

A close-up photograph of a snake's head and upper body. The snake has a dark brown or black base color with large, irregular yellowish-brown spots or blotches. Its eye is a vibrant red color. The scales on the head are clearly visible, showing a distinct pattern of larger frontal scales and smaller post-frontal scales.

# Snakes

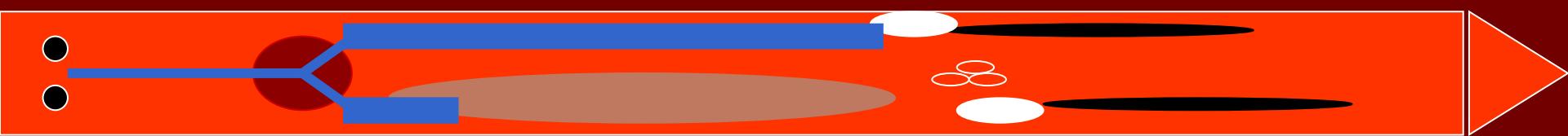
# Snake?





# General anatomy

right



kidney

# Respiration

- 1 or 2 lungs



# Captive breeding

- Cf lizards
- Egg shells soft
- Parental care



# Defences and handling

## ■ Passive:

- Camouflage, Mimicry...

## ■ Active:

- Threaten
- Bite
- Odor
- Poison













# Clinical examination: anamnesis

- Species!!!!
- Regurgitation
- “anorexia”





**General impression**

# Clinical examination

- General condition
- Hydration
- SKIN!



# Clinical examination

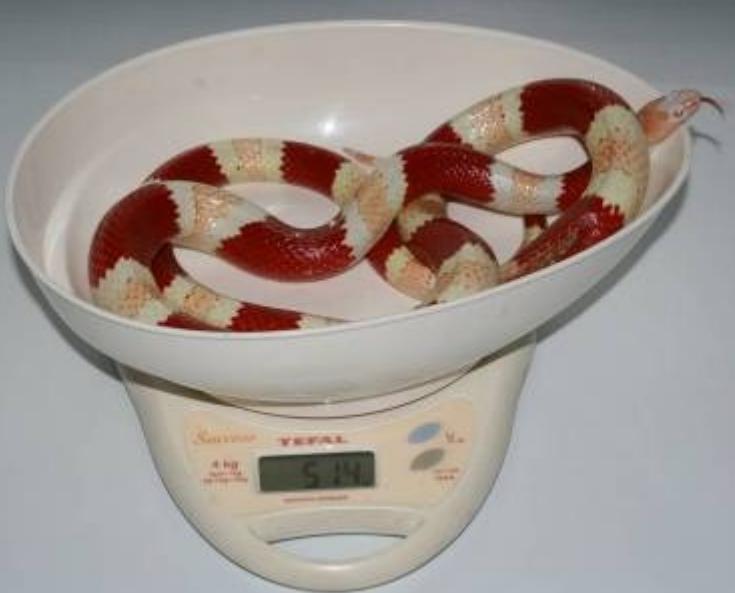
## ■ Respiration





# Clinical examination

- Mouth
- Cloaca
- Ossification?
- Parasitic
  - Faeces
  - Mouth!





# Additionally...

- RX
  - Egg binding, gestation, bone deformities
- Blood
  - Kidney and liver
- Echo!
  - Gestation, follicles, heart, ...
- (Endoscopy)

# Injections

- IV
- IP
- SC?
- IM -> dorsal muscles

# IV

- fluids
- Injection anaesthetics
- catheterisation?



