THE GENUS *PUNCTASTRIATA* AND THE COMPLEX *STAUROSIRELLA PINNATA* (ARAPHIDS, BACILLARIOPHYCEAE) FROM LACUSTRINE SEDIMENTS IN NORTHWESTERN PATAGONIA, ARGENTINA

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Araphid diatoms are frequent components of planktonic and benthic communities of lakes and rivers. These diatoms are particularly abundant in high-latitude, alpine environments, especially in post-glacial lacustrine sediments. The high morphological variability within this diatom group together with their usual small cell size make accurate identifications difficult at the light microscopy level. Consequently, there are uncertainties regarding the distributional and ecological ranges of many taxa based on current literature reports, restricting the usefulness of the group as ecological indicators for water quality assessments and paleoenvironmental reconstructions.

During the last three decades the use of electron microscopy has allowed the description of several new taxa and the detailed study of type materials. However, these studies have been focused mainly on materials collected in the northern hemisphere, while similar studies in other regions such as South America remain relatively scarce.

As part of a study aimed at reconstructing the main past environmental changes in different late Quaternary forest ecotones from the northern Patagonian Andes, the diatom assemblages of a 10 m sediment core recovered from Lake Torta (39°06'S, 71°21'W) are being analyzed. Light and scanning electron microscopy studies have revealed that along most of the sediment sequence, diatom assemblages are dominated by araphids in the genera *Staurosirella*, *Staurosira*, *Pseudostaurosira*, *Pseudostaurosiropsis* and *Punctastriata*, the former two exhibiting the highest species richness.

This presentation documents the genus *Punctastriata* and the *Staurosirella pinnata* (Ehrenberg) Williams & Round complex represented by at least 15 different morphotypes in the core, many of them probably new taxa to science. Since the identity of *S. pinnata* is not well defined in the literature, type material for this species was analyzed using light microscopy. These data, together with a critical analysis of the original illustrations by Ehrenberg show that *S. pinnata* is not an araphid, but rather a diatom in close association with *Denticula* Kützing.

This study evidences that detailed morphological studies are needed to improve the use of diatoms as proxies for reconstructing paleoecological changes and that the revision of type material is a key task for accurate identification of morphologically similar taxa.

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