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A review of the genus *Rhopalocerus* W. REDTENBACHER
of the World (*Coleoptera, Colydiidae*)

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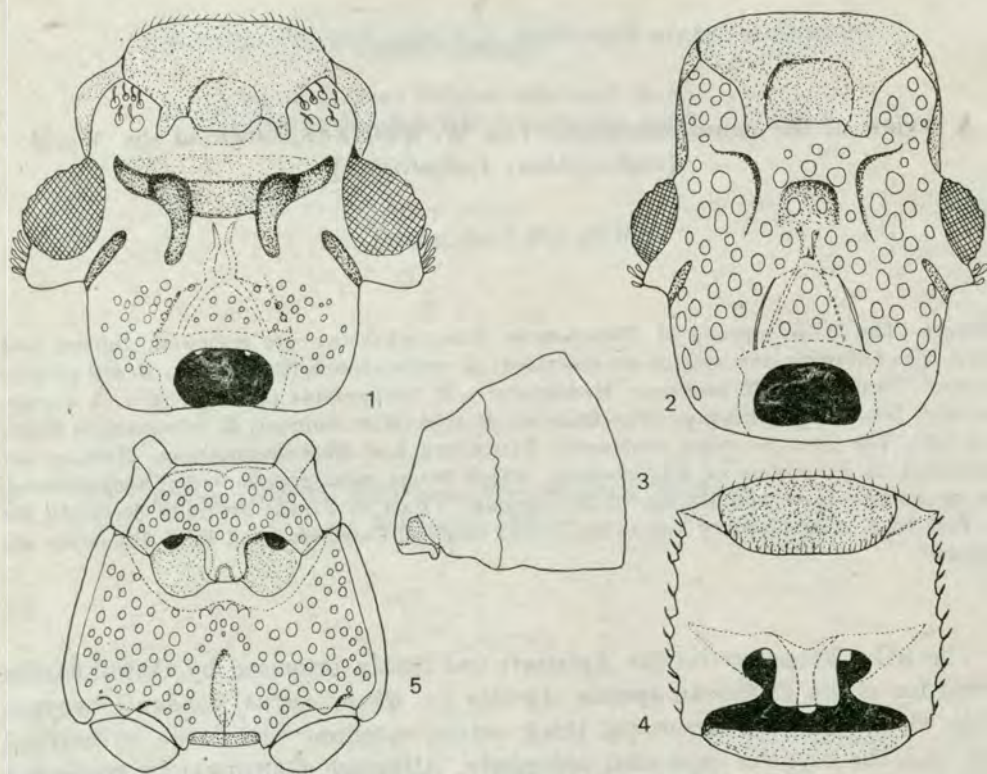
A review of the genus *Rhopalocerus* W. REDTENBACHER of the World
(Coleoptera, Colydiidae)

[With 109 Text-figures]

Abstract. The World species of *Rhopalocerus* REDTENBACHER are reviewed, figured and keyed. The following new species are described: *R. camerunensis* (Cameroon); *R. viti* (Togo); *R. mirei* (Cameroon); *R. minimus* (Madagascar); *R. tuberculatus* (Madagascar); *R. compactus* (Key Island); *R. papuanus* (New Guinea); *R. iviei* (New Guinea); *R. solomonensis* (Solomon Isl.). The generic names *Corticoides* FAIRMAIRE and *Rhopalocerophanus* HELLER are considered as synonyms of *Rhopalocerus*, which forms monogeneric tribe *Rhopalocerini*. The immature stages and biology of *R. rondanii* (VILLA et VILLA) are fully described for the first time. A preliminary key to the World tribes of *Colydiidae* and brief discussion are provided.

The tribe *Rhopalocerini* (as *Apistini*) was firstly proposed by GANGLBAUER (1899) for single European species *Apistus* (= *Rhopalocerus*) *rondanii* because of the shortened first tarsomere, thick, setose antennae with large, cylindrical club and the clypeus expanded anteriorly. Although GANGLBAUER restricted the tribe to *Apistus*, HETSCHKO (1930) in the World Catalogue, included in *Rhopalocerini* as well, *Hyberis* PASCOE, *Pharax* PASCOE and *Atyscus* PASCOE, probably because PASCOE had compared them in original descriptions with *Rhopalocerus*. All these genera were removed to *Synchitini* by ŚLIPIŃSKI (1985) because of long tarsomere I, slender antennae and lack of characteristic apophyses on ventral side of head. He, in the same paper, considered *Rhopalocerophanus* HELLER being synonym of *Corticoides* FAIRMAIRE because of 3-3-3 segmented tarsi, and reduced its status to subgeneric level of *Rhopalocerus*. Here after

reexamination of *Corticoides* and *Rhopalocerophanus bakeri* HELLER, taxonomic status of *Corticoides* is reduced to synonym of *Rhopalocerus*, because tarsi are really four segmented, instead of 3-3-3 as stated by FAIRMAIRE, HELLER and DAJOZ (1980). The complicate nomenclatorial problems involved with generic and tribal names of *Rhopalocerini* were fully discussed by MROCZKOWSKI (1984) and will not be repeated here. We agree with MROCZKOWSKI's proposal and therefore generic name *Rhopalocerus* is adopted in the present revision. In the present paper, a systematic review of the genus *Rhopalocerus* with description of new species, is combined with a detailed presentation of adult, larval and pupal morphology, biology and life cycle of the single European species *R. rondanii*, and a brief discussion of the higher classification of the family.



Figs. 1-5. 1, 2 - head, ventral; 3 - prothorax, lateral; 4 - prothorax, ventral; 5 - pterothorax, ventral. 1 - *R. solomonensis*; 2-5 - *R. rondanii*.

Abbreviations. Collections: BMNH - British Museum (Natural History), London; MCSN - Museo Civico di Storia Naturale "Giacomo Doria", Genova; MHNG - Muséum d'Histoire Naturelle, Genève; MNHN - Muséum National d'Histoire Naturelle, Paris; MRAC - Musée Royal de l'Afrique Centrale, Tervuren; IZPAN - Instytut Zoologii, Polska Akademia Nauk, Warszawa; RMNL - Rijksmuseum van Natuurlijke Historie, Leiden; TMB - Természettudományi Múzeum Állattára, Budapest; ZMB - Zoologisches Museum an der Humboldt-Universität zu Berlin. Measurements: PL/PW - the ratio of median

length of pronotum to its greatest width; EL/EW — the ratio of median elytral length along the suture to their combined greatest width; EL/PL — the ratio of the median elytral length to median pronotal length.

TRIBE RHOPALOCERINI

Apistini GANGLBAUER, 1899: 873. Invalid name because derived from a junior homonym — *Apistus* AGASSIZ, 1846 non Cuvier, 1829. — MROCKOWSKI 1984¹.
Rhopalocerini REITTER, 1911: 108.

Diagnosis

The tribe *Rhopalocerini*, as mentioned above, includes only single genus *Rhopalocerus* REDT. which in adult stage is similar to some members of *Synchitini* and *Sarrotrini*, having rather short-oval body, thick and setose antennae. *Rhopalocerus* differs from all known to us genera of *Synchitini* and *Sarrotrini* (see under discussion on p. 110) in having 4-4-4 tarsi with the tarsomere I considerably shorter than the preceding one, the antennae 10-segmented, setose and the antennal club large, cylindrical almost truncate apically and the metasternum with a prominent, short process anterad of each metacoxa.

The larva of *Rhopalocerus* differs from all described larvae of *Colydiidae* because of peculiar concealed, not visible from above abdominal tergite IX, the urogomphi extremely reduced, widely separated and without sclerotized pit between them. It also differs from most of *Synchitini* having no ocelli (except *Synchita*), pronotum as long as wide, narrowing anteriorly and markedly longer than mesothorax and surfaces, of abdominal tergites with ampullae bearing fine asperities.

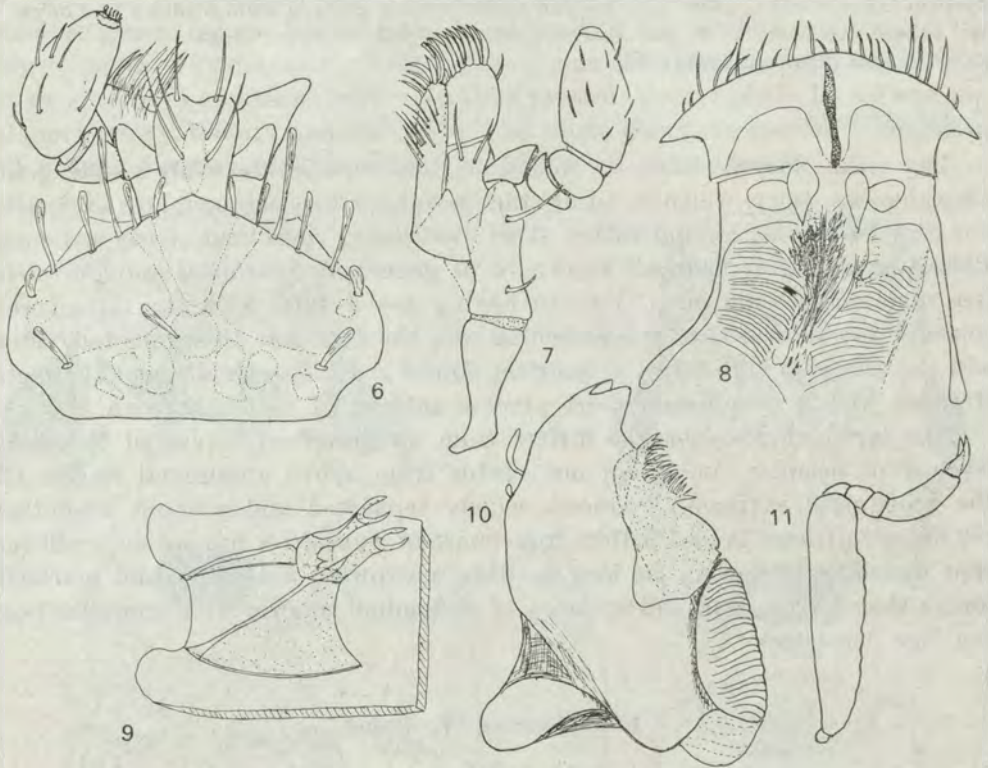
Rhopalocerus W. REDT.

- Spartycerus* MOTSCHULSKY 1837: 100. Type species, by monotypy: *Monotoma? rondanii* A. VILLA et J. B. VILLA, 1833.
Spartecerus ERICHSON, 1838: 208. Unjustified emendation and junior homonym of *Spartecerus* SCHÖNHERR, 1834.
Apeistus MOTSCHULSKY 1840: 186. Replacement name for *Spartecerus* ERICHSON.
Rhopalocerus W. REDTENBACHER, 1842: 21. Type species, by monotypy: *Rhopalocerus setosus* W. REDTENBACHER, 1842. — L. REDTENBACHER 1845: 34 (synonym with *Spartycerus*).
Apistus AGASSIZ, 1846: 100. Unjustified emendation of *Apeistus* MOTSCHULSKY and junior homonym of *Apistus* CUVIER, 1829.
Corticoides FAIRMAIRE, 1898: 395. Type species, by monotypy: *Corticoides setulosus* FAIRMAIRE, 1898. — ŚLIPIŃSKI 1985: 615. New synonymy.
Rhopalocerophanus HELLER, 1915: 306. Type species, by monotypy: *Rhopalocerophanus bakeri* HELLER, 1915. — ŚLIPIŃSKI 1985: 615 (synonym with *Corticoides*).

¹ Opinion No. 1397 of the ICZN, Bull. Zool. Nomencl., 1986, 43: 150-151. *Rhopalocerus* W. REDTENBACHER — conservea; *spartycerus* MOTSCHULSKY and *spartecerus* ERICHSON — suppressed.

Adult

Body (figs. 60, 83, 109) elongate-oval, to oval, moderately convex; surface dull or feebly shiny; vestiture consists of scattered hairs to scale-like setae irregularly inserted on head, pronotum and along elytral rows of punctures. Length 2.6–5.25 mm. Without external differences between sexes.



Figs. 6–11. 6 – labium, ventral; 7 – maxilla, ventral; 8 – labrum-epipharynx, ventral; 9 – tentorium, lateral; 10 – mandible, dorsal; 11 – protibia. 6–10 – *R. rondanii*; 11 – *R. setulosus*.

Head (figs. 1, 2) slightly declined, much narrower than prothorax, transverse. Frons with lateral sides moderately to strongly upturned laterally, almost carinate (figs. 90–96). Vertex with or without median groove and shallow sub-lateral ones. Antenna 10-segmented (figs. 82, 86, 88) with insertion completely concealed from above; scape large; pedicel narrower and subquadrate, antennomere III subequal and narrower than scape, segments IV–IX moderately to strongly transverse, setose; club large, about as long as two preceding segments together, almost truncate apically. Antennal grooves on ventral side absent. Pregular region with transverse impression which may be interrupted and limited (fig. 2) or entire and very deep with additional mesal cavities (fig. 1).

Eyes prominent to strongly prominent (figs. 1, 2, 90-96) supported behind by narrow, triangular, setose temples. Labrum (fig. 8) strongly transverse, rounded anteriorly, moderately sclerotized with epipharyngeal armature as in fig. 8; labral rods invisible. Mandible (figs. 10, 12) bidentate apically with hyaline, fringed protheca and well-developed mola. Maxilla (fig. 7) with narrow, elongate lacinia and moderately broad galea, both densely setose apically; maxillary palps with last segment elongate and subtruncate. Labium (fig. 6). Mentum trapezoidal, acuminate to weakly emarginate anteriorly (fig. 108); ligula expanded apically, emarginate, setose; labial palps subtruncate apically. Gular sutures barely traceable, widely separated, converging anteriorly. Tentorium (figs. 1, 2, 9) always with wide corpotentorial bridge, and sometimes with short median process and subparallel, short anterior arms.



Figs. 12-18. 12 - mandible, inner face; 13-14 - wings; 15 - abdomen, ventral; 16 - metendosternite, ventral; 17 - fore leg; 18 - protibia. 12, 14-17 - *R. rondanii*; 13, 18 - *R. solomonensis*.

