

1979–1981: Teaching Assistant, Biology Department, Humboldt State University

HONORS AND AWARDS

- 2014–2017:** President-Elect, President, Past President, American Society of Plant Taxonomists
2013–2016: President-Elect, President, Past President, Botanical Society of America
2008: *Plant Species Biology* Best Paper Award (see Ramp, Ranker, & Collinge, 2008, below)
2007: Elected Fellow of the American Association for the Advancement of Science (AAAS)
 “For significant contributions to the fields of phylogeny and evolution of vascular plants, particularly to the biogeography of island floras in the Pacific”
2005–2011: President, International Association of Pteridologists
2002–2006: President-Elect, President, American Fern Society
1997: Award for Excellence and Dedication in Teaching, Mortar Board Senior Honor Society, University of Colorado at Boulder
1992: Edgar T. Wherry Award for the Best Contributed Paper presented to the Pteridological Section of the Botanical Society of America at the annual meeting
1981: Recipient of Outstanding Graduate Student Award, Department of Biology, Humboldt State University

RESEARCH INTERESTS

The origin and evolution of the flora of oceanic and other islands. Phylogenetic systematics and evolution of vascular plants, especially ferns and lycophytes; evolutionary and ecological genetics of plant populations; conservation biology; historical biogeography. Field experience: Canada, China (Yunnan Province), Costa Rica, Cuba, Hawaiian Islands, Jamaica, La Réunion, Malaysia (Sabah, Borneo), México, Papua New Guinea, Puerto Rico, Society Islands, Taiwan, continental USA, Vanuatu.

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

American Association for the Advancement of Science, American Fern Society, American Society of Plant Taxonomists, Association for Tropical Biology & Conservation, Botanical Society of America, International Association for Plant Taxonomy, International Association of Pteridologists, Society for Conservation Biology, Society for the Study of Evolution, Society of Systematic Biologists, The American Society of Naturalists

EXTRAMURAL RESEARCH GRANTS AWARDED SINCE 1990

- National Science Foundation. **1990–1993.** \$170,000. Conservation and Restoration Biology: Evolutionary and conservation genetics of native Hawaiian ferns. (PI)
 National Science Foundation. **1994–1996.** \$10,000. Dissertation Research for Chrissen Gemmill: Population genetics and phylogenetic systematics of the native Hawaiian palm genus *Pritchardia*. (PI)
 National Science Foundation. **1993–1995.** \$11,000. Dissertation Research for Anna Arft: Population biology, phylogenetic systematics, and conservation management of *Spiranthes diluvialis*. (PI)
 National Science Foundation. **1998–2001.** \$81,564 (including \$6,563 REU Supplement). Collaborative Research: Morphological and molecular systematics of the Polypodiaceae and Grammitidaceae. (PI) (Collaborative project with A. R. Smith, University of California–Berkeley and C. H. Haufler, University of Kansas; total budget: \$212,000.)

- National Science Foundation. **2001–2003**. \$9,814. Dissertation Research for Jennifer Geiger: Phylogenetic systematics and biogeography of Hawaiian *Dryopteris* (Dryopteridaceae). (PI)
- National Science Foundation. **2002–2004**. \$9,991. Dissertation Research for Jennifer Ramp: Microevolutionary dynamics and population genetics of the endangered California vernal pool sunflower *Lasthenia conjugens* (Asteraceae). (PI)
- National Geographic Society. **2003–2005**. \$27,921. Historical biogeography and origin of the fern flora of Hawaii. (PI)
- National Science Foundation. **2004–2007**. \$210,728. Collaborative Research: Origin of the Hawaiian pteridophyte flora. (PI) (Collaborative project with J. M. O. Geiger, Carroll College, Helena, MT. Total budget \$311,674.)
- National Science Foundation. **2004–2006**. \$8,530. Dissertation Research for Jonathan Krieger: The evolution of developmental modules and lability of leaf form in the fern genus *Pleopeltis* (Polypodiaceae). (Co-PI; PI: R. Guralnick)
- National Science Foundation. **2004–2006**. \$9,905. Dissertation Research for Shannon Fehlberg: Evolutionary diversification of *Encelia* (Asteraceae: Heliantheae) in the Sonoran and Mohave Deserts based on multiple DNA sequences. (PI)
- NOAA–CIRES Climate Diagnostics Center. **2005–2006**. \$25,401. Using an adapted atmospheric trajectory model to identify the dominant source regions for the colonization of Hawaiian fern species. (PIs: Ramp Neale, J. M., R. Neale, T. A. Ranker, and B. Mapes. Awarded but declined due to change in employment of R. Neale.)
- State of Hawai‘i, Department of Transportation. **2011–2014**. \$275,093. Developing a large-scale delivery system for roadside re-vegetation with native Hawaiian ferns. (PI N. Sugii; Co-PIs C. Dunn and T. A. Ranker)
- National Science Foundation. **2011–2016**. \$420,378. REVSYS: Systematics of Paleotropical grammitid ferns (Polypodiaceae): using phylogenies to resolve generic circumscriptions and explore the evolution of morphological characters. [Including REU supplements for \$12,500 + \$6,250] (PI)
- National Science Foundation. **2016–2020**. \$212,624. Collaborative Research: Plant and Fungal Diversity of Tafea Province, Vanuatu, a Threatened Pacific Hotspot. (PI; with New York Botanical Garden, Swarthmore College, & California State University East Bay; total budget: \$1,294,759)

EXTRAMURAL EQUIPMENT & FACILITY GRANTS AWARDED SINCE 1990

- National Science Foundation. **1991**. \$20,695. Proposal for a shared ultracentrifuge to serve combined needs in physiology and molecular systematics. (Co-PI)
- National Science Foundation. **1994–1995**. \$202,500. Replacement and modernization of greenhouse facilities. (Co-PI) (Chair of EPOB Greenhouse Construction Committee)
- National Science Foundation. **1996**. \$12,315. Upgrade of storage facilities for the Colorado gymnosperm collection. (PI)
- National Science Foundation. **1999–2000**. \$50,000. From Grassland to Glacier: Planning for an interactive exhibit on biodiversity. (Project Curator - not listed on coversheet)
- National Science Foundation. **2003–2006**. \$67,847. Collaborative Research: Linked databases and interactive key for the vascular flora of the Southern Rocky Mountain Region. (PI) [Collaborative project with Colorado State University, University of Northern Colorado, and University of Wyoming; total budget \$450,000.]
- National Science Foundation. **2011–2015**. \$431,818. Collaborative Research: Consortium of Pacific Herbaria – A Research and Collections Network for Oceania. (PI) (with Bishop Museum and National Tropical Botanical Garden; total budget: \$1,445,241)

PEER-REVIEWED JOURNAL ARTICLES
(77 TOTAL)

1985

Haufler, C. H. and T. A. Ranker.** 1985. Effects of differential antheridiogen response on evolutionary mechanisms in *Cystopteris*. *American Journal of Botany* 72: 659–665.

1986

Ranker, T. A.** and A. F. Schnabel.** 1986. Allozymic and morphological evidence for a progenitor–derivative species pair in *Camassia* (Liliaceae). *Systematic Botany* 11: 433–445.

Ranker, T. A.** and C. R. Werth. 1986. Active enzymes from herbarium specimens: Electrophoresis as an afterthought. *American Fern Journal* 76: 102–113.

Barrington, D. S., C. Paris,** and T. A. Ranker.** 1986. Systematic inferences from spore and stomate size in the ferns. *American Fern Journal* 76: 149–159.

Windham, M. D., P. G. Wolf,** and T. A. Ranker.** 1986. Factors affecting prolonged spore viability in herbarium collections of three species of *Pellaea*. *American Fern Journal* 76: 141–148.

1989

Ranker, T. A. 1989. Spore morphology and generic delimitation in New World *Hemionitis*, *Gymnopteris*, and *Bommeria* (Adiantaceae). *American Journal of Botany* 76: 297–306.

Ranker, T. A., C. H. Haufler, P. S. Soltis, and D. E. Soltis. 1989. Genetic evidence for allopolyploidy in the neotropical fern *Hemionitis pinnatifida* (Adiantaceae) and the reconstruction of an ancestral genome. *Systematic Botany* 14: 439–447.

Sheffield, E., P. G. Wolf, C. H. Haufler, T. A. Ranker, and A. C. Jermy. 1989. A re–evaluation of plants referred to as *Pteridium herediae* (Colmeiro) Löve & Kjellqvist. *Botanical Journal of the Linnean Society* 99: 377–386.

Soltis, D. E., P. S. Soltis, T. A. Ranker, and B. D. Ness. 1989. Chloroplast DNA variation in a wild plant, *Tolmiea menziesii*. *Genetics* 121: 819–826.

1990

Haufler, C. H., M. D. Windham, and T. A. Ranker. 1990. Biosystematic analysis of the *Cystopteris tennesseensis* complex. *Annals of the Missouri Botanical Garden* 77: 314–329.

Ranker, T. A. 1990. Phylogenetic systematics of neotropical *Hemionitis* and *Bommeria* (Adiantaceae) based on morphology, allozymes, and flavonoids. *Systematic Botany* 15: 442–453.

Ranker, T. A. and C. H. Haufler. 1990. A new combination in *Bommeria* (Adiantaceae). *American Fern Journal* 80: 1–3.

Ranker, T. A., D. E. Soltis, P. S. Soltis, and A. J. Gilmartin. 1990. Subfamilial phylogenetic relationships of the Bromeliaceae: Evidence from chloroplast DNA restriction site variation. *Systematic Botany* 15: 425–434.

Schneller, J. J., C. H. Haufler, and T. A. Ranker. 1990. Antheridiogen and natural gametophyte populations. *American Fern Journal* 80: 143–152.

1991

Aradhya, K. M., D. Mueller–Dombois, and T. A. Ranker. 1991. Genetic evidence for recent and incipient speciation in the evolution of Hawaiian *Metrosideros*. *Heredity* 67: 129–138.

1992

Ranker, T. A. 1992. Genetic diversity, mating systems, and interpopulation gene flow in neotropical *Hemionitis palmata* L. (Adiantaceae). *Heredity* 69: 175–183.

Ranker, T. A. 1992. Genetic diversity of endemic Hawaiian epiphytic ferns: Implications for conservation. *Selbyana* 13: 131–137.

Ranker, T. A. 1992. *Adenophorus x carsonii* hyb. nov. (Grammitidaceae): A new endemic hybrid from the Island of Hawaii. *Novon* 2: 408–410.

1993

Aradhya, K. M., D. Mueller–Dombois, and T. A. Ranker. 1993. Genetic structure and differentiation in *Metrosideros polymorpha* (Myrtaceae) along altitudinal gradients in Maui, Hawaii. *Genetical Research* 61: 159–170.

Sheffield, E., P. G. Wolf, F. J. Rumsey, D. J. Robson, T. A. Ranker, and S. M. Challinor. 1993. Spatial distribution and reproductive behaviour of a triploid bracken (*Pteridium aquilinum*) clone in Britain. *Annals of Botany* 72: 231–237.

1994

- Brunsfeld, S. J., P. S. Soltis, D. E. Soltis, P. A. Gadek, C. J. Quinn, D. Streng, and T. A. Ranker. 1994. Phylogenetic relationships among genera of the conifer families Taxodiaceae and Cupressaceae: Evidence from *rbcL* sequences. *Systematic Botany* 19: 253–262.
- Ranker, T. A. 1994. Evolution of high genetic variability in the rare Hawaiian fern *Adenophorus periens* and implications for conservation management. *Biological Conservation* 70: 19–24.
- Ranker, T. A. and A. M. Arft.** 1994. Allopolyploid species and the U. S. Endangered Species Act. *Conservation Biology* 8: 895–897.
- Ranker, T. A., S. K. Floyd,** and P. G. Trapp. 1994. Multiple colonizations of *Asplenium adiantum-nigrum* onto the Hawaiian Archipelago. *Evolution* 48: 1364–1370.
- Ranker, T. A., S. K. Floyd,** M. D. Windham, and P. G. Trapp. 1994. Historical biogeography of *Asplenium adiantum-nigrum* in North America and implications for speciation theory in homosporous pteridophytes. *American Journal of Botany* 81: 776–781.

1995

- Haufler, C. H. and T. A. Ranker. 1995. *rbcL* sequences provide phylogenetic insights among sister species of the fern genus *Polypodium*. *American Fern Journal* 85: 361–374. (Invited contribution)
- Ranker, T. A. 1995. DNA sequence data in phylogeny reconstruction: an overview of techniques and analyses. *American Fern Journal* 85: 123–133. (Invited contribution)
- Sheffield, E., P. G. Wolf, and T. A. Ranker. 1995. Genetic analysis of bracken in the Hawaiian Islands. Pp. 19–32 (Chapter 5), in "Bracken: An Environmental Issue", R. T. Smith and J. A. Taylor (eds). International Bracken Group, Special Publication No. 2.

1997

- Johnston, J.*, M. D. Bowers, and T. A. Ranker. 1997. Iridoid glycoside and allozyme variation within and among populations of *Plantago rhodosperma* Decne. (Plantaginaceae). *Biochemical Systematics and Ecology* 25: 581–590.

1998

- Arft, A. M.** and T. A. Ranker. 1998. Population genetics and the allopolyploid origin of the rare orchid *Spiranthes diluvialis* (Orchidaceae). *American Journal of Botany* 85: 110–122.
- Chiou, W.-L., D. R. Farrar, and T. A. Ranker. 1998. Gametophyte morphology and reproductive biology in *Elaphoglossum* Schott. *Canadian Journal of Botany* 76: 1967–1977.
- Diggle, P. K., S. Lower*, and T. A. Ranker. 1998. Clonal diversity in alpine populations of *Polygonum viviparum* (Polygonaceae). *International Journal of Plant Science* 159: 606–615.
- Floyd, S. K.** and T. A. Ranker. 1998. Analysis of a transition matrix model for *Gaura neomexicana* ssp. *coloradensis* (Onagraceae) reveals spatial and temporal demographic variability. *International Journal of Plant Science* 159: 853–863.
- Gemmill, C. E. C.,** T. A. Ranker, D. Ragone, S. P. Perlman, and K. Wood. 1998. Conservation genetics of the endangered endemic Hawaiian genus *Brighamia* (Campanulaceae). *American Journal of Botany* 85: 528–539.

