

DANIEL J. HORNBACH
JOHN S. HOLL PROFESSOR OF ENVIRONMENTAL STUDIES

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EDUCATION: Ph.D.: Miami University, Oxford, Ohio. 1980. Major Zoology.
M.S.: University of Dayton, Dayton, Ohio. 1976. Major: Biology.
B.S.: University of Dayton, Dayton, Ohio. 1974. Major: Biology.

ACADEMIC EXPERIENCE:

- Faculty member, Department of Biology, Macalester College. Assistant Professor: September 1984 -August 1987; Associate Professor: September 1987 - August 1993; Full Professor: September 1993 - December 1997; DeWitt Wallace Professor: January 1998 – 2015; John S. Holl Professor: September 2015 - Present. Professor in Environmental Studies: 2006-present.
- Associate Editor, American Midland Naturalist. September 1995-2001.
- Assistant Professor, Department of Biology, University of Virginia. September 1980 - May 1984.
- Faculty, Mountain Lake Biological Station, University of Virginia. Summers of 1981, 1982, and 1984.

ADMINISTRATIVE EXPERIENCE:

- Environmental Studies Department, Chair, June 2006 – May 2019
- *Dean of the Faculty and Provost, Macalester College. June 1999-July 2005.*
- Biology Department Chair. September 1996 - 1999.
- *Provost, Macalester College. August 1993 - August 1995.*
- Faculty Development Coordinator for the Science Division, Macalester College. Aid faculty in investigating and obtaining grant support for research and curriculum development. September 1988 - August 1993.
- Director, Katherine Ordway Natural History Study Area. Oversee the development of research projects, prairie restoration, and the educational use of this 285-acre area owned by Macalester College. September 1986- September 1998.

- Other relevant administrative experience: I have chaired the following elected committees as a faculty member at Macalester - Personnel Committee, Faculty Advisory Council, Long Range Planning and Budget, and the Resources and Planning Committees, and the Educational Policy and Governance Committee. I have served as a reviewer for several Biology and Environmental Studies departments including:
 - St. Olaf College – Natural Lands Program - 2020
 - Colgate University – Environmental Studies - 2019
 - Smith College – Environmental Science and Policy - 2019
 - Carthage College – Environmental Science - 2018
 - Connecticut College – Environmental Studies - 2017
 - University of Massachusetts, Boston – Environmental and Sustainability Studies - 2016
 - Earlham College – Environmental Science/Studies - 2014
 - Marist College – Environmental Science and Policy - 2013
 - Ohio Wesleyan University – Environmental Studies – 2013
 - Knox College – Environmental Studies – 2012
 - Drake University – Environmental Studies – 2012
 - St. Olaf College – Biology - 2010
 - College of Wooster, OH- Consult on new ES minor - 2008
 - Lake Forest College - Environmental Studies - 2008
 - St.John's/St. Ben's University - MN - Environmental Studies - 2008
 - Pitzer College -Environmental Studies - 2007
 - Mt. Holyoke College - Environmental Studies - 2007
 - Queen’s University (Kingston, Ont.) - Environmental Studies - 2007
 - Colorado College - Dept. Biology- 2006
 - Wheeling Jesuit University - Dept Biology - 2005 - only reviewer
 - Grinnell College -Education Dept. - 2003 - chair of team

HONORS AND AWARDS:

- Honorary Member of Phi Beta Kappa (Epsilon of Minnesota Chapter). 2019.
- Freshwater Mollusk Conservation Society Lifetime Achievement Award 2017.
- Named John S. Holl Professor of Environmental Studies. Fall 2015.
- Midstates Consortium for Math and Science Janet Andersen Lecture Award, 2013
- Thomas Jefferson Service Award, Macalester College, March 2011.
- American Fisheries Society, MN Chapter, Best Poster Award, 38th Annual Meeting, March 2005.
- The Sir Charles Maurice Yonge Award, Malacological Society of London for a paper on Bivalvia that has made a significant contribution to the knowledge of this group (J. Moll. Stud. 67: 407-416 with S. M Baker). 2002.
- Named DeWitt Wallace Professor of Biology. November 1997.
- MN Governor’s Certificate of Commendation for participation in the Zebra Mussel Task Force Partnership nominated for the MN Cooperative Public Service Award. 1994.
- Alumni Special Achievement Award - University of Dayton. October 1994.
- Blandin Faculty Fellowship Program. September 1990.

