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# Notes on the genera *Neptosternus* SHARP and *Copelatus* ERICHSON from Sri Lanka and India with the description of new species (Coleoptera: Dytiscidae)

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## Abstract

Two new species of *Neptosternus* SHARP and two new species of *Copelatus* ERICHSON are described from India and Sri Lanka. A new name is substituted for *C. spangleri* WEWALKA. Keys to the known Indian and Sri Lankan species of these genera are provided, as is a list of the Oriental and Japanese species of *Neptosternus* SHARP. *Copelatus neelumae* VAZIRANI and *C. tenebrosus* RÉGIMBART are recorded from Sri Lanka for the first time, as is *C. freudei* GUIGNOT from the Maldive Islands. The male genitalia of *C. ceylonicus* VAZIRANI are figured for the first time.

The present paper is mainly based on a fairly large material of aquatic Adephega collected by Mr. A. JENSEN, Mr. V. MAHLER and Mr. A. TØFTING, all members of the 1979 expedition from the Naturhistorisk Museum, University of Århus, Denmark, to Sri Lanka. The study of the genera *Neptosternus* and *Copelatus* from this material has been supplemented by some specimens received from Dr. G. WEWALKA, Hygiene - Institut der Universität, Vienna, from the National Museum of Natural History, Smithsonian Institution, Washington, D. C., and from the Zoological Museum, University of Copenhagen.

Two new species of *Neptosternus* are described below from Sri Lanka, and three new species of *Copelatus* (including a replacement name) are described from India and Sri Lanka. Some additional notes on the genera are provided, as are keys to the Indian and Sri Lankan species.

## Abbreviations:

BM (NH) = British Museum (Natural History), London

Coll. MAHLER = Coll. Mr. V. MAHLER, Århus, Denmark

Coll. JÄCH = Coll. Dr. M. JÄCH, Scheibbs, Austria

now: Naturhistorisches Museum, Wien

Coll. WEWALKA = Coll. Dr. G. WEWALKA, Vienna, Austria

NMNH = National Museum of Natural History, Smithsonian Institution, Washington, D. C.

ZMUC = Zoological Museum, University of Copenhagen, Denmark

## Genus *Neptosternus* SHARP, 1882

Type-species: *Neptosternus ornatus* SHARP, 1882 (figured as *N. tridens*), by original monotypy.

A genus of Laccophilinae, characterized as follows (BRANCUCCI 1983): pronotum with hind margin not produced in the middle, with hind angles greatly produced backwards. Prosternal apophysis trifid. Hind tibia with two simple (not bifid) spurs.

Members of the genus furthermore have a length of 2.5 - 4.2 mm, and most species have a distinctly spotted or striped appearance. Front and mid tarsi hardly dilated in males, without ventral suckers. The species live in running waters.

This well-defined, probably monophyletic genus occurs in two widely separated parts of the world. So far 20 species have been described from Africa and Madagascar, and 17 from the Oriental region and Japan.

The species from Africa and Madagascar were first revised by GUIGNOT (1959). OMER-COOPER (1970) added five new species to this revision, and provided much information on the Afrotropical species.

The following species have been described from the Oriental region and Japan:

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|-----|--|----------------------|
| 1.  | <i>N. biharensis</i> VAZIRANI, 1963      | India                |
| 2.  | <i>N. brevior</i> RÉGIMBART, 1899        | Sumatra              |
| 3.  | <i>N. circumductus</i> RÉGIMBART, 1899   | India                |
| 4.  | <i>N. coomani</i> PESCHET, 1923          | Vietnam              |
| 5.  | <i>N. corporaali</i> ZIMMERMANN, 1924    | Sumatra              |
| 6.  | <i>N. horai</i> VAZIRANI, 1953           | India                |
| 7.  | <i>N. hydaticoides</i> (RÉGIMBART, 1877) | Phillipines, Sumatra |
| 8.  | <i>N. jacobsoni</i> ZIMMERMANN, 1927     | Sumatra              |
| 9.  | <i>N. kaszabi</i> SATO, 1972             | Vietnam              |
| 10. | <i>N. nipponensis</i> KAMIYA, 1939       | Japan                |
| 11. | <i>N. pocsi</i> SATO, 1972               | Vietnam              |
| 12. | <i>N. rajasthanicus</i> VAZIRANI, 1975   | India                |
| 13. | <i>N. regimbarti</i> PESCHET, 1916       | Sumatra              |
| 14. | <i>N. starmuehlneri</i> WEWALKA, 1973    | Sri Lanka            |
| 15. | <i>N. sumatrensis</i> RÉGIMBART, 1895    | Sumatra              |
| 16. | <i>N. taprobanicus</i> SHARP, 1890       | Sri Lanka, India     |
| 17. | <i>N. tenasserimus</i> GUIGNOT, 1956     | Burma                |

