

Birds of Prey

at the Oklahoma City Zoological Park

by Chris Smith, Oklahoma City, OK

The term "bird of prey" is used in reference to several types of carnivorous birds – specifically eagles, hawks, falcons, and owls. Although these birds share similar characteristics, such as talons, hooked beaks, and keen vision, not all of them are as closely related as they may appear.

"Bird of prey" is a rather casual description of members of two unrelated orders of birds; the Falconiformes (eagles, hawks, and falcons) and the Strigiformes (owls). These two groups are an example of convergent evolution, in which two lineages of unrelated birds have evolved similar characteristics and behaviors. Although many different species of birds are predators, "bird of prey" is usually only descriptive of the two above mentioned orders.

Each of these orders of birds is subdivided into families, of which each member shares even more distinguishing characteristics. Falconiformes is comprised of five families; 1) eagles, hawks, kites, and Old World vultures, 2) New World vultures, 3) osprey, 4) falcons and caracaras, and 5) secretary bird. Strigiformes is divided into only two families; 1) barn owls and 2) typical owls.

The Oklahoma City Zoological Park maintains a diverse collection of birds of prey. Most of the above mentioned families are represented in the zoo's bird collection. Not only is the selection of bird families varied, but the range of size of the birds themselves is great. At the Oklahoma City Zoological Park, visitors can see not only some of the largest birds of prey, but also some of the smallest. Several species exhibited are rarely seen in zoological collections. Others are endangered species in need of captive breeding programs in order to prevent their extinction.

Andean Condor ***Vultur gryphus***

The Andean Condor is the largest

living species of bird of prey. The wingspan of these immense vultures can reach over three meters (about 10 feet). Males are distinguished from the females by having a large fleshy crest on the beak. Males are also larger than the females, a trait that is unusual with birds of prey. These birds occur in the Andes Mountains of South America.

The pair at the Oklahoma City Zoological Park has been exhibited since 1960, and have produced six chicks that survived to adulthood. Andean Condors have a slow reproductive rate, laying only one egg every other year. The most recent offspring parented by these birds have been placed in release programs. Captive-hatch Andean Condors have been reintroduced into their natural habitat so researchers could study how well they acclimated from captivity to a natural environment. Andean Condors were also released in remote regions of California. These studies were conducted in order to establish a safe and effective method of reintroducing the highly endangered California Condor *Gymnogyps californianus* into its natural habitat.

King Vulture

Sarcorampus papa

The King Vulture is one of the most colorful birds of prey. The plumage is black and white, and the head, although featherless, is a brightly colored orange with shades of yellow, red and purple. These vultures also have a brightly colored caruncle at the base of the beak.

This is one of only a handful of bird species that has a strong sense of smell. The King Vulture is found primarily in tropical forests of Central and South America, and uses its keen olfactory senses to find carrion that would normally be hidden by dense vegetation.

The King Vultures at the Oklahoma City Zoological Park are not only colorful in appearance, but also in per-

sonality. One particular mischievous bird, "King Tut," will rarely pass up the chance to give a little love bite to any unwary bird keeper.

Bald Eagle

Haliaeetus leucocephalus

The Bald Eagle is perhaps the most recognizable bird of prey, as it is the national symbol of the United States. Despite being the national symbol of the USA, the Bald Eagle became endangered throughout parts of its range. Pesticide contamination in the food chain led to the decline of the Bald Eagle in southern Canada and the contiguous 48 states. After the pesticide DDT was banned in the 1970s, the Bald Eagle's population has been recovering. Although the Bald Eagle's population is on the rebound, it is still classified as a threatened species and remains protected.

The Bald Eagle is often thought of as a noble and majestic predator, but often behaves much like an over-sized sea gull, in that it will readily steal food from other birds, scavenge for dead fish in shallow rivers or even dine on roadkill.

The Bald Eagle at the Oklahoma City Zoological Park is on loan from the United States Fish and Wildlife Service. All captive Bald Eagles are the property of the U.S. government as it is illegal to own one. Like many Bald Eagles in captivity, this bird suffered injuries that would not allow it to survive in the wild.

