

Expression of The Enjoyment of Companionship In The Great Horned Owl (*Bubo virginianus*)

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Abstract: This is descriptive and exploratory research. Our focus is first, to build on earlier work by presenting a previously undocumented vocalization and accompanying behavior/context which most resemble the expression of the enjoyment of companionship in a Great Horned Owl (*Bubo virginianus*). Second, we draw attention to the only other source attributing companionship to *virginianus*. Those vocalizations are described qualitatively. We describe putatively similar vocalizations qualitatively and quantitatively from the data of 352 vocalizations we collected and examine their significance as another expression of enjoyment of companionship. We then place our findings in perspective.

Lorenz (1937) chose the word ‘Kumpan’ to unify various stimulus-response patterns in geese as these resemble companionship. The enjoyment of companionship between birds and other animals has been informally discussed extensively for various psittacines as “companion birds”. As a propositional attitude, enjoyment is a mode of consciousness (in the Cartesian sense) and it has the quality of aboutness regarding states in the external environment (Feldman 2002, Kawabata and Mallett 2022). There is evidence for consciousness in non-human animals including the birds continuing to accrue from neuroscience, including the owls (Stacho et al. 2020). Moreover, enjoyment of (companionship) may entail a “feeling”, though what a feeling is and how to explicate them has been a longstanding problem. Whatever feelings are, the consensus view is that various classes of vertebrates and even invertebrates have them (de Waal and Andrews 2022).

Artuso et al. (2022) summarize the work in the field on the types of vocalizations of the Great Horned Owl (*Bubo virginianus*). However, these vocalizations remain very poorly understood. Where functions are given, Artuso attributes functions to vocalizations based on sources providing non-prospective case studies. The first author (CTP) engaged in over 12 years of collection and examination of primary and secondary sources (including video review of infrared remote nest monitoring) to document vocalizations of *Bubo virginianus virginianus* where at least some of the behavioral and contextual information is known. This amounted to 352 recordings from various individuals. 57 vocalizations given in distinct contexts are from one individual, Rupert, a semi-tame male from the Ypsilanti/Ann Arbor, Michigan area. These recordings span over eight years from owlet through adulthood. Our focus in this report is first, to build on Artuso's work by presenting a previously undocumented vocalization and accompanying behavior/context which most resemble the enjoyment of companionship. Secondly we seek to describe a type of vocalization qualitatively and quantitatively, and compare it to qualitative descriptions in Heinrich (1987), the only other source attributing companionship to *B. virginianus virginianus*. (There is no documentation for other subspecies.) We then put these in perspective.

Methods and Discussion

CTP recorded all of the vocalizations of interest in the field. The previously undocumented vocalizations were recorded opportunistically as .wav files with an Olympus Portable Hand-held Recorder DM-620 held approximately 20 centimeters away. The rest of the vocalizations were recorded using a Marantz PMD-661Mkiii Field Recorder with a Sennheiser ME 66 Shotgun Microphone. As available, recordings were made in 19 distinct types of contexts.