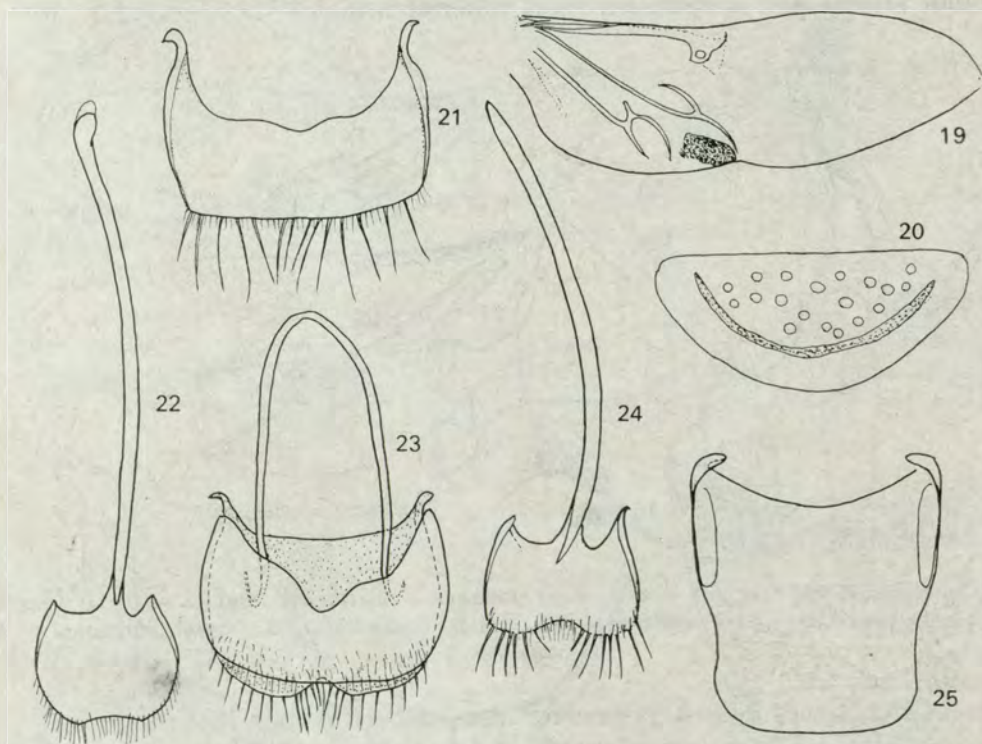
Prothorax subquadrate to transverse with lateral edges crenulate or denticulate, setose; pronotal disk punctate or granulate, usually with median groove and two admedian ones at base, the admedian grooves are usually reduced to

elongate cells at base (figs. 60, 61). Procoxal cavities externally and internally open; prosternal process (figs. 3, 4) wide, parallel-sides and convex.

Elytra short-oval to oval, slightly longer than wide; each elytron with 9 rows of stria punctures; epipleural fold narrow, complete.

Wings (figs. 13, 14, 19) with radial cell poorly developed or absent; sub-cubital fleck present; anal cell narrow; jugal lobe present only in *R. rondanii*.

Pterothorax (fig. 5). Mesocoxae separated by about half a coxal diameter; meso-metasternal junction with single knob. Metasternum transverse, with moderately long, mediobasal depression and short median suture at base; metasternum with a prominent process anterad of each metacoxa. Metendosternite as in fig. 16.

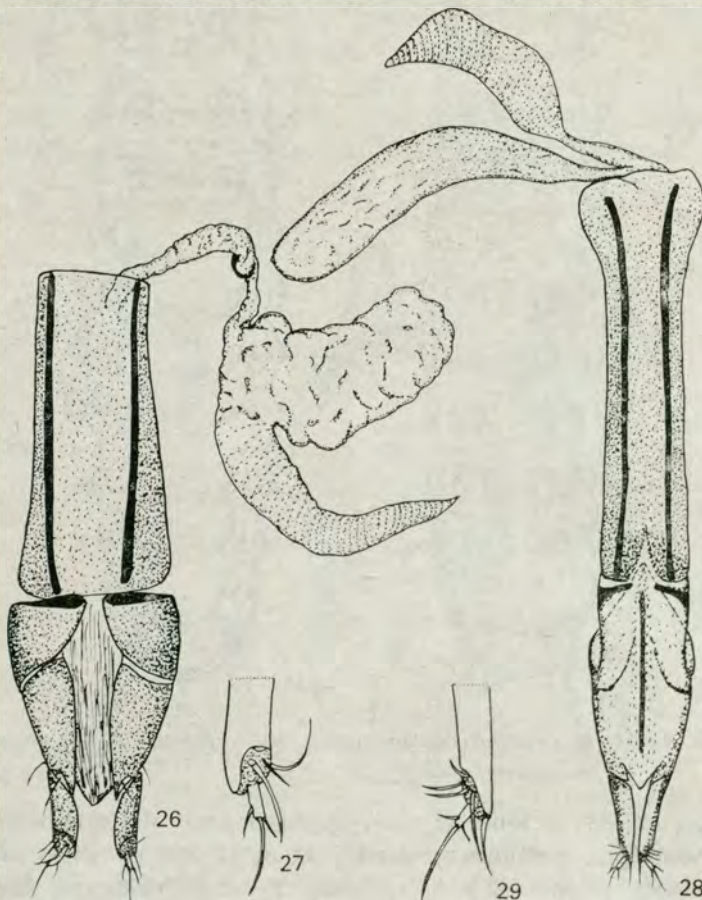


Figs. 19-25. 19 - wing; 20 - last ventrite ♂, ventral; 21 - tergite IX ♀, ventral; 22, 24 - IX sternite ♀, dorsal; 23 - IX sternite ♂, dorsal; 25 - VIII tergite ♀, ventral. 19 - *R. solomonensis*; 20 - *R. compactus*; 21, 24 - *R. parallelus*; 22, 23, 25 - *R. rondanii*.

Abdomen (fig. 15) almost as long as wide; ventrites I-III connate; ventrites IV and V, freely articulated, highly movable; last ventrite (fig. 20) with circular subapical groove.

Aedeagus (figs. 77-81) relatively small, about $0.35 \times$ as long as visible part of abdomen, narrowly elongate with ventral tegmen; basal piece markedly shorter

ter than apical piece, parameres separated; median lobe, narrow, sometimes expanded apically, with paired struts. Female genital tube and ovipositor as in figs. 26-29.



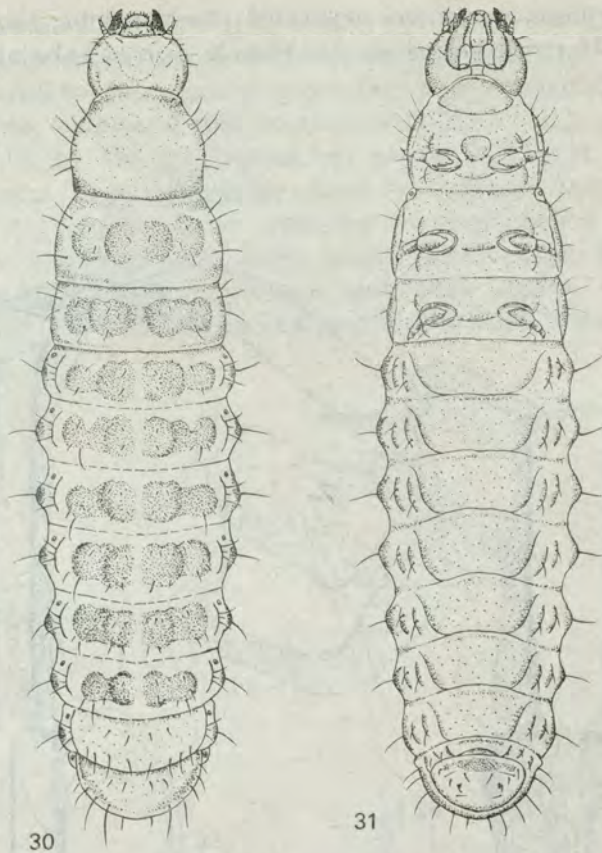
Figs. 26-29. Female cuticular structures and magnified gonostyles. 26-27 - *R. rondanii*;
28-29 - *R. parallelus*.

Mature larva¹ (Figs. 30-47)

Length of fully grown, distended specimens 4.8-6.0 mm.

Body elongate, spindle-shaped, tapering feebly anteriorly and posteriorly, constricted between segments. Colour milky-whitish, surface feebly sclerotized except for urogomphi, and parts of head and mouthparts, which are yellowish or brownish.

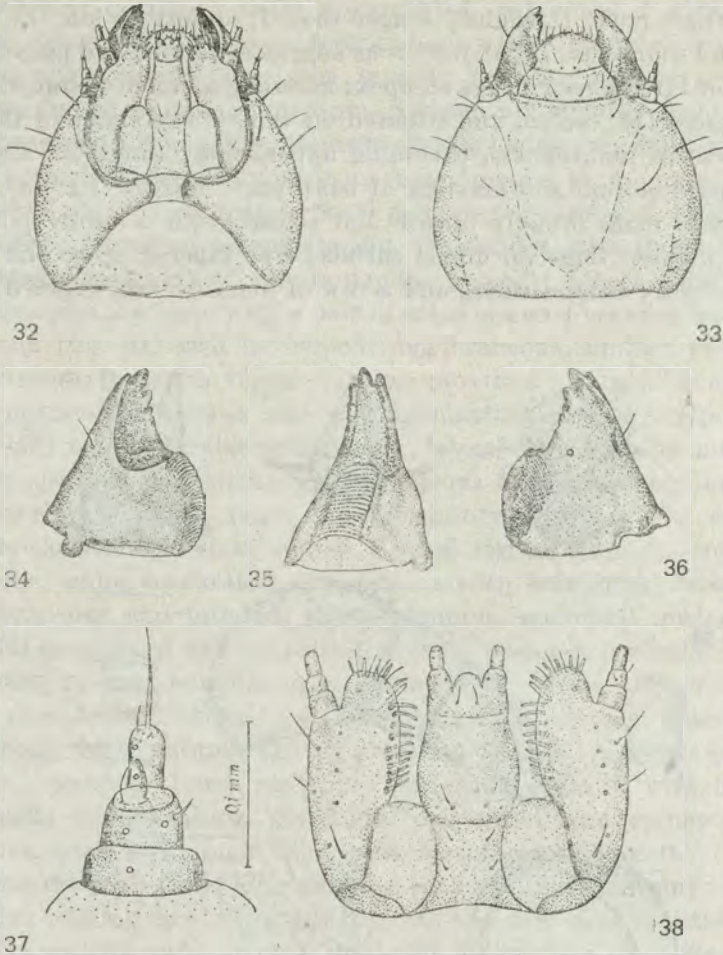
¹ Larval characters taken from reared larvae of *R. rondanii*.



Figs. 30-31. *R. rondanii*, mature larva. 30 - dorsal; 31 - ventral.

Head (figs. 32, 33) as long as wide, approximately 0.6 mm wide, flattened, much narrower than prothorax, usually about $0.7 \times$ as wide as prothorax, Occipital foramen nearly as wide as head. Frontale elongate, slightly longer than wide, with two short anterior setae near talus. Frontal sutures curved, epicranial one short, about $0.15 \times$ as long as frontale; neck suture almost straight dorsally but semicircular on ventral side. Epicranial plates large, covering posterodorsal, lateral and posteroventral parts of the head capsule. Dorsal surface with one long seta near frontal suture and two shallow sulci, each with five thin setae subequally spaced; lateral part with two anteroepicranial and two lateroepicranial setae; ventral side with one seta near hypostoma on each side.

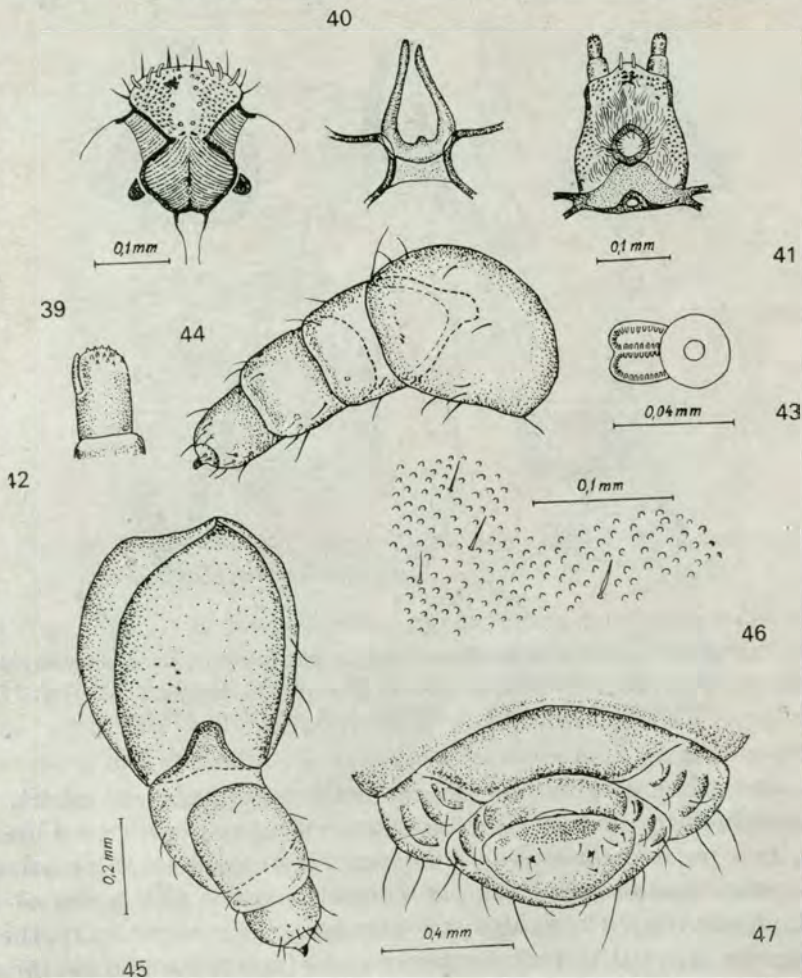
Clypeus fused with frons but epistomal suture well visible. Clypeus subtrapezoidal with lower side more than $3 \times$ as wide as long, with three pairs of setae; sides slightly narrowing to curved anterior margin. Labrum transverse, rounded in front, $0.66 \times$ as long as wide, with two setae near hind margin and four setae on each side near anterior margin. Epipharynx (fig. 39) membraneous with



Figs. 32-38. *R. rondanii*, mature larva. 32 - head, ventral; 33 - head, dorsal; 34 - right mandible, dorsal; 35 - left mandible, inner face; 36 - right mandible, ventral; 37 - right antenna, ventral; 38 - labium and maxillae, ventral.

