



AVIAN

Examiner

Number 21

New Nutritional Consultant

Greg J. Harrison,
DVM, DABVP-Avian

Harrison's Bird Foods is proud to introduce its new nutritional consultant, Debra McDonald. Debra is a zoo and wildlife nutritionist and is Director of *Démac Wildlife Nutrition* based in Australia. She has spent the past 11 years in the zoo industry, mainly as a conservation biologist working on endangered species.

Démac Wildlife Nutrition will be offering an internet service where (you) can have (birds') diets nutritionally evaluated.

Most recently, before returning to Australia, she was Assistant Nutritionist at the Bronx Zoo in New York. Debra was awarded a



Churchill Fellowship in 1999 to investigate the feasibility of establishing a center for Zoo Nutrition in Australia.

Debra majored in pharmacology and botany before pursuing an honors degree in fatty acid chemistry. During this time she also obtained a certificate in Herbal Medicine. Her PhD studies included an evaluation of the nutritional composition of foliage with implications for arboreal folivorous marsupials (especially aspects of tannin chemistry) as well as nutritional impacts on the survivorship



Debra McDonald

of the endangered Orange-bellied parrot (*Neophema chrysogaster*).

She is particularly interested in the problems associated with iron storage disease in certain frugivorous and insectivorous

birds and will continue to develop a database of nutritional diseases in birds.

Démac Wildlife Nutrition will be offering an Internet service where members of the public can have their birds' diets nutritionally evaluated, with recommendations to improve the health and productivity of their birds.

In Debra's spare time, she plays musical instruments

(Celtic harp, piano, flute, guitar, piano, accordion and the bagpipes) and writes and illustrates children's books based on caricatures of Australian wildlife. She is also renovating an old historic house, using as many organic paints and recyclable materials as possible.



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Practice TIPS

Suggestion for Repair of Stifle Luxation in a Cockatiel

Jesus Rodriguez Quiros, DVM
Madrid, Spain

*(In response to an online
surgical question [EXOTIC
DVM Readers' Forum]
regarding a cockatiel with
damage to medial ligaments
causing stifle luxation:)*

When there is a positive drawer sign and medial or lateral instability in the stifle, transarticular external fixation is recommended to maintain the stability of the stifle after reduction. The aim is the formation of sufficient scar tissue to stabilize the joint.

You can use a type I external skeletal fixator (ESF). At least two pins must be placed in both the distal femur and the proximal tibiotarsus. Olsen et al¹ used a type I ESF, with the fixator bars forming a triangle. Rosenthal et al² used a type I ESF, with many

pins placed into the bone in the lateral aspect of the femur and tibiotarsus. They didn't make a triangle with the fixator. I have used the first option, because this fixator is the most stable.

I recommend to you the paper by Jaffe et al.³ They made a medial release and extracapsular stabilization in a 7-month-old blue and gold macaw with a medial patella luxation. It is not the same

problem as being discussed here but it can give you some ideas.

In mammals there are diverse possibilities:

- a) A nylon suture placed between two bone screws (1.5 mm) in the origin and insertion areas of the medial collateral ligament.
- b) A fascial reinforcement of a medial ligament injury by elevating a strip of fascia that is left attached at each end. Then the fascia is sutured to the ligament and the fascial defect is sutured over the reinforcement.



Ventrodorsal view of a Northern Shrike (*Lanius excubitor*) with a stifle luxation.

References

1. Olsen GH, Redig PT, Orosz SE: Limb dysfunction. In Olsen GH, Orosz SE (eds): Manual of Avian Medicine. Mosby, St. Louis, MO, 2000, pp 524.)
2. Rosenthal K, Hillyer E, Mathiessen D: Stifle luxation repair in a Moluccan cockatoo and a barn owl. J Assoc Avian Vet 6(4):235-238, 1992.
3. Jaffe MH, Fitch R, Rich G, Tully TN: Medial release and extracapsular stabilization in a 7-month old blue and gold macaw (*Ara ararauna*) with a grade IV medial patella luxation. Proc Assoc Avian Vet, 2000, pp 101-104.

Uses of Avizyme®

As reported in Avian Examiner #20, Avizyme® is a source of live, naturally occurring enzymes that can be used in parrots, pigeons and other birds. Indications may include birds with chronic pancreatitis, malabsorption syndrome, proventricular dilatation or neonates with slow crop-emptying time. It is also indicated in chronically ill or

geriatric birds that seem to not be getting all the benefits from their food, or for sick birds under stress of illness.

