



Laonice (Annelida: Spionidae) from South and Central America

VASILY I. RADASHEVSKY^{1,2,3} & PAULO DA CUNHA LANA²

¹A.V. Zhirmunsky Institute of Marine Biology of the Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, 690041, Russia. E-mail: radashevsky@mail.ru

²Centro de Estudos do Mar, Universidade Federal do Paraná, 83255-000, Pontal do Paraná, Paraná, Brasil.
E-mail: lana@ufpr.br

³Corresponding author

Abstract

Laonice species from South and Central America are reviewed based on museum collections and new material collected in southern Brazil. An identification key is provided to 10 species including three previously described species, *L. antarcticae* Hartman, 1953, *L. weddellia* Hartman, 1978, *L. branchiata* Nonato, Bolívar & Lana, 1986, and three species represented by poor material, insufficient for final taxonomic diagnosis. Four new species, *L. petersenae* sp. nov., *L. aperata* sp. nov., *L. parvabranchiata* sp. nov., and *L. pinnulata* sp. nov. are described and illustrated. Earlier records of *L. cirrata* (M. Sars, 1851) from South America are not confirmed. The loss of neuropodial sabre chaetae and hooks until a certain size in terms of numbers of adult chaetigers is here used for the first time as a specific character with *Laonice* species.

Key words: taxonomy, morphology, Brazil, Chile, Costa Rica

Introduction

Laonice Malmgren, 1867 has never been defined in terms of phylogenetic relationships but appears to be an unambiguous monophyletic group of spionid polychaetes comprising 24 described species. Although well distinguished from other spionids, *Laonice* species are often difficult to identify when adults are encountered in benthic samples or larvae are caught in the plankton. Adult characters traditionally used for diagnostic purposes, such as shape of the prostomium and peristomium, length of the caruncle, arrangement of sabre chaetae, hooks, branchiae, lateral pouches, and number of pygidial cirri, vary a great deal among conspecific individuals of the same size (see Söderström 1920; Sikorski et al. 1988; Orrhage & Sundberg 1990; Sikorski 1999, 2003a–b) and, in addition, often change in the course of individual ontogenesis. This variability complicates the definition of individual species because there are few data on postlarval and juvenile morphology and on variability of adult morphology.

Very few *Laonice* species have been distinguished based on the presence of unique morphological features, such as appendages on branchiae or segments, while others are usually distinguished based on a combination of morphometric characteristics, such as caruncle length, arrangement of chaetae, branchiae, and lateral pouches. Variability in diagnostic characters resulted in the first described *Laonice* species, *L. cirrata* (M. Sars, 1851), originally collected in northern Norway, to be reported from all over the world in shallow to abyssal depths. A closer look at the morphology of specimens throughout the reported range of the species led Sikorski (2002) to suggest