

THE RED-SHOULDERED HAWK: A DISAPPEARING WOODLAND HAWK

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I whispered to my friend, "That's not the tail of a hawk, is it?"

The stubby, gray shape hung two or three inches over the edge of the nest of sticks and was absolutely motionless. The nest was deep in a floodplain forest, and the sky was twilight.

The heap of sticks rested crookedly on the curve of a silver maple trunk about 30 feet high. The stick structure seemed fixed loosely to the tree and was much more precarious-looking than nests described in field guides.

"It looks like it *could* be," said my friend.

A chilly, mud-scented breeze blew into the woods from the Mississippi River. It was April 18, and all during the day twirling maple keys had rained down from trees. Catkins had swelled red in cottonwoods, and wood ducks, blue-winged teals, great blue and green-backed herons had flushed from sloughs blooming suddenly green with duckweed.

Here in Bluff Siding, Wisconsin the last patches of ice and snow were finally gone from the flood plain, and as tundra swans hooted high above the forest, winging their way toward breeding grounds in the Arctic, anything seemed possible. But we looked up at the opposite side of the nest and saw no other sign of an incubating bird.

In March a red-shouldered hawk had appeared circling in the air above the floodplain forest, its rich reddish underwings, breast and belly conspicuous in clear light. The hawk's slender buteo shape, about three-quarters the size of a red-tailed hawk, and its dark tail with narrow white bands had also been readily distinguishable.

The red-shouldered had floated in a tight circle, tilting just right, and I had seen the marks which identify the species in all plumages, white crescents on its wing panels, near its wing tips.

In March a red-shouldered had also cried out inside the woods. *Kee-ah! Kee-ah! Kee-ah! Kee-ah!*

The red-shouldered's scream splits the air like no other North American hawk; I had felt my pulse quicken with anticipation. The hawk had beat its wings hard through bare tree tops, rising with a stick in a talon, showing off its red "shoulders," rufous patches on its upper wings, secondary coverts.

Frequently the red-shouldered screams at the slightest disturbance; presently the nest in the silver maple was silent. But I dared to hope.

Scientists in Wisconsin as well as Illinois, Iowa and Michigan have estimated that the red-shouldered hawk has diminished by 90% since these states were settled by Europeans. The species is listed as endangered or threatened throughout most of its eastern breeding range, from New Brunswick west to the eastern edge of the Great Plains and south to Florida and eastern Mexico.

In *The Birds of North America* Scott T. Crocoll, senior ecologist at U.S. Fish and Wildlife Service, cites habitat loss as the largest, probable cause of the decline of the red-shouldered hawk. In most of their eastern range red-shouldered hawks are found breeding almost exclusively in floodplain forests, which have disappeared by 60-98% since European settlement, depending on the region. In New York state the species also nests in upland forests near water sources.

The northeastern subspecies of the red-shouldered hawk, *buteo lineatus lineatus*, is found east of the Great Plains to edge of the Atlantic Ocean, north of Florida and the Gulf Coast. *Lineatus lineatus* breeds almost always in large tracts of forest, which are diminishing due to agricultural clearing, urban development and regeneration problems.

As forests become smaller, red-tailed hawks and great-horned owls move in to hunt new, open spaces. Both species are larger than red-shouldered hawks and have been observed displacing red-shouldered hawks from nest sites.

During 17 years of studying *lineatus lineatus* on the Upper Mississippi River, Jon Stravers, raptor biologist, found nests mostly in forests larger than 500 acres, usually a good distance from boat channels, roads, farm land or any human dwelling.

Northeastern red-shouldered hawks can be sensitive, if not downright hostile, to *homo sapiens*. Arthur Bent reported that as one man climbed a tree to check a nest, a red-shouldered hawk struck the man's head with a "hard blow," knocking off the man's hat and cutting his scalp. Stravers said that one day as he climbed into a crotch in a nest tree, he felt a blow and could not figure out why his field assistant had suddenly hit him over the head with a board. Stravers had been "knuckled" by closed talons.