# IV / ICo / ICa

- Ventrale staart vene
- Palatine vein
- Cardiocentesis
- V. jugularis



# IV

## – Problems

- poisonous
- small



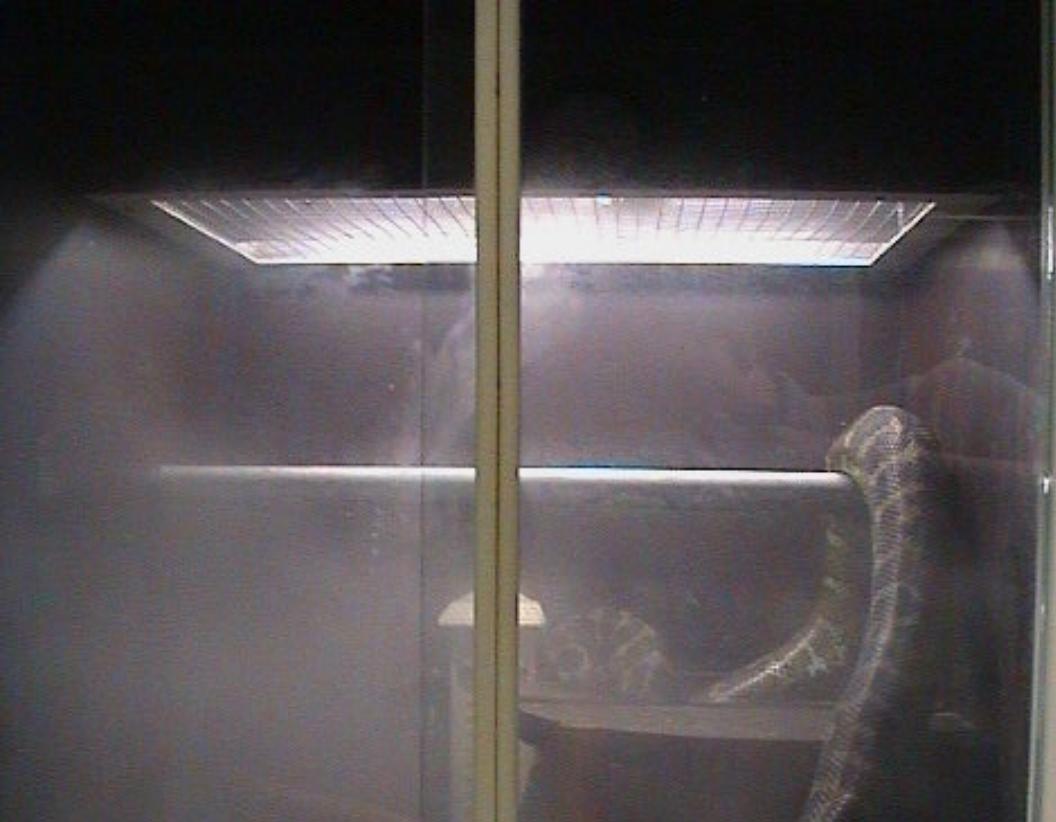
# Management of snakes



# Humidity

- Substrate
  - DRY!!!!





A photograph showing a large Python coiled on the ground, its long body stretching across the frame. It has captured a small, pale-colored animal, possibly a lizard or a small bird, which it is eating. Two men are standing nearby, observing the scene. One man is leaning over the snake, while the other stands further back. The setting appears to be a rural or semi-rural area with vegetation and a dirt path.

# Nutrition

# PREY!!!

Insects: cf lizards

Mammals, birds



# Nutritional problems

**FEW!**

- Specialist feeders
- Live / dead prey



# Anorexia



# Hypovitaminosis B1



# Predation





# Water



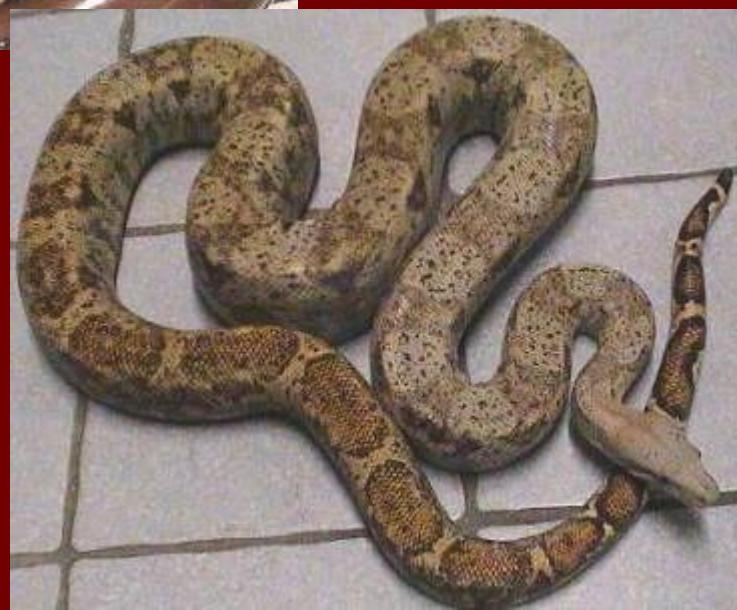
# Boidae / Boids and pythons

- constriction
- Medium to very large (10 m)
- Oviparous (pythons)
- Ovoviviparous (boa's)
- Genera
  - Boa
  - Python

# *Boa constrictor*



occidentalis



Hog island



*Epicrates cenchria*, rainbow boa



*Acrantophis dumerillii*



*Sanzinia madagascariensis*

Madagascar (Malagassy) boas



*Corallus caninus*, emerald tree boa



*Morelia viridis*, tree python



*Python molurus* (Burmese python)



# *Python curtus*



# *Python regius* (ball python)





***Morelia spilota* (carpet python)**

# Colubridae / rat snakes

- worldwide
- Largest snake family
- constrictors
- Oviparous / ovoviviparous



# Colubridae, water snakes



Tamnophis (ribbon snakes)



