

Avian Behaviour

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This paper will provide an overview of the principles and application of behavioural modification and therapy in avian practice.

Introduction

Birds have lived with people for thousands of years. Early records describe parrots being kept as pets in Inca inscriptions and in Indian, Chinese and Persian manuscripts as well as the writings of the early Greeks and Romans¹⁰. The first written record is from a Greek physician and historian, Ctesias, around 500 BC, who described a bird called *Bittacus* which was able to mimic in both an Indian language and ancient Greek¹⁰. The description is that of a Plumhead Parakeet (*Psittacula cyanocephala*) or Blossom Headed Parakeet (*Psittacula roseata roseata*)¹⁰. Aristotle wrote, around 400 BC, that one of the first parrots domesticated was the Alexandrine Parrot (*Psittacula eupatria nippalensis*), brought back from India by Alexander the Great - hence its current name¹⁰.

As we developed our relationship with these amazing birds, we also developed more of an understanding of their behaviours and their needs in captivity. As with any other patient that we treat, an understanding of the parrot's behaviour is an essential part of their husbandry. It is interesting to observe that many of the "problems" that arise in caring for parrots can be attributed to their behavioural needs not being met. As well as identifying and treating behavioural problems, we have a responsibility to educate our clients and raise their awareness of the behavioural requirements of their pets.

Instincts developed over millions of years allow parrots to forage, attract a mate, defend its territory and avoid predation. Many of these instincts can be identified in pet parrots, as they really are wild birds at heart.

When you take a bird into a home and raise it with people, it regards the family as part of its "flock"^{1,2,4}. Its reaction to the behaviours it experiences in this "flock" will determine its ability to cope with a human "flock". The most important guideline to assist people in living with a bird is to give them an appreciation of life, from the bird's perspective¹. This will allow them to develop a more appropriate environment and social setting suitable for a bird¹.

There are many publications listed in the bibliography to assist people with understanding their bird and providing appropriate training¹⁻⁶.

Normal Behaviour

To understand abnormal behaviour, you first need to have an understanding of what are the reasonable expectations of normal behaviour.

Parrots are born as altricial hatchlings that are entirely dependent upon the parents. They live in a darkened environment with other hatchlings and show little natural responses at an early age. As they

mature, they emerge from their nest cavity and then have to develop a suite of behaviours that allow them to fit into their society. Socialisation may take from months to years to develop fully¹.

Skills learnt during the socialisation period¹:

- What is and what is not food
- How to locate and access food
- Predator recognition
- Sentinel duties - Guarding the flock
- Grooming behaviour
- Survival skills

Once they have perfected the above skills, it is time to begin breeding. They must select a compatible mate, develop a pair-bond, select and defend a nesting site, reproduce and successfully raise their young¹.

Many of the opportunities to develop these skills listed above are by-passed or frustrated in hand-reared birds in captivity¹. They are maintained in a well-lit area, often on their own. They are removed at regular intervals and given relatively large amounts of food, then returned to the isolated environment of their nesting area¹. They have minimal social challenges and do not establish a "pecking order". They are deprived of a flock experience and do not learn to forage or develop other survival skills. As they mature, they learn to bond to people (or more likely a person). Once this bond is formed, they will perform instinctive behaviours such as fighting for a mate or defending a mate. This brings them into conflict with family members. Often they are shunned, by their chosen mate, for what is acceptable behaviour to the bird, but unacceptable behaviour to people.

The selection of a pet bird should be based on research of the general characteristics of that species, as some make ideal pets for beginners, while other species are really more suited to experienced bird owners - see Appendix 1. Careful consideration at this point and an understanding of the bird's behavioural needs can prevent many of the commonly reported behaviour problems¹. The alternative is a bird condemned to isolation and minimal interaction or exercise.

The other problem arises with owners who give their birds too many liberties and passively/unknowingly encourage them to be dominant¹.

Clients need to critically analyse the type of environment they are offering to their prospective pet. If they are away for 10-12 hours each day, selecting one of the larger parrots, that needs a lot of interaction, will not make for a suitable pet. Other parrots that can manage with their "mate" absent for long periods each day will need both auditory and visual stimulation – another bird in their cage or a cage close by; a window with a view of outdoors and some activity; radio; TV etc.

Many new bird owners are unsure of what to expect as normal behaviour from the new member of their family. In a lot of cases, they underestimate the intelligence of the bird¹. As well, they are unprepared for the changes that occur as the bird reaches puberty during the onset of its first breeding season – usually late winter to early spring. Some birds may become extremely aggressive and demanding at this time¹. A docile bird can turn into a pugnacious and screaming problem if it is not handled appropriately.

In the wild, most of the bird's time is spent foraging for food. They need to explore and forage in their environment to locate suitable food. Many of these food items must be ripped open, dug up, stripped off or plucked to reach the edible portion¹. In captivity the food is readily available and the birds have little opportunity for exploring or physical exercise. They are not challenged mentally or physically.

Behaviour modification

For any behaviour problem, the basis of correction is techniques used to modify the current behaviour. You need to teach your clients some basic fundamentals to be applied for modifying behaviour. Assist them to understand where the relationship may have been damaged.

Parrots learn by mimicking¹. They spend a lot of time with their parents after they fledge as well as other members of the flock. In captivity, they will, by instinct, mimic the people around them. Some behaviours are encouraged intentionally by people but many of the behaviours are learned passively, without people realising they are a role model.

Behaviours are reinforced by the reaction the bird receives¹. If the response is favourable (in the bird's opinion) it will be repeated to elicit the response. A good example is birds that are screaming will have that behaviour reinforced by people, if they scream back as a form of reprimand.

To modify behaviour, you need to analyse current behaviours and reinforce your role as the dominant individual.

Parrots consider themselves candidates for the top of the social order ("pecking order")¹. It is normal and natural for the bird to try to dominate those around it.

They will attempt to intimidate their owner to gain the dominant role. To prevent this, owners must continually present the bird with dominant signals. You do not need to be always aggressive to reinforce your dominant position - but you do need to give out dominant signals and avoid submissive signals.

Dominant signals toward your bird

Dominant individuals¹:

- Are bigger or have higher perches. Keep the bird below your eye level. Beware the bird sitting on your shoulder, as it may feel dominant.
- Show no hesitation and fear. If the bird lunges at you or bites you, you must mask your fright or it will feel dominant.
- Speak as though they expect to be answered, not pleading and cajoling.
- Offer a firm, steady hand as a perch. Body language that is not confident may encourage the bird to be dominant.
- Teach basic commands and reinforce them frequently. Regular training sessions establish and reinforce your dominant role. If problems develop, begin regular training sessions with rewards.
- Correct inappropriate responses. If you make excuses for poor behaviour and do not correct it, you are reinforcing the problem. You can show affection to the bird, but if you allow it to become spoilt, and do not correct bad behaviour, you are telling it, it is the boss.