No complete revision is available for the species occurring in the eastern distributional area of the genus, which no doubt contains several yet undescribed species. However the large number of very similar different species makes a complete revision very difficult; particularly due to the amount of indeterminate material present in various collections. ZIMMERMANN (1927) provided keys and reviews of species for Sumatra, and VAZIRANI (1963, 1968, 1975b) for India and Sri Lanka. A revised key to the species from India and Sri Lanka is given below.

Key to the species of *Neptosternus* from India and Sri Lanka:

1. Pronotum dark reddish, almost black. Elytra with none of the yellow spots reaching the lateral border (Fig. 1). Length: 3.9 - 4.0 mm. . . . . *sinharajaicus* n. sp.
- Pronotum largely yellow, sometimes darkened along anterior and posterior margins. Elytron at least with an apical yellow spot reaching the lateral border (Figs 2 - 8). Length: 2.6 - 3.7 mm. . . . . 2.
2. Elytron with a separate median presutural yellow spot of variable length (Figs 2 - 6); this spot rarely connects with subbasal or apical spots . . . . . 4.

- Elytral median presutural yellow spot confluent with other yellow markings laterally, conjointly forming a more or less transverse spot(Figs 7, 8). . . . . 3.
- 3. Elytron with two separate subbasal yellow spots, and with the median and apical spots distinctly connected along the lateral border (Fig. 7). Length: 3.0 - 3.1 mm . . . . . *taprobanicus* SHARP
- Elytral subbasal yellow spots confluent into one transverse spot; median and apical spots not distinctly connected along the lateral border (Fig. 8). Length: 3.0 mm . . . . . *biharensis* VAZIRANI
- 4. Anterior half of elytron with a distinct, uninterrupted yellow margin near the lateral border (Figs 2, 3). . . . . 5.
- Lateral yellow margin absent, indistinct or interrupted in the anterior half of the elytron (Figs 4 - 6). . . . . 6.
- 5. Elytral lateral yellow margin entire from base to apex (Fig. 2). Length: 3.5 mm . . . . . *circumductus* RÉGIMBART
- Elytral lateral yellow margin interrupted behind the middle (Fig. 3). Length: 3.5 mm. . . . . *rajasthanicus* VAZIRANI
- 6. Pronotum yellowish with anterior and posterior margins dark brown. Larger species, length: 3.5 - 3.7 mm. . . . . *starmuehlneri* WEWALKA
- Pronotum yellowish, at most slightly darkened along the margins. Smaller species, length: 2.6 - 3.0 mm. . . . . 7.
- 7. Elytron with the subbasal spot and the median lateral spot not reaching the lateral border (Fig. 5). Length: 2.6 mm. . . . . *horai* VAZIRANI
- Elytron with the conjoint subbasal spots (if not conjoint: the lateral subbasal spot) and the median lateral spot reaching the lateral border (Fig. 6). Length: 2.8 - 3.0 mm. . . . . *ceylonicus* n. sp.

*Neptosternus sinharajaicus* n. sp. (Figs. 1, 7)

Holotype ♂: Sri Lanka, Sinharaja, 4 - 7. XII. 1979, V. MAHLER (in ZMUC).

Paratypes: 2♀♀ same data as holotype (in ZMUC); 2♀♀ Sri Lanka, Tissa Wewa, 10. XII. 1979, V. MAHLER (in BM (NH), ZMUC).

