

## **Bird Behavior**

*adapted from "Manual of Avian Practice, A Foundation Manual," Chapter 22 - "Bird Behavior" by P. Lazo Rojas*

### **Introduction**

All bird behaviour originates from 'wild' behaviour, and can be either instinctive or learned. Companion birds need to effectively acquire learned behaviours that can make them socially acceptable as pets and companions. Many of these problems are often chronic by the time the bird is presented to veterinarians. Early recognition and treatment of these problems is more likely to result in successful treatment. Common behavioural problems seen in clinical practice include behaviours such as:

- Attention-demanding
- Displacement behaviours
- Reproductive issues
- Territoriality
- Feather damaging
- Phobias
- Biting
- Screaming
- Psychotic behaviour

### **Principles**

Companion birds face many challenges. These challenges are directly attributable to a lack of knowledge - and sometimes ignorance - of a bird's requirements. The two most common presentations of chronic problems seen by avian veterinarians are malnutrition and behavioural problems. Malnutrition stems from the traditional concept of birds as seed-eaters. The behavioural problems, however, stem from a lack of understanding of the unique nature of bird behaviour, and the owner's attempts to impose their own demands and expectations on their bird - expecting them to behave more like a dog or a cat, or even a child.

Understanding bird behaviour is a constantly evolving subject. What was accepted as fact 3–5 years ago has been debunked or disproved or, at best, modified. Preexisting notions of bird behaviour and its 'modification' or 'therapy' need to be re-examined and, where appropriate, discarded.

### **Understanding Bird Behaviour**

To understand bird behaviour, it is necessary to go back and look at the behaviour of birds in the wild - after all, most pet birds are only a few generations removed from wild birds. However, to generalize and talk about 'bird behaviour' is akin to talking about 'mammalian behaviour.' There are some 9,000 species of birds; approximately 360 of these are parrots. Parrots have evolved in Australia, South America, Africa, and the Asian region. Different environments and environmental pressures have shaped both the physical and psychological development of these birds, and to try and apply 'rules' across all 360 species is fraught with danger. However, there are some generalizations that can be made.

Avian behaviour can be categorized into two functional groups:

**Self-maintenance behaviours**, designed to accomplish a specific task to maintain the health of the individual. These include feeding, feather care, locomotion, and concealment.

**Social behaviours**, designed to communicate information to another individual. These behaviours include territoriality, concern or fear, and courtship.

Parrots are altricial - the young are hatched near-naked, blind, and perhaps deaf. They live for the first weeks of their life in a quiet, dark hollow, completely dependent on their parents. Social interactions at this stage are limited, confined to their siblings and parents. After fledging, many parrots learn to socialize by contact with their parents, siblings, and other birds (often their own age) in a flock. An example of this is the Galah (*Eolophus roseicapillis*). In the wild, clutches of 1–2 chicks, or more than 5, rarely survive.

Once they fledge, the chicks are taken to a nearby 'crèche', a tree or stand of trees where other Galah 'families' are interacting. Here they learn early social skills before joining a nomadic juvenile flock where they remain until reaching sexual maturity. This socialization period teaches the juvenile birds food recognition (and how to locate it), predator recognition, sentinel duties, grooming behaviour, survival skills, and early social behaviours.

As they reach sexual maturity, they learn new skills: how to select a mate, exhibit courtship behaviours and develop a pair bond; how to select, prepare and defend a nest site; and how to reproduce and raise their young.

Some of these behaviours are believed to be innate or instinctive; others are learnt. All are reinforced by the reaction the bird receives. Captive parrots, especially those hand-reared as pets, may not have the opportunity to learn these behaviours. Their instinctive behaviours though - particularly as they reach maturity - may bring them into conflict with their human flock.

### **How Do Behavioural Problems Develop?**

Problems seen in clinical practice can be attributable to one of two causes:

The first basic problem is a failure of the socialization process. This is usually the result of an individual bird being hand-reared in isolation and not being taught basic social skills. Once weaned, the bird is often ignored as its novelty value wears off. This process often results in attention-demanding behaviour (begging calls, screaming, feather chewing, etc.), displacement behaviours such as biting, feather damaging behaviour, phobias, and sometimes even self-mutilating behaviour.

