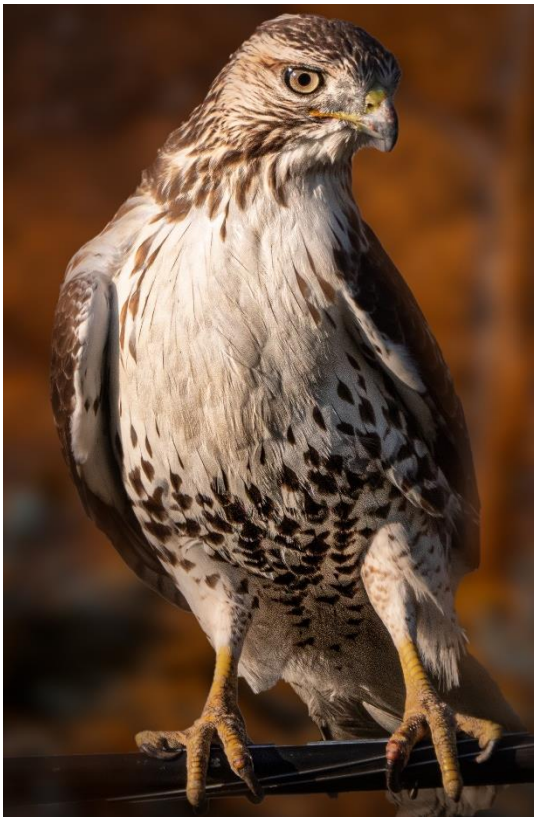
Red-tailed Hawk *(Buteo jamaicensis)*

17-26 inches long. Weighs 2-2.5 pounds. Wingspan is 4-4.5 feet.
Look at the pictures here and in your field guide. Check your field guide's range maps.

Note: Regionally, this bird can greatly vary in appearance and there are numerous subspecies (see box on p. 4). What I am describing here is the most common appearance of this hawk, but this may not apply to the bird you are identifying – for example, this hawk in Arkansas is much darker. Take into account where you are, check field guides, and ask local birders and at wildlife refuges.



Red-tailed Hawk. ***Photo by Virginia Kickle.***

What to look for: The red tail - which is easiest to see when the bird is flying or soaring and it banks/tilts to turn. This is a large bird that overall, looks brown, but has a white upper breast with a speckled/splotched brown band across its tummy – directly below the white breast.

Where to look: Soaring in the sky, perched in a large tree – generally from middle to top and towards the outside edge, or perched on top of utility or light poles. In fall and winter, look for them in trees and on poles along interstates. Often found in drier open woodlands - especially their edges.

Except for size (females are bigger), male and female look alike.

Under-side when soaring: A lot of white with smaller areas of dark. Impression is quite pale.

Breast, tummy, and under-tail coverts: The breast is white. Across the tummy is a band of vertical reddish-brown spots, splotches or ragged stripes. The under-tail coverts* are white.

Face and head: Shades of brown. Flecked and mottled with white.

Beak: Hooked. Dark tip.

Back and folded wings: Mottled shades of brown, rust, darks, with bits of white. Sometimes – not always – has a white splotchy 'V' on its back.

Tail: Red or reddish-brown. Can be banded with a darker brown but that can be hard to see.

Population: Increasing.

The red tail is easiest to see when the bird is flying or soaring, the tail is fanned, and the bird banks to make a turn. ***Photo by Vijayalakshmi Nidugondi on Unsplash.***

** For photos and a definition of undertail-coverts, download from my website The American Robin. It is a free download.*

The Red-tailed Hawk is most often seen perched in the outside edge of a tree; sitting on top of a fence post at the edge of a field, pasture or grassy area; sitting on top of a utility or light pole; or soaring high on a thermal. If you see a hawk perched in large trees along interstates – easiest to see when the leaves are off the trees – it will often be a Red-tailed Hawk.

The Red-tailed Hawk is the best-known and most widely distributed hawk in North America. One of the reasons for its wide distribution is it has a wider tolerance of habitats and conditions than any other North American hawk. They can be found at almost any elevation and can live almost anywhere except large areas of unbroken desert, forest, or tundra.

