

ALTICINAE OF NEW GUINEA, III.
***SCHENKLINGIA* AND ALLIES**
 (Coleoptera : Chrysomelidae)¹

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Abstract: Thirteen species from the Papuan Subregion are treated in this installment. Two genera and 9 species are described as new. All species are keyed, most are illustrated.

Five new species are added to *Schenklingia* Csiki & Heikertinger bringing the total to 7 for the Papuan Subregion. One species is added to *Halticorcus* Lea, a genus which previously contained a single species from Australia. Two new genera are proposed here; they are: *Maaltica* with 2 new species, and *Axillofebra* receiving 2 named and 1 new species.

Specimens belonging to Bishop Museum were collected by J. L. Gressitt, D. E. Hardy, T. C. Maa and J. Sedlacek. A small number of specimens belonging to the California Academy of Sciences, San Francisco (CAS), Magyar Nemzeti Múzeum, Budapest (MNM) and Rijksmuseum van Natuurlijke Historie, Leiden (LEIDEN) is included.

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The generic key separates most SE Asian-Papuan genera possessing the following combination of characters: body form subcircular to oval, interantennal space narrower or subequal to breadth of antennal socket, pronotum lacking ante-basal impression, procoxal cavities open behind, metatibial spine simple, metatarsal claw segment not dilated. Names in parentheses indicate genera or species not recorded from New Guinea; asterisks identify the new genera and new species in the keys. *Argopus*, *Argopistes* and *Sphaeroderma* are recorded from New Guinea and will be treated later.

KEY TO SCHENKLINGIA AND RELATED GENERA

- | | |
|---|---|
| 1. Frons with anterior margin deeply arcuate or arcuate-sinuate..... | 2 |
| Frons with anterior margin straight, weakly arcuate or sinuate | 3 |
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2. Interantennal space much narrower than transverse diameter of antennal socket; frons arcuate-sinuate, ♂ bearing tooth-like projection anteriorly; elytral epipleuron deeply concave [type: *E. clypealis* Chen, 1934—Borneo, Perak] (**Eucyclomela**)
 Interantennal space subequal in breadth to transverse diameter of antennal socket; frons deeply arcuate, ♂ lacking tooth-like projection; epipleuron flat..... **Argopus**
3. Metatibia with spine and tarsus inserted at apex 4
 Metatibia produced apically beyond insertion of spine and tarsus; elytral puncturation confused, sometimes with several obscure longitudinal rows sublaterally **Argopistes**
4. Antennal segment 1 longer than 3 (often as 2+3 or longer) 5
 Antennal segment 1 shorter than 3 [type: *Sphaerophysa piceicollis* Jacoby, 1889—Burma] (**Jacobyana**)
5. Pronotum transverse.....6
 Pronotum quadrate [type: *L. brunnea* Maulik, 1926—Ceylon].....(**Lanka**)
6. Maxillary palpus with last 2 segments slender or thickened, but not forming a spherical globule 7
 Maxillary palpus with last 2 segments forming a spherical globule; mesosternum visible [type: *Argopistes bistrispunctata* Duvivier, 1892—India: Bengal] (**Chilocoristes**)
7. Interantennal space narrow, $\pm 0.5\times$ or less as broad as transverse diameter of antennal socket..... 8
 Interantennal space moderately broad, $\pm 1\times$ as broad as transverse diameter of antennal socket; mesosternum visibly reduced to a transversely arched carina; elytral puncturation variable **Sphaeroderma**
8. Mesosternum visible, a distinct transverse plate..... 9
 Mesosternum concealed by intercoxal piece of prosternum..... 11
9. Profemur strongly flattened at basal extremity, greatest breadth of same usually post-basally; body not eumolpiform.....10
 Profemur not strongly flattened at basal extremity, greatest breadth of same preapically; body eumolpiform [NE New Guinea—subalpine]..... genus
10. Antennal groove (=impression at side of frons) obsolescent; elytral puncturation seriate, in 9 discal rows, sometimes with 2 internal rows slightly irregular [type: *P. coxalis* Sam., 1967—Solomons] (**Profebra**)
 Antennal groove distinct; elytral puncturation dominantly irregular or entirely confused **Axillofebra***
11. Antennal groove deep; basal margin of pronotum with median lobe well-produced, lobe subequal to length of scutellum 12
 Antennal groove obsolescent; basal margin of pronotum with median lobe weakly produced, lobe $\pm 0.5\times$ as long as scutellum **Maaltica***
12. Elytral puncturation seriate, in 9 discal rows, sometimes with 2 internal rows irregular basally **Schenklingia**
 Elytral puncturation dominantly irregular or entirely confused **Halticorcus**

Genus **Schenklingia** Csiki & Heikertinger

Eucycla Baly, 1876 (*nec* Bonaparte, 1854), *Trans. Ent. Soc. Lond.* **1876**: 439.—Maulik, 1926, *Fauna India, Chrysom. & Halt.*, 305 (type: *E. quadripustulata* Baly, 1876—Borneo).—Chen, 1933, *Sinensia* **3**: 225; 1934, *Ibid.* **5**: 337; 1934, *Stylops* **3**: 75; 1936, *Sinensia* **7**: 633.—Chûjô, 1935, *Trans. Nat. Hist. Soc. Formosa* **25**: 357 (key); 1937, *Ibid.* **27**: 52.
Schenklingia Cs. & Hktgr., 1940, *Junk Col. Cat.* **25** (169): 516 (new name for *Eucycla* Baly).—Gressitt & Kimoto, 1963, *Pacific Ins. Monogr.* **1B**: 833.

Diagnosis: Frons triangular, antennal insertions very close; antennal scape long, as long as segments 2+3 or 2+3+4 together; pronotum lacking ante-basal impression, base

sinuate; elytral punctures in longitudinal rows, sometimes with internal rows partly irregular; procoxal cavities open behind; mesosternum concealed; metatibia channeled; claws appendiculate.

The first couplet of the key defines two rather distinct groups of species which eventually may prove to be good subgenera. The nominate group includes *leverii*, but most of the species treated here fall into the other group.

1. Elytral epipleuron distinctly broadened basally, surface sub-horizontal; interstitial punctures of elytral disc usually prominent 2
Elytral epipleuron feebly broadened basally, surface flat; interstitial punctures not usually prominent 3
2. Elytron with puncture row at lateral margin \pm regular; dorsum black, elytron with metallic blue lustre; length 2.7 mm nr *leverii*
Elytron with puncture row at lateral margin very irregular; dorsum black, elytron lacking bluish lustre; length 3.1 mm [NE New Guinea] sp.
3. Elytron with discal puncture-rows entirely regular 4
Elytron with basal portions of sutural and 2 innermost discal puncture-rows irregular 7
4. Antennal segments 7-9 and sometimes base of 10 darker than others; aedeagus lacking prominent lateral tubercle at apical 1/5 5
Antennal segments 8 or 8-9 darker than others; aedeagus with median ventral carina briefly produced at apical 1/4 and with prominent lateral tubercle at apical 1/5; dorsum with blue-violaceous lustre; length 3.0 mm *ora**
5. Pronotum with central discal punctures small, interspaces 1.5-3 \times as large as punctures 6
Pronotum with central discal punctures mostly minute or absent, interspaces 3-4 \times as large as punctures; aedeagus with fine median ventral carina apically and fine submedian carinae preapically; dorsum with blue-violaceous lustre; length 3.0-3.3 mm *novaguineae**
6. Femora and usually ventral surfaces piceous; aedeagus not arched, ventral surface with broad preapical swelling and fine median carina apically; dorsum metallic blue; length 2.4-2.9 mm *admirala**
- Femora and ventral surfaces mostly red- to orange-testaceous; aedeagus weakly arched, ventral median keel strongly developed along apical 1/2; dorsum with blue-violaceous lustre; length 2.7-2.8 mm *carinipennis**
7. Pronotal disc \pm impunctate; dorsum with strong violaceous lustre; length 4 mm ... *malayana*
Pronotal disc punctate, punctures of different size with larger deeper ones basally and finer ones apically; dorsum blue-violaceous; length 3.6-3.9 mm *heteropunctata**

Schenklingia admirala Samuelson, new species Fig. 1a, 3a, 4a.

