

NOTES ON A COLLECTION OF DYTISCIDAE (COLEOPTERA) FROM MAHARASHTRA, WITH DESCRIPTION OF A NEW SPECIES

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(With 4 Text-figures)

INTRODUCTION

The Dytiscidae of Maharashtra are fairly well known. The author (1968) published the results of his earlier collections from the area and recorded thirty-six species belonging to seventeen genera. Subsequently Tonapi & Ozarkar (1969), in an account of the aquatic Coleoptera of Poona, added the following five species : *Laccophilus anticatus* Sharp, *Rhantaticus congestus* (Klug), *Sandracotus dejeani* Illiger, *Cybister confusus* Sharp and *C. rugulosus* Redtenbacher. *Hyphydrus indicus* Sharp, mentioned by these authors, is a junior synonym of *H. intermixtus* Walker and *Hydrocoptus subvittulus* Motschulsky is a case of mislabelling for *Hydaticus vittatus* (Fabricius), as is evident from the figure and measurements given in the text.

A large number of specimens collected by my colleagues at Western Regional Station, Zoological Survey of India, Poona, have now been examined by me. The present lot comprises twenty-four species, including one new species, and first records of *Laccophilus basalis* Motschulsky and *Hyphoporus severini* Regimbart from the area, thus bringing the number of species known from the area to forty-four.

Except for the remarks on five species *Laccophilus basalis* Motschulsky, *Hyphydrus (Apriophorus) renardi* Severin, *Hyphoporus severini* Regimbart *Peschetius toxophorus* Guignot and *Cybister cognatus* Aube, the other species do not call for any comments. Only the specimens have been listed under each species. The names of the collectors have been abbreviated as below : A. P. Kapur (APK), B. K. Tikader (BKT), B. S. Lamba (BSL), R. N. Chopra (RNC), K. R. Rao (KRR), M. Babu Rao (MBR), G. M. Yazdani (GMY), D. N. Tiwari (DNT).

SYSTEMATIC ACCOUNT

Family DYTISCIDAE

Subfamily NOTERINAE

1. *Canthydrus luctuosus* Aube

Maharashtra : Poona Dist., 3 ex. Vanawasi village, 15.ii.1972, *BSL*; 5 ex. Bhorghat, 16.xi.1965, *BSL*.

Subfamily LACCOPHILINAE

2. *Laccophilus anticatus* Sharp

Maharashtra : Satara Dist., 1 ex. Fritzgerald, 5.x.1972, *APK*.

3. *Laccophilus basalis* Motschulsky

Maharashtra : Kolaba Dist., 1 ex. Mahad, 14. ii. 1966, *BSL*.

Remarks.— This species has been reported by the author (1969) from India : West Bengal, for the first time and is also known from Sri Lanka, Andaman Islands and Indonesia. It is now being reported from Maharashtra for the first time. This species is obviously quite rare. It is very close to *L. inefficiens* in the elytral markings but has rufus irrotations as against black. They have however very distinct shape of penis as shown in Text-fig. 1 A-B.

