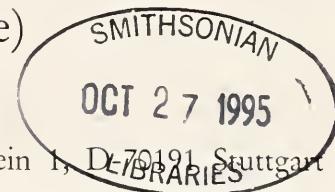


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Chrysomelidae (Coleoptera) from Leyte Island, Philippines

By Lev N. Medvedev, Moscow

With 21 figures

Summary

Chrysomelid materials from Leyte Island, Philippines, contain 105 species and 66 genera, of which 14 species and 2 genera are new to science; additionally one new species is described from Luzon. *Ortholema philippina* n. sp. (Criocerinae), *Pagellia schawalleri* n. sp., *Rhynparida katherinae* n. sp., *Rhynparida margrafi* n. sp., *Rhynparida diversicornis* n. sp., *Rhynparida weiseana* n. sp., *Phytorus leyteanus* n. sp. (Eumolpinae), *Mimastra leyteana* n. sp., *Liroetiella englerae* n. sp., *Mindana substriata* n. sp., *Mindella* n. gen. *luzonica* n. sp. (type species from Luzon), *Mindella leyteana* n. sp., *Philastra* n. gen. *carinata* n. sp. (type species from Leyte), *Cassena leyteana* n. sp. (Galerucinae), *Prionispa fulva* n. sp. (Hispinae). New synonyms: *Cynorta semilimbata* Jacoby n. syn. = *Diaphanidea cavifrons* (Duvivier 1885). *Dercetina* (Antipha) *quadriplagiata* Allard n. syn., *Dercetina* (A.) *marginella* Allard n. syn., *Dercetina* (A.) *tibialis* Allard n. syn. and *Dercetina* (A.) *terminata* Allard n. syn. = *Dercetina punctata* (Allard 1889). *Sindia schawalleri* Medvedev n. syn. = *Aspidomorpha deusta* (Fabricius 1775).

Zusammenfassung

Blattkäfer (Chrysomelidae) von der Insel Leyte, Philippinen, werden behandelt. Das Material enthält 105 Arten und 66 Gattungen, von denen 14 Arten (und eine zusätzlich von Luzon) und 2 Gattungen neu beschrieben werden. Neue Taxa und neue Synonyme siehe „Summary“.

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1. Introduction

Leyte is a relative large island (about 150 km length from north to south, about 70 km width) of the Philippine Archipelago situated between Luzon in the north and

Mindanao in the south. Leyte is closely adjacent to Samar Island; the two islands are divided by a 2 km wide channel, and connected by a bridge. The central part of Leyte supports a mountain ridge, reaching 1500 m above sea level, covered widely with coconut plantations and with very few remnants of primary and secondary tropical forests. The lowland areas are exclusively used for agricultural purposes, with rice, maize, coconut, sugar cane as well as batatas being planted as the main crops.

The insect fauna of Leyte remains highly insufficiently known as yet. There was no record for Leyte of a chrysomelid in the catalogue of Philippine Coleoptera (SCHULTZE 1916), listing no less than 331 species of Chrysomelidae in the Philippines. During the last few decades, only about a dozen leaf-beetles have been recorded from Leyte, mostly taken from around Tacloban, the capital city in the northeastern part of the island, by an unknown collector, and currently dispersed among several collections. One part of that material has joined to my collection via STAUDINGER & BANG-HAAS. Previous studies of the Philippine Chrysomelidae have been published by WEISE 1922, MEDVEDEV 1975 and SCHERER 1979.

In 1991, Dr. WOLFGANG SCHAWALLER (Stuttgart) visited Leyte Island together with Prof. Dr. JOCHEN MARTENS (Mainz), KATRIN GEIGENMÜLLER and JÜRGEN TRAUTNER (both Filderstadt), supported locally by Dr. PACIENCIA MILAN and Dr. JOSEF MARGRAF (both Visayas State College). They collected a copious and most interesting material of Chrysomelidae comprising 105 species (map see fig. 21). Additional material was collected later in the same year by ANITA ENGLER (Stuttgart). This material constitutes the basis of this paper, some new species of the Alticinae (MEDVEDEV 1993) and a new species of the Cassidinae (MEDVEDEV & ZAITZEV 1993) have already been published. The bulk of this material is deposited in the Staatliches Museum für Naturkunde in Stuttgart, except for a few duplicates retained by the author. The list below includes also some species recorded from Leyte in the literature or coming from other collections.

Abbreviations

CLMM Collection Lev N. MEDVEDEV, Moscow;
 SMNS Staatliches Museum für Naturkunde, Stuttgart;
 SMTD Staatliches Museum für Tierkunde, Dresden;
 VISCA Visayas State College of Agriculture.

Acknowledgements

I feel particularly obliged to Dr. WOLFGANG SCHAWALLER (SMNS) for the opportunity to study this highly interesting material of Chrysomelidae as well as for the help in publishing this paper.

2. Collecting localities on Leyte (fig. 21)

- A: Around Visayas State College of Agriculture N Baybay, cultivated land, 0–100 m, 20. II.–13. III. 1991 leg. SCHAWALLER et al.
- B: Above Visayas State College of Agriculture N Baybay, secondary forest, 100–200 m, 20. II.–13. III. 1991 leg. SCHAWALLER et al.
- C: Above Visayas State College of Agriculture N Baybay, primary forest near Mount Pangasugan, 200–500 m, 20. II.–13. III. 1991 leg. SCHAWALLER et al.
- D: Around Visayas State College of Agriculture N Baybay, cultivated land and forest, 0–300 m, IV.–IX. 1991 leg. ENGLER.
- E: Around Lake Danao near Ormoc, primary forest, 500 m, 19. II. & 9. III. 1991 leg. SCHAWALLER et al.
- F: Abuyog, secondary and primary forests, 100–300 m, 8. III. 1991 leg. SCHAWALLER et al.
- G: SW Abuyog, river bank, 100 m, 28. II. 1991 leg. SCHAWALLER et al.

3. List of Chrysomelidae from Leyte

3.1. *Lema quadripunctata philippinica* Heinze 1941

Material: Localities B, C.

Distribution: Widely distributed in the Oriental region, the subspecies is known from the Philippine islands Panay, Negros, Mindanao, Busunga, Butas Grande, Masbate, Palawan. The status of a distinct subspecies on the Philippines needs further examination, very possibly it is a synonym of the nominate subspecies.

3.2. *Lema heinzei* Medvedev 1975

Material: Locality B.

Remarks: The specimen from Leyte differs from other populations by an extremely feeble, almost indistinct transverse groove on the prothorax.

Distribution: Philippines (Luzon).

3.3. *Lema rugifrons* Jacoby 1889

Material: Locality A.

