

ATTACHMENT DR 45-1

RESUMES OF DRS. PATRICIA BROWN AND WILLIAM RAINEY

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Education

Michigan State University B. S. (with high honor) 1969 Geology
University of California, Berkeley Ph.D. 1985 Zoology

Professional experience

- 1988-present Research zoologist. PI or co-PI on direct grants and contracts.
2008-2010 Associate Specialist, California Biodiversity Center, University of California, Berkeley (fractional time).
1997-2007 Associate Specialist, Dept. of Integrative Biology, University of California, Berkeley (fractional time).
1989 Visiting associate research scientist. Dept. of Zoology, University of California, Berkeley.
1986-87 Post-doctoral research biochemist. Dept. of Anthropology, University of California, Berkeley.
1972-73 Zoologist, Island Resources Foundation, St. Thomas, Virgin Islands.

Refereed Publications

- 2012 de Valpine, P.; T. Ingersoll; and W.E. Rainey. Of GAMs and GAMMs: statistical modeling of high-frequency animal activity time-series. *Methods in Ecology and Evolution*. [Submitted]
- 2008 Golet, G.H.; T. Gardali; C.A. Howell; J. Hunt; R.A. Luster; W.E. Rainey; M.D. Roberts; J. Silveira; H. Swagerty; and N. Williams. Wildlife Response to Riparian Restoration on the Sacramento River. *San Francisco Estuary and Watershed Science* 6 (2): Article 1. <<http://escholarship.org/uc/item/4z17h9qm>>
- 2007 Frick, W.F., W.E. Rainey, and E.D. Pierson. Potential effects of environmental contamination on Yuma myotis demography and population growth. *Ecological Applications* 17(4): 1213-1222.

- 2004 Power, M.E., W.E. Rainey, M.S. Parker, J.L. Sabo, A. Smyth, S. Khandwala, J.C. Finlay, F.C. McNeely, K. Marsee, and C. Anderson. River to watershed subsidies in an old-growth conifer forest. Pp. 217-240. *In* G.A. Polis, M.E. Power, and G.R. Huxel (eds.) Food webs and Landscapes. Chapman and Hall, N.Y.
- 2000 M.E. Power and W.E. Rainey. Food webs and resource sheds: Towards spatially delimiting trophic interactions. Pp. 291-314. *In* M.J. Hutchings, E.A. John, and A.J.A. Stewart (eds.) Ecological Consequences of Environmental Heterogeneity. British Ecological Society Symposium 1999. Blackwell Science. Oxford.
- 1998 Pierson, E. D, and W.E. Rainey. Distribution of the spotted bat, *Euderma maculatum*, in California. *Journal of Mammalogy* 79(4): 1296-1305.
- 1998 Rainey, W.E. Conservation of bats on remote Indopacific islands. Pp. 326-341. *In* T. H. Kunz and P.A. Racey (eds.) Bat Biology and Conservation. Smithsonian Press.
- 1996 Pierson, E.D., T. Elmqvist, W.E. Rainey and P.A. Cox. Effects of tropical cyclonic storms on flying fox populations on the South Pacific Islands of Samoa. *Conservation Biology*. 10(2): 438-451.
- 1995 Rainey, W.E., E.D. Pierson, T. Elmqvist, and P.A. Cox. The role of pteropodids in oceanic island ecosystems of the Pacific. Pp. 47-62. *In* P.A. Racey and S. M. Swift (eds.) Ecology, Evolution and Behavior of Bats. Symposium of the Zoological Society of London, No. 67. Clarendon Press. Oxford.
- 1994 Elmqvist, T., W.E. Rainey, E.D. Pierson, and P.A. Cox. Effects of tropical cyclones Ofa and Val on the structure of a Samoan lowland rainforest. *Biotropica* 26(4): 384-391.
- 1992 Burke, T. A., W.E. Rainey and T. J. White. Molecular methods and ecological problems. Pp. 229-254. *In* R.J. Berry, T.J. Crawford, and G.M. Hewitt (eds.) Genes in Ecology. 33rd British Ecological Society Symposium. Blackwell Scientific Publications. Oxford.
- 1992 Elmqvist, T., P.A. Cox, W.E. Rainey, and E.D. Pierson. Restricted pollination on oceanic islands: pollination of *Ceiba pentandra* by flying foxes in Samoa. *Biotropica* 24(1): 15-23.
- 1991 Cox, P.A., T. Elmqvist, E.D. Pierson, and W.E. Rainey. Flying foxes as strong interactors in Pacific island ecosystems: A conservation hypothesis. *Conservation Biology* 5 (4): 448-454.
- 1991 Lowenstein, J.M., W.E. Rainey, and J. Betancourt. Immunospecific albumin in fossil pack rat, porcupine and hyrax urine. *Naturwissenschaften* 78: 26-27.
- 1990 Arnheim, N.A., T.J. White, and W.E. Rainey. 1990. Application of PCR: organismal and population biology. *Bioscience* 40: 174-182.
- 1986 Pierson, E.D., W.E. Rainey, R.M. Warner and C.C. White-Warner. First record of *Monophyllus* from Montserrat, West Indies. *Mammalia* 50: 269-71.