Submissive signals toward your bird

A signal is submissive when¹:

- The bird's eyes are above the handler's mouth and eyes. Keep the bird on your hand or forearm, do not allow it to climb up onto your shoulder.
- The handler averts their eyes. Maintaining eye contact is dominant behaviour. The dominant individual is always on the lookout to correct inappropriate behaviour. If they allow their vigilance to slip, they are asking to be challenged.
- The handler holds their hand behind the back (folded wings). Dominant body language is essential to maintain your dominant role.
- The tone of voice is soft and cajoling (baby talk).

Bird Training Techniques

Training is a tool to assist the bird in fitting into a human environment. It is also used to reinforce appropriate behaviour and to extinguish inappropriate behaviour. The techniques applied here are based on those used with other animals.

Every behaviour will have a positive or negative consequence that immediately follows its performance². Positive consequences reinforce the behaviour and ensure that it will be repeated. Negative consequences do not consist of physical punishment. But removal or withholding something the bird desires (e.g. an object, an interaction or an activity)².

- Begin each session with cheerful body language and voice
- Make each session a game and an enjoyable experience for the bird.
- Initial sessions are brief and designed to show the bird you are not a threat but a source of pleasant experiences. Simply reward the bird for allowing you to be close.
- Choose a treat that the bird is extremely keen to have. This may take some initial experimentation.
- Begin subsequent sessions with a specific behaviour previously learned and reward the bird until it is comfortable. This ensures the bird understands that there is no threat and that it will be readily rewarded.
- Divide any process to be trained into small incremental stages
- Do not progress to the next stage until the bird is comfortable with the current stage.
- Short pleasant training sessions are preferable to long drawn out ones that may leave the bird either stressed or bored.
- Sessions should be repeated at least daily until each goal is achieved.
- If you have progressed too quickly, return to a stage where the bird is comfortable and then build up again.
- Be insistent but not aggressive. Do not force the issue. Allow the bird to be comfortable.
- Spend more time on any behaviour that is a problem. Repetition and reinforcement is the aim.

Example: Training bird to "**step up**" onto your hand:

- Touch the bird's breast plumage and give a reward
- Gradually accustom the bird to allow you to touch more ventrally until you can touch the feet and legs (this may take many sessions over weeks, depending on the bird's personality).

- Reward each touch and immediately say "up". This links the reward to the word, so that in future the word will elicit the response, as the bird knows they are linked.
- Once the bird is comfortable and realizes that the reward follows the touch, show the bird a treat and hold your hand just away from its legs. Many will come towards you to elicit the treat. This is an important process as it allows the bird to decide to perform the behaviour. Begin to reward as the bird moves towards you. In subsequent sessions only reward the completed behaviour - stepping onto your hand.

Other behaviours to train¹:

- **Step Down:** Bring your hand or arm up to the perch so that it steps forward or backwards onto the perch.
- **Stay:** when the bird is on the perch, say "stay" and remove your hand away far enough to block it stepping.
- **Hooding:** cup your hand over the bird's head and eyes while talking softly and calmly. For small birds such as a budgerigar, form a tunnel with your hand and teach the bird to crawl through. This can become a game they enjoy, where the tunnel is made longer by repeatedly placing one hand on top of the other as the bird crawls through.
- **Transport:** teach the bird to step into and out of a cage or carrier voluntarily. Place the bird into the cage, close the door and wait 30-60 seconds then allow the bird to step out onto your hand.
- **Towel:** a towel is useful for simple restraint purposes (e.g. medicating, clipping claws or feathers). Hold a towel (or if it is frightened use a small cloth such as a handkerchief) near the bird and gradually accustom the bird to its presence. Once it is comfortable, gently move it up, down and around to accustom the bird to its movement. Treat it as a game. Each day, increase the proximity of the towel until you can touch the bird with it and lead up to placing it over the bird's back, shoulders and head. Progress to gently wrapping it around the bird and allowing it to find its way out. Eventually you should be able to wrap the bird and hold it securely without it panicking.

Commonly Encountered Behavioural Problems ¹ (refer to Appendix 6)

- Attention seeking
- Grooming
 - Excessive grooming
 - Compulsive grooming
 - Failure to groom
- Aggression
 - Dominance aggression
 - Fear aggression
 - Possessive aggression
 - Protective aggression
 - Territorial aggression
- Depression
- Fear
- Generalised anxiety
- Neophobia
- Obsessive/Compulsive disorder
- Psychogenic polydipsia
- Satyriasis

- Self-mutilation
- Separation anxiety
- Trichotillomania

Behaviour Modification Techniques

1. Dominance

The owner, as well as all family members, needs to regain the alpha position in the "flock"¹.

- Place the cage at a lower height to establish dominance¹.
- Encourage the bird to adopt a submissive role. Clip the wings¹. Encourage it to lay on its back in your hands¹.
- Gently handle the beak, wings and feet¹. This reinforces dominance as only the dominant individuals are allowed to perform this.
- Practice commands during regular training sessions¹ - "up", "down" and "stay" are all commands that every pet bird should be taught. When a command is given, it is reinforcing dominance, while the correct response by the bird reinforces its submissive role.
- The handler should always use tone-of-voice, eye contact as well as body language and attitude that express confidence (dominance)¹.
- Correct inappropriate behaviour¹. Use several simple commands in a row (e.g. "Step-up") with appropriate reward at the end. The speed and use of repeated commands reinforce dominance. There is a fine line here between correction and punishment. Do not repeat the command so many times that the bird feels punished. Responding to a command should never be seen as a punishment.
- If the bird is on your arm and tries to bite, use the "dump" or "wobble"¹. You need to be vigilant so that when the bird reaches over to bite, quickly wobble or drop your arm to unbalance the bird. Combine this with a reprimand as well as a strong tone-of-voice and stern body language.
- Be consistent and do not lose your temper. If problems arise, give the bird in a quiet place for ten minutes and then resume. If you lose your temper and cause extreme fear you may never regain the bird's trust
- Begin every training session cheerfully even if the previous one was not pleasant.

2. Fear

Fear is easily recognised by the bird's reactions. They often run, climb or fly away in a panic and many will scream. Some roll onto their back and defend themselves with their feet.

These birds need constant good quality contact with people and need to feel they are in a secure environment.

- Keep the bird as close as possible to the centre of the family area.
- Provide a calm, quiet, non-threatening environment.
- If the bird is extremely timid, shy or frightened, you can initially display some submissive signals. Have the bird's eyes above the handler's mouth.
- Elevate the cage until the bird is calmer.
- Begin handling and training sessions with your hands behind your back (wings folded).
- Do not maintain eye contact as staring is very threatening.

