

REDESCRIPTION OF *LOBOTHORAX TYPUS* BLEEKER, 1857 (ISOPODA,
CYMOTHOIDAE): THE FIRST RECORD OF THE SPECIES AND GENUS
FROM CHINESE WATERS

BY

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ABSTRACT

Lobothorax typus Bleeker, 1857, is recorded for the first time from Chinese waters. The species is redescribed, and the taxonomy, known hosts, and distributional data are discussed. A brief diagnosis of the genus is given.

ZUSAMMENFASSUNG

Lobothorax typus Bleeker, 1857, ist zum ersten Mal in chinesischen Gewässern gefunden worden. Die Art wird nachbeschrieben und die Taxonomie, die bekannten Wirte und die Verbreitungsgebiete werden diskutiert. Eine kurze Gattungsdiagnose wird gegeben.

INTRODUCTION

Our knowledge of marine Cymothoidae (Isopoda) of Chinese waters is minimal, consisting only of the contributions of Shen (1940) and Yu (1935) in the early 20th century, and more recently those of Yu & Li (2002, 2003). Bruce (1982, 1990a) also reported on the cymothoids of the region. Examination of the isopod collections deposited at the Institute of Oceanology, Chinese Academy of Sciences (IOCAS), revealed four female and one male specimens of *Lobothorax typus* (Bleeker, 1857), a long-overlooked species that has not been reported for almost 70 years. These five specimens represent the first record of the species and genus from China.

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Lobothorax Bleeker, 1857 is a little-known genus, and it is not well differentiated from *Ceratothoa* Dana, 1852 and *Glossobius* Schioedte & Meinert, 1883 (see remarks for *Glossobius*, in Bruce & Bowman, 1989: 13). Schioedte & Meinert (1883) believed that the name *Lobothorax* was incorrectly constructed and offered the replacement name *Saophra*, also establishing the family Saophridae. The latter names have not been accepted, other than their recent use by Trilles (1994).

MATERIAL AND METHODS

The terminology follows Bruce (e.g., 1990b). All material is held at the Institute of Oceanology, Chinese Academy of Sciences (IOCAS). The fish nomenclature is taken from Froese & Pauly (2005). The classification follows Brandt & Poore (2003).

TAXONOMY

CYMOTHOIDA Wägele, 1989

CYMOTHOIDAE Leach, 1814

Lobothorax Bleeker, 1857

Lobothorax Bleeker, 1857: 38.

Saophra Schioedte & Meinert, 1883: 282.

Type species. — *Lobothorax typus* Bleeker, 1857; by monotypy.

Diagnosis. — Body narrow, straight, about 3 times as long as wide; rostrum anteriorly wide, dorsoventrally flattened. Head laterally contained by pereonite 1. Pereonite 1 anterolateral angles expanded, forming spoon-like lobes that extend beyond anterior margin of head; pereonites 2-4 with distinct longitudinal median carina; pereonites 5-7 short, their combined lengths less than that of pereonite 4. Pleonite 1 markedly shorter than pleonite 2. Antennule basal articles not in contact. Pereopods 1-3 short, robust; pereopods 5-7 basis with posterior expansion. Pleopods lamellar, pleopods 1-5 exopods each with proximolateral lamella; without pockets or folds; pleopods 3-5 with weakly developed pockets or ridges.

Species included. — *Lobothorax typus* Bleeker, 1857, *L. aurita* (Schioedte & Meinert, 1883) (Philippines); *L. laevis* Richardson, 1910 (Philippines).

