

## A NEW GENUS AND SPECIES OF APHODIINAE FROM LEYTE, PHILIPPINES WITH NOTES ON OTHER TAXA (COLEOPTERA: SCARABAEOIDEA)

Zdzislawa Stebnicka.

Polish Academy of Sciences, Institute of Systematics and Evolution of Animals,  
ul. Siawkowska 17, PL-31- 016 Krakow (Poland).

### ABSTRACT

Eleven species and one subspecies of Aphodiinae are recorded from Leyte (Philippines), including one genus and two species described as new to science: *Saprovisca leytensis* n. gen., n. sp. and *Aphodius (Pleuraphodius) viscaensis* n. sp.

### Susammenfassung

11 Arten und eine Unterart der Aphodiinae aus Leyte (Philippinen) werden behandelt, darunter eine Gattung und 2 Arten neu beschrieben: *Saprovisca leytensis* n. gen., n. sp. und *Aphodius (Pleuraphodius) viscaensis* n. sp.

**Key words:** Aphodiinae, Scarabaeoidea, *Saprovisca leytensis*, n. gen., n. sp., *Aphodius (Pleuraphodius) viscaensis*, n. sp.

### INTRODUCTION

The following contribution is based on the material of Aphodiinae from Leyte (Philippines), collected by Dr. Wolfgang Schawaller, Jurgen Trautner and Katrin Gignmuller in 1991, and kindly submitted to me for examination. The field work was partly supported by the Visayas State College of Agriculture (VISCA).

Relatively little is known about the Aphodiinae of the Philippines, particularly of the smaller islands varying in size and isolation. A modest number of species were described or recorded mainly from Luzon and Mindanao, three species and one subspecies were described from the islands of Palawan, Mindoro, Cebu and Leyte. The material studied consists of the small series of specimens belonging to the five tribes, among which the Eupariini and Aphodiini are represented by the new taxa described herein.

The collection has been deposited in the Staatliches Museum for Naturkunde, Stuttgart, Germany (SMNS), some duplicate specimens are house in the Institute of Systematics and Evolution of Animals (ISEA), Cracow, Poland.

## Tribe EUPARIINI

*SAPROVISCA* n. gen.

**Generic diagnosis.** Head: large, moderately convex; genae protrudent, eyes moderate in size, eye canthus fine; antennae of 9 segments, mouthparts indicative of the soft diet. Prothorax: pronotum transverse, slightly concave at anterior angles; proepisterna shallowly excavated anteriorly. Pterothorax: scutellum small; middle coxae separated; anterior lobe of metasternum carinate between coxae, carina bilobed apically; metasternal triangle shallow. Elytra: with 10 striae including the one along epipleural edge and 10 intervals including the sutural one, epipleura narrow: humeral umbone slight, humeral denticles moderate, elytral suture coalescent. Flight wings vestigial. Legs: meso- and metafemora narrow without perimarginal lines: fore tibia short, three lateral teeth small; meso- and metatibiae enlarged toward apex with incomplete but distinct transverse ridges: row of short, equal setae in terminal tibial fringe, without accessory spine; apical spurs rather thick, unequal, curved outwardly, placed close together below the tarsal articulation; tarsi rather short with hair-like claws. Abdomen: six sternites visible, sutures coalescent, deep, finely fluted along margins, sterna 4-5 arcuate; pygidium exposed apically with transverse carina at middle.

Type-species: *Saprovisca leytensis* n. sp.

Derivatio nominis: *Saprovisca* combines the first portion of the generic name *Saprosites* and VISCA, the Visayas State College of Agriculture, in whose surroundings the type has been found.

1. *Saprovisca leytensis*, n.sp

Figs 1-3

**Holotype:** (SMNS), Leyte, VISCA N Baybay, in cultivated land, 3.III.1991, leg. W. Schawaller & al.

**Description of male:** Length 6.9 mm, greatest width of pronotum 2.2 mm. of elytra 2.0 mm. Body elongate, shining, glabrous, colour carbon black, antennae and palpi brown.

Head very large, moderately convex at middle, approximately 1/3 wider than long and as wide as base of elytra; clypeus with strong, obtuse, upturned teeth on each side of arcuate median emargination, clypeal anterior face abruptly slanting downward, genae right-angled, subdepressed, strongly protrudent; frontal suture slightly convex at almost entire distance between eyes, surface punctures fine, close, separated by about their diameter, those of occipital area a little larger and denser.

Pronotum rectangular, widest at anterior margin: anterior angles rounded and reflexed, sides finely margined, basal marginal line fine, widely broken at middle, distinctly crenate by close punctures: surface punctures moderate, scattered on disc, denser toward the sides, closest at anterior angles.

Scutellum small, narrowly triangular, impunctate.

Elytra parallel-sided, base without border; humeri denticulate and closely punctate laterally; striae impressed with moderate, distant punctures crenating

margins of the intervals; intervals nearly flat on disc, convex on apical declivity, surface punctures very minute, scattered.

