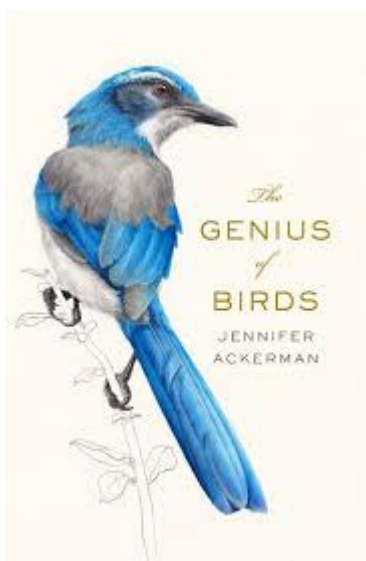


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Book Review: The Genius of Birds – Evergreen Audubon

7-8 minutes



People don't always have a lot of respect for bird intelligence. I'm sure you've heard (but never used!) the expression – "He's a birdbrain." Until the past 100 years or so, even scientists didn't consider birds to be very smart. Their brains were just too small.

In *The Genius of Birds*, Jennifer Ackerman demonstrates that we have been seriously mistaken about the "genius" of birds.

Although birds have brains very different from humans, some birds have significantly large brains in relation to body size and are as packed with neurons as some primates. They solve new problems, invent novel solutions, make and use tools, count, remember where they put things, and some of them understand

what another bird might be thinking.

Ackerman defines genius as “the knack for knowing what you’re doing—for ‘catching on’ to your surroundings, making sense of things, and figuring out how to solve your problems.” She reminds us that in 1921, a few Great Tits and Blue Tits in the United Kingdom learned to open the cardboard caps of milk bottles on people’s doorsteps so that they could drink the rich cream on the top. By 1939, tits through England, Wales, and Ireland had learned the skill, somehow communicated across country and across generations.

Ackerman divides *The Genius of Birds* into eight chapters, each featuring an example of avian intelligence. The first chapter focuses on birds as tool users, featuring the New Caledonian Crow, a bird she considers the world’s smartest. You can watch the eight-step problem-solving sequence on YouTube at <https://www.youtube.com/watch?v=AVaITA7eBZE>. Astonishing!

The crow appears, as the researcher explains it, to have an “abstract understanding of what a tool does.” It also has a working memory that allows it to remember how it conceives of the problem it is trying to solve, a capability once thought to be reserved for humans.

Ackerman explains that not all birds, of course, are equally intelligent. Crows, members of the corvid family, are generally thought of as some of the most intelligent birds. She contrasts the New Caledonian Crows with the flightless Kagu, which lives on the same mountain area as the crows. The Kagu appears out of the understory and runs directly toward Ackerman. The Kagu is near extinction, one of the hundred rarest birds on earth. She’s

not surprised, since it apparently chooses to run toward a possible predator. She realizes that birds are not all equally smart in the same ways. Different species have different abilities.

Ackerman points out that scientists have long resisted attributing intelligence to animals, fearing censure from “anthropomorphizing.” But more recently, as I’ve pointed out in a review of *How Animals Think and Feel*, scientists have recognized that human intelligence is not the only measure of intelligence. Birds are geniuses in ways that benefit their species.

In the second chapter, Ackerman details the research being done on the nature of a bird’s brain. The brain anatomy is different from our own but equally sophisticated. Gaining the ability to fly meant that dinosaur bodies had to become smaller and lighter but they didn’t give up the hyperinflated brains that their related dinosaurs had developed.

Chapter 3 goes more deeply into tool use, while Chapter 4 focuses on the social behavior of birds that live in large groups. Biologists discovered that ravens can remember social relationships, even after a separation of several years. Not only do they recognize and recall fellow ravens, but they also recognize individual humans, even ones trying to disguise themselves.

In Chapter 6, Ackerman provides details about how birds learn songs, focusing especially on the mimics. Mimics, like thrashers and mockingbirds, learn the songs of other birds to attract females, of course, displaying how incredibly clever they are. The strongest most capable singer with the greatest number of songs is likely to also be the most capable mate.

If you've ever seen the "bower" of the Australian Bowerbirds, you'll appreciate the artistic sensibilities of certain birds, the focus of Chapter 7. The bowerbirds we've seen in Australia favor blue objects, decorating their bowers with a wide variety of nature and manmade "blue" stuff. They create symmetrical avenues leading to the bowers, all designed to attract the best females.

The mysterious ability of birds to find their way to their breeding sites or their wintering sites is the focus of Chapter 8. We learn of birds carried clear across the US from the west to the east coast that can find their way home. Ackerman talks to scientists studying homing pigeons and their uncanny ability to return home from hundreds of miles away. We are told about homing pigeons who would return to a remote food source when they were hungry before heading to their roost site. The pigeons who were not hungry went directly to the roost, avoiding the food site.

Throughout *The Genius of Birds*, Ackerman tells of the work of the scientists who are studying bird behaviors in an effort to explain the nature of bird intelligence. Ackerman herself is a keen observer but her focus is to interview the scientists, read their studies, sometimes observe their work and bring their findings and insights to the reader.

In the final chapter, Ackerman considers the much-maligned House Sparrow, a species found nearly everywhere in the world. One scientist studied the proliferation of sparrows throughout Kenya but listening to television news broadcasts and picking up the sounds of the sparrows in the background, revealed that they had arrived in yet another city. Scientists are trying to understand why the House Sparrow is so successful in adapting to human

habitats. The sparrows find new and odd places to nest in cities and construct their nests out of human trash. They are supremely innovative, learning, for example, to open automatic sliding doors of grocery stores to pillage some of the food inside.

She compares the cleverness of the House Sparrows to a Ruddy Turnstone. In the 18th century, biologist Mark Catesby gave turnstones a row of stones to turn to study its feeding habits. She reports that “in a time when scientific experiments were less complex than they are today, the bird was furnished systematically with stones that had nothing beneath them, whereupon ‘not finding under them the usual food, it died.’”

Well, turnstones may be quite capable foragers where there is food, but House Sparrows beat them for innovations.

I’m sure you will find *The Genius of Birds* both entertaining and informative. The scientific studies that Ackerman reports about have astounding results and help us better appreciate the complex bird minds around us.

Penguin Press, 2016