

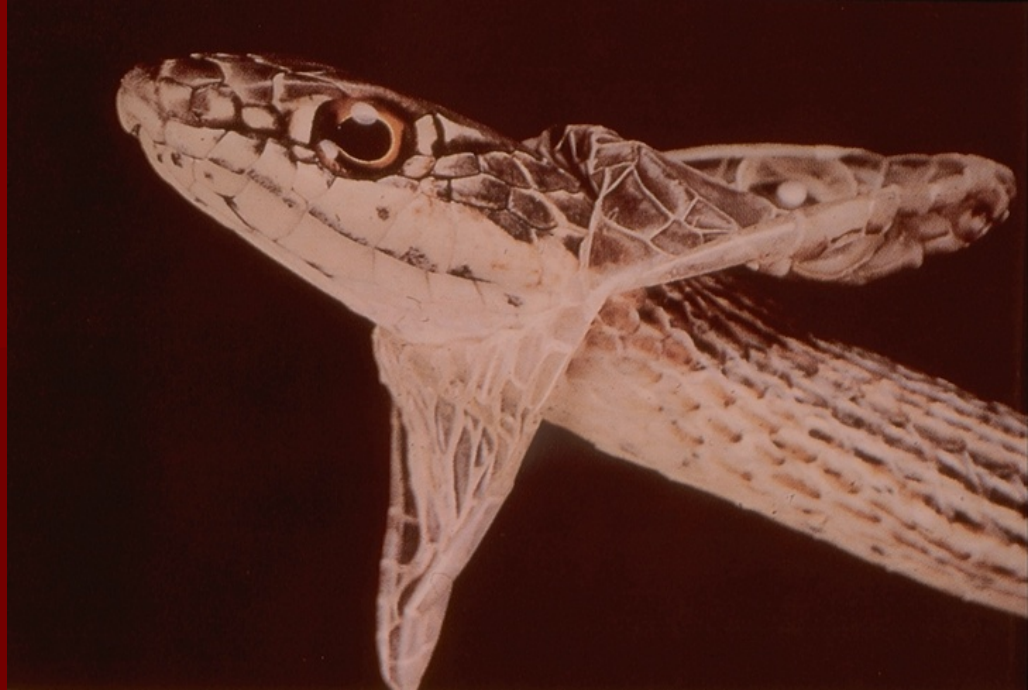


Snakes

# Snake?

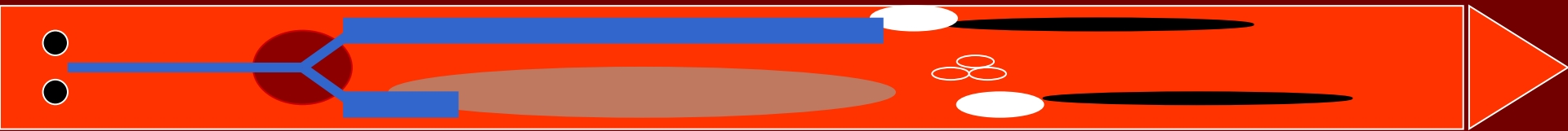






# General anatomy

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!

