

# REVISION OF THE TRIGONOPOID PLATYNOTINA (COLEOPTERA, TENEBRIONIDAE, PLATYNOTINI). PART I. GENERA *AMBLYCHIRUS* KOCH, *MELANOPTERUS* MULSANT ET REY, *SELINOPODUS* KOCH AND *TRIGONOPUS* MULSANT ET REY.

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**Abstract.**— Four genera of the trigonopoid Platynotina are revised: *Amblychirus* Koch, *Melanopterus* Mulsant et Rey, *Selinopodus* Koch and *Trigonopus* Mulsant et Rey. Six new species to science are described: *Trigonopus sigillatus*, *T. similis*, *T. danielssoni*, *T. signus*, *T. cochraneeae* and *Amblychirus pseudobrevior*. A new synonymy is proposed: *Melanopterus porcus* (Mulsant et Rey, 1853) (= *Trigonopus exaratus* Mulsant et Rey, 1853). Lectotypes are designated. The genus *Melanopterus* is reinterpreted. Keys for species determination are provided.



**Key words.**— entomology, taxonomy, revision, Coleoptera, Tenebrionidae, trigonopoid Platynotina, South Africa.

## INTRODUCTION

The first published description of a species of the trigonopoid Platynotina was that of *Platynotus striatus*, by Quensel, in Schönherr's 1806 paper. At present this species is included in the genus *Atrocrates* Koch, 1956. Dejean, in his catalogue of 1836–37 (pp. 196–236, pub. 1836) lists *striatus* within the genus *Eurynotus* Kirby, and includes many names under this genus which were used later by Mulsant and Rey (1853, 1854). The genus *Eurynotus* is currently placed in the Oncotini, a tribe closely related to the Platynotini.

In 1853 Mulsant and Rey described genus *Trigonopus*, a new platynotine genus, and gave diagnoses, descriptions and key to the 19 species which they included in it (18 of which are new). In the following year (1854) these authors described another genus, *Melanopterus* with another three new species. The material which these authors studied (type material) came from the collections of the Muséum Paris, Chevrolat, Deyrolle and Mannerheim, and at present are kept at the Muséum National d'Histoire Naturelle in Paris.

In 1870 Fähræus published a paper in which he described 9 new species of *Trigonopus*, 1 of *Melanopterus*, and a new monotypic genus *Zophodes* but these new taxa were not included in the catalogue published in the same year by Gemminger and Harold (1870). Fairmaire (1897) added an additional 2 new species of *Trigonopus* and described a new monotypic genus, *Crypticanus*, also belonging to the same genus group. General data, pertaining only to genera, are contained in

papers by Lacordaire (1859) and Péringuey (1904). The results of 19th century students were summarized by Gebien (1938) in an excellent and still very useful catalogue of the Tenebrionidae.

In his 1955 paper Koch presented an outline of the division of the tribe Platynotini into subtribes and described a new genus *Bantodemus* (28 species, 21 of them new). A year later (1956), the same author published a fairly long paper in which he presented in detail his division of the tribe Platynotini into subtribes and generic groups, one of them being the trigonopoid Platynotina. The group, besides the already known genera (*Trigonopus*, *Zophodes*, *Melanopterus* and *Bantodemus*), included 5 genera newly described by Koch (*Selinopodus*, *Atrocrates*, *Schelodontes*, *Eviropodus* and *Amblychirus*). In total, the trigonopoid Platynotina included 80 species, 24 of which were new.

In 1963 Kulzer published a list of types deposited at the G. Frey Museum. In the case of genera of the trigonopoid Platynotina, it includes paratypes of Koch's 1955 and 1956 revisions.

The only publication which contains descriptions of immature stages of this species group is that by Schulze (1964) who described larvae of *Zophodes fitzsimonsi* Koch and *Bantodemus zulu* Koch.

The present paper is the first of a series devoted to the revision of the trigonopoid Platynotina. It follows a revision of the melanocratoid Platynotina (Iwan 1996) – an endemic group of Madagascan genera, very closely related to the trigonopoid Platynotina.

## ACKNOWLEDGEMENTS AND DEPOSITORIES OF THE MATERIAL EXAMINED

I am grateful to the following curators and institutions for the loan of specimens used in this study:

- CNCI – Canadian National Collection of Insects, Biosystematics Research Institute, Research Branch, Agriculture Canada, Ottawa, Canada (A. Smetana)
- HBC – Zoologisches Staatssammlung, München, Germany, in permanent loan to Prof. Hans J. Bremer (H. J. Bremer)
- HNHM – Hungarian Natural History Museum (O. Merkl)
- JFC – Julio Ferrer Collection, Stockholm, Sweden (J. Ferrer)
- MHNG – Muséum d'Histoire Naturelle, Geneva, Switzerland (L. Löbl)
- MNHN – Muséum National d'Histoire Naturelle, Paris, France (C. Girard)
- MRAC – Musée Royal de l'Afrique Centrale, Tervuren, Belgium (H. M. André)
- MZLU – Museum of Zoology, Lund University, Lund, Sweden (R. Danielsson)
- NHMB – Natural History Museum, Bulawayo, Zimbabwe (K. Donnan)
- NMB – National Museum, Bloemfontein, Republic of South Africa (J. Irish)
- SAM – South African Museum, Cape Town, South Africa (M. Cochrane)
- TM – Transvaal Museum of Natural History, Pretoria, South Africa (S. Endrödy-Younga)
- ZMS – Naturhistoriska Riksmuseet, Stockholm, Sweden (B. Gustafsson, J. Ferrer)

I wish to thank M. Szczepańska for her excellent habitus illustrations.

The paper was sponsored by the State Committee for Scientific Research (grant no. 6 P204 027 04).

My special thanks are due to David G. H. Halstead for his valuable editorial comments.

## METHODS AND ABBREVIATIONS

Means and ratios are based on all specimens listed under "Material examined" (10 males and 10 females if were more specimens). The following abbreviations have been used in the descriptions:

- pl/pb – pronotum length/breadth ratio;  
 el/eb – elytra length/breadth ratio;  
 el/pl – length ratio elytra/pronotum;  
 eb/pb – breadth ratio elytra/pronotum;  
 lbp – length of basal part of aedeagal tegmen;  
 lap – length of apical part of aedeagal tegmen;  
 ll – length of lacinia (from suture of apical and basal parts to apex as in figs 39 and 75);

- tll – total length of lacinia (Figs 39 and 75);  
 c1/c2/c3/c4/c4–c3 – length ratios coxites1/coxites2/coxites3/coxites4/coxites4–coxites3;  
 bc1/lc1 – coxites1 breadth/length ratio;  
 lp/lc1 – length ratio paraproct/coxites1.

## SYSTEMATICS

According to Koch (1956) the tribe Platynotini comprises 3 subtribes: Anomalipina with the genus *Anomalipus* Latreille, Gonopina with the genera *Gonopus* Latreille and *Stenogonopus* Gebien, and Platynotina including 5 groups of genera: selinoid, trigonopoid, platynoid, opatrinoïd and anchophthalmoid.

Koch based his definition of the trigonopoid Platynotina on the structure of fore tibia (strongly triangularly widened), the border of the last abdominal ventrite (wide, when the border is absent, i. e. in the genus *Bantodemus* Koch, the pronotal base is straight) and the structure of the metasternum between the insertions of mid and hind coxae (very much shortened, borders of insertion margins practically in contact).

In my earlier study on endemic Madagascan species (Iwan 1996) I established a new genus group, the melanocratoid Platynotina which has some characters of the trigonopoid Platynotina (structure of male fore tibia and elytral epipleura). The groups differ in the structure of clypeus – the melanocratoid genera having a deep emargination on the anterior margin (the character, assumed to be a synapomorphy, serves as a base to distinguish the melanocratoid Platynotina).

Additional characters uniting the melanocratoid and trigonopoid groups are: the structure of the female reproductive system (ovipositor with paraproct shorter than the combined length of all coxite lobes) and the ovoviviparity (Tschinkel 1978, Iwan 1996).

The structure of the fore tibia places the Anomalipina and Gonopina close to the trigonopoid and melanocratoid Platynotina. Species of these taxa occur only in South Africa and Madagascar. Structures (denticles, swellings) on the outer margin of fore tibia are present in the Gonopina and melanocratoid Platynotina (most genera), as well as in the Anomalipina, in which the inner margin of fore tibia is also modified. The latter character (tibia provided with denticles and concavities on the inner side) is also characteristic of some of the genera of the melanocratoid Platynotina and the majority of the trigonopoid Platynotina. Such a "mixed" character distribution in these taxa can also be observed when studying the structure of the pronotum, elytral epipleura, last abdominal ventrite, structure of the mentum, female reproductive system etc. The geographical distribution of the taxa and the characters listed above, suggest that the melanocratoid and trigonopoid Platynotina are more closely related to the Anomalipina and Gonopina, than to the remaining groups of the tribe Platynotini.

Current knowledge, talking into account the division of the tribe proposed by Koch (1956) and my recent study (Iwan 1996), strongly indicated that the subtribes Anomalipina and Gonopina, and the melanocratoid Platynotina are distinct monophyletic taxa, while the trigonopoid Platynotina is probably polyphyletic. Cladistic analysis of all the taxa of the tribe Platynotini will in the future make it possible to ascertain monophyly of particular taxa and to present a hypothesis on their phylogeny.

*Amblychirus* Koch

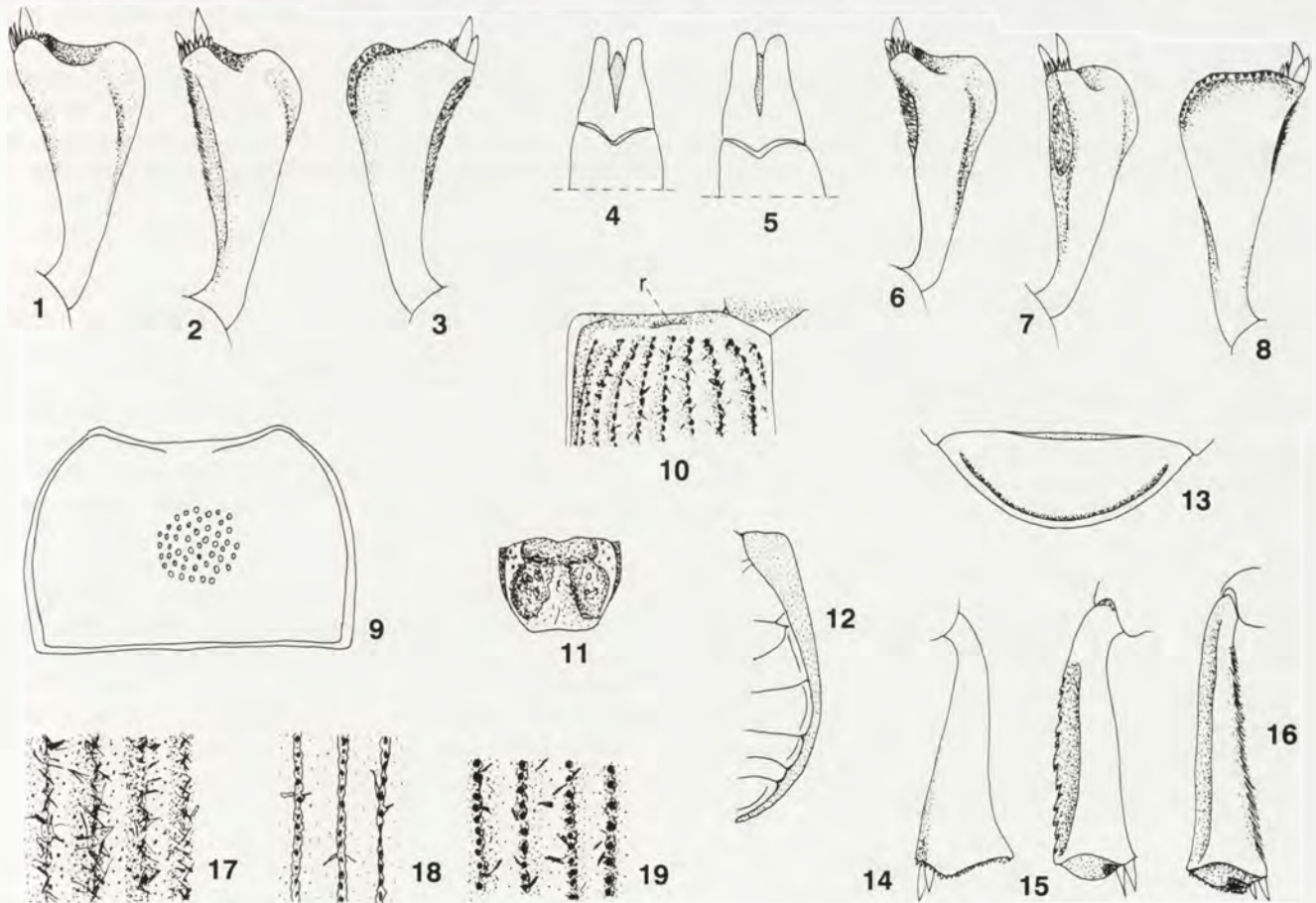
*Amblychirus* Koch, 1956: 87. Type species, designated by Koch 1956: 87: *Trigonopus brevior* Fairmaire, 1897.

**Diagnosis.** *Amblychirus*, like the genera *Melanopterus*, *Trigonopus* and *Selinopodus*, has the male fore tibia gradually widened to a broad apex and provided with an apical concavity which is visible on the inner side. The anterior elytral margin resembles that in these three genera, being strongly convex and with the humeri angular (Fig. 10). The structure of the mentum which has the mid part widened concave anteriorly (Fig. 11), places

*Amblychirus* close to *Melanopterus*. Like the genera *Atrocates*, *Zophodes*, *Trigonopus* and *Bantodemus*, it has the border of the anterior pronotal margin widely interrupted (Fig. 9), but differs from them in the structure of the mentum.

Strong pronotal puncturation distinguishes *Amblychirus* from the genera *Melanopterus* and *Selinopodus*, and its elytral sculpture separates it from *Trigonopus*.

**Description.** Medium and large species (14.0–17.0 mm). Body colour from dark brown to black. Head and pronotum coarsely and densely punctate; femora and tibia with puncturation sparser, at their bases finer; underside of body also densely punctate, punctures often fuse to form rugae, last two abdominal ventrites less strongly punctate. Body oval, rather strongly convex, elytra slightly tucked in posteriorly (small part of interval IX visible from underside). Head widest anterior to eyes, genal canthus wider than eyes. Mid part of the mentum widened anterad; median keel does not reach the anterior margin which is shallowly emarginate in the middle; lateral margins (wings) very narrow. Eyes narrowed laterally, 1–2 facets between gena and temple. Antenna similar to that in *Trigonopus*,



Figures 1–19. *Amblychirus* spp. 1–4, 17. *A. brevior*, 5, 18. *A. pseudobrevior*, 6–16, 19. *A. tenebrosus*. (1,6) dorsal, (2,7) latero-dorsal and (3, 8) ventral view of male fore tibia; (4–5) apical part of aedeagus, (9) pronotum, (10) anterior part of elytron (r – ridge), (11) mentum. (12) elytral epipleuron, (13) last abdominal ventrite. (14) ventral and (15) latero-dorsal view of male mid tibia, (16) latero-dorsal view of male hind tibia. (17–19) sculpture of elytra.

segment 3 ca. 2.0–2.5 × as long as 2. Frontoclypeal suture extremely weak, practically invisible. Pronotum with sides weakly rounded, nearly parallel on basal half; base almost straight, slightly arcuately emarginate; anterior border interrupted medially; lateral border even, moderately wide (ca. 0.9 × width of antennal segment 3); disc distinctly, evenly convex; at posterior angles sides very shallowly longitudinally concave; anterior angles rounded, posterior angles almost forming right-angle. Scutellum located at the level of humeral angles. Elytra with humeral angles obviously convex, slightly rounded, not protruding outwards; lower edge of the anterior elytral margin strongly convex, upper edge abruptly convex in middle – forming short ridge (Fig. 10); intervals poorly convex, impunctate; epipleura rounded in their apical part, obvious from the upperside (Fig. 12). Prosternal process produced towards mesosternum, with border interrupted at apex. Last abdominal ventrite bordered (Fig. 13). Male legs, femur densely pubescent; mid and hind tibia with ridge bearing row of dense dark setae on inner side and two longitudinal ridges on outer margin; fore tibia considerably widened at apices, strongly concave ventrally. Legs of both sexes have tibiae without spinules on underside and fore tarsi with glabrous gutters ventrally on all segments. General structure of aedeagus and female reproductive system as in other members of the trigonopoid Platynotina.

