

MICHAEL D. BEECHER – SHORT CV

Professor, Departments of Psychology & Biology (adj),
Neurobiology & Behavior Program, & Bloedel Hearing Research Center,
University of Washington
Seattle, Washington 98195 (206/543-6545)

EDUCATION

B.A., Reed College (1963)

Ph.D., Boston University (1969)

Postdoctoral, New England Regional Primate Center, Harvard Medical School

Awards: NSF Graduate Fellowships ('65-'69), NIH Postdoctoral Fellowship ('69-'71)

ACADEMIC POSITIONS

1969-71 Harvard Medical School, Visiting Scientist

1971-78 Eastern Michigan University (Associate Professor 1975)
University of Michigan (adjunct)

1978- University of Washington (Professor 1987; Chair Psychology 1993-2002)

TEACHING

I teach a variety of general animal behavior courses, all featuring a rigorous evolutionary approach to behavior. These courses are a 200-level course for non-science majors (Natural World credit), a similar (but small) course for students in the Honors College, and a 300-level course for psychology majors. I have also taught two joint Biology/Psychology courses, Mechanisms of Animal Behavior (408), and Sociobiology (409). I have also taught Sensory & Perceptual Process (333), another core course in the major. I teach several additional 400-level courses: Animal Communication (416), Evolutionary Psychology (459) and Animal Cognition (aka Animal Mind, 486); the last two courses are new courses that I introduced in the last two years. At the graduate level I teach Core Concepts in Animal Behavior (502, taken by graduate students from Psychology, Biology and a few other departments). I also teach or participate in numerous graduate seminars. Finally, 3-6 undergraduate students take Psych or Bio 499 every quarter, working with me and my graduate students in the lab and the field.

TEACHING AWARDS

Department of Psychology, 2008-09: Davida Teller Distinguished Graduate Mentor Award.

University: nominated for DTA in 2009, Landolt Award in 2010.

RESEARCH & TEACHING

My research and teaching programs are strongly intertwined. My research grants have always been designed to involve as well as support graduate students and in this research I always treat them like junior colleagues, never as research assistants (I have a long-term research tech). Of the 15 graduate students who have completed (or will soon complete) PhDs under my supervision, 8 carried out their dissertations as junior colleagues on my grant-supported research. In some cases (when the timing was right), they participated in developing and writing the proposal sent to NSF, and in other cases we modified the research direction or design once the student embarked on the project (happily NSF is quite tolerant of deviations from the original proposal, so long as the research pursues the originally-stated intention and the modified research

plan proves to be productive). Of my 7 other PhD students, 5 pursued totally independent research projects and 2 worked on research supported by other grants (NIH or RRF) in collaboration with other faculty (Eliot Brenowitz and Ed Rubel).

In addition, I have also always involved undergraduate students in my research. From the undergraduate's perspective, this is one of the real advantages of the UW experience, and can more than compensate for the large and rather impersonal lecture classes they experience in their first few years. Typically I have 3-8 undergrads in my lab in any given quarter, typically taking Psych or Bio 499 research credit, and in recent summers I have been able to get them NSF REU summer support as well. Many of these undergrads have gone on to graduate programs (and one of them became my long-term research tech!).

One indication of the role of students in my research can be seen in my (partial) publication list below. I have had 29 different student co-authors (20 graduate students, 9 undergraduate students).

EXTRAMURAL RESEARCH GRANTS

Continuous funding from National Science Foundation since 1974.

Current grant: "Social Factors in Vocal Development" (2007-2012) National Science Foundation

SELECTED PROFESSIONAL

Organizer, "Symposium on Individual and Species Recognition", American Society of Zoologists Meeting, Seattle, Dec 1980 (and PI on support grant from NSF).

American (Executive) Editor, Animal Behaviour, 1994-97

President, Animal Behavior Society (ABS), 2002 (President elect etc 1999-2003)

Fellow, Animal Behavior Society

Distinguished Service Award, Animal Behavior Society, 2005

Exemplar Award, Animal Behavior Society, 2007

Animal Behavior Panel, National Science Foundation, 1992 -1995, 2001 - 2005

Program Director, Animal Behavior, Division of Integrative Biology, National Science Foundation 2006-07

SELECTED PUBLICATIONS SINCE 1978

* *graduate students at time of the research (N=20)* † *undergraduate students at time of the research (N=9)*

*Sinnott, J. M., Beecher, M. D., Moody, D. B. & Stebbins, W. C. (1978). Speech sound discrimination by monkeys and humans. Journal of the Acoustical Society of America, **60**, 687-695.

