fine, mixed with somewhat bigger ones, not very dense.

  Sculpture of elytra and legs similarly vary as in preceding species. Very small. 2.6 mm.

   RSA (Cape Province) offensus Petrovitz, 1967
- 10 (7) Femora normal, narrow. Elytra reticulated.
- 11 (12) Elytra finely, but under x25 well visible, irregularly punctate. Scutellar spot mostly big, triangular, rarely weak or almost absent. Hind metatarsi as Iong as upper thorn and as next two joints together. 2.5-3 mm. RSA (Transvaal, Natal), (= probes Péringuey, 1901) dorsalis Klug, 1855

## Aberrative form:

1. Scutellar spot almost absent ab. indorsalis Endrődi, 1960
12 (11) Punctures of elytra extremely fine, sparse, without or only with a trace of a scutellar spot. Hind metatarsi somewhat longer than upper thorn and as long as next two joints together. 2.5-3 mm. - RSA (Transvaal) effetus Kolbe, 1908

#### Group 37: Nobius

1 (2) Hind metatarsi distinctly shorter than upper thorn of hind tibiae. Yellowish brown, very shiny, head, disc of pronotum, sutural interval and a big discal spot of elytra dark.

X A second species is probably A. carinifer Petrovitz, 1964, described as A. (Bodilus) with no equal apical bristles on hind tibiae. Reddish brown. Apex of clypeus truncate, genae produced, front with a double tubercle, behind anterior margin with a transversal carina. Pronotum densely punctate. Intervals convex. Hind metatarsi longer than upper thorn and almost as long as next three joints together. 6.4 mm. - RSA (Cape Province).

Clypeus emarginate, genae not produced. Punctures of pronotum almost equal, these of elytral striae notching flat intervals. Hind metatarsi scarcely longer than next two joints together. 4.3 mm. - RSA (Transvaal) specularis Petrovitz, 1962

- 2 (1) Hind metatarsi as long as or longer than upper thorn of hind tibiae.
- 3 (6) Hind metatarsi as long as upper thorn.
- 4 (5) Hind metatarsi as long as next two joints together. Nebulous spot of elytra often reduced. Clypeus weakly emarginate, genae weakly produced. Micropunctures of pronotum mixed with more bigger punctures. Elytral striae strong, with scarcely notching punctures, intervals on apex more convex. 4.5-5 mm. - RSA (Transvaal, Natal, Cape Province), (= peregrinus Boheman 1857, timidus Boheman, 1857, fauveli Harold, 1869)

5 (4) Hind metatarsi considerably longer than next two joints together. Vertex and disc of pronotum black, nebulous spot of elytra bright. Very similar to preceding species.

5 mm. - RSA (Cape Province) diens Balthasar, 1946

- 6 (3) Hind metatarsi distinctly longer than upper thorn of hind tibiae.
- 7 (8) Genae not produced beyond eyes. Disc of pronotum with unequal punctures. Nebulous spot of elytra weak. Clypeus truncate. Punctures of elytral striae notching lightly convex intervals. Hind metatarsi longer than upper thorn and almost as long as next three joints together. 4.4-4.7 mm. RSA (Transvaal) transvaalicus Petrovitz, 1964
- 8 (7) Genae produced beyond eyes, or other characters different.
- 9 (10) Elytral suture troughout very narrowly darkened. Apex of clypeus lightly rounded or truncate, genae produced. Pronotum very finely and sparsely punctate, on sides mixed with some bigger punctures. Striae of elytra with punctures notching convex intervals.

  Legs as in preceding species. 4.5 mm. RSA (Transvaal)

peringueyi Schmidt, 1909

- 10 (9) Dark colour of elytral suture on apex broader, mostly occupying the whole interval.
- 11 (12) Nebulous spot situated on anterior half of elytra, reaching sides, but never the suture. Clypeus truncate, genae weakly produced. Punctures of pronotum fine, on sides mixed with bigger ones. Elytral striae fine, punctures not notching scarcely convex intervals. Hind metatarsi as long as next three joints together. 2.5-3 mm. Zimbabwe-Rhodesia (bicoloratus Schmidt, 1908)

Aberrative forms:

- 1. Nebulous spot not reaching basis of elytra
- 2. Spot reaching basis of elytra

forma typica

- ab. partitus Endrődi, 1956
- 12 (11) Nebulous spot long and narrower, occupying more than two-thirds of elytral length, sides always bright.
- 13 (14) Anterior tibiae long and narrow. Disc of pronotum without bigger punctures and latter sparse also on sides. Clypeus not emarginate. Fine punctures of elytral striae lightly notching sides of convex intervals. Hind metatarsi as long as next three joints together.
  4-5 mm. Gallaland, "South Africa"? (innocens Schmidt, 1911)
- 14 (13) Anterior tibiae normal. Disc of pronotum between fine punctures with numerous, on sides with dense big punctures. Clypeus as in preceding species. Elytral striae often dark, punctures notching. Hind metatarsi shorter than next three joints together. 4.5-5.5 mm. RSA (Transvaal)
  heynei Schmidt, 1911

# 3. Genus: Psammodaphodius Endrődi, 1976

Bright reddish brown, bald. Clypeus emarginate, both sides sharp, genae produced. Sides of pronotum with trace of a weak impression, surface somewhat stronger punctate than vertex. Elytral striae impressed, intervals convex. Hind femora broad, oval. Hind metatarsi as long as upper thorn and as next two joints together. 4.5 mm. - RSA (Cape Province)

## 4. Genus: Ingogius Endrődi, 1976

 Black. Clypeus emarginate, both sides broadly rounded. Punctation of pronotum only behind anterior margin as fine as on vertex. Elytral striate deep with fine punctures. Hind femora normal. Transversal carinae of hind tibiae weak, claws of tarsi extremely fine, but horned, 3 mm. - RSA (Cape Province) leieupl Endrődi, 1976

## 5. Genus: Didactylia d'Orbigny, 1896

- 1 (2) Clypeus truncate. Bright yellow, elytra mostly with two dark spots. Genae weakly produced. Basal border of pronotum very fins, often interrupted, darker discal spot along middle mostly divided. Elytral strine on disc deeper than on sides, intervals convex, on apex almost flat. Hind metatarsi somewhat longer than upper thorn and as long as next two joints together. 3-5 min. Mosambique (yaria Schmidt, 1998)
- 2 (1) Clypeus distinctly emarginate. Bright brown, elyirs without spots. Easal border of prenotum stronger. Elytral striae without distinct punctures, intervals on disc stronly convex, on apex almost flat. Legs as in preceding species, but hind metatarsi distinctly longer than next two joints together. 3.5-4 mm. - Mosambique (turbida Erichson, 1843)

