

THE COCCINELLIDAE (COLEOPTERA) OF GOA

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(With 2 Text-figures)

I—INTRODUCTION

Very little is known of the fauna of Goa. This is especially true of the family Coccinellidae popularly called the lady-beetles. Dieke (1947) in his account of the genus *Epilachna* (*sens. lat.*) of Asia, Europe and Australia records four species, namely *Epilachna dubiosa* Dieke, *Epilachna pytho* Mulsant, *Afidenta minima* (Gorham) and *Afissa flavicollis* (Thunberg) from Murmugao, Goa. The Zoological Survey of India has been carrying out the faunistic survey of the Union territory of Goa for the last few years and as a result a large number of representative species of the fauna have been collected and are being studied. The present account deals with the lady-beetles collected by the Survey's parties led by Shri K. S. Pradhan, Superintending Zoologist, during 1966 and 1967 in different parts of Goa. It is based on 761 specimens belonging to 17 species grouped under two subfamilies and several tribes as mentioned below. All the species listed constitute first records from Goa and one of these, namely *Illeis bistigmosa* (Mulsant), is the first record from the Indian mainland. My thanks are due to Shri Pradhan for the interesting specimens brought by him.

II—LIST OF SPECIES OF THE COCCINELLIDAE RECORDED FROM GOA

Subfamily I. EPILACHMINAE

1. *Epilachna vigintioctopunctata* (Fabricius)

Subfamily II. COCCINELLINAE

Tribe (i) SCYMNINI

2. *Scymnus* (*Scymnus*) *nubilus* Mulsant
3. *Scymnus* (*Pullus*) *coccivora* Aiyar
4. *Scymnus* (*Pullus*) *quadrillum* Motschulsky

Tribe (ii) ASPIDIMERINI

5. *Cryptogonus quadriguttatus* (Weise)

6. *Pseudaspidimerus circumflexa* (Motschulsky)

## Tribe (iii) JAURAVIINI

7. *Jauravia limbata* Motschulsky

## Tribe (iv) CHILOCHORINI

8. *Chilochorus nigritus* (Fabricius)9. *Chilochorus rubidus* Hope10. *Brumus suturalis* (Fabricius)

## Tribe (v) SYNONYCHINI

11. *Menochilus sexmaculatus* (Fabricius)12. *Micraspis cardoni* (Weise)13. *Verania discolor* (Fabricius)

## Tribe (vi) COCCINELLINI

14. *Coccinella transversalis* Fabricius15. *Harmonia arcuata* (Fabricius)

## Tribe (vii) PSYLLOBORINI

16. *Illeis bistigmata* (Mulsant)17. *Illeis cincta* (Fabricius)

## III—TAXONOMIC ACCOUNT

## Subfamily I. EPILACHNINAE

1. *Epilachna vigintioctopunctata* (Fabricius)

1775. *Coccinella 28-punctata* Fabricius, *Systema entomologiae* : (Type locality—Tranquebar.)  
 1850. *Epilachna vigintioctopunctata* (Fabricius) : Mulsant, *Ann. Soc. Agric. Lyon*, (2) 2 : 834.  
 1947. *Epilachna sparsa* (Herbst) : Dieke, *Smithson. misc. Coll.*, 106 (15) : 32.  
 1966. *Epilachna vigintioctopunctata* (Fabricius) : Kapur, *Proc. Nat. Inst. Sci. India*, 32B (3 & 4) : 152.

*Material*.—5 examples : Goa, Colem, 23.xi.1967.

*Remarks*.—This species is widely distributed in the Oriental and Australian regions. It is variable both in the pronotal and elytral spots but can easily be distinguished by its sharp and distinct sutural angle at the apex of the elytra and by its characteristic male and female genitalia. This is a well-known pest of brinjals and potatoes in various countries.

## Subfamily II. COCCINELINAE

## (i) Tribe SCYMNINI

2. *Scymnus (Scymnus) nubilus* Mulsant

1850. *Scymnus nubilus* Mulsant, *Ann. Soc. Agric. Lyon*, (2) 2 : 972 (Type loc.—Assam).  
 1931. *Scymnus (Scymnus) nubilus* Mulsant : Korschefsky, *Coleopt. Cat., Berl.*, 16 (118) : 143.