Distribution: India, Burma, Indochina, Taiwan and Ryukyu Islands, firstly recorded for the Philippine Archipelago. In Vietnam this species is feeding on rice (MEDVEDEV 1985).

3.4. *Lema coromandeliana* (Fabricius 1798)

Material: Localities A, F.

Distribution: Throughout in the Oriental region, adults and larvae feed on *Commelina*, adults also on rice.

3.5. *Ortholema philippina* n. sp.

Holotype: Leyte, SW Abuyog, river bank, 28. II. 1991 leg. SCHAWALLER et al., SMNS.

Diagnosis: Similar to *Ortholema elongatior* Pic 1929 from Indochina, differs by fulvous coloration and by the absence of a longitudinal groove on the median line of the prothorax.

Description: Fulvous; antennae except bases, apices of tibiae and tarsi black; basal antennal segments more or less darkened on dorsal side.

Body narrow and elongate. Head strongly punctate and pubescent, ocular grooves deep, vertex convex, neither with frontal tubercles nor longitudinal impressed line. Antennae comparatively short, segment 2 subquadrate, segments 3 and 4 subequal, each about 1.5x as long as 2, next segments more elongate, subequal, each of them about 1.2x as long as 4. Prothorax convex, 1.2x as long as broad, almost cylindrical, feebly constricted just before base, with a shallow transverse basal groove, surface smooth in the middle with 2 rows of punctures along axis line and strong punctures on each side in the anterior half; basal groove and posterior part covered with very dense and small punctures. Elytra narrow and parallel, 2x as long as broad; all rows, including short scutellar one, quite regular; interspaces smooth, flat or slightly convex, apices with very feeble excavation. Body length 5.2 mm.

3.6. *Aetheomorpha ?semperi* Lefevre 1886

Material: Locality C.

Remarks: The single female has the elytra with the humeral spot only.

Distribution: The species was hitherto known from the adjacent Philippine islands of Cebu and Bohol.

3.7. *Coenobius flaviventris* Weise 1922

Material: Localities A, E.

Distribution: Philippines (Luzon, Leyte).

3.8. *Coenobius metallescens* Medvedev 1975

Material: Locality A.

Distribution: Philippines (Luzon, Mindanao, Panay, Leyte).

3.9. *Basilepta gemmata* Weise 1922

Material: Localities A, B, C, D, F.

Distribution: Philippines (Leyte: Tacloban).

3.10. *Pagria signata* (Motschulsky 1858)

Material: Localities A, B, D.

Distribution: Widely spread in the Oriental and eastern Palaearctic regions.
Dangerous pest of cultivated Fabaceae.

3.11. *Colasposoma cumingi* Baly 1867

Material: Locality D.

Distribution: Philippines (Luzon, Leyte, Negros).

3.12. *Colasposoma gregarium* Lefevre 1886

Material: Localities A, B, C, D.

Distribution: Philippines (Luzon, Mindanao, Leyte, Legros).

3.13. *Colasposoma rugiceps* Lefevre 1885

Material: Locality D.

Distribution: Philippines (Luzon, Leyte).

3.14. *Scelodonta curculionoides* Westwood 1837

Material: Locality B.

Distribution: Philippines (Luzon, Mindanao, Leyte).

3.15. *Pagellia schawalleri* n. sp. (fig. 1)

Holotype (♂): Leyte, VISCA N Baybay, cultivated land, 0–100 m, 26. II. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Together with holotype, 3 ex. SMNS, 2 ex. CLMM.

Diagnosis: Similar to *Pagellia butuanensis* Weise 1922, but smaller, dark coloured, without strigose punctures on prothorax.

Description: Black or dark pitchy; head, fore margin of prothorax and humeri usually more or less reddish brown, antennae and legs fulvous.

Body elongate ovate. Head densely shagreened, clypeus with strong punctures and almost straight fore margin; frons narrow, impunctate, vertex with a few punctures, ocular grooves narrow and deep, eyes large and convex, wider than frons. Antennae thin, segments 3–10 elongate, segment 2 a little shorter than 3, but also elongate. Prothorax as wide as head, 1.1x as wide as long; sides rounded, side margins not visible from above, fore and hind angles obtuse, surface with dense strong round punctures, not strigose. Elytra with very weak basal convexity, humerus not very prominent, elytral rows regular and consist by deep strong punctures, interspaces narrow, flat or feebly convex, with a weak humeral ridge. Propleurae smooth. Fore and mid tarsi of male with moderately widened first segment. Mid and hind femora with small acute tooth. Aedeagus concave on the ventral side, apex truncate with small central tip (fig. 1). Body length 2.6–2.7 mm.

3.16. *Trichochrysea philippinensis* (Baly 1864)

Material: Locality A.

Distribution: Philippines (Luzon, Leyte).

3.17. *Icogramma lineigera* Weise 1922

Material: Locality D.

Distribution: Philippines (Luzon, Leyte, Palawan).

3.18. *Aulexis luzonica* Lefevre 1885

Material: Locality C.

Distribution: Philippines (Luzon, Leyte).

3.19. *Rhynparida signifera* Weise 1922

Material: Localities A, B, C, D.

Remarks: Many specimens have a reduced dark pattern on the dorsal side, especially on the prothorax.

Distribution: Philippines (Leyte: Tacloban).

3.20. *Rhynparida katrinae* n. sp. (fig. 2)

Holotype (♂): Leyte, VISCA N Baybay, cultivated land, 0–100 m, 27. II. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Together with holotype, 2 ex. SMNS; – same locality, 26. II. 1991 leg. SCHAWALLER et al., 1 ex. CLMM; – same locality, IV.–IX. 1991 leg. ENGLER, 1 ex. SMNS; – VISCA N Baybay, secondary forest, 100–200 m, 4. III. 1991 leg. SCHAWALLER et al., 1 ex. CLMM.

Diagnosis: Similar to *Rhynparida signifera*, differs by other sculpture of prothorax and elytra, by a long femoral tooth and in details of the aedeagal structure.

Description: Body fulvous; mandibles, 5 or 6 apical antennal segments, sutural and lateral margins of elytra, apices of hind femora, sometimes tarsi and partly ventral side black or dark piceous; coloration varies, especially on the lateral margin of the elytra.

Clypeus distinctly narrowed posteriorly, ocular grooves deep, surface densely shagreened, sparsely punctured on clypeus and almost indistinctly on head. Prothorax flattened, with sides broadly rounded and maximal width just behind the middle, a setiferous pore on fore angles simple; surface densely shagreened, with sparse small punctures in the middle and stronger ones on the sides. Elytra shining, with distinct rows throughout, all interspaces flat and broad. Proepisternae smooth. Fore and mid femora with small, hind femora with long tooth. Aedeagus (fig. 2) as in *signifera*, but not widened apically and with the extreme apex more truncate. Body length 3.6–4.3 mm.

