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I DIDN'T KNOW THAT!!!
(Birds)

Allen Tubbs and John Parrish

Birds are among Nature's most beautiful creatures. Without their cheerful songs and flashing colors the world would not be as nice a place in which to live. In this issue of The Kansas School Naturalist, Allen Tubbs and John Parrish have gathered together many interesting items, gleaned from many sources, to introduce you to some of the almost unbelievable, and at times, humorous, "facts" about the feathered friends about us.

The Editor

The Road-Runner of western North America, a ground cuckoo, kills and eats lizards and snakes—even rattlesnakes. It is also so curious that it may sometimes look inside the tents of campers.

For ages owls have been regarded as birds of ill omen because of their solemn staring eyes, weird shrieking, and nocturnal habits.

An Ostrich may run at a speed of 40 miles per hour, with strides up to 15 feet long.

The Arctic Tern is famous for spending more time in daylight than any other living creature. It breeds during the arctic summer where it is daylight the full 24 hours each day, and visits the Antarctic to winter, where it can enjoy the continuous daylight of the Antarctic summer.

One Arctic Tern that was banded as a nestling in Labrador was recovered in southeastern Africa, some 11,000 miles away, less than three months after it had learned to fly.

The skimmer has one of the most remarkable "lures" used by any animal to capture its prey. It will fly just above the water at night, with its elongated lower beak making a "trail" through the water. The glowing microscopic organisms that are stirred to action by this attract minute forms
of aquatic life, which in turn attract fishes. The Skimmer then retraces its path and scoops up its prey.

The Great Auk of the North Atlantic, which is now extinct, was the only flightless bird of the Northern Hemisphere.

Sand grouse and pigeons are the only birds that drink with the bill held continuously in the water. Other birds lift the head and let the water run down the gullet.

Many of the feathers of the pigeon or dove may become loose just by touching the bird. Some scientists believe this to be a defensive mechanism against hawks and owls, since such loose plumage would tend to deflect the talons of the predator and send up an "explosion" of feathers.

There are records to show that, in 1898 in Venezuela alone, the plumes of 1,538,000 "white herons" were shipped out of the country to satisfy women's demands for their use as adornment.

Some members of the family Anatidae (Duck, Goose, & Swans) are so gregarious that they may collect in such a great flock that a single aerial photograph may include the total population of a continent. For example, a photograph of the Pacific Black Brant showed 174,740 birds.

A man and woman who "survive" 50 years of married life often get considerable publicity in the local paper. However, a pair of swans may stay mated for almost a century--unless separated by some hunter celebrating his first 50 years. (No hunting of swans is allowed in North America.)

A recent X-ray and fluoroscopic analysis of a large number of migrating waterfowl showed that nearly fifty percent carried lead pellets in their bodies!

Migrating ducks encountering a radar beam--even a mile or more from the sending station--may lose all sense of direction and often give up the flight. Radar has been used by Canadian biologists to force migrating ducks to land in specific banding and study areas.

Less than 70 wild Nene or Hawaiian Geese survive today from an estimated 25,000 in the 18th century.

Petrels are supposed to have been named after Saint Peter, when it was noted how their feet pattered on the water, as if they were walking on it.

Pelicans are probably the only birds that fly one behind the other with their wing beats synchronized as regularly as though they were in a chorus line.

The bag (gular pouch) of a Pelican's bill may hold up to twelve quarts.
The King Vulture looks like he has been "pushing toads" around his beak, but this is the normal facial adornment of a "handsome" male.

The American White Pelican has a wingspread of ten feet.

Gannets and Boobies dive for fish with such speed that it is believed that the impact of their bodies with the water stuns fish as far as six feet below the surface.

Long before lighthouses, the cries and screams of Gannets in and around their nesting cliffs served to warn sailing vessels in foggy weather of the proximity of dangerous reefs.

Snakebirds or Anhingas can shift internally stored air to change their buoyancy, floating high on the water one minute, and the next sinking below the surface with hardly a ripple. This mechanism is used in stalking prey and in escaping danger.