### 7. Genus: Harmogaster Harold, 1861

- 1 (2) Elytra with 12 rows of punctures. Clypeus on both sides of emargination rounded. Black, shiny. Behind apical margin of clypeus a fine transversal carina present, frontal suture finely raised. Punctures of clytral striae transversal, intervals convex. 6 mm. RSA (Natal, Cape Province) transitoria Péringusy, 1901
- 2 (1) Elytra with 20 rows of punctures.
- Apex of clypeus with four teeth, everywhere setose. Black, elytra dark reddish brown, less shiny. Pronotum strongly, very densely punctate. Alternate intervals very narrow, shiny, interrupted in short carinae, others consisting of a row of shiny tubercles.

  Hind metatarst shorter than upper thorn and as long as next two joints together. 5 mm. RSA (Cape Province)
- 4 (3) Apex of clypous emarginate, both sides rounded.
- 5 (6) Head and pronotum strongly rasp-like punctate. Black, dull. Mind angles of pronotum truncate. Alternate intervals of elytra higher and consisting of small shiny tubercles. Upper thorn of hind tibiae somewhat longer than next one and a half joints together. 3.3-3.6 mm. RSA (Cape Province)
  goobing Petrovitz, 1956
- 6 (5) Head and pronotum simply punctate.
- 7 (8) Elytra densely setose, setae short. Clypeus emarginate. Pronotum densely, partly confluently punctate, punctures unsqual. Sculpture of elytra as in H. quadridentella. Anterior tibiae beneath without distinct carina. Hind metatars; shorter than upper thorn and somewhat longer than next two joints together. 3.7-4 mm. RSA (Transvaal) setosa Petrovitz, 1964
- 8 (7) Combinations of characters different.
- 9 (10) Alternate carrinated intervals of elytra divided into tubercles. Disc of pronotum very sparsely, sides somewhat more densely punciate. Carina on under side of anterior tibiae with two strong teeth. Hind metatarsi as long as upper thorn and as next two joints together. 5 mm. RSA (Natal) sulcatula Schmidt, 1911
- 10 (9) Alternate intervals not divided into tubercles, at most with a row of indistinct granules.
- 11 (12) Hind metatarsi as long as next two joints together and shorter than upper thorn of hind tibiae. Between lateral margin and frontal carina of clypeus a short transversal carina present. Carina on under side of anterior tibiae with two strong teeth. 6-7 mm. RSA (Cape Province)

  exarata Harold, 1961
- 12 (11) Hind metatars! about as long as next three joints together. Clypeus without short carina laterally.
- 13 (16) Alternate intervals of slytra not raised.
- 14 (15) Punctures of clytral strike fine, not notching sides of intervals. Surface dull. Clypeus emarginate. Alternate intervals broad (others very narrow) very densely punctate. Hind metatarsi as long as upper thorn of hind tibiae. 4 mm. RSA (Natal, Cape Province) opacula Harold, 1869
- 15 (14) Punctures of clytral strice big and dense, distinctly notching sides of intervals, on disc big, longish, on basis and cides round. 4 mm. RSA (Cape Province) obloggopunctata Balthagar, 1941

- 16 (13) Alternate intervals raised, higher than others.
- 17 (18) Elytra bald. Genae strongly produced beyond eyes, front without tubercle. Pronotum everywhere very densely, uniformly punctate, punctures euqally big, only behind apical margin smaller. Hind metatarsi much longer (in o as long) than upper thorn and somewhat shorter than next three joints together. 4-5 mm. RSA (Transvaal)

  strydomi Endrődi, 1976

18 (17) Elytra with fine and short pubescence, or other characters different.

19 (20) Punctures of elytral striae big, notching sides of intervals, latter distinctly punctate.

Genae rounded. Punctation of pronotum very dense, on disc strong, on basis and sides very strong, almost confluent. Hind metatarsi somewhat longer than upper thorn and about as long as next three joints together. 4 mm. - RSA (Cape Province)

opatroides Balthasar, 1941

20 (19) Punctures of elytral straie fine, not notching sides of intervals, latter only with a few very fine punctures. Pronotum rather densely and rather finely punctate. Hind metatarsi as long as upper thorn and as next three joints together. 4-4.5 mm. - RSA (Transval, Natal, Cape Province)

geminata Schmidt, 1911

#### 8. Genus: Oxyomus Stephens, 1839

1 (2) Anterior tibiae not serrate above basal tooth. Pronotum subparallel, basis without border, disc deeply foveato-punctate. Intervals of elytra very sharp, striae with a row of broad, foveate punctures. 6-6.5 mm. - RSA (Natal, Cape Province)

costipennis Boheman, 1857

2 (1) Anterior tibiae serrate above basal tooth. Intervals of elytra tectiform, sharply carinated from basis to two-thirds of length only, striae not geminate, but deeply and closely punctate. 4 mm. - RSA (Natal) jugalis Péringuey, 1901

