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EDUCATION

Doctor of Philosophy *Limnological Institute, Russian Academy of Sciences, St. Petersburg, Russia, 1993 Ecology*

Master of Science *University of Leningrad, USSR 1984 Botany*

EXPERIENCE

Center for Systematic Biology and Evolution, Academy of Natural Sciences, Philadelphia
Assistant Curator 2008 – present.

University of Iowa
Adjunct Assistant Professor 2010

Patrick Center for Environmental Research, Academy of Natural Sciences, Philadelphia
Research scientist 2000 – 2007
Postdoctoral scientist 1999-2000

Department of Nature Conservation and Genetics, EBC, Uppsala University, Sweden
Postdoctoral research assistant 1999

Department of Botany, St Petersburg University, St Petersburg, Russia
Senior university lecturer 1997-1998

Department of Ecological Botany, Uppsala University, Sweden
Postdoctoral researcher 1994-1996

Institute of biological problems of the North, Academy of Sciences, Magadan, Russia
Research fellow 1984-1990, 1994

OTHER PROFESSIONAL EXPERIENCE

About 40 presentations at scientific meetings and conferences. Associate Editor, *Phycologia* (2005-present). Editorial Board, *Protistology* (since Nov. 2006). Guest Editor, *Southeastern Naturalist* (2006). 30+ paper reviews for scientific journals (including *Journal of Phycology*, *Phycologia*, *Hydrobiologia*, *Freshwater Biology*, *Biogeography*, etc.). Council Member of the International Society for Diatom Research, (since 2008); member of the Baltic Marine Biologists Working Group 27, workshops on the diatom distribution and intercalibration, Estonia (1995), Sweden (1996, co-organizer). Organizer of several diatom taxonomy workshops at ANSP (2008-2010).

GRANTS

- 1996 – "Effects of intrinsic life cycles and environmental variables on intraspecific morphological variation in *Diatoma moniliformis* (Bacillariophyceae)", the Royal Swedish Academy of Sciences, with Dr. P. Snoejis. \$15,000.
- 1998 – "The environmental status of small rivers and its assessment through diatom analysis", the John D. and Catherine T. Mac Arthur Foundation. \$17,000.
- 2007 – "Taxonomic consistency in biological assessment: contributions of diatom species records", USGS, subcontract. \$24,981.
- 2008 – Algal Research and Ecological Synthesis for the USGS. National Water Quality Assessment (NAWQA) Program: Coop3, Year 2, USGS, with Dr. D.F. Charles. \$380,991.
- 2008 - "Diatoms of North-Central Pennsylvania", the Wild Resource Conservation Program of PA Department of Conservation and Natural Resources. \$25, 889.
- 2008-2009. Trust for Mutual Understanding Grant. Collaborative Research on Ecosystem Monitoring in the Russian Northern Far-East. \$20,000.
- 2009 - Algal Research and Ecological Synthesis for the USGS. National Water Quality Assessment (NAWQA) Program: Coop3, Year 3, USGS, with Dr. D.F. Charles. \$300,000.
- 2009 – "Renovation and Computerization of the Diatom Herbarium at the Academy of Natural Sciences of Philadelphia", NSF, \$325,000.
- 2009-2010. Algal Research and Ecological Synthesis for the USGS National Water Quality Assessment (NAWQA) Program Cooperative Agreement 3, Year 4; Co-PI with D.F. Charles; Awarded \$299,000.
- 2010-2011. Algal Research and Ecological Synthesis for the USGS National Water Quality Assessment (NAWQA) Program Cooperative Agreement 3, Year 5; Co-PI with D.F. Charles; Awarded \$299,000.

PUBLICATIONS

- Potapova, M. 2011. Patterns of Diatom Distribution In Relation to Salinity. In: Seckbach, J and Kociolek, P. (Eds.) The Diatom World. Cellular Origin, Life in Extreme Habitats and Astrobiology (COLE) Book Series, V.19, Springer, Dordrecht, In Press.
- Potapova, M. 2010. The ANSP Diatom Herbarium: an important resource for diatom research. Proceedings of the Academy of Natural Sciences of Philadelphia 160: 3-12.
- Spaulding, S.A., Lubinski, D.J. and Potapova, M. 2010. Diatoms of the United States. <http://westerndiatoms.colorado.edu> (web publication).
- Enache, M. and Potapova, M. 2009. A new species of *Sellaphora* (Sellaphoraceae) from Hannaberry Lake, Arkansas, USA. Acta Botanica Croatica 68: 231-237.
- English, J. and Potapova, M. 2009. *Aulacoseira pardata* sp. nov., *A. nivalis* comb. nov., *A. nivaloides* comb. et stat. nov., and their occurrences in western North America. Proceedings of the Academy of Natural Sciences of Philadelphia 158: 37-48.
- Bahls, L., Potapova, M., Fallu, M.-A., and Pientiz, R. 2009. *Aulacoseira canadensis* and *Aulacoseira crassipunctata* (Bacillariophyta) in North America. Nova Hedwigia, Beiheft 135: 167-184.