The adult is a stocky, broad-chested bird and when in flight or soaring, the wings are more rounded than the wings of vultures and eagles. Besides the red tail, one of the definitive markings for identification is the white breast and the streaky/spotted reddish-brown band across the tummy (just below that white breast). The under-tail coverts are white, but can be flecked with a bit of brown. Take a good look at the breast and tummy of this hawk here and in your field guide and compare it to the breasts and tummies of the other hawks in your field guide. The Red-tailed Hawk is the only one to have the white circular area on the breast and the speckled band across the tummy.

Eyesight

Eyes are the dominant sense organ in raptors and people, and both have binocular vision. This means that to see, the two eyes are used together in synchronization to produce a single image. And this is what allows raptors and us to see things in depth – this is called depth perception. We see things in 3-dimension (3D). This type of vision is necessary for predators because it is what allows for the instant estimate of the constantly changing distances of moving prey. And it is very good for us – for example, binocular vision is what enables us to drive cars. Binocular eyes tend to be more toward the front of the head and closer together so the field visions of both eyes overlap. This position of the eyes is quite pronounced in owls – and of course in us – just look in the mirror!

The eyes of raptors have the ability to make detailed discriminations. For example, a Red-tailed Hawk can see a vole at a distance 2-3 times farther away than we can. We can see as far, but where the hawk can actually see small, individual objects, we will see a blending of undetailed color - only large objects are distinguishable. The hawk will see all the detail.

The other type of common vision is monocular. Three animals that have monocular vision are horses, rabbits, and goldfish. Look at the placement of the eyes. Compared to raptors and us - horses, rabbits, and goldfish have eyes on either side of their heads. They do not have a common field of vision between the eyes as raptors and people do. Many animals that are prey have monocular vision.

Binocular vision allows a predator to see depth and distance. Monocular vision allows an animal to see all the way around its body. Animals with monocular vision process two different pictures at the same time. Those with binocular vision process one. A rabbit can actually see a fox that is on one side of him and me holding a carrot standing on the other side of him – both at the same time. With binocular vision, there is peripheral vision – hold your arms out from your sides and you can most likely see your fingers. Move your arms back a bit and you cannot see them. A rabbit would continue to see fingers (or its paws!) all the way around its body. *(continued next page)*

When soaring, the Red-tailed has pale/white undersides of the wings with some narrow, dark edging/border on the outside edges. There are some small areas of shading and mottling of browns and grays. The breast, lower tummy, and under-tail coverts are also white/pale. The speckled brown band across the tummy is difficult to see if the bird is soaring or flying. The overall impression of the entire underside of this hawk is white/pale. Although this pattern is somewhat similar to a few other hawks, it is quite different from that of the Bald Eagle, Turkey Vulture, or Black Vulture.

When Red-tailed Hawks are not perching, resting, or looking for a meal, these birds are soaring with outstretched wings and fanned tail. They ride the thermals very well. No wobbling. Regardless of what this hawk is doing, it always looks strong and graceful. When going from one place to another, it is with purpose – and most often in a straight line. They fly with powerful wing-beats.

Almost all other birds - other than raptors - have monocular vision. It has been theorized that when you see a robin cocking its head, it is making this motion probably not to adjust its hearing as was commonly thought, but using its monocular vision – its two separate visual pictures – to locate its prey - which is often a worm. You can read more about this on my website in the eGuide that is a free download: The American Robin.

Raptors have relatively large eyes. For example, the human eye weighs less than 1% of the weight of the head. A hawk's eye accounts for about 15% of the weight of the head. And in a Red-tailed Hawk, each eye functions somewhat like a telescope. The highly curved cornea admits plenty of light.

The eyes of raptors and humans contain rods and cones. In simple terms, cones are the receptors used to produce a detailed image during daylight. Rods are used at night for the same reason. Hawks are active in daylight and inactive at night and so they have many cones and few rods. Their daytime vision is at the expense of their nighttime vision. We also have more cones than rods but the balance is closer. And raptors have many more vision cells in their eyes than we humans. We have about 200,000 cells involved in our vision. Hawks have about 1,000,000. No wonder they can see that vole!

Another identifying characteristic for the Red-tailed Hawk is its call (I always think of it as a scream.). You can listen to this online and as Cleon's cousin and expert birder Rick Radis pointed out to me, this 'scream' has been used in countless movies as the classic 'wild sound'. You may be surprised to find you recognize it immediately! Both males and females have the same call and you can hear it overhead in spring. Mated and courting pairs call to each other.

