

# **FLOCK BEHAVIOR IN THE WILD AND HOW IT APPLIES IN THE HOME**



**T**o understand parrot behavior in the home, one must first start in the jungle. Parrots can be found in the wild on the continents of North America, South America, Australia, Africa, Asia, and on some islands in the Caribbean and the South Pacific.

Most of the species are confined to relatively small areas of the world. Brazil, for example, is home to seventy parrot species, while Australia is home to another fifty-two. Colombia and Venezuela are home to forty-nine and forty-eight species, respectively, and New Guinea is home to an additional forty-six species.

Parrot lovers who want to witness behaviors in a natural setting can visit the Tambopata Research Center in southeastern Peru. The center, which has been in operation since 1990, is located near Manu National Park, where Charles Munn of the Wildlife Conservation Society began studying the habits of wild macaws, particularly as they apply to a clay lick in the park.

Birds visit the lick to obtain sodium that is missing from their diets, and they also may consume the clay to help neutralize toxins that they consume in some fruits and vegetables. Researchers led by Donald Brightsmith, Ph.D., of Duke University now know that visits to the clay lick are somewhat determined by the area's weather. Macaws are less likely to visit the lick on rainy or foggy days than they are on sunny days. They usually do not visit the lick if the morning is rainy, even if the rest of the day becomes sunny and clear. Nine of the fourteen parrot species seen at the lick visit it before 7:30 A.M., while the other species use it at almost any time of day. The birds are most likely to visit the licks between August and December, and they are least likely to visit the lick in May. Researchers believe the changes in visits to the lick throughout the year may tie into the

migrations of some birds away from the area at different times of the year and changes in the food supply during the year.

Visitors to Tambopata can see macaws and other parrots at the clay lick and in the surrounding jungle. Some of these birds are macaws that the research center staff hand-fed, then released back into the wild. These birds, affectionately known as *chicos*, are still tame enough to willingly approach staff members and visitors for special treats. The *chicos* have formed a semi-wild flock, and they forage with the resident birds during the day and return to the center for attention from people in the evening. Some of the birds have paired up with wild macaws and successfully raised chicks.

In addition to providing an ecotourism opportunity for bird lovers, the research center is devoted to improving the reproductive rates of macaws in the area. It has done this by providing additional artificial nest sites using nest boxes made of PVC or wood. The center has also provided natural nesting sites in aguaje palm trees by cutting the palms in such a way as to allow the center to rot and create a suitable nesting chamber for the macaws. In addition to hand-feeding some chicks as noted earlier, staff members have also provided supplemental feedings to some second- and third-hatched chicks in the nest, which has improved the survival rates for some of the second chicks, but not for the third chicks. They hope someday to be able to apply the lessons learned about macaw reproduction to other parrot species in the area.

Initially, researchers were concerned that the ecotourists themselves might interfere with the daily activities of birds and other animals around the clay lick, but this has not proven to be the case. Preliminary reports indicate that the birds do not seem to be affected by the presence of observers, as long as the observers remain quiet and stay about 500 feet away from the lick. Further research on the birds' behavior as it relates to tour groups is underway.

## **Bird Watching**

If you don't want to travel to Peru and you live in a temperate climate, you may be able to see feral parrots in your area. Bird-watchers in the Los Angeles area may have the chance to observe psittacine behavior in the wilds of canyons, parks, and residential streets because feral flocks of conures (cherry heads, mitreds, and nandays are the most frequently seen species), Amazons, and other psittacine species have been reported in the area.

Bird lovers from the Pacific Palisades to Pasadena have been delighted by the antics of these feral birds, which regularly perform gymnastic routines on power lines or raid nut trees. The birds stay in an area for a few days, then move over a few city blocks to start the routine over again.

