



Arizona's Raptor Experience, LLC

January 2018

~Newsletter~

*Greetings from Chino Valley
and Happy New Year!*

*We hope you enjoyed the
holidays and are looking
forward to new and
exciting experiences in
2018.*

*We are pleased to report that
ten of our kestrel boxes will
be part of a research project
this year on the Kaibab
National Forest!
Details in this issue...*

*Also, bird communication –
“music” with a purpose.*



Smokey, Western Screech Owl
Photo by Mark Elder

American Kestrel Research Project – On the Kaibab

Paul and I were recently contacted by Urban Forestry Specialist Jon Orona who is with the AZ Department of Forestry and Fire Management. He is proposing a research project on the Kaibab National Forest, Williams Ranger District using Kestrel nesting boxes. We have agreed to donate ten boxes in cooperation with the AZ Falconers Association which has financially supported our work to date.

The purpose of the Kaibab project is to examine the impact of grassland restoration treatments and forest thinning in edge habitat on American Kestrel nest success and productivity. The goal is to place 5 boxes as controls, 5 boxes in grassland restoration areas, and an additional 5 boxes in edge habitat that has been recently thinned or will be thinned.

The first few years will involve placing and monitoring the boxes for occupancy and nesting success. Paul and I will be involved in banding any offspring produced in the boxes. Very exciting!



Coda and Odin...by Tyler Clemens

Quail Music

This year Paul and I are especially grateful to be in AZ rather than experiencing another brutal NY winter! It's truly wonderful to go outside in the morning and be greeted by the sun and something we both love: quail music. At least that's what we call the wonderful sounds made by the quail up on the hill as they call to each other to locate their family members and keep the group together. Among the quail are several other song bird species, or passerines, that have also begun to actually sing in different areas on our property. So, what is the difference between a call and a song?



P. Schnell photo

Vocalizations made by birds are divided into two groups: calls, or call notes, and songs. These sounds originate in the same part of the bird's respiratory tract called the syrinx or voice organ. The passerines are known for producing very complex and elaborate songs while other groups of birds, like the diurnal raptors, only use calls. Some birds do not use either, and actually produce sounds using their wings, bill or tail feathers. Regardless, these are all forms of communication with specific functions.

Calls are short vocalizations and are typically innate, meaning the bird is hatched knowing how to make these sounds. Birds can have a dozen or more calls that signal things like alarm, that work to keep a group together (flight calls), to locate others in a group (contact calls), to announce or defend territory and many other things.

Song is a vocal display using one or more sounds that are consistently repeated in a specific pattern. Songs are mostly, but not exclusively, performed by males and are most often performed in the breeding season. The function of song varies from advertising the species and sex of the singer, proclaiming one's territory, to warning against intruders of the same species, inviting the opposite sex to breed and maintaining pair bonds. Songs tend to be complex and must often be learned, at least in part.

Song can be influenced by many factors, like habitat. Birds occupying open country often sing on the wing, or in flight. Others perch on prominent objects to increase their conspicuousness. Most sing more in the morning and evening when there is less light. Few sing when close to their nests, although some females actually sing quietly during incubation. Some birds are accomplished

mimics, and incorporate parts of the songs of other species into their own repertoire. The Mocking Bird is the most accomplished mimic in the wild.

Song substitutes

Ruffed Grouse produce a mechanical sound by drumming. They beat the air with their wings, increasing in speed, the deep, thumping sound starting slowly and building to a blurred crescendo as the bird rapidly rotates his wings back and forth. The drumming sequence lasts 8–10 seconds, during which the wings may beat up to 50 times. The bird typically stands on a log to increase his height and help distribute the sound.

Woodpeckers drum by hammering with their bills, usually on objects that provide resonance like trees and even the siding of houses, chimneys and roofs.

Mimicry in Captive Birds

Certain parrots in captivity imitate human speech and other sounds. Most likely, these birds that only have humans for social contact learn that producing these sounds brings attention. This may explain why these birds tend to mimic with increasing volume when they are ignored. Once they receive attention again, they typically quiet.

Diurnal raptors (hawks, eagles, falcons) use only calls to communicate. Their calls can be territorial, part of courtship, “conversation” between mates or hunger calls (female calling to her mate or from young). Nestlings are known to “peep” when moving around the nest and when their parents arrive.

“Grumpy Pants”
Red-tailed Hawk
Photo by Anne Schnell



While their songs are not as elaborate as passerines, owls do sing to attract a mate and to defend territory. Nocturnal owls are the most vocal of this group, their voices carrying a considerable distance in the quiet of night. The owl syrinx is relatively simple when compared to the song birds. Muscles control pitch and loudness of the sound as air is pushed out of the throat. Their song often includes a visible swelling of the throat as the sound is forced out – this adds a visual display to the song as feathers puff out and often reveal a contrasting color. The Eurasian Eagle Owl is an example with white feathers on the throat. (photo of Goliath by Eric Gofreed, DVM)

Most owl songs are variations on hooting, cooing or piping that follow a predictable sequence. They are genetically hardwired and show little variation within species. One behavior that is seen in owls but not most other bird groups is that of duetting. This is a part of courtship and involves the pair singing together, timing their vocalizations so both parts of the song are clear. This is very common among owls and used to cement pair bonds in species that mate for life and establish it for those together for the breeding season.



The Call of the Red-tailed Hawk

Perhaps the most well-known call of any diurnal raptor is that of the Red-tailed Hawk, for it is their call that is used on television and in movies for any bird of prey that appears, and most notably whenever a Bald Eagle is pictured.

Mnemonics

Words or phrases that sound like bird calls can be gimmicks that help us memorize the calls – they are called mnemonics.

Barred Owl call: Who cooks for you, who cooks for you 'all

Red-tailed Hawk call: Keeeeeeeeer

Red-Shouldered Hawk call: Kee-yer, kee-yer, kee-yer

Broad-winged Hawk call: Peet-seeeeeeep

Great-horned Owl call: Are you awake? Me too; hoot-a-hoot, hoo hoo

American Kestrel call: klee, klee, klee

Barn Owl call: Screeeeeeeeeeeeeeee (hissing, long)

Northern Saw-whet Owl call: too-too-too



*Coda, “talking” as usual...
photo by Kay Cross*