



The Genius of Birds

Jennifer Ackerman

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Birds are astonishingly intelligent creatures. In fact, according to revolutionary new research, some birds rival primates and even humans in their remarkable forms of intelligence. Like humans, many birds have enormous brains relative to their size. Although small, bird brains are packed with neurons that allow them to punch well above their weight.

In *The Genius of Birds*, acclaimed author Jennifer Ackerman explores the newly discovered brilliance of birds and how it came about. As she travels around the world to the most cutting-edge frontiers of research—the distant laboratories of Barbados and New Caledonia, the great tit communities of the United Kingdom and the bowerbird habitats of Australia, the ravaged mid-Atlantic coast after Hurricane Sandy and the warming mountains of central Virginia and the western states—Ackerman not only tells the story of the recently uncovered genius of birds but also delves deeply into the latest findings about the bird brain itself that are revolutionizing our view of what it means to be intelligent.

Consider, as Ackerman does, the Clark's nutcracker, a bird that can hide as many as 30,000 seeds over dozens of square miles and remember where it put them several months later; the mockingbirds and thrashers, species that can store 200 to 2,000 different songs in a brain a thousand times smaller than ours; the well-known pigeon, which knows where it's going, even thousands of miles from familiar territory; and the New Caledonian crow, an impressive bird that makes its own tools.

But beyond highlighting how birds use their unique genius in technical ways, Ackerman points out the impressive social smarts of birds. They deceive and manipulate. They eavesdrop. They display a strong sense of fairness. They give gifts. They play keep-away and tug-of-war. They tease. They share. They cultivate social networks. They vie for status. They kiss to console one another. They teach their young. They blackmail their parents. They alert one another to danger. They summon witnesses to the death of a peer. They may even grieve.

This elegant scientific investigation and travelogue weaves personal anecdotes with fascinating science. Ackerman delivers an extraordinary story that will both give readers a new appreciation for the exceptional talents of birds and let them discover what birds can reveal about our changing world. Incredibly informative and beautifully written, *The Genius of Birds* richly celebrates the triumphs of these surprising and fiercely intelligent creatures.

From the Hardcover edition.

The Genius of Birds Details

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From Reader Review *The Genius of Birds* for online ebook

Cathymw says

I'm a birder so I wanted to like this. The author reminded me of a kid writing a term paper and padding things trying to get to the minimum page limit. Just in the intro, she remarked 6 or 7 times about birds who cached their food and could find it later. Enough already.

There were some interesting studies and stories, but I found myself skimming most of the book to get past the tedious parts.

One chapter talked about birds creating elaborately decorated nests. Some photos would have been nice-- here and other places.

Cathrine ?? says

3.75 ? ? ? ? s

What a birdbrain? Awk! After reading this book I cry *Fowl!* I won't use that term or think of the birds visiting my feeders in the same way again, especially the jays and pigeons.

Bird fanciers should enjoy this but you needn't be an enthusiast to appreciate much of the content within. My favorite chapters were on navigation and caching skills.

Some things to crow about:

- Size does matter to the ladies: Give a hen a giant egg to sit on (even artificial) and she prefers it to smaller ones.
- Crows leave thank you gifts in feeders when they are treated regularly. Check out some treasures from Gabi Mann's collection.
-
- Golden Winged Warblers anticipate deadly impending storms.
- Bee hummingbirds weigh less than an old penny.
-
- Birds don't need to count calories. In an average thirty-year lifetime a tern may fly the equivalent of three trips to the moon and back
- Pigeons, our first air mail providers and GPS navigators, are more bookish than we might imagine, differentiating between the paintings of VanGogh, Monet, Picasso, and Chagall. Can I do that ?? Their average flying speed is an impressive fifty miles per hour. The Chinese military has built a force of ten thousand trained messenger pigeons in order to communicate with troops along borders in case of "electromagnetic interference or a collapse in their signals."
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Shorter than I thought at 267 pages because the rest of the count goes towards acknowledgements, notes, and index. This one just might win the award for most footnotes ever. Being an avid watcher of Nova and Nature much of the content was already familiar to me.