4. *Laccophilus chinensis inefficiens* Walker

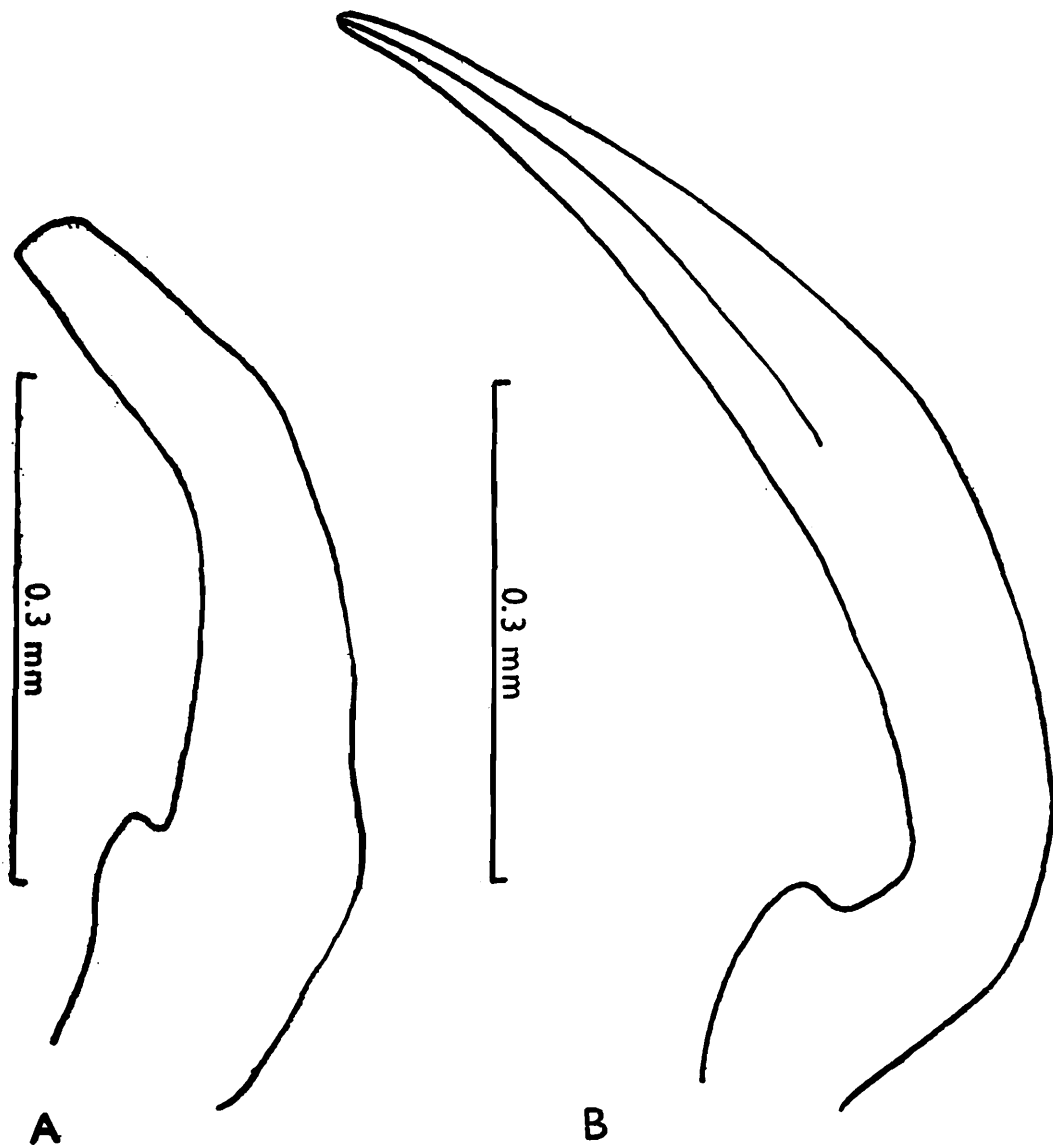
Maharashtra: Poona Dist., 1 ex. Sindewadi 29. ix. 1972, *BSL*; 3 ex. 22.i.1970, *BSL*; 8 ex. Moshi 24.i.1967, *BSL*; 10 ex. Moshi 7.v. 1971, *BSL*; 1 ex. Moshi 28.v.1971, *BSL*; 3 ex. Pirangut 18.i.1967, *RNC*; 2 ex. Pirangut 3.xii.1969, *RNC*; 5 ex Vanawasi 15.ii.1972, *BSL*; 3 ex. Kamathadi 25.vii. 1969, *RNC*; 1 ex. Kamathadi 19.ii.1969, *BSL*; 1 ex. Paud 6.xi.1969 *BSL*; 1 ex. Nira 20.v.1972, *MBR*; 1 ex. Shivapur, 3.iv.1969, *RNC*; 4 ex. Katraj Tank 8.xii.1970, *BSL*. Kolaba Dist., 1 ex. Mahad, 14 ii.1966, *BSL*.

5. *Laccophilus flexuosus* Aube

Maharashtra : Poona Dist., 1 ex. Kamset 10.xii.1970, *BSL*; 5 ex. Wagholi, 5..x.1967, *RNC*.

6. *Laccophilus parvulus* Aube

Maharashtra : Poona Dist., 3 ex. Moshi, 24.i.1967; 1 ex. Katraj Tank, 8.xii.1970; 1 ex. Kamset, 10.xii.1970, all *BSL* Colln.



Text-fig. 1.—Lateral view of penis, A-in *Laccophilus basalis*; B. in *L. inefficiens*.

7. *Laccophilus sharpi* Regimbart

Maharashtra : Poona Dist., 1 ex. Moshi, 24.i.1974, *BSL*.

Subfamily HYDROPORINAE

8. *Hyphydrus (Apriophorus) intermixtus* Walker

Maharashtra : Poona Dist., 1 ex. Sindewadi 28.ii.1966, *RNC*; 1 ex. Sindewadi 29.ix.1972, *BKT*; 3 ex. Nira, (Bhirvi Bhaudon) 12.xi.1967, *BSL*.

