# *Curriculum Vitae* David Zanatta, Ph.D.

<u>Address (work):</u>	Central Michigan University Department of Biology Institute for Great Lakes Research Biosciences 2408 Mount Pleasant, MI 48859
<u>Address (home):</u>	USA 1208 East Broadway St Mount Pleasant, MI 48858 USA
<u>Telephone (Office):</u>	(989) 774-7829
<u>Telephone (Cell):</u>	(989) 444-9130
<u>Fax:</u>	(989) 774-3462
<u>Email:</u>	<u>zanat1d@cmich.edu</u>
<u>Homepage:</u>	<u>http://people.cst.cmich.edu/zanat1d/</u>
<u>Citizenship:</u>	U.S.A. and Canada

## **Academic Positions:**

Professor, Biology

• Central Michigan University, Mount Pleasant, MI USA. August 2017-present.

#### Associate Professor, Biology

• Central Michigan University, Mount Pleasant, MI USA. August 2013-August 2017.

Assistant Professor, Biology

• Central Michigan University, Mount Pleasant, MI USA. August 2008-August 2013.

Natural Sciences and Engineering Research Council (NSERC) of Canada, Postdoctoral Fellow

• Trent University, Peterborough, ON Canada, sponsor: Dr. C. Wilson. Nov. 2007-July 2008.

## **Education:**

University of Toronto, Toronto, ON Canada

• Ph.D. in Ecology & Evolutionary Biology, conferred: June 2008, supervisor Dr. R. Murphy.

University of Guelph, Guelph, ON Canada

• M.Sc. in Zoology, conferred: February 2001, supervisor Dr. G. Mackie

Laurentian University, Sudbury, ON Canada

• B.Sc. (Hons.), Biology, conferred: June 1998

# Research:

<u>Peer-reviewed Articles and Book Chapters (including submitted, in review, in revision, and in press;</u> <u>\* indicates student author):</u>

- 1. Western, L.\* and **D.T. Zanatta. In review.** Identifying environmental drivers of shell shape variation in the freshwater gastropod *Campeloma decisum. American Malacological Bulletin.*
- Powell, D.\*, J. Collier, K. Klymus, D.A. Woolnough, D.V. Ruiz-Ramos, and D.T. Zanatta. In review. Limited detections of endangered *Epioblasma triquetra* (Snuffbox) using environmental DNA. *Freshwater Science*.
- 3. Laszlo, A.M., D.T. Zanatta, and D.A. Woolnough. In revision. Classification tree analyses

predict unionid habitat in a dreissenid-plagued ecosystem. Lake and Reservoir Management.

- Lopes-Lima, M., J. Geist, S. Egg, L. Beran, A. Bikashvili, B. Van Bocxlaer, A.E. Bogan, I.N. Bolotov, O.A. Chelpanovskaya, K. Douda, V. Fernandes, A. Gomes-dos-Santos, D.V. Gonçalves, M.E. Gürlek, N.A. Johnson, I. Karaouzas, Ü. Kebapci, A.V. Kondakov, R. Kuehn, J. Lajtner, L. Mumladze, K-O. Nagel, E. Neubert, M. Österling, J. Pfeiffer, V. Prié, N. Riccardi, J. Sell, L.D. Schneider, S. Shumka, I. Sîrbu, G. Skujiene, C.H. Smith, R. Sousa, K. Stöckl, J. Taskinen, A. Teixeira, M. Todorov, T. Trichkova, M. Urbanska, S. Välilä, S. Varandas, J. Veríssimo, I.V. Vikhrev, G. Woschitz, K. Zajac, T. Zajac, D. Zanatta, A. Zieritz, S. Zogaris, E. Froufe. 2024. Integrative phylogenetic, phylogeographic and morphological characterisation of the *Unio crassus* species complex reveals cryptic diversity with important conservation implications. *Molecular Phylogenetics and Evolution* in press. https://doi.org/10.1016/j.ympev.2024.108046
- Keretz, S.S.\*, A.K. Elgin, T.J. Morris, E. Roseman, D.T. Zanatta, and D.A. Woolnough. 2024. Ecological niche models effectively predict dreissenid mussel presence in two large rivers of the Laurentian Great Lakes. *Journal of Great Lakes Research* 50: 102273. <u>https://doi.org/10.1016/j.jglr.2023.102273</u>.
- Keretz, S.S.\*, D.A. Woolnough, T.J. Morris, E. Roseman, A.K. Elgin, and D.T. Zanatta. 2024. Habitat modelling of native freshwater mussels distinguishes river specific differences in the Detroit and St. Clair rivers of the Laurentian Great Lakes. *Ecological Modelling* 487: 110537. <u>https://doi.org/10.1016/j.ecolmodel.2023.110537</u>
- Dokai, W., P. Barry, D.T. Zanatta, K. Gruenthal, M. McPhee, and W. Larson. 2023. Two for the price of one: eDNA metabarcoding reveals temporal and spatial variability of mussel and fish co-distributions in Michigan riverine systems. *Environmental DNA* <u>https://doi.org/10.1002/edn3.390</u>
- Liu, X., Y. Liu, R. Wu, D.T. Zanatta, M. Lopes-Lima, D.V. Gonçalves, A.E. Bogan, S. Ouyang, and X. Wu. 2022. Systematics, distribution, biology, and conservation of freshwater mussels (Bivalvia: Unionoida) in China. *Aquatic Conservation: Marine and Freshwater Ecosystems* 32: 859-895.
- Layer, M.L.\*, R.L. Minton, T.J. Morris, and D.T. Zanatta. 2022. Utility of shell valve outlines for distinguishing among four lampsiline mussel species (Bivalvia: Unionidae) in the Great Lakes region. *Freshwater Mollusk Biology and Conservation* 25: 37-53.
- Bucholz, J.R.\*, N.M. Sard, N.M. VanTassel\*, J.D. Lozier, T.J. Morris, A. Paquet, and D.T. Zanatta. 2022. RAD-tag and mitochondrial DNA sequencing reveal the genetic structure of a widespread and regionally imperiled freshwater mussel, *Obovaria olivaria* (Bivalvia: Unionidae). *Ecology and Evolution* 12: e8560.
- 11. Keretz, S.S.\*, D.A. Woolnough, T.J. Morris, E. Roseman, A.K. Elgin, and **D.T. Zanatta**. 2021. Limited co-existence of native unionids and invasive dreissenid mussels more than 30 y post dreissenid invasion in a large river system. *American Midland Naturalist* 186: 157-175.
- VanTassel, N.M.\*, T.J. Morris, C.G. Wilson, and D.T. Zanatta. 2021. Genetic diversity maintained in comparison of captive-propagated and wild populations of *Lampsilis fasciola* and *Ptychobranchus fasciolaris* (Bivalvia: Unionidae). *Canadian Journal of Fisheries and Aquatic Sciences* 78: 1312-1320.
- Castañeda, R.A., J. Ackerman, L. Chapman, S. Cooke, K. Cuddington, A. Dextrase, D. Jackson, M. Koops, M. Krkošek, K. Loftus, N. Mandrak, A. Martel, P. Molnar, T. Morris, T. Pitcher, M. Poesch, M. Power, T. Pratt, S. Reid, M. Rodríguez, J. Rosenfeld, C. Wilson, D.T. Zanatta, D.A.R. Drake. 2021. Approaches and research needs for advancing the protection and recovery of imperilled freshwater fishes and mussels in Canada. *Canadian Journal of Fisheries and Aquatic Sciences* 78: 1356-1370.
- Inoue, K., B.E. Sietman, S.E. McMurray, J.S. Faiman, and D.T. Zanatta. 2021. New microsatellite markers for Ellipse, *Venustaconcha ellipsiformis* (Bivalvia: Unionidae), with notes on an optimal sample size and cross-species amplification. *Molecular Biology Reports* 48: 3037-3045.
- Porto-Hannes, I., L.E. Burlakova, D.T. Zanatta, and H.R. Lasker. 2021. Boundaries and hybridization in a secondary contact zone between freshwater mussel species (Family: Unionidae). *Heredity* 126: 955-973.

- Zieritz, A., E. Froufe, I. Bolotov, D.V. Gonçalves, D.C. Aldridge, A.E. Bogan, H-M. Gan, A. Gomes-dos-Santos, R. Sousa, A. Teixeira, S. Varandas, D.T. Zanatta, and M. Lopes-Lima. 2020. Mitogenomic phylogeny and fossil-calibrated mutation rates for all F- and M-type mtDNA genes of the largest freshwater mussel family (Bivalvia: Unionidae). *Zoological Journal of the Linnean Society* 193: 1088-1107.
- Willsie, J.A.\*, T.J. Morris, and D.T. Zanatta. 2020. Morphometric analyses distinguish Wabash Pigtoe (*Fusconaia flava*) and Round Pigtoe (*Pleurobema sintoxia*) mussels. *Diversity* 12: 337.
- Teixeira, J.E., E. Froufe, A. Gomes-dos-Santos, A.E. Bogan, A. Karatayev, L. Burlakova, D.C. Aldridge, I.N. Bolotov, I.V. Vikhrev, A. Teixeira, S. Varandas, **D.T. Zanatta**, and M. Lopes-Lima. 2020. Complete mitochondrial genomes of the freshwater mussels *Amblema plicata* (Say, 1817), *Pleuroberna oviforme* (Conrad, 1834) and *Popenaias popeii* (Lea, 1857) (Bivalvia: Unionidae: Ambleminae). *Mitochondrial DNA, Part B* 5: 2977-2979.
- VanTassel, N.M.\*, C.E. Beaver\*, D.A. Watkinson, T.J. Morris, and D.T. Zanatta. 2020. Absence of genetic structure reflects post-glacial history and present-day host use in *Quadrula quadrula* (Unionidae) in Manitoba, Canada. *Canadian Journal of Zoology* 98: 551-556.
- Beyett, T.W.\*, K. McNichols-O'Rourke, T.J. Morris, and D.T. Zanatta. 2020. Use of morphometric analyses and DNA barcoding to distinguish *Truncilla donaciformis* and *Truncilla truncata* (Bivalvia: Unionidae). *Freshwater Mollusk Biology and Conservation* 23: 99-108.
- Beauchamp, K.A.\*, T.W. Beyett\*, M.W. Scott\*, and D.T. Zanatta. 2020. Detecting hybrid Pyganodon grandis and P. lacustris (Bivalvia: Unionidae) using F- and M-lineage mtDNA sequences and geometric morphometrics. Journal of Molluscan Studies 86: 233-239.
- Liu, X-J., W-K. Wang, Y-L. Wu, R-W. Wu, W-W. Sun, C-H. Zhou, S. Ouyang, D.T. Zanatta, and X-P. Wu. 2020. Co-varying patterns of genetic diversity and structure with life history traits of freshwater mussel species (Bivalvia: Unionoida) in the Poyang Lake drainage, China. *Freshwater Science* 39: 213-227.
- Liu, X-J., X. Yang, D.T. Zanatta, M. Lopes-Lima, A.E. Bogan, A. Zieritz, S. Ouyang, and X-P. Wu. 2020. Conservation status assessment and a new method for establishing conservation priorities for freshwater mussels (Bivalvia: Unionida) in the middle and lower reaches of the Yangtze River drainage. *Aquatic Conservation: Marine and Freshwater Ecosystems* 30: 1000-1011.
- 24. Scott, M.W.\*, T.J. Morris, and **D.T. Zanatta**. 2020. Population structure, genetic diversity, and colonization history of the Eastern Pondmussel, *Sagittunio nasutus*, in the Laurentian Great Lakes watershed. *Aquatic Conservation: Marine and Freshwater Ecosystems* 30: 631-646.
- Krebs, R.A., L.E. Burlakova, and D.T. Zanatta. 2019. Post-glacial dispersal patterns of Pyganodon grandis (Bivalvia: Unionidae) into the lower Great Lakes watershed. The Nautilus 133(3-4): 74-84.
- Hewitt, T.L.\*, D.A. Woolnough, and D.T. Zanatta. 2019. Population genetic analyses of Lampsilis cardium (Bivalvia: Unionidae) reveal multiple post-glacial colonization routes into the Great Lakes drainage. American Malacological Bulletin 37(1): 21-34.
- Froufe, E., I. Bolotov, D.C. Aldridge, A. Bogan, H-M. Gan, U. Kovitvadhi, S. Kovitvadhi, N. Riccardi, G. Secci-Petretto, R. Sousa, A. Teixeira, S. Varandas, **D. Zanatta**, A. Zieritz, M. Fonseca, and M. Lopes-Lima. 2019. Mesozoic mitogenome rearrangements and freshwater mussel (Bivalvia: Unionidea) macroevolution. *Heredity* 124: 182-196.
- Beaver, C.\*, D.A. Woolnough, and D.T. Zanatta. 2019. Assessment of genetic diversity and structure among populations of the freshwater mussel *Epioblasma triquetra* in the Laurentian Great Lakes drainage. *Freshwater Science* 38(3): 527-542.
- Gomes-dos-Santos, A., E. Froufe, R. Amaro, O. Paz, S. Breton, D. Guerra, D. Aldridge, I. Bolotov, I. Vikhrev, H-M. Gan, D. Gonçalves, A.E. Bogan, R. Sousa, D. Stewart, A. Teixeira, S. Varandas, **D. Zanatta**, M. Lopes-Lima. 2019. The male and female complete mitochondrial genome of the threatened freshwater pearl mussel *Margaritifera margaritifera* (Linnaeus, 1758) (Bivalvia: Margaritiferidae). *Mitochondrial DNA Part B: Resources* 4: 1417-1420.
- 30. Wu, R-W., Y-T. Liu, W. Sa, X-J. Liu, **D.T. Zanatta**, K.J. Roe, X-L. Song, C-T An, and X-P. Wu. 2018. Testing the utility of DNA barcodes and a preliminary phylogenetic framework for

Chinese freshwater mussels (Bivalvia: Unionidae) from the middle and lower Yangtze River. *PLoS ONE* 13(8): e0200956.