- 1986 Pierson, E.D., V.M. Sarich, J.M. Lowenstein, M.J. Daniel and W.E. Rainey. A molecular link between the bats of New Zealand and South America. *Nature (London)* 323: 60-63.
- 1984 Rainey, W.E., J.M. Lowenstein, V.M. Sarich and D.M. Magor. Sirenian molecular systematics including the extinct Steller's Seacow *Hydrodamalis gigas*. *Naturwissenschaften* 71: 586-588.
- 1996 Licht, P.L., W.E. Rainey, and K. Clifton. Serum gonadotropins and steroids associated with breeding in the green sea turtle, *Chelonia mydas*, II. Mating and nesting in natural populations. *Gen. Comp. Endocrinology* 40: 116-122.
- 1980 Bickham, J.W., K.A. Bjorndal, M.W. Haiduk, and W.E. Rainey. The karyotype and chromosomal banding patterns of the green turtle (*Chelonia mydas*). *Copeia* 1980(3): 540-543.
- 1979 Fenchel, T.M., C.P. McRoy, J.C. Ogden, P.L. Parker, and W.E. Rainey. Symbiotic cellulose degradation in the green turtle, *Chelonia mydas* L. *Appl. Env. Microbiology* 37: 348-350.
- 1975 Towle, E.L., W.N. Brownell, and W.E. Rainey. Preliminary environmental evaluation of the mangrove lagoon/ Patanemo beach system (Venezuela). *Revue de Tourisme* 30(3): 91-97.

Conference papers/Reports

- 2012 Brown, P.E. and W.E. Rainey. The distribution and status of bats at Fort Irwin National Training Center. Prepared for the U.S. Army ACQCTR-W911NF, Durham, NC, under contract to UCLA. 36 pp.
- 2011 Pierson, E.D., W.E. Rainey and D. Wyatt. Roosting and foraging habitat for the Western Red Bat (*Lasiurus blossevillii*) in the Sacramento River Valley of California. Prepared for the U.S. Fish and Wildlife Service, Red Bluff, Ca. 56 pp.
- 2009 Rainey, W.E., T. Ingersoll, C.J. Corben and E.D. Pierson. Using acoustic sampling of bat assemblages to monitor ecosystem trends. Prepared for the U.S. Geological Survey. 139 pp. <<http://www.nps.gov/yose/naturescience/bats.htm>>
- 2006 Pierson, E.D., W.E. Rainey and L.S. Chow, Bat use of the Giant Sequoia groves in Yosemite National Park. Report prepared for the Yosemite Fund & Yosemite National Park. 146 pp. <<http://www.nps.gov/yose/naturescience/bats.htm>>
- 2006 Rainey, W.E., M.E. Power and S.M. Clinton. Temporal and spatial variation in aquatic insect emergence and bat activity in a restored floodplain wetland. 54 pp. Cosumnes Research Group contract report on terrestrial aquatic linkages. <http://baydelta.ucdavis.edu/files/crg/reports/AquaticInsectBat_Raineyetal2006.pdf>

- 2006 Pierson, E.D., W.E. Rainey, C.J. Corben. Distribution and status of Western red bats (*Lasiurus blossevillii*) in California. Calif. Dept. of Fish and Game, Habitat Conservation Planning Branch, Species Conservation and Recovery Program Report 2006-04, Sacramento, CA 45 pp. <http://www.dfg.ca.gov/wildlife/nongame/publications/bm_research/docs/2006_04.pdf>
- 2005 Chow, L.S., E.D. Pierson and W.E. Rainey. Using bat assemblages as a measure of ecosystem health. National Park Service. Natural Resource Year in Review—2004 (Science for Parks). <http://www2.nature.nps.gov/YearinReview/PDF/YIR2004_06.pdf>
- 2004 Rainey, W.E. Wrap-up: using bat detectors for species identification. Pp. 127, *In* R. M. Brigham, et al., (eds.). Bat echolocation research: tools, techniques and analysis, Bat Conservation International, Austin Texas 2002.
- 2003 Golet, G.H., Roberts, M.D., Peterson, D.R., Jukkola, D.E., Crone, E.E., Geupel, G.R., Small, S.L., Greco, S.E., Holl, K.D., Larsen, E.W., Ligon, F.K., Orr, B.K., Vick, J.C., Power, M.E., Rainey, W.E., Silveira, J.G., and Wilson, D.S. Using science to evaluate restoration efforts and ecosystem health on the Sacramento River Project, California. Pp. 326-341, *In* Faber, P.M. (ed.) Proceedings of the Riparian Habitat and Floodplains Conference 2001. Riparian Habitat Joint Venture, Sacramento, CA.
- 2003 Stillwater Sciences, W. Rainey, E. Pierson, C. Corben, and M. Power. Sacramento River ecological indicators pilot study. Prepared by Stillwater Sciences, Berkeley, California for The Nature Conservancy, Chico, California. <http://www.sacramentoriverportal.org/reports/chico_landing/apdx11/final_text.pdf>
- 2002 Pierson, E.D. and W.E. Rainey. Bats. Pp. 385-400. *In* J. E. Vollmar, (ed.) Wildlife and rare plant ecology of eastern Merced County's vernal pool grasslands. Vollmar Consulting, Berkeley, CA. <http://www.mercednccp-hcp.net/vollmar/chapters/chapter_10.pdf>
- 2002 Pierson, E.D., P.W. Collins, W.E. Rainey, P.A. Heady and C.J. Corben. Final report on the distribution, status and habitat associations of bat species on Vandenberg Air Force Base, Santa Barbara County, California. Santa Barbara Museum of Natural History, Santa Barbara CA. Technical Rept. 1. i-xii, 1-135.
- 2001 Pierson, E.D., W.E. Rainey, and C.J. Corben. Seasonal patterns of bat distribution along an altitudinal gradient in the Sierra Nevada. Report to California State University at Sacramento Foundation, Yosemite Association, and Yosemite Fund, 68 pp. <<http://www.nps.gov/yose/naturescience/bats.htm>>
- 1998 Pierson, E.D. and W.E. Rainey.[bat species accounts and bat summary assessment] *In*: Bolster, B.C., ed. Terrestrial Mammal Species of Special Concern in California. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. California Department of Fish and Game Wildlife Management Division,