Remarks. — *Lobothorax* remains one of the more poorly known genera of the Cymothoidae. The most recent diagnoses given for related genera such as *Ceratothoa* and *Glossobius* (cf. Bruce & Bowman, 1989) did not identify critical, distinguishing character states between those genera and *Lobothorax*. A revised

diagnosis is presented here in order to facilitate the separation of *Lobothorax* from related genera, but we refrain from presenting a full description until more data are available for the remaining species. Characters by which the genus can be identified are, in adult females: the strongly developed anterolateral lobes on pereonite 1, which extend past the anterior of the head; the flattened rostrum; and pereonites 5-7 being very short in comparison to *Ceratothoa* and *Glossobius*, which have only pereonite 7 shorter than pereonite 6. In addition, *Lobothorax* has a proximolateral lamella on all pleopod exopods (not present in *Ceratothoa* and *Glossobius*). *Glossobius* may also be distinguished by the head not being immersed into, or laterally overlapped by, pereonite 1.

Distribution. — The genus is known from the Indo-Malaysian region, from the Bay of Bengal (Barnard, 1936) to the Philippines (Richardson, 1910), and now from China.

***Lobothorax typus* Bleeker, 1857 (figs. 1-3)**

Lobothorax typus Bleeker, 1857: 39-40, fig. 16; Stebbing, 1893: 353; Nierstrasz, 1931: 130.

Saophra typus — Schioedte & Meinert, 1883: 283, pl. 11 figs. 1, 2.

Saophra typus — Nierstrasz, 1915: 87; Trilles, 1994: 114.

Material examined. — 1 ♀ (ovig., 27 mm), IOCAS 99CI-101, Sanya, Hainan Island, 4 December 1955, coll. Liu Ruiyu (J. Y. Liu); 2 ♀♀ (non-ovig., 35 mm; 1 imm., 13 mm), IOCAS 97CI-074, Yingge Sea, Hainan Island, 11 December 1955, coll. Liu Ruiyu (J. Y. Liu); 1 ♀ (non-ovig. 32 mm), 1 ♂ (15 mm), IOCAS 97CI-073, Qinglan, Hainan Island, 29 November 1956, coll. Liu Ruiyu (J. Y. Liu), on gills of *Lepturacanthus savala* (Cuvier, 1829).

Description of female. — Body straight, about 2.91 times as long as maximum width, widest at pereonite 5. Pereon with longitudinal mediadorsal ridge. Cephalon triangular, anterior margin produced to form narrowly rounded rostrum, eyes of moderate size. Pereonite 1 longest, anterolateral processes expanded apically. Pereonites 2-4 about equal in length, slightly shorter than pereonite 1. Pereonites 5-7 conspicuously shorter than other pereonites and decreasing in width. Pereonite 5 shortest, partly overlapped by pereonite 4. Coxae all shorter than pereonites. Pleon short, about 13% of total body length, deeply immersed in the thorax, all pleonites visible, subequal in length. Pleonite 1 very narrow, partly overlapped by pereonite 7, pleonites 2-5 gradually wider. Pleotelson about 0.8 times as long as wide, subrectangular, posterior margin tapering to caudomedial point.

Antennule robust, composed of 8 articles, slightly shorter than antenna, articles 1-3 expanded and flattened, article 2 longest. Antenna slender, composed of 9 articles, first 2 of which are short, articles 3-4 longest.

Articles of mandibular palp all distinct, article 3 with 3 apical setae. Maxillule slender, styliform, with 4 terminal robust setae. Maxilla broad, endopod and lateral