Diagnosis: A species of *Neptosternus* easily recognized on its very dark appearance, and on the shape and position of the elytral yellow spots. It is probably rather closely related to *starmuehlneri* WEWALKA, but differs in being longer and comparatively more narrow, and in having the yellow markings much less developed.

Length 3.9 - 4.0 mm, breadth 2.1 mm.

Shape elongate, oval; more attenuated posteriorly than anteriorly; not very strongly convex dorsally.

Head dark reddish to black, fronto-clypeal region reddish, antennae yellowish; punctuation very fine, rather obscure and remote; surface shining, micro-reticulate.

Pronotum uniformly dark reddish to black; almost impunctate; reticulation somewhat more impressed than on head; anterior submarginal row of punctures present.

Elytra black with four yellow spots on each elytron (Fig. 1): a subbasal spot, somewhat transverse and irregular in shape, a median presutural spot, small and roundish, a median lateral spot, squarish and larger than the median presutural spot, and a preapical spot, roundish and not touching the suture or the lateral border; apices brownish; lateral yellow border absent; two normal lines of serial longitudinal punctures present. Microsculpture a little deeper than on the pronotum.

Ventral surface reddish except for the front and mid legs which are yellowish; apical sternite paler; prosternal apophysis with lateral spines not extending beyond the middle of median spine.

Male with basal three segments of front and mid tarsi hardly dilated; penis as in Fig. 7.

Biology: the species is capable of flight, as all specimens were captured flying towards light in the evening (JENSEN & JENSEN 1981).

*Neptosternus ceylonicus* n. sp. (Figs. 6, 8)

Holotype ♂: Sri Lanka, Tissa Wewa, 10. XII. 1979, V. MAHLER (in ZMUC).

Paratypes: 5 ex, Sri Lanka, Sinharaja, 4 - 7. XII. 1979, V. MAHLER (in BM (NH), Coll. MAHLER, ZMUC); 1 ex., Sri Lanka, Surroundings of Ratnapura, Denawakganga near Malwala, 4. I. 1981, M. JÄCH (in Coll. JÄCH); 1 ex., Sri Lanka, Kitulgala, 29. XII. 1980, M. JÄCH (in Coll. WEWALKA).

Diagnosis: A species rather strongly resembling other smaller or medium-sized species of *Neptosternus*. It may be recognized by the size, the fairly widely oval shape of the body, the colour-patterns of pronotum and elytra, and the shape of penis in the males.

Length 2.8 - 3.0 mm, breadth 1.5 - 1.6 mm.

Shape elongate, rather widely oval; moderately convex dorsally; upper surface shining.

