

Marine Genera					
Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
Actinopoda					
ACANTHARIA (Tintinnia; skeletal rods made of strontium sulfate)					
		Order unnamed ACANTHARIA	tolweb.org/notes/?note_id=52	55.96	0 (Present)
RADIOLARIA (intricate mineral skeletons with inner and outer portion)					
		NASSELLARIA (non-spherical internal skeleton with spines and connecting bars)	tolweb.org/notes/?note_id=51	299	0 (Present)
		SPUMELLARIA (colonial, simple central capsule, no initial spicule)	tolweb.org/notes/?note_id=51	518.55	0 (Present)
ACTINOPODA - INCERTAE SEDIS					
			http://tolweb.org/notes/?note_id=52	272.3	259.81
Annelida (segmented worms)					
MYZOSTOMARIA (hermaphrodite parasitic worms)					
		No order given - MYZOSTOMARIA		485.37	443.83
PALAEOSCOLECIDA (priaplid-like proboscis covered with spines)					
		No order given- PALAEOSCOLECIDA		518.55	433.35
POLYCHAETA (bristleworms)					
		AMPHINOMORPHA (stinging and fire worms)	http://www.accessscience.com/content.aspx?id=241000#S7	311.08	148.53
		DRILOMORPHA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7141&is_real_user=1	209.46	0 (Present)
		EUNICEMORPHA (can reach up to 3 metres)	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7026&is_real_user=1	469.96	0 (Present)
		FLABELLIGERIMORPHA	http://tolweb.org/Annelida	311.08	311.08
		PHYLLODOCEMORPHA	http://paleobackup.nceas.ucsb.edu:8110/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7096&is_real_user=1	506.91	0 (Present)
		SERPULIMORPHA	http://paleobackup.nceas.ucsb.edu:8110/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7160&is_real_user=1	485.37	0 (Present)
		SPIOMORPHA	http://paleobackup.nceas.ucsb.edu:8110/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7135&is_real_user=1	516.1	0 (Present)
		TEREBELLOMORPHA (marine bristle worms)	http://tolweb.org/Terebellida >TEREBELLOMORPHA (marine bristle worms)	510.25	0 (Present)
		UNCERTAIN POLYCHAETA	http://tolweb.org/Annelida >UNCERTAIN POLYCHAETA	541	23.03
Arthropoda (arthropods)					
ARACHNIDA (spiders, mites, scorpions, whipscorpions, pseudoscorpions)					
		SCORPIONIDA (scorpions)	http://tolweb.org/Scorpionida	438.49	400.41
MARRELOMORPHA					
		ACERCOSTRACA	http://www.palaeos.com/Invertebrates/Arthropods/Arachnomorpha.html	407.57	400.41
		CYCLINA (= Cycloidea; cycloids, resemble crabs)	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19048&is_real_user=0	346.73	201.3
		MIMETASTERIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19042&is_real_user=0	505.79	400.41
MEROSTOMATA (aquatic chelicerates; horseshoe crabs)					
		AGLASPIDA (resemble horseshoe crabs)	http://www.wikipedia.org/Aglaspida	541	295.53
		CHASMATASPIDIDA	www.palaeos.com/Invertebrates/Arthropods/Chelicerata/Merostomata/Chasmataspidida.html	465.32	400.41
		EURYPTERIDA (sea scorpions)	www.palaeos.com/Invertebrates/Arthropods/Chelicerata/Eurypterida/Eurypterida.html	457.01	272.3
		XIPHOSURIDA (sword-tailed animals)	www.accessscience.com/content.aspx?id=752100	469.96	0 (Present)
		MEROSTOMATA - INCERTAE SEDIS	www.accessscience.com/content.aspx?id=416500	523.2	505.79
MEROSTOMOIDEA (transition between trilobites and chelicerates)					
		CHELONIELLIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19034&is_real_user=1	407.57	400.41
		EMERALDELLIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19027&is_real_user=1	505.79	502.45
		LIMULAVIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19031&is_real_user=1	505.79	502.45
