

Rounds

Animal Health
Department

Medical Rounds

"medicine for all"



Caring for Stranded Marine Animals

NATIONAL
MARINE
LIFE
CENTER

Notes

Veterinary Research
Department

Under the microscope

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Rounds Notes is a report on the health of animals at the National Marine Life Center from Sea Rogers Williams VMD for the staff, volunteers, and community of the center including professionals involved the captive care of similar species, the views expressed are not necessarily that of NMLC. Information in Rounds Notes should be considered confidential and used solely to benefit the health of aquatic animals everywhere.

February 1, 2011

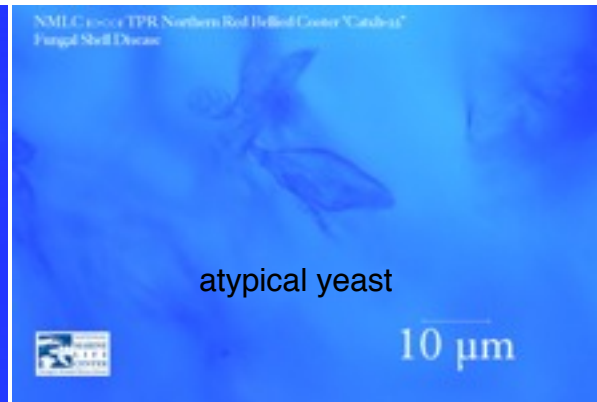
Rounds Notes

2: 3- 4(2011)

Headlines News: Try, Try, Try, Again

Fungal ID, take 3

A shell scraping still clearly shows the bunches of budding yeast and diskeratosis in the white areas of Catch-22's shell. A cytology preparation from the plastron clearly demonstrated the fungal elements and mild disease. Cornel has graciously agreed not to charge us for another bite at the apple and two new biopsies of affected shell were submitted for fungal culture, isolation and identification by PCR. If the isolate can be maintained it will be send to the fungal laboratory of Texas A&M for definitive characterization. Then we can contemplate therapy.



While the disease is relatively easy to diagnose at the center, characterization of the fungus has proved difficult. Effected areas are scraped with sterile scalpel blade and the keratin collected, stained with Wright-Giemsa and examined under high magnification as a wet-preparation. Oval yeast bodies are about 8 x 10um and often bunched. The separation of layers of keratin are also features of the disease and



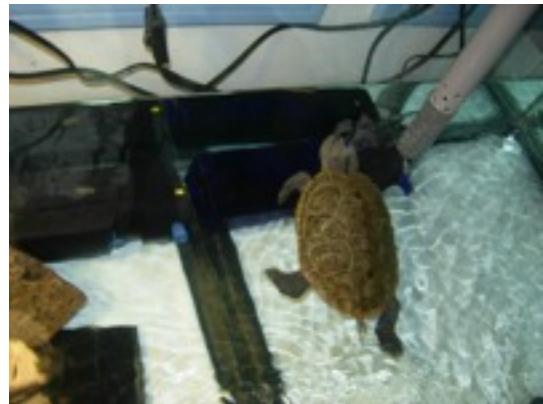
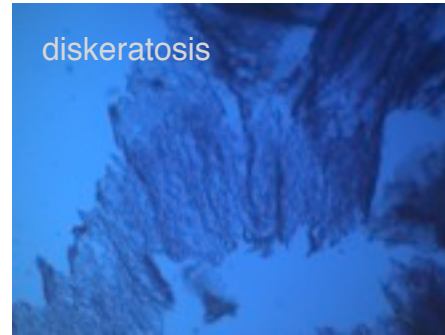
while not demonstrated by cytology, we know from histopathology that fungal hyphae infiltrate these areas. An interesting finding today was a possible fruiting body or even another species of fungus, which would make isolation even more difficult.

Why is this so hard ? After three months at Cornell, 24 sub cultures, no yeast or filamentous fungi were isolated. Heavy bacterial contamination (despite collection by sterile techniques) hamper our efforts.

Mixed species are very hard to isolate by PCR, and bacteria often outgrow the fungi in culture. Using the right media and temperature to favor the fungi and kill off the bacteria without killing the fungus all in what may be a novel species of fungus with unknown culture requirements is difficult. Gram positive cocci, Gram negative rods and even what are likely aquatic Mycobacteria have been seen, but so far the fungus alludes us.

Terrapins, Cooters, and Turtles, oh my . . . :

cooter continue to grown, Teanna takes to sea food



The cooters have increased their growth curve with a bump in temperature and lettuce allotment, the little chow hounds are doing well, nice shells, very active, happy as a cooter in a lettuce bed.

Teanna is eating some clams, so we are trying to wean her off the steady diet of pinkie mice, sure they taste great and who can

resist a McMouse, but we'd like to see her eat some of the items of brackish salt marsh we will return her to in the spring. She has taken to basking under her self-balled mercury vapor UVB bulb on the rocks staring out the window at the snow. I can only image she wonders why she brumates at all, this is the life.

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