

Hate These ‘Dirty’ Birds? These Startling Facts Could Change Your Mind

They're dirty and despised. That's where it usually ends - till you gain an appreciation of the many fine 'stunts' these birds are able to perform. Things like telling people apart, learning math rules, deciphering medical images, and more. No wonder they can sell for up to \$300K.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- Pigeons have an undeserved reputation as dirty, loathsome “rats of the sky”
- In reality, pigeons are remarkably smart birds. They are also powerfully built, form cooperative family units, and have an unmatched ability to find their way home
- Studies of pigeons have also shown them to possess advanced skills previously thought to be exclusively human

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As many regular readers here know, I love pigeons! In my work as a wildlife rehabilitator, I've found pigeons to be smart and cooperative patients. Sadly, many people believe these wonderful birds to be "dirty" and loathsome creatures.

Recently I ran across an article with the headline 5 Facts That Will Soften Your Hatred of Pigeons: Let's give the "rats of the sky" some love. Needless to say, I had to keep reading.

The author, Nathanael Johnson, writing for Rodale Wellness, offers 5 fascinating facts about pigeons¹ "... that'll lessen your hatred — and perhaps encourage your love — of the birds."²

5 Little-Known Facts About Pigeons

1. **They're surprisingly powerful birds** — Feral pigeons are the same species as pigeons bred to race, and some racers have sold for more than \$300,000 a bird.

Trained racing pigeons can fly at speeds up to 110 miles per hour for long stretches thanks to their impressive breast muscles. Those massive breast muscles account for one-third of their total body weight!

2. **They're private** — Have you ever seen a pigeon chick? I didn't think so. Interestingly, pigeons don't reveal themselves to humans until they are fully mature.

Johnson points out there are two good reasons for this phenomenon: Number 1, pigeons are very effective at

hiding their nests away from prying eyes. Number 2, young pigeons (called squabs) remain in the nest until they take on an adult appearance.

3. **They co-parent** — Mother and father pigeons are equal partners in providing for their chicks. This even extends to generating unique baby food: Both sexes secrete “milk” (a high fat and protein mixture squabs consume) into the crop, a food-storage pouch partway down the throat, used to nourish their clutch of offspring.
4. **They mate for life** — Pigeons are **monogamous**, and can live to the age of 20.
5. **They have an uncanny ability to find their way home** — Pigeons have an unparalleled ability to find their way home, no matter what scientists do to confuse them. They have delivered messages through a hail of bullets during wartime, and once delivered messages for Reuters, the world's largest news organization.

Homing pigeons are the same species as your neighborhood pigeon — they have simply been bred and trained for racing.

5 More Fascinating Facts About Pigeons

6. **They can do math** — A New Zealand study suggests pigeons can distinguish between groups of different-numbered objects (for example, they can distinguish between a group of three objects and a group of four).³

They can also order pairs, and most astonishing of all, pigeons can learn abstract mathematical rules. The only other non-humans known to have the same ability are rhesus monkeys.

7. **They can tell one person from another** — A study out of France reports that pigeons are able to recognize individual people, most likely by their facial characteristics.⁴ The study involved city dwelling, feral pigeons that had never been handled by humans.

Two researchers went to a park in Paris and fed pigeons. The two were of similar build and skin tone, wearing different colored lab coats. One of the researchers ignored the pigeons as they ate. The second individual was hostile toward the birds and chased them away.

In a second feeding session, neither feeder chased the pigeons away, but the birds entirely avoided the previously hostile feeder. The experiment, minus the initial hostility toward the pigeons, was repeated again and again with the same result — the birds steadfastly avoided the previously hostile feeder.

Even when the researchers attempted to confuse the birds by swapping lab coats, the pigeons still knew who was who and refused to give the mean feeder the time of day!

8. **They can problem-solve and make intelligent choices** — Psychologists at the University of Iowa gave laboratory pigeons the “string task,” a well-known test of basic intelligence. It involves attaching a food treat to one of two strings to judge whether study participants have the smarts to access the treat by pulling on the correct string.

In this experiment, the strings and treat bowls (one empty, one full) were virtual — they were on a computer touch screen. The image depicted the bowls at one end of each string, and at the other end were square buttons.

The pigeons were placed in front of the screens, and each time they pecked the correct button, the image of

the full bowl moved closer, until ultimately they were rewarded with a real food treat.

In many cases, the pigeons appeared to be scanning the length of the string as they looked up at the full bowl and pecked at the correct button. Researchers concluded the pigeons chose the correct string between 74% and 90% of the time using three variations of the task. According to study authors:

*"These results ... demonstrate that pigeons can concurrently contend with a broad range of demanding patterned-string problems, thereby eliminating many alternative interpretations of their behavior."*⁵

9. **They can categorize common items** — In order to tell one item from another, it's necessary to observe the significant features of each using a skill known as selective attention. This is an ability once thought to be exclusively human.

Another University of Iowa study of pigeons suggests they follow a thought process similar to humans when noting differences among objects.⁶ Learning about an item's important features goes hand-in-hand with the ability to use those features to categorize the item.

The researchers assumed the pigeons in the study would learn in two phases. The first phase would involve learning what was relevant about the object, followed by the second phase, which would include learning the appropriate response.

But what they found instead was that the pigeons' brains learned and categorized simultaneously. The researchers concluded the birds were using selective attention to put the objects in appropriate categories.

10. **They can decipher medical images** — Pigeons share many visual system properties with humans, and have impressive visual skills, so researchers reasoned the birds might be able to accurately distinguish between malignant and non-malignant medical images.

Sure enough, recent research demonstrates that pigeons trained to read medical images are able to accurately distinguish between digitized microscope slides and mammograms showing normal or cancerous breast tissue.⁷ According to study authors:

"We found pigeons to be remarkably adept at several medical image classification tasks. They quickly learned to distinguish benign from malignant breast cancer histopathology at all magnifications, a task that can perplex inexperienced human observers who typically require considerable training to attain mastery."

Sources and References

[Rodale Wellness, March 16, 2016](#)

^{1,2} [Rodale Wellness, March 16, 2016](#)

³ [Science. 2011 Dec 23;334\(6063\):1664](#)

⁴ [EurekAlert!, July 2, 2011](#)

⁵ [Animal Cognition, September 2013, Volume 16, Issue 5, pp 737-753](#)

⁶ [Iowa NOW, April 2014](#)

⁷ [PLoS One. 2015; 10\(11\)](#)
