

A NOTE ON LADY-BIRD BEETLES (COLEOPTERA : COCCINELLIDAE)
FROM RAJASTHAN, WITH FIRST RECORD OF *BULAEA LICHATSCHOVI*
(HUMMEL) FROM INDIA

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(With 1 Text-figure)

During the course of a general faunistic survey of Rajasthan by the Zoological Survey of India, in 1958, the following four species of lady-bird beetles (Coleoptera : Coccinellidae) were collected by the Survey parties.

1. *Epilachna chrysomelina*, subsp. *orientalis* Zimm.
2. *Menochilus sexmaculatus* (Fabr.)
3. *Bulaea lichatschovi* (Hummel)
4. *Coccinella septempunctata* Linn.

B. lichatschovi is undoubtedly a new addition to the list of Indian Coccinellidae, as will be seen from the remarks made under this species. Except for *M. sexmaculatus*, which is an Oriental species, all the other species are of palaeartic origin. Details of the material belonging to each species together with brief notes on their geographical distribution and colour variation are given below.

Subfamily 1. *EPILACHNINAE*

1. *Epilachna chrysomelina orientalis* Zimm.

1936. *Epilachna chrysomelina* subsp. *orientalis* Zimmermann, *Z. induct. Abstamm. u. Vererblehre*, **71**, pp. 527-537.

1950. *Epilachna chrysomelina* subsp. *orientalis* Zimm., Kapur, *Bull. ent. Res.*, **41** (1), pp. 175-179, (larva).

Material.—102 examples as follows: Rajasthan, Mohangarh, 15.I.1958 (1 example); Jedbaisar—Jaisalmer, 21.I.1958 (3 examples); Panchpodra Salt Depot, 14.II.1958 (2 examples) (all *K. K. Tiwari* Coll.); Gudha, Nagaur district, 10.VII.1958 (7 examples) (*A. K. Mukherjee* Coll.); 1.II.1958 (6 examples); 8.II.1958 (1 example); 7.IV.1958 (1 example); 8.V.1958 (2 examples); 20.V.1958 (3 examples); 26.V.1958 (5 examples); 27.V.1958 (9 examples); 30.V.1958 (6 examples); 26.VI.1958 (25 examples); Dudu, 11.IV.1958 (1 example); Sambhar Naraina road, 21.V.1958 (6 examples); Lihorana, 23.V.1958 (4 examples); Kuni, 24.VIII.1958, "on leaves of water melon" (20 examples) (all *T. G. Vazirani* Coll.).

Remarks.—Found on cucurbits, this species feeds mainly on the leaves. It occurs as a serious pest of cucurbits in the Middle East and occasionally also in northern India (note the occurrence on water melon above). We have not come across this species from eastern and southern parts of India.

Subfamily 2. COCCINELLINAE

Tribe 1. SYNONYCHINI

2. *Menochilus sexmaculatus* (Fabr.)

1781. *Coccinella 6-maculata* Fabr., *Spec. Ins.*, p. 96.
 1850. *Cheilomenes sexmaculata* (F.), Mulsant, *Ann. Soc. Agric. Lyon* (2) 2, p. 444.
 1943. *Menochilus sexmaculatus* (F.), Timberlake, *Bull. Hawaii. Sug. Ass. ent. ser.* 22, 47 (1), p. 40.
 1958. *Menochilus sexmaculata* (F.), Kapur, *Rec. Indian Mus.*, 53, p. 333.

Material.—18 examples as follows: Rajasthan, Gudha, Nagaur district, 8.II.1958 (7 examples); 5.III.1958 (6 examples); 7.IV. 1958 (1 example); Kuchaman road, 16.II.1958 (4 examples) (all *T. G. Vazirani* Coll.).

Remarks.—All the 18 specimens show the usual three black markings on each elytron which are light yellow to pink in ground-colour. None of the black elytral markings show any tendency towards confluence, a feature which is more evident in the populations from several other (on the whole more humid) parts of India. The size of the examples represented in the collection varies relatively considerably, the smallest specimen being 3.3 mm. long and 2.9 mm. wide, and the largest being 5.0 mm. long and 3.9 mm. wide.

This oriental species is widely distributed in South-East Asia and has been recorded from as far as Taiwan. It also occurs in the neighbouring countries of India, namely, Nepal in the north, Ceylon in the south, as well as in East and West Pakistan.

Tribe 2. COCCINELLINI

3. *Bulaea lichatschovi* (Hummel)

(Text-fig. 1)

1827. *Coccinella lichatschovi* Hummel, *Essais Entom.*, 1 (6), p. 43.
 1874. *Bulaea lichatschovi* (Hummel), Crotch, *Revis. Coccinellidae*, p. 105.
 1951. *Bulaea lichatschovi* (Hummel), Kapur, *Brit. Mus. Exped. South Arabia*, Pt. 18, p. 296.

Material.—3 examples: Rajasthan, Japog (District Jaipur), 25.IV.1958 (*T. G. Vazirani* Coll.).