Potapova, M.G. & Ponader, K.C. 2008. New species and combinations in the diatom genus *Sellaphora* (Sellaphoraceae) from Southeastern United States. *Harvard Papers in Botany*, Vol. 13 (1): 171–181.

Carlisle D.M., Hawkins C.P., Meador M.R., Potapova M., Falcone J. 2008. Biological assessments of Appalachian streams based on predictive models for fish, macroinvertebrate, and diatom assemblages. *Journal of the North American Benthological Society* 27(1): 16-37.

Potapova, M. and Hamilton, P.B. 2007. Morphological and ecological variation within the *Achnantheidium minutissimum* (Bacillariophyceae) species complex. *Journal of Phycology*, 43:561-575.

Potapova, M. and Charles, D.F. 2007. Diatom metrics for monitoring eutrophication in rivers of the United States. *Ecological Indicators* 7:48-70.

Ponader, K.C. and Potapova, M.G. 2007. Diatoms from the genus *Achnantheidium* in flowing waters of the Appalachian Mountains (North America): Ecology, distribution and taxonomic notes. *Limnologia* 37: 227-241.

Potapova, M. 2006. *Achnantheidium zhakovschikovii* sp. nov. (Bacillariophyta) and related species from rivers of Northwestern Russia. *Nova Hedwigia*, 82(3-4):399-408.

Potapova, M. G. and Winter D. 2006. Use of nonparametric multiplicative regression for modeling diatom habitat: a case study of three *Geissleria* species from North America. Pages 319-332 in: Ognjanova-Rumenova, N. and K. Manoylov (eds.) *Advances in Phycological Studies. Festschrift in Honour of Prof. Dobrina Temniskova-Topalova*. Pensoft Publishers & University Publishing House, Sofia-Moscow.

Potapova, M. and Charles, D.F 2005. Choice of substrate in algae-based water-quality assessment. *Journal of the North American Benthological Society*, 24: 415-427.

Potapova, M.G., J. F. Coles, E. M. Giddings, and H. Zappia. 2005. A comparison of the influences of urbanization in contrasting environmental settings on stream benthic algal assemblages. *Effects of urbanization on stream ecosystems*. American Fisheries Society Symposium 47: 333-359.

Potapova, M.G. and Ponader, K.C. 2004. Two common North American diatoms, *Achnantheidium rivulare* sp. nov. and *A. deflexum* (Reimer) Kingston: morphology, ecology and comparison with related species. *Diatom Research*, 19(1): 33-57.

Potapova, M. and Charles, D.F 2004. Potential use of rare diatoms as environmental indicators in U.S.A. rivers. Pages 281-295 in: *Proceedings of the 17th International diatom symposium*, M Poulin, editor, Biopress Limited, Bristol.

Potapova, M.G. , Charles, D.F., Ponader, K.C., & Winter, D.M. 2004. Quantifying species indicator values for trophic diatom indices: a comparison of approaches. *Hydrobiologia* 517: 25-41.