Ventral sclerites nearly glabrous, impunctate; metasternum convex, mid-line slightly impressed, mesosternal carina narrow.

Femora nearly impunctate; fore tibia short, inner apical margin sharply angular behind the fore tarsus, terminal spur lanceolate; meso- and metatibiae moderate in length, subcylindrical, widened toward apex and carinate; tarsi about 1/3 shorter than tibia with cylindrical segments; basal segment of metatarsus slightly shorter than upper tibial spur and longer than the following two segments combined.

Aedeagus as in Fig. 3.

Other characters as given under the generic description.

Female unknown.

**Affinities:** The overall structures of *Saprovisca* seem to form a possible transition between the genera *Saprosites* Redtb. and *Cnematoplatys* A. Schm. All mentioned genera share an elongate body with large head, slightly separated middle coxae and relatively short legs. They also share a form of the filtering mouthparts adapted to the soft-saprophagous diet (Stebnicka 1985; Cambefort 1991). The facies of ventral sclerites and tibial spurs of *Saprovisca* characterize the representatives of *Cnematoplatys*, while the features of male genitalia are similar to those of *Saprosites*. On the other hand, nothing similar to the shape of clypeus is hitherto observed in any Oriental and extra-Oriental genus of Eupariini.

In proposing a new generic and specific name I take the occasion to comment upon the related taxa. The Papuan, monotypic genus *Neosaprosites* was established by Endrödi (1951) on the basis of intercoxal and tibial characteristics of *N. cylindricus* Endr., that quite correspond with those of *Cnematoplatys*. A. Schm. and distinguish *Cnematoplatys* from *Saprosites* Redtb. Among unpublished material collected at Huon Peninsula (Papua-New Guinea), I noticed a typical member of *Cnematoplatys* closely allied to *C. numensis* Stebn. and there is no doubt that the genus has a wider distribution than hitherto reported (Stebnicka, 1986; 1992). In fact, this mostly brachypterous genus is rarely collected and in the Indo-Australian archipelago must live a number of species which remain to be discovered.

**Remarks:** The epipharynx of *S. leytensis* has not been illustrated due to the difficulties of its extraction resulting from a complex shape of the clypeus.

## 2. *Saprosites pygmaeus* Harold

**Material:** Visca N Baybay, 200-500 m, primary forest, 10.III. 1991, leg. W. Schawaller & al. (1 ex.).

**Distribution:** Widespread throughout Pacific islands, known from Tahiti, Hawaii, Kure, Fiji, Caroline Islands, Mariana Islands, Marshall islands, Papua New Guinea, Moluccas, Java and Philippines (no exact locality).

## 3. *Saprosites implicatus* A. Schmidt

**Material:** VISCA N Baybay, 200 - 500 m. primary forest, 22. II, 2- 3.III, 1991. leg. W. Schawaller & al. (9 ex.).

**Remarks:** The specimens examined differ a little from the unique type-specimen of *S. implicatus* preserved in the Naturhistoriska Riksmuseet in Stockholm, but after careful examination I am unable to find any decisive character to separate them as belonging to the other species. They are mostly darker in colour than type with slightly shorter elytra and variable features of the pronotum: in some specimens the posterior angles of pronotum are slightly excised, in some continuously rounded toward base. Otherwise the specimens are relatively uniform. On the basis of characters of the head, elytra and legs. *S. implicatus* is most closely allied to *S. malaisei* Paul, from which it differs by having more convex pronotum with basal marginal line, larger punctures and distinctly concave anterior angles.

The species was hitherto known only from Java.

#### 4. *Ataenius peregrinator* Harold

**Material:** VISCA N Baybay, cultivated land. 28. II. 1991. leg. W. Schawaller & al. (24 ex.); SW Abuyog, river bank. 28. II. 1991. leg. W. Schawaller & al. (2 ex.).

**Distribution:** The species is known from Borneo, Sumatra, Java, Bali, Sulawesi, Philippines (no exact locality) and Micronesia (Caroline, Mariana, Marshall Islands), also reported from Vietnam.

#### 5. *Ataenius orbicularis*. A. Schhmidt

**Material:** VISCA N Baybay, cultivated land. 28. II. 1, 4.III. 1991, leg. W. Schawaller & al. (11 ex.).

**Distribution:** Widespread species, known from Vietnam, Thailand, Malaysia, Borneo and Micronesia (Caroline, Mariana, Marshall Islands).

#### 6. *Ataenius australasiae* (Boheman)

**Material:** VISCA N Baybay, cultivated land, 2.III. 1991, leg. W. Schawaller & al. (1 ex.).

**Distribution:** Widespread and common species throughout the Oriental region and in Australia.

### APHODIINI

#### 7. *Aphodius (Pleuraphodius) viscaensis*, n. sp. Figs 4-6

**Holotype:** (SMNS), Leyte, VISCA N Baybay, cultivated land, 4.III. 1991, leg. W. Schawaller & al.

**Paratypes:** 2 ex. (SMNS), 1 ex. (ISEA), same data as holotype.

**Description:** Length 2.5-2.8 mm. greatest width 1.0-1.2 mm. Body oval, moderately shining, colour orange brown, head between eyes and elytral suture slightly darkened; surface covered with minute setae visible under high magnification.

