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COCCINELLIDAE COLLECTED BY THE HOKKAIDO UNIVERSITY
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(COLEOPTERA)

By MUTSUO MIYATAKE

Scientific Results of Hokkaidō University Expeditions to the
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M. MIYATAKE: Studies on the family Coccinellidae (Coleoptera)
of Japan and her adjacent territories, XXV

Abstract

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Forty-six species of the Coccinellidae of Nepal belonging to 27 genera are enumerated. Of these, nine species are described as new: *Sticholotis nepalensis*, *S. kumatai*, *Pseudoscymnus nepalicus*, *Scymnus (Pullus) godavariensis*, *Chilocorus matsumurai*, *Calvia connexa*, *Henosepilachna kathmanduensis*, *Epilachna gorkhana*, and *E. hopeiana*; eight species are recorded for the first time from Nepal: *Platynaspidius saundersii* (Crotch) comb. nov., *Exochomus uropygialis* Mulsant, *Chilocorus bijugus* Mulsant, *Propylea dissecta* (Mulsant), *Gyrocaria mimica* (Weise) comb. nov., *Synonycha grandis* (Thunberg), *Henosepilachna pusillanima* (Mulsant), and *Epilachna nielamuensis* Pang et Mao. Five species of Scymnini and one species of Epilachnini remain undetermined.

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Contents

Introduction	3
Enumeration	
1. <i>Jauravia quadrinotata</i> Kapur	3
2. <i>Sticholotis nepalensis</i> sp. nov.	4
3. <i>Sticholotis kumatai</i> sp. nov.	6
4. <i>Pseudoscymnus nepalicus</i> sp. nov.	7
5. <i>Pseudoscymnus</i> sp.	8
6. <i>Pseudoscymnus</i> sp.	9
7. <i>Pseudoscymnus</i> sp.	9
8. <i>Scymnus (Scymnus) nubilis</i> Mulsant	9
9. <i>Scymnus (Pullus) godavariensis</i> sp. nov.	10
10. <i>Scymnus (Pullus)</i> sp.	11
11. <i>Scymnus (Pullus)</i> sp.	11
12. <i>Cryptogonus nepalensis</i> Bielawski	11
13. <i>Platynaspidius saundersii</i> (Crotch) comb. nov.	11
14. <i>Exochomus (Exochomus) uropygialis</i> Mulsant	11
15. <i>Chilocorus bijugus</i> Mulsant	12
16. <i>Chilocorus matsumurai</i> sp. nov.	13
17. <i>Adonia variegata</i> (Goeze)	13
18. <i>Adalia tetraspilota</i> (Hope)	14
19. <i>Lioadalia luteopicta</i> (Mulsant)	14
20. <i>Coccinella septempunctata</i> Linné	14
21. <i>Protocaria billieti</i> (Mulsant) comb. nov.	15
22. <i>Propylea dissecta</i> (Mulsant)	15
23. <i>Gyrocaria sauzeti</i> (Mulsant)	15
24. <i>Gyrocaria mimica</i> (Weise) comb. nov.	16
25. <i>Pania luteopustulata</i> (Mulsant)	17
26. <i>Menochilus sexmaculatus</i> (Fabricius)	17
27. <i>Calvia connexa</i> sp. nov.	17
28. <i>Alloneda dodecaspilota</i> (Hope)	19
29. <i>Spilocaria bissellata</i> (Mulsant)	20
30. <i>Phrynocaria eberti</i> (Bielawski) comb. nov.	21
31. <i>Harmonia dimidiata</i> (Fabricius)	21
32. <i>Harmonia sedecimnotata</i> (Fabricius)	21
33. <i>Synonycha grandis</i> (Thunberg)	22
34. <i>Henosepilachna vigintioctopunctata</i> (Fabricius)	22
35. <i>Henosepilachna pusillanima</i> (Mulsant)	22
36. <i>Henosepilachna kathmanduensis</i> sp. nov.	23
37. <i>Henosepilachna</i> sp.	24
38. <i>Afidenta misera</i> (Weise)	25
39. <i>Afissula rana</i> Kapur	25
40. <i>Afissula mysticoides</i> (Sicard)	25
41. <i>Epilachna dumerli</i> Mulsant	25
42. <i>Epilachna hingstoni</i> (Kapur)	25
43. <i>Epilachna gorkhana</i> sp. nov.	26
44. <i>Epilachna grayi</i> Mulsant	27
45. <i>Epilachna hopeiana</i> sp. nov.	28
46. <i>Epilachna nielamuensis</i> Pang et Mao	30
Acknowledgements	32
References	32

INTRODUCTION

A total of 242 specimens of the Coccinellidae brought from Central Nepal by the Hokkaidô University Scientific Expedition to Nepal Himalaya, 1968, was handed to me for identification. These specimens were collected during the period from April to July by Drs. T. Kumata and T. Matsumura mainly at Kathmandu and on three trekking routes: Pokhara-Tukucha route (750-2780 m. above sea-level), Kathmandu-Gosainkund route (620-4300 m.) and Kathmandu-Namche Bazar route (880-3800 m.). This collection comprises 46 species belonging to 27 genera, which are enumerated in the following pages.

The first account of Nepalese Coccinellidae was published by Hope in 1831, who enumerated 19 new species. Five other species were then described by Mulsant (1850), Crotch (1874), and Dohrn (1882). The greater part of our present knowledge of the coccinellid-fauna of Nepal was made by Kapur (1958), who recorded 26 species including five new species and gave a list of 41 species known from Nepal. After that, three and one species were added by Miyatake (1967) and Bielawski and Chûjô (1968) respectively. Bielawski (1971 and 1972) published two papers on the Nepalese Coccinellidae, in which five new species were described and 17 species were newly added.

Of the 46 species under this report, nine species are new to science, eight are recorded for the first time from Nepal, 23 are already known from Nepal, and six remain undetermined. Thus, known species of Nepalese Coccinellidae are over 80 in total. All the specimens dealt with in this paper are deposited in the Entomological Institute, Hokkaidô University.

ENUMERATION

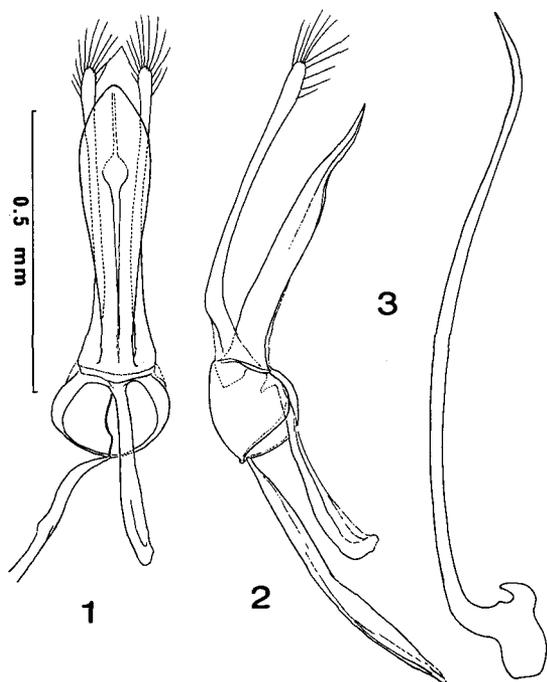
1. *Jauravia quadrinotata* Kapur (Figs. 1-3)

Jauravia quadrinotata Kapur, 1946: 78, 85 [Assam: Patkai Mts.]; Bielawski, 1972: 297 [Nepal: Bhimpedi Tal]; Bielawski, 1979: 110 [Bhutan].

Specimens examined: 1 ♂, Balaju, Kathmandu, 1400 m, 13. iv. 1968 (T. Kumata); 3 ♂, 2 ♀, Kathmandu, 1340 m, 14. iv. 1968, on scale insects on *Citrus* sp. (T. Kumata); 1 ♂. ditto, 15. iv, 1968 (T. Kumata); 1 ♀, Godavari, Nepal Valley, 1450 m, 20. iv. 1968 (T. Kumata).

Distribution: Nepal, Bhutan, India (Assam).

Remarks: The above-mentioned specimens are considerably larger in size (2.7-3.1 mm in length and 2.4-2.65 mm in width) than the type-series (2.5 mm long and 2.16 mm wide in the original description). In all of the males and one of the females the elytral punctures are coarse, deep and relatively close, and their interstices are smooth and shining as stated in the original description, while in the other two females the punctures are fine, somewhat obsolete but not sparse, and their interstices are minutely reticulate and matted. The tarsal claw is large and furnished with a sharply angulate tooth at base and a slender apical half. The male genitalia are shown in Figs. 1-3.



Figs. 1-3. *Jauravia quadrinotata*
Kapur, male genitalia: 1. tegmen,
ventral view; 2, ditto, lateral
view; 3, siphus.

2. *Sticholotis nepalensis* sp. nov. (Fig. 4)

Body nearly hemispherical, about 1.15 times as long as wide and widest a little behind middle, about one-half as high as long. Reddish testaceous; head somewhat darkened, mandibles piceous at tips, clubs of antennae more or less blackish brown; pronotum with a large, nearly semicircular, discal spot nearer to apical margin than to posterior margin and distinctly wider than interocular distance; elytra with ten spots, of which two are on the suture, the anterior spot is situated at about one-third from base, oblong-oval, and slightly longer than wide, and the posterior one is situated at about two-thirds, circular, and slightly wider than long; humeral spot on the callus, its centre being situated inside the callus, about as large as posterior sutural spot, touching the base of elytron; discal spot situated in line with the humeral spot, subrounded, distinctly nearer to lateral margin than to suture, about as long as wide; anterior lateral spot elongate and narrow, situated at level with the anterior sutural spot; posterior lateral spot oval in outline, much smaller than discal spot. Underside reddish brown except for intercoxal area of prosternum, the greater part of mesothorax, metathorax and the middle parts of abdominal sternites 1-4, which are all piceous to blackish piceous. Legs reddish testaceous, middle and hind coxae blackish, last tarsal segments in all legs more or less darkened.

Head rather small, about three-fifths as wide as pronotum, rather sparsely, coarsely and uniformly punctured and very finely pubescent; the punctures separated by two diameters, their interstices obscurely reticulate; frons about three times as wide as an eye; anterior margin of clypeus finely beaded, narrowly explanate-reflexed, slightly emarginate; labrum semicircular; eyes small, coarsely faceted.

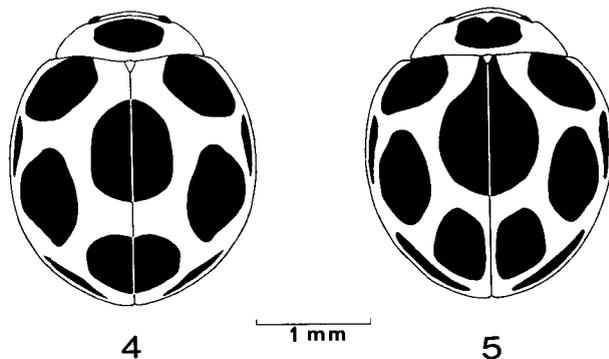


Fig. 4. *Sticholotis nepalensis* sp. nov., ♀.

Fig. 5. *Sticholotis kumatai* sp. nov., ♀.

Antennae slender, 11-segmented, with club composed of three segments: basal two segments relatively thick, 1st elongate, 2nd about one-half as long as 1st; 3rd to 6th very slender and subcylindrical, 3rd as long as 2nd, 4th slightly shorter than 3rd, 5th and 6th successively shorter, 7th and 8th somewhat wider than 6th, 9th much wider than 8th, subtrapezoidal, slightly transverse, 10th more dilated, wider and longer than 9th, 11th somewhat narrower and shorter than 10th, with apex subrounded. Terminal segment of maxillary palpi rather robust, slightly narrowing apically, with apex strongly obliquely truncate, a little more than two times as long as wide. Pronotum about 2.3 times as wide as long at middle, about three-fifths as wide as elytra; anterior margin deeply emarginate subquadrately; anterior angles produced forwards as seen from above, nearly rectangular in lateral view; lateral margins slightly arcuate, very finely marginate; posterior corners obtusely angulate; basal margin arcuate behind, finely marginate; dorsum well convex, finely, sparsely and uniformly punctured and almost smooth on the interstices in the discal portion, and much more coarsely and closely punctured and obscurely shagreened on the interstices in the lateral portions. Scutellum very small, triangular and impunctate. Elytra strongly convex above, rounded, nearly as wide at base as pronotal base; humeral calli distinct; lateral margins finely beaded and narrowly reflexed; surface shining, punctures relatively close and coarse but not clear, becoming coarser and stronger towards external areas.

Median part of prosternum surrounded by lateral longitudinal carinae and anterior transverse carina, a little longer than wide, lateral carinae being distinctly convergent posteriorly and slightly sinuous, posterior margin subtruncate, surface not distinctly punctured but obscurely rugose and somewhat densely clothed with relatively long hairs; mesosternum strongly and closely punctured, its anterior margin keeled and slightly emarginate medially, grooved along the keel, rather sparsely covered with hairs; metasternum rather coarsely and sparsely punctured on the anterior half, narrow lateral parts together with metepisterna strongly shagreened; abdominal sternites finely but distinctly shagreened except on the middle part of 1st sternite, closely punctured and finely and sparsely pubescent; femoral lines of 1st sternite incomplete, reaching the posterior margin, area surrounded by the line distinctly shagreened and indistinctly punctured. Elytral epi-

pleura rather narrow, not concave for reception of femoral apices but slightly depressed. Legs relatively slender, femora shagreened, sparsely punctured and pubescent; tarsal claws long and slender, with a small basal tooth.

Length 2.6 mm; width 2.15 mm.

