

SHORT COMMUNICATION

TEN INVERTEBRATES NEW FOR THE MARINE FAUNA OF MADEIRA

PETER WIRTZ

WIRTZ, P. 2006. Ten invertebrates new for the marine fauna of Madeira. *Arquipélago. Life and Marine Sciences* 23A: 75-78

The nemertine *Drepanogigas albolineatus*, the gastropods *Coralliophila kaofitorum*, *Haminoea orteai*, *Discodoris rosi* and *Janolus* n sp, the decapod *Palaemonella atlantica*, the phoronids *Phoronis australis* and *Phoronopsis californica*, the starfish *Chaetaster longipes* and the tunicate *Distaplia corolla* are recorded from Madeira archipelago for the first time.

Peter Wirtz (e-mail: peterwirtz2004@yahoo.com), Centro de Ciências do Mar, Universidade do Algarve, Campus de Gambelas, PT - 8005-139 Faro, Portugal.

INTRODUCTION

The shallow water fauna of Madeira is a mixture of species from the temperate Mediterranean-Atlantic region, species with boreal origin and a strong component of tropical species (WIRTZ 1998). Species new for Madeira and species new for science are still discovered every year in coastal waters of Madeira. During SCUBA dives along the coasts of Madeira and Porto Santo Islands, I again noted the presence of numerous species not yet recorded for the area. Similar to previous publications (e.g. WIRTZ 1998, 1999), I here report on ten marine invertebrates new for the fauna of the Madeira archipelago.

MATERIAL AND METHODS

All records were made while SCUBA diving in a depth range of 1 – 60 m. Animals were photographed in the field, collected, and preserved in alcohol. In some cases, specimens or photos were sent to experts for confirmation of my provisional identification (see Acknowledgements). Voucher specimens are deposited in the collection of the Museu Municipal do Funchal (História Natural) under the numbers MMF 36811 (*Drepanogigas albolineatus*), MMF 36232 and 36812

(*Coralliophila kaofitorum*), MMF 36229 (*Haminoea orteai*), MMF 35183 (*Phoronopsis californica*), MMF 36690 (*Chaetaster longipes*) and in Oxford University Natural History Museum under the number OUMNH.ZC.2006-17-001 (*Palaemonella atlantica*).

RESULTS

Nemertini

Drepanogigas albolineatus (Burger, 1895)

This nemertine of about 8 cm total length was encountered on sandy bottom during a night dive near Caniçal, south coast of Madeira, in August 2005. It can be identified by its distinctive colour pattern (Figure 1). This appears to be the first record of the species since its original description from Naples, Italy.

Gastropoda

Coralliophila kaofitorum Vega, Vega & Luque 2002

Snails of the family Coralliophilidae are parasitic on Cnidaria. The species *Coralliophila kaofitorum* has only recently been described from the Canary Islands, where it lives on the stem of the black coral *Antipathella wollastoni* (VEGA et

al. 2002). When I searched for it on the same species of black coral, in 35 m depth near Machico, south coast of Madeira, I immediately found it. It is, in fact, quite common at this site.



Fig. 1. The nemertine *Drepanogigas albolineatus* (photo P. Monteiro)

Haminoea ortei Talavera, Murillo & Templado, 1987

MALAQUIAS et al. (2002) gave a list of the Cephalaspidea known from the Madeira archipelago. They do not mention the presence of *Haminoea ortei* at Madeira. A mass occurrence of this species was noted in the natural swimming pool at Porto Moniz end of August 2005. The animals crawled between tuft-like blue-green algae in a few cm depth and the spawn of (presumably) this species was also common there. The species is known from the western Mediterranean Sea and in the eastern Atlantic from the Azores to the Cape Verde Islands (CERVERA et al. 2006; ROLÁN 2005).

Discodoris rosi Ortea, 1979

This record is based on a photo (Figure 2) taken during daytime by Artur Silva in the area of Santa Cruz, south coast of Madeira. The species is known from the Mediterranean Sea and in the eastern Atlantic from the Gulf of Biscay to mainland Portugal (CERVERA et al. 2006).

Janolus n sp.

The photo shown in figure 3 was taken during daytime on muddy sand in 30 m depth at São Pedro, south coast of Madeira, in December 2005.

It apparently shows an undescribed species of the genus *Janolus*. The animal which had a total length of about 4 cm, was not collected.

