

Ryszard BIELAWSKI

***Epilachninae (Coleoptera, Coccinellidae)* collected during the Noona Dan Expedition in 1961 and 1962**

[With 33 text-figures]

Thanks to the kindness of Dr Borge PETERSEN from the Zoological Museum in Copenhagen I have received *Coccinellidae* collected during the Noona Dan Expedition in 1961 and 1962 (PETERSEN, 1966). The material includes 156 specimens from the subfamily *Epilachninae* belonging to 13 species. The material is from the Philippines, from New Ireland and from New Britain. Several species have never been recorded in those areas before.

The material examined and worked out is in the Zoological Museum in Copenhagen and in the Institute of Zoology, PAS, in Warsaw. I am very grateful to Dr Borge PETERSEN for making it possible for me to study this material.

Henosepilachna doryca doryca (BOISD.)

General distribution: Philippines, Waigeo, Aru, New Guinea, New Britain, New Ireland, the Solomon Islands.

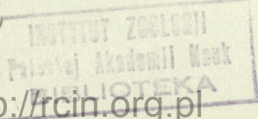
Material examined: Philippines: Tawi Tawi, Tarawakan north of Batu Batu, Nov. 1961 – 3 specimens; Palawan, Mantalingajan, Pinigisan 600 m., Barrio, Sept. 1961 – 3 specimens; Palawan, Brookes Point, Uring Uring, Aug. 1961 – 1 specimen; Mindanao, Sapamoro, Curuan distr., Dec. 1961 – 1 specimen; Bismarck Isl.: Mussau, Malakata, June 1962 – 1 specimen; Mussau, Talumalans, Feb. 1962 – 1 specimen; New Britain: Valoka, July 1962 – 4 specimens; Kwalakessi, July 1962 – 2 specimens; Bita Paka, 15 km SE of Kokopo, July 1962 – 2 specimens; New Ireland: Lemkamin, Apr. 1962 – 2 specimens.

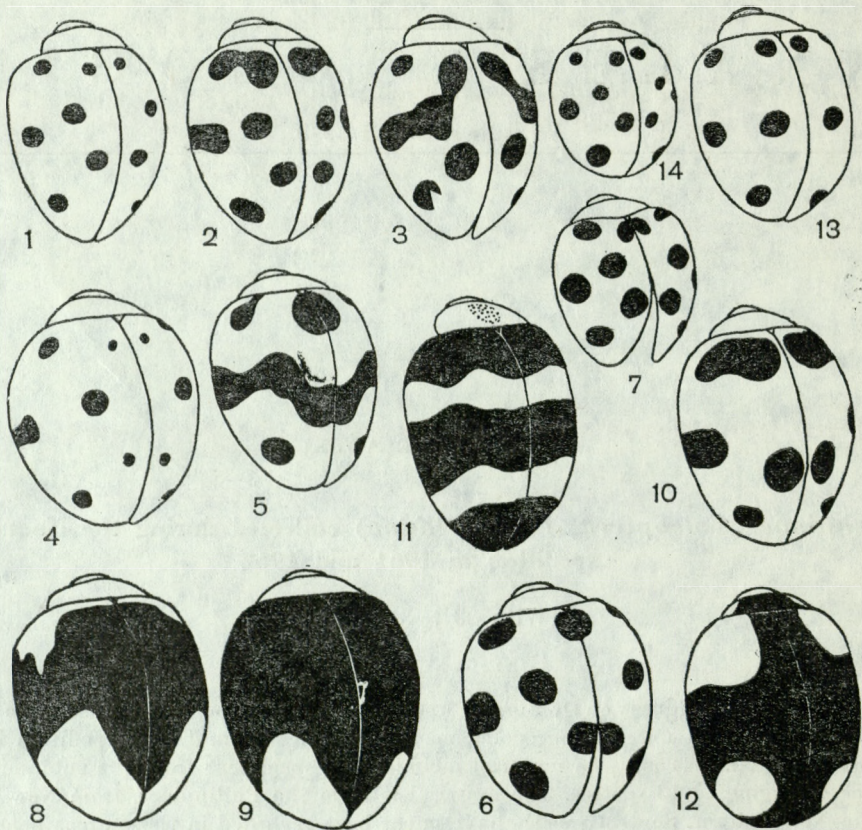
Recently, this species has been recorded in the Philippines and in New Ireland by BIELAWSKI (1965a and 1965b).