*Brown, C. H., Beecher, M. D., Moody, D. B., & Stebbins, W. C. (1978). Localization of pure tones by Old World monkeys. Journal of the Acoustical Society of America, **63**, 1484-1492.

*Brown, C. H., Beecher, M. D., Moody, D. B., & Stebbins, W. C. (1978). Localization of primate calls by Old World monkeys. Science, **201**, 753-754.

*Petersen, M. R., Beecher, M. D., Zoloth, S. R., Moody, D. B., & Stebbins, W. C. (1978). Neural lateralization of species-specific vocalizations by Japanese macaques. Science, **202**, 324-327.

Beecher, M. D., *Petersen, M. R., Zoloth, S. R., Moody, D. B., & Stebbins, W. C. (1979). Perception of conspecific vocalizations by Japanese macaques: Evidence for selective attention and neural lateralization. Brain, Behavior & Evolution, **16**, 443-460.

*Brown, C. H., Beecher, M. D., Moody, D. B., & Stebbins, W. C. (1979). Locatability of vocal signals in Old World monkeys: Design features for the communication of position. Journal of Comparative and Physiological Psychology, **93**, 806-819.

- Zoloth, S. R., *Petersen, M. R., Beecher, M. D., Green, S., Marler, P., Moody, D. B., & Stebbins, W. C. (1979). Species-specific processing of vocal sounds by monkeys. Science, **204**, 870-873.
- Beecher, M. D. & Beecher, I. M. (1979). Sociobiology of bank swallows: Reproductive strategy of the male. Science, **205**, 1282-1285.
- *Brown, C. H., Beecher, M. D., Moody, D. B., & Stebbins, W. C. (1980). Localization of noise bands by Old World monkeys. Journal of the Acoustical Society of America, **68**, 127-132.
- Beecher, M. D., Beecher, I. M., & †Lumpkin, S. (1981). Parent-offspring recognition in bank swallows (*Riparia riparia*): I. Natural history. Animal Behaviour, **29**, 86-94.
- Beecher, M. D., Beecher, I. M., & †Hahn, S. (1981). Parent-offspring recognition in bank swallows (*Riparia riparia*): II. Acoustic basis. Animal Behaviour, **29**, 95-101.
- Beecher, M. D. (1982). Signature systems and kin recognition. American Zoologist, **22**, 477-490.
- Beecher, I. M. & Beecher, M. D. (1983). Sibling recognition in bank swallows. Zeitschrift fur Tierpsychologie (Ethology), **62**, 145-150.
- *Stoddard, P. K. & Beecher, M. D. (1983). Parental recognition of offspring in the Cliff Swallow. Auk, **100**, 795-799.
- *Petersen, M. R., Beecher, M. D., Zoloth, S. R., Green, S., Marler, P., Moody, D. B., & Stebbins, W. C. (1984). Neural lateralization of vocalizations by Japanese macaques: Communicative significance is more important than acoustic structure. Behavioral Neuroscience, **98**, 779-790.
- Beecher, M. D., *Stoddard, P. K., & *Loesche, P. (1985). Recognition of parents' voices by young cliff swallows. Auk, **102**, 600-605.
- *Medvin, M. B., & Beecher, M. D. (1986). Parent-offspring recognition in the barn swallow. Animal Behaviour, **34**, 1627-1639.
- Beecher, M. D., *Medvin, M. B., *Stoddard, P. K., & *Loesche, P. (1986). Acoustic adaptations for parent-offspring recognition in swallows. Experimental Biology, **45**, 179-193.
- *Medvin, M. B., Beecher, M. D. & *Andelman, S. A. (1987). Extra adults at the nest in barn swallows. Condor, **89**, 179-182.
- Bolles, R. C. & Beecher, M. D. (1988). Evolution and Learning, Erlbaum.
- *Stoddard, P. K., Beecher, M. D. & †Willis, M. S. (1988). Response of territorial male song sparrows to song types and variations. Behavioral Ecology and Sociobiology, **22**, 125-130.
- Beecher, M. D. (1988). Kin recognition in birds. Behavior Genetics, **18**, 465-482.
- Beecher, M. D. (1988). Spectrographic analysis of bird vocalizations: Implications of the uncertainty principle. Bioacoustics, **1**, 187-208.
- Beecher, M. D. (1989). Signaling systems for individual recognition: an information theory approach. Animal Behaviour, **38**, 248-261.
- Beecher, M. D., *Loesche, P., *Stoddard, P. K. & *Medvin, M. B. (1989). Individual recognition by voice in swallows: signal or perceptual adaptation? In Dooling, R. J. & Hulse, S. H. (Eds.), The Comparative Psychology of Audition: Perceiving Complex Sounds, Erlbaum.
- *Stoddard, P. K., Beecher, M. D., †Horning, C. H. & †Willis, M. S. (1990). Strong neighbor-stranger discrimination in song sparrows. Condor, **97**, 1051-1056.
- Beecher, M. D. (1991). Successes and failures of parent-offspring recognition systems in animals. In P. G. Hepper (Ed.), Kin Recognition, pp. 94-124, Cambridge University Press.
- Schwagmeyer, P. L., Mock, D. W., *Lamey, T. C., *Lamey, C. S. & Beecher, M. D. (1991). Effects of sibling conflict on hatch timing in an asynchronously hatching bird. Animal Behaviour, **41**, 887-894.
- *Stoddard, P. K., Beecher, M. D., †Horning, C. H. & †Campbell, S. E. (1991) Recognition of individual neighbors by song in the song sparrow, a bird with song repertoires. Behavioral Ecology and Sociobiology, **29**, 211-215.
- *Loesche, P., *Stoddard, P. K., †Higgins, B. J. & Beecher, M. D. (1991). Signature vs. perceptual adaptations for individual vocal recognition in swallows. Behaviour, **118**, 15-25.
- *Medvin, M. B., *Stoddard, P. K. & Beecher, M. D. (1992). Signals for parent-offspring recognition: Strong sib-sib call similarity in cliff swallows but not barn swallows. Ethology, **90**, 17-28.

