Farmer's Guide to Necropsy Recognition of Diseases of Crocodile Hatchlings



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Normal appearance of internal organs

Kidneys

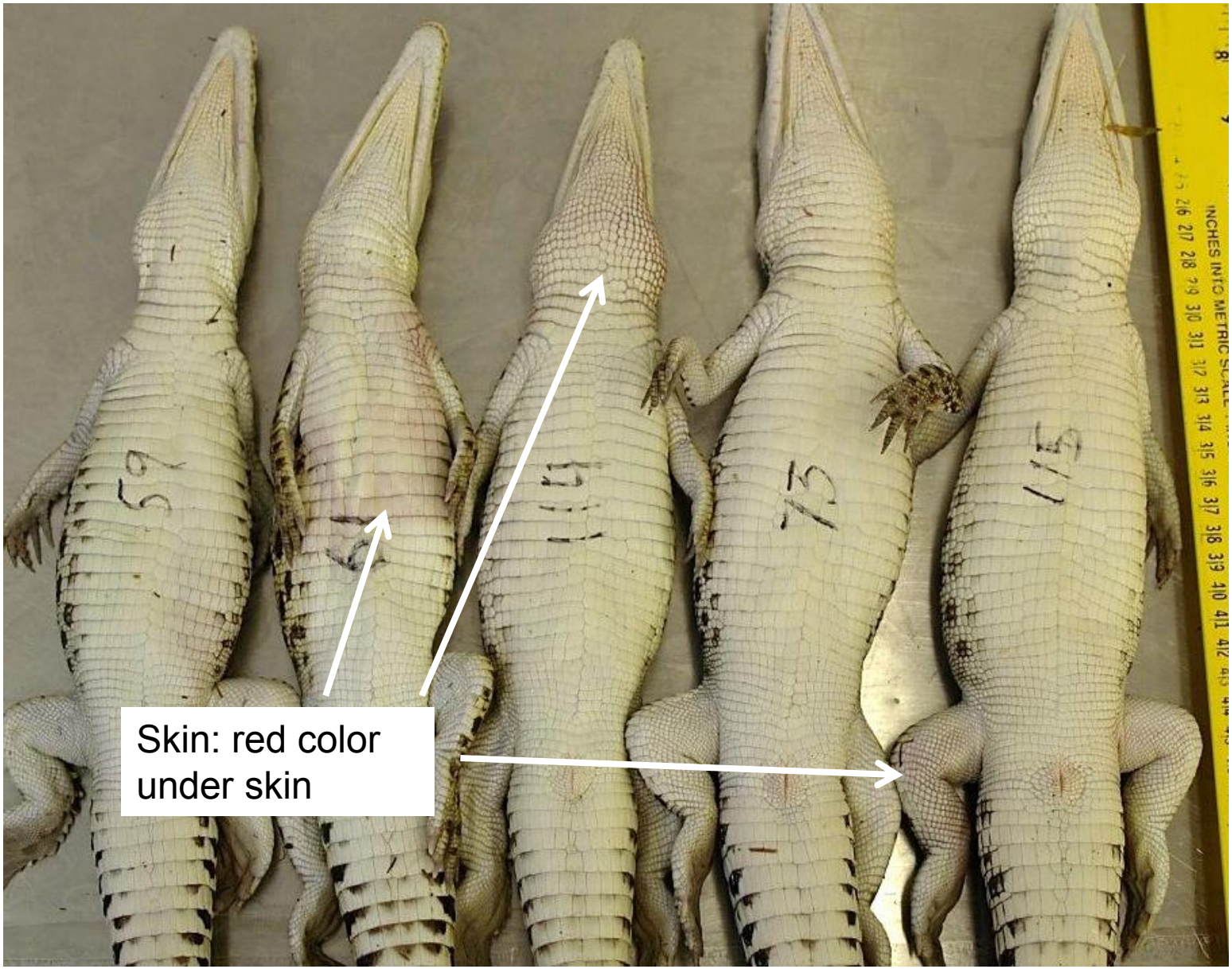
Liver

Heart

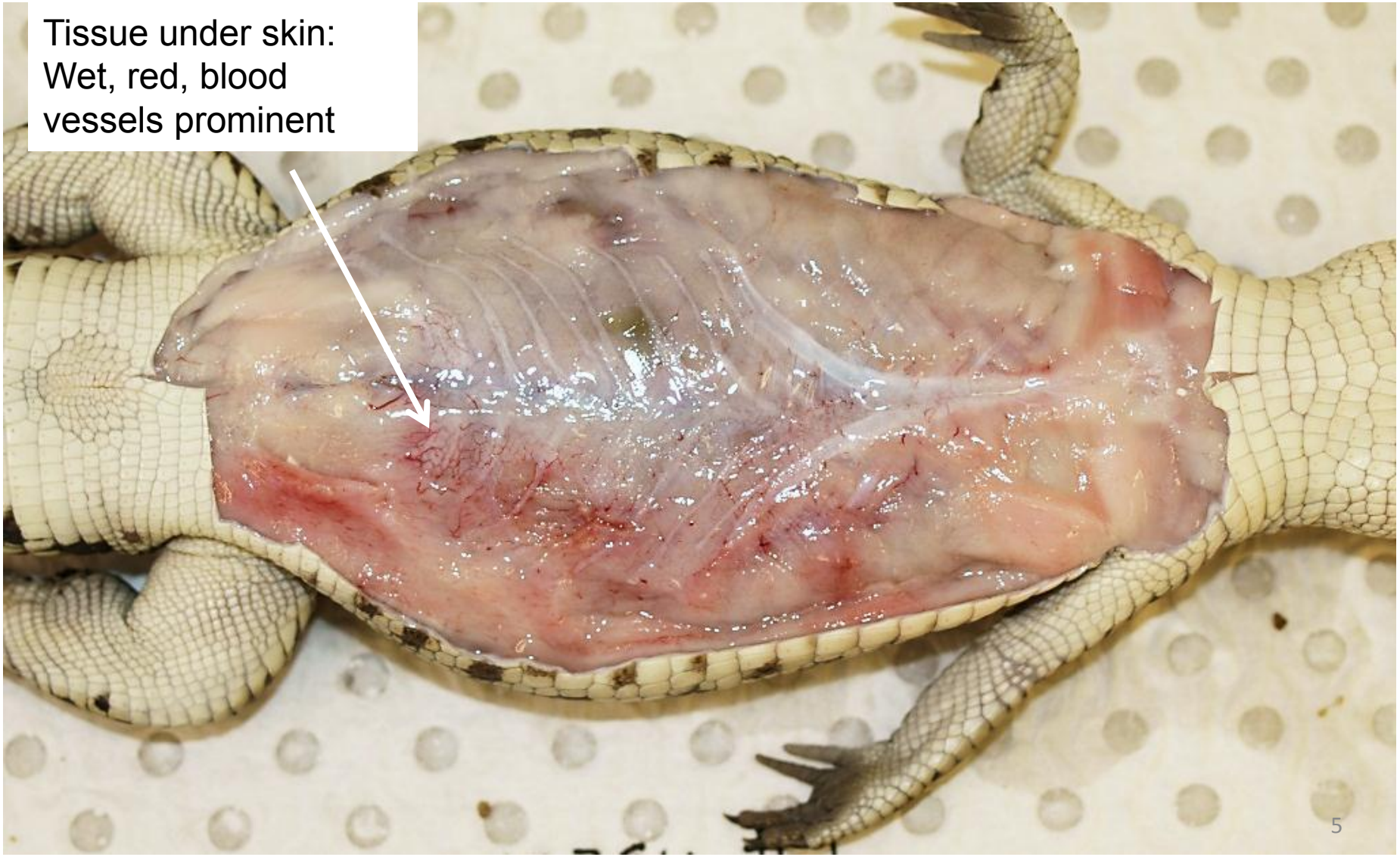
Lungs

Stomach

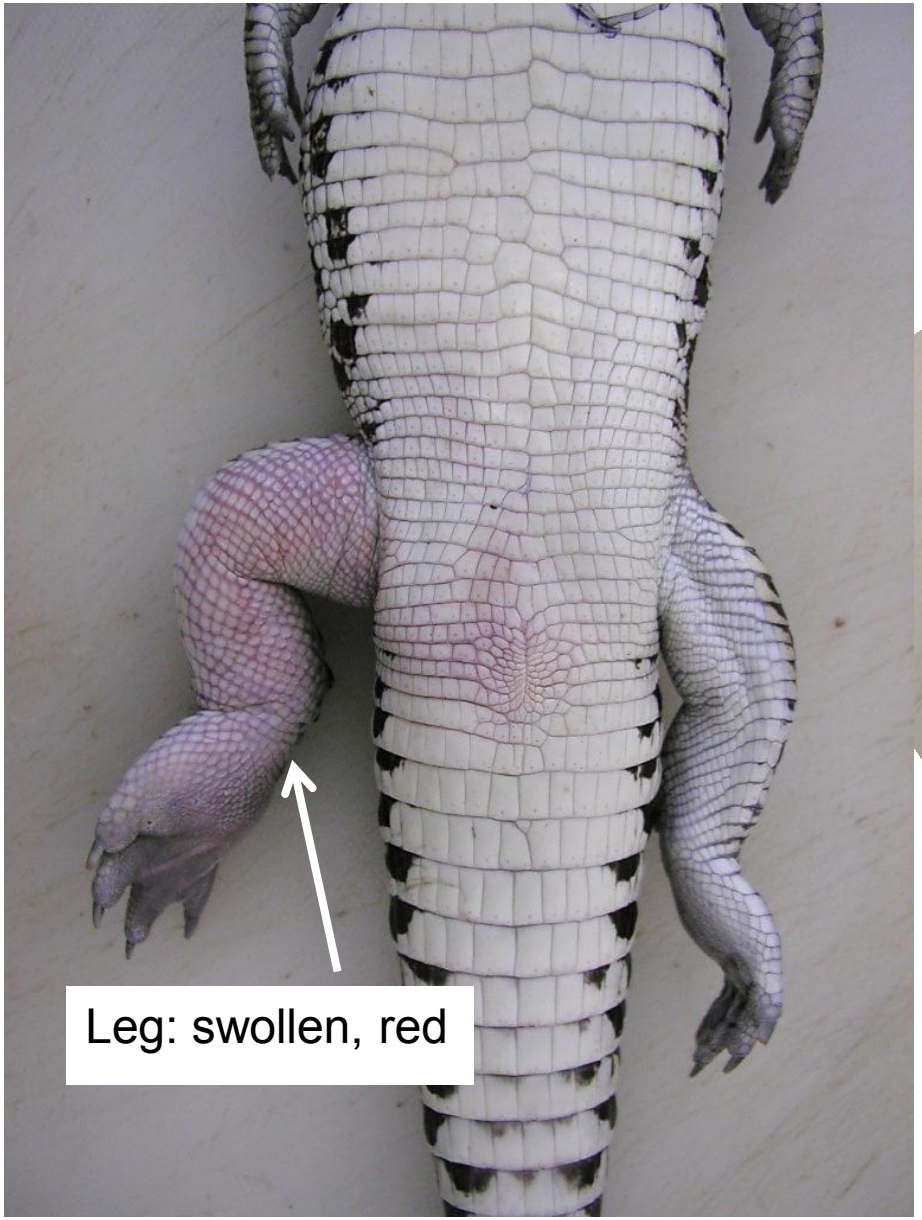
Infection with bacteria: Sepsis

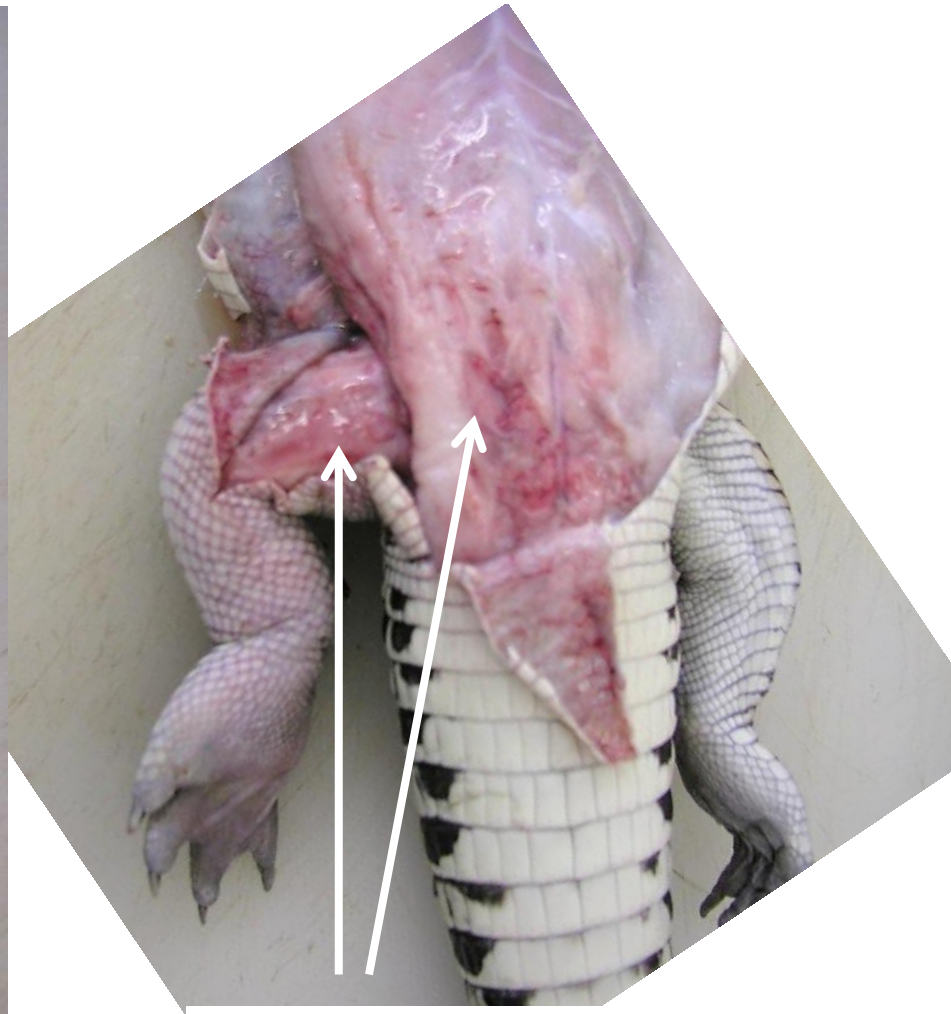


Bacterial infection: Sepsis (usually environmental Gram negative bacteria)