1999

- Chiou, W. L., D. R. Farrar, and T. A. Ranker. 1999. Gametophyte growth and sexual reproduction of some epiphytic ferns. Pp. 303–315. In X. C. Zhang & K. H. Shing (eds.). Ching Memorial Volume, A collection of pteridological papers published to commemorate the centenary of the birth of Professor Ren-Chang Ching. China Forestry Publishing House, Beijing.
- Russell, A. E., T. A. Ranker, C. E. C. Gemmill,** and D. R. Farrar. 1999. Patterns of clonal diversity in *Dicranopteris linearis* on Mauna Loa, Hawaii. *Biotropica* 31: 449–459.

2000

- Bingham, R. A.** and T. A. Ranker. 2000. Genetic diversity in alpine and foothill populations of *Campanula rotundifolia* (Campanulaceae). *International Journal of Plant Science* 161: 403–411.

- Ranker, T. A., C. E. C. Gemmill,** and P. G. Trapp. 2000. Microevolutionary patterns and processes of the native Hawaiian colonizing fern *Odontosoria chinensis* (Lindsaeaceae). *Evolution* 54: 828–839.
- 2001**
- Korb, J. E.** and T. A. Ranker. 2001. Changes in stand composition and structure between 1981 and 1996 in four Front–Range plant communities in Colorado. *Plant Ecology* 157: 1–11.
- Wolf, P. G., H. Schneider, and T. A. Ranker. 2001. Distributions of fern taxa: does dispersal obscure evidence of vicariance? *Journal of Biogeography* 28: 263–270.
- 2002**
- Chiou, W.–L., D. R. Farrar, and T. A. Ranker. 2002. The mating systems of some Polypodiaceae species. *American Fern Journal* 92: 65–79.
- Ranker, T. A. and H. A. Houston.** 2002. Is gametophyte sexuality in the lab a good predictor of sexuality in nature? *Sadleria* as a case study. *American Fern Journal* 92: 112–118.
- Schneider, H., A. R. Smith, R. Cranfill, C. H. Haufler, T. A. Ranker, T. Hildebrand. 2002. *Gymnogrammitis dareiformis* is a polygrammoid fern (Polypodiaceae) – Resolving an apparent conflict between morphological and molecular data. *Plant Systematics and Evolution* 234: 121–136.
- Wise, C. A.,** T. A. Ranker, and Y. B. Linhart. 2002. Modeling problems in conservation genetics with *Brassica rapa*: I. Genetic variation and fitness in plants under mild, stable conditions. *Conservation Biology* 16: 1542–1554.
- 2003**
- Haufler, C. H., W. A. Grammer, E. Hennipman, T. A. Ranker, and A. R. Smith. 2003. Systematics of the Ant–Fern Genus *Lecanopteris*: Testing Phylogenetic Hypotheses using DNA Sequences. *Systematic Botany* 28: 217–227.
- Ranker, T. A., J. M. O. Geiger,** S. C. Kennedy*, A. R. Smith, C. H. Haufler, and B. S. Parris. 2003. Molecular phylogenetics and evolution of the endemic Hawaiian genus *Adenophorus* (Grammitidaceae). *Molecular Phylogenetics and Evolution* 26: 337–347.
- 2004**
- Schneider, H., A. R. Smith, R. Cranfill, T. E. Hildebrand, C. H. Haufler, T. A. Ranker. 2004. Unraveling the phylogeny of polygrammoid ferns (Polypodiaceae & Grammitidaceae): exploring aspects of the diversification of epiphytic plants. *Molecular Phylogenetics and Evolution* 31: 1041–1063.
- Ranker, T. A., A. R. Smith, B. S. Parris, J. M. O. Geiger,** C. H. Haufler, S. C. K. Straub*, and H. Schneider. 2004. Phylogeny and evolution of grammitid ferns (Grammitidaceae): a case of rampant morphological homoplasy. *Taxon* 53: 415–428.
- Schneider, H., T. Janssen, P. Hovenkamp, A. R. Smith, C. H. Haufler, and T. A. Ranker. 2004. Phylogenetic relationships of the enigmatic Malesian genus *Thylacopteris* (Polypodiaceae, Polypodiidae). *International Journal of Plant Sciences* 165: 1077–1087.
- 2005**
- Schneider, H., T. A. Ranker, S. J. Russell, R. Cranfill, J. M. O. Geiger,** R. Agurauja, K. R. Wood, M. Grundmann, K. Kloberdanz*, and J. C. Vogel. 2005. Origin and diversification of the Hawaiian fern genus *Diellia* Brack. (Aspleniaceae, Polypodiidae). *Proceedings of the Royal Society of London Series B–Biological Sciences* 272: 455–460.
- Geiger, J. M. O.** and T. A. Ranker. 2005. Molecular phylogenetics and historical biogeography of Hawaiian *Dryopteris* (Dryopteridaceae). *Molecular Phylogenetics and Evolution* 34: 392–407.
- Ranker, T. A., P. G. Trapp, A. R. Smith, R. C. Moran, and B. S. Parris. 2005. New Records of Lycophytes and Ferns from Moorea, French Polynesia. *American Fern Journal* 95:126–127.
- 2006**
- Ramp Neale, J. M.,** S. K. Collinge, and T. A. Ranker. 2006. Restoration genetics of the vernal pool endemic *Lasthenia conjugens*. *Conservation Genetics* 7: 631–649.
- Smith, A. R., H.–P. Kreier, C. H. Haufler, T. A. Ranker, and H. Schneider. 2006. *Serpocaulon* (Polypodiaceae), a new genus segregated from old *Polypodium*. *Taxon* 55: 919–930.
- 2007**

- Fehlberg, S. D.** and T. A. Ranker. 2007. Phylogeny and Biogeography of *Encelia* (Asteraceae) in the Sonoran and Peninsular Deserts Based on Multiple DNA Sequences. *Systematic Botany* 32: 692–699.
- Geiger, J. M. O., T. A. Ranker, J. M. Ramp Neale,** S. T. Klimas.** 2007. Molecular biogeography and origins of the Hawaiian fern flora. *Brittonia* 59: 142–158.
- 2008**
- Ramp Neale, J. M.,** T. A. Ranker, and S. K. Collinge. 2008. Conservation of rare species with island-like distributions: A case study of *Lasthenia conjugens* (Asteraceae) using population genetic structure and the distribution of rare markers. *Plant Species Biology* 23: 97–110. “*Plant Species Biology Best Paper Award 2008*”
- Ranker, T. A. 2008. A new combination in *Adenophorus* (Polypodiaceae). 2008. *American Fern Journal* 98: 170–171.
- 2009**
- Fehlberg, S. D.** and T. A. Ranker. 2009. Evolutionary History and Phylogeography of *Encelia farinosa* (Asteraceae) from the Sonoran, Mojave, and Peninsular Deserts. *Molecular Phylogenetics and Evolution* 50: 326–335.
- Goebel, A. M.,** T. A. Ranker, P. S. Corn, and R. G. Olmstead. 2008. Mitochondrial DNA Evolution in the *Anaxyrus boreas* species group. *Molecular Phylogenetics and Evolution*. 50: 209–225.
- Lehnert, M., M. Kessler, A. N. Schmidt–Lebuhn, S. A. Klimas,** S. Fehlberg,** and T. A. Ranker. 2009. Phylogeny of the fern genus *Melpomene* (Polypodiaceae) inferred from morphology and chloroplast DNA analysis. *Systematic Botany* 34: 17–27.
- 2010**
- Ranker T. A., M. Sundue, P. Labiak, B. Parris, and G. Rouhan. 2010. New insights into the phylogeny and historical biogeography of the *Lellingeria myosuroides* clade (Polypodiaceae). *PLOS Currents Tree of Life*. 2010 Nov 18. Edition 1. doi: 10.1371/currents.RRN1197.
- Sundue, M. A., M. B. Islam,** and T. A. Ranker. 2010. Systematics of grammitid ferns (Polypodiaceae): using morphology and plastid sequence data to resolve the circumscription of *Melpomene* and portions of the polyphyletic genera *Lellingeria* and *Terpsichore*. *Systematic Botany* 35: 701–715.
- Wright, M. E.** and T. A. Ranker. 2010. Dispersal and habitat fidelity of bog and forest growth forms of Hawaiian *Metrosideros* (Myrtaceae). *Botanical Journal of the Linnean Society* 162: 558–571.
- 2011**
- Hirai, R. Y., G. Rouhan, P. H. Labiak, T. A. Ranker, and J. Prado. 2011. *Moranopteris*, a new neotropical genus of grammitid ferns (Polypodiaceae) segregated from Asian *Micropolypodium*. *Taxon* 60: 1123–1137.
- Shaw, S. W.** and T. A. Ranker. 2011. New and Improved Leaf Terminology for Gleicheniaceae. *American Fern Journal* 101: 117–124.
- Snow, N., T. A. Ranker, and D. H. Lorence. 2011. Taxonomic changes in Hawaiian ferns and lycophytes. *Bishop Museum Occasional Papers* 110: 11–16.
- 2012**
- Krishnan, S.** and T. A. Ranker. 2012. Coffee genomics. Pp. 229–249 in N. Benkeblia (ed), *OMICs Technologies: Tools for Food Science*. Taylor & Francis, London.
- Krishnan, S.,** T. A. Ranker, A. P. Davis, and J. J. Rakotomalala. 2012. An assessment of the genetic integrity of *ex situ* germplasm collections of three endangered species of *Coffea* from Madagascar: implications for the management of field germplasm collections. *Genetic Resources and Crop Evolution*. DOI: 10.1007/s10722-012-9898-3
- Krishnan, S.,** T. A. Ranker, A. P. Davis, and J. J. Rakotomalala. 2012. The study of genetic diversity patterns of *Coffea commersoniana*: a model for conservation of other littoral forest species. *Tree Genetics and Genomes*. DOI: 10.1007/s11295-012-0545-0
- 2013**
- Chau, M. M.,** W. R. Reyes*, and T. A. Ranker. 2013. Ecological factors influencing growth of the endangered Hawaiian fern *Marsilea villosa* and implications for conservation management.

American Journal of Botany 100: 1532–1543.

Geiger, J. M. O, P. Korall, T. A. Ranker, A. C. Kleist*, C. L. Nelson*. 2013. Molecular phylogenetic relationships of *Cibotium* and origin of the Hawaiian endemics. American Fern Journal 103: 141–152.

Vernon, A. L.** and T. A. Ranker. 2013. Current status of the ferns and lycophytes of the Hawaiian Islands. American Fern Journal 103: 59–111.

2014

Sundue, M. A., B. S. Parris, T. A. Ranker, A. R. Smith, E. L. Fujimoto,* D. Zamora-Crosby,* C. W. Morden, W.-L. Chiou, C.-W. Chen, G. Rouhan, R. Y. Hirai, and J. Prado. 2014. Global phylogeny and biogeography of grammitid ferns (Polypodiaceae). Molecular Phylogenetics and Evolution 81: 195–206.

2015

Sundue, M. A., S. P. Sylvester, M. Kessler, B. Lyons, T. A. Ranker, and C. W. Morden. 2015. A new species of *Moranopteris* (Polypodiaceae) from inaccessible ledges in the high Andes of Peru. Systematic Botany 40: 652–657.

Ranker, T. A. and M. A. Sundue. 2015. Why are there so few species of ferns? Trends in Plant Science 20: 402–403.

Sundue, M. A., W. L. Testo,** and T. A. Ranker. 2015. Morphological innovation, ecological opportunity, and the radiation of a major vascular epiphyte lineage. Evolution 69: 2482–2495. (#77)

PEER-REVIEWED BOOK CHAPTERS

1988

Spivak, M.,** T. Ranker,** O. R. Taylor, Jr., W. Taylor*, and L. Davis. 1988. Discrimination of Africanized honey bees using cell size, morphometrics, and a newly discovered isozyme polymorphism. In: "Africanized Honey Bees and Bee Mites", G. R. Needham, R. E. Page, Jr., M. Delfinado-Baker, and C. E. Bowman (eds). Horwood, Chichester, U. K., and Wiley, New York.

2008

Arcand, N. N.** and T. A. Ranker. 2008. Conservation biology. Pp. 257–283 in T. A. Ranker and C. H. Haufler (eds), *Biology and Evolution of Ferns and Lycophytes*. Cambridge University Press, Cambridge.

Ranker, T. A. and J. M. O. Geiger. 2008. Population genetics. Pp. 107–133 in T. A. Ranker and C. H. Haufler (eds), *Biology and Evolution of Ferns and Lycophytes*. Cambridge University Press, Cambridge.

Ranker, T. A., C. E. C. Gemmill, P. G. Trapp, and E. Sheffield. 2008. Island ferns, inbreeding depression and genetic risks of extinction. Pp. 427–431 in S. C. Verma, S. P. Khullar, and H. K. Cheema (eds), *Perspectives in Pteridophytes*. Bishen Singh Mahendra Pal Singh, Dehradun, India.

PEER-REVIEWED PROCEEDINGS

1996

Ranker, T. A., C. E. C. Gemmill,** P. G. Trapp, A. Hambleton*, and K. Ha*. 1996. Population genetics and reproductive biology of lava-flow colonising species of Hawaiian *Sadleria* (Blechnaceae). In: J. M. Camus, M. Gibby, and R. J. Johns (editors). *Pteridology in Perspective*, pp. 581–598, Royal Botanic Gardens, Kew.

2015

Krishnan, S., T. A. Ranker, A. P. Davis, and J.-J. Rakotomalala. 2015. Current status of coffee genetic resources: implications for conservation – case study in Madagascar. In: H. Jaenicke et al. (editors). *Proceedings XXIX IHC – IV International Symposium on Plant Genetic Resources*. Acta Horticulturae 1101. ISHS 2015. DOI 10.17660/ActaHortic.2015.1101.3.