Holotype: ♀, Ghasa, Palpa, Nepal, 2000 m, 8. v. 1968 (T. Kumata).

Distribution: Nepal.

Remarks: This new species may easily be distinguished from known species of the genus by the peculiar elytral markings, in which this species is very similar to the following new one.

3. *Sticholotis kumatai* sp. nov. (Fig. 5)

Body nearly hemispherical, somewhat narrower than in the preceding species, the ratio of length, width, and height = 6:5:3. Body reddish testaceous; dorsal surface with 12 blackish markings: pronotum with a large discal marking, which is closer to base than to apex, about one-third as wide as pronotum, wider than long (10:7), and with a deep notch (which suggests a fusion of two spots originally situated close to the middle); elytra each with six markings, one of which is largest, forming together with the counterpart an oval spot across the suture just behind scutellum, humeral spot suboval, touching the base of elytron, discal spot situated in line with humeral spot, suboval, longer than wide, posterior subsutural spot subquadrate, longitudinal, smaller than discal spot, anterior lateral spot smallest, elongate-fusiform, a little before the middle, posterior lateral spot much larger than the anterior one, oblong-quadrate, longer but narrower than posterior subsutural spot. Underside blackish piceous except for elytral epipleura, the lateral portions of prosternum, the marginal areas of 1st to 4th abdominal sternites and last sternite. Legs mostly reddish testaceous, anterior and middle femora more or less darkened, posterior femora blackish except for apex and base, posterior coxae black, last segments of all tarsi distinctly darkened.

Head about three-fifths as wide as pronotum, rather obscurely and sparsely punctured and clothed with very fine decumbent hairs; frons about three-fifths as wide as head, fully three times as wide as an eye; anterior margin of clypeus slightly emarginate at middle, finely marginate and slightly reflexed. Antennae missing. Pronotum a little more than two times as wide as long, anterior margin deeply emarginate subquadrate; anterior angles produced forwards and narrowly rounded at tip; lateral margins slightly arcuate; posterior angles obtuse; base gently arcuate, finely but distinctly marginate; dorsum well convex, punctured as on head, the punctures coarser and more distinct than those in the preceding species. Scutellum very small. Elytra well convex, strongly rounded on sides; punctation sparse, fine but distinct, finer, sparser, but more clearly impressed than on pronotum; lateral margins finely beaded and very narrowly reflexed, interspace smooth and shining. Median area of prosternum without carinae, gently convex, more or less distinctly punctured and sparsely pubescent; mesosternum very finely and sparsely punctured and pubescent, anterior margin narrowly marginate, slightly emarginate and reflexed at middle, grooved just behind the margin; metasternum sparsely but coarsely punctured, femoral plates and lateral portions together with metepisterna finely shagreened, median line finely impressed; elytral epipleura shallowly excavate for reception of femoral tips. Abdominal sternites shagreened on the ground

surface, more or less finely and sparsely punctured and indistinctly pubescent, the punctures being coarser on 1st and 5th sternites than the others. Legs slender for their length, femora shagreened and sparsely punctured.

Length 2.65 mm ; width 2.10 mm.

Holotype : ♀, Sundarijal, Kathmandu, ca. 1450 m, 10. vi. 1968 (T. Kumata).

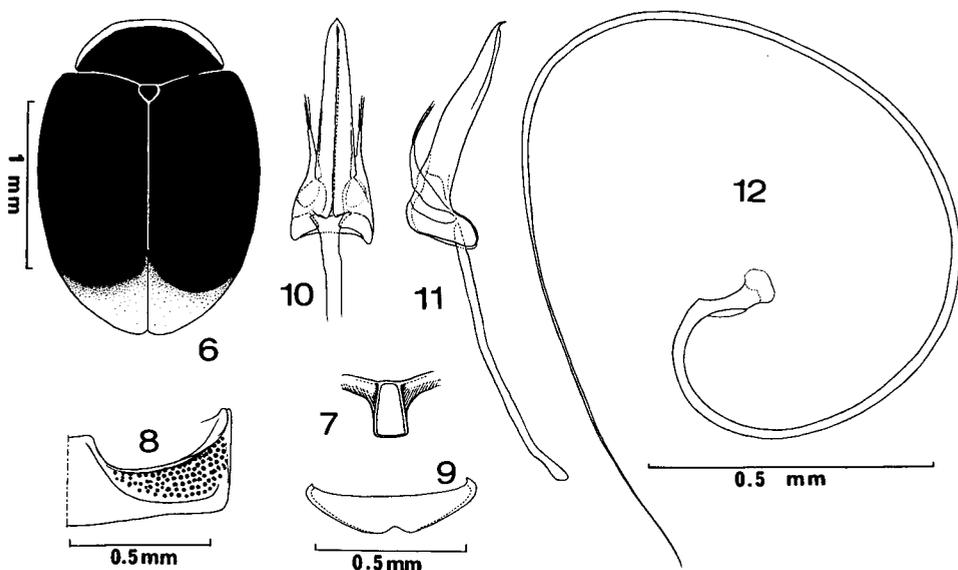
Distribution : Nepal.

Remarks : In spite of exceeding resemblance to the preceding species in appearance, the present new species seems to be different, being separable by the pronotal spot bilobed in front, the anterior sutural spot of the elytra larger and reaching the scutellum, the posterior subsutural spot distinctly divided by the suture, the femora pitchy black, the prosternal carinae absent, the elytral epipleura distinctly excavate for the reception of femora, the metasternum very sparsely punctured, etc.

4. *Pseudoscymnus nepalicus* sp. nov. (Figs. 6-12)

Body elongate-oval, moderately convex above, about 1.4 times as long as wide ; dorsal surface mostly black, head with anterior area more or less reddish brown, mouth parts and antennae reddish testaceous ; pronotum with anterior and lateral margins rather broadly reddish testaceous ; scutellum black ; elytra with a reddish-brown apical marking not well defined on border line and extending anteriorly along the suture. Underside mostly black, thoracic epipleura and apical segments of abdomen more or less yellowish testaceous ; legs reddish testaceous, hind femora largely infuscated on the ventral side.

Head with eyes large, inner margins of eyes rather strongly arcuate, interocular distance a little wider than one-third of the head width ; frons thickly covered with



Figs. 6-12. *Pseudoscymnus nepalicus* sp. nov., ♂ : 6, outline of body ; 7, mesal part of prosternum ; 8, part of 1st abdominal sternite showing the femoral line ; 9, last sternite ; 10-12, male genitalia : 10, tegmen, ventral view ; 11, ditto, lateral view ; 12, siphon.

depressed, long, silvery pubescence, which is directed towards the longitudinal median line and somewhat posteriorly in basal two-thirds and anteriorly in apical one-third, surface finely, closely and uniformly punctured. Antennae very short, formed as other congeneric species. Pronotum just two times as wide as long; sides straight and strongly narrowed anteriorly; anterior margin subtruncate in dorsal view; lateral margins very narrowly but distinctly margined; basal margin gently bisinuous, median portion slightly produced before scutellum; anterior angles rectangular; posterior corners obtusely angulate; dorsal surface densely covered with fine short suberect grayish pubescence, which is directed towards median line, and with fine but distinctly impressed punctures, which are somewhat coarser and sparser than those on head. Scutellum small and subcordiform. Elytra elongate-oval, moderately convex, humeral calli prominent, humeral angles obtusely rounded, lateral margins slightly arcuate, gradually narrowed in apical fifth, apical angles separately rounded; surface densely covered with subdepressed grayish hairs, which are arranged in a weakly curved S-form, and densely, coarsely and unevenly punctured excepting a narrow area along the suture on basal half, which is very finely and sparsely punctured.

Prosternal carinae moderately widely separated from each other and distinctly convergent anteriorly, area surrounded by carinae about 1.5 times as long as wide. Mesosternum rather narrow, somewhat coarsely and closely punctured. Metasternum coarsely and closely punctured, appearing to be somewhat transversely rugose. Femoral lines of 1st abdominal sternite incomplete, gently curved on basal half, reaching seven-eighths on the apical half except for a short recurved part of apex, area surrounded by the line very closely and coarsely punctured except for a narrow area along the line; lateral areas of 1st and 2nd to 4th sternites very closely and coarsely punctured, medial areas of 1st and 2nd sparsely and rather finely punctured; 5th much more finely and closely punctured, subtruncate behind; posterior margin of 6th distinctly but narrowly emarginate medially. Legs with tibiae slender.

Male genitalia: Tegmen slender, with median lobe rather gently narrowed from base to apex, which is ogivally pointed in ventral view, about 4 times as long as wide; lateral lobes of tegmen very short, about one-sixth as long as median lobe, almost straightly tapering to the apex, which is provided with a few long setae, which are longer than lateral lobe; trapes slender, about one-third longer than tegmen; siphon very slender and long, strongly curved, forming an entire circle, gradually tapering apically, apical part capillaceous, siphonal capsule with a long inner branch but without outer branch.

Length 1.80 mm; width 1.25 mm.

Holotype: ♂, Swinket, No. 3 West, 15. v. 1968 (T. Kumata).

Distribution: Nepal.

Remarks: This new species is very closely related to *P. lewisi* (H. Kamiya, 1961) from Japan, but can be separable from the latter by the body more elongate, the punctures of elytra much coarser, the prosternum with area surrounded by carinae much narrower, the median lobe of tegmen of male genitalia different in shape, the elytral apices more widely reddish testaceous, and the anterior and lateral areas of pronotum more widely yellowish testaceous.

5. *Pseudoscymnus* sp.

Specimen examined: 1 ♀, Godavari, Nepal Valley, 1450 m, 20. iv. 1968 (T. Kumata).

Remarks: This species somewhat resembles *P. sylvaticus* Lewis, 1896, from Japan in coloration, but the body is smaller.

6. *Pseudoscymnus* sp.

Specimen examined: 1 ♀, Godavari, Nepal Valley, 1450 m, 20. iv. 1968 (T. Kumata).

Remarks: This species seems to be very similar to *P. hareja* (Weise, 1879) or a certain form of *P. quinquepunctatus* (Weise, 1923) in coloration.

7. *Pseudoscymnus* sp.

Specimen examined: 1 ♀, Balaju, Kathmandu, 1400 m, 13. iv. 1968 (T. Kumata).

Remarks: This species is similar in the general appearance to *P. kurohime* (Miyatake, 1959) from the Ryukyus and *P. lewisi* (H. Kamiya, 1961) from Japan.

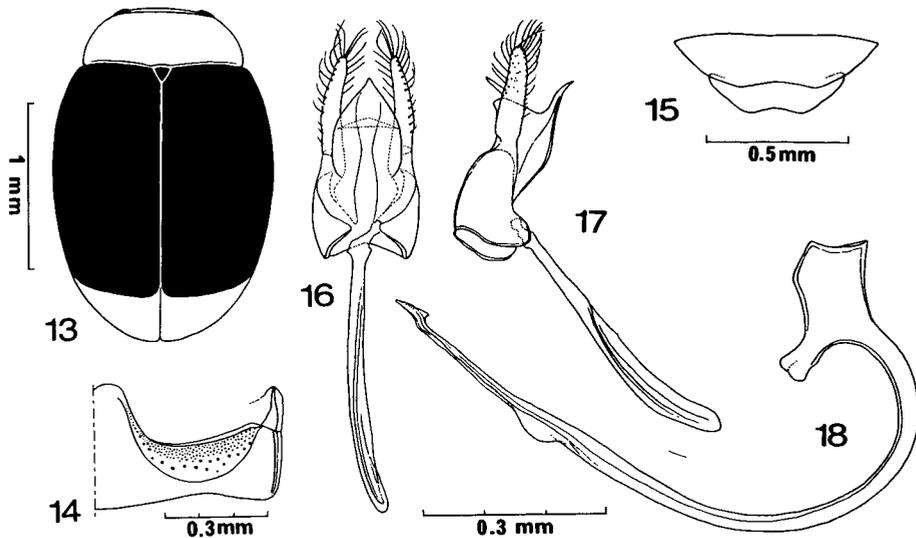
8. *Scymnus* (*Scymnus*) *nubilis* Mulsant

Scymnus nubilis Mulsant, 1850: 972-3 [Assam]; Mulsant, 1853: 146; Bielawski, 1972: 293-4, fs. 43-52 [Nepal: Rapti Tal, Godavari].

Specimen examined: 1 ♂, Adhabar, Terai Forest, 300 m, 27. vi. 1968 (T. Kumata).

Distribution: India, Burma, Nepal, Asia Minor.

Remarks: This species is closely related to *S. (S.) nigrosuturalis* H. Kamiya, 1961, from the Ryukyus, or *S. (S.) marinus* H. Kamiya, 1961, from Kyushu, Japan, in coloration and in the male genitalia.



Figs. 13-18. *Scymnus* (*Pullus*) *godavariensis* sp. nov., ♂: 13, outline of body; 14, part of 1st abdominal sternite showing the femoral line; 15, last two sternites of abdomen; 16-18, male genitalia: 16, tegmen, ventral view; 17, ditto, lateral view; 18, siphon.

9. *Scymnus (Pullus) godavariensis* sp. nov. (Figs. 13-18)

Elongate-oval, gently arcuate on sides, moderately convex above. Dorsal surface blackish piceous to black, head and pronotum light yellowish testaceous, middle portion of the latter slightly brownish; underside of head, mouth parts and antennae yellowish testaceous, mandibles with tips somewhat reddish brown; scutellum and elytra black except for apical fourth of elytra yellowish testaceous; undersurface mostly black, head, prothorax, and lateral areas and apical segments of abdomen yellowish testaceous. Legs yellowish testaceous, middle and hind coxae partly darkened.

