

**Zeitschrift:** Entomologica Basiliensia  
**Herausgeber:** Naturhistorisches Museum Basel, Entomologische Sammlungen  
**Band:** 21 (1999)  
  
**Artikel:** Revision of Lycocerus Gorham of Indochina and adjacent regions, with the description of Walteria, a new genus (Coleoptera, Cantharidae)  
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**DOI:** <https://doi.org/10.5169/seals-980421>

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# Revision of *Lycocerus* Gorham of Indochina and adjacent regions, with the description of *Walteria*, a new genus (Coleoptera, Cantharidae)

by S. Kasantsev

**Abstract.** The genus *Lycocerus* Gorham, 1889, of Indochina and adjacent regions of India and China is revised. *Walteria* gen.n. and three new species are described: *Walteria taiwana* sp.n., *Lycocerus wittmeri* sp.n. and *L. rufocapitatus* sp.n. Nine species [*Lycocerus pluricostatus* (Fairmaire, 1887), *L. distinctecostatus* Pic, 1917, *L. elongatus* Pic, 1921, *L. impressicornis* Pic, 1925, *L. coomani* Pic, 1926, *L. hickeri* Pic, 1934, *L. pieli* Pic, 1937, *L. longipennis* Pic, 1947, and *L. nigricollis* Wittmer, 1984] are transferred to other Oriental genera. *Lycocerus yunnanus* Pic, 1921, and *L. dalatensis* Pic, 1928, are excluded from the list of *Lycocerus*. *Walteria intermedia* (Pic) is restored as a good species, while nineteen taxa are synonymised: *Lycocerus miniatus* Champion, 1926 (= *L. paviei* (Bourgeois, 1890)); *L. trilineatus* Pic, 1921, *L. maculaticeps* Pic, 1921, *Podabrus sikkimensis* Pic, 1924, *L. variipes* Champion, 1926 (= *L. cordieri* Pic, 1915); *L. ruficeps* Pic, 1915, *L. indicus* Pic, 1921 (= *L. lateritius* Gorham, 1889); *Lycocerus nigriceps* Pic, 1938 (= *L. brevelineatus* Pic, 1916); *L. nigrolineatus* v. *femoralis* Pic, 1914 (= *L. nigrolineatus* Pic, 1914); *L. parallelus* Pic, 1927 (= *L. vitalisi* Pic, 1914); *L. vittaticollis* Champion, 1926 (= *L. caliginosus* Gorham, 1889); *L. pubicollis* Pic, 1915, *L. curticollis* Pic, 1921, *L. thibetanus* Pic, 1921, *L. fumatus* Champion, 1926, *L. pyrochroides* Champion, 1926 (= *L. yunnanus* (Fairmaire, 1886)); *L. hirsutus* Pic, 1921, *L. notaticollis* Pic, 1921 (= *L. limbatus* Pic, 1915); *L. obscurus* v. *diversus* Pic, 1916 (= *L. obscurus* Pic, 1916). Keys to the genera *Athemus*, *Lycocerus* and *Walteria*, as well as to *Walteria* species, are presented.

**Key words.** Coleoptera - Cantharidae - Cantharinae - Southeast Asia - taxonomy - new genus - new species - key

## Introduction

The genus *Lycocerus* Gorham, 1889 was erected for reception of some Oriental cantharids, a.o. *Omalisus maculicollis* Hope, 1831, which was subsequently designated as the type species by DELKESKAMP (1977). *Lycocerus* was separated from other cantharid genera by the broad antennomeres and by the red, generally densely pubescent, pronotum and elytra. By the eighties, over 70 taxa of the specific rank were described in the genus, mostly from Indochina and adjacent regions of India and China, one species was reported from the Malay Peninsula only and 8 from the Greater Sunda Islands. However the morphological diversity of these forms and often the embarrassing impossibility to differentiate them from *Athemus* Lewis, 1895, have long been urging to a critical revision of the group (CHAMPION, 1926).

The process was started by Wittmer, who transferred two species (*lineaticeps* Pic, 1914 and *parallelicollis* Pic, 1921) to *Habronychus* WITTMER, 1982, and another one (*costulatus* Wittmer, 1972) to *Athemellus* Wittmer, 1972 (WITTMER, 1982), a couple of taxa to *Fissocantharis* Pic, 1921 (*fortecostatus* Pic, 1943, and *planicornis* Pic, 1943 - see WITTMER, 1989) and finally two species to *Athemus* (*atriceps* Bourgeois, 1907, and *nigrobilineatus* Pic, 1916 - see WITTMER, 1995).

In the course of further revision of *Lycocerus*, it was found that a further number of species unquestionably belongs to other genera, and that *Lycocerus* itself consists of two genera. One of them, *Walteria* gen.n., is described as new to science, while *Lycocerus* is revised basing upon the study of the type material from the Paris Museum of Natural History, the Natural History Museum, London, and the Natural History Museum, Basel. Lectotypes have been designated when necessary.

The following abbreviations are used in the paper:

- BM Natural History Museum, London  
 MP Musée National d'Histoire Naturelle, Paris;  
 NHMB Natural History Museum, Basel;  
 ICM Insect Centre, Severtzov Institute of Evolution and Ecology Problems of the Russian Academy of Sciences, Moscow;  
 ZIP Zoological Institute of the Russian Academy of Sciences, St. Petersburg.

### Morphology and systematic account

The following species are excluded from *Lycocerus* resulting from the study of the types: *impressicornis* Pic, 1925, *coomani* Pic, 1926, and *pieli* Pic, 1937, they should be attributed to *Micropodabrus* Pic, 1920, meanwhile *distinctecostatus* Pic, 1917 to *Habronychus*. The species *Lycocerus dalatensis* Pic, 1928 (also very different from its congeners) is excluded from the genus as well.

*Lycocerus yunnanus* Pic, 1921, mentioned in *Coleopterorum Catalogus* (DELKESKAMP, 1977), should be treated as *L. yunnanus* (Fairmaire, 1887): on the cited page PIC (1921) just gives a short diagnosis of Fairmaire's species described in the lycid genus *Lipernes* Waterhouse, 1879. However, Pic did not point out that he was transferring the taxon to *Lycocerus* - so that the species has not been actually transferred until recently (KASANTSEV, 1993). *Lycocerus yunnanus* Pic is thus hereby rejected.

Apart from the excluded species a well-defined group was discovered within the genus that also differs from the rest of *Lycocerus*, including *L. maculicollis*, the type species, by a combination of characters (the shape of the pronotum, the structure of the antennae, the shape of the aedeagus, the structure of the apical abdominal segments in female, the vestiture, etc.). It is described as *Walteria* gen.n. and its differentiating characters are given in the key and in description below.

At the same time, an investigation has been carried out to trace characters for the remaining *Lycocerus* taxa that could be used for separating them from *Athemus*. Both genera are known to include almost morphologically identical forms, so that the type species of both genera were compared: *L. maculicollis* (Hope, 1831) and *A. suturellus* (Motschoulsky, 1860). The structure of the claws of both species is quite the same: simple in the male and conspicuously toothed at base in the female (in the outer claw). The difference between the species is following:

#### *Athemus suturellus*

1. Antennae filiform, more so in female, with glabrous grooves on median segments in male.
2. Vertex concave, roughly and densely punctate.
3. Pronotum with conspicuous sculpture, hind angles short and emarginate.
4. Aedeagus: no teeth on the inner surface of the dorsal blades; their apices simple.
5. Apical ventral segment in female with conspicuous sclerotized sculpture

#### *Lycocerus maculicollis*

1. Antennae flattened and broad, more so in female, without glabrous grooves in male.
2. Vertex flat, glabrous.
3. Pronotum smooth, with thickened and not emarginate hind angles that are produced latero-posteriorly.
4. Aedeagus: laterophyses making a lock with a tooth at the inner surface of the dorsal blades; apices of the latter developed in conspicuous hairy processes
5. Apical ventral segment in female without conspicuous sclerotized sculpture.

The width of antennomeres (generally used to distinguish the two genera) is of limited use. But even filiform antennae in the males of *Lycocerus* are without glabrous grooves in the median segments, it is so in the numerous males at my disposal. *Lycocerus* females can be recognized by the absence of conspicuously sclerotized sculpture on last ventrites.

The characters above allowed to transfer *L. pluricostatus* Fairmaire, 1887, and *L. nigricollis* Wittmer, 1984, to *Athemus*, and the species of the *elongatus*-group (namely, *L. elongatus* Pic, 1921, *L. hickeri* Pic, 1934, and *L. longipennis* Pic, 1947) to the genus *Athemellus* Wittmer. The latter has been recently treated as a subgenus of *Athemus* (WITTMER, 1995), though its placement either as a part of *Athemus* or *Lycocerus*, or as a separate genus seems to be uncertain due to the above mentioned considerations.

On the other hand, a number of *Athemus* species, especially from the indo-malayan region proved to belong to *Lycocerus*. Such species as *Athemus cyanurus* (Hope) may be externally different in the shape of the antennae, pronotal and elytral vestiture, and coloration. Due to the pronotal structure and the shape of the aedeagus, they are obviously much closer to *L. maculicollis* than to *A. suturellus* and the type species of the other *Athemus* subgenera (*Athemellus*, *Andrathemus* Wittmer, *Isathemus* Wittmer). Thus this group, i.e. *Lycocerus*, appearing to be rather diverse in appearance, includes species both with double or single elytral pubescence, with hairy or glabrous pronotum, with widened or filiform antennae, both uniformly red or differently coloured. A full list of *Lycocerus* can be elaborated after a critical revision of the numerous oriental *Athemus* species only, which is beyond the scope of the present study.

The difference between the three genera is shown in the key that follows.