- Use a cheerful and coaxing tone-of voice.
- Avoid the use of hats or hair that is raised or brushed up as this may mimic a raised crest - a threat sign
- Once the bird is behaving more confidently use non-aggressive techniques to establish a quiet, calm, dominance.
- Identify sources of fear and slowly expose the bird to the source. Only increasing proximity or frequency of exposure when the bird becomes comfortable and tolerant at each level.
- Psychotropic medications combined with the behaviour modification techniques above can be successful.

3. Screaming

Screaming is reported as being responsible for more birds being abandoned than any other problem¹. There is often a fine line between normal vocalisation (calling and squawking) and the level when it should be regarded as a behavioural problem (screaming). This problem arises because suppression of normal vocalisation may cause the bird to become stressed. A normal bird does not squawk constantly¹. Most birds will vocalise and “sing” at dawn and dusk with short bouts during the day. They rarely vocalise after dark. In many instances the birds are vocalising because they have learnt that it is good technique for gaining attention from their owners – feeding them; coming over to the cage or even negative attention such as: throwing something at them; yelling at them; squirting them with a water pistol¹.

- As soon as screaming occurs, cover the bird with a dark cloth, turn out the light or place it in a darkened room and close the door¹.
- When the screaming ceases, open the door and uncover the bird. Speak to it very softly. Teach it that a soft voice attracts you, not a loud one¹.
- When you are in another room in the house, call to the bird in a gentle singing voice. Eventually, it will mimic you and call back to you in the same style of voice. If the voice is appropriate then you can answer it. If it is inappropriate - ignore it and keep talking in your singing voice.

Treatment of Feather Picking

This can be a difficult problem to diagnose its cause and so arrive at a treatment regime. There are many causes of feather picking and you need a full work up to rule out causes other than behavioural. If medical causes are identified, treat them before embarking on behavioural treatments.

You have worked up your case and arrived at your diagnosis that a behavioural problem is the underlying cause of the feather picking. What do you do now? You need to discuss the options with your client and make your assessment of which treatment is likely to meet with some success. In all cases you need to be guarded in your prognosis - clients are often quite disappointed when their bird does not respond and they need to be prepared for all outcome possibilities.

Counseling & Behaviour Modification

Many clients are searching for the “magic pill” that will return their pet to normal. They see the problem as being a simple need to “just stop the bird chewing”. Once you have eliminated parasites, dietary problems and disease, you must assist the client in coming to terms with the fact that their bird is whacko. But how do you say this to them. I usually describe it as similar situation to a nervous breakdown in people. They know and

understand that people with this affliction will not recover quickly but with the right attitude, supportive environment and prolonged treatment they have a good chance of returning to normal.

Many of the birds are hand-reared and are displaying signs of separation anxiety. You need to discuss behavioural modification techniques with your client.

To conduct a thorough behavioural consultation is a prolonged procedure. Begin with careful questioning (I use the questionnaire in Appendix 4) about the following areas and then ask more specific questions as problem areas are revealed:

- the bird's previous history
- changes to its environment
- what happens around the bird with arrival and departure of family members
- how much time the bird spends alone
- What is normal behaviour for this bird - how does it interact with others in its environment
- What is the normal husbandry
- behavioural enrichment techniques already applied - indicate successes and failures

If the bird is to improve, some behaviour modification must be used. The attitude of the owner is paramount to a successful outcome. If the client is not prepared to change their interactions with the bird, it has little to no chance of improving, as the current behaviours will be reinforced.

As with behavioural problems in other species, the underlying problem is the client's lack of understanding of the bird's needs emotionally and physically. I use a client handout to assist them remembering material discussed in the consulting room. Appendix 5 contains an example based on one developed by Dr Bob Doneley, West Toowoomba Veterinary Hospital.

To assist to bird to adjusting and fitting in to any changes, the client will need a lot of patience, perseverance and determination. They also need some in-depth discussion of behaviour modification techniques and how to apply them in their individual situation^{1,2,3,4,5,6}.

To educate clients in modifying their bird's undesirable behaviour you need to change the way they view and interact with the bird. The client needs to be instructed in means of shaping the bird's behaviour and removing any positive reinforcement, by family members, of factors that lead to feather picking or other behaviour problems that may be present.

Restraint Devices

These are any apparatus that impedes the bird's ability to damage itself with its beak or claws. The two common techniques in use are:

1. **Elizabethan Collar.** This is made from many materials, cardboard in small birds through to X-ray film in larger birds. My preference is to make the central hole eccentric so that it naturally falls with the joint at the caudal aspect of the bird's neck. The joint may be fastened with anything that is light and will withstand the bird's beak. I do not use them often nowadays as they restrict the bird's movement too much.
2. **Neck Brace.** This is a roll of material that is applied around the bird's neck, reaching from the base of the chin to the top of the shoulders. It functions like the neck brace applied for cervical injuries. Its presence is less obtrusive than the elizabethan collar and birds appear to tolerate it better. I prefer to fit it under general anaesthetic and some experience is needed to select the correct length. Pressure sores from the

material rubbing, are common on the ventral aspect of the mandible and the lateral aspect of the shoulder girdle.

Some birds do not tolerate these devices well and may throw themselves around. Others will become quite depressed by their presence and refuse to eat or move around. Deaths have been reported in birds which

Medications

The use of medications for control of behavioural problems in birds has been reported to have variable success¹. To use them correctly, you must have knowledge of method of action, specific indications and potential adverse effects. It is important to use medications appropriately or results will be unreliable.

Use of all these medications is off-label and you must discuss this with clients prior to their administration. As well, all these drugs have a potential for abuse by people so client education and accurate records of quantity and dosage instructions must be kept¹.

When using psychotropic drugs, the aim is to alter the action of neurotransmitters and so enhance their action²²:

- Excitatory neurotransmitters¹
 1. acetylcholine
 2. dopamine
 3. androgens
 4. some specific amino acids
- Inhibitory neurotransmitters¹
 1. serotonin
 2. gamma-aminobutyric acid (GABA)

Appendix 2 contains drugs currently used or that have been used in the past with comments and indication of their primary effect.

Appendix 3 contains a list of the medications used for Obsessive Compulsive Disorder (OCD), and anxiety-related disorders in people. These medications are commonly grouped together and called antidepressants. Some practitioners are experimenting with these drugs and attempting to tailor their use to each patient's requirements. Most do not have any clear dosage regimes developed.

There are three classes of antidepressant medications commonly in use in people:

- Tricyclic Antidepressants (heterocyclics)
- Monoamine Oxidase Inhibitors (MOAI)
- Second Generation MOAI (developed in 1980's)

Monoamine Oxidase Inhibitors non-specifically inhibit type A and B monoamine oxidases to block degradation of norepinephrine, serotonin and dopamine. Monoamine Oxidase (MAO) is an intracellular enzyme located in the mitochondria, that catalyzes the conversion of biogenic monoamines

(norepinephrine and serotonin) to their deaminated products. Inhibition of MAO results in the increase of concentration of monoamines in the synapse¹⁹.

