Pacific Insects Vol. 20, no. 2–3: 279–292 16 May 1979

THE GENUS *INDALMUS* IN ASIA, NEW GUINEA AND AUSTRALIA, WITH DESCRIPTION OF A NEW GENUS, *PLATINDALMUS* (COLEOPTERA: ENDOMYCHIDAE)[1]

By **H. F. Strohecker**[2]

Abstract: The species of the endomychid genus *Indalmus* that occur in Asia, New Guinea and Australia are the subject of this review, based on a study of the types. *Indalmus formosanus* (Csiki) is given as a new combination for *Phaeomychus formosanus* Csiki. New synonyms noted are *I. formosanus* Strohecker = *I. formosanus* (Csiki); *I. latus* Arrow = *I. angusticollis* Gerstaecker; *I. latefasciatus* and *Ancylopus atricornis* Pic = *I. kirbyanus* (Latreille). *I. vulcanus* Stroh. is placed as a subspecies of *I. malayanus* Arrow and *I. coomani sinensis* is described as a new subspecies (China: Kiangsi). *Platindalmus*, new genus, is proposed with *Eumorphus calcaratus* Arrow as type species. *P. calcaratus australis*, new subspecies is described from south Laos.

At intervals over more than 2 decades, as material has come to me for study, I have given attention to the genus *Indalmus*. In 1960–61, through support from Grant G-9023 from the National Science Foundation, I was able to visit European museums and examine type material deposited by earlier students of the group. I have not seen the types for 6 nominal species. Of these *I. kirbyanus* (Latr.) is well established by usage; *I. lineella* (Chapuis) and *I. liuchungloi* Kryz. were illustrated by their describers; *I. quadripunctatus* (Ohta) was illustrated by Chûjô (1939). *I. latefasciatus* Pic appears, from the original description, to have been based on a callow specimen of *I. kirbyanus* and *I. grandjeani* (Pic) denotes an insect unknown to me.

Of the other 17 nominal taxa, I have seen the holotype or syntype series from which a lectotype has been chosen. Unless otherwise indicated, lectotype designations are made in this study for the first time.

References are made to the following institutions with abbreviations indicated:

AM	American Museum, New York
BISHOP	Bishop Museum, Honolulu
BOGOR	Museum Zoologicum, Bogor, Indonesia
BMNH	British Museum (Natural History), London
CAS	California Academy of Sciences, San Francisco
FMNH	Field Museum of Natural History, Chicago
FSCA	Florida State Collection of Arthropods, Gainesville
IZW	Institut Zoologique, Warsaw
LM	Rijksmuseum van Natuurlijke Historie, Leiden
MNM	Magyar Nemzeti Museum, Budapest

1. Materials examined from the Bishop Museum are partly the results of fieldwork and research supported by grants to Bishop Museum from the U.S. National Science Foundation (G-4774, G-2127, G-10734) and the U.S. National Institutes of Health (AI-01723).

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PM	Muséum d'Histoire Naturelle, Paris
ZIL	Zoological Institute, Leningrad
ZMH	Zoologisches Museum, Humboldt-Universitaet, Berlin
MGF	Museum G. Frey, Tutzing

Genus **Indalmus** Gerstaecker

Indalmus Gerstaecker, 1858: 185.—Arrow, 1925: 323.

Type-species: *Eumorphus kirbyanus* Latreille (Arrow 1925: 323). *Mycella* Chapuis, 1876: 104. Type-species: *Mycella lineella* Chapuis.

As treated here, *Indalmus* includes 21 species and 2 subspecies of generally black color and of small or moderate size (5.5–8 mm).

Antenna with club only moderately wide and but little flattened, except in *I. nanus* and *I. coomani.* Front margin of pronotum with small membrane extended upon occiput. Prosternum with basal area of pleurosternal suture deeply grooved (groove absent in *I. clavipes*). This fossa appears to be accessory to glands in pronotal base and is not peculiar to *Indalmus* but, with exception noted, is strongly developed. Spinasternum separating coxae but narrow and not prolonged behind them. Intercoxal area of mesosternum pentagonal, about as wide as long to slightly elongate and usually with a median ridge and raised borders, but smooth in *I. clavipes.* Mouthparts show no distinctive features. Mandibles with apex sharp and with an internal tooth, which may be close to apex or distant from it (*I. distinctus*; *I. malayanus*). Maxillary galea broadly triangular, lacinia short, narrow, tapering, its apex fringed with setae and so strongly oblique as to appear part of medial edge. Ligula corneous, lobed at sides, last article of labial palp transverse.

The association of these 21 species in a single genus is not wholly satisfactory. The generic name *Mycella* might be used for *lineella* and *lachrymosus. I. clavipes* and *I. pubescens* each present features which might justify monotypic genera, but I have largely limited my effort to clarification of specific taxa and shall leave the question of additional genera to subsequent students.

