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## A Review of the Genus *Leucitus* Fauvel

(Coleoptera: Staphylinidae)

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Whilst identifying Staphylinid material kindly submitted to me by Dr. H. Freude of Munich, I discovered a specimen belonging to the genus *Leucitus* which I consider to be new and which I am describing. After examining Types or Paratypes of all species so far described, I am reviewing the genus giving outline drawings of the aedeagi of all species except *L. superbus* Arrow. I am also including two species previously described in the genus *Philonthus*. *P. superbus* Arrow, and *P. somoruensis* Last, and removing *albertisi* Fauv. to the *Philonthus* genus, *Leucitus pulcher* Wend. is synonymous with *Leucitus quadripunctatus* Bernh., and *Leucitus benigseni* Bernh. is synonymous with *Philonthus beccarii* Fauv.

New combinations and correct synonymy is as follows:

*Leucitus beccarii* Fauvel, 1878, Ann. Mus. Genova XII, p. 262

transferred to *Philonthus*.

(= *Leucitus benigseni* Bernhauer) 1927, Nova Guinea XV, Zool. 3, p. 293.

It must be pointed out that in Junk this name is printed "*bennigseni*" and the label of a cotype also bears this spelling but in the description it is given as "*benigseni*".

*Leucitus albertisi* Fauvel, 1878, Ann. Mus. Genova XII p. 260

transferred to *Philonthus*.

*Philonthus superbus* Arrow, 1915, Trans. Zool. Soc. XX p. 499

transferred to *Leucitus*.

*Philonthus somoruensis* Last, 1963, J. Nat. Hist. 2 p. 360

transferred to *Leucitus*.

*Leucitus quadripunctatus* Bernhauer, 1915, Deutsche Ent. Zeitschr. p. 193

= *pulcher* Wendeler, 1924, Deutsche Ent. Zeitschr. p. 340.

Fauvel created this genus in 1878 (Ann. Mus. Genova XII p. 253) for three species, *albertisi*, *argyreus* and *beccarii*. The first and third of these species have now been transferred to the genus *Philonthus* and I am making *argyreus* the Genotype. The head shows a distinct neck. Eyes very large and convex. Labrum transverse, emarginate, pubescent. Mandibles long and pointed, toothed; maxillary palpi slender, last segment aciculate, parallel-sided, equal to the length of the third, labial palpi slender, filiform, third segment shorter than the second. Antennae long, reflexed margin of pronotum joined to

lateral margin before the anterior corner. Prosternum sharply triangular, metasternum truncate, rounded. Legs spinose; anterior tarsi dilated in the male, posterior tarsi elongate, first segment longer than the fifth, second almost twice the length of the first. F a u v e l states that the genus can easily be distinguished from *Philonthus* by these characters, but I have not found this to be so and judging by the transfer of some species in J u n k , and in the British Museum collection, there is still doubts about certain species. So often all the generic characters are not represented in a species and one has to decide those of priority. This genus appears to be like *Hesperus*, *Philonthus* and *Belonuchus* based upon differences which are largely comparative as mentioned by C a m e r o n (Faun. Brit. India III, 1932: 156). Heller in describing three new species (Heller, 1910, Abh. Zool. Mus. Dresden XIII, p. 9—10) attempted to make a key but with further species since that date, and their extremely close similarity, it is impossible to produce a workable key without taking into consideration the shape of the male aedeagi. Some authors have laid emphasis upon the number of white segments of the antennae, but in some species this is unreliable and should not be used as a diagnostic character. For instance in the large series of *Leucitus quadripunctatus* Bernh., in the British Museum (Nat. Hist.) the number of creamy-white segments exhibited in the antennae varies from four to seven. In the male sex of *quadripunctatus*, *argyreus* and *somoruensis*, the last segment of the antennae is more or less blackened. The unique type specimen of *L. superbis* is a female and the aedeagus is therefore unknown. Of the remaining nine species, three have the median

