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Passenger Pigeon: Like meteors from heaven

By Joel Greenberg and Elisabeth Condon (<https://www.birdwatchingdaily.com/author/joel-greenberg-and-elisabeth-condon/>)

Updated October 2, 2018

"I will always remember the last passenger pigeon I ever saw. It was on a cold morning in winter. There were nine of them in a peach tree facing the rising sun, with their breast feathers fluffed out against the cold. The sun shining on their red breasts made them look like nine large golden red apples in the tree. I will never forget the sight." G.D. Boyd, Chandler, Texas (1890s)

See a timeline of the Passenger Pigeon's demise

(<https://www.birdwatchingdaily.com/blog/2014/01/09/from-billions-to-none-a-passenger-pigeon-timeline/>).



The Passenger Pigeon was a bird like no other. No one knows for sure how many traversed the skies of eastern Canada and the United States at their peak, but almost certainly they numbered in the billions. Their population size exceeded that of any other bird in North America and probably the world. One assessment found that they made up 25-40 percent of all the birds of the continent.

Further, the abundance was neither evenly distributed nor cryptic. Passenger Pigeons often formed vast assemblages that stagger the imagination. But such masses were described over the course of 350 years by a wide range of witnesses writing in at least five languages.



Jacques Gravier, a Jesuit who explored the Mississippi River Valley in 1700, “saw so great a number of wood-pigeons [Passenger Pigeons] that the sky was quite hidden by them.” Alexander Wilson, America’s first ornithologist, carefully studied a single flight in Kentucky and concluded that it comprised 2,230,272,000 birds. A few years later, the country’s best-known ornithologist, John James Audubon, made a business trip along the Ohio River between Henderson, Kentucky, and Louisville. Flocks of birds eclipsed the sun for three straight days.

Remarkable peregrinations

In their movements, the pigeons did not care much what was beneath them, although they preferred that it was land. As a consequence, city dwellers from the Atlantic coast to the Mississippi River could witness their remarkable peregrinations. During his stay in the United States during the 1720s, the English naturalist Mark Catesby reported that residents of Philadelphia and New York City shot the birds from their homes. During the same time, in Montréal, the pigeons brought so many gunners into the streets that a safety hazard was declared, and shooting the birds within city limits was outlawed. And a century later, a minister in Chicago complained that the gunfire that erupted with the appearance of the pigeons prevented him from concentrating on his sermons.

Along with being targets, the birds were also objects of amazement. They inspired a host of painters, America’s first novelist, James Fenimore Cooper (*The Pioneers*, one of his Leatherstocking Tales, includes a Passenger Pigeon scene), and America’s first symphony composer, Anthony Philip Heinrich. He wrote a nine-movement piece devoted to the bird. A choral section in the work includes these words:

*In darkening clouds the wandering flock unnumbered fills the heavens.
The winged thunder shakes the sky and echoes in the winds....
The forest trembles crouching low
The waves roar on the shore
And Earth herself gives back the song of the legions of the air.*

Other evocative words were authored by Simon Pokagon, a Potawatomi chief whose powers of

observation and description led Glenn Adelson, associate professor of environmental studies at Lake Forest College in Illinois, to consider him one of the nation's first great field ecologists. Pokagon hunted and studied the birds from 1840 to 1880 and knew them as well as anyone. He wrote this often-quoted passage:

“It was proverbial with our father that if the Great Spirit in His wisdom could have created a more elegant bird in plumage, form, and movement, He never did.... I have seen them [Passenger Pigeons] move in one unbroken column for hours across the sky, like some great river, ever varying in hue; and as the mighty stream, sweeping on at sixty miles an hour, reached some deep valley, it would pour its living mass headlong down hundreds of feet, sounding as though a whirlwind was abroad in the land. I have stood by the grandest waterfall of America and regarded the descending torrents in wonder and astonishment, yet never have my astonishment, wonder, and admiration been so stirred as when I have witnessed these birds drop from their course like meteors from heaven.”

Project Passenger Pigeon

Throughout 2014, Project Passenger Pigeon will use a documentary film and a host of exhibits and programs to raise awareness of human-caused extinction, explore connections between humans and the natural world, and inspire the building of sustainable relationships with other species. Find a calendar of events and information on how you can take part at passengerpigeon.org (<http://passengerpigeon.org>).

Nesting and roosting sites also frequently held tremendously large numbers of pigeons. Although the birds ate a variety of insects and more than 40 genera of plants, they overwhelmingly preferred the highly nutritious nuts of oaks and beech during the nesting season, and the presence of such foods generally determined where they congregated to nest from year to year. (Smaller numbers bred in places where these trees did not occur.)