Differences between species are mainly in the structure of the male fore tibiae and the sculpture of the elytra.

**Distribution.** South Africa (E part of Cape Province, Orange Free State), Lesotho.

#### KEY FOR SPECIES DETERMINATION

- 1 Inner side of male fore tibia with a longitudinal ridge and a row of dense fine setae (Figs 1–3) ..... 2
- Inner side of male fore tibia with an oval concavity in apical part, bottom of concavity densely pubescence (Figs 6–8) ..... *tenebrosus*
- 2 Elytral striae composed of irregular punctures that fuse to form narrow gutters with irregular margins, transverse impressions sparse and single (Fig. 18); elytral intervals flat, smooth, slightly raised posteriorly and at sides of elytra; gap between aedeagal parameres narrower than width of paramere (Fig. 5) ..... *pseudobrevior* sp. nov.
- Elytral striae composed of widely diffuse, irregular punctures and impressions entering deep into intervals (Fig. 17); elytral intervals slightly raised on disc, strongly so posteriorly and at sides of elytra; gap between aedeagal parameres of the same width as paramere (Fig. 4) ..... *brevior*

*Amblychirus breviar* (Fairmaire)  
(Figs 1–4, 17, 119)

*Trigonopus breviar* Fairmaire, 1897: 118. – Gebien 1910: 272; 1938: 292.

*Amblychirus breviar* (Fairmaire): Koch 1956: 87.

**Locus typicus.** Cradock (South Africa: Cape Province).

**Diagnosis.** *A. breviar* is close to *pseudobrevior* having similar male fore tibiae but it differs in the elytral sculpture (cf. Figs 17 and 18) and the structure of aedeagus (cf. Figs 4 and 5).

**Description.** Body length 14.0–16.0 mm, pl/pb = 0.65–0.69, el/eb = 1.20–1.35, el/pl = 2.00–2.16, eb/pb = 1.04–1.12 (in females posterior part of elytra more convex). Elytral striae formed of irregular, widely diffuse punctures and impressions which fuse with punctures and encroach on elytral intervals at various angles (Fig. 17); intervals slightly convex on disc, posteriorly and at sides rather strongly convex, forming longitudinal ribs; interval surface not covered with punctures, disturbed only by impressions, which in posterior part interrupt rib-like convexities (similar structures, but more distinct and regular, are found in *Oncotini*). Male fore tibia, the inner side with longitudinal ridge, along the ridge a row of dense, erect setae (Figs 1–3). Aedeagus as in fig. 4, lap/lbp/tll/l = 1.0/2.6/0.6/0.6, laciniae relatively long (tll=0.6), base located at the level of suture uniting apical and basal part (tll=ll), width of gap between parameres equal to width of paramere; ovipositor as in *tenebrosus*, lp/lc1 = 3.4, bc1/lc1 = 2.2, c1/c2/c3/c4/c4–c3 = 1.0/1.4/1.3/1.7/0.3.

**Types.** Lectotype, (male) MNHN: "Cradock, Dr. Martin; *Trigonopus breviar* Fairm.". Paralectotypes: Museum Paris, Colonie du Cap, Cradock Dr. Ch. Martin; Cradock Dr. Martin; (MNHN) 1 f; Museum Paris, Colonie du Cap, L. Bedel 1898; Cradock, Dr. Martin; (MNHN) 1 m; Cradock, Dr. Martin; *Trigonopus breviar* Fairm., Cafraria; (MNHN) 1 f (present designation).

**Material examined.** S. Africa, C. P., Oviston, Colesberg SE 3025 Da; 23–26 Feb. 1976, S. van Ee; NMBH 5468, (NMB) 30 m, 20 f; S. Africa, O.F.S. Krugersdrift Dam Bloemfontein SE 2926 Aa; January 1986, Entomology Dept.; NMBH 6664; (NMB) 7m; IX. 1965 Queenstown Afrique Du Sud Dr. V. Allard; Museum Paris, coll. P. Ardoin 1978; (MNHN) 1 f; Museum Paris, Afr. australa, (L. Peringuey), Coll. L. Fairmaire, 1905; (MNHN) 1 f; Museum Paris, Basoutoland Maseru, R. Ellenberger 1923; (MNHN) 1 f; S. Africa, O.F.S. Glen 2868 Bloemfontein 28°57'S, 26°21'E; November 1985, Entomology Dept.; NMBH 19675; (MNB) 1m, 1f; S. Africa, O.F.S. Glen 2868 Bloemfontein 28°57'S, 26°21'E; February 1984, Museum Staff; National Muzeum Bloemfontein Dept. Entomology; 18452; (MNB) 1m, 2 f; S. Africa, O.F.S. Bloemfontein SE 2926 Aa 4 Okt.–16 Nov. 1975 Mus. staff, NMBH 5460; (MNB) 1 f; S. Africa, O.F.S. Florisbad 686 Brandfort SE 2826 Cc, May 1981 Entomology Dept., NMBH 9939; (MNB) 1 m; S. Africa, O.F.S. Glen Research Farm Brandfort SE 2826 Cd, September 1981, Entomology Dept., NMBH 9957; (MNB) 2 f; S. Africa, O.F.S. Lemoenboord 320 Philippolis SE 3024 Bb, 17–21 Sept. 1976, A. Strvdom, NMBH 387; (MNB) 1 m; 08–07–82 Koppies R.S.v. Zyl, NMBH 10405; (MNB) 1 f; S. Africa, O.F.S. Maselspoort Resort Bloemfontein SE 2926 Ab, 06–09 Nov. 1975, Gibson,

Ferreira, Beukes, NMBH 5457; (MNB) 1 m, 2 f; S. Africa, O.F.S. Bloemfontein SE 2926 Aa 12 July 1975 H. Beukes, NMBH 5458; (MNB) 5 m; S. Africa, O.F.S. Bloemfontein SE 2926 Aa 15 Feb.–27 Mar. 1977 S. van Ee., E. Lynch, NMBH 5471; (MNB) 2 m, 1f; S. Africa, O.F.S. Bloemfontein SE 2926 Aa, September 1982 Museum Staff, National Muzeum Bloemfontein Dept. Entomology, NMBH 6894; (MNB) 1 m; S. Africa, O.F.S. Bloemfontein SE 2926 Aa, October 1981 Entomology Dept., NMBH 9929; (MNB) 1 m; S. Africa, O.F.S. Bloemfontein SE 2926 Aa, 17 June 1976 S. van Ee, NMBH 5459; (MNB) 1 m; S. Africa, O.F.S. Bloemfontein SE 2926 Aa, April 1982 Entomology Dept. NMBH 5470; (MNB) 2 f; S. Africa, O.F.S. Bloemfontein SE 2926 Aa, October 1982 Museum Staff, National Muzeum Bloemfontein Dept. Entomology, NMBH 6901; (MNB) 1 f; S. Africa, O.F.S. Bloemfontein SE 2926 Aa, January 1981 Entomology Dept., NMBH 5468; (MNB) 1 f; S. Africa, O.F.S. Tussen-die-Riviere Game Farm Bethulie SE 3026 Ac/d, 29 Nov. – 3 Dec. 1982 Entomology Dept., NMBH 10160; (MNB) 13 m, 18 f; S. Afr: Orange Fr. St. 9 mi S. Brandfort 17 Feb. 1968 T. Schuh, JA & Slater, M.Sweet, Rolf L. Aalbu Collection (R.L.A.C.), ex collection Univ. Connecticut 1972 by exchange; (MRAC) 2 f; Cradock Dr Martin, Museum Paris 1906 Coll. Leon Fairmaire; (MNHN) 1 m, 1 f; S. Africa, O.F.S. Krugersdrift Dam Bloemfontein SE 2926 Aa; (September, August, May, October, April, June, 1985, 1984, 1983, 1986, 1982.) Entomology Dept., NMBH 6561, 6437, 17829, 17931; (MNB) 52 m, 37 f; S. Africa C.P. Oviston Colesberg SE 3025 Da, 23–26 Feb. 1976 S. van Ee, NMBH 5468; (MNB) 5 f.

**Distribution.** South Africa (Cape Province: Colesberg, Cradock, Queenstown; Orange Free State: Bethulie, Bloemfontein, Brandfort, Koppies, Philippolis), Lesotho (Maseru) (Fig. 119).

*Amblychirus tenebrosus* (Mulsant et Rey)

(Figs 6–16, 19, 119)

*Trigonopus tenebrosus* Mulsant et Rey, 1853: 39. – Gemminger et Harold 1870: 1912; Gebien 1910: 272; 1938: 292.

*Amblychirus tenebrosus* (Mulsant et Rey): Koch 1956: 87.

**Terra typica.** Le Cape de Bonne-Espérance [South Africa: Cape Province].

**Diagnosis.** The form of the elytral surface, only a few single impressions on the intervals, places *A. tenebrosus* close to *pseudobrevior*, while the structure of the aedeagus indicates close affinity with *brevior* (wide gap between aedeagal parameres). However, *A. tenebrosus* differs from both of these species in the structure of the male fore tibia.

**Description.** Body length 14.5–17.0 mm, pl/pb = 0.62–0.66, el/eb = 1.19–1.24, el/pl = 1.92–2.14, eb/pb = 1.04–1.7. Elytral striae formed of regular, distinct punctures which are slightly diffuse posterad and at sides of elytra; transverse impressions sparse and single (Fig. 19); intervals on disc slightly raised, posteriorly and at sides rather strongly convex, forming longitudinal ribs, surface of intervals finely and sparsely punctate. Male fore tibia,

inner side with oval apical concavity, bottom of concavity densely pubescent. Aedeagus as in *brevior*, lap/lbp/tll/l = 1.0/2.7/0.6/0.6, laciniae relatively long (tll=0.6), base at the of suture connecting apical and basal parts (tll=ll), width of gap between parameres equal to width of paramere; ovipositor as in *tenebrosus*, lp/lc1 = 4.3, bc1/lc1 = 2.6, c1/c2/c3/c4/c4–c3 = 1.0/1.1/1.3/1.9/0.4, lobe c4 strongly protruding beyond upper margin of c3 (c1/c4–c3 = 0.5).

**Type.** Holotype (male); MNHN: "Tirgonopus tenebrosus, type, Cap. bon. spci 483; Museum Paris 1900 Coll. Leon Fairmaire" (examined).

**Material examined.** IX. 1965 Queenstown, Afrique Du Sud, Dr. V. Allard, Museum Paris; (MNHN) 4 m, 5 f.

**Distribution.** South Africa (Cape Province: Queenstown) (Fig. 119).

*Amblychirus pseudobrevior* sp. nov.

(Figs 5, 18, 119)

**Name derivation.** This species is very similar to *A. breviar*.

**Locus typicus.** Steynsburg (South Africa: Cape Province)

**Diagnosis.** See diagnosis for *brevior*.

**Description.** Body length 14.0–15.0 mm, pl/pb = 0.65–0.66, el/eb = 1.22–1.30, el/pl = 2.02–2.07, eb/pb = 1.03–1.09 (in females elytra more convex posteriorly). Elytral striae composed of irregular punctures which have fused to form narrow gutters with irregular edges, transverse impressions sparse and single (Fig. 18); intervals on disc flat, posteriorly and at sides slightly raised, surface of intervals delicately and sparsely punctate. Male fore tibia with a longitudinal ridge on inner side bearing row of dense, erect setae. Aedeagus as in fig. 5, lap/lbp/tll/l = 1.0/2.7/0.5/0.5, laciniae relatively long (tll=0.5), base located at level of suture connecting apical and basal parts (tll=ll); ovipositor as in *tenebrosus*, lp/lc1 = 3.9, bc1/lc1 = 2.1, c1/c2/c3/c4/c4–c3 = 1.0/1.2/1.6/2.0/0.5, lobe c4 strongly protruding beyond upper margin of c3 (c1/c4–c3 = 0.5).

**Types** Holotype (male), MNHN: "Museum Paris, Colonie Du Cap, Steynsburg, R. Ellenberger 1915, Aout, Janvier". Paratypes: Museum Paris, Colonie Du Cap, Steynsburg, R. Ellenberger 1915, Aout, Janvier, (MNHN) 1 m; Museum Paris, Colonie Du Cap, East London, R. Ellenberger 1923; (MNHN) 3 m, 1 f.

**Distribution.** South Africa (Cape Province: East London, Steynsburg) (Fig. 119).

*Melanopterus* Mulsant et Rey *sensu novo*

*Melanopterus* Mulsant et Rey, 1854: 158; Lacordaire 1859: 235; Gemminger et Harold 1870: 1912; Gebien 1910: 272; 1938: 292; Koch 1956: 88. Type species, designated by Koch 1956: 89; *Melanopterus porcatus* Mulsant et Rey, 1854.

**Notes.** Koch's (1956) interpretation of the genus *Melanopterus* encompassed the 5 species included below plus *Melanopterus marginicollis* Mulsant et Rey, *M. triv-*

*ialis* (Fåhraeus), *M. amaroides* (Fåhraeus), *M. dilatipes* Koch, *M. incisus* Koch (species which I believe belong to the genus *Crypticanus*) and *M. podagricus* Koch, a species which should be placed in a separate genus (Iwan, revision in prep.).

An earlier analysis of characters (Iwan 1995a, 1995b) and my present studies on the tribe Platynotini have demonstrated that it is possible to distinguish three main types of mentum: I – mentum flat with well-developed median keel often reaching the anterior margin; II – mentum with widening of the anterior region of mid part spade-shaped and the median keel reaching the lower margin of the “spade” (in the genera *Amblychirus* and *Melanopterus*, present interpretation) “spade” short and shallow, e. g. figs 11, 20 and 21); III – mentum with whole of the mid part spade-like, “spade” very elongate and deep, sides strongly upturned. In group I nearly every genus has a different shape of mentum, hence it seems that they should be treated independently.

Three variants of pronotal puncturation occur in the trigonopoid Platynotina: 1 – punctures large and densely arranged; 2 – punctures fine and sparse (often almost invisible); 3 – puncturation “evanescent” i.e. coarse, often blurred at margins, on disc fine and evanescent (*Melanopterus*).

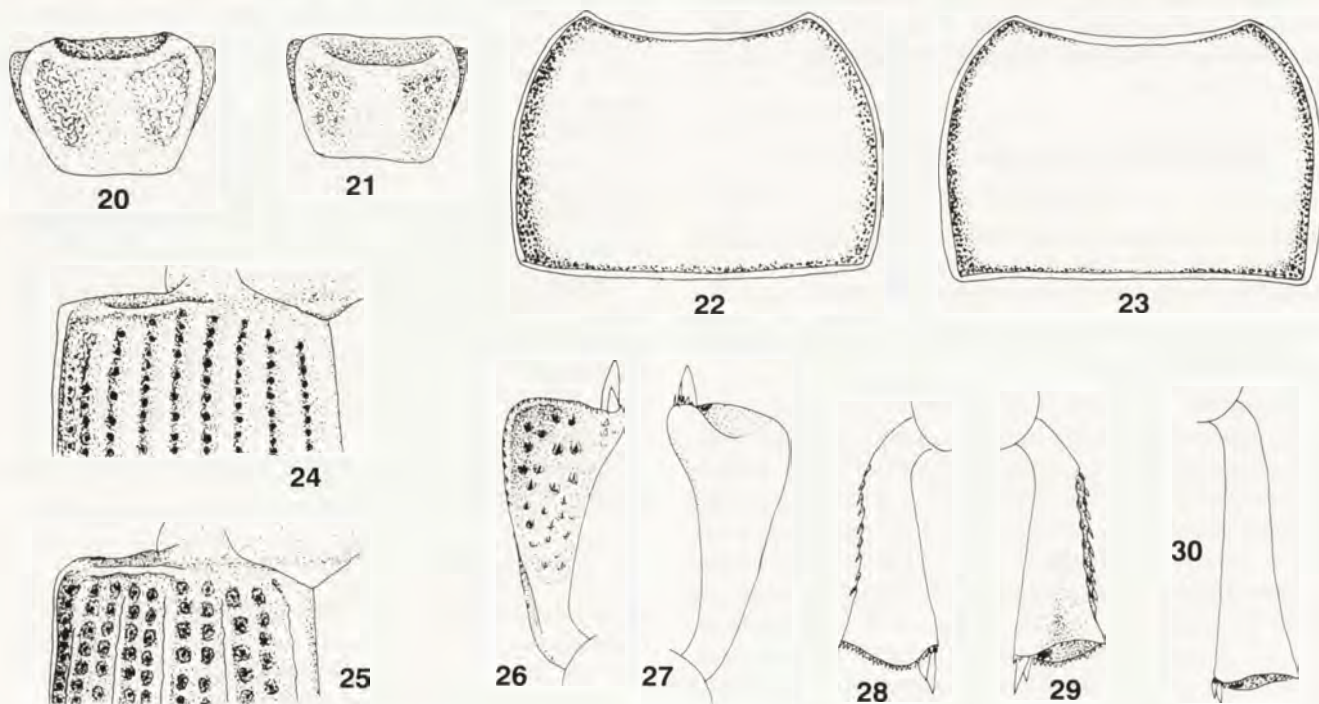
Very important characters are also provided by the lateral border of pronotum and the structure of the anterior elytral margin. In the genus *Melanopterus* (present interpretation) the lateral border of the pronotum is of even

width along its whole length, and the anterior margin of elytra strongly convex (forming a ridge), sometimes bordered (*porcus* and *porcatus*), while in the case of the genus *Crypticanus* (present interpretation) the lateral border of pronotum is strongly widened anterior to the posterior angles, and the anterior elytral margin is at most poorly convex, obtuse.

