On September 6, 2003, I attended the Maryland Pesticide Conference held at Johns Hopkins University in Baltimore. Designed for human physicians, the forces behind the gathering were questions about the safety of pesticides and their role in chronic disease, particularly issues of childhood illnesses — learning disorders, neurologic disorders, asthma and cancer. (Previous concerns of the public health and medical professions have focused on acute diseases and worker safety, which remain far from satisfactory.)

New issues over the summer of 2003 had caused some setbacks in action. The first was mosquito control driven by the spread of West Nile virus and a resurgence of EEE (more dangerous than West Nile) and malaria. Because traditional mosquito control had been aerial spraying and larvicidal applications to bodies of water, the hysteria generated by the news media allowed continued overuse of such chemicals.

The second new concern (and the recipient of a multi-million dollar study) involved the 123 pesticide depots that were perceived as potential weapons in the hands of terrorists.

The strong relationship of pesticide exposure to diseases in children prompted Maryland to implement a mandatory Integrated Pest Management (IPM) program for all public schools with announcements of pesticide use near playgrounds and public lands. Mosquito control and some termite applications are two exceptions — known carcinogens and systemically hazardous chemicals (e.g., Malathion®) can be applied without notice.

The accepted premise, when it comes to pesticide safety, is that the burden to prove the harm of pesticides is on the public, public health personnel, the EPA and the government rather than on the pesticide manufacturers to prove safety. The chemical industry should be forced to prove safety to the FDA just as the pharmaceutical companies must.

There seemed to be little support by the speakers for organic products, IPM and the banning of pesticides. Rather than proposing sustainable agriculture concepts, the consensus was to accept that pesticides are needed because crops are being grown in marginal, weak or outright inappropriate soils.
Hemochromatosis
in a Psittacine
Marc H. Kramer, DVM
kramermarcdvm@hotmail.com

Hemochromatosis, or iron storage disease, is a prevalent problem in soft-billed birds, such as mynahs, toucans, birds of paradise, starlings and quetzals. With the exception of lories and lorikeets, this condition is seen only sporadically in psittacines.

Hemochromatosis results from the pathologic accumulation of iron in various tissues. Although the etiology is not well understood, abnormal iron metabolism may be aggravated by high levels of dietary iron.* (The macaw described in this case was fed a typical parrot seed mix along with fruits, including grapes, watermelon, strawberries and banana.)

Hemosiderosis, a similar yet less severe condition, is defined as excessive accumulation of iron in hepatocytes without alteration of normal tissue morphology.

Circulating iron concentrations are neither diagnostic nor predictive of hemochromatosis. Assessment and diagnosis of hemochromatosis currently requires liver biopsy. Research is underway to assess the relationship between serum iron, total iron binding capacity, percent transferrin saturation, serum ferritin, bone marrow iron and liver iron in birds. Additionally, controlled feeding trials and treatment protocols, consisting of intermittent phlebotomy and chelation therapy, are underway.

* All Harrison’s Bird Foods contain low levels of iron, less than 70 ppm.

Further Reading

Garlic to Repel Mosquitos
Jo Gore
Birdlove2rescue@webtv.net

Mosquito Barrier® is a very strong garlic liquid that is diluted in water and sprayed on grass, shrubs, flowers and trees to kill and repel mosquitoes, ticks and fleas. When I tried it, I was surprised that it worked so well. The odor disappeared in about 30 minutes but the results lasted for up to 4 weeks. I don’t want to be without this product again. Mosquito Barrier® is made from all natural ingredients and is not harmful to children,

On necropsy, this bird appeared to be in normal body condition with good fat stores and normal muscle mass. Serosal surfaces, including the pleura, were opaque and thickened, and the lungs were dark, wet and congested. Histologic findings included severe hepatic fibrosis and hemochromatosis, mesangioliproliferative glomerulopathy and atherosclerosis of the kidney, myocardial necrosis and fibrosis with arteriosclerosis and atherosclerosis, chronic lung edema and splenic hemosiderosis.

A rare incidence of hemochromatosis is illustrated here in a 9-year-old male scarlet macaw that died suddenly. Acute death without clinical signs is common with this disease, as are the postmortem signs of hepatomegaly, ascites and cardiac enlargement seen here.