Overall it's interesting reading but it won't keep you up like a night?.

Douglas Wilson says

Full of fascinating details of the incredible mental processes of various kinds of birds. Just a delight. The reason for four stars instead of five is the running commentary that assumes evolution in the background, which had the disconcerting effect of making the reader think that Ackerman was telling us a bunch of true and stupefying things, but was not paying any attention to just how amazing they were.

Darwinism is not just a house of cards -- it is an inverted house of cards, with the apex of the entire card pyramid being one upright joker, holding up the whole thing, and then, five stories up, the storytellers started adding bricks, cinder blocks, and anvils. Every couple pages, Ackerman heaves another brick at the top, as though there were nothing unusual going on at all.

La La says

This book is brilliant! It doesn't read like a traditional science textbook, but rather like sitting down with a knowledgeable person and having coffee and a good conversation about a mutually loved subject. The personal anecdotes sprinkled throughout the text make it a smooth and enjoyable read. I didn't want to put it down until I was finished.

I was approved for an eARC, via Netgalley, in return for an honest review.

Atila Iamarino says

Um daqueles livros legais de ler pelas curiosidades que ele vai contando, na mesma linha do Are We Smart Enough.

Ackerman tirou o livro para mostrar como tem uma série de comportamentos entre aves que mostram que elas sabem muito mais do que parece. Com mais câmeras, mais cientistas e mais pessoas filmando e compartilhando o comportamento dos bichos, estamos tendo muito mais chances de saber o que os animais fazem. Quem mais iria acreditar que corvos fazem snowboarding se não fosse pelo YouTube?
<https://www.youtube.com/watch?v=1WupH...>

Ela passa por vários tipos de inteligência, espacial, comunicação, social, capacidade de aprender. E ao longo do livro vai contando como descobrimos aquilo e explicando até detalhes como o que faz uma espécie capaz de aprender novas habilidades quando a espécie mais próxima não aprende nada de novo.

Wanda says

The insult “bird brain” has always bothered me—how exactly is this insulting? I suppose if the only birds you are familiar with are domestic chickens and turkeys, you might think it’s appropriate, but if you’ve ever studied wild birds, you’ll know that it’s completely off the mark. Detailed observation of the domestic fowl might change your mind, too.

Think of the hummingbird—with a brain smaller than a pea, it manages to migrate long distances and maintain detailed mental maps of nectar sources in its territory, knowing when each flower will be refilled with sweet goodness and ready to be drained again! Or think about the Gray Jay, with its multitudinous stored foodstuffs, to be recovered before they have spoiled. Even the lowly pigeon can do amazing things—witness the homing pigeons, used successfully by people to communicate over great distances.

This book, while enjoyable, is not a scientific tome. Much of it consists of anecdotal evidence, which seems self-evident, but hasn't necessarily been peer reviewed. If you are searching for a definite science textbook on bird intelligence, this book may leave you frustrated, but if you are a bird enthusiast you will enjoy gaining a new appreciation for our feathered neighbours.

Richard Derus says

Rating: 4.5* of five, rounded down for jargoneering

I voted for this book in the 2016 Goodreads Choice Awards. It deserves every one of its stars! I was fascinated by the breadth of the study's scope. I was impressed by Ackerman's lucidity of prose, despite the (inevitable, I suppose) use of a lot of scientific jargon.

I've been a bird fancier since the first time I saw a Baltimore oriole's nest in 1967. In fact, after the birds had raised their chicks and migrated north again, I scaled (for the one and only time in my life! so scared of heights I had to be rescued by my aunt's gardener) the pecan tree where I'd watched them live their South Texas breeding lives and got me that empty nest. It was a staple of my home decor until a careless mover crushed it in 1999. I was so angry I had to leave the house for an hour or I'd've crushed him.