### 9. Genus: Coptochirus Harold, 1859

- 1 (2) Intervals of elytra alternately flat and convex. Clypeus very deeply emarginate, both sides sharply angulated and outward turned. Inside of anterior tibiae near apex with a strong, triangular tooth. 3.2-3.5 mm. RSA (Natal) zumpti Petrovitz, 1967
- 2 (1) Intervals of elytra equally flat or convex.
- 3 (6) Hind metatarsi flattened and strongly dilated in male, simple in female.
- 4 (5) Punctures of pronotum deep, Clypeus deeply emarginate. Hind metatarsi broad, weakly curved, longer than upper thorn or following joints together. Intervals of elytra convex. 4-5 mm. - RSA (South Africa) pteropus Harold, 1859
- 5 (4) Punctures of pronotum very shallow, especially on sides. Clypeus weakly emarginate. Hind metatarsi moderately dilated, strongly curved. Elytra only on apex very shortly setose. 5 mm. - RSA (Cape Province) cognatus Péringuey, 1901
- 6 (3) Hind metatarsi in both sexes normal.
- 7 (8) Yellowish brown, elytra with numerous dark spots. Clypeus emarginate, both sides rounded, genae produced beyond eyes. Basis of pronotum bordered, surface punctate. Intervals convex with a few setae. Hind metatarsi in male curved, longer than upper thorn and as long as next three joints together. 4-5 mm. RSA (South Africa), (= variegatus Wiedemann, 1823, non Herbst, 1783) emarginatus Germar, 1824
- 8 (7) Elytra unicoloured yellow or brown, without darker spots.
- 9 (10) Head and pronotum black, latter with narrow bright sides, elytra yellow. Similar to preceding species, but inside of anterior tibiae near basis without tooth, outer edge with an indistinct third tooth, hind angles of pronotum not truncate. Hind metatarsi in male as long as upper thorn and as next three joints together, in female shorter than upper thorn and as long as next two joints together. 3 mm. RSA (Cape Province) pallidipennis Harold, 1868
- 10 (9) Head and pronotum not black, at most disc darker, elytra more or less dark brown.
- 11 (12) Elytral intervals flat. Both sides of clypeal emargination with an obtuse, upturned angle. Basis of pronotum fine. Hind metatarsi as long as upper thom and as next three joints together, in female somewhat shorter. 4 mm. RSA (South Africa)
  excisus Harold, 1868
- 12 (11) Elytral intervals convex. Clypeus on both sides of emargination rounded.

- 13 (14) Ninth interval of elytra not carinate, Basis of pronotum bordered. Elytral striae distinct, apices with short setae. Hind metatarsi shorter than upper thorn and almost as long as next three joints together, in female shorter. 4 mm. RSA (South Africa) vulgatus Harold, 1868
- 14 (13) Very similar to preceding species only clypeus less deeply emarginate, intervals of elytra highly convex, ninth interval distinctly carinated. 4 mm. - RSA (South Africa) brachypterus Harold, 1868

## 10. Genus: Drepanocanthus Péringuey, 1901

- 1 (2) Elytra with four narrow ribs, between two ribs with two striae (and three very narrow intervals). Black, elytra dark brown, weakly shiny. Surface finely setose. Clypeus emarginate, genae produced. Pronotum very densely punctate. Anterior tibiae of male in apical half dilated, metatarsus on apex strongly curved (in female almost normal), as long as next three joints together. 4.5-5 mm. RSA (Cape Province)

  lineatus Wiedemann, 1823
- 2 (1) Elytra (included suture) with 10 ribs.
- 3 (4) Transversal punctures of elytra divided by a fine, raised line, appearing as 20 ribs. Punctation of pronotum deep and dense. Anterior tibiae of male weakly dilated, hind metatarsi also in male weakly curved. 4.5-5 mm. - RSA (Natal, Cape Province) intrusus Péringuey, 1901
- 4 (3) Transversal punctures of elytra not divided, clearly with 10 ribs.
- 5 (8) Head and pronotum black, sides and basis of latter with setae.
- 6 (7) Anterior tibiae of male not very strongly dilated, inner side lightly curved, also the apical thorn lightly curved. Clypeus emarginated. Intervals of elytral ribs with big transversal punctures. 4 mm. - RSA (Transvaal, Cape Province)

eximius Péringuey, 1901

- 7 (6) Anterior tibiae in male very strongly dilated in apical half, inner side very strongly curved, apical thorn almost straight, only apex strongly curved. Very similar as preceding species. 4.5-5 mm. RSA (Cape Province) maniculus Petrovitz, 1961
- 8 (5) Head and pronotum yellowish brown, at most disc of latter darker.
- 9 (10) Anterior tibiae of male in apical half dilated. Clypeus emarginate, both sides in male obtusely angulated, in female rounded. Punctures of pronotum longish. Ribs of elytra shiny, intervals broad with two rows of punctures. Hind metatarsi weakly curved, somewhat shorter than the upper thorn and as long as next three joints together. 3.4-4 mm.

   RSA (Natal), (= spinitarsis Péringuey, 1901) nasutus Harold, 1869
- 10 (9) Anterior tibiae in both sexes normal. Female very similar to preceding species, only punctation of pronotum stronger and sparser, longitudinal furrow shallower and shorter.

  3 mm. RSA (Cape Province) connexus Péringuey, 1901

### 11. Genus: Harmodactylus Péringuey, 1901

Reddish brown, elytra darker, shiny, bald. Genae produced into a very long triangular process. Clypeus weakly emarginate. Pronotum deeply and very densely punctated, except in the middle, basis bordered. Elytra densely punctato-striate, intervals on disconvex, on sides and on apex tectiform. 5.5 mm. - RSA (Cape Province)
 oscitans Péringuey, 1901

# 12. Genus: Pseudoxyomus Petrovitz, 1962

Almost dull, reddish black, head and anterior part of pronotum brownish red. Clypeus emarginate, both sides rounded, genae strongly produced. Hind angles of pronotum very broadly rounded, surface densely punctate. Ribs of elytra equal, only tenth indistinct. Hind metatarsi in male strongly dilated, in female normal. 3-4 mm. - RSA (Transvaal) rubescens Petrovitz, 1962

## 13. Genus: Macroretrus Péringuey, 1908

Black, anterior angles of pronotum and three apots on elyira yellow, Clypeus truncate. Pronotum covered with sparse unequal punctures, basis in the middle without border. intervals of slytra convex, Middle tibiae and tarsi of male strongly thickened, outer claw dilated, inner clow curved, acuminated. Hind metatarel much longer than upper thorn and as long as next three joints together. 3.5-4 mm. - Zimbabwe-Rhodesia, Angola (singularis Péringuey, 1908)

