
Diagnosis of Behavior Problems in Pet Birds

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The successful treatment of behavioral disorders requires a specific diagnosis. This requires careful collection and evaluation of the history, observation of the bird and owners. The resulting diagnosis should be considered a hypothesis which is to be tested by making changes and behavior modifications, and following the response.

Introduction

Veterinarians are trained to diagnose and treat medical problems. There are many situations, however, which are largely behavioral in origin. Traditionally, once a diagnosis of a behavioral etiology of a problem has been made, veterinarians have made no attempt to further define this category. Successful resolution of these problems, however, requires a more specific diagnosis. Since veterinary patients cannot be interviewed to determine what this problem is, it can be difficult. A hypothesis can be made by careful collection of a history and observation of the behavior of the patient. This hypothesis is then tested by making the necessary environmental changes or behavior modification.

Taking a history for behavior problems

While taking a good history is stressed for nearly every aspect of veterinary medicine, in behavior medicine it is really the only diagnostic option. It is therefore critical that the history be accurate and thorough. No tests will catch the omissions of the history. The history should be done in a way that is consistent. Each question should be asked every time. It is important that the questions are neither leading nor accusing. If clients feel guilty, or if they perceive that a certain response is desired, they may alter their story. Some important facts to find out about include the source, environment, diet, social interactions, and of course the behavior problems, and what the owners are doing in response to them. It is useful to give clients a survey form to fill out prior to the consultation. A sample form is provided below. The standardized form can then be augmented by interviewing the owners during the behavior consultation.

Owner		Bird's name	
Address		Species	
Phone		Age	
Work		Sex	
FAX		Determined	
Email		Color	

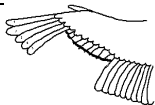
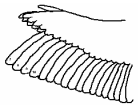
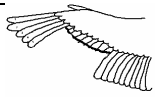
Please check which of the options below that you would prefer.

<input type="checkbox"/>	I would like to proceed with the behavior consultation and I agree to the fee of _____.
<input type="checkbox"/>	I do not wish to proceed with the consultation but retain this for my bird's medical record.

Medical and Grooming Information

My bird: <i>has</i>	<i>has not</i>	been examined by my veterinarian in the past 6 months.
My bird: <i>has</i>	<i>has not</i>	been examined by my veterinarian for this problem.

Have your veterinarian send a copy of your bird's medical record if he/she is not one of our patients.

My bird's wings are: <i>fully flighted</i>	<i>Clipped</i>	
First wing trim was done: <i>before weaned</i>	<i>after weaned</i>	<i>when mature</i>
		
Wing trim style:		
Wing trim is:	<i>one side</i>	<i>both sides</i>

Bird Source

I got my bird from : <i>a pet store</i>	<i>a breeder</i>	<i>a show</i>	<i>shipped</i>
My bird was: <i>wild caught</i>	<i>domestic parent raised</i>	<i>hand raised</i>	

When I took my bird home, he/she was:

<i>still being hand fed</i>	<i>just weaned</i>	<i>weaned a while but sexually immature</i>	<i>sexually mature</i>
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If you hand fed this bird, did you:

<i>allow to wean on his/her own</i>	<i>force weaning</i>	<i>continue hand feeding beyond 6 months of age</i>
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Other than the breeder or pet store, my bird has had: 0 1 2 *several* previous owners.

Prior to bringing my bird home I: *never* *Occasionally* *frequently* visited him/her.

Environment

Describe the bird's cage. Give brand name, size, etc.

List all furnishings and contents of the cage

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

Describe other areas where your bird spends time.

Environment (Continued)

How much time is spent here?

List toys your bird has access to.

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

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 you can photograph or video record this, much more information can be determined.

How many hours per day is your bird alone?

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

When are the lights in the bird's area turned off at night?

When does light first come in the morning?

Would you consider the light intensity:	<i>bright</i>		<i>dim</i>		<i>moderate</i>	
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Environment (Continued)

What types of lights are used in the area where the bird is kept?

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

What is your bird's feeding schedule?

What are your bird's favorite treats?

Are there any smokers in the household?

Do they smoke around the bird?

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Are there any other sources of odors or fumes in the household?

How often and in what way is your bird bathed?

Do you dry the bird following a bath? How?

Your Bird's Flock

List all human members of the household.

List all of the animal members of the household.