V-shaped sclerotized process and lateral parts furnished with short, conical spinules obliquely directed to midline; anterior margin with six obtuse, curved setae, two pointed ones at middle, and six minute sensillae arranged in transverse row; median part with six placoid sensillae and a dorsal cibarial sclerite. Mandibles (figs. 34-36) almost triangular, tridentate apically, the middle tooth being the longest; dorsal margin of inner face with two or three small subapical teeth; outer face with single, fine seta; mola distinctly cuspidate with numerous oblique, parallel striae dorsally and transverse rows of granulations ventrally. Antenna (fig. 37) short, 3-segmented, situated on a wide circular basal process within which is partly retracted; antennomere I broader than

long with single pore, II slightly longer than I, almost as long as wide, with two pores and short seta, III about $2 \times$ as long as wide with two placoid sensillae, long seta and three sensory pegs on apex; accessory segment about $0.5 \times$ as long as antennomere III, conical and situated on ventral extremity of the antennomere II. Ventral mouthparts, excluding appendages, almost as long as wide, consist of fused labium and maxillae at basal part. Maxilla (fig. 38) with short, suboval cardo; mala broadly obtuse and setose, with a stout spine at inner angle, four pointed setae on dorsal surface, five tapered setae and a rounded sensorium slightly behind them, and a row of long, curved, tapered setae close



Figs. 39-47. *R. rondanii*, mature larva. 39 - labrum-epipharynx, ventral; 40 - tentorium, dorsal; 41 - hypopharynx-prementum, dorsal; 42 - last labial palpomere; 43 - spiracle; 44 - left mesothoracic leg, ventral; 45 - right mesothoracic leg, lateral; 46 - ampullar asperities; 47 - abdominal segments VII-IX, ventral.

to inner margin; maxillary palpi 3-segmented, palpomere I with two pores, II with two setae and single pore, terminal one with a group of minute sensory papillae on apex; articulating area broadly suboval, membranous. Labium (fig. 38) free almost to base of mentum. Submentum slightly longer than wide, widest at base, with four setae. Mentum elongate with two long setae and two pores near posterior margin. Prementum short, broader than long with two setae at base. Labial palpi 2-segmented, basal palpomere cylindrical, as long as wide, with single pore; terminal palpomere (fig. 42) slender, with finger-shaped sensory appendage and group of minute papillae apically. Ligula reduced to small, membranous protuberance with a pair of setae inserted between bases of palpi. Hypopharynx (fig. 41) well developed, membranous, limited posteriorly by a dark, transverse hypopharyngeal sclerome provided with median anterior process and continued on either side by aligamentous process; hypopharyngeal bracon extends to mandibular articulation; lateral portions with minute spines directed forwardly and medially with numerous fine filaments; membranous lingua, posterior to ligula, bears three gustatory sensillae, and superlinguae on each side clothed with short spines. Ventral surface with glabrous postgenal areas mesally, widely separated. Hypostoma with sclerotized mesal margins. Gula membranous and inflated, short, glabrous, narrowed medially. Tentorium (fig. 40) consists of well developed, arcuate posterior tentorial bridge fastening to pregula, and semicircular arms ending freely in cranial cavity.

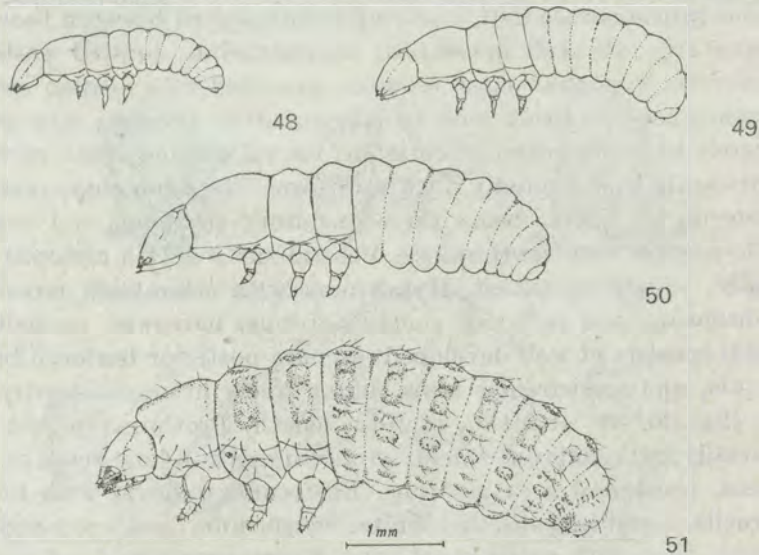
Thorax (fig. 30, 31) about $\frac{1}{3}$ of total length. Prothorax widest medially, covered dorsally by a glabrous shield; pronotum with 6 long setae on each side near margins, prosternal area glabrous. Eusternum suboval with four minute setae; sternella membranous, indefinite; episternum and epimeron reduced, membranous, each with single short seta. Mesothorax about $0.5 \times$ as long as wide, mesonotum with three long setae on each side near margin; tergum with two ampullae bearing fine asperities (fig. 46) and few minute setae on protuberances. The mesothoracic spiracle markedly larger than the abdominal ones. Metathorax $0.3 \times$ as long as wide similar to mesothorax but without spiracles.

Legs (figs. 44, 45) short, 5-segmented, moderately widely separated, shortly setose, without spine-like hairs. Coxa oval, excavated at outer surface for reception of trochanter and femur; trochanter subcylindrical with four setae; femur obliquely attached to trochanter, outer face longest, about as long as trochanter, with six setae; tibiotarsus short, about as long as broad with 8-10 setae around distal margin; ungula short, curved with 2 fine setae.

Spiracles (fig. 43) annular-bicameral, very small, situated laterally on anterior part of mesothorax and each of 1-8 abdominal tergites; atrium nearly spherical; each of two elongate-oval chambers is supported on each side by a row of tooth-like thickenings. Entrance to trachea rounded.

Abdomen (figs. 30, 47) with segments first to eight similar in shape. Tergites I-VI with ampullae, each ampulla with asperities on entire surface and few tiny setae; each tergum with 3 long setae on each side; tergite VII without ampullae,

bearing on each side two anterior, three lateral and four setae on posterior part. Tergite VIII with four setae arranged in transverse row and 10 setae along latero-posterior margin. Segment IX (figs. 31, 47) small and invisible from above, with 10 minute setae; the posterior part bearing subovate patch densely covered with small subconical tubercles. Urogomphi minute, pointed, prod-shaped, widely separated, each with single small seta at base. Pleural disk elongate-oval, protuberant, with single seta. Laterosternite small, indistinct, with single, short seta. Sternum large, subtrapezoidal, glabrous.



Figs. 48–51. *R. rondanii*, larvae. 48 – 2nd instar; 49 – 3rd instar; 50 – 4th instar; 51 – 5th instar taken in prepupal period.

Early instar larvae (Figs. 48–51)

First instar larva unknown. Second to four instars similar to mature one in shape, differing in length of body, head width, and abdomen which is comparatively shorter if compared to mature one. Measurements of the following stages and parts:

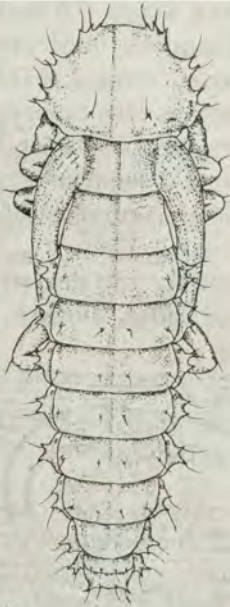
Instar	Body length	Head width
II	2.0–2.2mm	0.35 mm
III	3.0–3.2mm	0.50 mm
IV	3.8–4.0mm	0.55 mm

Pupa (Figs. 52–56)

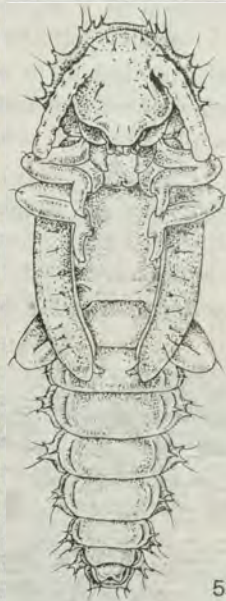
Longitudinally-oval, flattened dorso-ventrally; colour white and epiderm very feebly sclerotized; vestiture consists of setae inserted subapically on each sharp-pointed tubercle.

Head declined ventrally, completely hidden from above; each side with 3 temporal, 1 preantennal and 2 preclypeal setae; antenna thick, moniliform, moderately long, reaching anterior femora; labrum liguliform; labium short, bilobed apically; mandible with two setae on outer face near middle.

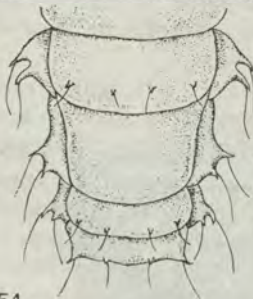
Pronotum almost trapezoidal, almost as long as both meso- and metanotum together, and about $0.75 \times$ as long as wide; disk with shallow median groove, three elongate setigerous tubercles along anterior margin and four lateral tubercles on each side, and a pair of seta arising subapically from paramedian tubercle, which is as high as its basal diameter.



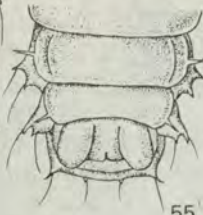
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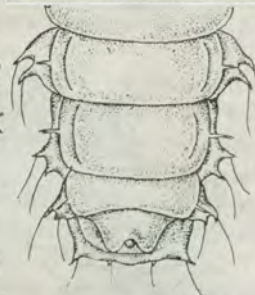
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54



55



56

Figs. 52-56. *R. rondanii*, pupa. 52 - dorsal; 53 - ventral; 54 - abdominal segments VI-IX, dorsal; 55 - female abdominal segments VIII-IX, ventral; 56 - male segments VI-IX, ventral.

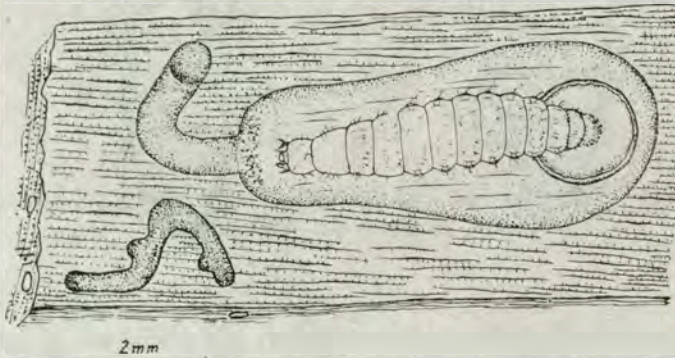
Meso- and metanotum almost rectangular, without setae.

Elytra fitting obliquely at both body sides and passing to the underside; each elytron with 11–13 small, setigerous tubercles, which are pigmented apically, sharply pointed and arranged in irregular row; elytron reaches posteriorly of femora-tibial joint of meta-legs. Wings partly visible, their apices reaching beyond the hind margin of abdominal sternite II.

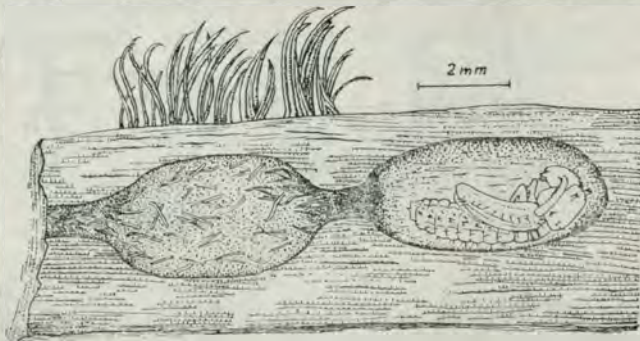
Legs short, widely separated, anterior and middle legs well visible, free, the metalegs partly covered by wings; apical part of each femora and tarsus with single, short seta.

Abdomen composed of 9 segments, equaling about 0.6 body length; abdominal terga I–VI almost equally wide, subsequent ones gradually tapering toward apex, each divided by a shallow groove. Tergum VIII about $0.5 \times$ as long as VII, which is the longest one; each tergum with moderately long setigerous, minute, sharply pointed tubercles, there are two tubercles on tergum I, four on terga II–VI and VIII–IX; each abdominal segment with two long, setigerous, pleural tubercles on each side. Spiracles annular, situated on lateral surfaces of mesothorax and abdominal segments I–VIII.

Ventral side with only 8 abdominal sternites visible; sternite I–II fused; sternite III–VII semirectangular with rounded sides, surface glabrous; sternite



57



58

Figs. 57–58. *R. rondanii*, larval galleries and pupal cell in decayed wood of linden tree.

II-VIII with setigerous, sharply pointed tubercles, each about $3 \times$ as long as its basal diameter.

Male gonopods as in fig. 56, the female ones as in fig. 55.

Biology

Very little is known about biology of *Rhopalocerus*, apart of the European species *R. rondanii* which is described in detail on p. 92. The remaining species are expected to have similar biology, and they seem to be connected with decayed wood infested by ants or termites, and their larvae to feed on decayed matter and fungi.

Distribution:

Europe (1)

East Africa (1)

West and Central Africa (4)

Madagascar (3)

Indo-Australian Region: Java, Sumatra, Philippine Isl. (2); Key Islands (1);
New Guinea (4); Solomon Islands (1).

KEY TO THE SPECIES

1. Antennal club longer than wide, only slightly widened apically (fig. 88); eyes relatively small and less prominent (fig. 2). Europe.
 *R. rondanii* (VILLA et VILLA), p. 92.
- Antennal club much shorter and strongly expanded apically (fig. 82); eyes large, more prominent (figs. 90-95) 2.
2. Pronotal surface entirely punctate, punctures minute, shallow and fairly dense, smaller than eye facets (fig. 96). Median pronotal groove almost absent, pronotal sides rounded. New Guinea.
 *R. simplex* HEINZE, p. 108.
- Pronotal surface at least laterally tuberculate or carinate, median groove usually well developed, and pronotal ornamentation often complicate.
 3.
3. Pronotum markedly transverse, PL/PW = 0.67-0.79. Lateral vertical grooves well visible (figs. 91-93). Elytral punctures small, widely spaced, setae long and narrow. Indo-Australian species only 4.
- Pronotum narrower, PL/PW = 0.88-1.05, often subquadrate. Lateral vertical grooves obsolete or completely absent. Elytral punctures larger and less spaced than by 2 diameters; elytral setae usually shorter, more squamiform 7.
4. Vertical grooves very long, situated partly on raised sides (fig. 109); PL/PW = 0.67-0.69. Solomon Isl.
 *R. solomonensis* sp. n., p. 109.
- Vertical grooves much shorter and situated behind the raised frontal sides (figs. 91, 93); PL/PW = 0.73-0.79 5.