One flock of feral parrots has become quite well known. They are a group of conures that live on Telegraph Hill in San Francisco. Mark Bittner began caring

for the birds in the 1990s when he was a caretaker for one of the neighborhood's cottages, and he studied their activities closely. His observations led to articles about the flock in local and national magazines and newspapers, a book, *The Wild Parrots of Telegraph Hill: A Love Story . . . with Wings*, and a documentary film, *The Wild Parrots of Telegraph Hill*, both of which were released in 2005. (See appendix B, "Resources," for further information on ordering copies of the book and film.) Bittner continued to keep the birds in the news in California after the movie was released. In early 2006, an agreement was reached between Bittner and a property owner on Telegraph Hill to maintain a stand of Monterey cypress trees the birds used as nesting sites. The property owner had originally planned to cut down the trees, but the cutting was stopped after Bittner threw himself in front of a tree-cutting crew. The new plan calls for additional trees to be planted to support and replace the original trees, which were in danger of falling and damaging nearby property.

Flocks of feral parrots may also exist in San Diego County in southern California, and in Texas, Florida, and other temperate climate zones. Feral flocks of Quaker parrots have been reported in less-temperate climates, such as Seattle and the New England region. In early 2006, animal lovers in Connecticut took legal action to stop a utility company in the state from destroying Quaker parakeet nests that were built on utility poles. The utility company maintains that the nests are a hazard, causing transformer fires and blackouts. The legal action asks that the utility undertake a maintenance plan that prevents the birds from nesting on the poles, rather than the current plan of destroying the nests and the birds after the nests are built.

How many of these parrots got loose is anyone's guess; some attribute the birds to a pet store fire, while others say that a smuggler who was about to be captured freed his supply of birds. Still others with a more realistic attitude attribute their presence to a great many lost (or intentionally freed) pets who were lucky enough to escape predators and band together.

Wherever they live in the world, parrots are naturally social creatures and live together in flocks ranging from a few individuals to several hundred birds. Lowland tropical rainforest is the most typical habitat for parrots, but they can also be found in semiarid climates, mountain areas, or savannahs. Some species are even seen in parks and other urban environments in South America and Australia.

Certain species are found in specialized wild habitats, such as Australia's ground parrot, found in a very restricted mountain heath area in southern Australia. Others, such as thickbilled parrots or glossy cockatoos, seem to live in habitats that contain a particular foodstuff that the parrots enjoy. In the case of thickbills, it's pine nuts, while glossy cockatoos prefer the seed of the casuarina tree.

Some species adapt in different ways to different environments. For example, parakeets living in central Australia have adapted to the harshness of the environment by reproducing at young ages and having many chicks in the hope that

some will survive the rigors of life in this part of the country. Parakeets living on the coast and in the central southern areas, where the climate is less extreme, do not demonstrate this ability to breed early and often.

In the wild, another Australian species, the cockatiel, is active during the early morning and the late afternoon. These are the times when the birds usually head toward a water source to drink, being sure to land, drink, and leave quickly rather than become a meal for a passing bird of prey. They spend a good bit of their days on the ground, searching for food, but they are likely to spend midday blending into their surroundings by sitting lengthwise along tree branches, usually dead limbs that are free of foliage.

Most parrots eat seeds and different types of fruits that they find in the tree-tops or on the ground. Many medium-sized and large parrot species use one foot (usually the left) to pick up and hold food while they eat.

To open a seed, a bird uses his tongue to steady the seed against the underside of his upper beak (a parrot's upper beak has ridges in it that help hold food steady) and peels away the seed husk with his sharp lower beak.

Some parrots, such as lories and lorikeets, are specialized feeders. These brush-tongued parrots live strictly in trees, where they feed on nectar, pollen, and soft fruits.

Some species actually change their diets significantly in the wild when the opportunity is right. For example, the kea parrot of New Zealand changed its diet from fruits and seeds to lamb after settlers in the area began raising sheep. The importance of lamb in the kea's diet has been overemphasized by some, so much so that a bounty was paid on keas in the past. According to Joseph Forshaw's *Parrots of the World*, these large, stocky parrots only feed on sheep trapped in snow, sick or injured animals, or animals the birds perceive as dead. Keas are now under limited protection of the New Zealand government. (See appendix B for more information on the Forshaw book.)