Head about three-fifths as wide as pronotum; eyes moderately large, inner margins of eyes arcuate and divergent anteriorly, interocular distance slightly less than half as wide as head; frons closely and rather obscurely punctured and clothed with moderately dense decumbent short hairs. Pronotum about five-sevenths as wide as elytra, about two times as wide as long; apical margin almost straight; sides very slightly arcuate and narrowing from base to apex; anterior corners nearly rectangular in profile; posterior corners slightly obtusely angulate; base slightly bisinuous, somewhat produced before scutellum, with a fine marginal stria; surface finely and moderately closely punctured and pubescent, pubescence whitish and fine as that on head. Scutellum subtriangular, moderate in size. Elytra moderately convex, sides gently arcuate from base to apical third, then broadly rounded to extreme apex; humeral calli prominent, humeral corners obtusely rounded; surface rather finely, closely but irregularly punctured, with two or three short striae of coarse punctures behind scutellum, 1st stria distinctly impressed with very coarse and close punctures, which are more deeply depressed anteriorly, 2nd stria shorter, with less coarse and sparser punctures, 3rd stria may be indistinct; pubescence fine, fairly long, dense, subdecumbent, grayish white, directed posteriorly in general.

Prosternal carinae widely separated, almost parallel, reaching apical margin. Meso- and metasternum closely and coarsely punctured, the middle area of the latter somewhat finely and sparsely punctured. Abdominal sternites coarsely and closely punctured except on the middle area of each sternite, which is sparsely punctured; femoral lines of 1st sternite complete, evenly rounded, extending to one-sixth of the length of sternum, area surrounded by the line finely and very closely punctured in basal half and sparsely but coarsely in apical half; 5th distinctly longer than 4th, more or less closely and finely punctured, posterior margin broadly and gently emarginate; 6th very short, impunctate, posterior margin more deeply emarginate than in 5th.

Male genitalia: Median lobe of tegmen broad, with a pointed apex and a strongly produced keel on the dorsal surface, lateral lobes of tegmen slender and one-fourth longer than median lobe, moderately sparsely haired in apical half, basal piece comparatively large, trabes longer than tegmen proper; siphon rather short, robust, basal third semicircularly curved, the remaining part almost straight, with a small swelling on apical third of the dorsal side, then suddenly tapering to apex, which is a triangular hook in lateral view, siphonal capsule with large outer process and narrow and short inner process.

Length 1.9 mm; width 1.2 mm.

Holotype: ♂, Godavari, Nepal Valley, 1450 m, 20. iv. 1968 (T. Kumata).

Distribution : Nepal.

Remarks : This new species may be closely related to *Scymnus (Pullus) hingstoni* (Kapur, 1963) from Sikkim so far as based on the male genital structure, but differs from the latter in the narrower body form and in the shape and size of the testaceous apical area of the elytra. In the elytral color pattern this species is rather similar to *S. (P.) testacecollis* (Kapur, 1963) from Sikkim, which differs altogether in the male genitalia from the other two.

10. *Scymnus (Pullus)* sp.

Specimen examined : 1 ♀, Kathmandu, 1400 m, 22. vi. 1968 (T. Kumata).

Remarks : This example somewhat resembles *S. (P.) ruficeps* (Ohta, 1929) from Japan.

11. *Scymnus (Pullus)* sp.

Specimen examined : 1 ♀, Kathmandu, 1400 m, 14. vi. 1968 (T. Kumata).

Remarks : This species somewhat resembles *S. (P.) ishidai* M. Araki, 1963, from Japan in color and shape, but it differs from the latter in the less close punctuation of the head and the more or less reddish head even in the female.

12. *Cryptogonus nepalensis* Bielawski

Cryptogonus nepalensis Bielawski, 1972 : 295-6, fs. 53-61 [Nepal : Tampa Koshi Tal].

Specimens examined : 1 ♂, 1 ♀, Godavari, Nepal Valley, 1450 m, 15. vi. 1968 (T. Kumata); 1 ♀, same locality, 11. vii. 1968 (T. Kumata); 1 ♂, Balaju, Kathmandu, 1400 m, 22. vi. 1968 (T. Kumata).

Distribution : Nepal.

Remarks : This species apparently belongs to the *orbiculus*-group of Kapur (1948) on account of the prosternal carinae. The male genitalia shown by Bielawski are very similar to those of *C. orbiculus* (Gyllenhal). In one male specimen the subapical spots on the elytra are connected with the median sutural spot and the lateral bands.

13. *Platynaspidius saundersii* (Crotch) comb. nov.

Platynaspis saundersii Crotch, 1874 : 197 [India]; Bielawski, 1959 : 107-8, fs. 34-37 [Afganistan].

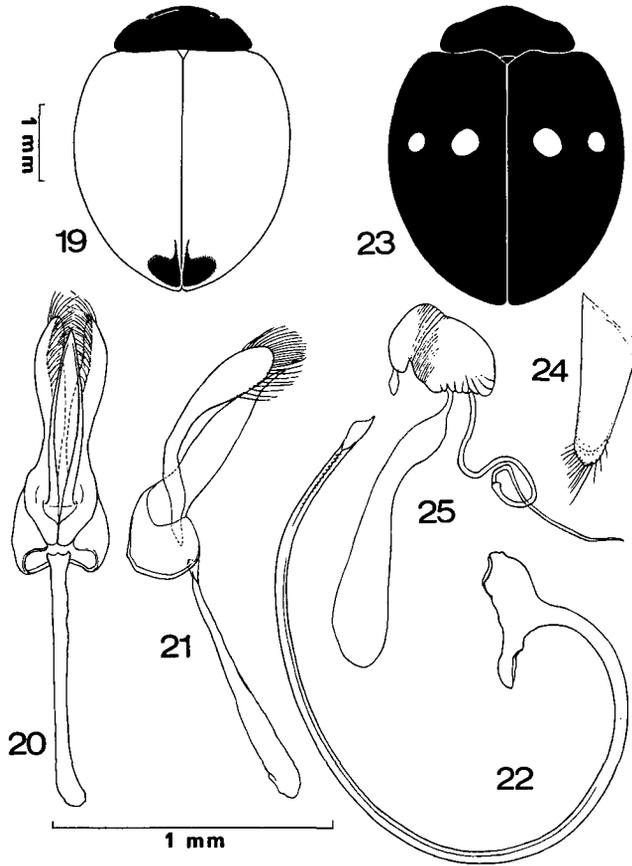
Specimen examined : 1 ♀, Biratanti, No. 4 West, 1150 m, 12. v. 1968 (T. Kumata).

Distribution : India, Nepal, Afganistan.

Remarks : This species may belong to *Platynaspidius* on account of the structures of the cardo of maxilla and the prosternal carinae. However, so far as based on Bielawski's (1959) figures, the male genitalia of the present species are rather similar in the general feature to those of *Phymatosternus* than of *Platynaspidius* (cf. Miyatake, 1961). Further, in Bielawski's description the middle femora of the male were not mentioned.

In the above specimen the subapical spots of the elytra are connected with the sutural band.

14. *Exochomus (Exochomus) uropygialis* Mulsant (Figs. 19-22)



Figs. 19-22. *Exochomus uropygialis* (Mulsant), ♂: 19, outline of body; 20-22, male genitalia: 20, tegmen, ventral view; 21, ditto, lateral view; 22, siphon.
 Figs. 23-25. *Chilocorus matsumurai* sp. nov., ♀: 23, outline of body showing color pattern; 24-25, female genitalia: 24, genital plate; 25, spermatheca.

Exochomus uropygialis Mulsant, 1853: 68 [North India].

Exochomus (Exochomus) uropygialis: Barovsky, 1922: 297-8 [North India, Kashmir]; Mader, 1955: 789, 797-8, f. 3; Bielawski, 1979: 114 [Bhutan] [*urophygialis*!].

Specimen examined: 1 ♂, Tukucha, Palpa, 2600 m, 6. v. 1968 (T. Matsumura).

Distribution: North India, Kashmir, Nepal, Bhutan.

Remarks: Although the present species has been known from Kashmir, it is recorded from Nepal for the first time. The male genitalia of this species are shown in Figs. 20-22. Recently Bielawski reported this species from Bhutan, but his description does not agree with the typical form in the apical spot of the elytra.

15. *Chilocorus bijugus* Mulsant

Chilocorus bijugus Mulsant, 1853: 61 [India]; Kapur, 1956: 259-262 [Kashmir, Uttar Pradesh, Assam]; Nagaraja and Hussainy, 1967: 249-250.

Chilocorus infernalis Mulsant, 1853: 183 [North India].

Specimen examined : 1 ♀, Balaju, Kathmandu, 1400 m, 25. vii. 1968 (T. Kumata).

Distribution : North India, Kashmir, Assam, Nepal, Pakistan, Central to South China.

Remarks : In the above example the elytral markings are much reduced in size, especially the outer one is very small and faint.

16. *Chilocorus matsumurai* sp. nov. (Fig. 23-25)

A female specimen before me belongs to the group VIII of *Chilocorus* (sensu Miyatake, 1970), which has been represented by a single species, *C. alishanus* Sasaji, 1968, in the narrow elytral epipleura, the indistinct basal tooth of the tarsal claws, and the absence of the pronotal striae across the posterior corners. This new species is closely allied to *alishanus* in size, coloration, and other features including the genital plate and spermatheca (Figs. 24-25), but differs from the latter in the following points :

1) Elytral spots much smaller, not rounded, distinctly or slightly wider than long, especially so in the outer spot, and more widely separated from each other by a distance as wide as or wider than the diameter of inner spot (in *alishanus* elytral spots large, as long as wide or longer than wide (outer spot always longer than wide), and separated by a distance about one-half to one-third of the diameter of inner spot).

2) Head with punctation generally finer and sparser, and interstices between punctures smooth (in *alishanus* head fairly closely and coarsely punctured and obscurely shagreened on the interstices between punctures).

3) Punctation of pronotum finer and that of elytra coarser, therefore, elytral punctures much coarser than pronotal punctures (in *alishanus* elytral punctures slightly coarser than those on pronotum).

4) Elytral marginal areas more strongly reflexed and more closely and coarsely punctured, with marginal bead incomplete and obscure in apical part (in *alishanus* weakly reflexed and very sparsely, uniformly, less coarsely punctured on the marginal area of elytra, marginal bead complete up to the apex).

5) External portion of pronotum more prolonged and more narrowly rounded, closely and coarsely punctured and densely clothed with short white hairs, and distinctly and widely reticulate on the interstices between punctures (in *alishanus* the lateral portion of pronotum short and broadly rounded, and coarsely punctured, the pubescent area narrower and the reticulation of the interstices between punctures obscure).

6) Basal tooth of tarsal claw narrower and indistinct.

Length 4.0 mm ; width 3.2 mm.

Holotype : ♀, Tukucha, Palpa, 2600 m, 6. v. 1968 (T. Matsumura).

Distribution : Nepal.

17. *Adonia variegata* (Goeze)

Adonia doubledayi Mulsant, 1850 : 38 [Indoustan?].

Adonia variegata : Kapur, 1942 : 50-56 [N. India, Kashmir to Mussorie Hills] ; Kapur, 1957 : 269-273 [Himalayas] ; Kapur, 1958 : 325-326 [Nepal, Darjeeling] ; Kapur, 1963 : 31-32 [Tibet] ; Bielawski, 1971 : 7 [Nepal].

Adonia variegata doubledayi : Bielawski, 1972 : 306-307, figs. 122-130 [Nepal] ; Bielawski,

1979 : 118-119 [Bhutan].

Specimens examined : 1 ♂, Kathmandu, 1340 m, 22. iv. 1968 (T. Kumata) ; 1 ♀, Godavari, Nepal Valley, 1450 m, 16. vi. 1968 (T. Matsumura).

Distribution : Palaearctic region ; N. India, Nepal, N. Bengal, Bhutan, China (Tibet).

Remarks : Kapur (1958, 1963) stated that the body size of this species varies according to the altitude of the habitat. The specimens mentioned above, collected at near localities and near altitudes, were 4.2 mm and 5.7 mm long respectively. In the color pattern of the elytra these specimens, however, are very similar to each other, corresponding with Bielawski's (1972) figure 127.

18. *Adalia tetraspilota* (Hope)

Coccinella tetraspilota Hope, 1831 : 31 [Nepal].

Adalia Hopii Mulsant, 1850 : 57 [India].

Adalia tetraspilota : Crotch, 1874 : 101 [Nepal, India] ; Kapur, 1963 : 32 [Sikkim] ; Bielawski, 1972 : 307 [Nepal].

Specimen examined : 1 ♀, Larjung, Palpa, 2530 m, 7. v. 1968 (T. Matsumura).

Distribution : India, Nepal, Sikkim, Afganistan, W. Turkestan.

19. *Lioadalia luteopicta* (Mulsant)

Adalia luteopicta Mulsant, 1866 : 45-47 [India] ; Kapur, 1958 : 326-327 [Nepal, Sikkim].

Lioadalia luteopicta : Kapur, 1963 : 32-33 [Tibet] ; Miyatake, 1967 : 74-75 [NE Nepal] ; Bielawski, 1971 : 7 [Nepal] ; Bielawski, 1972 : 307 [Nepal] ; Bielawski, 1979 : 119 [Bhutan].

Specimens examined : 3 ♂, Namche Bazar, No. 3 East, 3400 m, 6. vii. 1968 (T. Matsumura) ; 3 ♂, 2 ♀, Gosainkund, 3000-3500 m, 7. vi. 1968 (T. Kumata) ; 1 ♂, 1 ♀, Thare Pati, Gosainkund, 3570 m, 7. vi. 1968 (T. Matsumura).

Distribution : N. India, Sikkim, Nepal, Tibet, China.