#### A key to the genera *Lycocerus*, *Athemus* and *Walteria*

- 1 Pronotal lateral margins flattened and dilated at front angles so that pronotum is narrowed posteriorly (Fig. 10). Apical sternite in female with a flat process in the median emargination (Fig. 2). Legs with long bristling hairs (Fig. 10). Aedeagus hemispherical, with an apical lock composed of dorsal processes (Figs 6, 8) ..... ***Walteria* gen.n.**
- Pronotal sides if flattened not only at the front angles. Apical sternite in female with a simple emargination. Legs with normal pubescence. Aedeagus of different shape 2
- 2 Antennae usually flattened and dentate, males without glabrous grooves on median segments. Vertex flat and glabrous. Pronotum smooth, thickened and not emarginate at hind angles. Laterophyses of the aedeagus forming a lock with a tooth at the inner surface of the dorsal blades that are developed in modified hairy processes (Figs 15-34). Apical ventral segment in female without sclerotized sculpture..... ***Lycocerus* Gorham**
- Antennae mostly filiform, males with glabrous grooves on median segments. Vertex usually concave, roughly punctate. Pronotum conspicuously sculptured, with hind angles shortened and emarginate. Dorsal blades of aedeagus usually simple. Apical ventral segment in female with sclerotized sculpture ..... ***Athemus* Lewis**

#### ***Walteria* gen.n.**

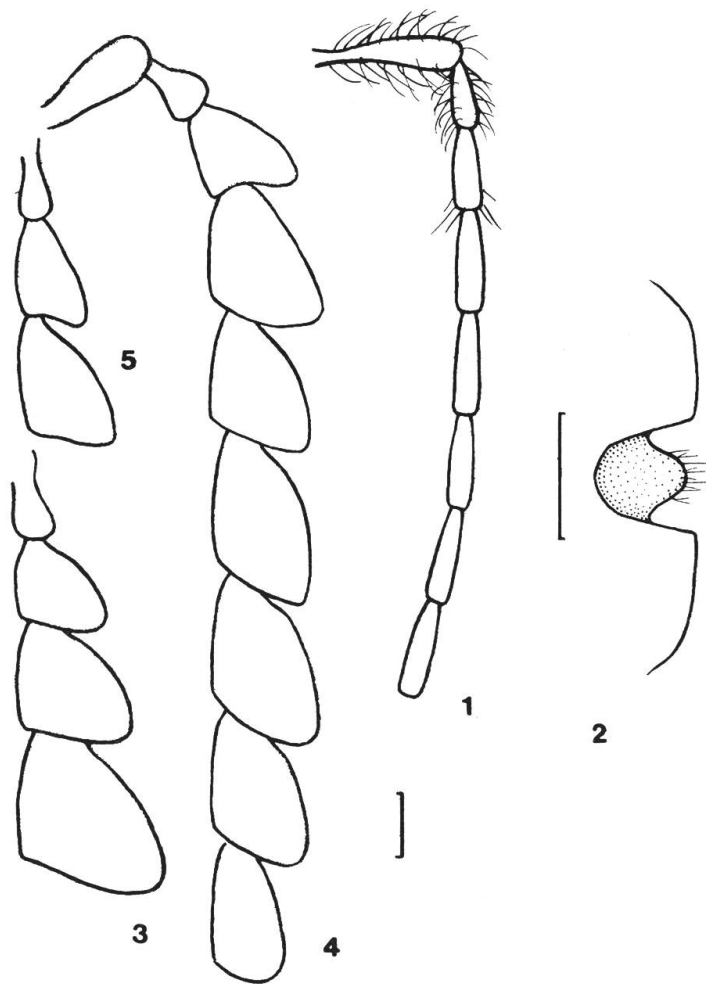
**Type species.** *Walteria particularis* (Pic, 1923). **Name derivation.** Named in the memory of an outstanding Coleopterist, specialist in Cantharidae and Malachiidae, and a most respected dear friend of mine, Dr. Walter Wittmer.



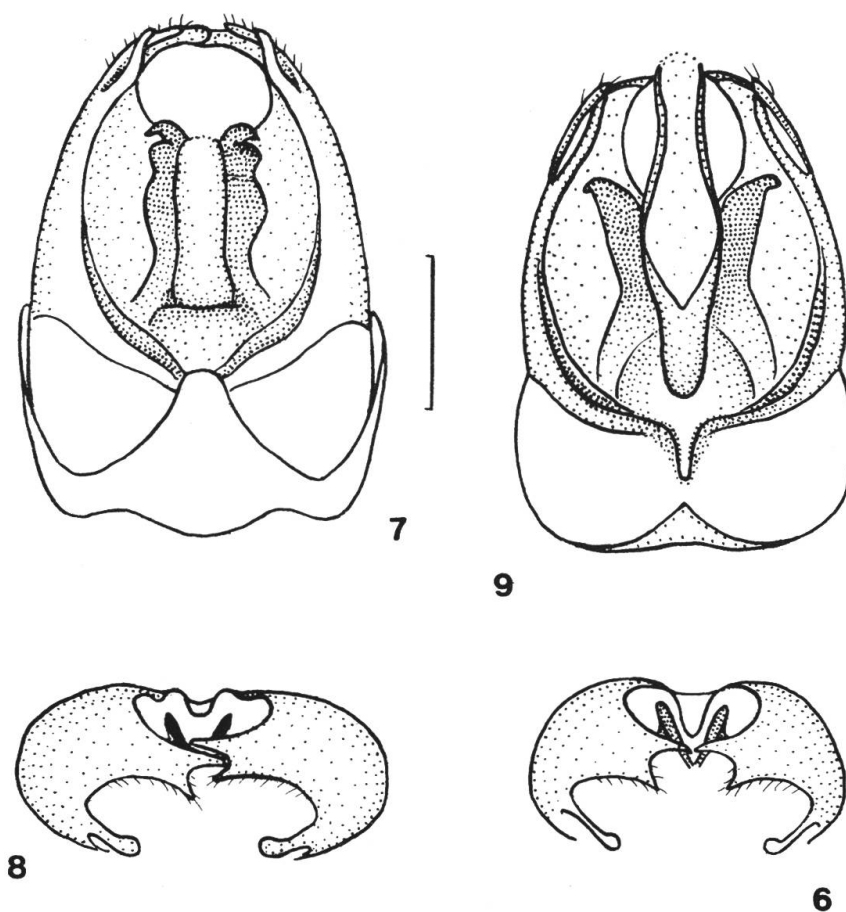
**Diagnosis.** *Walteria* gen.n. is very different from all known cantharid genera, both externally and in the shape of the male copulatory organs and the structure of the apical abdominal segments of female.

**Description.** Eyes relatively small. Head almost glabrous in front and densely punctured and pubescent behind the eyes. Mandibles simple. Ultimate segment of maxillary palpi slender, about twice as long as wide, widest in the middle. Antenna either filiform or flattened, dentate in both sexes, segment 2 shorter than 3, median segments with elongate glabrous grooves in male.

Pronotum elongate, slightly dilated anteriorly, with conspicuous longitudinal median groove (Fig. 10). Elytra with four costae, first two evidently much stronger than the rest, with dense double pubescence. Last abdominal sternite in female almost straight apically, with a flat rounded process in the median emargination (Fig. 2). Legs thin, with long bristling hairs, especially conspicuous on tibiae (Fig. 10); outer claws in both sexes with a little tooth basally. Aedeagus hemispherical, with processes of the dorsal blade making a lock and often showing differentiating characters from above (Figs 6, 8).



Figs 1-5. 1-2: *Walteria particularis* (Pic), holotype ♀: 1, antenna; 2, apical sternite. 3-5: antenna, ♀: 3, *W. coccinea* (Champ.), segments 2-5. 4, *W. subquadraticollis* (Pic), segments 1-9. 5, *W. taiwana* sp.n., segments 2-4. Scale: 0.5 mm.



Figs 6-9. 6, 8 - aedeagus, apical; 7, 9 - aedeagus, ventral: 6, *Walteria particularis* (Pic). 7-8, *W. decipiens* (Gorh.). 9, *W. subquadraticollis* (Pic). Scale: 0.5 mm.

### 1. *Walteria particularis* (Pic)

Figs 1-2, 6

*Lycocerus particularis* PIC, 1923: 34. **Holotype**, ♀: "Chapa", "*particularis* sp.n." (Pic's manuscript labels) (MP).

**Additional material examined.** ♀, "Laos, Nam-Tiene, le 14.iv.1918, R.Vitalis de Salvaza", "*Lycocerus particularis* Pic" (Pic's manuscript label) (MP); "Laos, Ban Konai, 16.iii.14"; "Tong King", "Hao Katoum"; "Tong King"; "Vinh Poukla" (MP and ICM); N Thailand, Chiang Mai, Doi Suthep, 1100 m, 5-20.iv.1983, T.Shimomura; NW Thailand, Chiang Mai, Doi Suthep to Doi Pui, 18°49'N 99°00'E, 19-23.iv.1991, Dembický; "Thai, Nan-pha Khab, 11-15.v.1993, Pacholátko & Dembický" (NHMB & ICM).

**Remarks.** *Walteria particularis* is very close to *W. decipiens* (Gorham), distinguishable by the shorter and wider apical dorsal processes and more spherical aspect of the aedeagus from above (Fig. 6).

### 2. *Walteria decipiens* (Gorham)

Figs 7-8

*Lycocerus decipiens* GORHAM, 1889: 109. **Paratype**, ♂, "India", "*Lycocerus decipiens* Gor." (Gorham's manuscript label); **Paratype**, ♀: "Dibra", "*Lycocerus decipiens* Gor." (Gorham's manuscript label) (MP);

**Additional material examined.** O Nepal, Lamobagar Gao, 1400 m, 28-31.v.1980, W.Wittmer; "O Nepal, Arun V., Lamobagar, Hedangna, 1400-800 m, 15.vi.1983, M.Brancucci"; "E Nepal, Arun V., Arun R.- Num, 800-1500 m, 17.vi.1983, M.Brancucci" (NHMB); "E-Nepal, Arun Valley, Mongmaya-Surtibari, 400 m, 1.vi.1992, J. & J. Probst" (ICM).

### 3. *Walteria coccinea* (Champion)

Fig. 3

*Lycocerus coccineus* CHAMPION, 1926: 249. **Holotype**, ♀: "Doherty", "Burmah, Ruby M-es", "Fry coll. 1905/100", "Type. H.T.", "*Lycocerus coccineus* type ♀ Ch." (Champion's manuscript label) (NHML).

**Remarks.** The holotype female, is easily attributed to *Walteria* gen.n. due to the pronotum conspicuously dilated anteriorly. This species is near to *W. subquadraticollis* (Pic), differing by the wider antennomeres in female (Fig. 3). Males are not known.