PEER-REVIEWED MONOGRAPHS**1995**

Ranker, T. A. 1995. Systematic treatment of the genus *Hemionitis* (Adiantaceae). Pp. 131–133 in Moran, R. C. and R. Riba (eds), *Vol. 1, Psilotaceae a Salviniaceae*; Davidse, G., M. Sousa, and S. Knapp (eds), *Flora Mesoamericana*.

Ranker, T. A. and C. H. Haufler. 1995. Systematic treatment of the genus *Bommeria* (Adiantaceae). Pp. 120–121 in Moran, R. C. and R. Riba (eds), *Vol. 1, Psilotaceae a Salviniaceae*; Davidse, G., M. Sousa, and S. Knapp (eds), *Flora Mesoamericana*.

2002

Ranker, T. A. and T. Hogan. 2002. Systematic treatment of the genus *Camassia* (Liliaceae). *Flora of North America*. Volume 26. Pp. 303–307.

2013

Zhang, G. and T. A. Ranker. 2013. Coniogramme. Pp. 171–178 in Z. Wu, P. H. Raven, and D. Hong (eds), *Flora of China, Volumes 2–3*. Beijing: Science Press and St. Louis: Missouri Botanical Garden.

Zhang, G. and T. A. Ranker. 2013. Anogramma. P. 211 in Z. Wu, P. H. Raven, and D. Hong (eds), *Flora of China, Volumes 2–3*. Beijing: Science Press and St. Louis: Missouri Botanical Garden.

Zhang, G. and T. A. Ranker. 2013. Pityrogramma. P. 212 in Z. Wu, P. H. Raven, and D. Hong (eds), *Flora of China, Volumes 2–3*. Beijing: Science Press and St. Louis: Missouri Botanical Garden.

Zhang, G. and T. A. Ranker. 2013. Parahemionitis. P. 235 in Z. Wu, P. H. Raven, and D. Hong (eds), *Flora of China, Volumes 2–3*. Beijing: Science Press and St. Louis: Missouri Botanical Garden.

Zhang, G. and T. A. Ranker. 2013. Paragymnopteris. Pp. 235–237 in Z. Wu, P. H. Raven, and D. Hong (eds), *Flora of China, Volumes 2–3*. Beijing: Science Press and St. Louis: Missouri Botanical Garden.

Zhang, G., G. Yatskievych, E. A. Hooper, and T. A. Ranker. 2013. Cheilantheae. P. 216 in Z. Wu, P. H. Raven, and D. Hong (eds), *Flora of China, Volumes 2–3*. Beijing: Science Press and St. Louis: Missouri Botanical Garden.

BOOK**2008**

Ranker, T. A. and C. H. Haufler (eds). 2008. *Biology and Evolution of Ferns and Lycophytes*. Cambridge University Press, Cambridge. 480 pp.

INVITED REVIEWS OF RESEARCH AND BOOKS**1991**

Ranker, T. A. 1991. Natural selection and the plastid genome of parasitic angiosperms. *Trends in Ecology and Evolution* 6: 205.

1993

Ranker, T. A. 1993. Review of *Spores of the Pteridophyta: surface, wall structure, and diversity based on electron microscope studies* by A. F. Tryon and B. Lugardon. *Systematic Botany* 18: 377.

1996

Ranker, T. A. 1996. Review of *Ferns of Hawai'i* by K. Valier. *The Quarterly Review of Biology* 71: 410.

2015

Ranker, T. A. and M. A. Sundue. 2015. Why are there so few species of ferns? *Trends in Plant Science* 20: 402–403.

PUBLISHED SYMPOSIUM PROCEEDINGS (NON-PEER-REVIEWED)

1993

- Arft, A. M.** and T. A. Ranker. 1993. Population genetics and phylogenetic systematics of the rare orchid *Spiranthes diluvialis*: Implications for conservation. Pp. 264–269 in R. Sivinski and K. Lightfoot (eds), Southwestern Rare and Endangered Plant Conference.
- Ranker, T. A., S. K. Floyd,** and M. D. Windham. 1993. Historical biogeography and population genetics of the rare fern, *Asplenium adiantum-nigrum* L. Pp. 221–226 in R. Sivinski and K. Lightfoot (eds), Proceedings of the Southwestern Rare and Endangered Plant Conference.

POPULAR ARTICLES (NON-PEER-REVIEWED)**1993**

- Gemmill, C. E. C.,** T. A. Ranker, and D. Ragone. 1993. Conservation of the native Hawaiian palm genus *Pritchardia*. The Bulletin of the National Tropical Botanical Garden. 23: 141–146.

2006

- Ranker, T. A. and C. H. Haufler. 2006. Polygrammoids: ferns who find their roots in the trees. Fiddlehead Forum (Newsletter of the American Fern Society) 33: 25–27.
- Ranker, T. A. 2006. Fern Foray of the American Fern Society. The Hardy Fern Foundation Quarterly 16: 84.

2014

- Ranker, T. A. 2014. Evolution and extinction on a volcanic hotspot: science, conservation, and restoration in the endangered species capital of the world. Address of the BSA President. Plant Science Bulletin 60: 207–210.

TECHNICAL REPORTS (NON-PEER-REVIEWED)**2002**

- Jermy, C. and T. A. Ranker. 2002. IUCN Species Survival Commission Pteridophyte Specialist Group Update. Species 38: 29–30.
- Jermy, C. and T. A. Ranker. 2002. Epilogue—The way forward. Proceedings of the International Symposium: Fern Flora Worldwide: Threats and Responses. The Fern Gazette 16: 417–424.

PUBLISHED ABSTRACTS OF PAPERS AND POSTERS PRESENTED AT PROFESSIONAL MEETINGS (111 TOTAL)**1982**

- Ranker, T. A.** and M. R. Mesler. 1982. The origin of tetraploidy in *Polypodium californicum*: an autopolyploid hypothesis. Botanical Society of America, Misc. Publ. No. 162: 77.

1984

- Ranker, T.** and A. F. Schnabel.** 1984. A systematic study of eastern *Camassia*. American Journal of Botany 70 (Part 2): 184.

1985

- Ranker, T. A. 1985.** Reassessing the generic relationships of *Hemionitis*. American Journal of Botany 72: 925–926.

1986

- Ranker, T. A.,** C. H. Haufler, and M. D. Windham.** 1986. Biosystematic studies of Gymnogrammoid–Cheilanthoid ferns. American Journal of Botany 73: 731–732.

1987

- Ranker, T. A. 1987. Variance in breeding systems and its effect on populational genetic structure in species of *Hemionitis* and *Gymnopteris*. American Journal of Botany 74: 711–712.

1988

Ranker, T. A. 1988. The origin of the tetraploid *Hemionitis pinnatifida*. *American Journal of Botany* 75: 384.

Ranker, T. A., D. E. Soltis, P. S. Soltis, and A. J. Gilmartin. 1988. Molecular systematics of subfamilial relationships in the Bromeliaceae: Restriction site analyses of cpDNA. *American Journal of Botany* 75: 200.

Schneller, J. J., C. H. Haufler, and T. A. Ranker. 1988. Antheridiogen and natural gametophyte populations. *American Journal of Botany* 75: 136.

1989

Ranker, T. A. 1989. Populational genetic structure and mating systems of endemic Hawaiian epiphytic ferns. *American Journal of Botany* 76: 206.

1990

Alverson, E. R., R. J. Meinke, and T. A. Ranker. 1990. Reproductive biology and allozyme variation in *Luina serpentina*, a clonal endemic plant. *Bulletin of the Ecological Society of America*.

Ranker, T. A. 1990. Evolutionary and ecological aspects of genetic endemism, gene flow, and mating system evolution in species of native Hawaiian ferns. *Fourth International Congress of Systematics and Evolutionary Biology*.

Ranker, T. A. 1990. Genetic endemism, gene flow, and mating systems in native Hawaiian ferns. *Annual meeting of the Guild of Rocky Mountain Population Biologists*.

1991

Ranker, T. A. 1991. Genetic diversity of endemic Hawaiian epiphytic ferns: Implications for conservation. *Plenary Session of Symposium on The Biology and Conservation of Epiphytes*, Marie Selby Botanical Gardens.

Ranker, T. A. 1991. Ecological genetics and evolution of Hawaiian ferns. *Symposium of the Society for the Study of Evolution on "Evolution of Hawaiian Organisms"*.

Ranker, T. A. 1991. Evolutionary patterns and processes in Mexican species of *Bommeria*, *Hemionitis*, and *Cheilanthes*. *Symposium of the Botanical Society of America and the American Fern Society on "Pteridophytes of Mexico"*. *American Journal of Botany* 78: 149.

1992

Arft, A. M.** and T. A. Ranker. 1992. Population genetics and phylogenetic systematics of the rare orchid *Spiranthes diluvialis*: Implications for conservation. *Southwestern Rare and Endangered Plant Conference*, Santa Fe, NM. March, 1992.

Gemmill, C. E. C.,** T. A. Ranker, and D. Ragone. 1992. Conservation genetics of the native Hawaiian palm genus *Pritchardia* Seem. & Wendl. (Arecaceae). *American Journal of Botany* 79(supplement): 62.

Ranker, T. A. 1992. Genetic diversity in relation to biogeography and colonization of native Hawaiian ferns. *Symposium of the Botanical Society of America and the American Fern Society on "Island Biogeography of Pteridophytes"*. *American Journal of Botany* 79(supplement): 116.

Ranker, T. A., S. K. Floyd,** and P. G. Trapp. 1992. Genetic evidence for multiple colonizations of *Asplenium adiantum-nigrum* onto the Hawaiian Archipelago. *American Journal of Botany* 79 (supplement): 119. *Recipient of the Edgar T. Wherry Award for the Best Contributed Paper presented to the Pteridological Section of the Botanical Society of America at the annual meeting in Honolulu*.

Ranker, T. A., S. K. Floyd,** and M. D. Windham. 1992. Historical biogeography and population genetics of the rare fern, *Asplenium adiantum-nigrum*. *Southwestern Rare and Endangered Plant Conference*, Santa Fe, NM. March, 1992.

Ranker, T. A., S. K. Floyd,** and M. D. Windham. 1992. Historical biogeography and population genetics of the rare fern, *Asplenium adiantum-nigrum*. *Annual meeting of the Guild of Rocky Mountain Population Biologists*.

1993

Ranker, T. A. and S. K. Floyd,** 1993. Historical biogeography and systematics of the rare fern, black spleenwort (*Asplenium adiantum-nigrum*). Second Annual Boulder County Ecosystem Research Symposium.

Ranker, T. A. 1993. Evolution and conservation of genetic diversity in tropical ferns. Symposium of the Association for Tropical Biology on "Genetic Variation in Tropical Plants – Implications for Understanding the Evolution of Diversity and Its Conservation".

1994

Diggle, P. K., S. S. Lower,* T. A. Ranker. 1994. Clonal diversity and phenotypic plasticity in three alpine populations of *Polygonum viviparum* (Polygonaceae). *American Journal of Botany* 81: 22.

Haufler, C. H. and T. A. Ranker. 1994. *rbcL* provides phylogenetic insights among sister species of the *Polypodium vulgare* complex. Symposium of the Botanical Society of America and the American Fern Society on "Use of Molecular Data in Evolutionary Studies of Pteridophytes". *American Fern Journal* 81: 121.

Ranker, T. A. and R. G. Olmstead. 1994. Overview of molecular techniques and phylogenetic analyses of molecular data. Symposium of the Botanical Society of America and the American Fern Society on "Use of Molecular Data in Evolutionary Studies of Pteridophytes". *American Journal of Botany* 81: 122–123.

Sheffield, E., P. G. Wolf, and T. A. Ranker. 1994. Genetic analysis of bracken in the Hawaiian Islands. Bracken '94 Conference, Aberystwyth, UK.

1995

Arft, A.** and T. A. Ranker. 1995. Demography of the rare orchid *Spiranthes diluvialis*: Implications for conservation management. Annual meeting of the Society for Conservation Biology. Ft. Collins, CO.

Bingham, R. A.** and T. A. Ranker. 1995. A preliminary assessment of self-compatibility, autogamy, and pollinator limitation in alpine and foothill populations of *Campanula rotundifolia* L. (Campanulaceae) in the Colorado Front Range. Annual meeting of the Guild of Rocky Mountain Population Biologists.

Gemmill, C. E. C.,** D. Ragone, S. Perlman, K. Wood, and T. A. Ranker. 1995. Conservation genetics of the endangered endemic Hawaiian genus *Brighamia* (Campanulaceae). *American Journal of Botany*, Supplement to 82: 131–132.

Gemmill, C. E. C.,** D. Ragone, S. Perlman, K. Wood, and T. A. Ranker. 1995. Conservation genetics of the endangered endemic Hawaiian genus *Brighamia* (Campanulaceae). Annual meeting of the Guild of Rocky Mountain Population Biologists.

Gemmill, C. E. C.,** A. M. Arft,** S. K. Floyd,** K. A. Mingo,** and T. A. Ranker. 1995. Systematics of the rare Hawaiian *Sesbania tomentosa* complex (Fabaceae). *American Journal of Botany*, Supplement to 82: 131.

Ranker, T. A., C. E. C. Gemmill,** P. G. Trapp, A. Hambleton*, and K. Ha.* 1995. Population genetics and reproductive biology of lava-flow colonising species of Hawaiian *Sadleria* (Blechnaceae). Pteridophyte Symposium '95, The Royal Botanic Gardens, Kew.

1996

Bingham, R. A.** and T. A. Ranker. 1996. Genetic structure and gene flow in alpine and foothill populations of *Campanula rotundifolia* L. (Campanulaceae) along the Colorado Front Range. *American Journal of Botany*, Supplement to 83: 95.

Duff, M.** and T. A. Ranker. 1996. Population structure and isozymic diversity of *Lyonothamnus floribundus* (Rosaceae). *American Journal of Botany*, Supplement to 83: 64.

Haufler, C. H., T. A. Ranker, and J. Li. 1996. Using *rbcL* sequences to test hypotheses of phylogenetic relationship in the fern families Polypodiaceae and Grammitidaceae. *American Journal of Botany*, Supplement to 83: 126.