Crows fascinate me to this day. In Austin in the 1970s, the street I lived on had gob-oodles of trees. Crows liked to perch in them because there was an extensive open space very near us. Great place to grub around (in the literal sense of the verb) and thus I could, over time, learn that there were certain trees where certain crows could normally be found. I also discovered that crows like multi-grain bread, which I do not, so they appreciated my gifts of whole crumbled loaves of the stuff that my mother couldn't afford to replace with anything except my preferred rye or pumpernickel bread. Thanks, guys!

This book resonated with me for those reasons, and also taught me a goodly amount of new information. I am completely unsurprised by the expanded knowledge scientists are accumulating about birds. They've been evolving for over 300MM years! Dinosaurs weren't stupid to begin with; add the last 65MM years for the birds to accumulate new knowledge and it shouldn't surprise us they're smart, it should surprise us if we find that they're dimwitted instinct-driven dum-dums.

Very highly recommended if you're already interested in birds; still recommended if you're only mildly curious about the avian family that we continue to decimate with our carelessness about the planet we live on. Pretty soon, ladies and gentlemen, **THE BIRDS** will be a prediction not a cautionary tale.

Jana says

I found *The Genius of Birds* to be both enjoyable and illuminating, especially with regard to the similarities between avian and human behavior, morphology, and evolution. Jennifer Ackerman conveys complex scientific information in a completely approachable way, which I really appreciated, since I am an absolute novice when it comes to birds: I can recognize a robin or chickadee by sight, and I keep a bird feeder in my backyard, but I certainly can't distinguish birds by sound or nest structure. Still, I'm fascinated by these feathered creatures, and reading *The Genius of Birds* fed the part of my brain that wants to know more about backyard wildlife, as well as many species of birds from around the world.

Ackerman doesn't provide the entire evolutionary history of birds, but she does touch on the important moments as they relate to various chapters, which focus on areas of interest such as bird brains, social interactions (both in the wild and in urban environments), levels of intelligence or communication, and their astonishing ability to navigate incredible distances. It's truly amazing to me that we understand so little about these creatures, even though they literally live on every habitable surface of this planet. Even the research which has been done to date has a tendency to raise more questions than answers, since--as Ackerman points out--we humans have difficulties separating our own reasons for certain behavior from why a bird or dog or virus might act. The risk of anthropomorphic explanations is great, and frequently unavoidable. Still, conscientious researchers do excellent work, and deserve attention for their findings.

I really enjoyed learning about bird behavior across species, particularly the tool-making and -use by various corvids, and the surprising depth of communication skills used by parrots. After finding out that generations of crows in New Caledonia have certain family-specific ways of grooming leaves into their own versions of Swiss Army knives, I guarantee that I'll never look at a crow the same way again! There's still so much that we don't know about why and how birds learn to mimic human speech, or why they seize onto particular phrases or sounds, but what little we do know is fascinating to me.

I do have a few questions after reading this book, which I expected. Ackerman describes a research project in which a student was asked to repeat a spoken phrase one hundred times; no matter how hard the student tried, he couldn't perfectly repeat himself, and included all manner of variations. The bird in the same study, however, had no such trouble, and could repeat a sung phrase impeccably. I wonder, did the research team consider asking a trained singer to sing a musical phrase or lyric one hundred times? Birds must practice their songs and calls innumerable times in order to repeat them flawlessly, as must human singers. I would be very interested to see the similarities and differences in the data from that particular study.

Additionally, Ackerman makes the point that birds who face challenges while foraging and collecting food tend to be more intelligent, due to the greater stress placed upon their drive to survive. What she doesn't touch upon, however, is whether bird feeders of the sort used by backyard-birders such as myself contribute in some way to a taming, and therefore dumbing down, of urban bird populations. Considering all of the other ways in which humans are a detriment to global bird populations, including but not limited to urbanizing rural bird habitats, hunting to eradication, destroying habitats and food sources, and pollution, I know my concern about one or two bird feeders somehow contributing to the decline in species diversity might seem silly. But it's undeniable that humans have had an incredible, indelible impact on the world around us, to the point that we have the dubious honor of creating the sixth mass extinction (named the Anthropocene, in case its cause isn't quite obvious). I'd hate to think that what I had thought was a beneficial action is actually detrimental.