### 4. *Walteria subquadraticollis* (Pic)

Figs 4, 9

*Lycocerus subquadraticollis* PIC, 1914: 9-10. **Lectotype**, ♀, (hereby designated): "Cambodge, Phnomh Penh", "*Lycocerus subquadraticollis*" (Pic's manuscript labels), "type", "*Lycocerus subquadraticollis* Pic, W.Wittmer det." (MP);

*Lycocerus acuminatus* PIC, 1914: 10. **Lectotype**, ♀, (hereby designated): "Lao Kay (ex Vitalis), May 1919", "*Lycocerus acuminatus* Pic" (Pic's manuscript labels), "type", "*Lycocerus subquadraticollis* Pic, W.Wittmer det." (MP);

*Lycocerus angustithorax* PIC, 1923: 34-35. **Holotype**, ♂: "Lao Kay", "*angustithorax* sp.n." (Pic's manuscript labels), "*Lycocerus subquadraticollis* Pic, W.Wittmer det." (MP).

### 5. *Walteria intermedia* (Pic) sp.rev.

Figs 10-12

*Lycocerus intermedius* PIC, 1927: 3. **Lectotype**, ♂ (hereby designated): "Tonkin, Chapa, 9.vi.1918, Jeanvoine", "*intermedius* sp.n." (Pic's manuscript label) (MP); 4♀: "Tonkin, Chapa, 23-26.vi.1918, Jeanvoine", "*intermedius* sp.n." (Pic's manuscript label) (MP).

**Remarks.** This taxon was synonymised with *Lycocerus subquadraticollis* Pic (WITTMER, 1982), actually, in spite of the habitual similarity, proved to be different in the shape of the aedeagus, and therefore is revalidated. In addition to the shape of the male copulatory organs it may be separated from the aforesaid species by a slightly more elongate pronotum with more conspicuously dilated front angles (Fig. 10).

### 6. *Walteria apicalis* (Pic)

*Lycocerus apicalis* PIC, 1949: 13. **Holotype**, ♀: "Indochine, Plao Ht. Donnai, 800 m, coll. Dessum", "*Lycocerus apicalis* sp.n." (Pic's manuscript label) (MP).

**Remarks.** This species is easily recognized by its uniformly black coloration with the exception of reddish brown apical half of the elytra and two rufous spots on the vertex. PIC (1949) mentioned in a footnote that he was allowed to keep the unique specimen of this taxon.

### 7. *Walteria taiwana* sp.n.

Figs 5, 13-14

**Holotype**, ♂: Taiwan (near Chihtuan), Taoyuan Hsien, 1200 m, 31.iii.1983, T.Shimomura (NHMB); **Paratypes** (3 ♂, 3 ♀): same label; Taiwan (near Mt. Lala), Taoyuan-Taipei H., 27.v.1978, T.Shimomura; Taiwan (Nanshan Chi), Nantou Hsien, 23.iii.1980, T.Shimomura; Taiwan, Nr. Chihtuan, Taoyuan Pref., 2.iv.1981, T.Shimomura; Taiwan (near Chihtuan), Taoyuan Hsien, 1200 m, 15.iv.1980, T.Shimomura (NHMB and ICM).

**Diagnosis.** *Walteria taiwana* sp.n. resembles *W. subquadraticollis*, but is readily distinguishable by the uniformly black head, the more elongate antennal joints, both in male and in female, and the shape of the aedeagus (Fig. 13-14).

**Description.** ♂. Dark brown; pronotum and elytra red.

Head glabrous anteriorly, densely punctate posteriorly. Eyes relatively small (interocular distance 2.5× as long as the radius). Labrum transverse, conspicuously convex anteriorly. Maxillary palpi slender, with ultimate joint parallel-sided, about 2×

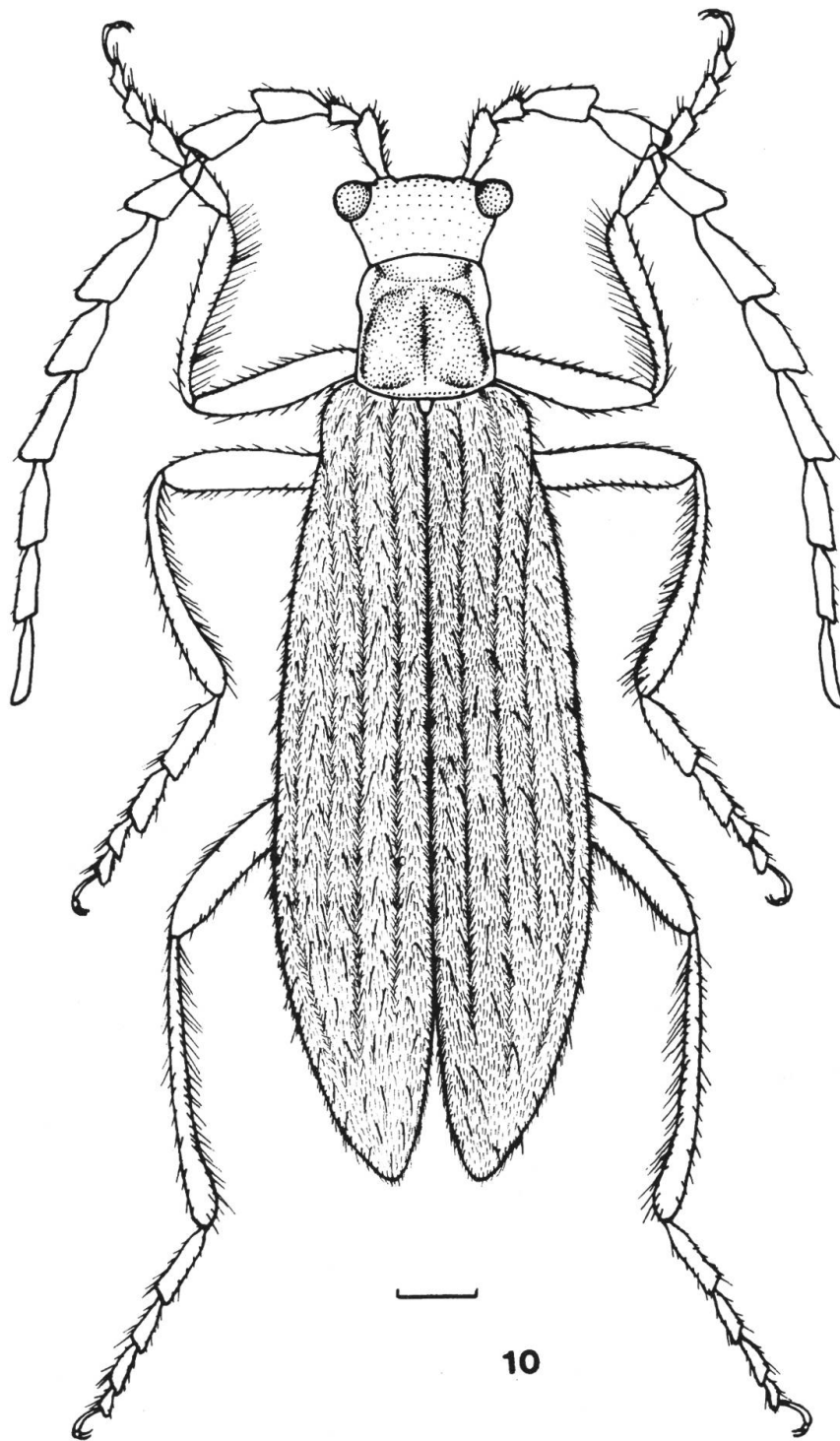
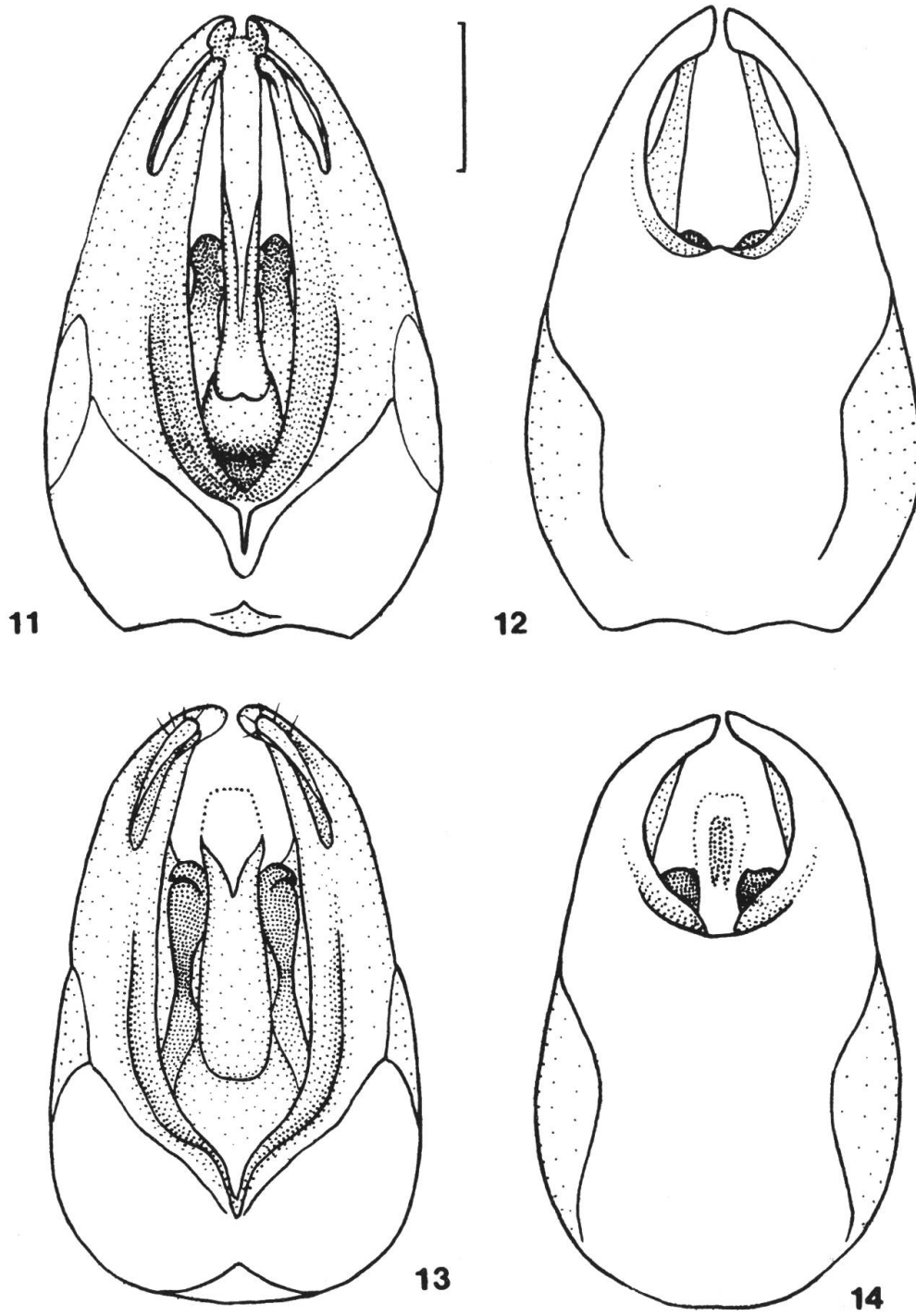


Fig. 10: *W. intermedia* (Pic), general. Scale: 1 mm.