Alternate Therapy

A recent survey reported in the daily press announced that approximately 70% of the human population have tried an alternative to western medicine, for an illness. Just as they are trying these treatments on themselves, there is a growing acceptance, and in many cases a strong desire, for these modalities to be provided for animals. Explanations offered for this interest in alternate medicine are: “chronic diseases rarely are successfully cured using conventional allopathic methods. Alternative modalities, including acupuncture, herbal medicine, homeopathy and nutrition show promise for increasing the success rate in treating these chronic conditions”⁸.

! Acupuncture^{24,28}

David McCluggage, a Veterinarian in Longmont, Colorado, USA, reported that he had treated at least 750 avian patients with acupuncture and noted an improvement in 70% of the birds¹². He went on to say that several were bald and had been this way for more than ten years, but after treatment all were fully feathered. “The earlier I get the case, the easier it is to help. I find that I need to use a variable number and location of acupuncture points determined by the individual needs of my patients - there are no ‘cook-book’ approaches that work consistently”¹².

Acupuncture cannot work miracles, but it can “take the edge off the bird’s daily anxieties”¹². The balance has to be provided by the changes the owner makes to the bird’s environment and routines.

! Chinese Traditional Medicine / Herbal Medicine^{21,25}

These medications are often difficult to administer to birds, as they are extremely hesitant to eat any food that tastes unusual⁸. Many of the products are suspended in alcohol. Some practitioners feel that alcohol is contraindicated in birds and boil the product to drive off the alcohol prior to it being mixed in a strong tasting food⁸.

! Homeopathy.

This has been proposed in birds as an adjunct to acupuncture⁸ or as a stand-alone medication^{7,23,25,26}. In Australia, medications used vary from the common homeopathic formulations used overseas such as the Bach Flower Remedies to homegrown products like the Australian Bushflower Essences. The products come as concentrate in solutions, powders or tablets. Tablets are crushed and then suspended in either water or brandy. Concentrates are diluted prior to dispensing. Medications are given once to twice daily for several weeks before an assessment is made.

• Nutriceuticals

Along with the credibility problem with modern medicine there are also concerns regarding modern agricultural and farming techniques. There is a growing concern that many of the behavioural manifestations in animals and people are related to factors such as pesticide residues in grain and other food products, as well as artificial colouring, salt and sugars in many commercial products¹³.

In both scientific and avicultural literature²⁷, anecdotal evidence is proposed for the use of diets that are wholly made from organic components as a treatment for feather picking in birds that are on diets that contain dyes,

or where pesticides and other chemicals have been used in their production^{8,13}. The use of such diets is becoming more popular, such that the dietary change is seen as a form of therapy.

Zinc Toxicity

An emerging problem with zinc toxicosis is feather picking^{13,14}.

In most parrots this can now be diagnosed by measuring blood levels if a sufficient quantity of serum can be harvested. In many instances, there is no large heavy metal foreign body detected by radiography, so diagnosis may have to be based on a high index of suspicion based on history and clinical signs. This is often mistaken for a behavioural problem, as the normal signs of disease are absent. Treatment is with Calcium Edetate (Calsenate) at a dose rate of 20-40mg/kg bid or tid or DMSA (Dimercaptosuccinic acid) 25mg/ml used at a dose rate of 30mg/kg for approximately five days. As well, the potential sources of zinc must be removed to avoid further exposure.

Conclusion

In my opinion, treatment of behavioural problems comes down to your personal philosophy of practice as to which, if any, of the techniques described in this paper fit into your therapeutic regime. Many of them are not backed by accepted scientific scrutiny, but there is a great deal of interest and experimentation currently being used in their application. It is over to each of you to scrutinise these modalities and to expand on them or quash them - whichever is appropriate. Whatever happens, I think we are in for some interesting experiences as they are debated and developed in veterinary circles worldwide.

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Appendix 1: Temperament of Common Avian Patients³

Species	Country of Origin	Temperament	Comments
Canary	Canary Islands, Azores	Nervous, do best in a quiet, calm household. Young imprinted birds are more suited to captivity	Males sing well, so often kept as solitary to enhance this characteristic. Suitable for beginner birdkeepers
Finches	Australia, Africa	Highly strung, very nervous. As a group can cope well in busy noisy locations. Imprinted and hand raised individuals may cope well as solitary in captivity	Best kept with other finches. Suitable for beginner birdkeepers.
Budgerigar	Australia	Strong personality, extremely active and fearless. Young hand-raised birds interact well with their owners. Enjoy playing with toys and people.	Some are good talkers, but not all. Females more likely to be aggressive than males. Good choice for a beginner.
Cockatiel/ Quarrion	Australia	Most are a pleasure to live with, very affectionate. Will try to mate with anyone they fancy. Easily stimulated sexually.	Not known as good talkers. Prefer companionship to toys. Quite popular pet in Australia
Lovebirds (Agapornis)	Africa	Adults extremely difficult to train. Hand-raised young can be quite tame, but females may remain aggressive.	Poor talkers. Females more likely to be aggressive than males. Can be very aggressive to birds other than their mates in an aviary situation.
Asiatic Parrots (Psittacula) e.g. Indian Ringneck, Plumhead, Alexandrine	India, Asia	Hand-reared birds can be very affectionate. Untamed birds are flighty and resent close contact. May be tame as young but develop aggression as they mature	Attractive coloration, usually poor speakers. Not common as pets in Australia
Rosellas and similarly sized Australian parrots (Platycercus, Psephotus etc)	Australia	Single hand-reared birds can be a good pet if the household is quiet. Can be quite aggressive to other birds.	Poor speakers. Well-behaved as a single pair in an aviary. Not common as pets in Australia

Appendix 1: Temperament of Common Avian Patients (continued)

Species	Country of Origin	Temperament	Comments
Conures	South America	Delightful pets if hand-reared. Many species easily become screamers if their needs are not met - Nanday, Jenday, Half-moon and Sun Conures. Patagonian and Maroon-bellied can be quiet pets if raised in a single bird household. Not common as pets in Australia	Can speak a little but usually limited clarity. Patagonian and Nandays can be carriers of Pacheco's virus and a risk to other birds in the house. Can be aggressive if not under the control of their owner - begins as playfulness and rapidly advances if not checked.
Caiques	South America	Hand reared birds bond strongly to one person. Usually playful and very active. Playfulness can develop into aggression if not controlled	Muffled speakers. Good pet for a beginner. A small number as pets in Australia - owners love them.
Lorikeets	Australia and South Pacific	Usually highly strung. Hand-raised birds can be very affectionate and bond closely to family members	More intricate diet than other parrots - consume fruit and nectar. Have sloppy droppings. Usually poor speakers. A small number kept as pets in Australia.
Eclectus	Indonesia, South Pacific, New Guinea, Australia,	Highly strung and demanding. Females can be aggressive particularly during the breeding season. Males usually gentler than females. Ideally pet-birds should be hand-raised and introduced to their new home at an early age, as vices develop early in life.	Highly intelligent. Can speak clearly and have an extensive vocabulary. Prone to feather-picking especially females. Becoming more popular as pets in Australia
African Grey Parrot	Africa	Highly intelligent, often shy and occasionally nervous. They do not suit a large, noisy family but are better in a quiet household and prefer to bond to one person. Even social birds are more suited to an all adult family. Need to socialise with other family members from the beginning.	Very clear speaker, with good mimicry. May not speak for the first year of life. A popular pet in USA, only available in limited numbers in Australia.
Amazon	Central and South America	A popular pet in USA, only available in limited numbers in Australia. Can be aggressive and noisy pets. Respond well to behavioural modification to eliminate undesirable behaviours.	Wide range in temperaments and speaking ability. Choose a bird that is inclined to be vocal if you wish to have a speaker. Good talkers are usually noisy by nature - it is unlikely you will have one without the other.

