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TARA Oceans: Diatoms from the vicinity of the Marquesas Islands, South Pacific

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Very little is currently known about the oceanic phytoplankton, despite the critical role it plays in the Earth's chemical, ecological and climatic states. The Tara Oceans (2009–2012) was the first expedition, which carried out a comprehensive worldwide sample collection campaign with a coherent strategy to record all the information necessary to the study of the plankton ecosystems. During the two-and-a-half-year expedition aboard the ship Tara, samples from 154 stations across the world oceans were collected. Since this immense effort brought an enormous amount of data, several smaller projects were separated from the original gigantic endeavor. One of those small and multidisciplinary projects focuses on the mass effect of the islands in a stable ocean current on the phytoplankton production. The aim of this project, called the "STEF", is to analyze the qualitative and quantitative response of the phytoplankton to a natural (iron) fertilization event causing a steady phytoplankton bloom in the vicinity of Marquesas Islands in the South Pacific. This work presents the preliminary results from the scanning electron microscopic observations from the project, with a special attention to the encountered centric and pennate marine diatoms from the area.

Diversity and ecology of diatoms from peat bog at Pešter plateau (Serbia)

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The subjects of the study were various types of diatom communities including epiphytes, benthos and plankton of the peat bog at Pešter plateau. A specific diatom flora inhabits all types of communities, comprising in total 250 taxa in 53 genera. Among them 46 taxa were new records to the Serbian diatom flora. The most abundant genera were *Pinnularia* (23), *Gomphonema* (22), *Nitzschia* (22) and *Navicula* (17). The most dominant taxon in all diatom communities was *Achnanthydium minutissimum* var. *minutissimum*. Also, in benthic and epiphytic diatom communities were dominant *Psammolithidium subatomoides* and *Staurosira mutabilis*, respectively. Peat bog at Pešter plateau was characterized by high diversity of diatoms. The results of the diatom indices calculation using OMNIDIA software show low organic pollution and low anthropogenic eutrophication.