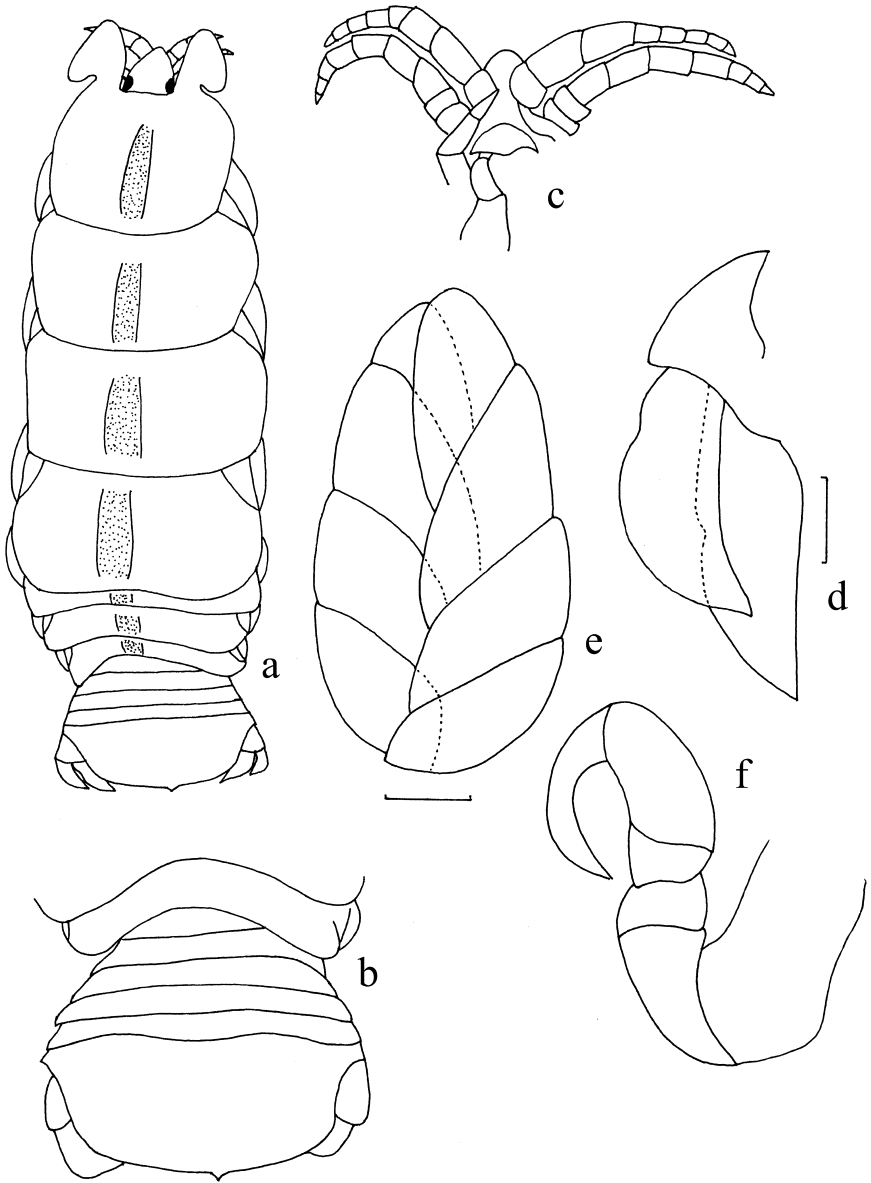


Fig. 1. *Lobothorax typus* Bleeker, 1857 (a-d, f, ♀ 32 mm, 97CI-073; e, ovigerous ♀ 27 mm, 97CI-072). a, body, dorsal view; b, pleon and pleotelson, dorsal view; c, antennule and antenna, ventral view; d, uropod; e, brood pouch; f, pereopod 1. Scale = a, e, 2.8 mm; b, 1.7 mm; c, 1.3 mm; d, 0.9 mm; f, 0.7 mm.

lobes each with 2 robust setae. Maxilliped composed of 3 articles and obscurely segmented basal articles; palp article 3 rounded, with 4 robust setae.