## 14. Genus: Lorditomaeus Péringuey, 1901

- 1 (4) Elytra with 10 striae, last one on lateral margin.
- 2 (3) Head and pronotum shiny, whole surface with erect setae, Genae not produced. Hind angles of pronotum angulated, surface very densely covered with almost equal big punctures. Intervals lightly convex, alternate ones with two, others with one row of setae. (setulosus Schmidt, 1908) 4.5-5 mm. - Zimbabwe-Rhodesia
- Head and pronotum reticulated, oily. Erect setae distinct only on head and on anterior 3 (2) margin of pronotum, big punctures denser. Hind angles of pronotum rounded. Intervals of elytra flat, unistriate, 5-6.5 mm. - RSA (Transvaal) invenustus Schmidt, 1908
- Elytra with 9 striae, seventh striae often divided into two. 4 (1)
- 5 (8) Seventh strike of elytra not divided.
- 8 (7) Head concave, clypeus emarginate. Hind angles of pronotum rounded, surface rather finely punctate, anteriorly with a transversal row of big setiferous punctures. Elytra strongly reticulated, intervals flat, with uniserial short setae. 6 mm. - Zimbabwe-Rhodesia (ellenbergi Paulian, 1942)
- 7 (6) Head flat, in the middle with a more or less distinct knob. Head, pronotum and apex of elytra with erect setae. Body depressed. Sides of pronotum flattened, basis without border. Sides of elytra broadly flattened, punctures of striae transversal, intervals flat with two rows of decumbent setae. 5-6 mm. - RSA (Transvaal)
  - opatroides Klug, 1851 Seventh stria of elytra divided behind shoulders into two parallel striac.
- 8 (5)
- 9 (10) Head and pronotum yellowish brown, disc not darker. Surface weakly reticulated, lightly shiny. Punctures of pronotum unequal, on disc biggest ones as big as those in transversal row behind spical margin, all with erect setae. Intervals of elytra weakly convex, decumbent setose. 5-5.5 mm. - RSA (Transvaal) lunulatus Schmidt, 1908
- Vertex and disc of pronotum strongly darkened. Somewhat bigger species. 10 (9)
- 11 (12) Whole surface densely and finely reticulated, dull. Big setiferous punctures of anterior transversal row of pronoture much bigger than biggest ones on disc, erect setae almost absent. Intervals of elytra weakly convex, finely setose. 5-6 mm. - Angola
- infuscatus Schmidt, 1908 Head and pronotum without distinct reticulation, shiny, also elytra somewhat shiny. Big 12 (11) setiferous punctures of anterior transversal row of pronotum scarcely bigger than biggest ones on disc, all these with erect setae. Intervals of elytra on disc strongly convex less medius Balthasar, 1965 on sides, finely setose. 6-7 mm. - RSA (Transvaal)

## 15. Genus: Sybax Boheman, 1857

- Both apical outer teeth of anterior tibiae united (Fig. 49). Elytra with four ribs (Fig. 1 (2) 50). Clypeus emarginated, hollows of pronotum shallow, only the longitudinal furrow deep. (sulcicollis Boheman, 1857) 7 mm. - Zimbabwe-Rhodesia
- Both apical teeth of anterior tibiae distinctly separated (Fig. 51). In other respects very 2 (1) similar as the preceding species. 7 mm. - RSA (Transvaal), Zimbabwe-Rhodesia impressicollis Boheman, 1857

II. Tribe: Corythoderini

Only one genus is known from South Africa.

### 1. Genus: Paracorythoderus Wasmann, 1918

1 (2) Raised suture of elytra acute angularly connected on basis with the third rib. Red, shiny. Basal knob of pronotum short, furrow in that distinct only in last third. Short rib between suture and second rib of elytra reaching anterior third. 3 mm. - RSA (Transvaal, Oranje) marshalli Brouns, 1900

2 (1) Raised suture of clytra connected with third rib by a straight line. Basal knob of pronotum longer, furrow in that occupying hind half of pronotal length. Short rib (in apical half of clytra) between suture and second rib reaching only the middle of clytra (Fig. 52). Red shiny. 3 mm. - RSA (South Africa), SWA-Namibia

caspert Kolbe, 1909

### III. Tribe: Rhyparini

Until now only one genus has been known from South Africa. It is likely that a second African genus (Rhyparus) will also be found.

## Key to genera

- 1 (2) Pronotum with six ribs (Fig. 4), disc of elytra with four ribs. Scutellum covered (genus: Rhyparus Westwood, 1843)
- 2 (1) Pronotum with five ribs, elytra with rows of punctures, intervals 1, 3, 5 and 8 raised, others flat. Scutellum visible. Head vertical, apex of clypeus turned downward. Eyes not visible from above 1. Genus: Notocaulus Quedenfeldt, 1884

### 1. Genus: Notocaulus Quedenfeldt, 1884

- 1 (2) Surface between outer discal rib and lateral rib of pronotum smooth, oily, only with a few very fine punctures. Lateral margin visible from above, parallel with lateral rib. Even-number intervals of elytra flat (Fig. 55), 3-3.5 mm. - RSA (Zululand) nigropiceus Quedenfeldt, 1884
- 2 (1) Surface between outer discal rib and lateral rib everywhere covered with big round punctures, lateral margins not visible from above (Fig. 54).
- 3 (4) Even-number intervals of elytra carinated but lower than others. Smooth stripe along the middle of dorsal intervals not sharply limited from neighbouring rows of punctures. 4 mm. - RSA (South Africa) sculpturatus Boheman, 1857
- 4 (3) All intervals of ribs flat, very densely, finely punctate, ribs obtuse, distinctly narrower than intervals. 4-4.5 mm. Angola (lattcollis Arrow, 1906)

## IV. Tribe: Psammodiini

The species of the tribe are characterized by a strongly convex, granulate head and by a typical (complete or reduced) pronotal structure. By the typical pronotal structure we mean five transverse ridges and five transverse furrow, the fourth and fifth ridges being interrupted medially by a longitudinal furrow (Fig. 5). This structure may be reduced meaning that on the pronotum there are one or two pairs of lateral impressions, which occur as vestiges of the impressed lateral parts of the first and third transverse furrows; sometimes the posterior longitudinal furrow is either present or marked by a row of coarse punctures; coarse punctures can also be concentrated along vestiges of some transverse furrows, particularly of the first and third ones.

In the literature, there are different opinions concerning the status of the particular genera and subgenera. Here we consider the tribe to include 17 genera. Out of them the genera Psammodius Fallén, Rhyssemus Mulsant and Pleurophorus Mulsant are represented in South Africa. They can be easily separated from one another. It is to note, that out of the genus Psammodius Fallén, there are only species with reduced pronotal structure (subgen. Leiopsammodius Rakovič) in South Africa and a possibility of revealing new species with complete pronotal structure (subgen. Granulopsammodius Rakovič and Psammodius s.str.) from this area is highly improbable. That is why Psammodius Fallén is characterized below as a genus without pronotal ridges in the key to genera.