In this photo of Virginia's you can see how short the tail of this Red-tailed Hawk is in proportion to the rest of its body. And you can also appreciate the rather long legs plus the good-sized feet and talons. This is an impressive, powerful predator. ***Photo by Virginia Kickle.***

In spring, look for - and spend time observing - soaring Red-tailed Hawks. Their courtship rituals in the sky are spectacular. Binoculars are not always needed, but they help you see the details of their moving wings and wing feathers as they roll, tumble, and cavort in the air. So graceful. They make it look so easy. Mid-morning is a good time to observe soaring hawks as by that time, thermals are well-established.

The Red-tailed Hawk is a species that has many subspecies and as a result, has great regional variations in color of plumage. Most of the morphs and plumage variations occur west of the Mississippi. The Red-taileds east of the Mississippi will generally look like the main picture in your field guide and the photos here in this Guide. But if you bird west of the Mississippi, keep the color variations in mind.

I was surprised when birding in Arkansas with friends who live there. I asked them to identify the dark hawks we were seeing that were perched in trees and they told me these birds were Red-tailed Hawks. I questioned them on this as in my experience east of the Mississippi, this just could not be. But they were right – good, local birders are almost always right! These Arkansas Red-tailed Hawks were the same size as the Red-taileds east of the Mississippi and perching in trees exactly as those Red-taileds do, but these birds were very dark brown, no white breast areas and the tails had just a tint of red – not obvious at all. What I was seeing was the Harlan's - a subspecies of the Red-tailed Hawk (see box on this page: Subspecies of Red-tailed Hawks). Birding is endlessly interesting! Just when you think you have something down pat …… well, you don't!

Subspecies of Red-tailed Hawks

Many field guides describe only three subspecies – there are about sixteen altogether. (The number may change with new discoveries from analyzing DNA.)

Eastern *(B. jamaicensis borealis)*: This is the subspecies discussed in this ebook. This is, by far, the most numerous of all the subspecies.

Harlan's *(B. jamaicensis harlani)*: Generally found in fall and winter in OK, KS and parts of the surrounding states. This is a very dark bird. No red tail. And to make it more confusing, there are two morphs of this subspecies: a light colored morph with white/pale breast and undersides of wing and tail, and a dark colored morph with dark breast, dark undersides of wings with white/pale primary wing feathers and white under-tail. This subspecies is 'Uncommon'.

Krider's *(B. jamaicensis kriderii)*: This subspecies is found on the central and upper Great Plains. Breast is all white with no band. Undersides of wings pale/white. Tail is whitish - sometimes a hint of red. This subspecies is 'Rare'.

Note: Some experts believe that Krider's is not a subspecies but a color morph (definition of 'morph' in box on pg. 41.). I think this gets very confusing. In my opinion, what is important for all of us to remember when trying to identify a hawk we see as a Red-tailed is that it is the most common hawk in the continental U.S. But we do need to remember it comes in a variety of plumages which can vary regionally. If you see an unknown hawk, start with the Red-tailed and eliminate it before moving to the other hawks. Consider size and habitat. Breast and tail color come next. And if you are still struggling, do not despair - ask for help. All birders have struggled at one time or another trying to identify hawks. And many of us still do!

I learned a great deal at Hawk Mountain in eastern Pennsylvania. During the late summer and fall, raptors migrate along the ridges and valleys of the Appalachian Mountains and they pass through this point in great numbers. During peak migrations, expert birders are often at the top observation point and call out what birds they see. These experts are amazing as they can identify a bird that is quite high up or far out. And they are almost always right. They will often explain what they are observing to make their identification. Sometimes it is a physical characteristic, often it is a flight pattern or behavior, and sometimes it is the company the bird keeps. At first, it can be completely baffling, but be patient - you will see there are patterns that emerge making things more logical. It just takes time and perseverance. And there are other good places to observe migrating raptors – songbirds, too. Here are three more of my favorites – check the internet to find others:

Hawk Hill in the Marin Headlands of The Golden Gate National Recreation Area, CA.

The Upper Mississippi River National Wildlife and Fish Refuge in MN.

Cape May, NJ.

Except for the subspecies Harlan's, the generally circular white area on the breast is always there, but the brown band underneath and the amount of brown flecks throughout the rest of the breast and tummy can vary quite a bit from bird to bird. Compare this photo to the one at the on pg. 42. The brown bands are decidedly different. This difference can be used to tell one Red-tailed Hawk from another.