The second group of problems result as a failure of the human 'flock' failing to understand normal parrot behaviour, and expecting birds to 'fall into line' with their human expectations. It was once said that there are no abnormal behaviours - just normal behaviours expressed inappropriately. Behaviours such as screaming morning and night, displaying territoriality and certain reproductive behaviours are examples of normal behaviour that are inappropriate in a companion bird scenario.

## **So how do these problem behaviours develop?**

The reinforcement of self-maintenance behaviours benefits companion birds - and abnormal self-maintenance behaviours are the most common behavioural disorders seen in these birds. They still have the same self-maintenance behaviours as their wild counterparts. However, they need less time for foraging and feeding behaviours (after all the food is in a dish in front of them every morning), and therefore feather care, social communication, and displays make up more of their daily activities.

Young captive birds need continued mentoring and behavioural molding, and require guidance for the establishment of a normal bird-human flock relationship. This includes a range of normal social behaviours of flock interaction, with appropriate rules of conflict resolution and appropriate maintenance and social behaviours.

Failure to be taught - or learn - these behaviours means that many young birds are not prepared for a life in captivity, and may develop behavioural problems. In the absence of imposed rules, the bird will make its own rules, based on immediate gratification and revolving around perceived value; however, these rules may not be socially acceptable. They eventually develop into behavioural problems and the bird becomes unable to socially interact with people without fear or social framework, and therefore a series of displacement, or defensive, behaviours develop - aggression, biting, etc. As these behaviours develop, the bird may become even more isolated, and therefore become more vocal in trying to re-establish contact with their 'flock.'

And this is often reinforced when owners respond: the bird receives a positive response (e.g., talking, feeding, etc.), it may augment the behaviour; if, on the other hand, the bird receives a negative response (e.g., covering cage, time-out, water pistols) that response may augment the feeling of isolation, and the problem may worsen.

Unfortunately, these problems are often chronic by the time the bird is presented to a veterinarian. Early recognition and treatment are much more likely to result in successful treatment; prevention through education of bird owners is a far more preferable approach. Techniques such as incorporating behavioural training into annual wellness examinations are important steps in preventing problems, and should be pursued vigorously by all those involved in the wellbeing of companion parrots.

## **Historical Approach to Treating Behavioural Problems**

Earlier attempts to treat behavioural problems in birds revolved around human concepts of 'discipline'

### **Psychotherapy**

Humans are driven, in many cases, by fear of punishment and negative reinforcement. From early childhood people are made well aware of the consequences of inappropriate behaviour - corporal punishment or even just the disapproval of adults. Given that early thoughts on parrot IQ were along the lines of "as intelligent as a 3–5 year old, but with the maturity of a 2–3 year old," it is not surprising that people expected birds could be motivated by the same fear of negative consequences.

And, if punishment didn't work, surely drugs would! The use of hormonal therapies, antidepressants, sedatives and even narcotic antagonists was advocated as the best therapy for 'misbehaving' patients. Conventional medicine sometimes dictates that for every disease or problem, there is a drug. So,

studies and trials were conducted that resulted in many a companion bird sitting on a perch in a drug-induced stupefaction, and everyone (except the bird) was satisfied.

But, as time wore on, it was realised neither of these approaches were successful in curing behavioural problems. They might have stopped for a while, but as soon as the threat of punishment or administration of drugs was stopped - the problem recurred.

### **New Concepts**

The first change in thinking on bird behavioural therapy came with the realization that drugs and physical restraint devices, such as Elizabethan collars, just did not work. Although they may have a limited, short-term role in selected cases, these therapies often worsen a situation and do not provide a long-term benefit.

A second change in thought was in dealing with the concept of dominance. It was long thought that a strict hierarchical structure existed within bird flocks, with dominance being reflected in advantages such as the highest perch, the best food, and first choice when selecting a mate. It was further thought that in a human - bird 'flock' situation, a similar dominance had to be maintained, with the human at all times being the dominant member of the 'flock.' However, studies of wild birds has shown that dominance, while it does occur, is not at all strict; rather, it is a fluid arrangement with different birds being dominant at different times. A flock is inconsistent in its structures - members are lost to predators, family groups change between flocks, new members are constantly being added. This makes a straight-line hierarchy difficult to maintain - and too energy-demanding to be compatible with survival in the wild. So the rigid dominance so often seen in human society does not readily transfer over to the bird world - and attempts to impose it usually involve 'flooding' a bird (overwhelming it with an imposed behaviour until it acquiesces), or using negative reinforcements and punishment as means of instilling discipline. The problem with these techniques is that the bird learns to perform a behaviour, or avoid exhibiting one, just enough to escape adverse consequences. Once these consequences are removed, the behaviour returns.