- *Loesche, P., Beecher, M. D. & *Stoddard, P. K. (1992). Perception of cliff swallow calls by birds and humans. Journal of Comparative Psychology, **106**, 239-247.
- *Stoddard, P. K., Beecher, M. D., *Horning, C. H. & †Campbell, S. E. (1992). Song type matching in the song sparrow. Canadian Journal of Zoology, **70**, 1440-1444.
- *Stoddard, P. K., Beecher, M. D., *Loesche, P. & †Campbell, S. E. (1992). Memory does not constrain individual recognition in a bird with song repertoires. Behaviour, **122**, 274-287.
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- Beecher, M. D., Campbell, S. E. & *Nordby J. C. (2000). Territory tenure in song sparrows is related to song sharing with neighbors, but not to repertoire size. Animal Behaviour, **59**, 29-37.

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- *Burt, J. M., Campbell, S. E. & Beecher, M. D. (2001) Song type matching as threat: a test using interactive playback. Animal Behaviour, **62**, 1163-1170.
- *Nordby, J. C., Campbell, S. E. & Beecher M. D. (2002) Adult song sparrows do not alter their song repertoires. Ethology, **108**, 39-50.
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- Brenowitz, E. A. & Beecher, M. D. (2005) Song learning in birds: Diversity and plasticity, opportunities and challenges. Trends in Neuroscience, **28**, 127-132.
- Beecher, M. D. & Campbell, S. E. (2005) The role of unshared songs in singing interactions between neighbouring song sparrows. Animal Behaviour, **70**, 1297-1304.
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- *Templeton, C. N., *Akçay, Ç., Campbell, S. E. & Beecher, M. D. (2009) Juvenile sparrows preferentially eavesdrop on adult song interactions. Proceedings of the Royal Society of London, Series B, **277**, 447-453
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- *Akçay, Ç., †Reed, V. A., Campbell, S. E. & Beecher, M. D. (2010) Indirect reciprocity in territorial defence by song sparrows. Animal Behaviour, **80**, 1041-1047.
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