

Correspondence



"Taxonomic certification versus the scientific method": a rebuttal of Rogers (2012)

JAMES STRIBLING¹, BERNARD SWEENEY², JOHN MORSE³, GAIL CORKUM⁴, GARY LESTER⁵, SCOTT MILLER⁶, RICHARD MITCHELL⁷, BARRY POULTON⁸, STEPHANIE STRACHAN⁹ & MARK WETZEL¹⁰

¹Tetra Tech, Inc., Center for Ecological Sciences, 400 Red Brook Boulevard, Suite 200, Owings Mills, MD 21117-5172, USA. E-mail: james.stribling@tetratech.com

²Stroud Water Research Center, 970 Spencer Road, Avondale, PA 19311, USA. E-mail: sweeney@stroudcenter.org

³Clemson University, School of Agricultural, Forest, and Environmental Sciences, University Box 340310 Clemson SC 29634-0310, USA. E-mail: jmorse@clemson.edu

⁴Acadia University, A.C.E.R., Room 139, 23 Westwood Ave., Wolfville, N.S. B4P 2R2, Canada. E-mail: gail.corkum@acadiau.ca

⁵EcoAnalysts, Inc., 1420 S. Blaine St., Suite 14, Moscow, ID 83843, USA. E-mail: glester@ecoanalysts.com

⁶US Bureau of Land Management, National Aquatic Monitoring Center, Utah State University, Department of Watershed Sciences, 5210 Old Main Hill, Logan, UT 84322, USA. E-mail: scott.miller@usu.edu

⁷US Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, N. W., Washington, DC 20460, USA. E-mail: Mitchell.Richard@epamail.epa.gov

⁸US Geological Survey, Columbia Environmental Research Center, 4200 New Haven Rd., Columbia, MO 65201, USA. E-mail: barry_poulton@usgs.gov

⁹Environment Canada, Science and Technology Branch, Water Quality Monitoring and Surveillance Division, #201-401 Burrard Street, Vancouver, B.C. V6C 3S5, Canada. E-mail: Stephanie.Strachan@ec.gc.ca

¹⁰Illinois Natural History Survey, Prairie Research Institute, University of Illinois at Urbana-Champaign, 1816 S Oak St., Forbes Natural History Bldg., Champaign, IL 61820-0904, USA. E-mail: mjwetzel@illinois.edu

We read with great interest the correspondence article entitled "Taxonomic certification versus the scientific method" (Rogers 2012), and, as members of the Taxonomic Certification Committee of the Society for Freshwater Science (formerly, the North American Benthological Society [NABS, 1975–2011]) (SFS-TCC 2012), we agreed to respond in a constructive fashion with factual information to correct and provide perspective for a few errors, unfounded and confused assumptions, and misperceptions it presents. The nature and structure of the article and its title requires that our response be segregated into two main parts. First, we briefly describe the philosophy, purpose, and objectives of the Taxonomic Certification Program (TCP [http://www.sfstcp.com/]) as developed and administered by the SFS, including correcting inaccurate statements or false assumptions. Second, we will address the issues Rogers has with terminology used in a paper he cites (Stribling *et al.* 2003 [not 2002 as cited by Rogers]). The former issue is, by far, most important—primarily because it has the potential of adversely affecting a program that has already had a large positive impact on the quality of biological monitoring in the USA and Canada by recognizing laboratory staff with demonstrated ability to perform taxonomic identifications of benthic macroinvertebrate samples. The terminology issue is trivial, but because the comments are made in print, we correct them in print by rebutting Rogers' perception that we were in error.

Taxonomic certification

The TCP began in 2005 when NABS (now SFS) recognized and acknowledged that the ever-increasing scale and scope of biological monitoring using freshwater benthic macroinvertebrates (hereafter "macroinvertebrates") was outstripping the availability of expertise to perform accurate and precise taxonomic identifications. In part, this large increase in biological monitoring offered an opportunity for employment to those with training and experience in biology, even though that background may not have been necessarily with macroinvertebrate identification. Consequently, the availability of people offering that service also increased and, predictably, so did concern that inadequate training and inconsistent depth of experience was prevalent among them. The SFS-TCP was established not as a program to guarantee better data quality, but rather, as a process intended to help distinguish individuals who have appropriate training and experience, and subsequent to successful completion of the certification exercise, to be considered as having the *capability* of providing taxonomic data of acceptable quality. In the last 2-3 years, we have observed an increase in agency grants and contracts requiring project taxonomists to be SFS-certified, including, for example, environmental