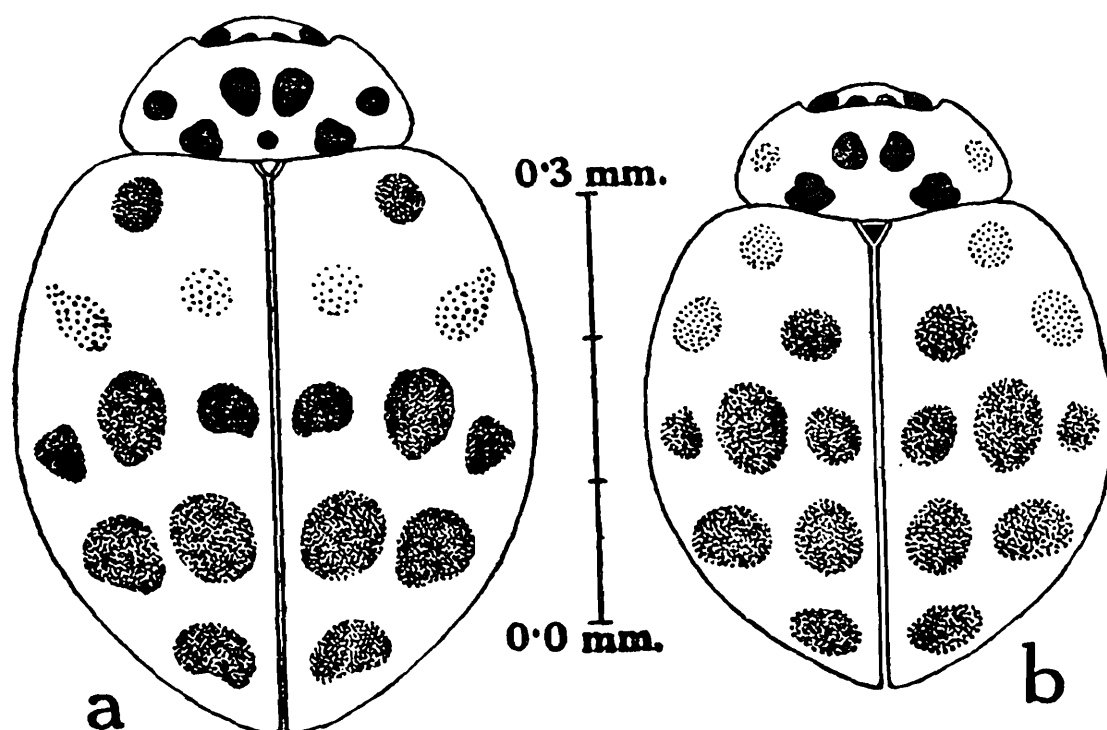
Remarks.—Crotch (*loc. cit.*) gave its distribution as "Sandy and desert places from Senegal through Egypt and Arabia to Central Asia and Persia." Heyden (1894)¹ subsequently recorded it from Afghanistan, and Korschefsky (1932)² from Hungary, Turkey, etc. It was hitherto, not recorded from India and its occurrence in Rajasthan is, therefore, of interest.

The species shows considerable variation of spots. This has been illustrated by Kapur (*loc. cit.*) in the Arabian material studied by him. While seven examples examined by him from South Arabia had full

1. Heyden, L. von, *Dtsch. ent. Z.*, 1894, p. 83, (1894).

2. Korschefsky, *R. Coleopt. Cat. Berl.*, 16, (120), p. 377 (1932).

number of spots (large and sometime confluent), 11 examples from South-West Arabia ('Asir) were without the elytral spots; on the other hand in the six examples from Yemen and Aden the elytral spots were much reduced in size though not altogether absent. In the above-mentioned three examples from Rajasthan, the size and number of the spot is not reduced but the elytral spots are lighter in colour, being dark-brown and not quite as black as the markings and spots on the head and pronotum (Text-fig. 1 *a, b*). It is, however, difficult to state whether Rajasthan would be an area of light pigmentation for this species. Perhaps more material from Rajasthan would be required in order to determine whether or not the light pigment of the elytral spot, as noted in the examples mentioned above, would be a character of any significance at all.



TEXT-FIG. 1.—Outlines of *Bulaea lichatschovi* (Hummel) from Rajasthan, showing the relatively diffused and light elytral markings.

4. *Coccinella septempunctata* Linn.

1758. *Coccinella septempunctata* Linnaeus, *Systema Naturae* (ed. x), p. 365.

Material.—45 examples: Rajasthan, Gudha, Nagaur district, 25.IV.1958 (*T. G. Vazirani* Coll.).

Remarks.—This is a well-known species which, though of Palaearctic origin, is widely distributed in India. A detailed account of the geographical variation in the elytral markings of this species in India, by Kapur¹ has already been sent for publication. Suffice it to say here that out of 45 examples of the species, 33 examples showed reduction in the size of the spots, 10 examples had normal size spots (*i.e.*, easily comparable in size to the ones in populations from Europe, the type-locality of the species) and only two examples showed enlarged and partially confluent elytral spots.

1. Kapur, A. P. *Proc. 1st All-India Congr. Zool.*, (1959) Pt. 2, pp. 479-492 (1962).

SUMMARY

During a general faunistic survey of Rajasthan carried out during 1958 by the Zoological Survey of India, the following four species of lady-bird beetles were collected : (1) *Epilachna chrysomelina*, subsp. *orientalis* Zimm., (2) *Menochilus sexmaculatus* (Fabr.), (3) *Bulaea lichatschovi* (Hummel) and (4) *Coccinella septempunctata* Linn. Of these only *M. sexmaculata* is oriental, while the rest are of palaeartic origin. *B. lichatschovi* is recorded for the first time from India. *E. chrysomelina orientalis* is a phytophagous species which occurs generally as a pest of Cucurbits in several parts of northern India and of the Middle East while the other three are well known carnivorous species.