

ON A NEW GENUS AND NEW SPECIES OF ALEOCHARINAE
(COLEOPTERA: STAPHYLINIDAE)
FROM MANGROVE FORESTS IN SINGAPORE

Kohei Sawada

ABSTRACT. - A new halobiont staphylinid beetle, *Lautaea murphyi* is described from mangroves in Singapore. The new genus *Lautaea* erected for it, is allied to *Pronomaea* Erichson.

INTRODUCTION

A new genus and species of staphylinid beetle (subfamily Aleocharinae) was recently discovered from intertidal mud flats under mangrove vegetation in Singapore. The description of this new genus and species, *Lautaea murphyi*, new genus and species, forms the content of the present paper.

Type specimens are deposited in the personal collection of the author (KS) and in the Zoological Reference Collection (ZRC), National University of Singapore.

TAXONOMY

FAMILY STAPHYLINIDAE

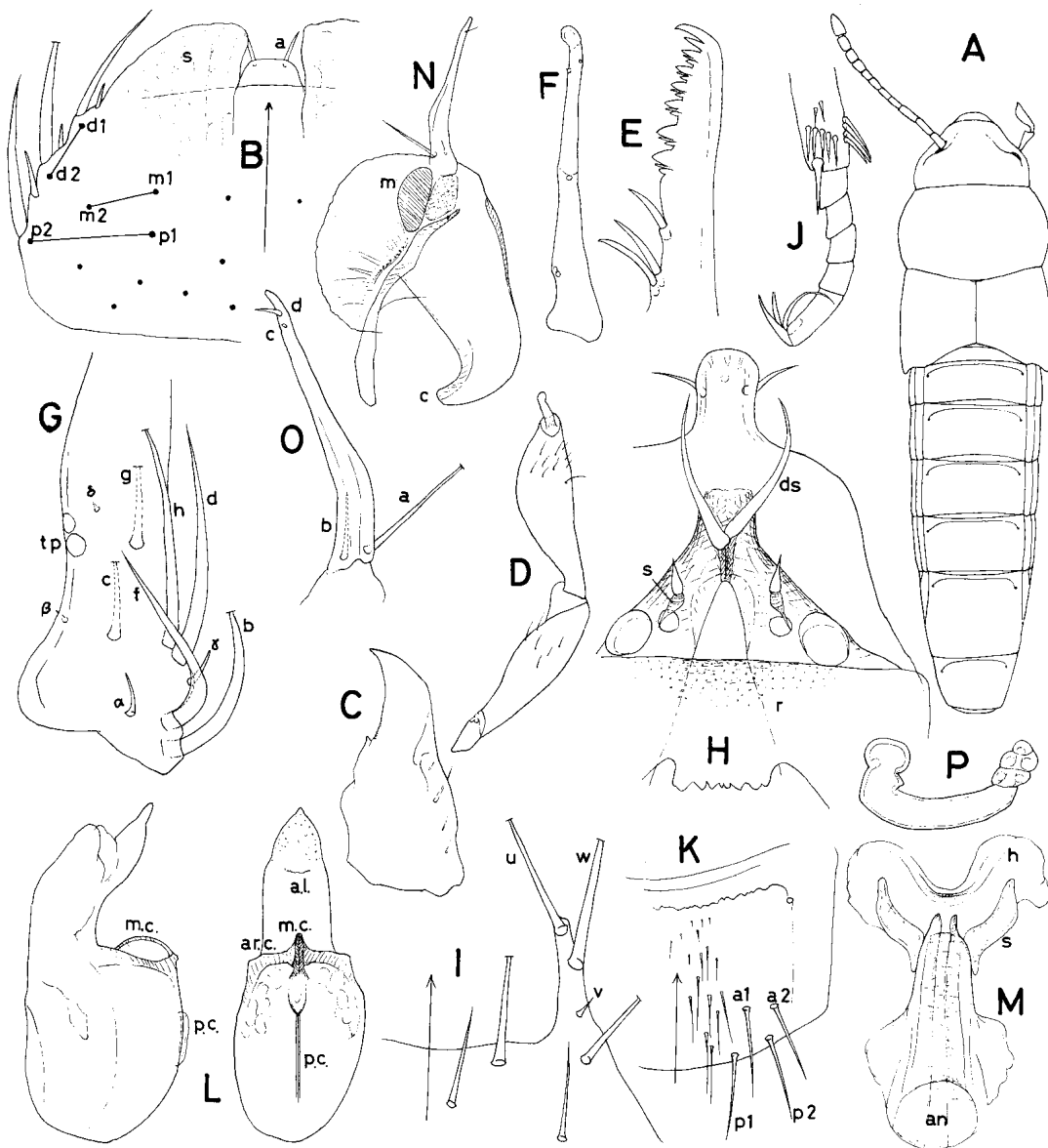
SUBFAMILY ALEOCHARINAE

GENUS *LAUTAEA*, NEW GENUS

Type species. - *Lautaea murphyi*, new species

Diagnosis. - Labrum (Fig. B) transverse, distal row of setae removed to lateral margins; prementum (Fig. H) with one large pore, one small pore and one strongly modified setal pore; setae *a* and *e* of labial palpus (Fig. G) absent; most of major setae removed to lateral margins; occipital part of head concealed by pronotum; abdomen uniformly retracted, tergites not depressed basally; tarsal formula 4, 5, 5, maxillae styliform.