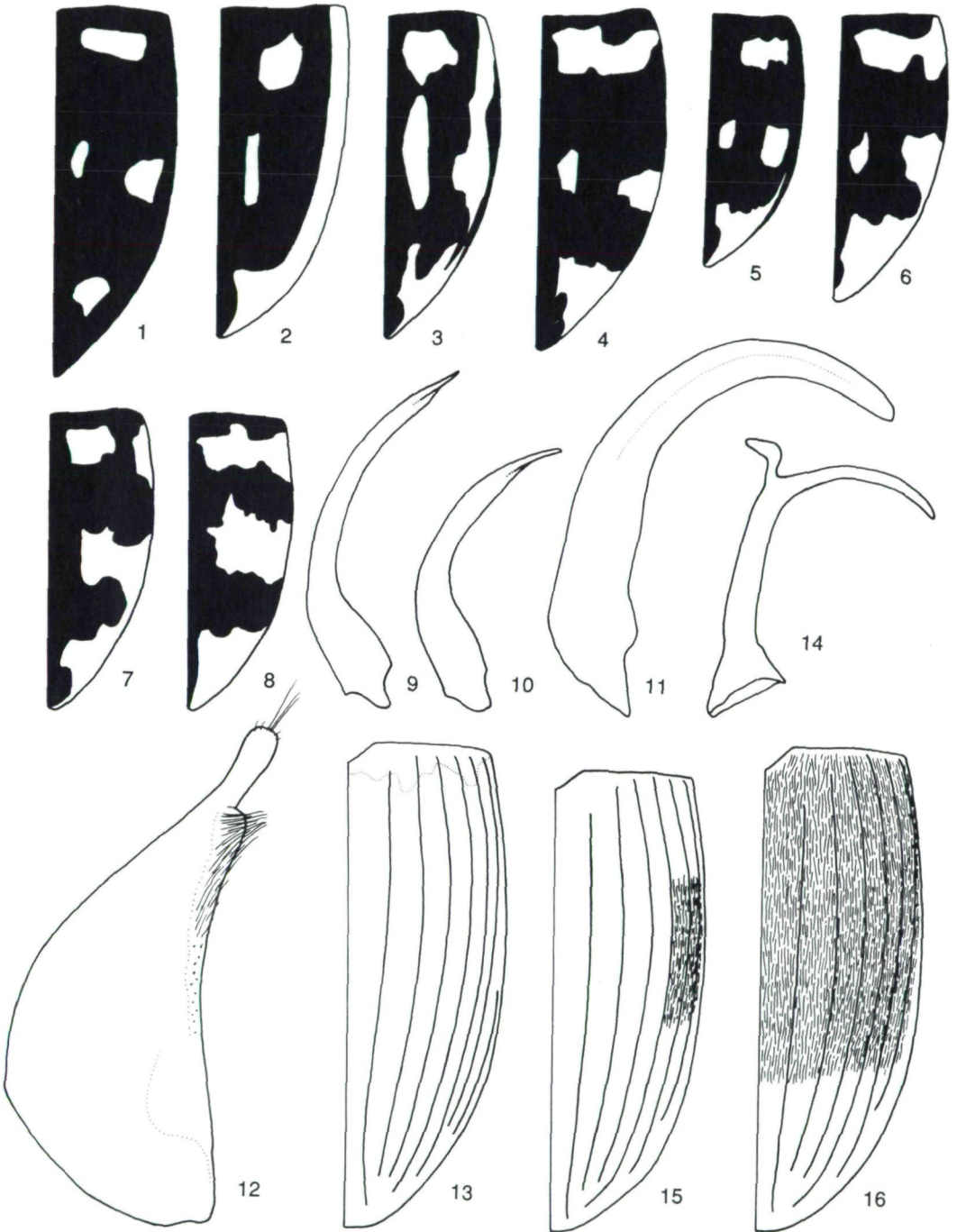
Head and antennae yellowish; punctation fine and remote on head; surface micro-reticulate.

Pronotum yellowish with a narrow transverse band in the middle slightly darker; reticulation as on head, but less impressed; punctation fine and remote; anterior submarginal row of punctures irregular.

Elytra very dark brown with four or five yellow spots on each (Fig. 6): a subbasal transverse spot (rarely divided into two), a median presutural spot, small and elongate, a median lateral spot, larger, squarish and joined to a fairly large triangular apical spot along the lateral border; lateral

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Fig. 1 - 8: right elytron of 1) *Neptosternus sinharajaicus*, 2) *N. circumductus*, 3) *N. rajasthanicus*, 4) *N. starmuehlneri*, 5) *N. horai*, 6) *N. ceylonicus*, 7) *N. taprobanicus* and 8) *N. biharensis*.  
Fig. 9 - 10: penis (lateral view) of 9) *Neptosternus sinharajaicus* and 10) *N. ceylonicus*.  
Fig. 11 - 12: *Copelatus ceylonicus*, 11) penis (lateral view) and 12) paramere.  
Fig. 13 - 14: *Copelatus karnatakus*, 13) right elytron and 14) penis (lateral view).  
Fig. 15 - 16: *Copelatus mahleri*, left elytron of 15) holotype and 16) paratype.



yellow margin along the border not complete from base to apex, missing or indistinct between the subbasal and median spots; reticulation as on head and pronotum; punctuation fine and remote, except for two longitudinal rows of quite close and moderately impressed punctures; epipleura dark.

Ventral side and legs yellowish; prosternal apophysis with lateral spines longer than half the length of the median spine.

Male with the basal three segments of front and mid tarsi hardly dilated; penis as in Fig. 8.