♂. Body form suboval. Dorsum black, with dark metallic blue lustre; head largely piceous, occiput reddish brown laterally; antenna with segments 1-6 brownish, 7-9 and base of 10 piceous, most of 10 and all of 11 testaceous; ventral surfaces and legs mostly dark reddish brown. Apical 7 antennal segments submoderately clothed with fine hairs; apical margin of last abdominal sternite moderately clothed with fine hairs.

Head: Labrum transverse, anterior margin straight; frontoclypeus triangular, flat but with sides weakly raised and low median swelling on upper 1/2, surface mostly granulate, median swelling smooth; interantennal space concave, 1/2 as broad as transverse diameter of antennal socket; interocular space 5/8 as broad as depth of eye; gena 4/9 as deep as eye; antennal groove deep; postantennal swellings obsolete; vertex impunctate; supraorbital puncture \pm large. **Antenna** 3/4 as long as body; segment 1 gradually thickened apically, 2 moderately swollen, 3-4 dilated apically, 5-10 gradually thickened to apices, last with apex acute; relative lengths of segments as

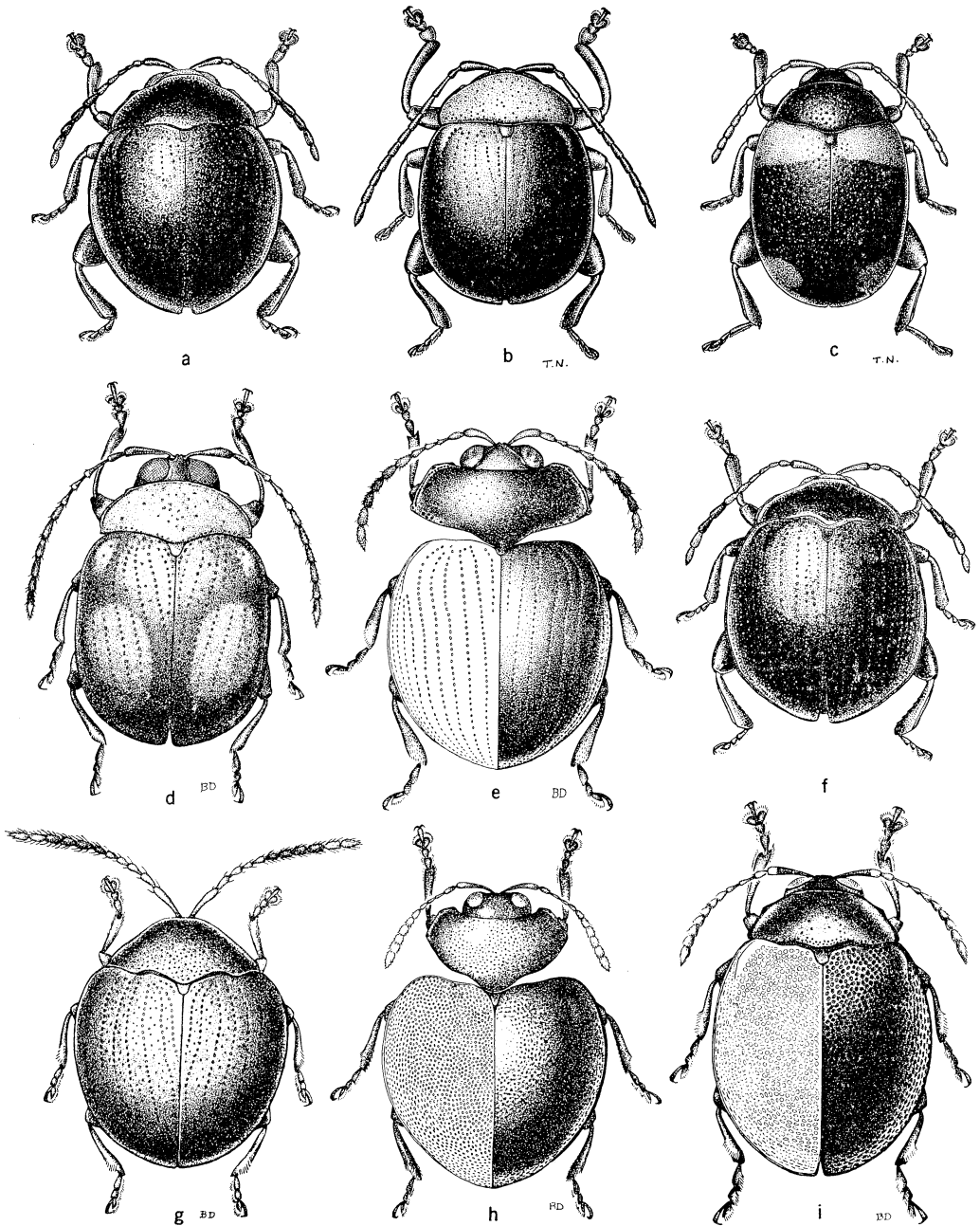


Fig. 1. Dorsal view: a, *Schenklingia admirala* n. sp.; b, *Maaltica concinna* n. gen., n. sp.; c, *Axillofebra flavomaculata* (Jacoby) n. gen.; d, *Maaltica magna* n. gen., n. sp.; e, *Schenklingia novaeguineae* n. sp.; f, *S. ora* n. sp.; g, *S. nr leveri* (Bryant); h, *Halticorcus zophos* n. sp.; i, *Axillofebra nephele* n. gen., n. sp.

follows: 16:6+:5:5:5:5+:7+:7+:7+:7:10. *Prothorax* 5/11 as long as broad; anterior angle transverse-rounded; side convex, marginal sulcus lacking distinct punctures; posterior angle obtuse; base sinuate; discal punctures small excepting 4 large circular impressions across disc; most interspaces 3× as large as punctures; basal margin with adjacent row of about 8 large punctures on each lateral 1/3. *Scutellum* semicircular, slightly broader than long, apex broadly rounded. *Elytron* 2.2× as long as broad, side convex, apical angle rounded; epipleuron flat, suddenly narrowed preapically and continued nearly to apex; humerus moderately swollen, region immediately behind humerus slightly depressed; disc with 9 regular longitudinal rows of punctures, a short sutural row ending near basal 1/3 and a row along lateral margin; most punctures 1/3-1/2 as large as longitudinal interspaces and 1× or less as large as transverse interspaces; punctures smaller apically; interstices mostly smooth, not swollen except convex lateral one. *Ventral surfaces*: prosternum with intercoxal piece vaguely and narrowly impressed medially, posterior margin concave; metasternum finely and transversely rugulose; abdomen with apical margin of last sternite sinuate; relative lengths of sternites as follows: 12:4+:3+:3+:6+. *Legs*: metafemur 7/12 as broad as long; metatibia 5/6 as long as femur; metatarsus 5/7 as long as tibia, basal segment shorter than 2+3 together. *Aedeagus* not arched, 4.2× as long as breadth at middle; ventral surface with very fine median carina apically and broad swelling preapically, lateral carina fine and sinuate. Length 2.75 mm; breadth 2.10.