In the individuals collected in the Philippines the spots on the elytra are not connected with each other (Fig. 1), but in the case of the specimens from the

P. 255.

k. cz





Figs. 1-14. Outline and pattern of the body. 1-3 - *Henosepilachna doryca doryca* (BOISD.); 4 - *H. pusillanima* (MULS.); 5 - *H. signatipennis* (BOISD.); 6 - *H. kaszabi* (BIEL. et FÜRSCH); 7 - *H. emarginata emarginata* (DIEKE); 8-9 - *H. bona* BIEL.; 10 - *H. urvillei* (MONTR.); 11 - *H. guttatopustulata* (F.); 12 - *H. biroi* (WS.); 13 - *Epilachna hendecaspilota* (MADER); 14 - *Afidentia misera* (WS.).

other islands the spots are partly interconnected in almost all of them (with the exception of 3 individuals out of 15). Most frequently, spots No 1 and 3, or spots No 1, 3 and 4, are mixed (Fig. 3). Only in one specimen are spots No 1 and 2 connected (Fig. 2); never before has this phenomenon been recorded in this species. This specimen highly resembles individuals of *H. urvillei* (MONTR.).

Henosepilachna pusillanima (MULS.)

General distribution: Ceylon, India, China, Taiwan, Vietnam, Philippines, Java, Flores.

Material examined: Philippines: Tawi Tawi, Tarawakan north of Batu Batu Oct., Nov. 1961 - 8 specimens; Palawan, Mantalingajen, Pinigisan 600 m., Barrio, Sept. 1961 - 3 specimens.

Recently, the species has been recorded in the Philippines by BIELAWSKI (1965a).

Externally *H. pusillanima* (MULS.) is similar to *H. diffinis* (EYD. et SOUL.). But it can easily be distinguished by a more stocky body, by spot No 4 which most frequently reaches the lateral margin (Fig. 4), and by rounded edges of the elytra.

The male and the female genitalia of the specimens examined are as described by LI et COOK (1961).

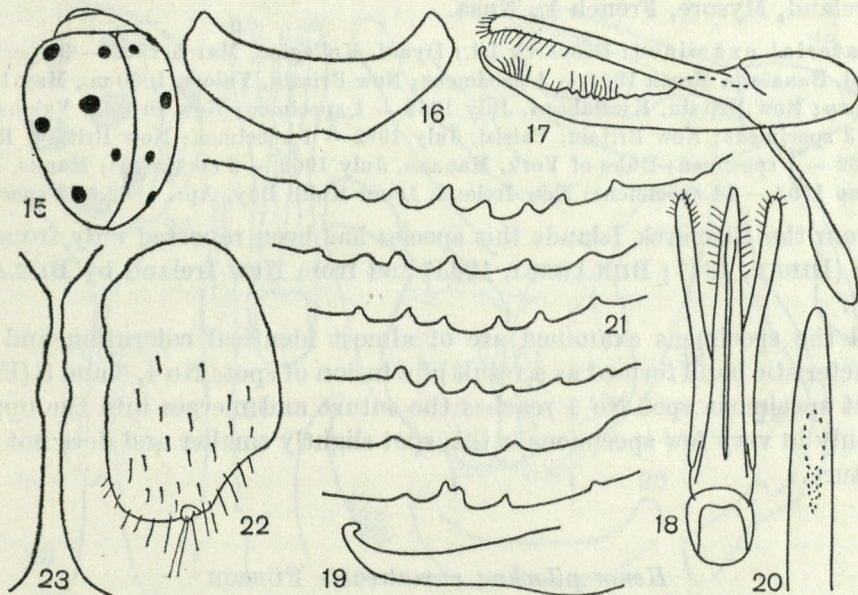
Henosepilachna diffinis (EYD. et SOUL.)

General distribution: Philippines, Borneo, Palawan.

Material examined: Philippines: Tawi Tawi, Tarawakan north of Batu Batu, Oct. et Nov. 1961 — 16 specimens; Tawi Tawi, Lapid Lapid at Manalik, Channel, Nov. 1961 — 5 specimens; Palawan, Brookes Point, Uring Uring, Aug. 1961 — 1 specimen; Palawan, Mantalingajan, Finigisan 600 m., Sept. 1961 — 1 specimen; Mindanao, Sapa-moro, Curuan distr., Dec. 1961 — 9 specimens.