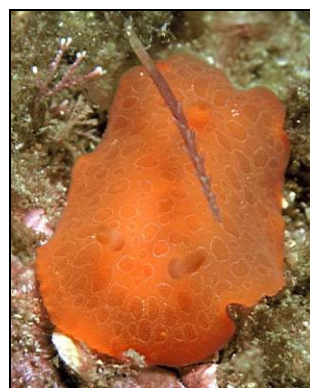


Fig. 2. *Discodoris rosi* (photo A. Silva).



Fig. 3. *Janolus* n. sp. (photo P. Wirtz).

Decapoda

Palaemonella atlantica Holthuis 1951

A large number of crustaceans live in facultative or obligatory association with the club-tipped sea anemone *Telmatactis cricoides* (WIRTZ 1997). The shrimp *Palaemonella atlantica* was recorded from the stem of a *Telmatactis* at the Canary Islands (WIRTZ 1997). I have since twice seen it on the stem of a *Telmatactis* at Madeira Island, in 15 and 20 m depth, and managed to capture a specimen on the second occasion. The species has been recorded in the eastern Atlantic, from the Canary Islands to Gabon (UDEKEM D'ACOZ 1999).

Phoronida

Phoronis australis Haswell, 1883

This species, which lives on the tube of *Ceriantharia*, was seen and photographed on the tube of a (*Pachy*) *Cerianthus* sp. in sandy bottom in about 25 m depth at Caniço de Baixo, south coast of Madeira in July 2006. I have been searching for this circum(sub)tropical species at Madeira Island during the last seven years and have seen it only once. It appears to be quite rare at Madeira. A colour photo of *Phoronis australis* from Madeira can be seen in the web page http://paleopolis.rediris.es/Phoronida/SYST/AUST/aust_ADULT.html. The distribution and biology of this species is described by MARTÍNEZ et al. (2005).

Phoronopsis californica Hilton, 1930

This circum(sub)tropical species is common on muddy sand all along the south coast of Madeira Island, from a depth of about 25 m downwards. A colour photo of *Phoronopsis californica* from Madeira can be seen in the web page http://paleopolis.rediris.es/Phoronida/SYST/CALI/cali_ADULT.html. The distribution and biology of this species is described by MARTÍNEZ et al. (2005).

Asteroidea

Chaetaster longipes Retzius, 1805

I have seen and photographed this species twice near Machico, south coast of Madeira, on rocky bottom in 27 and 38 m depth in September 2006. CLARK & DOWNEY (1992) and GARRIDO et al. (2004) record the distribution of this species as Mediterranean and from the Azores south to St. Helena but there appears to be no record from Madeira Island. A colour photo of an animal from the Azores can be seen in WIRTZ & DEBELIUS (2004).

Tunicata

Distaplia corolla Monniot F., 1975

The Caribbean tunicate *Distaplia corolla* has probably been transported to the Azores by boats

(MONNIOT & MONNIOT 1983). It is a common species there. During a dive at the wreck of the “Madeirense”, a few km in front of Porto Santo harbour, in November 2004, I noted the presence of this species, both the purple and the orange colour morph (cf. colour photo from the Azores in WIRTZ & MARTINS 1993). The species is also known from the Cape Verde Islands (MORRI et al. 2000).

DISCUSSION

The presence of *Discodoris rosi* at Madeira extends the known range of the species to the south, whereas the record of *Palaemonella atlantica* extends the known range of the species to the north. Most of the species reported here have already been noted both north and south of Madeira Island and their presence at Madeira comes as no great surprise.

Drepanogigas albolineatus is another supposedly Mediterranean endemic that has now been found in the eastern Atlantic. The degree of endemism of the Mediterranean fauna, estimated at 20–25 % (BIANCHI & MORRI 2000), has probably been overestimated in the past (WITTMANN & WIRTZ 1999). The Caribbean tunicate *Distaplia corolla* has probably been transported to the Azores by boats (MONNIOT & MONNIOT 1983). As yachts frequently cross from the Azores to Porto Santo Island, it appears likely that *Distaplia corolla* has now been transported by man the rest of the way from one side of the Atlantic Ocean to the other side. But because the species also has been recorded from the Cape Verde Islands, the animals from Porto Santo might, alternatively, have been introduced from there.

ACKNOWLEDGEMENTS

Pedro Monteiro took the photo of *Drepanogigas* during our night dive at Caniçal. Ray Gibson identified *Drepanogigas albolineata*. Artur Silva allowed me to use his photo of *Discodoris rosi* in this article and Lucas Cervera confirmed my provisional identification of this species. José Templado confirmed my provisional

identification of *Haminoea ortei*. Frank Swinnen suggested looking for *Coralliophila kaofitorum* on Madeira black coral and confirmed the identity of the collected specimens. Sammy de Grave confirmed my provisional identification of *Palemonella atlantica*. Christian Emig identified *Phoronopsis californica*. I am grateful to all of them.