On cut surface of pleura, lung

Report of Maryland Pesticide Seminar
continued from page 1

Two of the major speakers even admitted to using pesticides on their own lawns, showing their lack of true commitment to the cause. The handout material to educate doctors, nurses and public health officials was provided primarily by non-profit support groups. For me, the conference was a perfect example of a huge public problem being band-aided by the government and leaving the bulk of the work on the shoulders of the support groups. The task at hand is so huge — more effective measures must be found.
pets or plants. The web site is: <www.garlicbarrier.com/MosquitoBarrier.html>.

Ed note: Caution is advised in using this product, as some people are very sensitive to garlic.

Creating a Band Number Database for Your Avian Patients
Marc H. Kramer, DVM
kramermarcdvm@hotmail.com

Each year countless numbers of pet birds escape or are lost or stolen from their owners. Most of these birds are not recovered because their owners did not provide them with some kind of identification.

Microchips are commonly used for bird identification but are only effective if the bird reaches the hands of someone possessing a scanner. In contrast, leg bands, although inscribed with only a limited amount of data (usually a breeder code, year and number), are highly visible and can be read by anyone.

In a recent survey, 70% of avian veterinarians recommended removing leg bands due to the risk of developing leg-related injuries. The remaining 30% advocated leaving bands in place to serve as externally visible identification that anyone can read without specialized equipment. The author advocates the use of both microchips and leg bands together to maximize the chances that a lost bird is reunited with its proper owner.

Landmarks for Intraosseous Catheter Placement
Marc H. Kramer, DVM,
Don J. Harris, DVM.
kramermarcdvm@hotmail.com

Proper placement of an intraosseous catheter in the distal ulna of psittacine birds requires knowledge of the local appendicular anatomy.

The needle is advanced into the medullary cavity of the ulna, while grasping the mid-point of the ulna as a guide. When the catheter is properly placed and flushed with heparinized saline, fluid can be visualized passing through the ulnar vein on the ventral surface of the elbow.

Isoflurane anesthesia may be necessary in birds that are fractious. In medium to large birds, an 18- to 22-gauge, 1.5- to 2.5-inch spinal needle should be used. In small birds, a 25-gauge needle is used. The catheter should be secured in place by wrapping a piece of tape around the end and incorporating the tape into a figure-of-eight bandage.

Recording band numbers in a searchable database format is a valuable service a veterinarian can provide to clients and the local community.

In our clinic, all band numbers are recorded in our computer system (using Avimark® software). If a “found” new bird possesses a leg band, we search our database for information about its previous owner. Additionally, arrangements can be made with local breeders and pet shops to help support the band registry. There is also a web site <http://buddysfriends.com/registry.html> where breeders can register their band codes. Finally, band numbers can easily be placed by owners on locally posted “lost pet” flyers or in the local paper.

Feathers are removed from the distal wrist and the area is aseptically prepared.

The insertion point for the catheter lies on the dorsal surface of the wing, slightly ventral and distal to the dorsal condyle of the distal ulna. Location of this condyle is aided by visualization of the extensor carpi radialis tendon, which is seen crossing just proximal to the condyle.
Making Baytril® Palatable
Marc H. Kramer, DVM
kramermardvm@hotmail.com

Enrofloxacin (Baytril®) is one of the most effective and commonly used antibiotics in the avian practitioner’s arsenal. Typically, an intramuscular (IM) injection is used to commence therapy with enrofloxacin, especially for critically ill patients. For treating canine patients, the manufacturer recommends that the single injection be followed by initiation of oral therapy. This recommendation applies equally to off-label species such as birds. The injectable product can cause severe muscle irritation, necrosis and abscessation if used repeatedly.

Several forms of enrofloxacin are available, yet most of these are highly distasteful to birds. The injectable product administered orally without any flavoring syrup is extremely bitter and leaves a numbing sensation in the mouth. Client compliance with medicating a bird at home is greatly lowered when the bird resists foul-tasting oral therapy.

INTERPRETING AVIAN NUTRITION IN THE LITERATURE

Macroscopic and Microscopic Changes in Blood Vessels of Psittaciformes.

Commentary
In this study 14 randomly submitted birds were necropsied and none had macroscopic cardiovascular changes, while 8 of the 14 had microscopic alterations of the vessels. Four of 4 African greys and 1 of 2 Amazons had atherosclerosis (AS). Nothing was mentioned about diet, except the abstract offered age, gender, chlamydia infection, herpesvirus infection and cholesterol-enriched foods as possible accelerating factors for AS. From personal experience and interviews with Dutch and German colleagues, the majority of pet birds in the countries where the birds were studied are fed a straight seed diet. So this editor seriously questions these assumptions, especially the issue of feeding high cholesterol-enriched foods, because seeds are cholesterol-free.