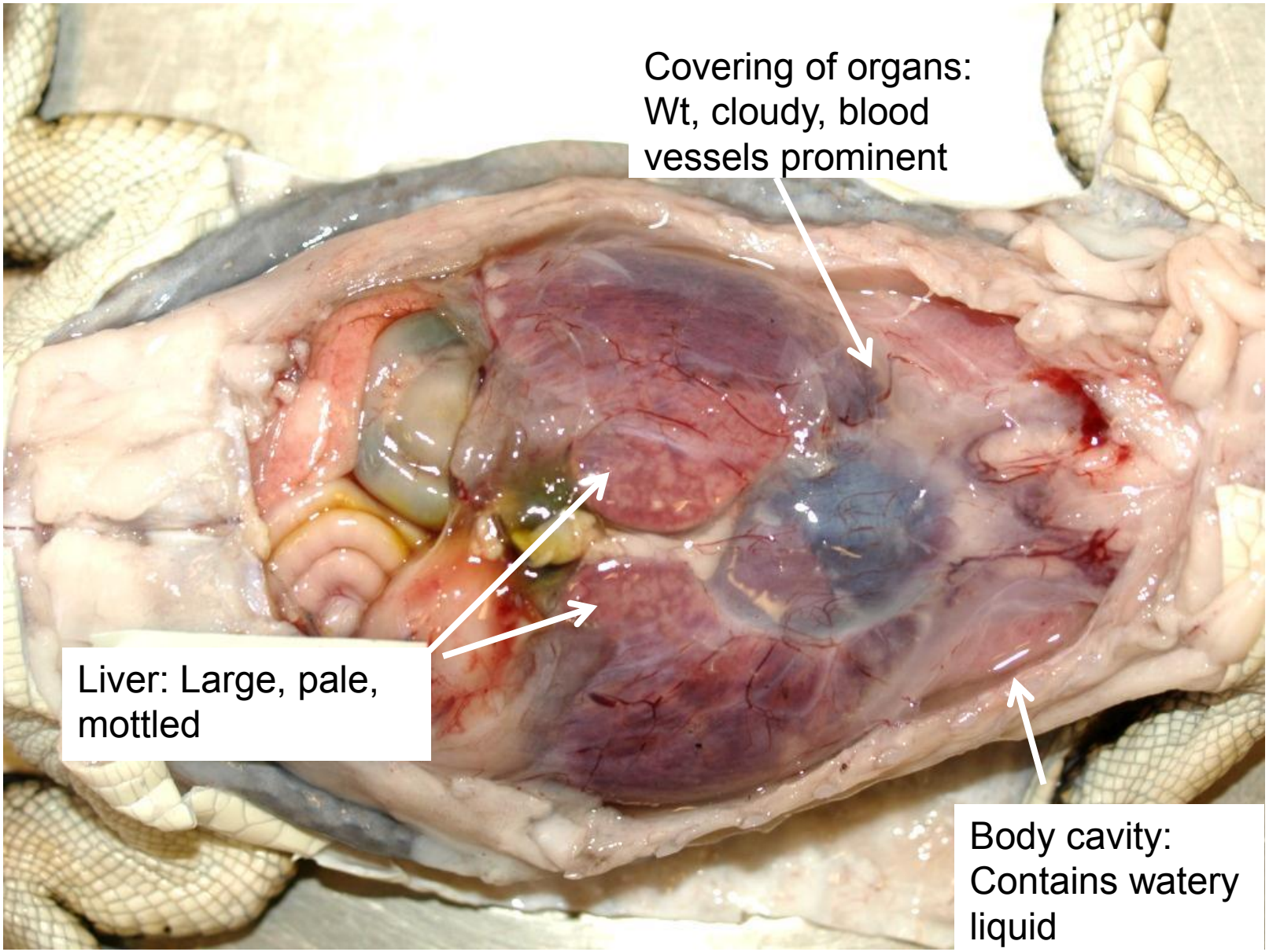
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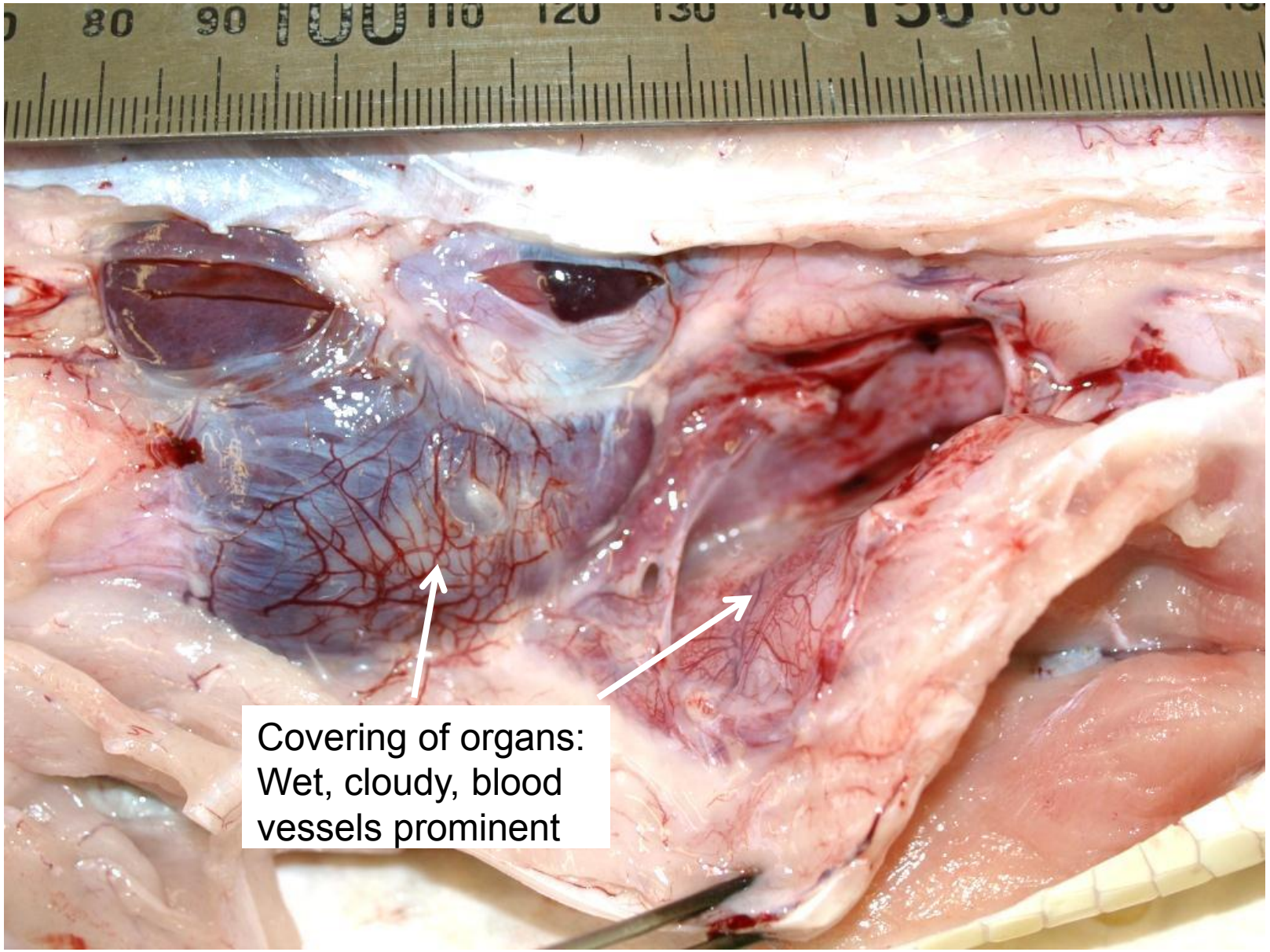


Under skin: Wet, red, blood vessels prominent

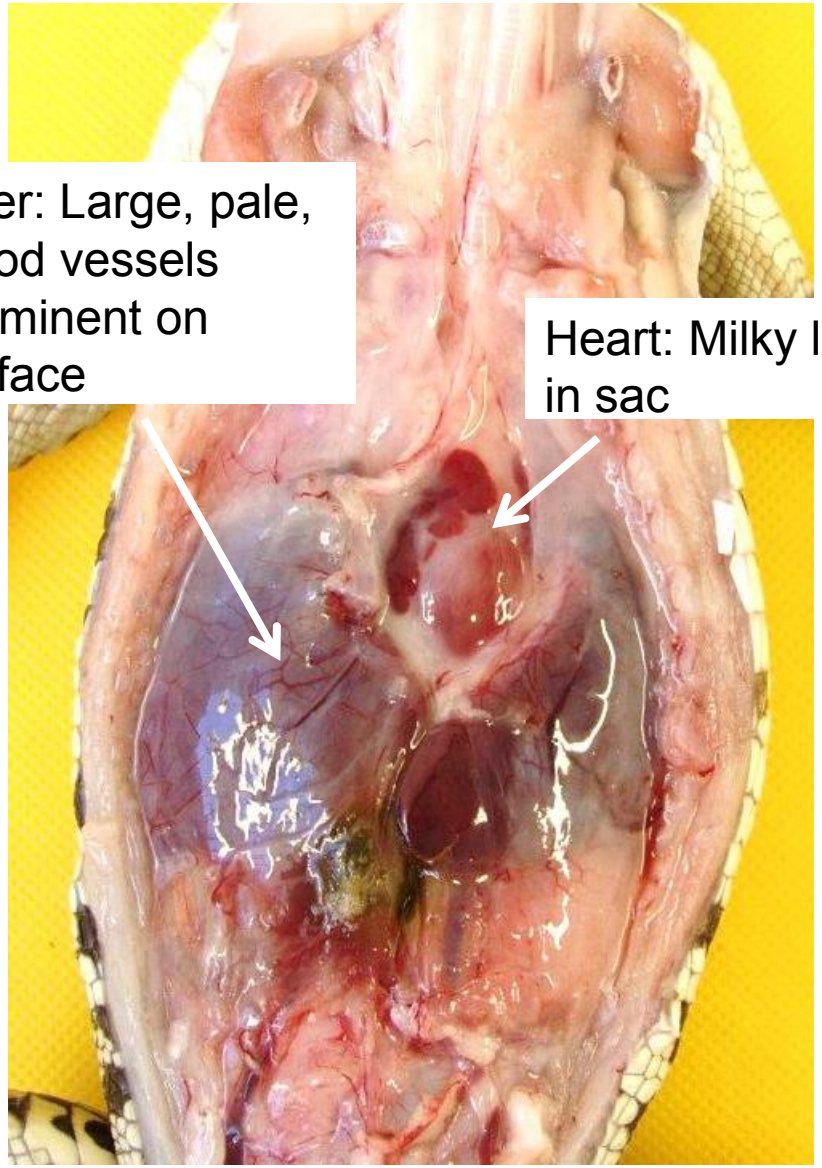
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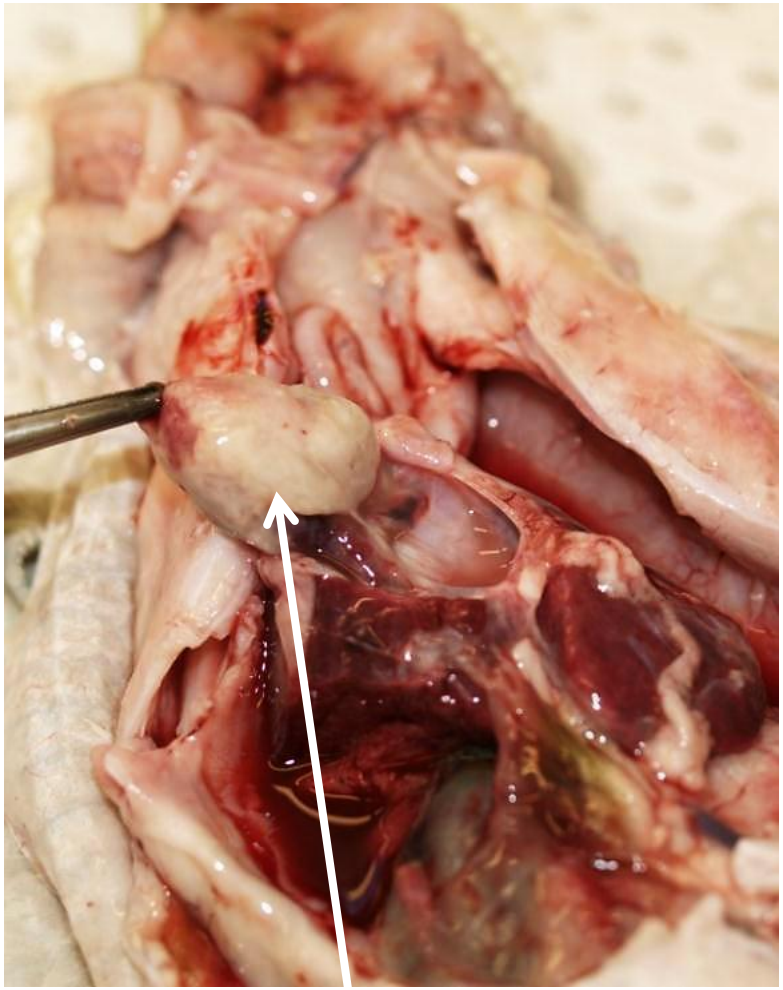


