

ORAL PRESENTATION

NOT JUST CURVATA, ANYMORE – INTERESTING RHOICOSPHENIA GRUNOW OF CALIFORNIA, U.S.A.

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The genus *Rhoicosphenia* is best known for the two species *R. curvata* (Kützing) Grunow and *R. abbreviata* (C. Agardh) Lange-Bertalot, which are now thought to be synonyms (Lange-Bertalot), and these are the most frequently reported species in ecological studies. However, under closer investigation the genus seems to be more diverse. The California Academy of Sciences on-line database currently lists 22 species and many intraspecific taxa. The current NADED taxa list only includes *R. curvata* and *R. abbreviata* – not even “sps” or “cfs”, as are common with other genera, are present in this list for *Rhoicosphenia* – this is surprising due to the quantity and variety of samples that have been examined to compile this list. In the 2005 Checklist of U.S. diatoms, Kociolek reports five *Rhoicosphenia* taxa, *R. curvata* and four varieties of that species (*gracilis*, *major*, *minor*, and *subacuta*) - two have citations from the Great Lakes, one from Pennsylvania, and two from Oregon. *R. curvata* as well as three other interesting taxa from this genus are present in samples from the state of California taken in 2007 and 2008. For the purposes of diatom diversity, these are exciting species finds and remind us that *Rhoicosphenia* is not a monospecific genus. Preliminary comparisons to species in Schmidt’s Atlas indicate that they may not all be new to science, however, being that *Rhoicosphenia* are not being reported in current diatom studies, it is important to show that other species do exist. From an ecological perspective, it will be interesting to see if there are any patterns of distribution based on geography or water chemistry. Light and scanning electron micrographs are presented in this work to better understand the diversity of this genus in California streams.