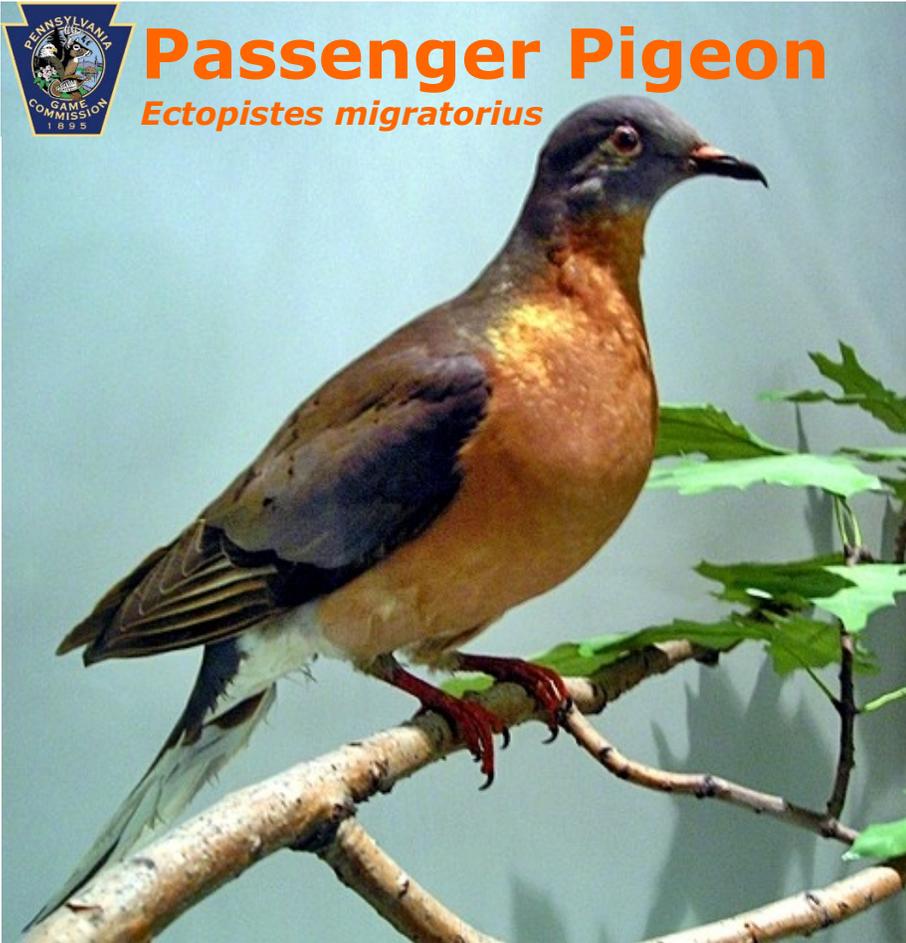




Passenger Pigeon

Ectopistes migratorius



STATUS: Extinct; the last reports of living passenger pigeons in Pennsylvania were in 1906. The last known living passenger pigeon died at 1 p.m. September 1, 1914, in the Cincinnati Zoological Garden. The bird — named "Martha" — was 29 years old.

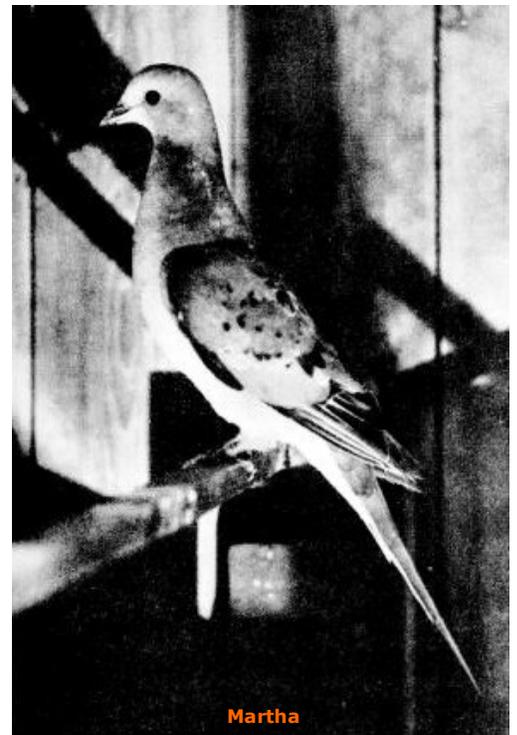
IDENTIFYING CHARACTERISTICS: A large dove; about 16 inches long, with a two-foot wing span; the head was slate blue with a black beak and red eyes; crimson feet; 12 tail feathers; gray to blue upper side; sides and back of neck, metallic golden violet; reddish-brown from throat to belly; white belly. Females were smaller than males. The birds weighed 9-12 ounces, two to three times the size of a mourning dove.