♀. Antenna 2/3 as long as body, segment 10 entirely testaceous; abdomen with apical margin broad and feebly concave in outline. *Spermatheca* as figured. Length 2.75 mm; breadth 2.10.

Paratypes. Antenna with segment 10 dark basally to entirely pale. Length 2.42-2.92 mm; breadth 1.86-2.26.

Holotype ♂ (BISHOP 6791), Bismarck Archipelago: Manus I, Momote, 24.XII.1959, Maa; allotopotype ♀ (BISHOP), same data as holotype; many paratopotypes, same data as preceding; 2 paratypes, Manus I, Rossum, 35-125 m, 29-30.VI.1959, Gressitt.

Differs from *ora*, n. sp. by having smooth median swelling on frons, antenna with 3 dark segments instead of 1 or 2, and ventral surface of aedeagus with lateral carina near apical 1/5 instead of prominent tubercle.

***Schenklingia carinipennis* Samuelson, new species** Fig. 3c.

♂. Body form subrounded. Dorsum black, with metallic violaceous lustre; antenna with segments 7-9 piceous, other segments brownish; ventral surfaces and legs orange- to red-testaceous. Antennal segments 1-4 sparsely clothed, 5-11 more densely clothed with pale; abdomen sparsely clothed, but pubescent closer along apical margin.

Head: Labrum transverse, anterior margin straight; frontoclypeus triangular, anterior margin narrowly swollen, side finely margined, surface ± flat and granulate, but with smooth median swelling above middle; interantennal space briefly concave between raised margins, 3/8 as broad as transverse diameter of antennal socket; interocular space nearly 2/3 as broad as depth of eye; gena 4/9 as deep as eye; antennal groove deep; postantennal swellings obsolete; vertex punctulate; supraorbital puncture large. *Antenna* 3/4 as long as body; segment 1 gradually thickened apically, 2 moderately swollen, 3-4 slender, gradually thickened to apices, 5-6 more robust than 4, 7-10 more robust than 6, last with apex acute; relative lengths of segments as follows: 15:6+:5:5:6:6:7:8:7:6:8+. *Prothorax* nearly 1/2 as long as broad; anterior angle oblique; side convex, marginal sulcus bearing punctures; posterior angle obtuse; base sinuate; discal punctures ± shallow, mostly 1/2 as large as interspaces; area adjacent to basal margin with about 7 large punctures along each lateral 1/3. *Scutellum* triangular, almost as long as broad, apex rounded, surface smooth. *Elytron* 2.2× as long as broad, side convex, apical angle rounded; epipleuron flat, suddenly narrowed preapically and continued nearly to

apex; humerus weakly swollen; disc with 9 regular longitudinal rows of punctures, a short sutural row and a row along lateral margin; most punctures $1/3-1/2$ as large as longitudinal interspaces and generally smaller than transverse interspaces; lateral 3 rows with larger punctures basally, all punctures smaller apically; interstices flat excepting convex lateral one, surfaces often with longitudinal rows of micropunctures. *Ventral surfaces*: prosternum with intercoxal piece impressed medially, posterior margin triangularly emarginate; abdomen with apical margin of last sternite sinuate; relative lengths of sternites as follows: 17 : 7 : 5 : 5 : 11. *Legs*: metafemur $2/3$ as broad as long; metatibia $5/6$ as long as femur; metatarsus $3/4$ as long as tibia, basal segment shorter than 2+3 together. *Aedeagus* weakly arched, $4.0\times$ as long as breadth at middle; ventral surface with prominent median keel on apical $1/2$, but lacking lateral tubercles near apical $1/4$. Length 2.75 mm; breadth 2.16.

Paratypes. Median swelling of frons reduced to small rounded tubercle or entirely absent. Length 2.70-2.75 mm; breadth 2.16.

Holotype ♂ (BISHOP 6793), NW New Guinea: Vogelkop, Manokwari, 75 m, 22.VII.1957, Hardy; SW New Guinea: 1 paratype, Vogelkop, Danowaria, 2.VI.1959, Gressitt; 1 paratype, Vogelkop, Fak Fak, S. coast of Bomberai, 10-100 m, sweeping, 12.VI.1959, Maa.

Differs from *admirala*, n. sp. by having larger punctures on pronotal disc; aedeagus with ventral median keel strongly produced and reaching apex, instead of gently swollen near apical $1/4$.

***Schenklingia heteropunctata* Samuelson, new species** Fig. 2a, 3d, 4d.

♂. Body form subrounded. Dorsum dark, pronotum piceous, elytron with metallic violaceous lustre; antenna with segments 1-4, 8-10 yellow-testaceous, 5-7, 11 dark brown; ventral surfaces and legs yellow-testaceous to pitchy brown, thoracic metasternum darker than abdomen, metafemur darkest. Apical segments of antenna and metasternum pubescent.

Head: Labrum transverse, anterior margin convex; frontoclypeus triangular, anterior margin straight, anterior $1/4$ reflexed and on same plane as labrum, surface granulate with fine median carina extending from interantennal space to clypeal region; interantennal space $5/12$ as broad as transverse diameter of antennal socket; interocular space nearly $2/3$ as broad as depth of eye; gena $3/8$ as deep as eye; antennal groove deep; postantennal swellings subrounded but obsolete, delimited from antennal sockets by transverse groove; vertex punctate; supraorbital puncture \pm large. *Antenna* $8/9$ as long as body; segment 1 arched, thickened apically, 2 thickened apically, 3-4 slender basally, gradually thickened to apices, 5-7 gradually thickened to apices,

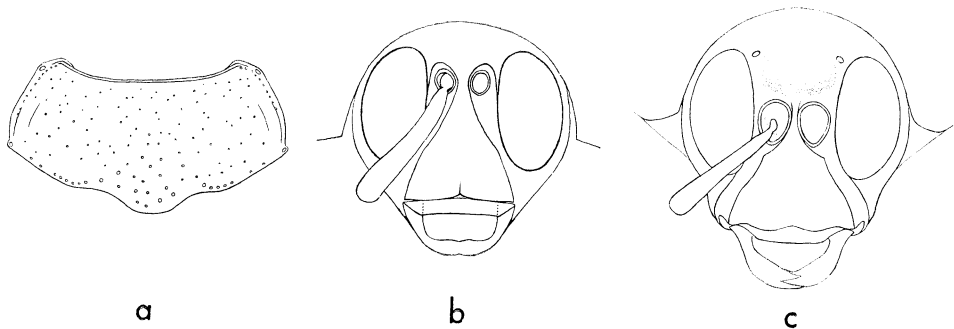


Fig. 2. a, pronotum, *Schenklingia heteropunctata* n. sp.; b, head, *S. nr leverii* (Bryant); c, head, *Axillofebra nephele* n. gen., n. sp.