Influence of Amount and Type of Dietary Fat on Plasma Cholesterol Concentrations in African Greys.
Bavelaar FJ, Beynen AC. J Appl Res 1(1)1-7, 2003

Commentary
This study used rescued African grey parrots of various ages (3-41 years). Prior to the study the birds had been fed a formulated diet (Versele-Laga Nutribird P15™ [15% protein and 16% fat]) for at least 2 months. Two low-fat diets and two high-fat diets were fed to the groups for varying times. The fat source was alternated between sunflower oil (polyunsaturated) and palm kernel oil (high in saturated fat).*

The study started with 30 birds: 10 of those were excluded for excessive weight loss or illness, 1 escaped and 1 died. The study expected to conclude that one could alter the cholesterol levels in these birds in a predictable way based on studies done on other species, i.e., saturated fats from palm kernel oil would raise cholesterol levels, and unsaturated fat (sunflower oil) at low levels would lower cholesterol levels.

The study concluded that you could lower cholesterol in birds by feeding fats at lower levels or those rich in polyunsaturated fatty acids. Yet birds on low levels of palm kernel oil did not have elevated cholesterol as predicted.

Several things were interesting in this study:
1. The authors report in a 2003 Avian Diseases reference that sudanophilic staining was present in the aortas of 84% of parrots presented for necropsy. Two finely ground 68 mg tablets are mixed per 9 ml of strawberry Ensure® to create a 15 mg/ml suspension. The resulting suspension is refrigerated and given a 2-week shelf life with instructions to shake well. Although the liver/strawberry combination may not sound very appetizing, acceptance of this suspension has been good in birds and appears clinically effective.

2. In that same reference the authors report a correlation between breast muscle fatty acid composition and adipose tissue as biomarkers of fatty acid intake.

It would seem to this commentator that both of these articles miss the point in their studies. We know birds on seed diets develop fatty disorders. The high incidence of AS is new but of little consequence. What’s needed is information on how to avoid these phospholipid problems in the first place.

Page 4
Why Lifekind® Sells Only Certified Organic Cotton Products*

Many resources focus on healthy organic alternatives to conventionally grown food, but food is not the only agricultural product that can benefit the environment from decreased use of pesticides.

Certified organic cotton is grown without pesticides. Certified organic cotton is not the same as “Green Cotton,” “100% Natural Cotton,” “Undyed and Unbleached Cotton,” “Colorgrown Cotton” and other products that are commercially grown using pesticides, with significant risks to human health and negative impacts to our environment. Some facts you should know about chemically grown cotton are presented here:

- “Chemicals have replaced bacteria and viruses as the main threat to health. The diseases we’re beginning to see as the major causes of death in the latter part of this century and into the 21st century are diseases of chemical origin.”
  - Dick Irwin, Toxicologist, Texas A&M University

- “Two-thirds of the cotton crop winds up in food. Half a million tons of cottonseed oil go into processed foods like baked goods, snacks and salad dressing. Three million tons of cottonseed is fed to beef and dairy cattle.”

- “3700 chemicals can be legally concealed in pesticide formulas. These ingredients can comprise up to 97% of the product. These ‘inerts’ are often insecticides such as DDT or contaminants like dioxin.”

- “Chemically grown cotton is sprayed with an assortment of toxic pesticides, herbicides, insecticides, fungicides, defoliants and other chemicals approximately 30-40 times during its normal growing season.”
  - Lifekind catalog.

- “It takes about one-third of a pound of chemicals to grow enough cotton for one T-shirt, and about three-quarters of a pound of chemicals to grow enough cotton for a pair of jeans.”
  - Sustainable Cotton Project, Cleaner Cotton Campaign Tool Kit, Oroville, CA

- “More than 84 million pounds of pesticides and 2 billion pounds of synthetic fertilizers were used in the production of chemically grown cotton in 2000.”

- “Conventionally grown cotton uses more pesticides than any other single crop and includes some of the most hazardous pesticides on the market. These cotton pesticides are frequently broad-spectrum organophosphates (originally developed as toxic nerve agents during WWII) and carbamates.”

- “As far back as 1988, EPA had detected over 70 different pesticides present in the groundwater of 32 states.”

- “50% of the total US population is supplied with drinking water from groundwater.”