Appendix 1: Temperament of Common Avian Patients (continued)

Species	Country of Origin	Temperament	Comments
Amazon	Yellow-naped	Medium to large sized bird, speaks well usually very social - interact well with others in their environment. Have a short attention span, so you need patience to train them. Can be difficult to separate aggressive behaviour from enthusiastic playfulness.	Poorly socialised birds may become screamers and aggressive when reach maturity. Never trust them with small children.
	Double Yellow-headed	Tend to be at the extreme end of behaviours (docile and sweet or aggressive and unpredictable). Choose a docile bird as a pet. It is often much more difficult to curb undesirable behaviour	Avoid choosing a shy, nervous bird for a pet. Tend to be quieter, more dignified than Yellow-naped.
	Blue-fronted	Monitor for aggressive tendencies around sexual maturity.	Intelligent birds that if handled and raised correctly make an exceptional pet
	Red-lored	Have a gentler nature than other Amazons. Undesirable behaviours usually less extreme.	Possess and above-average inclination to speak.
	Lilac-crowned	Friendly, docile nature. Some people regard these as the most easy going of the Amazons.	Medium capacity for speaking. Suit a family situation if raised with children.
	Orange-winged	Quiet, docile nature	Not as clear speech as others
Cockatoo	Australia, Indonesia	Extremely intelligent, but wide variation in temperament between individuals. Enjoy being groomed and can be very affectionate. Are extremely self-absorbed. Need a large amount of variation and mental stimulation to avoid boredom. They must be taught independent play habits at a young age or they become extremely dependent on their owner and develop undesirable behaviours when owners are absent - a form of separation anxiety	Commonly will develop screaming and/or severe feather-picking if their needs are not met. Do not show enjoyment when talking to owners, in many cases appear to be vocalising to themselves rather than owners. Large amounts of powder in plumage make them a problem for allergy and asthma sufferers

Appendix 1: Temperament of Common Avian Patients (continued)

Species	Country of Origin	Temperament	Comments
Cockatoo	Sulphur-crested	In my opinion most of these birds are too intelligent to suit the captive environment people offer. A large number present with behaviour problems.	Can be affectionate to the extent of being a problem. Not known for being clear speakers, can be poor to good speakers.
	Galah (Rose-breasted)	Can be highly strung, so suit a quiet environment. Easily develop strong bonding to owner, similar to Sulphur-crested and have same problems.	Usually poor talkers, more like mumbling speech.
	Major Mitchell (Leadbeater's)	Temperament a mix of Sulphur-crested and Galah. Can be extremely affectionate and develop a strong bond with their owners..	Not known as good talkers. Love to chew furniture and other objects, can be quite destructive.
	Black Cockatoos	Similar to Sulphur-crested but not as determined. Can be very noisy and easily become screamers. Bond strongly to their owners.	Becoming more common as pets in Australia, particularly Yellow-tailed and Red-tailed.
Macaws	Central and South America	Tend to be a stable bird in captivity. Less nervous and more predictable than cockatoos, but similar level of intelligence.	Are usually very active and enjoy interacting with people. Can be screamers.
	Noble & Hahn's	Smallest macaws. Affectionate and quite playful. Have a scream much larger than you would expect.	Most talk well but clarity is variable - clear to muffled. Are suited to beginner macaw owner.
	Yellow-collared	Larger than Noble Macaw. Can be temperamental - likely to nip. Need a more aware owner to avoid behavioural problems.	Usually poor speakers.
	Severe	Not as temperamental as Yellow-collared. Usually a good pet for beginner owners.	Usually poor speakers.
	Blue and Gold	Rowdy and affectionate, fit well into a family situation. Highly intelligent and very active. Need to be intellectually stimulated and challenged. Need room to be physically active	The most common macaw in Australia. Many will talk clearly and have a vocabulary of extensive phrases.

Appendix 1: Temperament of Common Avian Patients (continued)

Species	Country of Origin	Temperament	Comments
Macaws	Scarlet	More high strung and nippy than most macaws. Not suited to beginners or households that are noisy or have small children. Highly intelligent and very active.	Second most common macaw in Australia. Most consistently reliable speakers in the macaw family. Need to be intellectually stimulated and challenged. Need room to be physically active
	Military	More high strung and nippy than most macaws. Prefer to bond strongly to only one individual, so can be a problem in multi-person households.	Need proper socialisation and training to be a well behaved pet, so not suitable for beginners.
	Greenwing	Good natured, calm and easy going. Tender and affectionate once bonded to their owner. Regarded as the gentlest of the macaws. Slow moving behaviour falsely makes them appear to be clownish.	Largest macaw of <i>Ara</i> species. This makes them intimidating to many people. Fair to good speakers. Ideal pet for someone who wants only one large bird.
	Hyacinth	Extremely gentle and sweet natured. Similar to Greenwing with deceptive demeanour. A very intelligent bird. Can become excessively vocal and demanding if spoilt, or not trained and handled well early in the relationship.	The largest macaw and often regarded as the most beautiful. Ideal pet for someone who wants only one large bird. Only a very small number available in Australia.