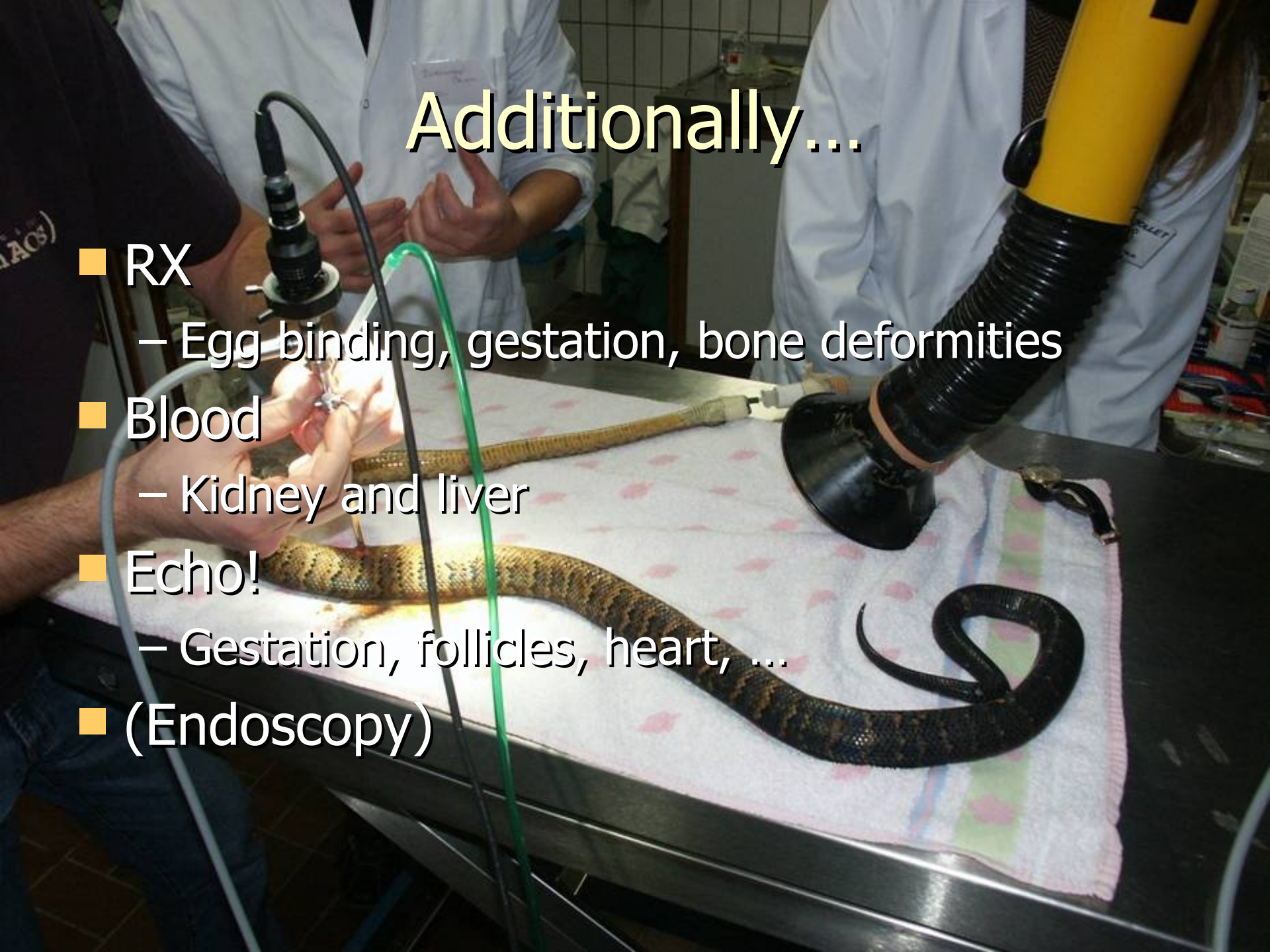






# Additionally...

- 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

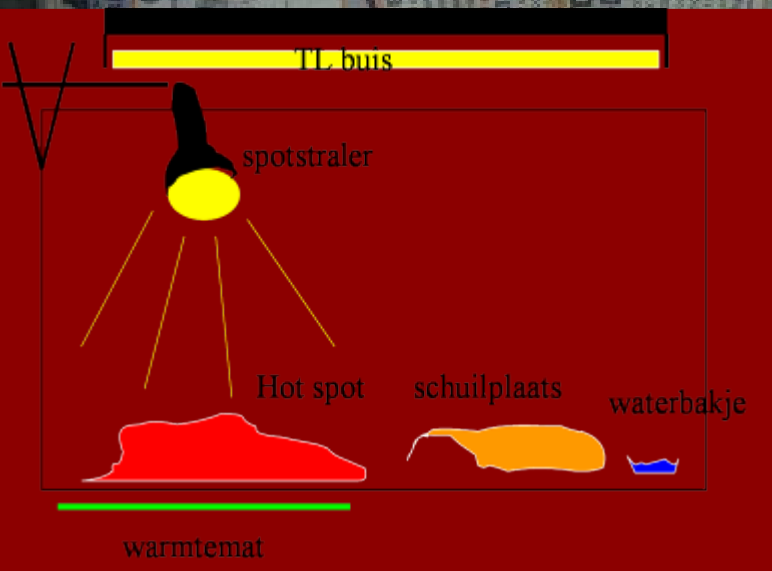
## – Problems

- poisonous
- small





# Management of snakes



# Humidity

- Substrate
  - DRY!!!!









