



# ‘The Coolest Bird’

*The Black Swift Colony of Box Canyon Falls*





BY SAMANTHA TISDEL WRIGHT

By human standards, Box Canyon Falls is hardly welcoming. It's a damp, dark, serpentine place that is alive with the roar of waterfall.

Here, over eons, the turbulent meltwater of Canyon Creek has sliced a narrow maw through fault-weakened limestone to form one of Ouray's most awe-inspiring natural wonders – a thundering grotto where every minute thousands of gallons of water rush through crooked crags of pre-Cambrian rock, cannonballing 280 feet to the canyon's floor.

Except for a suspended metal walkway that leads like a gangplank inside the Box Canyon (the better for tourists to observe the spectacle), there's precious little horizontal real estate in here, and none that is quiet or dry.

But for Colorado's largest known colony of Northern Black Swifts – a far-flung species occurring sparingly throughout western North America that breeds near waterfalls, on sea cliffs and in moist caves – this place is a made-to-order home.

And for birders, there is no better place on the planet to observe what one prominent ornithologist has dubbed "the coolest bird."

Generally speaking, the Northern Black Swift (*Cypseloides niger borealis*) is notoriously difficult to observe because of its high-flying habits and its penchant for inaccessible nest sites.

But where rappelling ropes or extension ladders would otherwise be necessary, the suspended walkway inside Box Canyon provides the perfect perch for the thousands of birders who flock here, hoping to catch a glimpse of this elusive species.

Since the colony was discovered by researchers in 1950, a total of 26 nests have been identified in Box Canyon (although not all are occupied every year), prompting the Audubon Society to declare it an Important Bird Area.

The birds' soup bowl-sized mud-and-moss nests are tucked into niches and crevices throughout the canyon – some at eye level along the walkway, others perched high above the creek on the opposite wall, or even right beside the powerful waterfall. They look like lumps of moss growing on the rock. Telltale streaks of urates (a concentrated urine full of white ammonia crystals) on the cliffs below the nests often give away their location.

As for the birds that build the nests, if you didn't know they were here, it would be easy to miss them. They are called "swifts" for a reason; the adults whiz through canyon shadows so swiftly (at speeds of up to 100 mph) that to the untrained human eye, their movements are nothing but a specter.

The birds' plumage blends in perfectly with the canyon walls. The adults have an overall dark, sooty color, with just a frosting of white across the face, and are seven inches long – smaller than a robin, but bigger than a chickadee or swallow. They weigh less than two ounces, with torpedo-shaped bodies and

extra-long scythe-like wings that allow them to stay airborne for hours, days and perhaps even months at a time, while performing aerial maneuvers in search of the flying insects that are their prey.

The U.S. Forest Service considers Black Swifts to be a "sensitive species" (one step below threatened), because they are so fussy about their habitat and because they reproduce quite slowly – just one hatchling annually per breeding pair.

The chick starts out looking like a little pink worm, but quickly becomes almost unbearably cute – all gray fluff and wide, winsome eyes – sitting solemnly in its cliffside nest, as it patiently waits for its parents to return from the day's hunt with milky boluses of regurgitated flying insects to feed it throughout the night (Black Swifts are awesome parents).

As the chick grows up, it starts hanging out on the rim of the nest to exercise its wings, flapping them as fast as a hummingbird. Those wings need to be in shape by the time it fledges (usually in September), because its maiden voyage takes it straight into an epic 4,000-mile migration.

### FROM THE BOX CANYON TO BRAZIL (AND BACK)

Until two years ago, the location of the Black Swifts' wintering grounds remained one of the greatest mysteries in the world of ornithology. They were the only species breeding in the U.S. and Canada for which no migratory history had been documented.

As luck would have it, a bird from Box Canyon helped crack that mystery wide open.

One summer night in 2009, a trio of Black Swift researchers (Jason Beason, of the Rocky Mountain Bird Observatory; Kim Potter, a Rifle-based wildlife technician for the U.S. Forest Service; and Carolyn Gunn, a Dolores veterinarian and fish pathologist for Colorado Parks and Wildlife) set up a mist net, deep inside Box Canyon.

