Great Basin birds
Frequent flyers at Utah’s busiest airport.

Millions of birds depend on the east shore of the Great Salt Lake and other water sources in the Great Basin to provide their resting, nesting, breeding, and feeding needs. Migrating birds need specific habitats in seasonal sequence, so at certain times of year, the abundance of wildlife in places such as the Great Salt Lake’s Bear River Migratory Bird Refuge is unmatched nearly anywhere else in the world but the Serengeti Plains of east Africa.

MIGRATORY BIRDS ON THE GREAT SALT LAKE
Utah’s busiest airport is north of Salt Lake International’s runways. It’s the east shore of the Great Salt Lake—where the Bear, Weber, and Jordan rivers pour fresh water into briny marshland—that witnesses the arrival and departure of millions of frequent flyers each year. This east shore is an oasis for more than two hundred species of birds, including huge flocks that rest and refuel here on their annual migratory marathons.

For 10,000 years, a significant portion of the Western Hemisphere’s shorebirds and waterfowl have depended on this complex of wetlands to rest, nest, breed, or feed. Although the Great Salt Lake is enormous, 1,500 square miles, the overwhelming majority of birds visit the east shore because it is flushed by runoff from the Wasatch Front. Unfortunately, the east shore is where, in the past 100 years, humans have begun to congregate in huge
numbers too. With only a narrow strip of land between the Wasatch Mountains and the lake, human sprawl is poised to change forever one of the most important wildlife habitats in the Western Hemisphere.

Staggering numbers of birds have been counted by scientists on the Great Salt Lake’s east shore—congregations of a half-million Wilson’s phalaropes, a quarter-million American avocets, and a million northern pintail ducks, for example. And it hosts the world’s largest concentrations of several species of birds that spend half their year migrating between breeding grounds in North America and wintering areas in South America.

But whopping bird counts are just figures on a page. To get a sense of the wealth of wildlife Utah hosts, take a trip to the east shore’s Bear River Migratory Bird Refuge. Here, you drive out onto the Great Salt Lake’s freshwater marshes on 12 miles of narrow dikes. On either side, you see hundreds of floating birds, such as tundra swans and grebes. In the shallow water, you see scores of spindly-legged shorebirds, like herons and ibis, feeding and fussing with each other. Roll down your car windows and the racket is a PBS nature show in Surround Sound.

Blackbirds screech, stilts weep, avocets peep—and when hundreds of ducks take off together, the beating of wings on water rumbles like a passing freight train. Overhead, squadrons of pelicans glide wingtip-to-wingtip in aerial t’ai chi, their wide bodies a snowy white and their bucket-beaks traffic-cone orange.

In a patch of refuge mud flat no larger than a living room, you can watch a half-dozen birds of different species feeding side by side. An avocet will sweep its upcurved bill like a sickle through the shallow water; a dowitcher probes the muck with a knitting-needle beak while a Wilson’s phalarope spins in circles on the water, stirring up grub then stabbing at it. Each type of bird works this Great Salt Lake buffet with different tools. The
wide variety of food here—everything from minnows, water bugs, and larvae to clouds of midges—is one reason why the east shore draws such a wide variety of wildlife. Wetlands such as these are second only to rainforests in the number and variety of species they support.

Today, a string of preserves like the Bear River Migratory Bird Refuge dot the Great Salt Lake’s east shore, protecting fragments of its wetlands. But these are not enough to support the profusion of wildlife that depends on it. The birds need marshes, mud flats, and fields in continuous open space, uncut by roads. These wide-open spaces support huge breeding flocks, and it’s this wide genetic base—a deep gene pool—that will keep these types of birds off the endangered species list for the foreseeable future.

In addition, the Great Salt Lake’s birds need uninterrupted water flows from Wasatch rivers and creeks. But nongame wildlife needs are a low priority to local politicians. The state of Utah plans to dam the Bear River, essentially so Salt Lakers can water their thirsty, nonnative bluegrass lawns through the next millennium. Additionally, Utah governor Mike Leavitt intends to pave a four-lane highway through prime east shore wetlands—though less damaging routes are available—so car commuters won’t have slowdowns during rush hour in Davis County.