- Potapova M.G., Ponader, K.C., Lowe, R.L., Clason, T.A. & Bahls, L.L. 2003. Small-celled *Nupela* species from North America. *Diatom Research*, 18(2), 293-306.
- Potapova, M. & Charles, D.F. 2003. Distribution of benthic diatoms in U.S. rivers in relation to conductivity and ionic composition. *Freshwater Biology*, 48: 1311-1328.
- Potapova, M. & Charles, D.F. 2002. Benthic diatoms in USA rivers: distribution along spatial and environmental gradients. *Journal of Biogeography*, 29: 167-187.
- Snoeijs, P., Busse, S. & Potapova, M. 2002. The importance of diatom cell size in community analysis. *Journal of Phycology*, 38: 265-281.
- Potapova, M. 1999. Use of algae for monitoring rivers in Russia. In: *Use of algae for monitoring rivers III, Proceedings of an International Symposium held at Douai, France, 1997*: 96-101.
- Snoeijs, P. & Potapova, M. 1998. Ecotypes or endemic species? – a hypothesis on the evolution of *Diatoma* taxa (Bacillariophyta) in the northern Baltic Sea. *Nova Hedwigia*. V.67(3-4): 303-348.
- Potapova, M., Kvitko, K., Dmitrieva, I. 1998. Algal components of the oil-polluted water ecosystems. *Proceedings of the Workshop of the Water/Wastewater Section of the VAAM on Microbiology of polluted aquatic ecosystems, Leipzig, Germany, N°10*: 182-187.
- Safonova, E., Kvitko, K., Potapova, M. 1998. The collection of algae from polluted waters and soils. *Proceedings of the Workshop of the Water/Wastewater Section of the VAAM on Microbiology of polluted aquatic ecosystems, Leipzig, Germany, N°10*: 188-196.
- Potapova, M. & Snoeijs, P. 1997. The natural life cycle in wild populations of *Diatoma moniliformis* (Bacillariophyceae) and its disruption in an aberrant environment. *Journal of Phycology*. V.33: 924-937.
- Potapova, M. 1996. Epilithic algal communities in rivers of the Kolyma Mountains, NE Siberia, Russia. *Nova Hedwigia*. V. 63 (3-4): 309-334.
- Snoeijs, P. & Potapova, M. (eds.) 1995. Intercalibration and distribution of diatom species in the Baltic Sea. Vol. 3. Uppsala: Opulus Press, 126.
- Makarova, I.V., Strelnikova, N.I., Kozyrenko, T.F., Gladenkov, A.Yu., Kazarina, G. Kh., Nikolaev, V.A., Potapova, M.G., Zhakovshchikova, T.K. 2002. *The Diatoms of Russia and adjacent countries. Fossil and recent. II(3)*. St. Petersburg: St. Petersburg University, 111 pp.
- Potapova, M.G. 1999. Diatom algae of a sandy littoral in the eastern part of the Gulf of Finland. - *Botanichesky Zhurnal (Botanical Journal)*. V.84 (1):59-65.
- Potapova, M. 1994. Biomass of the attached algae in the rivers of Kolyma Mountains: its dynamics and limiting factors. *Vodnye resursy (Water resources)*. V.21 (6): 684-690.
- Potapova, M. 1993. Ecology of the algae in the Kolyma Mountains rivers. PhD thesis. St. Petersburg. 150 pp.

Kharitonov V. & Potapova, M. 1993. Phytobenthos of the Kontaktovy creek. *Hydrology, hydrochemistry and hydrobiology of the Kontaktovy creek (the Upper Kolyma basin)*. Vladivostok. p. 33-41.

Potapova, M. 1993. Seasonal dynamics and spatial distribution of benthic algal communities in the Kontaktovy creek basin. *Hydrology, hydrochemistry and hydrobiology of the Kontaktovy creek (the Upper Kolyma basin)*. Vladivostok. p. 20-32.

Potapova, M. 1992. The composition and distribution of the attached algal communities in small rivers of the Upper Kolyma River basin. *Botanichesky Zhurnal (Botanical Journal)*. V.77 (1): 83-91.

Kharitonov, V. & Potapova, M. 1990. Check-list of algal species of the Kolyma Mountains rivers. Moscow: VINITI. 39 pp.

Potapova, M. 1987. Characteristic of the phytobenthic communities of the Upper Kolyma Mountain streams. *Biological investigations in the North-East USSR, Magadan*. p. 17-18.

PAPERS

Potapova, M. 2010. Preliminary phylogeny of the freshwater monoraphid diatoms. Presentation at the 21st International Diatom Symposium St. Paul, Minnesota United States 29 August to 3 September, 2010.

Edlund, M., Kociolek, P., Lowe, R., Potapova, M., Rushforth, S., Spaulding, S.A., Stoermer, E.F. 2010. Developing an on-line taxonomic guide to the freshwater diatoms of the United States: scope, process and initial steps. Presentation at the 21st International Diatom Symposium St. Paul, Minnesota United States 29 August to 3 September, 2010.

Enache, M., Potapova, M., Sheibley, R. and Moran, P. 2010. *Psammothidium* species from lakes of Washington Cascade Mountains, USA. Presentation at the 21st International Diatom Symposium St. Paul, Minnesota United States 29 August to 3 September, 2010.

