



**Curriculum Vita**  
**Thomas Edward Miller**

Department of Biological Science  
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**Areas of Expertise:**

Plant ecology, general community ecology, natural history of coastal dunes, evolutionary ecology, invasive species, conservation biology

**Education:**

B.S. - Ecology and Evolutionary Biology, University of Arizona, 1978.  
Ph.D. - Zoology, Kellogg Biological Station, Michigan State University, 1985.  
(advisor: P. Werner).

**Professional Employment:**

2004- Professor, Department of Biological Science, Florida State University  
1995-2004 Associate Professor, Department of Biological Science, Florida State University  
1989-95 Assistant Professor, Department of Biological Science, Florida State University  
1987-89 Postdoctoral Associate, Biological Sciences Collegiate Division, University of Chicago (with D. Schemske).  
1986-87 Fellow, North Atlantic Treaty Organization, University of East Anglia, Norwich, England (with A. Watkinson).

**Editorial and Advisory Boards**

Ecology and Ecological Monographs, Ecological Society of America, 1994-97.  
The American Naturalist, American Society of Naturalists, 1998-2001.  
Oecologia, 2003-2007.  
Ecology Letters, Centre National de la Recherche Scientifique, 2003-2009.  
Board of Reviewers for Canada Chairs, 2006-present  
Habitat Conservation Plan Scientific Board for the State of Florida, 2009-present.

**Professional Affiliations:**

Ecological Society of America  
American Society of Naturalists  
Florida Native Plant Society  
Friends of the Apalachicola Forest  
Botanical Society of America

**Peer-reviewed articles:**

Dungan, M. L., T. E. Miller, and D. A. Thomson. 1982. Catastrophic decline of a top carnivore in the Gulf of California rocky intertidal zone. *Science* 216:989-991.  
Miller, T. E. 1982. Community diversity and interactions between the size and frequency of disturbance. *American Naturalist* 120:533-536.  
Miller, T. E., J. S. Wing, and A. R. Huete. 1984. The agricultural potential of selected C4 forbs in arid environments. *Journal of Arid Environments* 7:275-286.  
Miller, T. E. 1987. Effects of emergence time on survival and growth in an early old-field plant community. *Oecologia* 72:272-278.

- Miller, T. E., and P. A. Werner. 1987. Competitive effects and responses between plant species in a first-year old-field community. *Ecology* 68:1201-1210.
- Miller, T. E., and J. Weiner. 1989. Local density variation may mimic effects of asymmetric competition on plant size variability. *Ecology* 70:1188-1191.
- Goldberg, D. E., and T. E. Miller. 1990. Resource additions and species diversity in an annual plant community: effects of different resources. *Ecology* 71:213-225.
- Miller, T. E. and D. W. Schemske. 1990. An experimental study of competitive performance in *Brassica rapa* (Cruciferae). *Amer. J. Bot.* 77:992-998.
- Miller, T. E. 1994. Direct and indirect species interactions in an early old-field plant community. *American Naturalist* 143:1007-1025.
- Miller, T. E., J. Leips, K. Kindell, D. Cassill, C. Johnson, D. McInnes, T. Bevis, D. Mehlman, and B. Richard. 1994. Intraspecific and interspecific in the pitcher plant mosquito, *Wyeomyia haynei*. *American Midland Naturalist* 131:136-145.
- Miller, T. E., A. A. Winn, and D. W. Schemske. 1994. The effects of density and spatial distribution on selection for emergence time in *Prunella vulgaris*. *American Journal of Botany* 81:1-6.
- Miller, T. E. 1995. The evolution of *Brassica rapa* L. (Cruciferae) populations in intra- and interspecific competition. *Evolution* 49:1125-1133.
- Winn, A. A., and T. E. Miller. 1995. Effect of density on magnitude of directional selection on seed mass and emergence time in *Plantago wrightiana* Dcne. (Plantaginaceae). *Oecologia* 103:365-370.
- Miller, T. E. 1996. On quantifying the intensity of competition across gradients. *Ecology* 77:978-981.
- McPeck, M. A., and T. E. Miller. 1996. Evolutionary biology and community ecology. *Ecology* 77:1319-1320.
- Miller, T. E., and J. Travis. 1996. The evolutionary role of indirect effects in communities. *Ecology* 77:1329-1335.
- Harvey, E. and T. E. Miller. 1996. Variance in composition in inquiline communities in leaves of *Sarracenia purpurea* L. on multiple spatial scales. *Oecologia* 108:562-566.
- Kindell, C., A. A. Winn, and T. E. Miller. 1996. The effects of surrounding vegetation and transplant age on the detection of local adaptation in the perennial grass *Aristida stricta*. *Journal of Ecology* 84:745-754.
- Dickinson, J. B., and T. E. Miller. 1998. Competition among small, free-floating aquatic plants. *American Midland Naturalist* 140:55-67.
- Kneitel, J. M. and T. E. Miller. 2002. The effects of resource and top-predator addition to the inquiline community of the pitcher plant *Sarracenia purpurea*. *Ecology* 83:680-688.
- Miller, T., J. M. Kneitel, and J. H. Burns. 2002. Effects of community structure on invasion success and rate. *Ecology* 83:898-90.
- Miller, T. E., L. Horth, and R. Reeves. 2002. Trophic interactions in the phytotelmata communities of the pitcher plant, *Sarracenia purpurea*. *Community Ecology* 3: 109-116.
- Buckley, H. L., T. E. Miller, A. M. Ellison, and N. J. Gotelli. 2003. Reverse latitudinal trends in species richness of pitcher-plant food webs. *Ecology Letters*,6:825-829.
- Ellison, A. M., N. J. Gotelli, J. S. Brewer, D. Liane Cochran-Stafira, J. M. Kneitel, T. E. Miller, A. C. Worley, and R. Zamora. 2003. Carnivorous plants as model ecological systems. *Advances in Ecological Research* 33:1-74.
- Kneitel, J. M. and T. E. Miller. 2003. Dispersal rates affect species composition in metacommunities of *Sarracenia purpurea* inquilines. *American Naturalist* 162:165-171.
- Mouquet, N., P. Munguia, J. M. Kneitel, and T. E. Miller. 2003. Community assembly time and the relationship between local and regional species richness. *Oikos* 103:618-626.
- Knight, T., and T. E. Miller. 2004. Local adaptation within a population of *Hydrocotyle bonariensis*. *Evolutionary Ecology Research* 6:103-114.

