

Project Perch's mission is to protect and nurture the Burrowing Owl in SE Florida.
A real life HOOT, join now!



Project Perch's BuOw Blog 12

Sunday, February 9, 2014

Nesting Behaviors for These Owls

Standing Guard – The male stands guard at the burrow entrance and as time goes on, he is there all of the time.

Hanging Tight Together – The owls sit very close together.

Chubby Female – The female looks and is much heavier, has to rest and is always in or near the burrow. The literature says she gets so heavy that sometimes she cannot fly and relies on the male for food while she is laying eggs.

Sleepy Female – The female is seen resting her eyes more often. Sometimes a tired female leans against the male as she naps.

In the Burrow – The female spends more and more time in the burrow.

Expanding the Burrow Entrance – The female expands the burrow entrance until both owls can sit in the opening comfortably.

Nest Decoration – For these owls it is a stick, about 6" long. They've had several sticks at their nest, always placing it in the same location. They had to relocate the stick when the mower kicked it away. The first time they nested they also had a piece of cardboard that the female pulled apart and then dragged a large piece of it down into the burrow. The following week the female kicked pieces of it back out of the burrow during her housekeeping. The second time they nested there was a dark square of something, that looked like cardboard. They also had a piece of a bike helmet and the upper part of a shoe.



Mutual Preening – When the owls first emerge in the morning they take their time and preen each other. Sometimes at night, after they have stretched, they also preen but normally it is not as thorough and does not take as long as it does in the morning.

Billing – Are they really billing or mutual preening? With some of the feeding behaviors, their faces may get dirty and it could be easier for them to clean up each other's faces since they couldn't clean it up themselves very easily.

Housekeeping – The female kicks dirt out of the burrow every morning, never in the evening. The dirt is flying and she sometimes hits the male with it. She works on expanding the entrance (see next item) and also created quite a dirt mound for them to stand on.

Wing & Leg Stretching – As time in the burrow increases, when they emerge in the evening there is usually some "same side" stretching, the wing and the leg on the same side is stretched very slowly and deliberately. Sometimes they stretch one side and then immediately stretch the other side. They also fan their tail feathers and/or arch their wings over their backs in an M shape.

Nesting Behaviors: When There Are Eggs in the Burrow

Attempted Mates or Dominance Rituals – In the early evening the male attempts to mate or asserts his dominance. In May it was always around 8pm and in December it was always right around 6pm. This happens infrequently to start but then it happens much more frequently once there are eggs. Then another owl moved into a nearby burrow and the ritual mating was daily and often times the female immediately went back down into the burrow.

Petticoat – The female's legs look very white and fluffy, like she has a petticoat on. The literature says the female has a brood patch, proof that she is the only one who incubates the eggs. We couldn't see the brood patch but the fluffiness is probably the feathers surrounding the brood patch.

Strange Owl Droppings – We documented two piles of strange owl droppings at the burrow on December 13. We found a reference at the "tailfeathersnetwork" in their egg binding section titled "Larger Droppings". They say the presence of an egg in the oviduct means there is less room for the bird to pass droppings, so a bird goes less frequently.¹ When the bird does go, they have to strain hard and then a huge dropping will come out.¹ These droppings are large; the size you expect from a larger bird.¹ The bigger the dropping is, the closer the egg is to the cloacae, where it is expelled.¹

When dealing with egg laying birds, they can hold their droppings for an extended period of time to keep the nest clean.¹ Then they will release large, loose, foul smelling poop due to bacteria and yeast in it.¹ When we sent our picture to Dr. Mealey, our local Burrowing owl expert, he asked us if it could be droppings from Marine Toads; but the droppings had no insect fragments in them and Marine Toads had not been seen.²



In the Owls of the United States and Canada, it said female short-eared owls sometimes defecate on their eggs when they are suddenly flushed from their nest.³ “Some authors have suggested that this is purposeful, but more likely, the incubating female may not have defecated in some time and the stored feces are expelled as part of their fright reflex.”³ So it is a biological process present in owls too. The large droppings lacked the white uric acid of normal droppings but the female would have dedicated all of her fluid and calcium to the egg. We ran our findings by a vet and other biologists who agreed this was biologically accurate for an egg laying bird.

As we tried to figure out when the owlets would emerge, we used Brian Millsap’s estimate of 70 days, 30 days incubating and 40 days as nestlings.⁴ Millsap counted backwards from fledge date, which was when juveniles, if approached, flew away instead of back into the burrow.⁴ The large droppings were seen on December 13, 2013 and the owlets emerged from the burrow on February 5, 2014 or 54 days. There were 3 owlets and it takes approximately two days to lay an egg, so there was at least 6 days of egg-laying.⁴ Six days of egg-laying plus the 54 days and the owlets emerged at 60 days and should fledge by February 15. So these extra large droppings may be a very accurate way to determine the timing of egg laying in burrowing owls.