## A Daily Routine

In the wild, the flocks greet the dawn by vocalizing. They do so to alert members of the flock that they will be moving soon, and they also let other flocks in the area know where they are. After the flock is awake, they move from their roosting trees to find food.

Bird language in the wild includes calls to signal the flock that food has been found, calls that indicate a mate has been won, calls that indicate danger is near, calls that bring the flock together at the end of a day, songs to establish territories and to attract mates, and chattering that some researchers believe resembles human conversation.

The birds forage and eat throughout the day, alerting other members of the flock to their location and to potential dangers through a series of calls and other vocalizations.

When they aren't foraging or eating, parrots in the wild spend a good part of their day playing. Young birds learn about their environment through play, and older birds use the opportunity to play to exercise and to reaffirm their position in the flock.

As the day ends, the birds call to each other to gather flock members together, and the flock goes back to roost, starting the cycle again in the morning.

Parrots become sexually mature at around 2 years of age for smaller species and at around 3 years of age for larger species. Because males and females frequently look the same, it is often difficult for humans to differentiate between the sexes. An exception to this rule is the eclectus, in which males are green and females are purple and red. The extreme difference in the coloring of the sexes, called sexual dimorphism, led early scientists to believe that they had actually discovered two different species of parrots!



*Sexual dimorphism, or the outward differences between male and female birds of the same species, is not usually as pronounced as it is in this pair of gang-gang cockatoos at the San Diego Zoo. The male (right) has a bright-red head and a fluffy crest, while the female (left) is less conspicuously colored. (PHOTOS BY JULIE RACH MANCINI)*



Most psittacine species are monogamous, and many mate for long periods, perhaps for life. Pairs demonstrate pair-bonding behavior, such as mutual preening or sitting very close to one another, throughout the year. Experts believe that a strong pair bond helps parent birds be more successful at laying fertile eggs and raising chicks.

A variety of conditions, including rainfall, an increase in the food supply, and gradually longer days, stimulate parrots to breed in their natural environments. In breeding facilities and pet homes, owners will notice that their birds begin to go into breeding mode in the late winter, spring, or summer. Few parrots are year-round breeders.

In the wild, parrots nest in tree cavities, termite mounds, niches carved in faces of sandstone cliffs, and other natural crevices. Few parrots excavate a nest from scratch, according to parrot expert Joseph Forshaw, but they will enlarge or expand an existing nest site that has been abandoned by other species of birds.

*Parrot chicks are altricial when they hatch, meaning that they are blind, featherless, and helpless. However, by the time they are about 3 weeks old, like these cockatiel chicks, their eyes have opened and they have started to develop feathers. (PHOTO BY GARY A. GALLERSTEIN, DVM)*



The nests are predominantly enclosed and parrot eggs are most typically white, so a parent bird can easily see them in the darkness of the nesting chamber. Clutch size ranges from two to five eggs for larger species, and can be as large as eight for smaller species. Eggs are laid on an approximately every-other-day schedule. The incubation period ranges from fourteen to more than thirty days.

Newly hatched young are altricial. This means they are blind, naked, and completely dependent upon their parents. A chick's eyes open about two weeks after hatching, and chicks stay in the nest for three weeks to three months, with smaller species leaving the nest sooner than their larger cousins.

As a rule, parrots do not build what we think of as nests. An exception to this rule is the Quaker, or monk, parrot, which can build quite elaborate nests out of sticks.

## **From Treetop to Cagetop**

What does all this mean to a parrot owner? Whether they are in the jungle or in your living room, parrots demonstrate some similar behaviors. They eat and play, they call to mates and other flock members, and they vocalize at sunrise and sunset. These are all normal behaviors that are unlikely to be modified significantly, although you can usually work with your parrot to modulate his noise level.

Whether in the wild or in your home, parrots communicate by whistling and vocalizing. Often, vocalizing crosses the line into screaming or loudly speaking the phrases you have so lovingly taught your bird, if you are fortunate enough to have a talking parrot. While these sounds may be music to your ears, your neighbors (especially if you're in an apartment or condominium) may not find your pet's antics so charming.