Key to Asiatic *Indalmus*,[3] based on external characters

1.	Elytron with longitudinal red stripe(s)	2
	Elytron with rounded or transverse markings	3
2 (1).	Elytron with complete red stripe	1. **lineella**
	Red stripe of elytron widely interrupted	2. **lachrymosus**
3 (1).	Elytral base (only) broadly red or yellow	3. **indicus**
	Elytron with 2 or 3 pale marks	4
4 (3).	Elytron with 2 pre-apical spots . . . (Timor I)	14. **insularum**
	Elytron with 1 pre-apical mark	5
5 (4).	Length 4 mm . . . (Sumbawa I)	23. ?**grandjeani**
	Length 5 mm or more	6
6 (5).	Anterior elytral mark irregular or angulate	7
	Anterior mark rounded or quadrate	14
7 (6).	Dorsum glabrous	8
	Dorsum distinctly pubescent	13
8 (7).	Pronotum coarsely, closely punctate . . . (Taiwan)	5. **formosanus**
	Pronotum finely punctate, shining	9

3. *I. malayanus vulcanus* and *I. coomani sinensis* not included.

9 (8).	Posterior elytral mark with long rays ... (Java)	12. **undulatus**
	Rays of posterior mark short or absent	10
10 (9).	Anterior elytral mark sharply angulate	6. **kirbyanus**
	Anterior mark with rounded angles	11
11 (10).	Elytra somewhat cordiform ... (S India)	22. **clavipes**
	Elytra bluntly rounded to apex	12
12 (11).	Posterior elytral spot oval ... (Taiwan)	4. **quadripunctatus**
	Posterior mark transverse, angulate	7. **liuchungloi**
13 (7).	Length 6 mm ... (Java)	20. **hirsutus**
	Length 8 mm ... (Indochina, Burma)	21. **pubescens**
14 (6).	Long-parallel, length: width more than 2	15
	Form broader, length: width 2 or less	16
15 (14).	Pronotum densely, conspicuously punctate	9. **distinctus**
	Pronotum finely punctate, shining	10. **malayanus**
16 (14).	Elytral margin abruptly widened behind umbo	17
	Elytral margin gradually widened caudad	19
17 (16).	Pronotum red ... (Luzon)	15. **luzonicus**
	Pronotum black ... (Mindanao, Borneo)	18
18 (17).	Pronotum parallel basad, hind angles sharp	16. **inermipes**
	Pronotum narrowed basad, hind angles obtuse	13. **brevis**
19 (16).	♂, middle tibia unarmed, tip incurved	17. **nanus**; 18. **coomani**
	♂, middle tibia bowed and with long spine	8. **angusticollis**

1. **Indalmus lineella** (Chapuis) FIG. 1

Mycella lineella Chapuis, 1876: 105. Holotype ♀, Australia: Queensland, Rockhampton, deposition unknown to me.

Indalmus lineelus: Strohecker, 1953: 80.

Shining black below and above, elytron with a narrow median red stripe. Pronotum and elytra of hardly interrupted parallel outline. ♂ with front tibia unarmed, middle tibia abruptly incurved at apex. Length 6.5–7 mm.

Material examined. AUSTRALIA: Cape York Penin., Iron Range, 10–16.VI.1948, L. J. Brass, 2 ♂ (AM, FSCA). PNG: NEW GUINEA (NE): Morobe Distr, Wau, 1200–1300 m, collections from 1961–1964, by J. (& M.) Sedlacek, numerous specimens; [Eastern Highlands]: Kainantu, 1650 m, 20–26.X.1959, Maa, 1 ♂, 1 ♀; Kassam, 7.XI.1959, Maa (BISHOP, FSCA).

2. **Indalmus lachrymosus** Arrow FIG. 2, 28

Indalmus lachrymosus Arrow, 1925: 327.

Lectotype ♀, Ceylon: Kalupahani, Haldummulle (BMNH).

Very similar in appearance to *I. lineella* but red markings of elytron are 2 longitudinal patches, one near base, the other near apex. Length 6–6.5 mm.

Although Arrow described the ♂, this sex is represented in BMNH by a single specimen with label "India, Bowring, 63.47" and was not cited by Arrow. I have seen only the 2 examples noted.