Behaviors When There Are Nestlings

Babies Chirping – We could hear babies chirping. When the female would go down into the burrow the chirping would stop. Sometimes the chirping would start the minute she came out of the burrow and she would look back down into the burrow. She had a serious face like she was saying, “Really”.

Blocking the Burrow Entrance – When both owls are out, one of the owls always sits directly in the burrow’s entrance, blocking it entirely.

Adults Staring Down Into the Burrow – Are they keeping an eye on the owlets or sternly telling them to stay down there or deciding if it is time to go back down? We do not know, but they do look down into the burrow entrance a lot and often times you can hear the owlets calling.

Feeding Scenarios

Night Time Hunts – As the food demands of the owlets increase, the male hunts at night, bringing back bigger prey items including ducklings, rats, turtles, mice and lots of lizards and frogs.

Food Delivery – The male brings food back. Either owl brings it down into the burrow. As the owlets get bigger, the male delivers some of the food live and hands it off to the female who brings it down to the babies. We worried there wasn’t enough feeding behavior when we stopped seeing the male bringing food back in the morning and then we realized he was flying it directly down into the burrow, so fast we weren’t even seeing it until we put his burrow dives into slow motion.

Carcasses – The duckling, frogs and lizards being left around the burrow’s entrance. The female would come out of the burrow and bring it back down into the burrow for the owlets.

Food Comes Back Out of the Burrow and Goes Back In – The female brought a carcass back out of the burrow and was either eating some of it or maybe she was focused on pulling it apart better for the young, because after 7 minutes she brought it back down into the burrow and left it there.

Food Comes Back Out of the Burrow – The female brought a partially eaten snake back out of the burrow and finished it herself. She also brought a partial carcass back out of the burrow, snacked on it once and then left it near the burrow entrance when she returned back into the burrow.

Prepping Food For Owlets – The female and male were each seen tearing apart a carcass, probably a rat. After they worked on it, they then brought it down to the owlets. The male seemed to eat some of it while he worked on it and the female seemed to just prepare it for them.

Domestic Dispute – The female brought a carcass back out and before she could eat any of it the male grabbed it away from her and brought it back down to the owlets.

Messy Owl's & Feathers Out of Place

Bill Cleaning – The female was seen wiping her bill off on the grass.

Male's Mohawk – On two occasions, the male's top face feathers were sticking straight up and he looked like he had a mohawk. On one of the days, the owls had a carcass. It was as though his feathers had gotten sticky and then stuck in that position.

Female's New Year's Eve Party Hat - A day later the female came out with a feather or piece of paper stuck to her head. There is not much time to preen when there are owlets and lots of food to deliver and tear apart.

The owls get messy as they provide food to the babies, which may explain the increase in mutual preening and billing, wiping bills off in the grass, out of place feathers and behaviors not normally seen the rest of the time.

"The Bug Garden"

Defecating – They defecate near the burrow entrance. We called it the potty break. She would come up out of the burrow, back up right into the camera's view and then go to the bathroom. It was funny to us, like she knew we were watching her backside.

Pellet Regurgitation at Burrow Entrance – Pellets would also attract bugs and we saw both the female and male regurgitate pellets near or right into the burrow entrance.

The Bug Garden – As remains from carcasses, the owl's droppings and pellets are left near the burrow's entrance, the bugs and beetles follow. As the feeding demands increase, the male brings more food to the burrow and leaves it around the entrance and this also adds to the bug load.

Flies on the Perch – We could see flies buzzing around and landing on the perch as the burrow became a buggy place and we counted 5 flies on the perch at once.

Sleepy Adults – As the food demands of the owlets increase, and the adults are working hard to feed them and protect them, the adults are tired.

Removing Nesting Material from the Burrow – On a couple of occasions we saw the female dragging nesting material out of the burrow. Was she making room as the babies grew up or had the nesting material gotten so dirty that it needed to be removed?

Sources:

¹ <http://www.tailfeathersnetwork.com/birdinformation/egg laying.php>

² Mealey, Brian. 2013. Personal Communication.

³ Lynch, Wayne. 2007. Owls of the United States and Canada: A Complete Guide to their Biology and Behavior, John Hopkins University Press. ISBN: 10:0801886872.

⁴ Millsap, Brian and Cindy Bear. June, 1990. Double-Brooding by Florida Burrowing Owls. The Wilson Bulletin, Vol 102, No 2, pp. 313-317.