Infection with bacteria: Sepsis



Infection with bacteria: Sepsis



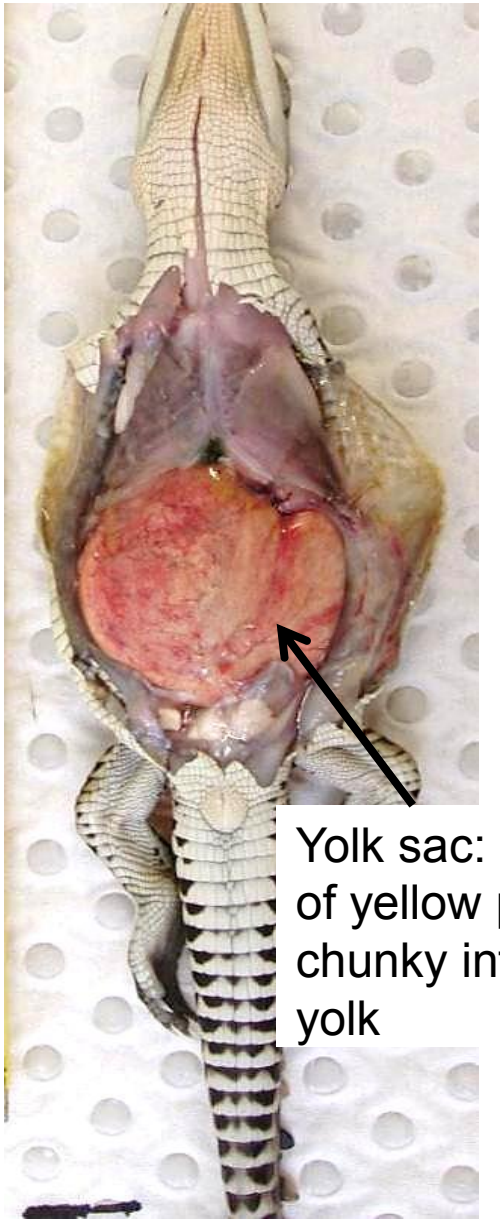


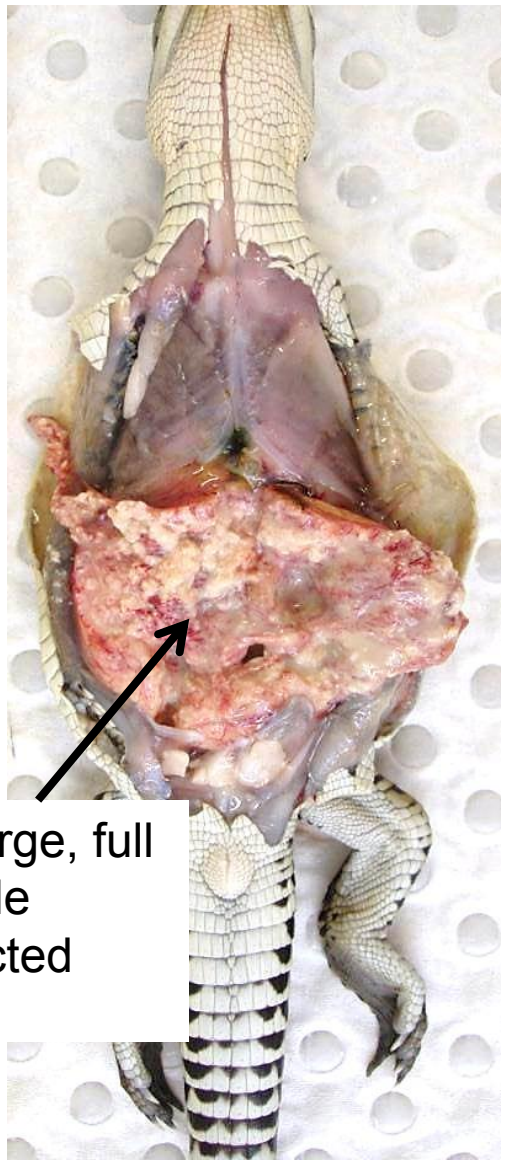
Heart: Surrounded by thick pus

Infection with bacteria: Yolk sac infection



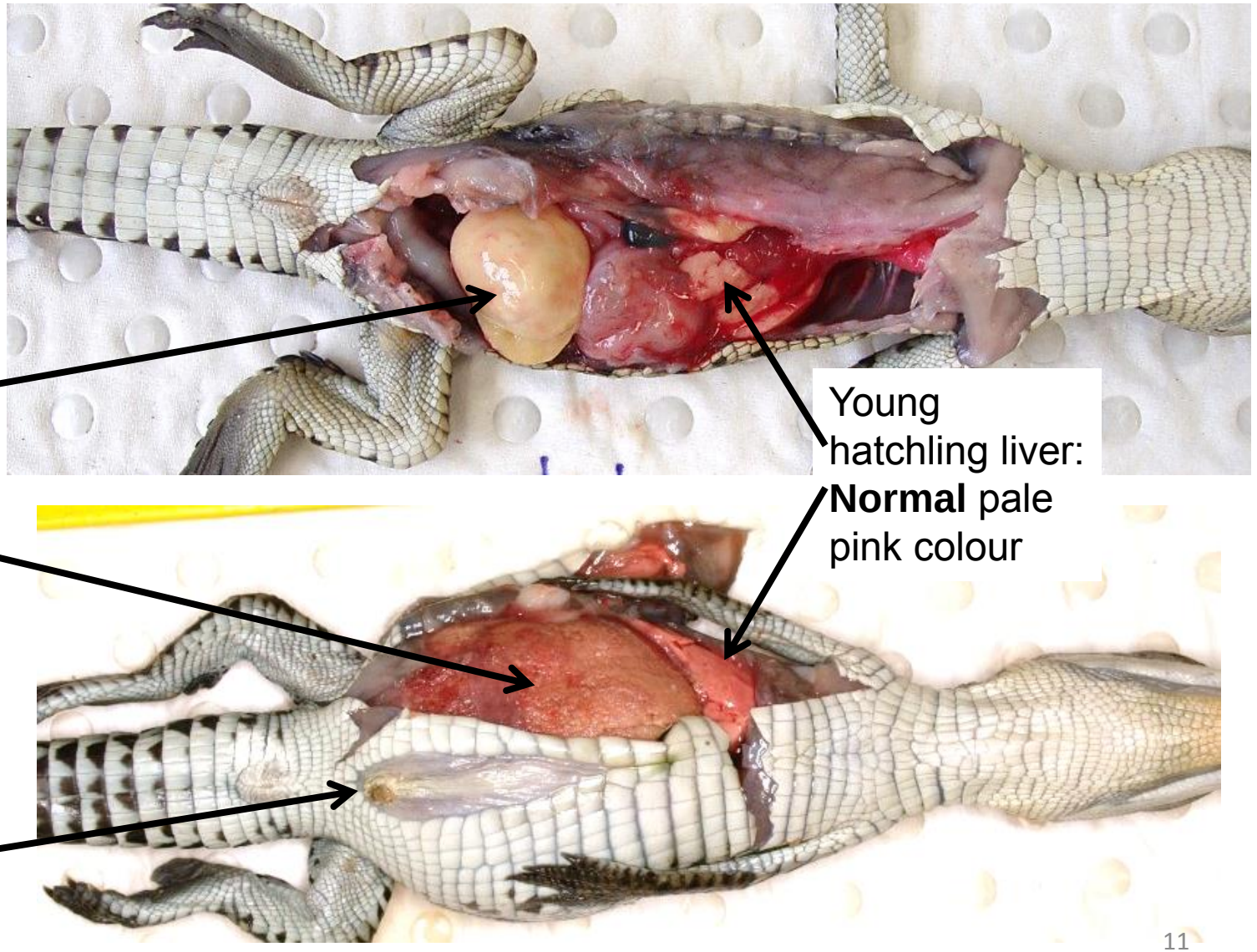
Abdomen: Enlarged, yolk sac scar poorly closed





Yolk sac: Large, full of yellow pale chunky infected yolk

Infection with bacteria: Yolk sac infection



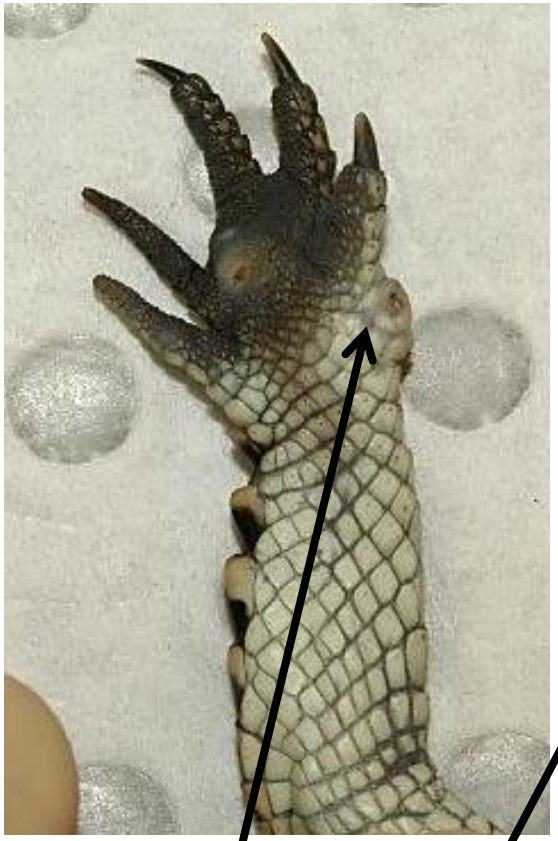
Yolk sac: Large, full of yellow or orange pale chunky infected yolk

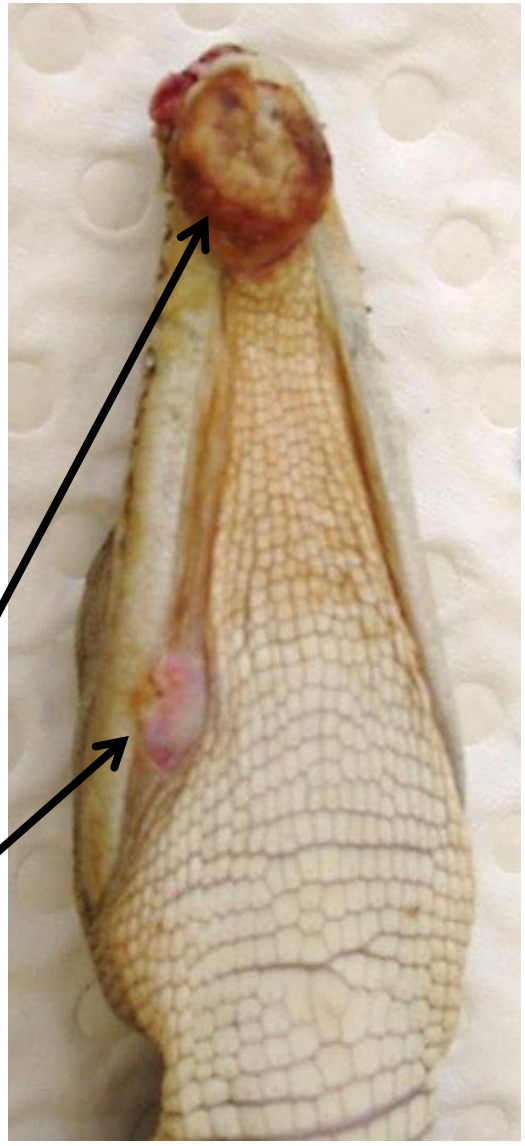
Young hatchling liver: **Normal** pale pink colour

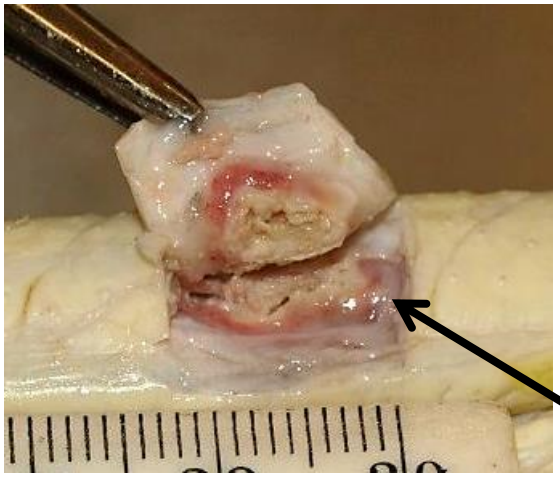
Yolk sac scar: Poorly closed

Infection with bacteria: bite wounds



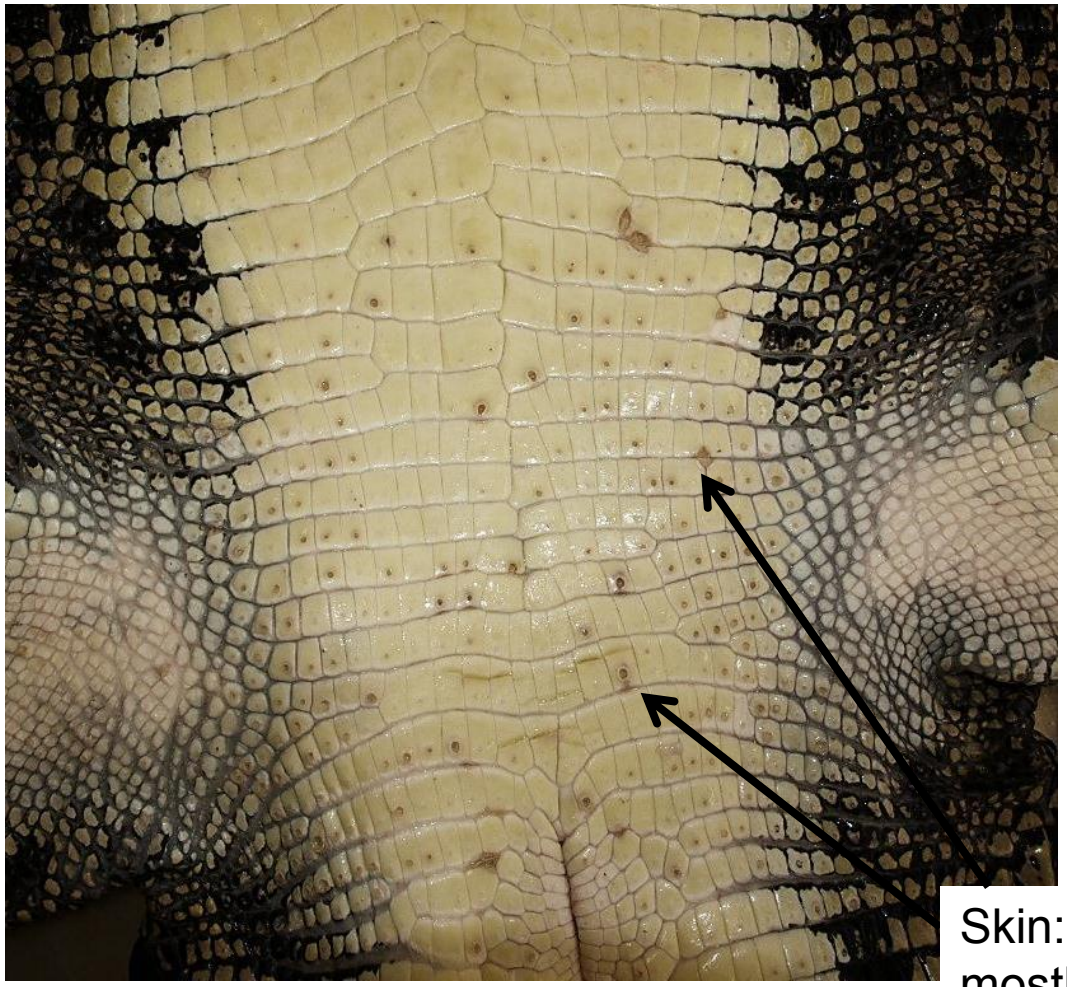


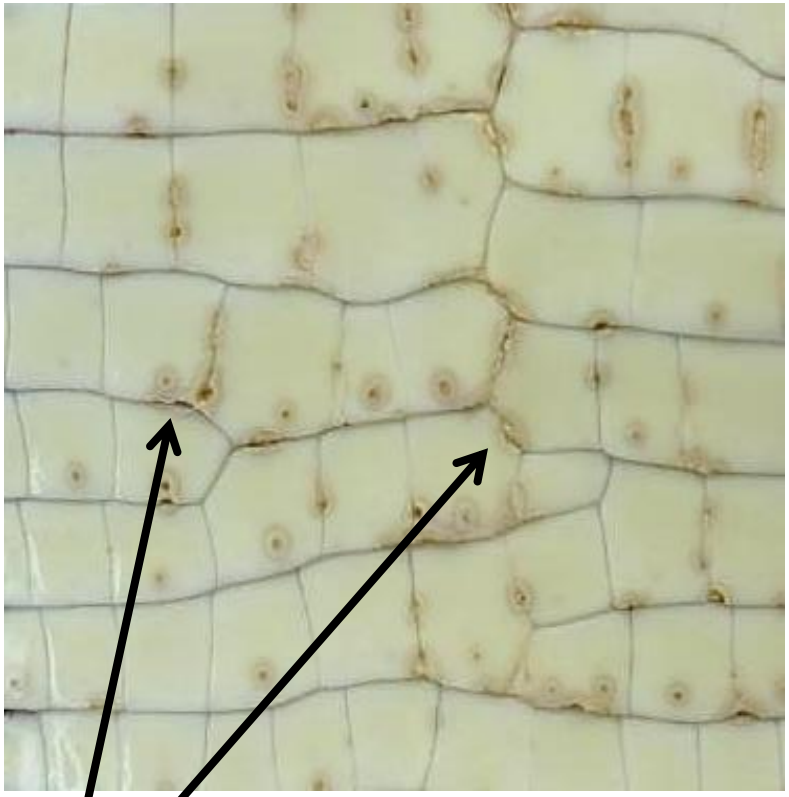




Skin: Raised areas containing yellow pus

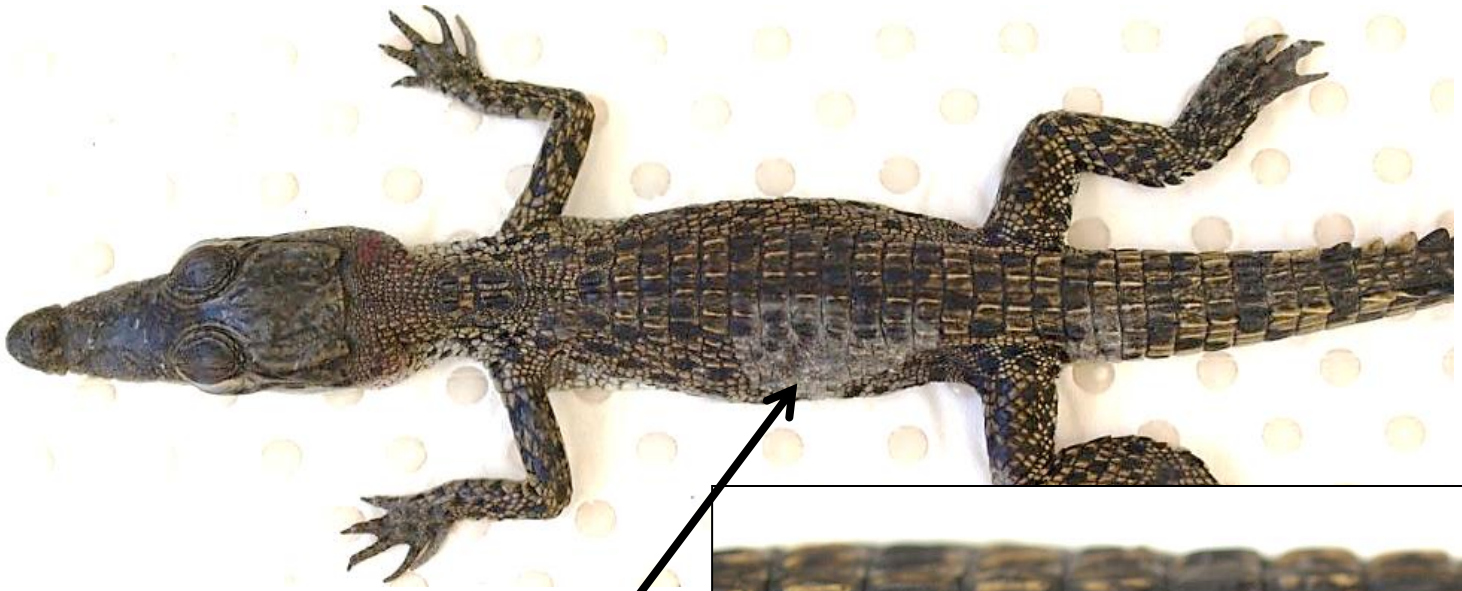
Infection with bacteria: Dermatophilus ("brown spot") infection of skin



