

A new common species *Achnantheidium caravelense* (Bacillariophyceae) discovered in the rivers of North of Portugal

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Achnantheidium caravelense Novais et Ector is described as a new species based on light and scanning electron microscopic observations, as well as on its ecological preferences as reconstructed from field observations (Novais et al. 2011). The most characteristic morphological features of this species are the different outline of the raphe valve (narrowly elliptic with linear margins) and the rapheless valve (narrowly elliptic to narrowly rhombic with moderately convex margins), the non-protracted broadly rounded apices and the length/width ratio. Furthermore, the areolae of the single row along the mantle are elongated and are more or less widely open, which is a characteristic discernible in girdle view under light microscopy. A comparison with the morphologically similar species *Achnanthes standeri* Cholnoky, *A. taidaensis* J. R. Carter, *Achnantheidium affine* (Grunow) Czarn., *A. eutrophilum* (Lange-Bert.) Lange-Bert., *A. exile* (Kütz.) Round et Bukht. and *A. minutissimum* (Kütz.) Czarn. revealed that the species that *A. caravelense* resembles most is *A. eutrophilum*. Nevertheless it can be distinguished from the latter by the different raphe valve outline, its higher valve length/width ratio and ecological preferences. *Achnantheidium caravelense* is characterized by a set of distinct morphological and ecological features that separate it well from all other similar *Achnantheidium* species and it is common and abundant in soft water rivers with low to moderate nutrient content in the North of Portugal. There is therefore a rather high probability that this species also occurs in other European countries in rivers with suitable conditions but this *Achnantheidium* has not yet been recorded due to probable misidentifications with *A. eutrophilum* or *A. minutissimum*.