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## Some Tunicates from Macquarie Island and Heard Island

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## SOME TUNICATES FROM MACQUARIE ISLAND AND HEARD ISLAND

By P. KOTT<sup>1</sup>

### INTRODUCTION

The following small collection of ascidians was collected by various members of A.N.A.R. Expeditions stationed at Macquarie Island and Heard Island during 1949-51. The collection is not large but it is in excellent condition and has made possible a detailed examination of *Sycozoa quoyi* (Herdman) which previously had not been sufficiently distinguished from *Sycozoa sigillinoides* Lesson. Also new records have enabled a wider sub-antarctic distribution to be suggested for certain species which previously have been known by few specimens from limited localities.

### DESCRIPTIONS

#### *SYCOZOA QUOYI* (Herdman)

For previous literature and synonymy see Kott (1954), p. 157.

*Collection.* Atlas Cove, Heard Island, Collection No. 224, 17/7/49. Atlas Cove, Heard Island, 5A. Atlas Cove, Heard Island (washed up on beach) 4/3/50. South West Bay, Heard Island, C9/51, August 1951.

*Previous records.* Macquarie Island, Iles de Kerguelen, Heard Island.

*Colony.* Numerous colonies are available; the stalk is slightly longer than the head. In larger specimens the stalk is about 2 cms. long, while the head is 1.5 cms. in length.

*Zooids.* The thorax has 14 longitudinal vessels; the branchial sac has 13 stigmata in each half row; parastigmatic vessels are absent. There is a well-defined long tubular gastric gland from the pear-shaped smooth stomach, breaking into branches which run parallel to one another for a short distance along the rectum. These branches are about the same length as the common trunk. In male colonies there are about 12 testes lobes on the right-hand side of the gut loop.

*Discussion.* The present collection of large numbers of this species, in good condition, has enabled further distinctions to be made between this species and *Sycozoa sigillinoides* Lesson. Previously these species have been clearly distinguished only by the size of the larva and the condition of the alimentary canal which is, in any case, extremely variable. From an examination of *Sycozoa sigillinoides* from d'Entrecasteaux Channel, Tasmania, it

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was found that here there are 12 very fine longitudinal muscle bands on the thorax, the gastric gland is tubular but very short so that the branches along the intestine are 3 to 4 times the length of the common trunk; testes lobes number about 8-12 as in *Sycozoa quoyi*.

Thus *Sycozoa quoyi*, although closely related to the latter species, is distinct and with a distribution apparently limited to the subantarctic region, while *Sycozoa sigillinoides* extends into the Antarctic.

#### *DIDEMNUM STUDERI* (Hartmeyer)

For previous literature and synonymy see Kott (1954), p. 161.

*Collection.* Atlas Cove Beach, Collection No. 113, 20/5/49.

*Previous records.* Iles de Kerguelen, Macquarie Island, Magellanic region, Tasmania.

*Discussion.* This species has not previously been taken from Heard Island. It has, however, a wide distribution in the subantarctic, so its presence here is not unexpected.

#### *SYNOICIUM KERGUELENSE* (Hartmeyer)

*Macroclinum kerguelense*, Hartmeyer (1911), p. 547.

*Collection.* Atlas Cove, 5A.

*Previous records.* Iles de Kerguelen.

*Colony.* The colony is almost spherical, 4 cms. in diameter, and fixed by a narrowed base. Zooids are numerous but present in the surface test only, and no systems were distinguished. The surface of the colony is smooth.

*Zooids.* There are 9 distinct longitudinal muscle bands on the thorax; the branchial sac has 8 rows of "punch-hole" stigmata with 7 stigmata in each half row. In all other ways the zooids are identical with those described by Hartmeyer.

*Discussion.* Although the form of the colony differs from the two described by Hartmeyer, the "punch-hole" stigmata are characteristic. The presence of this species at Heard Island therefore suggests a wider subantarctic distribution for this species, previously recorded only from Iles de Kerguelen.

#### *POLYZOA OPUNTIA* Lesson

For previous literature and synonymy see Kott (1954), p. 147.

*Collection.* Atlas Cove, Heard Island, March, 1949, Collection No. 115, 19/5/49; Collection No. 125, 19/5/49 (washed up on beach); Collection No. 198, 2/7/49 (Wharf Point, washed up); Collection No. 281, dredged, 1-5 m.

*Previous records.* Iles de Kerguelen, Heard Island, Straits of Magellan, Tierra del Fuego, Patagonian coast, Falkland Islands, South Georgia.

*MOLGULA NOVAEZELANDIAE* (Michaelsen)

For previous literature and synonymy see *Ctenicella novaezelandiae*, Michaelsen (1922), p. 373.

*Collection.* M1/49/Q1, 7/5/49, from reef, Buckles Bay, Macquarie Island.

*Previous records.* Lyttleton, South Island, New Zealand.

*Description.* The specimens are numerous, black and 1 cm. high, 0.5 cms. broad. They are characterized by the form of the branchial sac and the gonads.

*Discussion.* As with previous species, the known distribution of this species is extended, and it is probable that it is present more widely in the subantarctic area.

SUMMARY

Special anatomical features of 5 species of subantarctic ascidians are discussed, and their known distribution extended.

*Sycozoa sigillinoides* Lesson and *Sycozoa quoyi* (Herdman) are further distinguished from one another.

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