Kestrels of the World A Coloring Book



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HAWK MOUNTAIN

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What are Kestrels?

Kestrels are small to medium-sized **falcons** that occur on every continent except Antarctica. They differ from other falcons in having shorter wings in comparison to their tails and shorter toes than those of other falcons. There are 13 species of kestrels. The two smaller kestrel-sized falcons, the Red-footed Falcon and the Amur Falcon, included in this coloring book, have relatively longer wings than kestrels, but are closely related to them.

Kestrels prefer to hunt in open habitats including fields and grasslands where they prey on insects, small mammals, and lizards. Many kestrels hover while hunting. Kestrels **cache** their prey in hidden spots and retrieve and eat them later.

Kestrels do not build their own nests. Most nest in sheltered **cavities** where they are protected from predators. Nest cavities may be in dead trees, on the sides of cliffs, or in buildings. Because many populations of kestrels lack suitable nesting sites, conservationists often build nest boxes for kestrels.

Like many other birds of prey, female kestrels often are larger than males. In many species, males and females differ in **plumage**. The difference in appearance between males and females is known as **dimorphism**. Some individuals of the same species also show variation in plumage, from dark to light. These light and dark forms are known as **color morphs**.

Although they are birds of prey, kestrels are sometimes preyed upon by larger raptors and snakes. Their biggest threats, however, are caused by humans, and include both habitat loss and the misuse of pesticides.

Do Kestrels Migrate?

Migration is the seasonal movement of a species because of changes in temperature, daylength, or food availability.

Some kestrels migrate but others are **non-migratory** and stay in the same location year-round.

Complete and **partially migratory** kestrels include the American Kestrel, the Common Kestrel, and the Lesser Kestrel. The Red-footed Falcon and the Amur Falcon are kestrelsized falcons that also migrate. All of these species except for the American Kestrel, are widely distributed throughout the **Old World**. The American Kestrel occurs in the **New World**.

The remaining 10 species of kestrels are non-migratory. They include the Grey Kestrel, the Dickinson's Kestrel, the Fox Kestrel, and the Greater Kestrel all of which live in Africa. The Banded Kestrel, the Malagasy Kestrel, the Mauritius Kestrel, and the Seychelles Kestrel are **endemic** to Madagascar or islands in the Indian Ocean. The Spotted Kestrel lives on the islands of the South Pacific. The Nankeen Kestrel is widely distributed in Australia and several of its offshore islands.

Books about Kestrels

Cade, T.J. (1982). Falcons of the World. Cornell University Press, Ithaca, New York.

del Hoyo, J., A. Elliot, and J. Sargatal, eds. (1994). Handbook of the birds of the world (Volume 2). New World Vultures to Guineafowl. Lynx Ediciones, Barcelona.

Ferguson-Lees, J. and D.A. Christie. (2005). *Raptors of the World*. Princeton University Press, Princeton and Oxford.

Village, A. (1990). The Kestrel. T. & A. D. Poyser, London.

Websites with information about Kestrels

At the Peregrine Fund website <u>www.peregrinefund.org</u>, click on the "Global Raptor Information Network" link to learn more about the biology of kestrels.

At the Bird Life International website <u>www.birdlife.org</u>, click on the "Data Zone" link for information about the conservation status of kestrels.

To learn more about kestrels and the Migrating Kestrel Project, visit <u>www.kestreling.com</u>.

Conservation Status Guide

The International Union for Conservation of Nature (IUCN) uses knowledge about the range, population size and trend, life history, and the current threats facing a species, to determine its conservation or risk status.

Least Concern: lowest-risk status

Near-Threatened: likely to become endangered in the near future if environmental conditions do not change

Vulnerable: high risk of endangerment

Endangered: high risk of extinction in the wild

Critically Endangered: extremely high risk of extinction in the wild

Extinct in the Wild: surviving only in captivity

Extinct: no living individuals remaining

For more information about the IUCN and threatened species, visit the IUCN Red List website, <u>www.iucnredlist.org</u>.



Common Kestrel

Falco tinnunculus

My Appearance: I am a large kestrel in which males and females differ in **plumage**. Males have a grey head, upper tail **coverts**, and tail. Females have a mostly brown head and back, and a brown tail with black bars. The wings of females are barred. Those of males are spotted. Both males and females have a **moustache** and pale **rufous** underparts with dark spots. The underparts of females are darker and more heavily streaked than those of males. Both male and female Common Kestrels have yellow legs, a yellow **cere**, and a black bill.