Macias, M.* and T. A. Ranker. 1996. An assessment of RAPD inheritance using gametophytes of *Sadleria* species (Blechnaceae). *American Journal of Botany*, Supplement to 83: 128.

Macias, M.* and T. A. Ranker. 1996. An assessment of RAPD inheritance using gametophytes of *Sadleria* species (Blechnaceae). Annual meeting of the Guild of Rocky Mountain Population Biologists.

Ranker, T. A. 1996. Are pteridophyte mating systems correlated with habitat? *American Journal of Botany*, Supplement to 83: 121.

Wilk, J.* and T. A. Ranker. 1996. Population genetics of Colorado populations of *Asplenium septentrionale* (Aspleniaceae). Annual meeting of the Guild of Rocky Mountain Population Biologists.

1997

Bingham, R. A.,** K. Howe*, and T. A. Ranker. 1997. High levels of inbreeding depression after one generation of selfing in the autotetraploid *Campanula rotundifolia* L. (Campanulaceae). Annual meeting of the Guild of Rocky Mountain Population Biologists.

Ranker, T. A., C. E. C. Gemmill,** and P. G. Trapp. 1997. Mixed mating, gene flow, and founder effects in the native Hawaiian colonizing fern *Odontosoria chinensis* (Lindsaeaceae). Joint annual meeting of American Society of Naturalists, Society for the Study of Evolution, and Society of Systematic Biologists.

Ranker, T. A., C. H. Haufler, A. R. Smith, and J. Li. 1997. Merging morphology and molecules to modify models of paraphyly and polyphyly in the 'Polygrammaceae'. *American Journal of Botany*, Supplement to 84: 165–166.

Ranker, T. A. and S. Krier.* 1997. Evolution of gametophytic mechanisms controlling mating behavior in the Hawaiian endemic genus *Sadleria* (Blechnaceae). Annual meeting of the Guild of Rocky Mountain Population Biologists.

Wise, C. A.,** Y. B. Linhart, and T. A. Ranker. 1997. The role of genetic variation in stress tolerance and population persistence: an experimental study with *Brassica rapa*. Joint annual meeting of American Society of Naturalists, Society for the Study of Evolution, and Society of Systematic Biologists.

1998

Ranker, T. A. and C. E. C. Gemmill.** 1998. Population genetics of Hawaiian ferns and implications for conservation management. *American Journal of Botany* 85: 97.

1999

Gemmill, C. E. C. and T. A. Ranker. 1999. Hawaiian perspectives on the origin and diversification of pteridophyte species. Symposium of the XVI International Botanical Congress entitled “Species and speciation in Pteridophytes”.

Hildebrand, T., C. H. Haufler, M. Gabel, and T. A. Ranker. 1999. Population differentiation using two nuclear marker systems in Lycopodiaceae. Poster presented at the XVI International Botanical Congress.

Ranker, T. A. 1999. Ecological genetics and conservation of tropical ferns. XIII Simposio de Botánica Criptogámica.

Ranker, T. A. 1999. Evidence for founder–effect speciation in Hawaiian ferns? Annual meeting of the Guild of Rocky Mountain Population Biologists.

Ranker, T. A. and H. J. Houston. 1999. The value of voucher specimens from research greenhouse collections. Annual meeting of the Association of Education and Research Greenhouse Curators.

Ranker, T. A., C. H. Haufler, A. R. Smith, J. Therrien, and H. A. Houston.** 1999. Phylogeny of Polypodiaceae and Grammitidaceae, two derived and closely related fern families. Symposium of the XVI International Botanical Congress entitled “Fern phylogeny with emphasis on relationships of basal lineages”.

Wolf, P. G., H. Schneider, and T. A. Ranker. 1999. The roles of vicariance and long–distance dispersal in the origin of fern distributions. Symposium of the XVI International Botanical Congress entitled “Pteridophyte biogeography”.

2000

Smith, A. R., H. Schneider, B. S. Parris, C. H. Haufler, T. A. Ranker, J. P. Therrien, J. Geiger. 2000. Phylogeny of Grammitidaceae and Polypodiaceae inferred from two large data sets: *rbcL* and morphology. *American Journal of Botany*, Supplement to 86: 97.

2001

Geiger, J. M. O.,** T. A. Ranker, and D. D. Palmer. 2001. Phylogenetic systematics and biogeography of Hawaiian *Dryopteris* (Dryopteridaceae). Botany 2001 meetings, Albuquerque, NM.

Haufler, C. H., A. R. Smith, H. Schneider, T. Hildebrand, R. Cranfill, and T. A. Ranker. 2001. *Polypodium* redefined: Morphology, biogeography, and DNA sequences provide clues to lineages. Botany 2001 meetings, Albuquerque, NM.

Ramp, J.,** T. A. Ranker, and S. Collinge. 2001. Microevolutionary dynamics and population genetics of the endangered California vernal pool sunflower *Lasthenia conjugens*. Annual meeting of the Guild of Rocky Mountain Population Biologists.

Ranker, T. A., A. R. Smith, J. M. O. Geiger,** S. C. Kennedy*, C. H. Haufler, and B. S. Parris. 2001. Phylogenetic systematics of the Hawaiian endemic genus *Adenophorus* (Grammitidaceae). Botany 2001 meetings, Albuquerque, NM.

Ranker, T. A. 2001. The way forward: An action plan for the IUCN/Species Survival Commission – Pteridophyte Specialist Group. Fern Flora Worldwide: Threats and Responses, An International Symposium, University of Surrey, Guildford, UK.

Ranker, T. A. and J. M. O. Geiger.** 2001. Molecular phylogenetics of ferns: using molecules to infer patterns and processes of evolution and historical biogeographical. Invited Keynote Speaker. Annual Meeting of the Queenstown Molecular Biology Society, Queenstown, New Zealand.

2002

Ramp, J. M.** and T. A. Ranker. 2002. Conservation genetics of the vernal pool annual *Lasthenia conjugens* (Asteraceae). Botany 2002 meetings, Madison, WI.

2003

Ramp, J. M.,** T. A. Ranker, and S. K. Collinge. 2003. A comparative study of population genetic variability in eight populations of the endangered vernal pool annual *Lasthenia conjugens* (Asteraceae). Botany 2003 meetings, Mobile, AL.

Ranker, T. A. and J. M. O. Geiger.** 2003. Molecular evidence for the phylogenetic placement of Asiatic *Hemionitis arifolia* (Pteridaceae). Botany 2003 meetings, Mobile, AL.

Ranker, T. A. and J. M. O. Geiger.** 2003. Phylofloristics of the Hawaiian fern flora: preliminary studies on the origins of Hawaiian ferns and testing climate-based models of dispersal. Botany 2003 meetings, Mobile, AL.

2004

Fehlberg, S. D.** and T. A. Ranker. 2004. Diversification of *Encelia* (Asteraceae) in the Sonoran and Mojave Deserts. Botany 2004 meetings, Snowbird, UT.

Geiger, J. M. O.,** T. A. Ranker, and J. M. Ramp.** 2004. The origins and biogeography of Hawaiian Ferns. Botany 2004 meetings, Snowbird, UT.

Haufler, C. H., A. R. Smith, T. A. Ranker, and H. Schneider. 2004. A tale of two mechanisms: Discovering how dispersal and vicariance contributed to the pattern of species diversity in the “polygrams.” Botany 2004 meetings, Snowbird, UT.

Ramp, J. M.,** T. A. Ranker, and S. K. Collinge. 2004. The use of genetics to monitor restoration of endangered species: The vernal pool annual *Lasthenia conjugens* (Asteraceae) as a model system. Society for Ecological Restoration annual meeting, Vancouver, B.C.

Ranker, T. A., A. R. Smith, B. S. Parris, J. M. O. Geiger,** C. H. Haufler, S. C. K. Straub*, H. Schneider. Phylogeny and evolution of grammitid ferns (Grammitidaceae): a case of rampant morphological homoplasy. Ferns for the 21st Century Conference, Royal Botanic Garden Edinburgh, Scotland, UK. Sponsored by the Linnean Society of London, the British Pteridological Society and the Royal Botanic Garden Edinburgh

Schneider, H., T. A. Ranker, S. J. Russell, R. Cranfill, J. M. O. Geiger,** R. Agurajuja, K. R. Wood M. Grundmann, J. C. Vogel. 2004. Origin of the endemic fern genus *Diellia* (Aspleniaceae) coincides

with the renewal of Hawaiian terrestrial life in the early Miocene. Botany 2004 meetings, Snowbird, UT.

2005

Geiger, J. M. O. and T. A. Ranker. 2005. Diversification of Hawaiian ferns. Symposium of the XVII International Botanical Congress, Vienna, entitled “Diversification of seed-free vascular plants in the shadow of angiosperms”.

Ranker, T. A., J. M. O. Geiger, J. M. Ramp,** and S. T. Klimas.** 2005. Molecular biogeography and origins of the Hawaiian fern flora. Symposium of the XVII International Botanical Congress, Vienna, entitled “Modern phylogenetic studies in the Pteridophyta”.

2006

Fehlberg, S. D.** and T. A. Ranker. 2006. Phylogeography of *Encelia farinosa* (Asteraceae) from the Sonoran, Mojave, and Peninsular Deserts. Botany 2006 meetings, Chico, CA.

Geiger, J. M. O., M. E. Wright,** K. Christensen, S. D. Fehlberg,** and T. A. Ranker. 2006. Alternate pathways of fern dispersal to the Hawaiian Islands, Part 1: *Hypolepis* & *Diplopterygium*. Botany 2006 meetings, Chico, CA.

Kleist, A. C., C. L. Nelson, J. M. O. Geiger, P. Korall, T. A. Ranker, and K. M. Pryer. Alternate pathways of fern dispersal to the Hawaiian Islands, Part 3: *Cibotium*. Botany 2006 meetings, Chico, CA.

Plume, O.*, M. E. Wright,** T. A. Ranker, and J. M. O. Geiger. 2006. Alternate pathways of fern dispersal to the Hawaiian Islands, Part 2: Grammitids. Botany 2006 meetings, Chico, CA.

Ramp, J. M., T. A. Ranker, and R. P. Guralnick. 2006. Examination of plant community-level genetic diversity across a chronosequence in the Hawaiian Islands. Botany 2006 meetings, Chico, CA.

Ramp, J. M.,** T. A. Ranker, and S. K. Collinge. 2006. Restoration genetics of the vernal pool endemic *Lasthenia conjugens* (Asteraceae). Botany 2006 meetings, Chico, CA.

2007

Geiger, J. M. O. and T. A. Ranker. 2007. Biogeography, diversification, and speciation of the ferns of the Hawaiian Islands. Botany 2007 meetings, Chicago, IL.

Ramp Neale, J. M., R. B. Neale, and T. A. Ranker. 2007. Identifying the dominant source regions for the colonization of Hawaiian fern species using a trajectory and dispersal model. Botany 2007 meetings, Chicago, IL.

Ranker, T. A. and H. Schneider. 2007. Overview of fern floras on Oceanic Islands. Botany 2007 meetings, Chicago, IL.

Wright, M. E.** and T. A. Ranker. 2007. A genetic comparison of bog vs. forest populations of *Metrosideros polymorpha* (Myrtaceae) in Hawai‘i. Botany 2007 meetings, Chicago, IL.

2008

Sundue, M., M. B. Islam,** and T. A. Ranker. 2008. Systematics of grammitid ferns: *Lellingeria*, *Melpomene*, and *Terpsichore*. Botany 2008 meetings, Vancouver, B.C., Canada.

2009

Boutain, J.,** M. Thomas, and T. A. Ranker. 2009. Conservation of the Joseph F. Rock Herbarium wood collection. Hawai‘i Conservation Conference, Honolulu, HI. (poster)

Chau, M. M.** and T. A. Ranker. 2009. Restoration genetics of the endangered fern *Marsilea villosa*: Variation among populations on two Hawaiian islands. Botany 2009 meetings, Snowbird, UT.

Ramp Neale, J., T. A. Ranker, C. Morden. 2009. Genetic considerations in ecological restoration. Symposium on “Reproductive Biology of Hawaii’s Endangered Flora: The Role of Research in Conservation”. Hawai‘i Conservation Conference, Honolulu, HI.

Ranker, T. 2009. Reproductive biology and population genetics of Hawaiian ferns. Symposium on “Ecological Restoration in a Changing World”. Hawai‘i Conservation Conference, Honolulu, HI.

2010

Chau, M. M.** and T. A. Ranker. 2010. Effects of light, flooding, and weeding on *Marsilea villosa* growth in a common garden experiment: Implications for *in situ* restoration and management. Botany 2010 meetings, Providence, RI.