- Wu, R-W., T-H. Chen, D.T. Zanatta, S. Ouyang, and X-P. Wu. 2018. Reproductive traits of nine freshwater mussel species (Mollusca: Unionidae) from the middle Yangtze River, China. *Journal of Molluscan Studies* 18(3): 324–332.
- Bossenbroek, J.M., L.E. Burlakova, T.D. Crail, A.Y. Karateyev, R.A. Krebs, and D.T. Zanatta. 2018. Using ecological niche modelling to predict the presence of unionid refuges in the Laurentian Great Lakes. *Freshwater Science* 37(2): 330–342.
- Zanatta, D.T., B. Stoeckle, K. Inoue, A. Paquet, A.L. Martel, R. Kuehn, and J. Geist. 2018. High genetic diversity and low differentiation in North American *Margaritifera margaritifera*. *Biological Journal of the Linnean Society* 123: 850-863.
- Hoffman, J.R\*., T.J. Morris, and D.T. Zanatta. 2018. Genetic evidence for canal-mediated dispersal of Mapleleaf (*Quadrula quadrula*, Bivalvia: Unionidae) on the Niagara Peninsula, Canada. *Freshwater Science* 37: 82-95.
- Zieritz, A., A.E. Bogan, O. Klishko, T. Kondo, U. Kovitvadhi, S. Kovitvadhi, J-H. Lee, M. Lopes-Lima, J.M. Pfeiffer, R. Sousa, D. V. Tu, I. Vikhrev, and D.T. Zanatta. 2018. Diversity, biogeography and conservation status of freshwater mussels (Bivalvia: Unionida) in East and Southeast Asia. *Hydrobiologia* 810: 29-44.
- Hewitt, T.L.\*, J.L. Bergner\*, D.A. Woolnough, and D.T. Zanatta. 2018. Phylogeography of the freshwater mussel species *Lasmigona costata*: Testing post-glacial colonization hypotheses. *Hydrobiologia* 810: 191-206.
- Mathias, P.T.\*, J.R. Hoffman\*, C.C. Wilson, and D.T. Zanatta. 2018. Signature of postglacial colonization on contemporary genetic structure and diversity of *Quadrula quadrula* (Bivalvia: Unionidae). *Hydrobiologia* 810: 207-225.
- Sun, T-T., X. Liu, C. Zhou, H. Ding, W. Yang, D.T. Zanatta, S. Ouyang, X-P. Wu. 2017. Microsatellite analysis of genetic diversity and genetic structure of the Chinese freshwater mussel Solenaia caranita (Bivalvia: Unionidae). Aquatic Conservation: Marine and Freshwater Ecosystems 28: 37-44.
- Liu, X-J., Y-L. Cao, T-T. Xue, R-W. Wu, Y. Zhou, C-H. Zhou, D.T. Zanatta, S. Ouyang, and X-P. Wu. 2017. Genetic structure and diversity of *Nodularia douglasiae* (Bivalvia: Unionida) in the middle and lower Yangtze River drainage. *PLoS ONE* 12(12): e0189737.
- Hoffman, J.R.\*, J.R. Willoughby, B.J. Swanson, K.L. Pangle, and D.T. Zanatta. 2017. Detection of barriers to dispersal is masked by long lifespans and large population sizes. *Ecology and Evolution* 7: 9613–9623.
- 41. Lopes-Lima, M., M. Fonseca, D. Aldridge, A. Bogan, H-M Gan, M. Ghamizi, R. Sousa, A. Teixeira, S. Varanda, **D. Zanatta**, A. Zieritz, and E. Froufe. 2017. The first male (M-type) mitogenome of Margaritiferidae: Gene order as a potential character for high order phylogeny within Unionida, Bivalvia. *Journal of Molluscan Studies* 83: 249-252.
- 42. Lopes-Lima, M., E. Froufe, M. Ghamizi, K. Mock, Ü. Kebapçi, O. Klishko, S. Kovitvadhi, U. Kovitvadhi, O.S. Paulo, J.M. Pfeiffer III, M. Raley, N. Riccardi, H. Sereflisan, R. Sousa, A. Teixeira, V.T. Do, S. Varandas, X. Wu, **D.T. Zanatta**, A. Zieritz, A. Bogan. 2017. Phylogeny of the most species rich freshwater bivalve family (Bivalvia: Unionida: Unionidae): Defining modern subfamilies and tribes. *Molecular Phylogenetics and Evolution* 106: 174-191
- Sun, T-T., Y-L. Cao, C-H. Zhou, W-J. Yang, D.T. Zanatta, S. Ouyang, X-P. Wu. 2016. Development and characterization of 33 microsatellite markers for the endangered freshwater mussel Solenaia carinata (Bivalvia: Unionidae) based on transcriptome dataset. *Conservation Genetics Resources* 8: 359-370.
- 44. Scott, M.W.\*, J.R. Hoffman\*, T.L. Hewitt\*, R.R. Beasley, S.L. Lance, K.L. Jones, T.D. Morris, and D.T. Zanatta. 2016. Development and characterization of twenty-nine microsatellite markers for *Ligumia nasuta* (Bivalvia: Unionidae) using an Illumina sequencing approach. *Biochemical Systematics and Ecology* 66: 239-242.
- 45. Casenave, K.R.\* and **D.T. Zanatta**. 2016. Environmental drivers of shell shape in a freshwater gastropod from small and large lakes. *Freshwater Science* 35: 948–957.
- 46. Caldwell, M.L.\*, **D.T. Zanatta**, and D.A. Woolnough. 2016. A multi-basin approach to determine unionid host fish suitability. *Freshwater Biology* 61: 1035–1048.

- Paterson, W.L.\*, T.A. Griffith\*, L.E. Burlakova, R.A. Krebs, and D.T. Zanatta. 2015. An evaluation of the genetic structure of mapleleaf mussels (*Quadrula quadrula*) in the Lake Erie watershed. *Journal of Great Lakes Research* 41(4): 1123-1130.
- Galbraith, H.S., D.T. Zanatta, and C.C. Wilson. 2015. Comparative analysis of riverscape genetic structure in rare, threatened and common freshwater mussels. *Conservation Genetics* 16: 845-857.
- 49. Zanatta, D.T., J.M. Bossenbroek, L.E. Burlakova, T.D. Crail, F. de Szalay, T.A. Griffith\*, D. Kapusinski, A.Y. Karateyev, R.A. Krebs, E.S. Meyer, W.L. Paterson\*, T.J. Prescott, M.T. Rowe\*, D.W. Schloesser, and M.C. Walsh. 2015. Distribution of native mussel (Unionidae) assemblages in coastal Lake Erie, Lake St. Clair, and connecting channels, twenty-five years after the dreissenid invasion. *Northeastern Naturalist* 22(1): 223-235.
- Krebs, R.A., B.D. Allen, N.M. Evans, and D.T. Zanatta. 2015. Mitochondrial DNA structure of Pyganodon grandis (Bivalvia: Unionidae) from the Lake Erie watershed and selected locations in its northern distribution. *American Malacological Bulletin* 33(1): 34-42.
- 51. Rowe, M.T.\* and **D.T. Zanatta**. 2015. Investigating the genetic variation and structure of a native unionid mussel in the Laurentian Great Lakes following an invasion of dreissenid mussels. *Biological Invasions* 17:350-364.
- 52. Burlakova, L.E., B.L. Tulumello, A.Y. Karatayev, R.A. Krebs, D.W. Schloesser, W.L. Paterson\*, T.A. Griffith\*, M.W. Scott\*, T.D Crail, and D.T. Zanatta. 2014. Competitive replacement of invasive congeners may relax impact on native species: interactions among zebra, quagga, and native unionid mussels. *PLoS ONE* 9(12): e114926.
- 53. Scott, M.W.\*, M.T. Begley, R.A. Krebs, and **D.T. Zanatta**. 2014. Mitochondrial DNA variation in the Eastern Pondmussel, *Ligumia nasuta* (Bivalvia: Unionoida), in the Great Lakes region. *Walkerana* 17(2):60-67.
- Lucy, F., L.E. Burlakova, A. Karatayev, S, Mastitsky, and D.T. Zanatta. 2014. Zebra mussel impacts on Unionids: A synthesis of trends in North America and Europe. Pp. 623-646 in "Quagga and Zebra Mussels: Biology, Impact, and Control, 2nd Edition" Edited by T.F. Nalepa & D.W. Schloesser. CRC Press, Boca Raton FL.
- 55. **Zanatta, D.T.** and A.T. Harris\*. 2013. Genetic variability and phylogeography of the Ellipse, *Venustaconcha ellipsiformis* (Conrad 1836), and Bleeding Tooth, *V. pleasii* (Marsh 1891), mussels (Bivalvia: Unionidae). *American Malacological Bulletin* 31(2): 267-279.
- Sherman, J.J.\*, B.A. Murry, D.A. Woolnough, D.T. Zanatta, and D.G. Uzarski. 2013. Assessment of remnant unionid assemblages in a selection of Great Lakes coastal wetlands. *Journal of Great Lakes Research* 30(4): 997-1008.
- 57. Harris, A.T.\*, D.A. Woolnough, and **D.T. Zanatta**. 2011. Insular lake island biogeography: Using lake metrics to predict diversity in littoral zone molluscan communities. *Journal of the North American Benthological Society* 30(4): 997-1008.
- Galbraith, H.S., C.M. Smith, K.M. Wozney, D.T. Zanatta, and C.C. Wilson. 2011. Development and characterization of nine microsatellite loci for the imperilled Kidneyshell, *Ptychobranchus fasciolaris*, and cross-amplification in closely-related lampsilines (Bivalvia: Unionoida). *Conservation Genetics Resources*. 3: 533-536.
- 59. **Zanatta, D.T.** and D.A. Woolnough. 2011. Confirmation of *Obovaria olivaria*, Hickorynut mussels (Bivalvia: Unionidae), in the Mississagi River, Ontario Canada. *Northeastern Naturalist* 18(1): 1-6.
- 60. Crail, T.D., R.A. Krebs, and **D.T. Zanatta**. 2011. Unionid mussels from nearshore zones of Lake Erie. *Journal of Great Lakes Research* 37: 199-202.
- 61. **Zanatta, D.T.** and C.C. Wilson. 2011. Testing congruency of geographic and genetic population structure for a freshwater mussel (Bivalvia: Unionoida) and its host fish. *Biological Journal of the Linnean Society* 102: 669-685.
- 62. Galbraith, H.S., K.M. Wozney, C.M. Smith, **D.T. Zanatta**, and C.C. Wilson. 2011. Characterization of microsatellite loci in the freshwater mussel *Lasmigona costata* (Bivalvia: Unionoida). *Conservation Genetics Resources* 3: 9-11.
- Zanatta, D.T. and R.W. Murphy. 2008. The phylogeographic and management implications of genetic population structure in the imperiled snuffbox mussel, *Epioblasma triquetra* (Bivalvia: Unionidae). *Biological Journal of the Linnean Society* 93: 371-384.
- 64. Brooks, D.R., J. Bilewitch, C. Condy, D.C. Evans, K.E. Folinsbee, J. Fröbisch, D. Halas, S,

Hill, D.A. McLennan, M. Mattern, L.A. Tsuji, J.L. Ward, N. Wahlberg, D. Zamparo, and **D. Zanatta**. 2007. Quantitative Phylogenetic Analysis in the 21st Century. *Revista Mexicana de Biodiversidad* 78: 225-252.

- 65. **Zanatta, D.T.**, S.J. Fraley, and R.W. Murphy. 2007. Population structure and mantle display polymorphisms in the wavy-rayed lampmussel, *Lampsilis fasciola* (Bivalvia: Unionidae). *Canadian Journal of Zoology* 85: 1169-1181.
- 66. **Zanatta, D.T.** and R.W. Murphy. 2007. Range-wide population genetic analysis of the endangered northern riffleshell mussel, *Epioblasma torulosa rangiana* (Bivalvia: Unionoida). *Conservation* Genetics 8: 1393-1404.
- Zanatta, D.T., A. Ngo, and J. Lindell. 2007. Reassessment of the phylogenetic relationships among *Anodonta*, *Pyganodon*, and *Utterbackia* (Bivalvia: Unionoida) using mutation coding of allozyme data. *Proceedings of the Academy of Natural Sciences of Philadelphia* 156: 211-216.
- 68. **Zanatta, D.T.** and R.W. Murphy. 2006. The evolution of active host-attraction strategies in the freshwater mussel tribe Lampsilini (Bivalvia: Unionidae). *Molecular Phylogenetics and Evolution* 41: 195-208.
- 69. **Zanatta, D.T.** and R.W. Murphy. 2006. Development and characterization of microsatellite markers in the endangered northern riffleshell mussel, *Epioblasma torulosa rangiana* (Bivalvia: Unionidae). *Molecular Ecology Notes* 6: 850-852.
- 70. **Żanatta, D.T.**, G.L. Mackie, J.L. Metcalfe-Smith, and D. Woolnough. 2002. A refuge for native freshwater mussels (Bivalvia: Unionidae) from impacts of the exotic zebra mussel (*Dreissena polymorpha*) in Lake St. Clair. *Journal of Great Lakes Research* 28: 479-489.

Manuscripts in Preparation:

- Perigo, N.M.\*, **D.T. Zanatta**, and D.A. Woolnough. **In prep.** Unionid assemblage and habitat in a lotic to lentic transitional zone upstream of a reservoir. Target Journal: *Freshwater Science*.
- Sanfilippo, G.E.\*, K. Inoue, and **D.T. Zanatta**. In prep. Patterns of genetic diversity and structure in *Pressodon viridis*, Slippershell, in streams of the U.S. Midwest. Target Journal: *Heredity*.
- VanTassel, N.M.\*, N.M. Sard, T.J. Morris, B. Fisher, T.L. Hewitt, **D.T. Zanatta**. In prep. RADseq generated SNPs resolve patterns of genetic diversity and structure of the freshwater mussel *Ptychobranchus fasciolaris* in glaciated and unglaciated regions of North America. Target Journal: *Ecology and Evolution*.
- VanTassel, N.M.\*, W. Haag, K. Inoue, N. Johnson, T. Lane, T.J. Morris, N.M. Sard, D.T. Zanatta. In prep. RADseq derived SNPs reveal cryptic lineages in the freshwater mussel genus *Ptychobranchus*. Target Journal: *Ecology and Evolution*.
- VanTassel, N.M.\*, N.M. Sard, T.J. Morris, C.G. Wilson, and **D.T. Zanatta**. In prep. A comparative assessment of genetic diversity for captive-reared and wild *Lampsilis fasciola* (Bivalvia: Uniondale) using microsatellites and RADseq-generated SNPs. Target Journal: *Canadian Journal of Fisheries and Aquatic Science*.
- Keretz, S.S.\*, D.A. Woolnough, N.M. VanTassel\*, D.T. Powell\*, G. Sanfilippo\*, A.D. Wright\*, T.J. Morris, A.K. Elgin, E.F. Roseman, and D.T. Zanatta. In prep. Diverse freshwater gastropod assemblages in two large connecting rivers >30 years post-dreissenid invasion. Target Journal: *Journal of Great Lakes Research*.

Published Book Reviews:

• Zanatta, D.T. 2013. Review of "North American Freshwater Mussels: Natural History, Ecology, and Conservation" by W.R. Haag. *Quarterly Review of Biology*. 88:357-358.

Popular Articles:

• Healy, C.J. and **D.T. Zanatta**. 2006. The Mussel Behind Ontario's Aquatic Biodiversity: Charismatic creatures of Ontario's lakes, rivers, and streams. *Rotunda*. 39:11-13.