Recently, the species has been recorded in the Philippines by BIELAWSKI (1965a).

All of the individuals examined are of almost identical coloration (Fig. 15). A slight variability is recorded in the size of spots. Spot No 4 does not reach



Figs. 15-23. *Henosepilachna diffinis* (EYD. et SOUL.) 15 — outline and pattern of the body; 16 — last sternite of the male; 17-18 — male genitalia; 19 — apex of the penis; 20 — apex of the siphon; 21 — variability of the teeth on the inner margin of the penis; 22 — genital plate; 23 — inner margin of the genital plates.

the lateral margin. The femoral line incomplete, with the curve reaching 3/4 of the length of the segment. The last sternite of the male (Fig. 16) with a distinct notch in the middle of the posterior margin. The subgenital plates heavy. The spiculum gastrale straight, slightly widened at the end, 1.75 mm long.

Male genitalia (Figs. 17, 18). The penis as long as the parameres. In lateral view, at the end, it is strongly curved towards the parameres, its end recurvate (Fig. 19). The ventral surface of the penis covered with numerous hairs and teeth. The size and the number of the teeth vary greatly (Fig. 21). In ventral view the penis is virgate, and it gradually tapers towards its end. The parameres straight, narrow, uncinately ended, pubescence short and thin. The trabes short. The apex of the siphon as in Fig. 20.

Female genitalia. The genital plates (Fig. 22) elongate, their shape slightly irregular. At the end, on the outside, distinctly incised. The inner margin of the genital plates (Fig. 23) slightly and irregularly incised. The sexual tubercles large. Pubescence thick but not very long. The genital plate 0.57–0.6 mm long and 0.35–0.36 mm wide.

Henosepilachna signatipennis (BOISD.)

General distribution: Waigeo, New Guinea, the Bismarck Islands, New Ireland, Mysore, French I., Nusa.

Material examined: Bismarck Isl.: Dyaul, Kollepine, March 1962 — 9 specimens; Lavongai, Banatam, March 1962 — 3 specimens; New Britain, Yalom, 1000 m., May 1962 — 1 specimen; New Britain, Kwalakessi, July 1962 — 1 specimen; New Britain, Valoka, July 1962 — 3 specimens; New Britain, Vaisisi, July 1962 — 1 specimen; New Britain, Rabaul, July 1962 — 1 specimen; Duke of York, Manuan, July 1962 — 2 specimens; Manus, Lorengau, June 1962 — 14 specimens; New Ireland, Danu Kalili Bay, Apr. 1962 — 3 specimens.

From the Bismarck Islands this species has been reported only from New Britain (DIEKE, 1947; BIELAWSKI, 1963) and from New Ireland by BIELAWSKI (1965b).

All the specimens examined are of almost identical coloration and have a characteristic band formed as a result of a fusion of spots No 4, 3 and 5 (Fig. 5). In most specimens spot No 1 reaches the suture and merges into the opposite spot; only in very few specimens is this spot slightly smaller and does not reach the suture.

Henosepilachna sumatrensis FÜRSCH

General distribution: Philippines, Sumatra.

Material examined: Philippines; Palawan, Mantalingajen, Pinigisan 600 m., Sept. 1961 — 3 specimens.

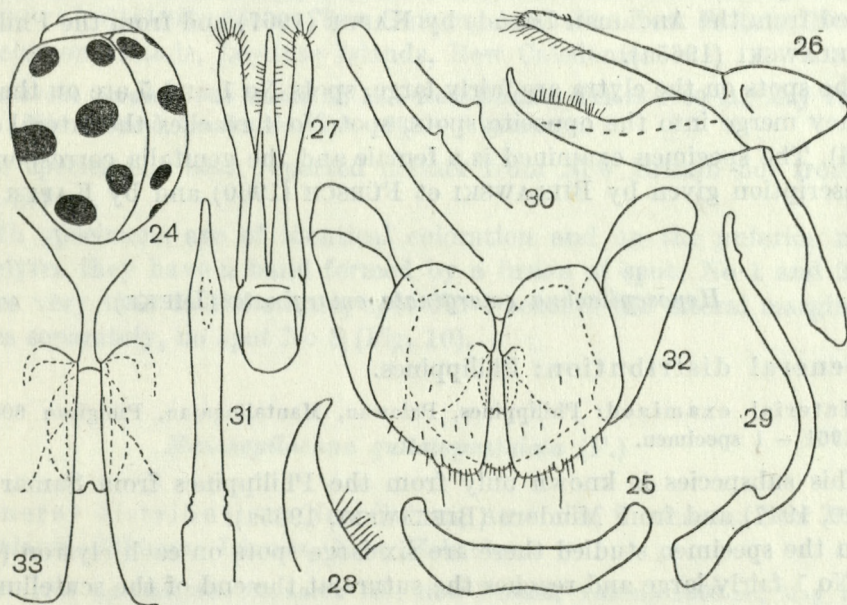
Up till now, the species has been reported from Sumatra only (FÜRSCH, 1959).