PROFESSIONAL AFFILIATIONS:

- American Institute of Biological Sciences
- Society for Freshwater Science
- Global Lakes Ecological Observatory Network (GLEON)
- Freshwater Mollusk Conservation Society
- Higgins Eye Pearlymussel Recovery Team (USFWS)
- Journal of Freshwater Ecology – Editorial Board, 2011-present
- Freshwater Mollusk Biology and Conservation – Associate Editor, 2021 – present

GRANTS (HORNBAACH AS PI OR CO-PI):

- MN Aquatic Invasive Species Research Center (2022) - \$39,120**
- USGS-Natural Resource Preservation Program (2020-2023) - \$22,000***
- MN Aquatic Invasive Species Research Center (2019-2021) - \$53,359**
- MN Aquatic Invasive Species Research Center (2018) - \$14,787**
- Legislative and Citizens Commission on MN Resources (2014-2018) - \$177,000**
- National Park Service (2012) - \$18,600
- National Park Service (2011) - \$7100
- National Park Service (2010-2011) - \$24,300
- NSF Field Station Planning Grant (2009-2010) - \$24,575
- Mellon Foundation (2007-2009) - \$300,000*
- National Park Service (2009-2010) - \$55,535
- National Park Service (2009-2011) - \$50,000
- National Park Service (2008-2010) - \$149,100
- National Park Service (2004-2007) - \$214,000
- National Park Service (2001-2004) - \$60,000
- National Park Service (2000-2002) - \$40,900
- Legislative Commission on MN Resources (1999-2001) - \$58,000
- National Park Service (1998) - \$4000
- National Park Service (1997) - \$6000
- Wisconsin Dept. Natural Resources (1997-98) \$6000
- Legislative Commission on MN Resources (1997-98) - \$9400
- Army Corps of Engineers (1996) - \$5000
- US Fish & Wildlife Service (1994-1995) - \$34,000
- US National Park Service (1993-1996) - \$63,000
- US Environmental Protection Agency (1992-1996) \$505,000
- Wisconsin Dept. Natural Resources (1992) \$20,000
- Minnesota Dept. Natural Resources (1992-93) \$3000
- Minnesota Dept. Natural Resources (1990-91) \$3000
- Blandin Foundation (1990-91) - \$10,000
- NSF ILIP Grant (1988) - \$83,000
- US Army Corps of Engineers (1987-1990)- \$72,000
- NSF ILIP Grant (1987) - \$35,546

*Grant to start the 3 Rivers Center at Macalester College

** Macalester portion of joint grant with Univ. Minnesota

*** Macalester portion of 1st year of grant with USGS-UMESC

SELECTED RECENT PRESENTATIONS:

- The 72nd Society for Freshwater Science Meeting, Philadelphia, PA. 2024.
- The 13th Biennial Freshwater Mollusk Conservation Society Meeting, Portland, OR. 2023.
- The 68th Society for Freshwater Science Meeting, Virtual Meeting, 2020.
- The 67th Society for Freshwater Science Meeting, Salt Lake City, UT. 2019.
- The 11th Biennial Freshwater Mollusk Conservation Society Meeting, San Antonio, TX. 2019.
- The 66th Society for Freshwater Science Meeting, Detroit, MI. 2018
- The 65th Society for Freshwater Science Meeting, Raleigh, NC. 2017
- The St. Croix River Research Rendezvous, Sci. Museum of MN. 2017
- The 64th Society for Freshwater Science Meeting, Sacramento, CA. 2016.
- The St. Croix River Research Rendezvous, Sci. Museum of MN. 2015
- The 62nd Society for Freshwater Science Meeting, Portland, OR. 2014.
- The St. Croix River Research Rendezvous, Sci. Museum of MN. 2014
- The 61st Society for Freshwater Science Meeting, Jacksonville, FL. 2013.
- The St. Croix River Research Rendezvous, Sci. Museum of MN. 2013