A healthy 2-year-old male Black Swift flew into this net. The researchers carefully took him in hand and fitted him with a tiny custom-made Teflon backpack that contained an even tinier light-level geolocator before releasing him to go about his business.

Three other swifts, caught at the Fulton Resurgence Cave (a nesting site near Rifle, Colo.), were similarly outfitted, with the objective of gathering information about the migratory path, timing and winter destination of the species.

The geolocator is a simple device consisting of a light sensor, digital clock and memory chip that records ambient light levels at fixed intervals for extrapolating the birds' latitude and longitude. Geolocators are highly effective instruments for tracking long-distance migratory species; unlike satellite tracking devices, they are also small enough to place on swifts. The only catch is, they have to be retrieved

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NESTING – An adult black swift peers out from its mud-and-moss nest inside Box Canyon, undisturbed by the steady stream of tourists passing by. (Photo by Brett Schreckengost)



# BLACK SWIFT SPRING MIGRATION

**COLORADO  
BREEDING SITE**

5/23/2010

5/17/2010

5/10/2010

**CORE  
WINTERING AREA**

## BLACK SWIFT 411

Sue Hirshman's research shows that, on average, Northern Black Swifts arrive at Box Canyon in mid-June and lay their eggs starting June 28. By late July, all of the eggs that are going to hatch have hatched. The average incubation period is 26 days and the nestling phase is 48 days. Fledging typically occurs in mid-September.

The Audubon Society provides the following data on Northern Black Swifts:

**BEHAVIOR:** Spends most waking hours in continuous flight, like other swifts, catching insects in midair. Travels singly or in small flocks.

**STATUS:** Localized and uncommon throughout its range. Total population may not exceed about 20,000 birds. Scattered distribution makes it hard to census.

**THREATS:** Because birds often nest behind waterfalls, destruction of mountain forests or the effects of a drying climate could make some sites unsuitable by reducing stream flows. Deforestation in South America also could degrade their wintering habitat.

**OUTLOOK:** With its wide range, the species is in no immediate danger, but its long-term survival could be jeopardized by climate change and habitat loss.

(Source: "Out of the Shadows: Black Swifts, North America's Most Mysterious Birds", Audubon Magazine, September-October 2012)

MAP courtesy Rocky Mountain Bird Observatory, U.S. Forest Service and Carolyn Gunn





CLOSE-UP – Black Swifts typically lay one egg per breeding season. In Box Canyon, the eggs are usually laid in late June, and hatch about a month later. (Photo by Sue Hirshman) At right, researchers outfitted a Black Swift from Box Canyon with a tiny geolocator to help solve the mystery of the species' winter migration. The bird was recaptured the following season, bearing hard evidence that he had wintered in Brazil's Amazon rainforest. (Photo by Todd Patrick; toddpatrickphoto.com)

to reveal their data.

Luckily, Black Swifts are known for nesting site fidelity, year after year. So researchers kept their fingers crossed that the birds they'd captured and outfitted would have a successful migration, and then wing their way back home to Colorado the following summer, bearing telltale information about where they'd spent the winter.

It was a long shot that succeeded, with three of the four backpack-toting Black Swifts returning the following summer.

Among them was the bird from Box Canyon.

Sue Hirshman was the first to spot him.

An amateur birder and retired nurse known as the "Black Swift Lady of Box Canyon," Hirshman got hooked in 1996, when she and her husband started summering in Ouray. She now logs upwards of 1,000 hours per season observing nesting Black Swifts at the Box Canyon colony.

Each year, starting in May and sometimes going all the way into October, the Indiana native meticulously documents the swifts' arrival, nest building, egg laying, incubation, hatching, rearing, and fledging patterns. In the process she has accumulated the most extensive body of observations for this species in existence, contributing reams of important statistical data about Black Swifts' nesting phenology, and publishing two highly regarded articles in the *Journal of Colorado Field Ornithologists* (April 1998) and *Wilson's Journal of Ornithology* (December 2007).