### **New concepts in behavioural therapy revolve around several principles:**

Birds are not people - or dogs - or cats. The best results are obtained when a bird wants to do the behaviour that the owner desires. A successful treatment may be a reduction in an unwanted behaviour, rather than a complete cessation of it. Successful behavioural change in companion parrots starts with behavioural change in the parrot owner.

### **Birds Are Not People - or Dogs - or Cats**

Imposing human values and emotions onto an animal (anthropomorphism) can hinder the behavioural modifications clinicians are trying to institute. Using terms such as angry, aggressive, jealous, and happy implies a state of mind which, realistically, we cannot truly assess. And by doing so, a set of expectations are created in the mind of the owners and perhaps in the clinician as well.

## **Parrots are animals that can:**

- Learn to feed from seasonally variable food sources
- Learn the specific call or 'dialect' of their flock
- Interpret subtle nuances in body language of other members of their flock
- Perform elaborate courtship displays
- Learn to mimic sounds in their environment to manipulate an environmental condition or maintain a pair bond
- Develop monogamous pair bond relationships
- Rigorously defend breeding territory
- Develop flight skills advanced enough to avoid/escape predatory attack
- Successfully rear young and make decisions about resource availability that influence fledgling mortality
- They are not little children with feathers; nor are they similar to mammals such as dogs and cats. They are unique, and deserve to be treated as such. It is important to attempt to replicate the environment in which they evolved, providing them with opportunities to exhibit normal behaviours such as foraging flying, interacting socially, and just having fun.

## **The Best Results Are Obtained When a Bird Wants to Do the Behaviour That the Owner Desires**

Reinforcing behaviour can be either positive or negative. Negative reinforcement involves applying a noxious consequence to a behaviour, in the expectation that the bird will cease the behaviour to avoid the consequence. Examples of this include time out; covering a cage, or squirting the bird with a water pistol. The problem with negative reinforcement is that the bird will do only just enough to avoid the consequence, and no more. In fact, as soon as the consequence is removed, the behaviour usually returns. Undesired consequences of negative reinforcement can include escape/avoidance behaviour, aggression, apathy (a decreased responsiveness in behaviour), and fear, leading to phobic behaviour.

Positive reinforcement, on the other hand, involves providing a favourable consequence (or reward) for a behaviour. This increases the likelihood that the bird will repeat the behaviour in the expectation of the reward. The motivation used to stimulate a desired behaviour must be evaluated from the bird's perspective, and can be influenced by several factors:

- The relationship between the bird and the person. This relationship must be built on trust, respect and prior positive experiences. Good communication must exist between the two - both must understand the other's body language in order to know what they want
- The bird's confidence and ability to perform the behaviour
- The bird's past experiences in training and motivation
- Natural influences such as social interaction, breeding season, comfort, and height
- The bird's hunger state - or preference for certain feed items

Some examples of good motivators include favourite food items, praise, and petting, proximity to people, a familiar object, and even out-of-cage time.

Care must be taken to prevent inadvertently reinforcing a behaviour while trying to use negative reinforcement. The classic example of this is shouting at a screaming parrot. Parrots are naturally noisy animals that seem to thrive on noise and drama - it is, after all, a natural part of their life and normal social interaction. While the owner thinks he/she is 'punishing' an undesired behaviour they are, in fact, giving the bird positive reinforcement and guaranteeing that the behaviour will be repeated.

Positive reinforcement can be used to increase, or decrease, the likelihood of a behaviour being repeated. It can also be used to establish and encourage other behaviours. These new behaviours can either be alternative behaviours, or behaviours that are incompatible with the undesired behaviour. Either way, it can lead to extinction of an undesired behaviour.