Fish, rodents, amphibians

dermatitis

hypovitaminose B1

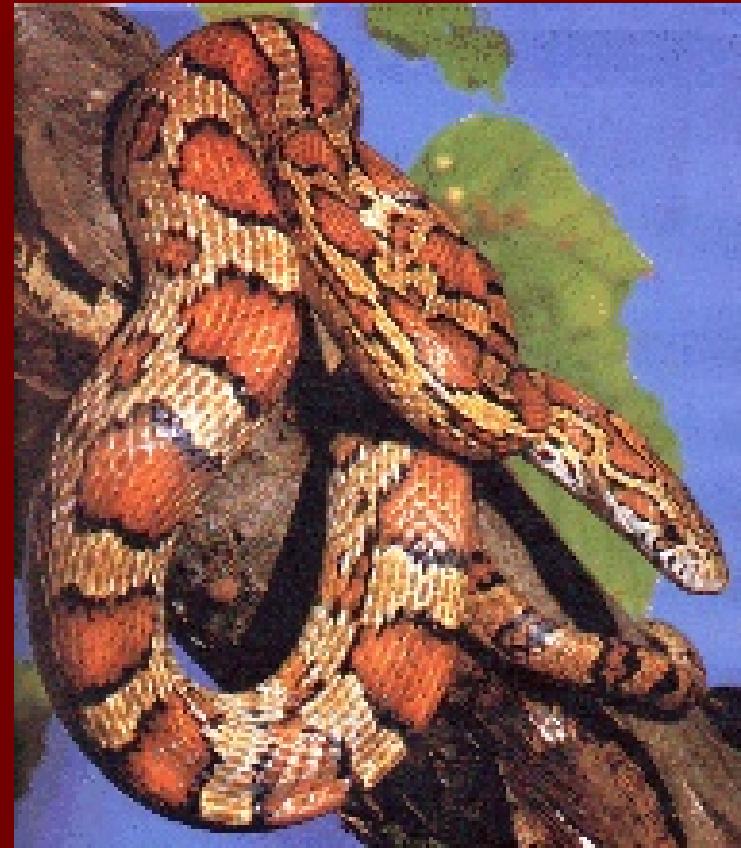
*Natrix maura*



# Colubridae, rat snakes, *Elaphe*



*E. mandarina*



*Elaphe guttata*, corn snake



*E. obsoleta*





*Lampropeltis* (kingsnakes)



# Most prevalent diseases



# Skin problems



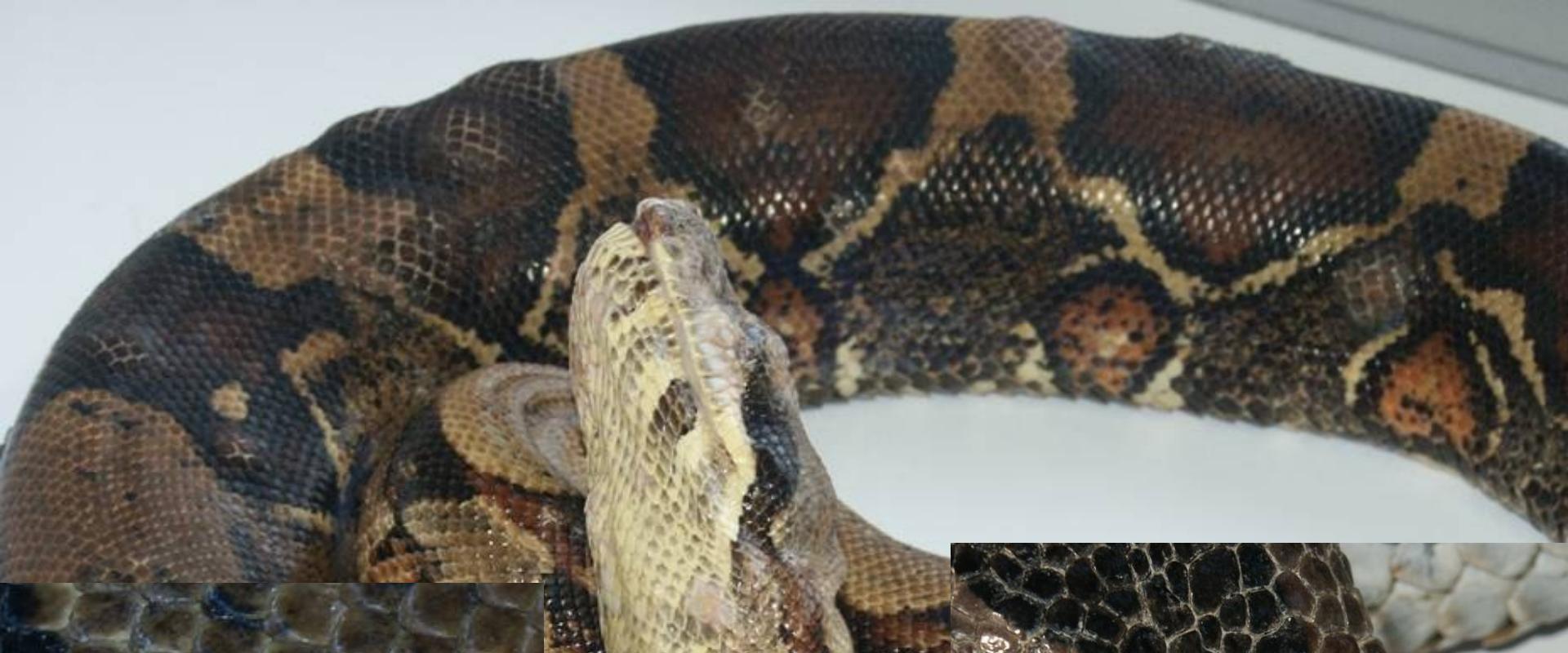


A close-up photograph of a snake's scales, likely a cobra, showing significant dermatitis. The scales are heavily mottled with dark brown and black spots, and there is visible irritation and discoloration along the midline where the scales meet. The snake's body is coiled, and the background is a solid dark color.

