



Arizona's Raptor Experience, LLC

June 2018

~Newsletter~

Greetings from Chino Valley!

We hope you are well and finding a way to stay cool. Summer is in full swing and the dry heat is taking its toll on the local vegetation and wildlife. Your backyard bird bath is very important at this time to keep local birds and animals cool and hydrated.

Here at our place we are enjoying our first set of orioles that have decided to stay in the yard – we see them regularly at the feeder and drinking from the bird bath. Gamble's Quail, Scrub Jays, Roadrunners and Ravens are also abundant and seen drinking daily. The mule deer, rabbits and javelina are taking advantage of the available water as well.

This time of year can be equally challenging for the hawks, eagles, falcons and owls that struggle to keep chicks in the nest cool as well as themselves. In this issue we will discuss thermoregulation – how birds beat the heat! And, we'll touch on the benefits of the sun for birds. We hope you enjoy it!

Sunbathing beauties...



Keeping Cool without Breaking a Sweat!

Birds naturally have a higher body temperature than mammals. It does vary by species, but most birds average about 105 degrees F. Their temperature can *change* by several degrees as well. Thermoregulation, or regulating body temperature, is just as essential in the heat as it is in cold.

Because birds do not have sweat glands, they need to be able to cool themselves in other ways when temperatures rise. Cooling through evaporation still plays an important role and occurs through the mouth when the bird pants. Breathing quickly with the mouth open leads to evaporation from the lungs, throat and mouth, cooling the bird as heat is absorbed by the evaporating water. Heat can also dissipate from the non-feathered parts of the body like portions of the face, legs and feet, a process that can be accentuated by getting these areas wet.

Cool fact: Some birds can regulate body temperature with their bill, part of which contains blood vessels. The Toucan, for example, has a large bill with lots of blood vessels. On hot days, the birds can increase the blood flow to their bill which helps release heat from this large surface area. When the temperature cools, the blood flow can be slowed, and heat is then retained within the body instead.

Bathing is a common way for birds to cool off in summer. Bird baths are an essential feature of a bird friendly yard. Many a water fountain in parks and cities have also been used by wild birds, even birds of prey, for an afternoon soaking! Captive birds should always have a bath pan large enough for them to fit inside and move around.



Andromeda (Eurasian Eagle Owl) bathing.

Other behavioral adaptations help birds keep cool. They tend to be active at the beginning of the day before it gets hot, and rest in shaded cool places during the intense heat of the afternoon. Holding their wings away from the body and compressing their feathers to reduce heat retention are also effective measures. In some cases, feathers are fluffed to allow cool breezes closer to the skin.

Wind and rising heat from the earth's surface allow soaring birds of prey to reach higher altitudes where the air temperature is cooler despite being in direct sunlight.

Cool fact: Vultures use a process called urohydrosis to cool themselves. This involves urinating and defecating on their bare legs and leads to evaporative cooling and turns their legs white, which reflects more sunlight.

The Benefits of Sunbathing

It's always surprising to see the birds out in the open on really hot days, like Andromeda (Eurasian Eagle Owl) here who is enjoying a good sunbathe in this photo. We know that birds seek shade to keep cool, so why would they actually choose to sit out in the sun when it's hot?



Bronson (Lanner Falcon) preening.

P. Schnell photo

Well, scientists have found sunning can help birds convert some of the compounds in their body to vitamin D, which is essential for their health. They may also sunbathe after getting wet to dry their feathers quickly if they need to fly. Some may also simply enjoy sunbathing.

More importantly, sunbathing is essential to maintain healthy feathers. Wild birds typically carry parasites that can damage their feathers. Sunning can cause these parasites to move to areas where the bird can preen them away more easily. Birds often preen directly after sunbathing for this reason. Removing these parasites helps prevent damage and issues with important things like flight and insulation.



The Arizona Raptor Center is Now Open for Business!

Rehabilitating injured birds of prey is often time consuming and difficult. It takes a lot of expertise and knowledge of raptors. Last year, the state's Adobe Mountain Wildlife Rehabilitation facility, where many injured birds of prey were sent, closed. One of their long time volunteers, Jerry Ostwinkle, has since created, developed and is managing the newly built Arizona Raptor Center.

The Center specializes only in birds of prey and utilizes state of the art techniques to ensure that birds are treated quickly, kept for as short a period of time as possible and released back into the wild if they are deemed releasable. As you can imagine, this endeavor is both time consuming and costly. The Center is up and running, but still needs financial support. **If you are interested in making a donation, or you need a rehabilitator, you can contact Jerry at: azraptorcenter@gmail.com or 602-549-8482.**



Beautiful Eurasian Eagle Owl feathers collected during the molt!