List the ages of children within the household

Who does the primary maintenance of the bird?

Who spends the most time with the bird?

Who does the bird appear to prefer?

Who does the bird appear to dislike?

Bird's Behavior

Would you say that your bird steps on your hand:	<i>easily</i>		<i>hesitantly</i>		<i>rarely</i>		
Is your bird allowed on your shoulder:	<i>often</i>		<i>occasionally</i>		<i>rarely</i>		<i>never</i>

How does your bird greet you when you come home?

How does your bird greet other family members?

Describe your birds play behavior.

Does your bird talk?

Yes		No	
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Vocabulary:

<10 words		10-30 words		>30 words	
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Does your bird use words appropriately?

Yes		No	
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Does your bird like to be petted:

on the head		on the back		over the tail		under wings		other	
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When out of the cage, is your bird in physical contact with someone:

constantly		intermittently		rarely		never	
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How well does your bird tolerate restraint?

doesn't mind at all		doesn't like it but tolerates it		gets very stressed	
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How does your bird respond to the following situations:

Favorite approaching:	<i>anxiety</i>	<i>Fear</i>	<i>calm</i>	<i>happy</i>	<i>excited</i>	<i>aggressive</i>	<i>can't tell</i>
Other approaching:							
Stranger approaching:							
Favorite opens cage:							
Other opens cage:							
Stranger opens cage:							
Favorite hand in cage:							
Other hand in cage:							
Stranger hand in cage:							
Favorite step-up:							
Other step-up:							
Stranger step-up:							
Favorite petting/touching:							
Other petting/touching:							
Stranger petting/touching:							
Favorite hands food:							
Other hands food:							
Stranger hands food:							
Other approaching favorite:							
Favorite approaching other:							
Stranger approaching favorite:							
Favorite approaching stranger:							
Stranger approaching other:							
Other approaching stranger:							
Favorite to other transfer:							
Other to favorite transfer:							
Favorite to stranger transfer:							
Stranger to favorite transfer:							
Other animal approaches:							

Favorite out of vision:							
Other out of vision:							
Loud noises:							
New objects out of cage:							
New object in cage:							
Strange places:							

Which behavior problems does your bird exhibit? Check all that apply.

<i>Biting</i>	<i>Screaming</i>	<i>Feather plucking/ chewing</i>	<i>Self mutilation</i>	<i>Irrational fears</i>	
<i>Other</i>	<i>Describe</i>				

Specifically describe the situations in which these behaviors occur.

Describe what you do when these behaviors occur.

For feather plucking, chewing, or self mutilation, answer these questions.

What parts of the body are affected?

Are feathers pulled or damaged: (Check all that apply)

<i>when they first appear?</i>	<i>when they start to open up?</i>	<i>when they are mature?</i>	
<i>when you're not home?</i>	<i>when you're not paying attention?</i>	<i>when you're paying attention?</i>	

Does behavior interrupt:			
<i>playing?</i>	<i>eating?</i>	<i>other activities?</i>	
This behavior can be interrupted by:			
<i>attention?</i>	<i>reprimand?</i>	<i>food?</i>	

When this behavior occurs:

<i>bird acts like it hurts?</i>	<i>bird acts like it itches?</i>	<i>bird acts like it doesn't bother him/her?</i>	
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The author prefers to have the survey filled out in advance both for time constraints and to avoid leading the owner in their answers to the question. This survey should be verified and clarified during the interview with the owner. Any questions in the mind of the consultant regarding the answers provided by the owner should be answered before proceeding. It is very important at this stage, to avoid giving advice about the owners' care of the bird at this time. This is a time for data collection. The time for devising a plan for correction of the problems comes later in the process. This is a common mistake made by veterinarians and staff members when collecting medical histories as well. Owners will start to become defensive and far less cooperative if they feel they

are being blamed for the problems for which they are seeking assistance. It is also important to emphasize that raw observations, not conclusions are desired. Often, an owner will describe “obsessive” behavior, or otherwise jump forward to a conclusion. If an owner does this, the consultant can simply ask, “what makes you think so?” to get the description.

