

## PUBLICATIONS

1. **O'Connell-Rodwell CE**, Wood JD, Kinzley C, Rodwell TC, Poole JH, Puria S. 2007. Wild African elephants (*Loxodonta africana*) discriminate seismic alarm calls of familiar versus unfamiliar conspecifics. *J. Acoust. Soc. Amer.* **122(2)**: 823-830.
2. **O'Connell-Rodwell CE**. 2007. Keeping an 'ear' to the ground: seismic communication in elephants. *Physiol.* **22**: 287-294.
3. Bouley DM, Alarcon C, Hildebrandt T, **O'Connell-Rodwell CE\***. 2007. The distribution, density and three dimensional histomorphology of Pacinian Corpuscles in the Asian elephant (*Elephas maximus*) foot and their potential role in detecting seismic information. *J. Anat.* **211(4)**: 428-435.
4. **O'Connell-Rodwell CE**, Wood JD, Rodwell TC, Shriver D, Puria S, Partan SR, Keefe, R, Arnason BT, Hart LA. 2006. Wild elephant (*Loxodonta africana*) breeding herds respond to artificially transmitted seismic stimuli. *Behav. Ecol. & Sociobiol.* **59(6)**:842-850.
5. Wood JD, **O'Connell-Rodwell CE**, Klemperer S. 2005. Using seismic sensors to detect elephants and other large mammals: a novel censusing technique for wildlife managers. *J. Appl.Ecol.* **42**: 587-594.
6. Gunther R, **O'Connell-Rodwell, CE\***, Klemperer S. 2004. Seismic waves from elephant vocalizations: a possible communication mode? *Geophys. Res. Lett.* **31**, L11602, p.1-4.
7. Arnason BT, Hart LA, **O'Connell-Rodwell CE**. 2002. The properties of geophysical fields and their effects on elephants and other animals. In: Revisiting the Umwelt: Animal communication in the context of its environments. *J. Comp. Psychol.*, **116(2)**.
8. **O'Connell-Rodwell CE**, Hart LA, Arnason B. 2001. Exploring the potential use of seismic waves as a communication channel by elephants and other large mammals. *Amer. Zool.* **41(5)**: 1157-1170.
9. **O'Connell-Rodwell CE**, Arnason B, Hart LA. 2000. Seismic properties of Asian elephant (*Elephas maximus*) vocalizations and locomotion. *J. Acoust. Soc. Amer.* **108(6)**: 3066-3072.
10. **O'Connell-Rodwell CE**, Rodwell T, Rice M, Hart L. 2000. The modern conservation paradigm: Can agricultural communities co-exist with elephants? (Five-year case study in East Caprivi, Namibia). *Biol. Conserv.* **93**:381-391.
11. **O'Connell CE**, Hart LA, Arnason B. 1999. Response to "Elephant hearing". *J. Acoust. Soc. Amer.* **105**, 2051-2052.

\*=honors/thesis student mentored project

## ACADEMIC BOOKS

1. **O'Connell-Rodwell CE**. (ed) (2009). The Use of Vibrations in Communication: properties, mechanisms and function across taxa. Research Signpost.

## BOOK CHAPTERS

1. **O'Connell-Rodwell CE** & Wood JD [*in press*]. Vibration generation, propagation and detection in elephants. In The Use of Vibrations in Communication: properties, mechanisms and function across taxa. ed. O'Connell-Rodwell. Research Signpost.
2. Narins P, Losin N, **O'Connell-Rodwell CE** [*in press*]. Sensory Modalities: Seismic and vibrational signals in terrestrial vertebrates. In *New Encyclopedia of Neuroscience*, ed. Squire, L. et al. Elsevier, 2009.
3. Wood JD & **O'Connell-Rodwell CE** [*in press*]. Field methods for measuring ground-borne vibrations used in animal communication. In The Use of Vibrations in Communication: properties, mechanisms and function across taxa. ed. O'Connell-Rodwell. Research Signpost.