Peer-Reviewed Reports (COSEWIC Status Reports):

- Zanatta, D.T., J.R. Hoffman, and J. Carney. 2016. Update Status Report on Mapleleaf mussel, *Quadrula quadrula*. Prepared for Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Status re-assessed as *Special Concern* in the Great Lakes-Western St. Lawrence DU and *Threatened* in the Saskatchewan-Nelson River DU in November 2016.
- **Zanatta, D.T.** 2011. Update Status Report on Snuffbox mussel, *Epioblasma triquetra*. Prepared for Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Status re-assessed as Endangered, Nov. 2011. xii + 57 pp.
- Zanatta, D.T., A. Martel, J. Madill, A. Paquet, and I. Picard. 2011. Status Report on Hickorynut, *Obovaria olivaria*. Prepared for Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Status assessed as Endangered, May 2011. viii + 52 pp.
- **Zanatta, D.T.** and S.K. Staton. 2010. Update Status Report on Northern Riffleshell, *Epioblasma torulosa rangiana*. Prepared for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Species re-designated Endangered April 2010. vi + 48 pp.
- Morris, T.J. and **D.T. Zanatta**. 2010. Update Status Report on Wavy-rayed Lampmussel, *Lampsilis fasciola*. Prepared for Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Species re-assessed as Special Concern, April 2010. vii + 64 pp.
- Zanatta, D.T. and J.L. Metcalfe-Smith. 2003. COSEWIC Status Report on Round Pigtoe, *Pleurobema sintoxia* (Rafinesque, 1820). Prepared for Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Species assessed as Endangered, May 2004.
- **Zanatta, D.T.** and J.L. Metcalfe-Smith. 2002. COSEWIC Status Report on Round Hickorynut, *Obovaria subrotunda* (Rafinesque, 1820). Prepared for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Species assessed as Endangered, May 2003.
- Metcalfe-Smith, J.L. and D.T. Zanatta. 2002. COSEWIC Status Report on Kidneyshell, *Ptychobranchus fasciolaris* (Rafinesque, 1820). Prepared for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Species assessed as Endangered, May 2003.

## Theses:

- **Zanatta, D.T.** 2008. The evolution, population genetics, and conservation of lampsiline freshwater mussels (Bivalvia: Unionoida: Lampsilini). Ph.D. Thesis, Department of Zoology, University of Toronto, Toronto, ON. pp. 221.
- Zanatta, D.T. 2000. Biotic and abiotic factors related to the distribution of unionid mussels in Lake St. Clair. M.Sc. Thesis. University of Guelph. Guelph, ON. pp. 121.
- **Zanatta, D.T.** and A.J. Cairns. 1998. Simple Hach kit measurement of Chemical Oxygen Demand (COD) in bottom sediments near a cage culture fish farm (Lake Wolsey, Manitoulin Island) and the potential use of COD for monitoring benthic accumulation of organic waste. B.Sc. Honours Thesis. Laurentian University. Sudbury, ON.

Technical Reports (non-peer reviewed):

- McNichols, K.A., **D.T. Zanatta**, C.C. Wilson, and J.D. Ackerman. 2009. Investigating Research Gaps for the Recovery of Unionid Mussel Species at Risk in Canada. 2008/09 Final Report (Project # ESR1509) Endangered Species Recovery Fund.
- Morris, T.J., D.J. McGoldrick, J.L. Metcalfe-Smith, D.T. Zanatta, and P.L. Gillis. 2009. Pre-COSEWIC assessment of the Wavyrayed Lampmussel (*Lampsilis fasciola*) Fisheries and Oceans Canada, Canadian Science Advisory Secretariat, Research Document 2008/083, Ottawa, ON Canada. Available at http://www.dfo-mpo.gc.ca/csas/
- Metcalfe-Smith, J.L., D.J. McGoldrick, D.T. Zanatta, and L.C. Grapentine. 2007. Development of a monitoring program for tracking the recovery of endangered freshwater mussels in the Sydenham River, Ontario. Water Science and Technology Directorate Contribution No. 07-510, Burlington, ON.
- Woolnough, D.A. and D.T. Zanatta. 2005. Collection of Canadian freshwater mussel records from United States institutions. Report to the Canadian Freshwater Mussel Working Group. 27pp.
- Metcalfe-Smith, J.L., D.J. McGoldrick, M. Williams, D.W. Schloesser, J. Biberhofer, G.L. Mackie, M.T. Arts, **D.T. Zanatta**, K. Johnson, P. Marangelo and T.D. Spencer. 2004. Status of a refuge for native freshwater mussels (Unionidae) from impacts of the exotic zebra

mussel (*Dreissena polymorpha*) in the delta area of Lake St. Clair. National Water Research Institute Technical Note No. AEI-TN-04-001, Burlington, ON.

- Metcalfe-Smith, J.L. and D.T. Zanatta. 2003. Development of a Monitoring Program for Tracking the Recovery of Endangered Freshwater Mussels in the Sydenham River, Ontario. Aquatic Ecosystem Impacts Research Branch Technical Note No. 03-001. National Water Research Institute, Burlington, ON.
- Mackie, G.L., **D.T. Zanatta**, J.L. Metcalfe-Smith, J. Di Maio, and S. Staton. 2000. Toward Developing Strategies for Re-habilitating/Re-establishing Unionidae Populations in Southwestern Ontario. A Final Report For Studies Funded by ESRF (Endangered Species Recovery Fund) in 1999.

#### Conference Proceedings:

 Metcalfe-Smith, J.L., D.J. McGoldrick, and D.T. Zanatta. 2004. Implementation of a Monitoring Program to Track the Recovery of Endangered Freshwater Mussels in the Sydenham River, Ontario. *In* T.D. Hooper (editor). Proceedings of the Species at Risk 2004 Pathways to Recovery Conference. March 2-6, 2004, Victoria, B.C. Species at Risk 2004 Pathways to Recovery Conference Organizing Committee, Victoria, B.C.

#### Invited Seminars:

- Woolnough, D.A. and D.T. Zanatta. 2023. The genetic history and conservation future of Michigan mussels. Alma College STEM Research Program. Alma, MI. August 2, 2023/
- Zanatta, D.T. 2022. Genomic tools for freshwater mussel conservation: Stories from the Great Lakes region. Shedd Aquarium, Chicago IL. Nov. 14, 2022.
- Zanatta, D.T. 2022. Genomic tools for freshwater mussel conservation: Stories from the Great Lakes region. U.S. Geological Survey, Eastern Ecological Science Center in Kearneysville WV. April 22, 2022.
- Zanatta, D.T. 2022. Genomic tools for freshwater mussel conservation: Stories from the Great Lakes region. University of West Virginia, Davis College, Division of Forestry and Natural Resources April 7, 2022.
- **Zanatta, D.T.** 2021. Status of Native Mussels at Ground Zero of the Dreissenid Invasion: The Detroit River. Invasive Mussel Collaborative Webinar on Dreissenid Effects on Native Mussels. Jan. 13, 2021.
- Zanatta, D.T. 2015. Patterns of post-glacial dispersal and colonization by freshwater mussels (Bivalvia: Unionoida) in North America: Implications for conservation and management of imperiled taxa. Lehrstuhl für Aquatische Systembiologie, Technische Universität München. Freising, Germany. Dec. 7, 2015.
- Zanatta, D.T. 2015. A North American perspective on genetic variation, structure and the complex histories of unionid mussel populations. Department of Ecology and Evolutionary Biology, University of Michigan. Ann Arbor, MI. Nov. 3, 2015.
- Zanatta, D.T. 2015. Impacts at "ground zero" of the Zebra Mussel invasion: Assessment of remnant native mussels in Lake St. Clair and Lake Erie. Conservation Day Symposium. Belle Isle Aquarium. Detroit, MI. April 11, 2015.
- Zanatta, D.T. 2014. Assessment of Native Mussel Populations in the St. Clair Delta a Quarter-Century after the Dreissenid Invasion. The St. Clair River: "Bridging the Environment and Economy" symposium. Port Huron, MI. Sept. 18, 2014.
- Zanatta, D.T. 2014. Genetic Variation, Population Structure, and Patterns of Post-glacial Colonization for Unionidae in the North American Great Lakes. Sino-U.S. Joint Center for Lake, Watershed and Wetland Studies, Jiangxi Normal University, Nanchang China. March 24, 2014.
- **Zanatta, D.T.** 2014. Reassessment of the Unionid Community in Lake Erie and Lake St. Clair, 25 Years After the Dreissenid Invasion. Nanchang University, Nanchang China. March 25, 2014.
- **Zanatta, D.T.** 2011. Patterns of post-glacial colonization for freshwater mussels in the Great Lakes. Buffalo State College, Great Lakes Center (Buffalo, NY). October 27, 2011.
- Zanatta, D.T. 2009. Coevolution and the plight of North America's native freshwater mussels.

Michigan State University, Department of Fisheries and Wildlife. October 23, 2009.

- **Zanatta, D.T.** 2009. Conservation genetics and evolution of unionid mussels in the Great Lakes region. University of Toledo (Ohio), Department of Environmental Sciences. Sept. 30, 2009.
- Zanatta, D.T. 2009. Using molecular approaches to understand the evolution and population structure of imperiled freshwater mussels. Miami University (Oxford, OH), Zoology Department. Apr 2, 2009.
- Zanatta, D.T. 2008. Pearls in Peril: The Plight of Freshwater Mussels in Michigan. Issues Day Seminar. Central Michigan University. Nov 14, 2008.
- Zanatta, D.T. 2007. Molecular approaches towards the conservation of molluscs in Canada. Annual Meeting of the Mollusc Special Subcommittee – Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Banff, AB. Oct 13, 2007.
- **Zanatta, D.T.** 2007. Molecular approaches towards the conservation of lampsiline freshwater mussels (Bivalvia: Unionidae: Lampsilini). Invited Seminar. Great Lakes Institute for Environmental Research, University of Windsor. Windsor, ON. April 27, 2007
- **Zanatta, D.T.** 2007. Evolution and Conservation Genetics of Lampsiline Freshwater Mussels (Bivalvia: Unionidae: Lampsilini). Invited Groupe de Recherche Inter-universitaire en Limnologie (GRIL) seminar. Université de Montréal. Montréal, QC. Jan. 23, 2007.
- Zanatta, D.T. 2005. The diversity, conservation, and evolution of North American freshwater mussels (Bivalvia: Unionidae). Invited Public Lecture. Toronto Field Naturalists. Toronto, ON. April 3, 2005.
- **Zanatta**, **D.T.** 2004. Pearls in Peril: A Mollusc Conservation Story. Invited Public Lecture. Canadian Museum of Nature. Ottawa, ON. Sept. 25, 2004.
- **Zanatta, D.T.** 2004. Pearls in Peril: The Diversity and Conservation of Pearl Producing Molluscs. Public lectures for the opening of <u>Pearls: A Natural History</u>. Royal Ontario Museum. Toronto, ON. Sept. 17 and 29, 2004.

#### Contributed Conference Presentations (\* Indicates CMU Student):

- Keretz, S.S.\*, N.M. VanTassel\*, D.A. Woolnough, D.T. Powell\*, G. Sanfilippo\*, A. Wright\*, T.J. Morris, A.K. Elgin, E.F. Roseman, **D.T. Zanatta**. 2023. Freshwater gastropod assemblages in the Detroit and St. Clair rivers of the Laurentian Great Lakes. Canadian Freshwater Mollusc Research Meeting. Nov. 15-16, 2023. Canada Centre for Inland Waters, Burlington, ON.
- Western, L.\* and **D.T. Zanatta.** 2023. Identifying environmental drivers of shell shape variation in the freshwater gastropod *Campeloma decisum*. Canadian Freshwater Mollusc Research Meeting. Nov. 15-16, 2023. Canada Centre for Inland Waters, Burlington, ON.
- Haugh, J.P., J.M. Pfeiffer, and **D.T. Zanatta.** 2023. Patterns of shell shape variation in the critically imperiled freshwater mussel genus *Epioblasma*. Canadian Freshwater Mollusc Research Meeting. Nov. 15-16, 2023. Canada Centre for Inland Waters, Burlington, ON.
- Wright, A.D.\* and **D.T. Zanatta**. 2023. Assessing freshwater mussel (Unionida) assemblage patterns by life history guilds, taxonomic groupings, and conservation status among unglaciated, partially-glaciated, and fully-glaciated river drainages in eastern North America. Freshwater Sciences 2023, June 3-6, 2023. Brisbane Australia.
- Inoue, K., M. Compton, S. Faiman, B. Fisher, J. Harris, T. Lane, A. Pieri, G. Sanfilippo\*, B. Sietman, A. Stodola, D. Zanatta. 2023. Molecular phylogenetics unearths hidden biodiversity within *Alasmidonta viridis* (Rafinesque, 1820) species complex in the Midwestern US. 13th Biennial Symposium of the Freshwater Mollusk Conservation Society, April 10-14, 2023. Portland OR.
- Vellequette, N.M.\*, A.M. Laszlo, D.T. Zanatta, and D.A. Woolnough. 2023. Unionid assemblage and habitat assessment after major dam failures in Mid-Michigan. 13th Biennial Symposium of the Freshwater Mollusk Conservation Society, April 10-14, 2023. Portland OR.
- Zanatta, D.T., A. Smith\*, C.L. Elderkin, E. Allison, S. Lin, and J. Pfeiffer. 2023. Molecular and morphological analysis of *Lampsilis* species in the Potomac River using 2d morphometric analysis and DNA barcoding. 13th Biennial Symposium of the Freshwater Mollusk Conservation Society, April 10-14, 2023. Portland OR.