Biology: The specimens have either been captured in running water or when flying towards light in the evening (JENSEN & JENSEN, 1981). A specimen from 4. I. 1981 was freshly emerged.

### **Genus *Copelatus* ERICHSON, 1832**

Type-species: *Dytiscus posticatus* FABRICIUS, 1801, by original monotypy.

A genus of Copelatinae, characterized as follows (GUÉORGUIEV 1968): pronotum distinctly bordered laterally. Elytral epipleura narrowed behind markedly from the second abdominal sternite. Hind coxal lines distinct, not strongly abridged, and very close to each other in front of the hind coxal apophyses.

Most species have an oblong, rather flattened appearance, and a length of about 3 - 8 mm. Many species possess a number of longitudinal striae (narrow grooves) on the elytra, the number of which is used for subdividing the genus into species-groups.

Species of *Copelatus* are usually met with in vegetation-rich stagnant water. They have been found in all major faunal regions, with highest number of species in the tropics. In the latest work on the classification of the genus, GUÉORGUIEV (l. c.) mentions a total of 365 species and 9 subspecies of *Copelatus*. However, additional species have been described since then, and some names have been synonymized.

SHARP (1882) arranged the genus into 14 numerical groups, and this subdivision was later followed in the important work on the Dytiscidae in the Berlin-Dahlem Museum (ZIMMERMANN 1919), in the monograph on the Palaearctic Dytiscidae (ZIMMERMANN 1934) and in the systematic work on *Copelatus* by BALFOUR-BROWNE (1939). GUIGNOT (1961) provided the groups with species-group names in his revision of the African species, and his naming has later been used by other authors such as GUÉORGUIEV (l. c.) in the classification of the Copelatini of the world, and by VAZIRANI in the revision of the Colymbetinae of India (VAZIRANI 1970) and in the catalogue of Oriental Dytiscidae (VAZIRANI 1977).

Only two species-groups are known with certainty from India and Sri Lanka, viz. species-groups *irinus* and *duodecimstriatus*. A key to the species from this area is given below.

Key to the species of *Copelatus* known from India and Sri Lanka:

Species-group *irinus* - elytron with 6 striae on the disc plus one submarginal, near the lateral border (i. e. Fig. 13).

1. Elytron with stria 1 (the stria closest to the suture) commencing either from base, or abridged for not more than 1/5 of its length from the base . . . . . 3.
- Elytron with stria 1 abridged at base for at least 1/4 of its length from base . . . . . 2.
2. Elytron with stria 1 commencing from middle of its length from base. Length: 6.0 mm. . . . . *latipes* SHARP
- Elytron with stria 1 commencing from 1/3 - 1/4 of its length from base. Length: 5.8 mm. . . . . *taprobanicus* WEWALKA & VAZIRANI
3. Elytron with all 6 discal striae commencing at base. Length: 4.8 - 5.0 mm. . . . . *faeae* RÉGIMBART
- Elytron with 1 or more discal striae not commencing at base . . . . . 4.
4. Elytron only with stria 1 distinctly abridged at base (striae 2, 3 & 5 also slightly abridged at base in *gibsoni*) (i. e. Fig. 13). . . . . 5.
- Elytron with stria 1 and some other discal striae abridged at base . . . . . 6.
5. Elytron with stria 1 abridged at base for about 1/5 of its length from base. Length: 5.3 - 5.5 mm. . . . . *brivioi* ROCCHI
- Elytron with stria 1 abridged at base for less than 1/5 of its length from base . . . . . 7.
6. Elytron with striae 1 & 2 abridged at base. Length: 5.0 mm. . . . . *bengalensis* GUIGNOT
- Elytron with striae 1, 5 & 6 abridged at base . . . . . 15.
7. Elytron without a distinct, paler subbasal band/fascia or a paler margin between lateral border and discal striae . . . . . 8.
- Elytron with yellow subbasal band/fascia and/or a yellow margin between lateral border and discal striae. . . . . 10.
8. Elytra reddish to black; penis without dorsal lobe; female with short, longitudinal sexual striae, restricted to basal half of elytra between lateral border and stria 1. Length: 5.0 - 5.3 mm. . . . . *spangleri* VAZIRANI
- Elytra yellowish to pale reddish or brownish; penis with (i. e. Fig. 14) or without dorsal lobe; species where females are known without sexual striae on female elytra. . . . . 9.
9. Head and pronotum reddish, elytra yellowish to pale reddish or brownish; penis with dorsal lobe; female without sexual striae on elytra. Length: 4.1 - 4.4 mm. . . . . *andamanicus* RÉGIMBART
- Head reddish, pronotum and elytra yellowish to pale reddish or brownish; penis without dorsal lobe, female unknown. Length: 5.3 mm. . . . . *gibsoni* VAZIRANI
10. Elytron with basal yellow fascia produced backwards between lateral border and stria 3. . . . . 11.
- Elytron with basal yellow fascia, if present, produced backwards along the lateral border only or up to stria 5. . . . . 13.
11. Penis without dorsal lobe; female without sexual striae on elytra. Length: 5.6 - 6.0 mm. . . . . *neelumae* VAZIRANI
- Penis with distinct dorsal lobe. . . . . 12.
12. Elytron with basal yellow fascia reaching from lateral border to stria 2; penis with dorsal lobe not so prominent, hardly broader than half of penis; female not known. Length: 5.4 mm. . . . . *scherrerii* WEWALKA
- Elytron with basal yellow fascia reaching from lateral border to stria 3; penis with more prominent dorsal lobe; female without sexual striae on the elytra. Length: 4.7 - 5.3 mm. . . . . *bangalorensis* VAZIRANI

