



Quaker Parakeets

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Able to survive temperatures of -27° F . . . able to build stick nests weighing up to 2,600 lbs. . . able to survive intense government eradication campaigns. . . and of course able clear tall buildings in a single glide. It's the famous Quaker Parakeet. My goal today is not to share info on the keeping and personality of this species (see December 1999 Bird Talk for an excellent article on this), but to show you a completely different view of the Quaker Parakeet: the wild side of Quakers. This article is based on information from the Monk Parakeet Birds of North America Species Account written by Mark Spreyer and Enrique Butcher. Mark has experience with introduced populations in the US and Dr. Butcher is an Argentinean who has dedicated many years to the study of these birds in their native habitat and this team has done an outstanding job of summarizing what is known about wild Quakers. So, join me as we explore the often surprising lives of this extremely popular species.

The Quaker Parakeet (*Myiopsitta monachus*), or Monk Parakeet as most ornithologists call it, is so well known in aviculture because over 200,000 have been imported into the US since the late 1960's. Quakers are native to the southern part of South America from S. Brazil and Bolivia to central Argentina. They do not inhabit the typical jungle habitats that so many associate with South America, instead they are found mostly in open areas including savannahs and lightly wooded areas. They are completely absent from large areas of dense forest. In fact they do not even occur within the famed rainforests of the Amazon Basin. Perhaps because of this habitat preference they are not a rare and endangered species on the verge of extinction. In fact the species is doing extremely well in South America. In the large grasslands, or pampas, of Argentina the species is rapidly expanding its range as settlers plant Eucalyptus trees near their houses. These trees provide the parakeets the only thing that these open grasslands lack, places to nest. So unlike so many parrots, the Quakers are doing just fine in their native homes in South America.

In the US the importation of 200,000+ birds meant that inevitably some would escape. Some pets escaped from their owners and some owners escaped from their pets (releasing the birds after tiring of their less than soothing calls). Some zoos reportedly released flocks of birds and some escaped from damaged importation crates. All of this added up to lots of escaped birds in many different areas of the country. In fact the species is the most abundant free-flying parrot in the US and has been seen in at least 30 different states. Today there are naturalized breeding populations established in 11 different states including Alabama, Connecticut, Delaware, Florida, Illinois, Louisiana, New Jersey, New York, Oregon, Rhode Island, and Texas. These US populations are confined almost exclusively to urban or suburban areas. Here the mixture of native and exotic tree species interspersed among the houses must provide sufficient food and a structure similar enough to their native savannah homes. The US the populations also seem to be doing very well. Results from Christmas counts in a variety of states show that populations in parts of Connecticut, Illinois,



Texas and Florida have dramatically increased. Nowhere is this clearer than in Florida where numbers recorded on Christmas Bird Counts jumped from less than 4 per year in the early 70's to over 1,000 per year in the early 1990's.

Subspecies: What is a Cliff Parakeet anyhow?

Most experts list four different subspecies of Quakers. If you are curious about what subspecies you may have and want to know where it came from, check sidebar 1. It is uncertain *calita* and *cotorra* are really different enough to be called subspecies, but the others are significantly different from each other and are thought to be good subspecies. In fact the Nigel Collar in his chapter on Parrots for the Handbook of Birds of the World considers *M. m. luchi* so different from the other subspecies that he calls it a different species, the Cliff Parakeet. This form has a very small range in the wild, occupying only a small number of valleys in central Bolivia. Some birds were exported from Bolivia so it is possible that some pet birds in the US belong to this species. If you or anyone you know has one of these, it would be great if you could find another Cliff Parakeet owner and breed this form which is undoubtedly very rare in captivity.

Nesting: Apartments built to suit.

The most characteristic thing about wild Quakers is their nest. They are the only parrots in the world where colonies cooperate to build a stick nest. Each pair builds its own nesting chamber out of sticks. Thorny sticks are the preferred building material as they are thought to stick together better and help deter predators. Each nesting area consisting of an entrance, usually located on the bottom of the nest and facing down to help deter predators. The entrance leads to a short tunnel that widens in to a porch where the birds can turn around and pair members can pass each other during nest visits. This porch then opens in to a large globular chamber where the birds lay their eggs and raise the young. Some pairs will go out on their own and nest in isolated nests but most nests are group affairs containing 2-20 chambers where multiple pairs nest at the same time. In exceptional cases the nests can get quite impressive. One nest on a tower in Argentina contained over 200 different nesting chambers and probably weighed in excess of 2,600 lbs!

These massive structures are usually constructed in tall isolated trees and artificial structures like telephone poles, towers, silos, buildings and even fire escapes. These massive structures on tall isolated structures are a conspicuous part of the landscape and do not go unnoticed by their animal neighbors. In Connecticut a Great-horned Owl nested right on top of a huge Quaker nest, and the Quakers continued nesting right underneath their large and dangerous guest. In other instances the interactions between Quakers and their guests are less amicable. Starlings and House Sparrows often try to occupy chambers in the Quaker nests. But the Quaker's don't take kindly to this and can usually drive away the unwanted squatters. In one instance a House Sparrow was found dead after a prolonged squabble with Quakers over a nest site. In Argentina the tables are sometimes turned on the birds. The Spot-winged Falconet is a particularly unwelcome visitor as it hunts both adult and young Quakers and then even usurps the nest to raise their own young. These falconets prefer to



take over isolated nests with only one compartment giving the Quakers more reason to nest in a colony.