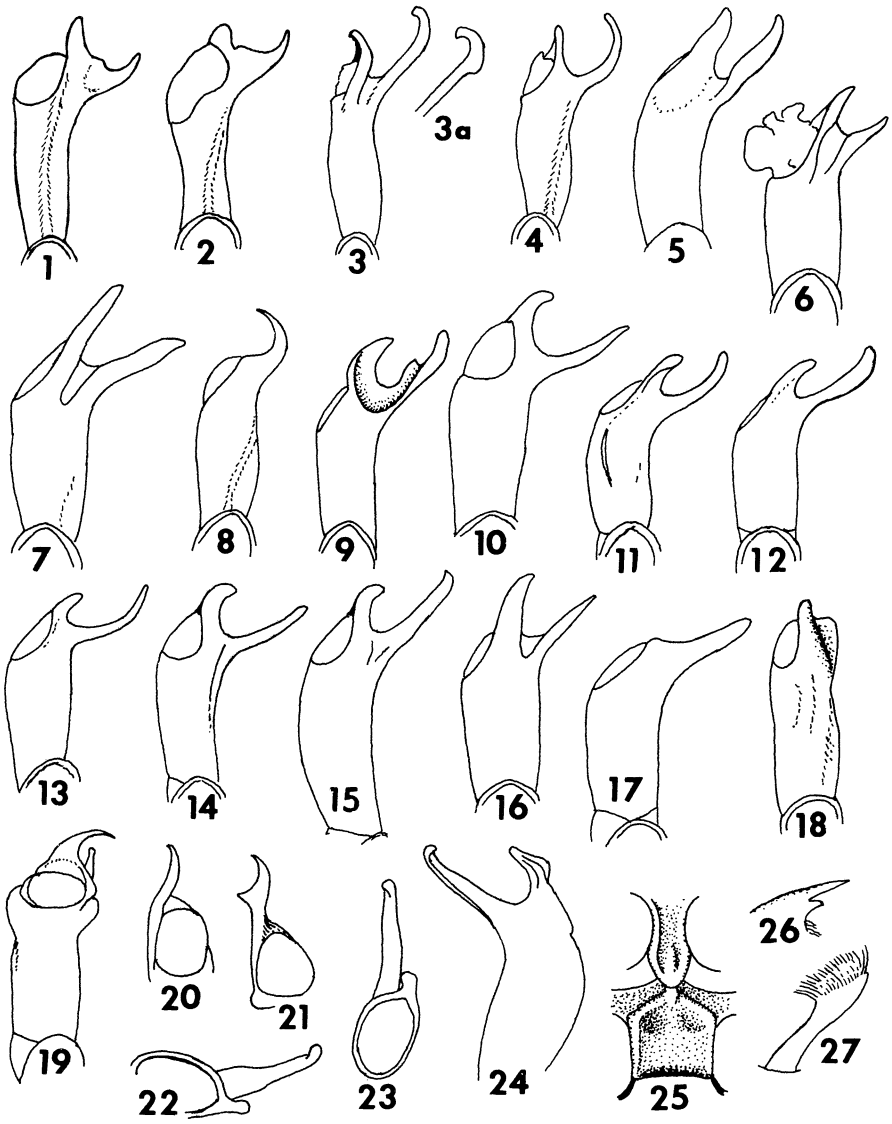

FIG. 1–27. 1–19, aedeagus, ventral view: 1, *Indalmus lineella*; 2, *I. lachrymosus*; 3, *I. indicus*; 4, *I. formosanus*; 5, *I. kirbyanus*; 6, *I. malayanus malayanus*; 7, *I. liuchungloi*; 8, *I. angusticollis*; 9, *I. distinctus*; 10, *I. brevis*; 11, *I. insularum*; 12, *I. luzonicus*; 13, *I. inermipes*; 14, *I. nanus*; 15, *I. coomani coomani*; 16, *I. hirsutus*; 17, *I. pubescens*; 18, *I. clavipes*; 19, *Platindalmus calcaratus calcaratus*. 3a, 20–23, aedeagal ramus, apical view: 3a, *I. indicus*; 20, *Platindalmus calcaratus calcaratus*; 21, *P. c. australis*; 22, *Indalmus coomani coomani*; 23, *I. c. sinensis*. 24, *I. undulatus*, aedeagus, dorsal view. 25–27, *P. c. calcaratus*: 25, pro- and mesosternum; 26, apex of mandible; 27, maxillary lacinia.

3. **Indalmus indicus** (Gorham) FIG. 3, 3a, 29

Ancylopus indicus Gorham, 1875: 312.
Indalmus indicus: Arrow, 1925: 327.—Kano, 1928: 258.—Chûjô, 1939: 89.

Lectotype ♀, India: "himalaya" (BMNH). BMNH also has 2 paralectotype ♀ and 1 ♂ with label "Kumaon, Haldwani Div., Nandhaur R., H. G. Champion."

Similar in form to the 2 preceding species. Prothorax and thoracic sterna red, other parts black but elytron with a large quadrate red or yellow patch on shoulder. Front tibia of ♂ with blunt tooth at distal ⅓. Length 6–6.5 mm.

Kano has recorded this species, perhaps erroneously, from Taiwan.

4. **Indalmus quadripunctatus** (Ohta)

Encymon ruficephalus quadripunctatus Ohta, 1931: 222.
Indalmus quadripunctatus: Chûjô, 1938: 398; 1939: 92, fig. 51.

Holotype (sex?), Taiwan: Baibara, 20.VII.1925, T. Uchida, H. Kono, Y. Miwa presumably in collection at Hokkaido Imperial University. I have seen no examples of this species.

As illustrated by Chûjô (1939), this insect is black, elytron with a slightly angulate red bar across umbo and an oval red spot on caudal slope. Length 6–7 mm.

5. **Indalmus formosanus** (Csiki), **new combination** FIG. 4

Phaeomychus formosanus Csiki, 1937: 7.
Indalmus formosanus Strohecker, 1945: 1. **New synonymy.**

Holotype ♂ of *Ph. formosanus* Csiki from Formosa: Takao (MNM); holotype ♂ of *I. formosanus* Strohecker from Formosa (AM).

Subparallel in outline, black with bronze sheen, elytron with 2 yellow marks, the anterior behind umbo deeply constricted and may appear as 2 spots, the posterior arcuate, extending caudad near suture. Length 5–6 mm.

Besides the type material cited, I have seen a few examples labeled "Formosa, Sauter Coll."