3.21. *Rhynparida margrafi* n. sp. (fig. 3)

Holotype (♂): Leyte, Lake Danao forest edge, 500 m, 19. II. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Together with holotype, 1 ex. CLMM.

Diagnosis: Similar to *Rhynparida signifera*, differs by pale apical segments of antennae, by very feeble elytral rows and by other form of the aedeagus.

Description: Body fulvous; mandibles, antennal segments 4–7 or 4–8, apices of tibiae, tarsi and apical part of hind femora on the inner side black.

Clypeus not narrowed posteriorly, distinctly punctured; vertex finely punctured, ocular grooves feeble. Prothorax even, with sides broadly rounded and with the maximal width in the basal third, a setiferous pore on fore angles simple; surface indistinctly shagreened, almost shining, rather finely punctured, especially in the central part. Elytra shining, with feeble rows of punctures, especially on basal convexity, in apical part and along the side margin; all interspaces flat and broad. Proepisternae smooth. Mid and hind femora with very small tooth. Aedeagus (fig. 3). Body length 4.2–4.3 mm.

3.22. *Rhynparida diversicornis* n. sp. (fig. 4)

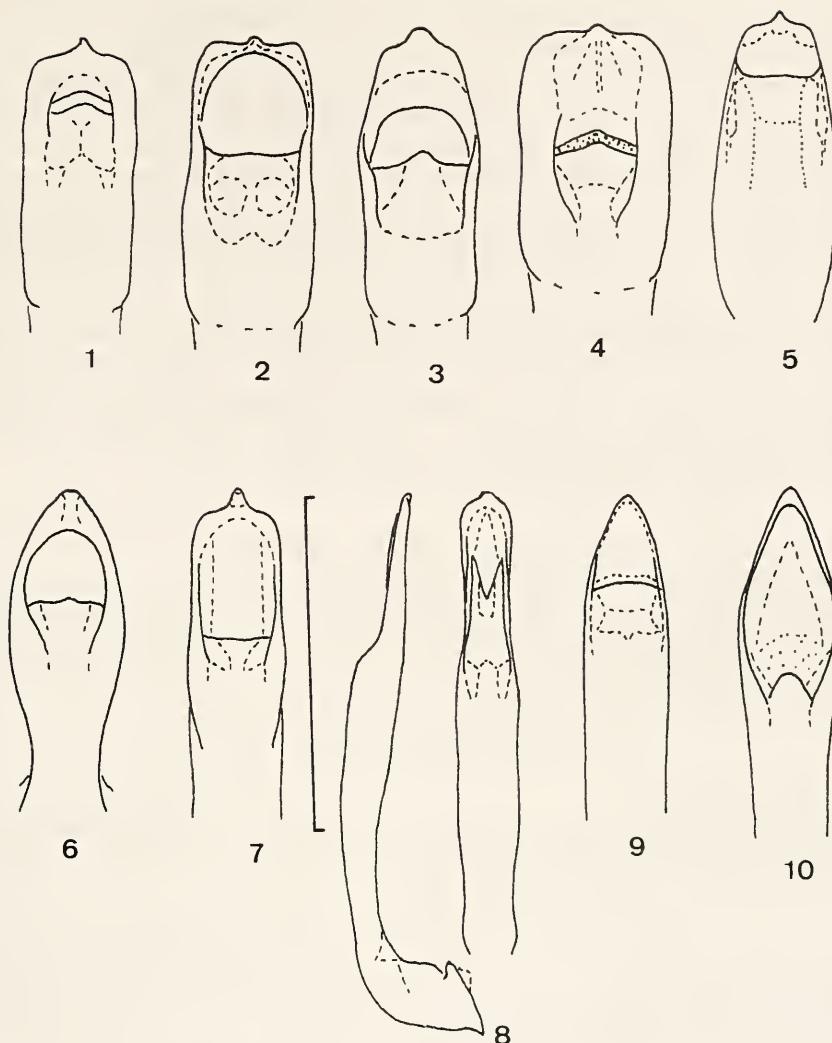
Holotype (♂): Leyte, VISCA N Baybay, primary forest, 200–500 m, 2. III. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Together with holotype, 1 ♀ SMNS, 1 ♀ CLMM.

Diagnosis: Comparable only with *Rhynparida pallidula* Weise 1922, but differs by the black coloration, larger size and by the sexual dimorphism in antennal coloration.

Description: Black, shining; mouth parts, including fore part of clypeus and sometimes tarsi more or less fulvous, antennae pale, almost white; males with antennal segments 4–7 black.

Body rounded ovate, convex. Head shining, clypeus and vertex finely, frons more strongly punctate. Fore margin of clypeus triangularly incised. Eyes convex. Width of head with eyes 0.95x as width of fore margin of prothorax. Antennae with segments 3–10 thin, elongate and subequal, segment 3 about 1.5x as long as segment 2. Prothorax 1.65x as broad as long, with maximal width behind the middle, side margins rounded, hind angles acute, fore angles bended downwards, with cylindrical protuberance, bearing a seta. Surface distinctly punctate, punctures not large, especially in the middle. Elytra with large humeral tubercle, without basal convexity, the rows consist by separate punctures (not striate), weakened to the sides and especially to apex; interspaces flat and broad, not punctate. Propleurae smooth. Femora not toothed. Aedeagus with the ventral side deeply concave and the apex truncate (fig. 4). Length of male 4.2 mm, of female 4.5–4.7 mm.



Figs 1–10. Aedeagus. – 1. *Pagellia schawalleri* n. sp.; – 2. *Rhyparida katrinae* n. sp.; – 3. *Rhyparida margrafi* n. sp.; – 4. *Rhyparida diversicornis* n. sp.; – 5. *Rhyparida weiseana* n. sp.; – 6. *Phytorus leyteanus* n. sp.; – 7. *Phytorus servidus*; – 8. *Minidana substriata* n. sp.; – 9. *Cassena leyteana* n. sp.; – 10. *Dercetina punctata*. – Scale: 1.0 mm.

3.23. *Rhyparida weiseana* n. sp. (fig. 5)

Holotype (♂): Leyte, VISCA N Baybay, cultivated land, 0–100 m, 1. III. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Leyte, VISCA N Baybay, secondary forest, 100–200 m, 21. II. 1991 leg. SCHAWALLER et al., 1 ♀ CLMM; – Leyte, VISCA N Baybay, primary forest, 200–500 m, 2. III. 1991 leg. SCHAWALLER et al., 1 ♀ SMNS.

Diagnosis: Similar to *Rhyparida polychroma* Weise 1922, but larger, dorsal side entirely metallic, venter of male with longitudinal groove.

