

POSTER PRESENTATION

NOTES ON IOWA DIATOMS: COMPARISON OF THE MORPHOLOGICAL RANGE OF MODERN POPULATIONS WITH SPECIMENS IN THE REIMER DIATOM HERBARIUM

John T. Manier¹, Set I. Castro², Suda Inthongkaew³, Tyler J. Kohler⁴, Lisa A. Kunza⁵, Justin R. Pool⁶, Marcella K. Purkey⁷, and Sarah A. Spaulding⁸

¹USGS- Upper Midwest Environmental Sciences Center, La Crosse, Wisconsin 54603, USA

²Department of Earth and Atmospheric Sciences, University of Alberta, Edmonton, Alberta T6G 2E3, Canada

³Earth Science Program, Department of Geology, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand

⁴School of Natural Resources, University of Nebraska, Lincoln, Nebraska 68583, USA

⁵Program in Ecology, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming 82071, USA

⁶Department of Environmental and Plant Biology, Ohio University, Athens, Ohio 45701, USA

⁷Mackay School of Earth Sciences and Engineering, University of Nevada-Reno, Reno, Nevada 89557, USA

⁸INSTAAR, University of Colorado, Boulder, Colorado 80309

Diatomists recognize, but underreport, that diatom populations from different regions differ in size range and morphology. In this study, we examined nine taxa from collections made from Iowa in 2009. We compared our specimens with specimens in the Reimer Diatom Herbarium, located at Iowa Lakeside Laboratory (ILL). The taxa examined include *Diploneis ovalis* ssp. *arctica* Lange-Bertalot, *Gomphonema angustatum* (Kützing) Rabenhorst, *Amphora normanii* Rabenhorst, *Amphora cimbrica* var. *tenuis* Levkov, *Encyonema muelleri* var. *ventricosum* (Temp. & Perag) Czarnecki, *Neidium* sp. and others when completed. We include original descriptions and living cell images to document chloroplast structure of several of the taxa. This poster presentation by the students of the Systematics and Ecology of Diatoms course at ILL represents an effort to document the taxa and range of morphology in Dickinson County, Iowa. The summer field course has now completed documentation of a total of 41 taxa. We plan to make the taxonomic treatments available online in the future.