

Tools for Survival: Raptor Adaptations



So, what is a **raptor**? A raptor, or bird of prey, captures and eats live animals. Raptors have tools for survival, or **adaptations**, that set them apart from other birds: strong feet with talons, curved beaks, and forward-facing eyes.

A raptor's **talons** are the very sharp toenails that the bird uses for catching, grasping, and killing its prey. They act as the raptor's fork and are designed to pierce through the tough skin of its prey. Raptors' feet are controlled by strong muscles, which allow them to kill animals that can be as big as the birds themselves. Some raptors have scaly skin over their toes to protect from bites and scratches from their prey. Others, especially owls, have feet that are covered with modified feathers.



A strong, curved **beak** with sharp, cutting edges is another telltale sign of a raptor. This serves as its knife, as it tears its prey into bite-sized pieces. Bird beaks have evolved according to the type of food the bird eats, so smaller raptors like the American Kestrel have short beaks for eating prey such as insects and mice, while the Eagle has a heavy, powerful beak for tearing large pieces of meat.

The **forward-facing eyes** of raptors also set these birds apart. Eyes that face forward provide raptors with binocular vision (both eyes used together) and ability to judge distance. Combined with keen eyesight, this helps to make raptors effective hunters. In comparison to a human's eye, a raptor's is much bigger and heavier, taking up quite a bit of space in the skull. If human eyes were comparatively as big as raptors', they would be as big as tennis balls!

Raptors can be classified into two main groups based on when they hunt. **Diurnal**, or daytime, hunters include the hawks, eagles, kites, harriers, Ospreys, caracaras, and falcons. **Nocturnal**, or nighttime, hunters include two families, Barn Owls and all other owls except Snowy Owls.

As predators at the top of the food chain, raptor populations are sensitive to environmental changes, and the fate of raptors is linked directly with human actions. After learning more about these unique birds, we hope you will develop an appreciation for raptors that will help you make informed decisions as you interact with the natural world.

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