Appendix 2: Common Medications for Avian Behavioural Problems 1.15.16.17.18

Medication	Dosage	Primary Effect	Comments I = Indications SE = Side Effects
Lithium	6-25mg/kg bid	Decreases the cellular response to neurotransmitters in general. Mood stabiliser, Anti-psychotic	No longer used in birds May cause mild transient hypothyroidism Usually marked PD/PU
Bromocriptine		Decreases the cellular response to neurotransmitters in general. Mood stabiliser, Anti-psychotic	No longer used in birds
Medroxy-progesterone	5-25mg/kg every 4-6 weeks	Potentiates GABA Has a non-specific calming effect Suppresses sexual activity Anti-inflammatory	I: feather picking, possessive, aggression SE: obesity, liver degeneration diabetes mellitus Not recommended for long term use because of side-effects
Diphenhydramine	2-4mg/kg bid	Antihistamine - inhibit histamine receptors Sedative	I: feather picking, suture picking, bandage picking - only has limited success SE: drowsiness
Hydroxyzine		Antihistamine Sedative	rarely used
Diazepam	0.5mg/kg bid or tid	Tranquilliser - central sedation Anticonvulsant Dopamine inhibitors GABA potentiators	may cause motor impairment from muscle relaxation I: feather picking, excessive fear or phobia SE: sedation, can interfere with learning ability, making training less effective
Phenothiazines (Acepromazine, Chlorpromazine)		Dopamine antagonists	Rarely used in birds
Butyrophenones (Haloperidol)	0.10-0.15mg/kg	Inhibits Dopamine Tranquillisation	I: Self mutilation but less effective for feather picking SE: Anorexia, inappetence, depression, excitability, agitation
Anticonvulsants (Phenobarbital)	3.5-7.0mg/kg	Potentiates GABA	Rarely effective for behaviour problems I: feather picking associated with seizures SE: Sedation, liver effects with long-term use
Naltrexone	1.5mg/kg bid	a mixed narcotic agonist/antagonist Blocks endorphin response at the opiate receptors in the brain	Alleviates anxiety and calms the bird to allow it to habituate to fearful stimuli and respond better to behavioural modification techniques I: feather picking, self mutilation, fears phobias SE: none reported

Appendix 3: Antidepressants for Avian Behavioural Problems^{1,15,16,17,18, 19}

Medication	Dosage	Primary Effect	Comments I = Indications SE = Side Effects
Monoamine Oxidase Inhibitors		Non-specifically inhibit type A and B monoamine oxidases to block degradation of norepinephrine, serotonin and dopamine.	Hypertensive crisis may arise Mood swings may be apparent
Isocarboxazid Phenelzine Tranylcypromine Selegiline		Inhibit MAO	I: depression, panic attacks, eating disorders, agoraphobia May take as long as 8 weeks to begin working SE: No known long-term risks Rarely used in birds Has been used for cognitive dysfunction in dogs
Tricyclic Antidepressants		Sedation, anticholinergic activity Inhibit norepinephrine and serotonin reuptake in the CNS	Strong antihistamine effect makes them useful for pruritus Combine with behavioural modification for best effect. Poor result if used without behavioural modification SE: due to anticholinergic effects - dry mouth, constipation, urinary retention and arrhythmias
Clomipramine	0.5-1.0mg/kg sid or bid	Serotonergic, antidepressant anxiolytic, antihistamine	I: feather picking, fears or phobias SE: regurgitation, drowsiness, arrhythmias
Doxepin	0.5-1.0mg/kg bid	Serotonergic, antidepressant anxiolytic, antihistamine	I: feather picking, fears or phobias SE: regurgitation, drowsiness, arrhythmias
Amitriptyline Nortriptyline Trimipramine			Amitriptyline is bitter

Appendix 3: Antidepressants for Avian Behavioural Problems (cont.)

Medication	Dosage	Primary Effect	Comments I = Indications SE = Side Effects
Others			
Fluoxetine (Prozac)	1mg/kg sid	Serotonergic effect without anticholinergic or antihistaminic activity SSRI - Selective Serotonin Reuptake inhibitor	I: feather picking SE: none reported Binds to the serotonin transporter and inhibits reuptake, enhancing serotonin activity within the synapse.
Sertraline Paroxetine Fluvoxamine		SSRI - Selective Serotonin Reuptake inhibitor	These bind to the serotonin transporter and inhibit reuptake, enhancing serotonin activity within the synapse.
Aminoketone (bupropion)		Norepinephrine/Dopamine reuptake inhibitor	
Triazolopyridine (Trazodone and nefazodone)		Serotonin reuptake inhibitor/Serotonin antagonist	5-HT ₂ receptor antagonist. The inactive metabolite of Trazodone possesses postsynaptic serotonin agonist activity
Tetracycline (Mirtazapine)		Presynaptic alpha-2 adrenergic/serotonin antagonist.	Enhances the transmission of norepinephrine due to alpha-2 -autoreceptor blockade and of serotonin due to alpha-2-heteroreceptor blockade
Phenylethylamine (Venlafaxine)		Serotonin/Norepinephrine reuptake inhibitor. But has little effect on dopamine	Also has a pharmacologically active metabolite (O-desmethylvenlafaxine) that acts in the same manner

Appendix 4 - Bird Behaviour Questionnaire

[Based on Miller (1999) & Welle (1999)]

The return of a completed behavior record allows us to start critically evaluating the environment, social interactions, and behaviour of your bird.

The more detailed information you give us, the more specific recommendations we can make.

The process of evaluating this history in the context of other clinical information about your bird takes substantial time. Please telephone us on 4229 8888 so that an appointment can be made and we can discuss the findings with you.

Please tick the box of your choice

Please retain this for my bird's record,
but I do not wish to proceed with the consult at this time.

I wish Dr. Michael Cannon to proceed with the behavior evaluation and agree to the consultation fee.

Sign below if you wish to receive the behavior consultation, including a printed list of recommendations.

Signature

Owner Name

Bird's name

Species

Age

Sex **Male** **Female** **Unknown**

Method of sex determination:

For each question, where applicable, please circle one option

A. Basic Details of my Bird

1. I got my bird from
 - a pet store
 - a breeder
 - a show
2. My bird was
 - wild caught
 - domestic parent raised
 - hand raised.
3. When I took my bird home, he/she was
 - still being hand fed
 - just weaned
 - weaned a while but sexually immature
 - sexually mature
4. Other than the breeder or Pet Store, the number of previous owners of my bird is
 - 1
 - 2
 - several previous owners.

Prior to bringing my bird home I visited him/her

- Never
- Occasionally
- frequently

B. Environment

6. Describe the bird's cage or environment. Give brand name, size, etc.
 - Cage Brand Name:
 - Approximate Dimensions (in centimetres or metres):
 - Height
 - Length
 - Breadth
 - Other features:

List all furnishings and contents of the cage.

How many hours per day does your bird spend in the cage?

7. Describe other areas where your Bird spends time.

8. How much time is spent here?

9. List toys your bird has access to.

10. Draw a simple map of your house and put in the bird's cage, play area, as well as areas where family members spend time.

13. Move the bird's cage to another area for this exercise.
Sit or stand at bird-height in the location of the cage.
Describe everything; you see and hear in all directions, including up and down.
If possible, photograph or video-record this.

How many hours per day is your bird alone?

