



American Swallow-tailed Kite (page 6)

Birds of Prey



by John Green

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Introduction

Every day, birds of prey (also called raptors) enter into our lives, if only commercially, as with the Bald Eagle in advertisements for the U.S. Postal Service. Of course the symbolic associations of birds of prey go far deeper. For ages, vultures have been associated with death, eagles with power and freedom, hawks with sly thievery and sharp eyesight, falcons with dazzling speed and royal sport, owls with the weird and occult. Most of us have also directly witnessed the majesty of the soaring hawk or eagle, or heard an owl's eerie midnight hooting.

As familiar as these birds are, no one understands exactly what a "bird of prey" is. Songbirds are not thought of as birds of prey, yet there are some, the shrikes, that routinely kill and eat other birds. On the other hand, many vultures, very closely related to the hawks and considered "birds of prey," lack the strong grasping talons of their cousins and take little or no live prey; a number of hawks and owls subsist almost entirely on insects, as do swallows, wrens, and flycatchers; and there are even one or two species of raptors that feed largely on the fruits of palm trees in Africa!

Even the grouping of hawks and owls in the same category, while convenient and traditional, has no solid biological foundation, for a hawk and an owl are no closer kin than either is to a chicken. Hawks (and their allies) and owls belong to two distinct orders of birds: the Falconiformes and the Strigiformes, respectively. Probably the reason for their long time association is the numerous similarities between many hawks and many owls, such as their sharp, hooked bills, powerful curved claws, and even the habit of regurgitating pellets composed of the bones and other indigestible parts of their prey. And of course many hawks and many owls do kill and eat mammals and birds. These similarities are attributable to the biological phenomenon of "convergent evolution," the same principle that accounts for the existence of bats and whales—mammals that fly like birds and swim like fish. Tradition, as well as the prevalence of similarities attributable to convergent evolution, justifies our keeping the hawks and owls together in this coloring book.

All members of both orders of birds are capable fliers. Some, like many eagles and vúltures, are known for spectacular soaring ability. Others, like the Peregrine Falcon, are among the fastest and most agile birds in the world. While owls cannot rival most falconiform birds in speed and soaring ability, many are the world's quietest predatory birds, their wings muffled with downy feathers to facilitate silent attacks on unwary prey in the dark.

Hawks and their allies are almost exclusively diurnal (active by day), while owls are principally, though far from exclusively, nocturnal (active by night). All birds of both orders are equipped with excellent vision. A hawk soaring over a meadow can spot a mouse moving in the grass hundreds of feet below. The vision of owls has a notable peculiarity: owls cannot move their eyes in their sockets. In compensation, however, they can turn their heads all the way around. Contrary to popular belief, even nocturnal owls can see perfectly well in the daytime; in addition, they have highly developed night vision. And some owls are equipped as well with an extraordinary sense of hearing, which enables them to detect the precise location of a faint sound in total darkness. A few birds of prey also have a highly developed sense of smell. It is now believed that the Turkey Vulture combines its sense of smell with keen vision to locate the dead animals it feeds on.

The nesting habits of birds of prey are extremely varied. Most falcons, owls, and New World vultures do not build their own nest, laying their eggs on a bare ledge or, for example, in an old woodpecker hole or an abandoned nest of another type of bird. Most other birds of prey build their own nest, sometimes a bulky, elaborate structure. The eggs of owls are as a rule more perfectly rounded than those of other birds.

The size of birds of prey varies greatly. The Andean Condor can reach four feet long with an impressive wingspan of ten feet. At the other extreme, some falcons and owls are no bigger than sparrows.

Many questions remain to be answered about these fascinating birds. A little of what we do know is given in the captions to the drawings that follow. These represent 42 species, about ten percent of the world's total, which includes about 275 species of hawks and their allies, and 135 of owls. In the descriptions of coloration, there is no room to convey more than a general impression; further details may be seen in the color versions of the drawings, on the inside and outside covers. The drawings are presented in taxonomic order (based on considerations of anatomy and evolution), as given in Birds of Prey of the World, by Mary Louise Grossman and John Hamlet (Bonanza Books, New York, 1964). As there is much disagreement among ornithologists regarding the precise taxonomy of hawks and owls, this arrangement must not be considered final. The forms of the birds' names follow more recent sources. Alphabetical lists of both common and scientific names of the birds depicted will be found on page 48.