5. Temple very shallowly emarginate (fig. 92); elytral setae orange and long (fig. 72). New Guinea.
 *R. iviei* sp. n., p. 106.
- Temple deeply emarginate (figs. 90, 91); elytral setae shorter and yellowish
 6.
6. Elytral punctures longitudinally separated by 2.8–3 puncture diameters; EL/PL = 1.71. New Guinea.
 *R. papuanus* sp. n., p. 105.
- Elytral punctures longitudinally separated by 1.2–1.8 puncture diameter. EL/PL = 1.53. Key Isl.
 *R. compactus* sp. n., p. 104.
7. Pronotal surface closely punctured or tuberculate, median groove if present without submarginal carinae 8.
- Pronotal surface at least laterally carinate, median groove very well defined, widest at middle usually bordered by submarginal carinae at base 14.
8. Anterior pronotal angles acute, prominent (fig. 89) 9.
- Anterior pronotal angles not prominent (fig. 102) 10.
9. Pronotal tubercles sparse laterally and usually arranged in short rows. Elytral setae shorter (fig. 70). EL/PL = 1.44. Aedeagus as in fig. 84. Philippines, Java, Sumatra.
 *R. bakeri* (HELLER), p. 102.
- Pronotal tubercles close laterally and never arranged in rows. Elytral setae comparatively slender and longer (fig. 71). EL/PL = 1.56. Aedeagus as in fig. 85. Java, Sumatra.
 *R. parallelus* (GROUV.), p. 101.
10. Pronotum entirely tuberculate, or granulose 11.
- Pronotum at least in median part punctate 13.
11. Interspaces along elytral rows flat. Madagascar.
 *R. tuberculatus* sp. n., p. 100.
- Interspaces along elytral rows convex and each form a separate tubercle with an apical setigerous puncture (fig. 97). Africa 12.
12. Pronotal tubercles laterally arranged in definite arcuate or oblique rows (fig. 76), but are not joined to a form of carinae. Aedeagus as in fig. 64. Togo.
 *R. viti* sp. n., p. 96.
- Pronotal tubercles at base and in lateral parts joined to a form of carinae, but those on lateral parts are not visible from dorsal aspect (fig. 75). Aedeagus as in fig. 63. Cameroon.
 *R. camerunensis* sp. n., p. 94.
13. Median groove of pronotum absent, or almost absent, barely traceable at anterior $\frac{1}{4}$. Pronotal punctures at base only slightly larger than eye facets; antennae slender with tarsomere III subquadrate; elytral punctures 1.5 diameters apart. Aedeagus as in figs. 79, 80. Madagascar.
 *R. minimus* sp. n., p. 99.
- Median groove on pronotum and vertex well visible (fig. 83). Pronotal punctures at base 1.5–2 × as large as eye facets; antenna stouter with antennomere III markedly transverse; elytral punctures longitudinally separated by less than one diameter. Aedeagus as in fig. 81. Madagascar.
 *R. setulosus* (FAIRM.), p. 98.

14. Pronotal ornamentation as in fig. 101. New Guinea.
 *R. novaguineae* HEINZE, p. 107.
 — Pronotal ornamentation different. Africa 15.
15. Head with median groove on vertex (fig. 61); antenna stout, with antennomeres IV–IX markedly transverse. EL/EW = 1.25–1.30. Cameroon, Ghana, Zaire.
 *R. africanus* (GROUV.), p. 94.
 — Head without median groove (fig. 60); antenna much slender (fig. 60) with antennomeres IV–IX elongate or subquadrate 16.
16. Pronotum as in fig. 60. EL/EW = 1.6; EL/PL = 1.75. Cameroon.
 *R. mirei* sp. n., p. 97.
 — Pronotum as in fig. 62. EL/EW = 1.40, EL/PL = 1.53. Ethiopia.
 *R. anytus* HINTON, p. 94.



Fig. 59. *Rhopalocerus rondanii* (VILLA et VILLA).

REVIEW OF THE SPECIES

Rhopalocerus rondanii (A. VILLA et J. B. VILLA)

(Figs. 2-5, 6-10, 14-17, 87, 88)

Monotoma? Rondanii A. VILLA et J. B. VILLA, 1833: 36. Type locality: "Italy". (Type not examined).

Rhopalocerus setosus W. REDTENBACHER, 1842: 22. Type locality: "Austria". (Type not examined).

Individuals of this species are easily distinguished from other *Rhopalocerus* by the comparatively smaller eyes (fig. 2), the antennal club comparatively elongate and not expanded apically (fig. 88), the dorsal setae very short and scale-like (fig. 71) and the first tarsomere comparatively longer than in remaining species. This is the only European member of *Rhopalocerus*.

Aedeagus as in fig. 87.

Length 2.8-3.2 mm.

Distribution: France, FRG, GDR, Austria, Switzerland, Hungary, Roumania, Bulgaria, Yugoslavia, Greece, Italy, USSR (Ukraine), Poland.

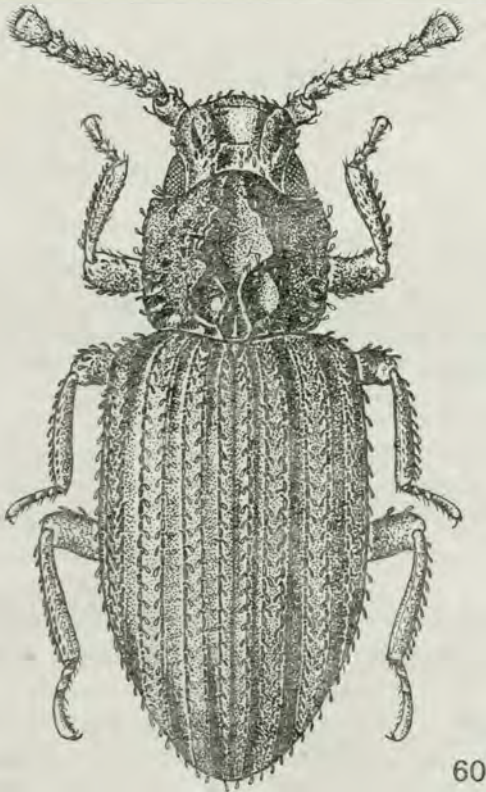
⁶⁶ **Biology.** *R. rondanii* is usually found in old, decaying trunks of deciduous trees (*Quercus*, *Populus*, *Tilia*, *Ulmus*, *Carpinus*, *Castanea*, *Juglans*) on warm stands, especially on forest edges, in parks, gardens and single road-side trees. Adults and larvae have been collected several times in hollows of old trees, everywhere in a company with ants of *Lasius brunneus* (LATR.). The adults are usually found in ants galleries and cavities. It seems that it is really myrmecophilous beetle. Several adults introduced into laboratory ant-nests with *Lasius brunneus* (LATR.) were completely ignored by ants and walked among them slowly on a dignified manner, and lived in the nest about four months, and ants never attacked nor threatened them.

The hibernating adults emerge from their hiding places in the spring and continue feeding for several weeks, and usually survive till September. They apparently feed on moist decayed wood and molds in old galleries of ant nests. The first copulation in the laboratory was observed on May 12th; the male sitting far back on the female dorsum. Eggs have never been observed, but may well escaped our notice owing to their probable small size. The species apparently requires two years to be mature, since in late autumn larvae of different sizes have been taken in the same place; it is probable that during favourable conditions the larval period might be shortened to one year.

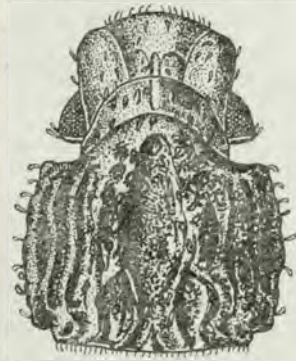
The younger larvae usually feed on decaying wood, making simple galleries and they penetrate only 0.5-3 cm in deep of substrate. Burrows are nearly round in cross-section, 0.5-3.0 mm in diameter, and packet throughout their length with fine, powdery particles of wood and frass. The larvae thrives only in moist wood, scraping the woody tissue and scooping it into the mouth. The larval

mandible has scoop-like tips and large molar part, which bear series of ridges, capable of crushing wood material. Numerous filaments and conical processes in the mouth cavity percolate and filter the already swallowed substrate. The mature larvae left somehow whitish, powder excrements, which are glued together in a flat regular disk (fig. 57).

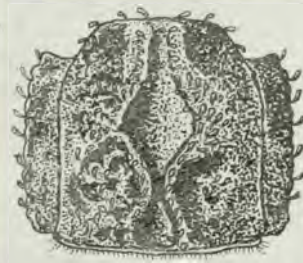
When mature, the larva starts to enlarge the tunnel, and excavate and elongate-oval camera in which it feeds, and further hibernates. In the spring larva excavates a pupal cell, that consists of 7×3 mm, oval excavation (fig. 58), 0.5–3.0 cm from wood surface, usually close to the point to where the larval camera started. Pupation occurs between May and June. The pupal stage lasts about 10 days. The newly emerged beetles remain teneral for one to two weeks, resting in the pupal chamber for this period. The adults feed before hibernation and then overwinter near ant nests, under loose bark, in wood cervices or in galleries of ants or other dendrophilous insects, and apparently not reproducing until the following spring. (Collecting and rearing data, see Appendix 1).



60



61



62

Figs. 60–62. 60 — *R. mirei*, dorsal; 61 — *R. africanus*, head and pronotum; 62 — *R. anytus*, pronotum.

Rhopalocerus anytus HINTON

(Figs. 62, 69)

Rhopalocerus anytus HINTON, 1941: 151. Type locality: "Abyssinia, Jem-Jem Forest". (Holotype, sex undetermined, examined, BMNH).

This species is characterized by the uniformly brown colour, the short, oval form of body and the elytral setae wide and squamiform (fig. 69). The pronotal ornamentation (fig. 62), and the pronotum only $0.85 \times$ as long as wide, with explanate sides serve as good characters to distinguish this species from remaining African *Rhopalocerus*.

Length 3.5 mm.

Material examined. Ethiopia: Djem-Djem Forest, 8000ft, 7. X. 1926, H. SCOTT (BMNH, holotype); Badabuna Forest, 15 km E. of Jimma, 1870 m, 18. VII. 1971, R. O. S. CLARKE (MRAC).

Biology. The holotype has been taken from decaying wood.

Rhopalocerus africanus GROUVELLE

(Figs. 61, 65, 68)

Rhopalocerus africanus GROUVELLE, 1914: 133. Type locality: "Zaire, Tuevo". (Holotype, sex undetermined, examined, MRAC).

This species is similar to *R. anytus* HINT. having the pronotum longitudinally carinate and short-oval body shape. But it is easily distinguishable by the pronotal ornamentation (fig. 61), the median groove on the vertex and the antennae being shorter and stouter if compared to *anytus*.

Aedeagus as in fig. 65.

Length 2.6–2.8 mm.

Material examined. Cameroon: John-Albrechtshöhe, 7. X.–22. XI. 1898, CONRADS (ZMB); Ghana: Ashanti Region, Bobiri Forest reserve, 320 m, S. ENDRÖDY-YOUNGA (TMB); Zaire: "Tuevo" (MRAC, holotype).

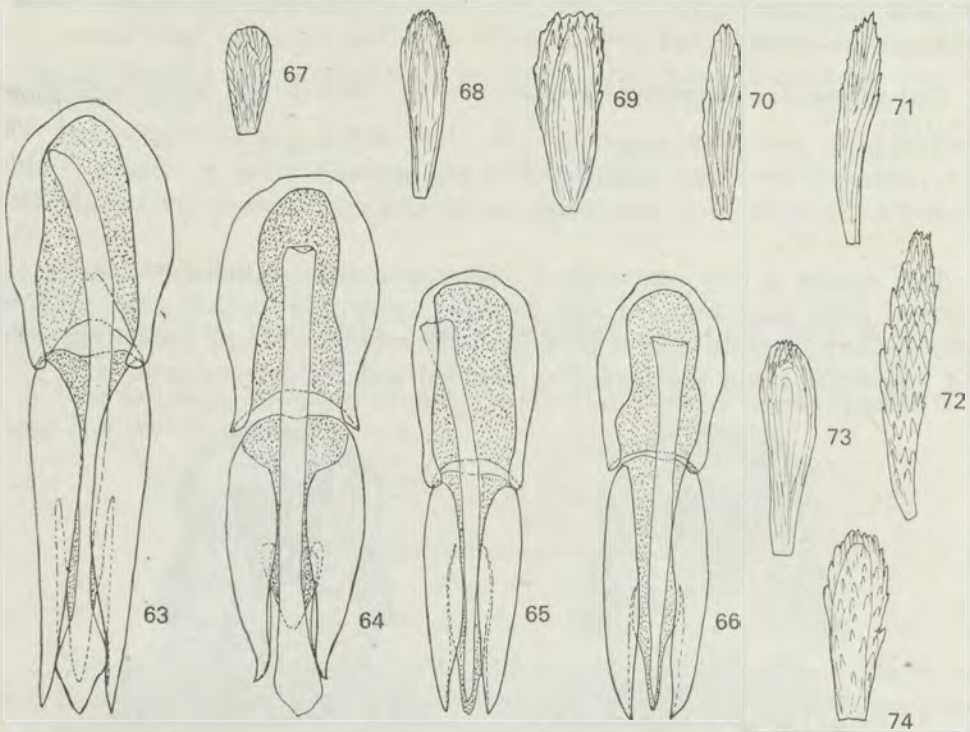
Biology unknown; one specimen from Ghana has been collected by sifting method.

Rhopalocerus camerunensis sp. n.

(Figs. 63, 75, 98)

This species is distinguished from *R. viti* by the longer and almost parallel-sided pronotum, the pronotal punctures in lateral parts joined to a form of

short carinae, the well developed median pronotal groove and the narrow scutellum. It differs from the Malgassy *R. tuberculatus* sp. n. having subbasal carinae on pronotum and the elytral interspaces between striae punctures raised.



Figs. 63-74. 63-66 — aedeagus, dorsal; 67-74 — elytral setae, all drawn to the same scale. 63 — *R. camerunensis*; 64 — *R. viti*; 65, 68 — *R. africanus*; 66 — *R. mirei*; 67 — *R. rondanii*; 69 — *R. anytus*; 70 — *R. bakeri*; 71 — *R. parallelus*; 72 — *R. iviei*; 73 — *R. papuanus*; 74 — *R. compactus*.

Colour piceous, surface dull; pronotal and elytral surface sparsely covered by semierected, yellowish, narrow and elongate setae.

Head $0.73 \times$ as long as wide, with anterior clypeal margin truncate medially; frontal sides raised, without median or sublateral carinae, surface between them weakly tuberculate, tubercles about $2 \times$ as large as eye facet.

