

Thanks to Native Americans, Purple Martins Underwent a Complete Tradition Shift

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Native Americans were the first to discover the joy and the utility of attracting nesting Purple Martins to their villages.

Twelve thousand years ago, before the first humans arrived in the New World over Bering Land Bridge, Purple Martins were a dramatically different bird than they are today. Back then, it's believed they nested only in the abandoned nest chambers of woodpeckers, or in any natural cavities they could find in tall, dead trees, on cliffs, or under boulders. Today, east of the Rockies, martins nest only in human-supplied housing; either in elaborate bird house condominiums known as "martin houses," or in natural and artificial gourds.

Why did Purple Martins stop nesting in the ancestral ways they had used for millennia? The answer is that Native American Indians started "messing with Mother Nature." Perhaps by accident, Native Americans discovered that martins could be lured into their villages by hanging up gourds with holes cut in their sides. In 1831, Alexander Wilson wrote: "*Even the solitary Indian seems to have a particular respect for this bird.*" He gives an account of the methods used by the Choctaw and Chickasaw Indians who "*cut off all the top branches from a sapling near*

their cabins, leaving the prongs a foot or two in length, on each of which they hang a gourd, or calabash, properly hollowed out for their convenience." In 1929, Forbush added that "when saplings were not conveniently situated the Indians set up poles, fastened crossbars to them and hung the gourds to these crossbars." According to Cooke's 1884 account, the Chippewa Indian name for the martin was: "Mu-ku-dé-shau-shau-wun-ni-bí-si."

Over hundreds, and perhaps thousands, of bird generations (i.e., years) martins gradually gave up their ancestral ways in a process now known as a "behavioral tradition shift." Here's how the tradition shift may have occurred in martins: First, a pair of martins probably tried nesting in a long-handled, dipper gourd, hung near a pond by natives as a drinking utensil. When the Indians discovered this curiosity, they may have been amused and started hanging other gourds for martins around their camps.

Because they were nesting near humans (where predators are scarcer) and nesting in chambers far larger than the ones in old woodpecker cavities, these martins were able to lay more eggs and raise more young than martins nesting in tiny, natural cavities. Perhaps the biggest reason martins switched to gourd clusters, though, is because they are a "super stimulus," relative to tree snags with only one or two nest cavities. In martins, the more nest cavities a site has, the more attractive the site is. This is because adult, male martins instinctively try to engage in extra-pair copulations with the females of the pairs using the neighboring cavities. Males living in colonies can leave two to three times the number of offspring they would if they only nested solitarily and just copulated with their own mate. In any event, the surviving young from these gourd nests would have "imprinted" on gourds and

sought them out for nesting sites when they became breeders the following year.

Concurrently, the Indians may have discovered other benefits, uses, and pleasures from having martins nesting in their company. For instance, documents from the 18th and 19th centuries suggest that these early Americans attracted martins to their villages because they acted like scarecrows, chasing crows away from their corn patches, and vultures away from their meats and hides hung out to dry. It's fun to speculate what additional benefits these Native Americans may have derived from their custom of martin attraction. Perhaps the martins were like alarm clocks, since they begin singing so early and regularly in the morning. Maybe they were like both radios and televisions, since they continually sing such pleasant songs and their behaviors are so entertaining to watch. They certainly would have been like calendars, since every phase of their annual cycle (from arrival, territory establishment, nest-building, egg-laying, hatching, fledging, and departure) is done on such a regular and predictable schedule. They would have been like ancient bug zappers, since they would have eaten the annoying insects that flew around camp. They might have been like

watchdogs, since they are notorious for giving alarm calls when predators or strangers approach. And finally, from the journals of French fur trappers, there is strong evidence to suggest that Native Americans Indians may have used the bodies of martins for the most bizarre function of all; as moth balls to protect their furs from the ravages of insect vermin during summer storage. In 1753, Dumont wrote: "The savages have another secret for the preservation of their beaver, otter, bear, or fox skins, from injurious animals, especially moths, and those Frenchman who go to trade



