

# Liberty Wildlife Rehabilitation Foundation



Liberty Wildlife

## Education Program's Natural History



**GREAT HORNED  
OWL**

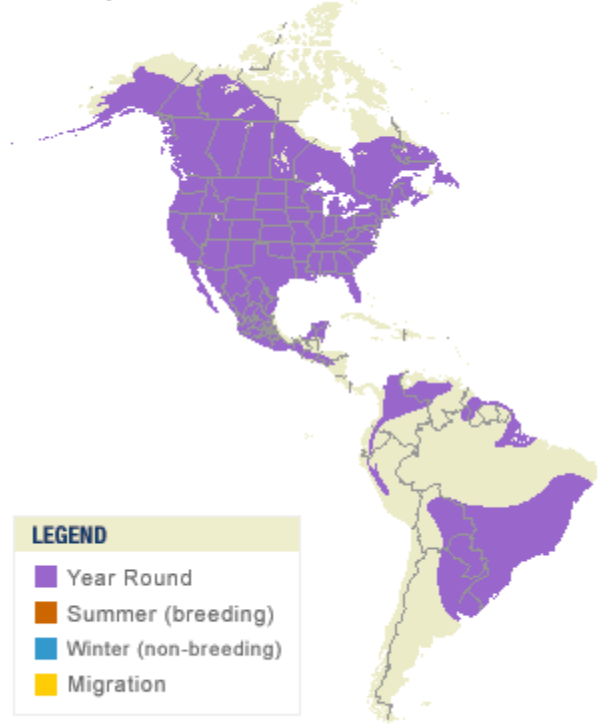


## Great Horned Owl (*Bubo virginianus*)

**Range:** The Great Horned Owl is found in North and South America from northern Alaska and Canada through Mexico to the tropical rainforest to Tierra del Fuego. It is one of the most widespread and common owls in North America – Found throughout Arizona. Generally they will stay year round in their territory, but those in the far north will move southward in the fall or winter.



Great Horned Owl  
*Bubo virginianus*



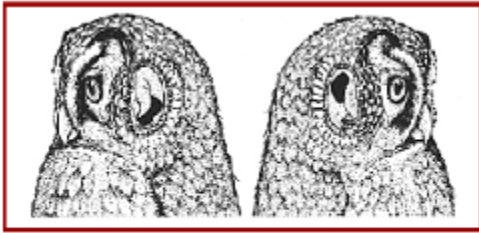
Map by Cornell Lab of Ornithology  
Range data by NatureServe

**Habitat:** Probably no other North American owl lives in so many habitats and in so many climates. Being such an adaptable bird, generally the Great Horned Owl prefers open country to hunt and sites close to the edge of wooded areas for nesting. They can be found in agricultural areas, forests, deserts, and suburban and urban areas. They share the same habitat as the Red-Tailed Hawk.

**Description:** The Great Horned Owl is a large owl that is easily recognized by its feather tufts on its head, referred to as horns and its deep hooting call. Generally its body is brown and gray with dark barring. Some variations may have pale gray to white plumage. It has a white patch on its throat and large yellow eyes surrounded by a large facial disk of orangish-brown feathers outlined by black feathers. The legs are feathered to the talons. The wingspan measures 3 to 4½ feet. Typically this owl weighs between 2 and 5 pounds, with the female weighing up to 1/3 more than the male. The higher weight is usually found in the northern parts of its range. The Great Horned Owl stands 18 to 25 inches tall. The most common call is a 5-syllable soft hooting with a cadence like “Don’t kill owls: save owls.” Shorter 3-syllable sequences “Don’t kill owls” are also common. Although the female is larger in size, it has the higher pitched hoot. The Great Horned Owl is usually inconspicuous during the day, roosting silently against the bark of a tree or in vegetation.



