Feather Plucking in Parrots

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DISCLAIMER:

For everyone/anyone who hopes this talk will give the explanation or solution for feather plucking in parrots you MUST lower your expectations immediately...
Feather plucking, feather picking or feather destructive behavior (FDB) is one of the most common, and frustrating, reasons for which caged psittacine birds are presented to the veterinary hospital, with an estimated prevalence of 10%.

(van Zeeland et al, 2009; Gaskins and Bergman, 2011; Rubinstein and Lightfoot, 2014)
This condition has been reported in many psittacine species, but seems over-represented in some as 39.4% of grey parrots (*Psittacus erithacus*) and 43.4% of cockatoos (*Cacatua species*) were affected in one UK study. (Jayson et al, 2014).
“Nonmedical Factors Associated With Feather Picking in Pet Psittacine Birds”

The odds of feather picking also were higher for birds that were out of their cages more than 8 hours per day and for birds that had been taken in by the owner as a “rescue”.

The odds of feather picking decreased by almost 90% for birds that interacted with people at least 4 hours a day.

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Amazon parrots (*Amazona species*), cockatiels (*Nymphicus hollandicus*) and budgerigars (*Melopsittacus undulatus*) are uncommonly presented with this complaint.

*(van Zeeland et al, 2009)*
Feather plucking is typically **complex**, with **several factors** (medical, physical and/or behavioral, environmental, genetic and neurobiological) being investigated as often contributing to the development to varying degrees of abnormal or stereotypic behaviors.

(van Zeeland et al, 2009 and 2013a).
Parrots may be seen over-grooming or biting, plucking or chewing feathers until feather damage, or complete removal, occurs.
These behaviors may sometimes be associated with self inflicted soft tissue injuries and feather damage, which prevents their normal regrowth (Harrison 1986; van Zeeland et al, 2009; Kubiak, 2015).

Contour and down feathers (which are often plucked or pulled) are usually the primary targets, but tail and flight feathers (which are often chewed) may also be affected.

(Nett and Tully, 2003a)
Feather damage usually occurs in the readily accessible regions of the neck, chest, flank, inner thigh and wing web (Harrison, 1986; Nett and Tully, 2003a), while the feathers on the parrot’s head remain intact.
Preening is an *essential social behavior* that can be performed individually (to maintain skin and feathers) or between birds in a flock to reinforce reciprocal bonds.

(van Zeeland et al, 2009; Kubiak, 2015)
However, self-comforting preening can run out of control and has been reported as a coping strategy at times of stress (Garner et al, 2003), as supported by significantly higher fecal cortisone levels. (Owen and Lane, 2006)

Furthermore, where birds are housed together, it is also essential to differentiate between self-plucking and plucking done by others.

(Chitty, 2005; Lightfoot and Nacewicz, 2006)
“Feather loss and feather destructive behavior in pet birds.”

Feather loss in psittacine birds is a common and frustrating clinical presentation.

Causes include medical and nonmedical causes of feather loss with and without overt feather destructive behavior.

Underlying causes include inappropriate husbandry and housing; parasitic, viral and bacterial infections; metabolic and allergic diseases; and behavioral disorders.

Prior to a diagnosis of a behavioral disorder, medical causes of feather loss must be excluded through a complete medical work-up including history, physical examination, and diagnostic testing.

Avianatural Remedies
FDA Registered
Pluck No More™
Stops Feather Plucking on Birds
Stops Excessive Itching on Dogs
Safe & Natural Homeopathic Formula
Before After
6 fl oz (177ml)
1.0 green-winged macaw

~ Hatch Nov 2003

Donated to Tulsa Zoo

Since animal was local, pre-testing was done at Tulsa Zoo in July 2013 – no issues noted.

Entered quarantine Nov 2013

Bird had been a pet
During the first week of quarantine, the bird exhibited rapid and extreme feather damaging behavior.
Animal Health staff immediately looked toward medical issues but were very aware that the issue was probably behavioral.

Amounts and types of enrichment were increased and staff was scheduled to spend more time with the bird even though still in quarantine.