Figs 11-14. 11, 13 - aedeagus, ventral; 12, 14 - aedeagus, dorsal: 11-12, *Walteria intermedia* (Pic). 13-14, *W. taiwana* sp.n. Scale: 0.5 mm.

longer and wider than 3. Antennae flattened and dentate, about as long as the body, antennomere 3 is 2× longer than 2 and 1.3× shorter than 4; 5 and following subequal in length.

Pronotum square, dilated anteriorly, with rounded anterior and straight posterior angles. Scutellum triangular, rounded and emarginate at apex. Elytra long, 3.75× as long as wide humerally, widening posteriorly, with 2 conspicuous elevated costae, with short decumbent pubescence and long bristling hairs. Legs slender and long.

Aedeagus (Figs 13-14).

♀. Similar to male, but eyes smaller, antennae shorter (only slightly reaching beyond elytral half), antennomeres wider and abruptly diminishing in width to apex, 11 is 3× narrower than 8.

Length: 10.1-11.4 mm. Width (humerally): 2.2-2.4 mm.

### A key to *Walteria* species

- 1 Antennae filiform in both sexes.....2
- Antennae flattened and serrate in both sexes .....3
- 2 Aedeagus more spherical, with apical dorsal processes wider and only slightly touching each other (Fig. 6).....*particularis* (Pic)
- Aedeagus more compressed, with apical dorsal processes narrower and inserted in each other (Fig. 8) .....*decipiens* (Gorham)
- 3 Upperside black, only elytra apically reddish brown.....*apicalis* (Pic)
- Upperside red or testaceous .....4
- 4 Female antennomeres 4 and 5 transverse (Fig. 3) .....*coccinea* (Champion)
- Female antennomeres 4 and 5 more elongate .....5
- 5 Aedeagus relatively broad, open ventrally (Fig. 9). Female antennae (Fig. 4) .....*subquadraticollis* (Pic)
- Aedeagus narrower, rather closed ventrally (Figs 11-14) .....6
- 6 Head black. Aedeagus with elongate dorsal window (Figs 11-12)....*intermedia* (Pic)
- Head behind the eyes reddish testaceous. Aedeagus with round dorsal window (Figs 13-14).....*taiwana* sp.n.

### *Lycocerus* Gorham, 1889

Type species: *Lycocerus maculicollis* (Hope, 1831)

**Description.** Eyes relatively small. Head flat, almost glabrous in front and very finely punctured and pubescent behind the eyes. Mandibles simple. Ultimate joint of maxillary palpi securiform, about twice as long as wide, widest in middle. Antennae either filiform in both sexes or flattened and dentate, wider in female, antennomere 2 considerably shorter than 3, median ones without glabrous grooves in male. Pronotum transverse, dilated posteriorly, with thickened not emarginate posterior angles. Elytra with four costae, first two evidently much stronger than others, with dense dual pubescence. Last abdominal sternite in female almost straight apically, with a round median emargination. Legs thin and long, outer claws simple in male, with a conspicuous basal tooth in female.



Aedeagus with laterophyses making a lock with a tooth at the inner surface of the dorsal blades; apices of the latter developed into conspicuous hairy processes (Figs 15-34).

**Remarks.** *Lycocerus* is obviously related to *Athemus*, where also forms with widened antennae (i.e. *A. nigricollis* Wittmer) or similarly structured aedeagus (i.e. *A. longipilis* Wittmer) occur, but the combination of other characters definitely keep them out of *Lycocerus*.

*Lycocerus* species display considerable infraspecific variability as to the coloration of the upperside, width of the antennomeres, size of the eyes, etc. Some taxa based on differently coloured forms became synonyms.

There are three distinct groups in *Lycocerus*: (a) with flattened and dentate, but not widened antennae and conspicuously developed transversely (horizontally) apices of the dorsal blades of the aedeagus (Figs 15-17). Two species can be attributed to this group from the mentioned region - *L. maculicollis* and *L. paviei*; (b) with completely filiform antennae and the aedeagi characteristic of group c (*L. lineatocollis*, *L. cordieri* and *L. wittmeri* sp.n.); and (c) with widened antennomeres, especially in females, and processes of the dorsal blades of the aedeagi produced apically (vertically) (Figs 18-34). This group embraces all the rest of the *Lycocerus*. Some species belonging to the last group are defined by the presence of a tooth at the base of the outer claw of front and middle tarsi in males as well (i.e. *L. vitalisi* and *L. lateritius*). In males of the latter species, a transition from toothed to unarmed claws occurs.

Taxa, which are only tentatively classified in or traditionally attributed to *Lycocerus* are treated below, while a considerable number of species will be placed in *Lycocerus* after a revision of the Oriental (especially Indochinese) *Athemus*-species.

## 1. *Lycocerus maculicollis* (Hope)

Fig.15

*Omalisus maculicollis* Hope, 1831, in Gray, Zool. Miscell.: 26. **Holotype**, ♀: "Nepal", "Hardwicke Bequest.", "Syntype", "Type. H.T.", "*maculicollis* Hope, 4045" (BM);

*Lycocerus serricornis* GORHAM, 1889: 109. **Holotype**, ♀: red rectangular, "Type", "type", "*Lycocerus serricornis*, Gorh." (Gorham's manuscript label), "*Lycocerus maculicollis* (Hope), det. W.Wittmer" (MP); ♀ (**Paratype**), "India", "*Lycocerus serricornis*, Gorh." (Gorham's manuscript label), "Sp. illustrated" (MP); "India" (MP);

**Additional material examined.** India, Distr. Darjeeling, Jhepi, 1300 m, 22.v.1975, W.Wittmer; Sikkim, Sisne, S Gangtok, 930 m, 14.iv.1977, B.Narayan; Nepal, Godavari, 30.iv.1981, Y.Gunji; Nepal, Kathmandu V., Balaju, 1400 m, 20.v.1983, M.Brancucci; Indien, Darjiling D., Kalimpong, 20.iv.1984, B.Barayan; India, Darjeeling D., Pudung, 830 m, 17.iv.1985, B.Bhakta; Indien, Darjiling D., Yok Forest (KPG), 1300 m, 6.v.1986, Ch.J.Rai; Indien, Darjiling D., Khoprey Busty (KPG), 1300 m, 7.v.1986, Ch.J.Rai; Indien, Darjiling D., Melli, 300 m, 23.v.1986, B.Bhakta (NHMB and ICM).