13. Elytron with narrow basal yellow band/fascia not produced backwards as a margin along the lateral border; penis with dorsal lobe (Fig. 14). Length: 4.4 - 4.8 mm. . . . . *karnatakus* n. sp.  
- Elytron without basal yellow band, but with a more or less distinct yellowish margin between the lateral border and stria 5 or 6; penis without dorsal lobe. . . . . 14.
14. Elytron with a yellowish margin between the lateral border and stria 6, female with sexual striae restricted to the middle third of elytron between lateral border and stria 3. Length: 5.0 - 5.5 mm. . . . . *freudei* GUIGNOT  
- Elytron with a yellowish margin between the lateral border and stria 5; female with sexual striae on the entire elytral surface. Length: 4.7 - 5.0 mm. . . . . *indicus* SHARP
15. Elytron with basal yellowish fascia. . . . . 16.  
- Elytron without basal yellowish fascia. . . . . 18.
16. Elytron with striae 5 and 6 almost equally abridged at base. Length: 3.5 - 3.8 mm. . . . . *irinus* RÉGIMBART (= *horni* RÉGIMBART)  
- Elytron with stria 6 more abridged at base than stria 5. . . . . 17.
17. Elytron with striae 2 and 4 shorter than 3 at apex, and stria 5 not extending beyond 2 and 4 at apex. Length: 4.9 - 5.3 mm. . . . . *bacchusi* WEWALKA  
- Elytron with striae 2 and 4 much shorter than 3 and 5 at the apex. Length: 4.0 mm. . . . . *minutissimus* BALFOUR-BROWNE
18. Elytra yellowish to pale brown; elytral striae 5 and 6 almost equally abridged at base; female with sexual striae on elytra, quite dense except near apices. Length: 5.4 - 5.5 mm. . . . . *malaisei* GUIGNOT  
- Elytra yellowish to reddish; elytral stria 6 more abridged at base than stria 5; species where females are known without sexual striae on female elytra. . . . . 19.
19. Elytron with striae 2 and 4 not shorter than 3 at apex; striae 2 - 5 terminating almost at the same point near apex; female not known. Length: 4.9 mm. . . . . *assamensis* VAZIRANI  
- Elytron with striae 2 and 4 a little shorter than 3 near apex. . . . . 20.
20. Shape of body rather oval; dorsal side reddish to black. Length: 4.1 - 4.5 mm. . . . . *tenebrosus* RÉGIMBART  
- Shape of body subparallel; dorsal side reddish; penis as in Fig. 11. Length: 4.4 mm. . . . . *ceylonicus* VAZIRANI

Species-group *duodecimstriatus* - elytron with 6 discal striae only (i. e. Figs 15, 16).