		MEROSTOMOIDEA - INCERTAE SEDIS	www.palaeos.com/Invertebrates/Arthropods/Arachnomorpha.html#Merostomoidea	518.55	504.68
MYRIAPODA (millipedes, centipedes)					
		Order unnamed - Myriapoda	www.palaeos.com/Invertebrates/Arthropods/Myriapoda/Myriapoda.html	503.56	433.35
PARATRILOBITA					

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		<i>Order unnamed - Paratrilobita</i>	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19023&is_real_user=1	566	541
	PYCNOGONIDA (sea spiders)				
		PALAEOISOPODA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19018&is_real_user=1	407.57	400.41
		PANTOPODA	http://tolweb.org/PANTOPODA	407.57	152.06
	SC. CRUSTACEA, BRACHYPODA (shrimp-like detrius feeders)				
		<i>Order unnamed - SC. Crustacea, Brachypoda</i>	http://tolweb.org/Cephalocarida-like detrius feeders)	491.75	489.5
	SC. CRUSTACEA, BRANCHIOPODA (brine shrimps, water fleas)				
		<i>Order unnamed - SC. Crustacea, Branchiopoda</i>	http://tolweb.org/Branchiopoda	407.57	400.41
	SC. CRUSTACEA, CIRRIPIEDIA (barnacles)				
		<i>Order unnamed - SC. Crustacea, Cirripedia</i>	http://tolweb.org/Cirripedia	505.79	0 (Present)
	SC. CRUSTACEA, COPEPODA (includes zooplankton)				
		<i>Order unnamed - SC. Crustacea, Copepoda</i>	http://tolweb.org/Copepoda	166.07	0 (Present)
	SC. CRUSTACEA, INCERTAE SEDIS				
		ORSTENOCARIDA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22098&is_real_user=1	491.75	489.5
		SKARACARIDA	http://tolweb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22096&is_real_user=1	504.5	499.25
		WAPTIIDA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22094&is_real_user=1	505.79	504.68
		UNCERTAIN SC. CRUSTACEA, INCERTAE SEDIS	http://tolweb.org/Crustacea">SC. CRUSTACEA, INCERTAE SEDIS	518.55	499.25
	SC. CRUSTACEA, MALACOSTRACA (crabs, lobsters, shrimp, mantis shrimp, krill, woodlice...)				
		AESCHRONECTIDA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22283&is_real_user=1	346.73	302.63
		AMPHIPODA (amphipods, scuds; shrimp-like crustaceans 1mm - 140 mm)	http://www.accessscience.com/content.aspx?id=030200	33.89	0 (Present)
		ARCHAEOSTRACA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22228&is_real_user=1	485.37	252.16
		BELOTELSONIDEA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22300&is_real_user=1	352.84	306.99
		CANADASPIDIDA (benthic, shield-backed feeder)	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22216&is_real_user=1	518.55	501.33
		CUMACEA (hooded shrimp)	http://www.accessscience.com/content.aspx?id=173300*	268.8	163.47
		DECAPODA (crabs, lobster, shrimp)	http://www.accessscience.com/content.aspx?id=181900	363.46	0 (Present)
		EOCARIDACEA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22289&is_real_user=1	385.21	306.99
		HOPLOSTRACA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22225&is_real_user=1	346.73	306.99
		HYMENOSTRACA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22223&is_real_user=1	516.1	465.32
		ISOPODA (woodlouse, roly-poly, sowbug, potato bug, pill bug)	http://tolweb.org/Isopoda	311.08	0 (Present)
		LEPTOSTRACA (sea fleas)	http://www.accessscience.com/content.aspx?id=378400	268.8	265.14
		LOPHOGASTRIDA (opossum shrimp)	http://animals.jrank.org/pages/1800/Lophogastrids-Lophogastrida-PHYSICAL-CHARACTERISTICS.html	311.08	0 (Present)
		MYSIDACEA (mysid shrimp)	http://www.accessscience.com/content.aspx?id=442900	358.94	0 (Present)
		PALAEOSTOMATOPODA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22263&is_real_user=1	372.24	327.08