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<<http://www.dfg.ca.gov/wildlife/nongame/ssc/1998mssc.html>>

- 1998 Pierson, E.D. and W.E. Rainey. Distribution, habitat associations, status and survey methodologies for three molossid bat species (*Eumops perotis*, *Nyctinomops femorosaccus*, *Nyctinomops macrotis*) and the vespertilionid, *Euderma maculatum*. Calif. Dep. of Fish and Game, Bird and Mammal Conservation Program Rep.98-5. 56 pp. <http://www.dfg.ca.gov/wildlife/nongame/publications/bm_research/docs/98_05.pdf>
- 1998 Pierson, E.D. and W.E. Rainey. Bat distribution in the forested region of northwestern California. Calif. Dep. of Fish and Game, Bird and Mammal Conservation Program Rep. 98-6. 36 pp. <<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentVersionID=5435>>
- 1997 Pierson, E.D., W.E. Rainey, and R.M. Miller. Night roost sampling: a window on the forest bat community in northern California. Pp. 151-163. In R. Barclay and M. Brigham (eds.) Bats and Forests Symposium, October 19-21, 1995, Victoria, British Columbia, Canada. Res. Br., B. C. Min. For. Victoria, B. C. Work. Pap. 23/1996. <http://www.for.gov.bc.ca/hfd/pubs/Docs/Wp/Wp23/Wp23_15.pdf>
- 1996 Pierson, E.D. and W.E. Rainey. The distribution, status and management of Townsend's big-eared bat (*Corynorhinus townsendii*) in California. Calif. Dept. of Fish and Game, Bird and Mammal Conservation Program Rep. 96-7. 49 pp. <http://www.dfg.ca.gov/wildlife/nongame/publications/bm_research/docs/96_07.pdf>
- 1996 Rainey, W.E. and E.D. Pierson. Cantara spill effects on bat populations of the upper Sacramento River, 1991-1995. Report to California Department of Fish and Game, Redding, CA. 98 pp.
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- 1995 Pierson, E.D. and W.E. Rainey. Photographic identification guide to *Pteropus* and *Acerodon* species by region. Office of Scientific Authority, USFWS, Washington, DC.
- 1995 Pierson, E.D. and W.E. Rainey. Bat Surveys Presidio Golden Gate National Recreation Area January – December 1994. Prepared for Jones and Stokes Associates, Inc. January 1995.
- 1995 Rainey, W.E. Tools for low disturbance monitoring of bat activity. Pp. 62-73. In B.R. Riddle (ed.) Inactive mines as bat habitat: guidelines for research, survey, monitoring and mine management in Nevada. Biological Resources Research Center, University of Nevada, Reno.

- 1992 Rainey, W.E., and E.D. Pierson. Distribution of Pacific island flying foxes. *In* D.E. Wilson and G. Graham (eds.) Proceedings of the Pacific Island Flying Fox Conservation Conference. USFWS Biological Report. 90(23): 111-121.
- 1991 Pierson, E.D., W.E. Rainey, and D. M. Koontz. Bats and mines: experimental mitigation for Townsend's big-eared bat at the McLaughlin Mine in California. Proc. Thorne Ecological Institute: Issues and technology in the management of impacted wildlife. 5:31-42.
- 1981 Rainey, W.E. Procedure for collecting dugong tissue for electrophoresis. *In* H. Marsh, (ed.) The Dugong. Proceedings of a Seminar/ Workshop, May 1979. James Cook University, Townsville, Australia.
- 1981 Rainey, W.E. Guide to sea turtle visceral anatomy. U.S. Department of Commerce. NOAA Technical Memorandum NMFS-SEFC-82.
- 1971 Brownell, W. N. and W. E. Rainey. Research and development of deep water commercial and sport fisheries around the Virgin Islands plateau. V.I. Ecological Research Station, Caribbean Research Institute Special Rept., Contrib. 3: 1-88.