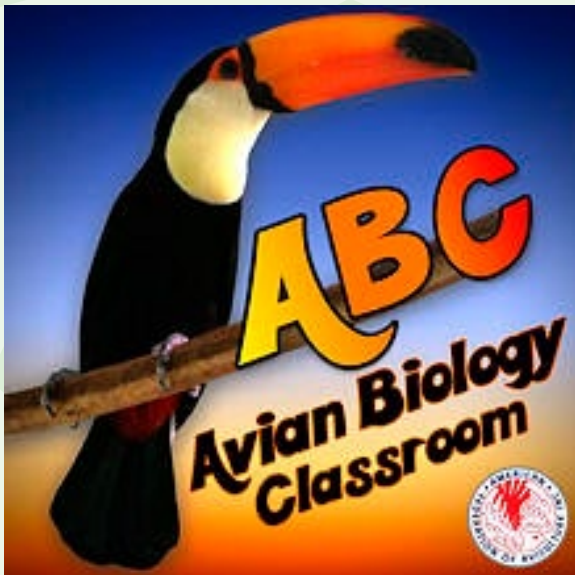


WAES News

Wasatch Avian Education Society



FEBRUARY SPEAKER

Avian Biology Classroom (ABC)

Presented by
Shawna Augustine

Shawna Augustine, a long-time member of WAES and Utah State Coordinator for the American Federation of Aviculture will present ABC. This is the first module authored and compiled by Jason Crean, MA,MS,AFA Education Chair.



Jason Crean
www.xyzo.com

These modules are geared towards anyone interested in learning about the biology of birds. It teaches participant about scientific problem-solving through the conservation story of the kakapo. It also has an additional activity that highlights the owl studies of researcher and AFA member Caroline Efstathion.

*Shawna can't wait to share
with eager learners.*

WAES CLUB MEETING

February 13, 2016

7:00 pm

Salt Lake County Complex

2001 S. State Street

Room N1100 (North Building)

Salt Lake City, UT 84190

You are Invited.

Our meetings are free and open to the public. We offer presentations, conversations and commraderie with other parrot enthusiasts. Refreshments are provided and a raffle table is a special fundraiser benefit for birds in WAES foster care. Come see what our volunteer flock is all about.



DEVELOPMENT OF METABOLIC BONE DISEASE IN BIRDS

Metabolic bone disease (MBD), while prevalent, is not commonly reported in the pet parrot literature. MBD is broadly defined as a diseases of the bone due to many causes- rather vague! African greys have certainly received most of the attention (especially from the European community). Regardless, MBD can occur in any species (above and beyond birds).

In my mind, there are several factors that contribute to the development of MBD in birds:

1.) Parents selectively feeding foods to their young that result calcium, phosphorous and other micronutrient imbalances. This can occur even if the parents are offered a balanced diet and with both experienced and inexperienced parents. Some birds are just not good parents and consume the high quality foods for themselves and manage to selectively regurgitate poorly food to their babies. This also appears to occur in the wild either because of poor parenting or the chick is not aggressive or healthy enough to get a complete diet.

2.) Poor (nutrient imbalanced) diets fed to birds. Poor diets (the classic all seed diet) is commonly blamed for MBD in birds, however I feel there are so many other factors than just the diet alone. Additionally, some birds like cockatiels and budgerigars are incredibly efficient at pulling nutrients out of a relatively poor diet. In fact, at least one study demonstrated how supplementing developing budgies with relatively small amounts of calcium could induce kidney disease.

3.) Lack of exposure to natural unfiltered sunshine. Over time, this has become a major concern of mine with birds kept entirely indoors. My travel and work schedules have me working in climate extremes from southern California (very warm and sunny) to the Great Lakes area of New York (cloudy and cold) and many places in between. While we are all hearing about the benefits of vitamin D and controlled exposure to sunshine, this issue struck me while working at a veterinary university in a colder climate. Upon reviewing radiographs (X-rays) of multiple animals (birds, reptiles, cats, dogs, etc), I noticed the bone mineral density was quite poor at this university loca-

tion. The animals were not necessarily suffering from overt MBD, but they clearly had osteopenia (decreased bone density) compared to what I was used to seeing in Austin, Texas (warm and sunny). Also, the clinicians (including board certified radiologists) had not noticed these rather subtle changes. The further north (and towards more cloudy and colder climates) I work, the more dramatic the changes. What is 'normal' on radiographs for the animals of the area, is sometimes clearly abnormal to me.

Upon further evaluation, I could see differences in bone mineral density between those animals kept entirely indoors and those that were allowed unfiltered sunshine. The differences between the two classes of animals are most striking in the colder and cloudier climates. This may be because those living in colder climates either never take their animals outside or do so quite a bit when the weather is nice and sunny. The comparatively intense sun exposure during the summer months may be enough to make up that difference in bone mineral density for the rest of the year.