Harpy Eagle

Harpia harpyja

The Harpy Eagle is the largest of the eagles, weighing up to nine kilograms (19.89 pounds). The wingspan can reach two meters, however, these eagles have relatively short wingspans in relation to their body size. The Harpy Eagle is characterized by having a crest of long dark plumes on its head, giving it an owl-like appearance. The size difference between males and females is great. Females are almost twice as large as males.

Harpy Eagles are found in tropical forests in Central and South America. These raptors prey mainly on large arboreal mammals, such as monkeys,

sloths, and opossums. Despite their size, Harpy Eagles are agile flyers, capable of snatching sloths from the undersides of branches while in flight. The Harpy Eagle's name comes from the Greek mythological monsters, the Harpies, which were used by Zeus to persecute those who angered him.

The Harpy Eagle is an endangered species due to deforestation and human persecution.

Cinereous Vulture ***Aegypius monachus***

The Cinereous Vulture is one of the largest vultures found in the Old World. These birds can weigh over twelve kilograms (26.5 pounds) and can have a wingspan of close to three meters (about 10 feet). The Cinereous Vulture is sometimes called the European Black Vulture, which is descriptive of juveniles. Adults are colored by various shades of dark brown, while young birds are nearly black.

The Cinereous Vulture is the dominant scavenger at a carcass. Most other species of vultures are too small to tear into larger carcasses and must wait for the Cinereous Vulture with its large and powerful beak to make the first cuts. In Tibet, this species will often feed at "celestial burial platforms," where dead domestic animals and occasionally humans are ceremoniously laid to rest.

These vultures once ranged throughout southern Europe to central and eastern Asia. Today, most of the European population has disappeared, and the Asian population is declining due to loss of nesting sites, accidental poisonings, and human persecution. A Species Survival Plan (SSP) has been developed by The American Zoo and Aquarium Association (AZA) in order to maintain a viable captive population of these threatened vultures. The Oklahoma City Zoological Park is an active participant in this program.

Secretary Bird ***Sagittarius serpentarius***

The Secretary Bird is a rather distinct species of bird of prey. The body of this raptor resembles that of an eagle, but its legs are long, like those of a crane. Secretary Birds are largely terrestrial and inhabit grasslands and savannah in sub-

Saharan Africa. These birds prey on any small animals that are found on the ground that can be overpowered with swift powerful kicks. They are well known for their ability to hunt and kill snakes, including cobras. These birds are often attracted to grassfires, where they will feast upon small animals and insects fleeing the danger of the fire. Farms in South Africa sometimes keep Secretary Birds to help control rodents and other vermin.

Secretary Birds are often thought to have been named for their resemblance to medieval secretaries with quill pens tucked behind their ears, but it is more likely their name came from the Arabic term saqr-et-tair, meaning "hunting-bird."

In 1986, the Oklahoma City Zoological Park became one of the first zoos in North America to successfully hatch and rear the Secretary Bird.

African Pygmy Falcon ***Polihierax semitorquatus***

The African Pygmy Falcon is one of the smallest of the birds of prey. These diminutive raptors are only about 20

centimeters in length, roughly the size of a starling. African Pygmy Falcons are dimorphic, with the female being more colorful than the male. Males are slate gray with white undersides. Females are recognized by having a chestnut cape.


These little falcons are rather unique in their nesting habits – they almost always nest in weaver colonies. Weavers are finch-like birds that construct massive multi-chambered nests, which can hold up to 50 pairs of weavers. African Pygmy Falcons will take over a few chambers and live among the weaver colony. Although the pygmy falcons occasionally prey upon weaver hatchlings, the weavers and falcons live in harmony with each other.

These tiny raptors are found in two distinct regions of Africa. One population occurs around Somalia and Kenya and the other is found in Namibia, Angola, and South Africa. Each of these populations is sometimes recognized as a sub-species although there is very little difference between the two. African Pygmy Falcons prey pri-

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Great Horned Owl ***Bubo virginianus***

The Great Horned Owl is the largest and perhaps most familiar owl in North America. These owls have an extensive range (northern Alaska and Canada to Tierra del Fuego, the southern-most tip of South America) and can be found in almost every kind of habitat.