8-10 \pm cylindrical, last with apex acute; relative lengths of segments as follows: 15:5:5:8:7:7+:7+:8:7+:7:9+. *Prothorax* 7/15 as long as broad; anterior angle oblique-rounded; side convex; base sinuate; discal punctures larger basally, finer apically, interspaces mostly 1.5-2 \times as large as punctures basally and commonly 3 \times as large apically; submarginal area of base with a series of about 8 punctures along each lateral 1/3. *Scutellum* subtriangular, slightly broader than long, apex rounded, surface \pm smooth. *Elytron* 2.1 \times as long as broad; side convex, apical angle oblique-rounded; epipleuron flat, continued nearly to apex; humeral swelling moderate, punctulate; discal puncturation in 9 regular longitudinal rows + short sutural row ending at basal 1/3; punctures mostly 1/2 or more as large as longitudinal interspaces 1.5-2 \times as large as transverse interspaces; size of punctures larger laterally and smaller apically; internal interstices irregularly punctured basally. *Ventral surfaces*: prosternum with intercoxal piece \pm flat; metasternum with median dark line on apical 1/2; abdomen convexly swollen medially, surface smooth medially, roughened laterally; last sternite with apical margin sinuate; relative lengths of sternites as follows: 16:6:4:4:9. *Legs*: metafemur 3/5 as long as long; metatibia 5/6 as long as femur; metatarsus 2/3 as long as tibia, basal segment slightly shorter than 2+3 together. *Aedeagus* arched, 4.1 \times as long as breadth at middle; ventral surface with broad median carina on apical 3/8. Length 3.88 mm; breadth 2.91.

♀. Antenna 2/3 as long as body; last abdominal sternite truncate at apical extremity. *Spermatheca* as figured. Length 3.64 mm; breadth 2.75.

Paratype. Length 3.76 mm; breadth 2.82.

Holotype ♂ (BISHOP 6794), NW New Guinea: Ifar, 400-500 m, 23.VI.1959, Maa; allotype ♀ (BISHOP), same data as holotype; 1 paratype, Waris, 450-500 m, sweeping, 1-18.VIII.1959, Maa.

Differs from *violacea* (Chen) by not having antennal segments colored as follows: 1-6, brown, 7-8 and apex of 11 black, 9-10 and base of 11 pale yellow; also differs by having larger punctures on base of pronotal disc.

Schenklingia nr leveri (Bryant) Fig. 1g, 2b, 3i.

Eucycla leveri Bry., 1941, *Ann. Mag. Nat. Hist.* ser. 11, 8: 97 (Solomon Is.—type in BMNH).

Schenklingia leveri: Sam., 1967, *Pacif. Ins.* 9(1): 152.

MATERIAL EXAMINED: 2, Bismarck Archipelago: Manus I., Momote, 24.XII.1959, Maa.

DISTRIBUTION: Solomons, Bismarck Archipelago [Manus].

Schenklingia malayana (Jacoby) Fig. 3f.

Eucycla malayana Jac., 1885, *Ann. Mus. Civ. Genova* ser. 2, 2: 39 (58) (New Guinea: Fly River—type in Genova Mus.).

Schenklingia malayana: Cs. & Hktgr., 1940, *Junk Col. Cat.* 25(169): 516.

MATERIAL EXAMINED: 1, NE New Guinea: Astrolabe Bay, Erima, 1897 (MNM). Determination tentative. The specimen differs from original description by having distinct punctures on pronotal disc instead of being entirely impunctate.

DISTRIBUTION: NE and SE New Guinea.

Schenklingia novaeguineae Samuelson, new species Fig. 1e, 3g, 4e.

♂. Body form subrounded. Dorsum black with blue-violaceous lustre; antenna with segments 7-9 piceous, other segments pale; ventral surfaces and legs mostly orange-testaceous. Antennal segment 1-3 \pm glabrous, remaining segments sparsely to moderately clothed along apical margin.

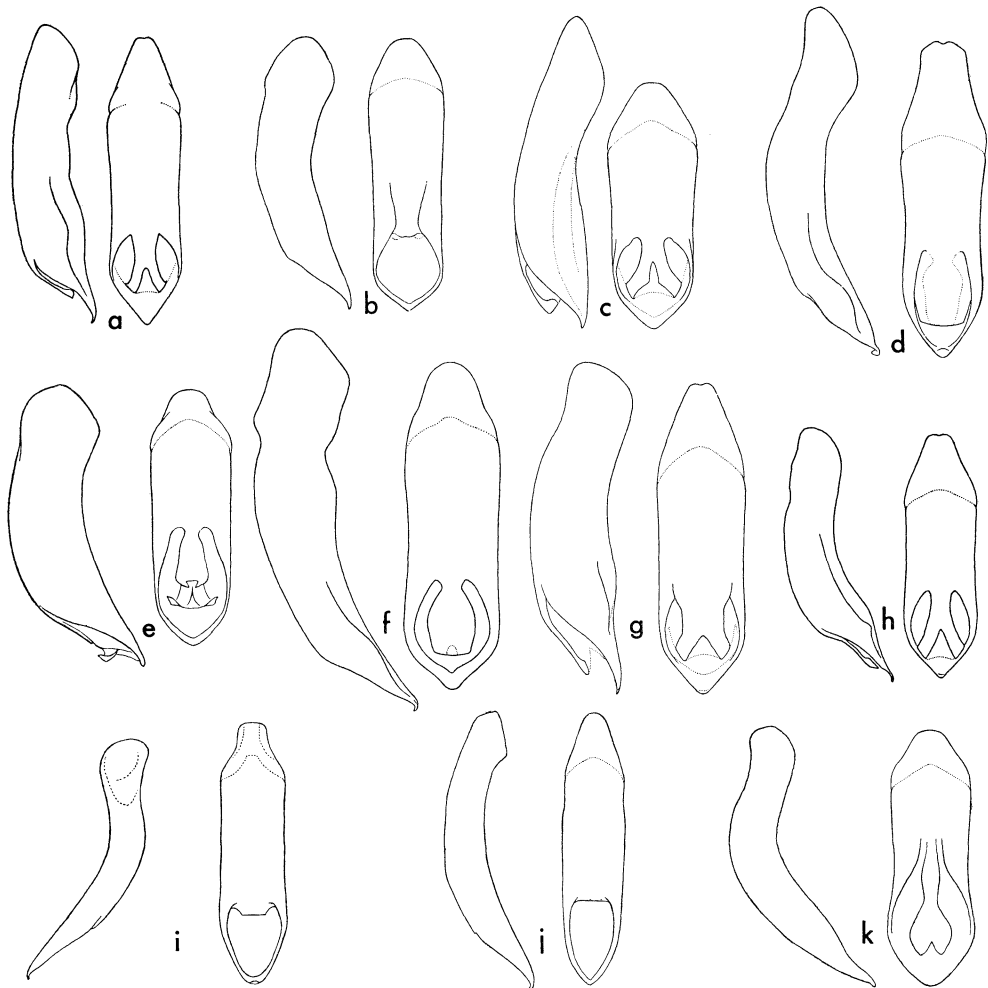


Fig. 3. Aedeagus, dorsal and lateral views: a, *Schenklingia admirala* n. sp.; b, *Maaltica concinna* n. gen., n. sp.; c, *Schenklingia carinipennis* n. sp.; d, *S. heteropunctata* n. sp.; e, *Maaltica magna* n. gen., n. sp.; f, *Schenklingia ?malayana* (Jacoby); g, *S. novaeguineae* n. sp.; h, *S. ora* n. sp.; i, *S. nr leveri* (Bryant); j, *Halticorcus zophos* n. sp.; k, *Axillofebra nephele* n. gen., n. sp.