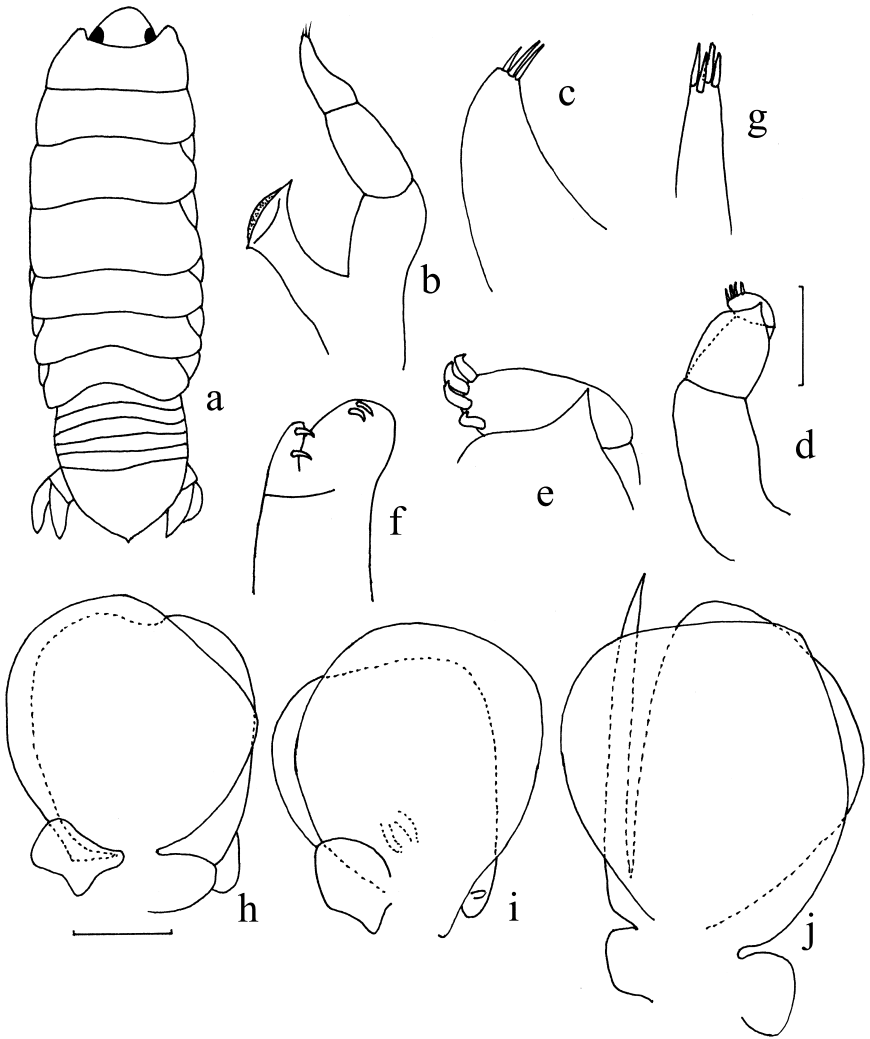


Fig. 2. *Lobothorax typus* Bleeker, 1857 (a, j, ♂ 14.5 mm, 97CI-073; b-i, ♀ 32 mm, 97CI-073). a, body, dorsal view; b, mandible; c, apex of mandible palp article 3; d, maxilliped; e, apex of maxilliped palp article 3; f, maxilla; g, maxillule; h, pleopod 1; i, pleopod 3; j, pleopod 2. Scale = a, 1.3 mm; b, d, h-j, 0.7 mm; c, e-g, 0.2 mm.

Pereopod 1 robust, basis rectangular; merus less than half length of ischium, inferior margin weakly dilated; carpus short, propodus about 1.5 times as long as combined lengths of merus and carpus. Pereopods 2 and 3 longer than pereopod 1. Pereopods 4-7 basis with posterior expansion becoming progressively larger toward posterior. Pereopods 5-7 carpus short, triangular. Brood pouch made up of 4 pairs of oostegites, arising from sternites 2, 3, 4, and 6.