*Material.*—5 examples : Goa, Merces, 24. iii. 1966 (1 ex.); Veluz, Valpoi Nagargaon, 13. iv. 1966 (1 ex.); Nuvem, Majorda, 20. iv. 1966 (1 ex.); 3 km. E. of F. R. H., Sanguem, 17. xi. 1967 (1 ex.); Dona Paula, Panjim, 25. xi. 1967 (1 ex.).

*Remarks.*—This species is widely distributed in different parts of India and has also been recorded from Burma. It is a predator of aphids infesting crops and plantations.

3. *Scymnus (Pullus) coccivora* Aiyar

1925. *Scymnus coccivora* Aiyar, *J. Bombay nat. Hist. Soc.*, 30 : 491 (Type loc.—Coimbatore, S. India).  
 1931. *Scymnus coccivora* Aiyar : Korschefsky, *Coleopt. Cat., Berl.*, 16 (118) : 142.

*Material.*—3 examples : Goa, Margao, 1. iv. 1966 (1 ex.); 2 km. E. of Colva, 12. xi. 1967 (2 exs.).

*Remarks.*—Recorded earlier from southern India, the species is an important predator of coccids. The larvae of the species have also been recorded to feed upon the eggs of mealybugs. The species is widely distributed, being found in other parts of the country also. It is variable in colour-pattern and the three examples mentioned above being darkish brown in colour, resemble the typical colouration of the species.

4. *Scymnus (Pullus) quadrillum* Motschulsky

1858. *Scymnus quadrillum* Motschulsky, *Etud. Ent.*, 7 : 120 (Type loc.—“Indes orientales”).  
 1900. *Scymnus (Pullus) quadrillum* Motschulsky : Weise, *Dtsch. ent. Z.*, 28 : 436.  
 1931. *Scymnus (Pullus) quadrillum* Motschulsky : Korschefsky, *Coleopt. Cat., Berl.*, 16 (118) : 144.  
 1942. *Scymnus (Pullus) quadrillum* Motschulsky : Kapur, *Indian J. Ent.*, 4 (1) : 60.  
 1956. *Scymnus (Pullus) quadrillum* Motschulsky : Puttarudriah and Channa Basavanna, *J. Bombay nat. Hist. Soc.*, 54 (1) : 156.

*Material.*—One example : Goa, Kavlem, Ponda, 8. iv. 1966 (1 ex.).

*Remarks.*—This species is widely distributed in India and has been known to predate upon cotton aphid *Aphis gossypii* Glover, and

aphids infesting brinjal in Mysore State (Puttarudriah and Channa Basavanna, 1956). Its life-history has been worked out by Kapur (1942) who also recorded five species of aphids as its hosts in Delhi.

(ii) Tribe ASPIDIMERINI

5. *Cryptogonus quadriguttatus* (Weise)

1895. *Aspidiphorus quadriguttatus* Weise, *Dtsch. ent. Z.*, 1895 : 326 (Type loc.—Sikkim).  
 1900. *Cryptogonus quadriguttatus* (Weise) : Weise, *Dtsch. ent. Z.*, 28 : 428.  
 1948. *Cryptogonus quadriguttatus* (Weise) : Kapur, *Trans. R. ent. Soc. Lond.*, 99 : 97.  
 1963. *Cryptogonus quadriguttatus* (Weise) : Kapur, *Bull. Brit. Mus. (Nat. Hist.) Ent.*, 14 (1) : 23.

*Material.*—One example : Goa, Colva Road, (from rice field), 14.iv.1966.

*Remarks.*—Originally described from Sikkim this species of predacious Coccinellidae of the tribe Aspidimerini is distributed in India from Kumaon Hills in Uttar Pradesh to the Patkai Mountains in Assam. The only example here resembles the typical colouration of the species. The present record of the species from Goa is worthy of note.

6. *Pseudaspidimerus circumflexa* (Motschulsky)

1858. *Platynaspis circumflexa* Motschulsky, *Etud. Ent.*, 7 : 118 (Type loc.—Ceylon).  
 1900. *Aspidimerus circumflexa* (Motschulsky) var. *testacea* Weise, *Dtsch. ent. Z.*, 28 : 423.  
 1948. *Pseudaspidimerus circumflexa* (Motschulsky) var. *testacea* (Weise) : Kapur, *Trans. R. ent. Soc. Lond.*, 99 : 122.  
 1966. *Pseudaspidimerus circumflexa* (Motschulsky) : Kapur, *Proc. Nat. Inst. Sci. India*, 32B (3 & 4) : 166.