All in all, I learned so much about both birds and humans from this book, and I'm absolutely going to seek out more of Jennifer Ackerman's work in the future. Highly recommended for backyard birders, amateur bird-watchers, and nature enthusiasts.

I received a free advance copy of this title from the publisher, which did not affect my review in any way.

Petra X says

I read this over Christmas mostly because a customer ordered four copies saying it was brilliant and would make great gifts. So since I liked Bernd Heinrich's *Mind of the Raven* and his other books on ravens, owls and geese, I prepared to meet another 5-star natural history book. But I was disappointed.

Not very. It's still a 4 star (just) read. But although it is science-based, to some extent, it is full of unproven theories and anecdotes, some of which are very charming and some which belabour the point at length.

I always have a problem with scientists' testing of animals because we are testing them in comparison to our own intelligence not to themselves. I also have a problem with scientific pronouncements of animal behaviour being taken as gospel and anecdotes considered frivolous when they actually might be even more meaningful. Witness Jane Goodall's paradigm-shifting observations of the Gombe chimps.

Once I had an experience with some wild golden pheasants in Kew Gardens in London. It was spring, mating season and my son had got very close to a big, beautiful male bird and called me over. We were able to get within 6' of the bird. He didn't seem to care at all. Up strode another equally big and beautiful male accompanied by two drab females who were walking slightly behind him.

There was a row. The two male birds flew into the air and had a considerable fight with feathers flying and the earth kicked up. The two females stood together and watched the proceedings with interest. The first bird beat the second one, he even lost a feather or two and slunk off.

Now, in the tv documentaries, which invariably are presented and written by men, the two drab females are supposed to remain with the winner. Indeed, the winner thought so too! But the females went off with the loser, one on each side of him inclining their heads towards him that, anthropomorphism or not, definitely looked like they were comforting him. They hadn't watched the right documentaries!

So I do question both when the author says, "some scientists say" and when she goes off about, for instance the colour blue being so important to bower birds because it is the rarest colour in nature. She gives far too few theories about the homing instinct and ability to navigate and since I'm reading *The Homing Instinct: Meaning and Mystery in Animal Migration* right now, I'm amazed by all the different methods birds and other animals have to find their way home.

The difference between Bernd Heinrich and Jennifer Ackerman, is one of degree. Heinrich is a better scientist, better observer and better writer. His books are 10 star and hers... 4, enjoyable but too light.

Jean says

The Genius of Birds, by Jennifer Ackerman is a gamechanger for the way in which the curious reader will think concerning birds. Perhaps you thought birds were cute but not very bright, for example. Get ready to

change your mind when you read in chapter one about "007", a corvid (kind of crow from New Caledonia), who goes through 8 steps, using tools, within two and a half minutes to get to a piece of food, after one scrutiny of this puzzle. Many types of birds are very smart, in the manner which humans are smart. Interestingly, the birds which take the longest to raise in the nest are the smartest and have the biggest brains (with the appropriate neurons). This section discusses the brilliance of some kinds of birds. Here you will find the tool users and others, such as the kees, who love clowning around and horseplay. As an illustration of this, the author mentions a kee who was seen rolling up a doormat and pushing it down a flight of steps. The writing by the author Jennifer Ackerman is at times beautiful (as when she is describing the rainforest at nightfall), or laugh-out-loud funny (she discusses attempts by a bird biologist to measure intelligence in his test subjects by disguising himself, wearing at different sessions: a kimono, a wig, sunglasses, or walking with a limp, or hopping. They always recognized him). I was totally rolling when I read this, thinking of Peter Sellers in the Pink Panther movies. She is always fresh too, with new news on birds right up to this year. As things have changed dramatically in what we know about birds within the past ten years, this book is welcome as an overview, now. This is a book for bird lovers of all sorts.