### **A Successful Treatment May Be a Reduction in an Unwanted Behaviour, Rather than a Complete Cessation of It**

Many behavioural problems are often chronic in nature by the time the bird is presented to a veterinarian. Feather picking is a classic example - by the time the owner has waited to see if it goes away, then consults the Internet, and then tries a variety of pet shop remedies, it may be many months or even years before the bird is presented to a veterinarian. Obviously such behaviours, now deeply ingrained and with their own set of positive motivators (perhaps only known to the bird), are going to be difficult to eradicate. This must be made clear to the owner from the beginning - that success in these cases may simply be a reduction in the behaviour, rather than its complete elimination.

### **Successful Behavioural Change in Companion Parrots Starts with Behavioural Change in the Parrot Owner**

There is no doubt that the owners of many birds are directly attributing to the problems they are experiencing, and directly, or indirectly, reinforcing them. As mentioned earlier, people grow up in a 'punishing' environment, where transgressions are punished, and human behaviours have evolved to avoid such punishments. Birds are not like this, and do not learn well in this manner. People who wish to interact and socialize with birds, preventing, or overcoming behavioural problems as they do so, must change their own behaviour in order to better understand and work with their bird.

These principles call for a re-assessment of how humans think of, and interact with, birds. Until we do so, our success in modifying their behaviour will be limited.

### **Basic Steps to Implement in a Behaviour Modification Program**

There are some basic steps to implement in a behaviour modification program when dealing with problem behaviours.

They include:

- Basic training
- Normalization of social interaction
- Avoid unwanted behaviours
- Replacement of unwanted behaviours with acceptable behaviours
- Basic Training

Many pet birds are hand-reared and seem to recognise accept people as 'members' of their flock. This recognition - and the interaction that comes with it - is what helps to make parrots such enjoyable companion birds. Normally, other flock members would teach the juvenile bird what social behaviors are appropriate through a system of examples and trial and error.

With companion birds, the role of mentor and teacher has to be filled by the owner of the bird. The basic requisites for training are essential to have in place in order to provide a solid foundation for acceptable social behaviors first.

These basics include step-up and step-down, and staying on a perch where placed.

1. "Step up": Stepping up onto an offered hand is a foundational manoeuvre upon which most training and behavioural guidance relies. In light of what is discussed above, it is important that the bird does this behavior because it wants to - not because it has to. By using a food reward and the cue words 'step up', a bird can be taught to step up onto the owner's hand and stay there.
2. "Step down": Stepping down allows the owner to guide the bird's movement. Once again, positive reinforcement (e.g., a food reward) and the cue words 'step down' can be used to teach the bird to step off the owner's hand and on to a suitable perch.
3. "Stay": Staying on a perch is important for a bird to experience "normal" flock social interaction while outside of its cage with its 'flock members,' without getting into mischief or requiring constant supervision. The free-roaming pet parrot is at a much greater risk of traumatic injuries and household poisonings. It is also more likely to develop pair bonded interactions with one person, and less likely to interact with other people. Portable table-top perches are suitable for this training since they can be put anywhere. The bird is stepped down onto the perch and rewarded (verbally or with a food reward) for remaining there. If they climb down and walk around, avoid inadvertently rewarding this - simply put them back onto the perch without any verbal cue or other reward. If they stay there, offer another reward. It is usually necessary to gradually extend the time between placing the bird on the perch and offering the reward.

### **Normalise Social Interactions**

This has to be done on two levels:

1. The interactions between the parrot and the person to whom the bird has bonded have to be modified. Interactions such as picking up the bird, scratching its head and body, playing with it, etc. have to be stopped, or reduced dramatically, while the modification program is being implemented. The bonded person can clean the cage and put in fresh food and water; however, the less interaction the better.
2. Other members of the household need the opportunity to interact positively with the bird. To avoid distracting the bird or triggering protective or territorial aggression, it is best if the bonded person is not around while this is being done and, when 'out of cage' training is being done, the bonded person should bring the bird to a place in which it doesn't exhibit territorial behaviours. The bird should learn to interact with other people using a combination of positive reinforcement and incremental exposure.

For example, have the new person drop a preferred food reward in the bird's food bowl and then walk away. If this is done often enough, eventually the bird will look forward to seeing the new person. This person can then try offering the reinforcement to the bird through the cage bars.