My Range: I am common throughout much of Europe, Asia, the Middle East, and parts of Africa.

My Diet: I hunt small mammals, insects, lizards, earthworms, and other birds, which I catch while perched or in flight.

My Migration Behavior: I am a **partial migrant**. In autumn, I migrate south from Western Europe to Spain; in Eastern Europe south through Italy; and in Asia south through the Middle East as far as Africa.

My Fun Fact: I am the most numerous and widespread of all kestrels.

My Conservation Status: Although some of my populations have declined recently I am considered to be a species of **Least Concern**.





My Appearance: I am a medium-sized entirely grey kestrel with a pale throat and dark streaks on my head and neck. My primary flight feathers are blackish. I have a grey tail that is lightly barred with paler grey. My cere, eye-ring, and legs are bright yellow.

My Range: I am an African species that is common in West African savannahs. I also occur in western Ethiopia, western Kenya, and western Tanzania, and from Angola and the Democratic Republic of Congo south to northern Namibia.

My Diet: I eat lizards, worms, rodents, birds, amphibians, bats, and, occasionally, the fruit of oil palm trees.

My Migration Behavior: I am largely non-migratory.

My Fun Fact: I form a permanent pair bond with my mate.

My Conservation Status: I am a species of Least Concern that often occurs in human-dominated lanscapes. In some instances I have benefited from human land use. Because I am uncommon throughout most of my range, I am susceptible to local declines.



Banded Kestrel

Falco zoniventris

My Appearance: I am a large kestrel with a grey head. My neck is streaked with black, and my back and wings are blue-grey with black bars. My tail is blackish with grey-white bars on the outermost feathers. My underparts are white with grayish-brown bars. My throat is white with brown streaks. My **eye-ring**, legs, and **cere** are yellow. My bill is black.

My Range: I am found only on the island of Madagascar where I occur in rainforest edges, forest clearings, secondary forests, and dry woodland. I am considered rare throughout most of my relatively small range.

My Diet: I feed on lizards, insects, and small birds. Chameleons, which I catch both on the ground and in trees, are one of my favorite prey items.

My Migration Behavior: I am largely **non-migratory**, but I do vacate the wetter eastern region of my range during the rainy season.

My Fun Fact: I am relatively inconspicuous. It took scientists many years to find and describe my nest sites, which I build in the center of **epiphytes**.

My Conservation Status: I am a species of **Least Concern**. The major threat to my existence is the rapid loss of Madagascar's forests.



Dickinson's Kestrel

Falco dickinsoni

My Appearance: I am a medium-sized kestrel. My head and neck are pale grey, tinged with brown and thinly streaked with black. My back and wings are blackish-grey. My tail is dark grey with white bands. I have a pale-grey throat and underparts. My **eye-ring**, legs, and **cere** are yellow. Unlike many kestrels, I have no facial **moustache**.

My Range: I am an equatorial species that lives in marshy African savannahs.

My Diet: I eat mainly insects, but I also feed on lizards, birds, small mammals, bats, amphibians, and crabs.

My Migration Behavior: I am non-migratory.

My Fun Fact: My eyes, which are proportionally larger than those of many other falcons, allow me to hunt at twilight.

My Conservation Status: I am a species of **Least Concern**, but I am not common anywhere in my range.



Nankeen Kestrel

Falco cenchroides

My Appearance: I am a large kestrel in which males and females differ in **plumage**. Both males and females have black **moustaches**, **rufous**-brown wings with black **primary flight feathers**, and whitish underparts with black streaks on their breast. Males have a pale-grey head, neck, and tail. Females have a rufous-brown head and a rufous tail that is finely barred with a heavy black band at the tip. Overall, females are darker and more heavily streaked than males. My cere, legs, and eye-ring are yellow.

My Range: I am common throughout Australia. I also occur in Indonesia, New Caledonia, Norfolk Island, Christmas Island, and the highlands of New Guinea.

My Diet: I eat mainly insects, including grasshoppers, beetles, ants, and spiders. I also eat mice and other birds.

My Migration Behavior: I am largely **non-migratory**. Populations nesting in the southern temperate latitudes of Australia are **partial migrants** because of seasonal changes in food abundance there.

My Fun Fact: I usually nest in tree cavities, on cliffs, or in abandoned nests of other birds. I also nest in the broken tops of tall anthills.

My Conservation Status: I am a species of **Least Concern**, whose numbers appear to be increasing.