20. *Coccinella septempunctata* Linné

Coccinella septempunctata : Kapur, 1958 : 328 [Nepal] ; Miyatake, 1967 : 75 [Nepal, Darijeeling] ; Bielawski and Chhijō, 1968 : 123 [Nepal] ; Bielawski, 1971 : 9 [Nepal] ; Bielawski, 1972 [Nepal] ; Bielawski, 1979 : 119 [Bhutan].

Specimens examined : 1 ex., Biratanti, No. 4 West, 1150 m, 30. iv. 1968 (T. Kumata) ; 2 exs., Ulleri, No. 4 West, 2010 m, 1. v. 1968 (T. Matsumura) ; 11 exs., Gorapani, No. 4 West, 2780 m, 1-2. v. 1968 (T. Kumata) ; 3 exs., ditto, 11. v. 1968 (T. Matsumura) ; 29 exs., Larjung, No. 4 West, 2550 m, 7. v. 1968 (T. Kumata) ; 8 exs., Tukucha, Palpa, 6-7. v. 1968 (T. Kumata) ; 3 exs., Kathmandu, 1340 m, 14. iv. 1968 (T. Kumata) ; 19 exs., Godavari, Nepal Valley, 1450 m, 18-20. iv. 1968 (T. Kumata and T. Matsumura) ; 3 exs., ditto, 15. vi. 1968 (T. Kumata and T. Matsumura) ; 1 ex., Balaju, Kathmandu, 1400 m, 23. iv. 1968 (T. Kumata) ; 1 ex., ditto, 25. vii. 1968 (T. Kumata) ; 2 exs., Khurumsang, No. 1 West, 2500 m. 8. vi. 1968 (T. Kumata) ; 2 exs., Thare Pati, Gosainkund, No. 1 West, 3570 m, 7. vi. 1968 (T. Matsumura) ; 3 exs., Gosainkund, 3500-3000 m, 7. vi. 1968 (T. Kumata) ; 1 ex., Jumbesi, No. 3 East, 2600 m, 29. vi. 1968 (T. Matsumura) ; 2 exs., Namche Bazar, No. 3 East, 3400 m, 6. vii. 1968 (T. Matsumura).

Distribution : Palaearctic region ; India, Nepal, Bhutan.

Remarks : This wide-spread lady beetle seems to be very common in the whole

part of Nepal, and the elytral spots are considerably variable in size and may be very enlarged or sometimes connected with each other. Of the above mentioned specimens, 59 examples are of the typical form, 6 of the *bruckii*-form, and 26 of the melanistic form (*confusa*-type). The melanistic form is, then, represented by about 30% of the specimens examined. This fact agrees with Kapur (1962) and Bielawski (1971, 1972).

21. *Protocaria billieti* (Mulsant) comb. nov.

Harmonia billieti Mulsant, 1853 : 16 [N. India].

Coccinella (*Synharmonia*) *billieti* : Kapur, 1958 : 327 [Nepal].

Synharmonia billieti : Kapur, 1963 : 33 [Tibet].

Oenopia billieti : Iablokoff-Khnzorian, 1979 : 69.

Specimens examined : 2 ♂, 2 ♀, Tukucha, Palpa, 2600 m, 6. v. 1968 (T. Matsumura).

Distribution : N. India, Nepal, Tibet.

Remarks : The male genitalia of this species are fairly different from those of *Synharmonia conglobata* (Linné, 1768), the type species of *Synharmonia*, in form, especially in the median lobe of tegmen. Having compared the present species with *Protocaria scalaris* Timberlake, 1943, especially concerning their male genital structures, I am convinced that these species are congeneric. Chapin (1965) synonymized the genus *Protocaria* with *Synharmonia* based mainly on the female genitalia, while Sasaji (1971) considered these genera to be different.

22. *Propylea dissecta* (Mulsant)

Lemnia (*Vola*) *dissecta* Mulsant, 1850 : 377 [India].

Lemnia mystacea Mulsant, 1853 : 50-51 [N. India].

Harmonia feliciae Mulsant, 1866 : 57 [N. India].

Propylea dissecta : Crotch, 1874 : 158 [India, Shanghai].

Specimens examined : 2 ♂, Rupakot Tal, No. 3 West, 750 m, 19. v. 1968 (T. Kumata) ; 1 ♂, Adhabar, Terai Forest, 300 m, 15. vii. 1968 (T. Kumata).

Distribution : India, Nepal.

Remarks : Mulsant described this species three times from India as shown in the above synonymy, and these forms are merely of the one species as stated by Crotch (1874). Weise (1892) treated the forms *dissecta* and *feliciae* as aberrations of *Halyzia* (= *Propylea japonica*) (Thunberg, 1781), and his opinion has been adopted by many authors (Korschefsky, 1932, etc.). However, in spite of a strong similarity in the male and female genitalia, the Nepalese specimens before me are different from the Japanese species *japonica*, and should all belong to the *feliciae*-type of *P. dissecta*.

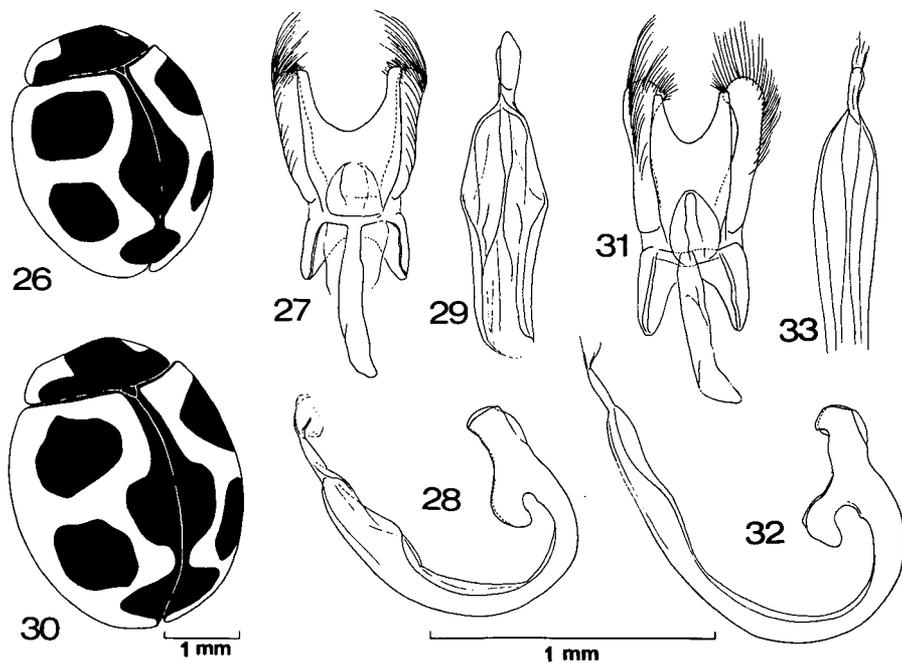
23. *Gyrocaria sauzeti* (Mulsant) (Figs. 30-33)

Oenopia sauzeti Mulsant, 1866 : 281 [India] ; Kapur, 1958 : 331-333 [Nepal] ; Kapur, 1963 : 27 [Sikkim] ; Bielawski, 1972 : 302 [Nepal] ; Bielawski, 1979 : 117 [Bhutan].

Gyrocaria sauzeti : Miyatake, 1967 : 76 [Nepal].

Specimen examined : 1 ♂, Rupakot Tal, No. 3 West, 750 m, 20. v. 1968 (T. Kumata).

Distribution : India, Nepal, Sikkim, Bhutan, Burma, Thailand, China.



Figs. 26-29. *Gyrocarya mimica* (Weise) comb. nov.: 26, outline of body showing color pattern, dorso-lateral view; 27-29, male genitalia: 27, tegmen, ventral view; 28, siphus; 29, ditto, apical half, ventral view.

Figs. 30-33. *Gyrocarya sauzeti* (Mulsant): 30, outline of body showing color pattern, dorso-lateral view; 31-33, male genitalia: 31, tegmen, ventral view; 32, siphus; 33, ditto, apical half, ventral view.

24. *Gyrocarya mimica* (Weise) comb. nov. (Figs. 26-29)

Oenopia mimica Weise, 1902: 505 [India].

Specimens examined: 2 ♂, Kathmandu, 1340 m, 14. iv. 1968 (T. Kumata); 1 ♀, Godavari, Nepal Valley, 1450 m, 18. vi. 1968 (T. Matsumura); 1 ♀, Balaju, Kathmandu, 1400 m, 1. vii. 1968 (T. Kumata).

Distribution: India, Nepal.

Remarks: This species is very closely related to the preceding species, *sauzeti*, in the male genital structure as well as in the color pattern, and has been synonymized with the latter by Iabrokoff-Khnzorian (1979). But, as stated by Weise (1902), these species can be separated from each other by the following characters:

Characters	<i>G. mimica</i>	<i>G. sauzeti</i>
body size	smaller on an average ♂ 2.9-3.7 mm (3.30 mm) ¹⁾ ♀ 3.4-4.3 mm (3.57 mm) ²⁾	larger on an average ♂ 3.4-4.1 mm (3.85 mm) ³⁾ ♀ 3.7-4.6 mm (4.18 mm) ⁴⁾
dorsal punctures	finer, sometimes very feeble	coarser and always distinct
pronotal marking	basal margin almost reaching the posterior angle	basal margin not reaching the posterior angle and remaining pale area
anterior sutural spot	gradually dilated and oval in outline	transverse-quadrangle or more rounded

anterior discal spot	large, subquadrate, anterior margin subparallel to elytral base	relatively smaller, subpentagonal, anterior margin more or less curved
trochanters in female	brownish testaceous in all legs	almost blackish in all legs
median lobe of tegmen in male genitalia	broader and more widely emarginate on apical margin	narrower and more narrowly emarginate on apical margin
sipho in male genitalia	shorter and distinctly widened at apical third in dorso-ventral view	proportionally longer and subparallel-sided throughout in dorso-ventral view

1) 12 examples from Nepal. 2) seven examples from Nepal. 3) six examples from Nepal and N. Thailand. 4) six examples from Nepal and N. Thailand.

Based on my examinations of material from various localities of India and Southeast Asia, the distribution of *G. mimica* seems to be limited to northern India and Nepal.

25. *Pania luteopustulata* (Mulsant)

Oenopia (Pania) luteopustulata Mulsant, 1850 : 421-422 [Assam].

Oenopia luteopustulata : Mulsant, 1866 : 280 ; Kapur, 1956 : 333-334 [India, Nepal] ; Kapur, 1958 : 329-331 [Nepal] ; Kapur, 1963 : 26 [Sikkim] ; Miyatake, 1967 : 77 [Nepal] ; Bielawski and Chôjô, 1968 : 121 [Nepal] ; Bielawski, 1971 : 7 [Nepal] ; Bielawski, 1972 : 301-302 [Nepal] ; Bielawski, 1979 : 116-117 [Bhutan].

Pania luteopustulata : Iablokoff-Khuzorian, 1979 : 58.

Specimen examined : 1 ♂, Balaju, Kathmandu, 1400 m, 16. iv. 1968 (T. Kumata).

Distribution : India, Nepal, Bhutan, Burma, Andaman Is., Tibet, China.

Remarks : *O. cinctella* Mulsant, 1850, was correctly designated to the type species of the genus *Oenopia* Mulsant by Timberlake (1943). The present species, *luteopustulata*, differs from *O. cinctella* in the male and female genitalia as well as in some external characters, as already stated by Miyatake (1967). Recently the subgenus *Pania* Mulsant, with *luteopustulata*, was elevated to a good genus by Iablokoff-Khuzorian (1979).

26. *Menochilus sexmaculatus* (Fabricius)

Coccinella 6-maculata Fabricius, 1781 : 96 [East Indies].

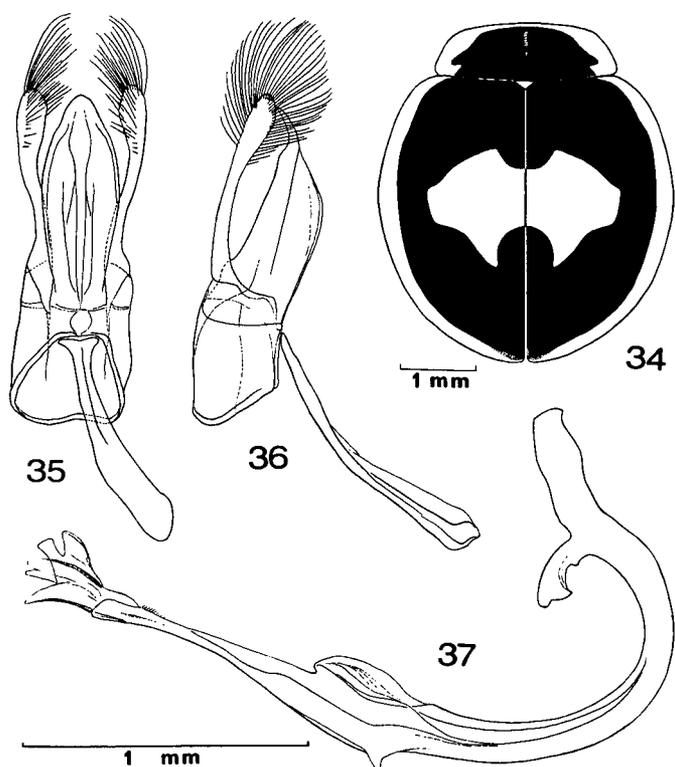
Menochilus sexmaculatus : Kapur, 1958 : 333 [Nepal] ; Bielawski, 1972 : 306 [Nepal].

