

觀新藻礁之環境水質因子探討

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摘要

台灣西北海域擁有全台範圍最廣之藻礁，本研究以發育最為完全的觀新藻礁為研究區域，分別以空間、時間之差異對比，進行水質的分析，依照同一條溪流之時間比較、鄰近溪流彼此間之比較，探討影響藻礁環境的可能因素。觀新藻礁區域最早為石珊瑚，發育在古石門沖積扇上，約 4500 年前藻礁成為主要造礁生物，範圍由最北大潭電廠至最南永安漁港，沿岸約 5km，洽為小飯壠溪、新屋溪、後湖溪三條溪流出海口。本研究選擇三點相距 2.5km 的採樣點，以每月現地測量水質資料，進行 pH 值、電導度、濁度、溶氧量之分析，用以討論藻礁現地生長環境優劣。另以桃園市政府環境保護局提供之河川水質監測數據，取鎘、鉛、鉻、鎳、銅、鋅、銀、錳等金屬以因子分析找出可能影響的相關性，以新屋溪兩點測站之時空對比，及新屋溪與鄰近溪流—觀音溪及社子溪做同一時間之空間對比，以期對藻礁保育有所貢獻。

Influence Factors of Water Quality in Guanxin Algal Reef, NW Taiwan

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Abstract

There is a wide range of algal reef in NW Taiwan. Guanxin algal reef, the most completely developed, is selected as the study area. In order to know which factors of water quality affected the algal reef growing in various place and time, we collected and analyzed water samples and compared their temporal and spacial variation. Coral reef grew on Old Shekmun alluvial fan ever since 7500 years ago, and algal reef became dominant biotic reef since about 4500 years ago. It is developed from north to south for 5km long, including Shiaufanli river, Shinwu river and Houhu river of estuary. In this study, we selected three sampling sites with 2.5km away. Seawater quality were examined every month by using a water analyzer: pH, electrical conductivity, turbidity and dissolved oxygen, so as to evaluate thegrowing environment of algal reef. Furthermore, factor analysis is used to find the correlation of Cadmium, Lead, Chromium, Nickel, Copper, Zinc, Sliver and Manganese, along with comparing among Shinwu river, Guanyin river and Shetz river on the same period. The results are expected to be valuable in the preservation and protection of Guanxin algal reef.