

## Exoticonscon Boston 2023

All exotics as prey species exhibit “masking behavior” which is not showing symptoms until they can no longer “hold it together” thus we often miss early signs of illness.

### Medicating cham:

Injectable meds always go in front half, fluids can go in back half. Injection site is forelimb avoiding the top of it which houses the radial nerve. Place injection at an angle rather than straight in.

Meds by mouth may not be effective, as the digestive systems goes quiescent between meals (my takeaway is try to feed small insect before & after oral meds)

### Metabolism

Reptiles have  $1/10^{\text{th}}$  the energy requirement of mammals. No need to supplemental feed unless >10% weight loss. Stomach capacity is 2-5% of body weight. If supplemental feeding end of red rubber tube works well to protect teeth.

### Fluids

Symptoms of dehydration are eyes sunken, skin tenting and thick, ropy saliva. Can give subQ in lateral body wall or between shoulder blades

### Parasites

It is a myth that crickets and other insects bring parasites; a study was done specifically on coccidia. They can however serve as a fomite if a cricket from enclosure with parasites is then removed and fed to another animal

### Nutrition and Vitamins

Study on supplying superworms with UVB light did NOT increase Vitamin D levels in the insects, since insects have no need for Vitamin D

One audience member said it takes reptile 90-120 days to clear excess Vitamin D

Total body calcium distribution is 99% bones and <1% is ionized calcium in the blood which is the most accurate evaluation of calcium homeostasis.

Insect exoskeleton is very high in phosphorus. Leafy greens high in calcium are best gutload

Goal is CA:P ratio of 1.5-2.1.

UVB decreases the need for Vit D. Author said UVB essential for all terrestrial reptiles *including* nocturnal ones.

Spectrum needed is 290-320 nanometers. Recommend using solarmeter and replacing bulb when it produces <70% of original output.

We know spinach is high in oxalates and should not be given to feeders; beets and celery are also oxalates.

Fluker's HiCal gutload will work in crickets for 24 hrs. After that it is no longer present. Recommend fasting insects for 12 hrs to make them eat the gutload.

### Hypovitaminosis A

Vit A maintains normal epithelium. Lack of A causes hyperkeratosis and squamous metaplasia, weight loss, anorexia, obstructed or abscessed glands, eye plaque or eyecap. Chams: irregular thickening along lips and commissures, hemipenial plugs/impaction/infection, URI/pneumonia, peri-aural abscessation, gout or renal insufficiency.

Avoid injectable vit A as it also contains D, use higher dose of oral instead

Response to treatment is SLOW-once the balance is restored, the epithelium must be replaced via successive sheds.

Vitamin A toxicosis causes skin to slough off, blisters

MBD

Referred to as NHSP, Nutritional Secondary Hyperparathyroidism which is a type of MBD

Mild Symptoms:

Lethargy, weakness, anorexia, lack of proper growth/size

Moderate:

Paresis, splayed rear legs, can't lift body up, gastrointestinal ileus (can't poop)

Severe:

Ataxia, tremors, seizures, bowing and/or fractures of long bones (called folding fractures), cloacal prolapse, bloating, intestinal impaction, oviductal prolapse, pre-ovulatory follicular stasis, post-ovulatory dystocia (can't lay), rubber jaw (as bone gets replaced with fibrous cartilaginous tissue)

Bloodwork should check total calcium to total phosphorus. Use plasma calcidiol NOT calcitrol

40-50% of bone must be depleted before we see it on rads.

Recommend no Vit D supplementation during treatment but yes to UVB light. May need opioids for pain, nsoids only if well-hydrated) injectable and oral calcium. May have to tape limbs to the tail or body to stabilize.

FIREFLY ingestion: They are cardiotoxic and will kill a beardedie in 30-60 minutes. So would assume also cham.

Symptoms lingual projection, nausea, vomiting, gaping. No treatment :

Don't leave chams out after dark where fireflies are present!

Periodontal disease common, tartar often looks brown or black. In acrodonts, gum tissue is very thin and just atop bone so must use care when cleaning-under anesthesia.

Chams in captivity general takeaways:

Got data from 65 zoos as follows:

35% males, 22% females 22%, 43% undetermined

65% of zoos are breeding; 8 of 36 species breeding (but almost all are livebearers). In the rarer species many zoos only have one or at the most 2, animals

Necropsies: 47.8% due to infections, 33% had renal lesions upon death. Assume there are gaps in husbandry, need comparative wild studies

We need an SSP (Species Survival Plan) such as we have for tigers and other threatened species.