The largest nesting on record occurred in central Wisconsin in 1871 and encompassed 850 square miles. A careful estimate based on newspaper accounts placed the number of adults involved at 136,000,000 birds. Seven years later, another huge nesting, near Petoskey in northern Michigan, spanned almost 200 square miles. A roost in Tennessee hosted so many birds that the pigeons' shrieks could be heard from six miles away.

It was in such massive groupings that the birds were slaughtered most effectively. This part of the Passenger Pigeon story is also unique: Human beings wiped out a billion or more birds in a matter of decades.

Native Americans who lived within the range of the species had partaken of the pigeon bounty for millennia. Because the birds were often absent from a given area for years at a time, however, relatively few groups depended on them and the extent of the take was limited by a demand based largely on family and tribal use. It was the arrival of the Europeans that spelled trouble for the Passenger Pigeon.

The first recorded instance of a European killing Passenger Pigeons seems to have been in July 1605, when the French explorer Samuel de Champlain and his men encountered “countless numbers of pigeons” off the coast of Maine and “took a goodly number.” From then on, the birds became cheap food for the poor, ingredients in elaborate recipes for the wealthy, live targets for shooting matches (some of which consumed more than 40,000 birds), feathers for beds, food for pigs, and recreation for people from all walks of life.



Bored soldiers in a fort on the northern shore of Lake Ontario fired a cannon loaded with grape shot into passing flocks with devastating results. Others burned sulfur pots in colonies to asphyxiate nesting birds. (“Women can take part with pleasure,” said one observer, “since there is neither fatigue nor danger of being wounded.” Falling pigeon carcasses were another matter.) In addition, Passenger Pigeons were poisoned, rendered intoxicated by grain soaked in liquor, skewered by flying arrows, incinerated, batted out of the air with long poles, and lured to glue-laden platforms where the birds remained stuck until the hunters retrieved them. Farmers in Ontario hurled potatoes at low-flying birds and occasionally brought some down.

Endless accounts of shooting

Primarily, however, they were shot or netted. Accounts of shooting are virtually endless. One writer gave instructions on how to shoot birds on the nesting grounds: You enter the site, point the barrel of the gun up, and fire. You can’t miss. Etta S. Wilson, the journalist and lecturer who would devote much of her adult life to bird conservation, recalled that her father sometimes shot 1,000 pigeons before breakfast as they flew over their farm on Michigan’s northwestern Leelanau Peninsula. Although different kinds of guns were used then, other writers tell of claims of killing more than 100 birds in a single shot.

Netting ranged from small single-person operations to more elaborate setups using so-called flyers and stool-pigeons. Bait of various kinds — many netters had their own special recipes — lured the birds to

beds over which the nets would spring. Single catches of hundreds of birds at a time were reported in many places. A Dr. Voorhies operating in Benzie County, Michigan, had a single-haul total of 109 dozen plus eight.

To catch the attention of the flocks as they flew over, captive pigeons on long tethers — the flyers — were thrown skyward. If the flock noticed and came back, then the stool pigeon would be employed. It would be secured to a stool at the end of a long teeter-totter-type device that would be moved up and down by cords controlled by the hunter. The idea was to create the impression that the pigeon was feeding peacefully, thus assuring the wild birds that they had nothing to fear.

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The destruction of the Passenger Pigeon tracks the economic development of the country. In the beginning, the birds were hunted for personal use or for sale in local markets. Then regional markets formed as railroads and telegraph lines expanded beginning in the 1840s. In 1851, for example, four different east coast firms exploited a large nesting area near Plattsburgh, on Lake Champlain in northern New York. Their efforts alone, apart from the freelancers and locals, resulted in the taking of *"one hundred and fifty thousand dozen birds."* (The italics appeared in the original newspaper article.)

Rails and telegraph lines

The advancement of rails and telegraph lines into the hinterlands created national markets, as birds procured in once-remote districts could now be conveyed easily to the growing urban centers of the Midwest and East. Some rail lines were extended specifically to access areas where the pigeons nested. And since the telegraph operators were instructed to share word of Passenger Pigeon sightings, areas where the birds could seek refuge from human predation grew fewer and fewer. It became possible for people to pursue pigeons year-round, from their breeding grounds to winter roosts. Estimates vary as to the number of full-time pigeon hunters, but they range between 600 and 5,000.