- Srivastava, D. S., J. Kolasa, J. Bengtsson, A. Gonzalez, S. P. Lawler, T. E. Miller, P. Munguia, T. Romanuk, D. C. Schneider, and M. K. Trzcinski. 2004. Are natural microcosms useful model systems for ecology? *Trends in Ecology and Evolution* 19:379-384.
- Buckley, H. L., J. H. Burns, J. M. Kneitel, E. L. Walters, P. Munguia, and T. E. Miller. 2004. Small-scale patterns in community structure of *Sarracenia purpurea* inquiline communities. *Community Ecology* 5:181-188.
- Burns, J. H., and T. E. Miller. 2004. Invasion of Chinese Tallow (*Sapium sebiferum*) in the Lake Jackson area, northern Florida. *American Midland Naturalist* 152:410-417.
- Ellison, A. M., H. L. Buckley, T. E. Miller, and N. J. Gotelli. 2004. Morphological variation in *Sarracenia purpurea* (Sarraceniaceae): geographic, environmental, and taxonomic correlates. *American Journal of Botany* 91:1930-1935.
- Miller, T. E., J. H. Burns, P. Munguia, E. L. Walters, J. M. Kneitel, P. Richards, N. Mouquet, and H. Buckley. 2005. A critical review of twenty years' use of the resource-ratio theory. *American Naturalist* 165:439-448.
- Gray, S., T. E. Miller, N. Mouquet, and T. Daufresne. 2006. Nutrient limitation in detritus-based microcosms. *Hydrobiologia* 573:173-181.
- Mouquet, N., T. E. Miller, T. Daufresne, and J. M. Kneitel. 2006. Consequences of varying regional heterogeneity in source-sink metacommunities. *Oikos* 113:481-488.
- Hoekman, D., A. Bauer, S. Braun, P. Gignac, R. Hopkins, S. Joshi, K. Laskis, N. Sanscrainte, C. terHorst, J. Travis, and T. E. Miller. 2007. Oviposition decreased in response to enriched water: a field study of the pitcher-plant mosquito, *Wyeomyia smithii*. *Ecological Entomology* 32:92-96.
- Miller, T. E., J. H. Burns, P. Munguia, E. L. Walters, J. M. Kneitel, P. Richards, N. Mouquet, and H. Buckley. 2007. Evaluating support for the resource-ratio hypothesis: A response to Wilson et al. *American Naturalist* 169:707-708.
- Burns, Jean H., Pablo Munguia, Benjamin E. Nomann, Sarah J. Braun, Casey P. terHorst and Thomas E. Miller. 2008. Vegetative morphology and trait correlations in 54 species of Commelinaceae. *Botanical Journal of the Linnean Society* 158:257-268.
- Mouquet, N., T. Daufresne, T. Miller, and S. Gray. 2008. Modelling the relationship between a pitcher plant (*Sarracenia purpurea*) and its phytotelma community: mutualism or parasitism? *Functional Ecology* 22:728-737
- Munguia, P., and T. E. Miller. 2008. Habitat destruction and metacommunity size in pen shell communities. *Journal of Animal Ecology* 77:1175-1182.
- Miller, T. E., C. terHorst, and J. Burns. 2009. The ghost of competition present. *American Naturalist* 173:347-353.
- Buckley, H., T. E. Miller, A. M. Ellison, and N. J. Gotelli. 2010. Local to continental-scale variation in the richness and composition of an aquatic food web. *Journal of Global Ecology and Biogeography* 19:711-723.
- Gornish, E. and T. E. Miller. 2010. Effects of storm frequency on dune vegetation. *Global Change Biology* 16:2668-2675.
- Miller, T. E., E. Gornish, and H. Buckley. 2010. Climate and coastal dune vegetation: disturbance, recovery and succession. *Plant Ecology* 206:97-104.
- terHorst, C., T. E. Miller, and D. R. Levitan. 2010. Evolution of prey in ecological time reduces the effects size of predators. *Ecology* 91:629-636.
- terHorst, C. P., T. E. Miller and E. Powell. 2010. When can competition for resources lead to ecological equivalence? *Evolutionary Ecology Research* 12:843-854.
- Mouquet, N., B. Matthiessen, T. E. Miller, and A. Gonzalez. 2011. Extinction debt in source-sink metacommunities. *PloS One* 6:e17567
- Baiser, B., N. J. Gotelli, H. L. Buckley, T. E. Miller, and A. M. Ellison. 2012. Geographic variation in network structure of a nearctic aquatic food web. *Global Ecology and Biogeography*: 21:579-591.

