

CLASSIFICATION OF MARINE ORGANISMS

cwh 8/97

KINGDOM	SUBKINGDOM	PHYLUM	CLASS	MARINE EXAMPLES
MONERA	Archaeobacteria	'thermoacidophiles'		thermobacteria (chemobacteria)
	Eubacteria	Schizonta Cyanonta		photobacteria (bioluminescent bacteria) cyanobacteria (blue-green algae)
PROTISTA	Protophyta	Pyrrophyta Chrysophyta		dinoflagellates (incl. zooxanthellae) diatom (golden-brown algae)
	Protozoa	Sarcodina	Actinopodea Rhizopodea	radiolarians foraminiferans
FUNGI	Ascomycota			<i>molds, lichens (symbiosis with algae/cyanobacteria)</i>
PLANTAE	'seaweeds'	Chlorophyta Phaeophyta Rhodophyta		green algae brown algae (incl. kelps) red algae (incl. coralline algae)
	Tracheophyta	Anthophyta		flowering plants (incl. sea grass & mangroves)
ANIMALIA	Parazoa	Porifera	Calcispongiae Hyalospongiae Demospongiae	calcareous sponges glass sponges bath sponges
	Metazoa	Cnidaria	Hydrozoa Scyphozoa Anthozoa	hydrozoans (incl. man-of-war & siphonophore) true jellyfishes sea anemones & corals
		Ctenophora		<i>comb jellies</i>
		Platyhelminthes	Turbellaria Cestoda (Trematoda)	planarians tapeworms <i>no marine species (flukes)</i>
		Nemertea		<i>ribbon worms</i>
		Nematoda Priapulida		roundworms <i>priapulid worms</i>
		Mollusca	Polyplacophora Scaphopoda Gastropoda Bivalvia Cephalopoda	chitons tusk shells snails & nudibranchs clams, mussels, oysters, scallops, shipworms octopuses, squids, cuttlefish, nautilus
		Annelida	Polychaeta (Oligochaeta) (Hirudinea)	polychaetes (incl. feather-duster & tubeworms) <i>no marine species (earthworms)</i> <i>no marine species (leeches)</i>

KINGDOM	Subkingdom	PHYLUM	CLASS	MARINE EXAM PLES
ANIM ALIA	Metazoa (continued)	Arthropoda	Merostomata	horseshoe crabs
			Pycnogonida	sea spiders
			Crustacea	crabs, lobsters, shrimps, barnacles
			Insecta	insects (incl. water striders)
			(Arachnida)	<i>no marine species (spiders, scorpions, ticks, mites)</i>
			(Chilopoda)	<i>no marine species (centipedes)</i>
			(Diplopoda)	<i>no marine species (millipedes)</i>
		Pogonophora		Riftia worms
		Brachiopoda		lampshells
		Echiura		spoon worms
		Spunculida		peanut worms
		Echinodermata	Crinoidea	sea lilies & feather stars
			Echinoidea	sea urchins & sand dollars
			Asteroidea	seastars
			Ophiuroidea	brittle & basket stars
			Holothuroidea	sea cucumbers
		Chordata	Subphy. Urochordata	tunicates
			Subphy. Cephalochordata	lancelets
			Subphy. Vertebrata	vertebrates (details below)

SUBPHYLUM	SUPERCLASS	CLASS	ORDER	MARINE EXAM PLES
VERTEBRATA	Pisces	Agnatha		jawless fishes (hagfishes & lampreys)
		Chondrichthyes		cartilaginous fishes (shark, ray, skate, ratfish)
		Osteichthyes		bony fishes (coelacanth, lungfishes, ray-finned)
	Tetrapoda	(Amphibia)		<i>no marine species (frogs & salamanders)</i>
		Reptilia	Chelonia	sea turtles
			Squamata	sea snakes & marine lizards
			Crocodylia	marine crocodiles
		Aves	Sphenisciformes	penguins
			Procellariiformes	tubenoses (albatrosses, petrels, shearwaters)
			Pelicaniformes	pelicans (incl. cormorants, frigatebirds, boobies)
			Charadriiformes	gulls (incl. terns & puffins)
		Mammalia	Cetacea	toothed whales (Suborder Odontoceti)
				baleen whales (Suborder Mysticeti)
			Carnivora	seals, sea lions, walruses (Suborder Pinnepedia)
				sea otters (Suborder Fissipedia)
			Sirenia	manatees
			Primata	humans