A new species and new recorded species of Lumbrineridae Schmarda, 1861 (Annelida: Polychaeta) from China*

CAI Wenqian (蔡文倩)1, 2, LI Xinzheng (李新正)1,**
1 Institute of Oceanology, Chinese Academy of Sciences, Qingdao 266071, China
2 Graduate University of Chinese Academy of Sciences, Beijing 100049, China

Received Jan. 19, 2010; revision accepted May 12, 2010

Abstract Based on material deposited in the Marine Biological Museum of the Chinese Academy of Sciences (Qingdao), a new species, Lumbrineris sinensis sp. nov., as well as Augeneria albidentata (Ehlers, 1908), which is recorded for the first time from coastal water of China, are reported in the present paper. The specimens examined were collected during 1958 to 1960 from the Yellow Sea, East China Sea and South China Sea at depths of 4 to 182 m.

Keyword: Polychaeta; Lumbrineridae; Lumbrineris sinensis sp. nov.; Augeneria albidentata (Ehlers, 1908); new species; new record; Chinese waters

1 INTRODUCTION

Lumbrineris de Blainville, 1828 was a polyphyletic genus in the family Lumbrineridae Schmarda, 1861 (Hartman, 1944; Fauchald, 1970). Species of Lumbrineris are characterized now by five pairs of maxillae, composite and simple hooded hooks, and MII (the second maxilla) as long as M1 (the first maxilla), with connecting plates poorly developed (Orenszan, 1990; Carrera-Parra, 2006a). At present there are 36 valid species in the genus (Carrera-Parra, 2006b).

The genus Augeneria Monro, 1930 was erected for those species with short nuchal antennae on the prostomium. It was treated by Fauchald (1970) as a synonym of Lumbrineris because some species of Ninoe Kinberg, 1865 and Lumbrineris also have nuchal antennae (Imajima and Higuchi, 1975). Orenszan (1973) reestablished Augeneria based mainly on the maxillary apparatus and mandibles (Carrera-Parra, 2001). Carrera-Parra (2006a) emended the description of the maxillary apparatus of the genus to delimit it. There have been nine valid species in the genus.

Recently, when we sorted the material of the family Lumbrineridae deposited in the Marine Biological Museum of the Chinese Academy of Sciences (MBMCAS) in the Institute of Oceanology, Chinese Academy of Sciences (IOCAS), some specimens of Lumbrineris and Augeneria were separated out. The Lumbrineris specimens belonged to an undescribed species, which is now described as L. sinensis sp. nov., the Augeneria specimens were identified as Augeneria albidentata (Ehlers, 1908). The present paper reports the sorting results.

2. MATERIAL AND METHOD

The material was collected by members of the “National Comprehensive Oceanography Survey” (NCOS, 1958–1960). All the samples were taken with 0.1 m\(^2\) and 0.25 m\(^3\) grabs. All the material is deposited in the MBMCAS.

The following abbreviations are used in the text: CN=collection number; coll(s).=collector (s); M=Maxilla; MBM=Marine Biological Museum, Chinese Academy of Sciences; spm (s)=specimen (s); St=Station.

The examination and terminology of the maxillary apparatus follow the proposals of Carrera-Parra (2001, 2006b). An anterodorsal dissection was made to extract the maxillary apparatus. The specimen was mounted dorsally and ventrally on a slide to examine details of the

*Supported by the Knowledge Innovation Program of the Chinese Academy of Sciences (No. 072715)
**Corresponding author: lzxzh@qdio.ac.cn
maxillae and mandible under a compound microscope. All parapodia were examined under a compound microscope. The measurements were standardized for length through chaetiger 10 (L10), and for width (W10) at chaetiger 10 excluding parapodia. The posterior chaetigers imply those chaetigers after chaetiger 30.

3. TAXONOMY

Family Lumbrineridae Schmarda, 1861
Genus Lumbrineris de Blainville, 1828
Lumbrineris sinensis sp. nov.
(Figs.1, 2)

Fig.1 Lumbrineris sinensis sp. nov. Holotype
a. anterior end, dorsal view; b. anterior end, ventral view; c. anterior parapodium, anterior view; d. parapodium 30, anterior view; e. posterior parapodium, anterior view; f. composite multidentate hooded hooks from anterior parapodium; g. simple multidentate hooded hooks from anterior parapodium; h. limbate from anterior parapodium; i. posterior end, dorsal view; j. mandibles, dorsal view; k. maxillae, dorsal view; l. MIII, MIV and MV, ventral view. Scale bars = 0.5 mm (a, b, i); 0.1 mm (c–e, j, l); 0.02 mm (f, g); 0.05 mm (b); 0.2 mm (k).