

***Staurosira jolinae* sp. nov. and *Staurosira circula* sp. nov.  
(Bacillariophyceae), two new fragilarioid diatoms from  
Subantarctica**

by

Bart Van de Vijver\* and Louis Beyens

Universiteit Antwerpen (RUCA), Department of Biology, Unit of Polar Ecology  
Limnology and Paleobiology, Groenenborgerlaan 171, B-2020 Antwerp, Belgium

\*E-mail address of the corresponding author: bartvdv@ruca.ua.ac.be

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**Abstract:** Two new freshwater diatom species, *Staurosira jolinae* and *Staurosira circula*, are described from the Subantarctic island Ile de la Possession (Crozet Archipelago). Based on their morphological characters, they are placed in the genus *Staurosira* Ehrenberg. Both species possess a number of typical features that distinguish them from similar taxa such as *Staurosira pinnata* and *Staurosira leptostauron*. The two new species are most abundant in small pools in the immediate vicinity of the sea with relatively high pH and moderate specific conductance.

**Key words:** Diatoms, Fragilariaceae, *Staurosira*, Subantarctica, Taxonomy.

### Introduction

Diatoms are commonly reported from water bodies in the Antarctic and Subantarctic regions. They are considered to be one of the most abundant algal groups in both freshwater streams and lakes in these areas (Jones 1996, Van de Vijver & Beyens 1999a). Because of their use as indicators of environmental and climatic changes, the morphology, taxonomy and distribution of diatoms in these regions are currently attracting considerable attention (Le Cohu 1999, Van de Vijver & Beyens 1999b&c). During an extensive survey of the diatom flora of the Subantarctic Island Ile de la Possession (Crozet Archipelago, TAAF), two new fragilarioid taxa were found in some freshwater pools in proximity to the sea. Although almost 20 different taxa from the genera *Fragilaria* and *Staurosira* were recorded, both taxa are unique and considered new to science. In the present paper we describe these two new taxa as *Staurosira jolinae* Van de Vijver sp. nov. and *Staurosira circula* Van de Vijver &