Potapova, M. 2009. Preliminary data on the phylogeny of the family Achnanthidiaceae (Bacillariophyta). Presentation at the Joint Annual Meeting of the American Society of Plant Biologists and the Phycological Society of America. July 18-22, 2009 Hawaii Convention Center, Honolulu, Hawaii.

Potapova, M. 2009. Serving the community of diatomists: Dr. Reimer's legacy at the ANSP Diatom Herbarium. presentation at the 20th North American Diatom Symposium, 23-27 September 2009, Iowa Lakeside Laboratory, Milford, Iowa.

Potapova, M. 2007. A New Diatom Genus Based on *Achnanthes kriegei* Krasske, presented at the 19th North American Diatom Symposium, Michigan, September 12-16, 2007.

Potapova, M. & Ponader, K. 2007. The Diversity of Sellaphoraceae in Rivers and Springs of the Southeastern United States, presented at the 19th North American Diatom Symposium, Michigan, September 12-16, 2007.

Hondula, K., Charles, D.F. & Potapova, M. 2007. An investigation of the freshwater diatom genus *Reimeria*, presented at the 19th North American Diatom Symposium, Michigan, September 12-16, 2007.

Charles, D.F., Mellott, D. & Potapova, M. 2007. Computer applications and electronic resources for diatom research at the Academy of Natural Sciences, presented at the 19th North American Diatom Symposium, Michigan, September 12-16, 2007.

S.A. Spaulding, D. Lubinski, M. Potapova, J. Thompson, J. Kinsey, and M. Edlund. 2007. Developing a web-based identification guide and ecological resource for diatoms of western North America, presented at the 19th North American Diatom Symposium, Michigan, September 12-16, 2007.

Potapova, M. G. and Hamilton, P. B. 2006. Morphological and ecological variation within *Achnantheidium minutissimum* (Bacillariophyceae) species complex, presented at the Annual meeting of the Phycological Society of America, Juneau, Alaska, July 7-12, 2006.

Potapova, M.G. and D.F. Charles. 2005. Diatom metrics for monitoring eutrophication in US rivers, presented at ASLO 2005 Aquatic Sciences Meeting, Salt Lake City, Utah, February 20-25, 2005.

Ponader, K.C. and Potapova, M.G. 2005. *Achnantheidium* species in flowing waters of the Appalachian Mountains, presented at the 18th North American Diatom Symposium, Mobile, Alabama, November 1-4, 2005.

D.F. Charles, K. Sprouffske, E. A. Morales, M. Potapova, K. C. Ponader, D. M. Winter, C. Bell, P. Cotter, R. McCourt, D. Mellott, C. Ratnayaka, and D. Waterman. 2004. Academy of Natural Sciences online algae image resources, presented at 18th International Diatom Symposium, 2-7 September 2004, Miedzyzdroje, Poland.

Morales, E. A., Charles, D.F., Sprouffske, K., Potapova, M., Ponader, K. C., Winter, D. M., Bell, C., Cotter, P., McCourt, R., Mellott, D., Ratnayaka, C. & Waterman, D. 2004. Bases de datos en línea conteniendo fotografías electrónicas pertenecientes a la Academia de Ciencias Naturales de Filadelfia [On line databases containing electronic images from The Academy of Natural Sciences of Philadelphia], presented at First Peruvian Phycological Congress/First South American Phycological Congress. Lima, Peru. p. 31.

Potapova, M.G., J. F. Coles, E. M. Giddings, and H. Zappia. 2004. Impact of urbanization on stream benthic algal assemblages in contrasting environmental settings, presented at the annual meeting of the North American Benthological Society, Vancouver, British Columbia, June 6-10, 2004.

Tate, C..M., T.F. Cuffney, M.R. Meador, T..M. Short, and M.G. Potapova. 2003. Ecological responses to gradients of urban intensity in metropolitan areas of three contrasting regions of the United States, Keynote Address at the Symposium on Urbanization and Stream Ecology, Melbourne, Australia, December 8-10, 2003.

Charles, D.F., Potapova, M., Ponader, K. & Winter, D. 2002. Diatom-based methods for assessing nutrient enrichment of rivers in the Northern Piedmont Ecoregion (USA), presented

at the Annual Meeting of the American Water Resources Association, Philadelphia, Pennsylvania. November 4-7, 2002.