## 2. *Lycocerus paviei* (Bourgeois)

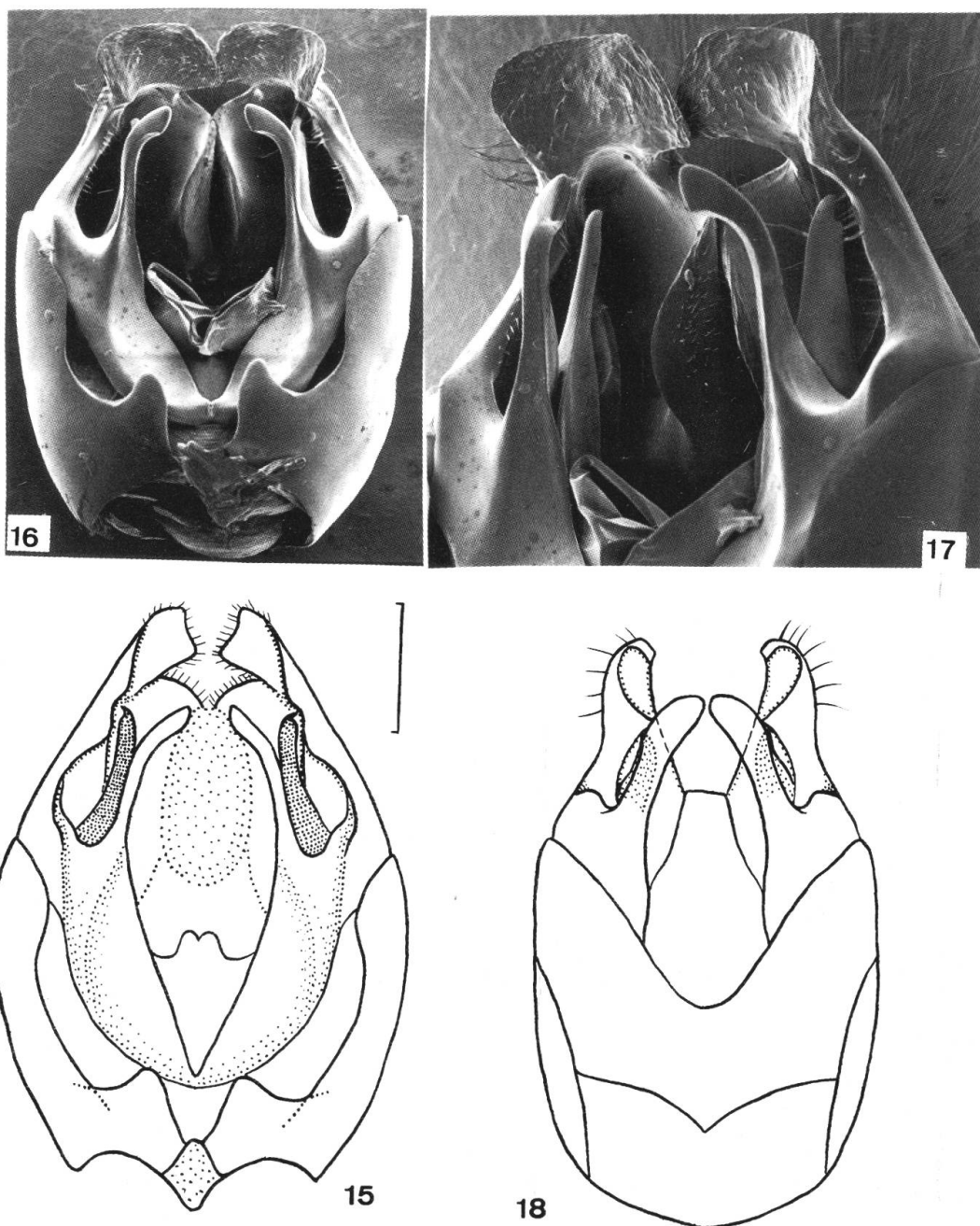
Figs 16-17

*Cantharis paviei* Bourgeois, 1890, Nouv. Arch. Mus. (3) 2: 186. **Paratype**, ♂: "Museum Paris, Luang Prabang/Theng, Pavie, 1888", "927.88" (white circle), "*Cantharis Paviei* Bourg., cotype" (Bourgeois's manuscript label), "Paralectotype" (MP);

*Lycocerus miniatus* CHAMPION, 1926: 251, **syn.n.** **Holotype**, ♂: "Doherty", "62747", "Tenasserim, Tavoy", "Type. H.T.", "*Lycocerus miniatus* type ♂ Ch." (Champion's manuscript label) (BM); "Nord West Yunnan, Djo-Kou-La, alt. 1200 m" (MP);

**Additional material examined.** "Yunnan", "*maculicollis*" (Pic's manuscript label) (MP); "Pe Yen Tsin, Yunnan, coll. De Touzalin", "*Lycocerus serricornis*" (Pic's manuscript label) (MP); "Tenasserim, Thagala, Fea, Apr.1887", "*Lycocerus serricornis*" (Pic's manuscript label) (MP); Thailand, Chiangmai, 28.v.1958, Ayoon; Carin, Asciuii Cheba, 1200-1300 m, i. (18)88, L.Fea; Laos, Pang Ngeon, le 19.v.1919, R.Vitalis de Salvaza (MP); China, Yunnan, Vallis Aumin, Soling-ho (NHMB).

**Remarks.** Externally very similar to *L. maculicollis*, differing in the shape of the dorsal blades of the aedeagus (Figs 16-17).



Figs 15-18. 15, 16, 18 - aedeagus, ventral; 17 - aedeagus, ventro-lateral: 15, *Lycocerus maculicollis* (Hope). 16-17: *L. paviei* (Bourgeois): 16, 30 $\times$ ; 17, 50 $\times$ . 18, *L. lineatocollis* (Hope). Scale: 0.5 mm.

### 3. *Lycocerus lineatocollis* (Hope)

Fig. 18

*Omalisus lineatocollis* Hope, 1831, in Gray, Zool. Miscell.: 26. **Holotype**, ♂: “♀” [!], “Syntype”, “Nepal”, “Hardwicke Bequest.”, “i Hope 4046”, “*Omalisus lineatocollis* 1831 Hope” (Champion’s manuscript label), “EMM 1926, det. G.C.C.”, “Holotype” (BM); “Assam, UKJH, Maushuid, 1400 m, 29.iii.1960, F.Schmid (NHMB and ICM).

**Remarks.** Though labelled as a female (and mentioned so by CHAMPION, 1926), the Holotype is actually a male.

### 4. *Lycocerus cordieri* Pic

Figs 19-20

*Lycocerus cordieri* Pic, 1915: 15. **Lectotype**, ♀ (hereby designated): “N. India, Mussoorie”, “ex coll. Cordier”, “*Lycocerus pres atriceps* Brg.”, “*Cordieri* Pic” (manuscript labels of Pic) (MP);

*Lycocerus trilineatus* Pic, 1921: 5, **syn.n. Lectotype**, ♂ (hereby designated): “N. India, Mussoorie”, “ex Cordier”, “*trilineatus* Pic” (manuscript labels of Pic) (MP);

*Lycocerus maculaticeps* Pic, 1921: 5, **syn.n.**

*Podabrus sikkimensis* Pic, 1924, Bull. Mus. Paris, 30: 480, **syn.n. Lectotype**, ♂ (hereby designated): “Sikkim”, “*Podabrus sikkimensis* mihi”, “type” (manuscript labels of Pic) (MP);

*Lycocerus variipes* CHAMPION, 1926: 256, **syn.n. Holotype**, ♂: “Sikkim, Gopaldhara, Rungbong Vall., H.Stevens”, “Type. H.T.”, “*Lycocerus (?) variipes* type ♂, Ch.” (Champion’s manuscript label) (BM).

**Additional material examined.** India, U.P., Sattal, 1400 m, 21.v.1981, M.Brancucci; E Nepal, Arun V., Hile-Arun R., 2000-300 m, 26.v.1983, M.Brancucci; India, Darjeeling D., Kalimpong, Agric. Farm, 26.iv.1986, B.Bhakta; India, Darjeeling D., Kalimpong, 15.iv.1984, B.Narayan; India, Darjeeling D., Chandraloke (KPG), 2200 m, 23.iv.1986, Ch.J.Rai; W Nepal, Tiknedhanga, 1500 m, 8.vi.1992, J.Moravec; E Nepal, Arun Valley, Num-Tasigaon, 1600-900-1600 m, 10-12.vi.1992, J. & J. Probst; C Nepal, Kathmandu Valley, Balaju, 1500-1596 m, 3.vi.1993, J. & J.Probst (NHMB).

**Remarks.** One of the most variable species of the genus both in the coloration of the upperside and the size of the body and the eyes (males with conspicuously larger eyes have been found). Its distribution range stretches from the Western to Eastern Himalayas.

According to the description, *L. maculaticeps* (the type of which from “India” I was not able to study) differs from *L. cordieri* only by the more reddish coloration of the upperside, and as this character is quite common in this species, especially in females, the former name is proposed to be considered synonymous with *L. cordieri*.

### 5. *Lycocerus wittmeri* sp.n.

Figs 21-22

**Holotype**, ♂: China, E Tibet, valley SW of Tangmai & env., 30°02'07"N 95°01'07"E, 2100-2300 m, L. & R.Businsky (NHMB); **Paratypes** (2 ♀♀): same label (NHMB and ICM).

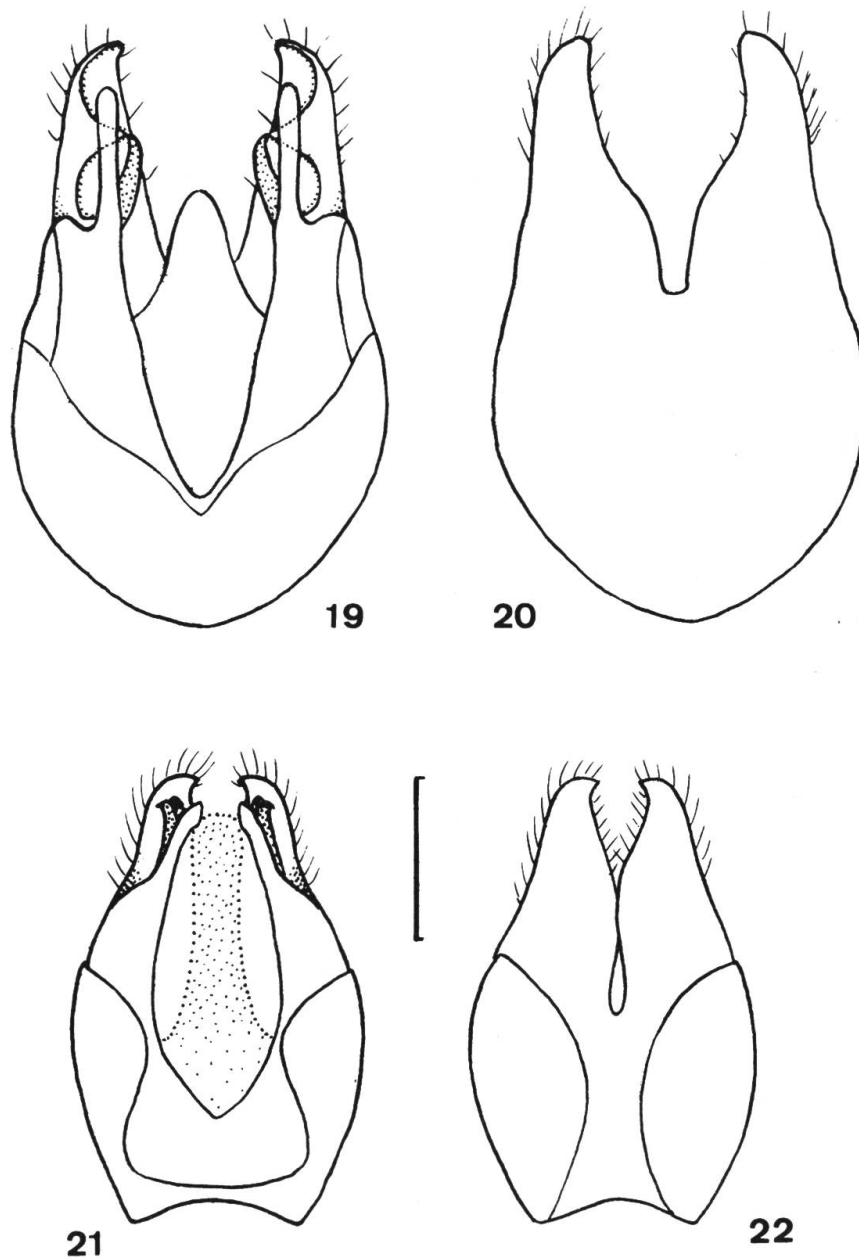
**Description.** ♂. Black; elytral margins dark red; upperside with red pubescence.