14. What sights, sounds, and other stimuli are available to your bird while you are gone?

15. At what time are the lights in the bird's area turned off at night?

16. At what time does first light come in the morning?

17. Would you consider the light intensity provided to your bird
- Bright
 - Dim
 - Moderate

19. Describe your bird's diet in detail. Give brands of pellets. Describe your bird's preferences in food items.

20. What is your bird's feeding schedule?

21. What are your bird's favorite treats?

22. Are there any smokers in the household?

- Yes
- No

23. Do they smoke around the bird?

- Yes
- No

24. List any other sources of odors or fumes in the household?

25. How often and in what way is your bird bathed?

26. Do you dry the bird following a bath? How is this done?
27. Describe your Bird's Flock (other birds or pets it interacts with).
28. List all human members of the household and list the ages of children within the household.
29. List all of the animal members of the household.
30. Who does the primary maintenance of the bird?
31. Who spends the most time with the bird?
32. Who does the bird appear to prefer?

33. Who does the bird appear to dislike?

C. Bird's Behaviour

1. Would you say that your bird will step onto your hand

- Easily
- Hesitantly
- Rarely or never

2. Is your bird allowed on your shoulder

- Often
- Occasionally
- Rarely or never

3. How does your bird greet you when you come home?

4. How does your bird greet strangers?

5. Does your bird play

- Vigorously
- Moderately
- gingerly

6. Describe your bird's play behavior.

7. Does your bird talk?

- Yes
- no

8. What is the bird's vocabulary?

- Nil
- Limited
- Moderate
- Large

9. Does your bird like to be petted?

- on the head
- on the back
- over the tail
- under the wings
- other

10. How well does your bird tolerate restraint?

- Well
- Resents any restraint

Problem Behaviors

1. Which behavior problem does your bird exhibit?

- Biting
- Screaming
- Feather plucking (What part/parts of the body?)

.....

- Feather chewing (What part/parts of the body?)

.....

- Self mutilation (What part/parts of the body?)

.....

- Irrational fear of new situations
- Other (describe)

2. If we have not seen the behavior occur, could you provide a videotape of the behaviour occurring?
If not describe in as much detail as possible, what your bird is doing.
3. Specifically describe the situations in which these behaviors occur.
4. Describe what you do when these behaviors occur.
5. Has any change recently occurred in the household? Please include' even minor things as birds may perceive these things differently than we do.
6. Please write any other information you would like to mention?

Appendix 5
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FEATHER PLUCKING IN PARROTS

Feather plucking is common, and often a difficult problem to diagnose and treat.

Typically, the bird has **normal head feathers** with feather loss or damage only in areas the bird can reach with its' beak. Anything from small patches, to the whole body may be affected. It occurs commonly in Sulphur Crested Cockatoos, Galahs and Cockatiels, but any species can be affected.

There are many causes of feather plucking, so a thorough investigation may be needed to get an accurate diagnosis. Without an accurate diagnosis, effective treatment is very difficult. Unfortunately, there is no single "*magic cure-all*" for feather plucking birds. Listed below, are some of the causes of feather plucking and possible treatments.

DISEASES CAUSING FEATHER PLUCKING

- 1. Allergies:** recent work has shown that some birds are allergic to certain seeds (oats, sunflower and canary seed), and house dust mites. Some birds respond to 'elimination diets' i.e. the only seed permitted was millet seed, and the general diet was improved with the addition of fresh fruit and veg. Central heating has been associated with increased dust and allergies in people and birds, as well.
- 2. Mites and Lice:** often blamed but rarely a problem. Generally easily diagnosed and treated.
- 3. Intestinal Parasites:** worms and protozoal parasites frequently cause feather plucking, especially in Cockatiels and Budgies. Diagnosis and treatment is usually quick and effective.
- 4. Low Humidity:** Tobacco smoke and central heating have been blamed for drying out feathers and causing excessive preening. Regular, light water sprays can be beneficial.
- 5. Skin Infections:** infectious dermatitis may cause feather plucking or may be the result of it. Beak and Feather Disease often causes feather loss and feather plucking.
- 6. Psittacosis:** although pneumonia and gastroenteritis are the most common symptoms associated with psittacosis, many birds pick their feathers as well. Antibiotics are usually curative.
- 7. Malnutrition:** common in parrots on seed-only diets. These lead to vitamin, mineral and protein deficiencies which frequently cause feather plucking. Improving the diet will cure the problem.
- 8. Cancer:** is common, especially in Budgies, Galahs and Sulphur Crested Cockatoos. The birds will pick at skin cancers or areas of skin overlying tumours. Severe, self-inflicted wounds can result. Many tumours seen in birds can be successfully operated on.

PSYCHOLOGICAL CAUSES OF FEATHER PLUCKING

When all medical causes of feather plucking have been ruled out, psychological causes are considered.

- 1. Boredom:** parrots are very intelligent and get bored easily. This is common cause of severe feather plucking. A change of scenery, people or other birds for company, interesting toys, chewable food (such as fruit and vegetables and non toxic wood) to chew, and TV or radio can all help to stimulate bored birds.
- 2. Over crowding:** leads to stress and aggression. This may cause birds to pluck themselves or other birds. Be very careful when placing a new bird into a cage with an existing bird.
- 3. Environmental change:** although birds enjoy stimulation they also need routine. Sudden or constant changes can often lead to stress. Frequent cage movements or new toys may cause this.
- 4. Poor wing clipping:** may cause a bird to chew at the feathers and over preen.
- 5. Sexual frustration:** many single birds may pick their feathers in the breeding season.

However, *don't* introduce a 'mate' without sound advice as this may actually make the problem worse.

Appendix 6 - Commonly Encountered Behaviour Problems

(Based on Welle, 1999)

Diagnosis	Signs	Bird's Actions	Treatment Summary
Attention seeking	Using vocal or physical behaviours to attract attention from people who are otherwise occupied	Bird behaves in a manner by physical or vocal means to attract attention and to interrupt human activity; screaming, destructive behaviour or any behaviour that has been reinforced in the past	Do not respond to any attention seeking behaviours. Do not allow extreme excitement to be rewarded by attention. Reward and reinforce quiet behaviours, at a time that is suitable to the owner.
Grooming Disorder	29. Compulsive Grooming: Grooming in excess of that required to keep plumage in good condition 30. Excessive Grooming: grooming unrelated to hygiene or plumage maintenance that is more frequent or intensive than previously exhibited	Feather-picking, feather chewing, self-mutilation	Give a thorough medical examination to rule out pathology. Common causes that need to be addressed: fear; boredom; loneliness; lack of exercise; sudden changes in the environment; improper socialisation; removal of a favoured person or companion
Failure to groom	Failure to groom: reduced or lack of normal grooming combined with depression	Failure to preen	Behaviour modification - lots of enjoyable training and interaction with owner. Groom the bird yourself and reward it when it grooms itself.
Aggression	1. Dominance: abnormal, inappropriate, out of context aggression consistently exhibited under any circumstance involving passive or active control of the animal's behaviour 2. Fear Aggression: aggression that consistently occurs accompanied by signs of fear: withdrawal; passive and active avoidance associated with sympathetic autonomic nervous system 3. Possessive aggression: Aggression that is consistently directed towards another individual who approaches an object the aggressor wishes to control 4. Protective aggression: Aggression that is consistently directed to a third party in the presence of a certain individual. Occurs in the absence of an actual threat	1. Intensification of aggression as a response to active or passive correction or interruption of the behaviour 2. Aggression accompanied by urination and/or defaecation. Is only active aggression when recipient disengages from behaviour. 3. Aggression does not occur when person is absent 4. Aggression intensifies with proximity or signs of threat, despite correction or reassurance from the person being protected.	Owner has to assume alpha position within the "flock". 1. place bird' cage on a lower level, beneath human eye level 2. Wing clipping keeps bird at a submissive position 3. Encourage bird to lay on its back in your hand - a submissive position 4. Touching can convey dominance - Gently handle beak, wings, feet and reward the bird's acceptance of this 5. Training - teach bird to respond to commands - practice and reinforce "up". "down" and "stay". 6. Behave dominant -Convey dominance by body language, tone of voice and eye-contact 7. If biting - wobble or shake your arm and hand vigorously to distract the bird at initiation of a bite