9. *Hyphydrus (Apriophorus) renardi* Severin

Maharashtra : Poona Dist, 1 ex. Bhorghat, 16.x.1965, *BSL*; 2 ex. Wagholi, 5.x.1967, *RNC*; 2. ex. Kamathadi, 19. ii. 1969, *BSL*; 1 ex. Shiva-

pur, 2.iv.1969, *RNC*; 1 ex. Kamathadi, 24.vii.1969, *RNC*; 1 ex. Kud, 9.x.1969, *BSL*; 1 ex. Shindewadi, 22.i.1970, *BSL*; 9 ex. Katraj tank, 8.xii.1970, *BSL*; 7 ex. Kamset, 10.xii.1970, *BSL*; 7 ex. Sindewadi, 23.ii.1971, *RNC*; 2 ex. Moshi, 24.i.1967, *BSL*; 1 ex. 28.v.1971, *BSL*; 1 ex. 7.v.1971, *BSL*.

Remarks.—Vazirani (1973) has discussed the variation in elytral pattern. Both the patterns A & B, as shown by Vazirani (*l. c.*) are present in this collection from the same locality, same pond and same date.

10. *Hyphoporus severini* Regimbart

Maharashtra : Poona Dist., 1 ex. Shinhagad, 28.ii.1966, *RNC*; 7 ex. Nira (Bhirvi Bhaudon), 12.xi.1967, *BSL*; 5 ex. Shindewadi, 16.x.1969, *RNC*., 1 ex. Sindewadi, 28.xi.1969, *BSL*; 2 ex. Moshi, 28.v.1971, *BSL*; 3 ex. Nira, 20.v.1972, *MBR*; Nasik Dist. 2 ex. Malegaon, 13.vi.1966, *BSL*.

Remarks.—Hitherto known from Bihar, Uttar Pradesh, Rajasthan and Pakistan. It is now being reported from Maharashtra for the first time.