My Appearance: I am a large, **rufous** kestrel. My head, wings, and back are streaked with black, my **primary flight feathers** are black, and my tail has faint black bars. My underparts are pale rufous, my legs are yellow, and my bill is black.

My Range: I live in semi-deserts, savannahs, grasslands, and mountains in the **Sahel** of Africa.

My Diet: I feed on insects, small mammals, lizards, and small ground-birds. I also search for flying insects at the edges of grassland fires.

My Migration Behavior: I am a **partial migrant**. In north central Africa sedentary individuals sometimes move between wet and dry areas.

My Fun Fact: I sometimes breed in loose **colonies** of up to 20 pairs, and I often return to the same nest site in multiple years.

My Conservation Status: I am a species of **Least Concern**, but am uncommon throughout my large range.



Mauritius Kestrel

Falco punctatus

My Appearance: I am a medium-sized kestrel with relatively short, pointed wings. My head is **rufous**-brown with black streaks. My back, tail, and wings are rufous-brown with black bars. My underparts are whitish with black spots. My bill is black, and my legs and feet are white.

My Range: I live in mountainous forests on the island of Mauritius in the Indian Ocean. I nest in hollow of trees or in holes on the faces of cliffs and volcanic rocks.

My Diet: I eat lizards, insects, small birds, and small mammals, which I usually catch below the forest canopy.

My Migration Behavior: I am a non-migratory island raptor.

My Fun Fact: I am one of the rarest birds in the world. My numbers dwindled to 4 birds in the wild in 1974. My population was estimated at between 800 and 1,000 individuals in 2005.

My Conservation Status: I am a **Vulnerable** species. I was once **Endangered**, but my population has increased due to captive breeding and improved conditions in the wild.



Spotted Kestrel

Falco moluccensis

My Appearance: I am a medium-sized kestrel in which males and females differ in **plumage**. My back, head, and wings are dark brown, and my underparts are light brown. Males have a grey tail with a black band near the tip. Females have a grey tail with 8-10 black bands. Females have more black streaks on the sides of their face and neck than do males. Females also have more bars of black on their back and more black spots on their underparts than do males. My bill and my faint **moustache** are black. My **cere**, **eye-ring**, and legs are yellow.

My Range: I live on Pacific Islands from Java and Bali east through the Lesser Sundas to Timor, and north to Celebes and the Moluccas. I live in forest edges and grasslands with scattered trees, including human-dominated landscapes.

My Diet: I feed on small mammals, birds, lizards, and insects.

My Migration Behavior: I am a non-migratory island raptor.

My Fun Fact: I am one of only a few species of falcons that occupy equatorial islands.

My Conservation Status: I am a species of **Least Concern**, whose numbers appear to be increasing.



American Kestrel

Falco sparverius

My Appearance: I am a small kestrel in which males and females differ in **plumage**. Males have blue-grey wings, and females have **rufous**-brown wings. Males have a single black band across the tip of their rufous tail. Females have a series of dark brown bands across their rufous tail. My back is rufous, my underparts are whitish, and my head is blue-gray. Both males and females have white cheeks with a black **moustache** and two black eyespots on the back of the neck. I have a yellow **cere**, yellow legs, and a black bill.

My Range: I am the only kestrel in the **New World**, and I occur throughout most of North, Central, and South America. I live in open habitats, including farmlands, deserts, marshes, grasslands, and the borders of woodlands. I often perch on power lines along roadways.

My Diet: I eat insects, small rodents, small birds, reptiles, fishes, and amphibians.

My Migration Behavior: I am a **partial migrant**. American Kestrels in the **Temperate Zone** are more likely to migrate than are tropical individuals.

My Fun Fact: I have two black spots on the back of my head, that may act as fake eyes to frighten predators.

My Conservation Status: I am a species of **Least Concern**, with a large population and extremely large range.



Lesser Kestrel

Falco naumanni

My Appearance: I am a small kestrel in which males and females differ in **plumage**. Males have a blue-grey head and tail, a pale **rufous** chest, and rufous backs and wings. Males have a whitish throat. Females have more spots on their chest and their chest is paler than that of males. Females have a brown head, and their back, wings, and tail are rufous-brown and heavily barred. Both males and females have yellow legs, a yellow **cere**, a black bill, and dark brown wingtips.

My Range: I breed in Asia, Europe, and North Africa, and I winter in Africa south of the Sahara.

My Diet: I mainly eat insects. I also eat small birds, lizards, and rodents.

My Migration Behavior: I am a **complete migrant**. I am social on migration and travel in large flocks.