Diagnosis	Signs	Bird's Actions	Treatment Summary
Aggression (cont'd)	5. Territorial aggression: Aggression that occurs in a circumscribed area (car, home, cage etc.)	5. Aggression intensifies as recipient approaches and continues despite correction or attempts to interact	8. Use non-violent corrections of bad behaviour - do not grab the beak or hit the bird- use tone of voice, facial expression and mild reprimand 9. Be consistent, Do not lose your temper. If bird misbehaves during a training session, give it time out and then try again later
Depression	Prolonged endogenous or reactive withdrawal from social stimuli, change in appetite, change in sleep/wake cycles not incidental or attributable to lethargy	Decreased motor activity and actual physical removal from social and environmental stimuli in the absence of underlying neurological or physiological condition	Behaviour modification - lots of enjoyable training and interaction with owner. Reward interactions and activity with treats and grooming the plumage while speaking in a soft voice and displaying relaxed body language. Psychotropic medication
Fear	Behaviour that occurs with withdrawal, passive and avoidance behaviours. Sympathetic autonomic response without aggression	Bird moves away from perceived threat, and assumes submissive pose. Panic screaming, running away, bird hangs onto back of the cage, flips onto its back and fights with its feet. Mild fear may be shown as constantly watching a person. May be accompanied by urination and/or defaecation	Keep the bird near the family group or centre of traffic flow. Slowly expose the bird to the source of fear until it develops tolerance, then increase proximity until the end result is tolerance and acceptance at all times. Behaviour modification - lots of enjoyable training and interaction with owner.
Generalised anxiety	Consistent exhibition of increased autonomic hyperactivity, increased motor activity, increased vigilance/scanning that interferes with a normal range of behaviours	Bird is hyperactive and displays increased activity in the absence of provocation stimuli	Psychotropic medication Behaviour modification - lots of enjoyable training and interaction with owner.
Neophobia	Consistent, sustained, extreme non-graded response to unfamiliar objects and circumstances. Manifests as intense avoidance, escape or anxiety behaviour associated with sympathetic autonomic activity	Fear when encountering any new objects or circumstances. May show extreme signs of fear. Repeated exposure does not reduce or vary the bird's response.	Keep the bird near the family group or centre of traffic flow. Slowly expose the bird to the source of fear until it develops tolerance, then increase proximity until the end result is tolerance and acceptance at all times. Psychotropic medication
Obsessive/ Compulsive disorder	Repetitive/stereotypic motor, locomotor, grooming, ingestive or hallucinogenic behaviours that occur out of context to their normal occurrence or of a frequency or duration that is in excess of that required to achieve a specific goal.	Repetitive behaviour that interferes with the bird's ability to otherwise function normally within its environment	Psychotropic medication Behaviour modification - lots of enjoyable training and interaction with owner.

Diagnosis	Signs	Bird's Actions	Treatment Summary
Psychogenic polydipsia	Water consumption in excess of physiological needs. Usually accompanied by significant polyuria.	An excessive consumption of water that has no detectable underlying pathological cause and is altering the bird's time budget and interfering with normal activity	Psychotropic medication. Behaviour modification - lots of enjoyable training and interaction with owner.
Satyriasis	Excessive sexual displays: solicitation, courtship display mounting, thrusting, masturbation, regurgitation of food to its owner, etc	Sexual displays unrelated to degree of provocation and usually directed interspecifically (to a different species). It may be directed towards animate or inanimate objects. e.g. Randy Budgie Syndrome	Do not reward sexual displaying. Limit stroking and grooming to neutral areas - avoid legs, medial aspect of legs, ventral abdomen and dorsal lumbosacral areas. Socialise to many family members rather than just one.
Self-mutilation	Removal of plumage with abrasion, excoriation, petechiation or ulceration to a part of the body	Feather loss and/or damage as well as damage to surrounding structures, from the bird's grooming behaviour	Give a thorough medical examination to rule out pathology. Common causes that need to be addressed: fear; boredom; loneliness; lack of exercise; sudden changes in the environment; improper socialisation; removal of a favoured person or companion. Psychotropic medication
Separation anxiety	The presence of physical or behavioural signs of distress only in the absence of the owner it is bonded to.	Distressed behaviour whenever bonded owner is absent	Avoid extreme excitement when you are leaving or returning home - this emphasises the joy of the presence of the person and attaches it to the person's presence so that their absence is more extreme. Ignore the bird around arrival or departure and then give it attention at random intervals, once you have settled in. provide distractors (regularly change them so they retain their novelty) for when you are absent. Psychotropic medication
Screaming	Incessant, repetitive excessively loud vocalisation	Usually at times when bird is not receiving attention it feels it deserves or it is giving an alarm call that a possible threat is present. Most common time for social vocalisation is morning and afternoon. Screaming at other times should be suspected as the beginning of a behavioural problem if it is repetitive. Treatment is best as early as possible.	Remove any attention as a punishment. Cover the bird, turn out the light and shut the door, so the bird receives no attention until it is quiet. Reward and attention should be provided as close as possible to the bird ceasing screaming. Once screaming ceases, turn on the light, remove the cover and open the door and speak to the bird softly. Reinforce that it is a soft voice that attracts you not the screaming. Psychotropic medication

Diagnosis	Signs	Bird's Actions	Treatment Summary
Trichotillomania	Removal of plumage with injury to the skin or surrounding structures	Usually only feather loss and areas of baldness in areas most accessible to the beak. Unusual for damage to occur to skin.	Give a thorough medical examination to rule out pathology. Common causes that need to be addressed: fear; boredom; loneliness; lack of exercise; sudden changes in the environment; improper socialisation; removal of a favoured person or companion Psychotropic medication