**dermatitis**



Spectacle  
retention





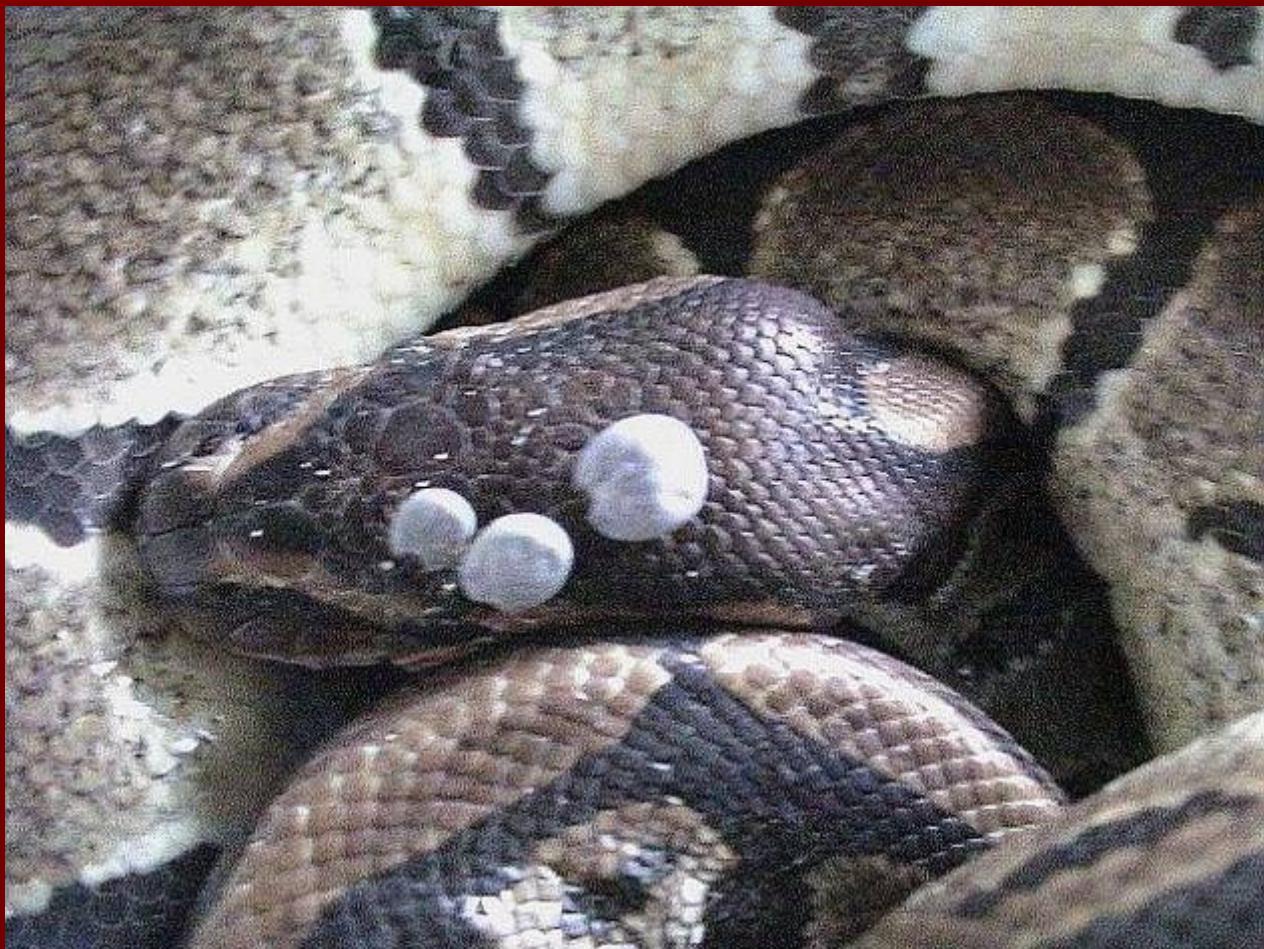
enrofloxacin





septicaemia

# ectoparasites



# Eye problems

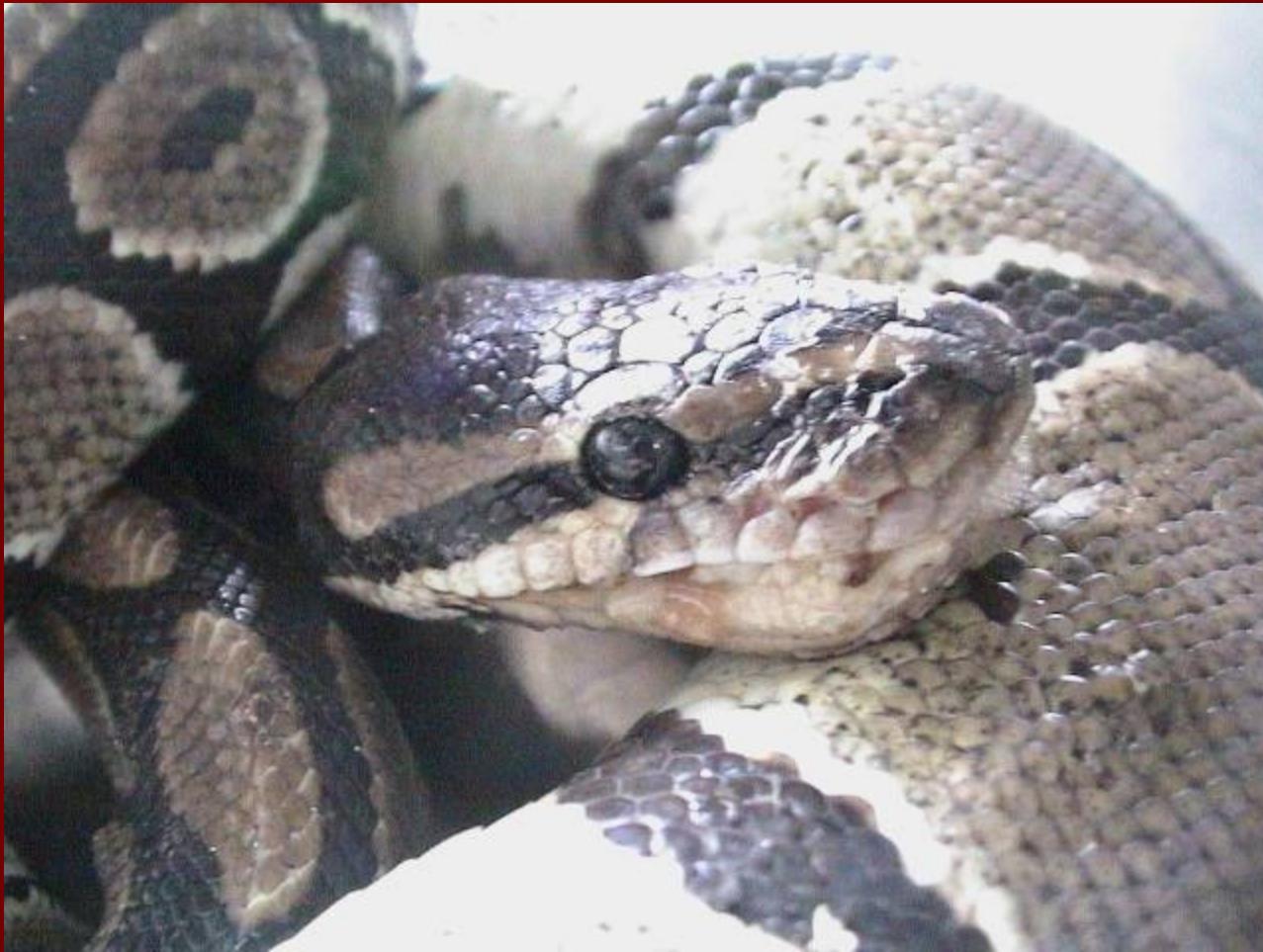


Panophthalmia *Python  
curtus*

