

SAND, DINGOS AND DIATOMS

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Fraser Island, the largest sand island in the world located few kilometres off the coast of southeast Queensland, Australia is a world heritage area. Known as K'gari (paradise) by the aboriginals who inhabited the island for 5 000 years, the sand island was formed over one million years of movement of sand by the oceanic waves laid on the continental shelf. It is 122 km long and 5-25 km wide covering 160,000 ha. In spite of logging and sandmining of the bygone years, the landscape is dotted with pristine rainforests, bush lands and crystal clear lakes and streams. This paper deals with the lakes and streams in transition and the diatom flora of the Island.

Amidst the giant trees and the interplay of shifting sand ,wind and water, the wandering much maligned dingos, and the ever increasing tourists ,the biologists still find this a paradise of discoveries.

As part of the project, diatom flora of Australia, fresh water diatoms of Fraser Island have been investigated.

The water quality of the lakes and streams was mostly pristine with a pH ranging from 5-6 and low Electrical conductivity. The deep tannin-coloured water in the streams emerging from the rainforest moving through the reddish sandy sediment painting puzzling patterns do harbour a unique diatom flora different from the mainland of Queensland ,Australia.

The crystal clear water in the freshwater lakes hides the vast abundance of diatoms

The diatoms in the lakes truly reflect the water quality. Some of the lakes are steadily encroached by shifting sand from the sea, whereas the rest of the lakes remain oligotrophic and fresh. The discovery of several interesting forms of *Frustulia*, *Eunophora*, *Eunotia*, *Surirella* and *Navicula* are discussed in the context of moving sand engulfing some lakes and increasing number of tourists. The wide variation in the distribution pattern of *Eunophora* which is found only in Poona Lake, the closest part of the mainland is discussed with ultrastructural studies.