Description: Brown or dark brown; head, dorsal side and breast with strong metallic green reflection, shining; antennae, legs and venter fulvous.

Body elongate ovate, convex. Haed sparsely, but distinctly punctate, more strongly on clypeus, its fore margin almost straight. Eyes large and convex. Antennae with segments 3–10 thin, elongate and subequal, segment 2 shorter than the 3. Prothorax about 1.4x as broad as head, 2x as broad as long, with maximal width just before the middle; sides and fore angles broadly rounded, hind angles obtusely rounded, fore angles not bended downwards; surface finely and sparsely punctate. Elytra with feeble humeral tubercle, without basal convexity; rows quite regular, consist by separate, densely placed punctures (not striate), interspaces flat or feebly convex on the sides. Propleurae smooth. Fore and mid tarsi of the male with moderately widened first segment. Mid and hind femora with extremely small, but distinct tooth. Venter of male longitudinally grooved in the middle, especially on segments 2–5; segment 1 besides more or less longitudinally strigose. Aedeagus (fig. 5) with concave ventral side, apex truncate with a small tip. Length of male 3.2 mm, of female 3.2–3.4 mm.

3.24. *Rhyparida ?hebes* Weise 1922

Material: Locality C.

Remarks: I can not compare this single specimen with the type, thus the identification seems doubtful to me.

Distribution: Philippines (Luzon).

3.25. *Rhyparida* sp.

Material: Locality D.

Remarks: The single female cannot be identified, but it represents obviously a further species of this genus from Leyte.

3.26. *Clypeolaria thoracica* Lefevre 1885

Material: Localities A, B.

Distribution: Philippines (Luzon, Leyte).

3.27. *Phytorus cyclopterus* Lefevre 1885

Material: A male with the label "Leyte, Philipp." (ex STAUDINGER) in CLMM.

Distribution: Philippines (Luzon, Mindoro, Leyte, Palawan).

3.28. *Phytorus leyteanus* n. sp. (fig. 6)

Holotype (♂): Leyte, VISCA N Baybay, cultivated land, 0–100 m, 27. II. 1991 leg. SCHAWALLER et al., SMNS.

Diagnosis and description: Body reddish fulvous, antennae and legs paler. External morphology identical with those in *Phytorus fervidus* Lefevre 1885, including the structure of the prosternum. The latter species was described in having a metallic dorsal side, but fulvous or reddish specimens are also very abundant. The only difference of this new species is the form of the aedeagus (fig. 6), without acute apical protuberance, very typical for *fervidus* (fig. 7). Length 5.2 mm, width 3.5 mm.

3.29. *Cleorina catanea* Lefevre 1885

Material: Locality E.

Distribution: Philippines (Luzon, Leyte).

3.30. *Colaspoides philippinensis* Baly 1867

Material: Locality A.

Distribution: Philippines (Luzon, Leyte, Palawan).

3.31. *Platycorynus suaveolus* (Marsham 1865)

Material: Locality D.

Distribution: Philippines (Luzon, Leyte, Mindanao).

3.32. *Apophylia ?basilana* Pic 1945

Material: Locality D.

Remarks: The single female from Leyte with unspotted prothorax is quite identical with a series from Luzon, also unspotted. Another female specimen from Basilan has a spotted prothorax, as noted in the original description, but all the other characters are identical.

Distribution: Philippines (Basilan, Mindanao, ?Luzon, ?Leyte).

3.33. *Pyrrhalta mindorana* (Weise 1913)

Material: Localities B, C, E.

Distribution: Philippines (Mindoro, Leyte).

3.34. *Oides vexilla* Duvivier 1884

Material: Locality B.

Distribution: Philippines (Luzon, Leyte).

3.35. *Aulacophora femoralis* (Motschulsky 1857)

Material: Locality D.

Distribution: Widespread in eastern Asia.

3.36. *Aulacophora flavigornis* Chapuis 1876

Material: Locality A.

Distribution: Philippines (Mindoro, Leyte).

3.37. *Aulacophora marginalis* Chapuis 1876

Material: Localities A, C.

Distribution: Philippines (Luzon, Leyte, Bohol, Romblon, Palawan), Micronesia.

3.38. *Aulacophora quadrinotata* Chapuis 1876

Material: Locality B.

Remarks: A single specimen of that series has a single elongate blue spot behind the middle of the elytra.

Distribution: Philippines (Bohol, Leyte).

3.39. *Aulacophora rosea* (Fabricius 1801)

Material: Localities, A. B.

Distribution: Philippines (Luzon, Mindanao, Leyte, Mindoro), India, Indo-china, Indonesia.

3.40. *Pseudocophora ambusta* (Erichson 1834)

Material: Locality C.

Distribution: Philippines (Luzon, Leyte), Sulawesi (= Celebes).

3.41. *Mimastra leyteana* n. sp. (fig. 11)

Holotype (♀): Leyte, VISCA N Baybay, secondary forest, 100–200 m, 4. III. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Leyte, VISCA N Baybay, secondary forest, 100–200 m, 20.–21. II. 1991 leg. SCHAWALLER et al., 2 ex. SMNS; – Leyte, VISCA N Baybay, cultivated land, 0–100 m, 27. II. 1991 leg. SCHAWALLER et al., 1 ex. SMNS; – Leyte, VISCA N Baybay, primary forest, 200–500 m, 22. II. 1991 leg. SCHAWALLER et al., 3 ex. SMNS, 1 ex. CLMM.

Diagnosis: Similar to *Mimastra elegans* Allard 1889, but elytra without dark stripe; antennae longer, with other proportions of the antennal segments; the coloration is identical with that of *Mimastra brevicollis* Allard 1889, but differs by elongate head, other form of the prothorax and proportions of the antennal segments (figs 11–13).

Description: Fulvous; antennae, apices of femora, tibiae and tarsi dark brown to black. Head elongate, smooth and shining, vertex long, narrowed to behind, with a longitudinal central groove. Antennae longer than body, with segment 1 as long as 2 and 3, segment 4 distinctly longer than 1 and 5 (fig. 11). Prothorax short, about 2.2x as broad as long, distinctly narrowed to base, with straight lateral margins; surface shining, impunctate, feebly transversely impressed. Elytra 2x as long as broad, distinctly punctate. Legs, including tarsi, very thin. Body length 7.3–7.7 mm.

3.42. *Calomicrus* sp.

Material: Localities A, C.

Remarks: Both records are represented by single females which probably belong to different species. They are both unicoloured fulvous. The genus is firstly recorded for the Philippines.

3.43. *Medythia suturalis* (Motschulsky 1858)

Material: Locality A.

Distribution: Widespread in the Oriental region and in eastern Asia.