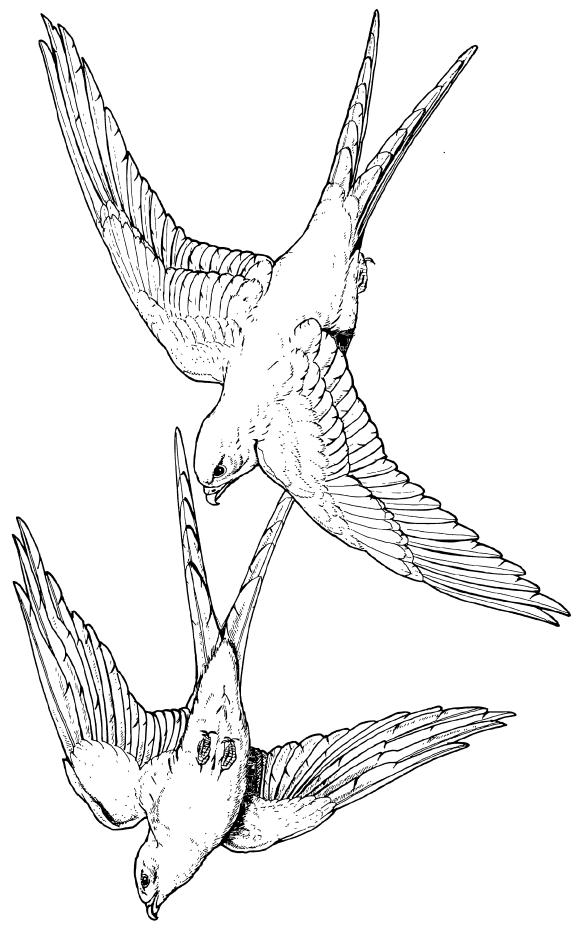
Andean Condor (Vultur gryphus). COLORATION: Black, gray, and white, with pinkish head. Males have a fleshy growth on the forehead called a carunch. This enormous vulture (four feet long) of western and southern South America may soar for hours high in the Andes Mountains on wings spread up to ten feet. It frequents open

country, including the seashore, feeding mostly on dead mammals and fish. The Andean Condor breeds only every other year, nesting on ledges or in crevices at over ten thousand feet in altitude Young birds take about six years to mature, but the total lifespan can be very long, up to 65 years in captive birds.



Turkey Vulture (Cathartes aura). COLORATION: Dark brown with red head (gray in immature birds). Popularly called "buzzard" in the United States, the Turkey Vulture, ranging from central Alberta to Tierra del Fuego, 1s the commonest and most widespread of the New World vultures (a different family from those of the Old World).

A large bird (up to about 29 inches long), it soars patiently for hours on massive, slightly uptilted wings until it spots or smells a dead animal. Soon after one bird descends to feed, all the vultures for miles around swoop in to join it.



American Swallow-tailed Kite (Elanoides forficulus). COLORATION: Black and white. Although closely related to various other hawks, the kites form a distinct subgroup of their own. The American Swallow-tailed Kite is a particularly fast, graceful flier, suddenly descending upon a small snake or lizard, or catching and devouring

insects in midair. Formerly found throughout much of the central and eastern United States, this medium-sized raptor (about 21 inches to the tip of its long, forked tail) is now restricted to the extreme southeastern United States, as well as parts of tropical Central and South America (including Mexico).



Snail Kite (Rostrhamus sociabilis). COLORATION: Males are slaty black with black-and-white tail and orange-red face. On females, the black is replaced by dark brown and there are white patches around the bill. One of the most unusual raptors, this kite is a specialist, feeding only on a certain large marsh snail, which it pries out of the shell

with its thin, specially curved bill. About 16 inches long, the Snail Kite is found widely throughout tropical and subtropical America. Loss of suitable snail-breeding habitat has severely reduced and restricted the populations of south Florida (where it was formerly called the Everglade Kite).



Red Kite (Milvus milvus). COLORATION: Streaked whitish head and brown back, black primaries (main flight feathers), and bright cinnamon tail. This large kite (24 inches long) of Europe, Asia Minor, and North Africa displays the nimble, buoyant flight of kites but also soars

like a Buteo (see pages 11-15, below). Like many kites, it shares with the vultures the habit of eating carrion. It will also eat almost anything else it can catch and kill, from frogs to chickens to mice.



