MARK J. MCKONE - CURRICULUM VITAE

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Academic positions

2015-present	Towsley Chair of Biology
2007-present	Research Supervisor of Cowling Arboretum & McKnight Prairie, Carleton College.
1999 - present	Professor of Biology, Carleton College.
1993-1999	Associate Professor of Biology, Carleton College.
1991-2007	Director of Cowling Arboretum & McKnight Prairie, Carleton College.
1987-1993	Assistant Professor of Biology, Carleton College.
1985-87	postdoctoral research fellow with Dr. David Lloyd, University of Canterbury, Christchurch, New Zealand.

Education

1985	Ph.D. in Ecology and Behavioral Biology, University of Minnesota, Minneapolis. Thesis title: "Gender in hermaphrodites: intraspecific variation in some wind-pollinated plants and the effect of breeding system." Minor in Botany.
1980	M.S. in Ecology and Behavioral Biology at the University of Minnesota, Minneapolis. Thesis title: "The effect of nutrients on competition among old field plants." Minor in Statistics.
1976	B.S.S. from Cornell College, Mt. Vernon, Iowa. Majors in Biology and Mathematics. Phi Beta Kappa, *summa cum laude*.

Classes currently taught at Carleton College

Evolution (Biology 350), Population Ecology (Biology 352) with lab (Biology 353), seminar on the Evolution of Sex and Sexes (Biology 358), Biostatistics (Biology 244), and part of Introductory Biology (Biology 125).

Research interests

Evolutionary ecology, especially of plant/insect interactions. Particular interests include the reproductive biology of prairie plants (especially asters and other composites) and the evolutionary impact of pre-dispersal seed predators.

Membership in professional societies

Ecological Society of America (since 1978), Society for the Study of Evolution (since 1979), Botanical Society of America (since 1984), American Society of Naturalists (since 1988).

Publications (* indicates Carleton College undergraduate or graduate)

Traw T.*, A. Ursin*, N. Braker, M.J. McKone, and S.G. Zweifel. 2026. Genetic evidence of interspecific hybridization in a threatened prairie legume, *Lespedeza leptostachya* in a southern Minnesota native prairie remnant. Natural Areas Journal 46:137- 141.

Hernández, D.L., S.M. Jones*, and M.J. McKone. 2026. Exclusion of dominant grasses from a prairie seed mix has long-term impacts on species richness and ecosystem properties. Ecosphere 17:e70689.

Beck*, J.J., M.J. McKone, and S. Wagenius*. 2024. Masting, fire-stimulated flowering, and the evolutionary ecology of synchronized reproduction. Ecology 105:e4261.

McKone, M.J. 2023. Loss of avian intromittent organs as a sperm competition strategy: a race to be last. American Naturalist 201:138-153.

Hernández, D.L., A. Antia*, and M.J. McKone. 2022. The ecosystem impacts of dominant species exclusion in a prairie restoration. Ecological Applications e2592.

McKone, M.J., E.W. Williams*, and J.J. Beck*. 2021. Evidence for local-scale community assembly processes from long-term observations of biodiversity in a grassland chronosequence. Journal of Vegetation Science 32:e13065.

McKone, M.J., and D.L. Hernández. 2021. Community-level assisted migration for climate-appropriate prairie restoration. Restoration Ecology 29:e13416.

McKone, M.J., and D.A. Beccue. 2021. The Iowa bird that inspired Antonín Dvořák's American String Quartet in 1893: controversy over the species' identity and why it matters. Nineteenth Century Music Review 18:521-537.

McKone, M.J., A.K. Gibson, D. Cook*, L.A. Freymiller*, D. Mishkind*, A. Quinlan*, J.M. York*, C.M. Lively, and M. Neiman*. 2016. Fine-scale association between parasites and sex in *Potamopyrgus antipodarum* within a New Zealand lake. New Zealand Journal of Ecology 40:330-333.

Beck, J.J.*, M.J. McKone, and O.S. McMurtrey*. 2016. Edge effects and avian community structure in a restored tallgrass prairie. Natural Areas Journal 36:328-333.

McKone, M.J., J.W. Moore*, C.W. Harbison*, I.C. Holmen*, H.C. Lyons*, K.M. Nachbor*, J.L. Michalak*, M. Neiman*, J.L. Nicol*, and G.R. Wheeler*. 2014. Rapid collapse of a population of *Dieffenbachia* spp., a plant used for tadpole-rearing by poison-dart frogs (*Oophaga pumilio*) in a Costa Rican rain forest. Journal of Tropical Ecology 30:615-619.

Hernández, D.L., E.H. Esch*, C.J. Alster*, M.J. McKone, and P. Camill. 2013. Rapid accumulation of soil carbon and nitrogen in a prairie restoration chronosequence. Soil Science Society of America Journal 77:2029-2038

Sandel, B.S.*, and M.J. McKone. 2006. Reconsidering null models of diversity: Do geometric constraints on species' ranges necessarily cause a mid-domain effect? Diversity and Distributions 12:467-474.

Camill, P., M.J. McKone, S.T. Sturges*, W.J. Severud*, E. Ellis*, J. Limmer*, C.B. Martin*, R.T. Navratil*, A.J. Purdie*, B.S. Sandel*, S.Talukder*, and A. Trout*. 2004. Community and ecosystem-level changes in a species-rich tallgrass prairie restoration. Ecological Applications 14:1680-1694.