**Diagnosis.** *Melanopterus*, like *Amblychirus*, *Trigonopus* and *Selinopodus* has male fore tibiae which are gradually widened to a broad apex and are provided with an apical concavity that is visible on the inner side. The above-mentioned genera have the anterior elytral margin similarly-structured (strongly convex, angular). The structure of the mentum (wide, anteriorly concave mid part) places *Melanopterus* close to *Amblychirus*.

The pronotal puncturation (coarse punctures at margins, fine puncturation of disc) distinguishes the genus from most other trigonopoid genera. The pronotal sculpture is similar in *Selinopodus* but the genus differs in the pronotal shape and the form of the mentum.

**Description.** Medium and large species (11.0–21.0 mm). Body colour from dark brown to black; upperside mat (sometimes intervals worn and shiny); underside shiny. Puncturation on pronotum evanescent; on femora and tibia coarser and at base finer. Body oval, rather strongly convex. Mid part of mentum widened anterad; median keel does not reach anterior margin, which is shallowly incised in middle; lateral margins (wings) very narrow. Eyes narrowed laterally, 1–5 facets between gena and temple.



Figures 20–30. *Melanopterus* spp. 20, 23–24. *M. porcus*, 21–22, 25–30. *M. porcatus*. (20–21) mentum, (22–23) pronotum, (24–25) anterior part of elytron, (26) ventral and (27) dorsal view of male fore tibia, (28) ventral and (29) dorsal view of male mid tibia, (30) male hind tibia.

Antenna structure as in *Trigonopus*. Frontoclypeal suture extremely weak, almost invisible. Pronotum with sides poorly rounded to almost parallel on basal half; base nearly straight; lateral border of even width; disc distinctly and evenly convex, at posterior angles sides slightly, longitudinally concave; anterior angles rounded, posterior angles almost forming right-angle or somewhat obtuse; border of anterior and basal pronotal margins entire. Scutellum located at level of humeral angles. Elytra with humeral angles obviously convex, slightly rounded, not produced outwards; lower edge of anterior elytral margin strongly convex, upper margin strongly convex in middle (forms a ridge, e. g. fig. 24), sometimes bordered; epipleura rounded in apical part, obvious from above. Prosternal process produced towards mesosternum, with border of process interrupted at apex. Last abdominal ventrite bordered. Tibiae on underside covered with spinules in both sexes. Male legs, fore tibia gradually widened to broad apex, and ventrally somewhat concave (Figs 26 and 27); mid tibia with two longitudinal ridges on outer margin (Figs 28 and 29); fore, and sometimes also mid tarsi widened (in female tarsi all narrow). General structure of aedeagus and female reproductive system as in remaining trigonopoid Platynotina.

**Distribution.** South Africa (southern part of Cape Province).

**KEY FOR SPECIES DETERMINATION**

- 1 Elytral striae not very deep, formed of clearly visible and fairly large punctures which deform edges of intervals (Figs 24–25, 31); outer margin of hind tibia smooth, obtuse ..... 2
- Elytral striae deep, sharply incised, very regular, punctures practically invisible (Fig. 41); intervals evenly convex, not deformed by row puncturation; outer margin of hind tibia with two longitudinal ridges ..... *amicus*
- 2 Anterior elytral margin bordered; elytra strongly convex, slightly tucked in posteriorly (part of interval IX visible from underside); size medium (11.0–13.5 mm); inner side of male femora glabrous, fore tarsi slightly widened (glabrous gutters on underside of segments 1 and 4) ..... 3
- Anterior elytral margin without border; elytra weakly convex, not tucked in posteriorly; size large (14.5–21.0 mm); inner side of male femora densely pubescent, fore tarsi very wide (without glabrous gutters on underside) ..... 4
- 3 Elytral intervals 1, 3, 5, 7 and 9 more strongly convex than others, forming shiny longitudinal ribs; intervals 2, 4, 6 and 8 narrower than striae; strial punctures very large, deep, and of irregular angular shape (subfoveate) (Fig. 25) ..... *porcatus*
- All elytral intervals equally convex, much wider than striae; strial punctures regular, round (Fig. 24) ..... *porcus*

- 4 Inner side of male fore tibia with longitudinal, shallow concavity reaching from apex to middle of tibia and slightly widened at apical 1/3 (Figs 33 and 34) ..... *varus*
- Inner side of male fore tibia with short, deep concavity reaching from apex to apical 1/3 and with a rectangular denticle at apical 1/3 (Figs 48 and 49) ..... *inga*

***Melanopterus porcatus* Mulsant et Rey**  
(Figs 21–22, 25–30, 50)

*Melanopterus porcatus* Mulsant et Rey, 1854: 159. – Gemminger et Harold 1870: 1912; Gebien 1910: 273; 1938: 292; Koch 1956: 89.

**Terra typica.** l’Afrique.

**Diagnosis.** The form of the border of the anterior pronotal margin and the structure of the legs and the mentum place *porcatus* close to *porcus*, from which it differs in the sculpture of the elytra.

**Description.** Body length 11.5–13.5 mm, pl/pb = 0.68–0.70, el/eb = 1.22–1.33, el/pl = 1.89–2.12, eb/pb = 1.04–1.09. Body dorsal side mat, with greasy sheen, intervals shiny; head sparsely and finely punctate, pronotal disc and elytral intervals smooth, impunctate. Body underside slightly shiny, puncturation of abdominal ventrites distinct, at margins longitudinal, fine rugosity except on last two ventrites which are smooth. Head widest at eye level. Mid part of the mentum rather wide (Fig. 21). Eyes narrowed laterally, 3–5 facets between gena and temple. Antennal segment 3 ca. 1.8 × as long as segment 2. Frontoclypeal suture inconspicuous except in side view. Sides of pronotum slightly rounded on basal half; base straight; lateral border not very wide (ca. 0.6 × width of antennal segment 3); pronotum evenly convex, lateral margins bordered by a shallow concavity (Fig. 22). Elytra strongly convex, slightly tucked in posteriorly (part of interval IX visible from underside); upper edge of anterior elytral margin arcuately convex, its border extending from humeral angle to interval IV (Fig. 25); intervals 1, 3, 5, 7 and 9 more strongly convex, forming shiny, longitudinal ribs; strial punctures very large, deep, of irregular angular shape (subfoveate); intervals 2, 4, 6 and 8 narrower than striae. Male legs, femora and tibia with inner side glabrous; fore tarsi slightly widened with glabrous gutters on underside of segments 1 and 4; mid and hind tarsi narrow; fore tibia straight on inside; hind tibia with outer margin smooth, obtuse (Fig. 30). Aedeagus: lap/lbp/tll/ll = 1.0/2.3/0.7/0.6; ovipositor: lp/lc1 = 2.9, bc1/lc1 = 1.9, c1/c2/c3/c4/c4–c3 = 1.0/0.7/1.1/1.3/0.2.

**Types.** Lectotype (male), MNHN: “Afrique Delalande; *Melanopterus porcatus*; Museum Paris, Afrique Australe, Delalande”. Paralectotype: *Melanop. porcatus*; *Melanopterus porcatus* Mulst., Cap. bon. sp., Museum Paris, 1906 Coll. Léon Fairmaire, (MNHN) 1 f (present designation).

**Material examined.** Caffraria; coll. R. Oberthür ex coll. Deyrolle; *Melanopterus porcatus* Muls., Caffraria; (MNHN) 1 m; *Melanopterus porcatus*, Cap. B. E.; Museum Paris, 1935 Coll. M. Sedillot, (MNHN) 1 f; *Melanopterus por-*

catus Muls., Caffraria, (MNHN) 1 f; Caffraria; coll. R. Oberthür ex coll. Deyrolle; *Melanopterus porcatus* Muls., Caffraria, (MNHN) 3 m, 1 f; Caffraria; coll. R. Oberthür ex Musaeo E. Allard 1890, (MNHN) 2 m; *Melanopterus porcatus*, Cap. Ju 66; Caffrerie; Museum Paris, Coll. De Marseul 1890, (MNHN) 1 m, 2 f; Cap.; *porcatus* Mulsant. Rey, (MNHN) 1 f; Algoa-Bay, Capland, Dr. H. Brauns, (NHMB) 2 m, 2 f; Port Eliz., 2.1896 Cruger; Museum Paris, (MNHN) 1 m; Cap.; Muséum Paris, Coll. R. Oberthür, (MNHN) 1 m; Capland; *exaratus* Muls. R., det. dr. Kaszab, (HNHM) 1 f; Afrique Delalande; *Trigonopus clathratus* Sol.; 947; Museum Paris, Afrique Australe, Delalande, (MNHN) 1 m; Museum Paris, 1906 Coll. Léon Fairmaire, (MNHN) 1 m.

**Distribution.** South Africa (Cape Province: Port Elizabeth) (Fig. 50).

*Melanopterus porcus* (Mulsant et Rey)

(Figs 20, 23–24)

*Trigonopus porcus* Mulsant et Rey, 1853: 36. – Gemminger et Harold 1870: 1911; Gebien 1910: 272; 1938: 292.

*Melanopterus porcus* (Mulsant et Rey): Koch 1956: 89.

*Trigonopus exaratus* Mulsant et Rey, 1853: 34. – Gemminger et Harold 1870: 1911; Gebien 1910: 272; 1938: 292. **syn. nov.**

*Melanopterus exaratus* (Mulsant et Rey): Koch 1956: 89.

*Trigonopus Wahlbergii* Fähræus, 1870: 283 **syn. by** Koch 1956: 89 [= *Trigonopus exaratus* Mulsant et Rey, 1853]. – Gebien 1910: 272; 1938: 292.

**Terra typica.** Le cap de Bonne-Espérance [South Africa, Cape Province].

**Diagnosis.** See diagnosis of *porcatus*.

**Description.** Body length 11.0–13.5 mm, pl/pb = 0.64–0.68, el/eb = 1.20–1.29, el/pl = 1.88–2.08, eb/pb = 1.01–1.07. Body upperside mat, with greasy sheen, intervals shiny; head sparsely and finely punctate, elytral intervals smooth, impunctate. Body underside slightly shiny, puncturation of abdominal ventrites distinct, at margins longitudinal, fine rugosity except on last two ventrites which are smooth. Head widest anterior to eyes. Mid part of the mentum rather wide (Fig. 20). Eyes narrowed laterally, 3–4 facets between gena and temple. Antennal segment 3 ca. 2.2 × as long as segment 2. Frontoclypeal suture inconspicuous except in side view. Pronotal shape variable, sides on basal half passing fluently from almost parallel to rounded; pronotum evenly convex; lateral border rather wide (nearly as wide as antennal segment 3); a wide concavity present along border (Fig. 23). Elytra strongly convex, slightly tucked in posteriorly (part of interval IX visible from underside); upper edge of anterior elytral margin arcuately convex, its border extending from humeral angle to interval IV; intervals 1, 3, 5, 7 and 9 slightly wider than others; all equally, moderately convex, much wider than striae; striae punctures moderately large, round. Male femora and tibia with inner side glabrous; fore tarsi slightly widened with glabrous gutters on underside of segments 1 and 4; mid and hind tarsi narrow; inner side of fore tibia straight; outer margin of hind tibia smooth,

obtuse. Aedeagus: lap/lbp/tll/l = 1.0/2.3/0.6/0.5; ovipositor: lp/lc1 = 3.2, bc1/lc1 = 2.2, c1/c2/c3/c4/c4–c3 = 1.0/0.7/1.2/1.5/0.3.

**Synonymy.** Koch (1956) mentioned the shape of the pronotal sides as the character distinguishing *porcus* from *exaratus*: parallel in *porcus*, rounded in *exaratus*. Since this is an extremely variable character and I have found is no other which could indicate a natural discontinuity between the studied populations, I think it proper to regard them as conspecific, the names *exaratus* and *porcus* being synonyms.

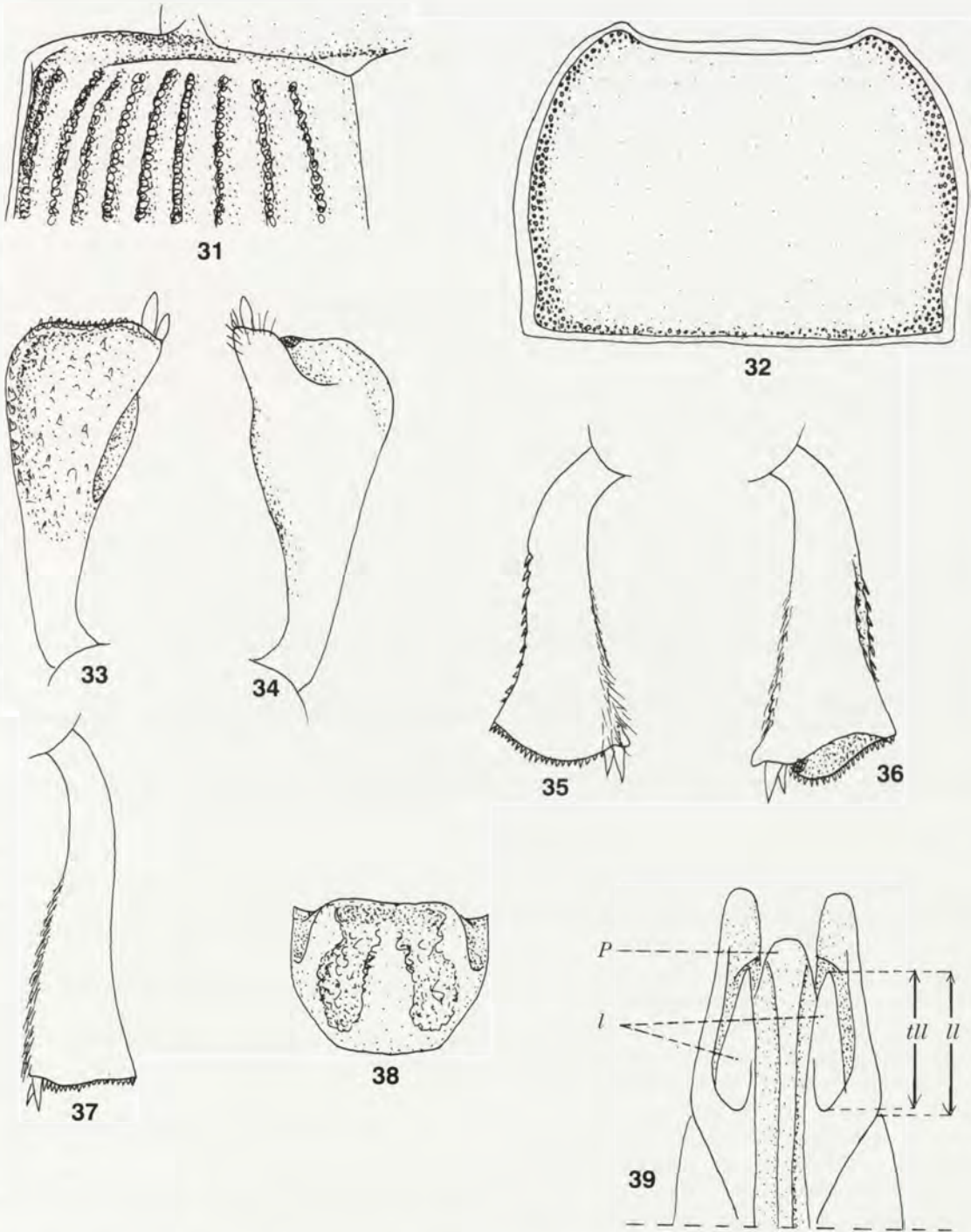
**Types.** *Trigonopus porcus* Mulsant et Rey, 1853. Lectotype (male), MNHN: “*Trigonopus porcus*; 478; *Trigonopus porcus* Mahtop p. 120, J. D. Drige, type, Cz b. Spei; Museum Paris, 1906 Coll. Léon Fairmaire”. Paralectotypes: Dumbrody (Cap De Esp.); *Trigonopus porcus* Muls.; Museum Paris 1906 Coll. Léon Fairmaire, (MNHN) 1 f; *Trigonopus porcus* Muls. Cap. 66; Caffrerie, Castelnau; *Trigonopus porcus* Muls. C. B. Esp.; Museum Paris Coll. De Marseul 1890, (MNHN) 1 f; Cap.b.sp.; *Trigonopus porcus* Muls. C. B. Esp.; coll. R. Oberthür ex coll. Deyrolle, (MNHN) 2 f (present designation).