Frigate, or Man-o-War Birds, only land on tall rocks, snags, or treetops--places from which they can lunge into the air. Though powerful fliers, their tremendous wings are so sail-like, their bodies so small, and their legs so short and fragile that, once down on the water, they usually never gain the air again by themselves and die.

A New Zealand fossil Penguin stood about six feet tall and probably weighed nearly 200 pounds.

Penguins may remain at sea for months, coming ashore only to breed.
Some Penguins have been recorded to go as long as almost four months without food.

Some old-timers claimed that the Pied-billed Grebe, before the invention of smokeless powder, would dive as soon as it saw the flash of the hunter’s gun, so that it was safely under the water before the bullet arrived.

Grebes are the only birds known to carry their young “pickaback” under the water.

The extinct Madagascar Elephant Bird is estimated to have weighed up to 1000 pounds. Its two-gallon egg was six times as big as an Ostrich egg, or equal to twelve dozen chicken eggs.

The Asian Frogmouth mimics a colorful flower, and then feeds on the insects that come and try to collect nectar and pollen.

The first birds on Earth had teeth like reptiles. However, birds lost their teeth 40 to 50 million years ago.

The fossil bird, Archaeopteryx, had distinct long fingers tipped with claws (in modern birds the “fingers” are fused or reduced).

Hesperornis was a flightless, loon-like bird that lived 85 million years ago in the inland seas that once covered a part of what is now western Kansas.

The eggs of the Elephant Bird are still being found in Madagascar swamps, where natives hunt for them by probing the mud with slender poles.

Birds are sometimes referred to as “glorified reptiles”, for their feathers are really a form of reptilian scale, they still wear scales on their legs and toes, and it is difficult to tell an embryonic feather from a young reptile scale.

Because the light, fragile bones of birds do not fossilize readily, there aren’t many fossil forms to allow us to piece together the paleontological history, for family tree, of birds.

South America has more bird species than any other continent.

Neolithic man painted pictures of birds on the walls of Spanish caves some 8000 years ago.

Domesticated chickens may grow feathers up to twenty feet long.

An ordinary bird feather consists of thousands of barbs and barbules all hooked together like a microscopic zipper.

The Oil Bird of South America uses a “sonar”, as bats do, to fly in the total darkness of caves.

The fossil bird, Dinornis maximus, was about thirteen feet tall.
Early sailors reported the Dodo to have been huge, poodle-tailed birds, with a fat, wobbling gait, disproportionately large heads, and huge hooked bills. They became extinct about 1861, and are now literally "dead as a Dodo."

The giant moas, which may have been the bird that gave rise to the giant birds mentioned in the Arabian Nights, were numerous until several thousand years ago.

Phalaropes are unusual in that the female woos the male. After selecting a mate, she selects a nesting site, but the male builds the nest. After she lays the three or four eggs, he assumes all the work of incubating the eggs and rearing the young. To add to the indignity, the "henpecked" male is also smaller and less colorful than his mate.

There is no truth to the story that the Ostrich hides its head in the sand in time of danger.

A female Ostrich helps with incubating the clutch of eggs—but only by day and only during cold spells.

An Ostrich has a life span about equal to that of a human.

There are reports of Australian Cassowaries (when cornered) attacking and killing natives.

Loons are able to dive deeper and stay under longer than any other bird. They may dive down to depths of 180 feet and stay under for as long as a quarter of an hour.

If a Loon is forced to land on dry land it cannot take off again.
Vultures completely lack a voice, as they have no syrinx, or "voice box."

The group of Australian birds known as the Megapodes or Mallee Fowl are the only known birds--and the only vertebrates above the level of the reptiles--that use heat other than that of the parent's body (e.g., heat of decaying vegetation) for the incubation of their eggs.

The Great Bustard of Africa, which may reach a weight of about 30 pounds and a length of about 45 inches, and stands nearly four feet tall, is one of the largest flying birds in the world.

