

Mystic Aquarium

INVERTEBRATE CLASSIFICATION



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Today we will:

1. Briefly review the concepts of taxonomy and classification and why we use them
2. Learn 4 marine invertebrate phyla
3. Use a dichotomous key to identify marine invertebrates to species, and
4. Determine which phyla each species belongs in.



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Classification: Assignment of organisms into groups.

Taxonomy: Identification, description and classification of living organisms.

Evolution: Change in the gene pool of a population over time.

Phylogeny: The evolutionary history of a group of organisms, usually depicted in a family tree.



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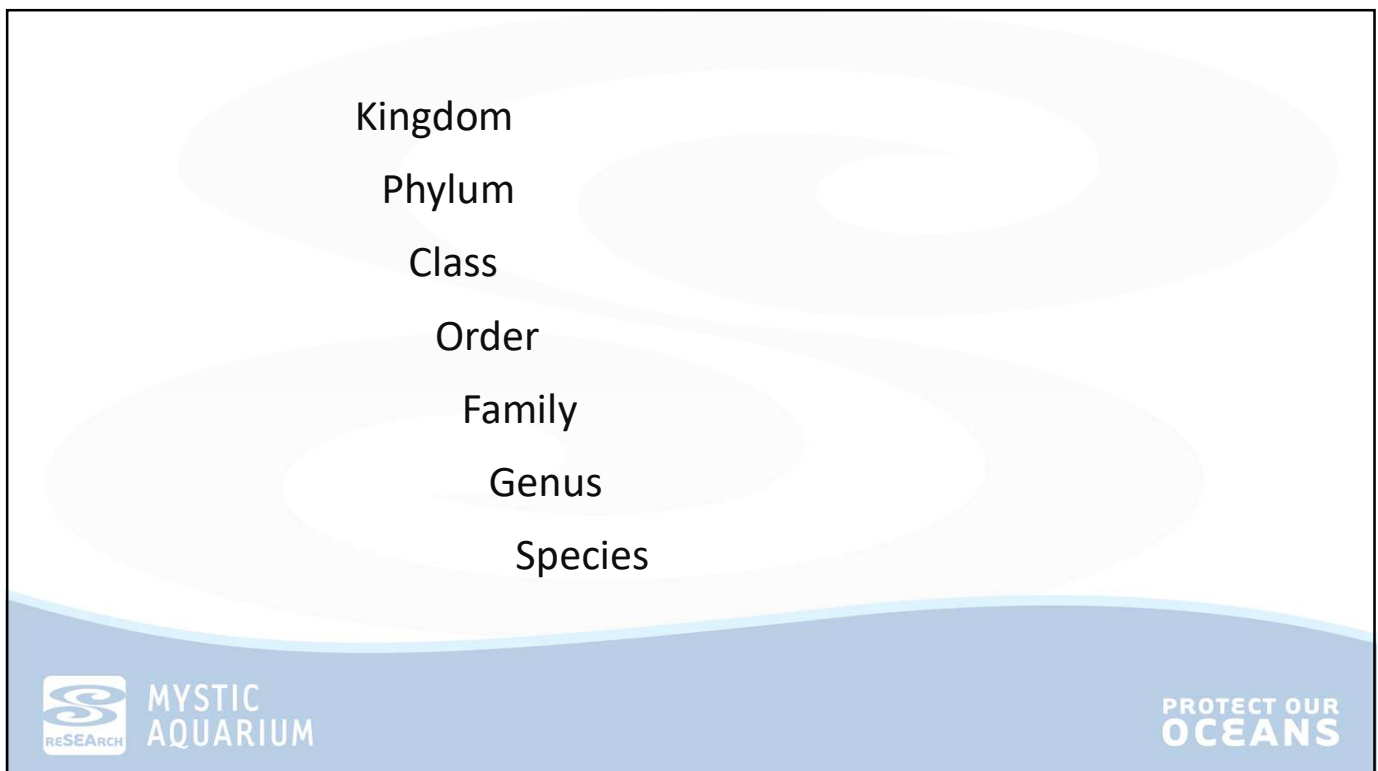
Classification – uses *meaningful* characteristics

- Apples
- Red potatoes
- Beef
- Cheerios
- Spaghetti



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Taxonomic Classifications

Kingdom – Animalia

Phylum – Chordata

Subphylum – Vertebrata

Class – Mammalia

Order – Primates

Family – Hominidae

Genus – *Homo*

Species – *sapiens*



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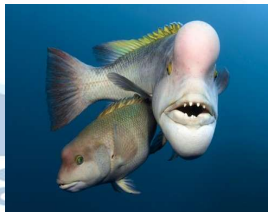
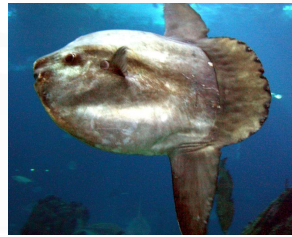
Vertebrate Classes



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Osteichthyes



RESEARCH AQUARIUM

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Reptilia



RESEA

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Mammalia



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Phylum Chordata

Kingdom – Animalia

Phylum – Chordata

Subphylum – Vertebrata

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Invertebrate Phyla

- Cnidaria – soft bodies & stinging cells on tentacles; radial symmetry – like a pizza 🍕
- Arthropoda – exoskeleton; molt; segmented bodies and jointed appendages; regrow lost appendages; bilateral symmetry – like a person 🧑
- Echinodermata – rough, spiny skin; tube feet; mesodermal skeleton; regenerate lost limbs; water vascular system; pentaradial symmetry - like a five-pointed star ★
- Mollusca – soft body with a large muscle, a mantle, and radula; usually has 1 or 2 shells



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