



Taxonomic notes on Dutch desmids V (Streptophyta, Desmidiaceae): new species, new morphological features

PETER COESEL¹ & MARIEN VAN WESTEN²

¹Institute for Biodiversity and Ecosystem Dynamics, University of Amsterdam, Postbus 94248, 1090 GE Amsterdam, The Netherlands. E-mail: p.f.m.coesel@uva.nl (corresponding author)

²Podzolhamel 26, 9403 XC Assen, The Netherlands. E-mail: mvanwesten@home.nl

Abstract

From the Netherlands five new or otherwise interesting desmid taxa are recorded. *Cosmarium vossenbergense* is described as new to science. Of *Closterium pronum* the zygospore, up to then unknown, is described as an elongate spore furnished with undulate costae. The rare species *Closterium pygmaeum*, *Euastrum pseudotuddalense* and *Sphaeroszma aubertianum*, newly recorded for the Netherlands, are discussed for their taxonomy and geographical distribution.

Introduction

After publication of a desmid flora of the Netherlands and adjacent lowland areas (Coesel & Meesters 2007) in the meantime a number of taxa have been collected from that region which are not dealt with in that flora. Part of those taxa, being of special interest from a taxonomic point of view, are discussed in the present paper. All of them originate from the Dutch province of Drenthe, a province that has turned out to be one of the richest in the Netherlands and adjacent regions (Van Westen & Coesel 2010, 2012).

Description and discussion of taxa

Closterium pronum De Brébisson (1856: 157) (Figs. 1–4, 13–16)

In Europe, *Closterium pronum* is a widely distributed species in various types of acidic to circumneutral water bodies. Yet, up to now zygospores of this species were unknown (e.g., Růžička 1977, Coesel & Meesters 2007, Brook & Williamson 2010).

Admittedly, a single figure of a zygospore said to belong to *Cl. pronum* has been published by Wade (1952) but as adhering gametangium cells have not been depicted identification of that alga cannot be checked.

Recently (April 2012) an abundantly sporulating population of this species in ‘Alenburg’, an artificial pool on former agricultural soil at the Drenthian village of Smilde, was encountered. Morphological characteristics of vegetative cells (Fig. 1) fulfilled those stated in the above-mentioned authoritative floras. With an average cell length to breadth ratio of 38.9 (n = 20, SD = 4.0) the similarly shaped, but less slender species *Closterium idiosporum* West & West (1900: 290) was no serious option (Růžička 1977). Zygospores appeared to be most peculiar in that they, when maturing, developed marked, undulate, longitudinal ridges on the spore wall.

Initially, the young, elliptic zygospore is smooth-walled (Figs 2, 3, 13). Already in this immature stage in its ectoplast a number of longitudinal series of closely set, fine punctae or striae may be distinguished (Figs. 2,