3.44. *Liroetiella englerae* n. sp. (fig. 14)

Holotype (♀): Leyte, VISCA N Baybay, cultivated land and forest, 0–300 m, IV.–IX. 1991 leg. ENGLER, SMNS.

Paratypes: Together with holotype, 1 ♀ SMNS, 1 ♀ CLMM.

Diagnosis: The genus was described from Indochina and contains a few species, from which the new Philippine species differs by the coloration of the dorsal side.

Description: Fulvous to reddish fulvous; antennae, tibiae and tarsi usually darkened; lateral margins of elytra, including apex and hind part of suture more or less narrowly darkened.

Body moderately elongate, widened posteriorly. Head impunctate, frontal tubercles triangular, with acute fore angles, delimited behind with transverse impression; clypeus triangular, flat. Antennae longer than half of the body, segment 3 almost 2x as long as 2, segment 4 longer than 3, thin and long, about 6x as long as wide, next segments subequal to the 4th (fig. 14). Prothorax 1.3x as wide as long, with fine and very sparse punctures and 2 rounded grooves. Elytra slightly widened posteriorly, subtruncate at apex, distinctly not covering 2 last abdominal tergites. First segment of hind tarsus as long as next segments together, the spur as long as the width of tibia. Body length 5.5–6.0 mm.

3.45. *Liroetiella* sp. 1

Material: Locality C.

3.46. *Liroetiella* sp. 2

Material: Locality C.

3.47. *Liroetiella* sp. 3

Material: Locality A.

Remarks: The last 3 records represent single females each, which are considered different species. The 4 species from Leyte differ as follows:

- | | | |
|---|--|------------------------------------|
| 1 | Antennae fulvous. Body fulvous with darkened tibiae and tarsi, widened to behind. Length 5.4 mm. | <i>Liroetiella</i> sp. 1 |
| – | Antennae more or less darkened. | 2 |
| 2 | Dorsal side reddish fulvous with red prothorax. Antennae completely black, legs and metasternum pitchy, lateral and apical margin of elytra infuscate. Length 4.5 mm | <i>Liroetiella</i> sp. 2 |
| – | 2–3 basal segments of antennae and usually the bases of the following segments fulvous | 3 |
| 3 | Body widened posteriorly. Elytra with darkened margins behind the middle, tibiae and tarsi usually black. Length 5.5–6.0 mm | <i>Liroetiella englerae</i> n. sp. |
| – | Body cylindrical. Elytra not darkened at sides legs fulvous with slightly infuscate last tarsal segments. Length 5.5 mm | <i>Liroetiella</i> sp. 3. |

3.48. *Monolepta hieroglyphica* (Motschulsky 1858)

Material: Locality A.

Distribution: Widespread in eastern Asia.

3.49. *Monolepta bifasciata* (Hornstedt 1788)

Material: Locality A.

Distribution: Philippines (Luzon, Mindanao, Leyte), India, Indochina, Indonesia.

3.50. *Monolepta nigripes* (Olivier 1808)

Material: Locality B.

Distribution: Widespread in tropical Asia.

3.51. *Monolepta* sp. 1

Material: Locality A.

3.52. *Monolepta* sp. 2

Material: Locality A.

3.53. *Monolepta* sp. 3

Material: Locality B.

3.54. *Monolepta* sp. 4

Material: Localities D, E.

Remarks: The above listed 4 species of *Monolepta* cannot be identified with security without revising this species-rich genus.

3.55. *Aplosonyx speciosus* (Baly 1879)

Material: Locality E.

Distribution: Philippines (Mindanao, Mindoro, Sibuyan, Leyte), Sulawesi (= Celebes).

3.56. *Aplosonyx fulvicornis* (Weise 1913)

Material: Locality E.

Distribution: Philippines (Luzon, Leyte).

3.57. *Aplosonyx banksi* (Weise 1913)

Material: Locality E.

Distribution: Philippines.

3.58. *Mindana substriata* n. sp. (fig. 8)

Holotype (♂): Leyte, SW Abuyog, forest, 100–300 m, 8. III. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Together with holotype, 2 ♀♀ SMNS, 1 ♀ CLMM.

Diagnosis: Differs from all congeners in having a few sublateral rows of punctures on the elytra.

Description: Head and prothorax red; antennae, labrum, elytra, metathorax and legs black, usually with a feeble metallic tint, venter and sometimes sutural region of elytra fulvous.

Body narrow, cylindrical. Head impunctate, shining. Frontal tubercles delimited behind with a deep groove. Interantennal ridge acute, clypeus triangular, convex. Antennal segment 3 3x (σ) or 2x (φ) as long as 2, segments 3–11 subequal, narrow, each of them about 4x as long as wide. Prothorax 1.2x as broad as long, with almost straight lateral margins; surface smooth, transversely impressed in the middle. Elytra shining, with very feeble basal convexity, almost impunctate on the inner part, finely punctate near side margin, with 2 confused sublateral rows of distinct punctures, starting just behind humerus. The male with a longitudinal ridge in the middle of the first abdominal segment, but without widened tarsal segments. Fore coxal cavities open (as well as in other congeners, however in the original description of the genus they were mentioned as closed). Aedeagus (fig. 8). Length of male 5.0 mm, of female 5.2–5.3 mm.

Mindella n. gen.

Type species: *Mindella luzonica* n. sp. by present designation.

Diagnosis: Body elongate. Frontal tubercles transverse, with acute fore angles, delimited behind with a deep transverse groove. Interantennal space narrow, with a longitudinal ridge. Clypeus triangular, convex. Antennae about $\frac{3}{4}$ of the body length. Prothorax convex, without any depressions, with margined basal border, feebly transverse. Elytra with well developed humeral tubercle and feeble basal convexity, with confused rows of strong punctures. Fore coxal cavities open. Tibiae without spurs. First segment of hind tarsus shorter than following segments combined.

Remarks: The new genus is similar to *Mindana* Allard 1889, but differs by the ungrooved prothorax and the subseriate punctuation of the elytra.

3.59. *Mindella luzonica* n. sp. (fig. 15)

Holotype (φ): Luzon, Los Baños, CLMM.

Paratype: Together with holotype, 1 φ CLMM.

Description: Head and prothorax dark red, elytra metallic blue; antennae, legs and ventral side pitchy black, first antennal segment and fore femora more or less reddish.

Head impunctate. Antennal segment 3 a little longer than segment 2, segment 4 about 1.8x as long as segment 3 (fig. 15). Prothorax 1.7x as wide as long, shining, with deep sparse punctures, more dense at the sides. Elytra with deep punctures in confused rows; interspaces narrow, flat and shining. Body length 4.0–4.8 mm.