- Shaw, S.** and T. A. Ranker. 2010. New and Improved Leaf Terminology for Gleicheniaceae. Botany 2010 meetings, Providence, RI.
- Vernon, A.** and T. A. Ranker. 2010. A Lucid-based Interactive Identification Key of the Hawaiian Ferns and Lycophytes: Preliminary Data. Botany 2010 meetings, Providence, RI.
- 2011**
- Chau, M. M.** and T. A. Ranker. 2011. Predicting success in the reintroduction of the endangered Hawaiian fern *Marsilea villosa*: an experimental case study. International Botanical Congress, Melbourne, Australia.
- Hirai, R. Y., G. Rouhan, P. H. Labiak, T. A. Ranker, and J. Prado. 2011. Molecular phylogeny reveals a new genus of grammitid ferns (Polypodiaceae) from the Neotropics. International Botanical Congress, Melbourne, Australia. (poster)
- Islam, M. B.** and T. A. Ranker. 2011. The evolutionary history of the cultivated cocas (*Erythroxylum*). Botany 2011, St. Louis, MO.
- Kamelamela, K.,** M. B. Thomas, and T. A. Ranker. 2011. Plants of Kaho‘olawe: A Bi-lingual Digital Resource. Hawai‘i Conservation Conference, Honolulu, HI. (poster)
- Krishnan, S.,** T. A. Ranker, and A. P. Davis. 2011. Genetic diversity of narrowly endemic wild *Coffea* in Madagascar: Implications for ex situ conservation. American Society for Horticultural Science Annual Meeting, Honolulu, HI.
- Kuo, L.-Y., A. Ebihara, W. Shinohara, M. Kato, K. Wood, T. A. Ranker, C.-N. Wang, W.-L. Chiou. 2011. Phylogeography of the genus *Deparia* (Woodsiaceae). International Botanical Congress, Melbourne, Australia. (poster)
- Mehlreter, K., N. N. Arcand,** and T. A. Ranker. 2011. Spatial patterns of fern diversity: a comparison of Hawaii and Mexico. Conference on Evolution of Life on Pacific Islands and Reefs: Past, present, and future. Honolulu, HI.
- Ranker, T. A., J. M. O. Geiger, M. A. Sundue, J. M. Ramp Neale, and R. Neale 2011. The importance of SE Asia for the Hawaiian Islands. Symposium of the XVIII International Botanical Congress, Melbourne, Australia, entitled “The Origin of Fern Diversity in the Indopacific Realm”.
- Ranker, T. A. and M. A. Sundue. 2011. Molecular phylogenetics of grammitid ferns: global biogeographic perspectives. Botany 2011, St. Louis, MO.
- Sundue, M., V. Doyle, and T. A. Ranker. 2011. Insights into the multiple origins of symbioses between *Acrospermum* and polypod ferns: evidence from plant and fungal sequence data. XVIII International Botanical Congress, Melbourne, Australia.
- Thair, T.,** T. A. Ranker, and C. Litton. 2011. Soil Seed Bank Dynamics in a Remnant Lowland Hawaiian Dry Forest: Implications for Restoration. Hawai‘i Conservation Conference, Honolulu, HI. (poster)
- Vernon, A. L.** and T. A. Ranker. 2011. A Web-based Interactive Identification Key to the Hawaiian Ferns. Hawai‘i Conservation Conference, Honolulu, HI. (poster)
- 2012**
- Chau, M. M.,** T. A. Ranker, and C. W. Morden. 2012. Bottlenecks and founder effects in the endangered Hawaiian fern ‘ihi‘ihi (*Marsilea villosa*). Botany 2012, Columbus, OH.
- Chau, M. M.,** W. Reyes*, and T. A. Ranker. 2012. Field ecology of the endangered Hawaiian fern *Marsilea villosa* and implications for conservation management. Botany 2012, Columbus, OH.
- Sundue, M., T. A. Ranker, C. W. Morden, B. Parris, D. Zamora-Crosby, and S. W. Shaw.** 2012. New insights into the phylogeny and biogeography of grammitid ferns (Polypodiaceae). Botany 2012, Columbus, OH.
- 2013**
- Amici, A.,** S. James, and T. A. Ranker. 2013. Impacts of logging on primary forests of Siboma Village in Morobe Province, Papua New Guinea. Botany 2013, New Orleans, LA.
- 2014**
- Krishnan, S., T. A. Ranker, A. P. Davis, and J. J. Rakotomalala. 2014. Current status of coffee genetic resources: Implications for conservation. 29th International Horticultural Congress, Brisbane,

Australia.

- Ranker, T. A., A. L. Vernon, J. M. O. Geiger, M. A. Sundue, C. W. Morden, J. M. Ramp Neale, and R. B. Neale. 2014. Origins of the Hawaiian fern and lycophyte flora. Island Biology meeting, Honolulu, HI.
- Sundue, M., B. Parris, T. A. Ranker, A. Smith, E. Fujimoto, D. Zamora-Crosby, C. Morden, W.-L. Chiou, C.-W. Chen, G. Rouhan, R. Hirai, and J. Prado. 2014. Global phylogeny and diversification of grammitid ferns. Botany 2014, Boise, ID.

2015

- Sundue, M. A., W. Testo,** B. S. Parris, C. W. Morden, and T. A. Ranker. 2015. Global biogeography and diversification of grammitid ferns. Next Generation Pteridology Conference, Smithsonian Institution, Washington, DC, June 2015.
- Sundue, M. A., W. Testo,** B. S. Parris, C. W. Morden, and T. A. Ranker. 2015. Global biogeography and diversification of grammitid ferns. Botany 2015, Edmonton, Canada, July 2015. (#111)

INVITED PRESENTATIONS AT SYMPOSIA & PROFESSIONAL MEETINGS ET AL. (37 TOTAL)

1986

- Ranker, T. A., C. H. Haufler, and M. D. Windham. 1986. Biosystematic studies of gymnogammitid–cheilanthoid ferns. Symposium of the Botanical Society of America and the American Fern Society on "Problems in the Evolution and Systematics of the Cheilanthoid Ferns".

1988

- Schneller, J. J., C. H. Haufler, and T. A. Ranker. 1988. Antheridiogen and natural gametophyte populations. Symposium of the Botanical Society of America and the American Fern Society on "Population Biology of Pteridophytes".

1991

- Ranker, T. A. 1991. Ecological genetics and evolution of Hawaiian ferns. Symposium of the Society for the Study of Evolution on "Evolution of Hawaiian Organisms".
- Ranker, T. A. 1991. Evolutionary patterns and processes in Mexican species of *Bommeria*, *Hemionitis*, and *Cheilanthes*. Symposium of the Botanical Society of America and the American Fern Society on "Pteridophytes of Mexico".
- Ranker, T. A. 1991. Biological diversity in Hawaii: Origin, evolution, and problems of conservation. Annual meeting of the Guild of Rocky Mountain Population Biologists.

1992

- Ranker, T. A. 1992. Genetic diversity in relation to biogeography and colonization of native Hawaiian ferns. Symposium of the Botanical Society of America and the American Fern Society on "Island Biogeography of Pteridophytes".
- Ranker, T. A. 1992. Quantitative methods for decision making in gene resource management: Case study of native Hawaiian ferns. Symposium of the Quantitative Forest Genetics Group, Western Forest Genetics Association.

1993

- Ranker, T. A. 1993. Evolution and conservation of genetic diversity in tropical ferns. Symposium of the Association for Tropical Biology on "Genetic Variation in Tropical Plants – Implications for Understanding the Evolution of Diversity and Its Conservation".

1994

- Ranker, T. A. and R. G. Olmstead. 1994. Overview of molecular techniques and phylogenetic analyses of molecular data. Symposium of the Botanical Society of America and the American Fern Society on "Use of Molecular Data in Evolutionary Studies of Pteridophytes".
- Haufler, C. H. and T. A. Ranker. 1994. *rbcL* sequences provide phylogenetic insights among sister species of the fern genus *Polypodium*. Symposium of the Botanical Society of America and the American Fern Society on "Use of Molecular Data in Evolutionary Studies of Pteridophytes".

1996

Ranker, T. A. 1996. Are pteridophyte mating systems correlated with habitat? Symposium of the Botanical Society of America and the America Fern Society on "Ecological Adaptations of Ferns".

1998

Ranker, T. A. and C. E. C. Gemmill.** 1998. Population genetics of Hawaiian ferns and implications for conservation management. Invited Keynote Speaker. Symposium of the Botanical Society of America and the American Fern Society on "Conservation Biology of Pteridophytes".

1999

Gemmill, C. E. C. and T. A. Ranker. 1999. Hawaiian perspectives on the origin and diversification of pteridophyte species. Symposium of the XVI International Botanical Congress entitled "Species and speciation in Pteridophytes".

Ranker, T. A. 1999. Ecological genetics and conservation of tropical ferns. XIII Simposio de Botánica Criptogámica. Invited Keynote Speaker. Madrid, Spain.

Ranker, T. A., C. H. Haufler, A. R. Smith, J. Therrien, and H. A. Houston.** 1999. Phylogeny of Polypodiaceae and Grammitidaceae, two derived and closely related fern families. Symposium of the XVI International Botanical Congress entitled "Fern phylogeny with emphasis on relationships of basal lineages".

Wolf, P. G., H. Schneider, and T. A. Ranker. 1999. The roles of vicariance and long-distance dispersal in the origin of fern distributions. Symposium of the XVI International Botanical Congress entitled "Pteridophyte biogeography".

2001

Ranker, T. A. 2001. The way forward: An action plan for the IUCN/Species Survival Commission – Pteridophyte Specialist Group. Fern Flora Worldwide: Threats and Responses, An International Symposium, University of Surrey, Guildford, UK.

Ranker, T. A. and J. M. O. Geiger.** 2001. Molecular phylogenetics of ferns: using molecules to infer patterns and processes of evolution and historical biogeography. Invited Keynote Speaker. Annual Meeting of the Queenstown Molecular Biology Society, Queenstown, New Zealand.

2004

Geiger, J. M. O.,** T. A. Ranker, and J. M. Ramp. 2004. The origins and biogeography of Hawaiian Ferns. Botany 2004 meetings, Snowbird, UT. Symposium of the Botanical Society of America and the America Fern Society on "The Power of Two: Marrying Phylogeny and Biogeography to Reconstruct the Evolutionary History of Pteridophytes".

Haufler, C. H., A. R. Smith, T. A. Ranker, and H. Schneider. 2004. A tale of two mechanisms: Discovering how dispersal and vicariance contributed to the pattern of species diversity in the "polygrams." Botany 2004 meetings, Snowbird, UT. Symposium of the Botanical Society of America and the America Fern Society on "The Power of Two: Marrying Phylogeny and Biogeography to Reconstruct the Evolutionary History of Pteridophytes".

Ranker, T. A. 2004. The origins and biogeography of Hawaiian Ferns. Special presentation to the Hawaiian Botanical Society, Honolulu, HI.

Ranker, T. A. 2004. The origins and biogeography of Hawaiian Ferns. Special presentation at the National Tropical Botanical Garden, Kalaheo, HI.

Ranker, T. A. 2004. The origins and biogeography of Hawaiian Ferns. Special presentation to the Taiwan Forestry Research Institute, Taipei, Taiwan.

2005

Geiger, J. M. O. and T. A. Ranker. 2005. Diversification of Hawaiian ferns. Symposium of the XVII International Botanical Congress, Vienna, entitled "Diversification of seed-free vascular plants in the shadow of angiosperms".

Ranker, T. A., J. M. O. Geiger, J. M. Ramp,** and S. T. Klimas.** 2005. Molecular biogeography and origins of the Hawaiian fern flora. Symposium of the XVII International Botanical Congress, Vienna, entitled "Modern phylogenetic studies in the Pteridophyta".

Ranker, T. A. 2006. Molecular biogeography and origins of the Hawaiian fern flora. Special presentation to Department of Botany, University of Hawai'i at Mānoa.

Ranker, T. A. 2006. Diversification of Hawaiian ferns. Special presentation to Hawai'i Botanical Society, Honolulu, Hawai'i.

2006

Ranker, T. A. 2006. Molecular biogeography and origins of the Hawaiian fern flora. Special presentation at Hawai'i Volcanoes National Park, Hawai'i.

2007

Geiger, J. M. O. and T. A. Ranker. 2007. Biogeography, diversification, and speciation of the ferns of the Hawaiian Islands. Botany 2007 meetings, Chicago, IL. Symposium of the Botanical Society of America and the American Society "Ferns on Oceanic Islands – from dispersal to long lasting diversity".

Ranker, T. A. 2007. Molecular biogeography and origins of the Hawaiian fern flora. Special presentation to Department of Biology, Utah State University, Logan, Utah.

Ranker, T. A. and H. Schneider. 2007. Overview of fern floras on Oceanic Islands. Botany 2007 meetings, Chicago, IL. Symposium of the Botanical Society of America and the American Society "Ferns on Oceanic Islands – from dispersal to long lasting diversity".

2009

Ramp Neale, J., T. Ranker, C. Morden. 2009. Genetic considerations in ecological restoration. Symposium on "Reproductive Biology of Hawaii's Endangered Flora: The Role of Research in Conservation". Hawai'i Conservation Conference, Honolulu, HI.

Ranker, T. 2009. Reproductive biology and population genetics of Hawaiian ferns. Symposium on "Ecological Restoration in a Changing World". Hawai'i Conservation Conference, Honolulu, HI.

2011

Ranker, T. A., J. M. O. Geiger, M. A. Sundue, J. M. Ramp Neale, and R. Neale. 2011. The importance of SE Asia for the Hawaiian Islands. Symposium of the XVIII International Botanical Congress, Melbourne, Australia, entitled "The Origin of Fern Diversity in the Indopacific Realm".

2014

Ranker, T. A. 2014. Evolution and Extinction on a Volcanic Hotspot: Science, Conservation, and Restoration in the Endangered Species Capital of the World. Botany 2014 meetings, Boise, ID. Presentation of the President-Elect of the Botanical Society of America.

2015

Sundue, M. A., W. Testo, ** B. S. Parris, C. W. Morden, and T. A. Ranker. 2015. Global biogeography and diversification of grammitid ferns. Next Generation Pteridology Conference, Smithsonian Institution, Washington, DC, entitled "Biogeographic Patterns and Processes of Speciation and Hybridization in Spore-Bearing Plants". June 2015.

Ranker, T. A. 2015. Teaching Plant Systematics Today: Classic Techniques and Novel Approaches. Botany 2015 meetings, Edmonton, Canada. Presentation of the President-Elect of the American Society of Plant Taxonomists. (#37)

GRADUATE STUDENT ADVISING/MENTORING

Ph.D. Dissertation Advisor of students with completed degrees (12 total)

University of Colorado, Department of Ecology and Evolutionary Biology

- Anna M. Arft, Ph.D. 1995. Genetics, demography, and conservation management of the rare orchid *Spiranthes diluvialis* (Orchidaceae). Current job: Teacher, San Diego Natural History Museum, San Diego, California.
- Chrissen E. C. Gemmill, Ph.D. 1996. Population genetics and systematics of the Hawaiian taxa *Pritchardia* (Arecaceae) and *Brighamia* (Campanulaceae). Current job: Senior Lecturer, University of Waikato, Hamilton, New Zealand.