		PHYLLOCARIDA INCERTAE SEDIS (most primitive malacosracans, bivalve carapace)	http://www.accessscience.com/content.aspx?id=512950	471.52	228.35
		STOMATOPODA (mantis shrimp)	http://www.accessscience.com/content.aspx?id=657400	346.73	0 (Present)
		TANAIDACEA	http://www.accessscience.com/content.aspx?id=677100	358.94	133.09
		WATERSTONELLIDEA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22302&is_real_user=1	338.83	330.92
	SC. CRUSTACEA, OSTRACODA				
		BRADIORIIIDA	http://www.accessscience.com/content.aspx?id=478900	541	427.36
		LEPERDITICOPIDA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22923&is_real_user=1	512.83	358.94
		METACOPIDA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=23746&is_real_user=1	485.37	100.5
		MYODOCOPIDA (bear a worm-like seventh limb)	http://www.accessscience.com/content.aspx?id=442450	485.37	0
		PALAEOCOPIDA	http://www.accessscience.com/content.aspx?id=483600	458.37	139.39

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		PHOSPHATOCOPDA	http://tolweb.org/content.aspx?id=478900	518.55	489.5
		PLATYCOPIDA (asymmetrical, oblong shell)	http://www.accessscience.com/content.aspx?id=527400	438.49	0
		PODOCOPIDA (no developed heart)	http://www.accessscience.com/content.aspx?id=530450	485.37	0
		UNCERTAIN SC. CRUSTACEA, OSTRACODA	http://tolweb.org/Ostracoda	485.37	5.33
		SC. CRUSTACEA, REMIPEDIA (blind, cave-dwelling crustaceans)			
		ENANTIOPODA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22214&is_real_user=1 >ENANTIOPODA	330.92	306.99
		THYLACOCEPHALA (pouch head)			
		CONCAVICARIDA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22068&is_real_user=1	438.49	93.9
		CONCHYLIOCARIDA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22076&is_real_user=1	541	148.53
		INCERTAE SEDIS THYLACOCEPHALA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=22067&is_real_user=1	518.55	272.3
		TRILOBITA (trilobites)			
		AGNOSTIDA (= Miomera, planktonic trilobites a few mm long)	http://www.palaeos.com/Invertebrates/Arthropods/Trilobita/Agnostida.html	541	393.25
		ASAPHIDA (head and tail of similar length)	http://www.palaeos.org/Asaphida	541	387.72
		CORYNEXOCHIDA (elongated glabella)	http://www.palaeos.org/Corynexochida	541	372.24
		LICHIDA (spiny trilobites)	http://www.palaeos.org/Lichida	499.1	382.69
		NARAOIIDA (= Nektaspida, soft-bodied)	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19101&is_real_user=1	521	443.83
		ODONTOPLEURIDA	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19772&is_real_user=1	514.47	372.24
		OLENELLIDA (narrow tail)	http://paleodb.org/cgi-bin/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=19109&is_real_user=1	521	510.25
		PHACOPIDA (lens-face)	http://www.palaeos.org/Phacopida	499.1	358.94
		PROETIDA	http://www.trilobites.info/ordproetida.htm	500.22	252.16
		PTYCHOPARIIDA	http://www.trilobites.info/ordptychopariida.htm	541	372.24
		REDLICHIIIDA (up to 90 spined thorax segments)	http://www.trilobites.info/ordredlichiiida.htm	541	500.22
		UNCERTAIN TRILOBITA	http://www.accessscience.com/content.aspx?id=710100	541	358.94
		UNCERTAIN Arthropoda			
		<i>Order unnamed - Uncertain Arthropoda</i>	http://tolweb.org/Arthropoda	541	272.3
		Brachiopoda			
		ARTICULATA (hinged brachiopods)			
		ATRYPIDA (earliest spiral-lophophorates)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Atrypidida.html	469.96	358.94
		ORTHIDA (first diversified articulates)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Orthida.htm	523.2	252.16
