

New algae species rewrites understanding of reef systems

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Crustose coralline algae on Lord Howe Island. Credit: Guillermo Diaz-Pulido

A discovery has been made in the heart of the world-renowned Great

Barrier Reef and unique reefs systems of the Coral Sea and Lord Howe Island, leading to a greater understanding of how the world heritage-listed landmark is protected.

An international team of marine scientists, led by Griffith University, has identified and officially named four species of algae new to science, challenging previous taxonomical assumptions within the *Porolithon* genus. The discovery has far-reaching implications for our understanding of the ecological role of these algae in the coral reef ecosystem.

Research Team leader Associate Professor Guillermo Diaz-Pulido from Griffith's Coastal and Marine Research Centre said *Porolithon*, a genus of crustose coralline algae, has been long recognized for its crucial ecological significance.

"These algae are responsible for cementing the delicate frameworks of coral reefs, sustaining marine biodiversity in the shallow margins of tropical and [subtropical waters](#)."

Traditionally, branched, fruticose *Porolithon* specimens found in the Indo-Pacific Ocean were identified as *Porolithon gardineri*, while the massive, columnar forms were known as *P. craspedium*.

However, the recent study conducted by scientists from Griffith, James Cook University, the Australian Institute of Marine Science, and the U.S. and Korea revealed a remarkable discovery: neither *P. gardineri* nor *P. craspedium* was present in the eastern Australian waters. Instead, these specimens have been found to belong to four distinct genetic lineages.

The four newly discovered species have been officially named as follows:

- *Porolithon lobulatum* sp. nov.: With branched forms and lobed free margins, this species is found in the Coral Sea and on the Great Barrier Reef (GBR). The name refers to the plant having lobed free margins.
- *Porolithon parvulum* sp. nov.: Characterized by short (

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