Pronotum $1.05 \times$ as long as wide, almost parallel-sided (fig. 75). Anterior angles acute, but only slightly prominent, posterior ones obtusely rounded, the lateral edges crenulate to denticulate. Surface with median groove not well defined, widest and deepest at the middle, gradually becomes obsolete at anterior $1/4$. Tubercles joined at base and form an "X" mediobasally and to a form of irregular and short carinae laterally, but these are not visible from above. Tubercles at median part, along the median groove, somewhat transverse and about $2 \times$ as large as those of lateral parts. Scutellum narrow, pentagonal.

Elytra $1.55 \times$ as long as wide and $1.4 \times$ as long as pronotum. Strial punctures deep and rounded, separated longitudinally by 1–1.5 diameter; interspaces tuberculate as in fig. 98. Intervals slightly narrower than transverse diameter of strial puncture.

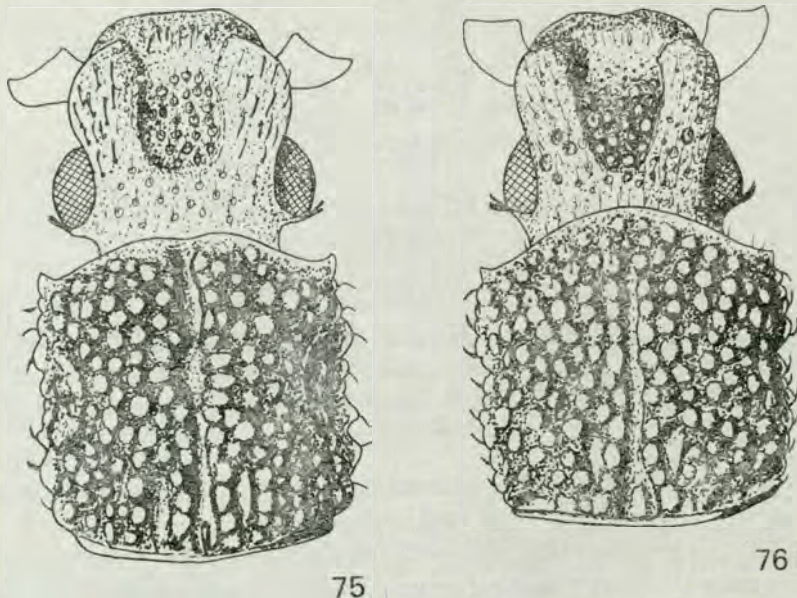
Aedeagus as in fig. 63.

Holotype ♂: Cameroon: Menguémé, 2. IV. 1968, B. DE MIRÉ, Test Cacao (MNHN).

Rhopalocerus viti sp. n.

(Figs. 64, 76, 99)

This species is very similar to *R. camerunensis* but is distinguished by the pronotal sides more rounded and scarcely emarginate medially, the pronotal tubercles not joined to a form of carinae, the median pronotal groove narrower and less defined and the scutellum rounded and more transverse.



Figs. 75–76. Head and pronotum. 75 – *R. camerunensis*; 76 – *R. viti*.

Colour dark-brown, surface dull, pronotal and elytral setae elongate, narrow, orange-yellow.

Head $0.66 \times$ as long as wide; anterior clypeal margin rounded laterally, almost truncate medially; frontal sides strongly raised; vertical grooves almost absent, the median one reduced to a shallow pit anteromedially; surface irregularly tuberculate and punctate, punctures about $1.5\text{--}2 \times$ as large as eye facet, tubercles, especially frontal ones slightly larger.

Pronotum as long as wide, with lateral margins slightly emarginate medially. Anterior angles acute, not prominent, posterior ones obtusely rounded (fig. 76); surface closely tuberculate, all tubercles of the same size, slightly smaller than base of scutellum, only along, almost complete, median groove arranged in rows, in lateral part tubercles arranged in short rows but never clearly joined as carinae; median groove obsolete at anterior $1/4$, not widened medially. Scutellum rounded, transverse.

Elytra $1.6 \times$ as long as wide and $1.43 \times$ as long as pronotum; strial punctures deep, separated longitudinally by about 1.2–1.8 puncture diameter, those interspaces tuberculate (fig. 99); intervals between rows about 1–1.5 puncture diameter.

Aedeagus as in fig. 64.

Holotype ♂: Togo, Palmé, Forêt de Klouto, 20–24. IV. 1974, S. VIT (coll. S. VIT).

This species is dedicated to our friend and discoverer of this species, Stanislav VIT, of Geneva.

Rhopalocerus mirei sp. n.

(Figs. 60, 66)

The species is most similar to *R. anytus*, having a similar body shape, slender antennae and the elytral setae distinctly squamiform. The median pronotal groove is more prominent in *R. mirei*, the lateral portions of the pronotum not explanate and with a different ornamentation (figs. 60, 62).

Colour brown, surface moderately shiny; dorsal setae yellow and markedly squamiform as in fig. 69.

Head $0.74 \times$ as long as wide with comparatively slender and longer antennae if compared to *R. africanus*; clypeus truncate medially, rounded laterally; lateral frontal edges carinate, surface between raised sides tuberculate; median vertical groove narrow and feebly defined.

Pronotum $0.9 \times$ as long as wide, almost parallel-sided with ornamentation as in fig. 60. Anterior angles acute, slightly prominent, posterior ones obtusely rounded; pronotal tubercles barely visible near median groove; laterally there are complicate system of longitudinal carinae, cells and separate tubercles as in fig. 60. Scutellum trapezoidal, transverse.

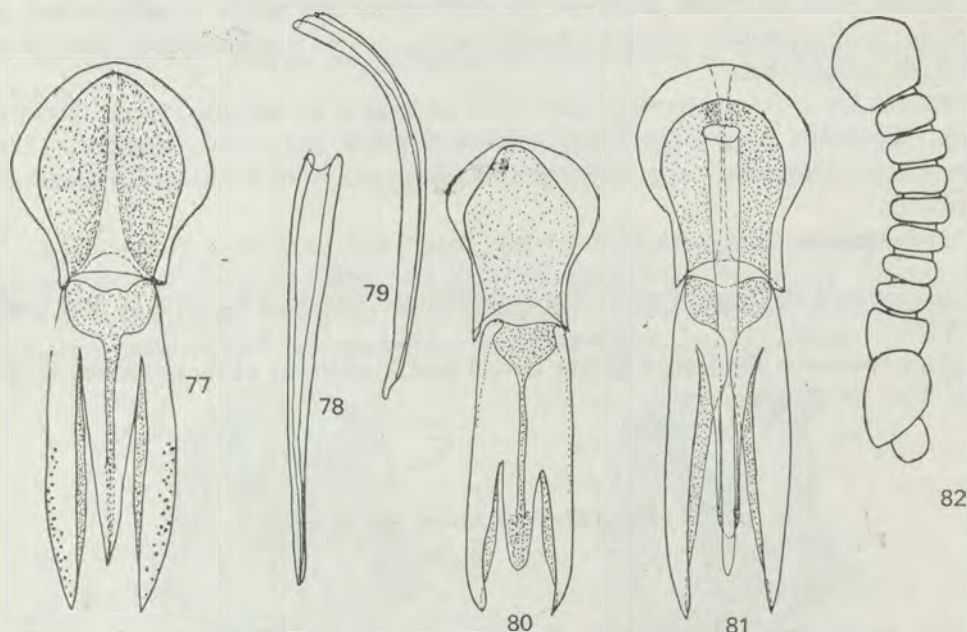
Elytra about $1.6 \times$ as long as wide and $1.75 \times$ as long as pronotum, markedly narrowing at apical one-third. Strial punctures round, deep and separated longitudinally by about one diameter, their interspaces slightly tuberculate. Intervals as wide as puncture diameter.

Aedeagus as in fig. 66.

Holotype ♂: Cameroon, Forêt de Bafut, Nguemba, 17. XI. 1969, B. DE MIRÉ, tamisage (MNHN).

Paratype ♀: same data as holotype (IZPAN).

The species is named after Mr. Bruneau de MIRÉ who collected the type serie.



Figs. 77–82. 77, 80 – tegmen, dorsal; 78 – median lobe, dorsal; 79 – median lobe, lateral; 81 – aedeagus, dorsal; 82 – antenna.

77–78 – *R. tuberculatus*; 79–80 – *R. minimus*; 81–82 – *R. setulosus*.

Rhopalocerus setulosus (FAIRMAIRE) **comb. n.**

(Figs. 11, 81–83)

Corticoides setulosus FAIRMAIRE, 1898: 396. Type locality: "Madagascar, Subérbieville". (Lectotype, examined, MNHN). — HETSCHKO 1930: 106; DAJÓZ 1980: 144 (Lectotype designation); ŚLIPIŃSKI 1985: 615.

This species is distinguished from *R. tuberculatus* by its deeply punctate instead of closely tuberculate the pronotal surface with narrow median groove. Despite of FAIRMAIRE's and DAJÓZ's descriptions and figures, this species has also clearly four segmented tarsi (fig. 11), with basal segment short but visible. The elytral punctures are large and elongate (fig. 83) and longitudinally separated by less than one diameter. The elytral setae are orange-yellow, short. *R. setulosus* may be distinguished from *R. minimus* by the stouter antennae with the antennomere III markedly transverse (fig. 82), the pronotal punctures larger and separated by less than one diameter.

Aedeagus as in fig. 81.

Length: 3.5–3.9 mm.

Material examined. Madagascar: "Madag. Perrier", "*Corticoides setulosus* FAIRM. Madag.", "Type", "coll. L. FAIRMAIRE", (Lectotype label by S. A. ŚLIPÍŃSKI, MNHN); Mt. D'Ambre, Coll. SICCARD (MNHN, IZPAN); Diego SUAREZ, coll. GROUVELLE (MNHN); "Madagascar", no more detailed data (ZMB).

Biology unknown, but the last specimen from ZMB has been originally mounted on a single card with a termite.

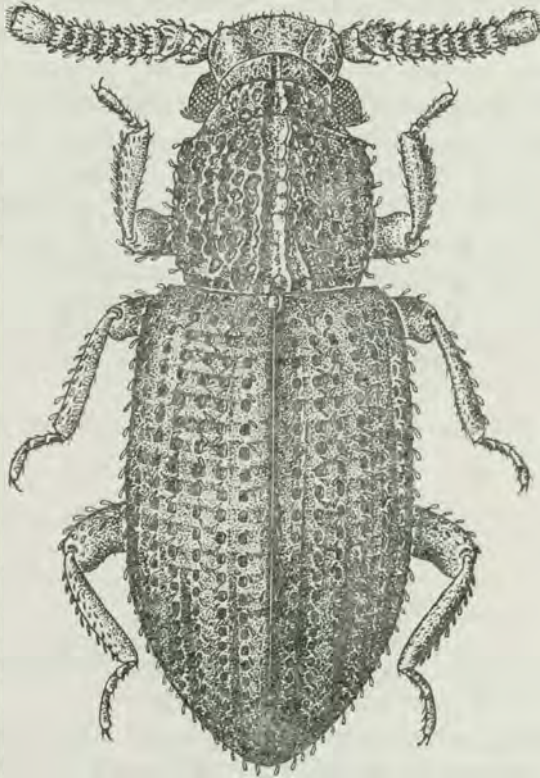


Fig. 83. *Rhopalocerus setulosus* (FAIRMAIRE).

Rhopalocerus minimus sp. n.

(Figs. 79, 80)

Corticoides setulosus: DAROZ, 1980: 144 (part.).

This species resembles *R. setulosus* in general body shape, the pronotal and elytral structures, but may be distinguished by the lack of the pronotal median groove, the antennae slender with the antennomere III subquadrate, the widely separate elytral punctures and the structure of aedeagus.

Colour almost black with head, antennae and legs brownish; surface dull; dorsal setae short, yellow.

Head $0.75 \times$ as long as wide; anterior clypeal margin widely but very feebly emarginate medially, surface punctured; frons sparsely punctate anteriorly, rather deeply and closely between raised sides; vertex deeply punctate, punctures somewhat elongate, irregular and about as large as eye facets. Antenna with antennomere III subquadrate.

Pronotum $0.97 \times$ as long as wide, at base markedly narrower than elytral bases, widest at anterior angles, slightly narrowing toward base; lateral margins faintly denticulate; anterior angles acute, not produced, posterior ones almost rectangular. Pronotal surface irregularly punctate, punctures barely traceable, irregular, fairly deep and close, their interspaces form slightly raised cell-system. Median groove almost absent, barely traceable at basal and anterior parts as an indistinct smooth line. Scutellum slightly transverse, pentagonal.

Elytra $1.41 \times$ as long as wide and $1.52 \times$ as long as pronotum; stria punctures slightly elongate, much smaller than base of scutellum, separated longitudinally by about 1.2–1.5 diameter, the interspaces somewhat convex, but not clearly tuberculate.

Aedeagus as in figs. 79, 80.

Length 2.75 mm.

Holotype ♂: Madagascar, Tananarive, Lambertson, ex coll. R. OBERTHÜR (MNHN).

Rhopalocerus tuberculatus sp. n.

(Figs. 77, 78)

Corticoides setulosus: DAJOZ, 1980: 144 (part.).

This species is distinguished from other Malgassy *Rhopalocerus* by its coarsely tuberculate, instead of punctate pronotal surface.

Body dark-brown; surface almost dull; dorsal setae short, orange-yellow.

Head $0.68 \times$ as long as wide with rather prominent eyes and reduced temples if compared to *R. setulosus*; anterior clypeal margin scarcely emarginate medially, and anteriorly margined by a fine line; frons sparsely punctate anteriorly, tuberculate between raised sides, vertex coarsely tuberculate, tubercles about 2–2.5 \times larger than eye facets.

Pronotum $0.97 \times$ as long as wide and entirely, closely granulate, granules at median part $1.5 \times$ larger than those on vertex and become smaller laterally; apart of basal admedian carinae, granules not joined into carinae. Median groove not well defined, marked as broad shallow median depression and shallow smooth grooves anteriorly and posteriorly. Scutellum transverse, pentagonal.