*Trigonopus exaratus* Mulsant et Rey, 1853. Lectotype (male), MNHN: “*exaratus* Type Mulsant.; *Trigonopus exaratus* cap. B. Sp.; *Eurynotus Exaratus* Dej., Cap. B. sp.; Museum Paris, Coll. De Marseul 1890; *Trigonopus exaratus*”. Paralectotypes: *Trigonopus exaratus*; *Trigonopus exaratus* Mtop 4,118,6, Czp. b. Sp. D., (MNHN) 1 f; *Trigonopus exaratus* Muls., C. B. Esp.; C. B. Esp., coll. R. Oberthür ex coll. Deyrolle, (MNHN) 1 m, 1 f (present designation).

*Trigonopus wahlbergi* Fähræus, 1870. Holotype (male), ZMS: “Afr. mer.; Typus; *Trigonopus wahlbergi* Fahr.; Naturhistoriska Riksmuseet Stockholm Loan no 1239/95” (examined).

**Material examined.** Mars 1895, Baltrasna-Highi ds Grahamstown, Afrique du Sud; Museum Paris, Coll. P. Ardoin 1978, (MNHN) 1 m, 3 f; *Trigonopus marginicollis* Dej. Cap.b.sp.; *Eurynotus marginicollis* Dej. C.M.S.; Museum Paris, Coll. De Marseul 1890, (MNHN) 1 f; Caffrerie; coll. R. Oberthür ex coll. Deyrolle, (MNHN) 1 m; Afrique Delalande; *Trigonopus lathæus*; Museum Paris, Afrique Australe Delalande, (MNHN) 1 m; Cap de B. Esp.; Museum Paris 1906 Coll. Léon Fairmaire, (MNHN) 1 f; Cap.; 255; Mus. zool. Polonicum Warszawa 12/45; *Trigonopus spec. dub.* (MIZPAN) 1 m; Erin, (MHNG) 1 f; Cap.; *Trigonopus striatus* Quens. H. Gebien det. 1939.; Mus. Zool. Polonicum Warszawa 12/45, (MIZPAN) 1 f; Cap. B. Spei.; Drege; *Trigonopus exaratus* Muls.; Naturhistoriska Riksmuseet Stockholm Loan no 1221/95, (ZMS) 1 f; Capland; *funbris* Muls. R. det.dr. Kaszab., (HNHM) 1 f; Sheldon-Grahamstown Eastern Cape Province Sud-Afr. Zumpt 8.I..50.; *Crypticanus edwardsi* Muls. Dr. Z. Kaszab det., (HNHM) 1 m; *Trigonopus cribratus* Chw.-Zanisbar; Museum Paris 1906 Coll. Léon Fairmaire, (MNHN) 1 m; S. Afr., Cape Prov., Uitenhage 26–28.03.93. **fc.** Arndt; *Melanopterus porcus* (Muls. & Rey), (JFC) 1 m, 1 f; cap.;





Figures 31–39. *Melanopterus varus*. (31) apical part of elytron, (32) pronotum, (33) ventral and (34) dorsal view of male fore tibia, (35) ventral and (36) dorsal view of male mid tibia, (37) male hind tibia, (38) mentum, (39) apical part of aedeagus (p – penis, l – lacinia, ll – length of lacinia, tll – total length of lacinia).

Museum Paris 1906 Coll. Léon Fairmaire, (MNHN) 1 m; S.Afr. Cap; *Trigonopus Walhbergi* Fahr., det. dr. Kaszab, (HNHM) 1 f; S.Afr.; Museum Paris, (MNHN) 1 m; S. Afr., Cape Prov., Zuurberg Pass 15 miles N. Addo 16.I.51. No.143; Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck; *Under-stones*; *Melanopterus exaratus* (Muls.

Rey) C. Koch det., (MZLU) 1 f; S. Afr. Cape Prov. Kabeljoustrivier 10 miles E Humansdorp 15.I.51. No.140; Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck; *exaratus*, (MZLU) 1 m; S. Afr., Cape Prov., 15 miles S Middleton 16.I.51. No. 144; Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck, (MZLU) 1 m,

*Trigonopus typhon*, Museum Paris 1930 coll. Sicard, (MNHN) 1 m; *Trigonopus porcus* Muls., Museum Paris coll. De Marseul 1890, (MNHN) 2 m, 1 f; *Trigonopus porcus*, Cap. B. E., Caffrerie, Museum Paris 1935 coll. M. Sédillot, (MNHN) 1 m.

**Distribution.** South Africa (Cape Province: Humansdorp, Uitenhage) (Fig. 50).

*Melanopterus varus* Koch  
(Figs 31–39, 50)

*Melanopterus varus* Koch, 1956: 449.

**Locus typicus.** Dunbrody (South Africa, Cape Province).

**Diagnosis.** *M. varus* is close to *M. inga* in body size and shape, elytral sculpture, leg pubescence, structure of male mid and hind tibia. The two species differ in the structure of male fore tibia.

**Description.** Body length 17.0–21.0 mm, pl/pb = 0.65–0.69, el/eb = 1.28–1.39, el/pl = 2.00–2.19, eb/pb = 1.01–1.10. Body upperside shiny; head rather densely, pronotum and intervals sparsely punctate, punctures very small and shallow. Body with underside strongly shiny, puncturation of prosternum strong and laterally rugose; puncturation of two last abdominal ventrites very sparse and fine. Head widest anterior to eyes, genal canthus wider than eyes. Mid part of mentum wide, anterior part not elongate (Fig. 38). Eyes narrowed laterally, 2–3 facets between gena and temple. Antennal segment 3 ca. 2.5 × as long as segment 2. Frontoclypeal suture inconspicuous except in side view. Pronotum evenly convex; sides slightly rounded (nearly parallel) sometimes with shallow incision anterior to posterior angles (Fig. 32); lateral border fairly wide (ca. 0.7 × width of antennal segment 3); wide concavity present along border, with large, blurred punctures at bottom. Elytra with disc flattened, moderately convex posteriorly, upper margin of epipleurae visible from above (not tucked in); upper edge of anterior elytral margin strongly convex, with a distinct ridge in its mid part (Fig. 31); intervals equally and rather strongly convex; striae sharply incised, regular; strial punctures round, often fused especially on disc, not deforming lateral edges on intervals. Male legs, inner side of femora densely covered with short setae; inner side of mid and hind tibia with row of setae; fore tibia slightly widened, on inner side a longitudinal, shallow concavity reaching from apex to middle (Figs 33 and 34); mid tibia provided with an apical denticle (Figs 35 and 36); outer margin of hind tibia without ridges, obtuse (Fig. 37); fore tarsi strongly widened (on underside short, dense hairs, without glabrous gutters), mid tarsi slightly widened, median glabrous gutters beneath each segment. Aedeagus as in fig. 39, parameres relatively short, distance between parameres at apex ca. 1.5 × larger than width of paramere, lap/lbp/tll/l = 1.0/1.9/0.7/0.7; ovipositor: lp/lc1 = 5.0, bc1/lc1 = 3.5, c1/c2/c3/c4/c4-c3 = 1.0/1.7/2.0/2.2/0.2.

**Material examined.** Caffrerie; *Trigonopus* Cap 66; Museum Paris Coll. De Marseul 1890, (MNHN) 1 m; Caffrerie; coll. R. Oberthür ex coll. Deyrolle, (MNHN) 3 m; 5316; Coll D. Ach 1.90, (MHNG) 1 m; 233; Cap; *Trigonopus tenebrosus* Mls. H. Gebien det. 1939.; Mus. Zool. Polonicum Warszawa 12/45, (MIZPAN) 1 m, 1 f; Caffrerie; Museum Paris 1906 Coll. Léon Fairmaire, (MNHN) 1 m; Dunbrody, O'Neill 97; Sam-Col-AO 11879, (SAM) 3 m, 1 f; Hottentottus Dej. Cap B. I Coll Gory (Solier), (MHNG) 1 f; Enon; 10; Sam-Col-AO 117882, (SAM) 1 m; Pt. Elizabeth, J. L. Drege 1899; Sam-Col-AO 11880, (SAM) 1 f; Cap de B Esp.; Museum Paris, 1906 Coll. Léon Fairmaire, (MNHN) 1 m; Grahamstown, A. Vogt; Coll. Mus. Tervuren; *Melanopterus varus* Koch, P. Ardoin Det. 1970, (MRAC) 2 m, 2 f; E. London; Sam-Col-AO 11881, (SAM) 2 f; Südafrika, East London, Jan. 1970; Museum Paris, Coll. P. Ardoin 1978, *Melanopterus porcus* Mulst. & R., P. Ardoin Det. 1970., (MNHN) 1 m, 1 f; South Africa, Delagoa Bay, Museum Paris ex. Coll. R. Oberthür, (MNHN) 1 m.

**Distribution.** South Africa (Cape Province: Port Elizabeth, East London, Albany, Uitenhage) (Fig. 50).

*Melanopterus inga* Koch  
(Figs 48–50, 120)

*Melanopterus inga* Koch, 1956: 447.

**Locus typicus.** East London (South Africa, Cape Province).

**Diagnosis.** See diagnosis of *varus*.

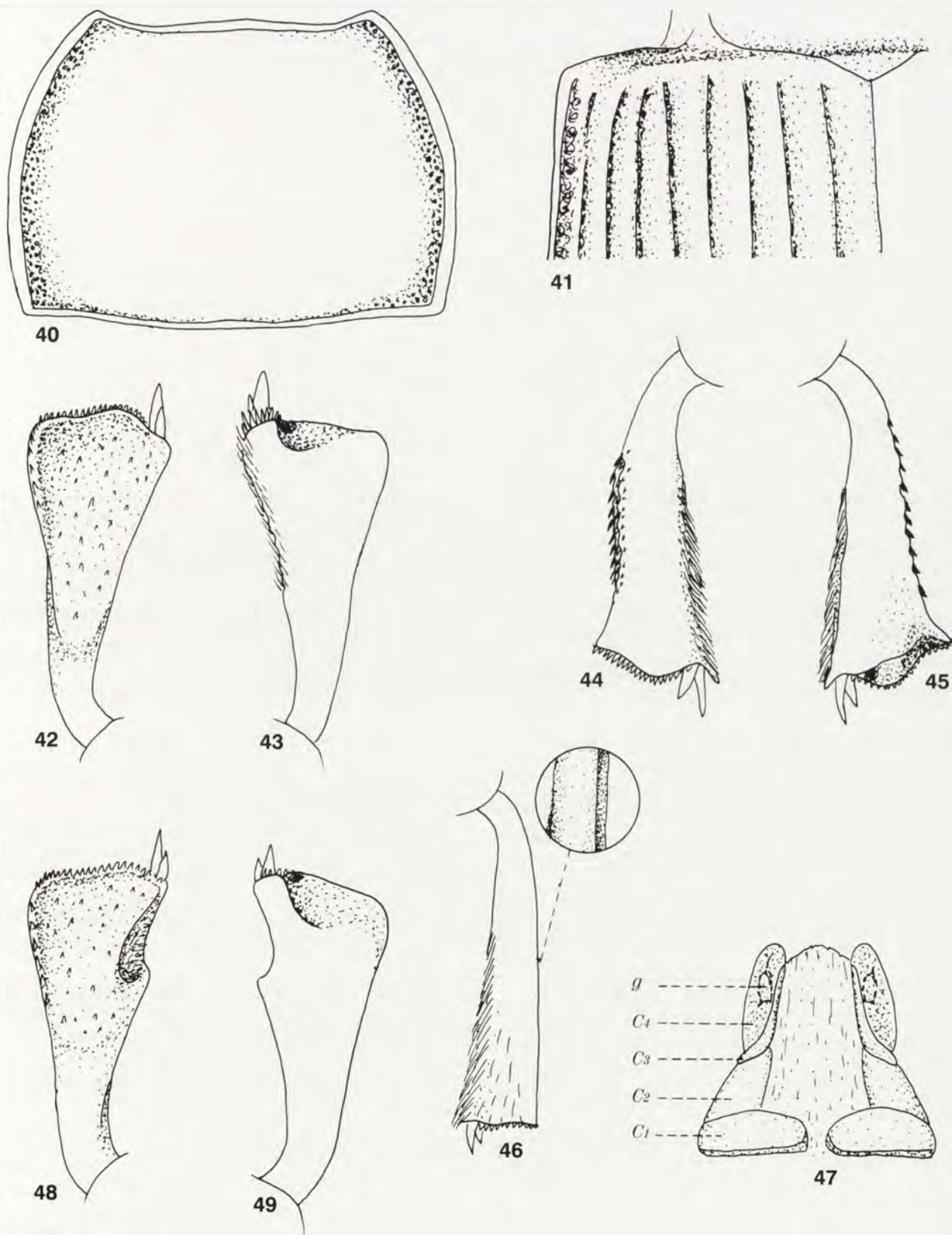
**Description.** Body length 14.5–18.0 mm (Fig. 120), pl/pb = 0.67–0.69, el/eb = 1.24–1.36, el/pl = 1.98–2.13, eb/pb = 1.03–1.09. Body shape and sculpture, structure of mentum and eye as in *varus*. Antennal segment 3 ca. 2.3 × as long as segment 2. Lateral border of pronotum rather wide (ca. 0.8 × width of antennal segment 3). Male legs, femora, mid and hind tibia, and tarsi as in *varus*; fore tibia with a short, deep concavity on inner side reaching from apex to basal 1/3 and a rectangular denticle on inner margin at apical 1/3 (Figs 48 and 49). Aedeagus as in *varus*, lap/lbp/tll/l = 1.0/2.2/0.6/0.6; ovipositor: lp/lc1 = 4.4, bc1/lc1 = 3.1, c1/c2/c3/c4/c4-c3 = 1.0/1.5/1.7/2.1/0.3.

**Material examined.** S. Africa, East London, Buffalo Pass, Jan. 25. 1976 R. E. Parrott, (CNCI) 18 m, 14 f; S. Africa, Gonubie, E. London, Jan. 17. 1976. R. E. Parrott, (CNCI) 2 m; Museum Paris, Colonie Du Cap, East London, R. Ellenberger 1923, (MNHN) 1 f; Museum Paris, Province Du Cap, East London, R. Ellenberger 1915; Mars, (MNHN) 1 m, 8 f; CAP, (MHNG) 3 m; CAP; Museum Paris 1906 Coll. Léon Fairmaire, (MNHN) 1 f.

**Distribution.** South Africa (Cape Province: East London) (Fig. 50).

*Melanopterus amicus* Koch  
(Figs 40–47, 50)

*Melanopterus amicus* Koch, 1956: 452.