## INVITED PAPERS

1. O'Connell-Rodwell, C. E. "Sociality in African Elephants: Novel Forms of Communication and Leadership Tactics", AAAS, Chicago, IL, 2/09.
2. O'Connell-Rodwell, C. E. "The relative role of vocal and seismic communication within a multi-modal communication network in the African elephant bull (*Loxodonta africana*)". Acoustic Communication by Animals, Acoustical Society of America, Corvallis, OR, 8/08.
3. O'Connell-Rodwell, C. E. "The vibration sense in large mammals and its role in communication: Elephants as a case study". Acoustical Society of America, Invited Chair for Special Session on Seismic Communication in Animals, Salt Lake City, Utah, 6/07.

4. O'Connell-Rodwell, C. E. "Using elephant behavior to mitigate conflict with farmers", Fish Depredation by Killer Whale and Sperm Whales: Behavioral Insights, Behavioral solutions, Pender Island, BC, Canada, 10/06.
5. O'Connell-Rodwell, C. E. "The importance of communication and culture to elephant survival", International Mammalogical Congress, Sapporo, Japan, 8/05.
6. O'Connell-Rodwell, C. E., Wood, J., Puria, S., Rodwell, T. C., Gunther, R., Kinsley, C., Klemperer, S., Sapolski, R., Arnason, B. T., Hart, L. A. "The role of vibration detection as a sensory modality for elephants", Acoustical Society of America, 5/04.
7. O'Connell-Rodwell, C. E., Rodwell, T. C., Wood, J., Arnason, B., Hart, L. A. "Can elephants close their ears and hear with their feet?", Scandinavian Vibration Society, Vibration Day, Goteburg, Sweden, 11/02.
8. O'Connell-Rodwell, C. E., Hart, L. A., Arnason, B. " Exploring the potential of novel low frequency auditory communication mechanisms in elephants and other large mammals", Society for Integrative and Comparative Biology, Chicago, Il., 12/01.
9. O'Connell-Rodwell, C. E. "The fate of the African elephant in the wild: problems and possible solutions", Performing Animal Welfare Society Annual Conference on Captive Wildlife, Sacramento, CA., 10/99.
10. O'Connell-Rodwell, C. E., Hart, L.A., Arnason, B. "Exploring new mechanism for low frequency auditory communication in elephants", American Association for the Advancement of Science (AAAS), Pacific Regional Conference, San Francisco, CA. 6/99.
11. O'Connell, C. E. "Reassessing the status of elephant/human conflicts in the Caprivi region of Namibia", Rotary International Annual District Conference. Reno, NV, 1/99.
12. Arnason, B., O'Connell, C. E., Hart, L. A. 1998. Long range seismic characteristics of Asian elephant (*Elephas maximus*) vocalizations and locomotion. *J. Acoust. Soc. Amer.* 104(3Pt.2):1810.

**CONTRIBUTED PAPERS (1<sup>st</sup> Authored)**

1. O'Connell-Rodwell, C. E., Wood, J. D., Rodwell, T. C., Shriver, D., Arnason, B. T., Hart, L. A. Elephant responses to seismic stimuli indicate that keeping an 'ear' to the ground could pay off. 1<sup>st</sup> International Conference on Acoustic Communication by Animals, The Acoustical Society of America, College Park, MD, 7/03.
2. O'Connell-Rodwell, C. E., Rodwell, T. C., Wood, J. D., Shriver, D., Gunther, R., Arnason, B. T., Klemperer, S., Hart, L. A. Elephants emit seismic vocalizations and respond appropriately to seismic playbacks of these vocalizations. Animal Behavior Society, Boise, ID, 7/03.
3. O'Connell-Rodwell, C. E., Wyman, M. T., Redfield, S., L. A. Hart. Interactive patterns of vocal communication in African Elephant herds (*Loxodonta africana*). Animal Behavior Society, Boise, ID, 7/03.
4. O'Connell-Rodwell, C. E., Arnason, B. & Hart, L. A. "Exploring the potential of novel low frequency auditory communication mechanisms in elephants". 3rd International Symposium on Physiology and Ethology of Wild and Zoo Animals, Institute of Zoo Biology and Wildlife Research (IZW) Berlin, Germany, 10/00.
5. O'Connell, C. E., Arnason, B., Hart, L. A. Seismic transmission of elephant vocalizations and movement. *J. Acoust. Soc. Amer.* 102(5Pt.2):3124, San Diego, CA. 12/97.
6. O'Connell, C. E., Arnason, B., Hart, L. A. "Seismic properties of elephant vocalizations" 2<sup>nd</sup> Annual Elephant Research Symposium, Pittsburg, PA. 7/97.
7. O'Connell, C. E. "Improving attitudes towards wildlife by reducing the costs: the elephant/human dilemma" Rotary International, Galt, CA. 5/97.
8. O'Connell, C. E. "Influences on African elephant vocalizations in a natural habitat", the Performing Animal Welfare Society, West Hollywood, CA. 11/96.
9. O'Connell, C. E. "Mating calls and species barriers in Hawaiian planthoppers", Society for Systematics and Evolutionary Biology, Hilo, HI, 8/91.
10. O'Connell, C. E. "Species barriers and breakdowns in Hawaiian planthoppers", the Entomological Society of America, Reno, NV. 12/91.