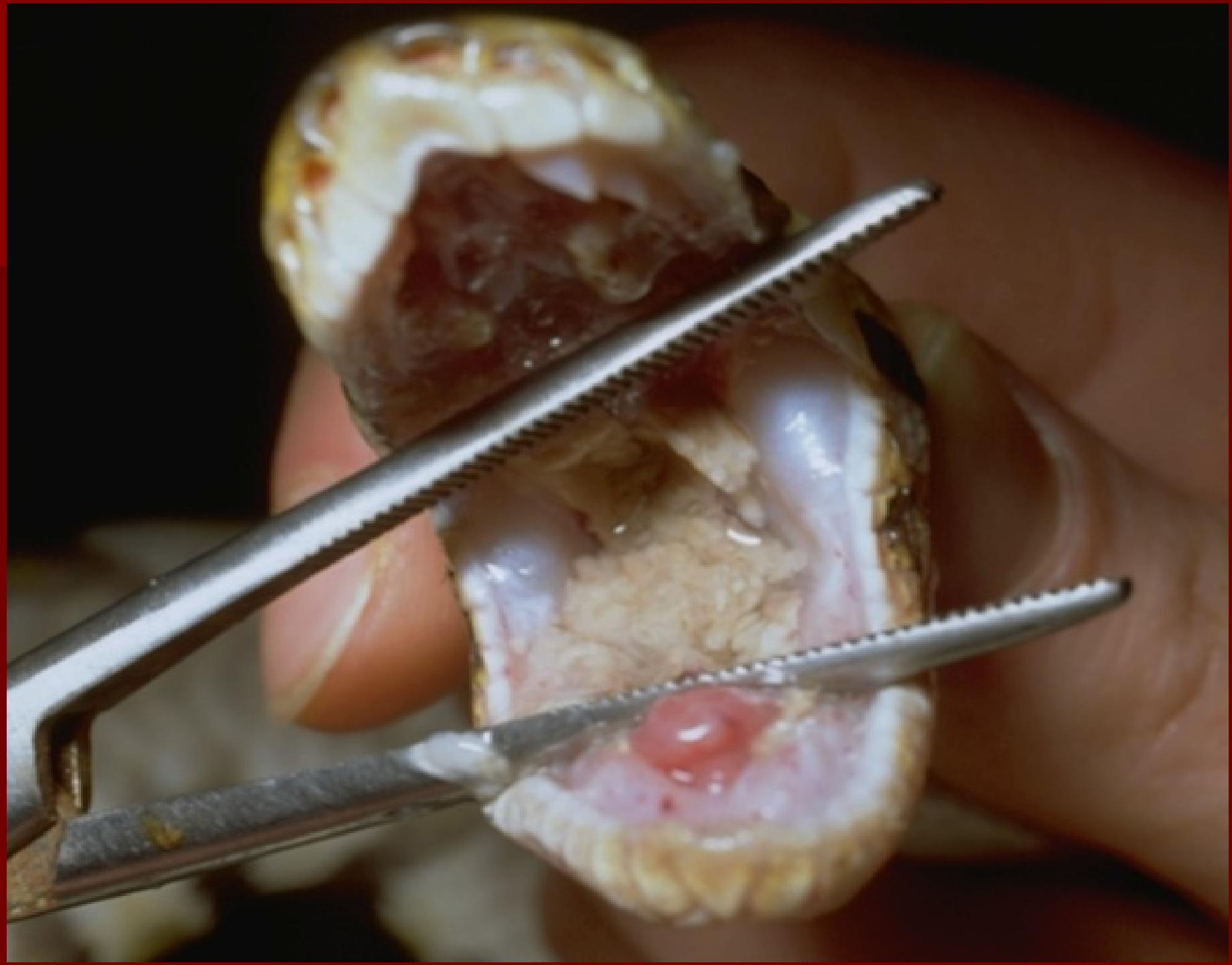
# Stomatitis

- bacterial / mycotic / parasitic
- Congested mouth mucosa, pseudomembranes
- Therapy:
  - debridement
  - 3% H<sub>2</sub>O<sub>2</sub>
  - acid solution (pH 2.5)
  - (antibiotica)





