



The First International Workshop to Marine and Anchialine Meiofauna in Lanzarote 2011

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This special issue of Marine Biodiversity features eight articles that represent the results of the First International Workshop to Marine and Anchialine Meiofauna in Lanzarote. This scientific workshop, held between 4 and 20 October 2011, involved a comprehensive survey of the most representative marine and anchialine habitats around the island of Lanzarote. Marine sampling included seven sandy beaches of different hydrodynamic state, three open caves mostly containing mud and coarse sand, and four open subtidal stations with different kinds of sediments. Sampling in the anchialine water bodies focused on the three flooded sections of La Corona lava tube: Cueva de Los Lagos, Los Jameos del Agua lake, and Túnel de la Atlántida, the world's longest flood lava tube (Martínez et al. 2016). This last section includes Montaña de Arena, the only truly interstitial anchialine habitat known in the island, situated 750 m within the cave (Wilkins et al. 2009). Sampling along La Corona lava tube was accompanied by the inspection of two complexes of anchialine pools (Charcos de Luis and Charcos de Montaña Bermeja) and the anchialine wells at Los Agujeros saltworks.

The main scientific objectives of the workshop were (1) to provide a comprehensive checklist of the marine and anchialine meiofauna in the Atlantic oceanic island of Lanzarote, (2) to investigate the ecological and geographical correlates to species richness and endemism at regional and local scales, (3) to complete the inventory of the interstitial fauna from the Montaña de Arena, and (4) to formally describe some of the most representative interstitial and cave species. The first three objectives were treated in the first contribution to this special issue (Martínez et al. 2019). This publication shows the astoundingly rich diversity of meiofauna that we encountered, which included 239 species amongst annelids, cnidarians, gastrotrichs, gnathostomulids, heterobranch molluscs, nemertean, platyhelminths, priapulids, and rotifers. Our analyses showed that the proportion of endemic species was lower in groups with a higher proportion of parthenogenetic species, while it was not significantly affected by body size and percentage of species with dispersal stages. Only annelids showed significantly higher number of endemic species in anchialine habitats, highlighting the resemblance between the interstitial fauna to Montaña de Arena and that found in the sea.

The fourth objective was treated in the seven other papers included in this issue, which formally described 10 out of the 85 new species to science found during this workshop (Di Domenico et al. 2019; Worsaae et al. 2019a, 2019b; Todaro et al. 2019; Gobert et al. 2019; Scarpa et al. 2019a, 2019b). Some of these papers went beyond the goals of the workshop, as they included the description of 10 additional species from

This article is a contribution to the Topical Collection Interstitial and cave diversity in Atlantic oceanic islands.

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Fig. 1 Group picture with some of the participants at the First International Workshop on Marine and Anchialine Meiofauna, Lanzarote 2011. Upper row, from left to right, Tom Artois, Marco Curini-Galletti, Asrin Partavian, Kirsten Kvindeberg, Enrique Domínguez, Diego Fontaneto; lower row: Toon Hansen, Maikon Di Domenico, Alejandro Martínez, M Antonio Todaro, Katrine Worsaae, Luis E Cañadas, Suso Fontes, and Ralf Schoenemark



other geographical regions, as well as molecular studies on their phylogenetic relationships. In addition to the papers included in this volume, the material collected during the workshop has been published so far in a total of nine peer-reviewed scientific studies (Martínez et al. 2015, 2017, 2019; Leasi et al. 2016; Gonzalez et al. 2017a, b, 2018; Gusmão et al. 2016; Worsaae et al. 2018), and three book chapters (Martínez and Gonzalez 2018, Martínez et al. 2018, 2019).

The First International Workshop of Marine and Anchialine Meiofauna was organized by Alejandro Martínez and Katrine Worsaae (University of Copenhagen). It included

scientists Tom Artois and Toon Hansen (Hasselt University); Marco Curini-Galletti (University of Sassari); Maikon Di Domenico (Federal University of Paraná); Diego Fontaneto (IRSA-CNR); Kirsten Kvindeberg, Peter R. Møller, and Asrin Partavian (University of Copenhagen); Francesca Leasi (University of Tennessee at Chattanooga); Jon Norenburg (Smithsonian Institution); and M Antonio Todaro (University of Modena) (Fig. 1); in addition to divers Luis Eduardo Cañadas, Enrique Domínguez, Sergio González, Carola D Jorge, Antonio Martín, Ralf Schoenemark, and Juan Valenciano (Fig. 2).

Fig. 2 Diving team by the entrance of Túnel de la Atlántida (from left to right): Antonio Martín, Juan Valenciano, Alejandro Martínez, Enrique Domínguez, and Carola D Jorge



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Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest.

Ethical approval All applicable international, national, and/or institutional guidelines for the care and use of animals were followed.

Sampling and field studies All necessary permits for sampling and observational field studies have been obtained by the author from the competent authorities and are mentioned in the acknowledgements, if applicable.

Data availability There is no data associated with this manuscript.

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