



Branching Out

Fall 2018

Hatching an Egg

It's a lot of work! A wide range of incubation habits is displayed among birds and varies with the species from 11 to 85 days. With most Florida raptor species, incubation time is 26-36 days, but because eggs are often laid 2-3 days apart and incubation begins when the first egg is laid, the birds will be sitting on eggs for a longer period of time.

The most important factor in successful hatching is maintaining the egg at a constant temperature. Body heat from the parents provides this warmth. Birds are "warm-blooded" and they need their feathers to keep them insulated. So how exactly can a mother (and in some species where both parents incubate, the father) bird stay warm and yet be able to incubate eggs at the same time? They develop a brood patch; an area of featherless skin that is visible on the belly of birds during the nesting season.



Most of us have heard about "down feathers". These are actually the feathers that help insulate the birds. They are underneath the outside vanned feathers which are called contour feathers. The down feathers are close to the skin of the bird. Birds molt their feathers automatically. During the nesting season, hormone levels change which starts the process for developing the brood patch. The down feathers and even some contour feathers get loose and fall out. There are some species which have to pull them out and they will use them in their nest. Once the feathers are gone, the tissue on the tummy begins to swell with water and the blood vessels that feed the skin expand.

The blood vessels make it possible for the birds to transfer heat to their eggs when incubating. There are many avian species, including Bald Eagles, where males will also develop a brood patch when helping incubate eggs, however the female's brood patch will be much more prominent

The eggs must be turned about once an hour to ensure that they are heated evenly and prevent the embryo from sticking to the side of the egg. Once the eggs are turned, it might take some wiggling around but the sensitive skin helps the incubating parents know when the eggs are in the best position to have contact with the brood patch. Once the chicks are hatched and the patch is no longer needed, the feathers will grow back.

Fall is the season Bald Eagles return to Florida to start refurbishing their nests. At ARC if we admit an eagle, we check for a brood patch during the initial evaluation. It's always very important to get these raptors back home as quickly as possible, but especially when they have a brood patch. Their chicks would be missing one of the parents that work so hard to keep them warm and fed and having both parents at the nest provides the best chance for their survival.

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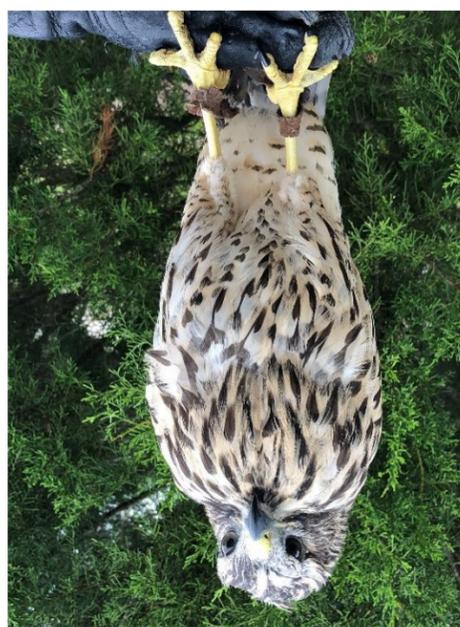
KeeLee
Mississippi Kite



Moira
Female American Kestrel



Amelia
Red-shouldered Hawk



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