### POSTERS (1<sup>st</sup> Authored)

1. O'Connell-Rodwell, C. E., Wood, J. D. , Kinzley, C., Rodwell, T. C., Alarcon, C., Wasser, S. K., Sapolsky, R. The impact of climate fluctuations on the complexity of social structure of African bull elephant society (*Loxodonta africana*), AAAS Keck Initiatives on Complexity, Irvine, CA, 11/08.
2. O'Connell-Rodwell, C.E., T. Hildebrandt, S. Partan, J.D. Wood, T.C. Rodwell, R. Keefe, D. Ketten, C. Alarcon, D. Bouley, B. Arnason, L. Hart, S. Puria. Somatosensory and bone conduction pathways in elephant signal detection: implications for reception of acoustic and seismic signals. Association of Researchers in Otolaryngology (ARO), New Orleans. 2/05.
3. O'Connell-Rodwell, C. E., Hart, L. A. & Arnason, B. T., 1998. 'The seismic propagation of elephant vocalizations and locomotion. Animal Behavior Society Conference, U. of Maryland, MD.
4. O'Connell, C. E., 1991. "Seismic communication plays a role in species barriers and breakdowns of the Hawaiian planthopper, *Nesosydne koae*." Society of Systematics and Evolutionary Biology, Hilo, HI.

### PUBLIC TALKS

- Oakland Zoo, Oakland, CA 10/2008. American Association for Laboratory Science (Northern California Branch). "Elephant society in a changing landscape"
- LA County Museum, Los Angeles, CA 2/2008. First Fridays at the Natural History Museum. "Human and environmental influences on elephant physiology and behavior"
- WhaleFest, Sitka, AK. 11/2007, "Human impacts on large mammals from whales to elephants"
- CRES, San Diego Wild Animal Park, CA 10/2007. BeWise Girls in Science program "Making Sense of the Elephant"
- HSWRI/Seaworld, San Diego, CA 10/2007, "Elephant multimodal communications"
- Genentech, Postdoctoral Offsite Meeting, Santa Cruz, CA. 5/2007. "Multi-modal communication and the influence of relationships and hormones on African elephant society"
- Oakland Zoo, Oakland, CA. 5/2007. Celebrating Elephants. "The Elephant's Secret Sense"
- UC Davis, Mondavi Center, Davis, CA. 5/2007. Ecological Insights series. "The Elephant's Secret Sense."
- Santa Barbara Natural History Museum, Discovery Lecture Series, 4/2007. "The Elephant's Secret Sense."
- Hopkins Marine Station, Monterey, CA., 11/2001, 3/2007. "The seismic propagation of elephant vocalizations and implications for long distance communication".
- Oakland Zoo, Oakland CA., 3 & 5/2006, "Listening through limbs" and "Elephant bulls need mentors"
- U.S. Geological Survey, Menlo Park, CA. 1/2002, "Can elephants close their ears and hear with their feet?" Xerox Research PARC Forum, Palo Alto, CA. 5/2001, "Exploring the potential of novel low frequency auditory communication mechanisms in elephants and other large mammals".

### POPULAR BOOKS

1. O'Connell, C. E. (2007) *"The Elephant's Secret Sense"*. Free Press (Simon & Schuster).
2. O'Connell, C. E. & Jackson, D. (*in press*) *"The Elephant Scientist"* volume for Houghton Mifflin's Scientist in the Field Series of Children's Books.
3. O'Connell, C. E. (*under contract*) *"The Boy's Club: an elephantine take on male society"*. Harvard University Press.