- Kadowaki, K., B. D. Inouye, and T. E. Miller. 2012. Assembly-history dynamics of a pitcher-plant protozoan community in experimental microcosms. *PLoS ONE* 7: e42651. doi:10.1371/journal.pone.0042651.
- Miller, T. E., and C. P. terHorst. 2012. Succession in the water-filled leaves of the purple pitcher plant (*Sarracenia purpurea*). *Oecologia* 170:243-251
- Miller, T. E., and C. P. terHorst. 2012. Indirect Effects in Communities and Ecosystems. In *Oxford Bibliographies Online: Ecology*. Ed. David Gibson. New York: Oxford University Press.
- Gornish, E. S., and T. E. Miller. 2013. Using long-term census data to inform restoration methods for coastal dune vegetation. *Estuaries and Coasts* 36:1014-1023.
- Pastore, A., C. Prather, E. Gornish, W. Ryan, R. Ellis, and T. Miller. 2013. Testing the competition-colonization trade-off with a 32 year study of a saxicolous lichen community. *Ecology*, in press.
- Gray, S. M., T. Poisot, E. Harvey, N. Mouquet, T. E. Miller, and D. Gravel. 2013. Temperature and trophic structure are driving ecosystem functioning along a biogeographical gradient. In revision, *Proceedings of the National Academy of Sciences*.
- Miller, T. E., E. R. Moran, and C. P. terHorst. 2013. Rethinking niche evolution: experiments with natural communities of protozoa in pitcher plants. In revision, *American naturalist*.

#### **Book Chapters:**

- Miller, T. E., and W. C. Kerfoot. 1987. Redefining indirect effects. Pp. 33-37 in W. C. Kerfoot and A. Sih, eds. *Predation: direct and indirect impacts on aquatic communities*. New England University Press.
- Miller, T. E. 1999. Optimal foraging: balancing costs and rewards in making foraging decisions. Pp. 187-206 in S. J. Karcher, ed. *Tested Studies for Laboratory Teaching*, Volume 20. Kendall/Hunt, Dubuque, Iowa.
- Leibold, M. A., and T. E. Miller. 2004. From metapopulations to metacommunities. Pp. 133-150 in Hanski, I., and O. Gaggiotti (eds.), *Ecology, Genetics, and Evolution of Metapopulations*. Academic Press.
- Miller, T. E., and J. M. Kneitel. 2005. Inquiline communities in pitcher plants as a prototypical metacommunity. Pp. 122-145 in Holyoak, M., M. A. Leibold, and R. D. Holt (eds.), *Metacommunities: Spatial Dynamics and Ecological Communities*. University of Chicago Press, Chicago.

#### **Published Reviews:**

- Miller, T. E. 1990. Ecological Interactions (book review). *Science* 249:1054.
- Miller, T. E. 1992. Foundations of Ecology (book review). *Journal of Vegetation Science* 3: 719-722.
- Miller, T. E., C. Hayes, and M. Collins. 1996. Biological diversity (book review). *Economic Botany* 50:143.
- Miller, T. E., and G. LeBuhn. 1998. The ecological detective (book review). *Science* 281:788.