A photographer took a picture of European Cuckoo nestlings being fed by foster parents so small that they had to stand on the backs of the monstrous babies in order to feed them.

There are some species of owls as small as sparrows.

Female owls and hawks are usually considerably larger than the males.

Nightjars may actually hibernate. One Nightjar that was marked by an ornithologist returned the following fall to hibernate in the same rock crevice where he had banded it.

The legs of a swift are very small, and so weak that if it accidentally lands on the ground it cannot stand and take off again. All food-gathering, courting, mating, bathing, and even gathering nest material is done on the wing.

One group of the swiftlets of the Indo-Australian region builds glass-like nests of mucus. These nests are "harvested" by man to make birds'-nest soup, which some people consider to be delicious. This nest-harvesting is a very profitable business, which annually amounts to more than $100,000.

The pectoral muscles of the tiny hummingbird are relatively the largest in the animal kingdom.

The wing-beats of a hummingbird may reach 200 per second. (Compare this with the 1 1/6per second of the Brown Pelican.)

The Sword-billed Hummingbird of South America has a bill much longer than the head and body together. If a man were built in proportion, he could feed through lips seven feet from his face, using a tongue that could be protrated another three to five feet--in fact, he could obtain food ten to twelve feet from his face without moving his head. A family equipped like this would only need one large dish of popcorn in the center of the floor in the TV room!

Hummingbirds are most active at dawn or dusk.

The body temperature of a hummingbird when awake is over 100° F,
The beak of some species of Toucan is almost as bulky and long as the bird that carries it. It has been suggested that the brightly colored, oversize beak may have a function in courtship.

but may drop to as low as 64° F during sleep.

The tiny male hummingbird is, pound for pound, probably the most pugnacious of all birds. Snakes, mammals, and even hawks will retreat in the face of a hummingbird attack.

A female Black-chinned Hummingbird of western North America was observed building a second nest and laying eggs in it while still feeding her first pair of young in another nest.

The tiny Ruby-throated Hummingbird of North America regularly flies nonstop nearly 500 miles across the Gulf of Mexico for the winter.

The Bee Hummingbird of Cuba is the smallest bird in the world. It reaches a length of two inches and is slightly larger than a bee.

The most destructive bird in the world may well be the Red-billed Quelea, a five-inch, sparrow-like bird, that may occur in such tremendous numbers that it can destroy the crops of an entire locale and cause famine among the native inhabitants. There is one record of them covering every tree in an area of up to 3000 acres with perhaps as many as ten million of their colonial nests.

The plumage and markings of the young of the parasitic Pin-tailed Widow Bird are so nearly identical to those of the legitimate young of the Wax-bill Finch species it parasitizes that it is difficult for even a trained ornithologist to tell the two apart.

Most birds feed their offspring insects, seeds, torn bits of meat, or regurgitated food bits, but pigeons and doves regurgitate "pigeon's milk," a creamy substance produced in their crop very similar in composi-
tion to rabbit’s milk.

The urge to feed young is so great that a Cardinal, which apparently had lost its young, was seen to feed goldfish in a garden pool for several days.

Most of today’s farmyard chickens are derived from the Red Jungle Fowl, which was first domesticated in its native India around 3000 B.C.

Most migratory birds travel at night. However, hawks, eagles, falcons, crows, hummingbirds, swifts and swallows migrate by day, while loons, geese, ducks, gulls, terns, and shore birds travel by day or night.

Among all animals, only birds and mammals have evolved true warm-bloodness (high constant body temperature).

Nearly all species of female birds possess only one ovary and associated egg-laying structures (the left). Interestingly, if the left ovary is removed from newly-hatched chickens, the remaining vestigial right ovary turns into a functional, sperm-producing male reproductive gland. Although genetically a female, the chicken crows and looks like a rooster!

Digestion is very rapid in birds; food passes through most birds within one-half to two hours after it is eaten.