Stomatitis *Python regius*



# Bacterial diseases

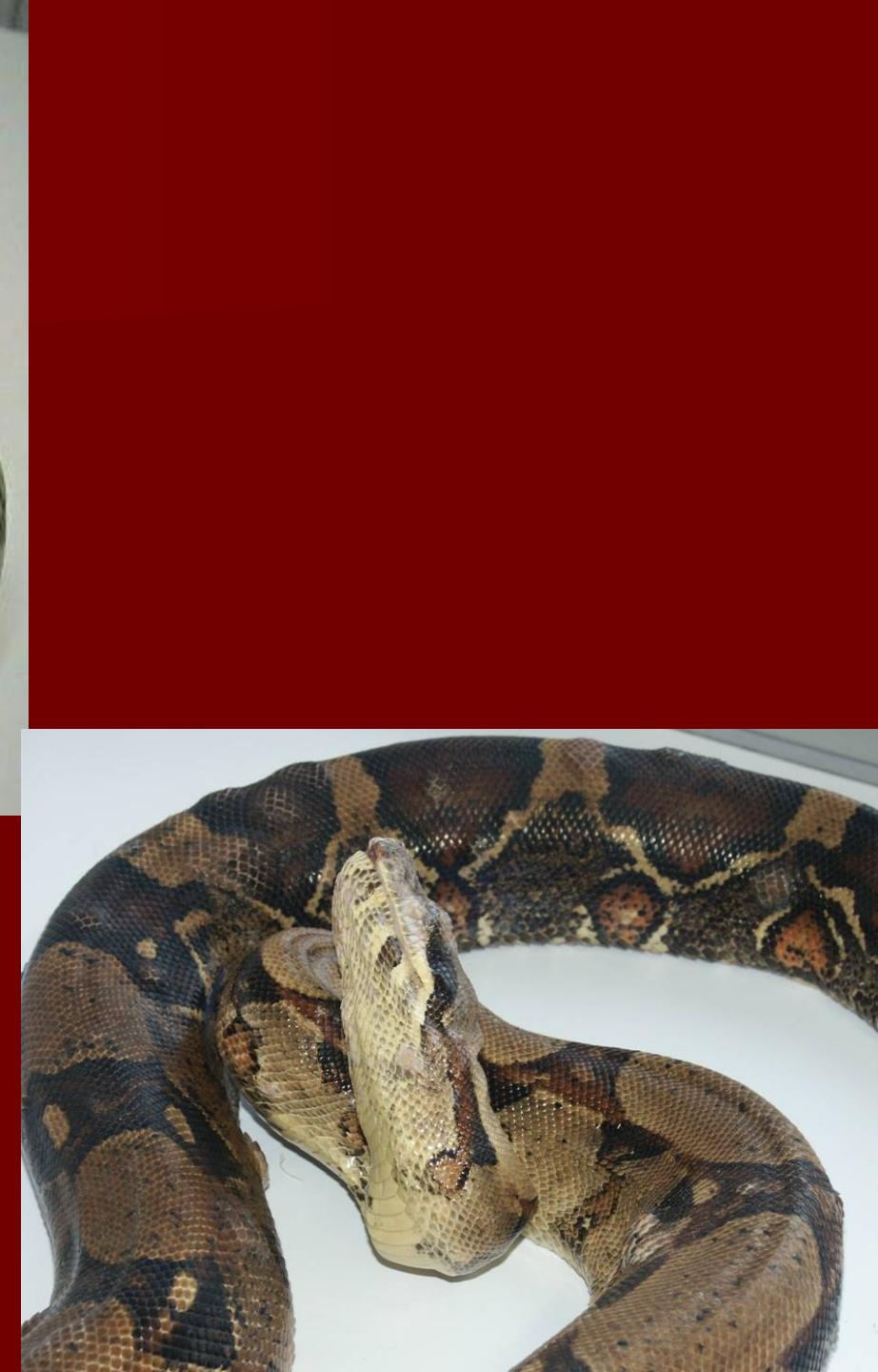
## ■ Cf lizards



# Retrovirus

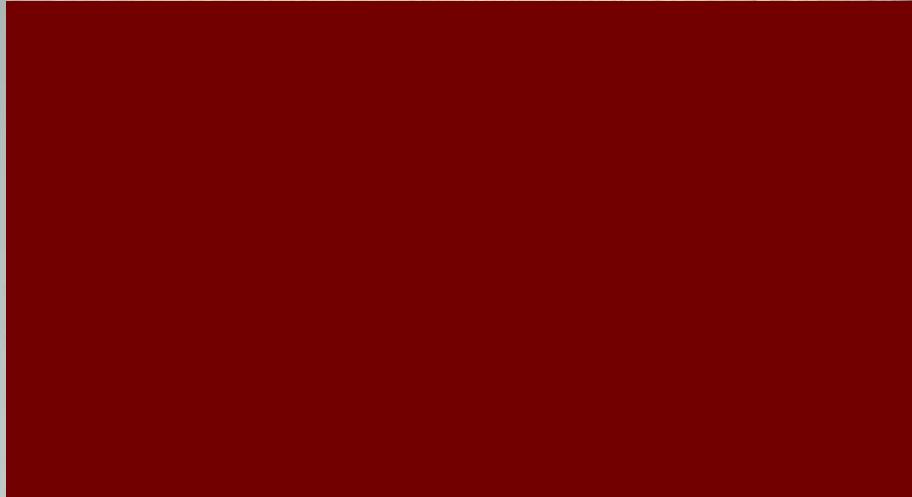
- Inclusion body disease
- BOAS
- mites?
- Clinical signs
- Diagnosis
- Treatment
- prevention







