



Herbal Treatment of Feather Picking

TRACY BENNETT, DVM, Dipl ABVP-Avian

DONNA KELLEHER, DVM, IVAS, AVAS, Master Herbalist

FEATHER PICKING IS ONE OF THE most common disorders that avian veterinarians are asked to treat. In our practice, approximately 50% of the patients who present for feather picking have no discernable medical cause for this behavior and the presumptive diagnosis of psychogenic feather picking is made in these cases.

Treatment is often unrewarding and many avian practitioners can attest to the frustration of treating these birds. Collars and other mechanical restraint devices prevent the behavior but do not treat the underlying cause while also creating stress for the bird.

Potentially dangerous drugs such as Haldol® sometimes work but run the risk of severely compromising or even killing the patient. A potential solution to this problem was using less toxic herbal formulations as a way to treat behavioral feather pickers. The authors developed a formula targeting the patients' stress, anxiety and immune function without adversely affecting their health.

Herbal medicines have been used to treat medical and psychological conditions in humans and animals for thousands of years. We wanted to develop a non-toxic calming therapy for the psychogenic feather picking birds seen in practice. One of the authors (DK) developed an herbal formula based on an extensive



knowledge of plant medicines. Since 1997, this formula has been used on over 500 patients. We believe most of these non-domesticated psittacines are stressed by their environment and are immune compromised, triggering feather picking behavior. It is our belief that in these cases, an herbal formulation is a reasonable treatment option. In our experience, and based on a small phone survey, it appears that in most cases this formula decreases the severity of feather picking and a significant number of birds have stopped this behavior altogether.

In our practice, the ideal work up for feather picking consists of a physical exam, bacterial culture, complete blood cell count, blood chemistries, fecal parasite exams, radiographs, skin biopsies, and zinc and lead



testing. Based on our review of cases, particularly those where radiographs and skin biopsies were performed, about 50% of our feather-picking cases are of unknown etiology. Dietary factors, husbandry and environmental factors were also evaluated in these cases. Our treatment included encouraging the owner to improve the diet and husbandry (e.g., increased light, air quality, bathing).

An interesting note: Approximately 20-25% of the feather-picking birds we previously thought were behavioral turned out to have a histologic diagnosis of "hypersensitivity dermatitis." We recommend skin biopsies for all feather-picking patients we see. We send two samples from healthy appearing skin and two samples from the affected area to the pathologist.* We have been doing allergy testing on

*Dr. Michael Garner, Northwest ZooPath, Snohomish, WA



a limited basis and, although we have had some results that were encouraging, there have been problems with the testing procedure itself. At this point it seems more research needs to be done in this area. In the cases reported here, no medical cause could be established for the feather picking, and the presumptive diagnosis of psychogenic feather picking was made.

Components of Herbal Formula

The calming and immune stimulating herbal formula that we use includes the following herbs: rosehips, astragalus, goldenseal, St. John's wort, Oregon grape root, vervain, oatstraw, passion flower, hops, lobelia, skullcap, sage, alfalfa, bupleurum, kava, spirulina, chamomile, cat's claw and gotu kola.

- **Rosehips** are an excellent source of vitamin C (immune enhancer) and add a pleasant flavor.
- **Astragalus**, *Astragalus mongolicus*, contains 2'4'-dihydroxy-5, 6 - dimethoxyisoflavane, choline, betaine, kumatakenin, sucrose, glucuronic acid and B-sitosterol. Its traditional uses include raising metabolism and stimulating immune function.¹ Scientific studies done primarily in China have shown the flavonoid portion of the plant

stimulates the immune system in immunosuppressed mice (raises T-cell count).²

- **Goldenseal**, *Hydrastis canadensis*, and Oregon grape root, *Mahonia repens*, both contain berberine, a plant alkaloid with powerful anti-inflammatory properties. Berberine has been shown to exhibit antibacterial, antifungal and antiparasitic effects.³
- **St. John's wort**, *Hypericum perforatum*, contains hypericine, a glycoside. Traditionally, St. John's wort was taken to relieve pain and treat neuralgia, anxiety and nervous tension.¹ Today it is popular for treating mild depression. St. John's wort seems to work by preventing the sodium-dependent uptake of catecholamines and amino acids at the synaptic nerve endings.⁴
- **Vervain**, *Verbena hastata*, contains the two glycosides, verbenaline and verbenine. Traditional uses include detoxification and treatment for hysteria.¹
- **Passion flower**, *Passiflora incarnata*, contains alkaloids including passiflorine, harmine and harmol. Uses include treatment of insomnia, nervous tension, anxiety, hysteria and epilepsy.⁵ Anti-anxiety properties are fairly well documented in the scientific literature, including a

double-blind randomized trial, which suggested it was as effective as oxazepam (a drug related to diazepam) in treating generalized anxiety disorder in humans.⁶ It was also found to cause less impairment than oxazepam in the test subjects.