6. **Indalmus kirbyanus** (Latreille) FIG. 5

Eumorphus kirbyanus Latr., 1807: 72.—Guérin, 1857: 251.
Dapsa kirbyana: Latr., 1829: 159.
Indalmus kirbyanus: Gerstaecker, 1858: 186.—Arrow, 1925: 324.—Kano, 1928: 223.—Chûjô, 1939: 91.—Strohecker, 1953: 80.
Ancylopus atricornis Pic, 1921: 2. **New synonymy.**
Indalmus latefasciatus Pic, 1929: 15. **New synonymy.**

Arrow (1925) notes the type of *E. kirbyanus* as unknown; it is probably lost. Holo-

type ♀ of *A. atricornis* from Tonkin (PM). No specimen of *I. latefasciatus* in Pic collection; probably destroyed by dermestids.

Habitus figures of this species have been given by Arrow (1925), Chûjô (1939) and Strohecker (1953). The insect is shining black, elytron with 2 yellow bars, the anterior transversely undulate with sharp denticulations, the posterior with front and hind margin excised. Protibial tooth of ♂ sharp and rather long. Length 6–7 mm.

Arrow (1925) recorded this species from S India, Bengal, Assam, Sikkim, Burma, Tenasserim and (1928) from Laos and Tonkin. I reviewed 45 specimens of Arrow's sorting in BMNH. Kano (1928) and Chûjô (1939) listed it among Taiwan species.

Material examined (in part). [INDIA] Assam: Kaziranga, N of Mikir Hills, V.1961, G. Scherer, 26 ♂, 36 ♀ (MGF, FSCA). NEPAL: Pekhara, 910 m, 18–27.IX.1965, L. W. Quate, 1 ♂, 5 ♀. THAILAND: Chiang Mai Prov., Chiang Mai, 1100–1500 m, 1966, J. Sedlacek, 6 ♂. LAOS: Sedone Prov., Paksong, 17.VI–15.VII.1965, native coll., 2 ♂, 3 ♀; Attopeu Prov., Houei Kong, 17.VII.1965, native coll., 1 ♂, 3 ♀; Borikhane Prov., Pakkading, 5.IV.1966, native coll., 1 ♂; Waikamthong Prov., Khong Sedone, 27.IX.1965, native coll., 1 ♂; Khammouane Prov., Phon Tieu, 28.IV–28.IX.1965, native coll., 22 ♂, 22♀; 8.III.1966, native coll., 3 ♂, 3 ♀; Sayaboury Prov., Sayaboury, 14.III–5.V.1966, native coll., 1 ♂, 2 ♀; Vientiane, 22.VII.1965, native coll., 1 ♂, 1 ♀ (BISHOP, FSCA). CHINA: Hainan I, Ta Hau, 5.VII.1935, 1 ♂, 1 ♀; Nokyu Chun, 22.III.1936, J. L. Gressitt, 1 ♂ (CAS).

7. **Indalmus liuchungloi** Kryzhanovskij FIG. 7

Indalmus liuchungloi Kryz., 1960: 871, 883.

Holotype ♂, China: Yunnan, Cheli (ZIL).

Similar in appearance to *I. kirbyanus* but of broader form and with elytral markings roundly rather than sharply angulate. Protibial tooth of ♂ is a small tubercle. Length 6.6–7 mm.

Material examined. BURMA: S Shan States, Mong Hai, 1233 m, 8.V.1937, F. K. Ward, 3 ♂, 1 ♀ (BMNH, FSCA). LAOS: Sedone Prov., Paksong, 17.VI–5.VII.1965, native coll., 1 ♂, 3 ♀ (BISHOP, FSCA). VIETNAM: Ban Me Thuot, 18.V.1960, L. W. Quate, 2 ♀ (BISHOP). CHINA: Hainan I, Liamu, 2.VIII.1935, J. L. Gressitt, 2 ♂ (CAS, FSCA); Chung Kon, 19.VII.1935, Gressitt, 1 ♂ (CAS).

8. **Indalmus angusticollis** Gerstaecker FIG. 8, 30

Indalmus angusticollis Gerst., 1858: 187.—Arrow, 1925: 329.
Indalmus latus Arrow, 1925: 325. **New synonymy.**

Lectotype ♂ of *I. angusticollis* with name label and locality label "Birma" (IZW). Lectotype ♂ of *I. latus* with "Type" label and from Sumatra: Medan, J. Corporaal (BMNH). There are 4 paralectotypes of *I. latus* from the type locality. Arrow cited also 2 specimens from Tenasserim in Prague Museum and material taken by Fea at Meetan. I have not seen the Tenasserim specimens.

Smaller and somewhat more convex than *I. kirbyanus*. The anterior elytral spot is large and subquadrate, the posterior almost circular. In ♂ protibial tooth is long, slender and sharp, the mesotibia strongly bowed and with a long appendage which rises at basal ⅓ and is directed distad parallel to tibia. Length 5.5–6 mm.

In describing *I. latus,* Arrow remarked on the great similarity of his diagnosis to Gerstaecker's description of *I. angusticollis* but did not examine the Gerstaecker material. In his treatment of *I. angusticollis,* Arrow (1925: 329) gave a translation of the original description, with the added remark, "I do not know this species."

Material examined. 2 ♀, THAILAND: Chiang Mai Prov., Chiang Dao, 450 m, 5–11.IV.1958, T. C. Maa (BISHOP, FSCA).

9. **Indalmus distinctus** Arrow FIG. 9, 31

Indalmus angusticollis: Gorham, 1896: 295 (not of Gerstaecker, 1858).
Indalmus distinctus Arrow, 1923: 485; 1925: 326.