		PENTAMERIDA	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Pentamerida.htm	511.54	358.94
		RHYNCHONELLIDA (nut-like shells)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Rhynchonellida.htm	485.37	0
		SPIRIFERIDA (wing-like shells)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Spiriferida.htm	469.96	174.15
		STROPHOMENIDA ("petrified butterflies")	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Rhynchonelliformea/Strophomenida.html	485.37	201.3
		TEREBRATULIDA (resemble ancient Roman oil lamps)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Terebratulida.htm	422.96	0 (Present)
		THECIDEIDA	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Thecideida.html	268.8	0 (Present)
		UNCERTAIN ARTICULATA	http://www.accessscience.com/content.aspx?id=053200	516.1	126.3
		INARTICULATA (no hinge)			
		CRANIIDA (camouflaged shells)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Craniiformea.html	163.47	0 (Present)
		CRANIOPSISIDA	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/E0A0E0Brachiopoda.htm	518.55	346.73
		TRIMERELLIDA (broad calcareous platforms)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Craniiformea.html	504.68	422.96
		LINGULATA (tongue shaped shells)			
		ACROTRETIDA (conical calcium carbonate shell)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Linguliformea/Acrotretida.html	541	0 (Present)
		LINGULIDA (burrowers; fingernail-shaped shell)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Linguliformea/Lingulida.html	541	0 (Present)
		PATERINIDA (distantly related to all other brachiopods)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Linguliformea/Paterinida.html	525.4	455.14

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
	UNCERTAIN Brachiopoda				
		CHILEIDA	http://tolweb.org/Brachiopoda	516.1	512.83
		KUTORGINIDA (earliest calcareous shell)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Kutorginida.htm	541	465.32
		OBOLELLIDA	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Brachiopoda/Obolellida.htm	523.2	499.1
		UNCERTAIN Brachiopoda	http://tolweb.org/Brachiopoda	541	455.14
Bryozoa (moss animals, sea mats, ectoprocts)					
	GYMNOLAEMATA (cylindrical or flattened zooids)				
		CHEILOSTOMATA (calcified forms)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Bryozoa.htm	148.53	0 (Present)
		CTENOSTOMATA (uncalcified forms)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Bryozoa.htm	485.37	0 (Present)
	STENOLAEMATA (tubular zooids)				
		CRYPTOSTOMATA (erect colonies)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Bryozoa.htm	477.72	201.3
		CYCLOSTOMATA (= Tubuliporata, encrusting and	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Bryozoa.htm	477.72	0 (Present)
		CYSTOPORATA (long, slender, and tubular zoecia)	http://www.accessscience.com/content.aspx?id=178500	485.37	228.35
		FENESTRATA (erect, net- or fern-like colonies)	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Bryozoa.htm	471.52	248.46
		TREPOSTOMATA (tubular or prismatic zoecia)	http://www.accessscience.com/content.aspx?id=708200	485.37	201.3
		UNCERTAIN STENOLAEMATA	http://www.palaeos.com/Invertebrates/Lophotrochozoa/Bryozoa.htm	469.96	372.24
Chaetognatha (arrow worms)					
	UNCERTAIN Chaetognatha				
		Protoconodontida	http://www.palaeos.com/Vertebrates/Units/030Conodonta/030.100.html	596	494
		UNCERTAIN Chaetognatha	http://tolweb.org/chaetognatha	506.91	306.99
CHORDATA (vertebrates)					