REFERENCES

- BIANCHI, C.N., C. MORRI 2000. Marine biodiversity of the Mediterranean Sea: situation, problems and prospects for future research. *Marine Pollution Bulletin* 40, 367-376.
- CERVERA, J.L., G. CALADO, C. GAVAIA, M.A.E. MALAQUIAS, J. TEMPLADO, M. BALLESTEROS, J.C. GARCÍA-GÓMEZ & C. MEGINA 2006. An annotated and updated checklist of the opisthobranchs (Mollusca: Gastropoda) from Spain and Portugal (including islands and archipelagos) *Boletino del Instituto Espanol de Oceanografia* 20 (1-4). 2004: 3-4 (for 2004)
- CLARK, A.M. & M.E. DOWNEY (1992) *Starfishes of the Atlantic*. Chapman and Hill, London. 794 pp.
- GARRIDO, M.J., M. HERNÁNDEZ, F. ESPINO, R. HERRERA & O. TÁVIO 2004. *Hacelia superba* H.L. Clark, 1921 and *Chaetaster longipes* Retzius, 1805 (Echinodermata: Echinodera) new records for the Canary Islands. *Arquipélago. Life and Marine Sciences* 21A, 87-88.
- MALAQUIAS, M.A., E. MARTÍNEZ & A.D. ABREU 2002. Cephalaspidea s. l. (Mollusca: Opisthobranchia) of the Madeira Archipelago and Selvagens Islands, northeast Atlantic, Portugal. *American Malacological Bulletin* 17, 65-83.
- MARTÍNEZ, F.A., C.C. EMIG, C.R. CORNEJO & J.M.V. MARTÍN 2005. *Lophophorata: Phoronida, Brachiopoda*. Fauna Iberica Vol. 27, 276 pages, Museu Nacional de Ciencias Naturales, Madrid.
- MONNIOT, C. & MONNIOT, F. 1983. Navigation ou courants? La colonisation des Açores et des Bermudes par les ascidies (Tuniciers benthiques). *Comptes rendus de la Société de Biogéographie* 59: 53-58.
- MORRI, C., R. CATTANEO VIETTI, G. SARTORI & C.N. BIANCHI 2000. Shallow water epibenthic communities of Ilha do Sal (Cape Verde Archipelago, Eastern Atlantic). *Archipelago. Life and Marine Sciences Suppl. 2 (Part A)*: 157-165.
- ROLÁN, E. 2005. *Malacological Fauna from the Cape Verde Archipelago*. Conchbooks. 455 pp.
- UDEKEM D'ACÓZ, C.D' 1999. Inventaire et distribution des crustacés décapodes de l'Atlantique orientale, de la Méditerranée et des eaux continentales au nord de 250 N. *Collection Patrimoines Naturels* 40: i-x + 1-383
- VEGA, R., R. VEGA & A.A. LUQUE 2002. *Coralliophila kaofitorum*, a new species (Gastropoda: Coralliophilidae) from the Canary Islands living on *Antipathes wollastoni* (Cnidaria: Anthozoa: Antipatharia). *The Nautilus* 116/2, 50-55.
- WIRTZ, P. 1997. Crustacean symbionts of the club-tipped sea anemone *Telmatactis cricoides* at Madeira and the Canary Islands. *Journal of Zoology* 242, 799-811.
- WIRTZ, P. 1998. Twelve invertebrate and eight fish species new to the marine fauna of Madeira, and a discussion of the zoogeography of the area. *Helgoländer Meeresuntersuchungen* 52, 197-207
- WIRTZ, P. 1999. Opisthobranch molluscs from the archipelago of Madeira. *Vita Marina* 46 (1-2), 1-18
- WIRTZ, P. & H. MARTINS 1993. New and little known marine invertebrates from the Azores - with a discussion of the zoogeography of the area. *Archipelago. Life and Marine Sciences* 11A: 55-63
- WIRTZ, P. & H. DEBELIUS 2004 *Mediterranean and Atlantic Invertebrate Guide*. Conchbooks, Hackenheim. 305 pp.
- WITTMANN, K. & P. WIRTZ 1999. A first inventory of the mysid fauna (Crustacea: Mysidacea) in coastal waters of the Madeira and Canary archipelagos. *Boletim do Museu Municipal do Funchal*. Sup. no. 5, 511-533.

Accepted 24 November 2006