Remarks. - The tarsal formula and structure of the maxilla allies *Lautaea* with *Pronomaea* Erichson, 1837 (see Cameron, 1939: 29; Fenyes, 1920: 140). The new genus differs however, in the absence of a beak-like projection of the head, in having short mandibles, a strongly carinate prosternum and a broadly truncate mesosternal process. The present halobiont genus also resembles *Bryothinusa* Casey, 1904 (see Fenyes, 1920: 131; Sawada, 1971: 81) especially in the structure of the maxillae. Their tarsal formulae, labra and genital structures however, are different.



Figs. A-P. *Lautaea murphyi*, new genus and species. A, habitus; B, labral chaetotaxy and marginal sensilla; C, right mandible; D, maxillary palpus; E, lacinia; F, G, left labial palpus and its chaetotaxy; H, glossa and prementum; I, mentum; J, mesotarsus; K, male tergite VIII; L, median lobe (lateral and ventral views); M, copulatory piece; N, O, lateral lobe and its distal segment; P, spermatheca.

New genus and species of Aleocharinae

Lautaea murphyi, new species

(Figs. A-P)

Material. - Holotype and 10 paratypes, mangroves at Mandai Kechil, Singapore, leg. D. H. Murphy, R. Yoshii & Y. Tanokuchi, 19.x.1987.