- Keretz, S.S.\*, D.A. Woolnough, N.M. VanTassel\*, D.T. Powell\*, G. Sanfilippo\*, A. Wright\*, T.J. Morris, A.K. Elgin, E.F. Roseman, **David T. Zanatta**. 2023. Freshwater gastropod assemblages in the Detroit and St. Clair rivers of the Laurentian Great Lakes. Michigan Chapter of the American Fisheries Society Meeting. Bellaire, MI. March 23-24, 2023. (Runner-up for Best Student Presentation Award)
- Sanfilippo, G.E.\*, K. Inoue, D.T. Zanatta. Preliminary assessments of phylogeography and habitat patterns for the imperiled Slippershell mussel, *Alasmidonta viridis*. Michigan Chapter of the American Fisheries Society Meeting. Bellaire, MI. March 23-24, 2023.
- Vellequette, N., D.T. Zanatta, D.A. Woolnough. 2023. Unionid Movement and Assemblages in Transitional Areas Influenced by Dams. Michigan Chapter of the American Fisheries Society Meeting. Bellaire, MI. March 23-24, 2023.
- Keretz, S.S.\*, D.A. Woolnough, T.J. Morris, G.E. Sanfilippo, D.T. Powell, N.M. VanTassel, A.D. Wright, and **D.T. Zanatta.** 2022. Mollusk sampling in large connecting rivers of the Laurentian Great Lakes. Freshwater Mollusk Conservation Society 12<sup>th</sup> Biennial Workshop, Mollusk Survey Techniques. Aug. 8-11, 2022. Henry Horton State Park, TN.
- Keretz, S.S.\*, D.A. Woolnough, T.J. Morris, A.K. Elgin, and **D.T. Zanatta**. 2022. Ecological Niche Modeling for Native and Invasive Mussels in the St. Clair and Detroit River Systems. Joint Aquatic Sciences Meeting, May 15-20, 2022. Grand Rapids, MI.
- Frankiewicz, A., V.J. Brady, and **D.T. Zanatta.** 2022. Use of Geometric Morphometric Analyses and DNA Barcoding to Separate Two Species of Sphaeriidae (*Sphaerium simile* and *Sphaerium striatinum*). Virtual Presentation. Joint Aquatic Sciences Meeting, May 15-20, 2022. Grand Rapids, MI.
- Wright, A.D.\*, N.M. VanTassel\*, D.T. Powell\*, G.E. Sanfilippo\*, and **D.T. Zanatta**. 2022. Patterns of Genetic Variation, Structure, and the Complex Histories of Unionids in the Great Lakes Region. Joint Aquatic Sciences Meeting, May 15-20, 2022. Grand Rapids, MI.
- Laszlo, A.M., D.A. Woolnough, and **D.T. Zanatta.** Predicting Presence of Freshwater Mussel Populations Using Habitat Parameters in Two Reservoir Lakes. Joint Aquatic Sciences Meeting, May 15-20, 2022. Grand Rapids, MI.
- Inoue, K., M.C. Compton, S. Faiman, J. Harris, A. Pieri, G.E. Sanfilippo\*, B. Sietman, A.P. Stodola, and D.T. Zanatta. 2022. Molecular phylogenetics unearths hidden biodiversity within *Alasmidonta viridis* (Rafinesque, 1820) species complex in the Midwestern US. Joint Aquatic Sciences Meeting, May 15-20, 2022. Grand Rapids, MI.
- VanTassel, N.M.\*, T.J. Morris, N.M. Sard, D.T. Zanatta. 2022. Phylogenomics of the unionid mussel genus *Ptychobranchus*. Joint Aquatic Sciences Meeting, May 15-20, 2022. Grand Rapids, MI.
- Powell, D.T.\*, J. Collier, K.E. Klymus, D.A. Woolnough, **D.T. Zanatta**. 2022. Evaluating an Environmental DNA qPCR Assay for Detecting the Endangered Snuffbox Mussel in Rivers. Joint Aquatic Sciences Meeting, May 15-20, 2022. Grand Rapids, MI.
- Powell, D.T.\*, J. Collier, K.E. Klymus, D.A. Woolnough, and D.T. Zanatta. 2022. Assessing the feasibility of a species-specific qPCR eDNA assay for the imperiled freshwater mussel, *Epioblamsa triquetra*, the Snuffbox mussel. Midwest Fish and Wildlife Conference, Feb 13-17, 2022. Des Moines, Iowa.
- Keretz, S.S.\*, D.A. Woolnough, T.J. Morris, and **D.T. Zanatta**. 2022. Species distribution modeling for native freshwater mussels in the two connecting rivers of the Huron-Erie corridor of the Laurentian Great Lakes region. Midwest Fish and Wildlife Conference, Feb 13-17, 2022. Des Moines Iowa.
- Van Tassel, N.M.\* and **D.T. Zanatta**. 2022. Are all captive-reared juveniles created equal? A comparison of genetic diversity in twelve *Lampsilis fasciola* families. Midwest Fish and Wildlife Conference, Feb 13-17, 2022. Des Moines Iowa.
- Keretz, S.S.\*, D.A. Woolnough, T.J. Morris, and **D.T. Zanatta**. 2021. Species distribution modeling for native freshwater mussels in the Detroit and St. Clair rivers. 4th Biennial Canadian Freshwater Mollusc Research Meeting. December 7-8, 2021. Canada Centre for Inland Waters, Burlington, ON (Virtual).
- Laszlo, A.M., D.A. Woolnough, and **D.T. Zanatta**. 2021. Mussel assemblages in four reservoir lakes on the Tittabawassee River (Lake Huron drainage, Michigan USA) after 2020

dam failures. 4th Biennial Canadian Freshwater Mollusc Research Meeting. December 7-8, 2021. Canada Centre for Inland Waters, Burlington, ON (Virtual).

- VanTassel, N.M.\* and **D.T. Zanatta**. 2021. Genetic diversity maintenance in captive-reared *Lampsilis fasciola*. 4th Biennial Canadian Freshwater Mollusc Research Meeting. December 7-8, 2021. Canada Centre for Inland Waters, Burlington, ON (Virtual).
- Powell, D.T.\*, J.J. Collier, K.E. Klymus, D.A. Woolnough, and **D.T. Zanatta**. Assessing effectiveness of a lab-verified qPCR assay for the endangered Snuffbox (*Epioblasma triquetra*) in a natural riverine environment. 4th Biennial Canadian Freshwater Mollusc Research Meeting. December 7-8, 2021. Canada Centre for Inland Waters, Burlington, ON (Virtual).
- Keretz, S.S.\*, D.A. Woolnough, T.J. Morris, and **D.T. Zanatta**. 2021. Species distribution modelling of native unionid and invasive dreissenid mussels in two large river systems of the Laurentian Great Lakes. Society for Freshwater Science Virtual Meeting. May 21-27, 2021.
- Willsie, J.A.\*, M.R. Layer\*, T.W. Beyett\*, K.C. Beauchamp\*, and **D.T. Zanatta**. 2021. Geometric morphometric analyses and DNA barcoding distinguish among various Great Lakes freshwater mussel species (Bivalvia: Unionidae). 12th Biennial Symposium of the Freshwater Mollusk Conservation Society. Online April 12-14, 2021.
- VanTassel, N.M.\*, T.J. Morris, C.G. Wilson, N.M. Sard, and **D.T. Zanatta**. 2021. Genetic diversity maintained in comparison of captive-propagated and wild populations of *Lampsilis fasciola* and *Ptychobranchus fasciolaris* (Bivalvia: Unionidae). 12th Biennial Symposium of the Freshwater Mollusk Conservation Society. Online April 12-14, 2021.
- Inoue, K., B.E. Sietman, S.E. McMurray, J.S. Faiman, D.T. Zanatta. 2021. Highly structured populations of *Venustaconcha ellipsiformis* reveal need for conservation management. 12th Biennial Symposium of the Freshwater Mollusk Conservation Society. Online April 12-14, 2021.
- Powell, D.T.\*, J.J. Collier, K.E. Klymus, D.A. Woolnough, and **D.T. Zanatta**. 2021. Using environmental DNA (eDNA) to detect endangered *Epioblasma triquetra* (Snuffbox). 12th Biennial Symposium of the Freshwater Mollusk Conservation Society. Online April 12-14, 2021.
- Keretz, S.S.\*, D.A. Woolnough, T.J. Morris, and **D.T. Zanatta**. 2021. Distributions and habitat modeling of native and invasive mussels in two large river systems. 12th Biennial Symposium of the Freshwater Mollusk Conservation Society. Online April 12-14, 2021.
- Willsie, J.A.\*, T.J. Morris, and D.T. Zanatta. 2020. Do You Know Your Pigtoes? DNA Barcoding and Geometric Morphometric Analyses Distinguish Between Common Wabash Pigtoe (*Fusconaia flava*) and Imperiled Round Pigtoe (*Pleurobema sintoxia*) in the Laurentian Great Lakes Region. 86<sup>th</sup> Meeting of the American Malacological Society (Virtual). July 12-13, 2020.
- VanTassel, N.M.\* and D.T. Zanatta. 2020. Genetic Diversity Maintained in Comparison of Wild and Propagated Populations of Imperiled Freshwater Mussels. 86<sup>th</sup> Meeting of the American Malacological Society (Virtual). July 12-13, 2020.
- VanTassel, N.M.\* and **D.T. Zanatta**. 2020. Development of empirically driven genetic guidelines for captive propagation of imperiled freshwater mussels. Michigan Chapter of the American Fisheries Society Meeting. Mount Pleasant, MI. March 12-13, 2020.
- Allred, S.\*, D.A. Woolnough, T.J. Morris, and **D.T. Zanatta**. 2020. Status Update for Native Mussels in the Detroit River. Michigan Chapter of the American Fisheries Society Meeting. Mount Pleasant, MI. March 12-13, 2020. (Best Student Presentation Award)
- Allred, S.\*, D.A. Woolnough, T.J. Morris, and **D.T. Zanatta**. 2019. Status Update for Native Mussels in the Detroit River. 3rd Biennial Canadian Freshwater Mollusc Research Meeting. Burlington, ON. Dec. 3-4, 2019.
- Morris, T.J., F. Gibson, K. McNichols-O'Rourke, M.N. Sheldon, and D.T. Zanatta. 2019. Everything old is new again: The rediscovery of Lake Floater (*Pyganodon lacustris*) in Canada. 3rd Biennial Canadian Freshwater Mollusc Research Meeting. Burlington, ON. Dec. 3-4, 2019.
- VanTassel, N.M.\*, C.E. Beaver\*, D.A. Watkinson, T.J. Morris, and **D.T. Zanatta**. 2019. Absence of genetic structure reflects post-glacial history and present-day host use in

*Quadrula quadrula* (Unionidae) in Manitoba, Canada. 3rd Biennial Canadian Freshwater Mollusc Research Meeting. Burlington, ON. Dec. 3-4, 2019.

- VanTassel, N.M.\*, **D.T. Zanatta**. 2019. Development of empirically driven genetic guidelines for captive propagation of imperiled freshwater mussels. 3rd Biennial Canadian Freshwater Mollusc Research Meeting. Burlington, ON. Dec. 3-4, 2019.
- Allred, S.S.\*, D.A. Woolnough, T.J. Morris, and **D.T. Zanatta**. 2019. State of Native Mussels in the Detroit River. State of the Straight meeting. Windsor, ON. Nov. 19, 2019.
- Willsie, J.A.\*, N.M. VanTassel\*, T.J. Morris, and D.T. Zanatta. 2019. Application of morphometric analyses and DNA barcoding for distinguishing between pigtoe mussels (*Fusconaia flava* and *Pleurobema sintoxia*) in the Great Lakes region. 3rd Biennial Canadian Freshwater Mollusc Research Meeting. Burlington, ON. Dec. 3-4, 2019.
- VanTassel, N.M.\*, D.T. Zanatta. 2019. Development of empirically driven genetic guidelines for captive propagation of imperiled freshwater mussels. Canadian Freshwater Species at Risk Research Network, Year 3 Symposium. Burlington, ON. November 13-14, 2019
- Beauchamp, K.\*, T. Beyett\*, M.W. Scott\*, and **D.T. Zanatta**. 2019. Assessing hybridization between *Pyganodon grandis* and *P. lacustris* (Bivalvia: Unionidae) using F- and M-lineage mtDNA sequences and geometric morphometrics. 11th Biennial Symposium of the Freshwater Mollusk Conservation Society. San Antonio, TX. April 14-18, 2019.
- Beyett, T.W.\* and **D.T. Zanatta**. 2019. Morphometric analyses and DNA barcoding distinguish *Truncilla donaciformis* and *T. truncata* (Bivalvia: Unionidae). 11th Biennial Symposium of the Freshwater Mollusk Conservation Society. San Antonio, TX. April 14-18, 2019. (Best Student Poster Award)
- Morris, T.J., F. Gibson, K.A. McNichols-O'Rourke, M.N. Sheldon, and D.T. Zanatta. 2019. First record of *Pyganodon lacustris* in Ontario, Canada? 11th Biennial Symposium of the Freshwater Mollusk Conservation Society. San Antonio, TX. April 14-18, 2019.
- Hannes, I.P., L.L. Burlakova, H.R. Lasker, and **D.T. Zanatta**. 2019. Species boundaries and levels of intermixing between *Lampsilis siliquoidea and L. radiata*. 11th Biennial Symposium of the Freshwater Mollusk Conservation Society. San Antonio, TX. April 14-18, 2019.
- VanTassel, N.M.\* and **D.T. Zanatta**. 2019. Development of empirically-driven genetic guidelines for captive propagation of imperiled freshwater mussels. 11th Biennial Symposium of the Freshwater Mollusk Conservation Society. San Antonio, TX. April 14-18, 2019.
- Martel, A.L., A. Bogan, I. Bolotov, J. Geist, P. Johnson, O. Klishko, M. Lopes-Lima, K. Miura, V. Prié, B. Sietman, I. Vikhrev, G. Wilson, and D. Zanatta. 2019. Morphology and patterns in arborescent papillae of the incurrent aperture among pearlshell mussels, family Margaritiferidae. 11th Biennial Symposium of the Freshwater Mollusk Conservation Society. San Antonio, TX. April 14-18, 2019.
- Bucholz, J.\*, **D. Zanatta**, and N.M. Sard. 2019. Genetic structure of *Obovaria olivaria* (Hickorynut) revealed using mtDNA and SNPs. 11th Biennial Symposium of the Freshwater Mollusk Conservation Society. San Antonio, TX. April 14-18, 2019.
- **Zanatta, D.T.** 2019. Patterns of genetic variation, structure and the complex histories of unionid populations in glaciated regions of North America. 11th Biennial Symposium of the Freshwater Mollusk Conservation Society. San Antonio, TX. April 14-18, 2019.
- Beaver, C.\*, D. Woolnough, and **D.T. Zanatta**. 2018. Assessment of genetic diversity and structure among populations of *Epioblasma triquetra* (Bivalvia: Unionidae) in the Laurentian Great Lakes watershed. Society for Freshwater Science (SFS) Annual Meeting. May 20-24, 2018.
- Bucholz, J\* and **D.T. Zanatta**. 2018. Phylogeography and post-glacial colonization history of the imperiled freshwater mussel, *Obovaria olivaria*. Society for Freshwater Science (SFS) Annual Meeting. May 20-24, 2018.
- Beaver, C.\*, R. Piette, T. Morris, D. Woolnough, and **D.T. Zanatta**. 2017. Microhabitat of *Epioblasma triquetra* (Unionidae) in the Laurentian Great Lakes Watershed. Society of Conservation Biology's 28th International Congress for Conservation Biology. Cartagena, Colombia. July 14-18, 2017.
- Beaver, C.\*, R. Piette, D. Woolnough, and **D.T. Zanatta**. 2017. Assessment of microhabitat preferences for *Epioblasma triquetra* across the Great Lakes drainage using presence-only

data. 10<sup>th</sup> Biennial Symposium of the Freshwater Mollusk Conservation Society. Cleveland, OH. March 26-29, 2017.