Photo by Hans Jergen Weinhardt on Unsplash.

If you see a hawk, always begin with the Red-tailed Hawk and eliminate that species before moving on to the others here and in your field guide. There are three positive identification traits to the majority of the Red-taileds that will separate this bird from the other hawks:

- The white upper breast area.
- The brown and white speckled, striped or mottled band across the tummy.
- The red tail – best seen when the bird is flying or soaring and banks/tilts to make a turn.

And notice where the bird is – and where you are. Red-tailed Hawks perch toward the outer edges of trees, on top of utility and light poles, and on fence posts generally adjacent to large open expanses of field or grass. If you see a large bird perched in a tree in the middle of the woods, this bird is most likely not a Red-tailed Hawk (check Cooper's Hawk, Sharp-shinned Hawk, Broad-winged Hawk, or owls). And Red-tailed Hawks like drier areas. If you see a large hawk perched in a tree in a swamp or a marsh, this might not be a Red-tailed Hawk but a Red-shouldered Hawk who likes to perch in trees in wetlands. So always keep in mind your surroundings – the habitat - when identifying any bird.

Red-tailed Hawks generally mate for life and build big nests in big trees – generally somewhere between 30 and 90 feet above the ground. They will also nest on cliffs, on large ledges of buildings, within large power line towers, and on nesting platforms erected especially for raptors. And they will

often build at the highest spot – they seem to be a bird that likes a view. If these birds build their nest in a tree, it is generally close to the trunk. Their nest is generally 2-3 feet across and heavy.

The nest starts out flat with a fairly shallow, wide depression where the eggs are laid. But as the nest is often reused year after year, the structure of the nest will get thicker and the depression/cup will get larger and deeper. These nests can grow to be over 6 feet high and 3 feet across. The structure is made of sticks and twigs and it is lined with moss, evergreen sprigs, and the soft parts of grapevines. During incubation the parents will constantly add bits of soft, green sprigs to the nest. Both male and female build. The female generally lays 2 eggs but there can be as many as 5. The male will feed her during incubation. She does all or almost all of the incubation and brooding. From the time the first egg is laid until the young fledge, it is generally about 2½-3 months – occasionally the young will stay with their parents for 6 months. Once the eggs hatch, the male will bring food to the nest but only she will feed the young.

When Red-taileds are building their nest or repairing last year's nest, do not approach them or get close to them. This is the one time they are skittish and they will abandon a nest, even if it has eggs in it. A rule of thumb is not to get closer than scope range to their nest. This means you will probably be beyond the range of your binoculars. If you can see details of the birds and their nest through your binoculars – like individual twigs or the birds' eyes and beaks, you are too close. There are Red-tailed Hawks that nest on buildings in cities and they seem to be less skittish about human beings. It is thought these birds gradually became accustomed to people and the appeal of nesting near tops of tall buildings overrides their fear or distaste of us. Red-tailed Hawks in the wild are not accustomed to people and will abandon their nest if you get too close. At any other time of the year, Red-taileds are less skittish and you can get much closer to them before they flush.

You will also notice that except during mating and nesting, this is generally a solitary bird. You will see one Red-tailed Hawk in a tree overlooking an open area, not many. If you see two soaring in the air together, you can generally assume it is a mated pair.

Photo by Charley Seyler on Unsplash.

Red-tailed Hawks mainly eat mammals: voles, squirrels, and rabbits are favorites. They will also eat songbirds, reptiles, and carrion from time to time. They hunt by quietly perching in a tree, on top of a pole, or on a fence. With their excellent eyesight, when they see movement, they drop and pounce. These raptors will pluck the

feathers from the songbirds they kill and they generally behead larger rodents. They swallow small rodents whole. These hawks will often regurgitate a pellet or small mass after eating. The pellet/mass will contain undigested bits such as the bones, claws, and teeth of whatever was eaten.

Not all Red-tailed Hawks migrate. Those living in the northern parts of our northern states migrate to the southern states. But those living in the middle or southern parts of the northern states do not always migrate. If they do not migrate, they generally stay at or near their nesting sites for the entire year. These birds tend to use the same nesting site for life. However regardless of where the juveniles live, until they become adults at about two or three years of age, they are strongly migratory and generally all juveniles in the northern states will move to the southern states in the late summer and early fall.