- And, lest we forget…. “Pesticides are poisons designed to kill living things.”
  - Washington Toxins Coalition, Toxic by Design.

* Adapted with permission from Lifekind® Products print catalog. For further information, contact 800-284-4983, 530-477-5395 or <www.lifekind.com> Other resources include Pesticide Action Network <www.panna.org> and a compilation of Pesticide Facts by RATE (Real Alternatives to Toxins in the Environment): <www.chebucto.ns.ca/Environment/RATE/pestfact.html>.
Kudos for David Vetter

A very key person in the original development and current quality control of organic ingredients for Harrison’s Bird Foods is David Vetter, an organic farmer from Marquette, Nebraska. A wonderful story about Dave’s start in organic farming and his philosophy of life (which is carried through in his commitment to Harrison’s products) is available on the web. Entitled “Tapping The Heavens, Tilling The Earth: Dave Vetter’s Stewardship Fosters Organic Community,” the article can be accessed at: <www.naturalfoodsmerchandiser.com/nfm_backs/sep_03/legacycfm>.

International Events

Two international events sponsored by European distributors of Harrison’s Bird Foods occurred during the late fall and another is scheduled for March, 2004.

• Avian Conference in the UK

“Loughborough University Conference Centre at Burleigh Court was the venue for a one-day conference on Avian Nutrition and Diseases, hosted by Sheila and Brian Stockdale of Harrison’s Bird Foods-UK Ltd.

Topics covered everything from overview of avian nutritional diseases, role of calcium in the avian body, and avian moult in health and disease to behavioural approach to the pet bird, ethics and disease of wild caught imports, selecting a breeding colony, possible causes of dead in shell and male bird infertility. We applaud and thank Harrison’s Bird Food UK, Ltd. for sponsoring this conference and having the insight to promote education in the keeping of parrots.

Parrots in captivity are our total responsibility. We must learn all we can to ensure their safekeeping. Education though events such as this will help us protect our birds. We, as bird lovers and keepers, must encourage others to attend and learn more as well, so all the birds can benefit and live a better life.”

* Adapted from an October, 2003 article by Eric Peake printed in Cage and Aviary Birds, a weekly newspaper for the cage bird fancy in the UK.

(Ed note: Eric Peake is a well known artist whose images of pet birds are treasured throughout the world. His presentation at the conference was Parrots in Aviculture.)

Bird Feeder and Wild Wings

If you saw the November/December 2003 issue of Organic Style magazine, you probably saw a unique bird feeder made from recycled plastic soda bottles as #11 of their top “50 Green and Gorgeous” gifts. They went on to say, “You’ll need organic wild bird feed to go with it, of course,” and gave the Wild Wings Organic web site, www.wildwingsorganic.com. These feeders (and the Wild Wings to put in them) are available through HBD 800-346-0269 or <www.harrisonsbirdfoods.com>.

Whats’s New at HBD?

• New Client Booklet to Distribute

A new booklet about how to use Harrison’s Bird Foods has been developed by Jean Coffinberry and is available free for distribution to your clients. Full of information on why feeding Harrison’s results in extraordinary health and appearance of companion birds, the 40-page guide will reinforce your clinical explanations and provide in-depth coverage of frequently asked questions. Veterinarians may request an initial supply of the new booklets to be shipped with their next food order. Call the HBD office at 800-346-0269.

• New Super Fine HBD Formulas

At the request of breeders and owners of very small psittacines and passerines, HBD is offering a new size in its line of organic bird foods. The exceptionally small, extruded nugget, known as Super Fine, was designed specifically for budgies, finches and canaries and is approximately half the size of the regular HBD Fine Grind. Super Fine is available in Adult Lifetime and High Potency formulations. For further information, contact HBD at 800-346-0269 or <www.harrisonsbirdfoods.com>.

Speakers at the HBF-UK Avian Seminar were (standing from left): veterinarians Michael Stanford, Alan Jones, Jan Hoomeijer, Brian Stockdale; (seated): Dr. Greg Harrison and artist Eric Peake.
I rehabilitated 4 squirrels this year, and all ate HBD High Potency Coarse until they were released. They loved it — it was well balanced for them, just the right size and they preferred it to seeds, bread and other less nutritious items. One squirrel still comes to the door and screeches if I don’t leave some outside for it.