So many birds were killed that the carcasses were sold by the barrel. Each contained between 300 and 400 birds. The 12 years between 1870 and 1882 saw the last of the big nestings, which occurred in Minnesota, Ontario, Pennsylvania, New York, Wisconsin, Michigan, and Oklahoma (1881). Pros and amateurs drawn to the nestings turned the wooded sites into places of carnage. As exploitation intensified and the population declined, pigeons abandoned nests more quickly when disturbed.

Yet the slaughter of adults and chicks continued unabated and became even less constrained. (Squabs way too young to be of culinary value were nonetheless collected and squished into barrels for sale.)

Since each pair nested only once a year and produced a single chick, the mortality and lack of successful reproduction triggered a spiral to oblivion. By 1890, only a few thousand Passenger Pigeons remained. As far as we know, the last three wild birds were killed on March 24, 1900, in Pike County, Ohio (this was the famous Buttons, the last immature and female to be collected, displayed at the Ohio Historical Society in Columbus); on March 12, 1901, in Oakford, Illinois (an adult male in the collection of Milliken University in Decatur, Illinois); and on April 3, 1902, in Laurel, Indiana. (The history of this bird leaves no doubt as to its identity, but, unfortunately, the specimen was lost many decades ago.)



Three captive flocks

Even though the pigeon ceased to exist as a wild species, three captive flocks remained. One was in Milwaukee, from which a number of birds were sent south to Chicago to form the second flock. In 1902, a female from Chicago was conveyed to the Cincinnati Zoo, which had held Passenger Pigeons since it opened its doors in 1875. Although the flocks produced young in varying amounts, breeding ebbed as the birds aged.

By 1911, precisely two remained, named George and Martha, in the Cincinnati Zoo. (Martha is almost certainly the bird that arrived from Chicago.) That summer, George passed on, leaving Martha as the last of her species. Finally, on September 1, 1914, probably sometime in the middle of the day, she too ceased breathing, and the Passenger Pigeon became a subject of history. We're marking the centenary of that sad event throughout this year.

In 1860, the population had probably exceeded one billion birds. Four decades later, it was zero or close to it. The magnitude and speed of the collapse has puzzled people ever since they realized it had happened. At the time, some observers claimed the birds had relocated to South America and changed their plumage to elude their tormentors. Others said the Passenger Pigeons had died in storms as they crossed one of the Great Lakes or the Gulf of Mexico. (Henry Ford placed the drowning in the Pacific Ocean as the birds sought refuge in Asia.) More plausibly but without a shred of evidence, a persisting minority says that disease was the culprit.

Modern scientists have advanced a number of other theories, including a reduction of food supplies due to lumbering, competition with swine (farmers often allowed them to forage in local woods), and the absence of snowfall on breeding territory. (Snow would have covered up the nuts, preserving them, so they would be available for the pigeons upon their return in the spring.) The loss of forests might have harmed the birds if the species had survived longer. But during the decades of their demise, plenty of food was available. A. W. Schorger, the great naturalist from Wisconsin who won the Brewster Medal from the American Ornithologists' Union for his 1955 book *The Passenger Pigeon: Its Natural History and Extinction*, pointed out "that the supply of beechnuts and acorns was far in excess of the needs of the pigeons through the last half-century of their existence."

There is no need for novel explanations: Whatever other factors were present after the species had started its spiral to extinction, slaughter by humans precipitated and sustained the collapse.

Joel Greenberg is a founder and principal of Project Passenger Pigeon (<http://passengerpigeon.org>) and the author of A Feathered River Across the Sky: The Passenger Pigeon's Flight to Extinction (<https://www.amazon.com/Feathered-River-Across-Sky-Extinction/dp/1620405342>) (Bloomsburg, 2014), a book we featured in our December 2013 issue. He also wrote Of Prairie, Woods, and Water (<http://press.uchicago.edu/ucp/books/book/chicago/O/bo5586817.html>) (University of Chicago, 2008) and A Natural History of the Chicago Region (<http://press.uchicago.edu/ucp/books/book/chicago/N/bo3618786.html>) (University of Chicago, 2002). Elisabeth Condon is a graduate student at the University of Minnesota-Duluth. She is currently working as an avian ecologist for Point Blue Conservation Science (<http://www.pointblue.org>). The authors thank Susan Wegner of Bowdoin College for translating the passage from Heinrich's choral work.



Martha, the last Passenger Pigeon, in 1912 (Wikimedia Commons (<https://commons.wikimedia.org/>))

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