	ACANTHODII (primitive fish with dermal spines)				
		ACANTHODIDA (filter feeders; no teeth in jaw)	http://tolweb.org/Vertebrates/Units/090Teleostomi/090.100.html	400.41	372.24
		CLIMATIIFORMES (shoulder armor, sharp spine)	http://www.palaeos.com/Vertebrates/Units/090Teleostomi/090.100.html	433.35	311.08
		ISCHNACANTHIDA (teeth fused to the jaw)	http://tolweb.org/Vertebrates/Units/090Teleostomi/090.100.html	438.49	358.94
		UNCERTAIN ACANTHODII	http://tolweb.org/Vertebrates/Units/090Teleostomi/090.100.html	422.96	306.99
	AMPHIBIA (amphibians)				
		TEMNOSPONDYLI (primitive amphibians)	http://tolweb.org/Temnospondyli	250.86	250.01
	AVES (birds)				
		CHARADRIIFORMES (Modern shore birds and	http://www.palaeos.com/palaeos.com/Vertebrates/Units/Unit365/365.100.html	72.05	0 (Present)
		HESPERONITHIFORMES (Craetaceous toothed birds)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/350Aves/350.500.html	107.59	66.04
		ICHTHORNITHIFORMES	http://tolweb.org/Aves	93.9	66.04
		PELECANIFORMES (medium to large waterbirds with all four toes webbed)	http://animaldiversity.ummz.umich.edu/site/accounts/information/Pelecaniformes.html	59.24	0 (Present)
		PROCELLARIIFORMES (seabirds that feed on the open ocean)	http://tolweb.org/Procellariiformes	72.05	0 (Present)
		SPHENISCIFORMES (penguins)	http://animaldiversity.ummz.umich.edu/site/accounts/information/Sphenisciformes.html	37.75	33.89
		AVES - INCERTAE SEDIS	http://animaldiversity.ummz.umich.edu/site/accounts/information/Genera_Incertae_Sedis_(12:69).html	66.04	61.61
	CEPHALASPIDOMORPHI (jawless fish)				
		ANASPIDA (no scales or paired fins)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/020Craniata/100.html	438.49	323.23
		ATELASPIDIFORMES	http://tolweb.org/Hyporoartia	433.35	419.2
		BIRKENIIFORMES (heavily armoured)	http://tolweb.org/Hyporoartia	433.35	419.2
		CEPHALASPIDIFORMES (=Osteostraci; bony armoured, paired fins, complicated cranial structure)	http://tolweb.org/Osteostraci	457.01	382.69
		MYXINIFORMES	http://tolweb.org/Hyporoartia	311.08	306.99
		PETROMYZONIFORMES (=Cyclostomata)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/040Pteraspitomorphi/040.000.html	330.92	306.99
CEPHALOCHORDATA (= Acrania, very primitive chordates)					

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		<i>Not named</i>	http://tolweb.org/Chordata	518.55	272.3
CHONDRICHTHYES (sharks and rays; cartilaginous fish with jaws, paired fins, paired nostrils, two-chambered hearts)					
		CARCHARHINIFORMES (sharks with two dorsal fins, anal fin, five gill slits)	http://animaldiversity.ummz.umich.edu/site/accounts/information/Scylorhinidae.html	168.28	0 (Present)
		CHIMAERIFORMES (smooth skin, no scales, most have venomous spine in front of dorsal fin)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/070Chondrichthyes/070.500.html	358.94	0 (Present)
		CHONDRENCHELYIFORMES (fused teeth)	http://tolweb.org/Gnathostomata	358.94	306.99
		CLADOSELACHIDA (three-pointed teeth, five ill slits, two dorsal fins, no anal fin)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/070Chondrichthyes/070.200.html	419.2	358.94
		COPODONTIFORMES	http://tolweb.org/Gnathostomata	382.69	323.23
		CORONODONTIDA	http://tolweb.org/Gnathostomata	382.69	258.94
		CTENACANTHIDA	http://www.palaeos.com/palaeos.com/Vertebrates/Units/070Chondrichthyes/070.600.html	419.2	66.04
		DESMIODONTIDA	http://tolweb.org/Gnathostomata	338.83	327.08