If noise is a concern, do not select a cockatoo or a macaw for your pet because these two species are among the noisiest of parrots. Cockatoos often greet the dawn by screaming, and some feel compelled to acknowledge sunset in the same way. Certain species, such as Moluccans, may hoot and stamp their feet as part of their natural display. Macaws' screams are higher-pitched than cockatoos, which may make them even more grating on your ears or those of your neighbors.

Cockatoos in general like to be the life of the party and the center of their owners' universe. They are emotionally needy birds that require a great deal of time and attention from their owners. If they do not receive it, cockatoos can become destructive feather pickers; some even turn to self-mutilation.

For those considering a medium-sized parrot, keep in mind that Amazons, although lively clowns, may whistle and scream frequently throughout the day. The good news is that their noise level should not bother neighbors. How you feel about sharing space with a noisy green parrot is another matter. For close quarters where noise may be a factor, choose a smaller bird, such as a parakeet, lory, or African grey.



*If your bird spends time on the floor in your home, you must be careful that you don't step on him or that he doesn't injure himself by chewing something that he shouldn't.*

(PHOTO BY JULIE RACH MANCINI)

For those of you concerned about chewing, realize that all parrots chew to some extent. However, some species, such as conures, are more voracious than others. By providing your parrot with access to appropriate chewables, such as food, nuts, or toys, you fulfill his need to chew while reducing the possibility of your bird chewing on some of your possessions.

Another behavior that concerns new parrot owners is biting. If you start with a young bird and handle him properly, you should not be bitten too often, but you must realize that being bitten is part of parrot ownership and, as a longtime bird-owning friend of mine once put it, "Nobody ever died from a bird bite."

Some parrots are more prone to biting during certain times of the year, such as breeding season, or they are incited to bite by their owners roughhousing with them. By being careful in the way you handle your bird, you will significantly reduce your chances of being bitten.

If space is a concern, I would recommend eliminating the large parrots, such as macaws and cockatoos, from consideration. Kept in appropriate-sized cages, these birds can occupy as much space as a full-sized refrigerator! If these large parrots are not allowed the opportunity to exercise outside their cages, they may develop some behavior problems, such as screaming or biting.



Remember that your bird needs the largest cage you can afford in order to benefit from daily exercise. The cage you select should be large enough so your bird can fully extend his wings without having the wings touch the sides of the cage. The bird should also have ample clearance for his head from the cage ceiling and his tail from the cage floor when sitting on his perch. In addition to your bird, the cage must hold a few perches, some toys, a food bowl, a water bowl, and possibly a bathtub.

When choosing your bird's cage, keep in mind that pet birds are like little airplanes, flying across an area, rather than little helicopters that hover up and down. For this reason, long rectangular cages that offer horizontal space for short flights are preferred to tall cages that don't provide much flying room. All cage birds—finches, canaries, softbills, and parrots—need to fly across their cages, so make a long, rectangular cage a priority regardless of the species you keep.



*Parrots, such as this bare-eyed cockatoo, will sometimes eliminate in their food or water dishes. Be careful when placing bowls in your bird's cage or when placing your bird on a T-stand.*