Specimen examined : 1 ♂, Rupakot Tal, No. 3 West, 750 m, 20. v. 1968 (T. Matsumura).

Distribution : Oriental region ; New Guinea, Japan.

27. *Calvia connexa* sp. nov. (Figs. 34-37)

Male. Body nearly hemispherical, rather weakly convex above, length/width=1.18; almost glabrous except for head. Head yellowish testaceous except for blackish vertex, grayish black eyes, and piceous tips of mandibles ; apical segment of antennae somewhat darker. Pronotum yellowish testaceous with a large blackish discal patch, which does not reach the anterior margin, but touches the base, and is divided by an obscure reddish-yellow median line ; lateral flanges semitransparent. Scutellum testaceous. Elytra black with fairly broad yellowish-testaceous margins, which are almost same width in their length and semitransparent, and with a large



Figs. 34-37. *Calvia connexa* sp. nov., ♂ : 34, outline of body showing color pattern ; 35-37, male genitalia : 35, tegmen, ventral view ; 36, ditto, lateral view ; 37, siphon.

reddish-testaceous discal patch, which is common to both elytra and nearly shaped like a bat on the wing. Underside including legs brownish testaceous except for the greater part of metathorax and the middle areas of basal four segments which are more or less blackish.

Head concealed behind by pronotum, frons finely and obscurely punctured, finely and rather sparsely pubescent. Labrum rounded on sides, slightly emarginate in front, very sparsely and finely punctured and haired. Eyes large, rather coarsely faceted. Antennae long and slender, about as long as or slightly longer than width of head, 1st segment comparatively thick, slightly bent, 2nd shorter and less robust than the 1st, 3rd to 8th filiform, subequal in length to each other, 6th to 8th slightly shorter than the 5th, somewhat thicker apically, 9th to 11th forming a very narrow club, 9th slightly longer and broader than 8th, distinctly longer than wide, 10th shorter but much broader than 9th, about as long as wide, 11th ovate, longer than 9th, longer than wide.

Pronotum transverse, more than two times as wide as long (9:4); anterior margin broadly emarginate, anterior corners produced, obtusely rounded, sides broadly reflexed together with anterior corners, slightly rounded, finely margined, posterior corners broadly rounded, basal margin gently rounded behind; dorsum finely, rather uniformly and sparsely punctured, ground surface between punctures finely shagreened. Scutellum small, triangular, much wider than long, with a few

fine punctures. Elytra rather weakly convex, external borders broadly explanate-reflexed, strongly rounded, marginal bead fine and weak; dorsum distinctly and not so closely punctured, punctures being variable in size but uniformly distributed throughout, and intermixed with coarse punctures towards sides and very coarse and irregular punctures on the external borders.

Underside: Propleural foveae indistinct but somewhat deeply depressed anteriorly; prosternal carinae distinct and slightly convergent anteriorly; mesosternum with intercoxal area narrow, convex, deeply emarginate anteriorly for reception of prosternal process, obscurely and irregularly punctured; elytral epipleura three times as wide as metepisternum; abdominal sternites coarsely, rather closely punctured in the middle but finely and sparsely in the lateral areas; femoral lines of 1st sternite incomplete, terminating at halfway to lateral side; 5th sternite finely and obscurely punctured; 6th sternite short, slightly emarginate behind.

Male genitalia: Median lobe of tegmen a little shorter than the lateral lobe, when viewed ventrally rather broad and gently arcuate on sides, suddenly narrowed apically, about three times as long as wide, when viewed from the side comparatively thick in basal four-fifths and then becoming very thin and rather strongly curved towards lateral lobes; lateral lobes of tegmen somewhat clavate, slightly curved, with long and dense hairs on the apical portion; basal piece about as long as wide; trabes moderately long and thick, distinctly longer than median lobe of tegmen; siphon rather massive, semicircularly curved at basal half, with large siphonal capsule, the outer arm of which is larger than the inner arm and about two times as long as the inner, median portion of siphon with a flattened oval swelling on the inner wall and a small hook-like projection on the outer wall, then gradually tapering to apical portion, which is complicated with several membraneous projections.

Length: 4.5 mm; width: 3.8 mm.

Female. Unknown.

Holotype: ♂, Godavari, Nepal Valley, 1450 m, 15. v. 1968 (T. Kumata).

Distribution: Nepal.

Remarks: This new species can be easily recognized by the peculiar marking of the elytra among the members of the genus *Calvia* and its related genera. Some salient structures of the siphon of the male genitalia are peculiar to this species.

28. *Alloneda dodecaspilota* (Hope) (Figs. 38-42)

Coccinella 12-spilota Hope, 1831: 31 [Nepal].

Caria duodecimsopilota Mulsant, 1850: 236-238 [Nepal].

Aiolocaria dodecaspilota: Crotch, 1874: 178 [Nepal]; Kapur, 1963: 26 [Sikkim]; Bielawski, 1972: 301 (Nepal); Bielawski, 1979: 116 [Bhutan].

Palaeoneda dodecaspilota: Mader, 1933: 93-94; Mader, 1934: 302 [Simla in Himalaya].

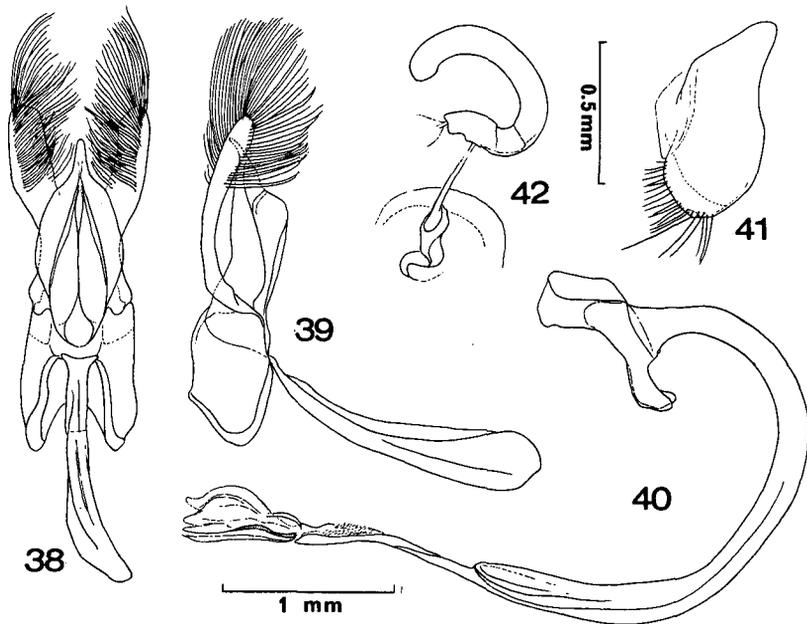
Alloneda dodecaspilota: Iablokoff-Khnzorian, 1979: 44, in text-figs.

Alloneda dodecastigma (sic): Iablokoff-Khnzorian, 1979: 63.

Specimens examined: 1 ♀, Balaju, Kathmandu, 1400 m, 22. v. 1968 (T. Kumata); 1 ♂, same locality, 25. vii. 1968 (T. Kumata); 1 ♀, Godavari, Nepal Valley, 1450 m, 15. v. 1968 (T. Kumata); 1 ♀, Rupakot Tal, No. 3 West, 750 m, 19. v. 1968 (T. Kumata); 1 ♀, Namuto, No. 2 West, 1450 m, 15. v. 1968 (T. Matsumura).

Distribution: Nepal, Bhutan, Burma, China.

Remarks: Although this species was referred to the genus *Aiolocaria* by recent



Figs. 38-42. *Alloneda dodecapilota* (Hope): 38-40, male genitalia: 38, tegmen, ventral view; 39, ditto, lateral view; 40, siphon; 41-42, female genitalia: 41, genital plate; 42, spermatheca.

authors (Kapur, Bielawski, etc.), it is quite different from *A. hexaspilota* (Hope, 1831) or *H. mirabilis* (Motschulsky, 1860) in the external characters and in the genital structures of both sexes. Recently Iablokoff-Khuzorian (1979) has erected a new genus, *Alloneda*, for this species. On the basis of my investigation on the male and female genitalia I quite agree to his proposal. Some structural characters of male and female genitalia are as follows:

Male genitalia: Median lobe of tegmen viewed from the ventral side broad oval, with a slender projection in apical third, about two times as long as wide, viewed from the side median lobe considerably thick in basal two-thirds, then gradually narrowed apically, apex slightly bent; lateral lobes of tegmen distinctly longer than median lobe, fairly curved at base, strongly clavate, and densely provided with very long hairs on apical half; basal piece robust, slightly longer than wide; trabes long and broad, slightly shorter than tegmen; siphon fairly thick, strongly curved in basal two-thirds, where the inner wall is widened laterally, forming a pair of flanges, and then becoming slender and slightly twisted towards apical portion, which is composed of five variable-sized, membranous projections.

Female genitalia: Genital plate broad, nearly oval in outline, more or less narrowed basally, apical margin broadly rounded and densely haired, stylus minute, with several long hairs; spermatheca very long and strongly curved, forming an almost entire circle.

29. *Spilocaria bissellata* (Mulsant)

Coelophora bissellata Mulsant, 1850: 400 [Bengal, Java]; Kapur, 1958: 332 [Nepal];

Bielawski, 1972 : 302 [Nepal].

Spilocaria bissellata: Timberlake, 1943 : 57, 59.

Specimens examined : 2 exs., Biratanti, No. 4 West, 1150 m, 12. v. 1968 (T. Kumata) ; 3 exs., Rupakot Tal, No. 3 West, 750 m, 19. v. 1968 (T. Kumata).

Distribution : Bengal, Assam, Nepal, Thailand, China, Java, Sumatra, Borneo, Philippines, Malacca, New Guinea.

30. *Phrynocaria eberti* (Bielawski) comb. nov.

Coelophora eberti Bielawski, 1972 : 304-306 [Nepal].

Specimen examined : 1 ♀, Swinket, No. 3 West, 1180 m, 15. v. 1968 (T. Kumata).

Distribution : Nepal.

Remarks : Although this species was described under the genus *Coelophora*, it does not belong to that genus strictly defined by Timberlake (1943). It may be referable to the genus *Phrynocaria* Timberlake, 1943, on account of the large eyes, narrow frons, and anteriorly divergent inner orbits of eyes. Judging from the original descriptions and figures by Bielawski, the male and female genitalia of this species are also very similar to those of *P. congener* (Billberg, 1808), the type species of *Phrynocaria*.

31. *Harmonia dimidiata* (Fabricius)

Coccinella dimidiata Fabricius, 1781 : 94 [Coromandel].

Coccinella 15-spilota Hope, 1831 : 30 [Nepal].

Coccinella 15-maculata Hope, 1831 : 30 [Nepal].

Coccinella bicolor Hope, 1831 : 30 [Nepal].

Coccinella dimidia Hope, 1831 : 30 [Nepal].

Coccinella basalis Redtenbacher, 1848 : 563 [Kashmir].

Leis dimidiata : Kapur, 1958 : 329 [Nepal, Himalayas] ; Kapur, 1963 : 25 [Sikkim] ; Bielawski and Chŭjō, 1968 : 121 [Nepal] ; Bielawski, 1971 : 7 [Nepal] ; Bielawski, 1972 : 300 [Nepal] ; Bielawski, 1979 : 115 [Bhutan].

Harmonia dimidiata : Miyatake, 1967 : 76 [Nepal].

Specimens examined : 1 ♂, Biratanti, No. 4 West, 1150 m, 13. v. 1968 (T. Kumata) ; 2 ♀, same loc., 14. v. 1968 (T. Kumata) ; 1 ♀, Yangja, No. 3 West, 1440 m, 16. v. 1968 (T. Kumata) ; 1 ♀, Rupakot Tal, No. 3 West, 750 m, 21. v. 1968 (T. Matsumura) ; 1 ♀, Arukunpohwa, No. 3 West, 750 m, 21. v. 1968 (T. Kumata) ; 1 ♀, Dana, Palpa, 1420 m, 3. v. 1968 (T. Matsumura) ; 1 ♂, Pokhara, No. 3 West, 830 m, 27. iv. 1968 (T. Kumata).

Distribution : Nepal, Kashmir, Assam, China, Taiwan, Bhutan.

Remarks : This Oriental species is very variable in color pattern. More than five varieties are known in Nepal alone. Of the specimens before me five belong to f. *quindecimmaculata*, two to f. *humeralis*, and one to f. *decemmaculata*.

32. *Harmonia sedecimnotata* (Fabricius)

Coccinella 16-notata Fabricius, 1801 : 370 [Amboina].

Callineda sedecimnotata : Crotch, 1874 : 161 [Sarawak].

Harmonia sedecimnotata : Bielawski and Chŭjō, 1968 : 128 [Nepal].

Specimens examined ; 1 ♀, Balaju, Kathmandu, 1400 m, 25. vii. 1968 (T. Kumata) ; 1 ♂, Godavari, Nepal Valley, 1450 m, 11. vii. 1968 (T. Kumata).

Distribution : Nepal, China, Malacca, Java, Borneo, Philippines, Amboina, Sumba, Bali, Flores, Ceram, Taiwan.

Remarks : In the specimens examined the elytral markings are much reduced into punctiform spots. This form is commonly found in Taiwan and the Philippines.

33. *Synonycha grandis* (Thunberg)

Coccinella grandis Thunberg, 1781 : 12 [China].

Synonycha grandis : Mulsant, 1850 : 230 ; Kapur, 1967 : 174 [Andaman Is., Darjeeling, Sikkim].

Specimen examined : 1 ♀, Balaju, Kathmandu, 1400 m, 1. vii. 1968 (T. Kumata).