Lectotype ♂ labeled "Birma; Gorham Coll. 91-50, *Indalmus distinctus* Arrow, Type" (BMNH); paralectotypes: 1 ♂, Assam, Silhet, Chandkhira and 1 ♀, Burma, Carin Cheba, L. Fea, 900–1100 m, 5.XII.1888, both labeled as co-types by Arrow (FSCA ex Janson). A ♀ (FSCA ex Janson) has label, "Carin Cheba, L. Fea, 5.XII.88" but no other data. Arrow also noted material in Genoa Civic Museum; this I have not seen.

Rather narrowly oblong, pronotum slightly sinuate basad. Black, shining, elytron with 2 large yellow patches, the anterior rounded-quadrate, the posterior transverse, protibia of ♂ with strong sharp tooth near middle of inner edge, mesotibia angulately toothed near mid-length and incurved distad. Length 7–8 mm.

I have seen only the material cited above.

10. **Indalmus malayanus malayanus** Arrow FIG. 6, 32

Indalmus malayanus Arrow, 1926: 249.

Lectotype ♂, Sarawak: Quop, IV.1914, G. E. Bryant (BMNH). Paralectotypes: 3 examples from Quop (BMNH). Sumatra: Medan, Corporaal (7 BMNH, 2 FSCA); Bandar Baroe, 850 m (1 BMNH); Haboko, 300 m (1 BMNH). I have not seen other examples of the type series.

Elongate-oval, subparallel. Pronotum sinuately narrowed basad, elytral shoulders distinct. Shining black, elytron with 2 large quadrate or rounded yellow patches. In ♂ protibia has a sharp tooth near middle of inner edge, middle tibia is angulately toothed near middle. In this species the apex of mandible is very long and acute. Length 6 mm.

Material examined. [MALAYSIA: BORNEO]: Sarawak: Bau Distr, Pangkalan Tebang, 8.IX.1958, T. C. Maa, 1 ♀; Sabah: Keningan, 12.I.1959, Maa, 3 ♂, 2 ♀; 19 km N of Kalabakan, 7.XI.1962, K. J. Kuncheria, 1 ♂; Liawan, 14–17.I.1959, Maa, 1 ♂; Ranau, W Coast Res., 7–9.X.1958, L. W. Quate & T. C. Maa, 6 ♂, 2 ♀; 22–25.I.1959, Maa, 1 ♂, 2 ♀; Singkor, 19.I.1959, Maa, 1 ♀ (BISHOP, FSCA).