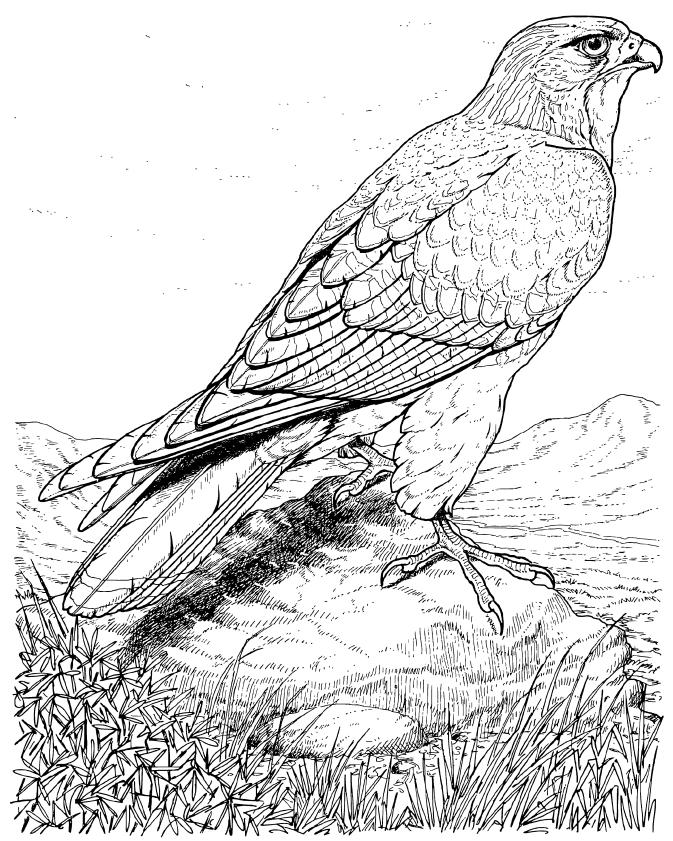
Northern Goshawk (Accipiter gentilis). COLORATION: Gray and white. This bird and the Sharp-shinned Hawk (next page) represent the Accipiters, a large group of principally forest-dwelling hawks with short, broad wings and long tails, which enable them to maneuver skillfully through dense forest in pursuit of their favorite prey, birds. The Northern Goshawk, a large, pugnacious

raptor of worldwide distribution, 20–24 inches long, also consumes many mammals, including rabbits and squirrels. The bird shown here is a trained hawk, fitted with jesses (straps of leather on its legs) and bells. Though not falcons, Goshawks have sometimes been used in the ancient sport of falconry.



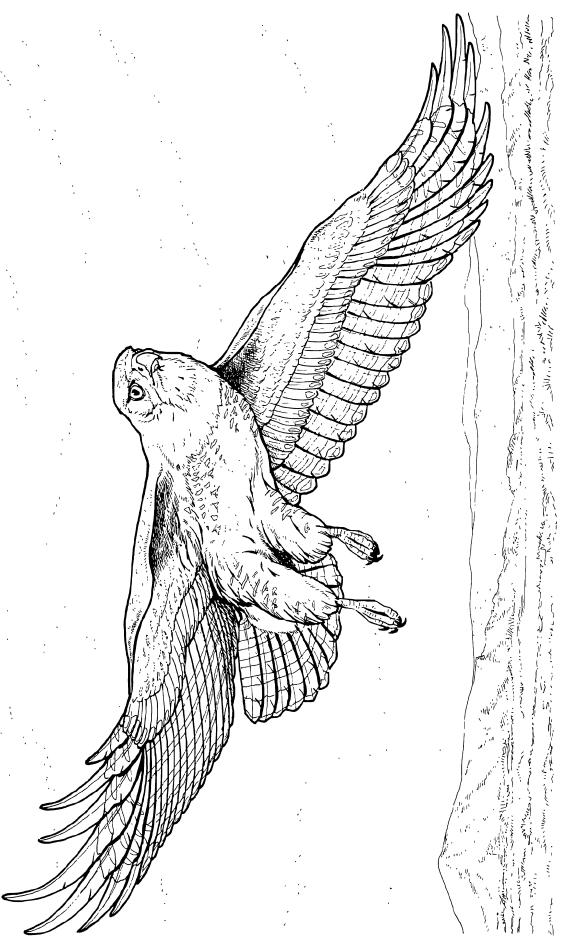
Sharp-shinned Hawk (Accipiter striatus). COLORATION: Dark slate gray, with rusty-barred underparts. Immature birds are brown, with white, brown-streaked underparts. This small American Accipiter (10–14 inches long), like its Old World counterpart the Eurasian Sparrowhawk, feeds almost exclusively on small birds, which