IBD





# Paramyxovirosis



Clinical signs

Diagnosis

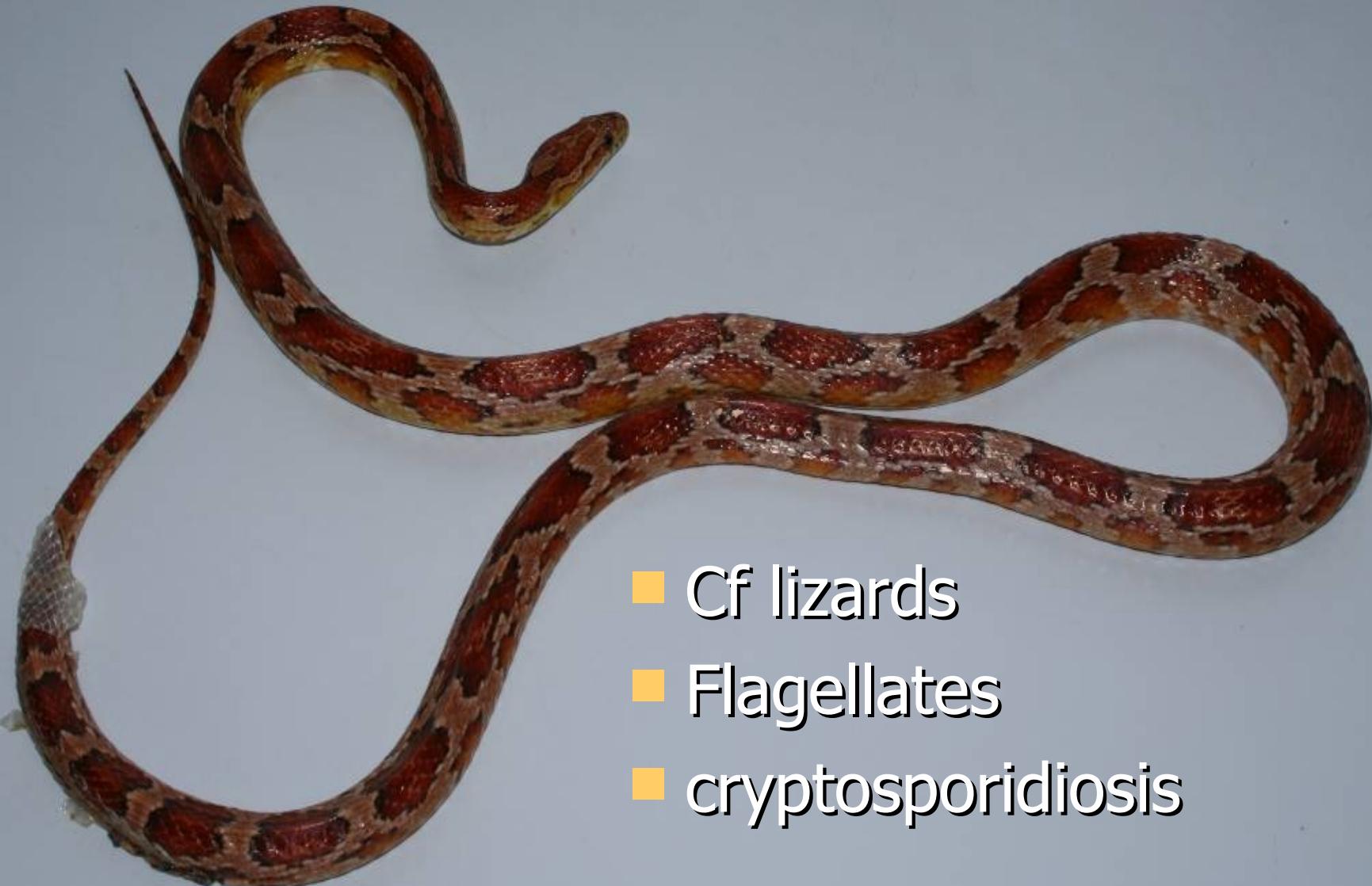
Treatment

prevention

# Pneumonia



# Parasitic enteritis



- Cf lizards
- Flagellates
- cryptosporidiosis

# Parasitic (gastro-) enteritis

- Coccidiosis
  - Cryptosporidiose
  - EsB3, toltrazuril, paromomycine
- Amoebiasis
  - Chelonians!
  - Metronidazole



# Gout

- Aminoglycosides!
- dehydration