The California subspecies, *buteo lineatus elegans*, seems to be a hawk of a slightly different color. *Lineatus elegans* nests in a wide variety of habitats near suburban development: in golf courses, streamside trees near subdivisions, palm groves, almond groves, eucalyptus wind rows and city parks. Michael McCrary, wildlife biologist at the Department of the Interior, observed a pair nesting 50 feet from home plate and the crowded bleachers of a busy softball field.

Lineatus elegans is found in riparian woodlands west of the Sierra Nevada from northern California to northern Baja California, only occasionally in southern Oregon, Utah, Nevada and Arizona. Its red shoulder patches are brighter than *lineatus lineatus*' patches, and its tail has fewer white bands, 2-3, and are wider. The rufous of its breast seems richer, more solid, not marked by the dark streaks or white barring seen on *lineatus lineatus*' breast. In general the California hawk is smaller

than the northeastern red-shouldered.

Though the California red-shouldered adapts more readily to humans, McCrary warned the subspecies may also face a decline in the future, also due to habitat loss. Currently the population is stable, but during the 1800's and early 1900's California red-shouldered suffered the loss of huge tracts of riparian habitat as California was settled. As suburban growth continues, the last islands of riparian edges are steadily disappearing, said McCrary. Nest sites are vanishing.

Other threats are more subtle, reflecting the complex web of connection between humans and red-shouldered. Some *lineatus elegans* may produce thin eggs due to pesticide residues, and others have suffered from the "hitchhiking" adaptation of the seeds of grasses introduced in California from Spain.

In 1981 McCrary and Peter Bloom, research biologist at the Western Foundation of Vertebrate Zoology at Camarillo, California, observed red-shouldered hawks that had swollen eyes and adjacent feathers matted and discolored with mucus. Wings the hawks used to rub their eyes with were also matted and stained. When birds were examined, the clinging barbs of the grass seeds were found lodged in the back of the hawks' eyes, sometimes in tear ducts.

McCrary and Bloom found three red-shouldered which they believed died indirectly from the eye irritation. They found emaciated hawks with similar symptoms. Eye problems may have impaired hunting ability and caused malnutrition. It was also suspected that one red-shouldered with a grass seed in each eye may have smashed fatally into a utility wire.

The seed problem continues today, said McCrary. The exotic grasses with needle-like, hitchhiking seeds are so ubiquitous many people consider the grasses native. A red-shouldered can survive with one seed in one eye, but seeds in both eyes create a hopeless situation, said McCrary.

An exotic grass species also threatens red-shouldered on the Upper Mississippi River, by potentially usurping the hawk's habitat. Reed's canary grass sprouts on the floor of the floodplain forest, growing faster and more densely than tree saplings.

The grass grows higher than my shoulders and by June becomes so thick it is nearly impossible to push through. If land managers cannot solve the difficulties of controlling Reed's canary grass, bottomland woods may be replaced by wet meadows. Unless conditions change, some red-shouldered habitat will surely be lost on the Upper Mississippi, said Stravers.

I returned the next morning to the local woods where I had seen the would-be tail and nest, looking around for fresh, April sprouts of Reed's canary grass. Happily there were none. I took extra-soft steps, nervous that if I found a red-shouldered hawk, I might merely sustain a long, human history of disturbing the species.

Kee-ah! Kee-ah! Kee-ah! Kee-ah!

Indeed the hawk rose up straight on the edge of the pile of sticks, screaming indignantly, glowering at me as if I were impossibly rude, trespassing with no right. The hawk pumped its head deeply, jerking its bill up and down, crying out faster and louder. Its feathers seemed to puff out on its neck and face; otherwise it held its wings wrapped tightly, and its body did not budge, and its screams went on.

The next afternoon I found a red-shouldered hunkered down silently in the nest, only its head and tail visible, its black stare fixed on me again. I left quickly, happy to document a nest for wildlife officials and also to leave it alone for the coming, crucial weeks.

Red-shouldered hawks require five months to complete their annual breeding effort, 150 days. Male and female arrive on territory and perform courtship flights, circling each other in the air, calling, swinging close to each other. According to Crocoll a male will soar high, dive steeply, spiral and ultimately land on the back of a perched female.