- **Hops**, *Humulus lupulus*, contain lupuline, humulone, lupulone, estrogenic substances, choline and asparagines. Hops have been used to treat insomnia, nervous tension, anxiety, restlessness and, of course, to flavor beer (beer really is medicine!).¹
- **Lobelia**, *Lobelia inflata*, contains the alkaloids lobeline and isolobeline, as well as lobelic and chelidonic acid. Lobelia is used to treat methamphetamine addiction in humans because one of its actions is to inhibit dopamine reuptake.⁷ It is also used as an anti-inflammatory, and studies have shown it acts by inhibiting complement activity via the classical pathway.⁸
- **Skullcap**, *Scutellaria galericulata*, a plant with blue flowers common throughout Europe, has historically been used for epilepsy, nerve pain and hysteria.⁵
- **Sage**, *Salvia* sp, contains an essential oil with the active constituents being thujone, cineol and camphor. Sages'



Astragalus



Oregon grape



Hops



Sage

benefits include muscle relaxation and treatment for nervousness.¹

- **Alfalfa**, *Medicago sativa*, is used more as a vitamin and flavor enhancer rather than an herb. Alfalfa is rich in protein, minerals and several vitamins.

- **Kava kava**, *Piper methysticum*, is an anxiolytic and contains kavapyrones. Kavas' effectiveness in treating anxiety is well documented in the human literature.^{9,10} Recent concerns over its safety center around 24 cases of liver damage in individuals in Germany and Switzerland, which may have been linked to the use of kava. Similar findings have not been corroborated in any other part of the world. Some of the patients in question were taking other drugs with known hepatic effects such as cholesterol lowering drugs or alcohol. Kava kava has been used as a sedative beverage in the South Pacific safely for thousands of years.¹¹ We have had no problems with Kava in the 5 years we have been using it in our formula.

- **Spirulina** is an immune enhancer.

- **Cat's claw**, *Uncaria tomentosa*, is a Peruvian herb used for centuries by the indigenous people. Cat's claw is an anti-inflammatory, which works by a variety of mechanisms including inhibition of prostaglandin E2. It is also an immune stimulant and antioxidant.

- **Gotu kola**, *Centella asiatica*, is used in the Ayurvedic herbal tradition as a nerve tonic to treat insomnia, nervousness and disturbed emotions.¹

- **Bupleurum**, *Bupleurum falcatum*, has been used in China for more than 2000 years to treat the liver and relieve moodiness. The Chinese found that bupleurum was "most effective against diseases that tend to begin externally as an acute syndrome and linger for a prolonged period."¹

In conclusion, we believe that herbal medicine has greatly enhanced our ability to treat a very difficult problem. Many chronic conditions in birds and other animals are not very amenable to treatment with traditional western medicine. Herbal medicine when used correctly is a safe and efficacious option for treatment of psychogenic feather picking in psittacines.

References

1. Tierra M: Planetary Herbalogy. Lotus Press 1988.
2. Jiao Y, Wen J, Yu X: Influence of flavanoid of *Astragalus membranaceus*'s stem and leaves on the function of cell mediated immunity in mice. Zhonggou Zhong Xi Yi Jie He Za Zhi 365-8, June 1999.
3. Scazzocchio F, et al: Antibacterial activity of *Hydrastis canadensis* extract and its major isolated alkaloids. Planta Med 561-4, Aug, 2001.
4. Buchholzer ML, Dvorak C, Chatterjee SS, Klein J: Dual modulation of striatal acetylcholine release by hyperforin, a constituent of St. John's Wort. J Pharmacol Exp Ther 714-9, May 2002.
5. Vermeulen N: Encyclopaedia of Herbs. Rebo International, 1998.
6. Akhondzadeh S, et al: Passionflower in the treatment of generalized anxiety: A pilot double-blind randomized controlled trial with oxazepam. J Clin Pharm Ther 363-7, Oct 2001.
7. Dwoskin LP, Crooks PA: A novel mechanism of action and potential use for lobeline as a treatment for psychostimulant abuse. Biochem Pharmacol 89-98, Jan 2002.
8. Philipov S, Istakova R, et al: Phytochemical study and anti-inflammatory properties of *Lobelia laxiflora*. Z Naturforsch [C] 311-7. May-Jun 1998.
9. Watkins LL, Connor KM, Davidson JR: Effect of Kava extract on vagal cardiac control in generalized anxiety disorder. J Psychopharmacol 283-6. Dec 2001.
10. Pittler MH, Edzard E: Kava extract for treating anxiety. Cochrane Database Syst Review 2001.
11. Robb-Nicholson C: Harvard Women's Health Watch, April 2002.

TABLE 1

Summary of Action of Ingredients in Feather-picking Herbal Remedy

Ingredients	Mode of Action
Gotu kola	Immune-enhancer
Bupleurum	Liver detoxifier
Rosehips	Contains vitamin C, pleasant flavor
Astragalus	Immune-enhancer
Goldenseal	Immune-enhancer, antimicrobial
St. John's wort	Anxiolytic, antidepressant, immune-enhancer
Goldenseal	Immune-enhancer, antimicrobial
Oregon grape root	Immune-enhancer
Vervain	Anxiolytic
Oatstraw	Anxiolytic
Passion flower	Anxiolytic
Hops	Anxiolytic
Lobelia	Anxiolytic
Skullcap	Anxiolytic
Sage	Anxiolytic
Alfalfa	Vitamins, pleasant flavor
Shitake mushroom pwdr	Immune-enhancer
Kava	Anxiolytic
Spirulina	Immune-enhancer
Cat's claw	Immune enhancer, anti-inflammatory