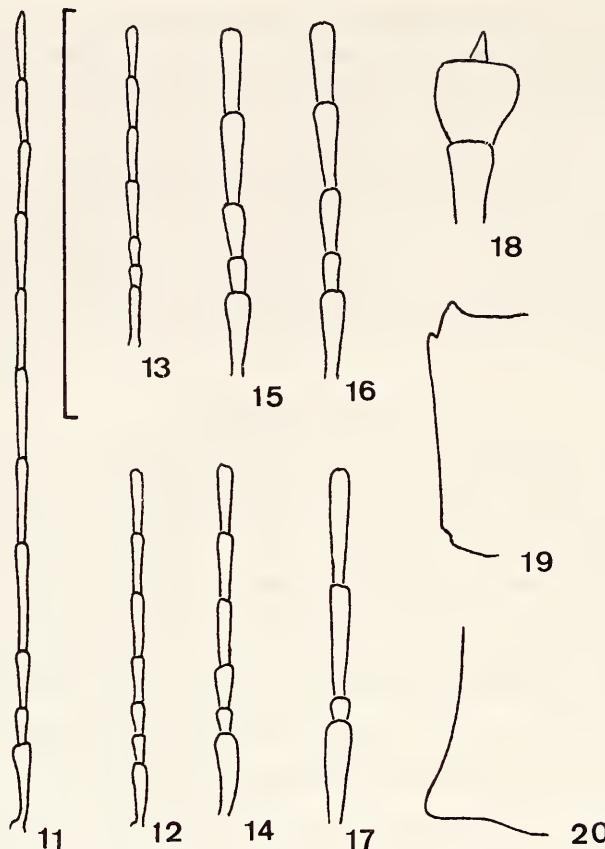
3.60. *Mindella leyteana* n. sp. (fig. 16)

Holotype (φ): Leyte, VISCA N Baybay, primary forest, 200–500 m, 2. III. 1991 leg. SCHAWALLER et al., SMNS.

Diagnosis: Differs from the preceding species by other proportions of the antennal segments, more sparsely punctate prothorax and fulvous abdomen.

Description: Head, prothorax and fore femora red, elytra metallic blue; antennae, legs and breast pitchy black, abdomen fulvous, labrum darkened.

Head impunctate. Antennal segment 3 1.6x as long as 2, segment 4 1.4x as long as 3 (fig. 16). Prothorax 1.4x as wide as long, shining, with a few large punctures, mostly in the middle. Elytra with deep punctures in confused rows; interspaces narrow, flat. Body length 4.8 mm.



Figs 11–20. Antenna (11–17), maxillary palpus (18), prothorax (19), posterolateral angle of elytra (20). – 11. *Mimastra leyteana* n. sp.; – 12. *Mimastra elegans*; – 13. *Mimastra brevicollis*; – 14. *Liroetiella englerae* n. sp.; – 15. *Mindella* n. gen. *luzonica* n. sp.; – 16. *Mindella leyteana* n. sp.; – 17–18. *Philastra* n. gen. *carinata* n. sp.; – 19–20. *Prionispa fulva* n. sp. – Scale: 5.0 mm (11–17), 2.0 mm (19–20).

Philastra n. gen. (figs 17–18)

Type-species: *Philastra carinata* n. sp. by present designation.

Diagnosis: Body elongate, moderately broad, flattened from above. Frontal tubercles triangular with acute fore angles, delimited behind by an impression. Inter-antennal space narrow. Clypeus triangular. Third segment of maxillary palpi widened apically, last segment very small, conical (fig. 18). Antennae about $\frac{2}{3}$ of body length, segment 2 very short, other segments elongate (fig. 17). Prothorax strongly transverse, with unmargined anterior and margined basal border; sides most straight, fore angle acute, hind angles obtuse; surface with large transverse impression. Elytra pubescent, confusedly punctate, divided into a horizontal and a vertical part by a sharp subhumeral ridge, disappearing in the apical third. Epipleurae extremely narrow, slightly widened only at the base. Fore coxal cavities open. Middle and hind tibiae with a short thin spur. Segment 1 of hind tarsus as long as following segments combined. Claws toothed.

Remarks: Close to *Trichosepharia* Laboissiere 1936, differs mainly in having a unmargined anterior border of the transversely grooved prothorax, humeral ridge of elytra and reduced epipleura.

3.61. *Philastra carinata* n. sp.

Holotype (♀): Leyte, VISCA N Baybay, primary forest, 200–500 m, 22. II. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Together with holotype, 1 ♀ CLMM; – Leyte, VISCA N Baybay, cultivated land and forest, 0–300 m, IV.–IX. 1991 leg. ENGLER, 1 ♀ SMNS.

Description: Pale flavous; antennae except basal and apical segments, tibiae and tarsi darkened.

Head impunctate. Antennae with proportions of segments as 11-2-10-8-7-8-9-10-10-10-11. Prothorax 2x as broad as long, impunctate, microscopically strigose. Elytra with a very feeble basal convexity, distinctly punctate, with interspaces more or less rugose or at least convex; pubescence short; vertical part of elytra longitudinally concave. Body length 5.5–5.7 mm.

3.62. *Cassena leyteana* n. sp. (fig. 9)

Holotype (♂): Leyte, VISCA N Baybay, cultivated land and forest, 0–300 m, IV.–IX. 1991 leg. ENGLER, SMNS.

Paratype: Leyte, VISCA N Baybay, primary forest, 200–500 m, 22. II. 1991 leg. SCHAWALLER et al., 1 ♂ CLMM.

Diagnosis: Similar to *Cassena indica* Jacoby 1889 and *punctatissima* Jacoby 1894, but the first has an aedeagus with a tridentate apex and 3 ridges on the ventral side; the second has a simple, but very narrow aedeagus and a distinctly punctate prothorax.

Description: Body red; elytra violaceous blue, antennae except first segment, tibiae (at least in apical part) and tarsi black.

Head impunctate. Antennal segment 3 almost 2x as long as 2, segments 3–10 subequal. Prothorax 1.6–1.7x as broad as long, with side margins rounded and reflexed, fore angles acute; surface strongly convex, extremely finely, almost indistinctly punctate, with basal grooves short (about 1/7 of prothoracic length). Elytra 1.3–1.4x as long as wide, closely punctate except extreme apex. First tarsal segment of the male moderately widened. Aedeagus (fig. 9) comparatively broad, with simple triangular apex and smooth ventral side, without any sculpture. Body length 5.0–6.2 mm.

3.63. *Strobiderus laevicollis* Allard 1889

Material: Localities A, D.

Distribution: Philippines (Luzon, Leyte).

3.64. *Diaphanidea cavifrons* (Duvivier 1885)

Cynorta semilimbata Jacoby 1894 n. syn.

Material: Locality A.