Greg Harrison, DVM: For the anti-inflammatory and regenerative properties of Avizyme® to be effective, it must be given on an empty stomach. A pinch a day (per 100 g or 1/2 tsp per 1000 g) may be given 3-4 hours after the last meal. Mixing it with lactulose works well.

Michael Weiss, DVM: I use Avizyme® in all the species in my practice — birds, other exotics, dogs. I have seen positive results particularly in cases of dermatitis and osteoarthritis.

Donald Zantop, DVM: I am using Avizyme® to help manage and keep weight on an Amazon with bile duct carcinoma that has spread to the pancreas.

Greg Harrison, DVM: To aid in digestion and diet assimilation and to help with weight gain, we add Avizyme® to the tube-feeding formula or sprinkle it over HBD High Potency formula. Bile acid (BA) values may increase at this time; however, this may be due to stored BA being recirculated. New liver damage is unlikely because there are no associated clinical signs (e.g., loss of appetite, presence of biliverdinuria or biliverdinurates). It would still be prudent to decrease the dose initially and gradually increase it.

Tips for Successful Repair of Beak Deficit

Greg J. Harrison, DVM,
DABVP-Avian

Various techniques for beak repair have included chemical bonding agents, prostheses, and metal or fabric support with bandage application. Failure is common

to all. Some principles of bone healing used by orthopedic surgeons may be applied to beak repair to improve the success rate:

- Remove all sequestered and damaged tissue.
- Expose raw live bone.
- Create maximum surface-to-surface interface for fracture repair.

- Minimize motion by applying continuous positive pressure to healing surfaces.
- For a deficit repair, rebuild the injury site for maximum recovery of all individual tissue layers involved (in this case, bone, periosteum and horn-generating epithelium).

References

1. Doyle JE: Introduction to microsurgery. In Harrison GJ, Harrison LR (eds): Clinical Avian Medicine and Surgery. WB Saunders Co, 1986, pp 568-576.
2. Martin H, Ritchie BW: Orthopedic surgical procedures. In Ritchie BW, Harrison GJ, Harrison LR (eds): Avian Medicine: Principles and Application. Lake Worth, FL, Wingers Publishing, 1994, pp 1162-1168.



*Methylmethacrylate repair kit - TempPlus Kit®
Ellman Intl Mfg, 800-835-5355, 516-569-1482



TIPS

- When a traumatic injury occurs to the beak, four tissue layers (bone, periosteum, horn-generating epithelium, horn) become co-mingled at the site of impact. This indented, sequestered tissue must be removed with a dental drill and burr.
- Approximately 2-3 mm of the horn layer is reflected around the margin of the resulting defect. Then the exposed epithelium/periosteum layer is reflected 1-2 mm from the end of the bone. Doyle¹ believes this stripping back is essential to prevent nonunion of fractures, or in this case, non-regeneration of tissue.
- Calcium hydroxide paste is applied to the defect and allowed to dry. The calcium hydroxide serves as a matrix for regrowth of the epithelium/periosteum. This procedure prevents the healing tissue from just wrapping around the bone margins and leaving a large hole.
- An acrylic patch* is applied to prevent desiccation and contamination, and, in some cases, to help stabilize the site and prevent motion. First, acrylic powder is placed over the calcium hydroxide. Then, using a pipette, a solvent is applied, and the acrylic is dried. In this deficit repair, the periosteum will grow out over the calcium hydroxide patch (under the acrylic) and span the deficit with new bone; the epithelium will generate new horn.



Safe Pesticides Around Birds

From Exotic DVM Readers' Online Forum
(www.exoticdvm.com)

Connie Orcutt, DVM, DABVP-Avian:

I have a client with several birds who is having a problem with ants and moths in her kitchen. She wants to use something that will be safe with regard to her birds but effective.

Jill A. Richardson, DVM, ASPCA Animal Poison Control Center:

Pyrethrins are considered safe insecticides (LD50 in many species is >2,000 mg/kg) and are usually well tolerated in birds. Most household ant and roach killing products contain small concentrations (<1%) and are comparable to concentrations found in flea sprays. Aerosols could cause respiratory irritation, so in that regard, we usually recommend removing birds from the area for an extended period (24 hours minimum in most cases) when the product is applied.