Distribution : Oriental region : Nepal, Darjeeling, Sikkim, Japan (Ryukyu Is.), New Guinea, Amboina, etc.

Remarks : This wide-spread species is recorded from Nepal for the first time. Korschefsky (1932) in his catalogue already showed the Himalayas as one of the habitats of this species. Kapur (1967) stated that there are examples from Darjeeling and Sikkim in the collection of the Zoological Survey of India.

34. *Henosepilachna vigintioctopunctata* (Fabricius)

Coccinella 28-punctata Fabricius, 1775 : 84 [Tranquebar].

Epilachna vigintiocto-punctata : Mulsant, 1850 : 834-839 [Japan, China, India, Java, New Guinea, etc] ; Kapur, 1958 : 310 [Nepal].

Coccinella pubescens Hope, 1831 : 31 [Nepal].

Coccinella sparsa Herbst, 1786 : 160 [E. Indies].

Epilachna sparsa : Dieke, 1947 : 29-33 [India, Assam, Punjab, etc.].

Henosepilachna sparsa : Bielawski, 1971 : 1 [Nepal].

Henosepilachna sparsa orientalis : Bielawski, 1972 : 1-2 [Nepal].

Specimens examined : 6 ♂, 3 ♀, Kathmandu, 1340 m, 14. iv. 1968 (on potato) (T. Kumata) ; 1 ♂, 22. iv. 1968 (T. Matsumura) ; 1 ♀, Adhabar, Terai Forest, 350 m, 14. vii. 1968 (T. Kumata).

Distribution : Oriental region : India, Nepal, Burma, Thailand, China, Taiwan, Japan, etc.

Remarks : This commonest lady beetle, which is known as a serious pest on potato, was recorded from Nepal under the name *pubescens* by Hope (1831). Bielawski (1972) has enumerated *H. vigintioctopunctata* and *H. sparsa orientalis* as different species in the same paper.

35. *Henosepilachna pusillanima* (Mulsant)

Epilachna pusillanima Mulsant, 1850 : 784 [Java, India].

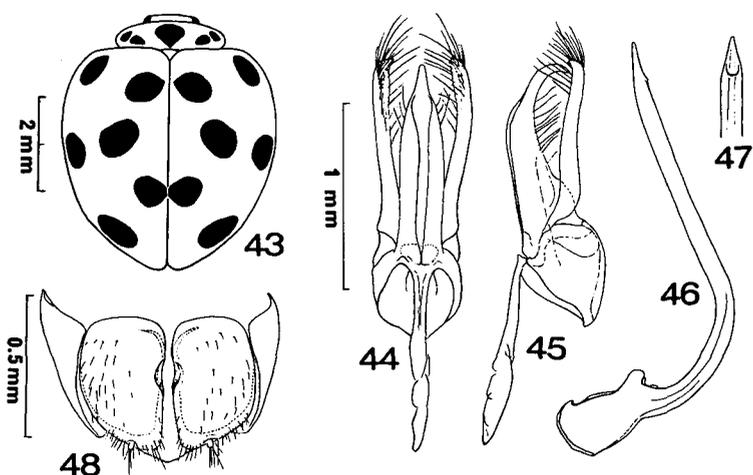
Epilachna dentulata Dieke, 1947 : 46-47 [Cochin-china, etc.] ; Fürsch, 1959 : 2 [Java, Darjeeling].

Epilachna dentulata parvinotata Dieke, 1947 : 47-48 [Darjeeling, etc.].

Specimen examined : 1 ♀, Rupakot Tal, No. 3 West, 750 m, 20. v. 1968 (T. Matsumura).

Distribution : Oriental region : India, Nepal, Darjeeling, Thailand, Viet Nam, China, Formosa, Philippines, etc.

Remarks : The above female specimen was identified by the peculiar features of the genital plate as shown by Dieke (1947) and Li and Cook (1961). This Oriental



Figs. 43-48. *Henosepilachna kathmanduensis* sp. nov. : 43, outline of body showing color pattern ; 44-47, male genitalia : 44, tegmen, ventral view ; 45, ditto, lateral view ; 46, siphus ; 47, ditto, apical part, ventral view ; 48, female genital segments.

species is new to the Nepalese fauna.

36. *Henosepilachna kathmanduensis* sp. nov. (Figs. 43-48)

Similar in appearance to *Afidenta misera* (Weise) but body somewhat smaller ; maximum convexity at the middle of the body.

Head reddish testaceous, eyes black, mandibles piceous ; pronotum also reddish testaceous, gradually yellowed towards antero-lateral angles, with five black or piceous spots : the anterior lateral pair usually ill-defined and brownish, sometimes blackish and distinct, posterior pair more or less distinct and brownish to piceous or blackish, sometimes very faint, subquadrate or triangular, discal spot always distinct, elongate oval or somewhat cordiform, piceous to blackish, nearer to base than to apical margin. Scutellum and elytra reddish testaceous, the latter with 12 black spots, arranged as 2, 2, 2, on each elytron as follows : spot 1 (scutellar spot) rounded, fairly close to sutural margin and distant from base of elytra as much as the diameter of spot (most remote from scutellum among the relatives in the genus), spot 2 or humeral spot situated right on callus, rounded, smaller than spot 1 and not touching the humeral margin, spot 3 or discal spot usually larger than the preceding two, sometimes smaller, subquadrate or subrounded, transverse and distinctly away from the suture ; spot 4 usually larger than spot 3, subquadrate or suboval, transverse and not touching lateral margin of elytron ; spot 5 suborbicular, smallest, almost touching, or sometimes extending to, suture ; spot 6 variable in size, usually largest, sometimes smaller than spot 4. Underside reddish testaceous except for posterior corners, sometimes the posterior half of metasternum, the middle part of 1st to 4th abdominal sternites, and the middle part of elytral epipleura, which are more or less blackish to piceous.

Head distinctly transverse, with fine, impressed and uniform punctation and thin, fairly close and grayish pubescence. Pronotum, when viewed from above, with anterior corners rounded, posterior corners obtuse and rounded, anterior margin

nearly rectangularly emarginate, lateral margins moderately rounded; punctation and pubescence similar to those on head. Scutellum longer than wide, minutely punctured. Elytra well convex, with humeral angles rounded, humeral calli fairly distinct, lateral margins narrowly explanate-reflexed from humeral angle to spot 6; apical angle rounded; punctation double, the finer punctures smaller and less impressed than those on head and pronotum; pubescence gray except on the black spots, where it is darker, otherwise similar to that on pronotum. Undersurfaces finely punctate, covered with thin and rather sparse pubescence, punctures on abdominal sternites more or less coarser and strongly impressed and the last sternite densely clothed with yellowish pubescence; femoral lines of 1st sternite complete, reaching near the posterior margin of the sternite; 6th sternite gently emarginate at middle in male, while that of female split longitudinally along the middle.

Male genitalia: Median lobe of tegmen about 1.0 mm long; when seen from above, a relatively narrow tube gradually narrowed in distal third, as seen from side, very broad at base, forming the opening uniformly narrow in basal two-thirds and fairly widened in distal third, a short edge between bases of lateral lobes, gradually narrowed to distal third and then suddenly narrowed and strongly curved towards lateral lobes of tegmen; lateral lobes as long as median lobe, very slightly sigmoid in outline, gradually narrowed from base to apex, which is sharply pointed, appearing to be a thorn-like projection, apical third rather sparsely clothed with long hairs; siphon moderately curved in basal two-fifths of length, then almost straight and of uniform width, except on apical portion which is suddenly narrowed to a pointed apex, with a slight emargination; siphonal capsule large and subquadrate, viewed from front it gives a pencil-like appearance towards apex, with a large, elongate-oval orifice before extreme apex.

Female genitalia: Genital plates subquadrate, about two-thirds as wide as long, maximum width at middle of its length, and apical angle rounded, inner margin weakly notched near the middle; styli small but distinct, with several long hairs.

Length: ♂ 5.3–5.6 mm, ♀ 5.5 mm; width: ♂ 4.3–4.7 mm, ♀ 4.5 mm.

Holotype: ♂, Balaju, Kathmandu, 1350 m, 16. iv. 1968 (T. Kumata). Paratypes: 1 ♂, Kathmandu, 1400 m, 14. iv. 1968 (T. Kumata), on potato; 1 ♀, same data as holotype; 1 ♂, Swinket, No. 3 West (T. Matsumura).

Distribution: Nepal.

Remarks: This new species is more closely similar to the *simplex*-form of *Afidentia misera* (Weise) than to the 12-spotted form of *H. vigintioctopunctata* (Fabricius) in external appearance. In the male genital structure this species may be closely related to *H. tamdaoensis* Hoang, 1977, from Tam Dao, N. Viet Nam, but apparently differs from the latter in the elytral pattern.

37. *Henosepilachna* sp.

Specimen examined: 1 ♀, Balaju, Kathmandu, 1350 m, 22. v. 1968 (T. Kumata).

Remarks: The female specimen resembles the preceding species, *H. pusillanima* (Mulsant), in appearance except that the body is larger. The genital plate of the present specimen is very similar to that of *H. wissmanni* (Mulsant) shown by Dieke (1947) and Li and Cook (1961). *H. wissmanni* is different from this species in the shape and size of the body, the size and arrangement of the elytral spots, etc.

38. *Afidenta misera* (Weise)

Epilachna misera Weise, 1900 : 420 [Ceylon].

Afidenta mimetica : Dieke, 1947 : 110 [Indochina].

Afidenta mimetica simplex : Dieke, 1947 : 111 [India]

Afidenta misera : Miyatake, 1967 : 70-71 [Nepal] ; Bielawski, 1972 : 284-285 [Nepal].

Specimens examined : 1 ex., Sikha, No. 4 West, 2000 m, 10. v. 1968 (T. Kumata) ; 1 ex., Biratanti, No. 4 West, 1150 m, 14. v. 1968 (T. Kumata).

Distribution : Nepal, India, Ceylon, Tibet, Indochina, China, Taiwan.

Remarks : This species seems to extend to the lower part of southern Nepal throughout the west to east. The above specimens have six spots on each elytron and belong to the 12-spotted type, *simplex* Dieke.

39. *Afissula rana* Kapur

Afissula rana Kapur, 1958 : 320-324 [Nepal] ; Bielawski, 1972 : 289 [Nepal].

Specimens examined : 16 exs., Kathmandu, 1340 m, 14. v. 1968 (T. Kumata) (Host : Npl-3, *Urtica* sp.) ; 2 ♂, Ghasa, Palpa, 2090 m, 4 & 8. v. 1968 (T. Kumata).

Distribution : Nepal.

40. *Afissula mysticoides* (Sicard)

Solanophila mysticoides Sicard, 1912 : 507 [India].

Afissa mysticoides : Dieke, 1947 : 145 [Darjeeling] ; Kapur, 1958 : 316-317 [Nepal].

Epilachna mysticoides : Miyatake, 1967 : 74 [Darjeeling] ; Bielawski, 1972 : 287 [Nepal].

Specimens examined : 1 ♀, Khurumsang, No. 1 West, 2500 m, 7. vi. 1968 (T. Matsumura) ; 1 ♀, Gosainkund, 3500 m, 7. vi. 1968 (T. Kumata).

Distribution : India, Darjeeling, Nepal.

Remarks : The genus *Afissula* Kapur was originally established for the preceding species, *A. rana*. Later, two Indian species, *Epilachna sanscrita* Crotch and *E. parvula* Crotch, were transferred to this genus by Kapur (1963) and Miyatake (1967) respectively. Recently Bielawski (1967) described three species of the present genus from Burma. Judging from the original description and figures, *A. puncta* Bielawski seems to be identical with *A. parvula* (Crotch).

41. *Epilachna dumerili* Mulsant

Epilachna dumerili Mulsant, 1850 : 801 [India] ; Bielawski, 1972 : 286 [Nepal].

Specimens examined : 12 exs., Rupakot Tal, No. 3 West, 750 m, 19-20. v. 1968 (T. Kumata).

Distribution : India, Ceylon, Nepal, Burma.

42. *Epilachna hingstoni* (Kapur)

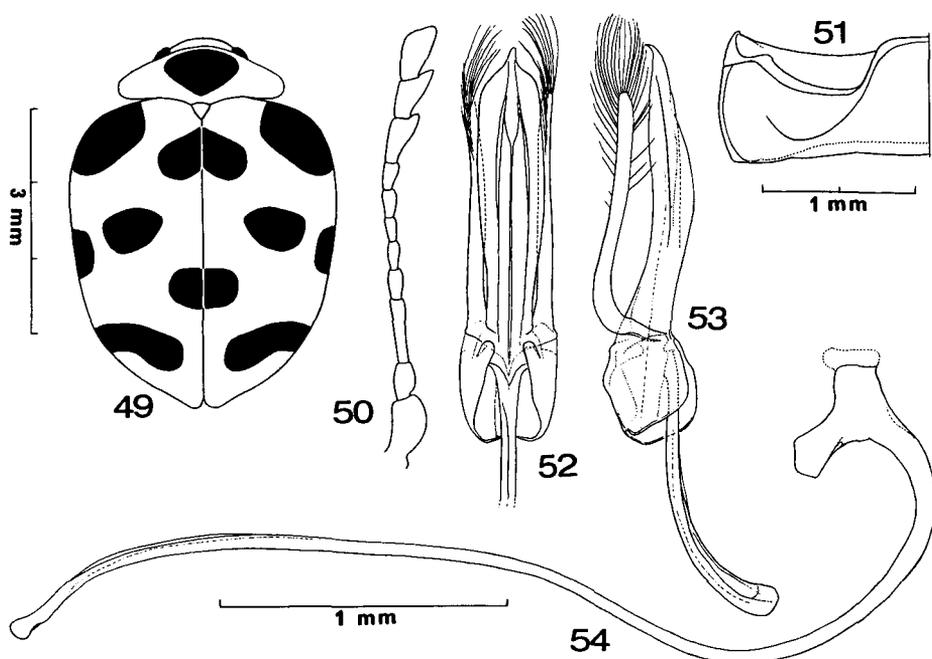
Afissa hingstoni Kapur, 1963 : 10-12 [Tibet, West Almora].

