



A new species, *Synura morusimila* sp. nov. (Chrysophyta), from Great Xing'an Mountains, China

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Abstract

A new species *Synura morusimila* sp. nov. was described from Great Xing'an Mountains, China. The colonies, scales and stomatocysts were observed using light, scanning and transmission electron microscopy. This *Synura* has two scale types on the same cell: spineless caudal scales and spine-bearing body scales. The caudal scales are ovate to obovate with small pores in the back of the scale. The body scales are characterized by cylindrical spine and the irregular reticulum on the base of the spine. The colony is large and oblong in shape with stomatocysts in it. The stomatocyst of *Synura morusimila* was named Stomatocyst 55, which is also new to science.

Key words: Chrysophyte, Greater Hingnan Mountains, stomatocyst

Introduction

The genus *Synura* Ehrenberg (1834: 314) consists of colonies that have been typically described as being spherical or elongated in shape. Each cell is surrounded by a covering consisting of imbricate silica scales whose ultrastructure primarily define the species (Kristiansen & Presig 2001). The genus is represented by 74 taxa so far, of which 44 have been recognized as currently accepted taxonomically (Skaloud *et al.* 2012).

Chrysophytes in China were first studied by Skvortsov (Skvortsov 1925, 1961) and Jao (1940). Péterfi & Asmund (1972) were the first to report silica-scaled chrysophytes from the country. Over more than a decade Jørgen Kristiansen and collaborators studied 54 silica-scaled chrysophytes (e.g. Asmund & Kristiansen 1986, Kristiansen & Tong 1988, 1989, Kristiansen 1989, Wei & Kristiansen 1994, 1998). These papers demonstrated that China has a rich and varied flora of silica-scaled chrysophytes.

The first report of *Synura* in China was from the region of Harbin by Skvortsov (1961). Three taxa including *S. elipidosa* Skvortsov (1961: 50), *S. falcata* Skvortsov (1961: 51) and *S. splendida* Korshikov (1942: 22) (Skvortsov 1961: 51) were described, but the identifications were not based on scale ultrastructure. Only 7 species and 2 formae of *Synura* have been reported from China based on their ultrastructure. These include *S. curtispina* (Petersen & Hansen 1956: 22) Asmund (1968: 506) (Kristiansen & Tong 1988, Kristiansen 1989, Kristiansen & Tong 1989, Wei & Kristiansen 1994, 1998), *S. echinulata* Korshikov (1929: 282) (Wei & Kristiansen 1994), *S. mammillosa* Takahashi (1972: 296) (Kristiansen 1989, Kristiansen & Tong 1989, Wei & Kristiansen 1994, 1998), *S. petersenii* Korshikov (1929: 283) (Kristiansen & Tong 1988, Kristiansen 1989, Kristiansen & Tong 1989, Kristiansen 1990, Wei & Kristiansen 1994, 1998), *S. petersenii* f. *glabra* (Korshikov 1929: 285) Siver (1987: 111) (Kristiansen 1989, Kristiansen & Tong 1989, Wei & Kristiansen 1994), *S. sphagnicola* Korshikov (1929: 287) (Kristiansen 1989, Wei & Kristiansen 1994), *S. spinosa* Korshikov (1929: 281) (Kristiansen & Tong 1989, Wei & Kristiansen 1994), *S. spinosa* f. *longispina* Petersen & Hansen (1956: 22) (Wei & Kristiansen 1998) and *S. uvella* Ehrenberg (1834: 314) emend. Korshikov (1929: 279) (Kristiansen 1989, Kristiansen & Tong 1989, Wei & Kristiansen 1994).