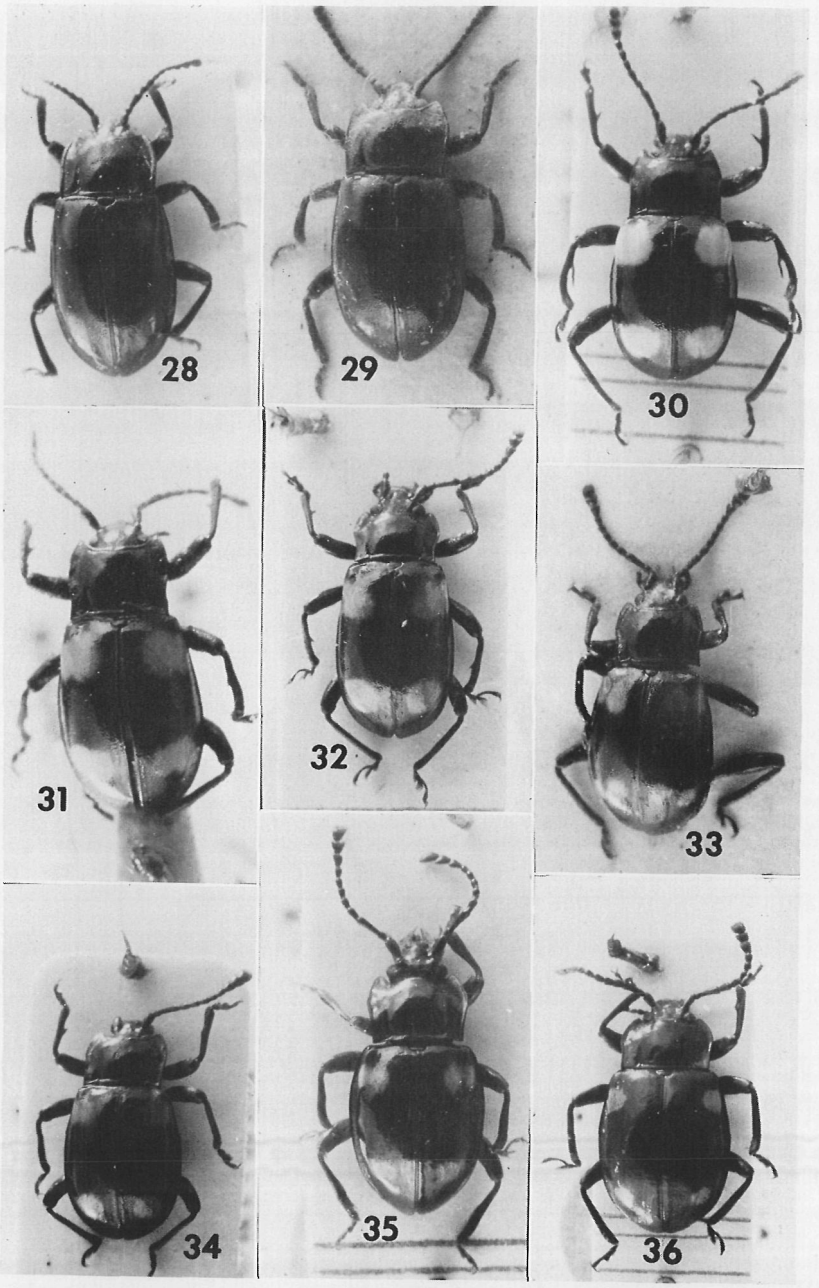

FIG. 28–36. 28, *Indalmus lachrymosus,* lectotype. 29, *I. indicus,* lectotype. 30, *I. angusticollis,* lectotype of *I. latus.* 31, *I. distinctus,* lectotype. 32, *I. m. malayanus,* lectotype. 33, *I. insularum,* holotype. 34, *I. nanus,* lectotype. 35, *I. clavipes,* lectotype. 36, *Platindalmus c. calcaratus,* lectotype.

11. **Indalmus malayanus vulcanus** Strohecker, **n. status**

Indalmus vulcanus Strohecker, 1957: 68.

Holotype ♂, Java: Gunung Slamat (LM).

Very similar to nominate form but narrower and with larger elytral spots. Middle tibia of ♂ is without tooth. I have seen only the type series.

12. **Indalmus undulatus** (Pic) FIG. 24

Engonius undulatus Pic, 1930: 8.
Indalmus stellatus Strohecker, 1957: 69; 1971: 14.
Indalmus undulatus: Strohecker, 1971: 14.

Holotypes cited and synonymy noted by Strohecker (1971).

Form oval, elytra widening to beyond middle. Black, elytron with 2 orange patches. The anterior patch sends a ray to the elytral base and is bidentate behind, the posterior patch is bidentate in front and unidentate behind. In ♂ protibia has a short sharp tooth distad of mid-length, middle tibia with apex incurved and hooked. Length 6.6–7 mm.

Material examined. INDONESIA: JAVA: Tankubanprahu (S coast), IX.1960, J. L. Gressitt, 1 ♂ (BISHOP).

13. **Indalmus brevis** Strohecker FIG. 10

Indalmus brevis Strohecker, 1959: 180.

Holotype ♂ from Borneo (ZMH).

Shining black, elytron with 2 large yellow patches, anterior covering umbo, posterior on apical slope. Pronotum roundly narrowed to base. Elytra widening to apical 1/3, their combined width 0.8 their length. Protibia of ♂ with a sharp tooth distad of mid-length, middle tibia strongly incurved at apex, hind tibia feebly undulate. Length 5.5–6 mm.

Structurally similar, including aedeagus, to *I. undulatus* but of shorter form and with pronotum somewhat differently shaped; elytral spots round. In appearance *I. brevis* resembles a small specimen of *Parindalmus quadrilunatus,* which also occurs in Borneo, while *I. undulatus* closely resembles *P. westermanni,* a Javan species.

Material examined. INDONESIA: BORNEO: Sabah: 19 km N of Kalabakan, 7–10.XI.1962, Y. Hirashima, 1 ♂ (BISHOP).

14. **Indalmus insularum** Gorham FIG. 11, 33

Indalmus insularum Gorham, 1873: 40.

Holotype ♂, Indonesia: Timor I (BMNH).

Black, strongly shining, elytron with anterior band and 2 posterior spots of rust-red color. Gorham cited length as 5.5 mm. Elytra widening to beyond mid-length, where they are about 1½× as wide as pronotum. Anterior pale bar large, its front margin excised, caudal slope of elytron with 2 small round spots, transversely placed. Protibia of ♂ with a short broad tooth, mesotibia incurved at tip.

I have seen only the holotype.

15. **Indalmus luzonicus** Gorham FIG. 12

Indalmus luzonicus Gorham, 1897: 452, pl. 32, fig. 7.

Lectotype ♂, N Luzon, Whitehead, spec. figured and 1 paralectotype ♂ with same collection data in Oberthur Coll. (PM).

Abdominal sternites, prothorax and head orange-red, other parts shining black, elytron with 2 subquadrate orange spots, one humeral, the other pre-apical. Length 6.5–7 mm. Front tibia of ♂ with a low broad tooth at distal ⅓ of inner margin. Apparently the only Luzon *Indalmus* and easily recognized from the Purkiss lithograph accompanying description.

Material examined. PHILIPPINE IS: N. Luzon, Ripong, 3 ♂, 1 ♀ (FSCA, BMNH).

16. **Indalmus inermipes** Strohecker FIG. 13

Indalmus inermipes Strohecker, 1958: 37.

Holotype ♂ from Mindanao, P. I. (FMNH).

Entirely black except 2 large rounded yellow spots on elytron. Slightly narrower in form than *I. luzonicus* but similar in general appearance except coloration. Protibia of ♂ somewhat clavately widened to apex, not toothed. Length 5.6–6 mm.

Material examined. PHILIPPINE IS: Mindanao, Davao, 1 ♂ (BMNH); Zamboanga, Kabasalan, 4.V.1932, H. C. Muzzall, 1 ♀ (CAS).