Great Horned Owls are characterized by possessing long ornamental tufts over the eyes, giving them a "horned" or "eared" appearance. Great Horned Owl calls are usually a series of six deep and soft whoots, which give reference to the term "hoot owl." Although the Great Horned Owl can occasionally be seen hunting during daylight hours, perhaps the best way to view this bird during the day is to follow the screams of crows or jays mobbing it as it rests.

The Great Horned Owl is sometimes thought of as an ecological counter-part to the Red-tailed Hawk *Buteo jamaicensis*. Both hunt similar prey and occur in similar habitats but have different circadian rhythms; the hawks active by day, the owls at night.

The Great Horned Owl at the Oklahoma City Zoological Park arrived as an injured, unreleasable animal and is now used in conservation and education programs.

Eurasian Eagle Owl ***Bubo bubo***

The Eurasian Eagle Owl is the largest living species of owl. They can measure 72 centimeters (28 inches) and weigh three kilograms (6.6 pounds). These massive owls are closely related to the Great Horned Owl, and both occupy the same niche in their environment. Eurasian Eagle Owls range from central Europe, north Africa, the Middle East and most of central Asia. In many parts of Europe, the Eurasian Eagle Owl has disappeared due to persecution and habitat loss. Efforts to reintroduce the owls into regions from which they had vanished have been moderately successful.

These birds prey upon anything up to the size of a small deer. They are unusual in their dietary habits in that

they often prey upon other birds of prey.

Although rather common in zoos throughout Europe, the Eurasian Eagle Owl is rarely seen in North American zoos. The Oklahoma City Zoological Park is currently the only zoo in the United States with a breeding pair of these owls.

Spectacled Owl ***Pulsatrix perspicillata***

The Spectacled Owl is found in tropical rain forests and woodlands in Mexico, Central, and South America. Spectacled Owls are named for the white markings that surround their eyes, giving them an appearance of wearing eyeglasses. These owls are dark brown on the back and on top of the head with yellowish white undersides and white markings around the eyes and under the chin.

Juveniles have white heads and dark brown faces. Young Spectacled Owls were once thought to be a separate species, as the young owls do not develop their adult colors until they are several years old.

The Oklahoma City Zoological Park was the first zoo in the United States to successfully hatch and rear the Spectacled Owl. Since 1980, 18 Spectacled Owls have hatched at the Oklahoma City Zoological Park.

Burrowing Owl ***Athene cunicularia***

The Burrowing Owl earns its name for its habit of nesting underground in abandoned prairie dog or ground squirrel burrows. It is only on rare occasions that burrowing owls reside within an active prairie dog town. These owls are rather small, standing only about 25 centimeters tall (9.7 inches).

Burrowing Owls have several habits that are not typical of most owl species. Along with nesting underground, these owls differ in that they are often active during the day and they are colonial. When threatened, the Burrowing Owl will seek safety within its burrow. But if the owl still feels threatened, it can mimic the sound of a rattlesnake buzzing its tail to scare off a potential intruder. Burrowing Owls are found in grass-

lands throughout North and South America. These little birds prey primarily on insects and small rodents.

Burrowing Owl populations have been declining in recent years, due mainly to efforts to control or eradicate prairie dogs from lands to be used for grazing livestock.

Eastern Screech Owl ***Otus asio***

Despite their small size, only about 23 centimeters in length (8.9 inches), these owls have inspired many fables and superstitions concerning death and disaster. Their calls are often described as blood-curdling shrieks and were thought to be a bad omen.

These owls often live in rural and suburban areas. There are two color phases of the Screech Owl; red and gray. The red-phased birds are more common in southern regions of the United States, while the gray-phased owls are more prominent in the north.