As a result, I very commonly recommend supervised unfiltered sunshine therapy. 'Supervised' because I don't want the birds to get out (unless they are flight trained) and/or get harmed (eaten). 'Unfiltered' because even window glass can block beneficial UV radiation that would otherwise stimulate active vitamin D formation in a bird's skin.

4.) Exposure to toxins or certain foods that competitively block the absorption of select nutrients (like calcium), cause increased elimination of calcium from the kidneys or that bind with calcium and other bone building nutrients in the diet (and subsequently prevent their absorption). The most common that comes to mind is excessive spinach consumption most frequently seen (by me) in pet doves. Of course oxalates are found in many plants and fruits but are particularly high in spinach and can result in either decreased absorption and/or urinary excretion of calcium (which is why they are sometimes associated with calcium oxalate kidney or urinary bladder stones). There are a number of toxins and mineral

excesses that can also result in increased calcium absorption or secretion. However, there are other important bone component nutrients such as phosphorous, silicon and manganese that can have altered absorption and/or secretion with certain drugs and foods.

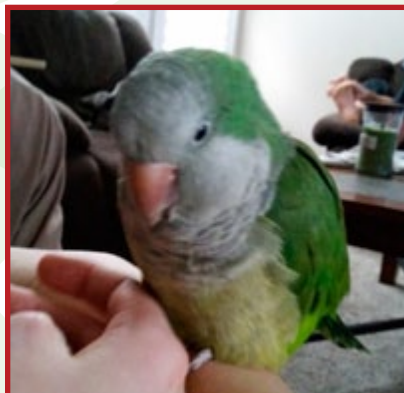
5.) Prolonged illness that results in decreased intestinal absorption of bone related nutrients. This can be something as simple as chronic diarrhea that decreases the amount of time foods have in the gut to be absorbed. More often, it is illnesses that affect the proventriculus/ventriculus (stomach) like proventricular dilatation syndrome or avian gastric yeast or various forms of liver and pancreatic disease that may prevent absorption of multiple nutrients. Primarily parathyroid diseases (which affect calcium and phosphorous balance) is considered rare in pet birds. However, we do commonly see secondary parathyroid disease as a result of MBD in pet birds.

6.) Disuse atrophy of the bones. This is better defined under 'osteopenia' where the exercise is limited (due to cage confinement, arthritis, etc) and bone strength is lost over time. Regardless, I feel that developing birds absolutely need exercise even before completely weaned. When observing weaning fledgling birds in the wild (from raptors to parrots to songbirds) I notice two consist factors that can affect bone health- young birds tend to sit out in the full or partially filtered (through tree leaves usually) sun and they practice stretching and flapping their wings in preparation for those first several flights. I feel that both activities are important to bone and muscle growth and development. Once a bird is fully weaned and eating on its own, I like to get those birds out foraging and playing with toys.

So my definition of MBD includes the obvious weak, soft and malleable bones we see in the most severe cases but also includes a collection of historical, physical exam labwork clues such as lack of exercise, poor (radiographic) bone density, poor or marginal diet, lack of sunshine exposure and more. MBD is not an exclusively dietary issue.

*This entry was posted in blog, Metabolic Bone Disease. Bookmark the permalink.
Direct link:
<http://www.avianstudios.com/metabolic-bone-disease/development-of-metabolic-bone-disease-in-birds/>*

NEW BIRDS



Kisses Quaker

11 years old. Believed to be male. Prefers women. Comes with cage. Vet check pending.

Pepper AG

Believed to be female, 10-15 years old. Comes with travel cage. Vet check pending.

ADOPTED

Sebastian/Frank SC, Figaro BFA

WANTED

WE NEED FOSTER HOMES!

The American Federation of Aviculture, Inc.
42nd Educational Conference & Avian Expo
Radisson Hartford - Cromwell, CT
Save the Date Aug 4 - 6, 2016
"Conservation Works"

www.AFABirds.org

Convention@AFABirds.org 281-217-0614

Keynote: Laney Rickman
Bird Endowment "Go Blue"

Paraba Barba AZU

What's new in aviculture

Workshops
30+ presentations
Networking
Shopping
Raffles
Art Auctions

Bird Exhibits

The American Federation of Aviculture, Inc. is a 501 (c)3 educational organization PO Box 91717 Austin, TX 78709

AFA DELEGATES

Shawna Augustine- Utah State Coordinator
ssaugy@hotmail.com

Open Position- WAES Delegate

Visit www.afabirds.org to learn more about bird education, conventions, publications from a nationally recognized organization.

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UPCOMING EVENTS

March WAES Meeting
Speaker TBA
March 12-7:00 pm

AFA 42nd Annual Convention
"Conservation Works"
August 4-6, 2016
Cromwell, CT
www.AFAbirds.org

THANKS & GRATITUDE

Be involved. Make WAES Worthwhile.

Newsletter will be distributed Electronically unless other arrangements are made

WAES

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