Epilachna hingstoni : Bielawski, 1972 : 285-286 [Nepal].

Specimens examined : 1 ♂, 1 ♀, Gorapani, No. 4 West, 2750 m, 11. v. 1968 (T. Kumata).

Distribution : Nepal, Tibet, India (Kumaon).

Remarks : The male genitalia of this species are very similar to those of *E. bengalica* (Dieke, 1947) as pointed out by Bielawski (1972). Also the elytral pattern of this species is made by the enlargement and connection of individual spots as in



Figs. 49-54. *Epilachna gorkhana* sp. nov., ♂: 49, outline of body showing color pattern; 50, antenna; 51, part of 1st abdominal sternite, showing the femoral line; 52-54, male genitalia: 52, tegmen, ventral view; 53, ditto, lateral view; 54, siphon.

E. bengalica. In the specimen of *E. hingstoni* figured by Bielawski the basal fascia is divided into two spots, humeral and scutellar, and may be transitional between *E. hingstoni* and *E. bengalica*. It is possible that these two supposed species are identical.

43. *Epilachna gorkhana* sp. nov. (Figs. 49-54)

Male. Brownish red, pronotum with a triangular median black spot, hardly reaching anterior margin, the spot being about 1.3 times as wide as long; scutellum brownish red; elytra somewhat dirty in ground color, each with six black spots arranged as in *E. bengalica* and *E. maculicollis*; spots 1 and 5 on suture, continuous with their counterparts on other elytron; spot 2 large, enlarged over humeral area, leaving a narrow lateral margin; spot 3 transverse, oval; spot 4 transverse, subquadrate, and larger than spot 3, reaching the lateral margin, spot 6 strongly transverse, slightly curved and narrowed at middle. Underside black except on head, prothorax and elytral epipleura, which are all reddish brown. Legs entirely reddish brown, hind coxae blackish.

Head finely and moderately closely punctured except for the interocular space which is sparsely punctured, pubescence fine, depressed and directed towards median line. Antennae slender, with 3rd segment long, fully twice as long as 4th, slightly widened apically, three terminal segments forming a narrow serrate club. Pronotum two times as wide as long; sides rounded and widest a little behind the middle; anterior margin widely and gently emarginate; anterior corners slightly

projected but not pointed; lateral margins together with corners very narrowly reflexed; basal margin nearly straight on each side of a short truncate part before scutellum; posterior corners very obtusely angulate; surface very finely and uniformly closely punctured throughout and covered with a fine, soft, depressed grayish pubescence, punctures distinctly smaller than those on head, pubescence directed outwards. Scutellum triangular, about as long as wide at base, invisibly punctured and finely pubescent. Elytra well convex above, maximum convexity before middle of elytra, sides gently arcuate, almost straight at middle and widest at basal third; humeral angles broadly rounded, humeral calli prominent; lateral margins beaded, slightly sinuous near apex, which is rounded; surface covered with a dual punctation, larger punctures very deep and sparse, smaller punctures very minute, uniform and very densely set. Prosternal process wide and not carinated; femoral lines of 1st abdominal sternite incomplete, ending far from the anterior margin of the sternite; apical margin of last sternite slightly emarginate at middle.

Male genitalia: Median lobe of tegmen about one-fifth longer than lateral lobes, viewed from the ventral side elongate, rather narrowed at base, about four times as long as wide, gradually widened from base to middle, and then almost parallel-sided to near apex, which is suddenly narrowed, forming a short pointed projection, viewed from the side median lobe narrow, slightly curved before middle, with apex bending towards lateral lobes; lateral lobes of tegmen curved at base and almost straight, with fairly long hairs at apical portion; trabes slender and about as long as the median lobe of tegmen; siphon very long, slender and gently sigmoid, siphonal capsule moderately large, apical end slightly widened.

Length: 5.0 mm; width: 3.6 mm.

Female. Unknown.

Holotype: ♂, Ghasa, Palpa, 2090 m, 4. v. 1968 (T. Kumata).

Distribution: Nepal.

Remarks: At first I considered the male specimen before me as *E. bengalica* (Dieke, 1947) on account of the external appearance, especially elytral color pattern. But, after carefully dissecting the male genitalia, I came to the conclusion that it is not *bengalica* but represents an undescribed species. Apart from the characteristics in the male genitalia, this new species differs from *bengalica* in the scutellum reddish brown, the pronotal spot not reaching the base, the antennal clubs narrower and darkened, etc. Recently Bielawski (1979) described some new relatives of *bengalica* from Bhutan, namely *E. sexsignata*, *sexpunctata*, *sexpustulata*, and *monsuna*. Among these species, *E. monsuna* may be closely related to this new species by the color pattern, the male genital characters, etc., though it differs from the latter in having the blackish tibiae.

44. *Epilachna grayi* Mulsant

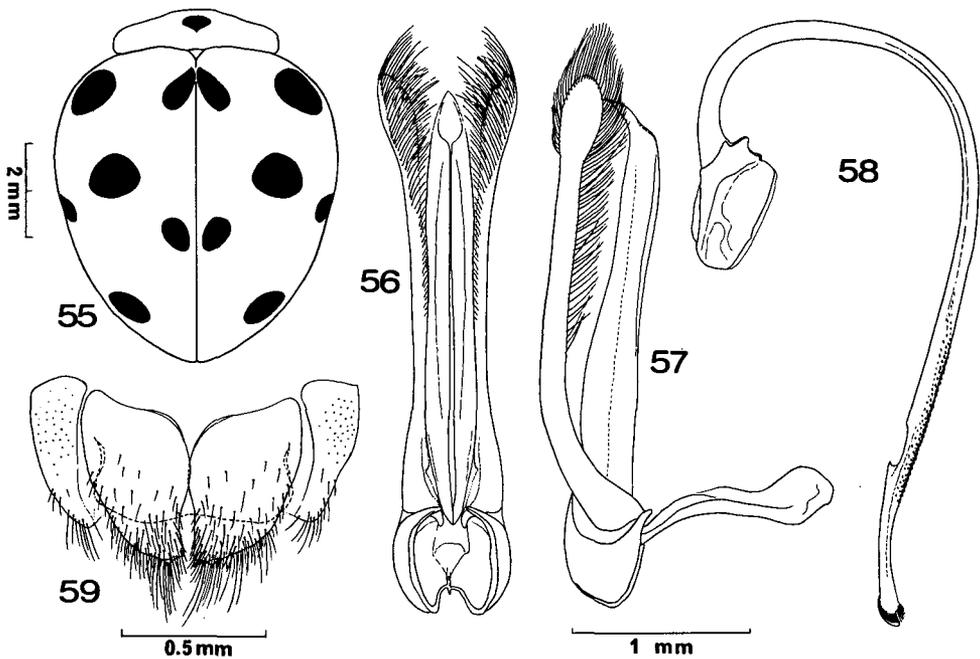
Epilachna grayi Mulsant, 1850: 774-776. [Bengal and N. India].

Afissa grayi: Kapur, 1958: 313-315, fs. 1, 8a-c [Nepal].

Specimen examined: 1 ♀, Godavari, Nepal Valley, 1450 m, 16. vi. 1968 (T. Kumata).

Distribution: Nepal, Assam, N. Bengal, Kumaon Hills, China, Java.

Remarks: The elytral pattern of the above-mentioned specimen agrees well with the figure of this species shown by Kapur (1958). The last sternite of the



Figs. 55-59. *Epilachna hopeiana* sp. nov.: 55, outline of body showing color pattern; 56-58, male genitalia: 56, tegmen, ventral view; 57, ditto, dorsal view; 58, siphus; 59, female genital segments.

present female specimen is deeply notched in the middle.

45. *Epilachna hopeiana* sp. nov. (Figs. 55-59)

Body shortly oval; moderately convex, highest at the center of body; pubescence grayish except on the blackish spots, where it is blackish brown.

Body reddish testaceous, pronotum with a small, triangular blackish spot before the middle; elytra each with six black spots, arranged as in *E. grayi*: postscutellar spot on the suture, small and variable in shape, generally oval, more or less oblique, entirely or hardly touching suture, connected with the counterpart; humeral spot on humeral callus, rounded or transverse-oval, never enlarged and reaching the base and lateral margin, discal spot transverse or rounded, sometimes largest, lateral spot transverse-oval, sometimes smallest, entirely or hardly touching the margin, post-median sutural spot usually small and longer than wide, not reaching suture in the holotype, subapical spot rounded or transverse-oval, somewhat nearer to the lateral margin than to suture. Underside reddish brown, with blackish areas on the posterior corners of metasternum and on the middle of elytral epipleura, abdominal sternites sometimes blackish in some extent.

Head covered with close and finely impressed punctures and dense and moderately long pubescence; eyes finely faceted; antennae nearly as long as the width of head, the three terminal segments forming a narrow, subserrate club, each segment being obliquely truncate at apex; labrum short, emarginate in front, with yellowish, dense and long hairs; mandibles moderately tridentate. Pronotum just

two times as wide as the median length, broadly emarginate in front, anterior corners rectangularly rounded, posterior corners obtusely but not sharply angulate; lateral margins arcuate, finely ridged; punctures somewhat denser than those on head, becoming larger and closer towards the lateral margins; pubescence dense, fine, moderately long, and decumbent. Scutellum longer than wide, rather narrowly triangular, with fine punctures and pubescence. Elytra broadly rounded at humeral angles, humeral calli prominent; external borders narrowly and shallowly channelled except near the apex, which is rounded; punctuation of the mixed type, coarser punctures impressed, irregular, sparse and interspersed among much finer and uniformly closer punctures; pubescence moderately long and dense; ground surface between punctures not smooth but finely and obscurely reticulate. Underside with prosternum and mesosternum not clearly punctured; prosternal process moderately wide, grooved along the margins; mesosternum more or less convex along median line; metasternum fairly coarsely and sparsely punctured, becoming somewhat finer and closer towards the posterior corners; abdomen with the femoral lines of 1st sternite, complete, strongly curved, reaching about one-sixth from the posterior margin of the sternite; abdominal sternites very closely punctured, 5th sternite longer than 4th, truncate behind in male, broadly rounded in female; 6th (last visible) sternite short, hind margin deeply emarginate in male and somewhat narrowly rounded in female.

Male genitalia: Tegmen well developed, proportionally large; median lobe of tegmen seen from the ventral side narrow, about seven times as long as wide, almost parallel-sided, slightly narrowing from middle to apical portion, which is gradually tapered to a pointed apex, seen from the side median lobe almost straight, narrow, apex sharply pointed and curved towards lateral lobes; lateral lobes of tegmen about as long as median lobe, slender, weakly curved near base, spatulate, apical portion and ventral margin furnished with long and dense hairs; trapes robust, short, about half as long as median lobe of tegmen, widened proximally; siphon slender, strongly curved at basal half, siphonal capsule massive but not large, without distinct arms, apical half almost straight, with a small hook on the inner wall at about apical sixth and remarkably emarginate before the hook, orifice located apically, obliquely and dorsally, and surrounded by pubescence.

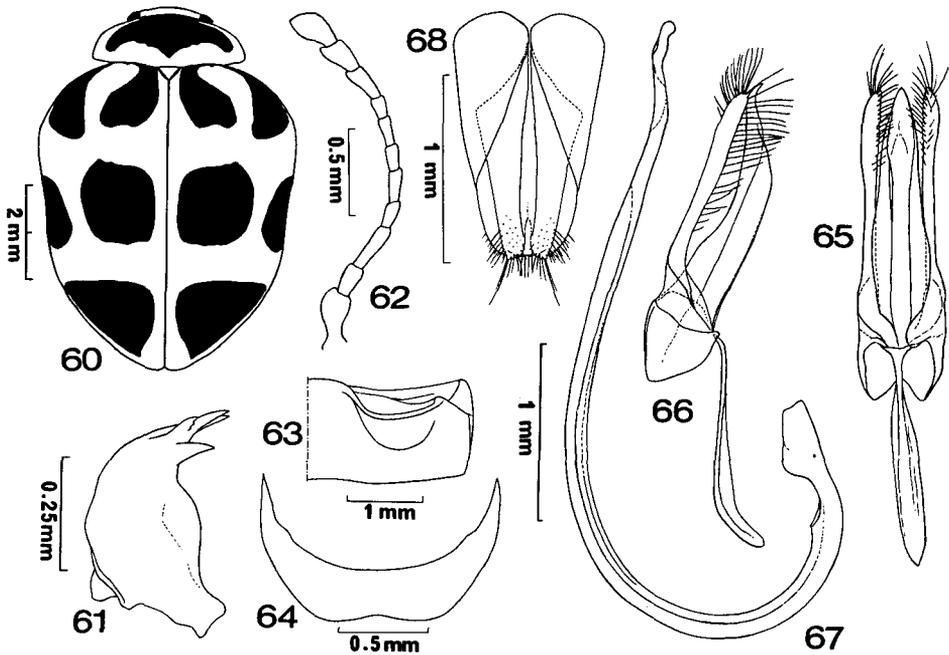
Female genitalia: Genital plates somewhat oval, the longitudinal axis about two times as long as the greatest width, outer margin broadly rounded, interior margin strongly curved into basal margin, widely and shallowly emarginate before the tip; styli rather small, with dense and long hairs; hind margin of 10th tergite shallowly emarginate.