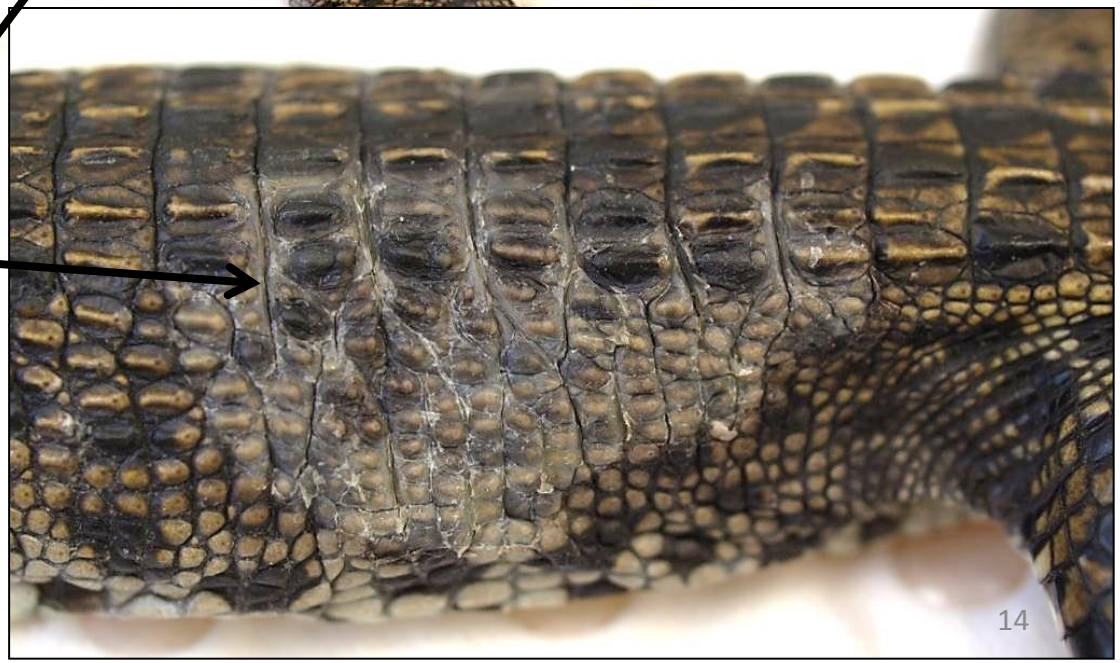


Skin: Tan or brown spots mostly involving hinges or ISOs

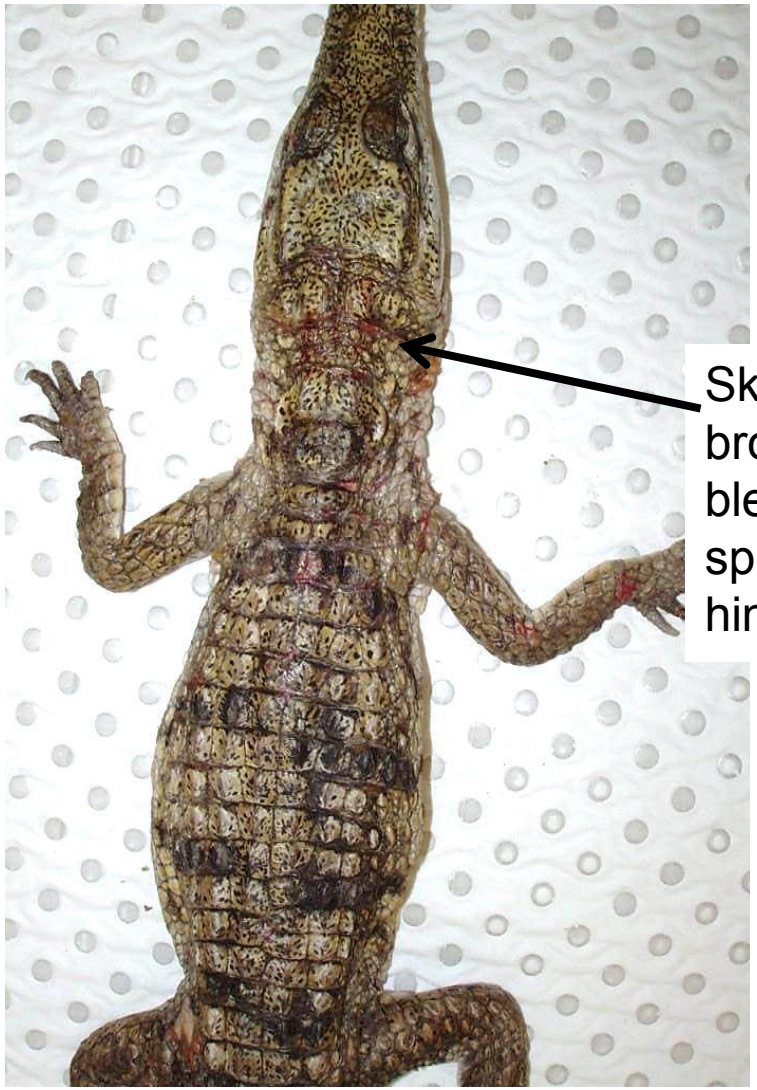
Infection with fungus: Surface infection of skin



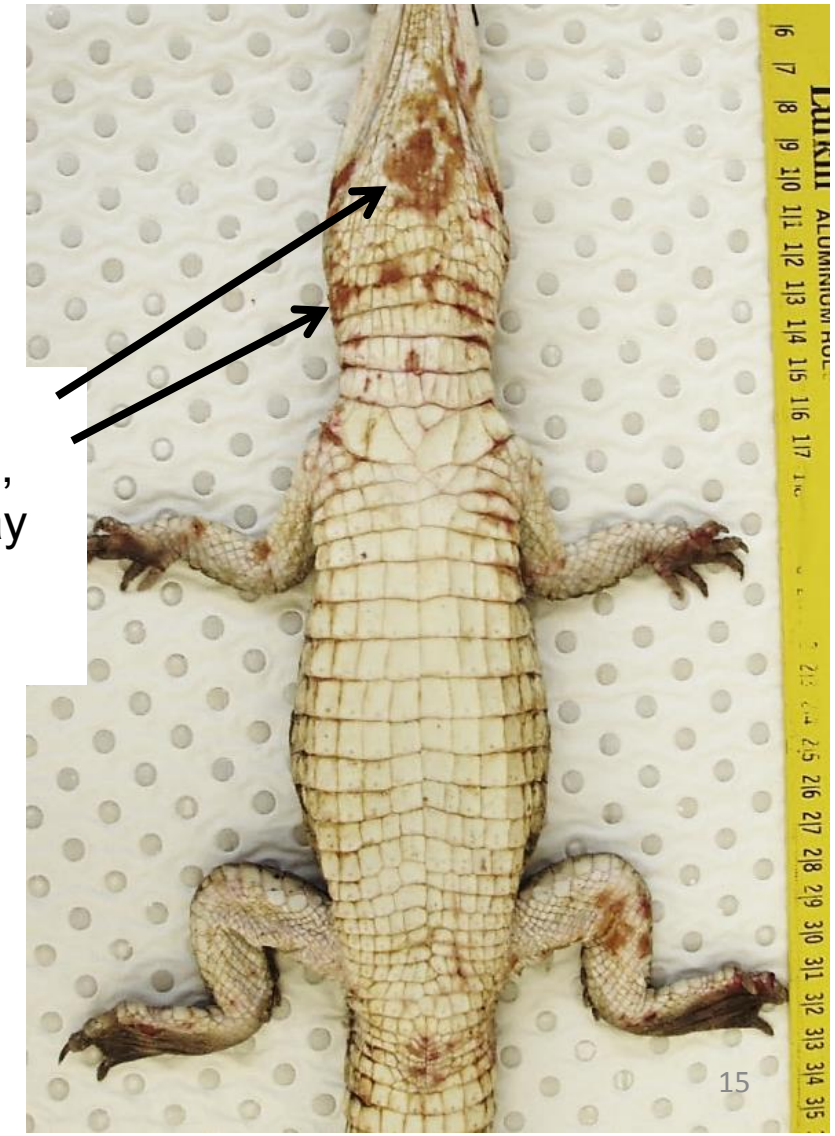
Skin: Pale and
flaking on surface



Infection with fungus: Deep infection of skin



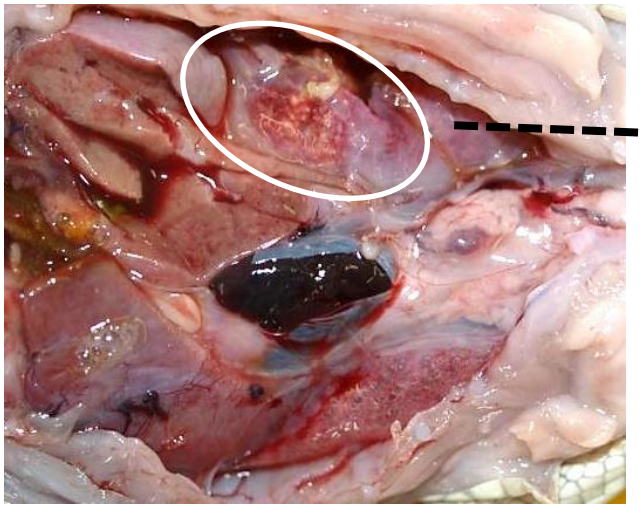
Skin: Red or brown crusts, bleeding, may spread from hinges

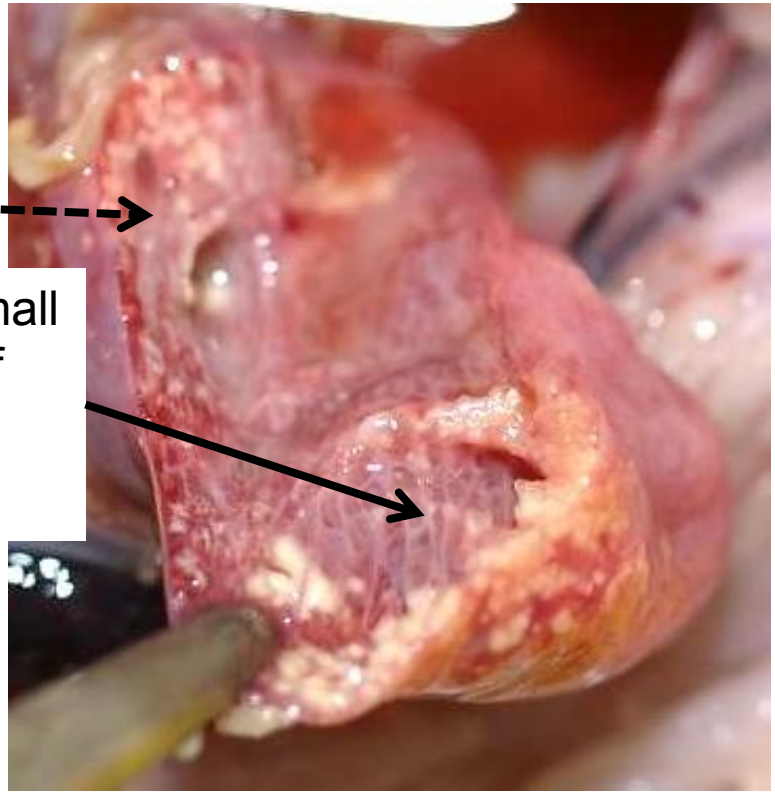


Infection with fungus: Deep infection of skin

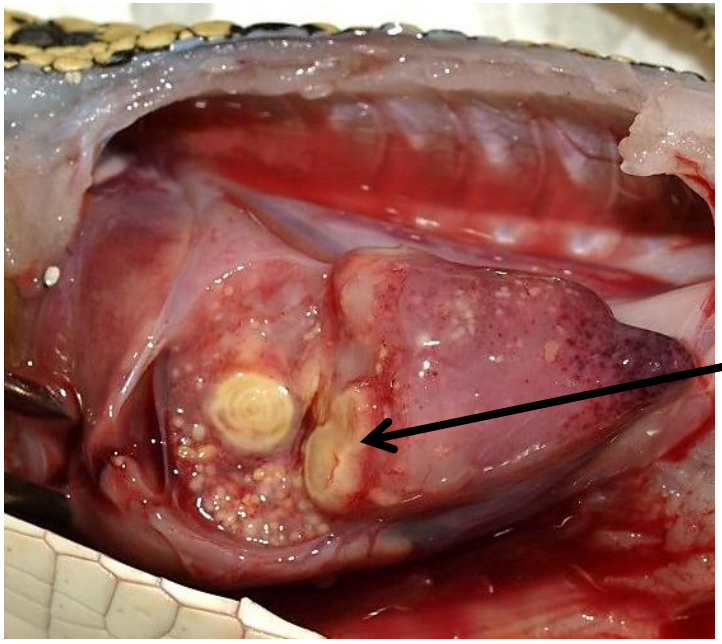


Infection with fungus: Lung



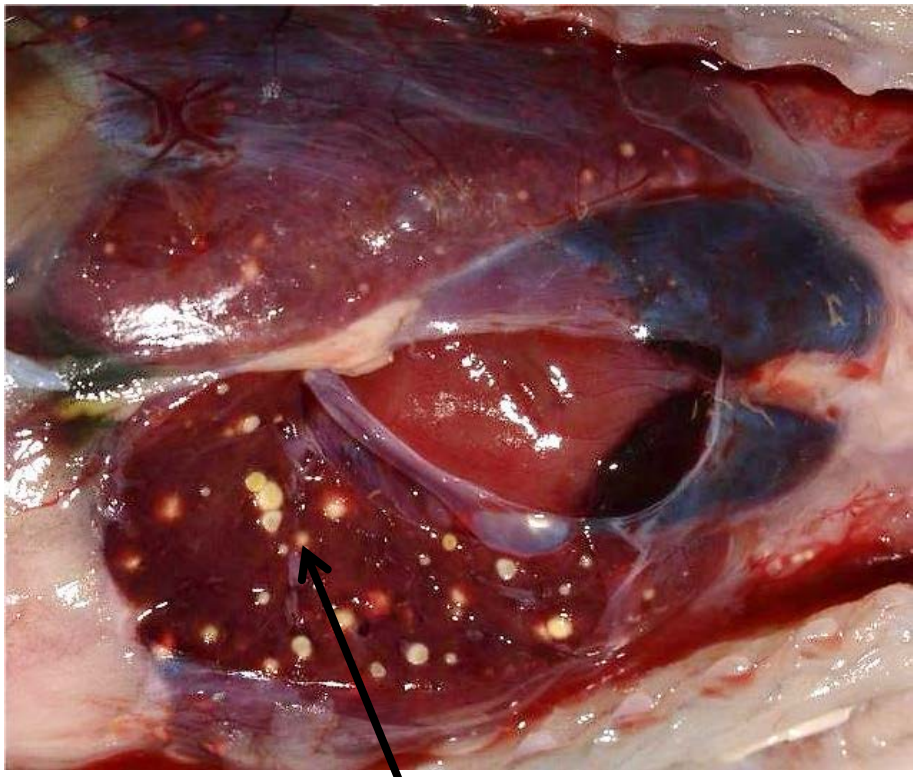


Lung: Many small yellow areas of exudate (inflammation)