Although they are small, they are capable of killing prey much larger than themselves, including pigeons, quail, and robins. Their hunting skills sometimes lead them to be described as "feathered wildcats." Despite their cute and dainty appearance, Screech Owls are very aggressive birds and will readily attack anything or anyone that disturbs their nests or young.

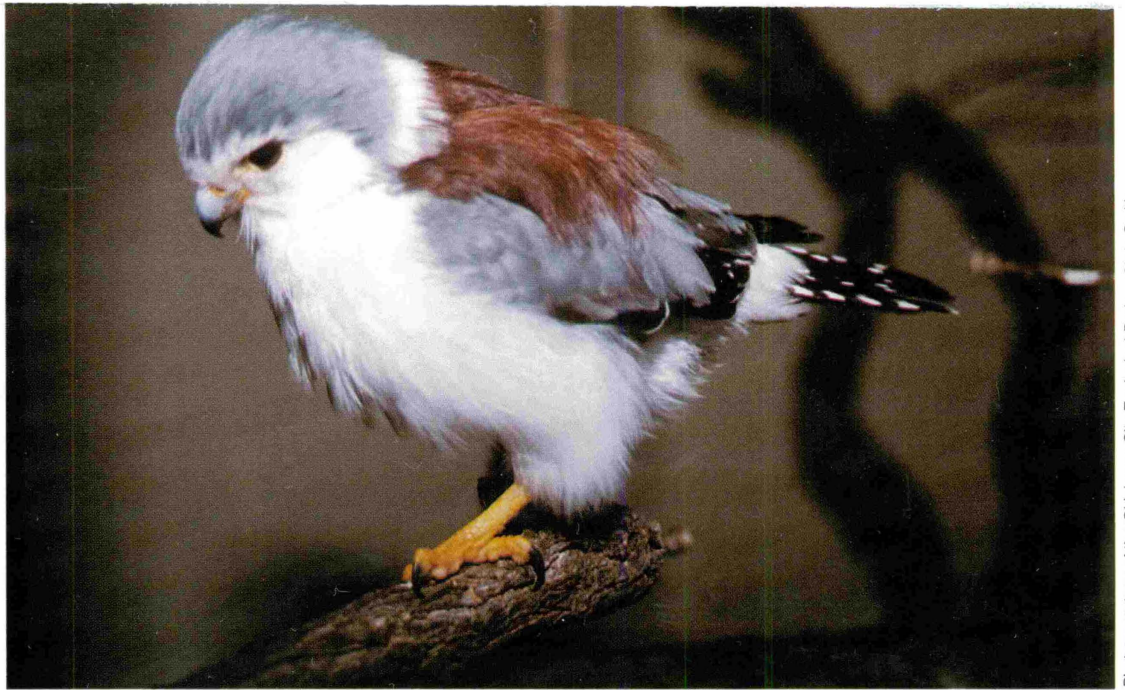
Both color phases of the Eastern Screech Owl can be seen in the Oklahoma City Zoological Park's conservation and education programs.

Snowy Owl ***Nyctea scandiaca***

The Snowy Owl is found in the Arctic tundra of North America, Europe and Asia. It is easily recognized as it is the only owl that is predominantly white. Females are distinguished from males by having much more black barring over their bodies. This helps camouflage the female when she tends to the nest. Snowy Owls are rather large and heavy birds, having a wingspan up to 1.6 meters (5.2 feet) and weighing up to 2.1 kilograms (4.6 pounds).