- Lopes-Lima, M. E. Froufe, M. Fonseca, H-M. Gan, D.C. Aldridge, R. Sousa, A. Teixeira, S. Varandas, D.T. Zanatta, A. Zieritz, A.E. Bogan. 2017. Mitogenomics of freshwater mussels (Bivalvia: Unionida): First results. 10<sup>th</sup> Biennial Symposium of the Freshwater Mollusk Conservation Society. Cleveland, OH. March 26-29, 2017.
- **Zanatta, D.T.**, B. Stoeckle, K. Inoue, R. Kuehn, A. Paquet, A.L. Martel, and J. Geist. 2017. Conservation genetics of North American *Margaritifera margaritifera*. 10<sup>th</sup> Biennial Symposium of the Freshwater Mollusk Conservation Society. Cleveland, OH. March 26-29, 2017.
- Scott, M.W.\*, T.J. Morris, D.T. Zanatta. 2017. Genetic diversity, population structure, and colonization history of the Eastern Pondmussel, *Ligumia nasuta*, in the Great Lakes region. 10<sup>th</sup> Biennial Symposium of the Freshwater Mollusk Conservation Society. Cleveland, OH. March 26-29, 2017.
- Scott, M.W.\*, T.J. Morris, D.T. Zanatta. 2016. Preliminary fine-scale analyses of genetic diversity, colonization history, and population structure of the Eastern Pondmussel, *Ligumia nasuta*, in the Great Lakes Region. 2016 FMCS Workshop Population Genetics and Freshwater Mollusk Conservation. National Conservation Training Center, Shepherdstown, WV. February 16-19, 2016.
- Hoffman, J.R.\*, B.J. Swanson, K.L. Pangle, J.R Willoughby, D.T. Zanatta. 2016. Modeling Population Genetic Response To Isolation and Drift: A Case Study Using Dams and Freshwater Mussels (Bivalvia: Unionida). 76<sup>th</sup> Midwest Fish and Wildlife Conference. Grand Rapids, MI. Jan 24-27, 2016.
- Bossenbroek, J.M., L.E. Burlakova, T.C. Crail, A.Y. Karatayev, R.A. Krebs, D.T. Zanatta. 2016. Using Ecological Niche Modelling To Predict The Presence of Unionid Refuges After 25 Years of *Dreissena* Invasion In The Laurentian Great Lakes. 76<sup>th</sup> Midwest Fish and Wildlife Conference. Grand Rapids, MI. Jan 24-27, 2016.
- **Zanatta, D.T.** 2015. Genetic variation, structure and the complex histories of unionid mussel populations: A North American perspective on selecting source populations for propagation and augmentation. 2<sup>nd</sup> International Seminar Rearing of Unionoid Mussels. Clervaux, Luxembourg. Nov 24-27, 2015.
- A.E. Bogan, E. Froufe, M. Ghamizi, K. Mock, Ü. Kebapçi, O. Klishko, S. Kovitvadhi, U. Kovitvadhi, O.S. Paulo, J.M. Pfeiffer III, M. Raley, N. Riccardi, H. Sereflisan, R. Sousa, A. Teixeira, V.T. Do, S. Varandas, X. Wu, **D.T. Zanatta**, A. Zieritz, and M. Lopes-Lima. 2015. Unravelling Unionidae: Examination of subfamily relationships within Unionidae. 2<sup>nd</sup> International Meeting on Biology and Conservation of Freshwater Bivalves. Buffalo, NY. Oct 4-8, 2015.
- **Zanatta, D.T.**, T.L. Hewitt\*, and P. Mathias\*. 2015. Varied patterns of post-glacial dispersal by freshwater mussels species into the North American Great Lakes with implications for conservation and management of imperiled taxa. 2<sup>nd</sup> International Meeting on Biology and Conservation of Freshwater Bivalves. Buffalo, NY. Oct 4-8, 2015.
- Krebs, R.A., and **D.T. Zanatta**. 2015. Dispersal and gene flow in unionid mussels and the boundaries defining Great Lakes assemblages. 2<sup>nd</sup> International Meeting on Biology and Conservation of Freshwater Bivalves. Buffalo, NY. Oct 4-8, 2015.
- Schuler, B.E.\*, D.T. Zanatta. 2015. Incongruencies between geometric morphometrics and DNA barcodes in delineating species of *Pyganodon* mussels (Bivalvia: Unionidae). 81<sup>st</sup> Meeting of the American Malacological Society. University of Michigan Biological Station, Pellston, MI. Aug 28-31, 2015.
- Hoffman, J.R.\*, W.L. Paterson\*, T.J. Morris, and D.T. Zanatta. 2015. Genetic structure of the mapleleaf mussel (*Quadrula quadrula*) on the Niagara Peninsula, Ontario, Canada: Inferring effects of canal and dam construction over the last 200 years. 81<sup>st</sup> Meeting of the American Malacological Society. University of Michigan Biological Station, Pellston, MI. Aug 28-31, 2015.
- Hewitt, T.L.\* and D.T. Zanatta. 2015. Phylogeography and genetic structure of two freshwater mussel species (Bivalvia: Unionidae) along hypothesized post-glacial dispersal

routes into the Laurentian Great Lakes. 81<sup>st</sup> Meeting of the American Malacological Society. University of Michigan Biological Station, Pellston, MI. Aug 28-31, 2015.

- Cazenave, K.R.\* and D.T. Zanatta. 2015. Environmental drivers of shell shape in *Pleurocera livescens*: Comparing small inland lakes and Lake Michigan. 81<sup>st</sup> Meeting of the American Malacological Society. University of Michigan Biological Station, Pellston, MI. Aug 28-31, 2015.
- Hewitt, T.L.\* and **D.T. Zanatta**. 2015. Phylogeography and genetic structure of two freshwater mussel species (Bivalvia: Unionidae) along hypothesized post-glacial dispersal routes into the Great Lakes. 9th Biennial Symposium of the Freshwater Mollusk Conservation Society. St. Charles, MO. March 22-26, 2015.
- Cazenave, K.R.\* and **D.T. Zanatta**. 2015. Environmental drivers of shell shape in a freshwater gastropod from inland lakes and coastal Lake Michigan. 9th Biennial Symposium of the Freshwater Mollusk Conservation Society. St. Charles, MO. March 22-26, 2015. (Honorable Mention for Best Student Poster Presentation)
- Hoffman, J.R.\*, W.L. Paterson, T.J. Morris, and **D.T. Zanatta**. Genetic structure of the Mapleleaf mussel (*Quadrula quadrula*) on the Niagara Peninsula, Ontario, Canada: inferring effects of canal and dam construction over the last 200 years. 9th Biennial Symposium of the Freshwater Mollusk Conservation Society. St. Charles, MO. March 22-26, 2015.
- Zanatta, D.T., L.E. Burlakova, R.A. Krebs, J.M. Bossenbroek, D.W. Schloesser, A.Y. Karatayev, F. de Szalay, T. Crail. 2014. Assessment of remnant native mussel assemblages after 25 years of dreissenid infestation in the lower Great Lakes and prognosis for the future. Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, Oregon.
- Hewitt, T.L.\*, J.L. Bergner\*, **D.T. Zanatta**. 2014. Phylogeography of two freshwater mussel species (Bivalvia: Unionidae) along hypothesized post-glacial colonization routes into the Great Lakes. Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, Oregon.
- Schuler, B.E.\*, **D.T. Zanatta**. 2014. Genetic and morphological diversity of *Pyganodon grandis* and *Pyganodon lacustris* from the Beaver Island Archipelago, Michigan. Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, Oregon.
- Zanatta, D.T., J.L. Bergner\*, A.T. Harris\*, P.T. Mathias\*, M.W. Scott\*. 2013. Genetic variation, population structure, and patterns of post-glacial colonization for Unionidae in the North American Great Lakes. World Congress of Malacology 2013, July 21-28, Ponta Delgada, Azores, Portugal.
- Burlakova, L.E., A.Y. Karatayev, B.L. Tulumello, D.T. Zanatta, F.E. Lucy, S.E. Mastitsky. 2013. *Dreissena* impacts on Unionidae: A synthesis of trends in North America and Europe and recent findings from the lower Great Lakes. World Congress of Malacology 2013, July 21-28, Ponta Delgada, Azores, Portugal.
- Burlakova, L., Karatayev, A., Bossenbroek, J. M., **Zanatta, D.**, Tulumello, B. L., Krebs, R. A., Paterson, W.\*, and Griffith, T.\*. 2013. Assessing unionid refuges and dreissenid impacts in the Lower Great Lakes. 56th Annual Conference on Great Lakes Research, June 2-6, 2013, Purdue University, Indiana.
- Burlakova, L., Karatayev, A., Tulumello, B., **Zanatta, D.**, Lucy, F., and S. Mastitsky. 2013. *Dreissena* impacts on Unionidae: general trends in North America and Europe and recent findings from the lower Great Lakes 18th International Conference on Aquatic Nuisance Species. April 21-25, 2013, Niagara Falls, Ontario, Canada.
- Burlakova, L., A. Karatayev, J. Bossenbroek, **D. Zanatta**, B. Tulumello, R. Krebs, W. Paterson\*, T. Griffith\*. 2013. Unionid Community of Southern Lake Ontario: Locating Existing Refuges and Assessing Dreissenid Impacts. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013.
- Zanatta, D., J. Bateman, J. Bossenbroek, L. Burlakova, T. Crail, F. de Szalay, T. Griffith\*, D. Kapusinski, A. Karatayev, R. Krebs, G. Longton, E. Meyer, W. Paterson\*, T. Prescott, M. Rowe\*, D. Schloesser, M. Shackelford, M. Walsh. 2013. Reassessment of the Remnant Unionid Community in Lake Erie and Lake St. Clair, 25 Years After the Dreissenid Invasion. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013.
- Krebs, R., B. Allen, N. Evans, D. Zanatta. 2013. Genetic Variation in the Freshwater Mussel,

*Pyganodon grandis* in Lake Erie and Lake St. Clair. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013.

- Griffith, T.\* and **D.T. Zanatta**. 2013. Correlating Genetic and Species Diversity of Unionids Across Variable Habitats in Western Lake Erie. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013.
- Paterson, W.\* and **D.T. Zanatta**. 2013. Genetic Structure of Mapleleaf Mussels (*Quadrula quadrula*) and Effects of the *Dreissena* Invasion in the Western Basin of Lake Erie. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013.
- Scott, M.\* and **D.T. Zanatta**. 2013. Testing Hypotheses of Atlantic Coastal Origin for the Endangered Eastern Pondmussel, *Ligumia nasuta*, in the Great Lakes. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013.
- Bergner, J.L.\*, D.A. Woolnough, and **D.T. Zanatta**. 2013. Spatially explicit genetic structure of two unionid species, *Lampsilis cardium* and *Lasmigona costata*, in the central Great Lakes. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013. (<u>Honorable Mention for Best Student Oral Presentation</u>)
- Caldwell, M.\*, **D.T. Zanatta**, and D.A. Woolnough. 2013. Host fish suitability tests and fragmentation assessment for Snuffbox, *Epioblasma triquetra*, from Laurentian Great Lakes basins. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013.
- Gibson, A.\*, **D.T. Zanatta**, and D.A. Woolnough. 2013. A multi-basin host fish approach to *Lampsilis cardium* distribution in rivers of the Laurentian Great Lakes. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society. Guntersville Lake State Park, AL, March 10-13, 2013.
- **Zanatta, D.T.**, J.L. Bergner\*, P.T. Mathias\*, and C.C. Wilson. 2012. Management Implications of Post-Glacial Colonization Routes and Genetic Structure for Freshwater Mussels (Unionidae) In the Great Lakes. 14<sup>2nd</sup> Annual Meeting of the American Fisheries Society. St. Paul, MN. August 19-23, 2012.
- Zanatta, D.T., J.L. Bergner\*, P.T. Mathias\*, and C.C. Wilson. 2012. Patterns of Post-Glacial Colonization for Freshwater Mussels (Unionidae) in the Great Lakes. 55th Annual Conference on Great Lakes Research. Cornwall, ON. May 13-17, 2012.
- Rowe, M.T.\* and **D.T. Zanatta**. 2012. Genetic Structure of the Fatmucket Mussel (*Lampsilis siliquoidea*) in the St. Clair River Delta and Tributaries: Effects of the *Dreissena* Invasion? 55th Annual Conference on Great Lakes Research. Cornwall, ON. May 13-17, 2012.
- Burlakova, L.E., B.L. Tulomello\*, A.Y. Karateyev, and **D.T. Zanatta**. *Dreissena* Impacts on Unionidae: Recent Trends in Lake Erie. 55th Annual Conference on Great Lakes Research. Cornwall, ON. May 13-17, 2012.
- Auer, D.W.\*, D.A. Kuipers\*, D.A. Woolnough, and **D.T. Zanatta**. Pelecypod and Gastropod Communities: Understanding Variations in Different Ecosystems. 55th Annual Conference on Great Lakes Research. Cornwall, ON. May 13-17, 2012.
- Kolich, L.A.\*, M.T. Rowe\*, and D.T. Zanatta. 2012. Effects of the *Dreissena* Invasion on the Genetic Structure of *Lasmigona costata* (Bivalvia: Unionoida) in the Lake St. Clair Delta and Surrounding Tributaries. 55th Annual Conference on Great Lakes Research. Cornwall, ON. May 13-17, 2012. (<u>HYDROLAB/IAGLR Student Poster Paper award</u>)
- Zanatta, D.T., J. Bateman, J.L. Bergner\*, J. Bossenbroek, L.E. Burlakova, T. Crail\*, F. de Szalay, T. Griffith\*, M. Hickin\*, D. Kapusinski\*, A.Y. Karateyev, L.A. Kolich\*, R. Krebs, G. Longton, E. Meyer, W. Paterson\*, T. Prescott, M.T. Rowe\*, D. Schloesser, M.W. Scott\*, M. Shackelford, K. Shreve\*, and M. Walsh. 2012. Survey and Reassessment of Unionidae in Lake Erie and Lake St. Clair, 25 Years After the Dreissenid Invasion. 55th Annual Conference on Great Lakes Research. Cornwall, ON. May 13-17, 2012.
- Burlakova, L.E., F.E. Lucy, A.Y. Karatayev, S.E. Matitsky, and **D.T. Zanatta**. 2011. *Dreissena* Impacts on Unionidae: General Trends in North America and Europe. 54th Annual Conference on Great Lakes Research. Duluth, MN. May 30-June 3, 2011.