Lung: Yellow exudate

Infection with fungus: Liver



Liver: Many yellow spots of exudate

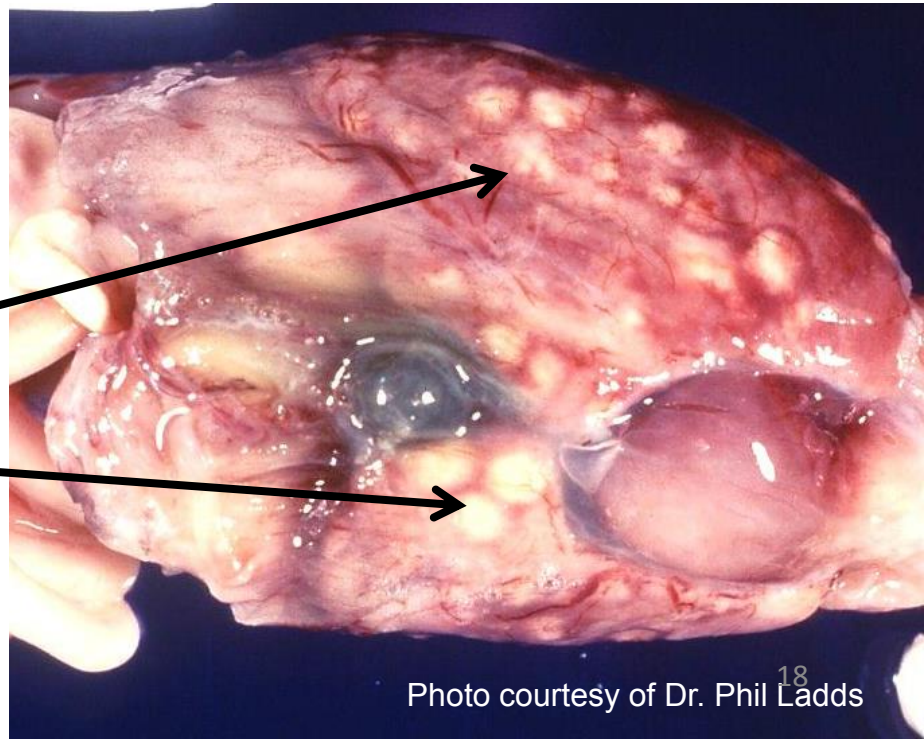
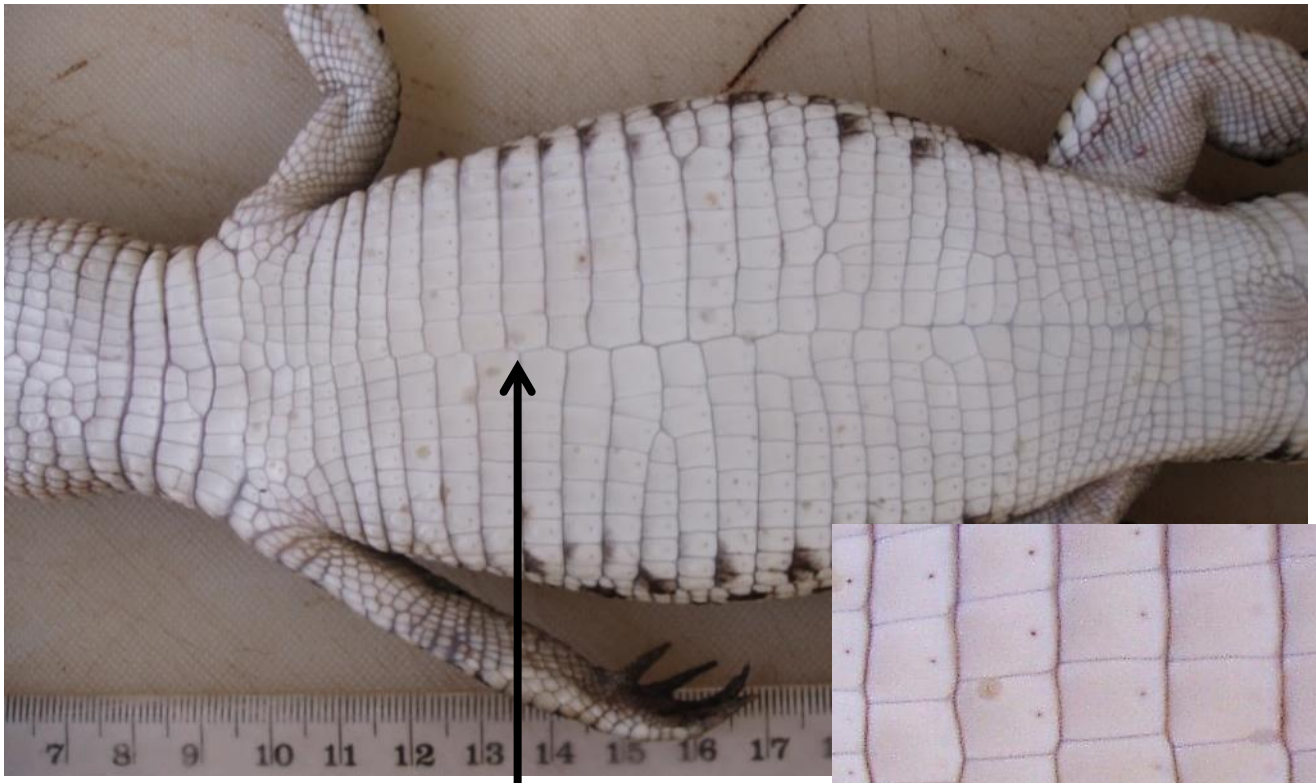
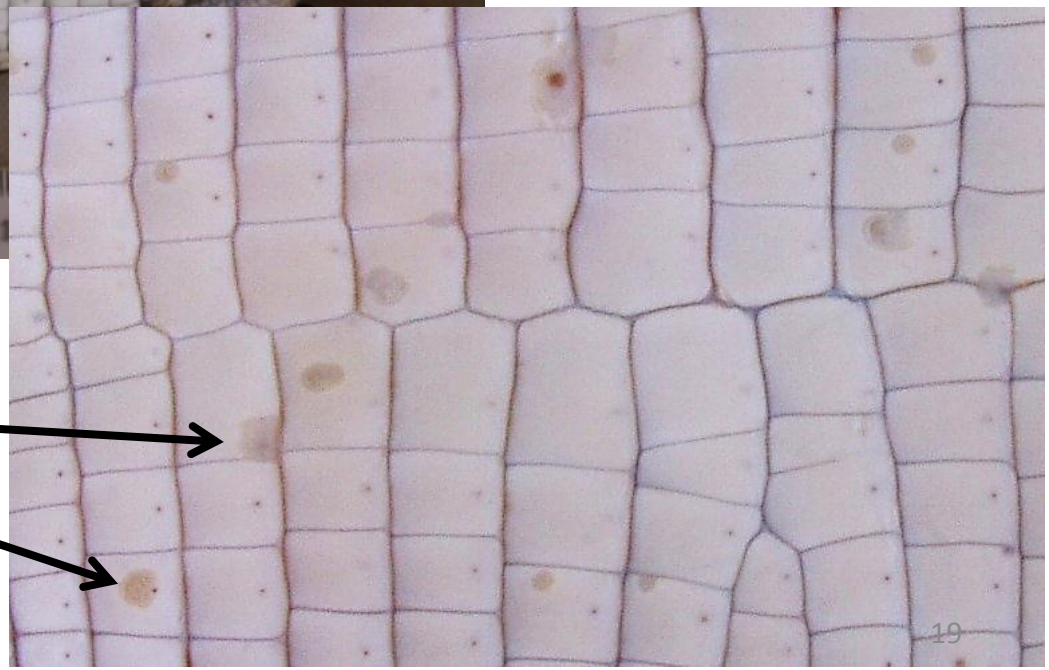


Photo courtesy of Dr. Phil Ladds

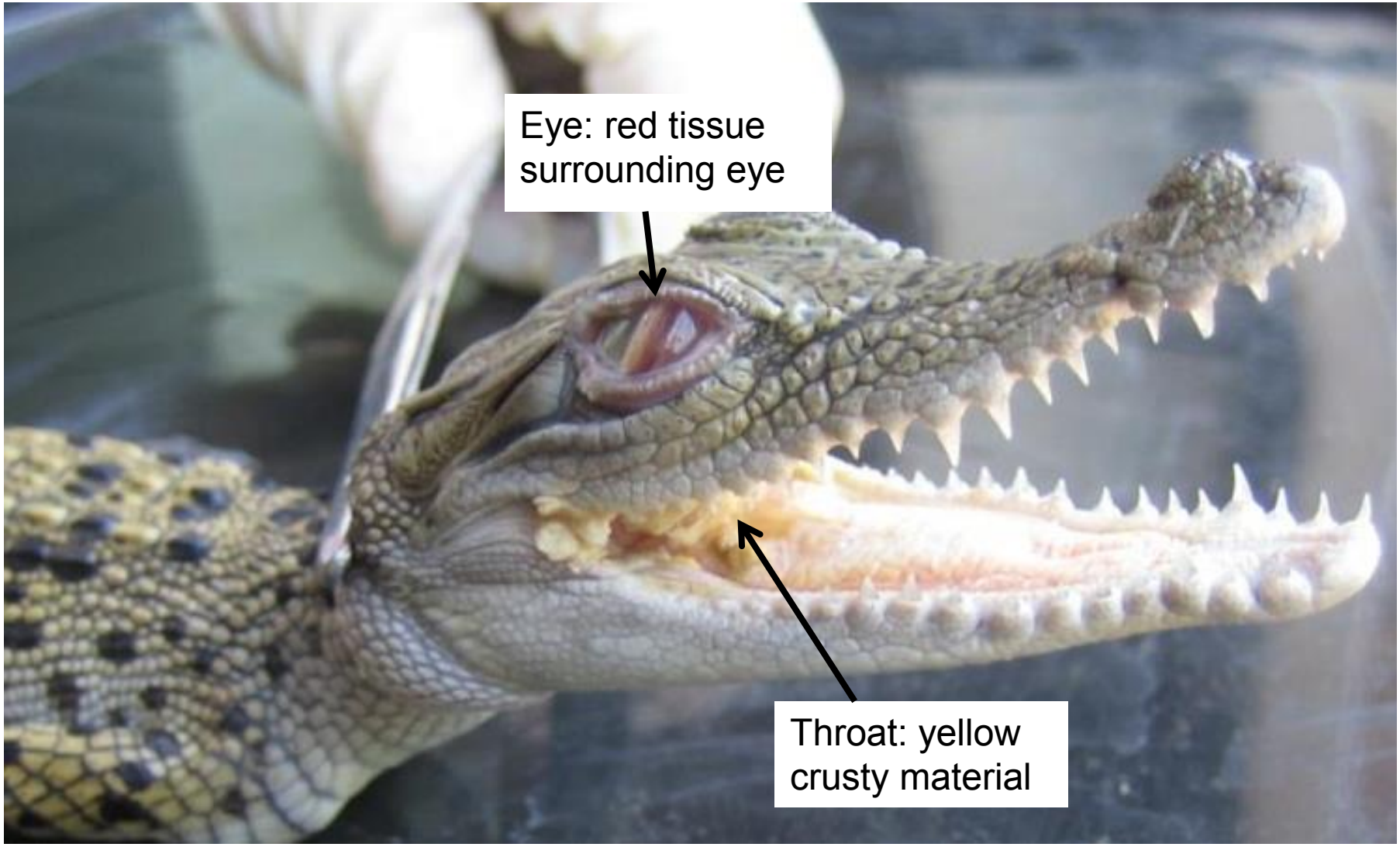
Infection with virus: Skin, poxvirus (does not usually make crocodile sick)





Skin: Pale small spots

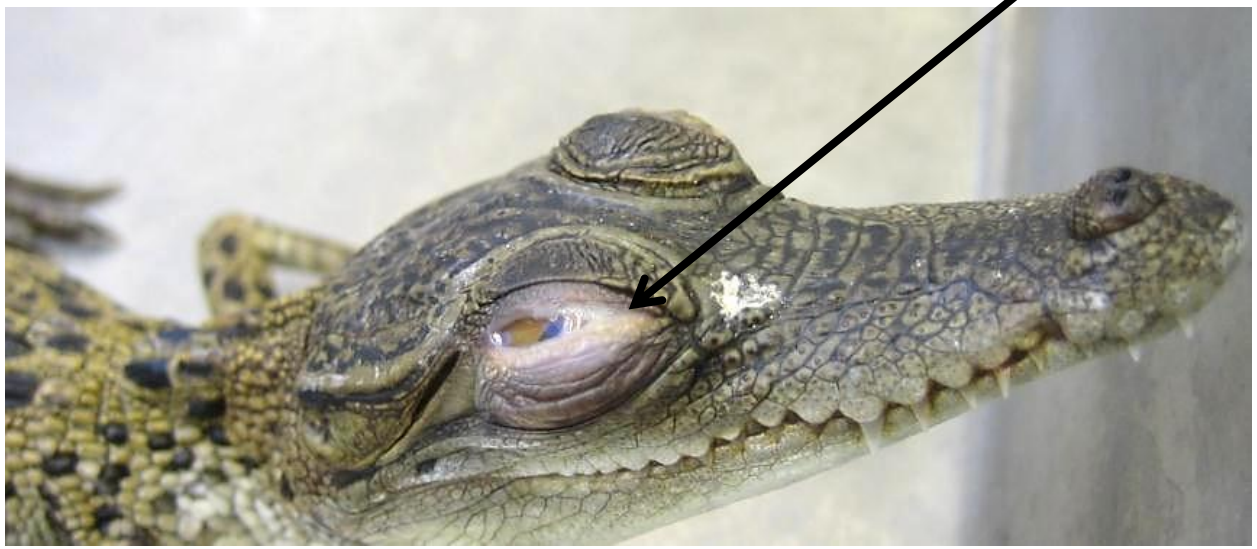
Infection of uncertain cause: Eye and throat (may be Chlamydia or other bacteria and/or herpesvirus)



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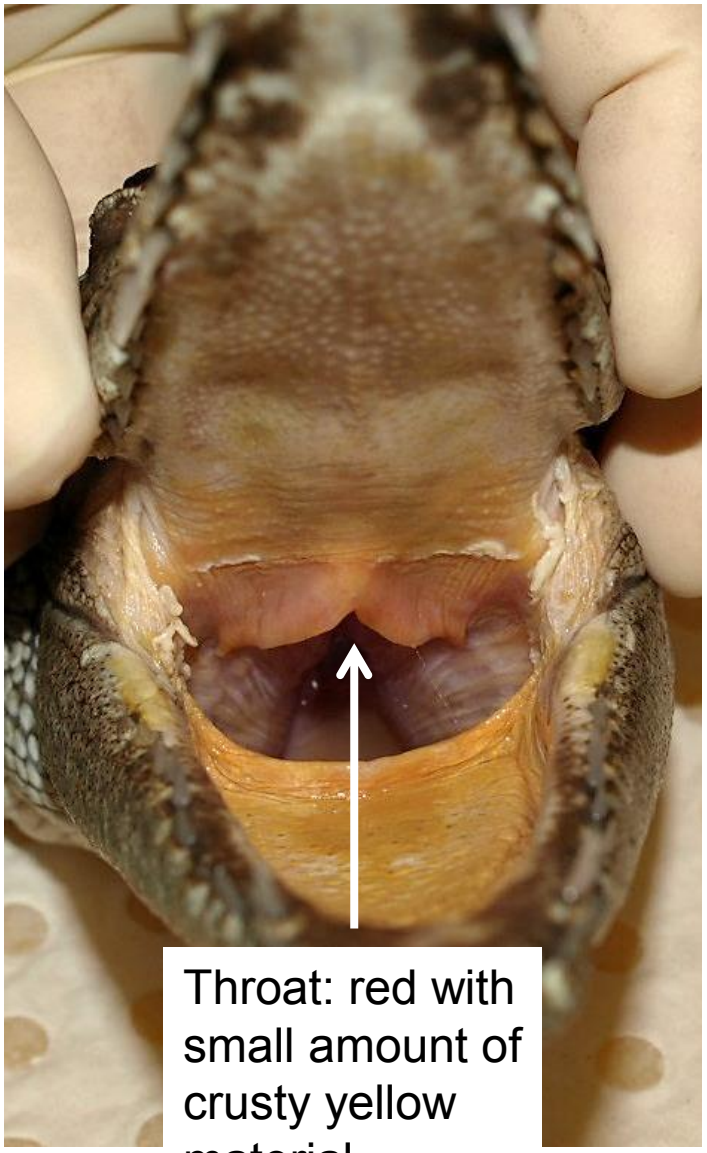


