

NOTES

Vocalizations by adult Turkey Vultures as they arrive at their nest sites during nesting season

William L. Lynch

During 1983, 1984, 2004 and 2005 I observed a vocalization that may be specific to arrival at nests and possibly serve as communication between adult Turkey Vultures *Cathartes aura* and their nestlings. A pattern of parent-offspring vocalization behaviour has been noted in many bird species. However, a specific connection to Turkey Vulture vocal calls and parent offspring recognition has not been proven. In addition to my current and past observations (Lynch 1986) two other authors, Coles (1938) and J.A. Jackson (cited in Kirk & Mossman 1998), reported observing vocalization that was not the familiar hissing and grunting associated with Turkey Vultures. As with my research both authors noted a distinctive call emitted by adult Turkey Vultures during nest arrival. Jackson labelled the sound as a "food call" which may be similar to the call I labelled an "arrival call" (Lynch 1986).

Observations of Turkey Vulture nest arrival were made at five nest sites in central and south central Kentucky. The sites were named: East Pinnacle North (EPN), Basin Mountain West (BMW), Warren County Barn, Houchens, and Potato Cave Nests. Four of the five nest sites I observed were located in small caves with 100% deciduous

tree canopy surrounding each site. The fifth nest was located in a barn's unused hayloft. This site had two small deciduous tree lots located 3 m to the east and 50 m to the south. The BMW Nest had a blind placed in the cave affording observations of the nestlings (Lynch 1986). The remaining sites had blinds placed 3 to 25 m from the nest entrances (Lynch 1986). Volunteers made independent observations at the Warren Co. Barn nest.

As with the previous observations by other authors discussed in the introduction paragraph, a vocalization emitted by adult Turkey Vultures was noted as the birds landed on perch sites (Lynch 1986) before entering the nest cavity. The sound, emitted in 1 sec burst, was low, raspy, and guttural, sounding similar to a cough. During the observations the arrival call was noted at least once during 25 of 37 (67%) Turkey Vulture nest visits. Nestlings' response was noted at three separate nest sites when an adult uttered the arrival call. The first observation of a nestling possibly responding to the sound was at the EPN nest. At 14h47 an adult landed on a tree perch and emitted three calls. At 14h48 a juvenile ascended to the entrance ledge of the nest and faced the adult. At 14h50 the adult landed on the

entrance ledge and fed the nestling. Nestlings were observed at the Barn site twice during adult nest arrival. At both observations the young were heard by an observer in a blind 4 m distance from the nest entrance. When the adult emitted the call on both occasions the nestlings immediately started to hiss and then hop to the entrance ledge of the Barn nest and face the adult vulture. On both occasions the adult flew from its tree perch to the entrance ledge of the Barn nest then immediately entered the barn followed by the nestlings. The observer was not able to determine if feeding occurred during these two nest visits. At the BMW nest the nestlings were observed on six occasions when an adult emitted the sound. This BMW nest was peculiar in that the eggs were laid in a 2.4 m deep pit with vertical walls. The perch sites utilized by the adult Turkey Vultures before landing on the entrance ledge at the BMW Nest could not be seen by the nestlings. Therefore, at the BMW nest the only contact between the adult on perch sites and young in the pit was auditory. On day 25 post hatch the nestlings appeared to respond to the arrival call by squealing and hissing. The five remaining BMW observations took place between days 30-75 post hatch. After the adult bird emitted the arrival call the young vultures were seen to hiss, flap their wings, run about the cave floor, and finally oriented themselves toward the cave opening. The adult fed the nestlings during three of these six nest visits.

The behaviour of the nestlings after the arrival call is emitted may indicate some type

of communication is occurring. Although a specific voice recognition between adult birds and their nestlings during nest arrival has not been proven it is hoped to demonstrate a cause and effect response to the arrival call with further observations and testing. There are several possible functions of the vocalization. Is the arrival call a signal for feeding or is the call of the adult and response by the young vultures an auditory cue letting the parent know where the young are and that the nestlings are still present? Future nest observations are planned for 2006. Currently, 2005, with equipment and volunteer student help supplied by Western Kentucky University recordings have been made at three nest sites. Analysis of the vocalization recordings is pending. During the 2006 nesting season I am planning to obtain additional recordings and implement play back experiments at nest sites.

Acknowledgements

Mammoth Cave National Park and Western Kentucky University (WKU) provided invaluable staffing assistance and access to their lands. WKU was generous in lending me recording equipment for the 2005 observation season. Private landowners also allowed observations and data collection on their property. This research could not have been possible without the support of Kentucky Department of Fish and Wildlife Resources. The observations made by WKU student Catarina Moreira and my wife Annela Lynch added greatly to the field data.

References

- Coles, V.C. 1938. Studies in the life history of the Turkey Vulture (*Cathartes aura septentrionalis*). Unpubl. PH.D. Dissertation, Cornell University, Ithaca, NY.
- Kirk, D.A. & Mossman, M.J. 1998. Turkey Vultures (*Cathartes aura*). In: The Birds of North America, No 339. Poole, A. & Gill, F. (Eds.). The Birds of North America, Inc., Philadelphia, PA.
- Lynch, W.L. 1986. Nesting and Post-Nesting Behavior of the Turkey Vulture (*Cathartes aura*) in Central Kentucky. M.S. thesis, Eastern Kentucky University, Richmond, KY, USA.

Keywords: Vocalizations, calls, breeding, behaviour, Kentucky, United States. Turkey Vulture *Cathartes aura*.

Author's address: William L. Lynch, Kentucky Department of Fish Wildlife Resources, 970 Bennett Lane, Bowling Green, Kentucky 42104, USA. E-mail address: bill.lynych@accessky.net