- Zanatta, D.T. and M.T. Rowe\*. 2011. Twenty-five Years of Change in the Bivalve Communities of Lake St. Clair. 54th Annual Conference on Great Lakes Research. Duluth, MN. May 30-June 3, 2011.
- Sherman, J.J.\*, D.G. Uzarski, **D.T. Zanatta**, D.A. Woolnough, and B.A. Murry. 2011. What Defines a Refuge for Unionids from Dreissenid Mussels (*Dreissena polymorpha* and *D. bugensis*) in Great Lakes Coastal Wetlands? 54th Annual Conference on Great Lakes Research. Duluth, MN. May 30-June 3, 2011.
- Bailey, J.P.\*, J.L. Bergner\*, and D.T. Zanatta. 2011. Measuring genetic variation and differentiation in *Lasmigona costata* (Flutedshell, Bivalvia: Unionoida) in a recently glaciated landscape. 59<sup>th</sup> Annual North American Benthological Society Conference. Providence, RI. May 22-26, 2011.
- J.L. Bergner\*, J.P. Bailey, J.P.\*, B.L. Collins\*, D.A. Woolnough, and D.T. Zanatta. 2011. Does scale matter? A landscape genetics investigation of two unionid species (Bivalvia: Unionoida). 59<sup>th</sup> Annual North American Benthological Society Conference. Providence, RI. May 22-26, 2011.
- **Zanatta, D.T.** and M.T. Rowe\*. 2011. *Dreissena*-induced changes in unionid communities of Lake St. Clair the St. Clair delta. 7th Biennial Symposium of the Freshwater Mollusk Conservation Society. Louisville, KY. April 12-14, 2011.
- Harris, A.T.\* and D.T. Zanatta. 2011. Implications of phylogeographic structure in the Ellipse mussel (*Venustaconcha ellipsiformis*) and the Ozarkian endemic Bleedingtooth mussel (*V. pleasii*). 7th Biennial Symposium of the Freshwater Mollusk Conservation Society. Louisville, KY. April 12-14, 2011.
- Mathias, P.T.\*, **D.T. Zanatta**, and C.C. Wilson. 2011. The geographic genetic structure of *Quadrula quadrula* (Bivalvia: Unionidae): Post-glacial colonization of the Great Lakes basin. 7th Biennial Symposium of the Freshwater Mollusk Conservation Society. Louisville, KY. April 12-14, 2011.
- Woolnough, D.A., D. Kuipers\*, D. Auer\*, and **D.T. Zanatta**. 2011. Using entire molluscan communities (even the limpets!) to predict habitat type. 7th Biennial Symposium of the Freshwater Mollusk Conservation Society. Louisville, KY. April 12-14, 2011.
- Harris, A.T.\* and **D.T. Zanatta**. 2010. Phylogeography of the Ellipse mussel (*Venustaconcha ellipsiformis*). Ohio Valley Unified Malacologists. Nov 6, 2010.
- **D.T. Zanatta**. 2010. What a difference a mussel (or two) makes: A quarter-century of change in the unionid communities of Lake St. Clair. Ohio Valley Unified Malacologists. Nov 6, 2010.
- Harris, A.T.\*, D.A. Woolnough, and D.T. Zanatta. 2010. Insular Lake Island Biogeography of Freshwater Mollusks on the Lake Michigan Island Archipelago: Using Lake Metrics to Predict Species Diversity. 58<sup>th</sup> Annual North American Benthological Society Conference. Santa Fe, NM. June 6-11, 2010. (ASLO - Outstanding Student Presentation Award)
- Neuman, T.M.\*, D.A. Woolnough, and D.T. Zanatta. 2010. DNA Barcoding, Morphometrics, and Identifying Species of *Pyganodon* (Bivalvia: Unionidae) in Insular Lakes of Lake Michigan Islands. 58<sup>th</sup> Annual North American Benthological Society Conference. Santa Fe, NM. June 6-11, 2010.
- Sherman, J.\*, D. Uzarski, **D.T. Zanatta**, and D.A. Woolnough. 2010. What defines a refuge for Unionids from Dreissenid mussels (*Dreissena polymorpha* and *D. bugensis*) in Great Lakes coastal wetlands? 2010 Michigan Chapter of the American Fisheries Society Meeting. Grayling, MI. Feb 24-25, 2010. (<u>Best Student Paper</u>)
- Neuman, T.M.\* and **D.T. Zanatta**. 2009. Morphometrics, DNA bar-coding, and identifying species of *Pyganodon* (Bivalvia: Unionidae) in insular lakes of Lake Michigan islands. American Indian Science and Engineering Society National Conference. Portland, OR. Oct 29, 2009.
- **Zanatta, D.T.** and C.C. Wilson. 2009. Incongruent genetic population structure between a unionid mussel and its host fish. 57<sup>th</sup> Annual North American Benthological Society Conference. Grand Rapids, MI. May 17-22, 2009.
- Wilson, C., H.S. Galbraith, K.M. Wozney, and **D.T. Zanatta**. 2009. New windows into the secret lives of unionids: Parentage analysis of glochidia. 57th Annual North American

Benthological Society Conference. Grand Rapids, MI. May 17-22, 2009.

- Morris, T.J. and D.T. Zanatta. 2009. A decade of change: Recovery of the endangered wavyrayed lampmussel (*Lampsilis fasciola*) in Canada (1999-2009)? 57th Annual North American Benthological Society Conference. Grand Rapids, MI. May 17-22, 2009.
- **Zanatta, D.T.**, S.J. Fraley, and R.W. Murphy. 2008. Population structure and mantle display polymorphisms in the wavy-rayed lampmussel, *Lampsilis fasciola* (Bivalvia: Unionidae). Canadian Conference for Fisheries Research. Halifax, NS. Jan 5-8, 2008.
- **Zanatta, D.T.** 2007. The evolution, population genetics, and conservation of lampsiline freshwater mussels (Bivalvia: Unionoida: Lampsilini). Department of Ecology and Evolutionary Biology, Internal Seminar Series. University of Toronto. Toronto, ON. Sept. 10, 2007.
- **Zanatta, D.T.** and R.W. Murphy. 2007. The zoogeographic and management implications of population structure in the imperiled snuffbox mussel, *Epioblasma triquetra* (Bivalvia: Unionidae). 5th Biennial Symposium of the Freshwater Mollusk Conservation Society. Little Rock, AR. March 12-15, 2007.
- Zanatta, D.T. and R.W. Murphy. 2006. Evolution of active host-attraction strategies in freshwater mussel tribe Lampsilini (Bivalvia: Unionidae). International Congress on Bivalvia. Universitat Autònoma de Barcelona, Bellaterra, Catalunya Spain. July 22-27, 2006.
- **Zanatta, D.T.** and R.W. Murphy. 2006. The evolution of active host-attraction strategies in the freshwater mussel tribe Lampsilini (Bivalvia: Unionidae). Annual General Meeting of the American Fisheries Society Ontario Chapter. Orillia, ON. March 3-4, 2006. (Winner of E.J. Crossman Award for best student presentation)
- Zanatta, D.T., R.W. Murphy and B.S. Bowen. 2005. Conservation genetics of the endangered Northern Riffleshell (*Epioblasma torulosa rangiana*). 4th Biennial Symposium of the Freshwater Mollusk Conservation Society. St. Paul, MN. May 15-18, 2005.
- **Zanatta, D.T.** and R.W. Murphy. 2004. Phylogenetic systematics of freshwater mussels (Bivalvia: Unionidae) from the Sydenham River, southwestern Ontario, Canada. 52<sup>nd</sup> Annual North American Benthological Society Conference. Vancouver, BC. June 8, 2004.
- Metcalfe-Smith, J.L., D.W. Schloesser, D.J. McGoldrick, D.T. Zanatta, P.J. Marangelo, and K. Johnson. 2004. Status of a refuge for native freshwater mussels (Unionidae) from impacts of the exotic zebra mussel (*Dreissena polymorpha*) in the delta area of Lake St. Clair. 47<sup>th</sup> Annual Conference of the International Association for Great Lakes Research. Waterloo, ON. May 24-28, 2004.
- Metcalfe-Smith, J.L., D.J. McGoldrick, and **D.T. Zanatta**. 2004. Implementation of a Monitoring Program to Track the Recovery of Endangered Freshwater Mussels in the Sydenham River, Ontario. Species at Risk 2004: Pathways to Recovery Conference. Victoria, BC. March 2-6, 2004.
- **Zanatta, D.T.** and J.L. Metcalfe-Smith. 2003. Status of *Ptychobranchus fasciolaris*, *Obovaria subrotunda*, and *Pleurobema sintoxia* in Canada. 3rd Biennial Symposium of the Freshwater Mollusk Conservation Society. Durham, NC. March 16-19, 2003,
- **Zanatta, D.T.**, J.L. Metcalfe-Smith, and J. DiMaio. 2002. Development of a monitoring program to track recovery of freshwater mussel populations in the Sydenham River, Ontario, Canada. 50<sup>th</sup> Annual North American Benthological Society Conference. Pittsburgh, PA. June 1, 2002.
- Metcalfe-Smith, J.L. and D.T. Zanatta. 2002. Status of the Kidneyshell, *Ptychobranchus fasciolaris*, and the Round Hickorynut, *Obovaria subrotunda*, in Canada. 50<sup>th</sup> Annual North American Benthological Society Conference. Pittsburgh, PA. June 1, 2002.
- Zanatta, D.T., D. Woolnough, and G.L. Mackie. 2001. Relationship between wind-driven water current patterns and the persistence of unionid mussels in Lake St. Clair, based on GIS. 49<sup>th</sup> Annual North American Benthological Society Conference. LaCrosse, WI. June 5, 2001.
- Zanatta, D.T. 2001. Squeers Lake Experimental Fishery: Past, Present, and Future. Winter Meeting of the Lake Nipigon Technical Committee. Ontario Ministry of Natural Resources-Northwest Science and Information Section-Science and Information Branch. Thunder Bay, ON. Jan 31, 2001.

- **Zanatta, D.T.** 2000. Biotic and Abiotic Factors Relating to Distribution of Unionid Mussel Species in Lake St. Clair. M.Sc. Oral Examination. University of Guelph, Guelph, ON. Sept. 18, 2000.
- **Zanatta, D.T.** and G.L. Mackie. 2000. Survival and Recolonization Mechanisms of Unionid Mussel Species in Lake St. Clair. 48<sup>th</sup> Annual North American Benthological Society Conference. Keystone Resort, CO. June 1, 2000.
- **Zanatta, D.T.** and G.L. Mackie. 2000. Survival and Recolonization Mechanisms of Unionid Mussel Species in Southwestern Ontario Rivers and Lake St. Clair. 10<sup>th</sup> International Aquatic Nuisance Species and Zebra Mussel Conference. Toronto, ON. Feb. 15, 2000.
- Zanatta, D.T. 1999. Survival and Recolonization Mechanisms of Unionid Mussel Species in Southwestern Ontario Rivers and Lake St. Clair (Proposal for project). University of Guelph Graduate Student Seminar, Feb. 4, 1999.
- **Zanatta, D.T.** and A.J. Cairns. 1998. Simple Hach kit measurement of Chemical Oxygen Demand (COD) in bottom sediments near a cage culture fish farm (Lake Wolsey, Manitoulin Island) and the potential use of COD for monitoring benthic accumulation of organic waste. Faculty Honours Thesis Defence. Laurentian University. Mar. 20, 1998.
- **Zanatta, D.T.** and A.J. Cairns. 1998. Simple Hach kit measurement of Chemical Oxygen Demand (COD) in bottom sediments near a cage culture fish farm (Lake Wolsey, Manitoulin Island) and the potential use of COD for monitoring benthic accumulation of organic waste. 11<sup>th</sup> Annual Ontario Biology Day. Laurentian University, Sudbury, ON. Mar. 14-15, 1998.

## Grants/Scholarships/Awards/Contracts Received:

#### External:

- Texas State University (subcontract on U.S. Army Corps of Engineers grant). "Patterns of genetic diversity of mollusks in Gulf of Mexico coastal river estuaries: understanding the past to infer future impacts of projected sea level rise." (\$44,912 to CMU). Collaboration with Dr. Astrid Schwalb (Texas State University). January 2024 – August 2024.
- U.S. Fish and Wildlife Service Great Lakes Fish and Wildlife Restoration Act 2023. "Comprehensive evaluation of unionid habitats in lower tributaries of Lake Michigan." (\$384,341). Central Michigan University (Woolnough and Zanatta) lead in collaboration with Michigan and Wisconsin DNR. October 2023 – December 2027.
- U.S. Fish and Wildlife Service, Great Lakes-Northern Forest Cooperative Ecosystem Studies Unit (\$76,811). Patterns of genetic diversity and population connectivity for imperiled mussels in tributary headwaters of Lake Michigan and other Midwestern streams. Co-PI with Dr. Kentaro Inoue (Shedd Aquarium, Chicago). February 2022 – December 2024.
- U.S. Fish and Wildlife Service, Fish and Wildlife Management Assistance Program (**\$31,949**). Population Assessments and Conservation Genomics of Proposed ESA Threatened Round Hickorynut Mussel in Great Lakes Tributaries. August 2021 – December 2024.
- Four Lakes Task Force. Four Lakes Mussels: Baseline Data Collection and Restoration Planning (\$425,000). Co-PI with Dr. Daelyn Woolnough (CMU Biology). February 2021 – December 2024.
- Fisheries and Oceans Canada. DNA Barcoding and Morphometric Analyses of Lampsiline Mussels in the Great Lakes Region (**\$9613**). June 2020 March 2021.
- Michigan Chapter of the North American Lake Management Society (MCNALMS). Invasive Mystery Snail Detection and Characteristics of Invaded Inland Lakes in Mid-Michigan. Student Research Grant (**\$2000**). Mentoring undergraduate student awardee: Emmett Smrcka. Summer 2020.
- U.S. Fish and Wildlife Service, Cooperative Ecosystem Studies Unit. Using Environmental DNA (eDNA) as a Detection Tool for an Imperiled Freshwater Mussel (*Epioblasma triquetra*; Snuffbox) in the Grand River, Michigan (\$49,789 + \$6700 supplement). Co-PI with Dr. Daelyn Woolnough (CMU Biology). August 2020 December 2022.
- Ionia Conservation District/ U.S. Fish and Wildlife Service. Environmental DNA (eDNA) as a Detection Toll of an Imperiled Freshwater Mussel (*Epioblasma triquetra*, Snuffbox) in the Grand River, Michigan: Water Sample Collections (\$36,430). Co-PI with Dr. Daelyn Woolnough (CMU Biology). January 2020 – August 2020.