The three specimens have 6 large spots on each elytron (Fig. 24). In all of them spot No 4 reaches the lateral margin. The ends of the elytra rounded. The femoral line incomplete. The last sternite of the male (Fig. 25) short, with a small notch on the posterior edge. The last sternite of the female divided, long.

The body length of the specimens examined varies from 7 to 7.5 mm.

Male genitalia (Figs. 26, 27). The penis massive, with the inner margin irregularly incised. The end curved towards the parameres (Fig. 28). In ventral view the penis is very narrow and elongate. Pubescence on the parameres short. The trabes short, wide at the end. The siphon (Fig. 29) fairly large, slightly arcuate, with a characteristic tooth at the end (Fig. 30). On the ventral side, the apex of the siphon (Fig. 31) in the form of a strongly elongate blade of a lancet.

Female genitalia (Fig. 32). The genital plates elongate, with small sexual tubercles and with short and thin pubescence. Two large, fairly distinct teeth on the inner margin. The internal structure of the plates, below the teeth, sclerotized in a fairly complicated way (Fig. 33). The genital plate 0.75 mm long and 0.45 mm wide.



Figs. 24-33. *Henosepilachna sumatrensis* FÜRSCH. 24 - outline and pattern of the body; 25 - last sternite of the male; 26-27 - male genitalia; 28 - apex of the penis; 29 - siphon; 30 - apex of the siphon, lateral view; 31 - apex of the siphon, ventral view; 32 - female genitalia; 33 - inner margin of the genital plates.

Male genitalia, and particularly the penis in lateral view, differ slightly from the figure presented in FÜRSCHE'S paper (1959). However, a comparison with the genitalia of a paratype of this species from the collection at the Institute of Zoology in Warsaw indicates that the specimens examined belong to *H. sumatrensis* FÜRSCHE and the differences are due to the very schematic figure in the paper. There have been recorded no basic differences in the structure of the penis of the specimens from the Philippines and of the specimen (paratype) from Sumatra.

The shape of the penis in *H. sumatrensis* FÜRSCHE is very similar to that in *H. tertia* (DIEKE), a species recorded in Assam (DIEKE, 1947), but the presence of a characteristic tooth on the siphon, a strong ventral elongation of the siphon and the rounded ends of the elytra indicate that the specimens from the Philippines belong to *H. sumatrensis* FÜRSCHE.

Henosepilachna kaszabi (BIEL. et FÜRSCHE)

General distribution: Burma, the Andaman Islands, Philippines.

Material examined: Philippines, Palawan, Mantalingajan, Pinigisan 600 m., 7 Sept. 1961 — 1 specimen.

This species has been described in Burma (BIELAWSKI et FÜRSCHE, 1960), reported from the Andaman Islands by KAPUR (1967) and from the Philippines by BIELAWSKI (1965a).

The spots on the elytra are fairly large, spots No 1 and 5 are on the suture and they merge into the opposite spots, spot No 4 reaches the lateral margin (Fig. 6). The specimen examined is a female and the genitalia correspond with the description given by BIELAWSKI et FÜRSCHE (1960) and by KAPUR (1967)

Henosepilachna emarginata emarginata (DIEKE)

General distribution: Philippines.

Material examined: Philippines, Palawan, Mantalingajan, Pinigisan 600 m., 10 Sept. 1961 — 1 specimen.

This subspecies is known only from the Philippines from Samar Island (DIEKE, 1947) and from Mindoro (BIELAWSKI, 1965a).