PUBLICATIONS – REFEREED PAPERS

- Rabaey, J.S., M. A. Holgerson, D.C. Richardson, M.R. Andersen, S. Bansal, L.E. Bortolotti, J.B. Cotner, D.J. Hornbach, O.F. Johnson, K.T. Martinsen, and E.K. Moody. 2024. Freshwater biogeochemical hotspots: High production and respiration rates in shallow waterbodies. *Geophysical Research Letters*. <https://doi.org/10.1029/2023GL106689>
- Hornbach, D.J., B.E. Sietman and R.W. Bouchard. 2024. The relationship between stream size and life-history traits in freshwater mussels: an examination of the Host-Habitat Continuum Concept. *Hydrobiologia* <https://doi.org/10.1007/s10750-024-05595-2>
- Hopper, G., E. Miller, W. Haag, C. Vaughn, D. Hornbach, J. Jones, and C. Atkinson. 2024. A test of the loose-equilibrium concept with long-lived organisms: evaluating temporal change in freshwater mussel communities. *Journal of Animal Ecology*. 93: 281-293. <https://doi.org/10.1111/1365-2656.14046>
- Hornbach, D.J., J.L. Kozarek, N. Blinick, M.C. Hove, P. Grams, M. Kaplinski, K.R. MacGregor, C. Milliren and A.T. Riesgraf. 2023. Distribution pattern of the Zebra Mussel (*Dreissena polymorpha*) in White Bear Lake, Minnesota: a spatial scale analysis. *Journal of Freshwater Ecology* 38: 2202700. <https://doi.org/10.1080/02705060.2023.2202700>
- Bakshi, B. R.W. Bouchard, Jr., R. Dietz, D. Hornbach, P. Monson, B. Sietman and D. Wasley. 2023. Freshwater mussels, ecosystem services, and clean water regulation in Minnesota: formulating an effective conservation strategy. *Water* 15: 2560. <https://doi.org/10.3390/w15142560>
- Holgerson, M.A., D.C. Richardson, J. Roith, L.E. Bortolotti, K. Finlay, D.J. Hornbach, K. Gurung, A. Ness, M.R. Andersen, S. Bansal, J.C. Finlay, J.A. Cianci-Gaskill, S. Hahn*, B.D. Janke, C. McDonald, J.P. Mesman, R.L. North, C.O. Roberts, J.N. Sweetman, and J.R. Webb. 2022. Classifying mixing regimes in ponds and shallow lakes. *Water Resources Research* 58: e2022WR032522. <https://doi.org/10.1029/2022WR032522>
- Moore, A.P., N. Galic, R.A. Brain, D.J. Hornbach, and V.E. Forbes. 2021. Towards representing listed mussel species in ecological risk assessment: a database and multivariate analysis of freshwater mussel life-history traits. *Aquatic Conservation: Marine and Freshwater Ecosystems* 31: 3386-3402. <https://doi.org/10.1002/aqc.3713>