But these kinds of habitat loss are a death sentence for wildlife. “This is the last of the best habitat for these birds,” says Al Trout, manager of the Bear River Migratory Bird Refuge. “There are no other places of this size and quality for them to go. Some will attempt to go other places, but whenever they go to new places, that’s when they suffer their highest mortality. A lot don’t survive.” Competing birds are already using all other available habitat that displaced birds may find, say biologists, and they defend their territory against newcomers.
A natural water flow is critical to Great Salt Lake birds as well. “Our main concern with the Bear River dam is the amount of water reduction that will occur,” Trout comments. “The natural cycle we need is lots of runoff in May and June. This flushes the salt out of the wetlands and makes them productive for the ducks and the shorebirds that depend on them.” Altering the natural water cycle and reducing wetlands on the Great Salt Lake’s east shore spell trouble for its migratory birds. These epic avian journeys are only possible if all the links—stopovers—in the chain are available. Migrating birds won’t survive without each link in place.

For Davis County commuters, 15 miles of slow auto traffic during rush hour is annoying, but compare it to the trek of a migrating Wilson’s phalarope. Most of the world’s population of Wilson’s phalaropes depends on doubling their weight at the Great Salt Lake’s brine shrimp buffet each June and July in order to fly nearly 2,000 miles—60 hours nonstop—to Argentina, Chile, or Peru. The effort, researchers say, may be comparable to a human running four-minute miles for 60 hours.

Now that’s a commute.

WHOOPING CRANES AND SANDHILL CRANES
Cranes must enjoy standing in ice water. At Grays Lake, Idaho—where a soaker numbs your foot like a shot of Novocaine—hundreds of sandhill cranes come to wade, mate, eat, and loaf around each year. Grays “Lake” is actually a broad, shallow marsh cradled in a high mountain bowl 60 miles north of the Utah border. It’s brimming with crystal runoff streaming down from the snow-draped shoulders of 9,800-foot Caribou Mountain and from the grassy foothills that surround it.

A national wildlife refuge, Grays Lake hosts the world’s largest population of nesting sandhill cranes. For a time, biologists thought this remote mountain wetlands would be a perfect home for North America’s tallest and rarest bird—the whooping crane.

Cranes, remember, are those tall, stately birds with spindly legs, long necks, and straight bills. They’re often noted for their wild and graceful courtship dance and because they pair up for life. If you’re lucky enough to see a sandhill crane and a whooping crane together, the difference will be readily apparent. Whoopers stand about a foot taller and are a luminous white except for black wing tips and a black moustache-like stripe near the
Sandhills are smaller bodied and gray. Both cranes have a striking patch of bare red skin like a scarlet skullcap on top of their heads.

Everything about whooping cranes is big, from their voices to the stretch of their wings. They are by far the largest of the three crane species in North America. Whoopers may stand five-feet tall and have a wingspan of nearly eight feet, and they trumpet a shrill *ker-loo, ker-lee-oo*, which can be heard for two miles. The bugle of a call resonates from the whooper’s five-foot long windpipe, which is looped like a French horn within their breastbone. On the ground, the call is a commanding alarm. While traveling, it keeps whoopers together.

And they do travel. The last remaining migratory group of whoopers journeys south 2,400 miles from summer nests near the Arctic Circle to the Gulf of Mexico each year. They can cruise at 35 to 45 miles an hour and log 175 miles a day.

Like other cranes, whoopers hang out in wetlands and estuaries scarfing up whatever wiggles: bugs, clams, small fish, and tiny rodents. Until Europeans colonized North America and relentlessly drained its prairie marshes, whooping cranes ranged from coast to coast. The wholesale conversion of wetlands to farmland reduced the population of whooping cranes to about 600 individuals by the late nineteenth century. By 1941, only 22 whooping cranes were left in the world.