Quakers are not always the innocent victims in cases of nest takeovers; they are known to do their fair share of squatting as well. In Florida they have been found nesting in the lower levels of Osprey nests. In South America the practice is even more widespread. In a study in Argentina Jessica Eberhard found that over half of the Quaker nests were remodeled nests of the Brown Cacholote (10-inch long, jay-like birds that also make large stick nests up to 7 ft. across). Jessica suggests a that the Quakers' nest building behavior may have evolved first as a habit of using, or stealing, the nests of other birds; then as the ability to fix dilapidated nests; then finally the birds evolved the ability to build their own nests.

Whatever the way it evolved, these impressive nests may just be the key to their current success both in South America and the US. These nests free the birds from dependence on the naturally occurring tree cavities that limit the populations of so many other parrots worldwide. The parakeets just need sticks and any tall sturdy structure. These nests also provide another unexpected advantage. They keep the birds warm. Quaker Parakeets sleep in their nests year round and temperatures inside these nests remain significantly warmer than the winter air outside. This may help explain how Quakers survived winters in Chicago where the temperature dropped as low as -27° F. The Quakers are not the only parrots that knew the trick of staying inside in the coldest weather. The Carolina Parakeet, which also occurred as far north as the Chicago area, was reported to have kept warm on the coldest nights by roosting in large groups inside hollow trees

The nest is not the only key to the Quaker's cold tolerance. Experiments have shown that the birds have a great ability to tolerate temperature extremes. At 17° F healthy Quakers showed no signs of hypothermia. The birds also showed a great deal of heat tolerance as well. At 111° F the birds were still easily able to control their body temperature.

[Note the birds in these experiments were in a controlled laboratory setting with no wind and no direct sun, the author does not suggest that you expose your birds to such extremes of temperature without careful consideration]. The birds kept cool not by sweating like we do, but by opening their beaks and panting much like a dog.

The wonderful nests of these parakeets are not without a down side. The fact that they are occupied year round provides nest parasites with a steady food supply. In South America nests are inhabited by two different blood-sucking parasites: a kissing bug (*Triatoma platensis*) and a cimid bug (*Psitacimex uritui*). The cimid bug is completely dependant on Quakers and is found only in the nests of these parakeets. Large nests may contain thousands of these parasites. The desire to escape hoards of parasites may help explain why as many as 50% of the pairs switch nests every year and why some birds may go off and start new nests on their own, even when other colonies are available nearby.

Even when the pairs decide to switch nests they don't go very far. In fact Quakers seem to be homebodies for the most part. When adults switch nests between years they choose a new site on average about 550 yards away. The furthest such move recorded was only about half a mile. Young



of most birds are known to nest long distances from where they were raised. In the parrots that have been studied, most young go on average over 10 miles before settling down to nest, but not the stay-at-home Quakers. On average they locate their nests only a quarter mile from where they were raised. This low rate of dispersal is particularly surprising because they may travel as far as 15 miles from the nest to gather food. The incredibly low rate of dispersal is thought to be a major reason why the species has not spread explosively across the US as officials from agriculture departments nationwide once feared.

Food, agriculture and eradication: Are Quakers the demons they are made out to be?

Wild Quakers in eat a mixture of seeds, buds, fruits, nuts and flowers. In South America they prefer thistle and grass seeds. Perching on a grass stem to eat the seeds can be rather challenging for a bird the size and weight of a Quaker. To get around this problem the birds have been seen hovering and plucking the seed heads off these plants then carrying them off to sturdier perches to eat. Quakers also eat the fruits of palms and other native trees. In Chicago the birds eat a variety of different items including weeds like plantain and dandelion; buds from elm, birch, ash and maple trees; fruits like mulberries, apples, and crabapples; berries from holly and juniper and seed from birdfeeders. In Chicago it is thought that without the food from residential bird feeders the species would not be able to survive because almost all of their food comes from these sources in the winter. This may not be the case in Connecticut where there is a greater abundance of winter foods available

It is the Quaker's reputation for raiding agricultural crops that has brought them in to the greatest conflict with man. In South America the species is known to eat corn, sunflower, sorghum, peaches and pears. This taste for commercially valuable crops has led to their persecution both in South America and the US. In South America the species has been persecuted for over 150 years. Argentineans have used a wide variety of methods to control the populations. They shoot the birds, burn the nests, snare adults at favorite perches, net birds and put out poisoned baits. Even putting bounties on the birds and exporting thousands for the pet trade has not reduced their populations significantly. From 1958 – 1960 in one province in Argentina bounty was paid on 427,206 Quakers killed by local citizens. This is over twice as many as the number listed on US importation records. Yet the populations continue to increase, showing that these campaigns are ineffective. The failure of these campaigns is due to a misunderstanding of the biology of the species. A large proportion of the individuals do not breed each year. So as breeders are killed, non-breeders usually step in and take their place. This means that as much as 30-50% of the population may need to be killed off before the number of breeders is reduced.