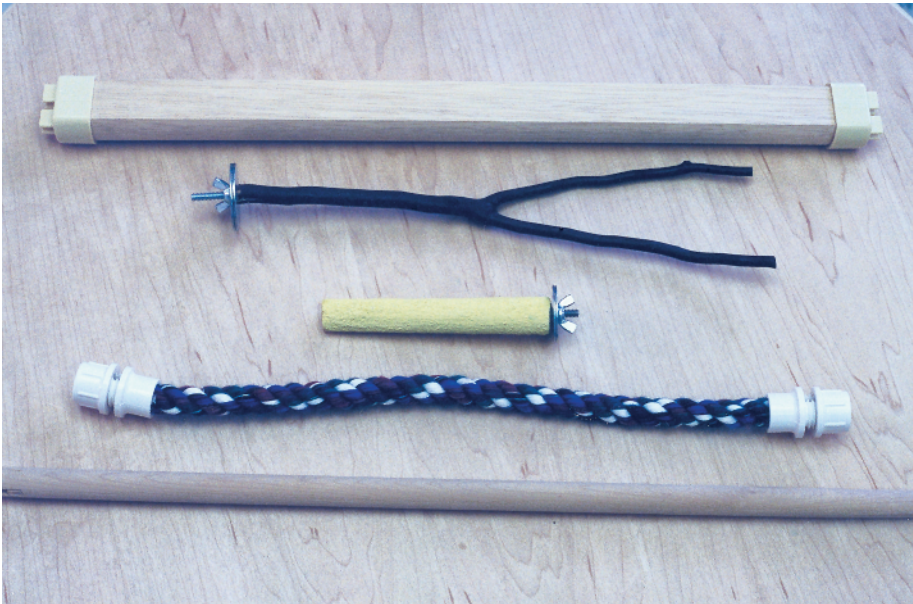
(PHOTO BY GARY A. GALLERSTEIN, DVM)

When setting up a cage for a young parrot, you may want to keep the perches fairly low. Some young birds, particularly African greys, are notoriously clumsy when they're first getting the hang of perching and climbing. Once you see that your bird is navigating around the cage with ease, you can raise the perch heights.

When placing perches in your bird's cage, try to vary the heights slightly so your bird has different "levels" in his cage. Vary the diameters slightly, too, so your bird can exercise his feet by sitting on a perch of recommended size part of the time and on one that's slightly larger than the recommended diameter the rest of the time.

Recommended perch diameters are as follows:

- $\frac{3}{8}$  inch for finches and canaries
- $\frac{1}{2}$  inch for parakeets
- $\frac{5}{8}$  inch for cockatiels
- $\frac{3}{4}$  inch for conures
- 1 inch for Amazons and other medium-sized parrots
- 2 inches for cockatoos and macaws



*Perches are available in a variety of different materials, including wood, rope, and concrete. Providing more than one type of material can give your bird some variety in his perching surfaces, which can help exercise his foot muscles. (PHOTO BY JULIE RACH MANCINI)*

Don't place perches over food or water dishes because birds can and will contaminate food or water by eliminating in it. Finally, place one perch higher than the rest for a nighttime sleeping roost. Parrots like to sleep on the highest point they can find to perch, so please provide this security to your pet.

Domed or round cages may cause some birds to develop behavioral problems, such as screaming, feather chewing, or self-mutilation because they feel uneasy without a corner to settle into. This information helped me to better understand my parrot's situation in her previous home. She had lived in a large, round, domed cage, and she chewed her feathers. She now lives in a smaller, rectangular cage and doesn't pick her feathers. I believe she didn't feel completely comfortable in her old cage because it was difficult for her to get around in, given her crippled legs and reduced mobility. In her present cage, she can maneuver quite well and, I would surmise, feels more at ease.

As you select a cage, you'll need to keep in mind one other dimension: bar spacing. This is the distance between the cage bars, and it's important because birds can get themselves stuck between the bars or even escape from a cage if the bar spacing isn't right for them.

Here are the bar spacing recommendations for commonly kept pet birds:

- $\frac{3}{8}$  inch for parakeets, canaries, finches, and lovebirds
- $\frac{1}{2}$  inch to  $\frac{3}{4}$  inch for cockatiels and small conures
- $\frac{3}{4}$  inch to 1 inch for Amazons, African greys, and other medium-sized parrots
- $\frac{3}{4}$  inch to  $1\frac{1}{2}$  inches for macaws and cockatoos

Reject any cages that have sharp interior wires that could poke your bird. Also be aware that birds may injure themselves on the ornate scrollwork that decorates some cages.

Examine the finish of the cage you select carefully before making your final selection. Make sure the finish is not chipped, bubbling, or peeling, because a curious pet bird may find that spot and continue removing the finish. This can cause a cage to look old and worn before its time, and some cages may start to rust without their protective finish. And if your pet ingests any of the finish, he could become ill.