# 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





*Acranthophis 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

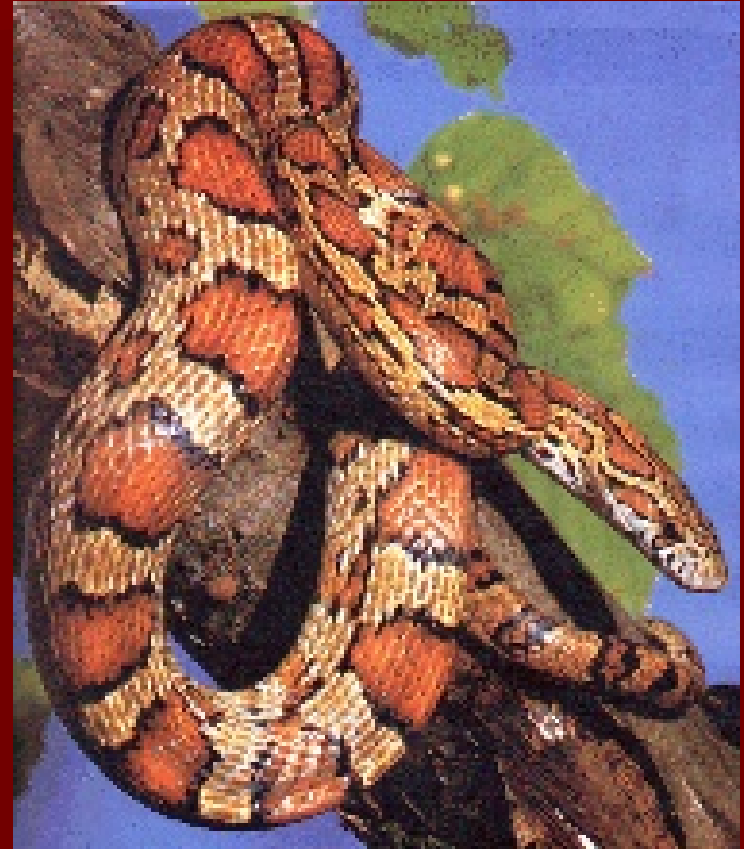
*Natrix maura*



# Colubridae, rat snakes, *Elaphe*



*E. mandarina*



*Elaphe guttata*, corn snake





*E. obsoleta*







*Lampropeltis* (kingsnakes)