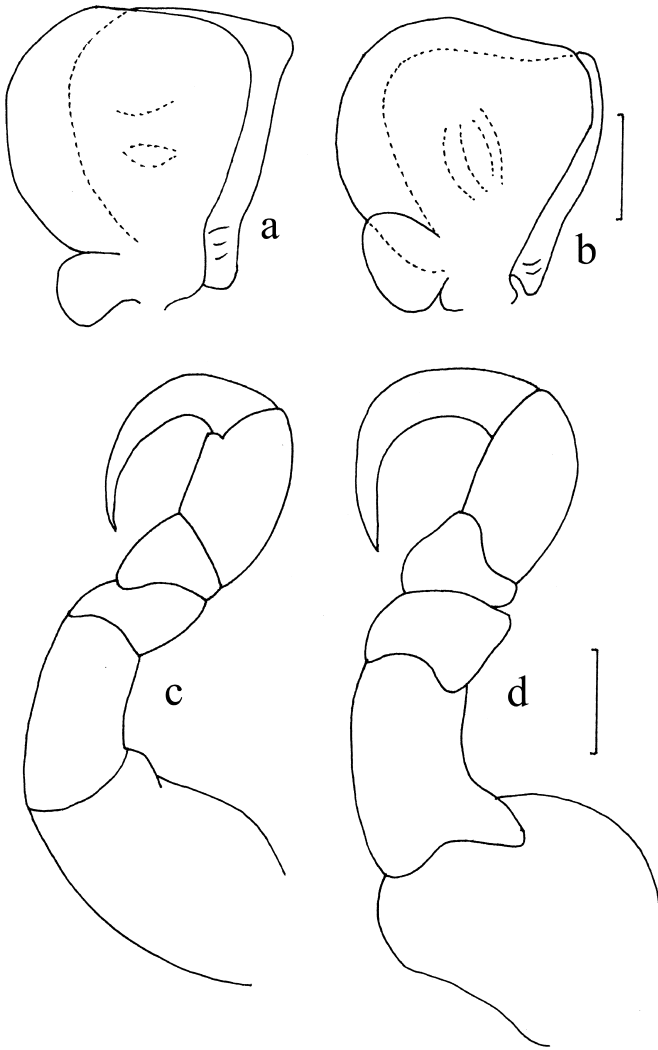


Fig. 3. *Lobotheorax typus* Bleeker, 1857 (♀ 32 mm, 97CI-073). a, pleopod 4; b, pleopod 5; c, pereopod 4; d, pereopod 7. Scale = a, b, 0.7 mm; c, d, 0.5 mm.

Pleopods all lamellar, all peduncles with developed lobes. Pleopods 3-5 endopods with 2 marked depressions. Uropods short, rami longer than peduncle, narrowing slightly distally; curving slightly medially; endopod longer than exopod.

Description of male. — Smaller than female, cephalon anterior margin bluntly rounded. Pereonite 1 'shoulders' reaching level of anterior margins of eyes. Pereonite 4 longest. Pereon without ridge. Pleon with length 22% of total length, triangular.

Appendages similar to those of female but antennule and antenna less robust, pereopods 5-7 expansions of bases less developed. Pleopod rami all lamellar, pleopod 2 with appendix masculina inserted basally, longer than endopod.

Remarks. — The distinguishing features of *Lobothorax typus* are the anterolateral margins of pereonite 1 projecting forward beyond the anterior margin of the cephalon, pereonites 1-7 each with an ill-defined longitudinal, dorsal median ridge, and pereonites 5-7 each abruptly shorter than pereonite 4.

These specimens agree well with the description provided by Bleeker (1857) from Batavia (Jakarta). The second species added to this genus was *Lobothorax aurita* (Schioedte & Meinert, 1883) (then placed in the genus *Saophra*). Richardson (1910) described the third species, *Lobothorax laevis* from the Philippines.

Distribution. — Jakarta, Java, Indonesia (as Batavia, Bleeker, 1857; Schioedte & Meinert, 1883), South China Sea.

Hosts. — The only host record is from *Lepturacanthus savala* (Cuvier, 1829), Pisces, Trichiuridae (cutlass fishes).

ACKNOWLEDGEMENTS

This study was supported by the National Science Foundation of China (No. 30500055) and foundation for excellent researcher of Shandong Province (03BS111). We are extremely grateful to Prof. Ruiyu Liu (J. Y. Liu) of IOCAS, for his kind encouragement to our study and his important comments to the manuscript.

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