The largest group of those remaining—15 that wintered on the Gulf of Mexico—could have been wiped out easily by one natural disaster, such as a hurricane. So, in 1975, U.S. Fish and Wildlife biologists tried an urgent experiment in the hope of starting a new population of migrating whooping cranes that would nest at Grays Lake. It went like this: whooping cranes lay two eggs, but usually raise only one chick,
unlike sandhills. So, biologists pinched one egg each from the nests of wild whoopers and slipped them into sandhill crane nests at Grays Lake. Scientists hoped the sandhills would foster parent the whoopers.

This part of the experiment worked. By the 1980s, the Grays Lake population of whoopers grew to three dozen. The immature whoopers migrated with their sandhill foster parents 750 miles to New Mexico each winter. But trouble came in unpredictable ways. Whooping crane chicks didn’t recognize the warning calls of their sandhill crane parents. Instead of running for cover when a sandhill sounded the alarm, the young whoopers wandered around confused. Worse, when the surviving cross-parented whoopers did reach adult age—four years old—they showed no interest in pairing up with their own kind. When it came to mating with other whoopers, these Grays Lake cranes had cold feet.

Scientists now believe that sandhill crane parents can’t teach adopted whooping cranes the correct courtship dance for their species. And without proper role models, cranes don’t mate. All cranes pair up by an elaborate dance, and each crane species has unique variations of it. For example,
Sandhill crane.
whoopers dance silently. One lowers its head and flaps its wings, then leaps into the air with its head stretched back. Its mate runs forward a few steps, pumping its head up and down and flapping its wings. Both birds then spring up and down like they’re on Pogo sticks. Without that specific dance, whooping cranes just don’t get in the mood. Ever.

Attempting to create a new migrating group of whooping cranes was a heroic—and expensive—effort by scientists. It ended in 1988 and the number of cross-parented whooping cranes has dwindled to two. “The last time a whooping crane was spotted at Grays Lake was several years ago,” said Steve Bouffard, a biologist at the U.S. Fish and Wildlife Service’s Southeast Idaho complex. “And we really don’t expect to see them here again. Of the two left, one summers at Red Rock Lakes National Wildlife Refuge in Montana, the other stays in Yellowstone.”

It goes to show that all the expensive science we care to pay for with taxes will not, in itself, save a species. Only preserving habitat gives whooping cranes—or any type of creature—the opportunity to survive. Because so much avian habitat is disappearing, bird species are currently going extinct at a rate of 100 species per year per million bird species, according to Stuart Pimm, an ecologist at the University of Tennessee. Birds commonly seen just 15 years ago are nearly impossible to spot now, he points out.

So, a visit to Grays Lake is like a step into the past, back to a time when North America had a wealth of bird species because it had many kinds of habitat. The Grays Lake area has marshy wetlands, grassy foothills, and wooded alpine slopes; two hundred species of birds have been identified there.

But spotting a whooping crane standing in the cold water at Grays Lake would be too sad a sight today: solitary, celibate, and still one of the rarest birds in the world.

**LOGGERHEAD SHRIKE**

A songbird that hunts like a hawk and skewers prey on a thorn or barbed wire—like a butcher hanging meat—is not an uncommon sight in Utah. The robin-size loggerhead shrike is famous in North America for making grasshopper, mouse, or sparrow shish kebab, though no one is certain exactly why it impales dinner on sharp objects. And while naturalists debate the reasons for this skewering behavior, the “butcher bird” is disappearing from large sections of its traditional range in the northeastern states.
With its black Lone Ranger mask and powerful, falcon-like beak, the loggerhead shrike looks like a songbird with attitude. While its overall size is unremarkable for a perching bird, its head is larger than most, which gives it the first part of its name, loggerhead, a Scottish term for large, or thick, head. It has a gray back, a white chest and belly, black wings, and a longish black tail that’s striped with white. A bit smaller than a robin, it is 8 to 10 inches long.