The endangered Peregrine Falcon of North America is the fastest of flying birds, reaching speeds of up to 180 mph when diving to catch prey.

Birds lack sweat glands but do possess an oil gland whose secretions are spread over the feathers and legs to waterproof them.

The bodies of penguins, ostriches and their relatives are completely covered with feathers, but most modern birds have large areas of the body which are naked.

The brilliant colors of birds are mostly caused by different pigments. However, there are no known blue pigments in birds. The Blue Jay and Bluebird are blue because the white light striking the feathers is broken up into its different wavelengths and is reflected much as it is by a soap bubble. If one crushes a blue feather, the blue color disappears, just as it does when a soap bubble bursts.

Birds can hear sounds at a much lower frequency than man. Thus, birds can hear approaching thunderstorms long before they arrive in an area.

Although the pupil of the eye of most birds is round, as in humans, the pupil is square-shaped in King Penguins.

Tool-using is very rare in birds. The most striking example is the Galapagos Woodpecker-finch, which uses a cactus spine to probe holes and
The long-legged Secretary Bird of Africa is probably the best snake hunter among the birds. They can walk faster than a man can run.

crevices for food.

Only a few species of birds have no voice—e.g., storks, some pelicans, and some vultures.

The common names of some birds are derived from their songs. Examples are the Bobwhite Quail, the chickadees, the Blue Jay, the Killdeer, the Common Flicker, and the Whip-poor-will.

As many as 50 South American Rheas may lay their eggs in one nest, after which, a male incubates them and cares for the young by himself.

 Relatives of pelicans, boobies get their name from bobo, a Spanish word for "blockhead, dolt, or buffoon." This is due to their rather comical appearance and their ease of capture by hungry sailors.

The goatsucker family, which includes the common Nighthawk and Whip-poor-will, gets its name from the old world superstition that they suck the udders of goats dry at night. Actually the birds are feeding on insects stirred up by the grazing of goats and sheep.

The egg of a Fairy Tern is laid precariously on the fork of a tree limb. Recent studies have shown that this isolation and lack of nest material greatly reduce parasitism by lice.

The 100 billion birds in the world are produced by only about 8,600 or
so different species. The domestic chicken is probably the most abundant bird in the world, followed closely by the House Sparrow and Starling which have been introduced from Europe to many parts of the world.

Herons have a serrated (comb-like) middle toenail which they use to groom their feathers and to help hold prey securely.

Bird song occupies a great deal of time during the waking hours of most birds. Nine to ten hours of song is not unusual during the breeding season. One Red-eyed Vireo was observed to sing over 22,000 times in a single day!

Most birds are extremely beneficial to man. A single Barn Swallow will eat a quart of insects in ten days; a flock of Franklin's Gulls can devour a bushel of grasshoppers in one meal.

The fastest swimming bird is the which can reach speeds of 25 mph underwater using its wings for propulsion.

Male Emperor penguins incubate their mate's single egg on top of their feet during the coldest two months of the Antarctic winter when temperature drop to -40°F with up to 100 mph winds.

Grebes eat many of their own feathers. These are thought to form a trap for sharp fish bones in the stomach which are held until they're broken down by digestive juices.

Albatrosses are perhaps the world's greatest travelers, known to fly 250 miles per day, every day. It is believed they can circle the world in about 80 days.

Pelicans, like aquatic cowboys, herd fish into the shallows and then as a group dive and scoop the fish up with their gular pouches.

Bald eagles, which use and add to their nest year after year, build perhaps the largest of all nests - up to 20 x 10 feet and weighing 4000 lbs.

The number of feathers a bird has is generally relative to the bird's body size. A Ruby-throated Hummingbird was found to have 940 feathers, while a Whistling Swan had 25,216!

Although some captive birds may live fifty to sixty years (Condor - 52 years, Bateleur Eagle - 55 years, Eagle Owl - 68 years) most die before the end of their second year in the wild.