17. **Indalmus nanus** (Arrow) FIG. 14, 34

Eumorphus nanus Arrow, 1920a: 326.
Engonius minutus Pic, 1927: 11.—Strohecker, 1971: 14.
Indalmus nanus: Strohecker, 1972: 14 (type citations and synonymy).

Lectotype ♂ of *E. nanus* from Tonkin: Hanoi (BMNH). Holotype ♀ of *E. minutus* from Tonkin: Than Moi (PM).

Black, elytron with 2 round yellow spots. Antennal club much flattened, broad, article 10 more than 2× as wide as 8. Pronotum with sides subparallel, feebly narrowed to base. Elytra slightly wider at base than pronotum, widened to beyond middle, rather abruptly rounded to apex. Protibia of ♂ with sharp tooth near middle of inner edge, middle tibia feebly curved. Length 5–6 mm.

Arrow noted the similarity of *E. nanus* to *Indalmus* spp. but chose generic placement on the basis of wide antennal club.

Material examined. In addition to the types cited I have seen 26 specimens, all from Tonkin (BMNH, PM).

18. **Indalmus coomani coomani** (Pic) FIG. 15, 22

Engonius coomani Pic, 1925: 3.
Indalmus coomani: Strohecker, 1971: 14.

Lectotype ♂, designated 1971, on card with 3 paralectotype ♀, Tonkin: Hoa Binh (PM).

Similar to *I. nanus* but with elytra more elongate, more than 3× as long as pronotum; anterior spot large and quadrate. The tooth on front tibia of ♂ projects from shaft at angle of almost 90° and its tip is slightly recurved. Length 6.5 mm.

I have seen only the Pic specimens.

19. **Indalmus coomani sinensis** Strohecker, **new subspecies** FIG. 23

Slightly larger than the nominate form and with elytral spots smaller, anterior spot almost confined to umbo, posterior spot circular and no more than ⅓ as wide as elytron; in *I. c. coomani* this spot covers more than ½ elytral width. Tooth on front tibia of ♂ inclined obliquely distad. Length 6.8 mm.

I suspect that this will prove to be a distinct species, but its structural similarity to the Tonkin specimens leads me to its present placement.

Holotype ♂ (CAS 12,979), CHINA: Kiangsi, Tau Au Hong, 4.VII.1936, J. L. Gressitt; allotype ♀ (CAS), Kiangsi, Wong Sa Shui, 6.VII.1936, Gressitt; paratypes: 1 ♂, Tai Au Hong, 6.VII.1936; 1 ♂, S Kiangsi, Hong San, 16.VII.1936; 1 ♂, Kwantung, Tingwu Shan, 23–26.VII.1950; 1 ♀, Wong Sa Shui, 10.VII.1936; 1 ♀, E Kwantung, Yim Na San, 13.VI.1936, all collected by Gressitt (CAS, FSCA).

20. **Indalmus hirsutus** Strohecker FIG. 16

Indalmus hirsutus Strohecker, 1944: 139.

Holotype ♂ from Java (FSCA).

Undersurface reddish black, upper surface black with fine gray pubescence; elytron with 2 orange patches, the anterior foot-shaped, running from behind umbo mesad and caudad, the posterior with front edge lightly, hind edge deeply excised. Protibia of ♂ straight, unarmed, middle tibia slightly bowed, visible sternite 5 without notch. Length 6 mm.

Material examined. Some years ago I received from A. M. R. Wegner a number of specimens of *I. hirsutus* in lots sent for determination. Representative data are W Java: Buitenzorg (Bogor), 250 m, X.1939, R. W. Becking; Idjen Plateau, 900–1500 m, 7.XI.1933 and 30.XII.1934, H. Lucht; Res. Cheribon, Tjideres, 100 m, I.1936 and 35 m, XII.1946, F. C. Drescher (Bogor; FSCA). S Celebes: Bonthain, C. Ribbe, 1 ♂, 1 ♀ (ZMH).

21. **Indalmus pubescens** (Arrow) FIG. 17

Engonius pubescens Arrow, 1925: 311.
Indalmus pubescens: Strohecker, 1971: 14; 1972: 201.

Lectotype ♂, designated by Strohecker (1971), Burma: Karen Hills, W. Doherty and 1 paralectotype ♂, Indochina: Haut Mekong, Nam Tiene, R. Vitalis (BMNH).

Black with fine gray pubescence, elytron with 2 orange patches, the anterior embracing umbo, the posterior transverse with front and hind edges excised. Protibia of ♂ with large sharp tooth, middle tibia angulately dilated at proximal ⅓ of inner edge, thence strongly curved and serrulate. Length 8 mm.

An anomalous species which shows close relationship with no other. Arrow (1925: 312) has given a fine habitus figure of the insect.

Material examined. S CHINA: Kwantung, Kau-lin San, 700–900 m, IV.1936, J. L. Gressitt & F. K. To, 1 ♂ (CAS). VIETNAM: Ninh Binh, Cuc Phuong, 11–17.V.1966, Gy. Topal, 1 ♀ (MNM).

22. **Indalmus clavipes** Arrow FIG. 18, 35

Indalmus clavipes Arrow, 1920b: 22; 1925: 328.

Lectotype ♂ from S India: Nilgiri Hills, Karkur Ghat, 600 m, H. L. Andrews (BMNH). Sixteen paralectotypes with same data as lectotype (BMNH, FSCA).