If you are choosing a cage for a parrot, make sure the cage you choose has some horizontal bars in it so your bird will be able to climb the cage walls if he wants to exercise. Climbing is good exercise that helps a parrot burn off energy he might otherwise use to scream or bite or pull his feathers, so be sure to encourage your pet to exercise inside his cage and out of it. Finches, canaries, and soft-bills are more apt to hop and flit across the cage than they are to climb the cage walls, so horizontal bars are not as great a requirement for them as they are for hookbilled birds.

*Parrots like to climb. Be sure to provide your pet with climbing opportunities in your home.* (PHOTO BY JULIE RACH MANCINI)



If you find wooden or bamboo cages in your shopping excursions for a parrot cage, reject them immediately unless the wood is lined with wire or wire mesh. Although they may be suitable for finches and songbirds, a busy hookbill beak will soon make short work of a wooden or bamboo cage, and you'll be left with the problem of finding a new home for your pet!

## Acrylic or Wire?

Birdcages are traditionally made of metal wire, but you may see acrylic cages in magazine advertisements or at your local pet store. These cages are better at containing seed hulls, loose feathers, and other debris your bird creates, which may make bird keeping easier and more enjoyable for you. Although it sounds like a sales pitch, I can attest that acrylic cages clean up easily—simply wipe inside and out with a damp towel and regularly change the tray that slides under the cage itself.

Before they moved to Texas with their owners, I regularly bird-sat a pair of Pacific parrotlets who had a tendency to fling food around with the greatest of

ease. When they were kept in a traditional wire cage, my dining room table and walls bore lasting reminders of each visit, no matter how diligently I scrubbed them. When the birds returned later in an acrylic cage, nothing remained to mark their passing after their owners took them home.

I also bird-sit a canary who lives in an acrylic cage. He is the easiest bird I have ever cleaned up after, because the feathers, seed hulls, and treat scraps remain within the cage. All I have to do for this bird is change the cage paper daily and clean and refill his food and water bowls twice a day. My own bird's wire cage, on the other hand, requires frequent vacuuming and diligent care.

If you choose an acrylic cage for your pet, make sure it has numerous ventilation holes drilled in its walls to allow for adequate air circulation. Be particularly careful about not leaving your bird in direct sunlight if you house him in an acrylic cage, because these cages can get warm rather quickly and your bird could become overheated. (Pet birds in wire cages shouldn't be left in direct sunlight either, as they can overheat, too.)

If you select an acrylic cage for your pet, make sure to include a couple of ladders between the perches to give your pet climbing opportunities he won't be able to take advantage of on the smooth sides of an acrylic cage.

## **Making Your Bird Feel at Home**

Some birds have special caging requirements. My parrot, for example, lived for many years in a rectangular rabbit cage because it had smaller mesh that she could hook her beak into easily. With her physical limitations, this helped her get around more quickly. However, the galvanized finish made her ill over time, so she was moved into a cockatiel cage with a bright brass finish. The bar spacing was not as convenient for her, but the health benefits were greater.

A parakeet I know named Calvin was handicapped as a chick. (I think his mother sat on him too tightly in the nest and squashed his developing skeleton a bit.) As a result of injuries he suffered early in life, Calvin didn't perch too well and had trouble getting around in and living in a conventional wire birdcage. His owner searched through pet stores to find the best cage for her physically challenged pet, and her solution was a wire hamster cage with climbing ramps and resting platforms, rather than traditional perches. Because the platforms and ramps were wide and had both horizontal and vertical bars on them, Calvin could maneuver around his cage pretty well.

You'll probably notice that your bird spends a lot of time moving around his cage. This mimics the movements of flocks in the wild. During these movements, he often uses his beak as much as his feet. Parrots are very good at using their beaks to climb, reach, hold, bite, hang, eat, preen, or play, depending on what their current activities call for.