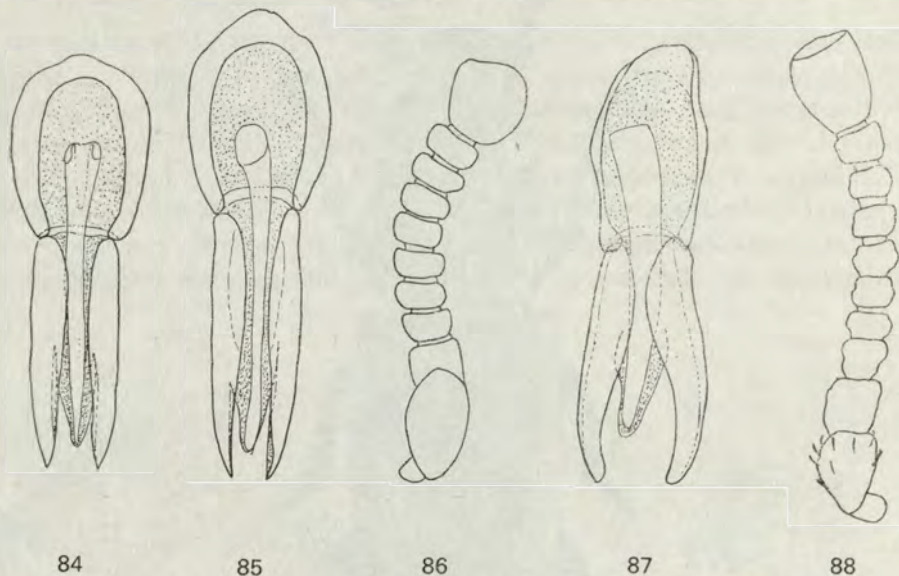
Elytra $1.69 \times$ as long as wide, and $1.54 \times$ as long as pronotum, pronotal punctures and intervals as in *setulosus*.

Aedeagus as in figs. 77, 78.

Length 3.8–3.96 mm.

Holotype ♂: Madagascar, Monte D'Ambre, 1930, coll. SICARD (MNHN).

Paratypes: 1♀, 1♂, with the same data as holotype (MNHN, IZPAN).



Figs. 84–88. 84, 85, 87 — aedeagus, dorsal; 86, 88 — antenna. 84 — *R. bakeri*; 85–86 — *R. parallelus*; 87–88 — *R. rondanii*.

Rhopalocerus parallelus (GROUVELLE)

(Figs. 71, 85, 86, 89)

Apistus parallelus GROUVELLE, 1910: 223. Type locality: "Toegoe, Java Occid.". Lectotype ♂, here designated, (RMNL). — In *Rhopalocerus*: HETSCHKO 1930: 45.

This species is very close to *R. bakeri* but is distinguished by the longer and more parallel-sided body (fig. 89), and the elytral setae (especially at apical part) comparatively longer and narrower (figs. 70, 71). *R. bakeri* has comparatively more prominent eyes and the frontal sides more expanded anteriorly.

Aedeagus as in fig. 85.

Length 3.7–3.8 mm.

Material examined. Lectotype: "Java Occidental Toegoe, J. D. PASTEUR" (hand on circle label), "*Apistus parallelus* Ty GROUV." (GROUVELLE's hand), "Col. No 1" (printed), "Mus. Leiden, *Apistus parallelus* Det. GROUV." (museal label), "Lectotype ♂ *Apistus parallelus* GROUVELLE, S. A. ŚLIPIŃSKI, 1986". (Aedeagus dissected and preserved in microvial).

Paralectotypes: "Java Occid. Sukabumi, 2000', 1893, H. FRUHSTORFER" (printed) — ex coll. A. GROUVELLE (1♀ MNHN); "Sumatra, Palembang" (printed), "*Apistus parallelus* Ty GROUV." (hand) — ex coll. A. GROUVELLE (1♀ MNHN).

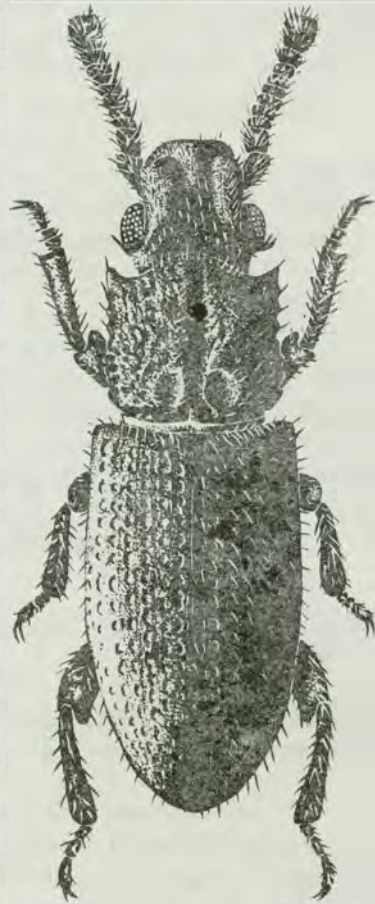


Fig. 89. *Rhopalocerus parallelus* (GROUVELLE).

Rhopalocerus bakeri (HELLER) **comb. n.**

(Figs. 70, 84)

Rhopalocerophanus Bakeri HELLER, 1915: 307. Type locality: "Philippine Isl., Luzon, Mt. Makiling". (Holotype not examined — Mus. Dresden?). — HETSCHKO 1930: 45.

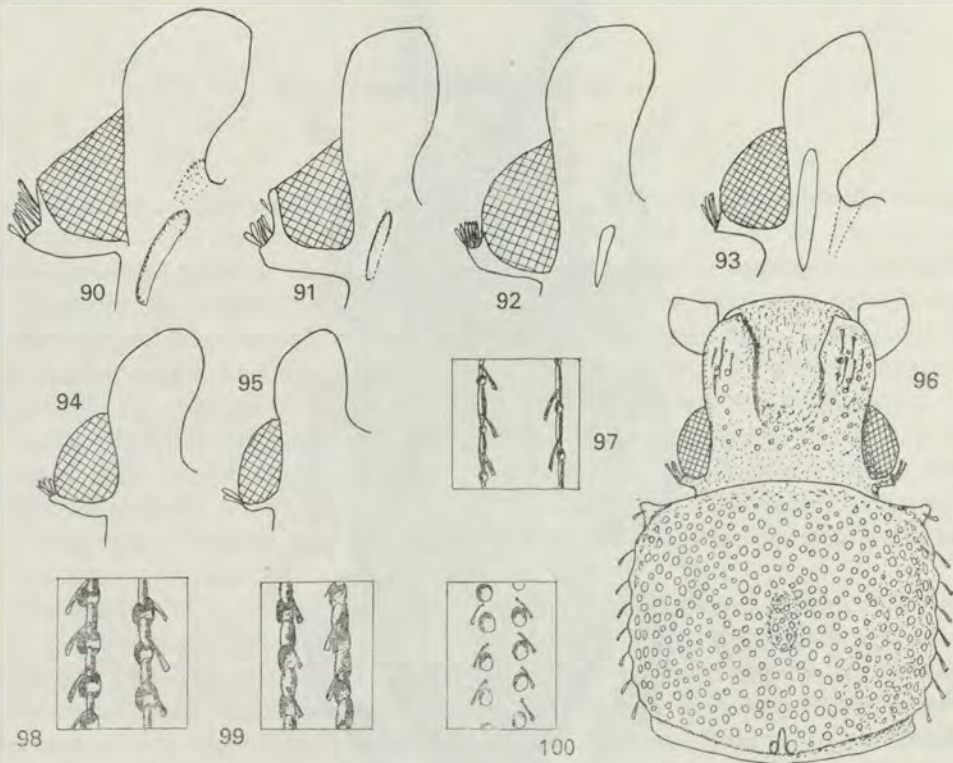
This species is very similar to *R. parallelus* but is distinguished by the broader and shorter body, the elytral setae comparatively shorter and wider apically (fig. 70). *R. parallelus* also has comparatively smaller eyes and the frontal sides less expanded anteriorly, in addition to the distinctive genitalia discussed under that species.

Aedeagus as in fig. 84.

Length 3.5 mm.

Material examined. Sumatra, Lianagas, coll. DOHRN, det. and comp. with type by E. HEINZE, ex coll. Mus. Stettin (1♂ IZPAN); Boekit Gabah, II. 1919, H. LUCHT (1♀ ZMB); Perak, Gounaong-Boubou, W. DOHERTY (1♀ MNHN). Java: Goen Hulimoen, 1937, coll. R. OBERTHÜR (1♀ MNHN, 1♀ IZPAN).

Remarks. *R. bakeri*, as it is here delimited, is somewhat variable and may represent a complex of two related species, which are sometimes not clearly separated from *R. parallelus*. Characters exhibiting the most noticeable variation are: size and shape of scutellum, size and separation of elytral punctures and the length of elytral setae. The scutellum of a male from Lianagas (IZPAN) is noticeably narrower than in remaining female specimens, which is also much widened apically; elytral punctures varies in size and separation, but usually they are slightly elongate and as wide as base of scutellum (male) or markedly



Figs. 90–100. 90–95 – left temple and eye, diagrammatic; 96 – *R. simplex*, head and pronotum; 97–100 – elytral puncturation. 90, 97 – *R. papuanus*; 91 – *R. compactus*; 92 – *R. iviei*; 93 – *R. solomonensis*; 94 – *R. tuberculatus*; 95 – *R. setulosus*; 98 – *R. camerunensis*; 99 – *R. viti*; 100 – *R. simplex*.

narrower (females); the male punctures are longitudinally separated by 0.8–1 diameter, while the female ones by 1.2–1.5 diameter. Also the Lianagas male has the shortest elytral setae, while the remaining females have them slightly longer, but still much shorter than those of *R. parallelus*. Much more material and available males are necessary to resolve this problem properly.

Rhopalocerus compactus sp. n.

(Figs. 74, 91, 106)

Body almost black, surface dull; dorsal setae short and narrow, yellowish (fig. 74).

Head $0.61 \times$ as long as wide; anterior clypeal margin straight; frontal sides raised; vertex with well visible lateral and fine median grooves, lateral grooves

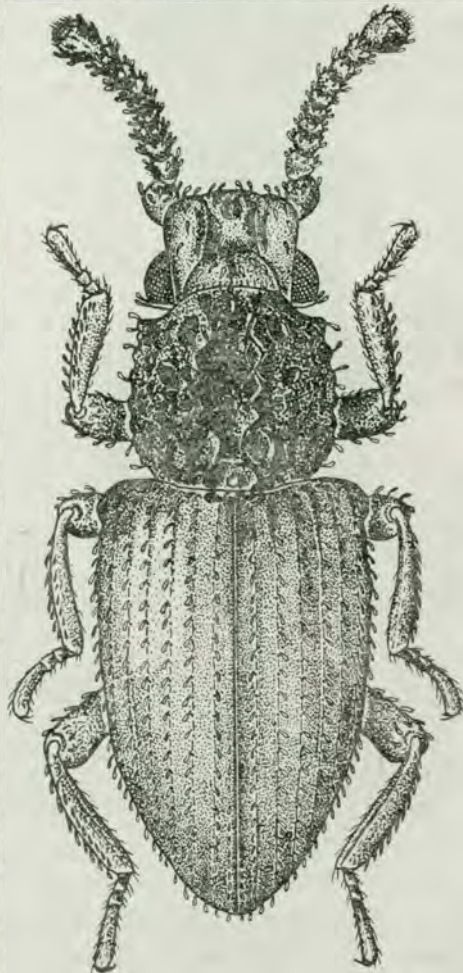


Fig. 101. *Rhopalocerus novaguineae* HEINZE.

short, reaching anteriorly up the middle of eyes, surface between grooves punctate, setose. Temples large, deeply emarginate as in fig. 91.

Pronotum $0.78 \times$ as long as wide with lateral sides almost straight, the margins crenulate. Anterior angles almost rectangular, unproduced, posterior ones rectangular. Pronotal surface and shape very similar to *R. iviei*, with median groove obsolete anteriorly and posteriorly, not well defined; laterally tubercles joined into row of somewhat carinate appearance, this leaves narrow, smooth explanate margin. Scutellum transverse, pentagonal.

Elytra $1.45 \times$ as long as wide and $1.53 \times$ as long as pronotum; striae punctures fairly deep and separated longitudinally by 1.5–2 diameters, interspaces slightly carinate.

Aedeagus as in fig. 106.

Length 4.07 mm.

Holotype ♂: Key Island (ZMB).

This species is very similar to *R. papuanus* and *R. iviei*, see these species for differences.

Rhopalocerus papuanus sp. n.

(Figs. 73, 90, 97, 103, 107)

This species is very similar to *R. compactus* but is distinguished by the wider and shorter lateral vertical grooves, the pronotal sides not at all explanate, and the pronotal tubercles smaller, more frequent and not arranged in a definite rows laterally, the elytral punctures smaller and widely separated longitudinally and the comparatively longer elytra. *R. iviei* has a more prominent anterior pronotal angles, longer and orange the elytral setae (figs. 72, 73), weakly emarginate temple, in addition to the distinctive genitalia discussed under that species.

Colour brownish-black, surface almost dull. Head transverse, about $0.64 \times$ as long as wide. Anterior clypeal margin truncate medially. Frontal grooves and raised sides as in fig. 90. Vertex with lateral grooves shorter but wider than those of *R. compactus*, median groove very narrow, barely visible. Surface between grooves punctate, setose.

Pronotum $0.73 \times$ as long as wide, almost parallel-sided. Anterior angles finely acute and prominent, posterior ones almost rectangular. Median groove narrow and obsolete at anterior $\frac{1}{5}$ and basal $\frac{1}{3}$, admedian grooves or carinae indistinct, tubercles in lateral parts not arranged in any definite pattern, sometimes arranged in short rows; margins not explanate. Scutellum narrowly trapezoidal, almost as long as wide.

Elytra $1.51 \times$ as long as wide and $1.7 \times$ as long as pronotum; striae punctures very small and separated longitudinally by 3–4 diameters, interspaces longitudinally carinate (fig. 97).

Aedeagus as in fig. 103.

Length 4.1–4.5 mm.

Holotype: New Guinea, Hatam, VII. 1875, BECCARI (MCSN).

Paratypes: as holotype (1, MCSN); Kelesi, N. G. mer., XI/XII 1890 L. LORIA (1♂, IZPAN); S.E. Huyibagu, V–IX. 1891, L. LORIA (1, IZPAN); S. E. Moroka, 1300 m, VII–IX. 1893 L. LORIA (1, MCSN).