- Robin A. Bingham, Ph.D. 1997. Reproductive biology and genetic structure in foothill and alpine populations of *Campanula rotundifolia* L. (Campanulaceae). Current job: Professor, Western State College, Gunnison, Colorado.
- Carla A. Wise, Ph.D. 1997. The importance of genetic factors in the persistence of plant populations: Modeling problems in conservation biology with *Brassica rapa*. (Co–advisor with Yan Linhart) Current job: Environmental Writer, Corvallis, Oregon.
- Jennifer M. O. Geiger (now J. M. O. Glowienka), Ph.D. 2003. Origin and diversification of Hawaiian *Dryopteris* (Dryopteridaceae). Current job: Associate Professor & Department Chair, Carroll College, Helena, Montana.
- Laura Mujica-Crapanzano, Ph.D. 2004. Landscape analysis of vegetation and diversity patterns across the forest–tundra ecotone of Niwot Ridge, Colorado. (Co–advisor with Patrick Bourgeron). Current job: Instructor, University of Hawai‘i, Maui College.
- Jennifer M. Ramp Neale, Ph.D. 2005. Microevolutionary dynamics and population genetics of the endangered California vernal pool sunflower *Lasthenia conjugens* (Asteraceae). (Co–advisor with Sharon Collinge). Current job: Director of Research and Conservation, Denver Botanic Gardens, Denver, Colorado.
- Shannon D. Fehlberg, Ph.D. 2006. Evolutionary diversification of *Encelia* (Asteraceae) in the Sonoran, Mohave, and Peninsular deserts. Current job: Conservation Biologist, Desert Botanical Garden, Phoenix, Arizona.
- Jonathan Krieger, Ph.D. 2007. The evolution of developmental modules and lability of leaf form in the fern genus *Pleopeltis* (Polypodiaceae). (Co–advisor with Robert Guralnick) Current job: Project Coordinator, Global Plants Initiative, Royal Botanic Gardens, Kew.
- Sarada Krishnan, Ph.D. 2011. Population Genetic Variation and Gene Flow Studies in Threatened *Coffea* species in Madagascar: Implications for Conservation Management and Development of a Sustainable, Genetically Diverse Agroforestry System. Current job: Director of Horticulture, Denver Botanic Gardens, Denver, Colorado.
- Melissa Islam, Ph.D. 2011. Phylogenetic systematics and historical biogeography of *Erythroxyllum* (Erythroxyllaceae). Current job: Associate Director of Research and Head Curator of the Herbaria, Denver Botanic Gardens, Denver, Colorado.

University of Hawai‘i at Mānoa, Department of Botany

- Marian Chau, Ph.D. 2012. Conservation of the endangered Hawaiian fern ‘ihi‘ihilauākea (*Marsilea villosa*): A synthesis of experimental restoration, community ecology, and population genetics. Current job: Director, Seed Conservation Laboratory-Hawaiian Rare Plant Program, Harold L. Lyon Arboretum, University of Hawai‘i at Mānoa.

Master's Thesis Advisor of students with completed degrees (15 total)

University of Colorado, Museum and Field Studies Graduate Program

- Jan I. Bernstein, M.S. 1994. Open Storage: A Survey. Current job: NAGPRA Consultant, Denver, Colorado.
- Dina A. Clark, M.S. 1995. Floristic survey of the Mesa de Maya region of southeastern Colorado. Current job: Collections Manager, University of Colorado Museum of Natural History, Boulder, Colorado.
- Mark Duff, M.S. 1994. Population genetics of the Channel Island endemic *Lyonothamnus floribundus* (Rosaceae). Current job: Teacher, Basalt High School, Carbondale, Colorado.
- Julie E. Korb, M.S. 1997. Vegetation dynamics in four ecosystems along an elevational gradient in the Front Range, Colorado. Current job: Associate Professor, Ft. Lewis College, Durango, Colorado.
- Andrea Orthner, M.S. 1999. Flora of the Buffalo Peaks Wilderness Area and vicinity, Mosquito Range, Colorado. Current job: Field Botanist, Western Ecological Resource, Inc., Boulder, Colorado.

- Erin (Schaaf) Robertson, M.S. 2000. Limits to female reproductive success in the bottle gentian *Pneumonanthe bigelovii* (Gentianaceae). Recent job: Staff Biologist, Center for Native Ecosystems, Denver, Colorado. Current job: Mom, Boulder, Colorado.
- Monique McHenry, M.S. 2005. Ferns and lycophytes of the Southern Rocky Mountain Region. Current job: Executive Director, Vermont Patients Alliance Inc., Montpelier, Vermont.
- Pamela Regensberg, M.S. 2007. Flora of Baca National Wildlife Refuge. Current job: Herbarium Collections Assistant, Denver Botanic Gardens, Denver, Colorado.
- Bethany Lewis, M.S. 2008. Floristic Survey of the Arapaho National Wildlife Refuge Complex of North Park, Colorado, and Laramie Plains, Wyoming. Current job: Field Biologist, Bureau of Land Management, Pinedale, Wyoming.

University of Colorado, Department of Ecology and Evolutionary Biology

- Sandra K. Floyd, M.A. 1995. Population structure, dynamics, and genetics of *Gaura neomexicana* ssp. *coloradensis* (Onagraceae), a rare semelparous perennial. Current job: Research Associate, Monash University, Melbourne, Australia.
- Kendra A. Mingo, M.A. 1997. Phylogenetic systematics and conservation genetics of the *Sesbania tomentosa* complex (Fabaceae) in Hawaii. Current job: Director, Office of Faculty Research and Resources, Willamette University, Salem, Oregon.
- Margaret Wright, M.A. 2007. A genetic comparison of bog vs. forest populations of *Metrosideros polymorpha* (Myrtaceae) in Hawai'i. Current job: Mom, Tempe, Arizona.

University of Hawai'i at Mānoa, Department of Botany

- Amanda L. Vernon, M.S. 2011. A Web-based Interactive Identification Key to the Hawaiian Ferns. Current job: Consulting Botanist, Boston, Massachusetts.
- Tiffany Thair, M.S. 2011. Soil seed bank dynamics in a remnant lowland Hawaiian dry forests: implications for restoration. Current job: Project Manager, SWCA Environmental Consultants, Honolulu, Hawai'i.
- Autumn A. Amici, M.S. 2013. Impacts of logging on primary forests of Siboma Village in the Morobe Province, Papua New Guinea. Current position: Doctoral student, Department of Biology, University of Utah, Salt Lake City, Utah.

Member of Graduate Advisory Committees of students with completed degrees

University of Colorado at Boulder

Ecology and Evolutionary Biology

Jonathan Friedman – Ph.D., 1993
 Steve Chischilly – M.A., 1994
 Andrea Premoli – Ph.D., 1994
 Hsiu-Ping Liu – Ph.D., 1994
 John Philip Gibson – Ph.D., 1995
 Sandra Floyd – Ph.D., 2001
 David Remucal – Ph.D., 2002
 Caroline Mitchell – M.A., 2003
 Ruth Heisler – M.A., 1995
 Anna Goebel – Ph.D., 1996
 Ron Millen – M.A., 1996
 William Gould – Ph.D., 1998

Brian Kreiser – Ph.D., 1999
 Norman Clippinger – Ph.D., 2002
 Tara Forbis – Ph.D., 2003
 Kristy Duran – Ph.D., 2004
 Nehalem Brieter – M.A., 2005
 Pablo Weaver – M.A., 2005
 Kasey Barton – Ph.D., 2007
 Jennifer Winther – Ph.D., 2008
 Heidi Schutz – Ph.D., 2008
 Ken Keefover-Ring – Ph.D., 2008
 Erin Bissell – Ph.D., 2010

Museum and Field Studies

Linda Clement – M.S., 1993

David Hunzicker – M.S., 2005

Caroline McLean – M.S., 1993
 Jack Watson – M.S., 1997
 Mary Damm – M.S., 2002
 Molly O'Malley – M.S., 1998
 Elizabeth Wall – M.S., 2005

Sarah Price – M.S., 2005
 Mary Coleman – M.S., 2005
 Heather McKeown – M.S., 2006
 Mardy Nelson – M.S., 2006
 Eric Chapman – M.S., 2007

Geological Sciences

Jared Morrow – Ph.D., 1997

Geography Department

Naomi Arcand – Ph.D., 2014

University of Hawai'i at Mānoa

Department of Botany

Thomas Sauvage – M.S., 2010
 Jessica Neumann – M.S., 2011
 Lauren Weissenberger – Ph.D., 2012
 Richard Pender – Ph.D., 2013
 Mary Ikagawa – M.S., 2014

Lara Reynolds – M.S., 2011
 Tara C. Shipley – M.S., 2011
 Pei-Luen Lu – Ph.D., 2012
 Jason Cantley – Ph.D., 2014
 David Cole – Ph.D., 2015

Tropical Plant and Soil Sciences

Ethan Romanchak – M. S., 2006

Current Member of Graduate Advisory Committees

University of Hawai'i at Mānoa

Daniela Dutra, Ph.D. (Botany)
 Peter Wiggin, Ph.D. (Botany)
 V. Nipuni S. Sirimalwatta, Ph.D. (Botany)

Andersonn Prestes, Ph.D. (PEPS)
 Wagner Magalhaes, Ph.D. (Biology)

ADVISOR OF UNDERGRADUATE HONORS STUDENTS UNIVERSITY OF COLORADO

- Nancy Bordelon, *cum laude*, 1994: Population genetics of *Washington filifera*. PhD Texas A&M 1990; Current job: Asst. Director of Preclinical Sciences, Alcon Laboratories, Dallas, Texas
- Jeffe Morehart, *magna cum laude*, 1994: A phylogenetic investigation of Hawaiian Palms. Current job: Bakery owner and Baker, Durango, Colorado.
- Brittany A. Wilson, *magna cum laude*, 1994: Phylogenetic relationships of *Adenophorus*.
- Keri Howe, *summa cum laude*, 1995: The mating system of *Campanula rotundifolia*. (Nominated "Outstanding Graduate in College of Arts and Sciences", Fall, 1995) Current job: Attorney.
- Lara Sims, *cum laude*, 1995: Phylogenetic history of the rare orchid *Spiranthes delitescens*.
- Chi Yang, *magna cum laude*, 1995: Genetic basis for isozyme variability in *Brassica rapa*. Current job: Private consultant, computer software, Denver, Colorado.
- Stephanie Arenales Brooks, *magna cum laude*, 1996: Phylogenetic systematics of Western North American *Scutellaria* (Lamiaceae). (Co-advised with R. G. Olmstead) Current job: Policy Analyst, Covering Kids and Families, Colorado Community Health Network, Denver, Colorado.
- Janine Johnston, *magna cum laude* 1996. Iridoid glycoside and allozyme variation within and among populations of *Plantago rhodosperma* Decne. (Plantaginaceae) in Kansas. (Co-advised with M. D. Bowers) Current job: Co-founder of and Instructor at ¡Que Viva El Español!, LLC, Spanish Language School, Santa Fe, New Mexico.
- Jemma Wilk, *magna cum laude*, 1996: Population genetics and historical biogeography of Coloradan populations of *Asplenium septentrionale* (Aspleniaceae). PhD Boston University 2002. Current

job: Associate Director, Genetic and Molecular Epidemiology Lead at Pfizer, Boston, Massachusetts.

- Amy Tanner, *summa cum laude*, 1998: The impact of genetic variation on reproductive fitness.
- Shannon Kennedy Straub, *summa cum laude*, 2001: Molecular systematics of the Grammitidaceae based on the chloroplast gene *atpβ*. Ph.D. Cornell University 2010. Current job: Assistant Professor, Hobart and William Smith Colleges, Geneva, New York.
- Keelie Klobberdanz, *magna cum laude*, 2002: Molecular systematics of Hawaiian *Asplenium*. Current job: Research lab technician, Colorado State University, Ft. Collins, Colorado.
- Sarah McPherson Houder, *magna cum laude*, 2007: Genetic differentiation of kipuka populations of *Vaccinium reticulatum* on the Island of Hawai'i. Current job: Coordinator, Office of Community Relations, University of Florida, Gainesville, Florida.

**COMMITTEE MEMBER FOR UNDERGRADUATE HONORS STUDENTS –
UNIVERSITY OF COLORADO**

- 2003:** Janice Forbis (EEB), Mindi Manes (EEB)
2004: Sara Desplaines (EEB), Colleen Kenney (EEB), Kira Krend (EEB), Anjali Subbarao (Psychology), Matthew Metzger (EEB)
2005: Mary Shannon Clow (EEB), Stephanie Kemp (EEB), Erin Posthumus (EEB), Matthew Siegle (EEB)

**HUGHES INITIATIVE UNDERGRADUATE RESEARCH ASSISTANTSHIPS PROGRAM (URAP) AND CU
UNDERGRADUATE RESEARCH OPPORTUNITY PROGRAM (UROP) STUDENTS
UNIVERSITY OF COLORADO**

URAP

1994: Nancy Bordelon **1995:** Chi Yang **2000:** Keelie Klobberdanz

UROP

1993: Vicki Frey
1994: Laura Carsten, Mignon Macias, Jeffie Morehart, Brittany Wilson, Eric Wilson
1995: Pamela Delboy, Tara Doughty, Heather Locke
1996: Susie Geer, Mignon Macias
1999: Natalie Triplett, Lauren Whiteside
2002: Keelie Klobberdanz

**SUMMER MULTICULTURAL ACCESS TO RESEARCH AND TRAINING STUDENTS
UNIVERSITY OF COLORADO**

1994: Mignon Macias **1996:** Amy Tanner
1995: Veronica Rodriguez **1999:** Eric Wada

**EEB RESEARCH EXPERIENCE FOR UNDERGRADUATES PROGRAM
UNIVERSITY OF COLORADO**

1996: Jemma Wilk **2001:** Kimberly van Exel
1997: Sara Krier **2002:** Rachel Prunier
1999: Elizabeth Twieg

