

New species of invertebrates discovered in the Antarctic

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Austasensis Tauroprimnoa (A) and *Digitogorgia kuekenthali* (B) species. Credit: Zapata-Guardiola y López-González.

The polyps of the new gorgonia discovered, *Tauroprimnoa austasensis* and *Digitogorgia kuekenthali*, in the region of Austasen, in the Eastern Weddell Sea, and to the south-east of the Falklands and Isla Nueve (in Chilean Patagonia) respectively, are small and elongated. Both species stand out for the number, shape and layout of the scales of calcium carbonate that cover the polyps, and for the type of ramification of the colonies.

"The *Tauroprimnoa* are characterized by being colonies in the shape of a

brush, with simple branches and whose [polyps](#) arranged in whorls, have only four marginal scales. The rest of the polyp is covered by five longitudinal rows of scales. The sight is reminiscent of a bull, hence the name", Rebeca Zapata-Guardiola, main author of the study and researcher in the department for Physiology and Zoology at the US, describes to SINC.

The study, which has been published in the journal *Polar Biology*, shows that *Digitogorgia* type gorgonea have the same characteristics as previous ones, except for the digitations in the distal region of the scales of the polyps, and the absence of spines on the eight marginal scales and on the eight rows filled with scales that cover the polyp.

The four gorgonea of Atka Bay

The other four species discovered in the area of the South Georgia islands and in Atka bay in the Antarctic region -*Thouarella bayeri*, *Thouarella sardana*, *Thouarella undulata*, and *Thouarella andeep*- are made up of, like the others of their kind, eight rows of scales that cover the surface of the polyp.

"The differences are found in the ramification pattern of the colonies, in the layout of the polyps in the branches and in the shape and ornamentation of the scales of the polyp", Zapata-Guardiola indicates.

This second investigation, published in the journal *Scientia Marina*, has revealed the presence of incidental opercular scales on the polyps of the gorgonea, located in an inner cycle, and already observed in 1908 by the Japanese Kinoshita. This could indicate that the number of scales has been reduced during its evolution. However, "up until now they hadn't been observed again in any other species of the genus", the biologist points out.

Oceanographic campaigns

The six new species have been collected using sampling techniques for benthic fauna thanks to the Agassiz net -one of the most commonly used trawling methods for analysing communities that live on the sea bed- during the LAMPOS, ANDEEP-SYSTCO and BENDEX campaigns on board the Polarstern ship.

The LAMPOS campaign, carried out between 3 April and 5 May 2002, made it possible to strengthen cooperation between Latin American and European scientists, and to study the relationship between biogeography and the evolution of benthic fauna between the region of Magallanes and the Antarctic peninsula.

The BENDEX campaign, carried out between 17 November 2003 and 18 January 2004, made it possible to discover how benthic fauna is affected by the alterations and disruptions of the icebergs.

The ANDEEP-SYSTCO campaign, of 28 November 2007 to 4 February 2008, undertook to study the benthic biodiversity of the depths of the Antarctic Ocean, the history of colonisations and patterns of recent communities, and systematic coupling. On this expedition, nine new Antarctic [species](#) were also discovered.

More information: References:

Zapata-Guardiola, Rebeca; López-González, Pablo J.

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Zapata-Guardiola, Rebeca; López-González, Pablo J.

"Four new species of Thouarella (Anthozoa: Octocorallia: Primnoidae) from Antarctic waters"

Scientia Marina 74(1): 131-146, marzo de 2010.

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