The loggerhead is an aggressive predator that hunts large insects such as Mormon crickets (grasshoppers) and bumblebees in the summer when they are plentiful and nabs small birds and mice when the weather turns cold. It perches on a post, bush, or wire with a wide view of the surrounding area and with keen vision spots small prey more than 100 feet away. The loggerhead may pounce from its low perch or it may hover, then dive. It kills prey with a hard blow from a sharply curved beak. Lacking the strong talons of a raptor, the loggerhead then transports dinner in its bill.

Its relatively weak claw grip is what leads some naturalists to believe the loggerhead impales prey so that it can hold the carcass stationary while tearing it apart with its bill. Unlike a hawk, which holds its prize down with strong claws and pulls it apart with its beak, the loggerhead may hang prey on a sharp object so that it can perch next to it and rip off eatable chunks. Or the skewering behavior may be a food storage program. Sometimes bugs and small animals are found spiked but not dismembered. This leads to the suspicion that loggerhead shrikes may kill more than they can eat and then in lean times come back to their food cupboard. This theory is bolstered by the fact that loggerhead shrikes sometimes will press their dead prey snugly into the crotch of a tree rather than hanging it.

Maybe hanging meat in its territory is a male loggerhead’s way of attracting female loggerheads, speculates the Utah Natural History Museum’s Eric Rickart. “Everybody knows about this shrike behavior [spiking food on sharp objects] but I’ve never seen it. I’m not certain, but it may be male behavior that advertises the quality of its territory. Maybe

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**LOGGERHEAD SHRIKE**

**Status:** Relatively common in Utah’s west desert. Disappearing in northeastern states.

**Tips for Viewing:** They are slightly smaller than a robin; look for the black mask and heavy beak. The loggerhead shrike often perches on tree branches overlooking open fields.
males are making a statement to females, ‘Look at my territory, there’s plenty of food for a brood.’”

Certainly, when it comes to attracting mates, the loggerhead shrike shouldn’t rely entirely on its song—if the human ear is any judge of romantic music. Though classified as songbirds, loggerhead vocalizations range from strangled gurgles and squeaky whistles to grating alarm shrieks. In fact, its name, shrike, is derived from the word shriek.

However unmelodic their tune, both males and females frequently break into song during spring courtship. They construct nests of twigs and grass in thorny shrubs like greasewood. Females lay and incubate a clutch of four to six eggs. The male feeds the female during incubation, bringing her bugs he’s snagged. Eggs hatch after about two weeks, and then both mom and dad deliver food frantically to satisfy the fast-growing young birds. With a nest full of squawking beaks, loggerhead parents must deliver about 15 grasshoppers per hour, according to one study.

In two to three weeks, the young loggerheads are nearly as large as their parents are. They move to nearby branches during the day and gradually become self-sufficient. An adolescent loggerhead shrike’s plumage is similar to an adult’s except that its feathers are barred on the back of its neck and crown.

There are only two species of shrikes in the Western Hemisphere and during the winter you can see both in Utah. The loggerhead is a year-round Utah resident, while the northern shrike winters in northern Utah after breeding in the Arctic during the summer.

Once common all across North America, loggerhead shrikes have now vanished from the northeastern states and are declining in the Midwest. Two culprits are suspected: habitat loss and pesticides. Where loss of habitat pushes loggerheads to do their hunting on roadsides, they may collide with cars.
Electric fences are hazardous to perching loggerheads as well. California prison officials have executed 111 loggerhead shrikes—according to a Deseret News article—inadvertently electrocuting them on their brand-new, high-voltage penitentiary fences.

Luckily, loggerhead shrikes are still relatively common in Utah’s arid, open spaces. And that’s fitting. After all, here’s a bird with its own food storage program that can probably eat more Mormon crickets than a seagull. It belongs here. 🦅
Bryce Canyon National Park.