- allopurinol?

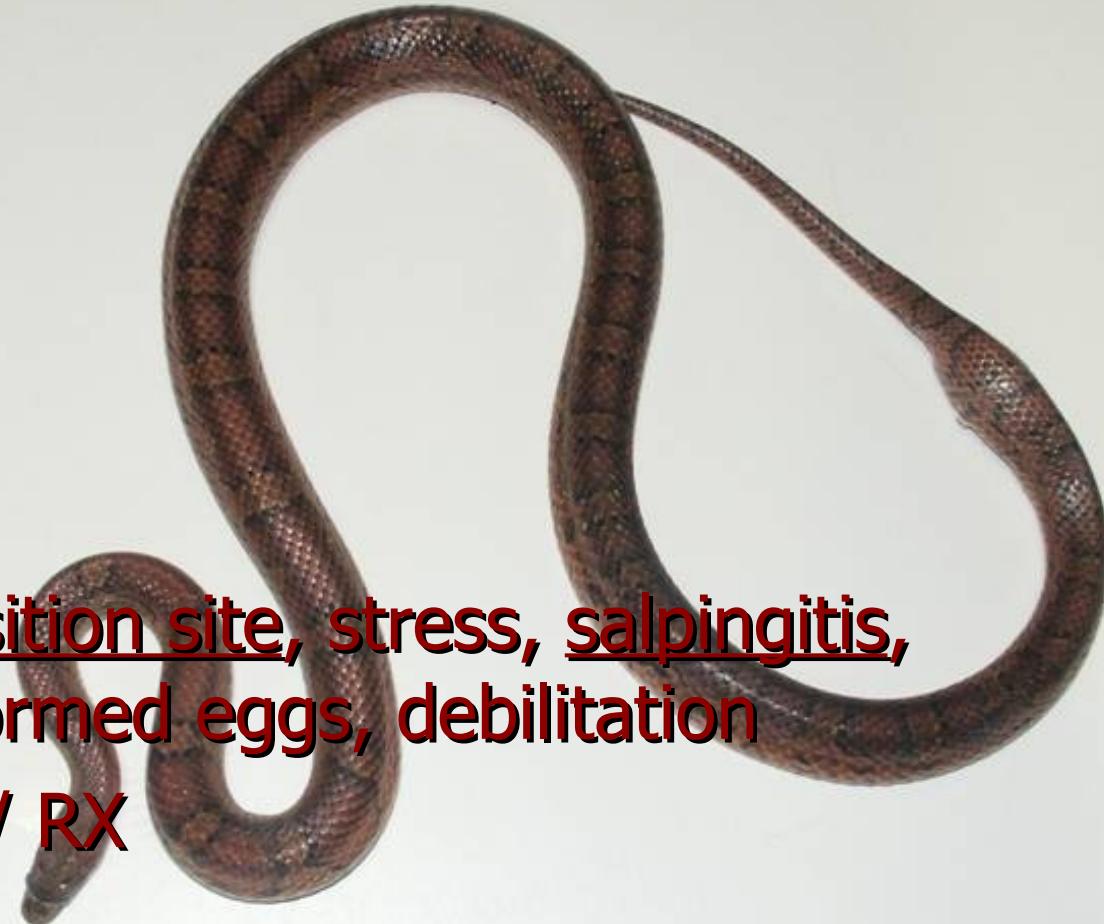


# Metabolic bone disease

- rarely



# Egg retention



- Egg deposition site, stress, salpingitis, MBD, deformed eggs, debilitation
- Palpation / RX
- Therapy:
  - Cf lizards
  - Aspiration
  - massage





# Cloaca prolaps



# “mid body” swelling





# Anorexia



# Sex determination

- Sexual dimorphism
- “Popping”
- PROBING!