I have also started using HBD Juvenile Hand-feeding Formula to tube feed sick bearded dragons. This formula (with Avizyme™ added) gets their intestinal bacteria back to normal quickly. Bearded dragons are prone to Clostridia and other gram-positive filamentous (anaerobic) bacterial overgrowth and excessive gram-negative bacterial proliferation when debilitated. Several animals that I didn’t expect to make it have turned around.

Dr. Jan Hooimeijer at the Parrot Seminar.

**Parrot Seminar in The Netherlands**

The Society for Parrot and Parakeet Welfare (SPPW) foundation hosted a full day program for veterinarians and bird clients in The Netherlands in early October. Sponsored by HBF-The Netherlands, many of the attendees were “graduates” of Dr. Jan Hooimeijer’s behavioral program that celebrates its success during its annual Parrot Walks (see Avian Examiners #23 and #25).

I have a client who buys a lot of HBD from us. She likes to come in and ask for the Harrison’s “High Frequency” diets.

**Converting Budgies the Easy Way**

Berend Westera BD BVSc
New Zealand. bwestera@xtra.co.nz

We have had great success converting budgies to Harrison’s by hospitalizing them and placing them in an incubator free of all accessories except for a mirror placed on the floor. We place the pelleted food on the mirror (with no seeds or other food present). The budgie cannot resist taking a look at the “foreigner” present in the mirror and beating it to the food there (see photo on page 8). They usually convert to Harrison’s in a day. For stubborn birds, we crop feed with 1.5 ml Harrison’s Juvenile formula three times daily. Sometimes for larger birds, we add peanut butter and hot water to encourage them to eat, or we grind some of their favorite seeds to sprinkle over the pellets.

**HBD for Species Other Than Birds**

Teresa Lightfoot, DVM, Dipl ABVP-Avian. Florida Veterinary Specialists, Tampa, Florida. LightfootT@aol.com

I have also started using HBD Juvenile Hand-feeding Formula to tube feed sick bearded dragons. This formula (with Avizyme™ added) gets their intestinal bacteria back to normal quickly. Bearded dragons are prone to Clostridia and other gram-positive filamentous (anaerobic) bacterial overgrowth and excessive gram-negative bacterial proliferation when debilitated. Several animals that I didn’t expect to make it have turned around.

**New Name?**

Chris Griffin, DVM
Kanapolis, North Carolina. thegryph@yahoo.com

I have a client who buys a lot of HBD from us. She likes to come in and ask for the Harrison’s “High Frequency” diets.

**Using Harrison’s**

**Converting Budgies the Easy Way**

**HBD for Species Other Than Birds**

**Parrot Seminar in The Netherlands**

**New Name?**

**Using Harrison’s**

**Coming Up:**

**Companion Bird Nutrition in Germany**

A full-day program, called Advances in Companion Bird Nutrition, is scheduled for Saturday, March 6, 2004 in Oberschleissheim, Germany (immediately following the XIV DVG Conference on Avian Diseases in Munich). Sponsored by Harrison’s Bird Foods of the United States and Avifood of Germany, the basic to advanced course in avian nutrition is designed to explore the fieldwork, recent research and practical applications of organic formulated diets in psittacine and selected passerine birds.

International speakers include Debra McDonald, PhD from Australia; Michael Stanford, BVSc, MRCVS and Brian Stockdale, MRCVS from the United Kingdom; Jan Hooimeijer, DVM and Eric A.W. van Kooten, PhD from The Netherlands; Friedrich Janeczek, Dr med vet from Germany; and Greg Harrison, DVM, Dipl ABVP-Avian, Dipl ECAMS from the USA.

Interested veterinarians and other animal health professionals are invited to attend this symposium at no cost, although reservations are requested. Attendees receive 8 CE credit hours of practical nutritional education, including opportunities for questions and answers, printed notes, lunch, morning and afternoon refreshment breaks and free Harrison’s Bird Food samples. For further information or to reserve space in the symposium, contact: info@avifood.com.

**Harrison’s Used to Raise Finches**

Carol Welcomb
chwelcomb@att.net

When my zebra finches had chicks, the female seemed overwhelmed by the six mouths to feed. I used Harrison’s Juvenile formula to hand feed the clutch twice a day (it’s not easy to feed baby zebra finches), and all six are alive and well.

Zebra finch
The Results Speak for Themselves

Mirror Image: The easy way to convert budgies to Harrison’s (see page 7).

The first 10 people to spot the “Bird Doc” inside this Avian Examiner receive a free bag of Harrison’s Power Treats. E-mail Tanya@harrisonsbirdfoods.com or call 800-346-0269