*Material.*—2 examples : Goa, 2 km. E. of Colva, 12.xi.1967; nr. Medical College Park, Panjim, (on Chrysanthemum), 27.xi.1967.

*Remarks.*—One of these examples resembles the typical *circumflexa*, with a large semicircular, black spot occupying the middle half of the basal margin of the pronotum and the testaceous elytra with an oblong-oval, sutural spot in the basal one-third of the suture an oblong discal spot in the middle of the length of each elytron. The other example whose dorsal surface is without any black spot, otherwise similar to *circumflexa* (Mots.) in structure, is var. *testacea* Weise. The species is found both in Ceylon and India. The type-locality of the nomino-typical form as well as of the variety, referred to above, is Ceylon. It is recorded from the southern and northern parts of India (Kapur, 1948) as well as from the Andamans (Kapur, 1966).

(iii) Tribe JAURAVIINI

7. *Jauravia limbata* Motschulsky

1858. *Jauravia limbata* Motschulsky, *Etud. Ent.*, 7 : 188 (Type loc.—Ceylon).

1900. *Clanis limbata* (Motschulsky) : Weise, *Dtsch. ent. Z.*, 28 : 432.  
 1908. *Sticholotis limbata* (Motschulsky) : Weise, *Stettin ent. Ztg.*, 69 : 227.  
 1946. *Jauravia limbata* Motschulsky : Kapur, *Ann. Mag. nat. Hist.*, (11) 13 : 82.

*Material*.—One example : Goa, 2 km. E. of Colva, 12. xi. 1967.

*Remarks*.—Originally described from Ceylon, this species was further recorded from Malabar, S. India by Kapur (1946). The example mentioned above agrees with the type specimen in its oval and convex shape, black eyes, pale testaceous pronotum, fuscous scutellum and a discoidal black area on the elytra. Its occurrence in Goa is of interest as it shows an extension in the range of its geographical distribution.

#### (iv) Tribe CHILOCHORINI

##### 8. *Chilocorus nigritus* (Fabricius)

1798. *Coccinella nigrita* Fabricius, *Suppl. Ent. Syst.*, : 79 (Type loc.—East Indies).  
 1850. *Chilocorus nigritus* (Fabricius) : Mulsant, *Ann. Soc. Agric. Lyon*, (2) 2 : 463.  
 1966. *Chilocorus nigritus* (Fabricius) : Kapur, *Proc. Nat. Inst. Sci. India*, 32B (3 & 4) : 171.

*Material*.—One example : Goa, Margao (on banyan tree), 25.iii. 1966.

*Remarks*.—Distributed widely in India and neighbouring countries the species plays an important role in checking the populations of certain armoured scale insects which occur as serious pests of plants. It has also been shipped out of India for trial in the biological control of coccids of coconut palms in the islands of Seychelles at the end of 1938 (Vasey-Fitzgerald, 1953).