Figures 40–49. *Melanopterus* spp. 40–47. *M. amicus*, 48–49. *M. inga*. (40) pronotum, (41) anterior part of elytron, (42, 48) ventral and (43, 49) dorsal view of male fore tibia, (44) ventral and (45) dorsal view of male mid tibia, (46) male hind tibia (inset. outer margin), (47) part of ovipositor (c1–c4 plates of coxites, g – gonostylus).

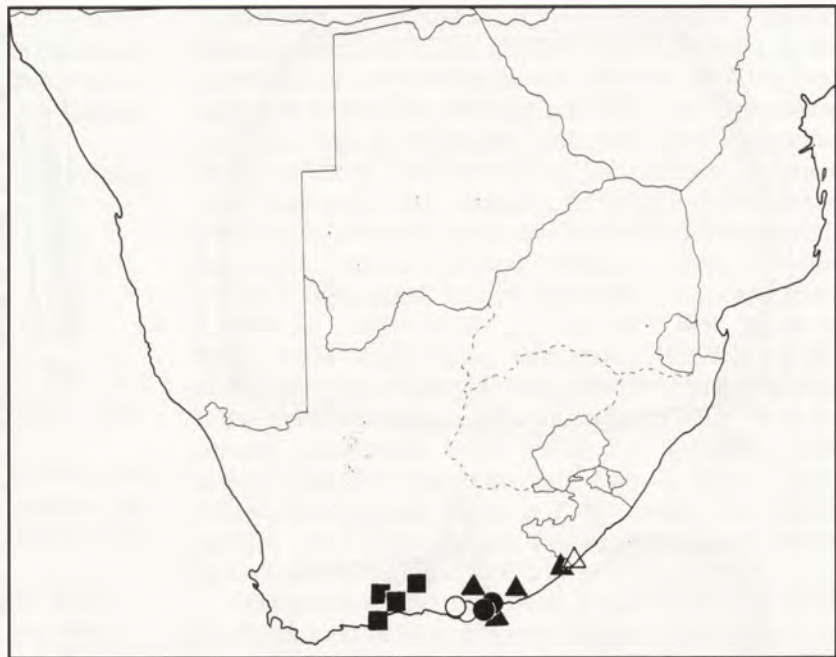
*Locus typicus*. George (South Africa, Cape Province).

**Diagnosis.** *M. amicus* is close to *porcus* and *porcatus* having similar male fore tarsi and tibiae, a smooth pronotal disc and elytral intervals. As in *varus* and *inga*, the anterior elytral margin in *amicus* is convex but not bordered. However, it differs from all its congeners in the structure of the elytral striae and intervals, the more elongate mid part of the mentum and the presence of two longitudinal ridges on the outer margin of the hind tibiae.

The species has characters of the genus *Melanopterus*: pronotal puncturation, lateral border of pronotum, strongly convex the anterior elytral margin, but at the same time the structure of the mentum and sculpture of elytra place it very close to *Crypticanus*. Distinct ridges on the outer margin of hind tibia are a character that does not occur in either the remaining members of *Melanopterus* or in *Crypticanus*.

**Description.** Body length 13.0–14.5 mm, pl/pb = 0.66–0.71, el/eb = 1.20–1.34, el/pl = 1.87–2.24, eb/pb = 1.05–1.10. Body, upperside mat, head, pronotal disc and intervals smooth, impunctate; underside slightly shiny, puncturation of three basal abdominal ventrites distinct and margins longitudinal rugose, puncturation of last two ventrites very sparse and fine. Head widest at eye level. Mid part of mentum wide, anterior part elongate. Eyes narrowed laterally, 1–2 facets between gena and temple. Antennal segment 3 ca. 2.3 × as long as segment 2. Frontoclypeal suture poorly marked, obvious only in side view. Pronotum evenly convex; sides slightly rounded, almost parallel; base straight, slightly arcuate (Fig. 40); lateral borders rather wide (nearly as wide as antennal segment 3), a wide concavity along border with large, blurred punctures at its base. Elytra strongly convex, slightly tucked in posteriorly (part of interval IX visible from underside); upper edge of anterior elytral margin strongly convex, with a slight ridge in its mid part (Fig. 41); intervals equally, rather strongly convex; striae punctures almost invisible, rows sharply incised, regular, not deforming lateral margins of intervals. Male legs, hind femora, mid and hind tibia with a row of setae (Figs 44–46); fore tarsi slightly widened (underside of segments 1 and 4 with glabrous gutters), mid and hind tarsi narrow; fore tibia with inner side straight (Figs 42 and 43); hind tibia with two longitudinal ridges on outer margin (Fig. 46, inset.). Aedeagus: lap/lbp/tll/l = 1.0/2.2/0.6/0.6; ovipositor: lp/lc1 = 4.1, bc1/lc1 = 2.7, c1/c2/c3/c4/c4–c3 = 1.0/1.6/1.9/2.2/0.3.

**Material examined.** S. Afr., Cape Prov., Outeniqua Berge, Robinson Pass, 7.I.51. No.125; Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck; *Melanopterus amicus* Koch C. Koch det., (MZLU) 2 m, 4 f; Cape Prov., Hartenbog, Dec. 1988 CR. Owen, (JFC) 1 m; George; Sam-



Figures 50. Distribution of *Melanopterus varus* (solid triangle), *M. inga* (open triangle), *M. porcatus* (solid circle), *M. porcus* (open circle) and *M. amicus* (solid square).

Col-AO 11839, (SAM) 1 m, 1 f; Cap. B. Spei.; Victorin; Naturhistoriska Riksmuseet Stockholm, Loan no 1232/95, (ZMS) 1 m.

**Distribution** South Africa (Cape Province: George, Mossel Bay, Willowmore) (Fig. 50).

### *Selinopodus* Koch, 1956

*Selinopodus* Koch, 1956: 79. Type species, by monotypy: *Selinopodus giganteus* Koch, 1956.

**Diagnosis.** The structure of the elytral epipleura (strongly convex in apical part) and the strongly bisinuate emarginate base of pronotum place the genus close to *Trigonopus*, while the structure of the male fore tibia widened to a broad apex and with an oval concavity in the inner apical part show affinity with *Amblychirus*, *Melanopterus* and *Trigonopus*.

*Selinopodus* differs from all the other related genera in the presence of interval X in posterior part of elytra.

**Description.** See description of *giganteus*.

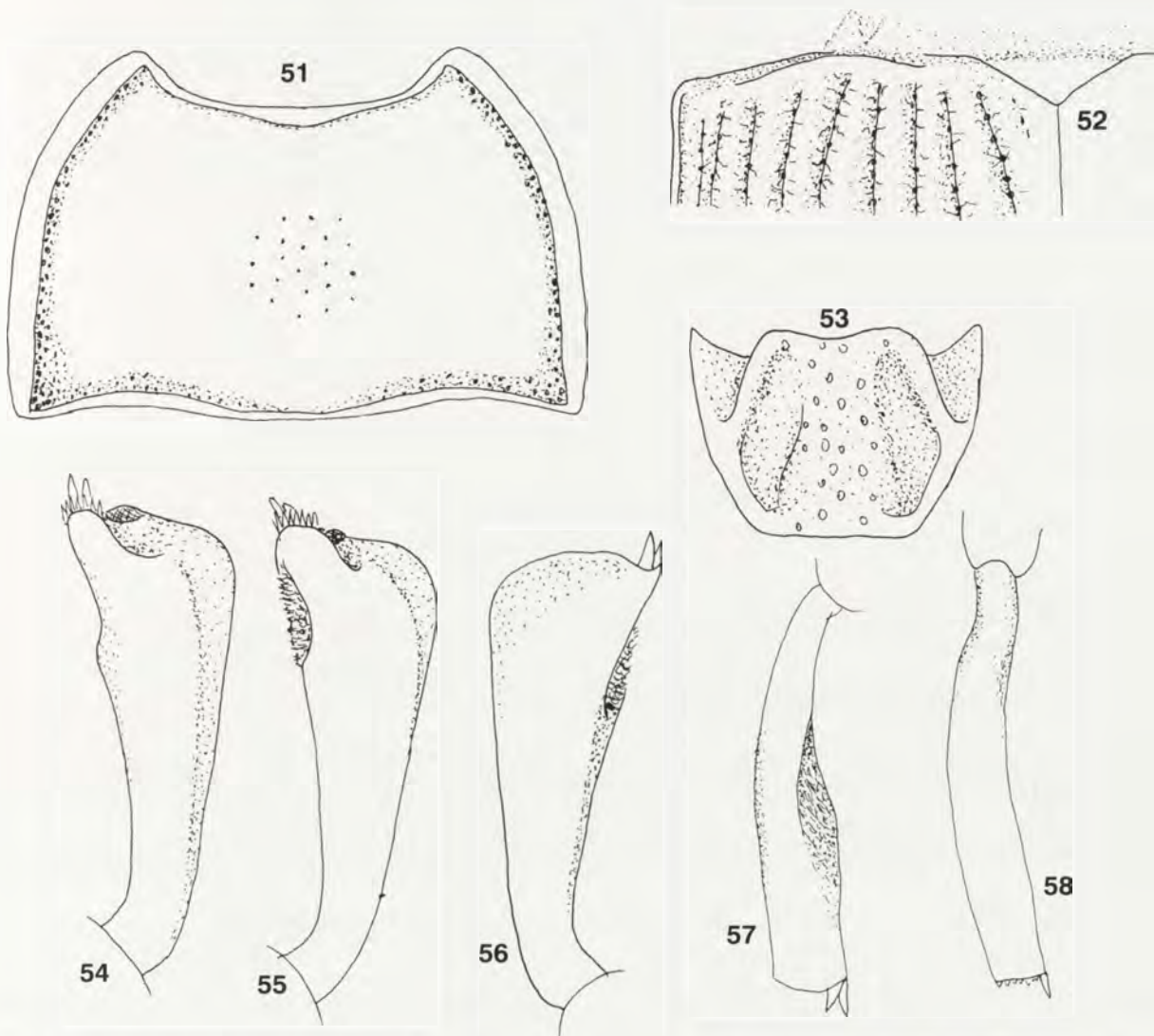
### *Selinopodus giganteus* Koch (Figs 51–56, 119)

*Selinopodus giganteus* Koch, 1956: 416.

**Terra typica.** Zululand (South Africa, Natal).

**Diagnosis.** See diagnosis of *Selinopodus*.

**Description.** The largest species of the trigonopoid Platynotina, body length 17.0–23.0 mm, pl/pb = 0.57 (pronotum relatively wide), el/eb = 1.13, el/pl = 2.06, eb/pb = 1.03. Body colour from dark brown to black. Upperside of body

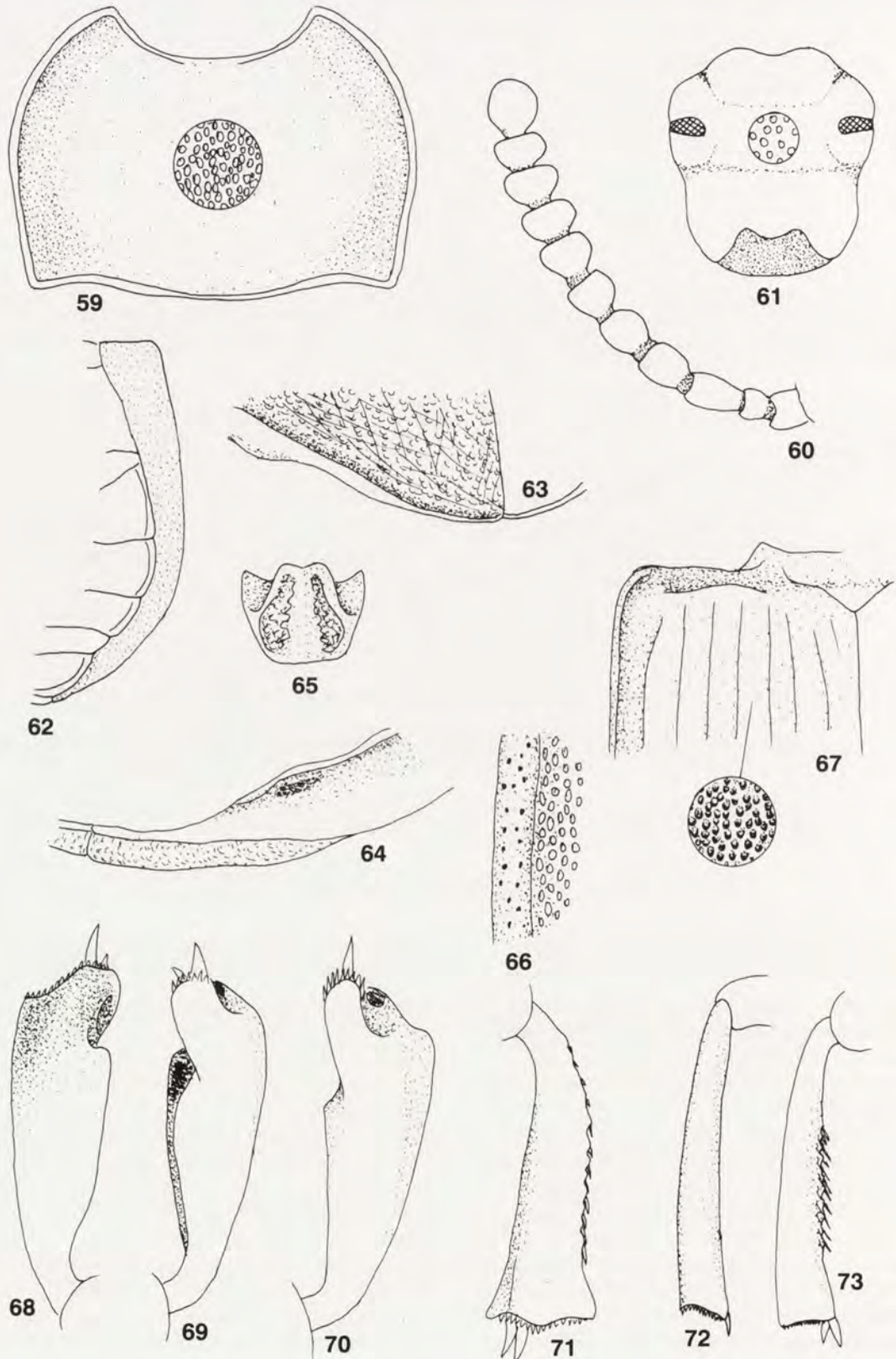


Figures 51–58. 51–56. *Selinopodus giganteus*, 57–58. *Trigonopus flexipes*. (51) pronotum, (52) anterior part of elytron, (53) mentum, (54) dorsal, (55) latero-dorsal and (56) ventral view of male fore tibia, (57) ventral and (58) dorsal view of male hind tibia.

mat, delicately and sparsely punctate; underside slightly shiny, puncturation of abdominal ventrites distinct, at margins finely rugose. Body oval, only slightly convex, elytra not tucked in posteriorly. Head widest anterior to eyes. Mid part of mentum rather wide, but slightly narrowed anterad, margin connecting it with anterior margin of lateral wings hidden (Fig. 53). Eyes narrowed laterally, 3 facets between gena and temple. Structure of antenna as in *Trigonopus*, antennal segment 3 ca.  $1.7 \times$  as long as segment 2. Frontoclypeal suture inconspicuous, more obvious laterally. Pronotum with basal half of sides nearly parallel; base bisinuate emarginate; anterior and basal borders entire; lateral border of even width, strongly convex and rather wide (ca.  $1.1 \times$  width of antennal segment 3); sides between disc and lateral margin widely, longitudinally concave with puncturation denser and more obvious there and at base (Fig. 51). Scutellum located at level of humeral angles. Elytra with humeral angles convex, slightly rounded, not produced out-

wards; lower edge of anterior margin visible, upper edge strongly convex and slightly produced anteriorly (forming curved ridge) (Fig. 52); striae sharply incised, punctate-sulcate, punctures very fine; intervals strongly convex, smooth, impunctate, interval X present; epipleura strongly convex in apical part. Prosternal process produced towards mesosternum, with interrupted border at apex. Last abdominal ventrite bordered. Legs, tibia of both sexes with underside densely covered with spinules. Male legs, male fore tibia gradually widened apically, concavity on inner side of apical part, bottom of concavity densely pubescent (Figs 54–56); mid tibia with two longitudinal ridges on outer margin, hind tibia with slightly marked ridges on outer side; mid and hind tibia straight; fore and mid tarsi strongly widened. General structure of aedeagus as in other trigonopoid Platynotina,  $lap/lbp/tll/l = 1.0/2.7/0.2/0.6$ , parameres close together.