# Most prevalent diseases



# Skin problems











dermatitis





Spectacle  
retention









enrofloxacin





septicaemia



# ectoparasites



# Eye problems



Panophthalmia *Python*  
*curtus*



# Stomatitis

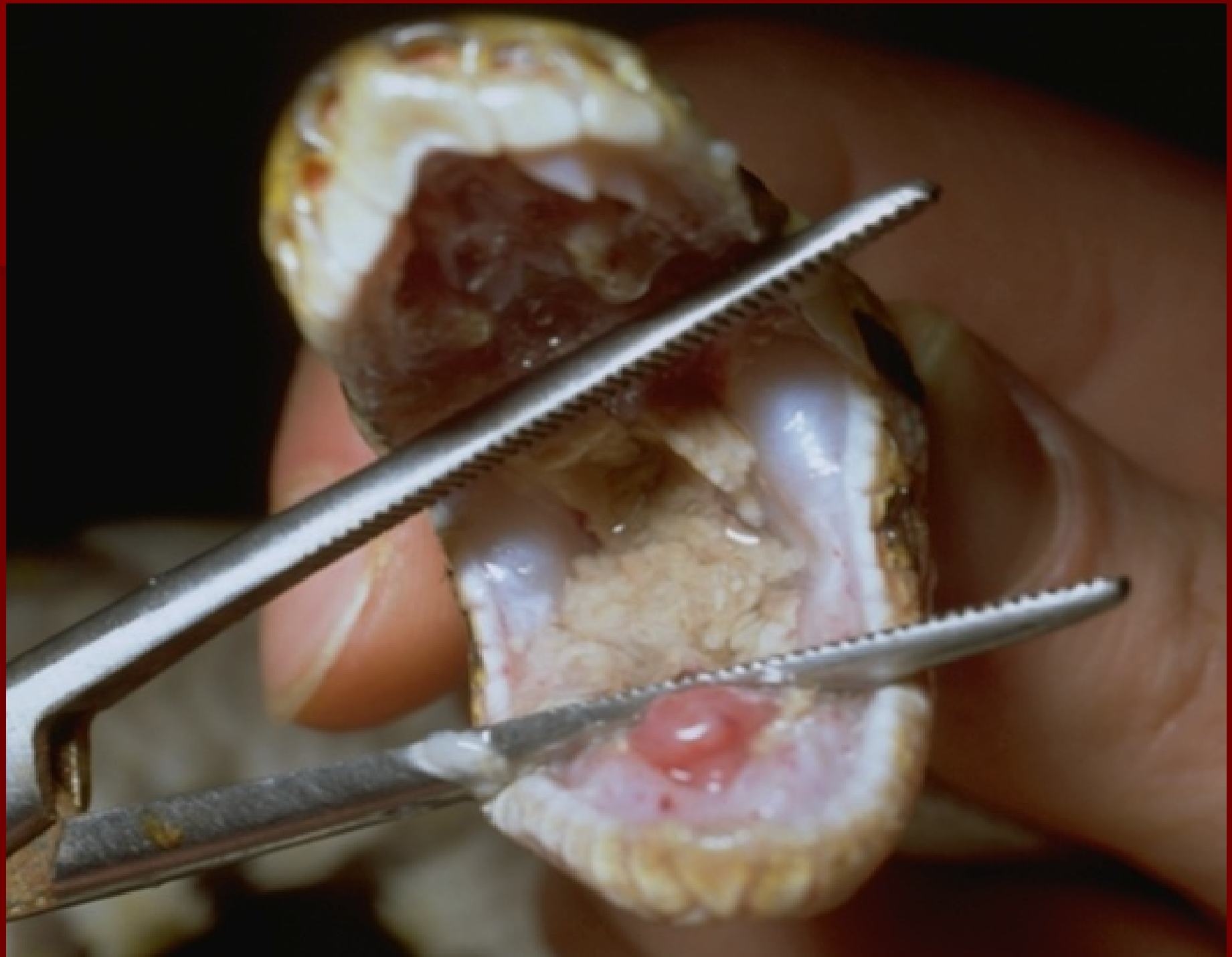
- bacterial / mycotic / parasitic
- Congested mouth mucosa, pseudomembranes
- Therapy:
  - debridement
  - 3% H<sub>2</sub>O<sub>2</sub>
  - acid solution (pH 2.5)
  - (antibiotica)





Stomatitis *Python regius*





# Bacterial diseases

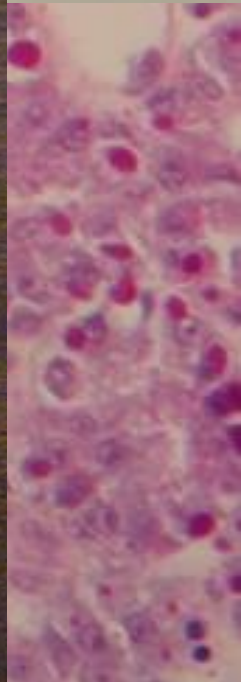
- Cf lizards





# 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

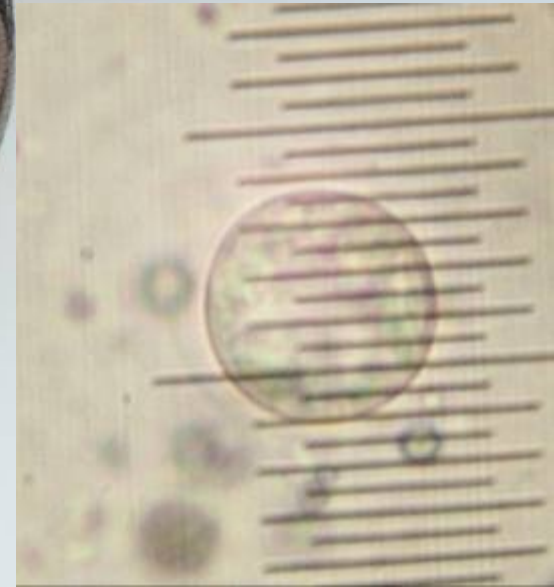
# Parasitic (gastro-) enteritis

## ■ Coccidiosis

- Cryptosporidiose
- EsB3, toltrazuril, paromomycine

## ■ Amoebiasis

- Chelonians!
- Metronidazole





# Gout

- Aminoglycosides!
- dehydration
- allopurinol?