Charles, D.F., Potapova, M., Ponader, K. & Winter, D. 2003. Diatom-based methods for assessing nutrient enrichment in Northern Piedmont rivers, presented at 51th Annual Meeting of the North American Benthological Society, Athens, Georgia, June 2003.

Potapova, M. & Charles, D.F. 2002. Potential use of rare diatoms as environmental indicators in USA rivers, presented at 17th International diatom symposium, Ottawa, Canada, August 2002.

Charles, D.F., Potapova, M., Ponader, K. & Winter, D. 2002. Diatom-based methods for assessing nutrient enrichment in rivers of the Northern Piedmont Ecoregions (USA), presented at 17th International diatom symposium, Ottawa, Canada, August 2002.

Winter, D., Charles, D.F. & Potapova, M. 2002. Benthic diatoms in Manatawny Creek, PA: temporal variability and the effects of dam removal), presented at 17th International diatom symposium, Ottawa, Canada, August 2002.

Potapova, M. & Charles, D.F. 2002. Choice of substrate type for water quality assessment using benthic algae, presented at 50th Annual Meeting of the North American Benthological Society, Pittsburgh, Pennsylvania, June 2002.

Charles, D.F. & Potapova, M. 2002. Calibration sets for quantifying ecological characteristics of river algae: habitat variability and spatial scale, presented at 49th Annual Meeting of the North American Benthological Society, LaCrosse, Wisconsin, June 2002.

Potapova, M. & Charles, D.F. 2001. Nutrient optima of diatom species in U.S. rivers, presented at 16th North American Diatom Symposium, Ely, Minnesota, September 2001.

Charles, D.F. & Potapova, M. 2001. Analysis of diatom assemblages for the USGS NAWQA program, presented at 16th North American Diatom Symposium, Ely, Minnesota, September 2001.

Potapova, M., Ponader, K.C. & Clason, T.A. 2001. New *Nupela* species from eastern rivers of the United States, presented at 16th North American Diatom Symposium, Ely, Minnesota, September 2001.

Winter, D.M. & Potapova, M.G. 2001. A study of three *Geissleria* species common in rivers of the Southeastern United States, presented at 16th North American Diatom Symposium, Ely, Minnesota, September 2001.

Potapova, M. & Charles, D.F. 2001. Patterns of benthic diatom distributions in US rivers, presented at 49th Annual Meeting of the North American Benthological Society, LaCrosse, Wisconsin, June 2001.

Charles, D.F. & Potapova, M. 2001. Influence of spatial and temporal scale on models for inferring nutrients in US rivers from benthic diatom assemblages, presented at 49th Annual Meeting of the North American Benthological Society, LaCrosse, Wisconsin, June 2001.

Potapova, M. & Charles, D.F. 2000. Benthic diatoms in USA rivers: distribution patterns and use as indicators of eutrophication, presented at 4th International Symposium 'Use of Algae in Monitoring Rivers, Durham, UK, July 2000.

Potapova, M. & Charles, D.F. 2000. Patterns of diatom distribution in US rivers, presented at 16th International diatom symposium, Athens, Greece, August 2000.

Charles, D.F. & Potapova, M. 2000. Inferring phosphorus concentrations in USA rivers from diatom assemblages: Initial results, presented at 16th International diatom symposium, Athens, Greece, August 2000.

Potapova, M. 1999. Benthic algae of the eastern part of the Gulf of Finland and its watershed. *Proceedings of the NorFa (Nordic Academy of Sciences) workshop 'Modelling sensitive environment of the Baltic coasts', StPetersburg, Russia, 29 May- 2 June 1999.*

Potapova, M. 1997. Use of algae in monitoring russian rivers, presented at 3rd European workshop Use of algae in monitoring rivers, Douai, France, Sept. 1997.

Potapova, M. 1997. Epiphytic and epipsammic diatoms of the Gulf of Finland, presented at Nordic meeting of Diatomists, Bergen, Norway, May 1997.

Potapova, M. & Snoeijs, P. 1996. Life cycle of a pennate diatom and its disruption in an aberrant environment, presented at the 14th International diatom symposium, Tokyo, Japan, Sept.1996.

Potapova, M. 1995. Life cycle of *Diatoma moniliformis* in the Baltic Sea, presented at the Nordic Meeting of Diatomists, Uppsala, Sweden, May 1995.

Potapova, M. 1993. The structure of epilithic diatom communities in Kolyma Mountain streams, presented at the International Diatom Conference, Irkutsk, Russia, Feb.1993.