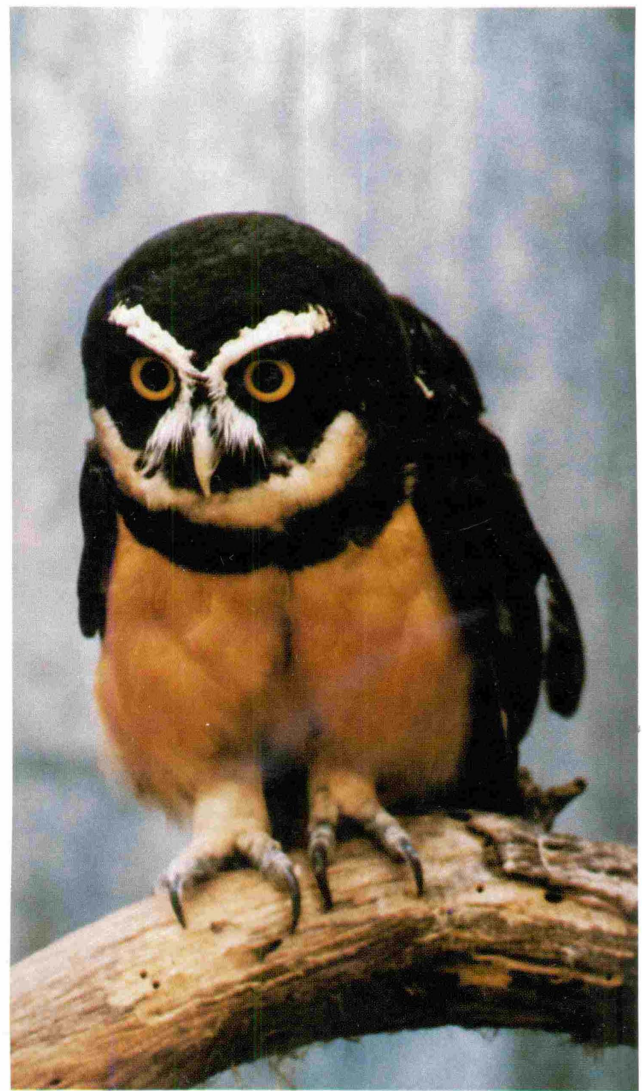
Snowy Owls nest on the ground, usually on a high ridge or a mound. These owls usually lay five to seven eggs per clutch, but can lay up to 16 eggs, a very high number for an owl.

*African Pygmy
Falcon*



Photos courtesy of the Oklahoma City Zoological Park Chris Smith

Tawny Frogmouth



Spectacled Owl

*Eurasian
Eagle Owl*

However, clutches this large only occur when rodent populations explode. During drastic environmental changes, such as flooding or severe food shortages, Snowy Owls will migrate as far south as Texas and the Gulf states.

Tawny Frogmouth *Podargus strigoides*

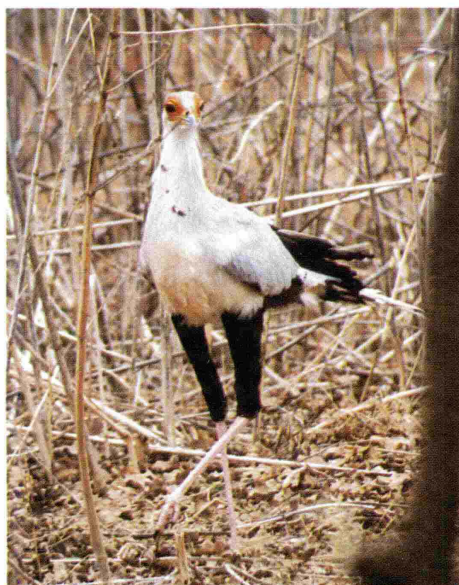
Although the Tawny Frogmouth has an owl-like appearance, it is actually a member of the Caprimulgiformes, which also includes the nightjars and nighthawks. Nightjars and their relatives are not considered birds of prey. These birds have wide gaping mouths, which they use to catch insects while in flight. Frogmouths differ from nightjars in that they are much larger and stockier, and are more carnivorous. The Tawny Frogmouth is an example of a predatory bird that is not categorized as a bird of prey.

Tawny Frogmouths attack their prey by pouncing upon it, but will on occasion capture prey on the wing. The diet of these birds usually consists of insects, small lizards, amphibians and rodents.

