



Catalog of Planktonic Dinoflagellates from the Guatemalan Pacific: New Records and Paralytic Shellfish Poisoning Events

Pósters

Taxonomy and Phylogeny

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This poster presents a catalog of planktonic dinoflagellates from the Pacific coast of Guatemala, based on samples collected between 2019 and 2022 across ten sites. A total of 42 species were identified, belonging to 14 genera and 6 orders, with morphological descriptions, diagnostic features, and geographic records. A literature review contextualizes the presence of each species in the regional marine ecosystem, accompanied by diagrams or photographs to aid identification. Ecological and toxicological aspects are also addressed, emphasizing their relevance for monitoring harmful algal blooms (HABs).

A notable case occurred in April 2022 in Tiquisate (Escuintla), where 11 cases of paralytic shellfish poisoning (PSP) were reported after consuming bivalves of the genus *Tagelus*, resulting in four deaths. Analysis of the bivalves' stomach contents revealed *Pyrodinium* cells and frequent *Noctiluca scintillans*. Toxicological tests by the Ministry of Public Health and Social Assistance (MSPAS) showed up to 7,069.4 mouse units (MU)/100 g of clam tissue in Madre Vieja, equivalent to 1,413 µg STX eq./g—over 18 times the FAO's permissible limit of 400 MU/100 g.

This HAB event, between April and May 2022, is likely linked to nutrient enrichment and oceanographic changes at the onset of the rainy season. The most affected areas were Madre Vieja, El Semillero, and Playa de la Isla, where the highest toxicity levels were recorded.

Palabras Clave

(1) Dinoflagellates, (2) Saxitoxins, (3) HAB'S.

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