Head: Labrum transverse, anterior margin straight; frontoclypeus triangular, upper 1/2 channeled medially, surface granulate, anterior margin slightly raised and smooth; interantennal space concave between raised sides, 4/9 as broad as transverse diameter of antennal socket; interocular space nearly 2/3 as broad as depth of eye; gena 2/5 as deep as eye; antennal groove deep; postantennal swellings obsolete; vertex impunctate; supraorbital puncture \pm large. **Antenna** \pm 2/3 as long as body; segment 1 gradually thickened to apex, 2 swollen near middle, 3-4 narrowed basally, dilated apically, 5-6 gradually thickened to apices, 7-10 thicker than 6, last with apex acute; relative lengths of segments as follows: 16+ : 6 : 4+ : 5 : 5+ : 5+ : 7 : 8 : 7 : 7 : 9. **Prothorax** 4/9 as long as broad; anterior angle oblique; side convex, marginal sulcus bearing punctures; posterior angle obtuse; base sinuate; discal punctures minute, mostly 1/4 as large as interspaces; area adjacent to basal margin with about 8 large punctures along each

lateral $1/3$. *Scutellum* semicircular, about as long as broad, apex broadly rounded, surface smooth. *Elytron* $2.2\times$ as long as broad, side convex, apical angle rounded; epipleuron flat, suddenly narrowed preapically and continued nearly to apex; humerus weakly swollen; disc with 9 regular longitudinal rows of punctures, a short sutural row and a row along lateral margin; most punctures $2/5-3/5$ as large as longitudinal interspaces and larger than transverse interspaces; punctures smaller apically; interstices feebly swollen excepting convex lateral ones, surfaces often bearing a longitudinal series of micropunctures. *Ventral surfaces*: prosternum with intercoxal piece rather evenly declined posteriorly, posterior margin \pm straight; abdomen with apical margin of last sternite sinuate; relative length of sternites as follows: $18:8:6:5:10$. *Legs*: metafemur $3/5$ as broad as long; metatibia $5/6$ as long as femur; metatarsus $2/3$ as long as tibia, basal segment shorter than $2+3$ together. *Aedeagus* feebly arched, $4.0\times$ as long as breadth at middle; ventral surface with fine median carina apically, fine submedian carinae preapically and arcuate lateral carinae along apical $1/4$. Length 2.98 mm; breadth 2.33.

♀. Antenna $5/9$ as long as body; abdomen with apex of last sternite truncate. *Spermatheca* as figured. Length 3.30 mm; breadth 2.52.

Paratypes. Length 3.00-3.08 mm; breadth 2.38-2.43.

Holotype ♂ (BISHOP 6796), NE New Guinea: Maprik, 160 m, 29.XII-17.I.1960, Maa; allotopotype ♀ (BISHOP), same data as holotype; 1 paratopotype, same data as preceding; 1 paratype, NW New Guinea: Bodem, 100 m, 7-17.VII.1959, Maa.

Differs from *carinipennis*, n. sp. by having pronotum more finely and sparsely punctured; aedeagus lacking prominent median apical keel on ventral surface.

***Schenklingia ora* Samuelson, new species** Fig. 1f, 3h, 4f.

♂. Body form subrounded. Dorsum dark: pronotum with dark blue-violaceous lustre, elytron with metallic violaceous lustre; antenna yellow-testaceous, segment 8 brownish; ventral surfaces pitchy brown; legs orange-testaceous, femora a little darker than tibiae. Antenna with apical 7 segments submoderately clothed with slender pale hairs; abdomen sparsely clothed.

Head: Labrum transverse, anterior margin straight; frontoclypeus triangular, upper $1/3$ weakly impressed between margins, surface granulate excepting smooth obtusely triangular area anteriorly; interantennal space $1/2$ as broad as transverse diameter of antennal socket; interocular space $5/7$ as broad as depth of eye; gena $4/9$ as deep as eye; antennal groove deep; postantennal swellings obsolete; vertex impunctate; supraorbital puncture \pm large. *Antenna* $2/3$ as long as body; segment 1 thickened to apex, 2 broadest near middle, 3-4 dilated apically, 5-10 gradually thickened to apices, last with apex acute; relative lengths of segments as follows: $16:5+:5:5:7:7:8:7:7:7:9+$. *Prothorax* $6/13$ as long as broad; anterior angle oblique; side convex, marginal sulcus punctate; posterior angle obtuse; base sinuate; discal punctures shallow, mostly $2/5$ as large as interspaces; sublateral area near base with 1 large puncture; area adjacent to basal margin with 7 or 8 large punctures along each lateral $1/3$. *Scutellum* subtriangular, distinctly longer than broad, apex briefly rounded, surface smooth. *Elytron* $2.2\times$ as long as broad, side convex, apical angle rounded; epipleuron flat, suddenly narrowed preapically and continued nearly to apex; humerus weakly swollen; disc with 9 regular longitudinal rows of punctures, a short sutural row ending near basal $1/3$ and a row along lateral margin; most punctures $2/5-1/2$ as large as longitudinal interspaces and slightly larger than transverse interspaces; punctures smaller apically; interstices feebly swollen and mostly smooth. *Ventral surfaces*: prosternum with intercoxal piece shallowly impressed medially, posterior margin declined and \pm straight; abdomen with apical margin of last sternite sinuate; relative lengths of sternites as follows: $13+:5:4:3+:7$. *Legs*: metafemur $5/8$ as broad as long; metatibia $5/6$ as long as femur; metatarsus $7/10$ as long as tibia, basal segment shorter than $2+3$ together. *Aedeagus* weakly arched, $4.0\times$ as long as breadth at middle; ventral surface with median carina briefly produced