There is a section about the social aspect of birds, subtitled "twitter". This is fascinating too. The reader will learn about how different types of birds bond, and how they teach their young to perform certain important actions they will eventually need to survive. Also discussed is how some types of birds teach others in their particular "group" techniques they have been trained. Incredibly, researchers have taught certain birds to open feeders in a special manner. They then were able to watch and track as their trained birds performed the tasks in the woods. The birds they had trained managed to train additional wild members to do exactly as they did, What collaborative little creatures!

Further on, you learn about vocal virtuosity. I particularly love bird song, as I find it incredibly uplifting. I didn't know that birds must be tutored to sing however. I understand this now, from this book. In this chapter you learn that among Thomas Jefferson's favorite pets were his mockingbirds. Later, when you read about Honey Child, a hand raised mockingbird, your jaw will drop with amazement at the repertoire of his songs, which he would add to and occasionally drop throughout the length of his life. Woodpeckers, wrens, jays, you name it, Honey Child is worth the read! You will learn that this intricate process of vocal learning is termed "advanced", because, it's done "our way", eg., the way humans teach their children, and the way children learn to selectively speak. The male songbirds who have better songs appeal to the females more, too. As the author writes, "Listening for super-sexy syllables allows female canaries to rule out males with poor bilateral co-ordination" This is important, if you are a lady canary!

Read on, through this award-winning author's book, to learn about birds who decorate: "the bird artist", birds who can map: "a mapping mind" and finally, sparrows: "sparrowville".

This is a book to curl up with in the winter, or to take along on your cruise. It doesn't really have photos, just a few sketches of birds opening each chapter, but that is not the point of this book. The Genius of Birds is about behaviors, patterns, reversal learning, which bird is the "world's dumbest"--yes, it has an offering for that, but not the author's (and I cracked up at that part!!!), the importance of studying birds in their natural environment to learn more and better understand them, and plenty more. The Genius of Birds is a big read, but nothing in it is wasted on the willing reader. I applaud Ackerman for taking me outside and to all sorts of amazing places, when she wrote this uplifting, extraordinary book about beautiful, beautiful birds.

Lyn Elliott says

Jennifer Ackerman's book on bird intelligence is brilliant. Tim Low, no mean slouch as a bird man, writes in the foreword: Her engaging survey of recent findings about bird acumen delivers so many surprises it ends up a revelation'. It certainly was revelatory for me.

Ackerman starts out with the idea of 'genius'. It's '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. In other words, it's a flair for meeting environmental and social challenges with acumen and flexibility, which many birds seem to possess in abundance'.

She moves on to talk about why cognition is a better word to use than intelligence when you're talking about birds. 'Animal cognition is general defined as any mechanism by which an animal acquires, processes, stores, and uses information. It usually refers to the mechanisms involved in learning, memory, perception and decision making'.

I knew about crows who exploited traffic light sequences so that car wheels would crack nuts the birds would wait for and retrieve in the pedestrian light cycle. But a crow who can correctly open a food puzzle using 6 separate tools in correct order the first time? In less than 3 minutes? Or a grey parrot who can not only count and talk but who clearly understands a range of language and can carry on a sensible, if limited, conversation.

Our copy is bulging with stick-it notes of various shapes and sizes. So many ideas, so many illuminating examples that you want to keep track of.

If you're interested in how smart birds are, then this book is a must read. It's the most interesting science-based book I've read this year.

The text is easy to read; references kept out of the main text and to be found in 50+ pages of notes at the end. It's also well-indexed.

Here is what the Scientific American said about it:

<https://www.scientificamerican.com/ar...>

'Science journalist Ackerman sets out to show that being called a “birdbrain” should be a compliment, not an insult. Birds' clever social and environmental problem-solving skills, she shows, establish them among the most intelligent members of the animal kingdom. Crows frequently steal the show: for example, they craft tools, such as branching twigs perfectly pruned into solitary sticks that can retrieve meat from plastic tubes. Even birdsong is cause for admiration: some birds' ability to hear a sound and re-create it has much in common with our own capacity to learn language.

Ackerman devotes each chapter to a different bird skill and ends the book with a discussion of avian adaptive capabilities, which will prove vital in the near future as climate change and loss of habitat have put more than half of North American bird species at risk, according to the Audubon Society'. [She writes for the Scientific America, by the way].