it chases down or approaches stealthily, seizes, and then squeezes to death with its powerful talons. As with many birds of prey, particularly bird hawks, the female Sharpshinned Hawk is considerably larger than the male. Unlike Buteos, Accipiters do not often soar, but, typically, alternately flap their wings a few times and glide.



Red-tailed Hawk (Buteo jamaicensis). COLORATION: Brown and white, with rusty tail (plumage highly variable, partly depending upon geographical race). Along with the next four species, the Red-tailed Hawk belongs to the large group called Buteos (or buzzards in England, not to be confused with the vultures, or "buzzards," of the New World). With their practice of circling high in the sky on

motionless wings, Buteos are among the hawks most commonly recognized as hawks by most people. The fairly sizable (19-22 inches long) Red-tailed Hawk is common throughout most of North and Central America, including the Caribbean. It will take almost any animal food on occasion but favors rodents, particularly mice.



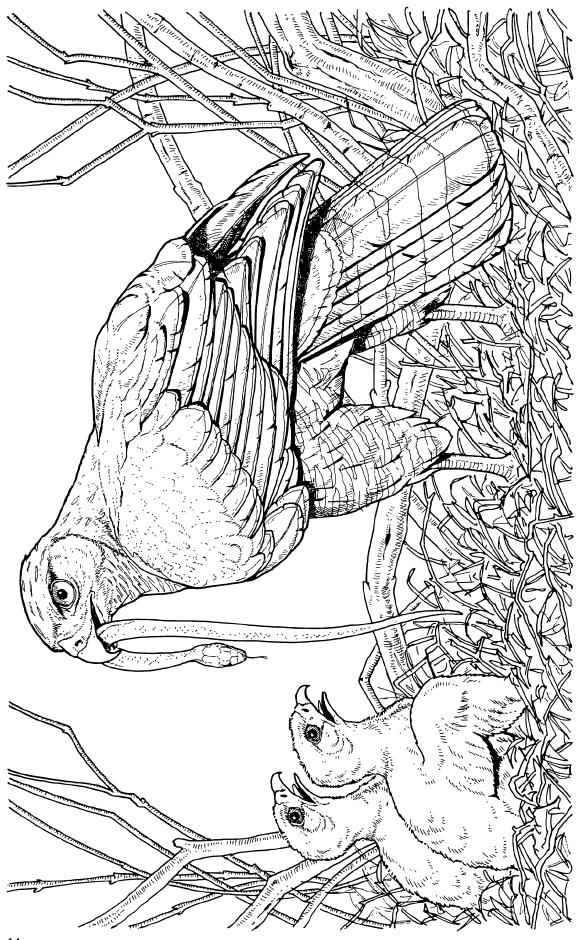
ians. Like many Buteos (the eastern American Broadwinged Hawk, for example), Swainson's Hawk is noted for its spectacular migrations; in the late summer, birds amass by the hundreds and slowly wend their way southward. Most spend the winter in Argentina.

Swainson's Hawk (Buteo stoainsoni). COLORATION: Brown and white (highly variable). This hawk is slightly smaller (17–21 inches long) than the Red-tailed Hawk and has wings somewhat slenderer. A common Buteo of open country in western North America, Swainson's Hawk feeds mostly on rodents, insects, reptiles, and amphib-