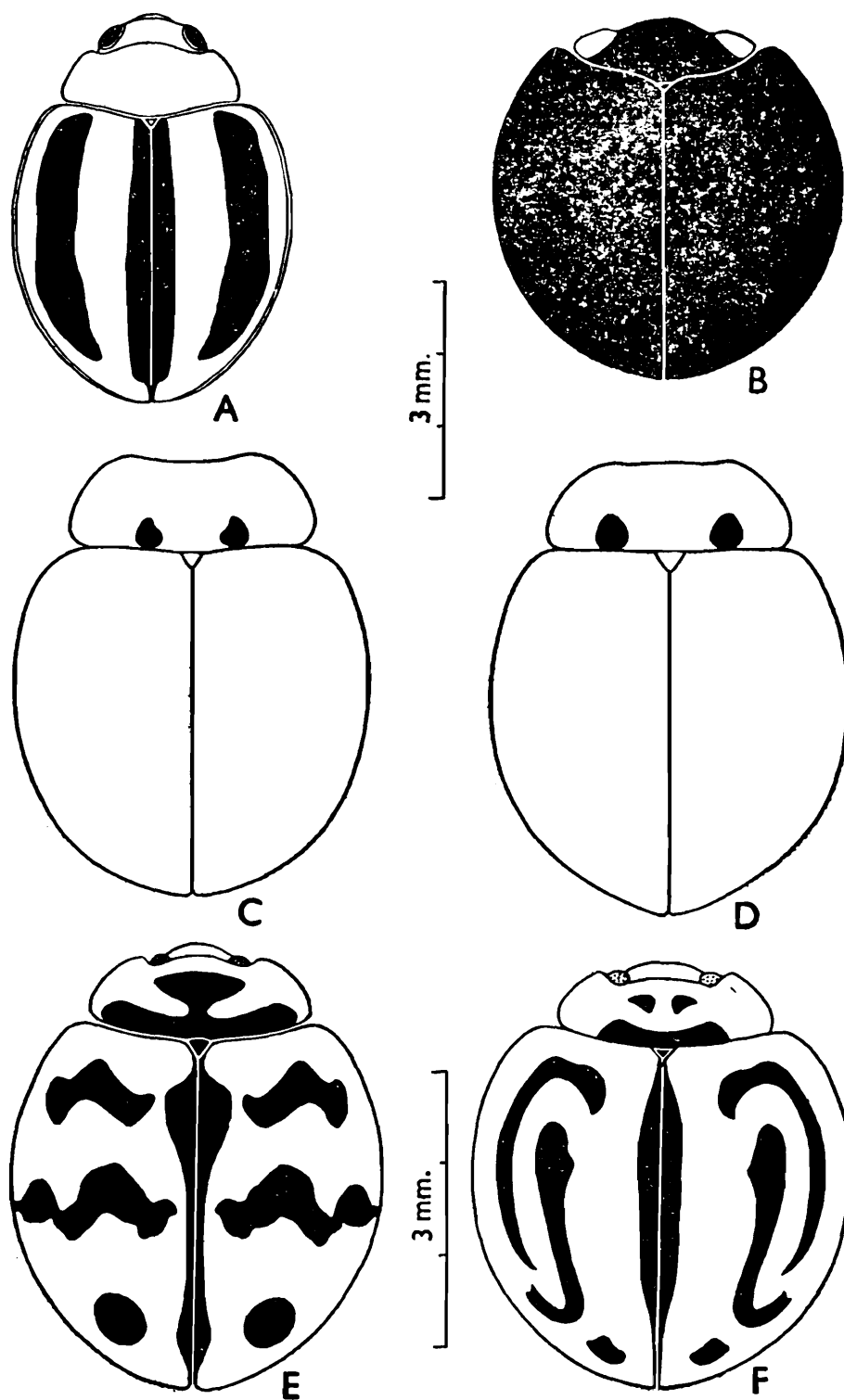
##### 9. *Chilocorus rubidus* Hope

(Text-fig. 2 B)

1831. *Chilocorus rubidus* Hope, *In Gray, Zool. misc.* : 31 (Type loc.—Nepal).  
 1850. *Chilocorus rubidus* Hope : Mulsant, *Ann. Soc. Agric. Lyon*, (2) 2 : 453.  
 1956. *Chilocorus rubidus* Hope : Kapur, *Rec. Indian Mus.*, 52 (2-4) : 262.

*Material*.—One example : Goa, Margao, 2.iv.1966.

*Remarks*.—The species is widely distributed in the Palaearctic and Oriental Regions. Like most other members of the genus *Chilocorus*, the species is also an important predator of scale insects. The species has been recorded earlier from Kashmir, Kumaon Hills (U. P.), Chitral (Pakistan) and Malaysia by the author. This constitutes first record of the species from the peninsular India.



TEXT-FIG. 1. Outline of beetles showing colour pattern—  
 A. *Brumus suturalis* (Fabricius). B. *Chilocarus nigrinus* (Fabricius), C. *Illeis bistigmata* (Mulsant), D. *Illeis cinota* (Fabricius), E. *Menochilus sexmaculatus* (Fabricius), F. *Micraspis cardoni* (Weise) (3 mm. scale for Figs. A-F.)

10. *Brumus suturalis* (Fabricius)

(Text-fig. 1 A)

1798. *Coccinella suturalis* Fabricius, *Suppl. Ent. Syst.* : 78 (Type loc.—India).  
 1850. *Brumus suturalis* (Fabricius) : Mulsant, *Ann. Soc. Agric. Lyon*, (2) 2 : 494.  
 1942. *Brumus suturalis* (Fabricius) : Kapur, *Indian J. Ent.*, 4 (1) : 8 (Bionomics).