1. Elytron reddish to brown with basal yellow band/fascia which is sometimes continued as a margin between the lateral border and stria 3; female elytron with sexual striae from lateral border to suture. Length: 3.7 - 4.2 mm. . . . . *cryptarchoides* RÉGIMBART  
- Elytron yellowish to black, sometimes with yellow or pale markings between the striae basally and apically and with a margin between the lateral border and stria 5, but without a distinct basal yellow band/fascia. . . . . 2.
2. Elytron only with striae 1 or 1 and 2 distinctly abridged at base; parts of female elytron covered by sexual striae varies. Length: 4.5 - 5.6 mm. . . . . 3.  
- Elytron with striae 1, 2 and 6 abridged at base; female with sexual striae restricted to an area between elytral striae 2 and 5 and between 1/4 of the length from base to middle. Length: 3.4 - 3.6 mm. . . . . *wewalkai* nom. nov. (= *spangleri* WEWALKA)
3. Elytron reddish to black, yellowish between lateral border and stria 5, in apical half between striae 4 and 5, and at the base and apex between striae 3 and 4; female with



sexual striae between lateral border and stria 3. Length: 4.9 - 5.6 mm. . . . . *mysorensis* VAZIRANI

- Elytron yellowish to pale brownish, except for some paler indeterminate markings between lateral margin and striae 5 or 6; female with sexual striae covering parts of the elytron varying from almost the entire 2/3 to a small median portion between striae 4 and 6 (Figs 15, 16); male not known. Length: 4.5 - 4.8 mm. . . . . *mahleri* n. sp.

***Copelatus* species-group *irinus***

GUÉORGUIEV (1968) mentions 77 species from the warmer climates of most of the world. In India and Sri Lanka 7 species have been described after the review by VAZIRANI (1970), viz.:

*C. neelumae* VAZIRANI, 1973; *C. spangleri* VAZIRANI, 1975a; *C. gibsoni* VAZIRANI, 1975a; *C. brivioi* ROCCHI, 1976; *C. schereri* WEWALKA, 1981; *C. bacchusi* WEWALKA, 1981; *C. taprobanicus* WEWALKA & VAZIRANI, 1985. With the present addition 21 species are now known from this area.

In the material studied, *C. neelumae* VAZIRANI, 1973, hitherto known only from India (Tamil Nadu), is present from Sri Lanka: Colombo, 27. XI. 1979 and Inginiyagala, 14. XII. 1979, V. MAHLER (in ZMUC). *C. tenebrosus* RÉGIMBART, 1880, is also recorded from Sri Lanka for the first time: Sinharaja, 4 - 7. XII. 1979, V. MAHLER (in ZMUC), as is *C. freudei* GUIGNOT, 1954, from the Maldive Islands (in Coll. WEWALKA). *C. ceylonicus* VAZIRANI, 1969, described from a female, is here represented by 3 males from Sri Lanka: 1, Hanwellla, 20. XII. 1979, V. MAHLER (in ZMUC); 2, Inginiyagala, 14. XII. 1979, V. MAHLER (in ZMUC), genitalia figured in Figs 10, 11.

***Copelatus karnatakus* n.sp. (Figs 13, 14)**

Holotype ♂: India, Karnataka, Mudigere area, 2 - 10. XI. 1977, ZMUC Expedition (in ZMUC).

Paratype ♀, India, Karnataka, Bangalore, VIII. 1929, J. C. BRIDWELL (in NMNH).

Diagnosis: Among members of the *irinus* species-group this species is characterized by the presence and shape of the dorsal lobe of penis. The elytral colour pattern and the length of the elytral striae also separates it from other species with a dorsal lobe of penis.

Length 4.4 - 4.8 mm, breadth 2.5 mm.

Shape elongate oval, more attenuated posteriorly than anteriorly, moderately convex dorsally.

Head reddish brown, antennae yellowish; punctation fine, punctures separated by about twice their diameter, surface micro-reticulate.

Pronotum reddish brown, somewhat paler on the sides; punctation and reticulation almost as on head; anterior submarginal row of punctures distinct in the middle, irregular towards the sides; female with longitudinal striae present near the hind angles.