**Hunting/Prey:** The Great Horned Owl will hunt anytime during the night, but is most active at dawn and dusk - crepuscular. As the day ends, from its perch in the tree, it will watch and listen for prey. It has good eye sight, but hunts primarily by sound. Its facial disk consisting of very fine feathers funnel sounds to its ears on each side of the disk to help it hunt. One ear opening tilts up and the other points down. The ears are located asymmetrically below its tufts allowing the owl to triangulate the location of its prey by sound alone. The owl's body and flight feathers are softer and less rigid than a hawk's to allow it to hunt its prey without making a sound. Its leading flight feather is comb-like to allow wind to pass through it without a sound. Once the food is located the owl will swoop down noiselessly and pounce on its prey. It can exert up to 80 pounds of pressure with its talons. The owl's diet consists of a wide variety of prey from raccoons, rabbits, squirrels, mice, snakes, insects, geese and other birds to the occasional cat or small dog. One of its favorite foods is the skunk, a slow moving nocturnal animal with a large white stripe down its back like a neon sign that says to the owl, "Eat me!"



Both sides of owls head with feathers pulled back to expose asymmetry of the ears.

**Breeding/Nesting:** Great Horned Owls are one of the earliest spring nesting birds; eggs may be laid as early as January or February through April. Courting will have occurred throughout the winter months, marked by the nighttime hooting between the pairs. Owls do not build nests and either take over abandoned nest of hawk or other large birds or will simply lay the eggs in alcoves, tree hollows, abandoned buildings or even on the ground. Generally the female will lay 2-3 white eggs, but could have a brood as large as 6. Both parents will feed the young. Both will guard the nest site fiercely against intruders including humans. The young fledge in 45-55 days. Fledgling will still have down around head and may not have noticeable ear tufts.

**Lifespan:** Typically this owl will mature in two years. Great Horned Owls can live more than 12 years in the wild. Some captive birds have lived as long as 29 years.

**Threats:** Some of the main threats are: Red-Tailed Hawk predation on the young, illegal shooting, electrocution, pesticide poisoning, automobiles and barbed wire entanglement.

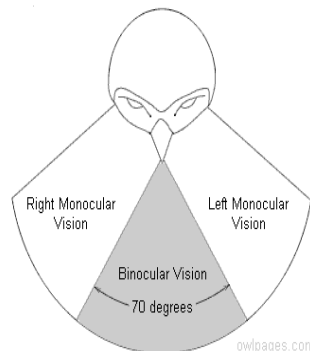
#### **Other Great Horned Owl Facts:**

- The Great Horned Owl is referred to as "the tiger of the sky" because of its fierce nature and ability to capture a wide variety of prey that may be larger or heavier than the owl.
- Four good field marks of a Great Horned Owl are its size, yellow eye color, ear tufts and white collar.
- It is speculated that the Great Horned Owl's ear tufts may convey body language - when they are irritated the tufts lie flat and when they are inquisitive the ears stand upright; or they may



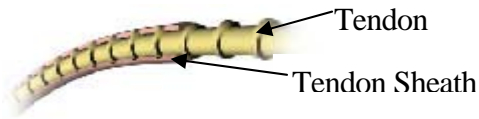
aid the owl in camouflaging its outline when sitting in a tree by breaking up the circle feature of its head.

- The Great Horned Owl's eyes are fixed in their sockets. This provides them with a field of binocular vision which assists in locating prey by sight, but provides limited to no peripheral vision. Because their eyes are fixed in their sockets, they cannot move them up or down or side to side. To compensate for this, the owls are able to move their heads 270° in order to see peripherally and behind them. This dexterity is accomplished by having 14 vertebrae in their necks compared to the human's 7.



- Like all birds of prey, the owl eats all of its prey including bones, feathers, skin, etc. It will then produce a pellet of undigested parts of its meal which it casts up several hours after eating. Because the Great Horned Owl's digestive system is not as acidic as other birds of prey and it typically eats its prey whole, its pellets will contain the undigested bones of its prey. With patience, scientists and students can piece together the skeleton of the Owl's last eaten prey.
- The owl does not have a crop like many other birds. I
- The owl's feathers are softer than other birds of prey's. This allows them to fly soundlessly when they hunt in limited light.
- Like all birds of prey, the Great Horned Owl has four toes on each foot. However, unlike other birds of prey that have three toes in front and one in back, its outer toe is reversible. It can rotate it so that it has two toes in front and two in back. This gives the owl a larger grasp to capture prey.
- The Great Horned Owl's eye is almost as large as a human's and allows a great deal of light to pass through to the pupil, allowing it so see in dark conditions better than humans. If a Great Horned Owl were as large as a human, its eye would be the size of an orange.
- The Great Horned Owl, like other birds of prey has a third eye lid called the nictitating membrane. It protects and cleans the eye.
- Like other birds of prey, the owl has four toes. However the owl's outer toe is flexible allowing it to have two toes in front and two in the back. This gives the owl a wider grasp when hunting.
- It is estimated the Great Horned Owl can exert up to 90 pounds of pressure when it closes it talons and is able to maintain it. A human can exert up to 50 pounds but only for a short period. As in all birds of prey, the owl's leg tendons are ridged as are the tendon sheaths. When the owl closes it talons, the tendon "locks" in place against the sheath until the owl relaxes its leg.





