

POSTER PRESENTATION

TWO INTERESTING GOMPHONEMOID DIATOMS FROM PSEUDO-AERIAL HABITATS IN THE UPPER PENINSULA, MICHIGAN (U.S.A.)

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The diversity of Gomphonemoid diatoms has been a focus of increasing interest over the past 25 years of diatom research due to their abundance in many aquatic habitats as well as their interesting morphological characteristics. Diversity within the genus *Gomphonema* (Ehrenberg) can be reduced in practical taxonomy for a number of reasons. These reasons include a lack of good identification resources and past practices of “lumping” taxa into existing species that may not be the best fit. Aerial habitats of the Upper Peninsula of Michigan (UP) were surveyed in the summer of 2006 as a part a study investigating community structure in these habitats. Two interesting Gomphonemoid diatoms were observed that do not appear to fit into any current species concept. The first taxon, *Gomphonema sp. 1*, is broadly lanceolate with rounded apices, 20-40 µm long, 5-7.5 µm wide, has 12 striae in 10 µm in the middle of the valve and 17 striae in 10 µm at the apices. A central stigma is present, four larger areolae are present in the central area, and striae are composed of round areolae. Light (LM) and scanning electron (SEM) micrographs are presented. The second taxon, *Gomphoneis sp. 1*, is similar to the rarely reported *Gomphonema olivaceoides var. hutchinsoniana* Patrick, however the habitat is much different than the type locality – pseudoaerial rock wall in northern Michigan as opposed to an oligotrophic stream in eastern Pennsylvania. This taxon is linear with a tumid central area and rostrate apices, 15-22 µm long, 4-5 µm wide, and has 10-11 striae in 10 µm. Four stigmoids are present in the central area and striae are composed of two rows of areolae. LM and SEM images of *Gomphoneis sp. 1* are presented and will be compared to type material of *G. olivaceoides var. hutchinsoniana* Patrick when material becomes available (currently not in collection at ANSP). *Gomphonema olivaceoides* Hustedt has already been transferred to *Gomphoneis* (however is “invalid”) and our taxon seems to fit better in this genus rather than in *Gomphonema*.