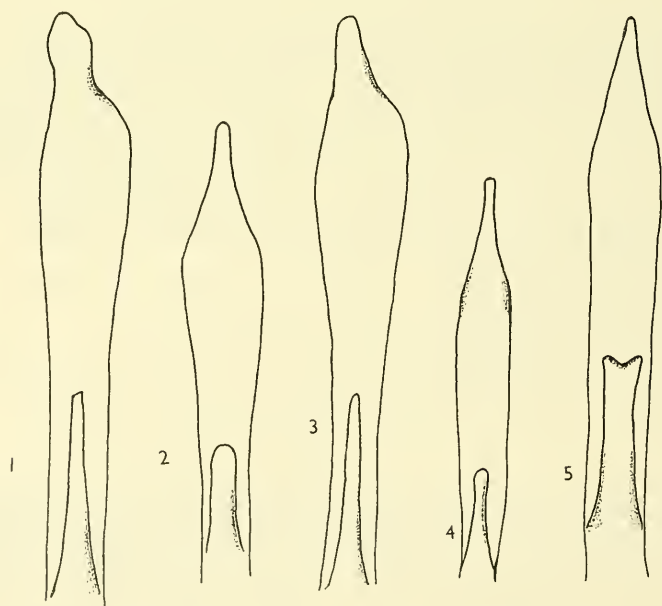


Fig. 1: Aedeagus of *L. argyreus* Fauv. — Fig. 2: Aedeagus of *L. quadripunctatus* Bernh. — Fig. 3: Aedeagus of *L. amicus* Bernh. — Fig. 4: Aedeagus of *L. paradiseus* Fauv. — Fig. 5: Aedeagus of *L. somoruensis* Last.

lobe symetrically acuminate from about the anterior third, i. e. *quadripunctatus*, *paradiseus*, *somoruensis*; two have the median lobe assymmetrically acuminate from about anterior quarter i. e. *argyreus*, *amicus*; three have the median lobe broadly and bluntly rounded at the apex i. e. *bernhaueri*, *mandibularis*, *semichalceus*, the remaining species *freudei*, has the median lobe more shortly acuminate (see Figs. 1—9).

### Notes on the species with the description of a new species

*L. argyreus* Fauvel, 1878, Ann. Mus. Genova, XII p. 254.

Fauvel created the *Leucitus* genus to include this species.

The head and pronotum shining green, the first segment of the antennae and base of the second and third red, the fourth to the sixth black, the last five creamy-white. The elytra coppery purple, with a central spot on each; also on the shoulders and the scutellum in silver coloured pubescence, the third to the fifth tergites also have a lateral tuft of golden setae at the apical borders, these tergites are also narrowly bordered with dark yellow, the seventh is more broadly bordered and the basal half of the eighth tergite is similary coloured. Legs are deep yellow, with apical third of femora, apical half of tibiae and tarsi black or much darkened. Abdomen narrows considerably to the apex. (Aedeagus Fig. 1.). Lectotype: ♂, Amberbaki, New Guinea, R. I. Sc. N. B. 17.479 Coll. and det. Fauvel.

*L. amicus* Bernhauer, 1915, Deutsche Ent. Zeitschr. p. 193.

Bernhauer compares this species with *argyreus* and mentions a difference in the colour of the basal and the last segments of the antennae. It must be admitted that in *amicus* the last five segments are of a dusky cream colour which looks like a whitish powder or dust, the basal segments are also of a darker red and the legs are darker, but these differences hardly justify a new species. The aedeagus also is very similar to *argyreus*. The type specimen is in rather poor condition and had previously been repaired. I have retained it as a separate species but am still doubtful. (Aedeagus Fig. 3)

Type: ♂, New Guinea, Sekar, Kuhn 1897, Bang-Haas in the Field Museum, Chicago.

*L. quadripunctatus* Bernhauer, 1915, Deutsche Ent. Zeitschr. p. 340.

This species is so like *L. argyreus* that until I had examined the aedeagus I thought it could only be that species. The aedeagus differs very considerably. Bernhauer draws attention to the puncturation of the pronotum but this can vary within the species. One can, however, appreciate the differences he mentions in the puncturation of the head and to some extent of the pronotum, but I cannot see much difference in the colouration of the legs. The number of segments of the antennae which are coloured white also varies. In the large series in the British Museum (Nat. Hist.) collection, it varies from four to seven, but the males always appear to have the last segment with a darkened apex. I have not seen the type of this species, but have compared many specimens with the lectotype *argyreus*. (Aedeagus Fig. 2).

*L. paradiseus* Fauvel, 1879/80, Ann. Mus. Genova p. 96.

Head and pronotum shining; greenish-black without microsculpture; antennae with three basal segments red, segments four to eight black, penultimate three, creamy-white. Head more sparingly punctured than *argyreus*, pronotum with four larger dorsal punctures otherwise finely and irregularly punctured. Elytra green, each with a large central patch of dark mauve which extends from sides of scutellum to the posterior margins, but leaving the suture, lateral margins and "shoulders" green, epipleura of elytra reddish yellow, strongly and densely punctured. Legs and apical margins of tergites and base of seventh tergite reddish-yellow, darker than in other species, with the silver-coloured abdominal pubescence (Aedeagus Fig. 4).