Distribution: Philippines (Luzon, Leyte, Samar).

3.65. *Coeligetes robustus* (Allard 1889)

Material: Locality C.

Distribution: Philippines (Luzon, Leyte), Borneo.

3.66. *Dercetina punctata* (Allard 1889) (fig. 10)

Antipha quadriplagiata Allard 1889 n. syn.

Antipha marginella Allard 1889 n. syn.

Antipha tibialis Allard 1889 n. syn.

Antipha terminata Allard 1889 n. syn.

Material: Localities A, B, C, D, E, F.

Remarks: This species is very variable in coloration. Usually the body is fulvous or reddish fulvous with a paler prothorax. The elytrae might be: a) fulvous, b) with black humeral spot or basal band and 1–2 spots or transverse band in the middle, c) lateral margins or all around black, d) entirely black, usually with more or less reddish apex. The prothorax and legs sometimes darkened, the antennae always fulvous. Aedeagus (fig. 10).

Distribution: Widespread on the Philippine Archipelago.

3.67. *Dercetina* sp.

Material: Localities B, C.

Remarks: The 2 collected specimens are females and differ from the preceding species by completely black antennae. The specimens are fulvous with black elytra, metathorax and legs, except hind femora. They might represent a different species, but without examining the structure of the aedeagus this cannot be confirmed.

3.68. *Psylliodes splendida* Harold 1877

Material: Localities, A, E.

Distribution: Philippines (Luzon, Mindanao, Palawan, Leyte).

3.69. *Psylliodes balyi* Jacoby 1884

Material: Locality E.

Distribution: Widespread in eastern and southern Asia, including Indonesia and the Philippines.

3.70. *Nonarthra sumatrense* Harold 1876

Material: Localities A, C.

Distribution: Philippines (Luzon, Mindanao, Panaon, Leyte, Palawan), Sumatra.

3.71. *Chaetocnema nigrica* Motschulsky 1858

Material: Locality D.

Distribution: Widespread in tropical Asia, a pest of rice.

3.72. *Clavicornaltica philippinensis* Scherer 1979

Material: Localities, C, E, F.

Distribution: Philippines (Luzon, Leyte).

3.73. *Clavicornaltica trautneri* Medvedev 1993

Material: Locality E (holotype SMNS).

Distribution: Philippines (described from Leyte).

3.74. *Sphaeroderma negrosanum* Weise 1913

Material: Localities B, C.

Distribution: Philippines (Luzon, Negros, Palawan, Leyte).

3.75. *Eucyclomera philippina* Medvedev 1993

Material: Locality A (holotype SMNS).

Distribution: Philippines (described from Leyte).

3.76. *Chabria pallida* Medvedev 1993

Material: Locality B; Tacloban, coll. SCHULTZE, SMTD (type series, partly SMNS).

Distribution: Philippines (described from Leyte).

3.77. *Chabria nigripennis* Medvedev 1993

Material: Tacloban (holotype CLMM).

Distribution: Philippines (Leyte), Molucca Islands.

3.78. *Luperomorpha serricornis* (Duvivier 1885)

Material: Locality D.

Distribution: Philippines (Luzon, Negros, Samar, Basilan).

3.79. *Trachyaphthona leyteana* Medvedev 1993

Material: Locality C (holotype SMNS).

Distribution: Philippines (described from Leyte).

3.80. *Sebaetha badia* (Erichson 1834)

Material: Localities, B, C, E.

Distribution: Widespread on the Philippine Islands.

3.81. *Sebaetha* sp.

Material: Locality B.

Remarks: With poorly sclerotized aedeagus most of the congeners cannot be identified. A key for the Philippine species of *Sebaetha* is given by MEDVEDEV 1993.

Distribution: Philippines (Luzon, Panaon, Mindanao).

3.82. *Erystus martensi* Medvedev 1993

Material: Localities A, E (type series SMNS).

Distribution: Philippines (described from Leyte).

3.83. *Erystus moroorum* (Weise 1922)

Material: Tacloban, coll. SCHULTZE, SMTD.

Distribution: Philippines (Mindanao, Samar, Leyte, Palawan).

3.84. *Acrocrypta cumingi* (Baly 1876)

Material: Locality B.

Distribution: Philippines (Mindanao, Samar, Leyte).

3.85. *Acrocrypta gracilicornis* Medvedev 1993

Material: Localities A, B, C.

Distribution: Philippines (Panaon, Samar, Leyte).

3.86. *Lipromorpha schawalleri* Medvedev 1993

Material: Localities A, B (type series SMNS).

Distribution: Philippines (described from Leyte).

3.87. *Philaphthona schawalleri* Medvedev 1993

Material: Locality D (holotype SMNS).

Distribution: Philippines (described from Leyte).

3.88. *Altica cyanea* (Weber 1801)

Material: Localities A, B, G.

Distribution: Throughout all the Oriental region, feeding on *Polygonum*.

3.89. *Tonfania apicalis* Chen 1936

Material: Locality A.

Distribution: Philippines (Luzon, Mindanao, Leyte).

3.90. *Manobia incerta* Chen 1934

Material: Locality E.

Distribution: Philippines (Luzon, Mindanao, Leyte).

3.91. *Callispa flavescens* Weise 1911

Material: Locality A.

Distribution: Philippines (Luzon, Mindoro, Leyte, Cebu, Basilan, Mindanao), Sumatra.

3.92. *Callispa cumingi* Baly 1858

Material: Locality D.

Distribution: Philippines (Luzon, Leyte, Palawan).

3.93. *Promecotheca cumingi* Baly 1858

Material: Locality D.

Distribution: Philippines (Luzon, Leyte, Samar, Mindanao, Palawan), Indonesia, Malacca.

3.94. *Gonophora femorata* Weise 1913

Material: Locality A.

Distribution: Philippines (Luzon, Negros, Leyte, Samar, Mindanao, Masbate).

3.95. *Oncoccephala bicristata* Chapuis 1876

Material: Localities A, B.

Distribution: Philippines (Luzon, Leyte).

3.96. *Prionispa fulva* n. sp. (figs 19–20)

Holotype: Leyte, VISCA N Baybay, primary forest, 200–500 m, 27. II. 1991 leg. SCHAWALLER et al., SMNS.

Paratypes: Leyte, VISCA N Baybay, cultivated land, 0–100 m, 20. II.–2. III. 1991 leg. SCHAWALLER et al., 5 ex. SMNS; – Leyte, VISCA N Baybay, secondary forest, 100–200 m, 20. II.–2. III. 1991 leg. SCHAWALLER et al., 1 ex. SMNS, 2 ex. CLMM.

Diagnosis: Differs from all Philippine species by the absence of a metallic coloration; it is very similar to *Prionispa subopaca* Chapuis 1875, which has, however, black elytra.

