



Cyclotella horstii sp. nov. (Bacillariophyta) from Ivankovskoe reservoir (Volga reservoirs, Russia)

SERGEI GENKAL & MAXIM KULIKOVSKIY

Department of Algology, I.D. Papanin Institute for Biology of Inland Waters, Russian Academy of Sciences,
152742 Yaroslavl, Nekouz, Borok; Russia
Corresponding author. Email: max-kulikovsky@yandex.ru

Abstract

Description of a new diatom species, *Cyclotella horstii* Genkal et Kulikovskiy sp. nov., from Ivankovskoe reservoir (Volga reservoirs, Russia) is given. It is similar to *Cyclotella ocellata* Pantocsek and *C. kuetzingiana* Thwaites but can be distinguished by the size of the depressions and absence of papilio on the valve face, the arrangement of marginal fulcrotubulae and the size of vegetative and initial valves.

Key words: Bacillariophyta, *Cyclotella*, new species, Ivankovskoe reservoir (Russia)

Introduction

The diatom genus *Cyclotella* (Kützing 1834: 535) de Brébisson (1838: 19) includes over 100 species according to Round *et al.* (1990: 144). Krammer & Lange-Bertalot (1991) recorded 37 species, while Kozirenko *et al.* (1992) provided descriptions of 64 recent and fossil species, including infraspecific taxa. In their revision of *Cyclotella*, Houk *et al.* (2010) described 59 species and forms. In addition, over the last two decades many new species have been described (for example by Scheffler 1994, Genkal & Kharitonov 1996, Meyer & Håkansson 1996, Klee *et al.* 2000, Alfinito & Tagliaventi 2002, Kiss *et al.* 2002, Genkal & Yarushina 2004, Sala & Ramirez 2008) and the taxonomic position of many taxa have been clarified (Håkansson 2002, Houk & Klee 2004).

Cyclotella kuetzingiana var. *planetophora* Fricke (in A. Schmidt 1900: pl. 222, figs 9–12) Genkal (1997: 40) was questionably combined with *C. ocellata* Pantocsek (1902: 104) by Håkansson (in Krammer & Lange-Bertalot 1991:51), yet only *C. tibetana* Hustedt (1922: 117) was given as a synonym in her later compilation (Håkansson 2002: 85 and 89 for further discussion of *C. ocellata*); *C. kuetzingiana* var. *planetophora* was mentioned as synonym of *C. ocellata* in Houk *et al.* (2010: 26). The new status of *C. kuetzingiana* var. *planetophora*, as *C. planetophora* (Fricke) Genkal (1997: 40), was first suggested by Genkal (1997) after studying samples taken from Ivankovskoe Reservoir. Further examination of specimens from that material suggested that those first identified as *C. planetophora* are, in fact, of a new species, described herein as *Cyclotella horstii* sp. nov.

Material and Methods

Phytoplankton samples were collected from Ivankovskoe Reservoir, part of the Volga reservoir series, during September 1972. Hydrochemical data are: Ca²⁺ 36.2–47.4 mg/l, Mg²⁺ 6.9–12.3 mg/l, Na⁺+K⁺ 2.8–20 mg/l, pH 7.0–7.6.