*Material.*—54 examples : Goa, Margao (Fatorda), 23.iii.1966 (3 exs.); Old Goa, 27.iii.1966 (1 ex.); Calangute, 29.iii.1966 (1 ex.); Margao, 2.iv.1966 (5 ex.) 7.iv.1966 (1 ex.); Vasco, 9.iv.1966 (1 ex.); 11.xi.1967 (2 exs.); Bichotim, 10.iv.1966 (1 ex.); Colva Road, 14.iv.1966 (10 exs.); Vasco Road Margao, 15.iv.1966 (11 exs.); Durbate Ponda, 17.iv.1966 (2 exs.); Majorda, 20.iv.1966 (5 exs.); Sanguem, 16.xi.1967 (2 exs.); 3 km. E. of F. R. H. Sanguem, 17.xi.1967 (1 ex.); Molem, 21.xi.1967 (2 exs.); Pernem, 22.xi.1967 (1 ex.); Panjim, 27.xi.1967 (6 exs.).

*Remarks.*—This species is widely distributed throughout the Oriental Region. It feeds upon a variety of hosts, e.g., mites psyllids, coccids and aphids and thus helps controlling them. The record of this species in large numbers in Goa is, therefore, of interest. Kapur (1942) has described its life history, seasonal occurrence and hosts in detail and recorded altogether three species of aphids, six species of coccids and one species of mite as its host.

## (v) Tribe SYNONYCHINI

11. *Menochilus sexmaculatus* (Fabricius)

(Text-fig. 1 E)

1781. *Coccinella sexmaculata* Fabricius, *Spec. Ins.* : 96 (Type loc.—East Indies).  
 1943. *Menochilus sexmaculatus* (Fabricius) : Timberlake, *Bull. Hawaiian Sug. Plrs. Ass. Exp. Stn. (Ent. ser.)*, No. 22, 47 : 40.  
 1958. *Menochilus sexmaculata* (Fabricius) : Kapur, *Rec. Indian Mus.*, 53 : 333.

*Material.*—127 examples : Goa, Margao, 22.iii.1966 (3 exs.), 1. iv.1966 (10 exs.), 2. iv.1966 (18 exs.); Margao (Fatorda), 23.iii.1966 (8 exs.); Marces, 24.iii.1966 (1 ex.); Mapuca (Mahpsa), 29.iii.1966 (8 exs. & 2 pupae); Collem, 3.iv.1966 (1 ex.); Sanguem, 5.iv.1966 (1 ex.); 16.xi.1967 (10 exs.); 17.xi.1967 (17 exs.); Canacona, 6.iv.1966 (8 exs.); Vasco, 9.iv.1966 (9 exs.); Bicholim, 10.iv.1966 (9 exs.); Colva Road, 14.iv.1966 (4 exs.); Vasco Road, Margao, 15.iv.1966 (11 exs.); Majorda, 20.iv.1966 (4 exs.); Cortalim, 15.xi.1967 (3 exs.); Pernem, 22.xi.1967 (1 ex.); Altinho, Panjim, 26.xi.1967 (1 ex.); Nr. Med. College Park, Panjim, 27.xi.1967 (2 exs.).

*Remarks.*—Distributed widely in India and in the neighbouring Indo-Malayan subregion, this species has been reported to feed upon

aphids. The size and colour-pattern of the species are variable and the specimens from Goa are lighter in their general ground colour when compared to the examples from peninsular India.

## 12. *Micraspis cardoni* (Weise)

(Text-fig. 1 F)

1892. *Verania cardoni* Weise, *Ann. Soc. ent. Belg.*, 36 : 19 (Type loc.—Chota Nagpur).  
 1894. *Coelophora cardoni* (Weise) : Gorham, *Ann. Soc. ent. Belg.*, 38 : 202.  
 1932. *Coelophora cardoni* (Weise) : Korschefsky, *Coleopt. Cat., Berl.*, 16 (120) : 588.  
 1943. *Micraspis cardoni* (Weise) : Timberlake, *Bull. Hawaiian Sug. Plrs'. Ass. Exp. Stn. (Ent. ser.)*, No. 22, 47 : 28.

*Material*.—One example : Goa, Bicholim, (on cashew tree), 10.iv.1966.