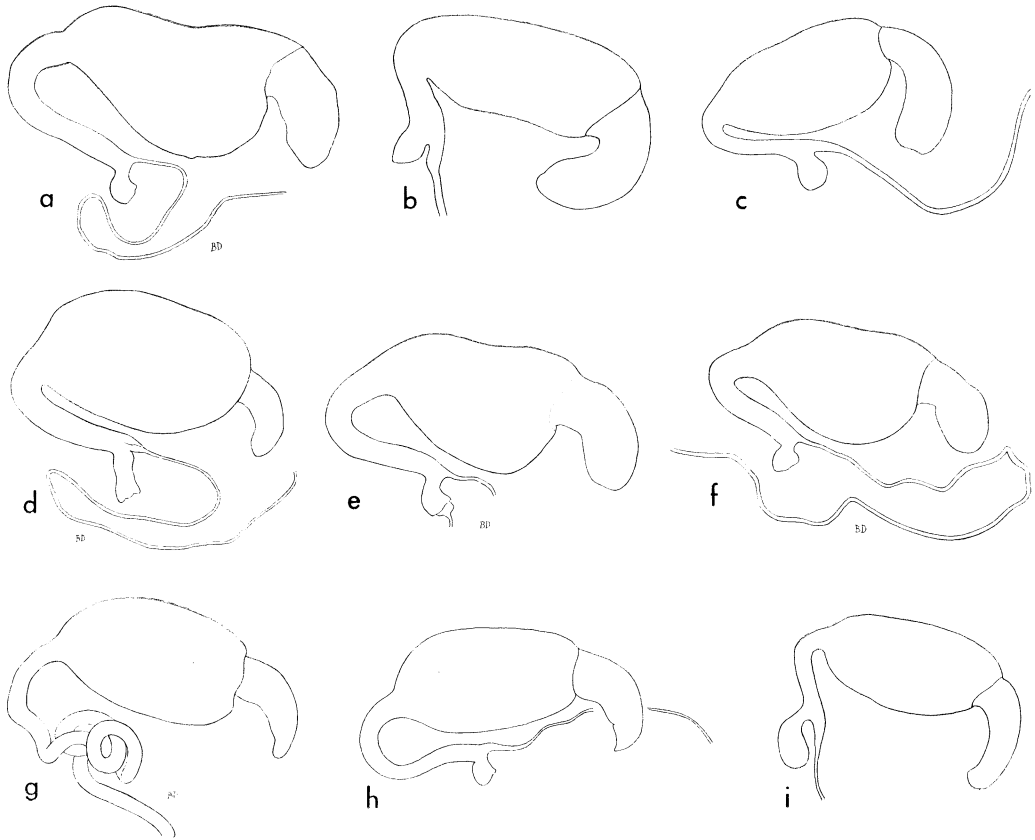


Fig. 4. Spermatheca, lateral view, apex placed to right: a, *Schenklia admirala* n. sp.; b, *Maallica concinna* n. gen., n. sp.; c, *Axillofebra flavomaculata* (Jacoby) n. gen.; d, *Schenklia heteropunctata* n. sp.; e, *S. novaeguineae* n. sp.; f, *S. ora* n. sp.; g, *S. undescr.* sp. [NE New Guinea]; h, *Halticorcus zophos* n. sp.; i, *Axillofebra nephele* n. gen., n. sp.

at apical 1/4, apical extremity \pm flat, and lateral tubercle prominent at apical 1/5. Length 3.00 mm; breadth 2.30.

♀. Postantennal swellings faint, oblique-rounded, separated medially by fine impression; antenna 4/7 as long as body, segments 8-9 piceous, other segments pale; abdomen with apical margin of last sternite \pm briefly truncate. *Spermatheca* as figured. Length 3.00 mm; breadth 2.42.

Paratype. Antennal segments 8-9 darker than other segments. Length 2.97 mm; breadth 2.38.

Holotype ♂ (CAS), SE New Guinea: Oro Bay, XI.1943-II.1944, Helfer; allotype ♀ (BISHOP 6797), same data as holotype; 1 paratype, same data.

Differs from *metallica* (Jacoby) by having distinct punctures on pronotal disc; from *carinipennis* and *novaeguineae*, n. spp. by having ventral surface of aedeagus with prominent lateral tubercle at apical 1/5.

Genus *Halticorcus* Lea

Halticorcus Lea, 1917, *Trans. R. Soc. S. Austral.* **41**: 319 (type: *H. platycerii* Lea—Queensland,

New S. Wales).—Froggatt, 1917, *Agric. Gaz. New S. Wales* **28**: 893, fig. (immature stages of *platycerii*).—Noble, 1935, *J. Austral. Inst. Agric. Sci.* **1**: 115, fig. (immature stages).

Diagnosis: Body form subcircular, highly convex; head scarcely exerted; antenna with segment 1 about as long as 2+3+4+5 together, apical segments thickened; elytral puncturation varied: entirely confused or dominantly irregular (in *platycerii* punctures small and confused with feeble development of serial rows); procoxal cavities open behind; mesosternum concealed; metatibial spine simple, inserted at apex of tibia.

Hitherto known from only the Australian species, *platycerii*, which was found to be associated with Staghorn Fern, *Platycerium grande* J. Sm. Papuan material appears to be sufficiently close to *Halticorcus* for inclusion therein. The genus is close to *Schenklingia*.

Elytral punctures fine; dorsum shiny blue or greenish, elytron with basal and central orange-flavous spots; length 3.2–3.5 mm (*platycerii*)
Elytral punctures deep, entirely confused; dorsum piceous; length 3.0–3.1 mm..... **zophos***

Halticorcus zophos Samuelson, new species Fig. 1h, 3j, 4h.

♂. Dorsum, head, thoracic sterna and legs piceous; antenna with segment 1 piceous on basal 1/3, remainder of 1 pitchy brown, 2–11 yellow-testaceous; abdomen dark reddish brown. Antennal segments 1–6 glabrous to sparsely clothed, apical 5 segments moderately clothed with fine pale hairs; ventral surfaces submoderately clothed with slender silvery hairs.

Head: Labrum transverse, anterior margin weakly convex, surface with transverse row of 4 punctures; frons triangular, shallowly concave between lateral margins, surface granulate with fine median line; interantennal space briefly impressed, 1/2 as broad as transverse diameter of antennal socket; interocular space 5/8 as broad as depth of eye; gena 7/15 as deep as eye; antennal groove deep; postantennal swellings obsolete; vertex punctulate. *Antenna* 5/8 as long as body, apical 5 segments conspicuously thickened; segment 1 gradually thickened to apex, 2 about 1/2 as broad as long, 3–6 dilated apically, 7–10 broadly swollen to apices, last with apex acute; relative lengths of segments as follows: 19+ : 6 : 4+ : 4+ : 4 : 4+ : 6 : 6 : 6 : 9+. *Prothorax* 6/11 as long as broad; anterior angle oblique; side feebly convex, marginal sulcus fine, vaguely punctured; posterior angle obtuse; base sinuate, median lobe deep; discal punctures ± deep, mostly 1/2–2/3 as large as interspaces. *Scutellum* subtriangular, slightly broader than long, apex briefly rounded, surface ± smooth. *Elytron* 2.1× as long as broad, side convex, broadest at basal 1/4, apical angle rounded; epipleuron subvertical basally, suddenly narrowed at apical 1/4 and ending before apex; humerus broadly and feebly swollen; disc confusedly and densely punctate, punctures deep, mostly 2× as large as interspaces. *Ventral surfaces*: prosternum with intercoxal piece broadly concave and roughened, posterior margin ± truncate; metasternum finely granulate, transversely rugulose; abdomen moderately punctate, last sternite with apical margin sinuate; relative lengths of sternites as follows: 12 : 4+ : 4 : 3+ : 8+. *Legs* metafemur 1/2 as broad as long; metatibia 4/5 as long as femur; metatarsus 4/5 as long as tibia, basal segment shorter than 2+3 together. *Wing* fully developed. *Aedeagus* moderately arched, 4.3× as long as breadth at middle. Length 3.00 mm; breadth 2.50.

♀. Antenna 4/7 as long as body; abdomen with apical margin of last sternite broadly truncate. *Spermatheca* as figured. Length 3.12 mm; breadth 2.58.

Holotype ♂ (BISHOP 6799), NE New Guinea: Mt Wilhelm, above Keglsugl, 3000 m, 4. VII.1955, Gressitt; allotype ♀ (BISHOP), Daulo Pass, Asaro-Chimbu Divide, 3000 m, 13. VI.1955, Gressitt.

Differs from undescribed material from NE New Guinea by having basal part of elytral epipleuron subvertical instead of flat.

Genus *Maaltica* Samuelson, new genus

Head: Frons triangular; antennal groove obsolescent; gena moderately broad from anterior aspect; antennal sockets approximate; interantennal space $\pm 0.5\times$ as broad as transverse diameter of antennal socket; postantennal swellings obsolescent. *Antenna* not quite attaining elytral apex; segment 1 longer than 2+3 together, rarely as long as 2+3+4 together; flagellum rather slender, apical segments becoming slightly thickened. *Prothorax* transverse; basal margin sinuate, median basal lobe not strongly produced; ante-basal impression absent. *Elytron*: epipleuron rather flat, not strongly broadened basally; puncturation in 9 regular discal rows, a short sutural row and a row along lateral margin; interstitial punctures not prominent; discal interstices not swollen. *Ventral surfaces*: procoxal cavities open behind; mesosternum concealed by intercoxal piece of prosternum in repose. *Legs*: protibia moderately arched in ♂; metatibia flattened along apical 4/5 and \pm feebly channeled preapically; metatarsal pad medially cleft on apical margin; claws appendiculate.