## Key to genera

1 (2) Pronotum with five transverse ridges (Fig. 5) (some ridges may be broken up into

discrete tubercles). Elytral intervals granulate (usually with two rows of granules), carinate or transversely wrinkled. 2. Genus: Rhyssemus Mulsant, 1842

2 (1) Pronotum without transverse ridges. Elytral intervals essentially smooth,

3 (4) Convex species, usually broader behind. Joints of hind tarsi triangularly widened (Fig. 56). Upper terminal spur of hind tibia remarkably longer than metatarsi (often as long as or longer than first and second tarsal joints together). Hind femur widened (length-to-width ratio often exceeding 0.5) (= Psammobius auct.)

1. Genus: Psammodius Fallén, 1807

4 (3) Flat, parallel-sided species. Joints of hind tarsi non-widened. Upper terminal spur of hind tibia about as long as metatarsi. Hind femur not widened

3. Genus: Pleurophorus Mulsant, 1842

### 1. Genus: Psammodius Fallén, 1807

The genus <u>Psammodius</u> Fallén was recently divided into three subgenera as follows: subgen. <u>Leiopsammodius</u> Rakovič (species with smooth, non-granulate elytra, without pronotal ridges), subgen. <u>Psammodius</u> s. str. (species with smooth, non-granulate elytra, with five transverse pronotal ridges and furrows between these ridges) and subgen. <u>Granulopsammodius</u> Rakovič (species with granulate elytra, with five transverse pronotal ridges and furrows between them).

In the Republic of South Africa and in neighbouring countries, we find only the representatives of the subgen. Leiopsammodius Rakovič. These species posses no pronotal ridges but have vestiges on the lateral parts of the first and/or third transverse furrows running just behind the anterior margin of the pronotum and near the middle of the pronotum, respectively. These vestiges are called lateral impressions in the key to species.

It is necessary to note that P. (L.) modestus (Péringuey) is a doubtful species. Its types do not exist and neither me, nor any other specialist has seen any specimen of this animal.

### Key to Psammodius (Leiopsammodius) species

- 1 (12) Pronotum with two pairs of lateral impressions (see the note above the key).
- 2 (3) Longitudinal furrow of pronotum remarkably impressed, extended from basal margin nearly to anterior margin. A small species. Reddish brown. 2.6-2.7 mm. - Rhodesia (endroedii Rakovič, 1979)
- 3 (2) Longitudinal furrow of pronotum only slightly impressed, present only posteriorly or marked only by a row of punctures. Usually larger species.
- 4 (9) Granules of head, at least those occurring anteriorly, strongly transversal.
- 5 (6) Majority of medium-sized or large punctures on pronotum irregularly distributed; pronotal disc remarkably punctate. Reddish brown. 3 mm. RSA (Cape Province), SWA Namibia subciliatus Harold, 1869
- 6 (5) Majority of punctures on pronotum arranged along vestigal furrows; pronotal disc at most with few punctures.
- 7 (8) Granules of head located anteriorly transversal, medial ones rounded. Elytra wider, length-to-width ratio above 1:0.72. Elytral intervals convex. Reddish brown. 2.7-3.1 mm. Seychelles, RSA (S. Kalahari) seychellensis Rakovič, 1979
- 8 (7) All granules of head transversal. Elytral narrower, length-to-width ratio about 1:0.69. Elytral intervals nearly flat. Reddish brown, 2.8-3.3 mm. - RSA (Transvaal, Cape Province), SWA - Namibia evanidus Péringuey, 1901
- 9 (4) Granules of head rounded, never transversal.
- 10 (11) Striae on elytral disc, viewed from above, indistinct. Punctures in striae often replaced by large, quite superficial, more or less darkened spots. Reddish brown. 2.5-3 mm. -SWA - Namibia substriatus Balthasar, 1943
- 11 (10) Elytral striae distinct, viewed from above, punctures never quite superficial. Reddish brown. 2.5-3 mm. Widely distributed in the Oriental and Ethiopian Regions incl. RSA (Transvaal) indicus Harold, 1877
- 12 (1) Pronotum with only one pair of lateral impressions. Dark brown, elytra paler. 3 mm. -RSA (Natal) modestus Péringuey, 1901

#### 2. Genus: Rhyssemus Mulsant

The genus <u>Rhyssemus</u> Mulsant is the largest genus of the tribe Psammodiini and thus, it is not easy to identify its species. The South-African species are divided below into four groups depending on the structure of elytral intervals. Of course, these groups are of no phylogenetic importance. They were established here just to facilitate identification.

The examination of paratypes and other specimens of  $\underline{R}$ , zumpti Petrovitz and  $\underline{R}$ , casperi Petrovitz revealed that the latter name is a synonym of the former since the differences were within the variation range.

### Key to Rhyssemus groups

- 1 (2) Even elytral intervals (sutural intervals considered as first interval) lower than odd intervals (second interval sometimes represents an exception). Odd intervals usually remarkably carinate

  Group 1
- 2 (1) All elytral intervals of about same height, flat or moderately convex, never carinate.
- 3 (4) Elytral intervals, viewed from above, with two rows of granules (at least one row, however, usually two rows of granules quite distinct) Group 2
- 4 (3) Granules on elytral intervals, in the area of elytral disc either absent or indistinct in dorsal view. Elytral intervals seem to be only transversely wrinkled, viewed from above (granules may be recognized in lateral view). Sometimes a few granules near the base can be recognized from above.
- 5 (6) Granules weak, however, yet present, distinct in lateral view Group 3
- 6 (5) Elytral intervals only transversely wrinkled (like in Rhyssemus germanus /L./). Granules absent, thus, not visible even from lateral view Group 4

### Key to Rhyssemus species - Group 1

- 1 (2) Clypeus broadly rounded at each side of emargination (Fig. 57), Elytral intervals consisting of elongate granules, 3.8 mm. RSA (Cape Province).
  - (1) Clyneus angular (Fig. 58) (at most with obtusely rounded angles) at each side of emer-
- 2 (1) Clypeus angular (Fig. 58), (at most with obtusely rounded angles) at each side of emargination. Odd elytral intervals represented by continuous, sharp carinae.
- First (anterior) pronotal ridge completely broken up into discrete tubercles. 3.5-4.0 mm.
   South Rhodesia, Congo, Guinea, East Africa, Angola (carinatipennis Péringuey, 1901)
- 4 (3) First pronotal ridge continuous (at least partially).
- 5 (6) 4th, 6th, 8th and 10th elytral intervals quite flat. 2.5-3.1 mm. SWA Namibia
  - sexcostatus Ad. Schmidt, 1909
- 6 (5) 4th, 6th, 8th and 10th elytral intervals lower than neighbouring odd intervals, however, yet rather carinate, never quite flat. 2.2-2.5 mm. SWA Namibia
  - ritsemae Clouët, 1901