*Remarks*.—This species was originally described under the genus *Verania* and subsequently transferred to *Coelophora* by Gorham (1894). Timberlake (1943) placed this species in *Micraspis* Chevrolat on account of its more orbicular form and broad epipleura. The species preys upon aphids and coccids which infest plantations. Besides Chota Nagpur, (Bihar), the species is recorded from Belgaum, Kanara (Mysore State) and Ceylon (Gorham, 1894).

## 13. *Verania discolor* (Fabricius)

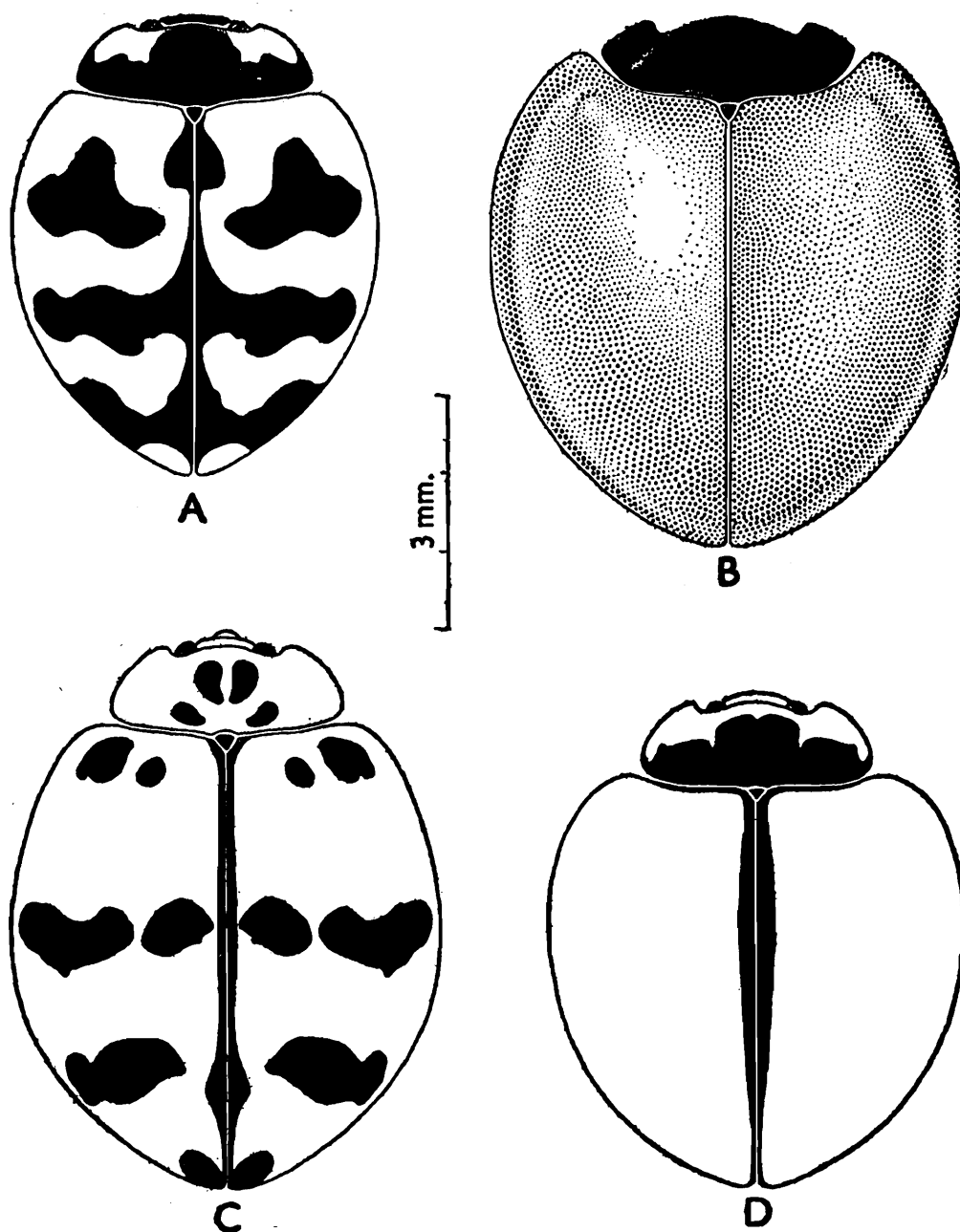
(Text-fig. 2 D)

1798. *Coccinella discolor* Fabricius, *Suppl. Ent. Syst.* : 77 (Type loc.—India).  
 1850. *Verania discolor* (Fabricius) : Mulsant, *Ann. Soc. Agric. Lyon*, (2) 2 : 369.  
 1966. *Verania discolor* (Fabricius) : Kapur, *Proc. Nat. Inst. Sci. India*, 32B (3 & 4) : 178.