BIOLOGY/NATURAL HISTORY: Passenger pigeons were once an abundant nester in the Commonwealth. Their North American population numbered as many as five

billion birds when colonists arrived and comprised 25 to 40 percent of America's total wild bird population. They captivated early residents with their spring and fall migrations. They ranged over eastern North America from Hudson's Bay south to the Gulf of Mexico, and west into the Mississippi River valley in mixed hardwood forests. Hunters and market hunters alike pursued them with reckless abandon. The birds were trapped, shot, netted and clubbed; even the young, called "squabs," were knocked from nests with poles, or the trees holding their nests were cut down, and they, too, were collected for market. For years, the flocks seemingly withstood the losses. After 30 years of observation, John J. Audubon reported, "...even in the face of such dreadful havoc, nothing but the diminution of our forests can accomplish their decrease."

Of course, Audubon wasn't entirely correct, although deforestation did contribute greatly to this bird's extinction. No species can endure continuous persecution, especially if it occurs when the animal is trying to reproduce. Eventually, the losses matter, because recruitment won't offset predation and other limiting factors.

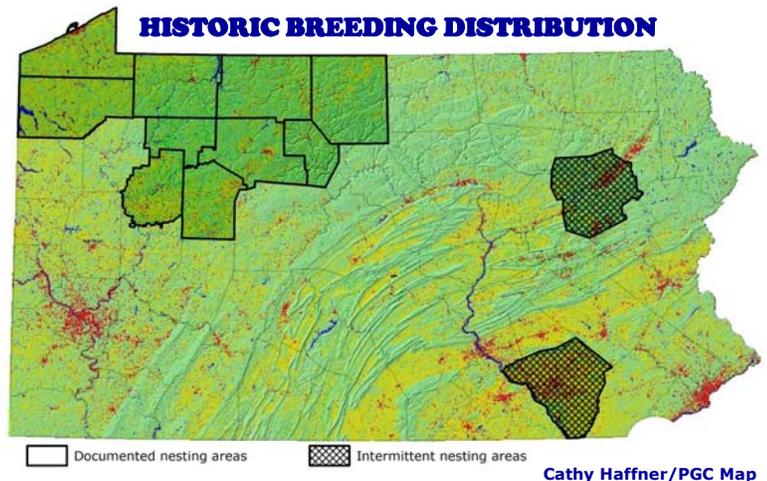
Passenger pigeons, also called "wild pigeons," migrated into and through Pennsylvania beginning in March; they went south in September and October. Fast fliers, they could reach speeds in excess of 60 mph. They foraged for and favored beechnuts, acorns and American chestnuts, but also consumed cherries, wild grapes, dogwood berries, earthworms, grasshoppers and many other items. They roosted nightly and left roosts en masse swiftly in early morning. They often roamed far from roosts to forage in mast-rich areas, regularly flying 60 to 80 miles and sometimes more. They re-



turned to roosts in the evenings. Nest colonies sometimes started before snow melt. All nesting sites were situated in areas with plenty of fallen mast on the forest floor. This appeared to be a prerequisite in site selection, because fledglings, upon leaving the nest, lived off that mast over the next few weeks as they became stronger fliers. Adult birds did not consume this mast.