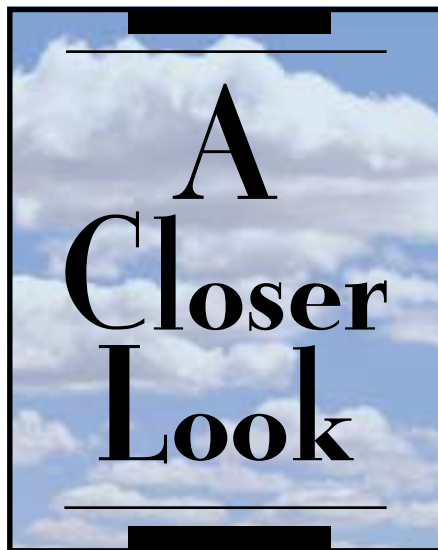
Another alternative for ants would be to use ant stations or baits. The insecticides used most commonly in these baits are chlorpyrifos, sulfluramid, fipronil, avermectin, boric acid, and hydramethylnon. The baits usually contain inert ingredients such as peanut butter, bread-crumbs, sugar and vegetable oil, which could be attractive to birds (and other pets.) The baits can be placed behind the refrigerator in a cabinet to avoid ingestion.

For further information about birds and poisons go to www.apcc.aspc.org.

Marion Janusz: I know this sounds weird, but it works and it's safe around animals! I have a sunroom where ants come in every spring, and pretty soon they're in the house! So I lay thin peelings from fresh cucumbers around the perimeter of the sunroom, and for

some reason, that prevents them from coming in! The peelings just dry up like dead leaves and I throw them out!

Flavia Zorgniotti, DVM: I worked for a pet store and 2 leopard geckos got out and lived in the walls for 2 years and did well. After that we never saw any bugs in the place



Cathy Johnson-Delaney, DVM: How about a short-tailed opossum or a hedgehog or sugar glider to just come and eat the bugs? I'm serious — having had insectivores around sometimes is a definite plus! A sugar glider will eat canaries and finches, but certainly won't bother parrots. My short-tailed made quick work of any ants that wandered in from my porch.

Greg J. Harrison, DVM: There are no safe pesticides — only those tolerated over the short term. Many that don't "harm" birds per se are devastating to frogs, crustaceans, and microorganisms in the soil. Ants are much less harmful than the alternative. We must set an example of zero pesticide use for the future. The casual use has gotten us where we are —

living in a petrochemical soup. It must end. Join the Rachel Carson Council at rccouncil@aol.com. There are alternatives.

Tom Chlebeczek, DVM, Kailua, HI:

Boric acid baits are very effective and safe. The boric acid screws up the ant's microflora from an antibiotic effect, which kills the ants. Since it's a slow kill the ants take the boric acid to the nest, which destroys the whole colony.

Sharon E. Lloyd: Isn't "safe pesticide" an oxymoron? Diatomaceous earth (DE) can handle crawling insects, even chitinous ones like ants and fleas at wall/floor joint cracks and crevices. Not a pesticide, DE is the residue of fossilized microorganisms (diatoms) found in geologic deposits that were once inland seas. It kills bugs by causing lacerations on even chitinous bodies and death from desiccation. DE feels as soft as talcum powder to hands, but to crawling insects it is like falling into glass shards.

The following web site includes a mail-order supplier of meal moth traps that use pheromones and visual lures on sticky traps to place in cabinets and pantries with food products. Lures last for 2-3 months; traps are non-toxic and pesticide-free.

<www.gardensalive.com>

Editor's Note: A firm called Kunafin produces and supplies beneficial insects for biological integrated insect control programs. In animal operations (cattle feedlots, kennels, etc.), their target pest is the common fly, whose life cycle is interrupted by a fly parasite's consumption of the fly's larvae. They also supply ladybugs and other beneficial insects. For more information, see www.kunafin.com.



Spirulina Now on the Inside!

You know the familiar “green” look to the HBD formulas? Most of the outside color was due to the post-extrusion application of spirulina, a potent source of beta carotenes, in order to prevent loss of any heat-sensitive nutrients.

