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Redescription of *Herdmania papietensis* Herdman, 1882 (Ascidiacea, Pyuridae) from Polynesia

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Abstract

Among the Pyuridae family the genus *Herdmania* Lahille, 1888 differs from the diagnose of *Pyura* Molina, 1782 by the presence of needle-shape echinated spicules in all tissues. These striking elements formerly led to identify many specimens collected in tropical or temperate waters as *Herdmania momus* (Savigny, 1916). Later the genus was split into several species with a special attention to the different structure of the gonoducts. Newly collected specimens and a revision of previously described animals in Polynesia lead to the redescription of *Herdmania papietensis* Herdman 1882 from Polynesia and to compare it to the other *Herdmania* species known in the Pacific Ocean.

Key words: Tunicata, Ascidians, Herdmania, Polynesia

Introduction

Cynthia momus Savigny, 1816 which constitutes the type of the actual genus *Herdmania* was already placed in the Pyuridae family. Later, the genus *Cynthia* was changed in *Pyura* Molina 1782 and species having long echinated spicules in all their tissues were placed in this genus. Lahille, 1888 created the genus *Herdmania* differing from *Pyura* only by the presence of these striking spicules and this is the status now universally adopted. In this genus the general organisation is always the same: branched tentacles, numerous high branchial folds, dorsal lamina in languets, one long gonad on each side, a wide open gut loop, the hepatic gland in several lobes, no endocarps. The internal view of opened specimens is very similar. Differences between the species mainly concern the gonad structure.

Several ancient collections and some recent ones obtained from different parts of Polynesia have led us to reexamine previously described specimens from Polynesia (Herdman 1882) and (Monniot C. & F. 1987). Specimens named as *H. momus* in Monniot C. & F. 1987 belong in fact to two different species *H. pallida* and *H. papietensis* differing according to their gonoducts. Both species are very close but the differences are constant.

The importance of the number and shape of the gonoducts was rightly emphasised in the revisions of Pacific *Herdmania* species by Kott (2002) and Nishikawa (2002), who gave descriptions of new species.

A description of *H. papietensis* is given here in comparison with all *Herdmania* species known in the Pacific Ocean (table 1) with a particular concern to the gonoducts. The other organs such as the tentacles, the number of branchial folds, the curve of the dorsal tubercle horns much depend on the size of the specimens.

Description

Material examined:
Polynesia:
Type: *Cynthia papietensis* Herdman, 1882 NHM n° ZOO 2014-1497 T, Tahiti.
Hao: extern reef, 30/01/1905—Hao: 18°13,105 S–140°49,376 W, 6 m, 05/05/2011-Rapa: Koumire point 27°34.8

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After Nishikawa 2002 *H. curvata* Kott, 1952 and *H. contorta* Monniot C.& F., 1992 are junior synonyms of *H. japonica*, and *H. insolita* Monniot F. & C. 2001 is a junior synonym of *H. mauritiana* , so they are not in table 1.

Pyura columna Monniot C.& F. 1991 from new Caledonia which has the same aciculate echinated spicules as in all *Herdmania* species differs from all the species above in having several elongated gonads on each side instead of one. Nevertheless it would be better attributed to the genus *Herdmania*.

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