The Fulmar (a relative of the albatross) can spit a foul smelling fluid from its stomach more than four feet to protect itself.

Cowbirds, European Cuckoos, and the Black-headed Duck of South America avoid the rigors of parenthood by laying their eggs in the nests of other birds for them to raise their young.
The female Great Curassow has been observed to roost at night with a chick under each wing.

The largest living bird, the 300 lb. Ostrich, lays a 3 lb. egg. That's equal to 1% of its body weight. A small accomplishment when one considers the 4 lb. Kiwi which lays a 1 lb. egg (25% of its body weight)!

The Great Horned Owl is one of the earliest (or latest) nesters in North America. It is not uncommon to find eggs in January.

In spite of their raw, unsophisticated calls, crows have seven pairs of vocal cords (humans only have one pair of true vocal cords).

Great-crested Flycatchers (which nest in tree cavities in Kansas) are well-known for their habit of incorporating a snake skin into the nest or dangling one from the cavity opening.

The Wandering Albatross and Andean Condor have the greatest wing-spreads of any living birds--about twelve feet each.

Bowerbirds once decorated their bowers with natural “treasures”: snail shells, insect skeletons, bright lumps of resin, seeds, shapely pebbles, colorful feathers, etc. However, in Australia, where the bowerbirds live in close proximity to humans, they now have begun to add a lot of man-made ornaments to the nuptial chambers, such as keys, glass, jewelry, bits of shiny metal, and even in one reported case, a glass eye. An ESU faculty
member saw the bower of one of these birds in Australia that was decorated with hundreds of bright blue plastic soda straws.

An ornithologist claims to have heard a male Mockingbird run through the repertoire of 20 or more songs of other birds—as well as a series of man-made noises. Another “Mocker” was reported to be able to mimic the songs of 32 other species of birds.

High-fidelity recordings of a Mockingbird’s song, played back at a slowed-down speed, showed that, beautiful as the song sounds to us, it is really much richer and more musical than the relatively inefficient ear of man can appreciate.

A male wren may build several false nests, usually near the spot where the real nest will be constructed.

The Brown-headed Cowbird has been reported to parasitize the nests of at least 20 species of birds.

When a native African hunter wants to search for a wild bees’ nest, he does not look for the nest itself, but instead listens for the call of a Greater Honey-guide. The bird then guides him to the nearest bees’ nest it can find, or, if he gets “off the track,” may follow him for as much as five miles, chattering and trying to get him back on the trail. The hunter seldom has to follow the bird for more than a half hour before a bees’ nest is located.

After the hunter gets his honey, he “rewards” the Honey-guide with a portion of the loot. In some of the more primitive parts of Africa, natives revere and protect the Honey-guides—even to the extent of cutting off the ears of anyone caught killing them.

A male Lyrebird is one of the finest bird mimics. It can master the calls of owls and the famous Laughing Jackass (Kookaburra), the voices of people, industrial noises, and even auto horns.

The butcher-birds (shrikes) catch mice, small reptiles, insects, and even small birds, and impale them on thorns or the barbs of barbed-wire. The thorn or barb serves as a vice to hold the prey while it is torn apart. Animal behaviorists are not sure why shrikes occasionally decorate certain thorny trees with uneaten victims, leaving the bodies dangling like ornaments.

The common Starling, introduced to this country shortly before the turn of the century, has now increased until it occurs from Mexico to Canada, and from coast to coast. Because of the bad example set by this bird, the United States now has rigid laws forbidding the importation of most birds of this family except by approved zoological parks.

As a rule, the heart rate is much slower in birds than mammals of the same size. Some typical heart rates are: The American Robin, about 570
beats/min; the Black-capped Chickadee, about 500-600 beats/min; and the Mallard 150 beats/min.

Recently, homing pigeons, as well as Mallards and teal, have been found to be able to detect ultraviolet light in the same wavelength regions as honey bees. Although the exact function of this ability is unknown, it has been suggested that ultraviolet light might be used by birds during navigation, particularly when the sky is overcast.