Type of genus: *M. concinna*, n. sp.

Differs from *Schenklingia* Csiki & Heikertinger by having antennal groove (=impression at side of frons) obsolescent instead of deep, basal margin of pronotum with median lobe less strongly produced and body form more elongate; from *Profebra* Sam. by having mesosternum concealed. The generic name honours Prof. T. C. Maa of Taipei.

1. Frons orange-testaceous 2
Frons piceous; length 5.0 mm [NE New Guinea].....sp.
2. Gena orange-testaceous, elytron entirely blue-violaceous, pronotum orange-testaceous;
length 4.8-5.4 mm **concinna***
Gena piceous, elytron blue with large discal yellow-testaceous area, pronotum with piceous median stripe or not; length 5.6 mm **magna***

***Maaltica concinna* Samuelson, new species**

Fig. 1b, 3b, 4b.

♂. Body form subelongate-oval, robust. Dorsum bicolorous: pronotum and scutellum orange-testaceous, elytron metallic blue-violaceous; head largely orange-testaceous; antenna with segments 1-5 pitchy brown, 6-9 piceous, 10-11 testaceous; ventral surfaces red to orange-testaceous, abdomen paler than metasternum; legs mostly red-testaceous, metafemur dark pitchy brown. Abdomen sparsely clothed with fine hairs.

Head: Labrum transverse, anterior margin broadly convex; frontoclypeus triangular with broad arcuate impression extending across middle to anterolateral angles, side barely elevated above gena, surface finely punctulate, shiny; interantennal space convex, 4/9 as broad as transverse diameter of antennal socket; interantennal space 4/7 as broad as depth of eye; gena 4/7 as deep as eye; postantennal swellings obsolete, separated by fine median line; vertex punctulate; supra-orbital puncture small. *Antenna* nearly as long as body; segment 1 slightly arched, gradually thickened apically, 2 slightly swollen apically, 3-4 slender basally, dilated apically, 5-10 evenly thickened apically, last broadest near middle, suddenly narrowed preapically, apex conical; relative lengths of segments as follows: 15 : 5 : 7+ : 7 : 6 : 6+ : 6+ : 6 : 5+ : 5+ : 9. *Prothorax* 7/15 as long as broad; anterior angle small, transverse-rounded; side strongly convex, marginal sulcus fine; posterior angle produced; base sinuate; discal punctures large, more closely placed centrally than laterally, central interspaces 0.5-1.5 \times as large as punctures. *Scutellum* triangular, apex subrounded. *Elytron* 2.2 \times as long as broad; side more strongly rounded apically than along middle, apical angle obtuse-rounded; epipleuron rather flat, suddenly narrowed near apical 1/5 and ending preapically; humerus moderately swollen; disc with 9 regular longitudinal rows of punctures, a sutural row ending near basal 1/3 and an obscure row along lateral margin, most punctures 2/5 as large as longitudinal interspaces and distinctly larger than transverse interspaces.

punctures smaller apically, interspaces \pm flat and often bearing micropunctures. *Ventral surfaces*: prosternum with intercoxal piece concave, posterior margin concave; metasternum finely granulate; abdomen with last sternite broad, margin weakly sinuate at extremity; relative lengths of sternites as follows: 20 : 7 : 4+ : 5 : 10. *Legs*: protibia arched longer than profemur and metatibia; metafemur 3/5 as broad as long; metatibia 5/6 as long as femur; metatarsus 3/4 as long as tibia, basal segment nearly as long as 2+3 together, 3 with pad notched. *Aedeagus* weakly arched, 3.6 \times as long as breadth at middle. Length 5.10 mm; breadth 3.40.

♀. Antenna 2/3 as long as body; abdominal sternites strongly decreasing in breadth posteriorly, last sternite triangular with apex briefly rounded with small indentation at extremity. *Spermatheca* as figured. Length 5.28 mm; breadth 3.80.

Paratypes. Color of elytron varying from deep metallic violaceous to greenish blue. All ♂♂. Length 4.85-5.41 mm; breadth 3.40-3.72.

Holotype ♂ (BISHOP 6792), NE New Guinea: Maprik, 150 m, 29.XII-17.I.1960, Maa; allotype ♀ (CAS), NW New Guinea: Maffin Bay, X.1944, Ross; 1 paratopotype, same data as holotype; 2 paratypes, NE NG: Finschhafen, 21.IV.1944; Ross; 5 paratypes, NW NG: Maffin Bay, 10.VI-7.X.1944, Ross; 1 paratype, Genjam, 100-200 m, 1-10.III.1960, Maa.

Differs from undescribed sp. in key by having elytral punctures more heavily impressed near apex, etc.

Maaltica magna Samuelson, new species Fig. 1d, 3e.

♂. Body form subelongate-oval, robust. Dorsum largely bicolorous: pronotum orange-testaceous, scutellum piceous, elytron metallic blue-violaceous with large oval orange-testaceous area at middle of disc; occiput dark metallic blue, gena piceous; antenna piceous but apex of segment 2 narrowly banded with brown, apices of 3-5 more broadly banded with brown and apical 1/2 of last pale; ventral surfaces orange-testaceous; femora orange-testaceous with extremities piceous, tibiae and tarsi piceous. Antennal segments 1-5 sparsely clothed with pale hairs, 6-11 more densely clothed; metasternum with slender hairs submedially; apex of last abdominal sternite with a fringe of short hairs.

Head: Labrum transverse, anterior margin convex; frontoclypeus triangular with broad arcuate impression extending across middle to anterolateral angles, side barely elevated above gena, surface \pm smooth; interantennal space convex, 5/12 as broad as transverse diameter of antennal socket; interocular space 1/2 as broad as depth of eye; gena 1/2 as deep as eye; postantennal swellings vague, separated by fine median impression; vertex with a few small punctures; supra-orbital puncture \pm large. *Antenna* 5/6 as long as body; segment 1 gradually thickened to apex, 2-5 dilated apically, 6-10 weakly thickened to apices, last broadest near middle, suddenly narrowed preapically, apex conical; relative lengths of segments as follows: 15 : 5+ : 8 : 6+ : 6 : 6+ : 6 : 6 : 5+ : 9. *Prothorax* 2/5 as long as broad, broadest behind middle; anterior angle small, transverse-rounded; side strongly convex, marginal sulcus \pm smooth; posterior angle obtuse, slightly produced; base sinuate; disc with confused grouping of punctures centrally, interspaces 1-2 \times as large as punctures, sparsely punctate laterally. *Scutellum* triangular, almost as long as broad, apex rounded, surface finely granulate. *Elytron* 2.3 \times as long as broad, broadest near middle, side more strongly rounded apically than along middle, apical angle rounded; epipleuron flat basally, suddenly narrowed preapically and continued to apex; humerus moderately swollen; disc with 9 regular longitudinal rows of punctures, a short sutural row ending near basal 1/4 and a vaguely punctured row along lateral margin; most punctures at middle of disc 1/3-2/5 as large as longitudinal interspaces and subequal to transverse interspaces; interstices mostly smooth, barely swollen excepting convex lateral one. *Ventral surfaces*: prosternum with intercoxal piece deeply excavated, posterior margin truncate; abdomen with last sternite broadly

truncate-subsinuate apically; relative lengths of sternites as follows: 14 : 5 : 4+ : 3 : 7. *Legs*: protibia arched, longer than profemur and metatibia; metafemur $\frac{3}{5}$ as broad as long; metatibia $\frac{4}{5}$ as long as femur; metatarsus $\frac{3}{4}$ as long as tibia, basal segment almost as long as remainder. *Aedeagus* weakly arched, $3.6\times$ as long as breadth at middle. Length 5.63 mm; breadth 3.88.