(HawkQuest)

- Red-Tail Hawks will hunt the owl's nestlings. Crows will mob it for hours.
- The Latin name *Bubo virginianus* means "owl of Virginia" where the first specimen was collected.



**HEDWIG**  
**GREAT HORNED OWL**

Hedwig was found at a park in Queen Creek in 2001. It was obvious from her behavior of seeking food from people that she was an imprint who had escaped or been released. She was taken from the park by a kind hearted man who did not know much about birds of prey. He placed her in with his





chickens until he discovered that Great Horned Owls eat chickens. Following his call to Liberty Wildlife, Hedy, as she was affectionately called, was transported to Liberty. As an imprint, Hedy cannot be released because she will continue to seek out humans to feed her and she will not interact with her own species. Hedy weighs approximately 1250 grams or 2.7 pounds. She is a higher level bird because of the difficulty of getting her on the glove. Wearing a right hand glove agitates her.



**MAGGIE**  
**GREAT HORNED OWL**



**SNICKERS**  
**GREAT HORNED OWL**

Snickers and Maggie arrived at Liberty at about the same time in 2003. Both were nestlings. Maggie was found on the ground with severe head and ear canal wounds. They appeared to be talon marks, leading to speculation that a bird of prey, possibly a Red-Tailed Hawk, had tried to take her from the nest and could not carry her. Maggie was transported to Liberty Wildlife as soon as she was found. Concern that her hearing, upon which these owls are vitally dependent, had been damaged, the medical decision was made that for her own good, Maggie would be kept in captivity. For weeks, the medical staff cleaned and rinsed the wounds to rid them of maggots and prevent infection.

Snickers was also found on the ground by well meaning rescuers. She had no apparent injuries. She arrived from her rescuers as an imprint.





## Darwin

(Photographed April 2011)

Darwin arrived at Liberty Wildlife on April 22, 2010. His rescuer had found him as a fledgling on the ground in Scottsdale. He had an obvious wing injury. The Liberty medical team determined from the X-rays that he had a fractured at his elbow on his right wing, causing the wing to noticeably droop. Flight tests reviewed that he fatigued quickly and would be unable to be a successful hunter. He was determined to be non-releasable. His calm disposition qualified him to become a member of the education team joining our other Great Horned Owl ambassadors.





## *Einstein*

Einstein was brought to Liberty Wildlife in May 2011 as a juvenile. During the medical examination, he was found to have a healed fractured "elbow," probably resulting from an impact injury. During this healing process, the fractured bones fused together, not allowing his wing to extend for flight. As a result of his non-flighted status and his ability to work with handlers, Einstein became one of Liberty's Education ambassadors.







## *Tucker*

*Tucker was brought into Liberty Wildlife in August 2015 after being hit by a car and stuck in the grill for an unknown time. He suffered trauma to the head, a fractured left wing and left leg. After extensive rehabilitation and treatment, the injuries healed. However, he could not extend the healed wing to fly sufficiently to achieve releasable status. With considerable acclaim for his remarkable recovery, he was enlisted in the Education cadre.*





## *Edison*

*Edison was found in a pool and brought to Liberty in September 2015. The medical exam determined that he had a fractured right wing which could not be surgically treated. The injury healed well but placed the wing at such an angle that he could not achieve full flight. As a male Great Horned Owl, he was a welcomed placement with the Education Team to compensate for all the moody female GHO's during the breeding season.*

Compiled by Max Bessler

Photos courtesy of Barb Del'Ve

Sources: Cornell Lab of Ornithology, Desert USA, National Geographic, The Peregrine Fund, University of Minnesota Raptor Center, North American Owls, 2<sup>nd</sup> Edition by Paul Johnsgard