Description of male. - Length ca. 2.70 mm (head 0.32 mm long X 0.42 mm wide); pronotum 0.42 mm X 0.60 mm; elytra 0.28 mm X 0.61 mm). Ground colour glossy, reddish brown, antennae and legs brighter coloured; body (Fig. A) narrowly elongate, subparallel, densely covered with long and short pubescence; head oval, declivous, front slightly produced, occipital region concealed by pronotum; eyes remarkably reduced, with some setigerous facets; antenna long, extremities hardly dilated; segment I shorter than segment II; segment III shorter than segment II; segment IV as long as segment III; segments V to IX gradually decreasing in length; segment X slightly wider than long, segment XI short; postgena with strong ventral margins; cervical carina not divergent; labrum (Fig. B) weakly sclerotised, rounded laterally, with nearly straight anterior margin, but with pair of broad, thin lobes produced beyond margin, with small median lobe on which well developed *a*-sensilla of labrum present; among 6 major setae, *p2*, *d2* and *d1* are placed at the lateral margin, each with short, setiform sensilla; proximal row of setae nearly transverse and much longer than median row; *m2* posterior to *m1*; ca. 7+7 secondary setae present; marginal sensillae of labrum *a* (*a* in Fig. B) setiform and diverging; *b* scarcely reaching margin; *c* pointed as in *b*; mandibles short and briefly hooked at apices; right one (Fig. C) with fine molar; maxillary palpus (Fig. D) 4-segmented; segment II about as long as segment III; the latter rather pedunculate with strongly dilated middle portion; segment IV minute and peg-like; both galea and lacinia corneous, linear; the former furnished with fine cilia apically, and the latter (Fig. E) provided with row of ca. 6 tricuspidate teeth on inner margin, together with few additional spines basally; labial palpus (Fig. F) styliform, linear; most of setae located near base, chaetotaxy (Fig. G) is as follows - α absent; β remote from *tp*; γ lateral to *tp*; *a* reduced to setula; *b* basal-most, apparently dilated basally; *f* strongly curved distally, dilated like *b*; *c* on level of β and *h*; glossa (Fig. H) small, oblong, with pair of setae; prementum (Fig. H) narrow, triangular in outline, with 1 setal and 2 real pores, in which lateral pair of latter is strongly enlarged; setal pore bears thick seta, socket converted to spindle-like sheath (*s* in Fig. H) connected to real pore; distal setae (*ds*) thick, short, arranged in longitudinal row; peculiar transverse rigid membrane (*r*) lying across level of enlarged real pores; mentum (Fig. I) nearly truncate in front, anteroexternal corner strongly spiniform; *u* apical; *v* nearly basal in position; pronotum (Fig. A) broader than long, distinctly convex above and declivous antero-externally; lateral margins uniformly rounded, with very short erect setae; surface provided with moderately long, very delicate pubescence, giving silky appearance; prosternum with high carina, apex flat, dilated; mesosternum raised medially, process broadly truncate, meeting metasternal process; mesocoxae separated; elytra short, covered with dense granules, which are sparser posteriorly; hind wings absent; macrochaetotaxy as 01-02-02-02-02-22; abdomen subcylindrical, uniformly retracted posteriorly, with long, conspicuous setae throughout; no tergites depressed, with exception of hardly depressed base of segment III; sternites with microsculpture in isodiametric imbricate pattern; legs moderately long; all tibiae with very short microsetae; tarsal formula as follows - 4, 5, 5; mesotarsal (Fig. J) and metatarsal segments I to IV subequally short; segment V about as long as segments III and IV together; empodium very long, coiled distally; median lobe of aedeagus (Fig. L) 0.56 mm long; apical lobe nearly parallel, ending in briefly pointed

K. Sawada

apex in ventral view; laterally strongly bent down with sinuate outline; basal half of median lobe very thick; costae of *m.c.* united to form high projection; *ar.c.* well developed, laterally angulate; copulatory piece (Fig. M) well sclerotised, gradually narrowed distally and terminating in pair of short orificial lobes, with large lateral sclerites subapically (*s* in Fig. M); *an* unusually large, basal-most in position; large membranous dilatation (*h*) anterior to apex of corpus; lateral lobe (Fig. N) broad with ovate middle apodeme (*m*); vellum well developed; medial segment with strongly hooked basal corner (*c*); distal segment (Fig. O) very long, almost styloform; long *a* and short *b* located at base; minute *c* and long *d* at apex.

Description of female. - Other than non-sexual characters - abdominal segments not modified; spermatheca (Fig. P) very short, linear, coiled 3 times at distal end; bursa small, without umbilicus.

Etymology. - This species is dedicated to Professor D. H. Murphy of the Department of Zoology, National University of Singapore.

Remarks. - The broad labrum with many secondary setae, the prementum with large and small real pores, and the copulatory piece with an unusual anellus are peculiar features of *L. murphyi*. In the examples dissected, the intestines were filled with fragments of harpacticoid copepods (Crustacea), which may be the usual prey of these insects.

Acknowledgements. - I am grateful to Professor D. H. Murphy, Dr. R. Yoshii and Dr. Y. Tanokuchi for furnishing me with the material. Dr. Yoshii is grateful for support from the Toyota Foundation.

LITERATURE CITED

- Cameron, M., 1939. *The Fauna of British India, including Ceylon and Burma. Coleoptera, Staphylinidae.* 4, London, 691 pp., 3 Pls.
- Fenyès, A., 1918-1921. *Genera Insectorum, Fasc. 173. Coleoptera, Staphylinidae Subfam. Aleocharinae.* Pasadena, California, 453 pp., 7 Pls. (1918: 111-110; 1920: 112-414, 7 Pls.; 1921: 415-453).
- Sawada, K., 1971. Aleocharinae (Staphylinidae, Coleoptera) from the intertidal zone of Japan. *Publ. Seto Mar. Biol. Lab.*, 19(2/3): 81-110.

Address: KS - Shukugawa Gakuin Junior College, Koyoen, Nishinomiya, Japan 662