- Hornbach, D.J., K.L. Shea, J.J. Dosch, C.L. Thomas, T.B. Gartner, A. Aguilera, L.J. Anderson, K. Geedey, C. Mankiewicz, B.R. Pohlad and R.E. Schultz 2021. Decomposition of leaf litter from native and non-native woody plants in terrestrial and aquatic systems in the eastern and upper midwestern US. *American Midland Naturalist* 186: 51-75. <https://doi.org/10.1674/0003-0031-186.1.51>
- Hornbach D.J., H.N. Stutzman*, H.N., M.C. Hove J. L. Kozarek, K. R. MacGregor, T. J. Newton and P.R. Ries. 2021. Influence of surrounding land-use on mussel growth and glycogen levels in the St. Croix and Minnesota River Basins. *Hydrobiologia* 848: 3045-3063. <https://doi.org/10.1007/s10750-019-04016-z>
- Hornbach, D.J. 2021. Multi-year monitoring of ecosystem metabolism in two branches of a cold-water stream. *Environments* 8: 19. <https://doi.org/10.1007/s10750-019-04016-z>
- Hornbach, D.J., E.G. Schilling and H. Kundel*. 2020. Ecosystem metabolism in small ponds: the effects of floating-leaved macrophytes. *Water* 12: 1458. <https://doi.org/10.3390/w12051458>
- Hornbach, D.J., M.C. Hove, K.R. MacGregor, J.L. Kozarek, B.E. Sietman, and M. Davis. 2019. A comparison of freshwater mussel assemblages along a land use gradient in Minnesota. *Aquatic Conservation: Marine and Freshwater Ecosystems* 29: 1826–1838. <https://doi.org/10.1002/aqc.3167>
- Santosh, K., J. Kozarek, D. Hornbach, M. Hondzo and J. Hong. 2019. Experimental investigation of turbulent flow over live mussels. *Environmental Fluid Mechanics* <https://doi.org/10.1007/s10652-019-09664-2>
- Hornbach, D.J., D.C. Allen, M.C. Hove and K.R. MacGregor. 2018. Long-term decline of native freshwater mussel assemblages in a federally protected river. *Freshwater Biology* 63: 243-263 <https://doi.org/10.1111/fwb.13055>
- Hornbach, D.J., M.C. Hove, M.W. Ensley-Field*, M.R. Glasenapp*, I.A. Goodbar*, J.D. Harman*, B.D. Huber*, E.A. Kangas*, K.X. Liu*, M. Stark-Ragsdale* and L.K. Tran*. 2017. Comparison of ecosystem processes in a woodland and prairie pond with different hydroperiods. *Journal of Freshwater Ecology* 32: 675-695. <https://doi.org/10.1080/02705060.2017.1393468>
- Hansen, A.T., J. A. Czuba, J. Schwenk, A. Longjas, M. Danesh-Yazdi, D. J. Hornbach and E. Foufoula-Georgiou. 2016. Coupling freshwater mussel ecology and river dynamics using a simplified dynamic interaction model. *Freshwater Science* 35: 200–215. <https://doi.org/10.1086/684223>
- Hove, M., B. Sietman, M. Berg, E. Frost, K. Wolf, T. Brady, S. Boyer and D. Hornbach. 2016. Early life history of the sheepnose (*Plethobasus cyphus*) (Mollusca: Bivalvia: Unionoida). *Journal of Natural History* 50: 523-542. <https://doi.org/10.1080/00222933.2015.1083059>
- Hornbach, D., M Hove, M. Agata*, E. Arnold*, E. Cavazos*, C. Friedman*, K. Jay*, E. Johnson*, K. Johnson*, and A. Staudenmaier. 2016. Ecosystem Structure and Function in two branches of an eastern Minnesota trout stream. *Journal of Freshwater Ecology* 31: 487-507. <https://doi.org/10.1080/02705060.2016.1212118>
- Hornbach, D.J., R. Beckel*, E.N. Hustad*, D.P. McAdam*, I.M. Roen*, and A.J. Wareham*. 2015. The influence of riparian vegetation and season on stream metabolism of Valley Creek, Minnesota. *Journal of Freshwater Ecology* 30: 569-588. <https://doi.org/10.1080/02705060.2015.1063096>
- Hornbach, D.J. M.C. Hove, H. Liu*, F.R. Schenck*, D. Rubin* and B.J. Sansom*. 2014. The influence of two differently sized dams on mussel assemblages and growth. *Hydrobiologia* 724: 279-291. <http://dx.doi.org/10.1007/s10750-013-1743-y>
- Simmons, J.A., M. Anderson, W. Dress, C. Hannac, D.J. Hornbach, A. Janmaat, F. Kuserk, J. G. March, T. Murray, J. Niedzwiecki, D. Panvini, B. Pohlad, C. Thomas, and L. Vasseurk. 2014. A comparison of the stream temperature regime under forested and non-forested riparian 4 zones at eleven sites across North America. *River Research and Applications* 31: 964-974. <https://doi.org/10.1002/rra.2796>