Description: Fulvous; antennal segments 1–2 red, following segments black. Elytra indistinctly darkened at the hind angles and at the extreme apex near suture.

Head with acute ridge between antennae, frons strongly punctate. Antennae with segment 3 the longest, about 1.5x as long as 2. Prothorax subquadrate, slightly narrowed to fore margin, fore angles bidentate (fig. 19); surface coarsely punctate. Elytra widened to apex, with straight side margins and moderately acute postero-lateral angles (fig. 20); surface with rather regular rows of strong punctures and 4 low ridges, the first ridge with a low triangular elevation behind base, the second ridge with a high triangular tooth in the middle, the third row with a feeble elevation before apical slope. Body length 5.6–5.9 mm.

3.97. *Dactylispa vittula* Chapuis 1876

Material: Localities, A, F.

Distribution: Philippines (Luzon, Leyte, Cebu).

3.98. *Dactylispa angusta* Gestro 1917

Material: Localities F, G.

Distribution: Philippines (Luzon, Mindanao, Basilan, Leyte).

3.99. *Dactylispa trigemina* Uhmann 1933

Material: Locality C.

Distribution: Philippines (Mindanao, Leyte, Bucas).

3.100. *Dactylispa miranda* Gestro 1917

Material: Localities A, D.

Distribution: Philippines (Luzon, Mindanao, Negros, Samar, Leyte, Bucas).

3.101. *Basiprionota immaculata* (Wagener 1881)

Material: Locality A.

Distribution: Philippines (Luzon, Leyte).

3.102. *Aspidomorpha miliaris* (Fabricius 1775)

Material: Locality A.

Distribution: Widespread in the Oriental region, feeding on *Ipomoea*.

3.103. *Laccoptera tredecimguttata* Wagener 1877

Material: Localities A, B, C, D.

Distribution: Philippines (Luzon, Leyte).

3.104. *Aspidomorpha deusta* (Fabricius 1775)

Sindia schwalleri Medvedev 1993 n. syn.

Material: Locality A (type series SMNS).

Remarks: The species has been erroneously described as a new species of *Sindia* together with the larvae and pupae, feeding on *Ipomoea* (MEDVEDEV & ZAITZEV 1993). This synonymy was also recognized by Dr. L. BOROWIEC (in litt.).

Distribution: Australia; introduced to the Philippines, New Guinea and Java.

3.105. *Cassida circumdata* Herbst 1790

Material: Localities A, B, D.

Distribution: Widespread in the Oriental region, feeding on *Ipomoea*.

3.106. *Cassida bakeri* Spaeth 1925

Material: Locality A.

Distribution: Philippines (Mindanao, Leyte).

4. Faunal composition and zoogeography

Since the total number of Chrysomelid species from Leyte is close to 100, the values below are given absolute rather than as percentage. Out of the 105 species currently known from Leyte, the bulk are referable to 3 subfamilies: Galerucinae (35), Eumolpinae and Alticinae (23 each). The proportion of Hispinae is also rather high (10), whereas the other 4 subfamilies harbour between 1 and 6 species.

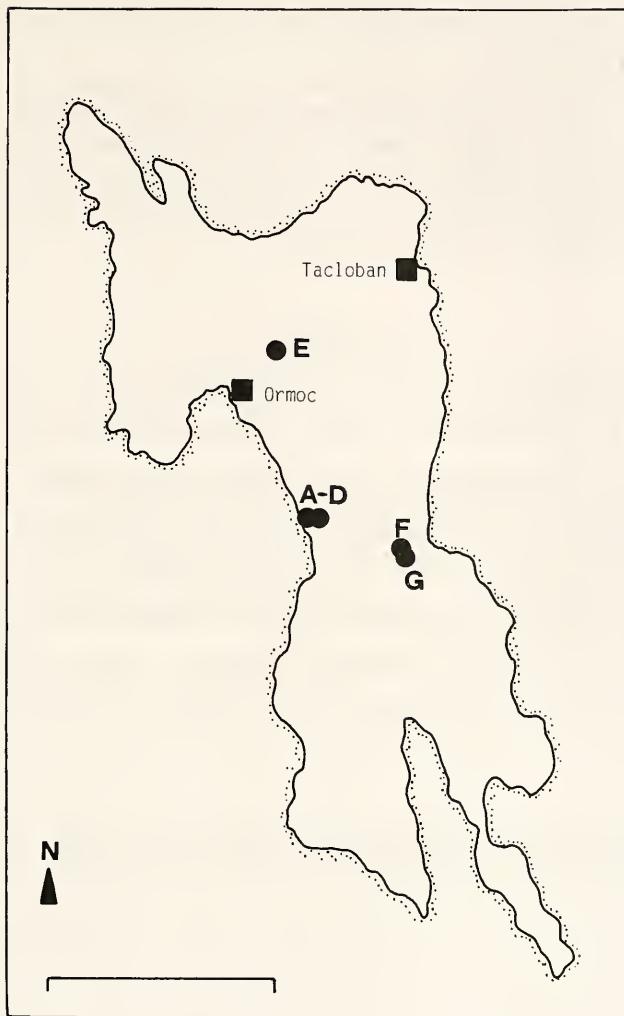


Fig. 21. Map of Leyte with the collecting localities, for A-G see chapter 2. – Scale 50 km.

Such a faunal composition is quite characteristic for Oriental Chrysomelidae. However, the Philippines are distinguished by their high-level endemism. Out of 105 Leyte species, only 22 occur beyond the archipelago, of which 7 are confined also to the nearest islands of Indonesia. Further 15 species are widespread and common on the continental southeastern Asia, being represented mainly by agricultural pests: rice (*Lema*, *Chaetocnema*), legumes (*Pagria*, *Medithya*, *Monolepta*), batatas (*Cassida*, *Aspidomorpha*), Cruciferae (*Psylliodes*), Cucurbitaceae (*Aulacophora*) as well as weeds (*Altica*). Some of them may be introduced in recent years.

The proportion of Philippine endemics amounts to 83 species, some of which are highly local in distribution. As many as 34 chrysomelid species are endemic to Leyte, although this number might prove to be overrated along with further progress in our knowledge. Further 5 species occur also on the immediately adjacent islands, 14 are

widespread throughout the archipelago, being encountered also on the 2 largest islands, Luzon and Mindanao.

Interestingly, in addition to the widespread taxa, Leyte supports only 3 species in common with the nearest Mindanao and as many as 26 species shared with the much more remote Luzon. In part, this seems to be explicable in terms of a much better knowledge of the fauna of Luzon. However, its great influence on the faunas of the medium-sized islands lying south of it and representing a southerly extension of Luzon mountain ranges is also beyond doubt.

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