**Material examined:** Mozambique, Maputo, 1951 Travassos oias; Museum Paris, (MNHN) 1 m; Namaacha



Figures 59–73. *Trigonopus capicola*. (59) pronotum, (60) antenna, (61) head, (62) elytral epipleuron, (63) apical part of elytron, (64) apical part of elytral epipleuron, (65) mentum, (66) part of lateral border of pronotum, (67) anterior part of elytron, (68) ventral, (69) latero-dorsal and (70) dorsal view of male fore tibia, (71) ventral view of male mid tibia, (72) dorsal and (73) ventral view of male hind tibia.

Mata, 17/11/963, M. C. Ferreira, G. V. Ferreira, (TM) 1 m; S. Afr. Natal, Umbombo Mt., I. 1976, leg. P. E. Reavel, (TM) 1 m, 1 f; S. Afr. Natal, Mkuze, 17.VII.1976, leg. P. E. Reavel, (TM) 1 f; RSA, Natal, False Bay, 18.9.81, S. Jackson, (TM) 1 f.

**Distribution.** South Africa (Natal: Mkuzi, Ngxwala, Ingwavuma, Hluhluwe, Umfolosi, Pongola River), Mozambique (Maputo, Magude) (Fig. 119).

### *Trigonopus* Mulsant et Rey

*Trigonopus* Mulsant et Rey, 1853: 21. – Lacordaire 1859: 234; Gemminger et Harold 1870: 1911; Gebien 1910: 271; 1938: 291; Koch 1956: 80. Type species, designated by Koch 1956: 80: *Trigonopus capicola* Mulsant et Rey, 1853.

**Diagnosis.** Like *Selinopodus*, it has elytral epipleura strongly convex in their apical part and the pronotal base very distinctly bisinuate emarginate. *Trigonopus* differs from *Selinopodus* in the coarse pronotal puncturation and the number of elytral rows (9 in *Trigonopus*, 10 in *Selinopodus*). Like the genera *Amblychirus*, *Melanopterus* and *Selinopodus*, it has broad male fore tibia which have an apical concavity on the inner side.

Among all the genera, *Trigonopus* is distinct in having flat tubercles on the elytra and epipleura.

**Description.** Size medium and large (9.0–22.0 mm). Body colour from dark brown to black; most often dust from the substratum stains the outer waxy cover, hence various shades of brown and grey, and also brick red. Elytral intervals and epipleura covered with flattened tubercles (Fig. 67); head, pronotum and femora coarsely and densely punctate; body underside also densely punctate and rugose, last two abdominal ventrites poorer punctured. Body oval, upperside somewhat flattened, elytra not tucked in posteriorly (Fig. 74). Head widest anterior to eyes. Mid part of the mentum narrowed anterad (Fig. 65). Eyes narrowed laterally, 1–3 facets between gena and temple. Antenna as in fig. 60, segment 3 ca. 3 × as long as segment 2. Frontoclypeal suture almost invisible. Pronotum with sides rounded (Fig. 59); base strongly bisinuate emarginate; anterior border interrupted in middle; lateral border of even width, rather narrow (0.6–0.7 × width of antennal segment 3) (Fig. 66); sides between disc and lateral margin widely, longitudinally concave. Scutellum located at level of humeral angles. Elytra with humeral angles convex, slightly rounded, not produced outwards; lower edge of anterior margin strongly convex, upper edge sharply convex and produced anteriorly in middle (forms curved ridge) (Fig. 67); striae blurred, puncturation practically invisible; epipleura strongly convex in apical part, in most species tucked in posteriorly (Fig. 64). Prosternal process produced towards mesosternum, with interrupted border at apex. Last abdominal ventrite bordered. Legs, in both sexes tibiae thickly covered with spinules; fore tibiae widened apically. Male legs, fore tibia with a concavity on inner side; mid tibia with two longitudinal ridges on outer margin and apical denticle on inner side (Fig. 71); hind tibia with slightly marked ridges on outer margin (Figs 72

and 73). General structure of aedeagus and female reproductive system as in other trigonopoid Platynotina.

Differences between species are found mainly in the structure of male legs (fore tarsi, fore and hind tibia), the shape and sculpture of the pronotum and structure of the elytral intervals.

**Distribution** South Africa (SE part of Cape Province, Natal), Lesotho.

### KEY FOR SPECIES DETERMINATION

- 1 Elytral intervals 1, 3, 5 and 7 clearly convex, forming longitudinal, smooth, shiny, irregular ribs, all tubercles covering their surface fused (Figs 106 and 107) ..... *danielssoni* sp. nov.
- Elytral intervals 1, 3, 5 and 7 only slightly rounded, generally only in posterior part of elytra, always covered with distinct tubercles, which sometimes fuse in groups ..... 2
- 2 Male fore tarsi very wide, segment 3 more than twice as wide as 4 (Figs 96 and 97) ..... 3
- Male fore tarsi narrow, segment 3 ca. 1.5 × as wide as 4 (Figs 116 and 117) ..... 6
- 3 Inner margin of male fore tibia simple (not forming denticle), reaching almost apex (Figs 82 and 93) ..... 4
- Inner margin of male fore tibia forms a denticle within apical half (Figs 68 and 79) and ends it apical 1/3 ... 5
- 4 Male hind tibia bent (Figs 57 and 58); fore tibia as in figs 93–95; pronotum puncturation regular ..... *flexipes*
- Male hind tibia straight (Figs 85 and 86); fore tibia as in figs 82–84; pronotum with puncturation on disc irregular, sometimes punctures fuse to form two symmetrical smooth patches ..... *similis* sp. nov.
- 5 Pronotal puncturation regular (Fig. 59); male fore tibia as in figs 68–70 ..... *capicola*
- Pronotal puncturation irregular, punctures fusing with each other; on disc two symmetrical, smooth, irregular patches (Fig. 78); male fore tibia as in figs 79–81 ..... *sigillatus* sp. nov.
- 6 Inner margin of male fore tibia with deep, transverse pit and denticle (Figs 102–104); pronotum regularly punctate ..... *cochraneae* sp. nov.
- Inner margin of male fore tibia with a longitudinal, shallow concavity, without denticle (Figs 113–115); pronotal punctures irregular, enlarged ..... *signus* sp. nov.

### *Trigonopus capicola* Mulsant et Rey

(Figs 59–77, 118)

*Trigonopus capicola* Mulsant et Rey, 1853: 24. – Gemminger et Harold 1870: 1911; Gebien 1910: 272; 1938: 291; Koch, 1956: 80.

**Terra typica.** Le cap de Bonne-Espérance [South Africa, Cape Province].

**Diagnosis.** *T. capicola* is close to *flexipes* (pronotal shape and puncturation – medium-sized punctures of regular shape), and, like *flexipes*, *sigillatus* and *similis*, has

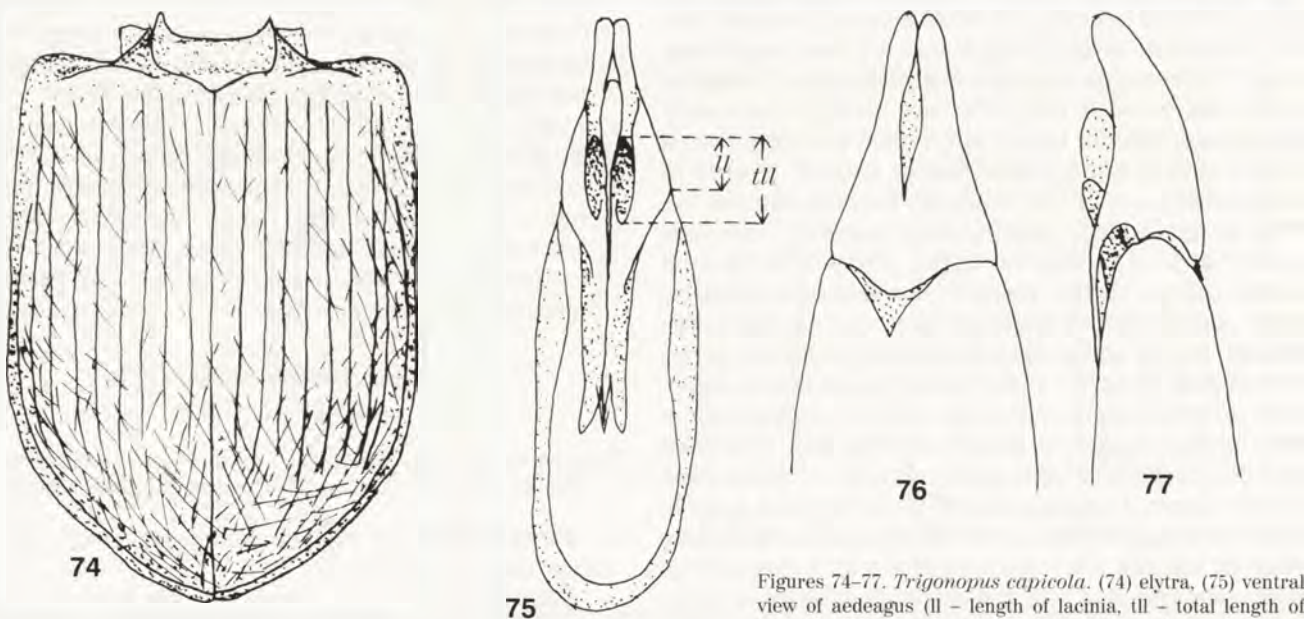
strongly widened male tarsi. The structure of fore tibia in this species differs little from that *sigillatus* but the two species differ in their pronotal sculpture.

*T. capicola* is easily distinguished from *flexipes* and *similis* by the structure of male fore and hind tibia, and from its remaining congeners by the structure of male tarsi and tibiae, and sculpture of pronotum. Also, the structure of elytral intervals separates this species from *danielssoni* (see above key).

**Description.** Body length 16.0–21.0 mm, pl/pb = 0.58–0.63, el/eb = 1.18–1.33, el/pl = 2.06–2.30, eb/pb = 1.01–1.08. Head and pronotum very densely but evenly punctate, punctures not very large, regular (Fig. 61). Anterior pronotal angles produced anterad; sides rounded, sometimes slightly sinuately emarginate just anterior to posterior angles; sides between disc and lateral margin slightly concave (Fig. 59). Elytral intervals 1, 3, 5 and 7 wider than remaining ones; all intervals slightly and evenly convex, always covered with distinct tubercles, which sometimes fuse in groups. Male fore tibia widened to apex; inner side with apical concavity which is pubescent at bottom; inner margin at forms right angle at level of concavity and disappears at ca. 1/5 length before apex (Figs 68–70); hind tibia on inside slightly flattened and bent and with a marginal row of fine setae along medial region of inner margin (Figs 72 and 73); fore tarsi strongly widened without glabrous medial gutters ventrally. Aedeagus as in figs 75–77, lap/lbp/ll = 1.0/2.6/0.3, ovipositor as in *similis*.

**Types.** Lectotype (female), MNHN: "144, *Trigonopus capicola*, Museum Paris 1906 Coll. L.on Fairmaire; *Trigonopus capicola*, type, Cap.b.Sp.". Paralectotype: Museum Paris, Cap De Bonne Espérance, Verreaux 1835, (MNHN) 1 f (present designation).

**Material examined.** Mars 1875, Baltrasna-Highi ds Grahamstown Afrique du Sud, Museum Paris Coll. P. Ardoin 1978, (MNHN) 2 f; Dunbrody E. Cape Prov. J. O'Neil, coll. N.H.M. Bulawayo, (NHMB) 2 f; Caffraria, J. Wahlb. f., *Trigonopus vietus* Per., Naturhistoriska Riksmuseet, Stockholm Loan no 1240/95, (ZMS) 1 f; 20.I.1970 Knysna Cape Prov. Afrique du Sud, Muséum Paris, (MNHN) 1 f; Cap. b. sp.; Muséum Paris, (MNHN) 1 f; K.W.T., 25, L. Péringuey, Museum Paris, King Will Town, Collection Léon, Fairmaire 1906, *Trigonopus dermatodes* Frm. n.sp., (MNHN) 1 m; *Trigonopus granulatus* Sol., Cap. B. sp., Museum Paris Coll. De Marseul 1890, (MNHN) 1 m; Port Elizabeth Dr. Martin, Sig. R. Oberthür (Coll. C. Martin) Eing. Nr.4,1956, (ZMS) 1 m; Sheldon-Grahamstown Eastern Cape Province Sud Afr. Zumpt. 8.I.50, *Trigonopus flexipes* Kv. Dr. Z. Kaszab det., (HNHM) 1 m; Museum Paris 1906 Coll. L.on Fairmaire, (MNHN) 1 m; Natal, Muz Zool. Pol. Warszawa 12/45, (MIZ-PAN) 1 m; I. 1968 Wittklip East Cape Dr. V. Allard, Muséum Paris, (MNHN) 2 f; Algoa Bay, Capland, Dr. Brauns., coll. N.H.M. Bulawayo, (NHMB) 1 m, 1 f; Enon. E.P. 09.1990., 03.1912, J.O'Neil, *Trigonopus capicola* Muls. det. A.T.Hesse. coll. N.H.M. Bulawayo, (NHMB) 2 m; Afrique Delalande, Museum Paris Afrique australe Delalande, (MNHN) 2 f; S. Afr. Cape Prov. Van Stadenspas 25 miles W Port Elisabeth, 1.III.51. No.195, Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck, *Trigonopus victus* Pér. Det. Julio Ferrer 1985, (MZLU) 2 m, 1 f; (JFC) 1 m, 1 f; H. Alutaceus Illiger Cap. b. sp., Museum Paris Coll. P. Ardoin 1978, Coll. Mus. Tervuren, *Trigonopus capicola* Muls. et R., P.Ardoin Det. 1970, (MRAC) 1 f; H. Difformis Thumb Cap. b.sp. Coll. Mus. Tervuren, *Trigonopus capicola* Muls. et R., P. Ardoin Det. 1970, (MRAC) 1 m; Stormsriver, nr. Humansdorp, 16.12.1964, H. Geerbena, (TM) 1f; Grahamstown, C. J. Pringle, (TM) 1 m, 1 f; Lambert's Bay, Cape Prov. R.S.A., 29.VII.89, G. Minet



Figures 74–77. *Trigonopus capicola*. (74) elytra, (75) ventral view of aedeagus (ll – length of lacinia, tll – total length of lacinia), (76) dorsal and (77) lateral view of apical part of aedeagus.



Recolt. (TM) 1 m, 1 f; S. Afr. Transkei, Port St. Jones Silaka, 31.33 S – 29.30 E, 2.12.1987, E-Y:2547, beating, indig. for., leg. Endrödy-Younga, (TM) 1 m; S. Afr. SE Cape Prov., Alexandria, For. St., 33.43 S – 26.23 E, 4.12.1987, E-Y:2550, indig. forest litter, leg. Endrödy-Younga, (TM) 1 f.

**Distribution.** South Africa (Cape Province: Knysna, Port Elizabeth, Albany, Uitenhage) (Fig. 118).

*Trigonopus sigillatus* sp. nov.  
(Figs 78–81, 118)

**Name derivation.** Latin adjective, *sigillatus*: decorated with relief.

**Terra typica.** Natal (South Africa).

**Diagnosis.** *T. sigillatus* is close to *capicola* similar pronotal shape, structure of male fore tarsi and tibia and as in *signus* and *cochraneae*, on the pronotal disc there are two symmetrically located, smooth, irregular patches, and the pronotal punctures are rather large and of irregular shape.