In 2009, Hirshman added a new element to her research, helping Beason, Potter and Gunn in their mission to capture and outfit a Black Swift from the Box Canyon with a geolocator.

Was she excited when "her" little bird came back home the following spring, with its backpack intact? "Omigosh, yes," she exclaimed, still thrilled at the memory.

It was as if she had been working on a complicated puzzle for 14 years, carefully fitting thousands of tiny

pieces into place around that one giant missing piece – where did her Black Swifts go after they fledged?

The recovered geolocators spilled the beans. Their data, revealed to the public in 2012, told the tale of a remarkable migration in which the birds flew well over 200 miles per day over a period of three weeks to wintering grounds in the Amazon Basin of northwest Brazil (about 4,300 miles to the south) ... and back again to Colorado every spring.

### 'THE COOLEST BIRD'

It was Rich Levad, the late coordinator of the Rocky Mountain Bird Observatory, who coined the term "The Coolest Bird," and then used it as the title for a book on the species which was published posthumously in 2010: *The Coolest Bird: A Natural History of the Black Swift and Those Who Have Pursued It* (now available as a digital download from Amazon.com).

"This dark, mysterious bird has captivated the interest of a remarkable cast of investigators, and the quest of it is marked by spurts of discovery, decades of inactivity and a few false leads," Levad wrote in his introduction. Among this "remarkable cast of investigators," Levad devoted a whole chapter of his book to Hirshman and her research on the Box Canyon Black Swift colony.

"Sue's relationship with the Box Canyon Black Swift colony parallels that of a mother bird to her nest; the more time a bird has invested in incubating and brooding, the more tenaciously she sets," Levad wrote. "Abandonment of a healthy clutch hardly ever hap-

pens. At this point, it would probably require a number of death threats to drive Sue away from her post."

Indeed, seven years after Levad's book was published, Hirshman persists with her research, and frets over "her" birds, whose numbers have declined in recent years. Last summer was her lowest fledgling count ever, with only five successful nests, well down from the average of 10. "It was really not a good year," she said, the worry straining her voice. "I am hoping for a better breeding summer this year."

Hirshman is certain that climate change is the culprit. The federal 2010 State of the Birds report, coauthored by Audubon and other conservation groups, backs her up, rating the species as the western forest bird most vulnerable to climate change.

"Here we have a bird very reliant on cool, moist habitat," explained Daniel Casey, an American Bird Conservancy biologist who researches Black Swifts, in a 2012 *Audubon Magazine* article. "It's the canary in the coal mine where climate change is concerned. We could see it blink

out as the effects worsen." ("Out of the Shadows: Black Swifts, North America's Most Mysterious Birds", *Audubon Magazine*, September-October 2012)

The article's author, Alisa Opar, writes that "predicted loss of glaciers and decreased precipitation could shrink suitable breeding grounds. Climate change might also disturb the flying ant hatch, a major part of the bird's summer diet. Add that the species rears a single, slow-growing nestling and it's easy to see why this elusive bird is facing serious trouble."



'BLACK SWIFT LADY' – Sue Hirshman on the job at the Box Canyon. (Photo by Brett Schreckengost)





**VISITORS** – Tourists (at left) flock to Box Canyon Falls by the thousands each summer. While the main attraction for many of them is the thundering waterfall, the canyon is also a mecca for birders hoping to catch a glimpse of the elusive Black Swift. (Photo by Brett Shreckengost) Many nests, like the one at right, are plainly visible from the suspended metal walkway inside the canyon. The human presence in the canyon doesn't seem to bother the birds. (Photo by Sue Hirshman)

Scientists are also concerned that deforestation in South America could degrade the species' wintering habitat. Opar notes one computer model predicting that by 2050, almost a third of the forest cover in the region of Brazil where the Black Swifts winter could vanish.

### FOR THE LOVE OF IT

But for now, at least, the Black Swifts keep returning to Box Canyon, and Hirshman keeps showing up to observe them. Through her binoculars, she has borne witness to things that perhaps no other birder has ever seen.