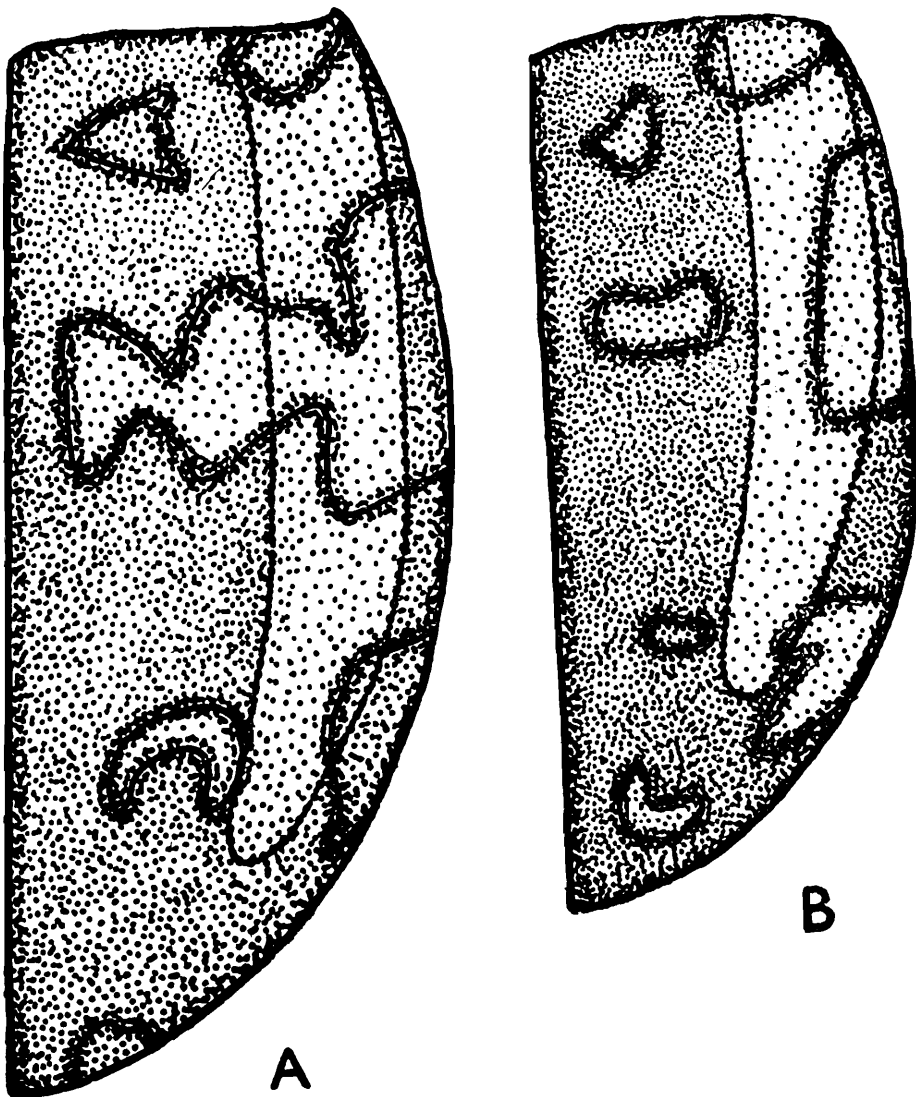
11. *Peschetius quadricostatus* Aube

Maharashtra : Poona Dist., 1 ex. Pirangut 18.i.1967, *RNC*; 1 ex. Moshi, 28.v.1971, *BSL*; Kolaba Dist., 1 ex. Mahad, 24.ii.1966, *BSL*.

12. *Peschetius toxophorus* Guignot

Maharashtra : Poona Dist., 1 ex. Moshi, 24.i.1967, *BSL*; 1 ex. Nira, 20.v.1972, *MBR*.

Remarks.—Omer-Cooper (1970) divided the African species into groups on the basis of the prosternal process being keeled or not. In both the species known from India the prosternal process is without keel and thus belong to the species group *P. parvus* Omer-Cooper and *P. nigeriensis* Omer-Cooper. Further two examples in the above collection have black labro-clypeus as against rufoferruginous in other examples. This difference is coupled with the differences in elytral markings (Text-fig. 2 A-B) but both examples happen to be female. These specimens also differ in having the elytral carina more prominent and surface more shining. It is suspected that 2 species may be involved but additional specimens need to be collected besides study of the type specimens.



Text-fig. 2.— A & B Elytral markings in *Peschetius toxophorus*.