- Fisheries and Oceans Canada. Morphometric and DNA barcoding analyses to confirm identifications of *Pleurobema sintoxia* (Round Pigtoe) and *Fusconaia flava* (Wabash Pigtoe) and *Pyganodon* species in Ontario Canada (**\$13,463**). January 2019 March 2020.
- U.S. Fish and Wildlife Service Great Lakes Fish and Wildlife Restoration Act 2018. "Surveys and habitat modeling for imperiled native mussels in the Detroit and St. Clair Rivers." (\$247,934). Central Michigan University (Zanatta and Woolnough) lead in collaboration with Michigan DNR and Fisheries and Oceans Canada. January 2019 – January 2023.
- Fisheries and Oceans Canada. Conservation genetics research on Hickorynut and Fawnsfoot in Canada (\$13,956). May 2018 March 2019.
- Ministère des Forêts, de la Faune et des Parcs (MFFP), Québec Canada. Analyses génétiques des populations du Québec de la moule en situation précaire : obovarie olivâtre (*Obovaria olivaria*) pour une étude des populations du bassin des Grands-Lacs et du fleuve Saint-Laurent au Canada et aux Etats-Unis **(\$3500)**. December 2017 December 2019.
- Fisheries and Oceans Canada. Population genomics research on the endangered Hickorynut mussel in Canada **(\$16,347**). September 2017 March 2018.
- Fisheries and Oceans Canada Canadian Freshwater Species at Risk Research Network. Development of empirically-driven genetic guidelines for captive breeding and propagation of SAR freshwater mussels (\$107,068). December 2017 – March 2020.
- Fisheries and Oceans Canada. Population Genetics Research on the Endangered Eastern Pondmussel in Canada (\$14,898). May 2016 March 2017.
- U.S. Fish and Wildlife Service Great Lakes Restoration Initiative, Endangered Species Program 2015. "Conservation Genetics of Snuffbox Mussels in the Great Lakes Watershed" (**\$49,949**). Jan. 2016 Dec. 2018. Co-PI with Dr. Daelyn Woolnough, CMU.
- Technical University of Munich (Germany). August-Wilhelm Scheer Visiting Professorship (€4900). November December 2015.
- Fisheries and Oceans Canada. Population Genetics Research on the Threatened Mapleleaf Mussel and the Endangered Eastern Pondmussel in Canada (\$16,598). May 2015 – March 2016.
- Director's Open Funds, Key Lab of Poyang Lake Wetland and Watershed Research, Jiangxi Normal University (JXNU). Regional population connectivity between the Poyang Lake and Yangtze River watersheds: Developing population genetic markers for Chinese unionids.
  (¥120,000 = \$20,000US + \$10,000 CMU match). Aug 2014 Sept 2016. Collaboration with Dr. Xiaoping Wu (Nanchang University) and Dr. Wenjing Yang (JXNU).
- Fisheries and Oceans Canada. Population genetics study on the threatened Mapleleaf mussel on the Niagara Peninsula, Ontario (**\$10,000CDN**). May 2014- March 2015
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Contract to prepare update status report on the Mapleleaf mussel, *Quadrula quadrula* (\$7,500CDN).
  Collaboration with Dr. Joseph Carney, Lakehead University. May 2014 March 2016.
- U.S. Fish and Wildlife Service Great Lakes Fish and Wildlife Restoration Act 2010. "Conservation of native freshwater mussel refuges in Great Lakes coastal zones." (\$381,168). Central Michigan University (Zanatta) lead on collaborative grant with colleagues from Buffalo State College, Cleveland State University, Otterbein College, Kent State University, University of Toledo, PA Natural Heritage Program, NY Natural Heritage Program, MI Department of Natural Resources, MI Natural Features Inventory, PA Fish and Boat Commission, and NY Department of Environmental Conservation. Oct. 2010 – Sept 2014.
- U.S. Fish and Wildlife Service Great Lakes Restoration Initiative, Endangered Species Program 2010. "Population Trajectory Improvement for At Risk Freshwater Mussels in the Great Lakes Watershed" (\$214,252). Sept. 2010 – March 2013. Co-PI with Dr. Daelyn Woolnough, CMU.
- Pierce Cedar Creek Institute URGE Grant. "Pelecypod and Gastropod Communities at PCCI". (\$10,500 + room and board for 2 undergraduate researchers). May – Sept 2010. Co-PI with Dr. Daelyn Woolnough.
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Contract to prepare update status report on the Snuffbox mussel, *Epioblasma triquetra* (**\$5,000CDN**). January

2010.

- Michigan Department of Environmental Quality (DEQ) Coastal Management Program.
  "Conservation of native freshwater mussel refuges in Great Lakes coastal wetlands: Geneflow and connectivity among refuges in coastal wetlands and surrounding riverine watersheds." (\$15,000 + \$3,000 supplement). May 2010 – June 2011.
- Michigan Department of Natural Resources (DNR). "Unionid mussel diversity in the wadeable tributaries of the Grand River Watershed, Michigan, USA." (\$5,000 + CMU Match), May 2010 December 2010. Co-PI with Dr. Daelyn Woolnough, CMU.
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Contract to prepare status report on the Hickorynut mussel, *Obovaria olivaria* (**\$6,000CDN**). May 2009.
- Species at Risk Funding for Ontario (SARFFO) World Wildlife Fund Canada (\$70,876 + DFO match), 2009. Title: "Investigating Research Gaps for the Recovery of Unionid Mussel Species at Risk in Canada". Co-PI with Dr. Chris Wilson, Trent University and Dr. Josef Ackerman, University of Guelph.
- Endangered Species Recovery Fund World Wildlife Fund Canada (\$57,938 per year + DFO match), 2008. Co-PI with Dr. Chris Wilson, Trent University and Dr. Josef Ackerman, University of Guelph.
- Natural Sciences and Engineering Research Council (NSERC) of Canada Postdoctoral Fellowship (\$80,000), Apr. 2008 – Aug. 2008 (terminated early to begin tenure-track faculty position).
- Clemens Rigler Travel Award, Travel Scholarship for Canadian Conference for Fisheries Research (**\$325**), Jan. 2008.
- Freshwater Mollusk Conservation Society, Student Travel Scholarship (\$220US), Mar. 2007.
- Ontario Graduate Scholarship (\$15,000), Sept. 2006–Aug. 2007.
- E.J. Crossman Award for best student presentation (**\$250** travel scholarship + copy of the Freshwater Fishes of Canada), American Fisheries Society Ontario Chapter, Mar. 2006.
- Department of Fisheries and Oceans, SARCEP contract to ROM (\$10,000; co-PI with Dr. Bob Murphy), Jan. 2006. Conservation Genetics of the Wavy-rayed Lampmussel (*Lampsilis fasciola*).
- Ontario Graduate Scholarship (**\$15,000**), Sept. 2005–Aug. 2006.
- Canadian Museum of Nature competitive grant for the Canadian Freshwater Mussel Project (**\$5000**), in collaboration with D.A. Woolnough (Iowa State University), Apr.–Sept. 2005.
- Freshwater Mollusk Conservation Society, Student Travel Scholarship (**\$285US**), Mar. 2005.
- Department of Fisheries and Oceans, SARCEP contract to ROM (**\$50,000**; co-PI with Dr. Bob Murphy), Nov. 2004. Conservation Genetics of the Northern Riffleshell (*Epioblasma torulosa rangiana*) and Snuffbox (*E. triquetra*).
- Natural Sciences and Engineering Research Council (NSERC) of Canada, Post Graduate Scholarship (**\$42,000**), Sept. 2003–Aug. 2005.
- Interdepartmental Recovery Fund (Canadian government) contract to ROM (\$15,000; co-Pl with Dr. Bob Murphy), Jan. 2003. Development of microsatellite loci for the Northern Riffleshell (*E. torulosa rangiana*).
- Department of Fisheries and Oceans, SARCEP contract to ROM (**\$15,000**; co-PI with Dr. Bob Murphy), Jan. 2003. Matching funds for IRF in 2003. Development of microsatellite loci for the Northern Riffleshell (*E. torulosa rangiana*).

Internal:

- CMU President's Award for Outstanding Research and Creative Activities top senior faculty researcher in 2024 (**\$1,200** + teaching release).
- Faculty Research and Creative Endeavours Grant (**\$7000**), Oct. 2021. Title: "Initiating collaborations with Smithsonian National Museum of Natural History: Phylogeography and Population Genomics of Freshwater Mussels from the North Atlantic Slope". Office of Research and Graduate Studies, Central Michigan University.
- Faculty Research and Creative Endeavours Grant (**\$8000**), Oct. 2018. Title: "Bringing freshwater mussels into the genomics era: Phylogeography and population genetics of the Kidneyshells". Office of Research and Graduate Studies, Central Michigan University.
- CMU College of Science and Engineering Outstanding Research Award (**\$5000**). June 2018.

- Faculty Research and Creative Endeavours Grant (**\$8000**), Mar. 2016. Title: "Phylogeography and population genetics of the imperiled freshwater pearl mussel (*Margaritifera margaritifera*): a comparison of North American or European populations". Office of Research and Graduate Studies, Central Michigan University.
- CMU Institute for Great Lakes Research. "Fine-scale population genetic analyses of freshwater mollusks on beaver island, the great lakes and beyond: development and testing of new microsatellite DNA and male-lineage mtDNA markers" (**\$5660**). May 2015.
- Faculty Research and Creative Endeavours Grant (**\$8000**), Oct. 2013. Title: "Testing hypotheses of post-glacial colonization for freshwater mussels in the Great Lakes watershed using genetic analyses". Office of Research and Sponsored Programs, Central Michigan University.
- CMU Provost's Award for Outstanding Research and Creative Activies top junior faculty researcher in 2011 (**\$1,400** + teaching release).
- CMU College of Science and Technology Funds for Advancing Research. "Improving Wetlab Facilities in the CMU Biology Department: Aquatic Habitat Units" (\$68,000), 2010 – 2012. Co-PI with Dr. Daelyn Woolnough, Dr. Tracy Galarowicz, Dr. Brent Murry, Dr. Don Uzarski, Dr. Scott McNaught, CMU.
- CMU College of Science and Technology collaborative Michigan DNR projects. "Unionid mussel diversity in the wadeable tributaries of the Grand River Watershed, Michigan, USA." (\$5,000), May 2010 – December 2010. Co-PI with Dr. Daelyn Woolnough, CMU.
- President's Research Investment Fund (**\$18,960**), Apr. 2009. Title: "Patterns of Aquatic Organism Colonization and Diversity in the Lake Michigan Island Archipelago". Office of Research and Sponsored Programs, Central Michigan University.
- Research Excellence Fund (**\$60,000**), Feb. 2009. Title: "Towards the Recovery of Michigan's Aquatic Biodiversity: Understanding Freshwater Mussel Population Structure Using Landscape Genetics". Internal Grant, Office of Research and Sponsored Programs, Central Michigan University.
- Faculty Research and Creative Endeavours Grant (**\$4906**), Sept. 2008. Title: "Coevolution of mussels and their host fish: Snuffbox mussels and logperch darters". Office of Research and Sponsored Programs, Central Michigan University.
- Jeanne F. Goulding Fellowship, School of Graduate Studies, University of Toronto (**\$6500**), Sept. 2006.
- A. Murray Fallis Award in Zoology, University of Toronto (\$3000), Nov. 2005.
- Arthur D. Latornell Graduate Travel Scholarship, University of Guelph (\$750), Mar. 2000
- Norman James Award in Aquatic Ecology, University of Guelph CBS (**\$4000**), Jan. 2000.
- University of Guelph Graduate Student Scholarship (**\$2000**), Sept. 1999.

# Teaching:

## Classroom Teaching Experience:

- Instructor for Advances in Earth & Ecosystem Science (EES 703, Central Michigan University), Spring 2021, Spring 2023.
- Instructor for Foundations of Evolution and Diversity (BIO 111, Central Michigan University), Fall 2016, Spring 2017, Fall 2017, Spring 2018, Spring 2020, Fall 2023.
- Instructor for Ecology and Systematics of Freshwater Molluscs, Fall 2015 (Lehrstuhl für Aquatische Systembiologie, Technische Universität München).
- Instructor for Freshwater Mollusks of the Great Lakes (BIO 597Z/BIO 520, Central Michigan University), Summer 2014 (at CMU Biological Station), Fall 2017, Fall 2019.
- Instructor for Freshwater Mollusks of Northern Lake Michigan (BIO 597Z, Central Michigan University), Summer 2018 (at CMU Biological Station).
- Instructor for Evolution (BIO 501, Central Michigan University), Spring 2013, Spring 2015, Spring 2017, Spring 2019, Spring 2020, Fall 2021, Spring 2024.
- Instructor for General Zoology (BIO 218, Central Michigan University), Spring 2011, Spring 2012, Summer 2013 (at CMU Biological Station), Fall 2013, Spring 2014, Fall 2014, Spring 2015, Summer 2015 (at CMU Biological Station), Spring 2016, Fall 2016.

- Instructor for Invertebrate Diversity (BIO 519, Central Michigan University), Fall 2010, Fall 2011, Fall 2018, Fall 2020, Fall 2022.
- Instructor for Concepts of Biology (BIO110, Central Michigan University), Fall 2009, Spring 2010, Fall 2010.
- Instructor for Natural History of Non-Vertebrates (BIO397M, Central Michigan University), Spring 2009.
- Instructor for Conservation of Natural Resources (BIO240, Central Michigan University) Fall 2008, Fall 2009, Spring 2010, Fall 2012, Spring 2014, Fall 2014.
- Teaching Assistant for Animal Diversity Invertebrate Section (ZOO265, University of Toronto) 2005-2006, Winter 2007.
- Lab Teaching Assistant for Organisms and their Environment (BIO150, University of Toronto) Winter 2006.
- Freshwater Mussel Identification Workshop. Department of Fisheries and Oceans Canada Canada Centre for Inland Waters every June since 2004.
- Teaching Assistant for Introduction to Aquatic Environments (BIOL 3450, University of Guelph) Fall 1999, Winter 2000.
- Demonstrated for public at Zoology Department displays for "College Royale" (University of Guelph, open house) Mar. 2000.
- Lab Teaching Assistant for Biology I (BIOL 1030, University of Guelph) Fall 1998, Winter 1999.
- Demonstrated for public at Biology Department displays for Laurentian University Open House Oct. 1996 and Oct. 1997.