*Material*.—475 examples; Goa, Margao, 22.iii.1966 (2 exs.); 25.iii.1966 (1 ex.); 1.iv.1966 (65 exs.), 2.iv.1966 (39 exs.), 6.iv.1966 (23 exs.), 7.iv.1966 (7 exs.); Margao (Fatorda), 23.iii.1966 (1 ex.); Mangeshi, Panjim, 27.iii.1966 (52 exs.); 27.xi.1967 (60 exs.), Mapuca, 29.iii.1966 (6 exs.); Canacona, 6.iv.1966 (1 ex.); Bicholim, 10. iv. 1966 (44 exs.); Valpoi, Nagargaon, 13.iv.1966 (2 exs.); Colva Road, 14.iv. 1966 (7 exs.); Vasco Road, Margao, 15.iv.1966 (64 exs.); Majorda, 20.iv.1966 (10 exs.) ; 3 Km. N. W. of Ponda, 14.xi.1967 (50 exs.); Sanguem, 16.xi.1967 (11 exs.); 19.xi.1967 (5 exs.); 2 Km. N.E. of F. R. H., Molem, 21.xi.1967 (1 ex.); Pernem, 22.xi.1967 (17 exs.); Colem, 23.xi.1967 (2 exs.).

*Remarks*.—This species occurs throughout India and is widely distributed in the Oriental region and to some extent in the adjacent parts of the Palaearctic region. It feeds upon the aphids infesting crops. The colour-pattern on the pronotum is variable and several varieties are recognized in the above-mentioned material.





TEXT-FIG. 2. Outline of beetles showing colour pattern—  
 A. *Coccinella transversalis* (Fabricius). B. *Chilocorus rubidus* Hope. C. *Harmonia arcuata* (Fabricius). D. *Verania discolor* (Fabricius) (3 mm. scale for Figs. A-D).

(vi) Tribe COCCINELLINI

14. *Coccinella transversalis* Fabricius

(Text-fig. 2 A)

1781. *Coccinella transversalis* Fabricius, *Spec. Ins.* : 97 (Type loc.-Coromandel).  
 1943. *Coccinella ransversalis* Fabricius : Timberlake, *Bull. Hawaiian Sug. Plrs.' Ass. Exp. Stn. (Ent. ser.)*, No. 22 : 14.  
 1962. *Coccinella transversalis* Fabricius : Kapur, *Proc. 1st All-India Congr. Zool.* : 479.  
 1966. *Coccinella transversalis* Fabricius : Kapur, *Proc. Nat. Inst. Sci. India*, 32B (3 & 4) : 178. fig. 9E.

*Material.*—72 examples ; Goa, Margao, 6.iv.1966 (2 exs.); Colva Road, 14.iv.1966 (2 exs.); Vasco, 11.xi.1967 (3 exs.); Margao Camp, 12.xi.1967 (1 ex.); Sanguem, 16.xi.1967 (11 exs.); 17.xi.1967 (7 exs.); 19.xi.1967 (33 exs.); Molem, 20.xi.1967 (1 ex.); Pernem, 22.xi.1967 (1 ex.); Colem, 23.xi.1967 (7 exs.); Altinho, Panjim, 27.xi.1967 (1 ex.) Arvalem waterfalls, 28.xi.1967 (1 ex.).

*Remarks.*—Described originally from Coromandel, S. India, the species extends to the Palaearctic Region as far north as Japan and in the South to the Australian continent. The colour-pattern of this species is variable. In the material under study the pattern is more like the examples described from the type locality.

### 15. *Harmonia arcuata* (Fabricius)

(Text-fig. 2 C)

1787. *Coccinella arcuata* Fabricius, *Mantissa Insectorum*, 1 : 55 (Type loc.—“China Dom.”).  
 1850. *Harmonia arcuata* (Fabricius) : Mulsant, *Ann. Soc. Agric. Lyon*, (2) 2 : 77.  
 1966. *Harmonia arcuata* (Fabricius) : Kapur, *Proc. Nat. Inst. Sci. India*, 32B (3 & 4) : 179.