# Key to Rhyssemus species - Group 2

- 1 (2) A large, plump species. 4.5-5.0 mm. RSA (Cape Province)
  - maximus Clouet, 1901
- 2 (1) Smaller (at most 4.2 mm), subparallel-sided species.
- 3 (4) Clypeus broadly rounded at each side of emargination. First pronotal ridge consisting of discrete granules. 3.5-4.0 mm - RSA (Cape Province) capensis Clouet, 1901
- 4 (3) Clypeus angular, at most moderately rounded at each side of emargination. First pronotal ridge more or less continuous medially.
- 5 (6) Granules in medial rows on elytral intervals very small and sparsely distributed, intervals thus appearing to have only one row of granules. 3.4-3.5 mm. SWA Namibia laevinasus Petrovitz, 1964
- 6 (5) Elytral intervals with two distinct rows of granules.
- 7 (8) Granules in lateral row on elytral intervals elongate, 3.4-3.8 mm. RSA (Cape Province, Natal) atramentarius Péringuey, 1901
- 8 (7) Granules in lateral rows rather rounded.
- 9 (10) Pronotal transverse ridges at least as wide as transverse furrows behind them. 3.5 mm. SWA Namibia hauseri Balthasar, 1961

10 (9) Pronotal transverse ridges (possibly excepting first one) narrower than furrows behind them. 11 (14) Narrower species, elytral length-to-width ratio about 1:0.63. 12 (13) Transverse furrows of pronotum with transverse wrinkles. First pronotal ridge wider than first pronotal furrow. 4.0-4.2 mm. - SWA - Namibia pondoensis Petrovitz, 1967 Pronotal transverse furrows rather densely transversely punctate. First pronotal ridge at 13 (12) most as wide as first pronotal furrow, 3.3-3.4 mm. - Botswana (scineri Petrovitz, 1968) Wider species, elytra length-to-width ratio 1:0.65. 14 (11) 15 (16) Large granules in lateral rows on elytral intervals much higher than small granules in medial rows, 3.2-3.6 mm. - S. Rhodesia, Congo, Sudan, East Africa, San Thomé Is., Guinea (congolanus Clouët, 1901) 16 (15) Height of granules in lateral rows comparable to that of granules in medial rows. 3.7-3.9 mm. - RSA (Transvaal, Natal), SWA - Namibia africanus Petrovitz, 1963 Key to Rhyssemus species - Group 3 Pronotal ridges low, poorly delimited, all more or less interrupted medially by a lon-1 (2) gitudinal furrow. 3.2-3.8 mm. - RSA (Cape Province), SWA - Namibia promontorii Péringuey, 1901 Pronotal ridges well developed, only fourth and fifth ridges interrupted medially by a 2 (1) longitudinal furrow. 3 (6) First pronotal ridge medially not granulated by coarse transverse punctures. 4 (5) First and second pronotal furrows with transverse wrinkles, remaining furrows with transverse punctures. 3.0-3.8 mm. - From Egypt to Mosambique (mayeti Clouet, 1901) 5 (4) First and second pronotal furrows with transverse punctures, remaining furrows with mimus Balthasar, 1961 rounded punctures, 3.6-4.1 mm. - SWA - Namibia 6 (3) First pronotal ridge granulate medially. 7 (8) All pronotal transverse furrows densely filled with coarse, transverse punctures; medial widths of third transverse ridge and third transverse furrow comparable; third transverse furrow neither impressed nor widened laterally. 3.5-3.8 mm. - SWA - Namibia bechuanus Petrovitz, 1956 8 (7) Coarse punctures in pronotal furrows rather indistinct and sparsely distributed; third pronotal ridge much wider medially than third transverse furrow (at least by a factor of 3 to 4); third transverse furrow widened and strongly impressed laterally. 3.8 mm. -SWA - Namibia robani Bénard, 1910 Key to Rhyssenius species - Group 4 1 (2) Pronotal ridges low, poorly delimited. 3.75 mm. - RSA crispus Ad. Schmidt, 1901 2 (1) Pronotal ridges well developed. 3 (4) Pronotal ridges wider than furrows. 3.6-4.2 mm. - SWA - Namibia (= casperi Petrovitz, 1965, syn.n.) zumpti Petrovitz, 1956 4 (3) Pronotal ridges narrower than furrows, 3.3 mm. - RSA (Natal) parallelicollis Clouet, 1901 3. Genus: Pleurophorus Mulsant, 1842

In South Africa the genus Pleurophorus Mulsant is represented only by two species.

# Key to Pleurophorus species

Pronotum posteriorly with a punctate longitudinal furrow (the punctures arranged in a 1 (2) row). Elytral intervals remarkably convex. Hind metatarsi longer than upper terminal spur of hind tibia. 3 mm. - RSA (Cape Province) capensis Péringuey, 1901

2 (1) Pronotum posteriorly without longitudinal furrow. Elytral intervals nearly flat. Hind metatarsi shorter than upper terminal spur of hind tibia. 3.0-3.75 mm. - RSA (Natal) natalensis Péringuey, 1901

### V. Tribe: Eupariini

From the African genera of this tribe only species from two genera are known, but it is possible, that other genera also occur in this region (cf. those in parentheses).

### Key to genera

- 1 (2) Apex of clypeus turned downward, limited above by a transversal carina (Fig. 59). Pronotum very strongly convex (Fig. 60). Body short. Head without tubercle. All species black. 2-4.5 mm (Genus: Odontolochus Schmidt, 1910)
- 2 (1) Apex of clypeus not turned downward, apical margin visible from above.
- 3 (4) Apex of anterior tibiae truncate, straight (Fig. 61). Hind angles of pronotum turned downward (Fig. 62), surface simply convex, basis bordered. Elytra dilated backwards, mostly with short bristles. 2.5-5 mm.

   Genus: Simogonius Harold, 1871
- 4 (3) Apex of anterior tibiae normal, not truncated.
- 5 (6) Surface at least on sides distinctly pubescent
  - (Genus: Euparia Lepesme and Serville, 1828)
- 6 (5) Surface bald or with very small scales.
- 7 (8) Head as broad as pronotum, strongly convex, genae strongly turned downward (Fig. 63). Slender, cylindrical, shiny species, legs short, 2-4 mm.