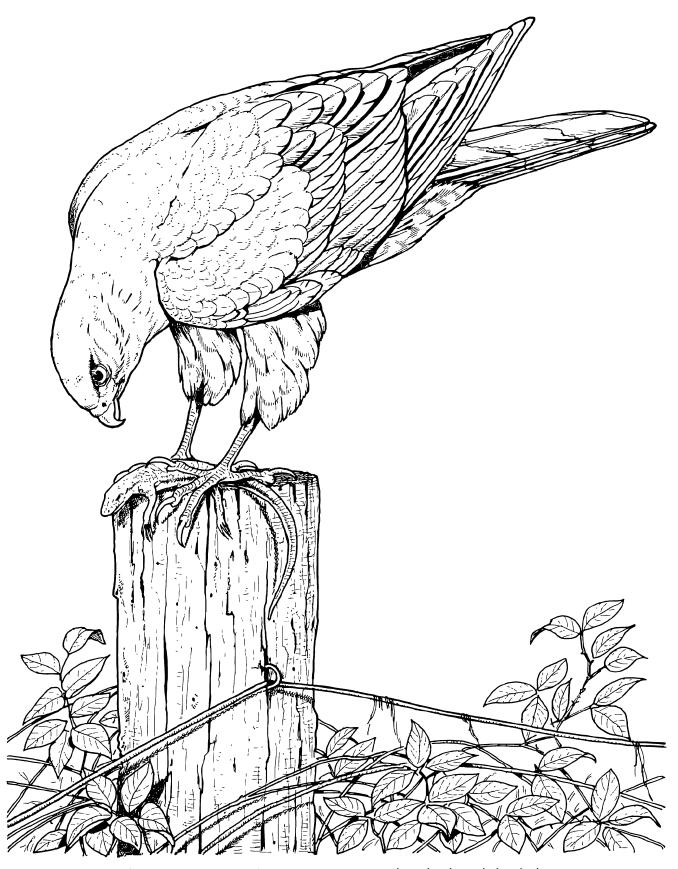
Ferruginous Hawk (Buteo regalis). COLORATION: Black, white, and rusty. The Ferruginous Hawk is a large (23-25 inches long) Buteo of the plains and prairies of the western United States and Canada. Like the similar Northern Rough-legged Hawk, the Ferruginous Hawk frequently hovers over one spot while hunting. Or it

may wait patiently on the ground for a prairie dog or ground squirrel to leave its burrow. It also preys heavily on a variety of other rodents, as well as jackrabbits, and will occasionally take reptiles, birds, and insects. Ordinarily a peaceful neighbor, the Ferruginous Hawk will attack even a Great Horned Owl if its nest is threatened.



Texas. Its flight resembles that of an Accipiter rather than a typical Buteo. It feeds largely on snakes, lizards, other reptiles, and amphibians.

and white. This medium-sized (15-17 inches long) Buteo of the American tropics and subtropics is found in the United States only in parts of Arizona, New Mexico, and Gray Hawk (Buleo nitidus). COLORATION: Gray, with black



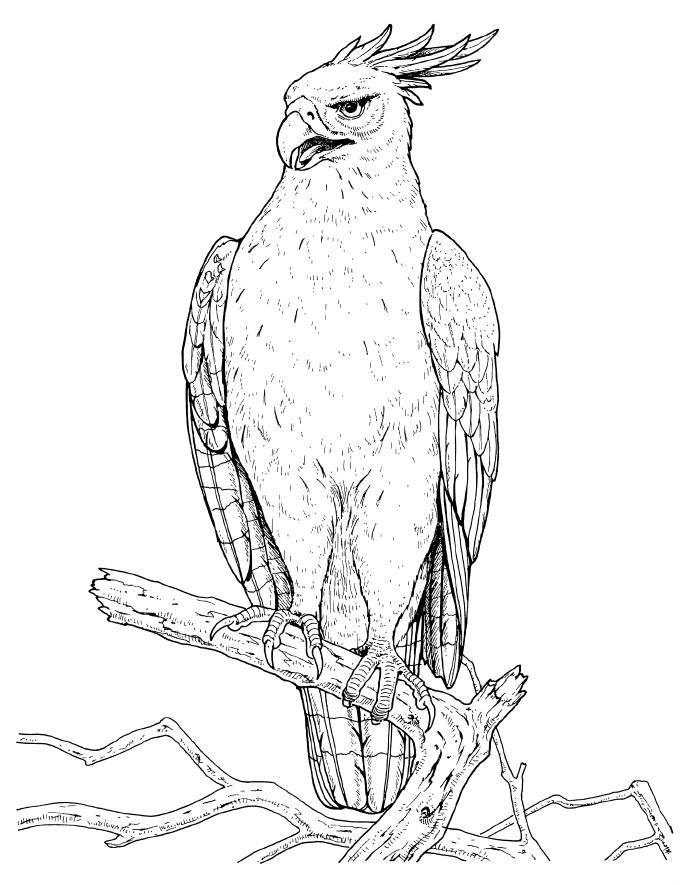
Common Black-Hawk (Buteogallus anthracinus). COLORA-TION: Black, with white on the tail. The medium-sized (18–21 inches long) Common Black-Hawk is far from common in the United States, a few breeding in southern Arizona and Texas; it is, however, common from Mexico through northern South America. Most of the year this