TEACHING: UNIVERSITY OF COLORADO

- Spring, 1991:** Plant Systematics, EPOB 3520 (51 students)
 Independent Study – Graduates, EPOB 7840 (2 students)
 Master's Thesis, EPOB 6950 (1 student)
 Independent Study – Seniors, EPOB 4840 (2 students)
 Museum Intern – Botany, Museum 4933 (1 student)
- Fall, 1991:** Origin of Species, Graduate Seminar, EPOB 6200 (31 students)
 Doctoral Dissertation, EPOB 8990 (1 student)
 Independent Study – Seniors, EPOB 4840 (2 students)
 Independent Research – Seniors, EPOB 4870 (2 students)
- Spring, 1992:** Plant Systematics, EPOB 3520 (60 students)
 Independent Study – Graduates, EPOB 5840 & 7840 (2 students)
 Independent Study – Seniors, EPOB 4840 (2 students)
- Summer, 1992:** Plants of Colorado, EPOB 4520 (19 students)
- Fall, 1992:** Independent Research – Seniors, EPOB 4870 (4 students)
 Independent Study – Seniors, MUSM 5840 (1 student)
 Doctoral Dissertation, EPOB 8990 (1 student)
- Spring, 1993:** Plant Systematics, EPOB 3520 (63 students)
 Independent Research – Sophomores, EPOB 2840 (1 student)
 Independent Research – Seniors, EPOB 4870 (2 students)
 Independent Study – Graduates, EPOB 5840 (2 student)
 Independent Study – Graduates, EPOB 7840 (2 students)
 Independent Study, Museum, MUSM 4900 (1 student)
 Museum Intern – Botany, MUSM 4933 (1 student)
 Master's Thesis, EPOB 6950 (1 student)
 Doctoral Dissertation, EPOB 8990 (3 students)
- Summer, 1993:** Plants of Colorado, EPOB 4520 (19 students)
 Independent Research – Seniors, EPOB 4870 (3 students)
 Doctoral Dissertation, EPOB 8990 (2 students)
- Fall, 1993:** Independent Research – Juniors, EPOB 3870 (2 students)
 Independent Study – Seniors, EPOB 4840 (1 student)
 Independent Research – Seniors, EPOB 4870 (3 students)
 Master's Thesis, EPOB 6950 (3 students)
 Independent Research – Graduates, EPOB 8840 (2 students)
 Independent Study – Graduates, EPOB 7840 (2 students)
 Doctoral Dissertation, EPOB 8990 (4 students)
- Spring, 1994:** Plant Systematics, EPOB 3520 (62 students)
 Independent Study – Junior, EPOB 3840 (1 student)
 Independent Research – Junior, EPOB 3870 (2 students)
 Teaching Biology (Plant Systematics), EPOB 4010 (1 student)
 Independent Research – Senior, EPOB 4870 (2 students)
 Independent Study – Graduate, EPOB 5840 (1 student)
 Independent Research – Graduate, EPOB 6840 (1 student)
 Master's Candidate, Plan 2, EPOB 6940 (1 student)
 Master's Thesis, EPOB 6950 (1 student)
 Independent Study – Graduate, EPOB 7840 (1 student)
 Doctoral Dissertation, EPOB 8990 (4 students)
- Summer, 1994:** Independent Research – Junior, EPOB 3870 (1 student)
 Independent Research – Senior, EPOB 4870 (1 student)
 Independent Research – Graduate, EPOB 6860 (1 student)

- Fall, 1994:** Independent Research – Junior, EPOB 3870 (1 student)
 Independent Study – Senior, EPOB 4840 (1 student)
 Independent Research – Senior, EPOB 4870 (3 students)
 Independent Study – Graduate, MUSM 5900 (1 student)
 Topics in Evolution, Graduate Seminar, EPOB 6110 (10 students)
 Biology/Evolution of Polyploidy, Graduate Seminar, EPOB 6300 (8 students)
 Master's Candidate, Plan 2, EPOB 6940 (1 student)
 Master's Thesis, EPOB 6950 (2 students)
 Doctoral Dissertation, EPOB 8990 (5 students)
- Spring, 1995:** Plant Systematics, EPOB 3520 (40 students)
 Teaching Biology (Plant Systematics), EPOB 4010 (1 student)
 Independent Research – Senior, EPOB 4870 (3 students)
 Independent Study – Graduate, MUSM 5900 (1 student)
 Master's Thesis, EPOB 6940 (2 students)
 Independent Study – Graduate, EPOB 7840 (3 students)
 Doctoral Dissertation, EPOB 8990 (5 students)
- Fall, 1995:** Independent Research – Senior, EPOB 4870 (1 student)
 Independent Research – Graduate, EPOB 6880 (1 student)
 Doctoral Dissertation, EPOB 8990 (5 students)
- Spring, 1996:** Plant Systematics, EPOB 3520 (18 students)
 Teaching Biology (Plant Systematics), EPOB 4010 (1 student)
 Independent Research – Senior, EPOB 4870 (1 student)
 Independent Study – Senior, MUSM 4900 (1 student)
 Independent Study – Graduate, EPOB 5840 (1 student)
 Independent Study – Graduate, EPOB 7840 (1 student)
 Doctoral Dissertation, EPOB 8990 (4 students)
- Summer, 1996:** Independent Research – Senior, EPOB 4870 (2 students)
- Fall, 1996:** Independent Research – Junior, EPOB 3870 (1 student)
 Independent Research – Senior, EPOB 4870 (1 student)
 Origin of Species, Graduate Seminar, EPOB 6200 (8 students)
 Museum Practicum in Botany, MUSM 5913 (1 student)
 Master's Thesis, MUSM 6950 (1 student)
 Doctoral Dissertation, EPOB 8990 (3 students)
- Spring, 1997:** Plant Systematics, EPOB 3520 (49 students)
 Independent Research – Junior, EPOB 3870 (2 students)
 Teaching Biology (Plant Systematics), EPOB 4010 (1 student)
 Master's Thesis, MUSM 6950 (1 student)
 Museum Practicum in Botany, MUSM 5913 (1 student)
 Doctoral Dissertation, EPOB 8990 (3 students)
- Fall, 1997:** Independent Research – Senior, EPOB 4870 (1 student)
 Master's Thesis, EPOB 6950 (1 student)
- Spring, 1998:** Plant Systematics, EPOB 3520 (47 students)
 Independent Study – Senior, EPOB 4840 (1 student)
 Independent Research – Senior, EPOB 4870 (1 student)
 Independent Study – Graduate, EPOB 7840 (2 students)
- Summer, 1998:** Independent Study – Graduate, MUSM 5900 (1 student)
- Fall, 1998:** *Sabbatical Leave*
 Doctoral Dissertation, EPOB 8990 (1 student)
 Master's Thesis, MUSM 6950 (1 student)
- Spring, 1999:** *Sabbatical Leave*

- Doctoral Dissertation, EPOB 8990 (1 student)
 Master's Thesis, MUSM 6950 (1 student)
- Summer, 1999:** Biological Field Studies, EPOB 4350 (1 student)
- Fall, 1999:** Doctoral Dissertation, EPOB 8990 (2 students)
 Independent Research – Senior, EPOB 4870 (1 student)
 Independent Study – Senior, MUSM 4900 (1 student)
- Spring, 2000:** Plant Systematics, EPOB 3520 (69 students)
 Teaching Biology (Plant Systematics), EPOB 4010 (1 student)
 Independent Study – Graduate, EPOB 5840 (1 student)
 Independent Study – Graduate, EPOB 7840 (1 student)
 Scientific Survival, Graduate Seminar, EPOB 6000 (24 students)
 Doctoral Dissertation, EPOB 8990 (2 students)
- Fall, 2000:** Doctoral Dissertation, EPOB 8990 (2 students)
 Museum Practicum/Botany, MUSM 5913 (1 student)
- Spring, 2001:** Collections Management, MUSM 5051 (10 students)
 Independent Study, MUSM 4900 (1 student)
 Doctoral Dissertation, EPOB 8990 (1 student)
- Fall, 2001:** Doctoral Dissertation, EPOB 8990 (4 students)
- Spring, 2002:** Independent Study, ENVS 4840 (1 student)
 Doctoral Dissertation, EPOB 8990 (4 students)
- Summer, 2002:** Doctoral Dissertation, EPOB 8990 (1 student)
- Fall, 2002:** Collections Management, MUSM 5051 (13 students)
 Doctoral Dissertation, EPOB 8990 (4 students)
 Independent Research – Graduate, EPOB 8840 (1 student)
- Spring, 2003:** Independent Research – Senior, EPOB 4870 (1 student)
 Island Biology Graduate Seminar, EPOB 6100 (7 students)
 Doctoral Dissertation, EPOB 8990 (4 students)
- Fall, 2003:** Collections Management, MUSM 5051 (8 students)
 Doctoral Dissertation, EPOB 8990 (3 students)
- Spring, 2004:** Independent Study – Senior, EPOB 4840 (1 student)
 Independent Study – Graduate, EPOB 7840 (1 student)
 Doctoral Dissertation, EPOB 8990 (3 students)
- Fall, 2004:** Doctoral Dissertation, EBIO 8990 (3 students)
- Spring, 2005:** Plant Systematics, EBIO 3520 (20 students)
 Grant Writing Graduate Seminar, MUSM 6110 (11 students)
 Independent Research – Senior, EBIO 4870 (1 student)
 Independent Study – Graduate, EBIO 5840 (1 student)
 Doctoral Dissertation, EBIO 8990 (2 students)
 Master's Thesis, MUSM 6590 (1 student)
- Fall, 2005:** *Sabbatical leave*
 University of Hawai'i: Graduate seminar on Darwin's Origin of Species (8 students)
 Doctoral Dissertation, EBIO 8990 (2 students)
- Spring, 2006:** *Sabbatical leave*
 Honors Independent Research, EBIO 4990 (1 student)
 Master's Thesis, EBIO 6950 (2 students)
 Doctoral Dissertation, EBIO 8990 (2 students)
 University of Hawai'i: Graduate seminar on The Biology and Evolution of Ferns and Lycophytes (11 students + 8 auditors)
- Fall, 2006:** Independent Study – Undergraduate, EBIO 4840 (1 student)
 Independent Study – Graduate, EBIO 5840 (1 student)

- Spring, 2007:** Doctoral Dissertation, EBIO 8990 (2 students)
 Doctoral Dissertation, EBIO 8990 (2 students)
 Master's Thesis, EPOB 6950 (1 student)
- Fall, 2007:** Independent Study – Graduate, EBIO 5840 (1 student)
 Doctoral Dissertation, EBIO 8990 (2 students)
 Master's Thesis, EPOB 6950 (1 student)
- Spring, 2008:** Doctoral Dissertation, EBIO 8990 (2 students)

TEACHING: UNIVERSITY OF HAWAI'I

- Spring, 2008:** Directed Research, BOT 699 (1 student)
- Fall, 2008:** Current Botany Foundations I, BOT 601 (15 students)
 Directed Research, BOT 699 (1 student)
- Spring, 2009:** Biology and Evolution of Ferns and Lycophytes, BOT 612 (6 students)
- Fall, 2009:** Directed Research, BOT 699 (2 students)
- Spring, 2010** Plant Diversity and Evolution, BOT 201 (21 students; team taught, 3 faculty)
 Directed Research, BOT 399 (3 students)
 Botanical Seminar, BOT 610 (8 students)
 Directed Research, BOT 699 (4 students)
- Fall, 2010** Directed Research, BOT 699 (4 students)
- Spring, 2011** Plant Diversity and Evolution, BOT 201 (24 students; team taught, 3 faculty)
 Directed Research, BOT 699 (4 students)
- Fall, 2011** Directed Research, BOT 399 (2 students)
 Directed Research, BOT 699 (1 student)
 Dissertation Research, BOT 800 (1 student)
- Spring, 2012** Directed Research, BOT 699 (2 students)
- Spring, 2014** Graduate Seminar, BOT 612: Darwin's Origin of Species (7 students)
- Fall, 2014** Graduate Seminar, BOT 601: Current Botany Foundations (15 students)
- Spring, 2015** Graduate Seminar, BOT 612: Darwin's Origin of Species (11 students)
 Graduate Seminar, BOT 612: Biology & Evolution Ferns & Lycophytes (1 student)
- Fall, 2015** Graduate Seminar, BOT 601: Current Botany Foundations (15 students)

UNIVERSITY SERVICE

University of Colorado

- 1991–2007:** Ad-hoc reviewer of UROP proposals; 5–10 per year
- 1993–1996:** Boulder Faculty Assembly representative
- 1993–1996:** Council for Research and Creative Work–Graduate School
- 1996–1998,**
- 2000–2004:** Graduate Student Research and Creative Work Awards Committee – Graduate School
- 1996–1997:** Sussman Environmental Internship Committee – Graduate School
- 1997, 1999,**
- & 2000:** Dean's Small Grants Review Committee – Graduate School
- 2003–2005:** University Undergraduate Honors Council

University of Colorado – College of Arts & Sciences

- 1992–1993:** Presentation to A & S 50th Reunion, Class of 1942, entitled "Plants of Hawaii"

University of Colorado – University Museum

- 1990–1991:** Collections Committee; Museography Review Committee

- 1991–1992:** Chair, Collections Committee; Tenure Review Committee
- 1992–1993:** Chair, Collections Committee
- 1993–1994:** Chair, Collections Committee; Search Committee, Vertebrate Zoologist; Task Force, Masters of Basic Science Program Review
- 1994–1995:** Co–Chair, Curriculum Committee; Collections Committee; Yellow Jacket Archeological Site Advisory Committee; Museum Space Committee
- 1995–1996:** Co–Chair, Curriculum Committee; Collections Committee; Yellow Jacket Archeological Site Advisory Committee; Museum Space Committee
- 1996–1997:** Co–Chair, Curriculum Committee; Collections Committee; Yellow Jacket Archeological Site Advisory Committee; Museum Space Committee
- 1997–1998:** Co–Chair, Curriculum Committee; Collections Committee; Yellow Jacket Archeological Site Advisory Committee; Museum Space Committee; Project Curator for NSF planning grant proposal: “From Grassland to Glacier” exhibit; Museum Web Page Committee
- 1998–1999:** *Sabbatical leave*; Project Curator for NSF–funded exhibit renovation project: “From Grassland to Glacier” exhibit
- 1999–2000:** Curriculum Committee; Collections Committee; Museum Space Committee; Project Curator for NSF–funded exhibit renovation project: “From Grassland to Glacier” exhibit; Chair, Search Committee for Coordinator of Museum & Field Studies Program. Member of standing, low–level activity committees: Yellow Jacket Archeological Site Advisory Committee.
- 2000–2001:** Curriculum Committee; Collections Committee; Project Curator for NSF–funded exhibit renovation project: “From Grassland to Glacier” exhibit; Search Committee for Coordinator of Museum & Field Studies Program. Member of standing, low–level activity committees: Yellow Jacket Archeological Site Advisory Committee. Presented lecture on “Assessing changes in biological diversity over time” to workshop of K–12 teachers sponsored by the CU Museum and the National Wildlife Federation.
- 2001–2002:** Interim Director of CU Museum; Project Curator for exhibit renovation and biodiversity science education project (“BioHall Committee”); Tenure and Reappointment Committee
- 2002–2003:** Chair, Collections Committee; BioHall Committee; Participant in “Science After School” workshop for 4th–grade girls; *ad hoc* Zoology Section Review Committee; Emergency Planning Committee
- 2003–2004:** Chair, Collections Committee; Chair, Grants Committee; Zoology Collection Manager Search Committee; Chair, Guralnick Comprehensive Review Committee; Emergency Planning Committee; Curator of Vertebrate Zoology Search Committee; Bowers Post–Tenure Review Committee; Curator for exhibit “Remains of a Rainbow”; Cordell Post–Tenure Review Committee; Reappointment Committee
- 2004–2005:** Chair, MFS Curriculum Committee; Chair, Student Fees Committee; Co–Chair, PRP Committee; Bowers Post–Tenure Review Committee
- 2005–2006:** *Sabbatical leave*
- 2006–2007:** Interim Director