The next part of the process is observation of the bird. This part can be difficult. If the consultation occurs in the veterinary hospital, the behavior of the bird will be directly affected by the unfamiliar environment and even by the observer. Observation in the examination room can reveal how a bird responds to a frightening situation. Birds that calmly preen their feathers are generally birds that tolerate change well and are not afraid of strangers. Those that screech or growl in terror may be more prone to stress and anxiety related behavior disorders. However, the behavior in the examination room can hardly provide an accurate view of the normal day to day behavior of the bird. Aggressive birds are often much more docile away from their home environment, sometimes allowing handling by people they would ordinarily bite severely. A home visit to observe the bird is better. This allows direct observation of the environment as well as the behavior of the bird and all of the household members. Once again, however, the presence of the consultant can alter the responses of the bird. Video recording of the bird may provide the most accurate means of observation. Owners are asked to record the entire environment of the bird, five minutes of interaction of the bird with each member of the household, 5-15 minutes after everyone leaves the house and the bird is left alone, and any specific behavior that the owner suspects is not normal.

Once all of the data are collected, they must be evaluated for information that can to a clinically relevant conclusion. Veterinary behavior as a science is still in its infancy. The etiologies of behavioral disorders, the minimum standards of care for psittacine birds, the reference values for the “normal” responses to various situations have not been established. These facts make evaluation of the behavior history difficult. Nonetheless, trends can sometimes be identified. Associations between anamnestic factors and certain behavioral traits sometimes can be made. This is the means by which clinical sciences develop. More importantly, evaluation of the history and observations allows for a customized plan of environmental and behavioral modification to be formulated for the patient at hand.

Signalment

- **Species**
 - Wild-type or domesticated.
 - Species that are relatively close to the wild state (1-2 generations) tend to have more problems than those that are partially or completely domesticated
 - Rapid or slow behavioral development
 - Rapidly developing smaller species have less time for mistakes in management to affect behavior compared with larger species with a long, flexible social development
 - Social behavior
 - Species craving physical contact (such as cockatoos) will have more problems with development of excessive or inappropriate bonds with the owners.

- **Age**
 - Juvenile
 - Problem is likely to be either genetic, or due to improper early socialization.
 - Hormonal effects are very unlikely at this stage.
 - Adolescent or Mature
 - Problems beginning roughly at the time of sexual maturity may be associated with hormonal effects.
 - Problems beginning many years after the onset of sexual maturity are not likely to have hormonal etiology, nor are they likely to be due entirely to early socialization inadequacies.
- **Gender**
 - Male
 - Aggressive behavior is somewhat more common, particularly territorial and possessive aggression.
 - Female
 - Feather damaging behaviors appear to be somewhat more common in females of some species, particularly South American species. In these birds, the behavior is often related to reproductive hormones.

Development

- Wild caught
 - Depending upon the age at which they were captured, wild caught birds often suffer from fear and mistrust of humans. If captured as nestlings, these birds will behave very much like domestic, hand raised birds.
- Parent raised
 - Depending upon the level of contact with people, these birds may initially exhibit fear of humans. On the other hand they less likely to pair bond with an owner since they will sexually imprint on parent birds rather than a human foster parent.
- Hand raised
 - These birds are more likely to develop pair bonding and excessive dependence upon humans. This is compounded if early socialization and sensory input is limited.
- Clutch vs. Isolation
 - Isolation of chicks from clutch mates exacerbates the problems associated with hand raising. These birds are more likely to be unable to interact with other birds appropriately.
- Fledging
 - Flying and learning to fly can promote physical, psychological, and behavioral development. While trimming wing feathers to limit flight can facilitate training, early or excessive wing trimming can blunt behavioral development, and can predispose to injuries. Birds with severe wing trims often behave nervously or fearfully.
- Weaning
 - Forced weaning may contribute to anxiety.

- Trafficking
 - Wild birds will stay in one nest with one set of parents until fledging, then stay with the same parents until weaned. Between fledging and weaning, they integrate into the flock. Birds that are moved around from nest, to brooder, to owner prior to weaning are subjected to repeated betrayals of trust. This may lead to anxiety.
- Trauma
 - Rough, abusive, or careless handling can increase fear in any animal.