In your home, your parrot probably won't spend much time foraging for his food. To provide an outlet for those foraging tendencies, consider offering food in different forms from time to time. Offer whole green beans or peas in the pod to encourage your bird to work for his food a little bit. You can also give your bird nuts in the shell to challenge his mind as well as nourish his body. (You may want to crack the nuts slightly the first time you offer them, especially if your bird is young, so he knows what's inside the nutshell.)

To further help your bird expend the energy he would use to forage and feed in the wild, give him ample opportunities to play. Busy, occupied birds are less likely to misbehave, and they become well-adjusted, content companions. Birds who might otherwise scream, pull their feathers, or become aggressive can channel their energies into play if provided with the chance.

Parrots need suitable toys to play with. If you try one type of toy—for example, a chain with a bell on it—and your bird doesn't like it, don't give up! You may have to try several different types of toys before you find one that your bird likes.

When selecting toys for your bird, be sure they are of an appropriate size for your pet. Small birds, such as parakeets or cockatiels, can become frightened if they are presented with toys that are too large for them, and toys that are too large can even injure them. By the same token, large parrots such as macaws or cockatoos, with their powerful beaks, can easily splinter toys made for smaller birds and the splinters can injure them. Most bird toys are sold with bird-size recommendations printed on their price tag, or you can ask the staff of your bird supply store for recommendations.

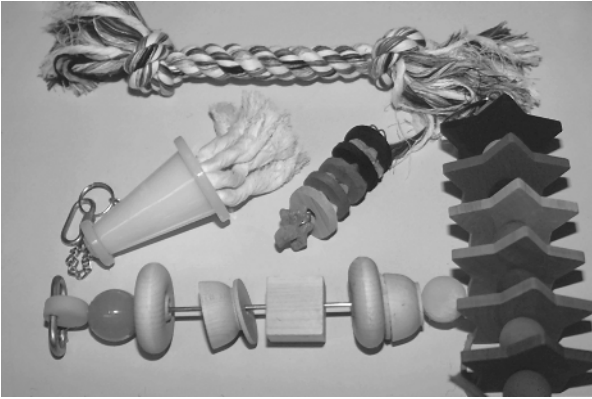
In addition to selecting correctly sized toys, make sure the toys you choose for your bird are safe. Avoid toys that attach to cages with split-ring fasteners because some birds can open these rings enough to catch their beaks, tongues or toes in them. Choose toys that attach with C-clips instead.

Select toys that are made from vegetable-tanned leather and that use food-safe dyes. These are important ingredients in a bird-safe toy because your pet will spend a lot of time chewing on his toys, and you don't want him to become ill from chemically treated leather or dyes that are not food-safe.

Some birds do not react well to brightly colored toys, while others love them. A friend who has a flock of three birds reports that her pets seem to favor toys that have colors similar to those of the birds' plumage. Perhaps these birds perceive items of a similar color as less threatening than those that are brightly colored and foreign to them.

In addition to playing with toys, your parrot needs a chance to flap his wings, climb, hang off of a perch or play gym, or chase a ball. All these activities will help your pet burn off energy. Again, each parrot will have activities that he prefers, so you will have to see which type of exercise appeals to your parrot.

Remember to take time to play with your bird, too. Parrots are flock animals, so your bird would naturally expect to have some company while he's playing. You can roll your bird over and pet his "tickle spots," you can play tug-of-war with him, you can introduce him to a new toy, or you can hold him on your hand or arm while he flaps.



*Toys can be colorful or plain, complicated or simple. You will have to determine which type is right for your bird. (PHOTO BY JULIE RACH MANCINI)*



*Select toys that are appropriate to the size of your bird. These toys are suitable for a parakeet or other small parrot. (PHOTO BY JULIE RACH MANCINI)*

*These toys are suitable for a larger parrot, such as an Amazon or African grey.*

(PHOTO BY JULIE RACH  
MANCINI)



*You can encourage your bird to play by challenging him to a game of tug-of-war.*

(PHOTO BY JULIE RACH  
MANCINI)