Lectotype: ♂, Nouva Guinea, Fly River, Mt. Hautukeen (?spelling), Astrolabe, L. M. D'Albertis 1876–77, in the collection of Institute Royal des Sciences Naturelles de Belgique.

*Leucitus somoruensis* (Last)

= *Philonthus somoruensis* Last, 1968, J. Nat. Hist. 2 p. 360.

This species had been described in the *Philonthus* genus but it quite obviously belongs to the *Leucitus* genus.

I cannot see any distinct differences between this species and *L. argyreus* Fauv. except that the shape of the paramere is quite different (Fig. 5.). The scattered puncturation of the pronotum is also finer and similar to that of *L. quadripunctatus* Bernh. Type: ♂, Mobutie Somoru, New Guinea 6-iii-1966 (R. Hornabrook) in the collection of the British Museum (Nat. Hist.).

*L. bernhaueri* Heller, 1910, Abh. Zool. Mus. Dresden XIII p. 10.

This species is very similar to *mandibularis*, but it differs in having the head and pronotum shining black, whereas in *mandibularis* they have a distinct metallic shimmer; the three basal segments of the antennae are red, in *mandibularis* they are black. The last three segments are white, in *mandibularis* the last five are white. The elytra are more strongly punctured. The antennae are coloured as in *paradiseus* but it differs from this species in having the elytra differently coloured and is larger. The tergites are not coloured as in the above species, they are black. The elytra are green, each with a large central purple blotch (Aedeagus Fig. 6.). Type: ♂, Kais. Wilhelmsland, Toricelli Gebirge, Dr. Schläglinhaußen, in the collection of the Staatl. Museum für Tierkunde, Dresden.

*L. mandibularis* Heller, 1910, Abh. Zool. Mus. Dresden XIII p. 9.

Head and pronotum black with a metallic shimmer, elytra green with a large blackish-purple blotch; scutellum black. Elytra finely moderately densely punctured, head and pronotum not densely punctured, dorsal row of four regular punctures, head and pronotum with fine alutaceous microsculpture; antennae black with the last five segments creamy-white. Legs black, basal half of tibiae and base of femora reddish (Aedeagus Fig. 7.).

Type: ♂, Kais. Wilhelmsland, Toricelli Gebirge, Dr. Schläglinhaußen, in the collection of Staatl. Museum für Tierkunde, Dresden.



*L. semichalceus* Heller, 1910, Abh. Zool. Mus. Dresden, XIII p. 9.

This is the largest species of the genus so far described, and perhaps the most beautiful. The legs, the two basal segments of the antennae and the apical borders of the tergites and the base of the eighth tergite, red; the last six segments of the antennae are yellowish-white. Head and pronotum dark green, the former finely punctured in which it differs from all other members of the genus, the pronotum, besides the large dorsal punctures, irregularly and rather finely punctured. Both the head and pronotum have a fine alutaceous microsculpture which is slightly finer on the head.

The elytra are metallic-green, each with a large central dark green blotch which is surrounded by a band of purple, the broad epipleura are black; the whole elytra are covered with long dense silvery-gold pubescence (Aedeagus Fig. 8).

Type: ♂, Kaiser Wilhelmsland, Toricelli Gebirge, Dr. Schlagin-haufen, in the Staatl. Museum für Tierkunde, Dresden.

