Reptile pathology
Necropsy techniques

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Reptile pathology: Performing a necropsy
Do a careful external exam
- Oral cavity, eyes, vent
- Musculoskeletal
- Skin
Reptile pathology: Performing a necropsy

Dorsoventrally Flattened
Laterally Flattened

Wide variation in morphology – Therefore use slightly different techniques

Reptiles with armour
Long tubes
Reptile pathology: Lizard necropsy

Dorsoventrally Flattened – Ventral Midline Incision

Bearded Dragon
Reptile pathology: Lizard necropsy

Dorsoventrally Flattened – Ventral Midline Incision

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Dorsoventrally Flattened – Ventral Midline Incision

Bearded Dragon
Reptile pathology: Lizard necropsy

Dorsoventrally Flattened – Ventral Midline Incision

Bearded Dragon
Laterally Flattened – Remove the right or left lateral body wall
Laterally Flattened – Remove the right or left lateral body wall
Reptile pathology: Lizard necropsy

Veiled chameleon
Reptile pathology: Turtle necropsy

Reptiles with armour – Remove the plastron

Snapping turtle
Reptile pathology: Turtle necropsy
• Assess Body Condition
  • Coelomic adipose stores - fat pads in the caudal coelom
  • Muscle mass, fat deposits in the tail (leopard geckos)
After opening carcasses, my approach for each of these is similar:
- Separately remove the liver, the heart and the lungs (can collect the pluck or take things out separately)
- Remove / reflect the gastrointestinal tract – open entire length
- Find the spleen and remove it
- Find and remove the gonads +/- adrenal glands
- Evaluate and remove the kidneys +/- open the bladder (chelonians, some lizards)
- Remove the head and fix, or collect the brain
- Check joints
Bearded Dragon

Reptile pathology: Lizard necropsy

- Remove the liver first (it’s often in the way)
- Handle tissues gently!
- Then evaluate the heart and lungs
  - Together or separately

Liver
Reptile pathology: Lizard necropsy

Bearded Dragon

Heart and lungs
Reptile pathology: Lizard necropsy

- Liver
- Lung – with air sac like extensions
- Heart

Veiled chameleon
Reptile pathology: Lizard necropsy

• Kidneys can be tricky:
  • Split the pelvis – they are always more caudal and dorsal than you expect!
Reptile pathology: Lizard necropsy

- Spleen and pancreas are often close together and associated with the stomach/duodenum
Sometimes the gonad is very easily identified, but other times....
Reptile pathology: Lizard necropsy

- Remove the head and collect the brain (or place entire head in formalin)
  - Open skull in similar manner as a mammal (but the brain is pretty tiny)
  - Always open a few joints in lizards and turtles
The gastrointestinal tract (GIT) is relatively short

- The separate segments (esophagus, stomach, intestine) are ill-defined
- The GIT terminates in the cloaca (as do the reproductive and urinary tracts), which opens to the skin via the vent.
Veiled chameleon
Reptile pathology: Turtle necropsy

- Remove the heart
Reptile pathology: Lizard necropsy

Snapping turtle

Remove the liver

Bladder
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