This species differs from *capicola* and *flexipes* in elytral sculpture, somewhat shallower concavity of the pronotal sides and the structure of the male fore and hind tibia. It differs from the remaining species in the structure of male tarsi and tibia and additionally from *danielssoni* in the structure of the elytral intervals

**Description.** Body length 15.0–17.0 mm, pl/pb = 0.60–0.62, el/eb = 1.15–1.23, el/pl = 2.06–2.18, eb/pb = 1.04–1.18. Head and pronotum with puncturation very dense, punctures fairly large, irregular. Pronotum with two symmetrically situated, irregular, smooth patches on disc; punctures at sides often fuse to form fine rugae (Fig. 78); anterior angles produced anterad, posterior angles slightly produced posterad; sides rounded, sometimes slightly arcuately emarginate just anterior to posterior angles; between disc and lateral margin shallowly concave. Elytral intervals 1, 3, 5 and 7 wider than remaining ones; all intervals slightly and evenly convex. Male legs, fore tibia gradually widened to broad apex, concavity, setose at base, present on inner side in apical part, inner margin at level of concavity forms an obtuse, but strongly arched angle, and disappears at apical ca. 1/5 (Figs 79–81); hind tibia straight; fore tarsi strongly widened, without ventral glabrous gutters. Aedeagus structure similar to that in *capicola*, lap/lbp/l = 1.0/2.6/0.3, ovipositor as in *similis*, lp/lc1 = 4.1, bc1/lc1 = 2.6, c1/c2/c3/c4/c4–c3 = 1.0/1.1/1.6/1.9/0.1.

**Types.** Holotype (male), MIZPAN: “237, Natal, *Trigonopus* n.sp. H. Gebien det. 1939; Muz. Zool. Polonicum, Warszawa 12/45”. Paratypes: Natal, Howick, Museum Paris, (MNHN) 1 m, 2 f; Durban 1900, IPC, Muséum Paris, (MNHN) 2 f; Cap. Museum Paris ex. Coll. R. Oberthür, (MNHN) 1 m.

**Distribution.** South Africa (Natal: Durban, Howick) (Fig. 118).

*Trigonopus flexipes* Koch  
(Figs 57–58, 90–101, 118)

*Trigonopus flexipes* Koch, 1956: 459.

**Locus typicus.** King Williamstown (South Africa, Cape Province).

**Diagnosis.** *T. flexipes* is close to *capicola* (similar pronotal shape and sculpture) and like *capicola*, *sigillatus* and *similis* it has strongly widened male tarsi and pronotum sides with a distinct, rather wide concavity between the disc and lateral margin. It is also similar to *similis* in the structure of the fore tibia but the two species have very different male hind ibia.

It is easily separated from *capicola* and *sigillatus* by the structure of the male fore and hind tibiae and also from the latter by the pronotal sculpture. It differs from the remaining members of the genus in the structure of the male fore tarsi and additionally from *danielssoni* in the structure of elytral intervals.

**Description.** Body length 17.0–20.0 mm, pl/pb = 0.61–0.64, el/eb = 1.30–1.35, el/pl = 2.22–2.24, eb/pb = 1.02–1.05. Head and pronotum with puncturation very dense and even, punctures not very large, regular. Mentum as in fig. 92. Pronotum with anterior angles produced anterad, posterior angles slightly produced posterad; sides rounded, just anterior to posterior angles slightly sinuately emarginate (Fig. 90); with rather deep, wide gutter present between disc and lateral border; lateral border strongly convex, sharply demarcated (Fig. 91). Elytral intervals 1, 3, 5 and 7 wider than others; all intervals slightly and evenly convex. Male legs, fore tibia gradually widened to broad apex, concavity, setose at base, present on inner side in apical part; inner margin strongly widened at level of concavity, passing as a gentle arc towards apex and disappearing just before it (Figs 93–95); hind tibia strongly bent, inner side rather strongly flattened and with short, sparse setae (Figs 57 and 58); fore tarsi strongly widened (Figs 96 and 97) without ventral glabrous gutters (Fig. 97); mid and hind tarsi as in figs 98–101. Aedeagus structure similar to that in *capicola*, lap/lbp/l = 1.0/2.6/0.2, ovipositor as in *similis*.

**Material examined.** 27.I. 1970. Berlin près East-London Afrique Du Sud Cl. Besnard leg., Museum Paris, (MNHN) 4 m, 1 f; Grahamstown S. Afr., Museum Paris, (MNHN) 1 m; S. Afr., Museum Paris, (MNHN) 1 m; C.B.Ep., Museum Paris 1900 Coll. Leon Fairmaire, (MNHN) 1 m; 93, East London Cape II.1987 C. R. Owen, *Trigonopus victus* Péringuey, (JFC) 1 f.

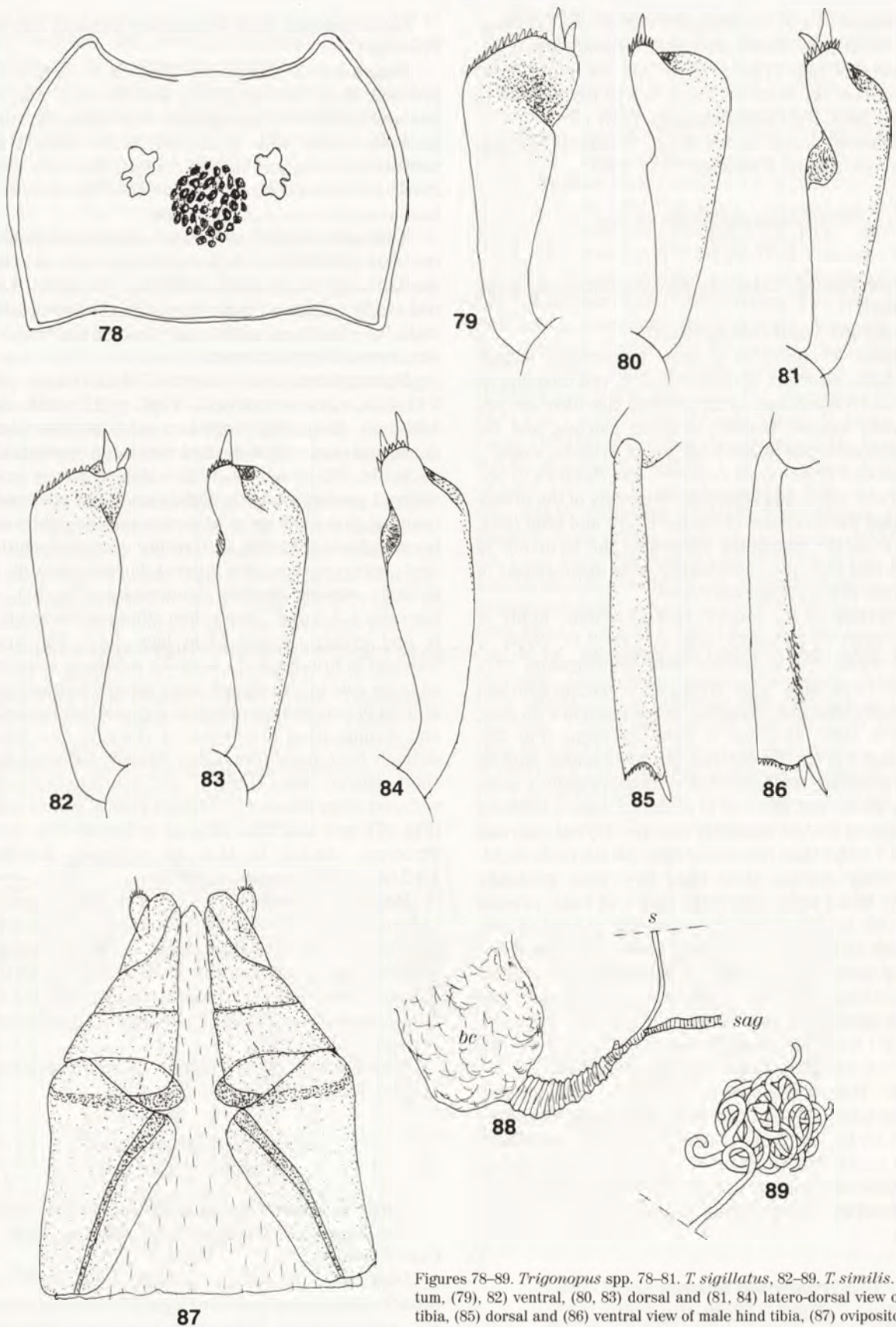
**Distribution.** South Africa (Cape Province: East London, King Williamstown) (Fig. 118).

*Trigonopus similis* sp. nov.  
(Figs 82–89, 118, 121)

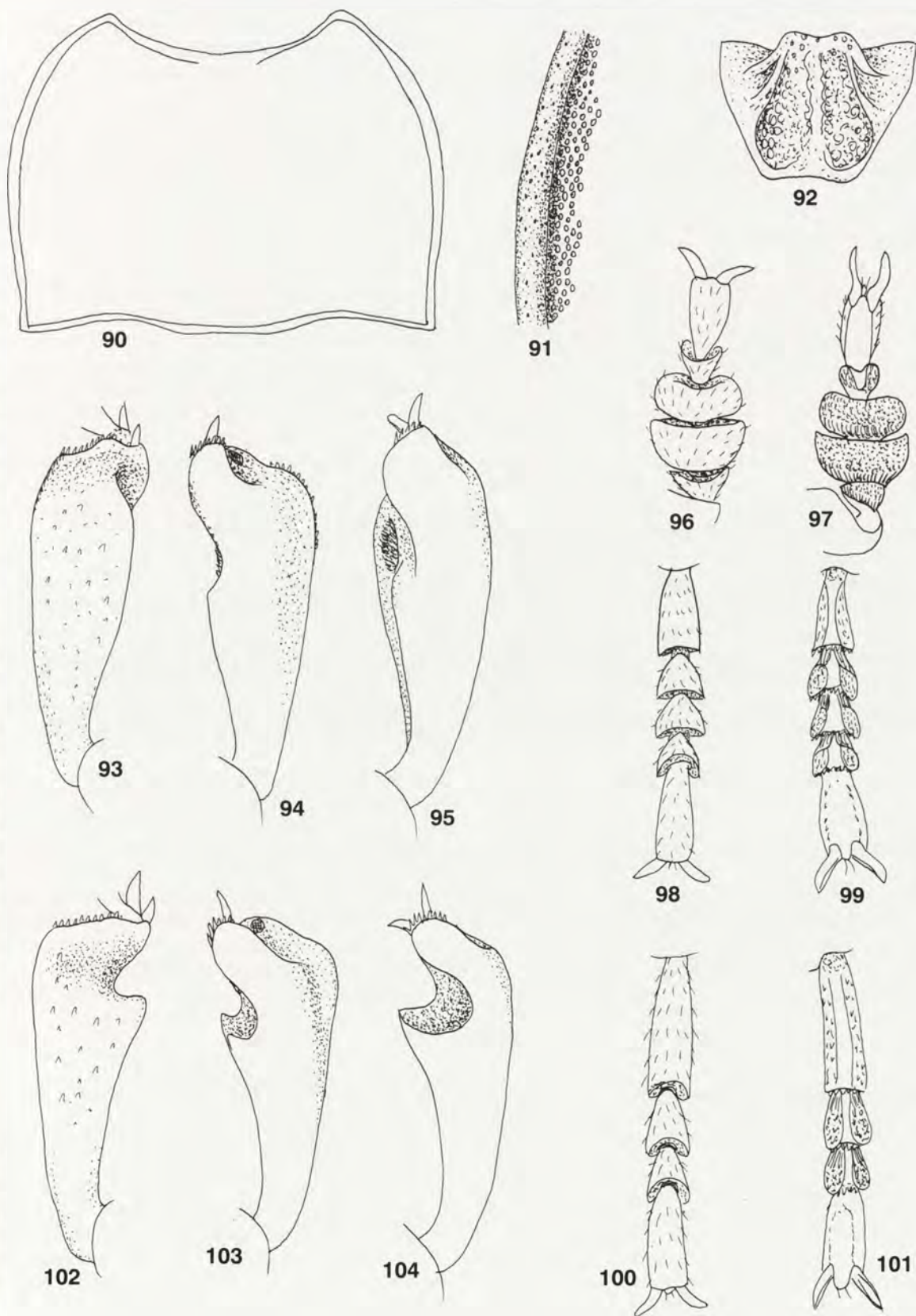
**Name derivation.** Latin adjective, *similis*: similar.

**Locus typicus.** Berlin près East-London (South Africa, Cape Province).

**Diagnosis.** *T. similis* is close to *flexipes* (similar pronotal shape and male fore legs) and like *flexipes*, *capicola* and *sigillatus*, it has strongly widened male tarsi and pronotal sides with wide concavities along their margin.



Figures 78–89. *Trigonopus* spp. 78–81. *T. sigillatus*, 82–89. *T. similis*. (78) pronotum, (79), (82) ventral, (80, 83) dorsal and (81, 84) latero-dorsal view of male fore tibia, (85) dorsal and (86) ventral view of male hind tibia, (87) ovipositor. (88) part of bursa copulatrix (bc – bursa copulatrix, s – spermatheca, sag – spermathecal accessory gland), (89) spermatheca.



Figures 90–104. *Trigonopus* spp. 90–101. *T. flexipes*, 102–104. *T. cochraneeae*. (90) pronotum, (91) part of lateral border of pronotum, (92) mentum, (93, 102) ventral, (94, 103) dorsal and (95, 104) latero-dorsal view of male fore tibia, (96) dorsal and (97) ventral view of male fore tarsus, (98) dorsal and (99) ventral view of male mid tarsus, (100) dorsal and (101) ventral view male hind tarsus.

Although the male fore tibiae of this species and *flexipes* are similar their hind tibiae are quite different.

It clearly differs from *capicola* and *sigillatus* in the structure of the male fore tibia and also from the latter in the sculpture of pronotum. *T. similis* differs from its remaining congeners in the structure of the male fore tarsi and, additionally from *danielssoni*, in the structure of the elytral intervals

**Description.** Body length 16.5–18.5 mm (Fig. 121), pl/pb = 0.058–0.60, el/eb = 1.24–1.38, el/pl = 2.20–2.45, eb/pb = 1.04–1.08. Head and pronotum with puncturation very dense and even, punctures not very large, regular. Pronotum sometimes with two very small symmetrically located flat, irregular patches on disc; anterior angles produced anterad, posterior angles slightly produced posterad; sides rounded, just anterior to posterior angles slightly sinuately emarginate; with rather deep gutter between disc and lateral border; lateral border strongly convex, sharply demarcated. Elytral intervals 1, 3, 5 and 7 wider than others; all intervals slightly and evenly convex. Male legs, fore tibia gradually widened at broad apex; concavity on inner side of apical part, with bottom pubescent; inner margin slightly widened at level of concavity, passing in a gentle arc towards apex and disappearing just before it (Figs 82–84); hind tibia straight, on inner side sparsely pubescent (Figs 85 and 86); fore tarsi strongly widened, underside without glabrous gutters. Aedeagus structure similar to that in *capicola*, lap/lbp/l = 1.0/2.7/0.2, ovipositor as in fig. 87, lp/lc1 = 4.8, bc1/lc1 = 2.6, c1/c2/c3/c4/c4–c3 = 1.0/1.4/2.3/2.6/0.2, female internal genitalia as in figs 88–89.

**Types.** Holotype (male), MNHN: "27.I. 1970. Berlin près East-London Afrique Du Sud Cl. Besnard leg., Museum Paris". Paratypes: 27.I. 1970. Berlin près East-London, Afrique Du Sud, Cl. Besnard leg., Museum Paris; (MNHN) 9 m, 5 f; S. Africa, Transkei Mooiploas, Mar. 15.1976 R. E. Parrott; (CNCI) 2 m; S. Africa, Vict. E. Hogsback Feb. 1.1976. R. E. Parrott; (CNCI) 5 m, 3 f; S. Africa, Beacon Bay, E. London Jan, 1976, R. E. Parrott; (CNCI) 1 f; S. Africa, Humandorp, 4.XII.1970, J. S., Museum Paris 1978 coll. P. Ardoin, (MNHN) 1 m.

**Distribution.** South Africa (Cape Province: East London, Humandorp, Mooiploas) (Fig. 118).

*Trigonopus danielssoni* sp. nov.  
(Figs 105–112, 118)

**Name derivation.** In honour of Roy Danielsson from Museum of Zoology Lund University, Lund.

**Locus typicus.** Quthing (Lesotho).

**Diagnosis.** *T. danielssoni* is close to *signus* (similar pronotal shape and male fore tibiae). As in *sigillatus*, *signus* and *cochraneae*, the pronotal punctures are relatively large and irregular. In these species, however, there are no smooth patches on the pronotal disc. Narrow male fore tarsi place *danielssoni* close to *signus* and *cochraneae*.

