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EDUCATION

Ph.D. Biology, Harvard University, Cambridge, Massachusetts.

B.A. Biology, University of California, Santa Barbara.

RESEARCH INTERESTS

I have broad research interests in systematics, biogeography, and ecology. My systematic studies have focused on moths (Lepidoptera) and beetles (Coleoptera), but I am also interested in theoretical aspects of phylogenetic systematics. My biogeographic studies focus on island biogeography and the implications of climatic and tectonic changes through time, especially in the Pacific Basin. My ecological research focuses on New Guinea -- insects sampled with various techniques: intensive rearing from selected host plants, canopy fogging, and light trap transects.

I also have a strong commitment to the application of information from systematics studies and collections to "on the ground" problems in conservation and agriculture. In order to do this, I am interested in applications of information management technology to biological diversity issues and the development of techniques to evaluate and monitor biological diversity.

PROFESSIONAL EXPERIENCE

International Centre of Insect Physiology and Ecology, Nairobi, Kenya

Principal Scientist and Leader, Biodiversity and Conservation Programme (1998-1999)

Bernice Pauahi Bishop Museum, Honolulu, Hawaii, USA

Research Associate, Department of Natural Sciences (1998-present)

Chairman, Department of Natural Sciences (1993-1997)

Chairman, Department of Entomology (1986-1993)

University of Hawaii, Honolulu, Hawaii, USA

Affiliate Graduate Faculty, Dept. of Entomology (1987-present)

National Museum of Natural History, Smithsonian Institution, Washington, DC, USA

Supervisory Research Entomologist (2000-)
Collaborator (1983-1987); Research Associate (1987-1997)
Santa Barbara Museum of Natural History, Santa Barbara, California, USA

Staff Associate (1975-1978); Research Associate (1978-present)
Natural History Museum of Los Angeles County, Los Angeles, California, USA

Research Associate (1977-present)

SELECTED RECENT PUBLICATIONS

Miller, S.E. 1993. The information age and agricultural entomology. *Bulletin of Entomological Research* 83: 471-474.

Miller, S.E. 1993. Biodiversity and conservation of the nonmarine invertebrate fauna of Papua New Guinea, p. 227-325. In: Beehler, B., editor, *Papua New Guinea Conservation Needs Assessment. Volume 2. Department of Environment and Conservation, Boroko, PNG.* (appendices by D.A. Polhemus, L.G. Eldredge and R. Cowie).

Allison, A., G.A. Samuelson & S.E. Miller. 1993. Patterns of beetle species diversity in New Guinea rain forest as revealed by canopy fogging: preliminary findings. *Selbyana* 14: 16-20.

Miller, S.E. 1994. Development of world identification services: networking, p. 69-80. In: D.L. Hawksworth, editor, *Identification and characterization of pest organisms.* CAB International, Wallingford, UK.

Miller, S.E. 1994. Systematics of the Neotropical moth family Dalceridae (Lepidoptera). *Bulletin of the Museum of Comparative Zoology* 153: 301-495.

Evenhuis, N.L. & S.E. Miller, editors. 1995-1998. Records of the Hawaii Biological Survey for 1994-1996. *Bishop Museum Occasional Papers* 41, 42, 45, 46, 48, 49, 55, 56.

Sekhran, N. & S. E. Miller (eds.). 1996. *Papua New Guinea Country Study on Biological Diversity.* Papua New Guinea Department of Environment and Conservation, Waigani. xl + 438 p.

Basset, Y., G. A. Samuelson, A. Allison, & S. E. Miller. 1996. How many species of host-specific insects feed on a species of tropical tree? *Biological Journal of the Linnean Society* 59: 201-216.

Allison, A., G. A. Samuelson, & S. E. Miller. 1997. Patterns of beetle species diversity in *Castanopsis acuminatissima* (Fagaceae) trees studied with canopy

fogging in mid-montane New Guinea rainforest, p. 224-236 in N. E. Stork, J. Adis & R. K. Didham (eds.), *Canopy arthropods*. Chapman and Hall, London, England.

Keast, A. & S. E. Miller (eds.) 1997. *The origin and evolution of Pacific island biotas, New Guinea to Eastern Polynesia: Patterns and processes*. SPB Academic Publishing, Amsterdam. viii + 531 p.

Kami, K.S. & S.E. Miller. 1998. *Samoan insects and related arthropods: Checklist and bibliography*. Bishop Museum Technical Report 13: v + 121.

Novotný, V., Y. Basset, S.E. Miller, A. Allison, G.A. Samuelson, & L.J. Orsak. 1998. The diversity of tropical insect herbivores: an approach to collaborative international research in Papua New Guinea. pp. 112-125 in B.H. Lee, J.C. Choe & H.Y. Han (eds.), *Taxonomy and Biodiversity in East Asia: Proceedings of International Conference on Taxonomy and Biodiversity Conservation in East Asia*. Korean Biodiversity Council and Korean Institute for Biodiversity Research, Chonju.

Basset, Y., V. Novotny, S.E. Miller & N. Springate. 1998. Assessing the impact of forest disturbance on tropical invertebrates: some comments. *Journal of Applied Ecology* 35: 461-466.

Allison, A. & S.E. Miller. 1998. Hawaii Biological Survey: Museum resources in support of conservation, in P.H. Raven and T. Williams (ed.), *Nature and human society: The quest for a sustainable world*. Proceedings of a conference, 27-30 October 1997. National Academy Press, Washington, D.C. (in press).

Miller, S.E., B. Gemmill, L. Rogo, M. Allen & H.R. Herren. 1998. Biodiversity of terrestrial invertebrates in tropical Africa: assessing the needs and plan of action, in P.H. Raven and T. Williams (eds.), *Nature and human society: The quest for a sustainable world*. Proceedings of a conference, 27-30 October 1997. National Academy Press, Washington, D.C. (in press).

Miller, S. E., Novotny, V. & Basset, Y. (in press) Case studies of arthropod diversity and distribution. In *Foundations of tropical biology: Key papers and commentaries*. (eds. R. L. Chazdon & T. C. Whitmore), University of Chicago Press, Chicago.

Holloway, J.D., Kibby, G. Peggie, D., Miller, S.E. & Carter, D. (in press) *Families of Malesian moths and butterflies*. Fauna Malesia Handbook Series. Brill, Leiden.