Head flat and glabrous, hairless anteriorly. Eyes small (interocular distance 4× as long as the radius). Labrum transverse, semicircular anteriorly. Maxillary palpi slender, with ultimate joint securiform, about 2× longer and wider than 3. Antennae about as long as body, antennomeres filiform, 3 is 2× longer than 2 and 1.3× shorter than 4; 5 and following subequal in length.

Pronotum square, slightly dilated posteriorly, with rounded anterior and posterior angles. Scutellum triangular, rounded at apex. Elytra relatively short, 2.75× as long as wide humerally, parallel sided, with 2 conspicuous elevated costae, with short decumbent pubescence and long bristling hairs. Legs slender and long; all claws simple.

Aedeagus - Figs 21-22.

♀. Similar to male, but eyes slightly smaller, antennae shorter (only slightly reaching Figs 19-22. 19, 21 - aedeagus, ventral; 20, 22 - aedeagus, dorsal: 19-20, *Lycocerus cordieri* Pic. 21-22: *L. wittmeri*



sp.n. Scale: 0.5 mm.

over half the elytra), outer claws of front and middle tarsi with a tooth at base. Length: 10.1-11.2 mm. Width (humeraly): 2.5-3.0 mm.

**Remarks.** *L. wittmeri* sp.n. is easily recognisable by the short body with the male antennae almost reaching the apex of the elytra. The coloration of the upperside resembles that of *L. limbatus*, while the antennae are almost as filiform as in *L. cordieri*. However, due to the structure of the aedeagus with long laterophyses and a peculiar lock on the inner surface of the dorsal blades (Figs 21-22) *L. wittmeri* sp.n. can be related to neither of them.

#### 6. *Lycocerus lateritius* Gorham

Fig. 23

*Lycocerus lateritius* GORHAM, 1889: 109. **Holotype**, ♀: red rectangular, "TYPE", "*Lycocerus lateritius*, Gorh." (Gorham's manuscript label) (MP); **Paratype**, ♀: red rectangular, "*Lycocerus lateritius* Gorh." (Gorham's manuscript label) (MP);

*Lycocerus ruficeps* PIC, 1915:3, **syn.n. Lectotype**, ♂ (hereby designated): "Kulu. Rost. Himalaya", "*L. ruficeps* Pic" (Pic's manuscript label) (MP);

*Lycocerus indicus* PIC, 1921: 5, **syn.n. Lectotype**, ♀ (hereby designated): "India", "*indicus* Pic" (manuscript label of Pic) (MP);

*Lycocerus maculicollis* v. *ruficeps* [CHAMPION, 1926]: 250.

**Additional material examined.** "Sunderdhunga V., W Almora Divn, 8,000-12,000 feet, June '19, M.G.C.", "3065", "=cordieri Pic" (Champion's manuscript label), '*Lycocerus cordieri* Pic', "G.C.Champion B.M. 1926-146", "E.M.M. 1926, det. G.C.C." (NHMB); Nepal, Naulaphur, 2400 m, 28.iv.1962, G.Ebert; Bhutan, Sampa-Katoka, 1400-2600 m, 9.vi.1972, NHMB Expedition; C Nepal, Kathmandu Valley, Godavari, 1600-2100 m, 19-24.v.1983, T.Shimomura; S.Bily; E Nepal, Koshi, Goza, 2100 m, 5-6.vi.1985, C.Holzschuh; W Nepal, Dhawalagiri, Myagdi D., Kali-G, Khola, Kopchepani-Gasa, 1600-2000 m, 19.vi.1986, C.Holzschuh; Nepal, Langtang Nat. Park, Dunche, 2000 m, 30.v.1990, C Nepal, Godavari, 150-1700 m, 11.vi.1990, J.Moravec (NHMB).

**Remarks.** The vague testaceous coloration, always present in the posterior part of the head in *L. lateritius*, can spread to the front so that all of the head is testaceous.

## 7. *Lycocerus rufocapitatus* sp.n.

Fig. 24

**Holotype**, ♂: Yunnan, Gaoligong Mts, 24°57'N 98°45'E, 2200-2500 m, 8-16.v.1995, V.Kubán (NHMB); **Paratypes**, 2 ♀: same locality data (NHMB and ICM).

**Description.** ♂. Dark brown; upperside except head in front of the eyes orange testaceous; upper halves of femora rufous.

Head flat and glabrous, almost hairless anteriorly. Eyes relatively small (interocular distance about 3× as long as the radius). Labrum transverse, conspicuously triangular. Maxillary palpi slender, apical segment securiform, about 1.5× longer and wider than 3. Antennae flattened and dentate, reaching beyond two thirds of elytra, antennomeres 3 to 7 transverse, 3 is 3× longer than 2 and 1.3× shorter than 4.

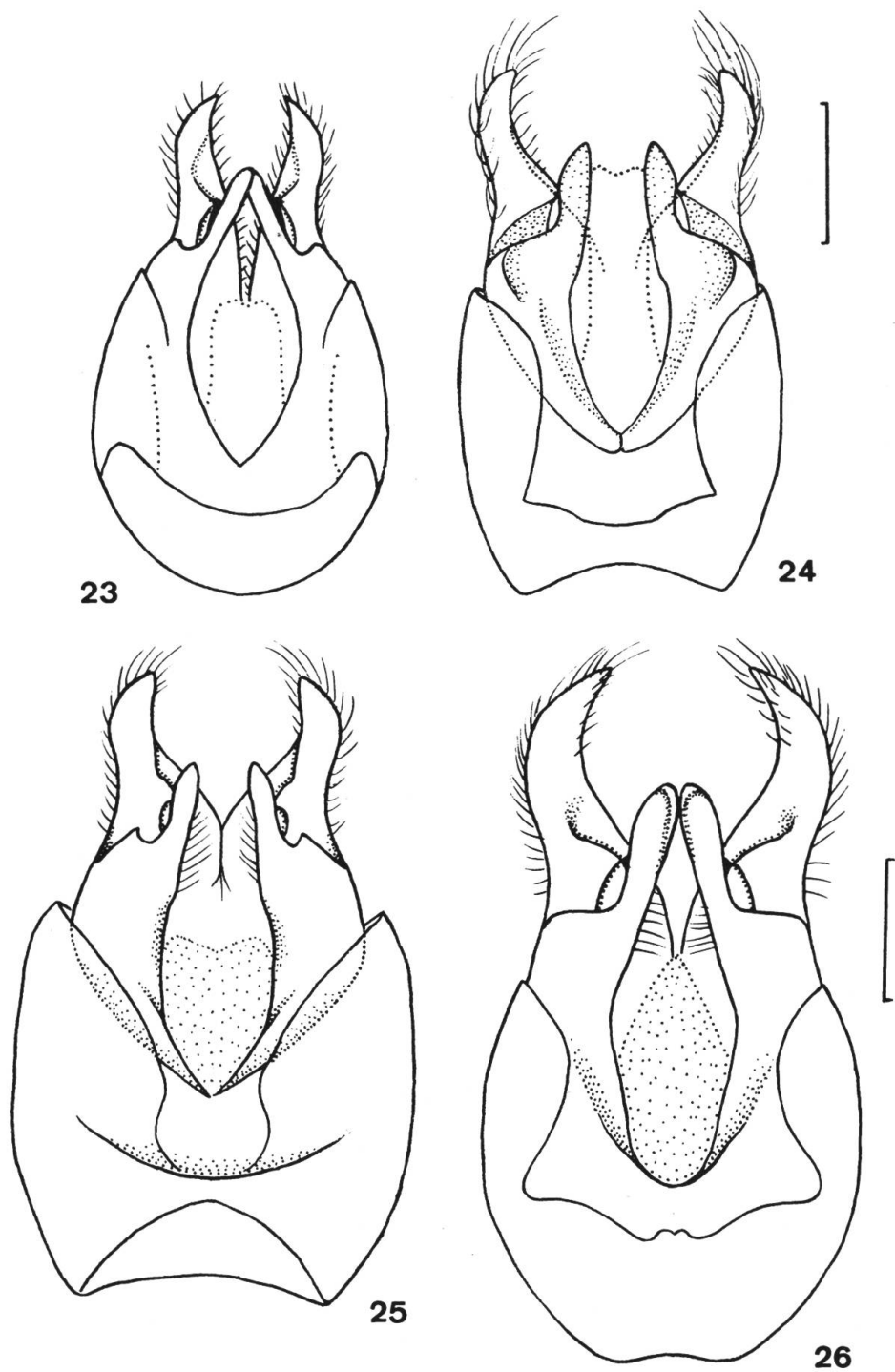
Pronotum transverse, dilated posteriorly, with rounded anterior and almost straight posterior angles. Scutellum triangular, rounded at apex. Elytra relatively long, on humeri about 3× as long as wide, widening posteriorly, with 2 conspicuous elevated costae, with short decumbent pubescence and long bristling hairs. Legs long and slender; all claws simple.

Aedeagus (Fig. 24).

♀. Similar to male, but antennae shorter (only slightly reaching beyond half the elytra), outer claws of front and middle tarsi toothed.

Length: 14.4-14.8 mm. Width (humeraly): 3.2-3.5 mm.

**Remarks.** *Lycocerus rufocapitatus* sp.n. is to be placed near *L. lateritius*, from which is distinguishable by the distinct orange coloration of the head behind the eyes, while the anterior part of the head is black, definitely wider antennomeres in both sexes, details of the aedeagus (Fig. 24), etc.



Figs 23-26: aedeagus, ventral: 23, *Lycocerus lateritius* (Gorham). 24, *L. rufocapitatus* sp.n. 25, *L. vitalisi* Pic. 26, *L. brevelineatus* Pic. Scale: 0.5 mm.