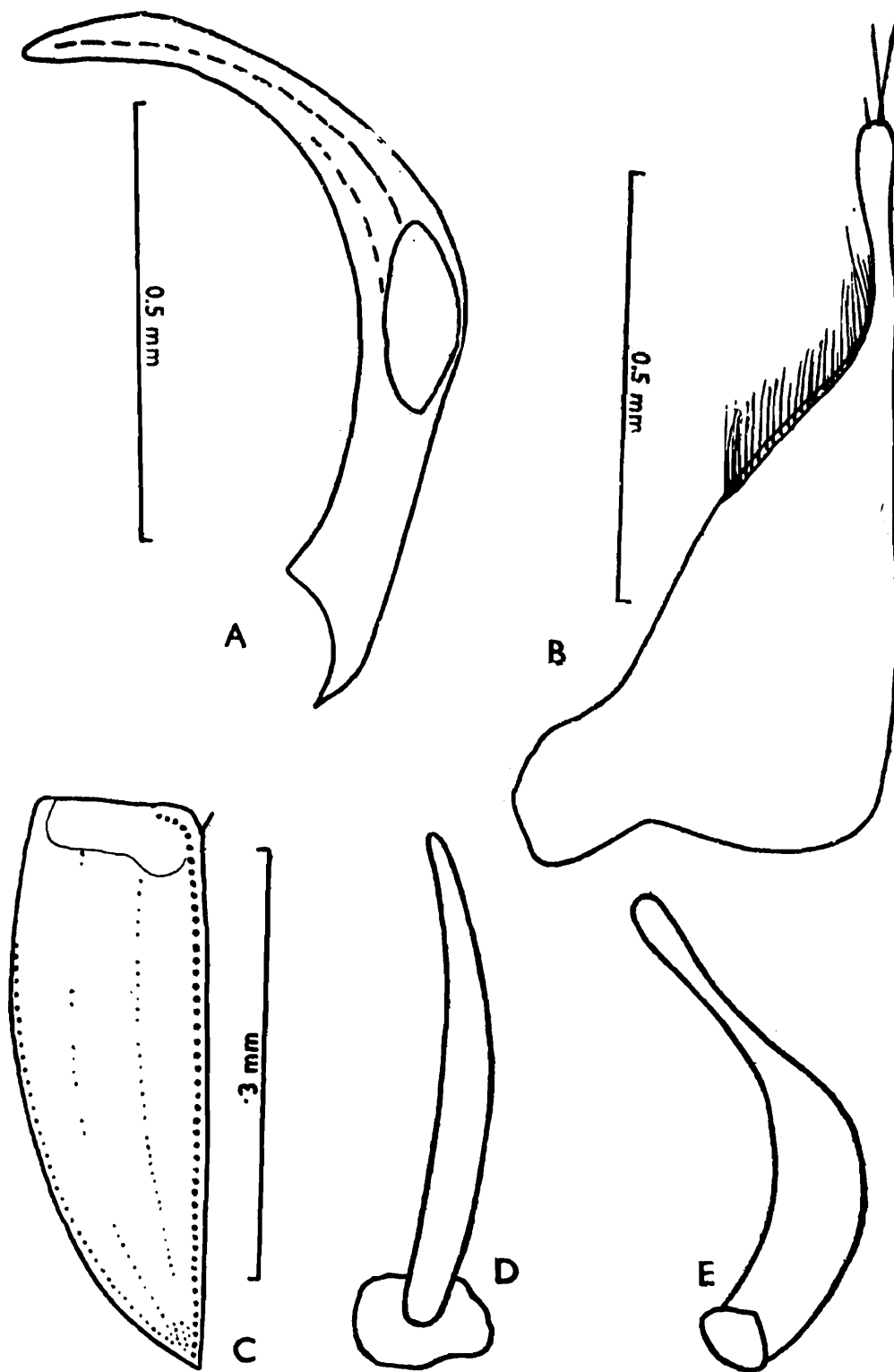
Subfamily COLYMBETINAE

13. *Lacconectus* (S. Str.) *lambai* sp. nov.

Holotype- Male, Maharashtra : Satara Dist., Fitzgerald, 5. x. 1972, A. P. Kapur colln. Paratypes—13 ex. same particulars as holotype in the Zoological Survey of India.

Length 5.0-5.6 mm.

Head testaceous anteriorly blending into ferruginous posteriorly, impunctate with reticulation indistinct. *Pronotum* ferruginous on the disc, testaceous at the sides and along the anterior border; anterior transverse row of black punctures fine and irregular, not exceeding beyond the outer margin of eyes; sides not rebordered, feebly arched, posterior angles pointed. *Elytra* (Text-fig. 3C) testaceous to ferruginous, rather iridescent, with a pale yellow undefined basal band not reaching the lateral margin, sutural row of fine black punctures, a row of



Text-fig.3.— A. Lateral view of penis, *Lacconectus lambai* B. paramere, C. left elytron. Penis in *Lacconectus tonkinensis* : D. dorsal view; E. lateral view.

few irregularly arranged punctures between the sutural row and inner striae of punctures, a similar row of irregular punctures between the inner and outer normal striae also present, sublaterally a row of black punctures, finer than the sutural row, commencing from the one third to the apex; reticulation imperceptible. *Ventral side* ferruginous with legs (except metatibiae and tarsi), abdomen and epipleurae rather testaceous; prosternal process depressed in between meso and meta

coxae, rounded at apex, sides of the apical portion rebordered. Penis (Text-fig. 3A) strongly curved, broad at base and narrowed towards apex; twisted in the apical portion, apex bluntly pointed; basal three segments of protarsi and mesotarsi feebly dilated to provide minute suckers underneath, 2+2+1 from basal segment.

Remarks.—In the key to the species of *Lacconectus* by Gueorguiev (1968) this species runs to *L. fulvescens* Motschulsky, but differs from it in the its much larger (5.0-5.6 mm as against 4.0-4.3 mm). Vazirani (1970) has split the genus into two subgenera on the basis of presence of metacoxal lines coupled with the normal striae on elytra consisting of stronger punctures. In this key to the species, this species runs near to *L. tonkinensis* Guignot, but differs from it (i) elytra testaceous as against brown-black and without any spots except the undefined basal band (ii) supplementary punctures on elytra are few in this species as against dense in anterior half and larger and coalescent in posterior half. The two species also differ in the shape of penis (Text-fig. 3 D, E).

14. *Rhantus taprobanicus* Sharp

Maharashtra : Poona Dist., 1 ex. Wagholi, 17.i.1972, *MBR*.

Subfamily DYTISCINAE

15. *Eretes sticticus* (Linnaeus)

Maharashtra : Poona Dist., Moshi, 13 ex. 2.iii.1969, *BSL*.

16. *Hydaticus* (*Guignotites*) *incertus* Regimbart

Maharashtra : Nasik Dist., 2 ex. Malegaon, 28.i.1968, *RNC*; Aurangabad Dist., 2 ex. Shaigadh, 17.ii.1970 *BSL*; Nanded Dist., 1 ex. Manded vill. Mangore R. 2.xii.1970, *RNC*; Poona Dist., 3 ex. Kamset, 10. xii.1970, *BSL*; 1 ex. Pirangut, 18.i.1967 *RNC*; 1 ex. Kondapuri, 30.xii.1971, *MBR*.