(Genus: Saprosites Redtenbacher, 1857)

8 (7) Head narrower than pronotum, not very convex, genae not turned downward, produced beyond eyes (Fig. 64). Front without tubercles. Pronotum simply convex. Elytra with rows of punctures. Apex of hind tibiae with a long thorn, hind metatarsi always longer than next two joints together. 2.5-5 mm. 2 Genus: Ataenius Harold, 1867

## 1. Genus: Simogonius Harold, 1871

Black, shiny. Clypeus weakly emarginate, genae small, but produced beyond eyes, hollowed. Pronotum, especially on sides with very sparse, long setae, disc densely punctate, basis without border, but with a dense transversal row of punctures. Elytral striae consisting of setiferous punctures, setae bright, intervals convex. 4-5 mm. - RSA (Transvaal)

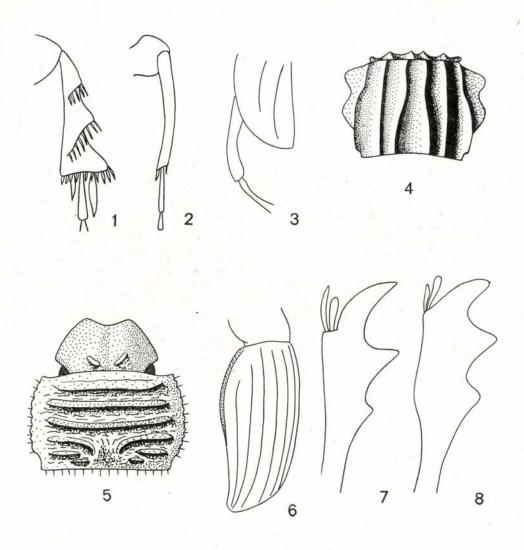
beccarii Harold, 1871

#### 2. Genus: Ataenius Harold, 1867

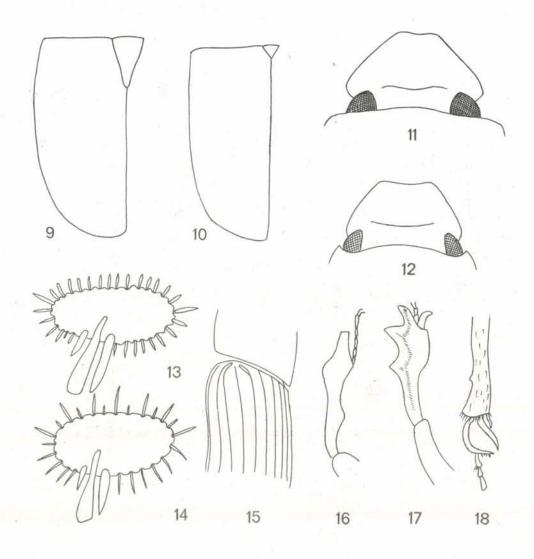
Very small, rather depressed, surface bald. Clypeus weakly emarginate, frontal suture absent. Anterior angles of pronotum weakly produced, broadly rounded, hind angles rounded, basis bordered, without bristles, disc with a longitudinal furrow and an impression behind anterior angles and an other one in the middle of sides, everywhere densely punctate. Elytral striae broad, deep, with big punctures, intervals convex. Hind metatarsi longer than upper thorn of hind tibiae and somewhat shorter than following joints together. 2.5-3 mm. - RSA (Transvaal) kratochwili Balthasar, 1942

### LITERATURE

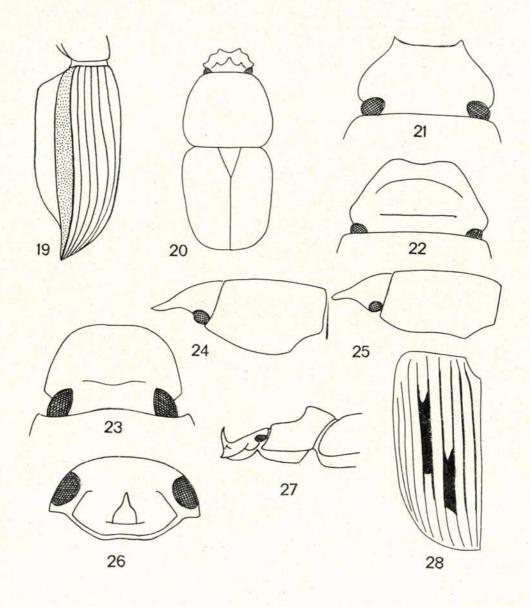
- BALTHASAR, V. (1964): Monographie der Scarabaeidae and Aphodiidae der palaearktischen und orientalischen Region. Coleoptera, Lamellicornia, Band 3. Aphodiidae. Verlag des CS Akademie der Wissenschaften, Prag.
- ENDRŐDI, S. (1960): Die Aphodinae von Ost-Afrika. Ann. Mus. Congo Tervuren, Zool., 88:67-249.
  ENDRŐDI, S. (1964): Die Aphodinae des Congo-Gebietes in Rahmen der Faune von Zentral-Afrika
  (Coleoptera, Scarabaeidae). Ann. Mus. Roy. de l'Afrique Centrale, Sci. Zool., No. 123: 415 pp.
- LANDIN, B.O. (1946): Zur Systematik der Gattung Aphodius III. Opusc. Ent., 11: 87-93.
- PÉRINGUEY, L. (1900): Descriptive Catalogue of the Coleoptera of South Africa. Trans. S. Afr. Phil. Soc., 12: 369-451.
- SCHMIDT, A. (1922): Aphodiinae. Das Tierreich, 45. Lieferung: XXXVI und 614 pp. Berlin und Lelpzig.