About three weeks later two or three eggs are laid. Scientists believe the female does most of the incubating, which lasts five weeks. After hatching young stay in the nest about seven weeks and then continue to be fed by adults for about ten more weeks.

Scientists believe males catch most of the food for the brood, landing near the nest with prey, calling out sharply. It is suspected that females fly to the male and take the prey—reptiles, amphibians, small mammals, small birds, crayfish.

At the nest adults tear strips of flesh from the prey and place the strips into the open beak of one young at a time. During a study in Massachusetts chipmunks were found to be a favorite food, and they were decapitated before fed to nestlings, perhaps so young birds would not struggle digesting jawbones or teeth.

In the local floodplain forest I did not witness such fascinating behavior. I stayed away from the nest almost two months, and when I finally approached the site again, I was actually pleased to push through thigh-high nettles. The more I was stung by nettles, the more I realized the native plant remained much more abundant than canary grass, for this year at least.

Kip! Kip! Kip! Kip! Kip! Kee-ah! Kee-ah!

An adult stood on the nest again, screaming, sounding plaintive as well as angry. About ten feet above the adult, two fledglings glowered down from a mass of yellow-green foliage. There was a third in a higher branch. The fledglings had darkish, brownish crowns with tawny edges, shaped like tough-guy haircuts from the 1950's. The fledglings were silent and extremely watchful. The adult continued to

scream, and I skedaddled again.

Two Aprils later the red-shouldered nest was vacant, and the following April it was altogether gone, perhaps blown off the trunk by storm winds. However there was a more substantial nest about 50 feet high in the fork of another silver maple, and a broad tail with a black tip hung over the edge of it. There were wide, white bands and a fluff of rufous feathers; a head swiveled around replete with "cat" ears and big, round facial disks. As scientific literature suggests, a great-horned owl had moved into the nesting territory of a red-shouldered hawk.

I looked deeper in the floodplain forest for any new red-shouldered nests but did not even hear a single *kee-ah kee-ah*.

I could not visit the woods in May but in June conducted surveys for breeding birds in the area. By June 13 no red-shouldered had been encountered, and I found myself standing at the edge of the woods while a boom box blared calls of rails across a cattail marsh in front of me. I felt fairly useless. This was the fourth round of rail surveys, and there had been no response to the taped calls.

A black-capped chickadee came around, eyeing the boom box strapped by bungee cords to the stump of a dead river birch. The deep, throaty "pump" of an American bittern started to play, and a bull frog seemed to reply, belching lazily from a nearby stand of water lilies.

Suddenly crows shouted behind me, sounding as though thirty or more of them had a barred owl surrounded in a tree. A *kee-ah kee-ah* burst from the same vicinity, but ten minutes were left on the rail tape, and I was not to move until the survey was finished.

Both the red-shouldered and the crows grew louder, sharper; the *kee-ah kee-ah* swept around to a strip of trees beside the marsh. Redwings began to *peent*, to roar nasal cries together, and then the red-shouldered beat its wings out of the strip of trees, a snake dangling from a talon.

A cloud of crows and redwings gave chase, pecking at the hawk from above and behind, and then the red-shouldered dashed over my head, its belly a smooth, beautiful, rufous red. The hawk's cries nearly made me shake, it clung to its snake, it entered a long, narrow slough and flew fast in front of the crows and blackbirds.

I felt a small victory for the world of wildlife. A nest-site competitor, a great horned owl, fed young 1/4 mile away. From where I stood I could hear a Minnesota highway, a Wisconsin highway, an interstate bridge, two railroad lines and two boat channels. I could see tall, greensward bluffs on both sides of the Mississippi River, steep forests which gave way immediately to many hundreds of miles of agricultural land mostly unsuitable for red-shouldered, east and west.

But in my neck of the woods one of the most spirited birds of prey in America

remained, and even as the red-shouldered disappeared into a dense stand of swampy trees, its scream continued to ring tenaciously above the muddy, summer water.