17. *Hydaticus* (*Guignotites*) *luczoncius* Aube

Maharashtra : Poona Dist., 1 ex. Khed, 10. iv. 1970, *KRR*; 2 ex. Wagholi, 17.i.1972, *MBR*.

18. *Hydaticus* (*Guignotites*) *vittatus* Fabricius

Maharashtra : Poona Dist., 1 ex. Wagholi, 5.x.1967, *RNC*; 1 ex. Wagholi, 7.xii.,1967, *RNC*; 1 ex. Khed Shivapur, 17.ix.1968, *RNC*; 3 ex. Wagholi, 25.ii.1968, *RNC*; 1 ex. Paud 8.v.1969, *RNC*; 1 ex. Khed 10.iv.1970, *KRR*; 1 ex. Katraj tank, 8.xii.1970, *BSL*; 2 ex. Koregaon, *Z.S.*..9

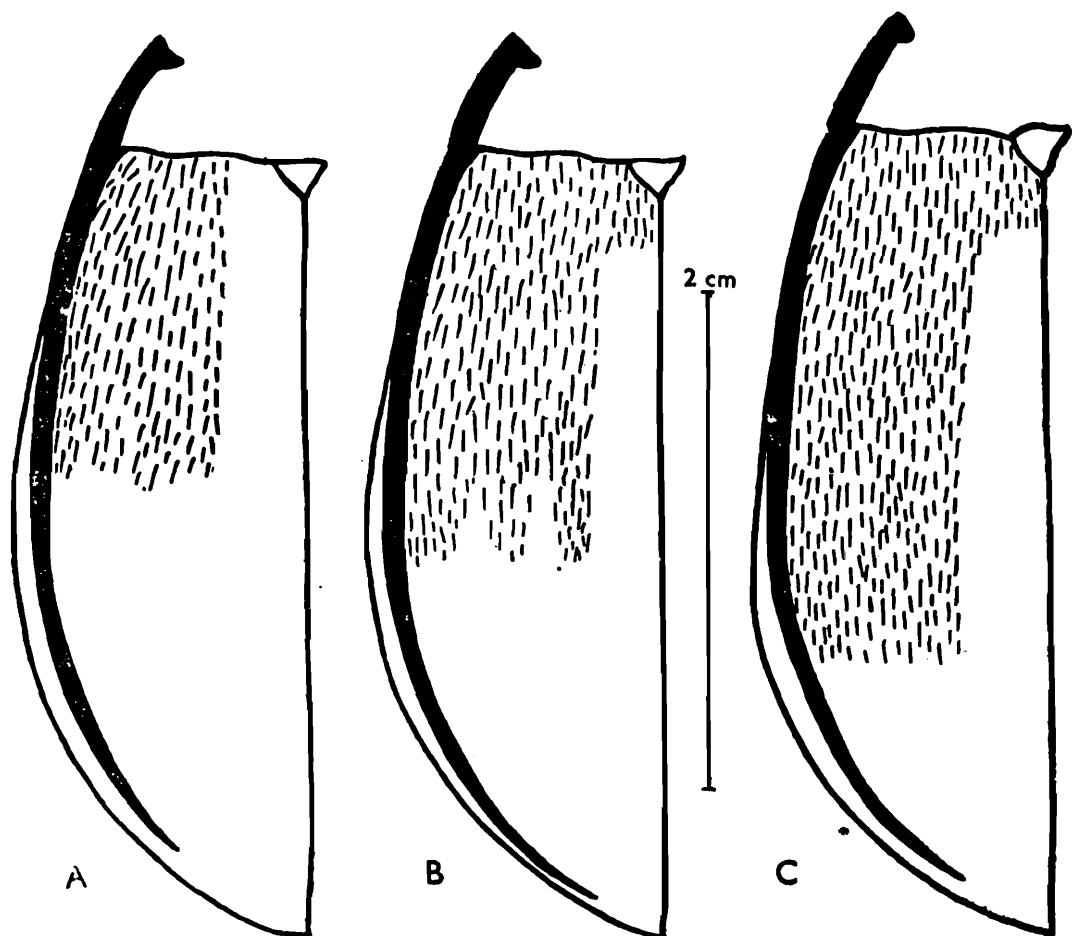
27.ix.1971, *BSL*; 3 ex. Kondapuri, 30.xii.1971, *MBR*; 9 ex. Wagholi 17.i.1972, *MBR*. Ratnagiri Dist., 2 ex. Kandamala R. 2.xii.1971, *BSL*. Aurangabad Dist., 1 ex. Shahgadh 17.ii.1970, *BSL*.