My Fun Fact: I take most of my prey in flight.

My Conservation Status: I am a **Vulnerable** species whose numbers have declined since the 1950s. I have been **extirpated** in Austria, the Czech Republic, Slovakia, and Slovenia. I am threatened by habitat loss in Europe and Africa, and by pesticides, that kill my insect prey.



Seychelles Kestrel Falco araea

My Appearance: I am a small, island-dwelling kestrel. My throat and underparts are pale rufous and unspotted. My back is dark brown streaked with black. My head and tail are grey. My tail is tipped with white and has three or four broad, black bands. I have a faint black moustache. My cere, eye-ring, and legs are yellow. My bill is black.

My Range: I live on the Seychelles, a small group of islands 1800 kilometers northeast of Madagascar in the Indian Ocean.

My Diet: I eat lizards, particularly skinks and geckos, which I find on trees in dense forests.

My Migration Behavior: I am a non-migratory island raptor.

My Fun Fact: Local people refer to me as "manzeur des poules," which means chicken eater. This name is incorrect, as I am much too small to catch chickens.

My Conservation Status: I am considered Vulnerable. I have a very small decreasing population due to introduced predators and introduced competitors for nesting sites. I also am threatened by logging and pesticide use. Conservationists have installed nest boxes to help protect us while nesting.





My Appearance: I am a small island-dwelling kestrel. My underparts are whitish with black bars. My back and wings are brown with black spots. My head is **rufous**-grey, my **moustache** is pale grey, and my tail is grey with narrow black bands and a white tip. I have a black bill. My legs and **cere** are yellow.

My Range: I live in human-dominated landscapes and in open grasslands and agricultural fields on Madagascar and nearby islands in the Indian Ocean.

My Diet: I eat insects that I catch in the air. I also eat birds, small mammals, reptiles, and frogs.

My Migration Behavior: I am non-migratory island raptor.

My Fun Fact: I am the most common bird of prey in Madagascar, as well as the smallest.

My Conservation Status: I am a species of Least Concern. I have a relatively large range, and my population is increasing.



Greater Kestrel

Falco rupicoloides

My Appearance: I am the largest kestrel. My head and neck are pale **rufous** with black streaks, and my back and wings are a darker rufous with black spots. My tail is grey with black bars and a white tip. My underparts are pale rufous with dark brown streaks. My legs and **cere** are yellow, and my bill is black.

My Range: I occur in the Great Rift Valley of East Africa and southern Africa.

My Diet: I feed on insects, but I also eat small mammals, birds, and reptiles.

My Migration Behavior: I am non-migratory.

My Fun Fact: I am the only kestrel with a white **iris**. Unlike most kestrels, I do not hover while hunting.

My Conservation Status: I am a species of **Least Concern**. My population is large, and in some circumstances I do well in human-dominated landscapes.





Falco amurensis

My Appearance: I am a small kestrel-like **falcon** in which males and females differ in **plumage**. Males are mostly dark grey with white under-wing linings, a dark grey belly, and a black tail. Females have a white throat, a black **moustache**, a dark grey back with black spots, and white underparts with black spots. Both males and females have a **rufous vent**, and an orange **cere** and legs.

My Range: I breed in Amurland in northeastern China and southeastern Russia, and in eastern Mongolia. I winter in southern Africa.

My Diet: I eat insects, including swarming termites and grasshoppers. I also hunt small mammals, birds, amphibians, and reptiles.

My Migration Behavior: I am a **complete migrant**. My migratory movements cover 70° of latitude and 70° of longitude, and are considered to be the most extraordinary of all raptors. I fly through Burma, Assam, and India, and then across the Indian Ocean from India to East Africa.

My Fun Fact: My white under-wing linings are thought to be used in communication among individuals.

My Conservation Status: I am a species of **Least Concern**. I am threatened by the destruction of my roosts and by collisions with cars and trucks. Agriculture and pesticide use also are threats because they reduce the availability of my insect prey.



Red-footed Falcon

Falco vespertinus

My Appearance: I am a medium-sized, kestrel-like **falcon** in which males and females differ in **plumage**. Males are dark grey with paler grey underparts. Females have a bluish-grey back, wings, and tail. Females have black spots on their back and tail, and black stripes on their wings and tail. The head and underparts of females are orangish. Females have a black **moustache** and a white throat and cheeks. The **eye-ring**, **vent**, legs, and toes of both males and females are red-orange.