Now, scientific studies have confirmed that the positive nutritional and antioxidant properties of spirulina are not inactivated by the temperatures reached in the HBD extrusion process. It is because HBD products contain complex carbohydrate and high mucopolysaccharide ingredients that extrusion can be accomplished at lower temperatures than required for processed flour products. So the spirulina is now on the inside of the nugget.

The food may look a little less green in color, but you can be assured that your bird will benefit from having all the nutrients available *within* the food, rather than falling to the bottom of the feeding bowl.

Hospital Display

Display shelves can be used to feature the Harrison's packages most often requested by clients.

Ross M. Prezant,
DVM
All Creatures
Animal Hospital
Stuart, FL



HBD NEWS



Fun at TNAVC and WVC Booths

John Carrano of Orlando entertained children (and their parents) at the HBD booth at The North American Veterinary Conference by making a wide assortment of balloon animals.

New Clinic Poster

A new HBD poster has been designed to promote the availability of HBD products through your avian practice. To order your free copy, contact the HBD office, 800-346-0269 or email customerservice@harrisonsbirdfoods.com.



Pudgie Parrots?

A well done PetPlace.com article called “Dealing with an Overweight Bird” is available at the following site: <http://aolsvc.petplace.aol.com/articles/artShow.asp?artID=1733>.

Just a Reminder

Now that you've seen the great, new, oxygen-impermeable bags that your Harrison's food comes in, we wanted to remind you to tell your clients too.

- Carefully squeeze the air out of the open bag prior to closing it.
- Use the zipper function of the bag to prevent leakage, or fold the top down and apply a chip clip.
- No longer refrigerate or freeze the food, because it is not necessary.
- Be informed about conversion techniques for a smooth transition to a healthy diet.
- Avoid over-supplementation, because that is the major cause of product failure (see back of bags for supplement recommendations).
- All birds can benefit from eating a High Potency formula early in their diet conversion; later on, they can be switched to their specific HBD Maintenance formula.



Using Harrison's

HBD for Lories

We have 2 lories and a lorikeet that are on HBD Adult Lifetime formula, which is soaked in grape juice or apple juice (depending on the owner). They have done great, although one of them does tend to get heavy if offered too much food. One rainbow lory is 12 years old and a recovered hepatic lipidos bird. Bile acids that were over 200 are now back below 100, and triglycerides and cholesterol levels are half of what they were.

*Teresa L. Lightfoot DVM,
DABVP-Avian
Largo, Florida*

WE GET MAIL

Dear Dr. Harrison,
After sitting in on your meetings in Las Vegas, I introduced HBD to my practice and have not looked back. It has been a terrific addition and I have seen great results.

Karin-Susan Breitlauch, DVM

Preliminary Results in Two Studies

BUDGIE PROJECT

Nancy Sondel is a Californian who has long been a bird enthusiast. She raises budgies and writes articles for Bird Talk and other publications. She offered to have a neighborhood pet shop evaluate the results of a diet change to HBD.

Before HBD: Budgies were fed primarily a seed diet. The store owner/breeder had 8 budgie nestboxes, each with 2-4 eggs per box. There was a 50% hatch rate, with 1-2 eggs hatching per box. Many eggs were kicked out of the box or eaten. 100% of hatchings weaned/fledged successfully, though some showed signs of calcium deficiency — splayed legs, deformed beak. One necropsy of a young, fledged budgie showed very inadequate bone density.

After starting to feed HBD, the store owner now has 18 budgie nestboxes, and so far, they are producing 4-6 eggs per box — 100 to 150% more eggs than on mainly seed diet. The breeders started on HBD Adult Lifetime, but switched to High Potency when it arrived, so maybe 4-6 eggs per box will increase once they've been eating the High Potency for a while.



AFRICAN GREY PROJECT

Ed note: Michael Stanford, Birch Heath Veterinary Clinic, Birch Heath Road, Tarporley, Cheshire, UK has been given a grant by HBD to do some field work at Beck's Bird Barn, comparing results of breeding birds fed Harrison's to the same species that continue to be fed their previous diet of seeds and supplements. These are some of his early comments:

After a few short months following conversion of breeding African grey parrots to Harrison's, we have compared their results

with birds that continued to be fed mainly seeds.