*Material.*—One example : Goa, Molem (F.R.H. compound), 23.xi.1967.

*Remarks.*—The species occurs in peninsular and north-east India and has also been recorded from several other parts of the Oriental Region as well as from Australia. It is also variable in colouration especially in the elytral pattern. The one example referred to above bears typical pattern of the species.

#### (vii) Tribe PPYLLOBORINI

### 16. *Illeis bistigmata* (Mulsant)

(Text-fig. 1 C)

1850. *Psyllobora bistigmata* Mulsant, *Ann. Soc. Agric. Lyon*, (2) 2 : 168 (Type loc.—Penang.)  
 1874. *Thea bistigmata* (Mulsant) : Crotch, *Revision of Coccinellidae* : 135.  
 1932. *Illeis bistigmata* (Mulsant) : Korschefsky, *Coleopt. Cat., Berl.*, 16 (120) : 440.  
 1943. *Illeis bistigmata* (Mulsant) : Timberlake, *Bull. Hawaiian Sug. Plrs'. Ass. Exp. Stn. (Ent. ser.)*, No. 22 : 60. (Sumatra).  
 1961. *Illeis bistigmata* (Mulsant) : Bielawski, *Ann. Zool., Warsz.*, 19 (8) : 366.  
 1966. *Illeis bistigmata* (Mulsant) : Kapur, *Proc. Nat. Inst. Sci. India*, 32B (3 & 4) : 179.

*Material.*—4 examples : Goa, Margao, (on Chilli plant), 22.iii.1966 (1 ex.); Canacona, (on mulberry tree), 6.iv.1966 (3 exs.).

*Remarks.*—These examples from Goa differ from the typical example described from penang by the absolutely reduced otherwise

absence of pronotal spots. The beetles are smaller in size than the examples recorded from Andamans by Kapur (1966). The Goa examples can be distinguished from other species of the genus by the characteristic male and genitalia, described earlier by Bielawski (1961) and Kapur (1966) by their more convex and rounded shape of the body. This constitutes the first record of the species from the Indian mainland. Members of the tribe Psylloborini are fungivorous in their habits.

### 17. *Illeis cincta* (Fabricius)

(Text-fig. 1 D)

1798. *Coccinella cincta* Fabricius, *Suppl. Ent. Syst.* : 77 (Type loc.- India orientalis).  
 1874. *Thea cincta* (Fabricius) : Crotch, *Revision of Coccinellidae* : 135.  
 1932. *Illeis cincta* (Fabricius) : Korschefsky, *Coleopt. Cat., Berl.*, 16 (120) : 558.  
 1943. *Illeis cincta* (Fabricius) : Timberlake, *Bull. Hawaiian Sug. Plrs'. Ass. Exp. Stn. (Ent. Ser.)*, No. 22 : 60 (Key to species ; from Ceylon).  
 1961. *Illeis cincta* (Fabricius) : Bielawski, *Ann. Zool., Warsz.*, 19 (8) : 356.

*Material.*—7 examples : Goa, Margao, (on Chilli plant), 22.iii.1966 (3 exs.); Panjim, Altinho, (at light), 28.iii.1966 (1 ex.); (on brinjal plant), 2.iv.1966 (1 ex.); Canacona, (on mulberry tree), 6.iv.1966 (1 ex.); Valpoi, Nagargaon, (from forest nursery), 13.iv.1966.

*Remarks.*—The species has been recorded mainly from the southern India. It is larger in size and more elongate in outline than *I. bistigmosa*. The characteristic male genitalia distinguish it from other members of the genus commonly found in India. It is possible this species feeds on the mildew on the plants mentioned above.

#### IV—SUMMARY

Very little is known of the Coccinellidae of Goa. The present paper is based on the material of the family collected during March-April, 1966 and November-December, 1967 by Mr. K. S. Pradhan. It consists of a total of 761 specimens belonging to 17 species all of which constitute new records for Goa. Almost all the species are well distributed in the mainland of India except one, *Illeis bistigmosa* (Mulsant), which was originally described from Penang and was later reported from Sumatra and the Great Nicobar Island. The species reported from Goa in this paper belong to two subfamilies, seven tribes and thirteen genera.

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