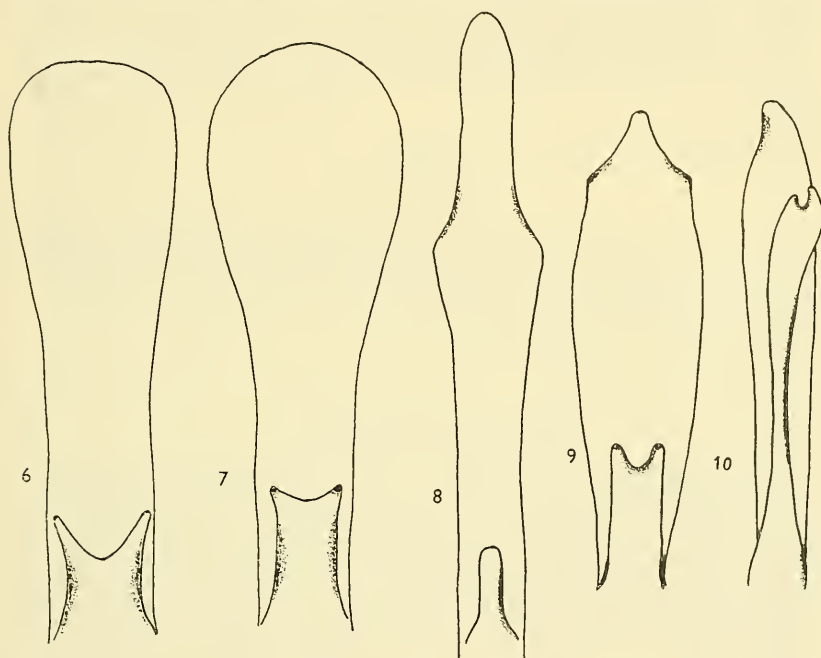


Fig. 6: Aedeagus of *L. bernhaueri* Heller. — Fig. 7: Aedeagus of *L. mandibularis* Heller. — Fig. 8: Aedeagus of *L. semichalceus* Heller. — Fig. 9: Aedeagus of *L. freudei* sp. n. — Fig. 10: Aedeagus of *Hesperus heinrichi* sp. n.

### ***Leucitus freudei* sp. n.**

This species is easily distinguished from other members of the genus by the conspicuous reddish-yellow border to the elytra, which are laterally broad and extending over the large epipleura; the posterior margin is narrower, but all borders can be easily seen from above. It differs in this respect from *L. paradiseus* Fauv., the lateral borders of which cannot be seen from above, moreover, *paradiseus* is

considerably smaller and the puncturation of the elytra is finer and denser. *L. freudei* does not have the narrow yellow apical border nor the tufts of golden pubescence as on the tergites of *L. argyreus* Fauv., and *L. quadripunctatus* Bernh.

This species, however, differs from all others by the last segment of the antennae which is creamy-white and almost as long as the four penultimate together. Fortunately this specimen is a male and the aedeagus exhibits quite a difference from all other species so far described (Fig. 9).

Type: ♂, Papua/Wau, Keinde 17/22-VI-1969 leg. G. Heinrich, in the collection of Zoologische Sammlung des Bayerischen Staates, Munich.

*L. superbus* (Arrow, 1913) Trans. Zool. Soc. XX p. 499.

Head and pronotum shining green. Elytra dusky-yellow with a large blackish-purple patch extending over the posterior half but leaving lateral and posterior borders of dusky-yellow and also a narrow sutural border.

Type: ♀, Dutch New Guinea, Sept. 1912 — March 1913. A. F. R. Wollaston 1913-24, in the collection of the British Museum (Nat. Hist.).

### Resume

This is a review of the genus *Leucitus* Fauv. with some removals of species to another genus and with some transfers from the *Philonthus* genus. A new species is also described and line drawings of the aedeagi of all species is given except of one which is so far represented by an unique female specimen.

\* \* \*

### *Hesperus heinrichi* sp. n.

This species is distinctly smaller than *Philonthus discipennis* Fauv., but more closely compares with *Hesperus beccarii* Fauv. It differs in the following details, the antennal segments four to the last are slightly longer, the elytra are a little more densely punctured and are darkly metallic compared with the golden colour of *beccarii*, the legs are also dusky yellow, in *beccarii* they are much brighter. The aedeagus differs considerably. Head, pronotum and antennae, except the last three segments black, elytra and abdomen metallic black, last three segments of the antennae cream coloured; legs dusky yellow.

Head transverse (10:6.5), moderately shining, with distinct but rather confused alutaceous microsculpture, with very large punctures near inner margins of the eyes and on the temples, and with a number of scattered very much smaller punctures; eyes convex, their longitudinal diameter a third longer than the temples; antennae with all segments longer than broad, the last three much less so, last segment emarginate at the apex, all segments with strong black setae which are shorter on the last four; maxillary palpi with last segment as long as penultimate, parallel sided.

Pronotum as broad as long, with distinct alutaceous microsculpture, with two rows of four punctures and others laterally, also with a few

very small scattered punctures, bordered for two thirds laterally and extending round the posterior margin, where it converges, and with rather long bristles.

Elytra as broad as long, rather strongly and densely punctured, and with rather long, dense setae, with longer bristles laterally and along posterior margin.