Eye: cloudy white fluid or yellow crusty discharge





Infection of uncertain cause: Eye and throat (may be Chlamydia or other bacteria and/or herpesvirus)

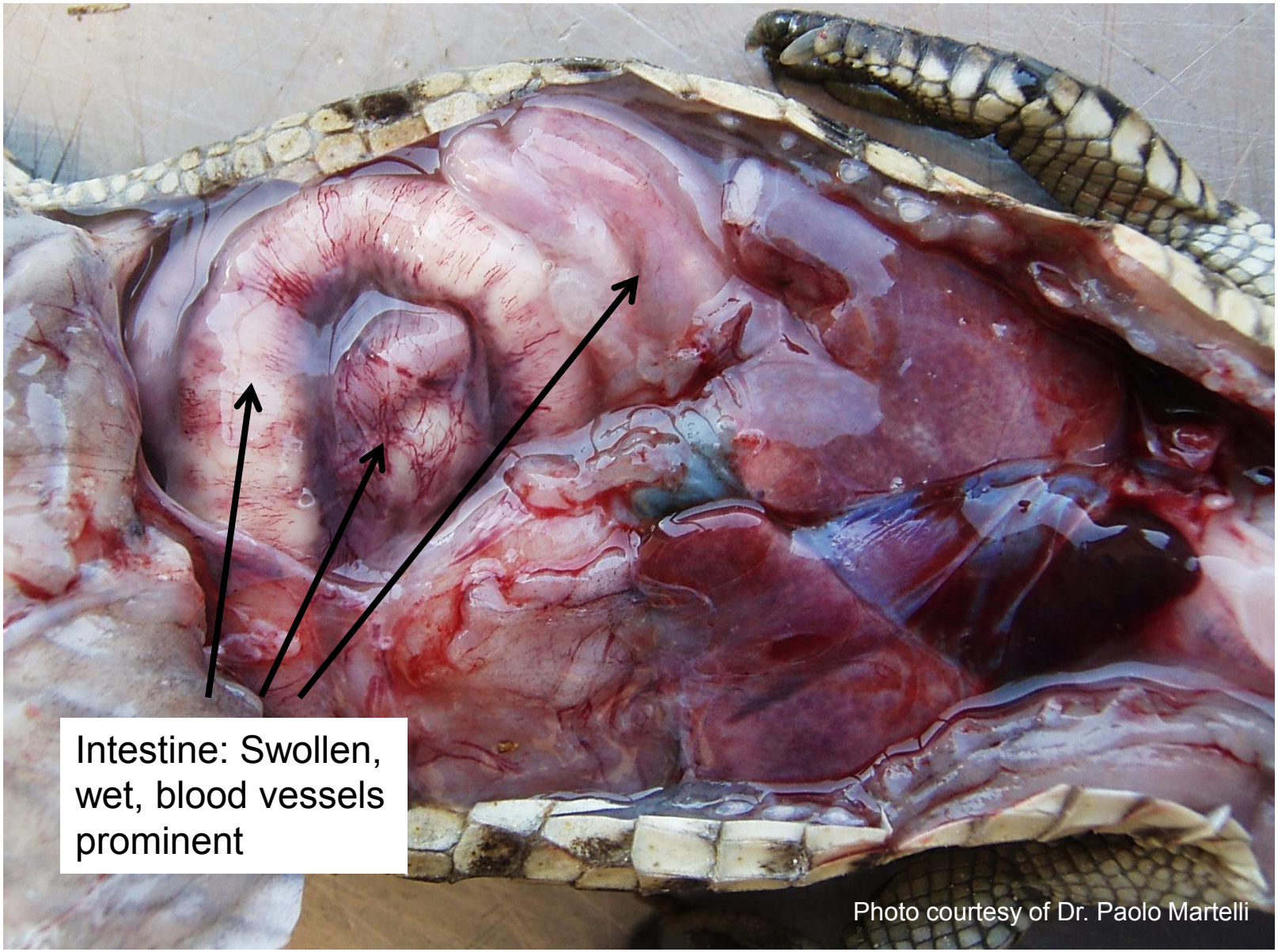


Throat: red with small amount of crusty yellow material

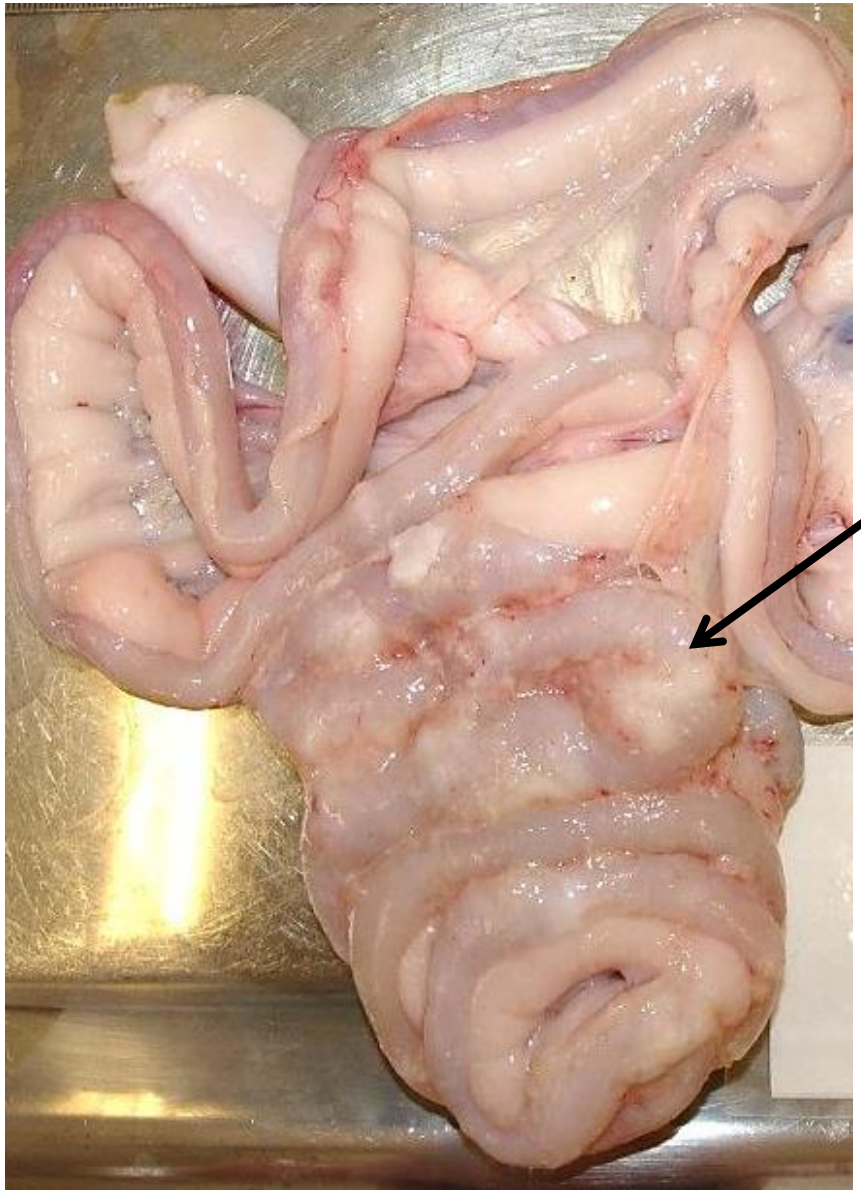


Throat: yellow exudate covering airway

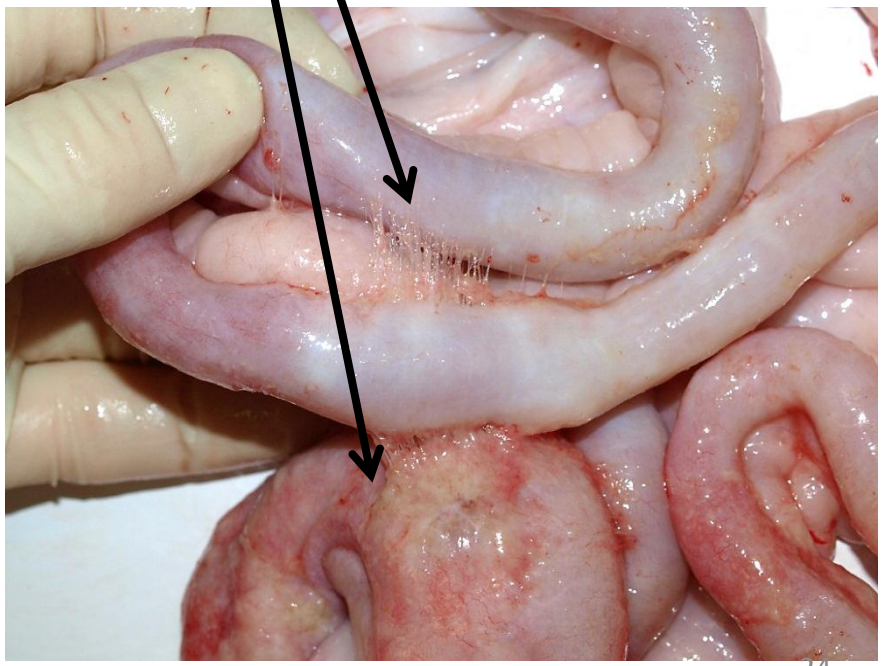
Parasitic disease: Coccidia (protozoa) in intestine



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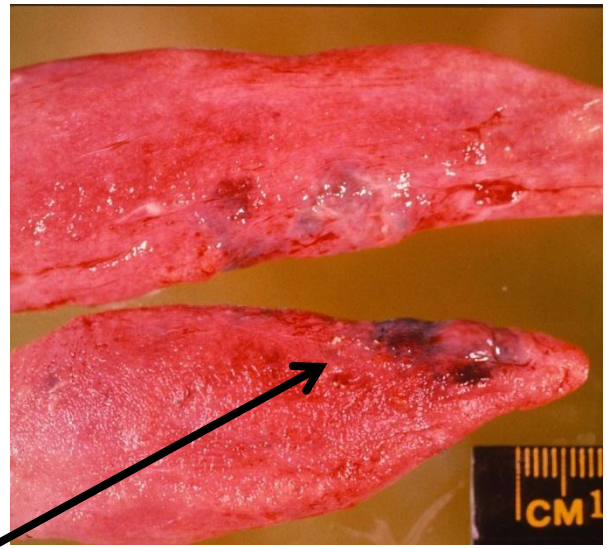


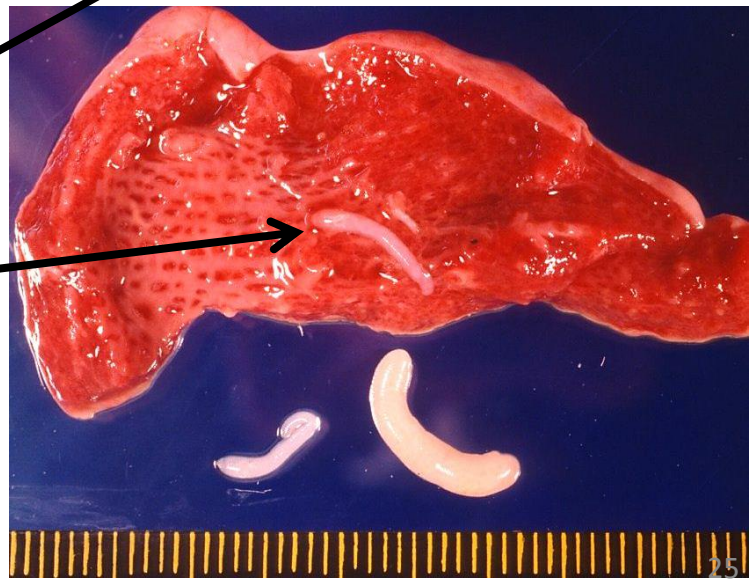
Intestine: Loops stuck together, blood vessels prominent