In the US the US Fish and Wildlife Service began an eradication campaign in 1973 to help control the potential spread of Quakers in the US. 163 birds were killed, mostly in New York, New Jersey, Virginia, and California but within a few years the campaign faded out without having eradicated the species. Today fifteen states regulate or ban the ownership and transport of the species (see Bird Talk January 2000) because of the supposed threat they pose to agriculture.



How serious a threat are Quakers to agriculture? This is the \$1,000 question and with most such questions the answer is unknown. In Argentina they definitely do eat crops and have caused damage. Unfortunately there has never been any independent measure of the financial impact this has had on farmers, so the only figures come from the farmers themselves and are considered less than reliable. The effects on fruit orchards are considered negligible and for grain crops the effects are unknown. In the US all populations of the species are confined to urban and suburban areas and the only potentially valuable crops they are reported feeding on are apples and mulberries. In fact Spreyer and Bucher list no complaints from farmers in their paper, not even in Florida where the species is the most abundant and tropical fruit orchards occur close to major Quaker population centers like Miami. Given that this species require a variety of fruits and seeds available year round, their current restriction to urban and suburban habitats, and their sedentary nature it seems that their potential for causing great damage to US agriculture is minimal.

For more information on Quaker Parakeets please see Spreyer, M. F. and E. H. Butcher 1998. Monk Parakeet (Myiopsitta monachus). In The Birds of North America, No. 322 (A. Poole and F. Gill, eds.). the Birds of North America, Inc. Philadelphia, PA. Available at most larger libraries.



SIDE BAR 1

Which subspecies of Quaker do you have? Most experts list 4 different subspecies see the list below to get an idea what your bird may be.

Myiopsitta monachus monachus

Range: Se. Brazil, Uruguay and ne. Argentina

Wing length (measured from the bend of the wing to the tip of the longest primary): 14.1-16.1 cm

Weight: 120 g

Note: Largest subspecies of Quaker. Since most Quakers were exported from within the range of this subspecies most pets in the US should belong to this subspecies.

M. m. calita

Range: Western Argentina

Wing length: 13.6-14.4 cm

Weight: 100g

Note: The size difference is the best way to tell this from *M. m. monachus*. If your bird is small it may be this subspecies or *M. m. cotorra* (see below).

M. m. cotorra

Range: Se. Bolivia, Paraguay and s. Brazil

Wing length: 13.1-14.7 cm

Weight: 100g

Note: This subspecies and *calita* are very hard to distinguish. *M. m. cotorra* supposedly is brighter green above and have less yellow below than *calita*.

***M. m. luchi* (a.k.a. the Cliff Parakeet)**

Range: Central Bolivia, geographically isolated from all other subspecies

Wing length: 146-163



Note: This is best told from the others by its distinctive plumage. The gray of the breast is uniform, not scaled. On all other subspecies the breast feathers are darker gray in the center with a lighter border giving the breast a scaled appearance. In addition, the gray on the forehead is whiter and extends to the mid crown in *M. m. luchi*. The band on the upper abdomen is also purer yellow.

This bird gets its name because it builds its stick nests on cliffs in the deep valleys where it lives. This bird has recently been considered a different species *Myiopsitta luchi* the Cliff Parakeet by Collar 1997 (see below for reference). Any aviculturists who have these birds should make a conscious effort to breed them with other Cliff Parakeets to help preserve captive populations of this globally uncommon species.

Adapted from N. J. Collar. 1997. Family Psittacidae. *in* Handbook of Birds of the World Volume 4 Lynx Ediciones Barcelona, Spain.



SIDE BAR 2

Quaker Parakeet Vital Statistics

Latin Name: *Myopsitta monachus* (Myo = fly, psitta = parrot, monachus = monk)

Other Names: Monk Parakeet, Cotorra (Spanish), Caturrita (Portuguese)

Total Length: 11.5 inches

Wingspan: 21 inches

Weight: 90 – 140g

Incubation: 24 days

Clutch size 5 – 7 average 6 *

Fledging: 40+ days in Argentina, 50 in captivity

Stay with adults: 3 – 12 months *

Age at first breeding: 50 – 65% breed in second year *

Percent of wild population that breed: 37 – 60% *

Percent that relay after lost clutch: 20 – 35% *

Proportion that raises two broods: 5% *

Lifespan: 12 – 15 years (in captivity)

Survival: 61% first year, 81% for adults (in the wild) *

Young fledged per nesting pair: 1.5 *

Percent of eggs laid that fledge young: 25% *

* All data are from wild populations in Argentina unless otherwise noted. From Spreyer and Bucher 1998.