Head trapezoid, clypeus slightly marginate medially, sides nearly straight to small, obtuse genae; eyes very large, space between eyes one and one-half times

as wide as one eye when viewed from directly above; frontal suture weakly marked, surface punctures fine, evenly distributed, separated by their diameter.

Pronotum convex, anterior edge and base slightly lobed at middle, anterior angles obtuse, directed downward and closely clinging to eyes; sides very finely margined, posterior angles obtuse, base crenate by irregular row of fine punctures; surface minutely alutaceous, the punctures mixed fine and a little larger, generally separated by their diameter.

Scutellum small, triangular, impunctate.

Elytra oval, about two and one-third times as long as pronotum, humeri finely but sharply denticulate; striae wide with row of distinct punctures bordered laterally by continuous line; intervals as wide as striae, cariniform, 9th interval wider and more elevated than the remained, 10th interval inconspicuous.

Abdominal sterna minutely setaceous, finely punctate; metasternum distinctly punctate and minutely setaceous, midline feebly impressed.

Legs moderate in length; fore tibia with three lateral teeth, sharply serrate to base, apical spur straight, acute; meso- and metatibiae weakly widened toward apex, transverse ridges vestigial, marked by short lines, apical setae very fine, spurs thin; basal segment of metatarsus one-third longer than upper tibial spur and longer than the following three segments combined.

The epitorma of the epipharynx lightly sclerotized, bristles of the chaetoparia rather short and thin, the remaining setae of pedium and paria unequal in length, thin.

Sexual external characters not evident; male aedeagus as in Fig. 6.

**Remarks:** The new species may be distinguished from the other Oriental species of *Pleuraphodius*-group by its unusually large eyes and relatively long pronotum. The structure of elytra is nearly the same as in *A. lewisi* Waterh.

#### 8. *Aphodius (Pharaphodius) diadema* Wiedemann

**Material:** VISCA N Baybay, 100-200 m, secondary forest cultivated land, 5,III, 1991, leg. W. Schawaller & al. (6 ex.).

**Distribution:** Indonesian species, recorded from Java, Borneo and Bali (Stebnicka, 1991).

#### 9. *Aphodius (Trichaphodius) reichei* Harold

**Material:** VISCA N Baybay, 100-200 m. secondary forest and cultivated land. 2, 3, 5, III. 12991, leg. W. Schawaller & al. (14 ex.).

**Distribution:** Widespread, occurs in South China, Taiwan, Vietnam, Thailand, Malaysia, Borneo, Philippines, New Guinea to North Australia

### ODOCHILINI

#### 10. *Odochilus johnsoni* Rakovic

Fig. 7

1987 *Odochilus johnsoni* Rakovic, Acta Entomol, Boheemosloc., 84 33, 38-39.

**Material:** VISCA N Baybay. cultivated land. 1.III.1991, leg. W. Schawaller & al. (2 ex.).

**Complementary description:** The epitorma of the epipharynx well sclerotized, nearly circular; bristles of the chaetoparia very long, moderately thick; the chaetopodium with row of 7-8 bristles shorter than those of the chaetoparia and with clump of long, thin setae; the numerous sensillae within the epitorma orange in colour.

**Distribution:** The species was originally described from the islands of Mindoro and Palawan.

11. *Odochilus syntheticus philippinensis* Rakovic

1987 *Odochilus syntheticus philippinensis* Rakovic, Acta Entomol.

Bohemoslov., 84: 34.

**Material:** VISCA N Baybay, cultivated land, 3.III. 1991. secondary forest, 100-200 m. 5.II. 1991, leg. W. Schawaller & al. (2 ex.).

**Distribution:** The subspecies was described from NE Leyte.

### PSAMMODIINI

12. *Rhyssemus inscitus* (Walker)

**Material:** VISCA N Baybay, cultivated land. 1,3,4, III, 1991, leg. W. Schawaller & al. (7 ex.).

**Distribution:** Widespread from Madagascar throughout Oriental Region to Australia, recorded from Luzon and Mindanao by Pittino (1984).

### RHYPARINI

13. *Rhyparus peninsularis* Arrow

**Material:** VISCA N Baybay, primary forest, 200-500 m. 22. II- 10.III. 1991, leg. W. Schawaller & al. (1 ex.).

**Distribution:** The species was originally described from Malacca, recorded from Sabah (Borneo) by Paulian (1989).

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Received 7 November 1992

## FIGURES

Figures 1-3. *Saprovisca leytensis* n. gen., n. sp. - 1. habitus; 2. anterior of head; - 3. aedeagus (lateral view).

Figures 4-6. *Aphodius (Pleuraphodius) viscaensis* n. sp. - 4. fore body; - 5. epipharynx; - 6. aedeagus (lateral view).

Figure 7. *Odochilus johnsoni* Rakovic, epipharynx.