Passenger pigeons nested in large colonies. Some of the state's largest pigeon nesting sites were found in Pennsylvania's northwestern and northcentral counties. Before 1880, the birds nested in great numbers in Cameron, Elk, Forest, McKean, Potter and Warren counties. They also established communal nest sites in Crawford and Erie counties. Substantial rookeries, or "cities," as some called them, were reportedly located near Kane, Oil City, Pigeon, Sheffield and Brookston, and Conneaut and Pymatuning marshes. In these nesting areas, which were often up to two miles wide and miles long, the birds would pile into the trees to the point where tree limbs would break. It wasn't uncommon to see from 50 to 100 nests in a tree. Nesting areas hardly ever were used in consecutive years, partly because of the damage the birds caused and partly because of the damage professional pigeoners caused.

Nests were loosely made of twigs and about six inches in diameter located 10 to 25 feet off the ground. Females laid only one white egg annually. Incubation was about two weeks; young left the nest in about two weeks, at which time, they were abandoned. Their limited reproduction would eventually play a role in the species' inability to respond to the conspiring circumstances that led to its extinction.



The chatter from their nesting areas carried for great distances across the landscape. The birds had an undeniable and conspicuous presence, according to Ohioan Sullivan Cook who wrote of his boyhood experiences with passenger pigeons in *Forest and Stream* magazine in 1903. "...We started for the pigeon roost a little after dark. Although three miles from the roost when we started from home, we could hear the sullen roar of that myriad of birds, and the sound increased in volume as we approached the roost, till it became as the roar of the breakers upon the beach."

Through the early 1800s, Pennsylvania's growing number of residents were seemingly content taking migrating pigeons and or intercepting adults flying near nesting areas and taking squabs from nests. They took what they needed with great pride and satisfaction and little more. But the demand for wild pigeons grew, primarily for food, but also for trapshooting. An improving transportation system provided a faster means to take hunters to the birds and the harvested birds to big city markets. When word spread on the telegraph lines that the pigeons were coming in, market hunters and netters would converge on rookeries. The results were devastating. A noticeable decline in migrations was occurring by the mid 1800s. It would only worsen.

In 1869, from the town of Hartford, Michigan, located near a large nesting colony, three railcar loads of passenger pigeons were shipped to market daily for 40 days. The carcasses totaled more than a 11 million over

that period. This snapshot illustrated the deadly effectiveness of the professional "pigeoners," as well as the incredible numbers of passenger pigeons that existed in North America.

Pennsylvania was not excused from the work of professional pigeoners. In 1863, according to correspondence received by W.B. Mershon, who authored "The Passenger Pigeon" in 1906, passenger pigeons nested near Smithport and Sheffield. "We located at Cherry Grove, six miles from Sheffield. The birds fed on hemlock mast. There were other nestings in Pennsylvania at the same time."

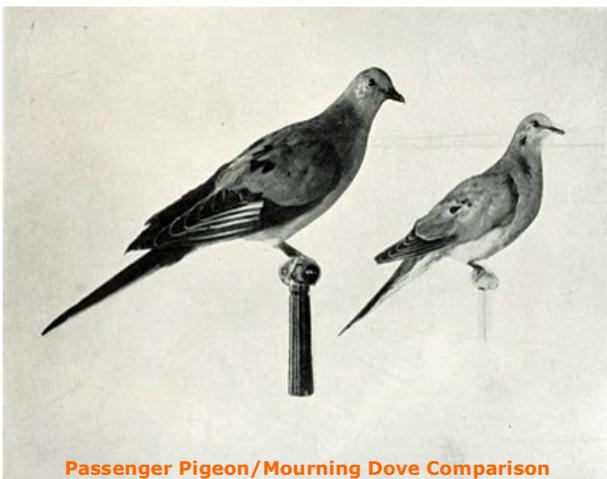
The last recorded occurrence of professional pigeoners in Pennsylvania appears to have been in 1878, when a colony nesting near Sheffield was worked over. Normally, Pennsylvania's mountains made large-scale pigeon-taking a difficult proposition compared "Great Lakes country," which was flat, accessible and well connected to roads and later, railroads.