Arrow described the insect as, "Dark chestnut-brown with slight purplish or metallic lustre upon elytra . . . each . . . with 2 bright yellow spots, the 1 transverse and constricted at middle, the 2 round or oval, midway between the middle and apex." Length 6 mm.

The features of this insect prevent its definite placement in any current endomychid genus. Its dorsal surface is less convex, its ventral more convex than other *Indalmus*. Front coxae are globular but very prominent, prosternum is narrow and rather short as in *Indalmus* but mesosternum is quite wide and smooth. Elytra are long-cordiform rather than abruptly rounded to apex. Protibia of ♂ strongly dilated in distal ½ and lobed beneath, mesotibia incurved with a small hook at disto-internal angle, metatibia weakly undulate, distal ½ of inner edge with a row of long hairs. The aedeagus is also unusual in form.

I have seen only the type series.

23. **Indalmus grandjeani** (Pic), taxon dubium

Engonius grandjeani Pic, 1930: 8.
Indalmus grandjeani: Strohecker, 1971: 14.

There is no specimen in Pic collection and I have seen none to which Pic's diagnosis is applicable. I give a translation of Pic's unusually full description:

"Oblong-elongate, glabrous, black, each elytron with a large marking at base and a transverse band behind middle, yellow; antennal club but little dilated; pronotum shining, rather short and broad, sides subsinuate, anterior angles projecting but little, lateral sulci long, disc sparingly punctate; elytra slightly wider than pronotum, somewhat elongate, outline subarcuate, sparsely and irregularly punctate; protibia stout, unarmed. Length 4 mm. Sumbawa (ex coll. Grandjean).

Because of narrowness of antennal club this species might be placed in the genus *Indalmus*. The very large anterior macula, enclosing the umbo, suffices for recognition of this species."

Platindalmus Strohecker, **new genus**

Form broad-oval, convexity normal for family. Antenna rather stout, article 3 about as long as 4–5 combined, club not much flattened and only moderately wide, article 10 not quite 2× as wide as 8. Mandible with apex aciculate and with an internal tooth. Maxillary galea broadly triangular, lacinia short and narrow, its apex strongly oblique and with a dense row of cilia, last article of palp conoid, minutely truncate. Ligula lobed at sides, last article of labial palp transverse. Prosternum broad between coxae, apex prolonged and somewhat narrowly rounded. Intercoxal mesosternum pentagonal, about as wide as long, flat but with side and front edges raised. Scutellum almost semicircular, not angulate.

In structure of thoracic sterna similar to some of the larger forms of *Eumorphus* but with different mandibular structure. Some features, especially those of ♂, set it apart from other known endomychids, as noted by Arrow.

Type-species: *Eumorphus calcaratus* Arrow.

Platindalmus calcaratus calcaratus (Arrow), **new combination**

FIG. 19, 20, 25–27, 36

Eumorphus calcaratus Arrow, 1920a: 325.—Kryzhanovskij 1960: 876.

Lectotype ♂, Indochina: Haut Mekong, Vien Poukha, 3.V.1918, R. V. de Salvaza (BMNH). BMNH also has a syntype (paralectotype) from Xieng Khouang, Ban Sai. One or more syntypes are probably in PM. Arrow (1920a) cited material from Luang Prabang, Sala Pang Yok.

Black below and above, elytron with 2 small round yellow spots, one behind umbo, the other on caudal slope. Length 7–8 mm, max. width 4.5 mm. Protibia of ♂ with a short, broadly triangular tooth at distal ⅓ of meso-inferior edge, metatibia straight, tip with an acutely triangular appendage, which is directed mesad and fringed with coarse hairs. Each abdominal sternite of ♂ bears at middle a tuft of coarse setae. Aedeagus of unusual form.

Material examined. VIETNAM: Ninh-Binh Prov., Dang Forest, 200 m, 19–27.X.1963, T. Pócs, 3 ♂, 2 ♀ (MNM, FSCA).

Platindalmus calcaratus australis Strohecker, **new subspecies** FIG. 21

External features as in nominate form. Elytral spots are darker orange in *P. c. australis,* but this may be due to greater maturity. Differentiation is made here on the basis of aedeagi, as shown in the figures.

Holotype ♂ (BISHOP 11,135), LAOS: Sedone Prov., Paksong, 5.VIII.1965, native collector; allotype ♀ (BISHOP) with same data as holotype; paratypes: 3 ♂, 1 ♀, same data as holotype (BISHOP, FSCA).

Acknowledgments. For permission to study the types from Gerstaecker, Gorham, Arrow, Pic and Csiki, I thank J. Balfour-Browne and M. E. Bacchus of the British Museum (Natural History), A. Bielawski of the Institut Zoologique, Warsaw, A. Descarpentries of the Muséum National d'Histoire Naturelle, Paris and Zoltan Kaszab of the Magyar Nemzeti Museum. Additional material has come to me from M. Cazier, then at American Museum, J. L. Gressitt of Bishop Museum, A. M. R. Wegner, then at Bogor Museum, H. B. Leech and D. H. Kavanaugh of the California Academy of Sciences, R. Wenzel and H. Dybas of the Field Museum of Natural History, K. Delkeskamp and F. Hieke of Zoologisches Museum der Humboldt-Universitaet zu Berlin and the late Georg Frey.

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