19. *Sandracottus dejeani* Aube

Maharashtra : Poona Dist., 1 ex. Moshi, 28.v.1971, *BSL*.

20. *Cybister (Meganectes) cognatus* Sharp

Maharashtra : Poona Dist., 1 ex. Kamset, 24.xii.1970, *RNC*; 2 ex. 20.xi.1970, *KRR*; 1 ex. 27.i.1971, *RNC*; 1 ex. Khed, 8.ii. 1968, *BSL*; 1 ex. 14.ii.1969, *BSL*; 1 ex. 3.ii.1970, *BSL*; 1 ex. 10.iv.1970, *KRR*; 1 ex. 1.v.1970, *RNC*; 2 ex. 12.xi.1970, *KRR*; 1 ex. 2.i.1971, *RNC*; 2 ex. 23.i.1971, *RNC*; 1 ex. 10.ix.1971, *BSL*; 1 ex. 7.v.1971; 1 ex. 13. xii.1971, *KRR*; 1 ex. 4.iii.1972, *KRR*; 1 ex. Pirangut, 6.xi.1969, *BSL*; 1 ex. 12.iii. 1970, *RNC*; 1 ex. Wagholi 5.ii.1968, *DNT*; 2 ex. 17.i.1972, *MBR*; 2 ex. Moshi 25.iii.1972, *KRR*; 1 ex. Sindewadi 5.xii.1969, *RNC*; 2 ex. 11.ii.1971, *RNC*; 1 ex. Ponolon, 24.viii. 1965, *SMK*; 1 ex. Kondapuri, 30.xii.1971, *MBR*; 1 ex. Paud 8.v.1969, *RNC*; 1 ex. 19.vi.1969, *RNC*; 1 ex. Kamathadi, 13.vi.1969, *RNC*; 1 ex. Talegaon, 27.i.1971, *RNC*.



Text-fig. 4—A-C variation in striations on the elytron of *Cybister cognatus*.

Remarks.—There is considerable infra-specific variation in this species in the colouration of ventral surface as well as the striations on the elytra in females. The colouration of the ventral surface is either variegated between yellow and ferruginous or dark ferruginous to black. The specimens with black ventral surface may be easily confused with *C. confusus*, but can be separated only by genitalic characters. The striations on the elytra in female vary between their presence on the anterior on fourth or half or three-fourths (Text-fig. 4. A-C). Among the twenty examples now studied 4 examples have the elytral striations on the anterior one fourth, 8 on the anterior half and 8 on the three fourth.

21. *Cybister (Meganectes) rugulosus* Redtenbacher

Maharashtra : Poona Dist., 2 ex. Koregaon, 29.iv.1971, *RNC*; 1 ex. Koregaon, 20.v.1971, *RNC*; 1 ex. Khed, 19.xi.1971, *KRR*; 1 ex. Saswad, 20.i.1972, *MBR*; 1 ex. Koregaon, 7.iii.1973, *BSL*; Aurangabad Dist., 1 ex. Paithan, 27.xii.1968, *BSL*. Parbhani, Dist., 3 ex. Gangakhed, 21.viii.1971, *KRR*; 1 ex. Godavari, River, N. Bank. Shahgadh, 30.vi.1972, *MBR*.

22. *Cybister (Meganectes) tripunctatus asiaticus* Sharp

Maharashtra : Poona Dist., 2 ex. Moshi, 28.v.1971, *BSL*; 1 ex. 25.iii.1972, *KRR*; 1 ex. Khed 17.i.1969, *RNC*; 1 ex. 13.xi.1969, *BSL*; 2 ex. 22.v.1970, *BSL*; 1 ex. 23.i.1971, *RNC*; 1 ex. 4.iii.1972, *KRR*; 1 ex. Sindewadi 27.xi.1969, *BSL*; 1 ex. Wagholi 5.ii.1968, *DNT*; 3 ex. 29.ii.1968, *RNC*; 1 ex. 21.iii.1968, *RNC*; 1 ex. Kondapuri, 2.xii.1971, *BSL*; 1 ex. Kamathadi 29.v.1969, *RNC*; Ratnagiri Dist., 1 ex. Madkhol, 5.ii.1973, *MBR*; 1 ex. Srungaratbali, 16.ii.1973, *MBR*; 1 ex. Kamblevir, 28.ii.1973; 1 ex. Kasrali village, 16.viii.1971, *KRR*; 2 ex. Kondamala River, 18.ii.1973, *MBR*.