Scutellum densely punctured and setose.

Abdomen shining, with extremely fine microsculpture and large elongate setae-bearing punctures; converging to the apex. Legs strongly spinose especially tibiae, Length 18 mm. (Aedeagus Fig 10).

Type: ♂, Papua, Madang 4-1969, paratypes (1♂ 9♀♀) same data (G. Heinrich) in the Zoologische Sammlung des Bayerischen Staates, Munich. Details of other specimens in the Munich Museum are as follows:

*Paederus laensis* Last i. l. Papua/Madang 17/22-VII-1969 (5 ex).

*Priochirus bisinuatus* Cam. Papua/Madang V/VI-1969 (2 ex).

*Philonthus perfidiosus* Last Papua/Madang VII-1969 (1 ex).

*Leucitus quadripunctatus* Bernh. Papua/Madang VI-1969 (4 ex).

*Actinus imperialis* Fauv. Papua/Madang VI-1969 (1 ex).

all taken by G. Heinrich.

Included in the specimens sent were some Myrmedoniini taken by R. Remane in the Sudan: Erkowit, Kassala Prov., 14-VI-1962, details as follows:

*Zyras (Camonia) imperialis* Bernh. (28 ex).

*Porus ferrugineus* Kr. (21 ex).

*Zyras (Myrmoecia) bipustulatus* Bernh. (24 ex).

In addition to the typical form of this species were 134 examples of a variety of this species which I name var. *rubrothoracicus* n. nov.

The typical form has the pronotum black with the reddish-yellow posterior blotch on the elytra varying to a greater or lesser extent. The structure of the third tergite of the male follows a consistent pattern having two well separated apical "prongs". In var. *rubrothoracicus* the pronotum is red, and the third tergite of the male has the two prongs more developed and closer together, and the space between, often has a smaller central prong and this is sometimes bifid, the paratergite is also often prolonged apically and strongly acuminate; the fourth tergite often exhibits deep depressions with the apical margin broadly concave. The males have a broad shallow depression on the vertex of the head and a small setiferous pore between the base of the antennae which also applies to the typical form (♂ 3rd tergites Figs. 11 & 12).

### Acknowledgements

I would like to thank my colleagues and the Institutions to which they belong for the loan of Types or paratypes of species in their collections, which have made this review of the genus possible. The late M. Gaston Fagel, Institut Royal des Sciences Naturelle de Belgique, Brussels; Dr. R. Hertel, Staatliches Museum für Tierkunde Dresden; Dr. F. Hieke, Museum für Naturkunde der Humboldt-Universität, Berlin; Field Natural History Museum, Chicago; Dr. H. Freude, Zoologische Sammlung des Bayerischen Staates, Munich; The Authorities of the British Museum (Nat. Hist.) and the Rev. C. E. Tottenham for various translations.

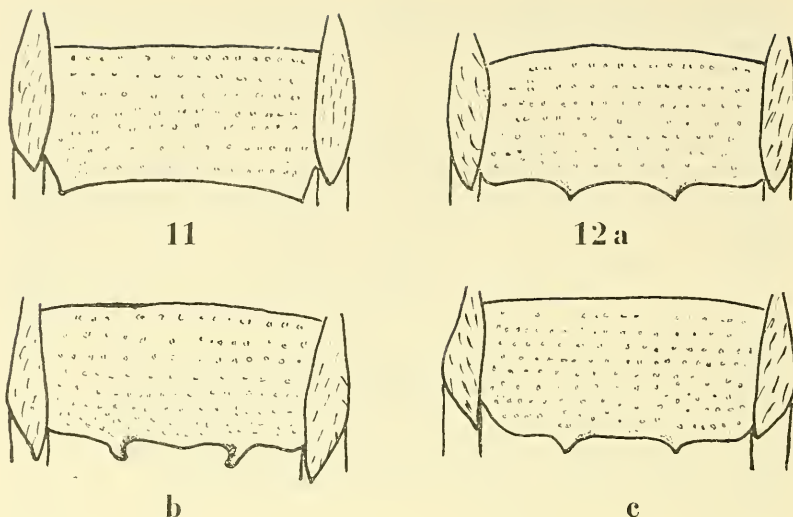


Fig. 11: Third tergite of ♂ *Zyrras (Myrmoecia) bispustulatus* Bernh. (typical form) — Fig. 12: (a, b, c) Third tergite of ♂ var. *rubrothoracicus* n. nov. showing variation.

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