		EUGENEODONTIDA (= Edestida + Helicoprionida, sharks with a tooth-work on the lower jaw)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/070Chondrichthyes/070.100.html	393.25	250.01
		HETERODONTIFORMES (primitive bull-headed sharks)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/080Neoselachii/080.100.html	178.42	0 (Present)
		HEXANCHIFORMES (most primitive sharks, one dorsal fin, six or seven gill slits, no nictitating membrane in the eyes)	http://tolweb.org/Gnathostomata	393.25	0 (Present)
		INIOPTERYGIA ("flying sharks" living at a depth between rocks, caves, and seabeds)	http://tolweb.org/Gnathostomata	330.92	305.12
		LAMNIFORMES (two dorsal fins, anal fin, five gill slits, eyes without nictitating membrane, mouth extending behind the eyes)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/080Neoselachii/080.100.html	152.06	0 (Present)
		MYLIOBATIFORMES (rays)	http://tolweb.org/Gnathostomata	100.5	0 (Present)
		ORECTOLOBIFORMES (carpet sharks, two dorsal fins, no spines, small mouth forward of the eyes)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/080Neoselachii/080.100.html	199.3	0 (Present)
		ORODONTIDA (cartilaginous fish, small flippers, fins without spines, one dorsal fin, no anal fin)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/070Chondrichthyes/070.100.html	367.85	290.06
		PETALODONTIDA	http://tolweb.org/Plethodontidae	358.94	254.2
		PRISTIOPHORIFORMES (sawsharks with blade-like snouts)	http://animaldiversity.ummz.umich.edu/site/accounts/information/Pristiophorus_cirratous.html	84.95	0 (Present)
		PSAMMODONTIFORMES	http://tolweb.org/Gnathostomata	363.46	330.92
		RAJIFORMES (true rays)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/080Neoselachii/080.700.html	182.7	0 (Present)
		SQUALIFORMES (sharks, two dorsal fins, no anal fin or nictitating membrane, five gill slits)	http://tolweb.org/Gnathostomata	152.06	0 (Present)
		SQUATINACTIDA	http://www.palaeos.com/palaeos.com/Vertebrates/Units/070Chondrichthyes/070.100.html	330.92	0 (Present)
		SYMMORIIDA	http://www.palaeos.com/palaeos.com/Vertebrates/Units/070Chondrichthyes/070.200.html	372.24	306.99
		TORPEDINOIDEA (electric rays)	http://tolweb.org/Gnathostomata	66.04	0 (Present)
		GALEOMORPHII INCERTAE SEDIS	http://tolweb.org/Gnathostomata	252.16	55.96
		HOLOCEPHALI INCERTAE SEDIS (cartilaginous fish with little known)	http://tolweb.org/Aspidogastrea	311.08	100.5
		CHONDRICHTHYES - INCERTAE SEDIS	http://animaldiversity.ummz.umich.edu/site/accounts/information/Genera_Incertae_Sedis_(12.69).html	427.36	419.2
		SQUALOMORPHII INCERTAE SEDIS	http://tolweb.org/Gnathostomata	152.06	148.53
		UNCERTAIN CHONDRICHTHYES	http://tolweb.org/Gnathostomata	419.2	33.89
CONODONTA (filter-feeders that resemble eels)					
		CONODONTOPHORIDA (eel-shaped chordates lacking jaws and pelvic fins)		505.79	201.3
		PARACONODONTIDA	http://www.palaeos.com/palaeos.com/Vertebrates/Units/030Conodonts/030.100.html	510.25	458.36
MAMMALIA (mammals)					
		CARNIVORA (Pinnipedia, carnivores)	http://tolweb.org/Carnivora	28.09	0 (Present)
		CETACEA (whales, dolphins, porpoises)	http://tolweb.org/Cetacea	47.84	0 (Present)
		DESMOSTYLIA (marine mammals with hollow molars)	http://www.ucmp.berkeley.edu/mammal/mesaxonia/desmostylia.html	28.09	5.33
		SIRENIA (fully aquatic herbivorous mammals like manatees; reduced dentition, arms for steering, paddle-like tail)	http://tolweb.org/Sirenia	55.96	0 (Present)
OSTEICHTHYES (bony fish)					

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)	