Environment

- Cage
 - Cages that are too small severely limit activity. This can lead to boredom, stress, and cage vices.
 - Cages that are inaccessible due to height, very small doors, excessive depth, perch arrangement can contribute to aggression.
 - Birds that spend excessive amount of time within the cage may develop cage vices, territorial aggression, or fear of leaving the security of the cage.
- Surroundings
 - Activity level
 - As social animals parrots should be in an area where their flock is, whether that flock is human or avian. Prolonged separation from the flock is highly stressful.
 - Real and perceived threats
 - As prey animals, parrots may feel threatened by objects or animals that may not seem to be threatening to us. For a budgerigar, a cat is equivalent to an elephant-sized lion.
- Sleep
 - Tropical and subtropical birds need 10-12 hours of sleep nightly to avoid stress.
 - In birds from more temperate zones, the long day length can stimulate reproductive hormones, although with continuous long day length, they may become refractory to long day length.
- Diet
 - Adequacy of the diet is, of course, important for health. However the diet can influence behavior in many ways.
 - Foraging for food is one of the primary means by which wild birds occupy time, often taking up to 6 hours daily. Captive birds consume all of their calories in an average of 45 minutes.
 - Many birds use the presence of an abundance of food, particularly high calorie and high moisture content foods, to signal the onset of breeding cycles. Free feeding these types of foods promotes a continual breeding season.
 - Obesity is common in pet birds. Obesity can lead to inactivity as well as many health problems.
- Activities
 - The activities that a bird has access to and the ones that a bird actually engages in are not always the same. Some birds appear to lack the knowledge or desire to play. These birds are often ones that have been poorly socialized. They also tend to be overly dependent on the owners.

Socialization

- Humans in the household
 - Birds that behave very differently toward one person than the rest of the household are either reacting to the handling capabilities of the people, or have developed a pair bond with that person. When people exhibit fear of a bird, the bird will avoid contact by aggression. A person that is too rough or overbearing may frighten the bird. Watching each person handle the bird will usually determine whether handling deficiencies are the problem.
 - Petting, cuddling, fondling, kissing, and other intimate contact with parrots are, in parrot language, exclusively sexual interactions.
- Birds in the household
 - Birds that develop close bonds with other birds will not pair bond readily with humans.

Behavior

- General
 - A general impression should be made about the overall behavior of the bird.
 - If the bird engages in many stereotypical behaviors, chews the nails, flips the wings, and otherwise appears nervous on a frequent basis, a stress or anxiety related condition should be suspected.
 - If the bird behaves normally others than the specified behavior, the problem may be environmental. It may be that the owner is intolerant of normal psittacine behavior.
- Aggression
 - Territorial
 - Aggression occurs only in or around the cage, nest site, play area. Aggression ceases once the bird is away from these areas.
 - Possessive
 - Aggression occurs only in the presence of an item or person which the bird perceives as its own.
 - Dominance
 - This type of aggression often displayed toward some people, but not others.
 - Victims of aggression are afraid of the bird and often have poor handling skills.
 - Diagnosis applies to bird/human pair, not just the bird.
 - Fear
 - Fear biting is normal. What needs to be corrected is the fact that the bird fears the person.
- Self damaging behaviors
 - While this is complex, certain suspicions can be held depending on the behavior evaluation.
 - Birds that constantly pick feathers or scratch, that interrupt other behaviors to pick, and that otherwise act agitated either have a true pruritis, or are truly obsessive/compulsive.
 - Birds that chew feathers but do not pull them out or mutilate skin probably have a behavioral etiology. Chewing the feathers gives little tactile stimulus.

- Birds that damage feathers only when the owners are not present may have separation anxiety.
- Birds that damage feathers intermittently, especially if associated with known stresses, are likely to have stress-associated feather picking.

Diagnosis

Veterinary behavior specialists have begun to name and categorize some common behavioral problems in dogs and cats. Table 1 lists below are some that may have similarities to avian behavior problems.¹ In order to make these diagnoses certain criteria must be met. Necessary criteria are those that must be present for the diagnosis to be made. Sufficient criteria are those needed to distinguish a problem from all other conditions.