Seven babies from HBD-fed parents (parent-reared for first 4 weeks) were radiographed at 7 weeks of age. They showed beautiful straight bones, nicely calcified with perfect ionised calcium levels. Past experience with birds hand-reared on a homemade mix usually involves considerable osteodystrophy. The Harrison's fed birds are winning 10 eggs to 2 over the seed-fed birds at the moment.

*Michael Stanford
Beck's Bird Barn*



Practice TIPS

Continued from page 3



Treatment of Diabetes Mellitus in a Galah

Bob Doneley, BVSc
Toowoomba, QLD, Australia

I have used glipizide (Minidiab® - Pharmacia Australia or Glucotrol® - Pfizer) on a few cases of diabetes mellitus.

One recent case was an obese galah with PU/PD and

a blood glucose >33.3 mmol/L (that's as high as a Reflotron™ machine measures!). I converted the bird to Harrison's Bird Foods and started it on Minidiab® at 1 tablet crushed into 100 ml water.

After 6 weeks the bird had lost 100 g, the PU/PD had resolved, and the blood glucose was normal. I took it off Minidiab®, and the bird has remained normal and is continuing to normalize its weight (it started at 540 g).

New Feeding Tubes

Ernest A. Slovon, DVM
Owings Mills, MD

Up until now, I have been unhappy with the commercial feeding tubes available for feeding large birds such as macaws. They just weren't long enough to prevent the bird from biting the end of the syringe and dislodging and/or swallowing the tube.

Recently, a longer tube (10 ga x 9 in) has become available from Veterinary

AVIAN MEDICINE BOOK

Avian Medicine: Principles and Application — THE classic avian veterinary reference to which all others are compared

- Edited by Branson W. Ritchie, Greg J. Harrison and Linda R. Harrison
- 1384 pages, 430 full color photos, over 1000 B&W photos/illustrations
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Specialty Products (800-362-8138). It is better suited for large birds and reptiles. Because of the larger diameter, it allows feeding of thicker formulas without plugging up.

Wild Wings Update

New brochures are available to promote Wild Wings, the premium, certified organic wild bird foods from HBD for free-

ranging birds.* For a brochure sample or for more information, contact Jean at the HBD office (800-346-0269 or 561-279-4233). Plus, check out the new, fun, easy-to-use web site for Wild Wings <www.wildwingsorganic.com>.

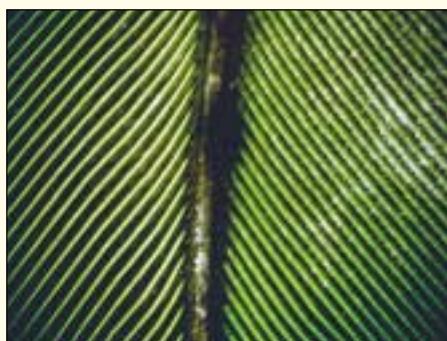


* Organic seeds are no more of a complete diet for captive pet birds than non-organic seeds are.



Evaluating Feathers

Magnification is needed to truly evaluate the condition of feathers during a physical examination of a bird. At increasing visual power, one can appreciate the damage that may accumulate in the feathers of a bird that consumes an inadequate diet.



HBD's Avian Examiner is brought to you as a service of HBD International, Inc., manufacturer and distributor of Harrison's Bird Foods. This publication is part of HBD's commitment to building avian practice through education and nutritionally sound diets. Although every effort has been made to ensure the accuracy of the information presented herein (particularly drug doses), it is the responsibility of the clinician to critically evaluate the contents, to stay informed of pharmacokinetic information and to observe recommendations provided in the manufacturers' inserts. Reader responses, comments and suggestions are encouraged. Please mail to Avian Examiner Publications, 220 Congress Park Drive, Suite 232, Delray Beach, FL 33445 or fax to 800-279-5984.



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For the latest in interactive, cutting edge communication and useful discussion boards for avian veterinarians, log on to www.avianmedicine.net and look for the link.

Separate veterinary forums include:

- General Avian Medicine
- Surgery
- Nutrition
- Research
- The Pet Bird Hospital
- Open Topic

Veterinary students and technicians may view the discussion on the above, but cannot post messages. They each have their own forum.

Veterinary students and technicians forums include:

- AVMed Students
- Tech Talk

Initial registration requires a free password (simply email Jean@harrisonsbirdfoods.com).

Questions? Contact Jean@harrisonsbirdfoods.com