Gujarat : Broach Dist., 1 ex. Ankleshwar, 23.xi.1972, *GMV*

23. *Cybister (Meganectes) posticus* Aube

Maharashtra : Poona Dist., 1 ex. Talegaon, 2.ii. 1968, *BSL*, 1 ex. 27.i.1971, *RNC*; 1 ex. Pirangut, 2.iv.1966, *RNC*; 1 ex. 13.xii.1971, *KRR*; 1 ex. Kondapuri, 8.vii.1971, *BSL*; 1 ex. Kamathadi, 5.xii.1969, *RNC*; 3 ex. Bhorghat 16.x.1965, *BSL*; 1 ex. Nasrapur, 13.iii.1969, *RNC*; 1 ex. Moshi, 11.v.1967, *RNC*; 1 ex. Yerandvana 5.iii.1965, *BSL*. Ratnagiri Dist., 3 ex. Insuli Nalla, 2.iii.1973, *MBR*; 3 ex. Bidjilla Nalla 15. ii.1973, *MBR*; 1 ex. Khare Patten Nalla, 24.ii.1973, *MBR*; 1 ex. Kondhi River, 18.ii.1973, *MBR*; 2 ex. Nekka Nalla, 21.ii.1973, *MBR*; 2 ex. Nirukhe Nalla, 2.iii.1973, *MBR*; 1 ex. Avari Nalla, 26.ii.1973, *MBR*;

1 ex. Kamale vir Nalla, 28.ii.1973; 3 ex. Kondamala River, 18.ii.1973, *MBR*. Satara Dist.; 7 ex. Koyana River 24.ii.1965, *BSL*; 2 ex. Bhima-sankar Dak Bunglow, 1.v.1965, *BSL*; 2 ex. Wahi, (Mahabaleshwar) 24.iii.1965, *BSL*; Nasik Dist., 2 ex. Godavari River at Trimbak, 6.ii.1968, *RNC*. Nanded Dist., 1 ex. Sikarghat, 10.viii.1971, *KRR*. Thana Dist., 2 ex. Dungipura Nalla Palghar, 31.x.1972, *GMY*. Kolaba Dist., 1 ex. Mahad 16.ii.1966, *BSL*.

Karnataka : Belgaum Dist., 1 ex. Sirsi, 14.ii.1972, *BSL*; 1 ex. Devimane Ghat, Katgal 11.ii.1971, *BSL*.

24. *Cybister (Meganectes) confusus* Sharp

Maharashtra : Poona Dist., 2 ex. Kamset, 13.viii.1970, *RNC*; 2 ex. 20.xi.1970, *KRR*; 2 ex. 24.xij.1970, *RNC*; 1 ex. 11.iii.1971, *RNC*; 1 ex. Kamathadi, 1.v.1969, *KRR*; 1 ex. 25.iv.1972, *BSL*; 1 ex. Khed, 3.ii.1970, *BSL*; 1 ex. 1.v.1970, *RNC*; 1 ex. 12.xi.1970, *KRR*; 1 ex. 2 i. 1971, *RNC*; 1 ex. 7.v.1971, *BSL*; 1 ex. 10.ix.1971, *BSL*; 1 ex. 4.iii.1972, *KRR*; 1 ex. Koregaon, 7.iii.1973, *BSL*; 1 ex. 16.ii. 1969, *BSL*; 1 ex. 18. xii.1970, *KRR*; 1 ex. 26.iii.1971, *RNC*; 1 ex. 28.v.1971, *BSL*; 2 ex. 25. iii.1974, *KRR*; 1 ex. Pirangut, 23.i.1969, *BSL*; 1 ex. 22.v.1969, *RNC*; 1 ex. 7.vii.1969, *RNC*; 1 ex. 12.iii.1970, *RNC*; 1 ex. 7.i.1971, *RNC*; 1 ex. Rajbagh, 3.ii.1972, *KRR*; 5 ex. Sindewadi 11.ii.1971, *RNC*; 1 ex. Wagholi, 7.i.1972, *MBR*; Paud, 29.vi.1965, *BSL*. Ratnagiri Dist., 1 ex. Kondamala River, 18.ii.1973, *MBR*; 1 ex. Madkhol 5.ii.1973, *MBR*.

Gujarat : Broach Dist., 1 ex. Ankleswar Narmada River, 20.xi. 1972, *GMY*.

Karnataka : Mysore Dist., 1 ex. Kudgiri Village, 1.ii.1972, *BSL*.

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