In the specimen studied there are six large spots on each elytron (Fig. 7). Spot No 1 fairly large and reaches the suture at the end of the scutellum. Spot No 5 is very close to the suture, but does not reach it. None of the other spots reach any of the margins.

The male genitalia of the specimen examined are as described by BIELAWSKI (1965a).

Henosepilachna bona BIEL.

General distribution: New Britain, New Ireland.

Material examined: Bismarck Isl.: New Britain, Yalom 1000 m., May 1962 — 10 specimens; New Britain, Komgi 1000 m., May 1962 — 3 specimens; New Ireland, Lemkamin, Apr. 1962 — 8 specimens.

Up till now the species has been recorded in New Ireland only (BIELAWSKI, 1965a).

The New Ireland specimens examined have lighter coloration on the anterior and posterior parts of the elytra. The lighter coloration on the anterior part is of various sizes in particular specimens, but it is always distinct (Fig. 8). The specimens from New Britain have no lighter coloration on the anterior part of their elytra and that which occurs on the posterior part is slightly smaller in comparison with the specimens from New Ireland (Fig. 9). In the specimens from New Britain and from New Ireland both the shape of the body and the structure of the genitalia of the male and the female are identical and correspond with the ones given by BIELAWSKI (1965b).

Henosepilachna urvillei (MONTR.)

General distribution: New Guinea, Australia, New Britain, New Ireland, Solomon Islands, Loyaute Islands, New Caledonia.

Material examined: Bismarck Isl.: New Britain, Yalom 1000 m., May 1962 — 1 specimen; New Ireland, Lemkamin, Apr. 1962 — 1 specimen.

The species has been reported neither from New Britain nor from New Ireland before.

Both specimens are of identical coloration and on the anterior margin of the elytra they have a band formed by a fusion of spots No 1 and 2, spot No 5 lies very near to the suture, spot No 4 reaches the lateral margin, spot No 6 lies separately, no spot No 3 (Fig. 10).

Henosepilachna guttatopustulata (F.)

General distribution: New Guinea, Australia, Tasmania, New Britain, New Ireland, Solomon Islands, New Hebrides.

Material examined: Bismarck Isl.; New Britain, Yaloma 1000 m., May 1962 — 3 specimens; New Britain, Valoka, July 1962 — 10 specimens; New Ireland, Lamkamin, Apr. 1962 — 2 specimens.

This species has been recorded in New Britain by BIELAWSKI (1963) and in New Ireland by BIELAWSKI (1965b).

In the specimens from New Ireland and the two specimens from New Britain the black colour on the elytra is more diffuse and covers a larger part than the light colour (Fig. 11). In the other specimens the light colour covers a larger part of the elytra than the black colour.

Henosepilachna biroi (Ws.)

General distribution: Philippines, New Guinea, New Britain.

Material examined: New Britain, Komgi 1000 m., 14 May 1962 — 1 specimen.

The species has not been recorded in New Britain before.

In the specimen studied the light colouring at the end of the elytra is surrounded by the black colour in such a way that it forms a round spot reaching the lateral margin only (Fig. 12).

The female genitalia correspond with the description given by BIELAWSKI (1963).

Epilachna hendecaspilota (MADER)

General distribution: Ceylon, India, Burma, Thailand, Taiwan, China, Philippines.

Material examined: Philippines: Tawi Tawi, Tarawakan north of Batu Batu, 25 Oct. 1961 — 1 specimen; Balabac, Dalawan Bay, Oct. 1961 — 5 specimens.

The species has never been recorded in the Philippines before.

In all the specimens studied there is no spot in the middle of the pronotum, only a slight darkening occurs in some of them. The elytra with 5 spots on each (Fig. 13). The male genitalia as described by BIELAWSKI (1964).

Afidenta misera (Ws.)

General distribution: Ceylon, India, Hongkong, Taiwan, China, Philippines.

Material examined: Philippines, Palawan, Mantalingajan, Pinigisan 600 m., Sept. 1961 — 2 specimens.

Up till now *Afidenta misera* (Ws.) has not been recorded in the Philippines before.

The species is discussed in detail in a paper by BIELAWSKI (1961). In one of the specimens examined there are two small spots on the pronotum, the other has a unicoloured pronotum. Each elytron with 6 spots (Fig. 14). The male genitalia as described by BIELAWSKI (1961).