is a relatively sluggish hawk, but at nesting time it engages in spectacular displays of aerial prowess. Its diet is somewhat atypical for a Buteo, since it takes fish as well as lizards, frogs, insects, and, in some areas, large quantities of crabs.



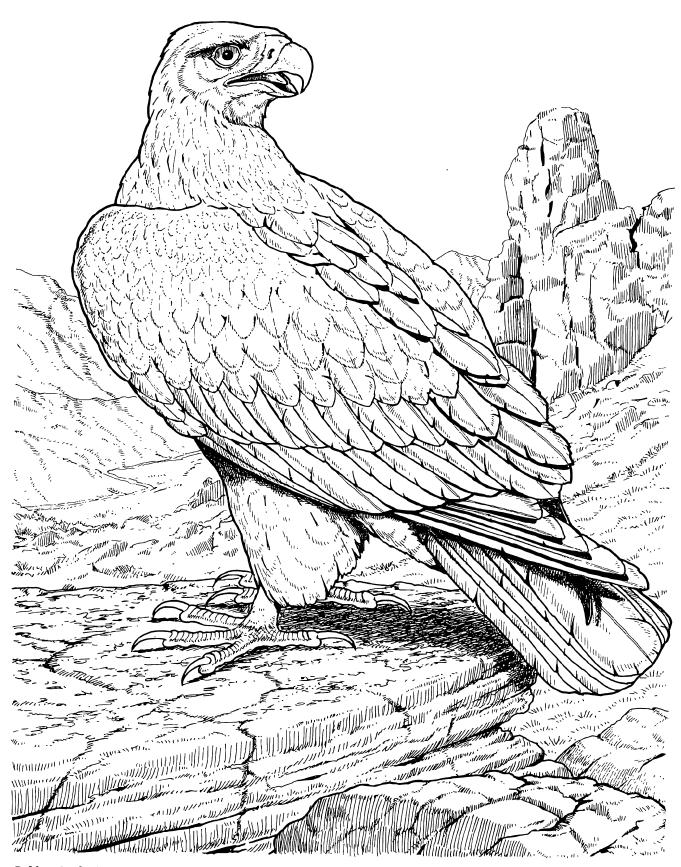
Harpy Eagle (Harpia harpyja). COLORATION: Black, gray, and white. Eagles, like most raptors, tend to fall into groups of birds with similar appearance and habits. The monstrous Harpy Eagle (over three feet long) is a rarely seen denizen of tropical American rainforests. Armed

with heavy, powerful feet, it feeds on monkeys (like the similar Philippine Monkey-eating Eagle and African Crowned Eagle), as well as sloths, other mammals, and some birds.