Student Mentoring Experience:

- I have supervised/mentored numerous CMU undergraduate and graduate students, providing training in molecular techniques (DNA extraction, PCR, agarose gel electrophoresis, DNA sequencing, genotyping, genomic library preparation), phylogenetic and population genetic analyses (microsatellites, mtDNA, and RADseq/SNPs), geometric morphometric analyses, field techniques (mussel and fish collection), and mussel aquaculture techniques.
- Graduate Student Major Advisor:
  - o Jonah Jimmerson (MS Con Bio), January 2024 Current
  - o Alec Smith (MS Plan B/non-thesis), Fall 2023 Current
  - Aaliyah Wright (EES PhD), May 2021 Current (NSF-Graduate Research Fellow)
  - Gabrielle Sanfilippo (MS Con Bio), June 2021 Fall 2023
  - Dr. Shay Keretz (EES PhD; co-supervised by Dr. Daelyn Woolnough), May 2019
     May 2023 (postdoc at U of Michigan/CIGLR/NOAA GLERL)
  - Dr. Nichelle VanTassel (EES PhD), May 2018 November 2023 (Research Associate/Postdoc at Smithsonian National Zoo)
  - Dylan Powell (MS Con Bio), June 2020 Summer 2022 (now a Ph.D. student at the University of Arkansas)
  - Jamie Bucholz (MS Bio), August 2017 May 2019 (now a Ph.D. student at the University of Alabama)
  - Caitlin Beaver (MS Con Bio), June 2016 May 2018 (now a conservation genetics laboratory technician for the USGS in Gainesville FL)
  - Mariah Scott (MS Con Bio), June 2015 June 2017 (now a Ph.D. student at the University of Chicago and the Field Museum)
  - Jordan Hoffman (MS Con Bio), June 2014 June 2016 (completed Ph.D. at CUNY and the NY Botanical Garden)
  - Trevor Hewitt (MS Con Bio), June 2013 June 2015 (completed Ph.D. at the University of Michigan)
  - Wendy Paterson (MS Con Bio), June 2011 June 2013 (now employed as an outreach coordinator for Niagara River Keepers, Buffalo NY)
  - Traci Griffith (MS Con Bio), June 2011 June 2013 (now employed as a program officer for the National Fish and Wildlife Foundation, St. Paul, MN)

- Matthew Rowe (MS Con Bio), June 2010 December 2012 (now employed as Freshwater Mussel Biologist with Georgia Dept. of Natural Resources)
- Jennifer Bergner (MS Con Bio; co-supervised by Dr. Daelyn Woolnough), Sept 2009 – Aug 2013 (now faculty at Helena College, Montana State University, Helena MT)
- Philip Mathias (MS Con Bio), May 2009 August 2016 (now employed by EnviroScience as a Senior Malacologist)
- Undergraduate Research Advisor (e.g., CMU BIO403 or HON499):
  - Lauren Western (CMUBS REU, University of Montana), Summer 2023
    - James Haugh (HON499, CMU ORGS Summer Program for Arts and Research 2023), Fall 2022 – Best Poster @ 2023 CMU Biology Undergraduate Research Symposium.
    - Emmett Smrcka (MCNALMS Student Research Scholarship awardee \$2000), 2020.
    - Madison Layer (HON499, ORGS Summer Scholar 2020), Spring 2021 Awarded CMU Honors Program Best STEM Student Senior Project in May 2021.
    - Julia Willsie (HON499, ORGS Summer Scholar 2019), Spring 2020 CMU Provost's Award for Undergraduate Research in 2021.
    - Emily Wessel (BEST-program, BIO403), 2018-2019, Spring 2019
    - o Tyler Beyett (HON499, ORGS Summer Scholar 2018), Spring 2019
    - Kate Beauchamp (HON499), Spring 2019
    - Baleigh Schuler (CMUBS REU, HON499), Summer 2013, Spring 2016 Awarded CMU Honors Program Best STEM Student Senior Project in May 2016.
    - o Kandis Cazenave (CMUBS REU, Mississippi State University), Summer 2014
    - Lindsay Kolich (BIO403), Fall 2011
    - o Mariah Scott (HON499, ORGS Summer Scholar 2011), Fall 2011
    - Joe Bailey (BIO403), Spring 2011
    - Briana Collins (HON499), Fall 2010
    - Katie Colaccino (BIO403), Spring 2010
    - o Tonya Neuman (HON499), Fall 2009
    - o Andrew Harris (BIO403, McNair Scholar), Fall 2009, Summer 2010
- Graduate Student Committees:
  - Nicole Vellequette (MS Biology CMU, supervised by Dr. Daelyn Woolnough), June 2022 – May 2024
  - Willie Dokai (MS Biology University of Alaska Fairbanks, supervised by Dr. Wes Larson), 2020 - 2022
  - Mandi Caldwell (MS Biology CMU, supervised by Dr. Daelyn Woolnough), Aug 2012 May 2014
  - Adrienne Gibson (MS Biology CMU, supervised by Dr. Daelyn Woolnough), Aug 2012 May 2014
  - Cassie Dresser (MS Biology CMU, supervised by Dr. Brad Swanson), Sept 2010 – May 2013
  - Jenny Gubler (MS Biology CMU, supervised by Dr. Kirsten Nicholson), Sept 2009 – May 2012
  - Rucha Pendke (MS Biology CMU, supervised by Dr. Brad Swanson), Sept 2009 – Aug 2011
  - Jessica Sherman (MS Biology CMU, supervised by Dr. Donald Uzarski), Sept 2008 May 2011
  - Renae Sattler (MS Biology CMU, supervised by Dr. Brad Swanson), Sept 2008 Feb 2011

# Service:

University/College Service:

- CMU Museum of Cultural and Natural History Council. Spring 2021 present.
- CSE Earth and Ecosystem Science PhD Program Council. Fall 2020 Summer 2024.

- Program Director Fall 2022, 2023 2024.
- CSE Research Advisory Council Fall 2022, 2023-24.
- CSE Communications Committee. Fall 2019 Spring 2020.
- CSE Sabbatical Committee. Fall 2018, Spring 2019.
- CMU Field Safety Policies Committee (Ad-hoc). Fall 2016.
- President's and Provost's Award Committee (Ad-hoc). Fall 2014 Spring 2015.
- Faculty Research and Creative Endeavors (FRCE) grant review committee. Fall 2012 Spring 2018.
  - Committee Chair Spring 2016 to Spring 2017.
- Natural Resources Council (chair), Central Michigan University. Assessed Natural Resources Minor with members of Geology and Geography departments, advised students enrolled in the minor. Fall 2009 – Fall 2013.
- Executive Committee Institute for Great Lakes Research, Central Michigan University. 2011-2012.

## Department Service:

- Executive Committee Biology, Central Michigan University. 2010 2011, 2020 Fall 2021, 2022 – 2023.
- Biology Department Chair Search Committee Spring 2019 Fall 2019.
- Reappointment, Tenure and Promotion Committee Spring 2016 Spring 2019.
  Committee Chair Fall 2017 Spring 2019.
- Bylaws Committee Biology, Central Michigan University. Fall 2011 Spring 2014, Fall 2017 Spring 2018.
- Curriculum Design Committee Subcommittee for the Foundations of Evolution and Diversity (BIO111) class. Fall 2013 Spring 2018.
- Graduate Committee Biology, Central Michigan University. Fall 2013 Spring 2016, Fall 2022 present.
  - Committee Secretary 2014-2015.
- Tri-Beta Faculty Advisor, Central Michigan University. Spring 2012 Spring 2015.
- Building Planning Committee new Biosciences building, Central Michigan University. Spring 2011 Spring 2014.
- Personnel Committee Biology, Central Michigan University. Spring 2010.
  - Seminar Committee Biology, Central Michigan University. Spring 2009 Summer 2012.
    - Committee Chair Spring 2009 Summer 2012

## External Service:

- Recovery Planning Meeting for the Hickorynut mussel (*Obovaria olivaria*) in Canada. Québec City, QC. Feb 21-22, 2019.
- Associate Editor for *Freshwater Science*. December 2013 present.
- Member of the Mollusc Specialist Subcommittee (SSC) for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). December 2006 2022.
  - Meet annually to carry out the functions of the SSC (Banff AB-2007, Halifax NS-2008, Walpole Island ON-2009, Penticton BC-2010, Quebec City QC-2011, Yellowknife NT-2013, Fredericton NB-2014, Windsor ON-2015, Charlottetown PE-2016, Winnipeg MB-2017, Whitehorse YT-2019, Virtual-2020, Virtual-2021, Halifax NS-2022).
  - Contribute to the development and maintenance of a Canadian species candidate list within the taxonomic group
  - Review and evaluate status reports for completeness, accuracy and reliability and add information when required
  - $\circ$   $\;$  Evaluate information obtained from range jurisdictions and other sources  $\;$
  - Recommend status assessments through discussion at SSC meetings based on COSEWIC's assessment criteria.
  - Volunteer position with COSEWIC.
- External reviewer for tenure and/or promotion cases at Texas State University, University of Massachusetts Boston, University of Texas Rio Grande Valley, University of Michigan,

University of Dayton, Appalachian State University.

Peer-Review Experience:

- Manuscript reviews for: Data, Diversity, Freshwater Mollusk Biology and Conservation, PeerJ, Canadian Field Naturalist, Journal of Experimental Zoology, Hydrobiologia, Canadian Field Naturalist, Biological Invasions, Freshwater Biology, Molecular Phylogenetics and Evolution, Conservation Genetics, Current Zoology, Invertebrate Biology, International Review of Hydrobiology, Journal of Great Lakes Research, Fisheries Science (Japan), Journal of Molluscan Studies, Molecular Ecology, PloS One, Northeastern Naturalist, Biological Conservation, American Midland Naturalist, Freshwater Science/ Journal of the North American Benthological Society, Biological Journal of the Linnean Society, Journal of Biogeography
- Status reports for the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
- Book chapter in a monograph on the fauna of the Atlantic Maritime Ecozone to be published by *Ecological Monitoring and Assessment*.
- USFWS Status Report on the Snuffbox mussel, *Epioblasma triquetra*.

# Professional Societies:

- Society for Freshwater Science (formerly the North American Benthological Society NABS)
  - Attended Conferences in Grand Rapids MI (2022, Joint Aquatic Sciences Meeting), Detroit MI (2018), Portland OR (2014, Joint Aquatic Sciences Meeting), Providence RI (2011), Santa Fe NM (2010), Grand Rapids MI (2009), Vancouver BC (2004), Pittsburgh PA (2002), Lacrosse WI (2001), and Keystone CO (2000)
  - Organized Special Session on Conservation of Great Lakes Unionids for 2009 meeting Grand Rapids, MI
  - Co-organized Special Session on Great Lakes Connecting Waters: Research, Monitoring, and Progress for 2022 meeting Grand Rapids, MI
  - Associate Editor for the society journal: *Freshwater Science* (December 2013 present).
- Freshwater Mollusk Conservation Society (FMCS)
  - Attended Mollusk Survey Techniques Workshop. Henry Horton State Park, TN. August 8-11, 2022
  - Attended Joint Aquatic Sciences Meeting (JASM) in Grand Rapids MI, May 2022.
  - Attended 12<sup>th</sup> biennial symposium (online), April 2021.
  - Attended 11<sup>th</sup> biennial symposium in San Antonio, TX, April 2019.
  - Organized schedule of presentations and abstract book for 10<sup>th</sup> biennial symposium in Cleveland, OH, March 2017.
  - Attended 8<sup>th</sup> biennial symposium at Guntersville Lake St. Park, AL, March 2013.
  - Attended 7<sup>th</sup> biennial symposium in Louisville, KY, April 2011.
  - Attended 5<sup>th</sup> biennial symposium in Little Rock, AR, March 2007. Assisted with conference organization and registration.
  - Attended 4<sup>th</sup> biennial symposium in St. Paul, MN, May 2005.
  - Attended Conservation Genetics Workshop on Imperilled Freshwater Mollusks and Fishes in Shepherdstown, WV, June 2004
  - Attended 3<sup>rd</sup> biennial symposium in Durham, NC, March 2003
  - Attended Propagation of Freshwater Mussels Workshop in Shepherdstown, WV, March 2002.
- International Association for Great Lakes Research (IAGLR)
  - Attended IAGLR conference in Grand Rapids MI (2022, Joint Aquatic Sciences Meeting), Cornwall ON (2012), Duluth MN (2011), and Peterborough ON (2008).
- American Fisheries Society
  - Attended Conference in Grand Rapids MI (2022, Joint Aquatic Sciences Meeting) St. Paul MN (2012)
- American Malacological Society
  - Elected AMS Councillor-at-Large 2020-2022
  - Attended AMS 2021 virtual meeting.
    - o Co-organized AMS Presidential Symposium on Freshwater Mussels of the North Atlantic

Drainage.

- Attended AMS 2020 virtual meeting.
- Attended AMS 2015 Meeting at the University of Michigan Biological Station, Pellston MI. Aug 28-31, 2015.
  - Organized special session on Great Lakes Malacology.
- Attended World Congress of Malacology in Ponta Delgada Azores, Portugal (2013).

Elected Positions:

- American Malacological Society Councillor-at-Large 2020-22.
- Freshwater Mollusk Conservation Society Co-Chair Genetics Committee 2017-21.
- Laurentian University Biology Society President 1996-98.

# **Other Relevant Activities:**

Museum Curatorial Experience:

- Canadian Freshwater Mussel Working Group Canadian Museum of Nature.
  - Collection of Canadian freshwater mussel records from U.S. institutions; the computerization, standardization (in Darwin Core 2 format), and georeferencing of records.

Contract with the Canadian Museum of Nature, Collection Services Division, P.O. Box 3443 Stn "D" Ottawa, ON. May 31 – December 31, 2005.

- Assistant Curator (Contract) for <u>Pearls: A Natural History</u> exhibition, Royal Ontario Museum.
  - Responsible for advancing the academic discipline and the objectives of the Royal Ontario Museum during the Pearls exhibition.

Royal Ontario Museum, Exhibit Planning and Community Programs, 100 Queen's Park, Toronto, ON. March 29, 2004-September 30, 2004.

#### Other Professional Experience:

- Mackie and Associates Water Systems Analysts (MAWSA) Environmental Consulting Contract
  - Lead teams in endangered mussel relocation around proposed bridge and pipeline construction zones. Contract required on-site project design and implementation, field identification of mussels and use of SCUBA.

Contracts with MAWSA, 23 Avra Court, Guelph ON. September 20-29, 2006; August 2007.

- **Biological Research Technologist (Environment Canada).** Freshwater mussel conservation and research:
  - Aiding in design of projects, conducting field work in Great Lakes and their tributaries.
  - Data management and analysis.
  - Writing scientific reports.
  - Attending scientific conferences and meetings and presenting research findings to peers.
  - Reviewing COSEWIC Species at Risk Reports.
  - Writing status reports of Canadian mussel species at risk for Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
  - Liaising with television, radio and print media reporting on research activities and species at risk recovery.
  - Member of the recovery teams developing recovery strategies for aquatic species at risk in the Sydenham, Thames and Ausable Rivers
  - Working with stakeholders and landowners (public) to develop recovery strategies for aquatic species at risk.
  - Providing technical expertise on freshwater mussels for the recovery teams.

• Core member and science expert on the Freshwater Mussel Recovery Team. Aquatic Ecosystem Impacts Research Branch, National Water Research Institute, Environment Canada, Burlington, ON. June 2001-September 2003.

- **Project Biologist (Ontario Ministry of Natural Resources, OMNR).** Working on numerous fisheries management projects:
  - Population analysis and modeling of Lake Trout from Squeers Lake experimental winter fishery, also involved in data collection and fish sampling at Squeers Lake in March 2001.
  - Fall Walleye Index Netting (FWIN) data management and analysis for all Ontario lakes
  - Designed and initiated a summer creel survey on Whitefish Lake.

Ontario Ministry of Natural Resources-Northwest Science and Information Section-Science and Information Branch, Thunder Bay, ON. October 2000-May 2001.

• Deer Check Station Volunteer (OMNR). Weighing and measuring white tailed deer carcasses and recording hunter information for deer census at Ontario Ministry of Natural Resources (OMNR) Deer Check Station at Grundy Lake Provincial Park, Loring ON. November 1995, 96, 97.