Eventually the reward can be offered for stepping up on the hand as well as other cooperative behaviour. Alternatively, working in a neutral territory, the other members of the household can cue

the bird to perform simple behaviours the bird already knows how to do. This gives the bird an activity on which to focus, while at the same time receiving rewards from people other than the one the bird has bonded to. This can help build a positive relationship with the rest of the household.

The goal with these two levels of modification is to limit the positive experiences with the bonded person and, at the same time, increase the positive experiences with the new person. However, it may never be possible for the new person to interact at the same level the bonded person can with the bird, and it is unlikely positive interactions can occur while the bonded person is in the room.

### **Avoid Unwanted Behaviours**

Analysis of a problem behaviour should follow the ABC of behaviour, where:

A = Antecedent - the situation which led to the behaviour

B = Behaviour - the actual behaviour displayed by the bird

C = Consequences - what the bird got out of the behaviour; consequences can be positive or negative

The consequence will determine whether a behaviour will be repeated or not. If it is not possible to alter the consequence (and therefore the bird's likelihood of repeating the behaviour), it becomes necessary to change the antecedent.

For example, if a bird screams loudly each morning until it is fed, the behavioural analysis is as follows: The antecedent is that there is no food in the bird's bowl first thing in the morning. The behaviour is that the bird screams. The consequence is that the owner hurriedly feeds the bird, positively reinforcing its behaviour. The bird still has to be fed each day; therefore the consequence cannot be changed. However, if the owner places food in the bowl after the bird has gone to sleep the night before - and therefore food is available to the bird as soon as it wakes up - the antecedent has changed and the behaviour should change (or stop). Sometimes it is necessary for the owner to change his/her behaviour in order to change the bird's behaviour.

### **Replacement of Unwanted Behaviours with Acceptable Behaviours**

Most birds, captive or wild, spend their time during the day performing daily maintenance behaviours that are essential for survival. These behaviours include foraging, social interaction, and feather care. Wild birds spend approximately 80% of their waking life foraging for food, with the remaining 20% of their time devoted to socializing and grooming.

If "normal" social interaction with members of the household is limited, as is often the case when owners are at work or school, the other maintenance behaviours (foraging and grooming) must be increased to fill the time. Companion birds, with their food provided in the same dish, in the same place, at the same time each day, do not have to spend so much time foraging in order to survive. This deficit in activity may be replaced with abnormal behaviours such as stereotypical behaviours, feather-damaging behaviour (through over-grooming), or screaming. It may also heighten the bird's anticipation of the owner's presence and lead to problems with pair bonding.

By increasing the daily foraging activities available to a bird, its lifestyle can be enhanced significantly. Interestingly, several studies have confirmed that when a bird is given a choice between foraging for food, or eating it out of a dish, most birds prefer to forage.

**Foraging activities that can be implemented include:**

A piece of non-treated wood (e.g., pine) is drilled with holes into which nuts, seeds, or other treats fit tightly. The reward should be visible but not accessible without chewing down through the wood. The wood can be used as a perch in the cage, hung in the cage to increase the challenge, or used as toy outside the cage.

Wrapping the food bowls with newspaper or cardboard to make the bird chew through it to get at the food. A starter hole may be necessary to encourage the bird to begin chewing. Wrapping food items in small pieces of paper, corn husks or other materials. Not all wrappings need to contain a reward. Mixing food with inedible items e.g., wood buttons or other items so that the bird has to dig through to find its food. Some parrot species can be particularly stimulated into new foraging behaviours by having a large box full of different items in which some desired food items or treats can be found. Puzzle toys that require birds to unscrew parts or manipulate components to get at their reward.

**Other activities that can be implemented to encourage normal behaviours include:**

Lightly spraying the bird with water will dampen the feathers and encourage the bird to groom normally. Providing items for the bird to chew and destroy e.g., non-toxic tree branches, cardboard boxes, wooden toys, etc.

Bird behaviour is complex and, as mentioned earlier, our understanding of it is still evolving. There is no simple approach to dealing with individual cases but, by applying the principles and strategies outlined above, clinicians should be able to have a positive impact on the relationship between bird and owner.

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