Parasitic disease: Pentastome worms in lung







Lung: Red, black and yellow areas, worms on the inside

Photos courtesy of Dr. Phil Ladds

Parasitic disease: Ascarid worms in stomach

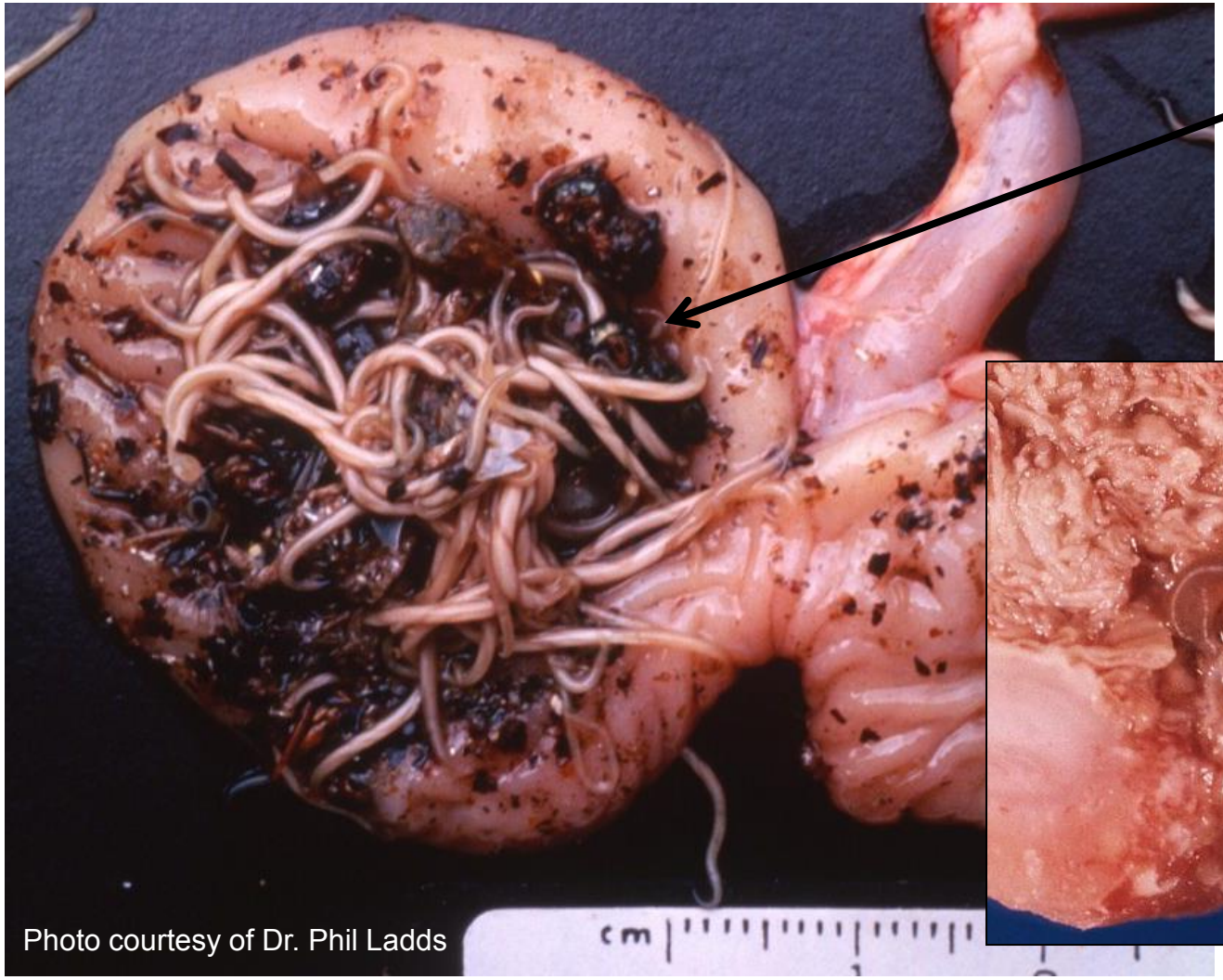


Photo courtesy of Dr. Phil Ladds

Stomach: contains blood, worms inside ulcers

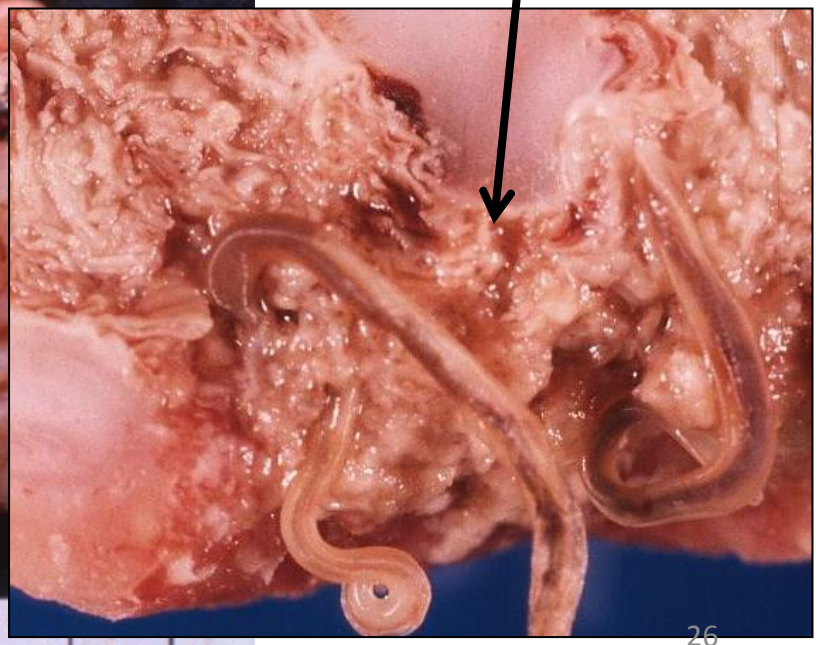
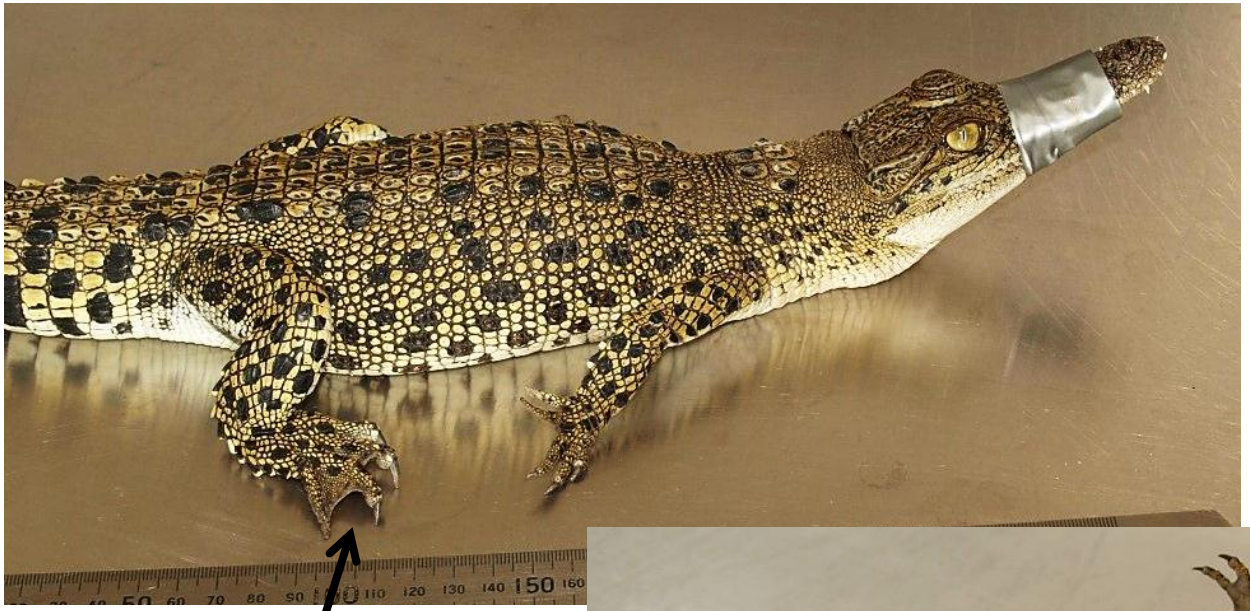
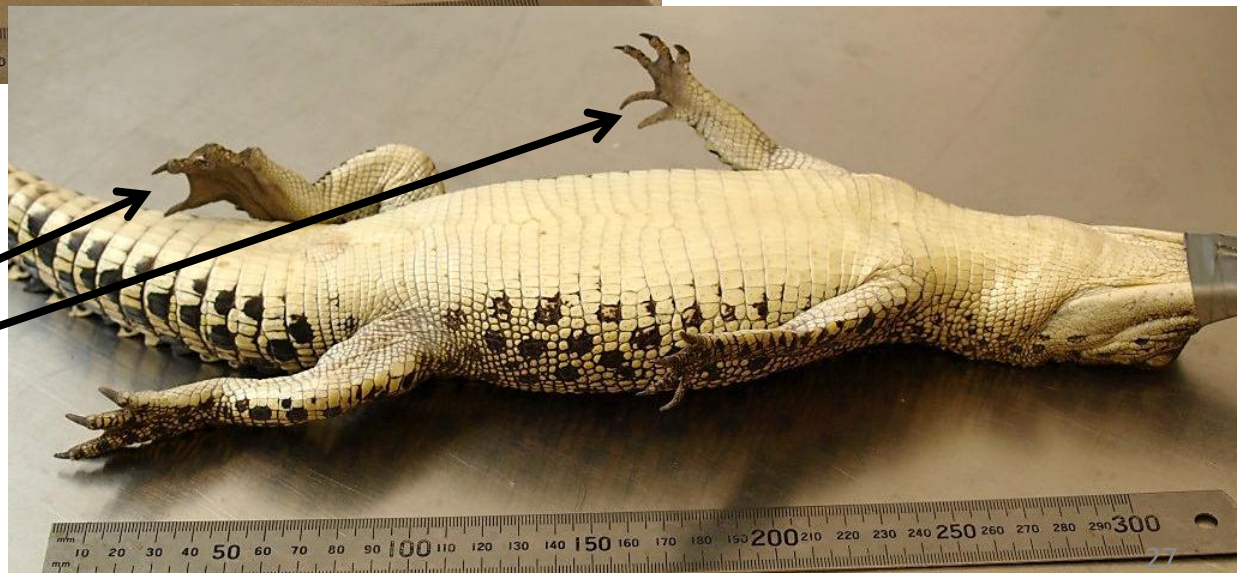


Photo courtesy of Dr. Phil Ladds

Nutritional disease: Improper balance of calcium and phosphorus in food (“rubber jaw”)

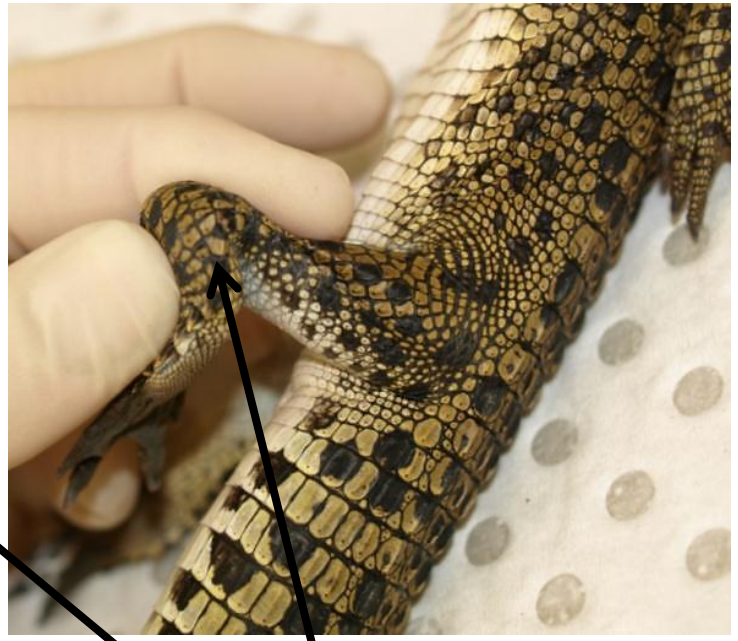


Live crocodile: Rigid legs, trembling, trouble moving



Nutritional disease: Improper balance of calcium and phosphorus in food (“rubber jaw”)



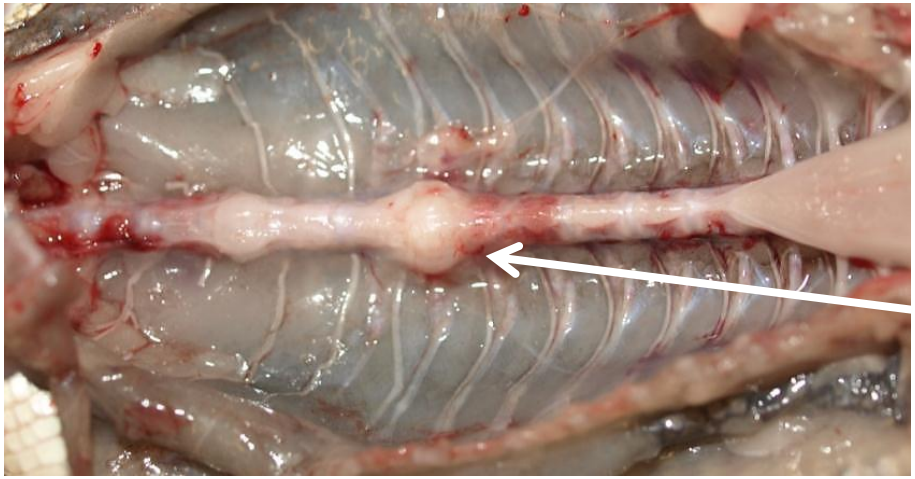


Jaw and leg bones: Bend without breaking

Nutritional disease: Improper balance of calcium and phosphorus in food

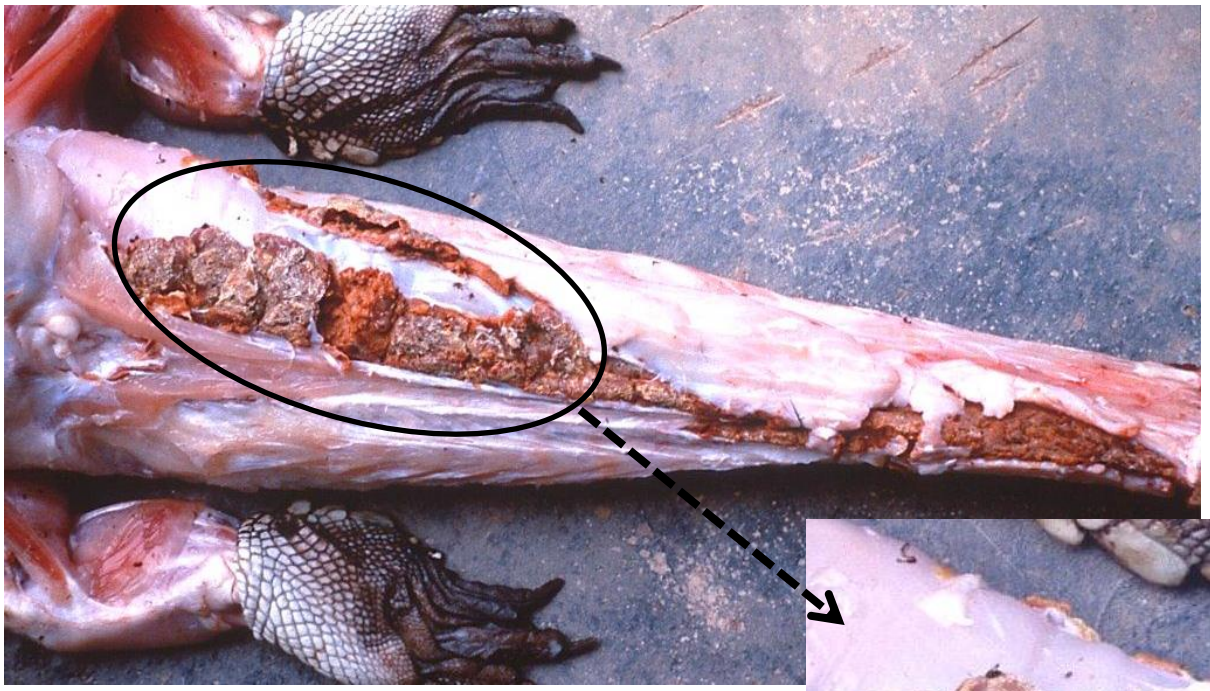


Bone: Deformed back in growing crocodile



Bone: Lumps in back bones

Nutritional disease: Inflammation of fat (vitamin E deficiency combined with spoiled fatty diet)

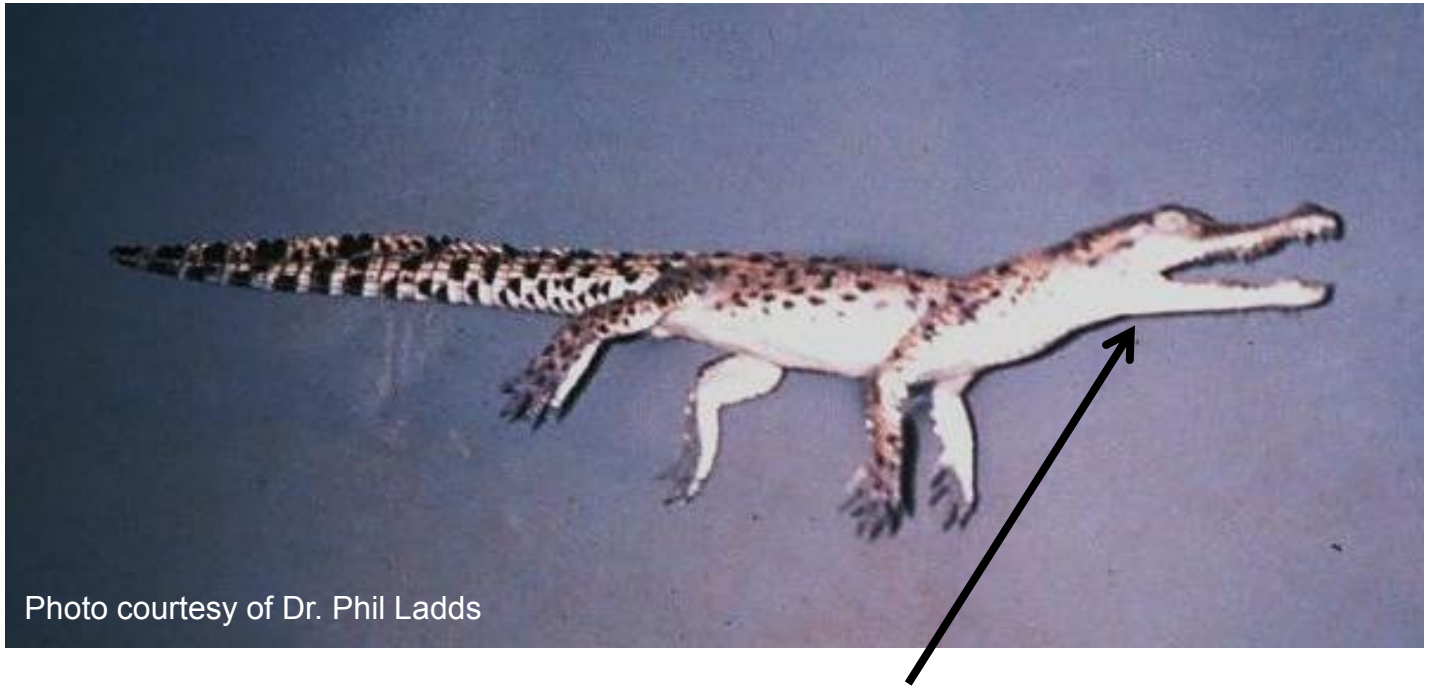




Fat: Hard and brown instead of soft and white

Photos courtesy of Dr. Phil Ladds

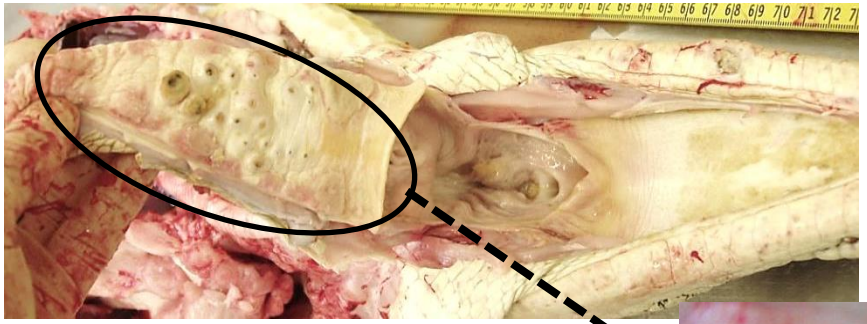
Nutritional disease: Thiamine (B vitamin) deficiency