The famous painting by John James Audubon of Purple Martins nesting in a Native American calabash gourd hung from the dead branch of a sapling. This is from his monumental 4-volume work The Birds of North America published between 1827-1839 and filled with huge, individually hand-colored plates.

among them do not fail to take advantage of this in the preservation of their pelts. For this purpose they make use of the body of a certain bird which in many places is called a 'fisher' [probably a heron or a kingfisher]. After having dried it, some of them cut it into many small pieces which they put here and there on their skins. Others reduce it to fine powder, which they scatter over the skin side of the hair. In whatever way one makes use of it, it is certain that the odor of this bird drives away moths and all other destructive creatures which might be able to injure the peltries. It is asserted that the martin (martinet), a kind of bird which resembles the swallow, has the same virtue and the same properties."

Perhaps for some (or all) of these reasons, a cultural tradition would have begun and other native tribes would have taken up the habit of hanging gourds for martins. Gradually, over time, more and more martins would have chosen gourds for nesting, and fewer and fewer would have chosen natural cavities.

When European colonists arrived in the New World, they too adopted the Indian custom of hanging natural gourds for martins, but they supplemented their offerings with ceramic gourds and wooden martin houses. At the same time, these new inhabitants cut down the entire eastern virgin forest, and with it, the emergent, dead trees with old woodpecker cavities that martins required for breeding, further driving the tradition shift in martin's nest-site choice. Eventually, by the early 20th century, the entire eastern race of the Purple Martin (*Progne subis subis*) nested only in human-supplied housing. The tradition shift was complete. Today, in the 2010s, it is so rare to find martins nesting in natural cavities in *eastern* North America, that to do so would justify the publication a scientific paper. The mystery is why the desert (*Progne subis hesperia*)

and western (*Progne subis arboricola*) races of martins haven't undergone a similar tradition shift. The western race is just now beginning to take to human-supplied housing.

This long association with (and now total dependency on) humans helps explain why martins prefer that their housing not be placed any farther than about 100-200 feet from human homes, and perhaps why they are the tamest of all wild birds. Today, east of the Rockies, they are the only bird species totally dependent on humans for supplying them with nesting sites. And they have been managed by man longer than any other North American species. If we humans were to stop supplying martins with homes, they likely would disappear throughout all of eastern North America, unable to go back to their ancestral ways. In any event, we can thank the Native Americans for "making" martins the "semi-domesticated" birds they are today.

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Blue Memory

Millen Brand

Suppose in this meadow back from the Unami, in this large, rough, larch-shadowed space where cow's horns dig holes in heal-all, mud, and nettle, suppose here the original Delawares reappeared and planted two nine-foot poles, fastened a crossbar, and on it hung gourds hollowed out for purple martins, nests of noise companionable to the nearby tents. The gourds would be tied with threads of larch root torn from the creek ooze, pull-and-reel, pull-in-the-rain, pull-and-peel.

No Delaware knew that those blue immigrants skimmed from Brazil to these nests under a hill, but the moment for attaching the crossbar and gourds was timed exactly to their coming in. Once homed, they swept the air clean, flying faster than dragonflies, hunters' bolts. The young birds' throats called incessantly to be fed — run-and-catch, run-in-the-sun, run-and-snatch — an aerial wampum of blue hawk heads threaded by the wind.

Under the communal dazzle of those wings the Indian wars began. White settlers reminded the Delawares of the treaty that the settlers could buy from them "as much land as a man could walk around in a day." In the "Walking Purchase," three white men ran: "No sit down to smoke, no shoot squirrel, just lun, lun, lun all day long."

Brother Onas changed. Penn's sons changed. No matter that the Iroquois had told the Delawares: "We made Woman of you." The no-longer-woman broke the peace.

As fighting started, Conrad Weiser talked to his Indian friends with the inveterate hope of his concern for them. "To fly with my family I can't do. I must stay if they all go." He stayed. The martins still hunted with their blue strokes, skeins of harsh song, zhupe, zhupe, but their gourds were gone.

Reprinted from the book, Local Lives, by Millen Brand, published in 1975 by Clarkson Potter, New York, NY.

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