

# COMPARISON OF DIATOMS OF TWO MONTANE LAKES IN THE COMMONWEALTH OF DOMINICA, WEST INDIES, AND STATUS FOLLOWING HURRICANE MARIA

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The freshwater algal flora of the Lesser Antilles and Windward Islands in the Caribbean has received scant attention. The island of Dominica, known by its native name of Waitukubuli, has never been surveyed for its algal flora despite the presence of ecological zones ranging from dry forest to geothermal zones to high-altitude elfin forest. Dominica is the most 'intact' of all the islands in this part of the Caribbean and it has numerous aquatic habitats, from hundreds of streams to lakes and wetlands. Its algal flora is likely to be similar to that of neighboring Guadeloupe which was surveyed by Bourelly and Manguin (1952) as well as other investigations that were more specific to certain taxa. The diatom flora of these islands remains largely uninvestigated.

During a comprehensive collecting effort throughout Dominica, I noticed that two high-altitude lakes, located in the same geological formation, contained vastly different algal flora, both dominated by diatoms. Boeri Lake was dominated by *Rhizosolenia* species similar to that described by Tremarin in Brazil lakes. The other lake, Freshwater Lake, was dominated by *Ulnaria (Synedra) acus* in great abundance. These lakes are close to each other and at approximately the same altitude. Observations over a period of 5 years confirmed that these dominant forms remain consistently dominant. The difference must be related to chemical nutrition. Boeri Lake receives no inputs other than rainfall. In addition to precipitation, Freshwater Lake also is affected by inflows from a geothermal area. Here I discuss the ramifications of this difference.

Hurricane Maria devastated this island. Nearly the entire island was defoliated by the storm and in the subsequent two years, regrowth indicates that approximately 1/3 of the original forest remained alive. Streams received massive inputs of organic material along with the devastating flood. Here I also summarize the effect on freshwater habitats as well as other aspects of island life.