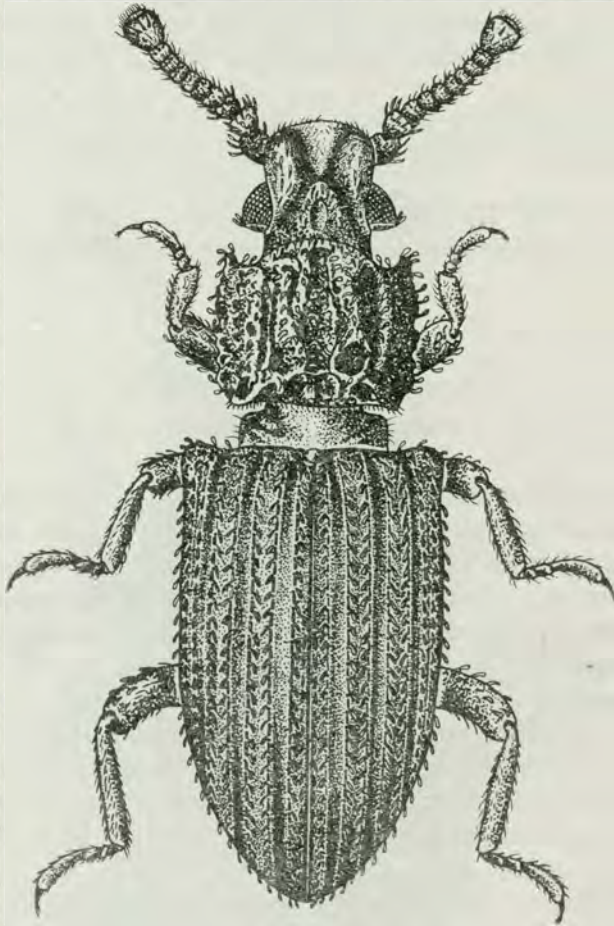


Fig. 102. *Rhopalocerus iviei* sp. n.

Rhopalocerus iviei sp. n.

(Figs. 72, 92, 102, 104)

This species is distinguished from both *R. compactus* and *R. papuanus* by the markedly longer and orange elytral setae and the temple only weakly emarginate.

Colour brown to nearly black, surface feebly shiny; dorsal setae (fig. 73) elongate, narrow and orange.

Head transverse, about $0.7 \times$ as long as wide; anterior clypeal margin shallowly but widely emarginate medially, surface punctured. Frontal sides strongly raised, bordered by a deep groove. Vertex with very fine median and short lateral grooves as in fig. 92. Temple weakly emarginate.

Pronotum $0.8 \times$ as long as wide with shallow, often incomplete median groove, basally with short admedian ones (fig. 102), and laterally with tubercles arranged in different manner. Anterior angles acute, prominent, posterior ones obtusely acute, slightly prominent. Scutellum narrow, trapezoidal, almost as long as wide.

Elytra $1.69-1.71 \times$ as long as wide and $1.78-1.82 \times$ as long as pronotum. Strial punctures barely visible, longitudinally separated by 1.5-2 diameters, interspaces longitudinally carinate (fig. 102).

Aedeagus as in fig. 104.

Length 5.16-5.25 mm.

Holotype: Papua New Guinea, EH Province, Kainantu, Onerunka, 25. X. 1979, W. G. ULLRICH (MHNG).

Paratypes: same data as holotype but 26. X. 1979 (M. IVIE coll.); as above but 18. VIII. 1979 (IZPAN); as above, XI. 1979 (MHNG, IZPAN), 22. V. 1979, 1. II. 1980, II. 1980 (MHNG, IZPAN); Okapa, 22. VIII. 1969, R. HORNABROOK (RMNL).

This species is dedicated to our dear friend and colleague Dr. Michael A. IVIE of the Montana State University, USA.

Rhopalocerus novaguineae HEINZE

(Fig. 101)

Rhopalocerus novaguineae HEINZE, 1944: 4. Type locality: "New Guinea, Sattelberg, Huon Golf". (Holotype examined - TMB).

Individuals of this species are elongate and narrow (fig. 101); the frontal sides are slightly raised and the vertical grooves almost obsolete; the pronotal ornamentation consists of very deep and wide median groove and rather large punctures than granules or tubercles laterally. The colour is almost black and surface moderately shiny. The elytral punctures are separated longitudinally by 1.5-2 diameters and their interspaces slightly convex.

Length 2.78 mm.

Material examined: New Guinea, Sattelberg, Huon Golf, 1899, BIRÓ (TMB, holotype).

Rhopalocerus simplex HEINZE

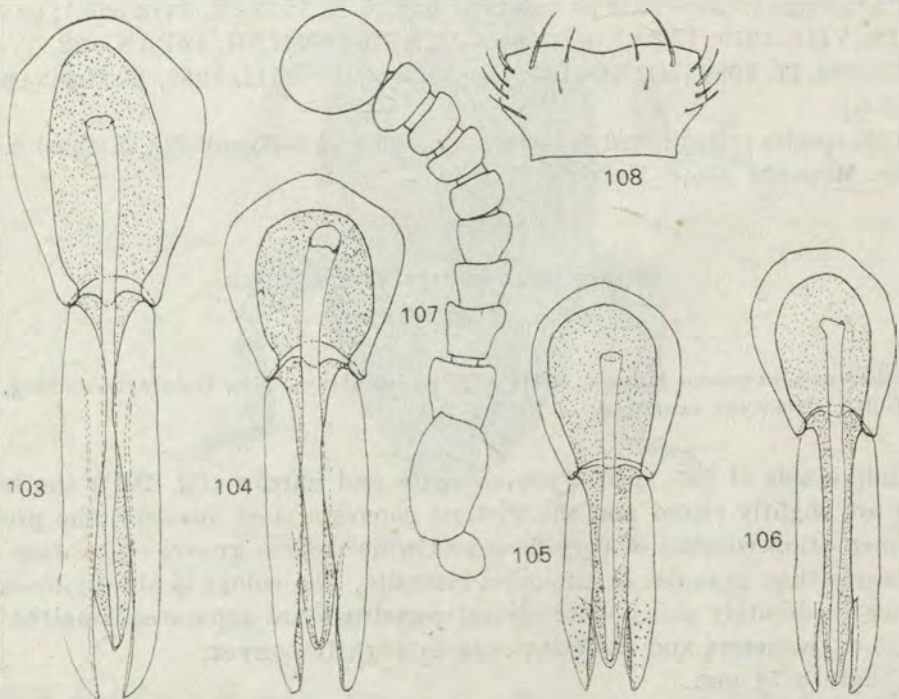
(Figs. 96, 100)

Rhopalocerus simplex HEINZE, 1944: 6. Type locality: "New Guinea, Seleo Berlinhafen". (Holotype examined — TMB).

This species is characterized by the uniform brownish colour, weakly raised frontal sides and obsolete vertical grooves, reduced temple and the uniformly punctured pronotal surface. The pronotal punctures are somewhat variable in size, subcontiguous and shallow. The median groove almost obsolete, marked as a shallow barely limited median elongate depression (fig. 96). The pronotal sides are rounded, weakly denticulate and the anterior angles not prominent. The elytral punctures as large as pronotal ones and longitudinally separated by about one diameter, their interspaces are flat (fig. 100). The elytral setae are long and narrow, slightly widened apically.

Length 2.84 mm.

Material examined: New Guinea, Seleo Berlinhafen, 1896, BIRÓ (TMB, holotype).



Figs. 103–108. 103–106 — aedeagus, dorsal; 107 — antenna; 108 — mentum, ventral, 103, 107 — *R. papuanus*; 104 — *R. iviei*; 105–108 — *R. solomonensis*; 106 — *R. compactus*.

Rhopalocerus solomonensis sp. n.

(Figs. 93, 105, 108, 109)

This is the most distinctive species of the genus, it is easily distinguished by the comparatively short and broad pronotum and elytra, the lateral vertical grooves unusually long and deep and situated on raised frontal sides (fig. 109).

Colour reddish-brown to brown, dorsal surface feebly shiny; elytral setae narrow, moderately elongate and yellow.

Head $0.64 \times$ as long as wide with anterior clypeal margin scarcely emarginate apically. Frontal sides raised, surface between them punctured, setose. Median vertical groove barely traceable, the lateral ones long and wide and situated partly on raised sides (fig. 93).



Fig. 109. *Rhopalocerus solomonensis* sp. n.

Pronotum $0.67 \times$ as long as wide with lateral sides arcuate and margins finely crenulate. Ornamentation as on fig. 109. Median groove variable, sometimes almost obsolete. Scutellum transversely pentagonal.

Elytra $1.35 \times$ as long as wide and $1.5 \times$ as long as pronotum. Strial punctures small, separated longitudinally by 1.8–2 diameters, interspaces longitudinally carinate.

Aedeagus as in fig. 105.

Length 3.6–3.75 mm.

Holotype: Solomon Islands, Nggela, Sandfly, 16277, I. 1964. P. GREENSLADE (TMB).

Paratypes: same data as holotype (TMB, IZPAN).

COMMENTS

On the basis of both larval and adult characters, the *Colydiidae* appear to be closely related to the families *Zopheridae* and *Monommidae*, having very similar the procoxal closure, the last abdominal ventrite usually with a semi-circular groove, and the aedeagal structure. Adults of these families cannot be separated on the basis of any one character (including tarsal formula as well), and DOYEN and LAWRENCE (1979) suggested that all the three groups may be united in a single taxon of family rank. Progress in studies of *Tenebrionoidea* by J. T. DOYEN, J. F. LAWRENCE, J. C. WATT and others, including revisionary projects within *Monommidae-Zopheridae-Colydiidae* lineage by one of us (SAS), M. A. IVIE and T. K. PAL should accumulate much more available data for ultimate resolution. Below we give a new concepts of several tribes of the *Colydiidae*, and a preliminary key to the World tribes.

The *Colydiidae* are usually divided into 14 tribes (DAJOZ 1977, 1980; LAWRENCE 1980) of rather obscure limits and relationships. The last key to the World tribes of *Colydiidae* appeared in DAJOZ (1977); subsequently *Aglenini* (*Aglenus* and *Ocholissa*) was removed to *Othniidae*, *Trogocryptinae* by LAWRENCE (1980); *Myrmexixenus* and *Anopidini* to the *Tenebrionidae* by DOYEN and LAWRENCE (1979); and finally *Coxelini* and *Diodesmini* were considered as synonyms of *Synchitini* by ŚLIPIŃSKI (1982, 1985). The aforementioned key does not work well for most of the groups because it is almost exclusively based on the European representatives and single species from the tropical tribes (eg. *Adimerini*, *Acropini*).

Perhaps the limits and relationships between the evolutionary lines among *Synchitini* are the most difficult problems in *Colydiidae*. The tribe *Synchitini*, as it is here delimited, includes apart of *Synchitini* of HETSCHKO (1930), the *Coxelini*, *Langelandiini*, *Diodesmini*, *Corticini* (except *Rhagodera*), *Megataphrini*

and *Priolomini*. It is by far the largest tribe and contains about 120 genera distributed throughout the World, but mainly in tropical and subtropical regions. In the *Synchitini* the mandibular bases are concealed from above, the protibia is obtusely rounded at outer-apical angle and without a large non-articulated spine, the antenna is 10–11-segmented with compact and usually distinct club, the procoxae are rather narrowly separated by less than 0.5 of coxal diameter, and wings, if present, with the subcubital fleck.

Corticus LATR. along with *Ceropachys* COASTA, *Pseudocorticus* HINTON, *Orthocerus* LATREILLE, *Diplagia* REITTER and *Helioclamenus* SCHAUFUSS are normally included in the tribe *Orthocerini* (incl. *Corticini*). Recently *Rhagoderma* MANNERHEIM of *Rhagoderini* was also included (DAJOZ 1977). GANGLBAUER (1899) properly considered *Orthocerus* being only superficially similar to *Corticus*-like forms and separated it into the monotypic tribe *Orthocerini*. *Orthocerus* s.l. (probably incl. *Helioclamenus* and *Diplagia*) differs from *Corticus* by the following: metacoxae narrowly separated; intercoxal process of the ventrite I narrowly rounded apically and all ventrites freely articulated, and equally flexible; aedeagus almost as long as visible part of abdomen; median lobe with long, basally fused dorsal struts and apical part swollen; and wing with subcubital fleck and radial cell (in *Orthocerus* s. str.). In contrast, *Corticus* and many other apterous *Synchitini* have the metacoxae widely separated by a wide, almost apically truncate intercoxal process; ventrites I–III connate; aedeagus about $\frac{1}{3}$ as long as abdomen with paired ventral struts and the median lobe apically acuminate. Unfortunately apart from brief and inadequate description of *Orthocerus*, larvae of remaining genera of former *Orthocerini* remain unknown. We believe at least *Orthocerus* LATR. should be placed in a separate tribe for which the name *Sarrotrini* BILLBERG, 1820 not *Orthocerini* REITTER, 1882 should be adopted according to the current rules of the Code, while the remaining genera of former *Orthocerini* (*Corticini*) should be moved to *Synchitini* (excl. *Rhagoderma* MANN., see discussion below).

The tribe *Synchitini*, as here outlined, presents an assemblage of diverse, perhaps not always closely related forms of rather uncertain relationships. The subdivision of *Synchitini* into smaller, and perhaps, more natural groups is possible, but needs much more investigation, than was possible. Two broad groups among the tribe could be recognized on the basis of adult characters: abdominal ventrite I–III free/connate; last ventrite as long/apparently longer than preceding one; metacoxae narrowly/widely separated; intercoxal process of ventrite I narrow, acute/wide and almost truncate apically. The first group represents all apterous, usually stout forms like *Corticus*, *Cozelus*, *Hyberis*, *Tarphiosoma*, which are mostly found in forest leaf litter, underground (*Langelandia*), while the second group represents mostly subcortical forms (*Bitoma*, *Lasconotus*, *Synchita*) and rarely in forest litter or rotten wood. All intermediate forms occur frequently that obscure the true relationships, which might be based on convergent not homologous characters.

Only a few larval forms of the tribe *Synchitini* have been described (NIKITSKIJ and BELOV 1980; BURAKOWSKI and ŚLIPIŃSKI 1986) and it is premature to derive any final conclusions. The only larva from the former *Coxelini*, that of *Lastrema* by NIKITSKIJ and BELOV (1980) slightly differs from another *Synchitini* in having asymmetric mandibles, tergite IX with interurogomphal pit and sclerotized granules. None of the above mentioned characters are exclusive for *Lastrema* and are shared with other genera of *Synchitini*, *Gempylodini* and *Colydiini*. The interurogomphal pit is one of the more interesting features of colydiid larvae, but this structure can be derived independently in different lines of *Colydiini* (*Aulonium*), *Pycnomerini* (*Pycnomerus*, part), *Synchitini* (*Bitoma*, *Cicones*, *Niphopeltha*, *Lastrema*) and also in some *Salpingidae*, *Pythidae* and *Monommidae*.

