

Marine Exposure

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No Disclosures

Case

- A 32-year-old male is vacationing in Cabos San Lucas. As he is frolicking in the waves, he experiences a sharp stab to his heel. He immediately retreats from the water and notices a clustered group of puncture wounds with a dark central dot. He has local pain, no bleeding.

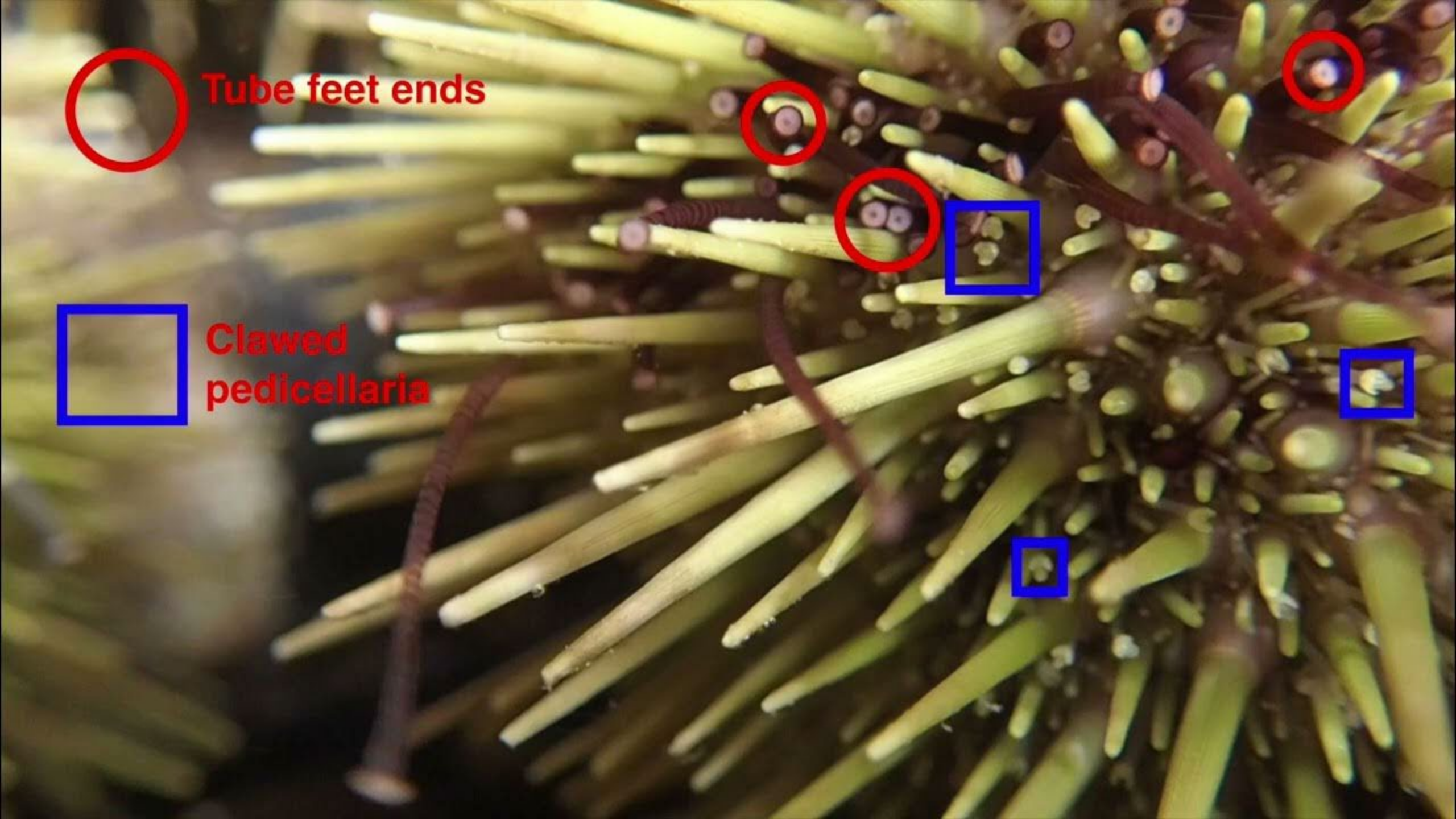




Tube feet ends

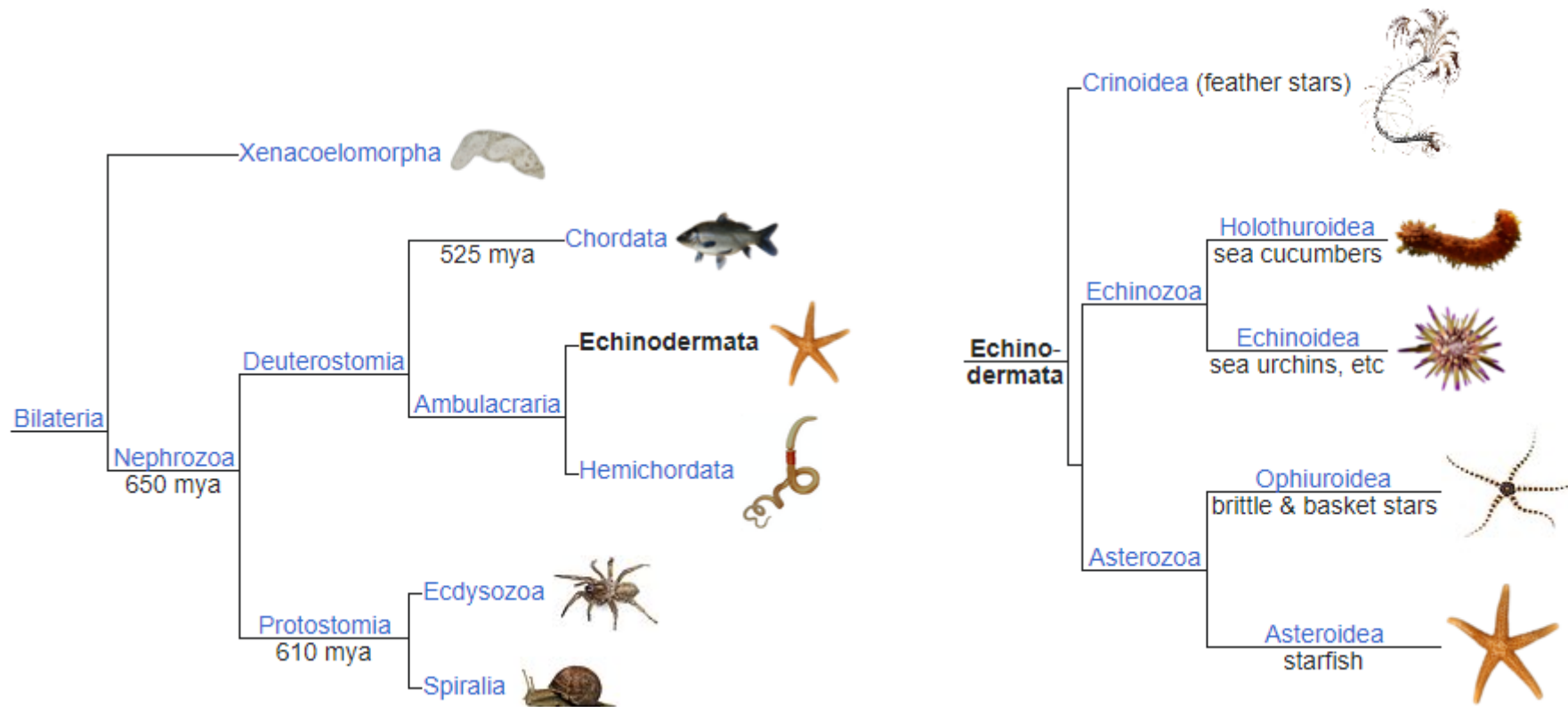


**Clawed
pedicellaria**



Echinodermata

- Phylum composing a group of animals with radial symmetry usually 5 pointed. All reside within the ocean



A sampling of urchin from the Sea of Cortez



Toxopneustes rosea

There are approximately 23 species of sea urchin that reside within the Sea of Cortez. One species, *Mellita granti*, is endemic to the area



Diadema mexicana next to a starfish

Venom

- Complex protein mixture that varies between species and habitats
- Venom tends to be more potent during mating season (in Norway spawn during April)
- It can be histaminergic, hemolytic, cardiotoxic, and neurotoxic
- Toxins are heat labile mid size proteins ~20 to 80 kDa
- Consumption of sea urchins can also produce toxicity in a seasonally dependent manner

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rolling was mainly over the ulnar aspect of the fingers and the sternum were clearly visible. The

Treatment

- Spines may cause local irritation, can consider removing
 - Spines are brittle and care must be taken, often unnecessary to explore wound. If deep the body will extrude or absorb fragments
- Venom typically causes local irritation and pain
 - Best treated with hot water immersion (40-46C as tolerated) and analgesia
- Allergic reactions are best treated in typical fashion
- Consider tetanus vaccination update
- There is no recommendation for prophylactic antibiotics unless the patient is immunocompromised, has serious wounds, or has significant comorbidities
 - Treatment is directed at Staph, Strep, *Vibrio vulnificus*, and *Mycobacterium marinum*
 - Ciprofloxacin, trimethoprim-sulfamethoxazole, or doxycycline can be given
- There is no antivenom. Treatment is supportive

Special considerations

- Initial spine insertion may effectively tattoo the skin with a pigment. This may be confused for embedded spine but typically resolves within 48 hours
- If a spine inserts near a joint, consultation with a surgical specialist may be warranted to avoid septic complications
- At times, retained spines may cause granulomatous reactions to form which can be painful/limiting. They may be amenable to surgical removal
- If a patient is susceptible to infection, it is reasonable to prophylactically treat

Thanks

- Questions?

References

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