Table 1 Behavioral Diagnoses

Diagnosis	Necessary conditions	Sufficient conditions	Avian equivalent
Attention seeking	Animal uses vocal or physical behaviors to obtain attention from people when they are otherwise occupied	Whenever a person is not engaged in activity with animal, animal uses behaviors to direct attention to itself and will interrupt human activity to do so.	Same
Compulsive grooming	Grooming in excess of that required for grooming or exploring.	Licking in excess of that required for grooming or exploring. Interferes with normal behavior. Not aborted by interruption.	Feather picking
Depression	Prolonged endogenous or reactive withdrawal from social stimuli, changes in appetite, and changes in sleep/wake cycles not incidental or attributable solely to lethargy.	As above, accompanied by decreased motor activity and actual physical removal from normal social and environmental stimuli in the absence of any underlying neurological or physiological condition.	Same
Dominance aggression	Abnormal, inappropriate, out of context aggression consistently exhibited under any circumstance involving passive or active control of the animal's behavior or access to the behavior.	Intensification of any aggressive response from the animal with any passive or active correction or interruption of the behavior	Same

Table 1 Behavioral Diagnoses (Continued)

Diagnosis	Necessary conditions	Sufficient conditions	Avian equivalent
Excessive grooming	grooming by means of licking, scratching, or rubbing that is unrelated to hygienic or maintenance and that is more frequent or intensive than previously exhibited.	Interruptible (as opposed to compulsive grooming)	Feather picking
Failure to groom	from a reduction to a lack of normal grooming behaviors	same without concomitant signs of depression	Failure to preen
Fear aggression	Aggression that consistently occurs with signs of fear as identified by withdrawal, passive, and avoidance behaviors associated with sympathetic autonomic system.	Aggression accompanied by urination/defecation or when aggression is only active or interactive when recipient disengages from behavior.	Same
Fear	behavior that occurs with withdrawal, passive and avoidance behaviors/sympathetic autonomic response without aggression.	behavior that occurs with withdrawal, passive and avoidance behaviors/sympathetic autonomic response without aggression.	Same
Generalized anxiety	consistent exhibition of increased autonomic hyperreactivity increased motor activity, and increased vigilance and scanning that interfere with a normal range of behaviors.	As above in the absolute absence of provocational stimuli	Same
Neophobia	Consistent, sustained and extreme nongraded response to unfamiliar objects and circumstances manifests as intense, active avoidance, escape or anxiety behaviors associated with sympathetic autonomic activity.	Same; repeated exposure does not vary response	Same

Table 1 Behavioral Diagnoses (Continued)

Diagnosis	Necessary conditions	Sufficient conditions	Avian equivalent
Obsessive compulsive disorder	Repetitive, stereotypic motor, locomotor, grooming, ingestive or hallucinogenic behaviors that occur out of context to their normal occurrence or in a frequency or duration that is in excess of that required to achieve a goal.	As above and interferes with the animal's ability to otherwise normally function in its social environment.	Feather picking
Possessive aggression	Aggression that is consistently directed toward another individual who approaches an object the aggressor wishes to control.	As above but aggression does not occur in absence of object.	Same
Protective aggression	Aggression that is consistently directed to a third party in the presence of a certain individual. Occurs in the absence of actual threat.	Intensifies with proximity or signs of threat, despite correction or reassurance by person protected.	Same
Psychogenic polydipsia	Water consumption in excess of physiological needs of animal.	Above is altering time budget, and interferes with normal activity.	Same
Satyriasis	Excessive solicitation, mounting, thrusting etc.	Above regardless of degree of provocation, directed interspecifically at animate or inanimate objects.	Same
Self-Mutilation	removal of coat with abrasion, petechiation, or ulceration to part of the body.	above, in the absence of any physiologic, or dermatologic conditions.	Same
Separation anxiety	presence of physical or behavioral signs of distress only in absence of owner.	presence of physical or behavioral signs of distress only in absence of owner.	Same
Trichotillomania	pulling out hair	above without injury to skin	Feather chewing
Territorial aggression	aggression that occurs in a circumscribed area (car, home, cage)	intensifies as recipient approaches, continues despite correction or attempts to interact.	Same

Follow up

The evaluation does not end here. Follow up of the problem is critical. Owners should be asked to start a journal of the bird's behavior. The frequency, severity, and timing of the episodes of undesirable behavior should be tracked. Any corresponding factors that are recognized should be tracked as well. This journal can have several benefits. The first is that the effectiveness of treatment can be tracked. Most behavior problems that are successfully treated do not simply stop one day. They gradually attenuate in frequency and severity over time. If there is no record, owners may become discouraged and fail to comply with recommendations for sufficient time to resolve the behavior issues. The second is that the additional data determined by the record keeping may add information that can help further define the problem.

1. Overall KL Appendix F Terminology: necessary and sufficient conditions for behavioral diagnoses. in Overall KL Clinical behavioral medicine for small animals. Mosby 1997.