**8. *Lycocerus vitalisi* Pic**

Fig. 25

*Lycocerus vitalisi* Pic, 1914: 9. **Lectotype**, ♀ hereby designated, "Lao Kay, Tonkin, 1912 (ex Vitalis)", "*Lycocerus Vitalisi* Pic", "type" (manuscript labels of Pic), "Type" (MP); o (**Paralectotype**, hereby designated), "Tonkin, Lao Kay, le 2.04.1912, R.Vitalis de Salvaza", "*Lycocerus Vitalisi* Pic" (manuscript labels of Pic) (MP);

*Lycocerus parallelus* Pic, 1927: 3, **syn.n. Lectotype**, ♂ (hereby designated): "Tonkin, Chapa, 8.05.1918, Jeanvoine", "*parallelus* Pic" (manuscript label of Pic) (MP);

**Additional material examined.** 1 ♀: Tonkin, Chapa, 29.04.1918, Jeanvoine" (MP); India, U.P., Chaurengi, 2200-2500 m, 23.v.1978, W.Wittmer; Laos, Luangnamtha pr., 21°09'N 101°19'E, Namtha-Muang Sing, 900-1200 m, 5-31.v.1997, V.Kubáň (NHNB & ICM).

**Remarks.** Similar to *L. lateritius*, differing by the head completely black, vertex with red pubescence, pronotum more dilated posteriorly and pronounced anteriorly, tooth at the base of the parameres produced (Fig. 25).

**9. *Lycocerus brevelineatus* Pic**

Fig. 26

*Lycocerus brevelineatus* Pic, 1916: 15. **Lectotype**, ♂ (hereby designated): "Yunnan (R. Juillebeau)", "*brevelineatus* Pic" (manuscript labels of Pic), "type" (MP);

*Lycocerus nigriceps* Pic, 1938: 158, **syn.n. Holotype**, ♀: "Chapa", "*atriceps* sp.n.", "*nigriceps* mihi" (manuscript labels of Pic) (MP);

*Lycocerus atriceps* Pic, 1923: 33, 35, preoccupied by *L. atriceps* Bourgeois, 1907.

**Additional material examined.** China, Yunnan, Kunming, Diaolin Nat. Res., 22.v-2.vi.1993, E. Jendek & O.Šauša (NHMB).

**Remarks.** Apart from the details of the aedeagus (Fig. 26), it is separable from the allied species (*L. lateritius*, *L. vitalisi*) by the uniformly black head without red pubescence.

**10. *Lycocerus nigrolineatus* Pic**

Fig. 27

*Lycocerus nigrolineatus* Pic, 1914: 10. **Lectotype**, ♀ (hereby designated): "Lao Kay (ex Vitalis)", "*Lycocerus nigrolineatus* Pic", "type" (manuscript labels of Pic), "Type" (MP);

*Lycocerus nigrolineatus* v. *femoralis* Pic, 1914: 10, **syn.n. Lectotype**, ♂ (hereby designated): "Lao Kay (ex Vitalis) mai 1913", "*nigrolineatus* v. *femoralis* Pic", "type" (manuscript labels of Pic), "Type" (MP);

**Additional material examined.** N Vietnam, Hoang Lien Son Distr., Sa Pa, 1600 m, J.Horák; Vietnam, Truong Yen, Moc Chau, 450 m, 30.v.1995, A.Saito (NHMB).

**Remarks.** In addition to the details on copulatory organs (Fig. 27), it is quite easily separable from the allied species by the distinct black median pronotal stripe and infusate first elytral interstice.

**11. *Lycocerus caliginosus* Gorham**

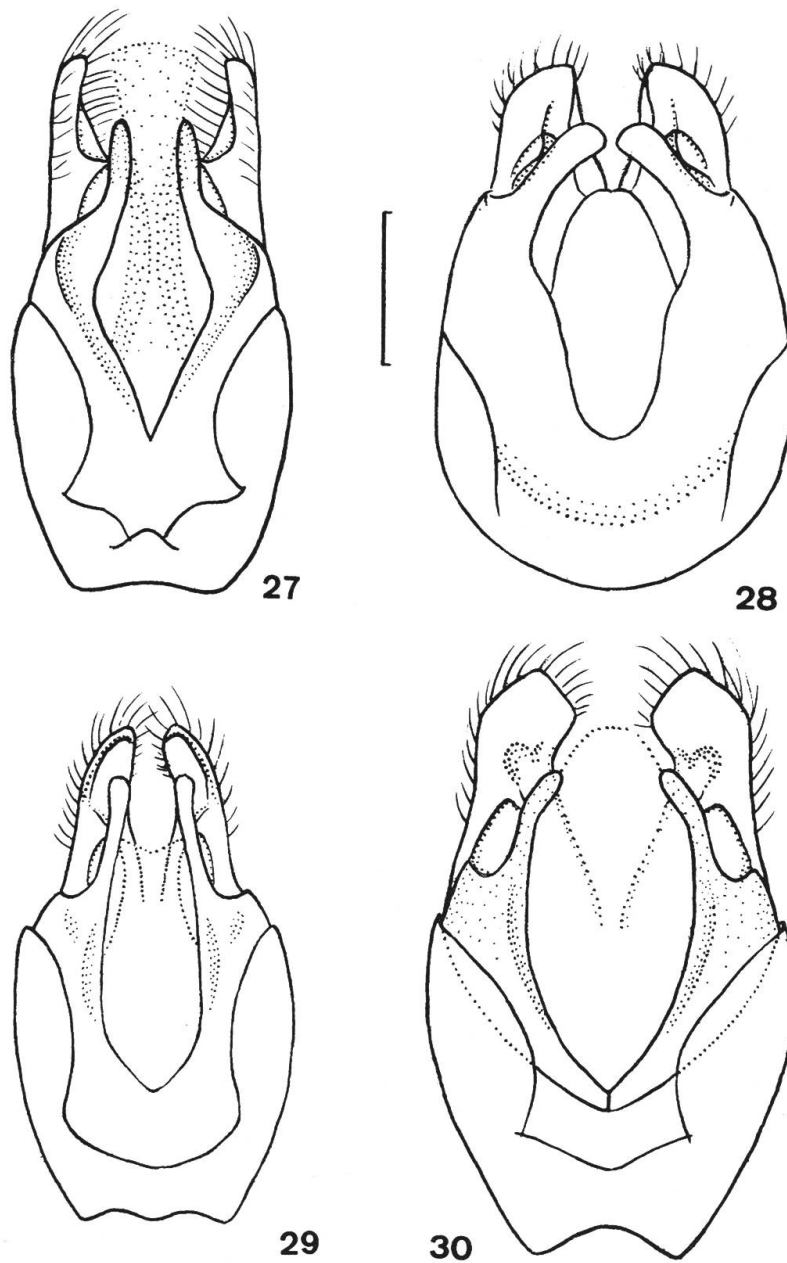
Fig. 28

*Lycocerus caliginosus* GORHAM, 1889: 110. **Holotype**, ♀: "TYPE", "9206", "type", "*Lycocerus caliginosus* Gorh." (Gorham's manuscript label) (MP); **Paratype**, ♀: "9208", "Sp. figured", "*Lycocerus caliginosus* Gorh." (Gorham's manuscript label) (MP);

*Lycocerus vittaticollis* CHAMPION, 1926: 255, **syn.n. Holotype**, ♂: "Burmah, Karen Mts.", "Doherty", "Fry coll. 1905.100", "Type.H.T", "*Lycocerus vittaticollis* type ♂, Ch." (manuscript label of Champion), "*Lycocerus* (?) *vittaticollis* Champ.", "E.M.M.1926, det. G.C.C." (BM); ♂ (**Paratype**), "Burmah, Karen Mts.", "Doherty", "Fry coll. 1905.100", "*Lycocerus vittaticollis* type ♀, Ch." (manuscript label of Champion), "*Lycocerus* (?) *vittaticollis* Champ.", "E.M.M.1926, det. G.C.C." (BM); **Paratype**, ♀: "Burmah, Karen Mts.", "Doherty", "Fry coll. 1905.100", "*Lycocerus* (?) *vittaticollis* Champ." (MP); **Paratype**, ♀: "Ruby mines, Upper Burmah, 5-7,000' (Doherty)", "*Lycocerus* (?) *vittaticollis*, Champ.", "**Paratype**" (NHMB);

**Additional material examined.** N Thailand, Mt. Doi Pui, Chiang Mai, 1400-1500 m, 1.v.1982, T.Shimomura; Laos, Luangnamtha pr., 21°09'N 101°19'E, Namtha-Muang Sing, 900-1200 m, 5-31.v.1997, V.Kubáň (NHNB).

**Remarks.** In addition to the details of the aedeagus (Fig. 28) *L. caliginosus* can be separated from *L. nigrolineatus* by the wider pronotal stripe and uniformly red elytra.



Figs 27-30: aedeagus, ventral: 27, *Lycocerus nigrolineatus* Pic. 28, *L. caliginosus* Gorham. 29, *L. yunnanus* (Fairmaire). 30, *L. limbatus* Pic. Scale: 0.5 mm.

**12. *Lycocerus yunnanus* (Fairmaire)**

Fig. 29

*Lipernes yunnanus* FAIRMAIRE, 1887: 338. **Lectotype**, ♂ (hereby designated): "Yunnan", "*Lipernes yunnanus* Fairmaire" (Fairmaire's manuscript label), "*Lycocerus yunnanus* Fairm., sub *Lipernes*" (Bourgeois's manuscript label) (MP).