- Sansom, B.J.*, D.J. Hornbach, M.C. Hove, and J.S. Kilgore. 2013. Effects of flow restoration on mussel growth in a Wild and Scenic River North American River. *Aquatic Biosystems* 9: 6 (11 pages). <https://doi.org/10.1186/2046-9063-9-6>
- Szumowski*, S.C., S.L. Boyer, D.J. Hornbach and M.C. Hove. 2012. Genetic diversity of two common freshwater mussel species, *Lampsilis cardium* and *Quadrula pustulosa* (Bivalvia, Unionidae), in a large federally protected waterway (St. Croix River, Minnesota/Wisconsin, U.S.A.). *American Malacological Bulletin* 30: 1-14. <https://doi.org/10.4003/006.030.0105>
- Hove, M.C., M. T. Steingraeber, T. J. Newton, D. J. Heath, C. L. Nelson, J. A. Bury, J. E. Kurth, M. R. Bartsch, W. S. Thorpe, M. R. McGill, and D. J. Hornbach. 2012. Early life history of the winged mapleleaf mussel (*Quadrula fragosa*). *American Malacological Bulletin* 30: 47–57. <https://doi.org/10.4003/006.030.0104>
- Hove, M.C., B.E. Sietman, J.E. Bakelaar, J.A. Bury, D.J. Heath, V.E. Pepi, J.E. Kurth, J.M. Davis, D.J. Hornbach and A. R. Kapuscinski. 2011. Early Life History and Distribution of Pistolgrip (*Tritogonia verrucosa* (Rafinesque, 1820)) in Minnesota and Wisconsin. *American Midland Naturalist* 165:338-354. <https://doi.org/10.1674/0003-0031-165.2.338>
- Bowne, D.R., A.L. Downing, M.F. Hoopes, K. LoGiudice, C.L. Thomas, L.J. Anderson, T. Gartner, D.J. Hornbach, K.Kuers, J. Machado, B.R. Pohlad and K. L. Shea. 2011. Transforming ecological science at primarily undergraduate institutions through collaborative networks. *BioScience* 61:386-392. <http://dx.doi.org/10.1525/bio.2011.61.5.7>
- Panahbehagh, B., D.R. Smith, M. Salehi, D.J. Hornbach, and J.A. Brown. 2011. Multi-species attributes as the condition for adaptive sampling of rare species using two-stage sequential sampling with an auxiliary variable, pp. 2093-2099 *In* Chan, F., D. Marinova, and R.S. Anderssen (eds.) MODSIM2011, 19th International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2011. (ISBN: 978-0-9872143-1-7)
- Hornbach, D.J., M.C. Hove, B. Dickinson*, K. MacGregor and J.R. Medland. 2010. Estimating population size and habitat associations of two federally endangered mussels in the St. Croix River, Minnesota and Wisconsin, USA. *Aquatic Conservation: Marine and Freshwater Ecosystems* 20: 250-260. <https://doi.org/10.1002/aqc.1081>
- Hornbach, D.J. V.J. Kurth*, and M.C. Hove. 2010. Variation in freshwater mussel shell sculpture and shape along a river gradient. *American Midland Naturalist* 164:22-36. <https://doi.org/10.1674/0003-0031-164.1.22>
- Baker, S.M. and D.J. Hornbach. 2008. Zebra mussels (*Dreissena polymorpha*) attached to native mussels (Unionidae) or inanimate substrates: Comparison of physiological rates and biochemical composition. *American Midland Naturalist* 160:20-28. [https://doi.org/10.1674/0003-0031\(2008\)160\[20:ZMDPAT\]2.0.CO;2](https://doi.org/10.1674/0003-0031(2008)160[20:ZMDPAT]2.0.CO;2)
- Allen,* D.C., M.C. Hove, B.E. Sietman, Mike Davis, D.E. Kelner, Jennifer E. Kurth, Jeffrey L. Weiss, and D.J. Hornbach. 2007. Aspects of reproductive biology and conservation status of *Venustaconcha ellipsiformis* (Bivalvia: Unionidae) in Minnesota. *American Midland Naturalist* 157: 74-91. [http://dx.doi.org/10.1674/0003-0031\(2007\)157\[74:ELACSO\]2.0.CO;2](http://dx.doi.org/10.1674/0003-0031(2007)157[74:ELACSO]2.0.CO;2)
- Hornbach, D.J. 2007. Phylogeny and Classification: Electrophoretic Evidence, pp. 200-202. *IN* G.L. Mackie. *Biology of Freshwater Corbiculid and Sphaeriid Clams of North America*. Ohio Biological Survey Bulletin, New Series, Volume XV, Number 3. Columbus, Ohio.
- Hornbach, D.J. and C.M. Way. 2007. Ecology: Population Dynamics, Energetics and Production, pp. 126-128. *IN* G.L. Mackie. *Biology of Freshwater Corbiculid and Sphaeriid Clams of North America*. Ohio Biological Survey Bulletin, New Series, Volume XV, Number 3. Columbus, Ohio.

