

PODCAST OUTLINE: THE ECHINODERMS II – DIVERSITY

1. Introductory comments

A. Number of species and classes

2. Crinoids - Crinoidea

A. Habitat

B. Body plan

a. Shape of body

b. Position of mouth

c. Arms

C. Diversity

a. Sea lilies

b. Feather dusters

D. Evolutionary history

3. Brittle stars – Ophiuroidea

- A. Habitat
- B. Body Plan
 - a. Central disc
 - b. Arms
- C. Feeding strategy
- D. Digestive system

4. Sea Urchins – Echinoidea

- A. Body
 - a. General shape
 - b. Spines
 - c. Mouth
 - d. Anus
- B. Ecology
 - a. Habitat
 - b. Prey
 - c. Predators
- C. Experimental importance
- D. Economic importance
- E. Danger to humans

5. Sea cucumbers – Holothuroidea

A. Body features

- a. Shape
- b. Length
- c. Ossicles

B. Ecology

- a. Habitat
- b. Feeding strategy

C. Unique features

- a. Respiratory tree
- b. Evisceration

D. Economic importance

6. Starfish – Asteroidea

A. Body features

- a. Shape, position of mouth
- b. Arms
 - i. Number
 - ii. Shape
 - iii. Ambulacral groove
 - iv. Internal anatomy
- c. Digestive system
 - i. Overall organization
 - ii. Cardiac stomach
 - iii. Pyloric stomach
- d. Sieve plate – water vascular system

E. Ecology

- a. Habitat
- b. Prey
- c. Role as keystone species

7. Conclusion

Questions:

1. Which echinoderms are more likely to be found along a rocky coastline, and which are likely to be found at depths within the ocean?
2. What is the difference between the sea lilies and the feather dusters?
3. How are some sea urchins harmful to people.
4. List three ways in which the sea cucumbers differ from the other echinoderms.
5. Which groups of echinoderms are consumed, especially in Asia?
6. How do the arms of brittle star and sea stars compare?
7. What is meant when somebody refers to starfish as a keystone species?