My Range: I breed in Asia north of China and Turkey, and in Eastern Europe. I winter in southern Africa.

My Diet: I eat insects as well as small rodents, small birds, reptiles, and amphibians.

My Migration Behavior: I am a **complete migrant**. I often migrate in flocks to southern Africa, where I spend the winter. To get there, I fly through the Middle East. I also cross the Mediterranean at the ends of the Greek and Italian peninsulas. During spring migration, I sometimes travel through West Africa and cross the Mediterranean between Morocco and Spain.

My Fun Fact: I am a colonial breeder that breeds in trees in human-dominated landscapes.

My Conservation Status: I am considered **Near Threatened**. Some of my populations are declining because of habitat loss and the lack of suitable nesting sites, and some have been affected by pesticide poisoning.


How to Build a Nestbox for American Kestrels

Instructions:

- Use 10"-wide untreated pine or cedar. Do not paint or treat with a wood preservative.
- Use 1 5/8" galvanized deck screws.
- You can use the cutout from the entrance hole to make a perch inside the box 3" below the hole.
- Place 2 two-penny nails at the top and bottom of the back of the box to attach the box to a suitable pole, tree, or building.
- Place the box on an isolated tree in open habitat such as grasslands, orchards, fields, or farmland, with the nest entrance clear of foliage and facing away from any nearby road. The box should be about 12-20 feet from the ground.
- Each year before nesting season the box should be cleaned of material inside and 2" of coarse woodchips (not sawdust) should be placed in the bottom of the box.





Glossary

Cache: to hide or store food.

Cavity: a hollow area in the trunk or a large branch of a tree, and in holes in cliffs and buildings.

Cere: a leathery band of skin across the base of the upper bill.

Colony: a group of birds nesting or roosting together at one site.

- **Color Morph**: one of several distinct forms of a species having differently colored plumages.
- **Complete migrant**: a species in which at least 90% of all individuals move seasonally between their breeding and non-breeding sites. (See also **Non-migrant**, **Partial migrant**.)
- **Coverts**: the feathers that overlay the flight and tail feathers. Coverts provide insulation and a streamlined body shape.
- **Dimorphism**: when males and females of the same species are different in size, plumage color, or both.

Endemic: a species found only in a particular region.

Epiphyte: a plant growing on another plant.

Extirpated: when a species no longer occurs in a portion of its range.

Eye-ring: a circle of bare skin or contrasting plumage around the eye.

- **Falcon**: a genus of raptors characterized by tapered wings that allow them to fly at high speeds and to change directions rapidly.
- **Great Rift Valley**: a great depression extending from the Jordan Valley in the Middle to Mozambique in southeastern Africa.

Iris: the colored part of the eye surrounding the pupil.

Moustache: a prominent, dark facial mark below the eye and down the cheek.

New World: the Western Hemisphere, including North, Central, and South America. (See also Old World.) Non-migrant: a species that is sedentary, and does not move seasonally. (See also Complete migrant, Partial migrant.)

Old World: the Eastern Hemisphere, including Europe, Africa, and Asia. (See also New World.)

Owl: a bird of prey that is active at night. (See also Raptor.)

Plumage: the feathers that cover a bird.

Partial migrant: a species in which fewer than 90% of all individuals migrate. (See also **Complete migrant**, **Non-migrant**.)

Primary feathers: the flight feathers of the outer wing; the longest and narrowest feathers of the wing. (Secondary feathers are the feathers of the inner wing.)

Raptor: a bird of prey that is active during the day, including vultures, eagles, the osprey, hawks, and falcons. (See also **Owl**.)

Reforestation: the conversion of open land into forest.

Rufous: a reddish brown or rust color.

Sahel: a biogeographic zone of Africa between the drier Sahara Desert to the north and wetter savannas to the south.

Temperate Zone: the intermediate latitudes between the tropics and the polar regions.

Tropics: a global biogeographic zone directly north and south of the equator.

Urbanization: the growth and expansion of cities.

Vent: the posterior opening of the bird between the lower belly and the base of the tail.











Kestrel Checklist

Species	Where seen	When seen
Common Kestrel		
Grey Kestrel		
Banded Kestrel		
Dickinson's Kestrel		
Nankeen Kestrel		
Fox Kestrel		
Mauritius Kestrel		
Spotted Kestrel		
American Kestrel		
Lesser Kestrel		
Seychelles Kestrel		
Malagasy Kestrel		
Greater Kestrel		
Amur Falcon		
Red-footed Falcon		