		ACIPENSERIFORMES (ray-finned bony fish)	http://tolweb.org/Acipenseridae	152.06	0 (Present)	
		ALEPISAUROFORMES ("lizard form without scales")	http://tolweb.org/Gnathostomata	112.95	0 (Present)	
		AMIIFORMES (primitive ray-finned fish, very long dorsal fin)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/100Neopterygii/100.500.html	252.16	66.04	
		ANGUILLIFORMES (true eels)	http://tolweb.org/Anguilliformes	119.63	0 (Present)	
		ATHERINIFORMES (ray-finned fish, silvery in colour)	http://tolweb.org/Percomorpha	47.84	0 (Present)	
		AULOPIFORMES (deep-sea ray-finned fish, some can self-fertilise)	http://tolweb.org/Gnathostomata	100.5	0 (Present)	
		BATRACHOIDIFORMES (toadfish)	http://tolweb.org/Percomorpha	55.96	0 (Present)	
		BELONIFORMES (streamlined fish that live close to the surface of water; includes flying fish)	http://tolweb.org/Percomorpha	72.05	0 (Present)	
		BERYCIFORMES (ray-finned fish)	http://tolweb.org/Acanthopterygii	100.5	0 (Present)	
		BOBASATRANIFORMES	http://tolweb.org/Gnathostomata	259.81	228.35	
		CEPHALOXENIFORMES (thick head bones and crushing dentition)	http://tolweb.org/Gnathostomata	241.5	239.1	
		CLUPEIFORMES (ray-finned fish including herrings and anchovies)	http://tolweb.org/Gnathostomata	163.47	0 (Present)	
		COELOCANTHIFORMES (=Crossopterygii, lobe-finned fish, armour-like scales)	http://tolweb.org/Gnathostomata	419.2	78.1	
		CROSSOGNATHIFORMES (bony, ray-finned fish)	http://tolweb.org/Gnathostomata	130.77	41.15	
		CTENOTHRISSIFORMES (teleostean fish, link between soft-rayed and spiny-rayed fish)	http://tolweb.org/Gnathostomata	100.5	89.77	
		DACTYLOPTERIFORMES (greatly enlarged pectoral fins that resemble wings)	http://tolweb.org/Percomorpha	47.84	0 (Present)	
		DIPTERIFORMES (= Dipnoi, lungfish, can breathe air)	http://tolweb.org/Gnathostomata	419.2	358.94	
		ELOPIFORMES (single dorsal fin with only soft rays)	http://animaldiversity.ummz.umich.edu/site/accounts/information/Megalops_atlanticus.html	163.47	0 (Present)	
		GADIFORMES (cods & hakes)	http://animaldiversity.ummz.umich.edu/site/accounts/information/Gadiformes.html	86.26	0 (Present)	
		GASTEROSTEIFORMES (ray-finned fish that includes sea horses, pipefishes, and sticklebacks)	http://tolweb.org/Percomorpha	83.64	0 (Present)	
		GONORHYNCHIFORMES (ray-finned fish with small mouths and no teeth)	http://tolweb.org/Gnathostomata	145.01	0 (Present)	
		LAMPRIDIFORMES (deep sea ray-finned fish, highly protrusible jaws, lack fin spines and scales, typically brightly coloured)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/130Acanthomorpha/130.100.html	66.04	0 (Present)	
		LOPHIIFORMES (anglerfish)	http://tolweb.org/Lophiiformes	55.96	0 (Present)	
		MACROSEMIIFORMES (teleost ray-finned fish)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/100Neopterygii/100.100.html	241.5	93.9	
		MEGALOPIFORMES	http://tolweb.org/Gnathostomata	107.59	0 (Present)	
		MYCTOPHIFORMES (small fish with subterminal mouths with numerous tiny teeth and light-producing organs)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/120Euteleostei/120.700.html#Scopelomorpha	100.5	0 (Present)	
		OPHIDIIFORMES (ray-finned fish that resemble eels, have long dorsal fins and an anal fin)	http://tolweb.org/Percomorpha	83.64	0 (Present)	
		OSMERIFORMES (generally silvery and elongate fish)	http://tolweb.org/Gnathostomata	145.01	0 (Present)	
		OSTEOGLOSSIFORMES (mostly f/w, toothed or bony tongues)	http://tolweb.org/Osteoglossiformes	168.28	47.84	