LITERATURE

- BIELAWSKI R., FÜRSCH H. 1960. Zwei neue Coccinelliden aus Burma. Mitt. münchn. ent. Ges., München, **50**: 68–71, 13 ff.
- BIELAWSKI R. 1961. Materialien zur Kenntnis der Coccinellidae (Coleoptera). II. Ann. zool., Warszawa, **19**: 383–415, 74 ff.
- BIELAWSKI R. 1963. Monographie der Epilachninae (Coleoptera, Coccinellidae) der Australischen Region. Ann. zool., Warszawa, **21**: 295–461, 403 ff.
- BIELAWSKI R. 1964. Über drei Arten aus der Verwandtschaft von *Epilachna flavicollis* (THBG.) (Coleoptera, Coccinellidae). Bull. Acad. Polon. Sci., Cl. II., Warszawa, **12**: 255–262, 34 ff.
- BIELAWSKI R. 1965a. A review of the Philippine species of the genus *Henosepilachna* LI et COOK (Coleoptera, Coccinellidae). Pol. Pismo ent., Wrocław, **35**: 535–553, 49 ff.
- BIELAWSKI R. 1965b. On Certain Species of the Genus *Henosepilachna* LI (Coleoptera, Coccinellidae) from New Ireland. Bull. Acad. Polon. Sci., Cl. II., Warszawa, **13**: 227–230, 8 ff.
- DIEKE G. H. 1947. Ladybeetles of the genus *Epilachna* (sensu lato) in Asia, Europe, and Australia. Smiths. misc. Coll., Washington, **106**, No. 15, 183 pp., 6 ff., 27 tt.
- FÜRSCH H. 1959. Die palaearktischen und indomalayischen *Epilachnini* der Zoologischen Sammlung des Bayerischen Staates München (Col., Cocc.). Opusc. zool., München, No. **29**, 9 pp., 17 ff.
- KAPUR A. P. 1967. The Coccinellidae (Coleoptera) of the Andamans. Proc. Nat. Inst. Sc. India, Calcutta, **32**, No. 3–4: 148–189, 12 ff.
- LI C. S., COOK E. F. 1961. The Epilachninae of Taiwan (Col.: Coccinellidae). Pacific Insects, Honolulu, **3**, No. 1: 31–91, 159 ff.
- PETERSEN B. 1966. The Noona Dan Expedition, 1961–62. Insects and other land arthropods. Ent. Medd., Copenhagen, **34**: 283–304.

Instytut Zoologii PAN
Warszawa, Wilcza 64

STRESZCZENIE

[Tytuł: *Epilachninae* (Coleoptera, Coccinellidae) zebrane podczas ekspedycji Noona Dan w latach 1961 i 1962]

Opracowano 13 gatunków *Epilachninae* zebranych przez ekspedycję Noona Dan na Filipinach, Nowej Brytanii i Nowej Irlandii. Dla fauny Filipin wykazano 3 nowe gatunki, dla Nowej Brytanii 3 gatunki i dla nowej Irlandii jeden gatunek. Bardziej szczegółowo omówiono dwa gatunki: *Henosepilachna diffinis* (EYD. et SOUL.) i *H. sumatrensis* FÜRSCH.

РЕЗЮМЕ

[Заглавие: *Epilachninae (Coleoptera, Coccinellidae)*, собранные во время Нуна Дан экспедиции в 1961 и 1962 годах]

Обработали 13 видов *Epilachninae*, собранных Нуна Дан экспедицией на Филиппинских островах, Новой Британии и Новой Ирландии. Констатировали для фауны Филиппинов 3 новых вида, для Новой Британии — 3 вида и для Новой Ирландии — один вид. Подробно обсудили два вида — *Henosepilacha diffinis* (EYD. et SOUL.) и *H. sumatrensis* FÜRSCH.

Redaktor pracy — prof. dr J. Nast

Państwowe Wydawnictwo Naukowe — Warszawa 1980

Nakład 960 + 90 egz. Ark. wyd. 0,75; druk. 5/8. Papier druk. mat. kl. III, 80 g, B1. Cena zł 10, —
Nr zam. 2016/80 — Wrocławska Drukarnia Naukowa

ISBN 83-01-01905-0

ISSN 0003-4541