*Lycocerus pubicollis* PIC, 1915: 78, **syn.n. Lectotype**, ♀ (hereby designated): "Thibet, Trianatang", "*L. pubicollis* Pic" (manuscript labels of Pic), "Type" (MP); ♀ (**Paralectotype**, hereby designated), "Thibet, Trianatang", "*pubicollis* mihi" (manuscript labels of Pic) (MP); ♀ (**Paralectotype**, hereby designated), "Thibet, Trianatang" (manuscript labels of Pic) (NHMB);

*Lycocerus curticolis* PIC, 1921: 5, **syn.n. Lectotype**, ♀ (hereby designated): "Yunnan", "*curticolis* Pic" (manuscript labels of Pic) (MP);

*Lycocerus thibetanus* PIC, 1921, Mél. exot.-entom. 34: 5, **syn.n. Lectotype**, ♂ (hereby designated): "Thibet, Trianatang", "*thibetanus* mihi", (manuscript labels of Pic) (MP);

*Lycocerus fumatus* CHAMPION, 1926: 253, **syn.n. Holotype**, ♀: "Burmah, Ruby M-es", "Fry coll. 1905.100", "64704", "Doherty", "Type. H.T.", "*Lycocerus fumatus* type ♀, Ch." (Champion's manuscript label) (BM);

*Lycocerus pyrochroides* CHAMPION, 1926: 255, **syn.n. Holotype**, ♂: "64714", "Burmah, Ruby M-es", "Doherty", "Fry coll. 1905.100", "Type, H.T.", "*Lycocerus pyrochroides* type ♂ Ch." (Champion's manuscript label) (BM); ♀ (**Paratype**), "64714", "Burmah, Ruby M-es", "Doherty", "Fry coll. 1905.100", "Type, H.T.", "*Lycocerus pyrochroides* type ♂ Ch." (Champion's manuscript label) (BM); (China), env. Batan, 4.vi. (18)93, Potanin (ZIP);

**Additional material examined.** "Lao Kay (ex Vuiller)", "*obscurus* Pic", "type" (manuscript labels of Pic) (MP); "Yunnan Sen" (MP); Kuatun, 27°40'N 117°40'E, 2300 m, 6.vi.1938, Klapperich (NHMB); China, Yunnan, Weishan City, Weibaoshan, 2500-2900 m, vii.1993; China, Yunnan, Kunming, Diaolin Nat. Res., 22.v-2.vi.1993, E.Jendek & O.Šauša; China, Yunnan, Gaoligong Mts, 25°22'N 98°19'E, 1500-2400 m, 17-24.v.1995, V.Kubán; China, S Sichuan, Luoijishan, 2200-2800 m, 16-25.vii.1996, S.Kasantsev (NHMB & ICM).

**Remarks.** The coloration of the upperside in *L. yunnanus* can vary from orange testaceous (*yunnanus*, *pubicollis*, *curticolis*, *pyrochroides*) to almost completely black with only margins of the elytra red (*thibetanus*, *fumatus*), with all possible transition forms present. The variation of the aedeagus is slight and cannot be associated with any of the colour forms.

The specimen from Lao Kay labelled by Pic as "*obscurus* type" cannot be referred to the type series, as the type locality of *L. obscurus* is different (Annam). The actual type of this taxon is also deposited in the Pic collection in the Paris Museum.

**13. *Lycocerus limbatus* Pic, 1915**

Fig. 30

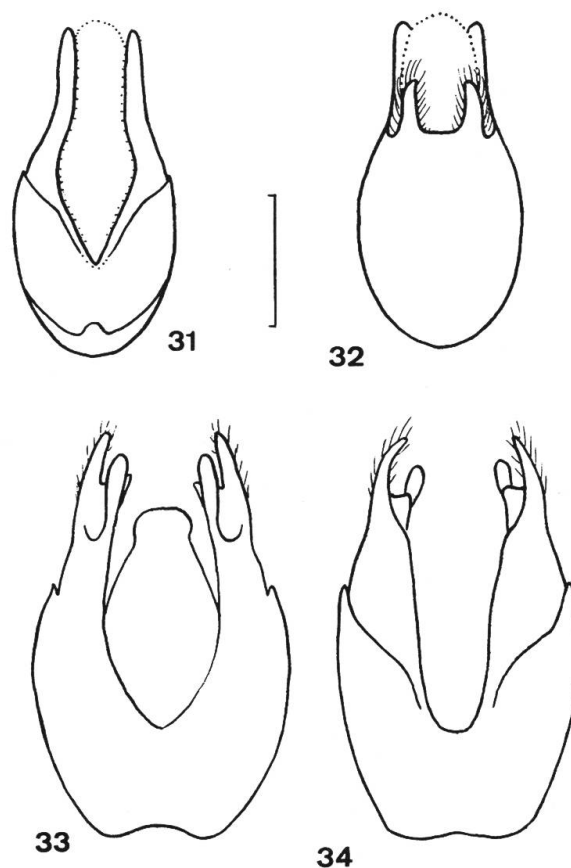
*Lycocerus limbatus* PIC, 1915: 78. **Lectotype**, ♀ (hereby designated): "Thibet", "type", "*L. limbatus* Pic" (manuscript labels of Pic) (MP)

*Lycocerus hirsutus* PIC, 1921: 4, **syn.n. Lectotype**, ♂ (hereby designated): "Yunnan", "*hirsutus* Pic" (manuscript labels of Pic) (MP)

*Lycocerus notaticollis* PIC, 1921: 4, **syn.n. Lectotype**, ♂ (hereby designated): "Dali", "*notaticollis* Pic" (manuscript labels of Pic) (MP)

**Additional material examined.** "Da-t sien-lu, 1.vii. (18)93, Potanin (ZIP); "Tatsienlu-Kiulung, China, Em.Reitter", *Lycocerus hirsutus* Pic" (Hicker's manuscript label) (NHMB); Sichuan, Moxi, Gongashan Mts, 28.vi-2.vii.1984, 1650 m, Bolm; China, N Yunnan, Lijiang, 2600 m, 30.vi-2.vii.1990, L. & M.Bocak; China, Yunnan, Yulongshan Mts, Ganhaizi Pass, 27°06'N 100°15'E, 3000-3500 m, 18-23.vii.1990, V.Kubán; China, Yunnan, Lijiang, 26°53'N 100°18'E, 1800 m, 23.vi-2.vii.1992, S.Bečvář; China, Yunnan, Yulongshan Mts, N slopes, 27°14'N 100°15'E, 3300-2500 m, 5.vii.1992, V.Kubán; N Yunnan, Xiaguan env, 25°36'N 100°12'E, ca 2000 m, 18.vi.1994, D.Král & J.Farkač; China SE Sichuan, Xichou-E env., 23°22'26"N 104°41'49"E, 1400-1700 m, 13-18.v.1995, L. & R.Businsky; China, Yunnan, Yulong Mts, 27°00'N 100°12'E, 5.vii.1995, Bolm; Yunnan, Cang Mts, 25°36'N 100°11'E, 2300 m, 21.vi.1996, V.Kubán; China, S Sichuan, Luoijishan, 2200-2800 m, 16-25.vii.1996, S.Kasantsev (NHMB & ICM).

**Remarks.** The upperside of *L. limbatus*, as in the preceding species, varies from uniformly testaceous or red to almost completely black with only margins dark red.



Figs 31-34: 31, 33 - aedeagus, ventral; 32, 34 - aedeagus, dorsal: 31-32, *Lycocerus harmandi* Pic. 33-34, *L. karenensis* Champion. Scale: 0.5 mm.

#### 14. *Lycocerus harmandi* Pic

Figs 31-32

*Lycocerus harmandi* Pic, 1925: 72. **Lectotype**, ♂ (hereby designated): "Museum Paris, Sikkim, Dardjiling Harmand, 1890", "type", "*Lycocerus Harmandi* Pic" (manuscript labels of Pic) (MP); **Paralectotype**, ♂: "Museum Paris, Sikkim, Dardjiling Harmand, 1890", "type", "Det. M.Pic (Digoïn) *Lycocerus Harmandi* sp.n." (manuscript labels of Pic) (MP).

**Additional material examined.** O Nepal, Chichila-Pangma, 1900-1200 m, 18.vi.1980, W.Wittmer; Sankhua Sabha Distr., Arun Valley, betw. Mure and Hurure, mixed broad-leaved forest, 2050-2150 m, 9-17.vi.1988, Martens & Schawaller (NHMB).

**Remarks.** *L. harmandi* is easily recognisable by its small size and very peculiar male copulatory organs (Figs 31-32).

#### 15. *Lycocerus sublimbatus* Pic

*Lycocerus sublimbatus* Pic, 1927: 3. **Lectotype**, ♀ (hereby designated): "Tonkin, Chapa, 24.iv.1918, Jeanvoine", "*sublimbatus* sp.n." (manuscript label of Pic) (MP).

**Additional material examined.** 1 ♀, "Laos" (MP); 1 ♀, "Tong King" (MP).

**Remarks.** Differs by the dark brown violet coloration of the upperside. Male unknown.

## 16. *Lycocerus obscurus* Pic

*Lycocerus obscurus* Pic, 1916: 13. **Lectotype**, ♀ (hereby designated), "X (ieng) K (huang) (R.)", *L. obscurus* sp.n.", "type" (manuscript labels of Pic) (MP). **Paralectotypes**: 2♀: same labels (MP); 2♀: "Xieng Khuang, Annam", "*obscurus* Pic" (manuscript labels of Pic) (MP); 1♀: "Laos: Xieng Khuang, le 17.iii.1914, R.Vitalis de Salvaza", "*Lycocerus obscurus* Pic" (manuscript label of Pic) (MP).

*Lycocerus obscurus* v. *diversus* Pic, 1916: 13, **syn.n. Lectotype**, ♀ (hereby designated): "Xieng Khuang (ex Vitalis)", "*obscurus* v. *diversus* Pic", "type" (manuscript labels of Pic) (MP).

**Remarks.** *L. obscurus* is very unlike its congeners: the female antennae are filiform and robust, and the whole body is with blue metallic tint. Males unknown at all, only their study can clarify taxonomic position of this species.

## 17. *Lycocerus karenensis* Champion

Figs 33-34

*Lycocerus karenensis* CHAMPION, 1926: 255. **Holotype**, ♂: "Burmah, Karen Mts.", "Doherty", "Fry coll. 1905.100", "*Lycocerus karenensis* type ♂ Ch." (Champion's manuscript label) (BM); **Paratype**, ♀: "Burmah, Karen Mts.", "Doherty", "Fry coll. 1905.100", "*Lycocerus karenensis* co-type ♀ Ch." (Champion's manuscript label) (BM).

**Remarks.** The structure of the aedeagus of *L. karenensis* with a wide emargination between the dorsal blades, provided with a prominent tooth in their apical portion (Figs 33-34), makes the species of rather isolated position.

## Acknowledgements

It is my pleasure to express gratitude to Dr. W. Wittmer (Natural History Museum, Basel) and Dr. J.J. Menier (National Museum of Natural History, Paris) for the loan of the ample material, including many types, and for their personal and professional assistance that has made the present study possible.

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