- Beekey, MA and D.J. Hornbach. 2004. The effect of size-limited brood size in a freshwater bivalve. *American Midland Naturalist* 151: 274-285.
[https://doi.org/10.1674/0003-0031\(2004\)151\[0274:TEOSBC\]2.0.CO;2](https://doi.org/10.1674/0003-0031(2004)151[0274:TEOSBC]2.0.CO;2)
- Cope, W.G., M.C. Hove, D.L. Waller, D.J. Hornbach, M.R. Bartsch, L.A. Cunningham*, H.L. Dunn and A.R. Kapuscinski. 2003. Evaluation of relocation of unionid mussels to *in situ* refugia. *Journal of Molluscan Studies* 69: 27-34. <https://doi.org/10.1093/mollus/69.1.27>
- Hornbach, D.J. 2001. Macrohabitat factors influencing the distribution and abundance of najads in the St. Croix River, MN and WI, USA, pp. 213-230. *In* G. Bauer and W. Wachtler [eds] *Ecology and Evolutionary Biology of the Freshwater Mussels Unionoidea*. Ecological Studies Vol. 145. Springer-Verlag: Berlin.
- Baker, S. and D.J. Hornbach. 2001. Seasonal metabolism and biochemical composition of two unionid mussels, *Actinonaias ligamentia* and *Ambblema plicata*. *Journal of Molluscan Studies* 67: 407-416.
<https://doi.org/10.1093/mollus/67.4.407>
- Baker, S. and D.J. Hornbach. 2000. Physiological status and biochemical composition of a natural population of unionid mussels (*Ambblema plicata*) infested by zebra mussels (*Dreissena polymorpha*). *American Midland Naturalist* 143: 443-452.
[https://doi.org/10.1674/0003-0031\(2000\)143\[0443:PSABCO\]2.0.CO;2](https://doi.org/10.1674/0003-0031(2000)143[0443:PSABCO]2.0.CO;2)
- Tyrrell*, M. and D.J. Hornbach. 1998. Selective predation by muskrats on freshwater mussels in 2 Minnesota rivers. *Journal of North American Benthological Society* 17: 301-310.
<https://doi.org/10.2307/1468333>
- Baker, S. and D.J. Hornbach. 1997. Acute physiological effects of zebra mussel (*Dreissena polymorpha*) infestation on two unionid mussels, *Actinonaias ligamentina* and *Ambblema plicata*. *Canadian Journal of Fisheries and Aquatic Sciences* 54: 512-597. <https://doi.org/10.1139/f96-319>
- Hornbach, D.J., T. Deneka, B.S. Payne and A.C. Miller. 1996. Shell morphometry and tissue condition of *Ambblema plicata* in the upper Mississippi River. *Journal Freshwater Ecology* 11: 233-240.
<https://doi.org/10.1080/02705060.1996.9663483>
- Hornbach, D.J., J.G. March*, T. Deneka*, N.H. Troelstrup and J.A. Perry. 1996. Factors influencing the distribution and abundance of the endangered winged mapleleaf mussel, *Quadrula fragosa* in the St. Croix River, Minnesota and Wisconsin. *American Midland Naturalist* 136: 278-286.
<https://doi.org/10.2307/2426732>
- Hornbach, D.J. and T. Deneka. 1996. A comparison of a qualitative and a quantitative collection method for examining freshwater mussel assemblages. *Journal of North American Benthological Society* 15: 587-596. <https://doi.org/10.2307/1467809>
- Baker, P., S. Jennings and D.J. Hornbach. 1995. Can zebra mussels force a species to extinction? *Dreissena* 6(5): 1-4.
- Hornbach, D.J., T. Deneka*, M. Hu*, B.S. Payne and A. C. Miller. 1993. Temporal and spatial variability in midge assemblages from a backwater lake in Pool 2, Mississippi River. *Hydrobiologia* 252: 133-141. <https://doi.org/10.1007/BF00008151>
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- Hornbach, D.J., T. Deneka* and R. Dado*. 1991. Life-cycle variation of *Musculium partumeium* (Bivalvia; Sphaeriidae) from a temporary and a permanent pond in Minnesota. *Canadian Journal of Zoology* 69: 2738-2744. <https://doi.org/10.1139/z91-385>
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- Hornbach, D.J. 1991. Life history traits of a riverine population of the Asian clam *Corbicula fluminea*. *American Midland Naturalist* 127:248-257. <https://doi.org/10.2307/2426531>
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- Way, C.M. D.J. Hornbach, T. Deneka* and R.A. Whitehead. 1989. A description of the ultrastructure of the gills of freshwater bivalves, including a new structure, the frontal cirrus. *Canadian Journal of Zoology* 67: 357-362. <https://doi.org/10.1139/z89-053>
- Hornbach, D.J., T. Deneka*, B.S. Payne and A.C. Miller. 1989. Benthic macroinvertebrate community structure in a backwater lake of Pool 2, Upper Mississippi River. *Journal of Freshwater Ecology* 5: 131-138. <https://doi.org/10.1080/02705060.1989.9665223>
- Hornbach, D. J. and D. L. Childers*. 1987. The effects of acidification on life-history traits of the freshwater clam, *Musculium partumeium* (Say), 1822) (Bivalvia: Pisidiidae). *Canadian Journal of Zoology* 65: 113-121. <https://doi.org/10.1139/z87-017>
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- Hornbach, D. J. and D. L. Childers*. 1986. Life-history variation in a stream population of *Musculium partumeium* (Bivalvia: Pisidiidae). *Journal of the North American Benthological Society* 5: 263-271. <https://doi.org/10.2307/1467478>
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