If one happens to find a newly-hatched young bird on the open ground during the spring or summer, it is best to chase it into cover of bushes or shrubs in the same general area. The parents will find and feed the young bird if it is healthy.

Some hummingbirds and swifts hibernate during the winter, just like bats and ground squirrels.

Man, by selective breeding during the past 5000 years, has developed nearly 200 different strains or varieties of pigeons, ranging from small, colorful show pigeons to large, meat-producing birds. If these specialized types of pigeons are mixed, their descendants will again resemble the wild ancestor in a few generations.

The Passenger Pigeon is now extinct. However, in 1876 and 1877, only about a hundred years ago, a hunter reported seeing one flock that was 28 miles long and three or four miles wide.

The ornithologist Alexander Wilson recorded two billion Passenger Pigeons as passing overhead in 1808 near Frankfort, Kentucky, yet the last survivor of the species (a captive bird) died in 1914.

Psittacosis ("parrot fever") is not restricted to parrots, as once thought, but may afflict almost any species of bird. The disease is now often referred to as ornithosis ("bird disease").

The single egg that the parasitic European Cuckoo lays in the nest of the foster parents is a kind of "kiss of death" to the legitimate offspring, especially as the victim is almost always a much smaller species. The young parasite, shortly after hatching, crowds the eggs of the legitimate offspring over the edge of the nest to their deaths.

All wild North American birds, except Starlings, House Sparrows, and Rock Doves (pigeons), are fully protected by federal regulations. It is, therefore, illegal to capture, hold, transport, or kill any protected species, and to take or otherwise destroy its nest or eggs. Thus, the following acts involving a protected species are illegal:

1. To be in possession of any living specimen, regardless of state of health of the bird.
2. To pick up or be in possession of a dead bird or its parts, including feathers.
We have quite a number of back issues of The Kansas School Naturalist that are available upon request. Class-sized quantities of issues on hand will be sent to teachers, Scout Leaders, or other interested groups. However, due to our limited postage budget, and the recent increase in postal rates, we would appreciate you helping with the shipping and handling costs on quantity orders if you can.

BOOK REVIEWS

We recently reviewed the following new books for children. We also had elementary teachers who were attending the Emporia State University Summer Session examine them. The books are easily read, with clear, informative sketches and photographs. Children enjoy them, and Linda Allison's book presents a large number of suggestions of how to help your students gain a greater appreciation for the "Great Indoors":

Cavagnaro, David and Maggie. 1979. The Pumpkin People.

The above books may be ordered from Charles Scribner's Sons, 597 Fifth Avenue, New York, N.Y. 10017.

Flower lovers should drop by your local library and examine the new Regent's Press release, WILDFLOWER AND WEEDS OF KANSAS, by Janet E. Bare. The book contains keys, many black and white photographs, and excellent color reproductions of our Kansas wild flowers. Copies may be ordered from The Regent's Press of Kansas, 366 Watson Library, Lawrence, Kansas 66045.

1979-80 AUDUBON SERIES

The ESU Division of Biology and Special Events will offer the following Audubon Screen Tours for the coming school year:

October 16, 1979 — Superior — Land of the Woodland Drummer, Tom Sterling presenting.
February 13, 1980 — Wilderness Trek Through New Zealand, Gran Foster presenting.

All programs will start promptly at 7:30 in Albert Taylor Hall, on the ESU Campus. Season tickets: Family—$10.00; Single—$5.00; ESU Faculty and Staff (Family)—$8.00. Single tickets: Adult—$2.00; Middle and Senior High School Students—$1.50; Grades 5 and under—$0.75. ESU Students: Full-Time—free with ID; Part-time—$1.00 with ID. Group Rate (10 or more): $1.00 each. Tickets available at the door, or by writing: Audubon Films, Conferences and Special Events, Emporia State University, Emporia, Kansas 66801, or call (316) 343-1200, Ext. 443. Make check or money order payable to Special Events — ESU.