Length: ♂ (holotype) 7.0 mm, ♀ 7.4-8.0 mm; width: ♂ 5.8 mm, ♀ 6.0-6.2 mm.

Holotype: ♂, Balaju, Kathmandu, 1400 m, 1. vii. 1968 (T. Kumata). Paratypes: 1 ♀, same data as holotype; 1 ♀, Sanupaka, No. 1 East, 1600 m, 17. vii. 1968 (T. Matsumura).

Distribution: Nepal.

Remarks: In the elytral pattern this new species is very similar to the preceding species, *E. grayi* Mulsant, and in the male genital structure these two species are very closely related. But the last visible abdominal sternite of the female is entire in this species, while deeply and narrowly notched in *E. grayi* as stated above. In the structure of the siphon this new species may be closely related to *E. glochinosa*



Figs. 60-68. *Epilachna nielamuensis* Pang et Mao: 60, outline of body showing color pattern; 61, left mandible; 62, antenna; 63, part of 1st abdominal sternite showing the femoral line; 64, 6th (last visible) abdominal sternite of male; 65-67, male genitalia: 65, tegmen, ventral view; 66, ditto, lateral view; 67, siphus; 68, female genital segments.

Pang et Mao, 1979, which has recently described from Yunnan, China, based upon three male specimens. Moreover, in the color pattern these two species are very similar to each other except for the shape of the humeral spots on the elytra.

This new species was named in honour of the distinguished coleopterist, F.W. Hope, who made the first contribution to the knowledges of the coccinellid-fauna of Nepal in 1831.

46. *Epilachna nielamuensis* Pang et Mao (Figs. 60-68)

Epilachna nielamuensis Pang et Mao, 1977: 323-324, 327 [Tibet].

Specimens examined: 10 ♂, 1 ♀, Sikha, No. 4 West, 10. v. 1968 (T. Kumata), on a species of Compositae (Npl-156).

Distribution: Tibet, Nepal.

Remarks: This remarkable species, recently described from Nielamu, Tibet (Xizang), on the basis of a single male specimen, is easily recognizable by the body form, the elytral color pattern, the male genitalia, etc. Therefore, I did not hesitate to identify the Nepalese specimens before me with this Tibetan species. Since the original description was written in Chinese, I should like to give a description together with some illustrations based on the Nepalese specimens.

Body oval, widest a little behind the humeri, then gradually narrowed to apical third, with a remarkable constriction near middle, and from there rather strongly narrowed towards elytral apices; strongly convex and highest at middle.

Reddish testaceous or yellowish brown, pronotum with a large transverse blackish band, which seems to be composed of a large triangular middle patch fused with two lateral spots; scutellum usually with a narrow blackish margin, sometimes darkened throughout; elytra each with five large blackish spots, arranged 2, 2, 1: spot 1 near scutellum, elongate-triangular, usually touching base, which is more or less narrowly blackish, spot 2 on humeral callus, subtriangular, usually touching base and almost but not entirely touching the humeral and lateral margins, its inner corner approaching the outer corner of spot 1, sometimes connected with it, enclosing an elongate-oval pale space, spot 3 on the middle of disc, subquadrate, a little wider than long, spot 4 always touching lateral margin, level with spot 3, slightly longer than wide, spot 5 occupying apical fourth, largest, practically extending from suture to the margin but never touching them, external margin brownish at basal third and piceous behind from spot 4 to approximate apex. Undersurface reddish testaceous; prosternum sometimes infuscated before coxae; mesosternum piceous black between coxae, mesepimera obscurely darkened; metasternum and metepisternum blackish piceous except for bases which are very narrowly testaceous. Elytral epipleura always brownish testaceous, sometimes narrowly infuscated along the middle of external border. Legs reddish brown, middle and hind coxae partly or often entirely blackish. Abdomen brownish testaceous, with 1st to 4th sternites blackish piceous except for lateral areas of each sternite and posterior margins of 2nd and 3rd sternites.

Head comparatively small, with eyes small and frons wide, finely and closely punctured near eyes and somewhat sparsely so at middle, and densely covered with fine, short, and depressed pubescence; mandibles moderately tridentate; antennae long and slender, longer than the width of head, 1st segment robust, about three times as long as wide, 2nd shorter and narrower than 1st, 3rd to 8th slender, 3rd as long as 1st, about two times as long as 4th, 4th to 8th subequal in length to each other, 9th to 11th forming a rather narrow and subserrate club, 11th oval, obliquely truncate apically. Pronotum much narrower than elytra, about two times as wide as long; anterior margin shallowly emarginate; anterior angles broadly rounded; lateral margins slightly arcuate, narrowly and shallowly channelled; posterior angles obtusely rounded; basal margin simply rounded behind; punctures uniformly fine and close; pubescence as that on head. Scutellum equilaterally triangular, sometimes slightly convex at middle, very finely and closely punctured. Elytra somewhat cordiform, humeral angles very broadly rounded, sides widest a little behind humerus, and then gradually narrowed to apical third, and from there strongly narrowed towards apices, which are separately rounded, slightly but distinctly constricted at the spot 4; punctation of mixed type, finer punctures very closely and uniformly distributed throughout, coarser punctures much impressed, sparse, unevenly interspersed among the finer punctures; interstices between punctures smooth; pubescence moderately long and dense. Underside with prosternum fairly inflated, broad between coxae, and not clearly punctured, mesosternum slightly convex at middle, coarsely but not clearly punctured on sides, metasternum somewhat distinctly and closely punctured along the median suture and very finely and obscurely punctured on lateral areas; elytral epipleura without distinct foveae; abdominal sternites finely but distinctly, and uniformly and closely punctured for the most part; femoral lines almost complete and strongly curved, reaching nearly

one-third of the length of the sternite; 5th abdominal sternite truncate behind in male and broadly rounded in female; 6th (last visible) abdominal sternite short, shallowly emarginate medially in male, and subtruncate in female. Claws bifid, the inner denticle shorter but broader than the outer one.

Male genitalia: Median lobe of tegmen a little longer than the lateral lobes, seen from the ventral side rather narrow, about five times as long as wide, the sides slightly arcuate in basal half, and then gradually tapering to a pointed apex, seen from the side median lobe gently sigmoid, moderately wide at base, gradually narrowed towards upturned apex; lateral lobes of tegmen straight and not widened apically, sparsely with moderately long hairs; trabes slender, shorter than the median lobe of tegmen; siphon moderately long, slender, with siphonal capsule small and ill-defined, without arms, apical portion slender and feebly bisinuous, extreme apex rounded.

Female genitalia: Genital plates elongate and triangular in outline, with several hairs on small styli; hind margin of 10th tergite subtruncate without emargination.

Length: ♂ 6.4-7.0 mm, ♀ 6.6 mm; width: ♂ 5.0-5.4 mm, ♀ 5.4 mm. (Length: 7.0 mm; width: 5.8 mm in the holotype ♂ in the original description.)

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REFERENCES

- Bielawski, R. 1967. Drei neue Arten der Gattung *Afissula* Kapur aus Burma (Coleoptera: Coccinellidae). Bull. Acad. pol. Sci. (Sci. Biol.) 15: 151-157, 30 figs.
- 1971. Ueber Coccinellidae (Coleoptera) aus Nepal. Ergebn. Forschungsunternehmens Nepal Himalaya. Khunbu Himal, 4: 1-9, 35 figs.
- 1972. Die Marienkäfer (Coleoptera: Coccinellidae) aus Nepal. Fragm. Faun. 18: 283-312, 139 figs.
- 1979. Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel. Coleoptera: Fam. Coccinellidae. Entomologica Basiliensia 4: 83-125, 141 figs.
- & Chûjô, M. 1968. Coleoptera from Southeast Asia arranged by M. Chûjô (VII). Coccinellid-beetles from E. Nepal, Thailand, Cambodia, Viet-Nam, S. Korea and Is. Ambon, with descriptions of 4 new species and 33 figures. Trans. Shikoku ent. Soc. 9: 119-128, 33 figs.
- Chapin, E.A. 1965. Coccinellidae, in Insects of Micronesia, Coleoptera. 16 (5): 189-254, 49 figs.
- Crotch, G.R. 1871. List of Coccinellidae. Cambridge, 8 pp.
- 1874. A revision of the Coleopterous family Coccinellidae. London. xvi+311 pp.
- Dieke, G.H. 1947. Ladybeetles of the genus *Epilachna* (s. str.) in Asia, Europe, and Australia. Smiths. misc. Coll. Washington, 106: 1-183, 150 figs.
- Fürsch, H. 1959. Die palaearktischen und indomalayischen Epilachnini der Zoologischen Sammlungen des Bayerischen States München (Col. Cocc.). Opuscula Zool., München, 26: 1-9, 17 figs.
- Hoang, D.N. 1977. Epilachninae (Coleoptera, Coccinellidae) of the northern Viet Nam, I. Entom. Obozr. 56: 132-145, figs. 1-11. (In Russian.)

- Hope, F.W. 1831. Synopsis of the new species of Nepal insects in the collection of Major General Hardwicke. In Gray, Zool. Miscellany : 21-31.
- Iablokoff-Khinzorian, S.M. 1979. Genera der paläarktischen Coccinellini (Coleoptera, Coccinellidae). Entom. Blätter, 75 : 37-75, fig. 1, a-j.
- 1982. Les coccinelles, Coléoptères-Coccinellidae. Tribu Coccinellini des régions Paléarctique et Orientale. Paris. 568 pp., figs. 1-104, many illusts.
- Kapur, A.P. 1946. A revision of the genus *Jauravia* Mots. (Coleoptera, Coccinellidae). Ann. Mag. Nat. His. London, (11) 13 : 73-93, 30 figs.
- 1956. Contribution to a knowledge of the fauna of Manipur State, Assam, V. Coleoptera. Rec. Indian Mus. 52 (1954) : 313-348, text-fig. 1, a-l.
- 1958. Coccinellidae of Nepal. Rec. Indian Mus. 53 (1955) : 309-338, text-figs. 1-12.
- 1963. The Coccinellidae of the Third Mount Everest Expedition 1924 (Coleoptera). Bull. Brit. Mus. (Nat. Hist.) Entomology 14 : 1-48, text-figs. 1-17.
- 1967. The Coccinellidae (Coleoptera) of the Andamans. Proc. Nat. Inst. Sci India, 32 (B) : 148-189, figs. 1-12.
- Korschefsky, R. 1931. Coccinellidae, I. Junk's Coleopterorum Catalogus (118) : 1-224.
- 1932. Coccinellidae, II. Ibid. (120) : 225-659.
- Li, C.S. & Cook, E.F. 1961. The Epilachninae of Taiwan (Col., Coccinellidae). Pacif. Ins. 3 : 31-91, 159 figs.
- Mader, L. 1933. Ueber neue und bekannte Coccinelliden. Wien. ent. Zeit., 50 : 93-99.
- 1926-1937. Evidenz der paläarktischen Coccinelliden und ihrer Aberrationen in Wort und Bild. I. Teil. xii+412 pp., 64 pls., 15 figs.
- 1955. Ibid., II. Teil., Entom. Arb. Mus. Frey 6 : 764-1035, 1 pl.
- Miyatake, M. 1967. Notes on some Coccinellidae from Nepal and Darjeeling District of India (Coleoptera). Trans. Shikoku ent. Soc. 9 : 69-78, 34 figs.
- 1970. The East-Asian Coccinellid-beetles preserved in the California Academy of Sciences, Tribe Chilacorini. Mem. Coll. Agric., Ehime Univ. 14 : 19-56, 67 figs.
- Mulsant, E. 1850. Species des Coléoptères Trimères Sécuripalpes. Ann. Soc. Agr. Lyon (2) 2, xv+1,104 pp.
- 1853. Supplement à la monographie des Coléoptères Sécuripalpes. Ann. Soc. Linn. Lyon (2) 1 : 129-334 (Opus. Ent. 3 : 1-205).
- 1866. Monographie des Coccinellides, I. Coccinelliens. Paris, 294 pp.
- Pang, X.-F. & Mao, J.-L. 1977. Notes on the Epilachninae of Tibet Autonomous region (Coleoptera : Coccinellidae). Acta Ent. Sinica, 20 : 323-328, text-figs. 1-6. (In Chinese with English summary.)
- &———1979. (Economic Insects of China, 14, Coleoptera-Coccinellidae, II), 170 pp., 16 pls., 164 figs. (In Chinese.)
- Sasaji, H. 1968. A revision of the Formosan Coccinellidae (II), Tribes Stethorini, Aspidimerini and Chilacorini (Coleoptera). Etizenia, (32) : 1-24, figs. 1-7.
- 1971. Fauna Japonica, Coccinellidae (Insecta : Coleoptera). ix+340, 16 pls. Tokyo.
- Sicard, A. 1912. Notes sur quelques Coccinellides de l'Inde et de Birmanie appartenant à la collection de M. Andrewes, de Londres, et description d'espèces et de variétés nouvelles. Ann. Soc. ent. France, 81 : 495-506.
- 1913. Coccinellides nouveaux de la collection de M. Walter, de Rägern (Moravie). Ibid. 81 (1912) : 507-513.
- Timberlake, P.H. 1943. The Coccinellidae or Ladybeetles of the Koebele Collection — Part 1. Hawaiian Planters' Record, 47 : 1-67.
- Weise, J. 1880. Ueber *Halyzia japonica* Thunb. Ent. Monatbl. 2 : 118-119.
- 1891. Neue Coccinelliden. Deutsch. ent. Zeitschr. 1891 : 282-288.
- 1902. Coccinelliden aus der Sammlung des Ungarischen National-Museums. Termés. Füzetek, 25 : 489-520.