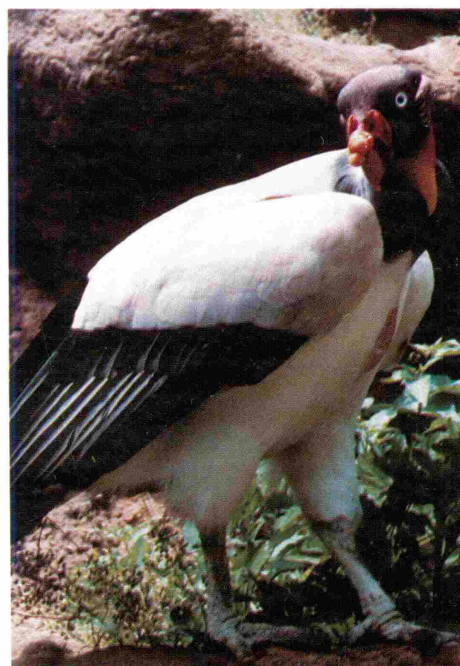
The Tawny Frogmouth is found in woodland habitats throughout Australia. Its plumage is colored with various shades of grey and brown and is patterned like tree bark. Their cryptic coloration allows them to blend in with their surroundings and avoid detection. When startled, the Frogmouth will hold its head up, sit in an erect posture and remain still, looking very much like a branch of a tree.

The Oklahoma City Zoological Park maintains the Regional Studbook for breeding programs throughout the country. Keeping a studbook allows zoos throughout the country to maintain a healthy gene pool of the animals in captivity and prevent inbreeding.

In addition to the birds of prey on display at the Oklahoma City Zoological Park, a variety of native raptors can be seen at the zoo. The Oklahoma City Zoological Park is located at the edge of the metro area and has quite a bit of undeveloped land in the surrounding area. The zoo has a natural lake which attracts a variety of native wildlife. Also, the zoo is adjacent to a golf course, which, with



Two views of the Secretary Bird (above).



King Vulture

its trees and greens, are enticing to wildlife as well.

Red-tailed Hawks are commonly seen throughout the year. Swainson's Hawks *Buteo swainsoni* can also be observed on a regular basis. During the summer, Mississippi Kites *Ictinia mississippiensis* are abundant, as many probably nest in the neighboring golf course. Turkey Vultures *Cathartes aura* are occasionally seen soaring high overhead. For those with a sharp bird-watching eye, a Cooper's Hawk *Accipiter cooperii* or an American Kestrel *Falco sparverius* may be noted. A Merlin *Falco columbarius* can occasionally be spotted as it migrates through the region for winter. Owls, being nocturnal, are rarely seen. Screech Owls are sometimes seen in the spring, when chicks begin to venture from their nests. Great Horned Owls are occasional, but unwelcome at the zoo. They usually make their presence known with a successful hunting trip to a waterfowl exhibit during the night. Aside from the rare predation upon a zoo inhabitant, the native birds of prey benefit the zoo, as they help keep local rodent populations in check.

When visiting the Oklahoma City Zoological Park, visitors can see some of the most impressive raptors from around the world. But if they take a moment to look beyond the exotic animal exhibits and into the sky, they might see some birds of prey that live a little closer to home.

References

- Brown, Leslie and Amadon, Dean *Eagles, Hawks & Falcons of the World* The Wellfleet Press, Secaucus, NJ 1989
- Grossman, Mary L., and Hamlet, John *Birds of Prey of the World* Bonanza Books, New York 1964
- del Hoyo, Josep, Elliott, Andrew and Sargatal, Jordi *The Handbook of the Birds of the World vol 2 New World Vultures to Guinea-fowl* Lynx Edicions, Barcelona 1994
- Hume, Rob *Owls of the World* Running Press, Philadelphia 1991
- Simpson, Ken and Day, Nicholas *The Princeton Field Guide to the Birds of Australia* Princeton University Press, Princeton, NJ 1996
- Tarboton, Warwick *African Birds of Prey* Cornell University Press, Ithaca, NY 1990
- Terres, John K. *The Audubon Society Encyclopedia of North American Birds* Wings Books, Avenel, NJ 1991
- Voous, Karel H. *Owls of the Northern Hemisphere* The MIT Press, Cambridge, MA 1989



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