McKone, M.J., and S.H. Halpern*. 2003. The evolution of androgenesis. American Naturalist 161:641-656.

Doherty, K.R.*, E.W. Zweifel, N.C. Elde*, M.J. McKone, and S.G. Zweifel. 2003. Random amplified polymorphic DNA markers reveal genetic variation in the symbiotic fungus of leaf-cutting ants. Mycologia 95:19-23.

Linksvayer, T.A.*, A.C. McCall*, R.M. Jensen*, C.M. Marshall*, J.W. Miner*, and M.J. McKone. 2002. The function of hitchhiking behavior in the leaf-cutting ant *Atta cephalotes*. Biotropica 34:93-100.

McKone, M.J., K.K. McLauchlan*, E.G. LeBrun*, and A.C. McCall*. 2001. An edge effect caused by adult corn-rootworm beetles on sunflowers in tallgrass prairie remnants. Conservation Biology 15:1315-1324.

McKone, M.J., D. Kelly, A.L. Harrison, J.J. Sullivan, and A.J. Cone. 2001. Biology of insects that feed in the inflorescences of *Chionochloa* (Poaceae) in New Zealand and their relevance to mast seeding. New Zealand Journal of Zoology 28:89-101.

Cutraro, J.L.*, A.Y. Ercelawn*, E.G. LeBrun*, E.W. Lonsdorf*, H.A. Norton*, and M.J. McKone. 1998. Importance of pollen and nectar in flower choice by hummingbird flower mites, *Proctolaelaps kirmsei* (Mesostigmata: Ascidae). International Journal of Acarology 24:345-351.

McKone, M.J., D. Kelly, and W.G. Lee. 1998. Effect of climate change on escape from insect seed predators by masting species. Global Change Biology 4:591-596.

McKone, M.J., C.P. Lund*, and J.M. O'Brien*. 1998. Reproductive biology of two dominant prairie grasses (Poaceae: *Andropogon gerardii* and *Sorghastrum nutans*): male-biased sex allocation in wind-pollinated plants? American Journal of Botany 85:776-783.

Garrettson, M.*, J.F. Stetzel*, B.S. Halpern*, D.J. Hearn*, B.T. Lucey*, and M.J. McKone. 1998. Diversity and abundance of understorey plants on active and abandoned nests of leaf-cutting ants (*Atta cephalotes*) in a Costa Rican rain forest. Journal of Tropical Ecology 14:17-26.

Hinman, K.*, H. Throop*, K. Adams*, A. Dake*, K. McLauchlan*, and M.J. McKone. 1997. Predation by free-ranging birds on partial coral-snake mimics: the importance of ring width and color. Evolution 51:1011-1014.

McKone, M.J., A.L. Thom, and D. Kelly. 1997. Self-compatibility in *Chionochloa pallens* and *C. macra* (Poaceae) confirmed by hand pollination of excised styles. New Zealand Journal of Botany 35:259-262.

McKone, M.J., R. Ostertag*, J.T. Rauscher*, D.A. Heiser*, and F.L. Russell*. 1995. An exception to Darwin's syndrome: floral position, protogyny, and insect visitation in *Besseya bullii* (Scrophulariaceae). Oecologia 101:68-74.

Lively, C.M., and M.J. McKone. 1994. Choosing an appropriate ANOVA for experiments conducted at few sites. Oikos 69:335.

McKone, M.J., and C.M. Lively. 1993. Statistical analysis of experiments conducted at multiple sites. Oikos 67:184-186.

Dickinson, J.A.*, and M.J. McKone. 1992. Insect floral visitors to four species of tall-grass prairie composite (Asteraceae: Heliantheae). Prairie Naturalist 24:159-174.

Kelly, D., M.J. McKone, K.J. Batchelor, and J.R. Spence. 1992. Mast seeding of *Chionochloa* (Poaceae) and pre-dispersal seed predation by a specialist fly (*Diplotoxa*, Diptera: Chloropidae). New Zealand Journal of Botany 30:125-133.

McKone, M.J. 1990. Characteristics of pollen production in a population of New Zealand snow-tussock grass (*Chionochloa pallens*). New Phytologist 116:555-562.

McKone, M.J. 1989. Intraspecific variation in pollen yield in bromegrass (Poaceae: *Bromus*). American Journal of Botany 76:231-237.

McKone, M.J., and C.J. Webb. 1988. A difference in pollen size between the male and hermaphrodite flowers of two species of Apiaceae. Australian Journal of Botany 36:331- 337.

McKone, M.J. 1987. Sex allocation and outcrossing rate: a test of theoretical predictions using bromegrasses (*Bromus*). Evolution 41:591-598.

McKone, M.J., and D.D. Biesboer. 1986. Nitrogen fixation in association with the root systems of goldenrod (*Solidago* L.). Soil Biology and Biochemistry 18:543-545.

McKone, M.J., and D.W. Tonkyn. 1986. Intrapopulation gender variation in common ragweed (Asteraceae: *Ambrosia artemisiifolia* L.), a monoecious, annual herb. Oecologia 70:63-67.

McKone, M.J. 1985. The reproductive biology of several bromegrasses (*Bromus* L.): breeding system, the pattern of fruit maturation, and seed set. American Journal of Botany 72:1334- 1339.

Lyon, D.L., J. Crandall, and M. McKone. 1977. A test of the adaptiveness of interspecific territoriality in the blue-throated hummingbird. Auk 94:448-454.