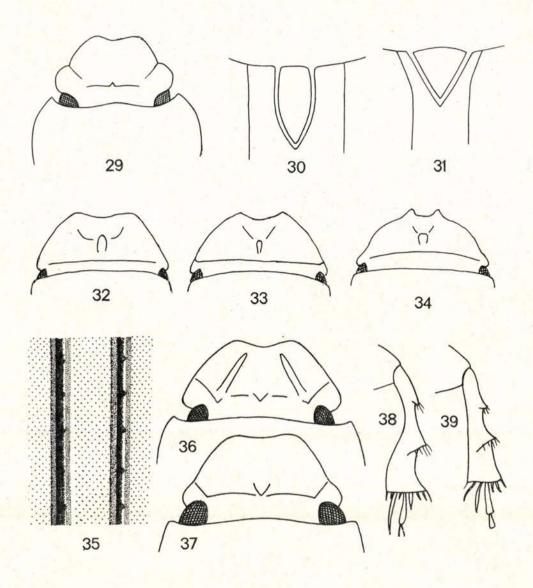
Figs. 1-8: 1. Transversal or oblique carinae in tribe Aphodiini (Aphodius septemmaculatus Fabricius - 2. Hind tibiae without transversal carinae on hind tibiae (Rhyparus comorianus Fairmaire) - 3. Hind femora extending well beyond apex of elytra (Paracorythoderus marshalli Brouns) - 4. Sculpture of pronotum in Rhyparus comorianus Fairmaire - 5. Sculpture of head and pronotum in Rhyssemus mayeti Clouet - 6. Ventrally placed epipleura (punctate) in Aphodius septemmaculatus Fabricius - 7. Anterior tibia of the same species - 8. Anterior tibia in the group Aphodobius of Aphodius (Aphodius paulianellus Endrődi)



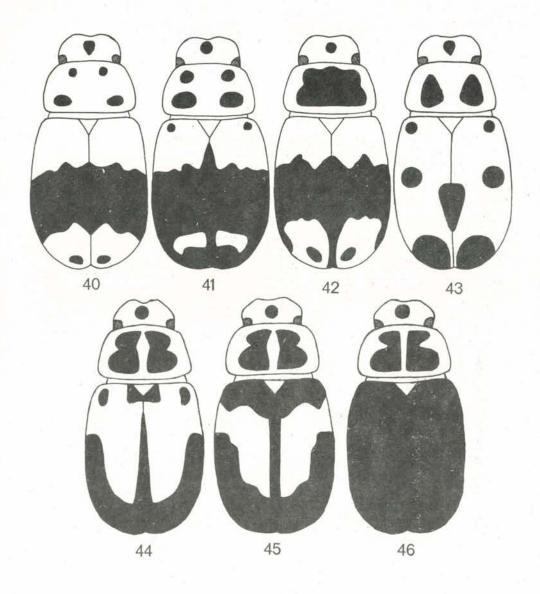
Figs. 9-18: 9. Big scutellum in the genus Colobopterus Mulsant (Colobopterus maculicollis Reiche) - 10. Small scutellum in the genus Aphodius Illiger (Aphodius septemmaculatus Fabricius) - 11. Genae produced beyond eyes (Aphodius teter Roth) - 12. Genae not produced beyond eyes (Aphodius rarus Endrődi) - 13. Apical bristles of hind tibiae equal (Aphodius damarinus Kolbe) - 14. Apical bristles of hind tibiae unequal (Aphodius bredoi Endrődi) - 15. All eyltral ribs reaching basis in the genus Oxyomus Stephens - 16. Anterior tibia in Coptochirus pteropus Harold - 17. Anterior tibia in Drepanocanthus eximius Péringuey - 18. Hind metatarsus in the same species



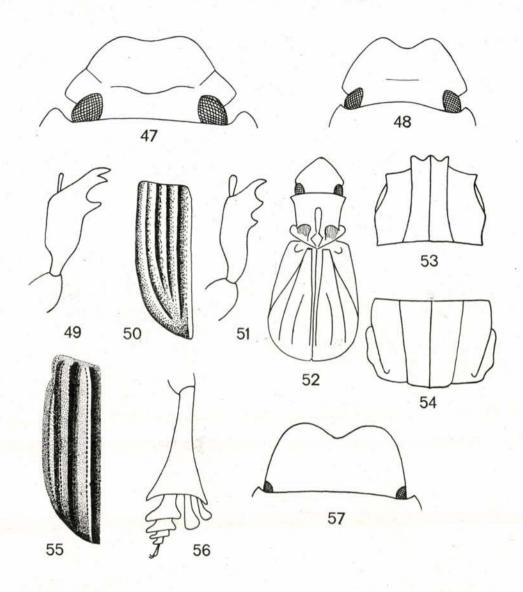
Figs. 19-28: 19. Apipleura (punctured) in Lorditomaeus invenustus Schmidt - 20. Short body of Colobopterus dimidiatus Roth - 21. Head of Aphodius adustus Klug - 22. Head of Aphodius dukei Endrődi - 23. Head of Aphodius calcaratus Boheman - 24. Hind angles of pronotum deeply emarginated (Aphodius fastigatus Schmidt) - 25. Hind angles of pronotum truncated (Aphodius motoensis Endrődi) - 26. Head of Phodius rhinoceros male (frontal view) - 27. Head and pronotum in the same species (lateral view) - 28. Elytra of Aphodius moestus Fabricius



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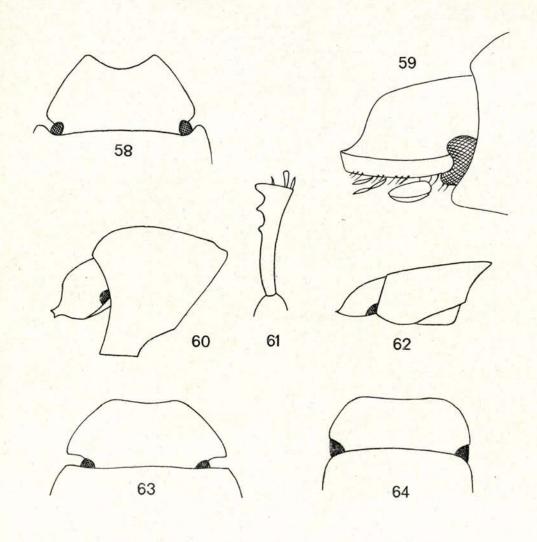


Figs. 40-46: Aberrative pattern in Aphodius septemmaculatus Fabricius. - 40. ab. wahlbergi Boheman - 41. ab. smithi Shipp - 42. ab. decorellus Endrődi - 43. forma typica - 44. ab. decorus Endrődi - 45. ab. pulcherrimus Reiche - 46. ab. aequalis Schmidt



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Head of Rhyssemus hottentottus Petrovitz



Figs. 58-64: 58. Head of Rhyssemus ritsemae Clouët - 59. Head of Odontolochus basilewskyi Endrődi - 60. Head and pronotum of the same species - 61. Anterior tibia of Simogonius beccarii Harold - 62. Head and pronotum of the same species - 63. Head of Saprosites cavus Schmidt - 64. Head of Ataenius kratochwili Balthasar

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