As mentioned previously, loss of habitat was a primary contributing factor in the passenger pigeon's nosedive toward extinction, which began in the 1850s and was completed by the turn of the century. As North America's forests were razed to accommodate agriculture, community development and meet forest product demands, the passenger pigeon lost important feeding, roosting and nesting areas. This, coupled with widespread unregulated harvest from America's Deep South to Canada and the conveniences railroads and telegraphs provided market hunters, were the beginning of the end for billions of passenger pigeons.

As passenger pigeon numbers declined, it has been reasoned that these gregarious birds may have lost some of their effectiveness in finding food and as communal breeders. Added to the growing problems the species was facing, it soon became apparent that this troubled bird's days were numbered.



Hayashi and Toda



Passenger Pigeon/Mourning Dove Comparison

REASONS FOR BEING EXTINCT: Passenger pigeon numbers began to slip in some areas during the mid 1800s. There was little concern about the birds, though, because they were so numerous. But the bird protection movement sweeping the country during this period apparently compelled some Ohioans, in 1857, to petition state legislators to introduce a bill protecting wild pigeons. A select committee of the state's senate, found problems with the idea. The panel's report recommended: "The passenger pigeon needs no protection. Wonderfully prolific, having the vast forests of the North as its breeding grounds, traveling hundreds of miles in search of food, it is here today and elsewhere tomorrow, and no ordinary destruction can lessen them, or be missed from the myriads that are yearly produced."

In 1873, Pennsylvania's General Assembly adopted a legislative package consolidating wildlife laws. One of its laws made it illegal to discharge a firearm within a quarter mile of wild pigeon rookery and to shoot at roosting pigeons. The fine was \$25. The measure, noble as it was, was largely ignored. In 1875, the General Assembly enacted legislation prohibiting the killing or disturbing passenger pigeons on roosts or nesting grounds — nonresidents were required to pay \$50 for a license to trap or net these birds. Six years later, another legislative act made it unlawful to discharge firearms within one mile of a pigeon roost and to remove squabs from nests. **Concern continued to mount. The absence of this bird's once mighty migrations, after all, was hardly unnoticeable.**

By the early 1880s, passenger pigeons were nesting only sporadically in Pennsylvania. Within 10 years, they became a rare sight everywhere in the eastern United States. As recently as April 22, 1905, the General Assembly approved legislation protecting passenger pigeons for 10 years. The fine for killing one was \$25, a steep fine in the day. But the effort was too late. The birds were gone. Some theorized the birds started migrating to Mexico and South America. Some believed a terrific wind storm blew great flocks to sea, where they perished. Some believed only deforestation led to the bird's demise. But those people familiar with wild pigeons knew it was loss of vital habitat coupled with excessive hunting and trapping that had caused its extinction.



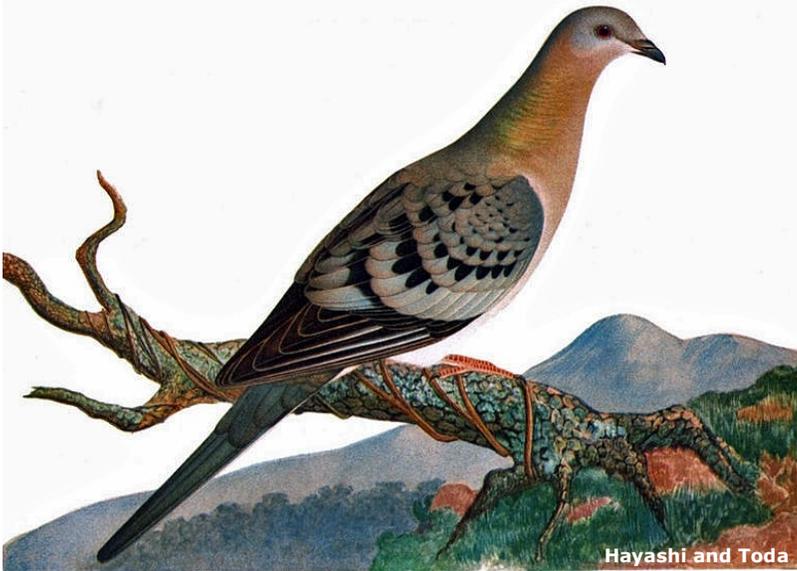
Although reports in Pennsylvania and elsewhere had some passenger pigeons being observed into the early twentieth century, it is widely believed that the last wild passenger pigeon was shot and killed by a boy in Ohio in 1900. The Cincinnati Zoological Garden held the last three known to the world, two males and a female named Martha. The last male died in 1910. Four years later when Martha died, she was **immediately packed in ice, placed on a train and sent straight to the Smithsonian's Museum of Natural History**, where her internal organs were preserved and the bird was mounted. Her passing made her the last of a species that once gave this continent some of its grandest migrations. She was it. The species was gone. All that would remain in Pennsylvania were mounts of passenger pigeons, such as the one at the **Game Commission's Middle Creek Wildlife Management Area Visitors Center, and, of course, the village of Pigeon**, named after these great birds, which foraged and nested in beech groves near this Forest County community.