An excellent review of both *Are We Smart Enough to Know How Smart Animals Are?* and *The Genius of Birds* is at:

<http://www.nytimes.com/2016/05/01/boo...>

?Kimari? says

The narrator of the audiobook frequently mispronounces words. For example, hypo-campus instead of hippocampus. I quickly switched to the ebook, and I'm happy that I did. John Burgoyne's illustrations, especially the cover, are lovely. He also illustrated Dog Songs by Mary Oliver.

Thumbs up to the author for including references, citations, and a useful index. The Genius of Birds is mainly summaries of other people's research; most of which I was already familiar with. I would have preferred more original content. Frequently a topic is mentioned in several different chapters, sometimes in nearly identical wording, making the book feel even more repetitive.

I noticed an error in the book, which hopefully will be corrected in future editions.

Some say vocal mimicry in birds is more like the Batesian version of mimicry: The monarch butterfly mimics the wing design of the toxic viceroy butterfly to warn would-be predators, "Eat me and you'll die."

Monarchs do not mimic Viceroy. It was once thought that Viceroy was Batesian mimics of Monarchs and Queens, but research by David Ritland and Lincoln Brower ([Nature 350:497-498 (1991)]) has shown a Müllerian model may be more appropriate.

Viceroy are not toxic. Viceroy caterpillars feed on members of the willow family, sequestering salicylic acid, which tastes bitter but is not toxic to predators. Monarchs feed on milkweed, sequestering steroids called cardenolides, which are both unpalatable and toxic to predators.

You might also enjoy:

- ★ Alex & Me
- ★ Mind of the Raven
- ★ One Wild Bird at a Time
- ★ The Forest Unseen: A Year's Watch in Nature
- ★ Under the Sea Wind
- ★ Animals in Translation
- ★ The Soul of an Octopus

Lynn says

One must be a major devotee of birds to love this book. It is well researched and written: exploring avian intelligence, mating, migration, cognition, and evolution. It had a particularly elegant section on the dangers of anthropomorphism: the attribution of human characteristics to animals. However, my major criticism of the book was that it was guilty of the very thing it warned against.

Liz says

I received a copy of this book in a Goodreads giveaway.

This was an interesting book! I had been anticipating a book that described the intelligence and behaviors of

birds to be a very dull read. I was wrong ... this was such an easy read that I just couldn't put it down. The author did a great job in introducing the attributes of birds from tool making, social networking, vocal ability and much more. I learned a lot and will never look at a bird in my yard the same way again.

Cheryl says

Ackerman is a good science writer. She gives negative examples, she explains about how some interpretations of data can be made to say 'oh look!' or can be explained away with a "killjoy" conclusion. She understands the scientific method of random sampling, control group, etc. She knows that there are lots and lots of unanswered questions, and insufficient data to be assured of the theories of those we think we probably have answered.

But still, she's a journalist, not a scientist. There are so many reports here of birds doing amazing things, and notes in the back to justify all the anecdotes, that the impression a reader is given is one of total awe for birds' intelligence. But almost none of the anecdotes are backed up in the text with explanations of the research. All too often I wondered, "How on earth could they measure that? Or figure out that?"

I prefer books with a tighter focus that take the time to construct the argument being made by the scientist author. This was often entertaining, but seldom enlightening. I still favor, as a recommendation for you about animal intelligence, *Are We Smart Enough to Know How Smart Animals Are?*, by the ethologist Frans de Waal.

I do have some book darts here:

I'm charmed by the mental image of the little stint, a sandpiper, skittering along the edge of the waves, as if thinking, "can't get my knees wet, can't get my knees wet."

Crow researchers admit that "The trick is keeping them amused,... making their tasks hard enough to keep them interested and engaged."

And in Stillwater, Oklahoma, where my middle son worked on a team of wildlife biologists, one crow "lobbed three pine cones at a scientist's head as he climbed up to its nest." (I'll have to ask my son about that.)