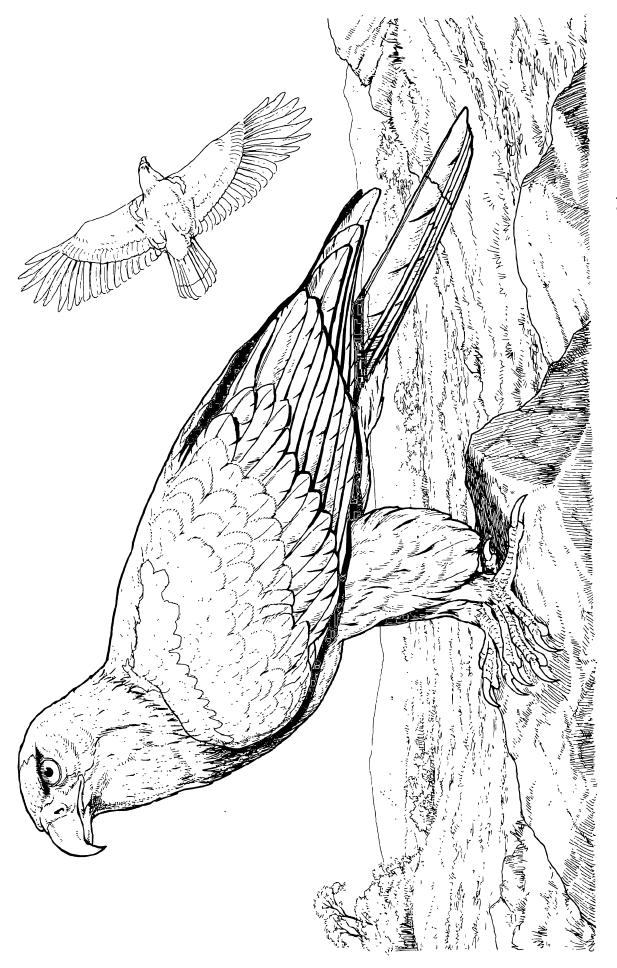
Long-crested Hawk Eagle (Lophoaetus occipitalis). COLORA-TION: Dark brown or black, with areas of white. As fierce-looking as its similarly crested relatives, the Longcrested Hawk Eagle is actually a smaller, tamer eagle,

about 19-22 inches long, of open forests and savannas of sub-Saharan Africa. It preys upon rodents and various other small vertebrates and invertebrates, sometimes picking off mice fleeing from grass fires.



Golden Eagle (Aquila chrysaetos). COLORATION: Brown, with an amber-brown tinge on the head and neck. The eagles of the genus Aquila form a distinct group, generally inhabiting remote, mountainous country. The Golden Eagle is a huge, powerful eagle, 30-40 inches long, found widely throughout the Northern Hemisphere. Generally

Golden Eagles are content to feed on small mammals, such as hares and ground squirrels, but, when faced with starvation in the far north, these birds, hunting in twos and threes, have been known to bring down full-grown deer and pronghorn antelopes. They are capable of surprisingly swift flight.



Asia and parts of Africa and southern Europe. Like many eagles, it builds an enormous nest high in an isolated tree and hunts in nearby open country, generally preying upon small mammals.

Imperial Eagle (Aquila heliaca). COLORATION: Dark, light, and medium brown, with white shoulder patches. The Imperial Eagle is a slightly smaller (up to 35 inches long) cousin of the Golden Eagle, found in western and central



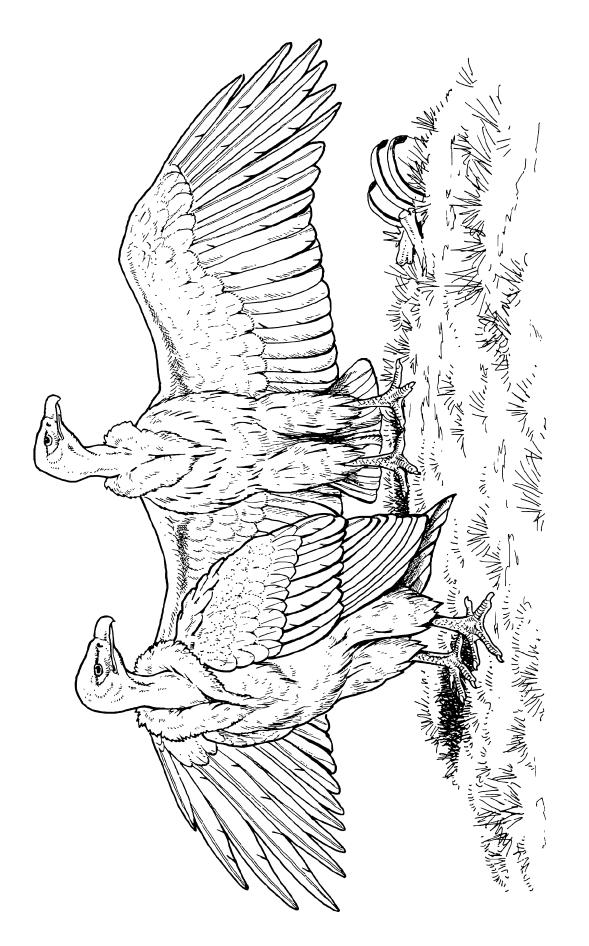
Bald Eagle (Haliaeetus leucocephalus). COLORATION: Dark brown, with white head and tail. As an official emblem of the United States, the Bald Eagle is familiar to many who have never seen the live bird. The only eagle restricted to North America, it is, however, closely related to a number of other similar fishing eagles (of the group "sea