Turn-of-the-century conservationist William Hornaday seemed to capture the confusion surrounding wild pigeons in his early 20th century writings. "The passenger pigeon millions were destroyed so quickly, and so thoroughly en masse, that the American people utterly failed to comprehend it, and for 30 years obstinately refused to believe that the species had been suddenly wiped off the map of North America."

W. E. Clyde Todd, wrote in his Birds of Western Pennsylvania, "...one is imbued with the sense of the irreparable loss suffered by the naturalists of the country in the passing of the pigeon. Undoubtedly it was one of the most abundant birds – if not the most abundant – on the American continent in the early days. The unbelievably vast numbers in which it was wont to appear; the extent of its daily flights; the enormous area, the unusual density, and in particular the shifting character, of its communal roosting and nesting places, were features of its life history that were unique. Here was a species so perfectly fitted to its environment and to existing conditions that, although a pair laid but one egg at a setting, or two at most, and although its enemies were legion, it had increased in the course of time to such an extent that it bade fair to overrun the continent by sheer force of numbers. The story of its passing is a shameful record of human cruelty, avarice and indifference – a story one wishes had never been told."

Sources:

Blockstein, D. E. and H. B. Tordoff. 1985. A contemporary look at the extinction of the Passenger Pigeon. *American Birds* 39: 845-852.



Bucher, E. H. 1992. The causes of the extinction of the Passenger Pigeon (*Ectopistes migratorius*). Pp. 1 – 35 in Current Ornithology. Vol. 9 (D. M. Power, ed.). Plenum Press, New York.

French, J. C. 1919. [The Passenger Pigeon in Pennsylvania: Its Remarkable History, Habits and Extinction](#). Altoona Tribune Company, Altoona, Pa.

Genoways, H. H. and F. J. Brenner (eds.). 1985. Species of special concern in Pennsylvania. Special Publication, Carnegie Museum of Natural History, 11. 430 pp.

Hornaday, W.T. 1913. [Our Vanishing Wildlife: Its Extermination and Preservation](#). New

York Zoological Society, New York, NY.

Kosack, J.A. 1995. The Pennsylvania Game Commission 1895-1995: 100 Years of Wildlife Conservation. Pennsylvania Game Commission, Harrisburg, PA.

Mershon, W.B. 1907. [The Passenger Pigeon](#). Outing Publishing Company, New York, NY. 225 pp.

Schorger, A.W. 1955. The Passenger Pigeon: Its Natural History and Extinction. University of Wisconsin Press, Madison, WI. xiii + 424 pp.

Terres, J.K. 1996. The Audubon Society Encyclopedia of North American Birds. Wings Books, New York, NY.

Todd, W.E.C. 1940. Birds of Western Pennsylvania. U. Pittsburgh Press, Pittsburgh PA.

Suggested further reading:

Askins, R. A. 2000. Restoring North America's Birds: Lessons from Landscape Ecology. Yale University Press, New Haven and London.

Cokinos, C. 2000. Hope is the Thing With Feathers: a Personal Chronicle of Vanished Birds. Penguin Putnam Inc., New York.

Weidensaul, S. 1994. Mountains of the Heart: A Natural History of the Appalachians. Fulcrum Publishing, Golden, CO. 288 pp.