*T. danielssoni* differs from all its congeners in the structure of its elytral intervals.

**Description.** Body length 9.0–16.5 mm, pl/pb = 0.56–0.64, el/eb = 1.24–1.33, el/pl = 2.04–2.44, eb/pb = 1.01–1.08. Head and pronotum with puncturation very dense, punctures rather large, irregular. Pronotum with anterior angles produced anterad, posterior angles slightly produced posterad; anterior border incomplete medially; sides rounded; shallow concavity between disc and lateral border (Fig. 105). Elytral intervals 1, 3, 5 and 7 distinctly more convex, forming longitudinal, smooth, shiny ribs (tubercles covering their surface fused) (Figs 106 and 107). Male legs, fore tibia gradually widened to apex, shallow concavity on inner side of apical part, bottom of concavity pubescent, inner margin slightly widened at level of concavity, passing in gentle arc towards apex and disappearing just before it (Figs 108–110); hind tibia straight; fore tarsi weakly expanded, segment 4 without glabrous median gutter ventrally (Figs 111 and 112). Aedeagus structure similar to that in *capicola*, lap/lbp/l = 1.0/2.8/0.2, ovipositor as in *similis*, lp/lc1 = 4.2, bc1/lc1 = 2.5, c1/c2/c3/c4/c4–c3 = 1.0/1.2/1.7/1.8/0.2.

**Types.** Holotype (male), (MZLU): "S. Afr. Basutoland, Quthing 15.III.1951. No. 234, Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck". Paratypes: S. Afr. Basutoland, Quthing 15.III.1951. No. 234, Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck (MZLU) 5 m, 8 f; (JFC) 1 f; S. Afr. Basutoland Nazareth M.S. 20 miles ESE Maseru 24.III.1951. No.245, Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck, (MZLU) 1 m; S. Afr. Cape Prov. River 6 miles S Mount Fletcher, 9.III.1951. No.216, Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck, (MZLU) 1 m; S. Afr. Basutoland Mount 15 miles NE Quthing 18.III.1951. No.241, Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck, (MZLU); 1 m; S. Afr. Basutoland Mount Morosi 15 miles NE Quthing 16.III.1951. No.236, Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck, (MZLU) 1 m; South Africa, Nordöstl. Kap-Prov., Elliot, ca. 1500 m, kleines Wäldchen, 9.III.1992, H. J. Bremer leg. (HBC) 2 m, 2 f.

**Distribution.** Lesotho (Maseru, Quthing), South Africa (Cape Province: Mount Fletcher) (Fig. 118).

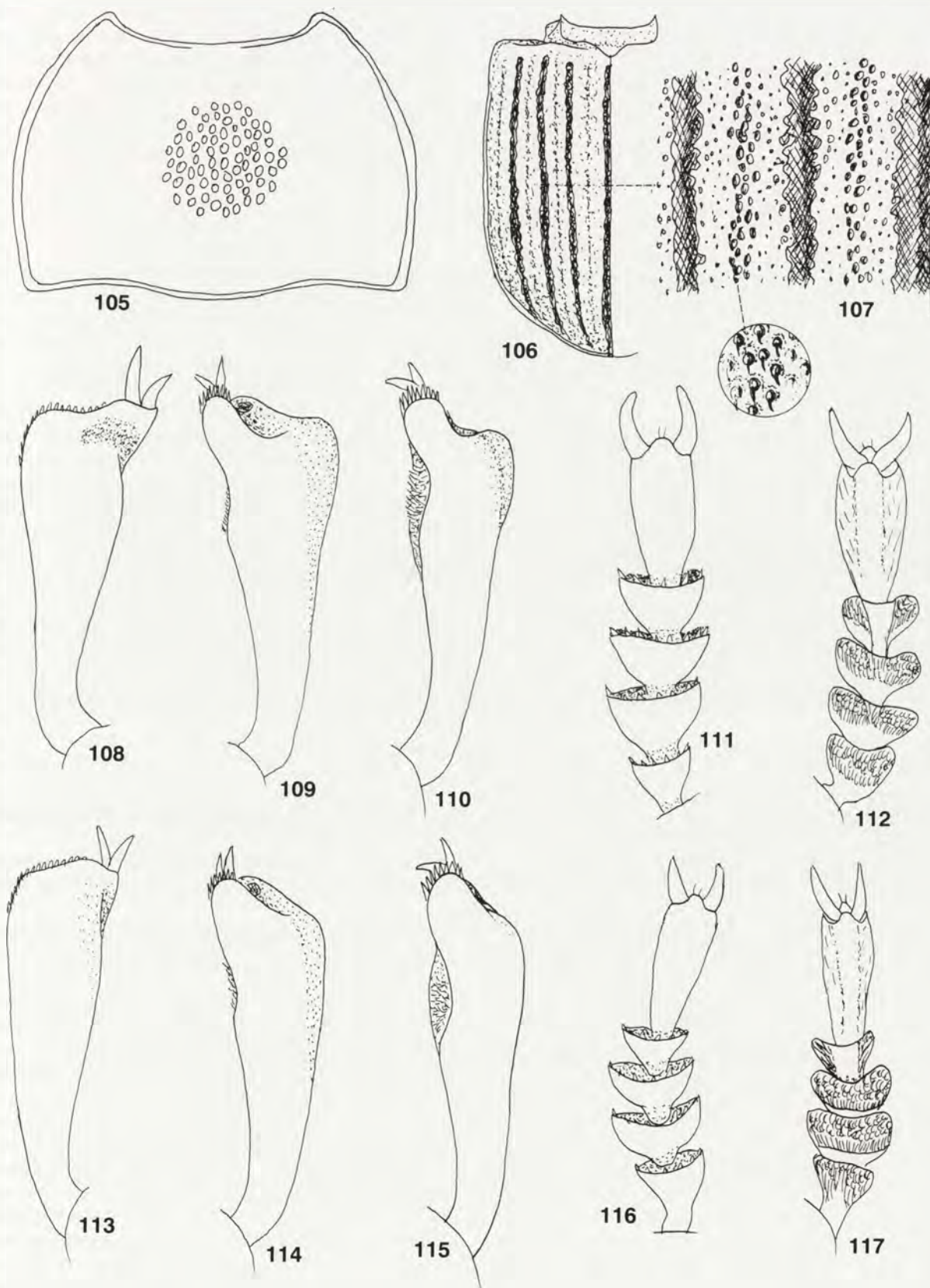
*Trigonopus signus* sp. nov.  
(Figs 113–117, 118)

**Name derivation.** Latin adjective, *signum*: sign.

**Terra typica.** Natal (South Africa).

**Diagnosis.** *T. signus* is close to *danielssoni* which has a similar pronotum and male fore tibia. As in *sigillatus* and *cochraneae*, the pronotum has punctures which are relatively large and irregular and on its disc there are two smooth patches. Narrow male fore tarsi also place *signus* close to *danielssoni* and *cochraneae*.

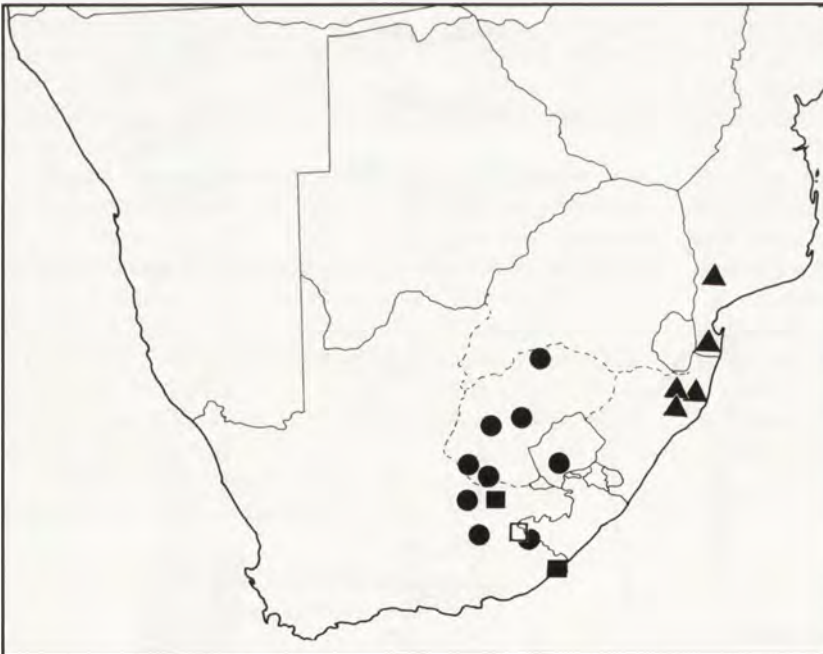
*T. signus* differs from *danielssoni* in the structure of the elytral intervals and the pronotal sculpture (patches on disc), and from *cochraneae* in the structure of the male fore tibiae.



Figures 105–117. *Trigonopus* spp. 105–112. *T. danielssoni*, 113–117. *T. signus*. (105) pronotum, (106) elytron, (107) sculpture of elytron, (108, 113) ventral, (109, 114) dorsal and (110, 115) latero-dorsal view of male fore tibia, (111, 116) dorsal and (112, 117) ventral view of male fore tarsus.



Figures 118. Distribution of *Trigonopus similis* (solid triangle), *T. sigillatus* (open triangle), *T. signus* (solid circle), *T. cochraneae* (open circle), *T. capicola* (solid square), *T. flexipes* (open square) and *T. danielssoni* (solid diamond).



Figures 119. Distribution of *Selinopodus giganteus* (solid triangle), *Amblychirus brevior* (solid circle), *A. pseudobrevior* (solid square) and *A. tenebrosus* (open square).

**Description.** Body length 14.0–16.5 mm, pl/pb = 0.57–0.66, el/eb = 1.16–1.26, el/pl = 1.92–2.32, eb/pb = 1.07–1.13. Head and pronotum with puncturation very dense, punctures rather large, irregular. Pronotum with two symmetrically located, irregular, smooth patches on disc; anterior angles produced anterad, posterior angles slightly

produced posterad; sides rounded; shallow concavity between disc and lateral margin. Elytral intervals 1, 3, 5 and 7 wider and somewhat more convex than the remaining ones. Male legs, fore tibia gradually widened to not very broad apex; shallow concavity on inner side of apical part with bottom pubescent; inner margin slightly widened at level of concavity, passing in gentle arc towards apex and disappearing just before it (Figs 113–115); hind tibia straight; fore tarsi weakly expanded, segment 4 with glabrous median gutter ventrally (Figs 116 and 117). Aedeagus structure similar to that in *capicola*, lap/lbp/ll = 1.0/2.6/0.3, ovipositor as in *similis*, lp/lc1 = 4.3, bc1/lc1 = 2.8, c1/c2/c3/c4/c4–c3 = 1.0/1.1/1.9/2.2/0.2.

**Types.** Holotype (male), MIZPAN: "Natal, 239, *Trigonopus* n.sp. H. Gebien det.1939.; Mus. Polonicum 12/45". Paratypes: Natal, Mariamhill, *Trigonopus platyderus* Muls. det. dr. Kaszab; (HNHM) 1 m, 1 f; S. Afr. Cape Prov. 15 miles ENE Mount Frere 6.III.1951 No.209, Swedish South Africa Expedition 1950–1951 Brinck-Rudebeck, (MZLU) 2 m, 2 f; (JFC) 1 m, 1 f; Cape Colony, Cussey, SAM-Col-AO 11876; (SAM) 1 f; S. Afr. S. Natal, Weza, Impetyene grassveld, 30.37 S – 29.42 E, 16.11.1989, E-Y: 2678, groundtraps, Endrödy & Klimaszewski, groundtrap with meat bait, (TM) 1 f; S. Afr. S. Natal, Weza, lower stinkwood for., 30.34 S – 29.43 E, 27.11.1989, E-Y: 2724, stand. dead Podocarp., Endrödy & Klimaszewski, (TM) 1 f; *Trigonopus capicola*, Museum Paris ex coll. R. Oberthür, (MNHN) 1 m.

**Distribution.** South Africa (Cape Province: Mount Frere; Natal: Mariamhill) (Fig. 118).

*Trigonopus cochraneae* sp. nov.  
(Figs 102–104, 118)

**Name derivation.** In honour of Mrs Marge Cochrane from South African Museum, Cape Town.

**Terra typica.** Transkey (South Africa, Cape Province).

**Diagnosis.** *T. cochraneae* is close to *danielssoni* and *signus* (similar relatively large and irregular punctures on the pronotum and narrow male fore tarsi). As in *sigillatus* and *signus*, there are two smooth patches on the disc. The structure of elytra is similar to that in *danielssoni*, but the intervals are much less convex and have shiny patches, not longitudinal shiny ribs.

*T. cochraneae* differs from all its congeners in the characteristic structure of the male fore tibia which has a very large denticle on the inner side.



Figure 120. *Melanopterus inya* (by M. Szczepańska). Male.

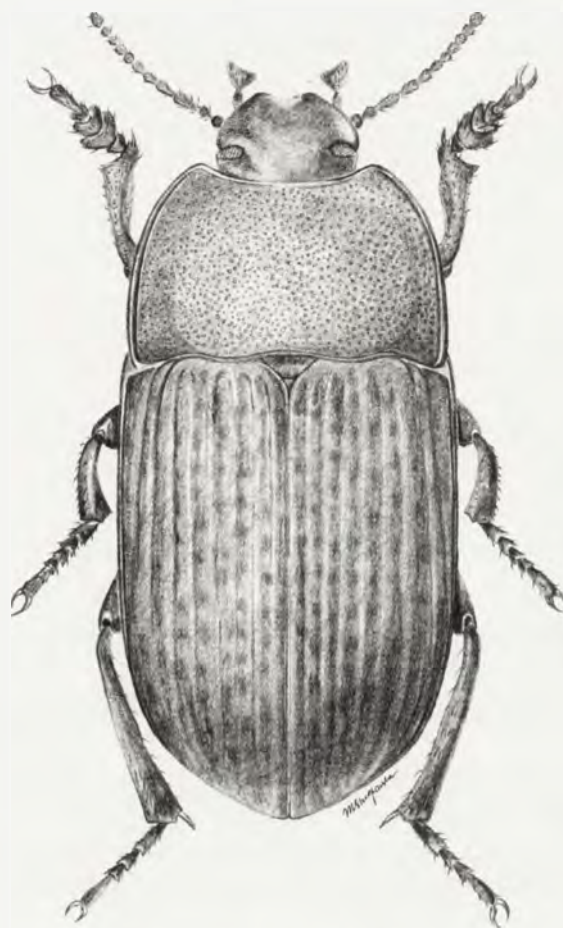


Figure 121. *Trigonopus similis* (by M. Szczepańska). Male.

**Description.** Body length 15.5–16.0 mm, pl/pb = 0.62, el/eb = 1.19, el/pl = 2.10, eb/pb = 1.10. Head and pronotum with puncturation very dense, punctures fairly large, irregular; pronotal disc with two symmetrically located, irregular, smooth patches. Pronotum with anterior angles produced anterad, posterior angles slightly produced posterad; sides rounded; shallow concavity between disc and lateral margin. Elytral intervals 1, 3, 5 and 7 wider and slightly more convex than others; in middle of each interval tubercles fuse to form irregular, longitudinal, shiny patches. Male legs, fore tibia widened apically; deep concavity on inner side of apical part, bottom of concavity pubescent; inner margin before concavity strongly widened forming large, sharp denticle (Figs 102–104); hind tibia straight; fore tarsi moderately widened, segment 4 with glabrous median gutter ventrally. Aedeagus structure similar to that in *capicola*, lap/lbp/l = 1.0/2.6/0.2.

**Types.** Holotype (male), SAM: "Transkey, Aug 1883, *Trigonopus capicola* Muls. SAM-Col-AO 11878". Paratype: Transkey, Aug 1883, *Trigonopus capicola* Muls., Sam-Col-AO 11877, (SAM) 1 m.

**Distribution.** South Africa (Cape Province: Transkey) (Fig. 118).

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Received: June 30, 1997

Accepted: October 10, 1997

Corresponding Editor: S. A. Ślipiński

Issue Editor: D. Iwan