University of Colorado – Department of Ecology and Evolutionary Biology

- 1990–1991:** Search Committee for Assistant Director of Plant Facilities; General Biology Laboratory Evaluation Committee; EPOB Graduate Fellowship applications (*ad hoc* reviewer)
- 1991–1992:** Executive Committee; Undergraduate advising; Environmental Rooms co–ordinator; Chair, Greenhouse Construction Committee
- 1992–1993:** Chair, Greenhouse Construction Committee; Environmental Rooms co–ordinator
- 1993–1994:** Chair, Greenhouse Construction Committee; Chair, Environmental Rooms; Search Committee, Field Biologist
- 1994–1995:** Instructor Reappointment Committee; Undergraduate advising

- 1995–1996:** Undergraduate Curriculum/Advising Committee; Undergraduate advising
1996–1997: Undergraduate Curriculum/Advising Committee; Evolutionary Biology Committee; Undergraduate advising
1997–1998: Graduate Committee; Search Committee for Evolutionary Biologist
1998–1999: *Sabbatical leave*
1999–2000: Graduate Committee; Greenhouse Committee; Search Committee for Evolutionary Biologist
2000–2001: Greenhouse Committee; Chair, Reappointment Committee for an instructor
2001–2002: Strategic Planning and Hiring Committee; Tenure and Reappointment Committee
2002–2003: Executive Committee; Salary and Evaluation Committee
2003–2004: Faculty Comprehensive Review Committee; Departmental Honors Committee
2004–2005: Graduate Committee; Departmental Honors Committee; Faculty Comprehensive Review Committee; Sequencing Facility Committee
2005–2006: *Sabbatical leave*
2006–2007: Graduate Committee

University of Colorado – Institute of Arctic and Alpine Research

- 2002:** Member of *ad hoc* review committee of Mountain Research Station

University of Hawai‘i at Mānoa

- 2010–2011:** University representative for the working agreement between UH Mānoa and the U.S. Fish and Wildlife Service Student Career Experience Program (SCEP)
2008–2011: Chair, Department of Botany
2008: Chair, *ad hoc* committee on the use of ‘clickers’ on UH Mānoa campus
2008–2011: Chair, Graduate Program, Department of Botany
2008–2011: Undergraduate Adviser, Department of Botany
2014–2017: Graduate Council, Course Committee
2015: Presenter on Academic Writing & Reading at New Graduate Student Orientation, Office of Graduate Education
2016: Tenure Promotion and Review Committee, UH Mānoa

University of Hawai‘i at Mānoa, Office of the Chancellor

- 2009:** Professional Administrative Summer Institute *ad hoc* selection committee
2010: Professional Administrative Summer Institute *ad hoc* selection committee

PROFESSIONAL SERVICE

Reviews of Manuscripts & Books for Peer-Reviewed Journals and Publishers and Grant Proposals (1990–present):

Manuscripts/books: 205

Acta Botanica Mexicana; American Fern Journal; American Journal of Botany; American Naturalist; Annales Botanici Fennici; Annals of Botany; AoB Plants; Arctic, Antarctic, and Alpine Research; Biological Conservation; Biological Journal of the Linnean Society; BMC Evolutionary Biology; BMC Plant Biology; Botanical Journal of the Linnean Society; Botanical Studies (Taiwan); Brittonia; Cambridge University Press; Canadian Journal of Botany; Chapman & Hall Publishers; Cladistics; Conservation Biology; Conservation Ecology; Conservation Genetics; Ecology Letters; eFlora of New Zealand; Endangered Species Research; Evolution; The Fern Gazette; Flora Neotropica Monographs; Grammitidaceae for *Nuevo Catálogo de la Flora de Venezuela*; Genetica; Heredity; International Journal

of Molecular Sciences; International Journal of Plant Sciences; Journal of Plant Research; Journal of Systematics and Evolution; Journal of The Society for the Advancement of Breeding Researches in Asia and Oceania (SABRAO); Journal of Systematics and Evolution; Journal of the Botanical Research Institute of Texas; Journal of the Torrey Botanical Society; Landscape Ecology; Madroño; Molecular Ecology; Molecular Phylogenetics and Evolution; Monocots III/Grasses IV Proceedings, Rancho Santa Ana Botanic Garden; New England Wild Flower Society (*Peterson Field Guide to the Ferns*); New Phytologist; New Zealand Journal of Botany; Novon; Oxford University Press (*Timetree of Life*); Pacific Science; PhytoKeys; Plant Ecology; Plant Genetic Resources; Plant Systematics and Evolution; PLOS Currents: Tree of Life; PLOS One; Review of Palaeobotany & Palynology; Smithsonian Institution Press; South African Journal of Botany; Systematic Biology; Systematic Botany; Taxon; Tree Genetics & Genomics; University of California Press; Western North American Naturalist

Grant Proposals:

• National Science Foundation, Smithsonian Institution	143
• The Charles A. and Anne Morrow Lindbergh Foundation	67
• Colorado Natural Areas Program	6
• Idaho Board of Education	2
• University of Hawai'i, College of Tropical Agriculture and Human Resources	1
• Canon National Parks Science Scholars Program for the Americas/AAAS	15
• The Vermont Agricultural Experiment Station	1
• National Geographic Society	3
• Sigma Delta Epsilon/Graduate Women in Science Fellowship	1
• M. J. Murdock Charitable Trust	4
• University of Wisconsin, Research Growth Initiative	1
• American Philosophical Society (2010)	12
• Louisiana EPSCoR (2013)	1

National Science Foundation:

- Panel Member: 1996, 1997, 2000, 2001, 2004

American Association for the Advancement of Science:

- Reviewer of symposium proposal for annual meeting, 2010

American Fern Society:

- President–Elect, 2002–2004
- President, 2004–2006
- Managing Editor, American Fern Journal, 2013–present

American Society of Plant Taxonomists:

- Environment and Public Policy Committee, Member, 1996–1999
- Editorial Committee Member for Systematic Botany Monographs, 2004–2007
- Associate Editor for Systematic Botany, 2004–2009
- Editor–in–Chief for Systematic Botany, 2010–2012
- President Elect, 2014–2015
- President, 2015–2016
- Past President, 2016–2017

American Society of Naturalists, Society of Systematic Biologists, Society for the Study of Evolution:

- Member of Organizing Committee for joint annual meeting, 1997

Association for Tropical Biology and Conservation & Organization for Tropical Studies:

- Member of Scientific Program Committee for joint annual meeting, 2013

Bernice Pauahi Bishop Museum

- How to Identify Ferns and Lycophytes of the Hawaiian Islands Workshop. Part of a series of workshops offered at Bishop Museum in conjunction with the Consortium of Pacific Herbaria grant supported by NSF

Botanical Society of America:

- Secretary/Treasurer, Pteridological Section of BSA, 1998–2001
- Committee on Committees, 2000–2002
- Conservation Committee, Chair, 2001–2003
- Conservation Committee, Member, 2001–2004
- Elections Committee, Member, 2006–2009
- Committee on Committees, Chair, 2013–2014
- President Elect, 2013–2014
- President, 2014–2015
- Past-President, 2015–2016

Boulder Valley Public Schools Community Advisory Committee to Science:

- Member, 2006–2007

Botanical Society of America and American Fern Society:

- Chair of contributed paper session at joint annual meeting, August 1992
- Organized symposium on “Conservation Biology of Pteridophytes”, August 1998
- Program officer for AFS & Pteridological Section at annual meeting in Portland, OR, 2000
- Program officer for AFS & Pteridological Section at annual meeting in Mobile, AL, 2003
- Program officer for AFS & Pteridological Section at annual meeting in Snowbird, UT, 2004
- Co-Organized symposium on “Ferns on Oceanic Islands – from dispersal to long lasting diversity”, joint annual meeting in Chicago, IL, 2007

The Field Museum, Chicago

- Outside reviewer for faculty reappointment, 1999

Green Plant Phylogeny Coordinating Group (NSF/USDA/DOE):

- Invited participant in workshop, Montreal, Canada, August, 1997

Hawai‘i Department of Education

- Mentor to two high school students for annual Science Fair, 2009–2010

International Association of Pteridologists:

- President, 2005–2011

International Organization of Plant Biosystematists:

- Co-Host and Organizer of five one-day field trips in the Rocky Mountains following the annual meeting of IOPB in St. Louis, June 1992

IUCN/Species Survival Commission – Pteridophyte Specialist Group:

- Invited Member, 1994–2005
- Co–Chair, 2001–2005

IUCN/Species Survival Commission – Pteridophyte Specialist Group & British Pteridological Society:

- Member of Organizing Committee for “Fern Flora Worldwide: Threats and Responses, An International Symposium”, University of Surrey, Guildford, UK, 23–26 July 2001

Lyon Arboretum, University of Hawai‘i at Mānoa:

- Member of three search committees for Lyon Arboretum staff positions, April 2006

Mentornet:

- Online mentor to one post-doc, 2009
- Online mentor to one faculty member, 2010
- Online mentor to three graduate students, 2009–2010
- Online mentor to one graduate student, 2011

Organization for Tropical Studies

- Resource Faculty for Tropical Ecology class, February, 2003

PhytoKeys, Pensoft Publishers

- Monilophyte Taxon Editor, 2010–present

PlantingScience.org

- Steering Committee Member, 2010–present

Public Library of Science (PLoS)

- Member, Board of Reviewers PLoS Currents: Tree of Life, 2010–present

XIII Simposio de Botánica Criptogámica, Universidad Complutense

- Member of Scientific Committee, 1999–2000

Smithsonian Institution

- Outside reviewer for faculty evaluation, 2010

Universidad de Havana, Cuba

- Outside reviewer of Ph.D. dissertation, 1996

The New York Botanical Garden

- Outside reviewer for faculty reappointment, 2001

University of Hong Kong

- Outside reviewer for faculty promotion, 2013

University of Melbourne, Melbourne, Australia

- Outside reviewer of Ph.D. dissertation, 2014

Uppsala University, Uppsala, Sweden

- Doctoral dissertation defense *Opponent*, 2009

Other U. S. Universities

- Reviewer of Full Professor promotion cases, 2005: 2; 2015: 1
- Reviewer of tenure/promotion case, 2008: 1; 2010: 2; 2014: 1

Colorado Native Plant Society

- 1991:** Presentation of workshop on "Systematics, Ecology, and Conservation of Native Hawaiian Ferns"
- 1992:** Co-host for workshop on Brassicaceae
- 1992–1996:** Board of Directors
- 1993:** Co-host for workshops on *Agave*, Brassicaceae, and Gentianaceae
- 1993–1996:** President
- 1994:** Presentation on "Ferns of Hawaii" (Denver Chapter)
- 1995:** Co-host for workshop on Cucurbitaceae
- 1996:** Co-host for workshop on trichomes; presentation of two workshops on "Basic Plant Identification"
- 1996:** Co-host for workshop on the genus *Haplopappus* and related genera
- 1997:** Co-host for workshop on "The Chihuahuan Element in the Colorado Flora"
- 1997:** Co-host for workshop on "The Orchids of Colorado"
- 1997:** Co-host for workshop on "The Cacti of Colorado and Adjacent Areas"
- 1998:** Co-host for workshop on "The Brassicaceae: *Physaria* and *Lesquerella*"
- 1999:** Co-host for workshop on "The genus *Chenopodium*"
- 2000:** Presentation of two workshops on "Basic Plant Identification"
- 2003:** Presentation of two workshops on "Basic Plant Identification"
- 2004:** Presentation of two workshops on "Lycophytes and Ferns of Colorado"
- 2004:** Host for workshop on "Xeriscaping"
- 2005:** Presentation of two workshops on "Basic Plant Identification"

Other Organizations and Agencies

- 1990:** Hawaiian Botanical Society, President
- 1991–1992:** Boulder Valley School District, Science Fair Judge
- 1992:** Green Mountain United Methodist Church, workshop on biodiversity
- 1992–2004:** Technical Committee for Rare Plants in Colorado, U. S. Fish & Wildlife Service, founding member
- 1994:** U.S. Forest Service: two workshops on plant identification at University of Colorado
- 1994–1995:** Consultant to Colorado Bureau of Investigation, Department of Public Safety
- 1995–2000:** Member Native Plant Policy Group, State of Colorado Department of Natural Resources
- 1996–2005:** Member, Science Advisory Network, Nature Conservancy of Colorado
- 2000:** Colorado/Wyoming Junior Academy of Science – Herbarium tours and discussions of botanical science to two groups of 15 students
- 2011:** US Army Garrison, Environmental Division, Department of Public Works. Presentation on Hawaiian ferns and lycophytes.
- 2012:** Marshall High School, Vienna, VA, Science Fair judge.

[Updated: 18 November 2015]