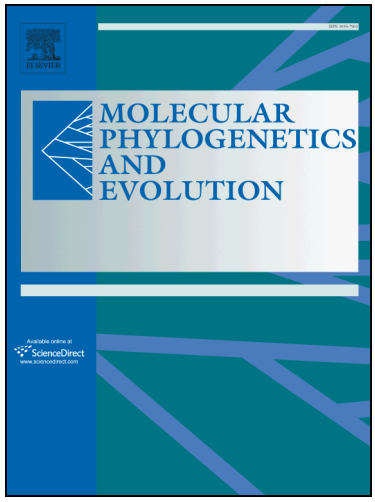

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M.M. Soler-Hurtado, P.J. López-González, A. Machordom

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Molecular phylogenetic relationships reveal contrasting evolutionary patterns in Gorgoniidae (Octocorallia) in the Eastern Pacific

M. M. Soler-Hurtado[1,2,3], P. J. López-González[2] & A. Machordom[1]

[1] Biodiversidad y Biología Evolutiva. Museo Nacional de Ciencias Naturales (MNCN-CSIC). 28006 Madrid, Spain. E-mail: mar.s.hurtado@mncn.csic.es

[2] Biodiversidad y Ecología de Invertebrados Marinos, Facultad de Biología, Universidad de Sevilla, 41012, Sevilla, Spain.

[3] Instituto Nacional de Biodiversidad, Museo Ecuatoriano de Ciencias Naturales. Rumipamba 341 y Av. Shyris, Quito, Ecuador.

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Abstract

The description and delimitation of species in an evolutionary framework is essential for understanding patterns of biodiversity and distribution, and in the assessment of conservation strategies for natural resources. This study seeks to clarify the evolutionary history and genetic variation within and between closely related octocoral species that are fundamental to benthic marine ecosystems for harbouring a high diversity of associated fauna. For our study system, we focused on members of the Gorgoniidae family in the Eastern Pacific, particularly of the Ecuadorian littoral, a less studied marine ecosystem. According to our results, the diagnosis of the genus *Pacifigorgia* is here amended to include species previously considered in the genus *Leptogorgia.* The