OCE 2001

Marine Organism Classification

* Domain Archaea – prokaryotic cells
	+ Extremophile bacteria in hydrothermal vents
* Domain Bacteria – prokaryotic cells
	+ Bacteria that live on/in other marine organisms
	+ Bacteria that photosynthesize
	+ Includes what used to be in Kingdom Monera
* Domain Eukarya – eukaryotic cells
	+ “Kingdom Protista”
		- Algae – photosynthetic protists
			* Seaweed
				+ Brown Algae – Sargassum, Giant Kelp
				+ Green Algae – sea lettuce
				+ Red Algae
			* Phytoplankton
				+ Diatoms
				+ Coccolithophores
				+ Dinoflagellates
		- Protozoans – heterotrophic protists
			* Zooplankton
				+ Radiolarians
				+ Foraminiferans
	+ Kingdom Plantae
		- Phylum Anthophyta – flowering plants
			* Sea grasses, mangroves
	+ Kingdome Animalia
		- Phylum Porifera – sponges
		- Phylum Cnidaria – jellyfish, corals
		- Phylum Mollusca – clams, oysters, snails, squid, octopus
		- Phylum Arthropoda – lobster, crab, krill
		- Phylum Echinodermata – star fish (sea stars)
		- Phylum Chordata
			* Subphylum Vertebrata
				+ Class Chondrichthyes – cartilaginous fish (sharks, rays)
				+ Class Osteichthyes – bony fish
				+ Class Reptilia – sea turtles, sea snakes

Also now includes birds (“Class Aves”) – pelicans, osprey, penguins

* + - * + Class Mammalia

Order Carnivora

Sea otter, polar bear

Family Odobenidae – walrus

Family Otariidae – sea lions (“eared”)

Family Phocidae – seals

Order Sirenia – manatees

Order Cetacea

Suborder Odontoceti – toothed whales

Dolphins, killer whales, sperm whales

Suborder Mysticeti – baleen whales

Blue whale, gray whale, humpback