eagles"). An opportunist, the Bald Eagle will steal fish from Ospreys, pick up dead fish from the shore, or catch its own fish or, sometimes, ducks or small mammals. The distinctive white head and tail do not appear until the bird is about four years old. (Size: 31–37 inches long.)



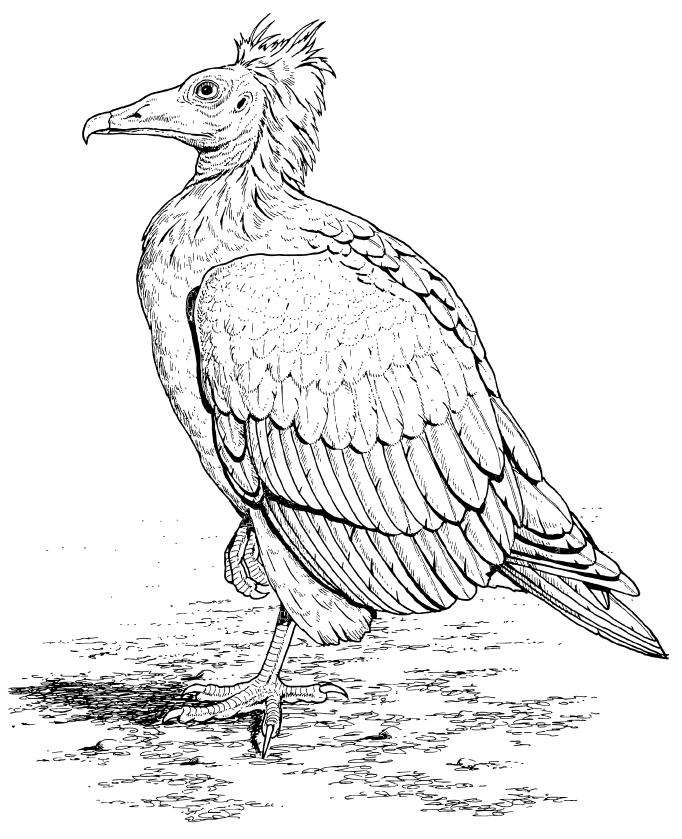
White-tailed Eagle (Haliaeetus albicilla). COLORATION: Brown, with white tail. The White-tailed Eagle is the Eurasian counterpart of the Bald Eagle: it is almost the same size (26-35 inches long), is found in similar habitat, and eats the same kind of food. Both birds also build the

same kind of nest, a massive stick nest, usually high in a tree or on a cliff, to which the birds return year after year. This sea eagle is also found in parts of Greenland and Iceland.



Griffon Vulture (*Gyps fulvus*). COLORATION: Olive, tan, brown, and black body, with white head and ruff. Not closely related to the New World (Cathartid) vultures, the Old World (Accipitrine) vultures are, rather, close kin to the more typical hawks and eagles. The Griffon Vulture (over 40 inches long) is found in parts of

southern Europe, Asia, and Africa. Where many species of vultures coexist, they usually specialize in different parts of an animal carcass. When a more powerful vulture has ripped open an animal's hide, the Griffon Vultures, with their grotesquely long necks, can come in to feed on the inner organs.



Egyptian Vulture (Neophron percnopterus). COLORATION: Mostly white, with brown and black; yellow face patch. The relatively small Egyptian Vulture (22–25 inches long) is found in most of Africa, except rain forests, and in southern Europe and Southeast Asia. It is at the bottom of the vulturine feeding chain, joining crows and other small scavengers in eating scraps left by the larger

carrion-feeding birds. An undiscriminating feeder, the Egyptian Vulture will search garbage heaps for anything digestible, may take live mice and crabs, and has even been known to feed on dates.

(Note: Birds of the order Falconiformes continue on page 26.)