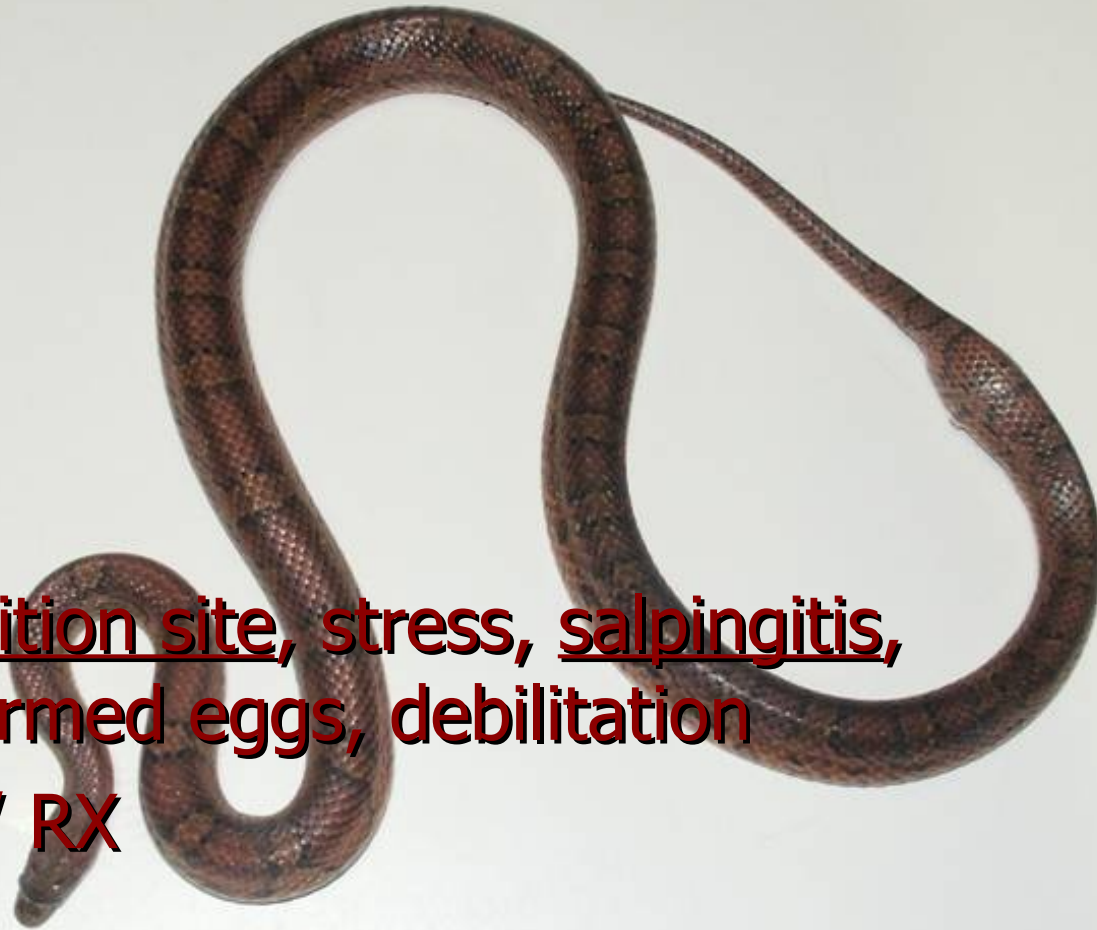
# Metabolic bone disease

- rarely

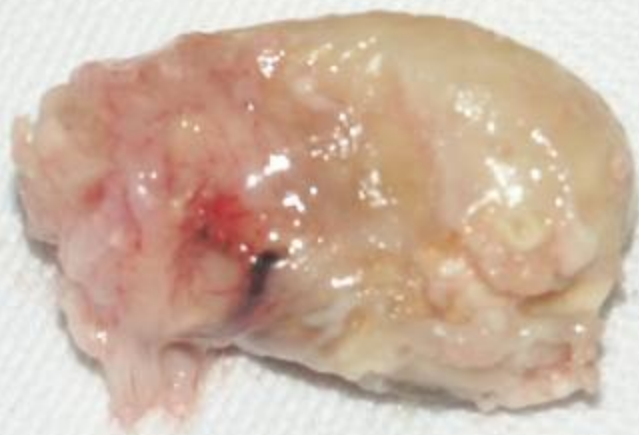




# Egg retention



- 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!