Holotype ♂ (BISHOP 6795), NW New Guinea: Wisselmeren, Enarotadi, 1850-1900 m, 30.VII.1962, Sedlacek; 1 spm, Paniai, 29.IX.1939 (LEIDEN).

Differs from *concinna*, n. sp. by having antenna entirely dark, elytron with discal pale spot; elytral puncturation finer; aedeagus with apical outline less obtuse and more evenly rounded.

Genus *Axillofebra* Samuelson, new genus

Head: Frons triangular; antennal groove distinct; interantennal space very narrow, distinctly less than $0.5\times$ as broad as transverse diameter of antennal socket; eye much deeper than broad; postantennal swellings absent or vague. *Antenna* exceeding basal $\frac{1}{2}$ of elytron but not attaining apex; segment 1 \pm as long as 2+3+4 together; apical flagellar segments slender or robust. *Prothorax* transverse; basal margin sinuate, median lobe broad, not strongly produced; ante-basal impression absent. *Elytron* with surface of epipleuron rather flat, not strongly broadened basally; discal puncturation dominantly irregular or entirely confused. *Ventral surfaces*: procoxal cavities open behind, intercoxal piece broad; mesosternum a distinct transverse plate. *Legs*: profemur strongly flattened at basal extremity; metatibia weakly channeled along apical $\frac{1}{2}$; metatarsal pad medially notched on apical margin; claws appendiculate.

Type of genus: *Eucycla flavomaculata* Jacoby

Allied to *Profebra* Sam. Differing from same by having antennal groove well-defined instead of obsolescent, elytral puncturation irregular or confused instead of dominantly seriate. Members of both genera tend to have a lamellar structure on the procoxa which is produced over part of the trochanterofemoral articulation. This condition is more pronounced in *Profebra*. Derivation of *Axillofebra*: from Latin, *axilla*=armpit + *Febra*=an alticine genus whose name is possibly derived from *febris*=fever.

1. Flagellar antennal segments slender; elytral puncturation dominantly irregular; dorsum black with flavous markings.....2
- Flagellar antennal segments robust; elytral puncturation entirely confused; dorsum entirely black; length 3.3-3.8 mm..... **nephele***
2. Elytron with 1 flavous patch on humerus; antenna with segments 5-9 darker than others; length 4 mm..... **humeralis**
- Elytron with basal transverse flavous band nearly reaching suture and smaller flavous preapical spot; antenna with all segments testaceous; length 3.8-4.0 mm..... **flavomaculata**

Axillofebra flavomaculata (Jacoby), new combination Fig. 1c, 4c.

Eucycla flavomaculata Jac., 1885, *Ann. Mus. Civ. Genova* ser. 2, 2: 38 (57) (New Guinea: Katau—type in Genova Mus.)

Schenklingia flavomaculata: Cs. & Hktgr., 1940, *Junk Col. Cat.* 25 (169): 516.

MATERIAL EXAMINED: 1, SE New Guinea: W. District, Oriomo Govt. Sta., on palm, 26-28.X.1960, Gressitt.

DISTRIBUTION: SE New Guinea.

Axilofebra humeralis (Bryant), new combination

Schenklingia humeralis Bry., 1950, *Ann. Mag. Nat. Hist.* ser. 12, 3: 745, fig. 30 (Papua: Mafulu, 1250 m — type in BMNH).

DISTRIBUTION: SE New Guinea.

Axilofebra nephele Samuelson, new species Fig. 1i, 2c, 3k, 4i.

♂. Body form oval. Dorsum black: pronotum pitchy-black, elytron dark piceous; head mostly pitch-black, mouthparts fuscous; antenna with segment 1 piceous basally, remainder of 1 and 2-9 yellow-testaceous, 10-11 slightly darker than 9; ventral surfaces, femora piceous; apical 3/5 of protibia, extreme apices of meso- and metatibiae and tarsi yellowish brown. Antenna sparsely clothed with suberect slender hairs, apical 6 segments clothed with fine pale pubescence; ventral surfaces sparsely clothed.

Head: Labrum transverse-triangular, anterior margin obtusely angulate at middle; frons triangular, surface ± smooth, broadly and shallowly impressed near middle, weakly convex anteriorly; interantennal space finely carinate, 3/8 as broad as transverse diameter of antennal socket; interocular space 7/10 as broad as depth of eye; gena 3/7 as deep as eye; antennal groove distinct; postantennal swellings ± obscure, oblique-rounded, separated medially by fine impression; vertex sparsely punctured; supraorbital puncture large. *Antenna* 2/3 as long as body; segment 1 arched, gradually thickened to apex, 2 moderately swollen, 3-5 dilated apically, 6-7 becoming more robust, 8-10 robust, weakly swollen to apices, last with apex acute; relative lengths of segments as follows: 20 : 6 : 7+ : 7 : 6+ : 6 : 6 : 7+ : 7 : 6+ : 10. *Prothorax* 1/2 as long as broad; anterior angle obtuse-rounded; side weakly convex, marginal sulcus deep; posterior angle obtuse; base sinuate, median lobe broad; discal punctures deep, mostly 1/2-2/3 as large as interspaces; area adjacent to basal margin with series of large punctures along central 2/3. *Scutellum* subtriangular, broader than long, apex rounded, surface smooth. *Elytron* 2.4× as long as broad, side convex, more strongly rounded apically than along middle, apical angle obtuse-rounded; epipleuron flat and smooth, suddenly narrowed preapically and continued nearly to apex; humerus moderately swollen, largely impunctate; disc confusedly and coarsely punctured; most punctures large, deep and 2-3× as large as interspaces; interspaces often with small punctures. *Ventral surfaces*: prosternum with intercoxal piece broadly impressed and roughened, posterior margin concave; mesosternum plate-like, transverse-oval, surface with a circular depression at each side; metasternum finely rugulose to granulate; abdomen granulate, sparsely punctured, last sternite with apical margin sinuate; relative lengths of sternites as follows: 12 : 6 : 4 : 3+6+. *Legs*: metafemur 4/7 as broad as long; metatibia 5/6 as long as femur; metatarsus 3/4 as long as tibia, basal segment shorter than 2+3 together. *Wing* fully developed. *Aedeagus* arched 3.7× as long as breadth at middle. Length 3.30 mm; breadth 2.26.

♀. Antenna 1/2 as long as body; last abdominal sternite with apical margin truncate. *Spermatheca* as figured. Length 3.8 mm; breadth 2.58.

Holotype ♂ (BISHOP 6790), NE New Guinea: Daulo Pass, 2400 m, 7.VII.1963, Sedlacek; allotype ♀ (BISHOP), same data as holotype.

Differs from congeners by having flagellar antennal segments robust instead of slender, elytral puncturation entirely confused instead of dominantly irregular.