For example, "I've actually seen two Black Swifts lay their egg," she said. "I've got the date, the time and everything."

She also thinks she has seen Black Swifts mate.

"But I can't prove it," she hurriedly adds. "Nobody has enough scientific knowledge to determine or prove if they mate in the air or on the ground. They were either mating or fighting for a nest."

Each new season brings its own unique tales of heartbreak, intrigue and survival. Last summer, Hirshman documented a leucistic chick with a genetic mutation that prevented melanin and other pigments from being deposited normally in its feathers.

"It turned out to be a beautiful chick," she said. "It was very visible, especially when the chick got larger. It was completely different looking, with a white crown, and some white on the wing. I'm really hoping it will come back."

She also kept watch over a mother swift whose nest had deteriorated over the winter.

"She tried to build a new one, but she didn't build it good enough," Hirshman recalled. "She did lay an egg,

but it rolled out. She roosted there. She tried sitting on that nest even after she lost the egg. I was sad for her."

Over the years, Hirshman has observed that once in a rare while, when a breeding pair loses their first egg, they are able to produce a second one later in the season. When this happens, it is a race against time for the late chick to fledge before cold weather returns in the fall.

The latest chick she has ever documented hatched from a second egg in 2011. "It stayed until October 9," she marveled. "It was 58 days old. That broke a record. It's not good when they stay that long. The nights get cold. There is a lack of insects."

Hirshman haunted the canyon until the late chick fledged. "I was in here on Oct. 9 in the morning. It was bitter, bitter cold," she recalled. "It was so amazing to see what I saw. The adult was trying to cover the big chick, which was larger than the parent. It was so tender. When I came back in the afternoon they were both gone. I don't know if the chick survived."

Over the years, Hirshman has fended off a multitude of "empty-nest" jokes from her friends, and recurring requests from her husband to "retire" from her research. So far she has resisted.

"It's my passion," she said. "I wouldn't know how to act if I didn't come over here and take notes and study the birds. I hope I can study this bird until I'm 90. Or even older. As long as I am able to walk, I am going to go over there. I'm obsessed with them. There is no doubt about it."

Black Swifts just seem to have that effect on people.

### TIPS FOR OBSERVATION

The Box Canyon Black Swift colony is active from mid-June through mid-September. Early in the sea-

son, you will see the adults building their nests, incubating their eggs or nursing newly hatched naked chicks. Later in the summer, it is tougher to glimpse the adults, but you can frequently spot the chicks, sitting in their nests, peering out at the world, or perhaps exercising their wings.

A sign along the suspended walkway points to an area where many of the nests are clustered across the canyon. Be sure to bring binoculars!

### IF YOU GO

Box Canyon Falls Park is maintained by the City of Ouray and is open to visitors from 8 a.m.-8 p.m., mid-May through mid-October. Admission is \$4 for adults, \$2 for children 5 to 12 years old, and \$3 for those 62-75. Visitors over the age of 75 and children 4 or younger are admitted at no charge.

Amenities include sheltered picnic areas, gazebos, restrooms, a visitor's center with interpretive exhibits, and a trail system that includes a short but steep hike to a "high bridge" affording dizzying views of the canyon below.

Whether walking or driving, it is easy to get to Box Canyon Falls Park from downtown Ouray.

On foot, veer left at the bottom of Third Avenue near the Box Canyon Lodge and follow the road up the hill for about one-fourth mile to the park entrance. The new Perimeter Trail that circumnavigates Ouray also connects to the park.

To drive there, follow Hwy. 550 south of Ouray, taking an immediate right onto CR 361 after the first hairpin turn. Follow the signs to the right, going over the Uncompahgre Gorge to the drive-in entrance.

Dogs are not allowed within the park.

For more information call 970/325-7080, 970/325-7065, or visit the following websites: [www.cityofouray.com](http://www.cityofouray.com) and [www.ouraycolorado.com/ouray-activities/Box-Canon-Falls-Park.php](http://www.ouraycolorado.com/ouray-activities/Box-Canon-Falls-Park.php). 