Elytra reddish brown with a narrow yellowish basal band just reaching the lateral border (Fig. 13); reticulation as on head; punctation fine, more impressed than on head and pronotum; stria 1 (closest to the suture) slightly abridged at base, 2 - 6 commencing at base, 7 (submarginal)

commencing at middle; striae 2, 3 and 5 shorter than 1 and 4 at apex, 6 shorter than 5, 6 extending about as long as 7.

Ventral side reddish brown, legs yellowish.

Male with basal three segments of front and mid tarsi widened, as is front tibia towards apex; penis as in Fig. 14, with a dorsal lobe.

Female without sexual striae on the elytra.

### *Copelatus* species-group *duodecimstriatus*

GUÉORGUIEV (1968) provided a key to the 12 known species of this group, which is represented in Africa, the Oriental region, New Guinea, Oceania and S. America. In India and Sri Lanka one more species has been described after the review by VAZIRANI (1970): *C. spangleri* WEWALKA, 1981 (preocc.). With the present addition 4 species are now known from this area.

### *Copelatus wewalkai* nom. nov. (replacement name)

*Copelatus spangleri* WEWALKA, 1981: 68 (preocc.: *C. spangleri* VAZIRANI, 1975a).

The name *Copelatus wewalkai* is suggested as a replacement name for *Copelatus spangleri* WEWALKA, 1981, which is preoccupied.

### *Copelatus mahleri* n. sp. (Figs 15, 16)

Holotype♂: Sri Lanka, Inginiyagala, 14. XII. 1979, V. MAHLER (in ZMUC).

Paratype♀, same data as holotype (in ZMUC).

Diagnosis: A member of the species-group *duodecimstriatus* characterized by its size, colouration, the length of the elytral striae, and by the extension of the elytral area covered by sexual striae.

Length 4.5 - 4.8 mm, breadth 2.3 - 2.5 mm.

Shape elongate oval, slightly more attenuated posteriorly than anteriorly; not very convex dorsally.

Head pale reddish brown, antennae yellowish; punctuation fine and remote, obscured by well impressed micro-reticulation; surface dull.

Pronotum pale reddish brown, paler towards the sides; punctuation fine and remote, reticulation less impressed than on head; surface dull; anterior submarginal row of punctures distinct, longitudinal striae present near the hind angles (probably only in females).

Elytra yellowish to pale brownish with somewhat irregular paler markings apically and between lateral border and stria 3; a row of small black dots is present along the suture; punctuation very fine, obscured by micro-reticulation, surface with matt appearance; each elytron with 6 striae (Figs 15, 16): stria 1 (closest to the suture) abridged at base, 2 slightly abridged at base, 3 - 6

commencing at base; striae 2, 3 and 5 shorter than 1 and 4 at apex, 6 shorter than the others, 1 and 4 almost enclosing 2 and 3 and nearly terminating at the same point near apex.

Ventral side and legs yellowish to pale brownish.

Male not known.

Female with sexual strioles covering an elytral area varying from a median section between striae 4 and 6 to most of the anterior 2/3 of the elytra; strioles (probably sexual strioles) also present on metasternum, at least anterolaterally, and on the basal two of three visible sternites.

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### Zusammenfassung

Zwei neue Arten der Gattung *Neptosternus* SHARP (*N. sinharajaicus* sp. n., *N. ceylonicus* sp. n.) und zwei neue Arten der Gattung *Copelatus* ER. (*C. karnatakus* sp. n., *C. mahleri* sp. n.) aus Indien und Sri Lanka werden beschrieben. Für das Homonym *Copelatus spangleri* WEWALKA wird der Name *Copelatus wewalkai* nom. nov. substituiert. Bestimmungstabellen der indischen und ceylonesischen Arten der beiden Gattungen wurden erarbeitet. *Copelatus neelumae* und *C. tenebrosus* werden zum ersten Mal für Sri Lanka gemeldet und *C. freudei* wird erstmals für die Malediven gemeldet. Die männlichen Genitalien von *C. ceylonicus* werden erstmals abgebildet.

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