Afrorthocerus POPE is usually placed in *Synchitini* (ŚLIPIŃSKI 1984) and is characterized as follows: antenna rather stout with elongate, cylindrical, one-segmented club; prosternal process wide and expanded apically; procoxal cavities narrowly open behind. These characters are somewhat similar to *Adimerini*, but in *Afrorthocerus* the tarsi are simple, wings absent and the mesocoxal cavities laterally open. The last character is exceptional among the *Colydiidae*; therefore, the systematic position of *Afrorthocerus* should be verified. It is tentatively retained in *Synchitini*.

Lobogestoria REITTER (*Aditoma* CASEY) with two species from Samoa and Florida has 4-4-4 tarsi, tarsomere I rather shorter than the following, a large bifid process on pronotum, and elytra striate-punctate with characteristic *Pycnomerus*-like flexure apically. Because of the elytral characters *Lobogestoria* could be regarded as a member of the tribe *Pycnomerini* (K. STEPHAN, pers. comm.). It is apparently superficially similar to *Pycnomerini*. However, the narrow prosternal process, the procoxal cavities not completely closed externally, the meso- and metacoxae approximate, and the wing with the subcubital fleck clearly exclude it from *Pycnomerini*. It should be placed in *Synchitini* near *Colydodes* MOTSCHULSKY and *Neotrichus* SHARP; it should be noted that elongate channels on pronotal surface associated with a bifid process are similar to longitudinal grooves seen in two highly aberrant species of *Bitoma* from Australia.

The tribe *Priolomini* was proposed by DAJOZ (1980) to include four genera from Madagascar with slightly lobed tarsomere II. *Priolomus* ERICHSON and all the above mentioned genera have all characters of the *Synchitini*. In our opinion, the lobed tarsomeres are not sufficient to create a separate tribe because either simple or lobed tarsi occur in other groups like *Acropini* and *Synchitini*. The lobed tarsomere I occurs in all *Adimerini*, in some *Acropini* (*Acropis*, part.), and some *Synchitini* (*Tarphiomimus* WOLLASTON and an unnamed genus from New Caledonia). This character has apparently been independently derived from a simple tarsomere in *Acropini*, *Adimerini* and *Tarphiomimus*. Therefore, *Priolomini* is considered here as a synonym of the *Synchitini* for having all diagnostic characters of that tribe.

Adimerini (*Monoedini*), found exclusively in the New World, is retained as a distinct and uniform tribe because of the prosternal process wide and expanded apically, 10-segmented antenna with apical segment ovoid and separated as a club, the tarsomere I lobed and sole-like, the maxillary lacinia without spine and the biology unusual. *Monoedus guttatus* LEC., found in southern Florida, is recorded from milkweed (*Metastelma scoparium*), and its larva lives within the pith of this plant (K. STEPHAN, pers. comm.). This is the only known case of colydiid larva feeding on live plant tissue.

Rhagoderini is considered as a synonym of *Orthocerini* (*Sarrotrini*) by most of recent workers. The only genus, *Rhagodera* MANNERHEIM with 4 species from North America presents a peculiar assemblage of characters that may require tribal status for it. *Rhagodera* differs from all other examined *Synchitini* and *Orthocerini* in the following features: antenna 11-segmented with loose, indistinct, 3-segmented club, all segments well separated, sparsely setose and the apical one asymmetrical; mandibular mola triangular, almost smooth or weakly ridged; ligula almost reduced, densely setose; labrum transverse with median sclerome; base of mouth cavity with long, anteriorly projected process on each side; prosternal process narrow, parallel-sided; procoxal cavities narrowly open behind; metacoxa only slightly wider than mesocoxa; metepisternae unusually wide and together as wide as metasternum; intercoxal process of ventrite I long, parallel-sided for $\frac{2}{3}$ of its length, rounded apically; ventrite IV with unique system of branched channels and glandular pores on each side; aedeagus short, about $\frac{1}{3}$ as long as abdomen with tegmen ventral. In all of the characters described above *Rhagodera* is more similar to *Orthocerus*, and apparently not to *Corticus*. However these characters, especially the ventral tegmen, and median lobe structure, in *Rhagodera* differ considerably from *Orthocerus*, and therefore *Rhagoderini* is restored as an independent tribe, close to *Sarrotrini*.

DAJOZ (1977) keyed out *Acropini* on the basis of narrowly lobed protarsomere I. However this character can not be applied to the whole group, since such tarsomere occurs only in some species of *Acropis* BURMEISTER, and tarsi are simple in all species of *Ethelema* PASCOE, *Lemnis* PASCOE and *Plagiopoe* ERICHSON. *Acropini* is very closely related to *Synchitini* and is well distinguished in having temples large and laterally expanded, eyes situated more dorsally, prosternal process zoopherid-like and procoxal cavities externally open (except some *Acropis*); mouth cavity small and directed more posteriorly and antenna very short, 10–11 segmented with ovoid, compact club. Larva yet undescribed.

Finally, DAJOZ (1980) described the monotypic tribe *Betschini* based on unusual blind and apterous genus from Madagascar. Unfortunately all three specimens on which description was based could not be found in Paris to verify DAJOZ's statements and to make the situation clear. According to DAJOZ's description and figures *Betschia* is characterized as follows: the maxillary lacinia seems to be strongly reduced; the labial palp two-segmented; the trochanter not at all heteromeroid, but rather normal-elongate type; the frontoclypeal

suture visible; the antenna 10-segmented with insertion weakly, if at all, concealed from above; the protibia slightly widened apically and angulate at outer-apical angle and the tarsi 3-3-3-segmented. DAJOZ (1980) did not give any reason for placement of *Betschia* in *Colydiidae* near *Pycnomerini*. From his description and figures, it appears that *Betschia* may not be a colydiid at all, but a member of *Cucujoidea* (*Clavicornia*) close to *Bothrideridae*.

PRELIMINARY KEY TO TRIBES OF THE WORLD *COLYDIIDAE*

1. Mandibular bases visible from above; head without supraorbital ridges; all tibiae with short, curved spine at outer-apical angle; procoxal cavities broadly closed behind, meso- and metacoxae approximate; pronotal margins almost invisible from above; tarsomere I of meso- and metatarsi longer than II+III; antenna 11-segmented, club 2-segmented, short (PAL and ŚLIPIŃSKI 1984). Indo-Australian, New World **Nematidini**.
- Mandibular bases concealed from above; without other characters in combination 2.
2. All tibiae with large, non-articulated spine or tooth at outer-apical angle; body usually elongate, at least 3 × as long as wide 3.
- Tibiae almost always simple or with 2 subequal to several spines at outer-apical angle; body usually shorter 4.
3. Prosternal process strongly expanded apically and at least as wide as procoxa diameter; procoxal cavities always broadly closed behind; metacoxae widely separated, and intercoxal process of the ventrite I broadly arcuate or truncate; antennal insertion not separated from mandibular articulation by a carina; wings, if present, without subcubital fleck; tarsomere I subequal to II. Cosmopolitan **Pycnomerini**.
- Intercoxal process of prosternum sublaminar, much narrower than coxa diameter; procoxal cavities closed behind; metacoxae approximate, their intercoxal process narrow and acute apically; antennal insertion separated from mandibular articulation by a carina; wings with subcubital fleck; tarsomere I longer than II, often as long as three next together. Africa, Indo-Australian, Neotropical. (LAWRENCE 1980) **Gempylodini**.
4. Head trapezoidal with temples strongly expanded laterally and large eyes situated above; mouth cavity comparatively small and produced backwards; antenna very short, 10-11 segmented with 1-2 segmented club, the club small, compact; tarsomere I usually slightly longer than II, rarely markedly longer or lobed below; procoxal cavities narrowly closed or slightly open behind; wings, if present, with subcubital fleck. Neotropical **Acropini**.
- Head never trapezoidal with such expanded temples and large eyes; without other characters in combination 5.
5. Tarsomere I (at least at meso- and metalegs) longer than II+III; antenna always 11-segmented with loose 3-segmented club; pronotum usually with submarginal carina on each side, so that the edge appears to be doubly margined; body elongate to subcylindrical, subglabrous; protibia often widened apically with long spine at inner angle and small denticles at outer

- margin; eyes large, usually scarcely emarginate by genal canthus; wing always present, with r-cell and subcubital fleck; procoxal cavities closed, rarely narrowly open behind (*Pseudaulonium*). Holarctic, Neotropical. (ŚLIPŃSKI in prep.) ***Colydiini***.
- Tarsomere I of meso- and metalegs always shorter than II+III; without other characters in combination 6.
6. Tarsomere I distinctly lobed and forms dilated sole. Antenna 10-segmented with small, narrow 1-segmented club; eyes small; antennal grooves on lower margin of eyes absent; wings present with r-cell and subcubital fleck; procoxal cavities narrowly open behind; prosternal process widened apically; maxillary lacinia unarmed. (= *Monoedini*). New World ***Adimerini***.
- Tarsomere I simple, very rarely dilated, if dilated then antenna 11-segmented with 2-segmented club, well developed antennal grooves and the maxillary lacinia with apical spine 7.
7. Tarsi 4-4-4, basal tarsomere minute and much shorter than the following one; antenna 10-segmented with stout, one-segmented club; metasternum before metacoxae with characteristic process on each side (fig. 4). Old World ***Rhopalocerini***, p. 77.
- Tarsi 4-4-4 or 3-3-3 with basal tarsomere at least as long as the following one; antennal club usually distinct, rounded apically; without other characters in combination 8.
8. Aedeagus with tegmen ventral; metepisternae unusually wide and together as wide as metasternum; metacoxae only slightly wider than mesocoxae, narrowly separated, their intercoxal process long, narrow and rounded apically. Wing absent. Antenna 11-segmented with loose but not very distinct 3-segmented club, all segments sparsely setose; last ventrite markedly shorter than the preceding one. Tarsomere I slightly longer than II. North America ***Rhagoderini*** stat. rev.
- Aedeagus with tegmen dorsal; metasternum distinctly wider than both metepisternae; without other characters in combination 9.
9. Antenna 10-segmented without clearly separated club, antennomeres gradually widened apically, setose; all abdominal ventrites freely articulated; tegmen almost as long as abdomen; wings reduced but present; intercoxal process of the ventrite I narrow and obtusely rounded apically. [Actually antenna is composed of 11 segments but last two are appressed that it seems to be 10-segmented.] (= *Orthocerini*) (*Orthocerus* LATR., *Heliocetamenus* SCHAUF.). Palearctic ***Sarrotrini*** stat. rev.
- Antenna filamentous with distinct 1-3 segmented club, if shorter and densely setose (*Corticus* LATR.) then ventrites I-III connate and intercoxal process of the ventrite I wide and broadly rounded apically; aedeagus usually about $\frac{1}{3}$ length of abdomen; no other characters in combination. (= *Coxelini*, *Diodesmini*, *Langelandiini* syn. n., *Corticini* syn. n., *Priolomini* syn. n.). Cosmopolitan ***Synchitini*** new sense.

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APPENDIX I

Collecting and rearing data of *R. rondanii* VILLA et VILLA

The adults and larvae of *R. rondanii* have been found mostly in Poland and occasionally in Roumania, and always being associated with damp, soft, decaying wood of older standing trees, with ants of *Lasius brunneus* (LATR.), in holes in the interior of the trunk, near the ground and high up to 2 m.

The breeding was carried out in the laboratory in stoppered glass jars of 1 litre capacity, containing in $\frac{1}{2}$ a number of pieces of damp decayed wood, collected with larvae or adults in the field. Some larvae were carefully transferred to a glass tube 20 mm \times 80 mm, which in $\frac{2}{3}$ had been previously supplied with relatively small particles of moist decaying wood; tubes were stoppered with cotton plugs; and the larvae remained until pupation within the tubes. All rearing were done in the same laboratory on the temperature 16–25 centigrades, the larvae were cooled in the winter time, in the loft on temperature -4 ± 8 centigrades. The proper moisture of a substrate was ensured by watering the substrate or placing the moist blotting paper.

Poland. Warszawa-Bielany. 4. 19. IV. 1961, live old hornbeam on warm stand, infested by *Fomes fomentarius*, white and yellowish, damp wood, near ant-nest, and in company of *Scydmaenus hellwigi* (HERBST), *Thoracophorus corticianus* MOTSCH., *Batrisodes delaporti* (AUBÉ), — several mature larvae, partly reared (adults — 10. VI and 14. VII. 1961); same locality 24. IX. 1965, in dead log, several larvae in decayed yellowish wood, partly reared (adults — 31. V., 6. VI. 1966), and number of adults in old galleries of xylophagous larvae of weevils.

Warszawa-Ogród Saski. 10. X. 1977, in dead *Tilia* sp. log, in shady area, several larvae of different sizes (2–5 mm), pupae observed on April 20, 1978 (adults — 2. V. 1978).

Roumania. Bucharest, 23. X. 1964, in a wood sample of yellowish, rotting damp wood taken from big old linden-tree (*Tilia* sp.) near *Lasius brunneus* (LATR.), in a company of *Platyarthrus hoffmannseggii* BRANDT (*Isopoda*), several larvae, partly reared (pupa — 22. III.–5. IV., adults — 1–15. IV. 1965).

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STRESZCZENIE

[Tytuł: Przegląd światowych przedstawicieli rodzaju *Rhopalocerus* W. REDTENBACHER (*Coleoptera*, *Colydiidae*)]

Praca stanowi światową rewizję rodzaju *Rhopalocerus* REDT., który jest zarazem jedynym przedstawicielem plemienia *Rhopalocerini*, obejmującego 17 gatunków, z których 9 opisano jako nowe. Autorzy omawiają po raz pierwszy morfologię larwy i poczwarki *R. rondanii* z Europy oraz jego cykl rozwojowy. Drugą część pracy jest poświęconą rozważaniom systematycznym nad układem plemion w rodzinie *Colydiidae* i zawiera wiele zmian w zakresie poszczególnych plemion i ich synonimikę. W zakończeniu podano klucz do oznaczania światowych plemion w rodzinie *Colydiidae*.

РЕЗЮМЕ

[Заглавие: Обзор мировых представителей рода *Rhopalocerus* W. REDTENBACHER (*Coleoptera*, *Colydiidae*)]

Работа представляет ревизию рода *Rhopalocerus* REDT. со всего света. Обсуждаемый род является единственным представителем племени *Rhopalocerini*, кото объединяет 17 видов, 9 из них описаны как новые. Авторы впервые описыв морфологию личинки и куколки *R. rondanii* из Европы и его цикл развития. Втор. часть работы посвящена обсуждению системы племен в семействе *Colydiidae* и держит ряд изменений в пределах отдельных племен и их синонимику. Привел также ключ для определения мировых племен в семействе *Colydiidae*.

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