Bird left quarantine after ~60 days – Jan 2014; moved to area with two other macaws for eventual exhibit.

Staff spent continued to offer increased enrichment and spend time with the bird.

Low dose of Paxil (paroxetine) also began being offered orally, once/day.
Staff continues to work with bird

Feather plucking has ceased but feather damage concerns remain
Feather Destructive Behavior = Call to Action
Over preening: A parrot might “over-work” an area of the body while preening, sometimes causing feather damage or thinning in that area.

Plucking: This is the removal of the feather. When a bird continues this practice over a long period of time, the follicles are eventually compromised and new feathers cannot grow back to replaced those that were plucked. When a parrot intentionally pulls out a feather, it is painful and endorphins are released into the blood stream giving the parrot a sense of calm. It is considered possible that this is the reason some parrots pluck. Endorphins, like drugs, are emotionally addictive, causing an ongoing cycle.

Barbering: this is the destruction of the feather that doesn’t involve its removal. A parrot might chew at the feathers, destroying them, or might actually bite them off, sometimes down to the skin.

Rubbing: This is when an individual parrot scrapes the feathers from its head and neck using the bars of its cage, perches or toys.

Mutilation: Sometimes plucking escalates into self mutilation and a parrot will attack the skin once the feathers are removed. There is a constant threat of infection and since the skin of a bird is so thin, healing properly becomes a major issue.
Medical vs. Environmental vs. Behavioral
Possible medical causes for feather plucking include:

1) **Endoparasites** (especially giardiasis in cockatiels) and, rarely, tapeworms or roundworms.
2) **Ectoparasites**
3) **Hepatic disease**, with associated pruritus.
4) **Coelomic cavity granuloma or mass**.
5) **Neoplasia**, which typically causes localized plucking of the area associated with an underlying mass.
6) **Folliculitis or dermatitis** that is primary, or secondary to excessive plucking and/or mutilation. Bacteria, viruses, fungi, or yeasts may be involved.
7) **Allergies**. Although difficult to confirm, a change in environment or diet when allergens are suspected may lead to a decrease in plucking and a tentative diagnosis by elimination.
8) **Endocrine abnormalities**, the most likely being hypothyroidism.
9) **Heavy metal toxicosis**, notably zinc. Barbering and feather plucking from zinc ingestion have been hypothesized.
10) **Poor nutrition**
Histologic findings are described for 408 feather-picking or self-mutilating psittacines with the use of biopsies from clinically affected and unaffected skin.

Inflammatory skin disease was diagnosed in 210 birds, and traumatic skin disease was diagnosed in 198 birds.
Inflammatory skin disease in parrots is a reflection of underlying allergic or some other unknown systemic inflammatory disease. The predominant clinical sign is plucking or damaging the feathers. In severe cases, birds might mutilate the skin as well. In many of these birds, the skin looks inflamed (red), but not in all cases.

Many causes for traumatic skin disease have been proposed, including behavioral problems, hormonal imbalances, infectious agents, follicular dysplasia, and hypersensitivity.

The results of this study indicate that a subgroup of traumatic skin disease likely exists that is not associated with underlying inflammatory skin disease, infectious agents or follicular dysplasia.
A preponderance of inflammatory skin disease was seen in macaws (Ara spp.) and Amazon parrots (Amazona spp.).

A preponderance of traumatic skin disease was seen in cockatoos (Cacatua spp.) and African grey parrots (Psittacus erithacus).

The prevalence of each was approximately equal in several other species, including conures (Aratinga and Pyrrhura spp.), eclectus parrots (Eclectus roratus), quaker parrots (Myiopsitta monachus), cockatiels (Nymphicus hollandicus), parakeets (Cyanorhamphus and Psittacula spp.), and caiques (Pionites spp.).

No geographic or gender-based trends were identified.
Environmental
- Housing
- Lighting
- Temperature
- Other species
- People (guests, staff, etc)
- Humidity
- Air quality
- Diet – presentation/quality
Behavioral
- Enrichment (boredom?)
- Stress (Change is bad...)
- Lack of attention
- Frustration

- Training
Feather Destructive Behavior = Call to Action