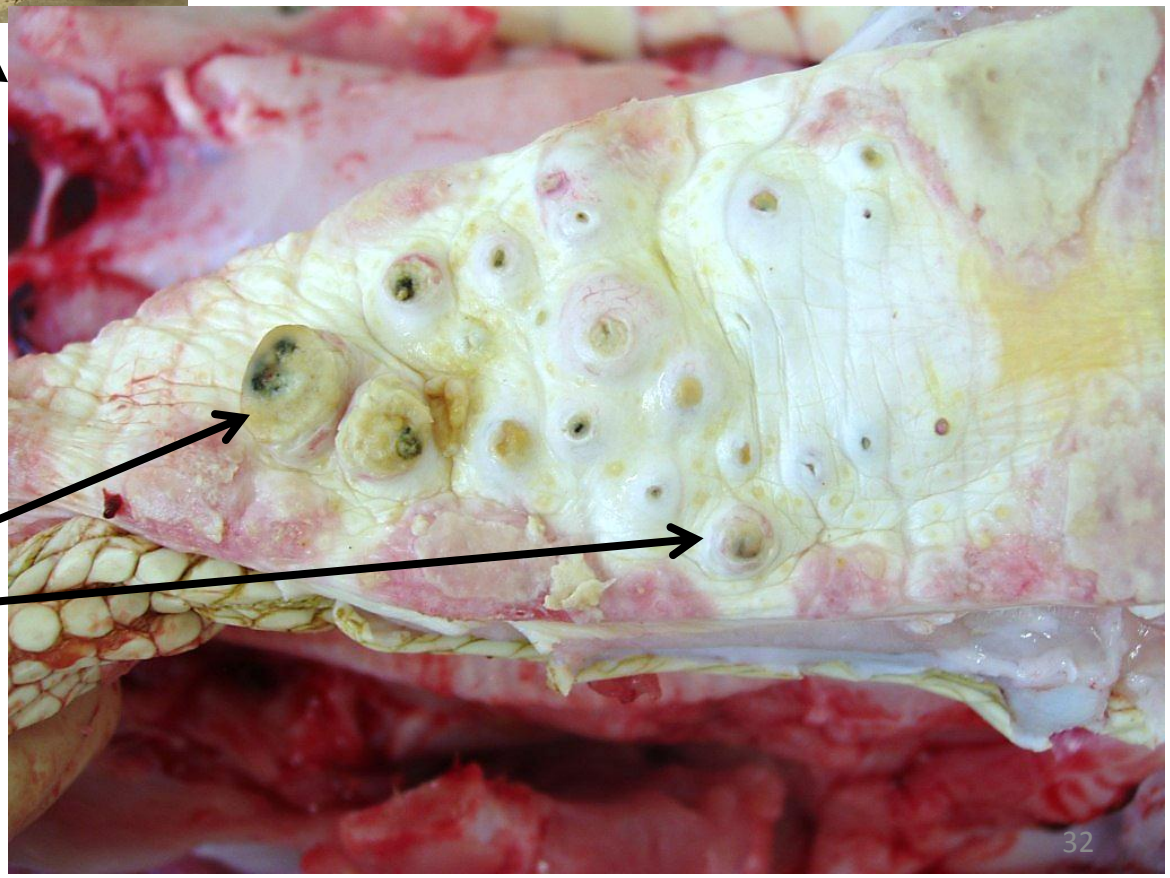


Live crocodile: “Stargazes” (head raised, stares into space), can’t move. No gross necropsy findings

Nutritional disease: Vitamin A deficiency

(may be related to gout by causing kidney disease)

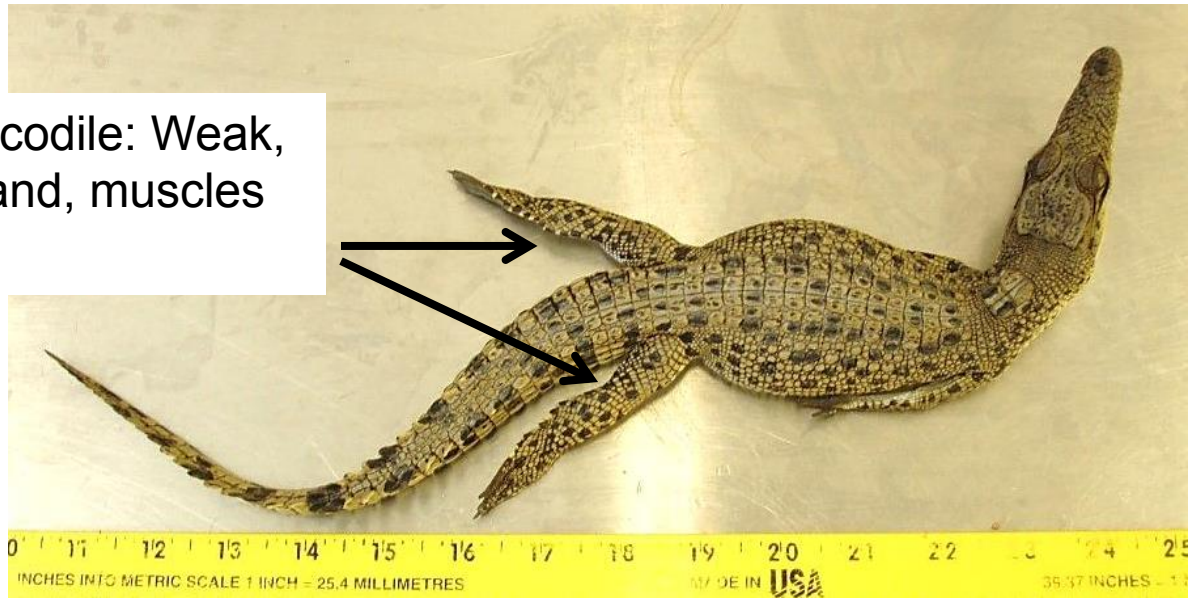


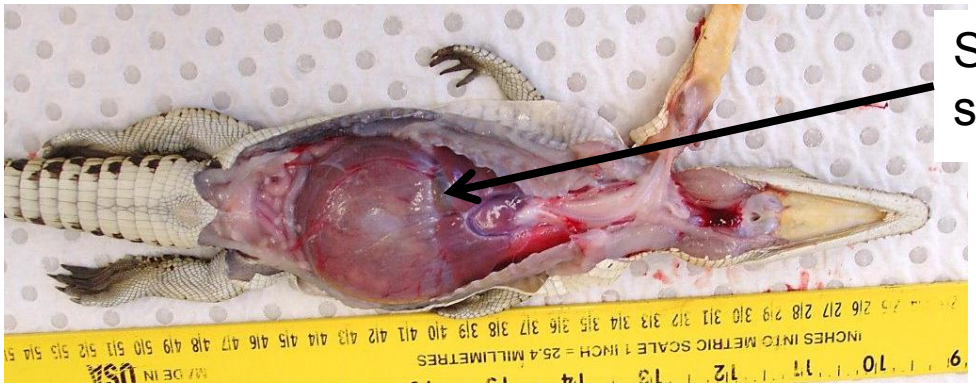


Tongue: Swollen glands with yellow or black deposit

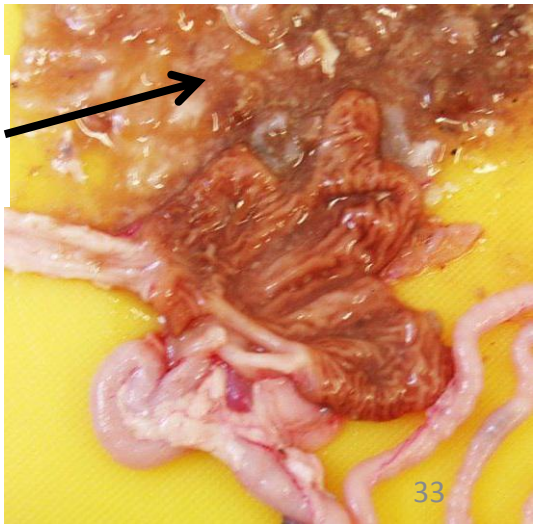
Nutritional toxin: Botulism?

Live crocodile: Weak, can't stand, muscles relaxed



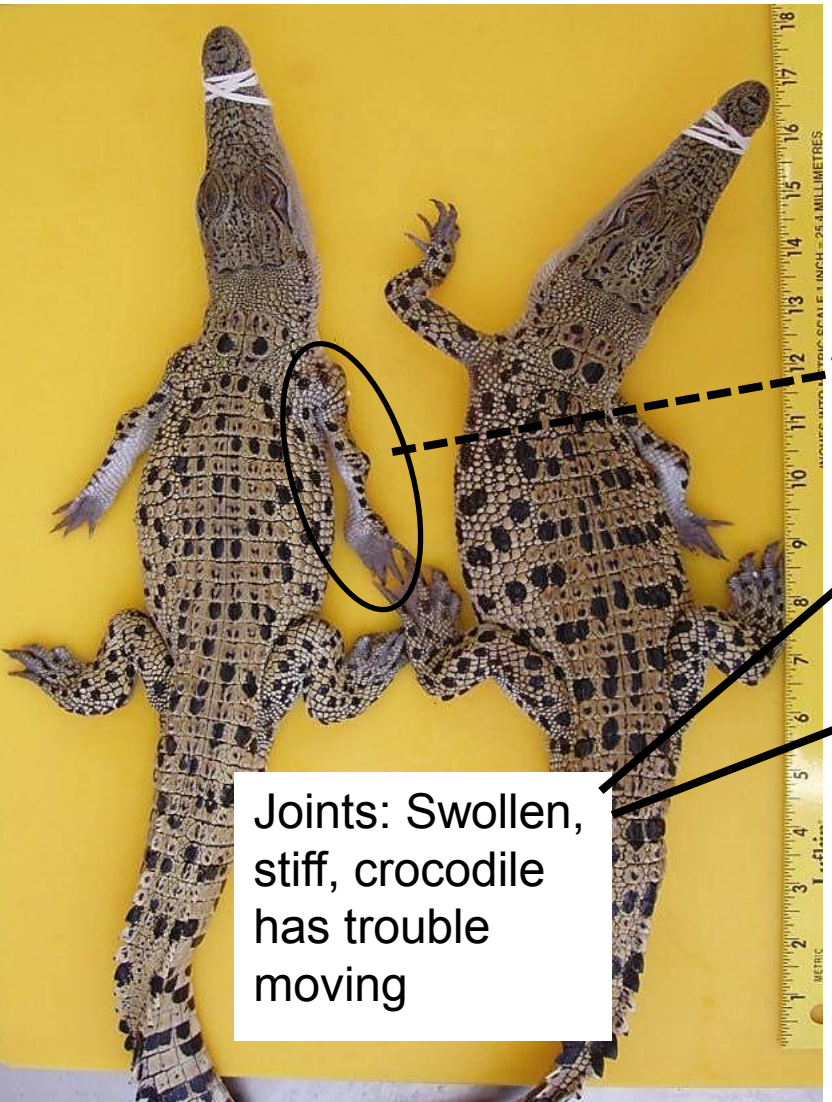


Stomach: Full of spoiled food

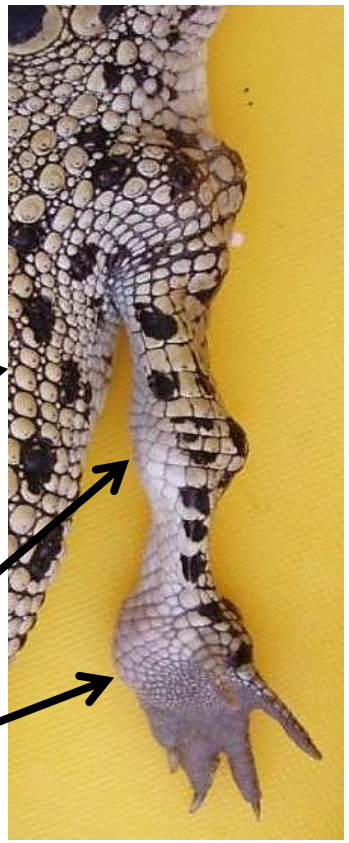


Nutritional and/or environmental disease: Gout

(possible causes are wrong protein in diet, kidney disease, dehydration, cold temperature, vitamin A deficiency)



Joints: Swollen, stiff, crocodile has trouble moving







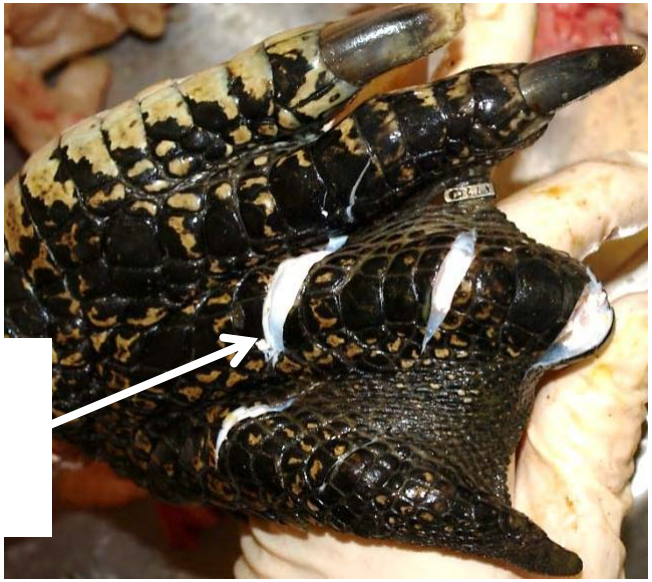
Joints: White, chalky material in joints

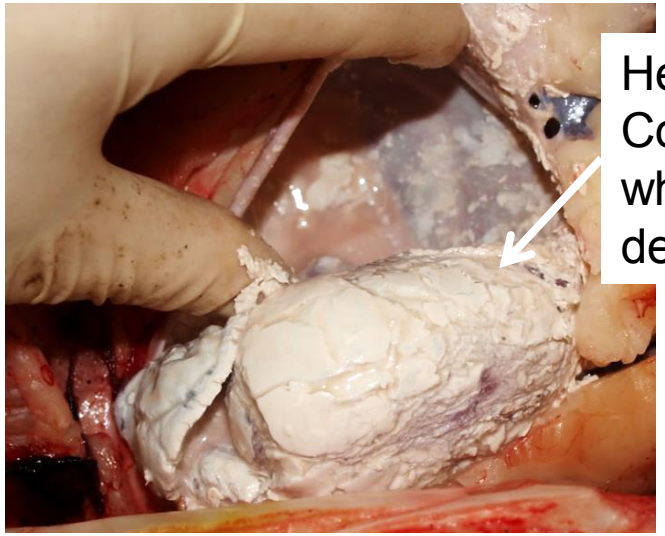
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Joints: White, chalky deposit in joints





Heart: Covered in white chalky deposit



Kidney: Pale, swollen, fine white streaks

Miscellaneous: “Runting” or “failure to thrive” or “maladaptation syndrome” (cause unknown)



Runts: Crocodiles that fail to grow much bigger than hatching size. No findings of disease at necropsy.