

EMERGING RECOGNITION OF *NITZCHIA SORATENSIS* (MORALES AND VIS 2007) IN WATERS OF THE USA

Clinton J. Davis and Sean Sullivan
Rhithron Associates Inc., Missoula, Montana, USA

Nitzschia soratensis (Morale and Vis 2007) was first described from alpine streams in Bolivia, South America 12 years ago, then became widely recognized in central Europe in 2011, and reports appear to have emerged within the USA in 2015. Prior to recognition, specimens were likely reported as *Nitzschia inconspicua*. European field and lab studies of these two morphologically similar taxa have revealed important autecological similarities (e.g. indifference to phosphorus) as well as key differences (strictly freshwater vs wide salt tolerance). A preliminary review of multiple datasets indicates a very high occurrence (>14,000 records) of this complex in USA waters. In fact, this complex is the 3rd most commonly occurring taxa in samples we have analyzed from waters in Montana and Washington. Given the prevalence of this complex it seemed pertinent to consider the potential ramifications for past analysis (pre-2015) using the complex as well as moving forward with separating these two similar species. A preliminary analysis of our most recent western USA dataset shows a general prevalence of *N. soratensis* in waters of the Western Mountain ecoregions (EPA/NRSA), while *N. inconspicua* is prevalent in waters of the Northern Plains (EPA/NRSA). These results support the previous published suggestions that water conductivity/alkalinity, driven by watershed geology, is the primary environmental variable determining the distribution of these two taxa.