		PACHYCORMIFORMES (ray-finned fish with serrated pectoral fins)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/100Neopterygii/100.600.html#Pachycormiformes	241.5	66.04	
		PALAEONISCIFORMES (earliest known and most primitive ray-finned forms)	http://tolweb.org/Palaeonisciformes	427.36	72.05	
		PELTOPLEURIFORMES	http://tolweb.org/Gnathostomata	241.5	190.82	
		PERCIFORMES (bony ray-finned fish with dorsal and anal fins divided into anterior spiny and posterior soft-rayed portions)	http://tolweb.org/Percomorpha	78.1	0 (Present)	
		PERLEIDIFORMES (bony, diamond-shaped, not-overlapping scales)	http://tolweb.org/Perleidiformes	252.16	201.3	
		PHOLIDOPLEURIFORMES (crushing dentition, long and slender, anal fins far back on the body)	http://tolweb.org/Gnathostomata	252.16	228.35	
		PLEURONECTIFORMES (flatfish, often with both eyes in one side of the head)	http://tolweb.org/Percomorpha	55.96	0 (Present)	
		POLYMIXIIFORMES (deep-sea marine ray-finned fish with a pair of long hyoid barbels)	http://tolweb.org/Acanthopterygii	100.5	0 (Present)	

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		PTYCHOLEPIFORMES (spindle-like shape that is wide in the middle and tapers at both ends)	[For details click PTYCHOLEPIFORMES (spindle-like shape that is wide in the middle and tapers at both ends)].	241.5	174.15
		PYCNODONTIFORMES (ray-finned bony fish)	http://tolweb.org/Gnathostomata	228.35	37.75
		SALMONIFORMES (ray-finned fish including salmon, trout, with pelvic fins far back and having a forked tail)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/100Neopterygii/100.600.html	145.01	0 (Present)
		SAURICHTHYIFORMES (vertical jaw-support)	http://tolweb.org/Gnathostomata	259.81	174.15
		SCORPAENIFORMES (carnivorous ray-finned fish, called "mail-cheeked")	http://animaldiversity.ummz.umich.edu/site/accounts/information/Scorpaeniformes.html	55.96	0 (Present)
		SEMIONOTIFORMES (primitive freshwater ray-finned fish)	http://animaldiversity.ummz.umich.edu/site/accounts/information/Semionotiformes.html	259.81	0 (Present)
		SILURIFORMES (bony catfish)	http://tolweb.org/Siluriformes	83.64	0 (Present)
		STOMIIFORMES (deep-sea ray-finned fish)	http://tolweb.org/Gnathostomata	100.5	0 (Present)
		TARRASIIFORMES	http://tolweb.org/Chondrostei	382.69	306.99
		TETRADONTIFORMES (puffers, boxfish; two pairs of large teeth at the front of the jaw)	http://tolweb.org/Gnathostomata	100.5	0 (Present)
		ZEIFORMES (boarfishes, dories, and john dories)	http://tolweb.org/Acanthopterygii	100.5	0 (Present)
		ACANTHOMORPHA INCERTAE SEDIS (thorn-shaped fish)	http://tolweb.org/Acanthomorpha	100.5	15.97
PLACODERMI (fish with armour on the head and thorax)					
		ACANTHOTHORACI (a pair of large spines from)	http://www.palaeos.org/Acanthothoraci	419.2	393.25
		ANTIARCHA (extremely heavily armoured in the)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/Unit060/060.200.html	419.2	358.94
		ARTHRODIRA (movable joint between armour surrounding the head and body; lacked distinct teeth)	http://www.palaeos.com/palaeos.org/Arthrodira	419.2	358.94
		BRINDABELLASPIDA (long-snouted armoured fish)	http://tolweb.org/Gnathostomata	407.57	393.25
		PETALICHTHIDA (small, flattened armoured fish with splayed fins)	http://tolweb.org/Gnathostomata	419.2	372.24
		PSEUDOPETALICHTHIDA (skate-like armoured fish)	http://tolweb.org/Gnathostomata	407.57	400.41
		PTYCTODONTIDA (not so armour-plated fish)	http://www.palaeos.com/palaeos.org/Ptyctodontida	419.2	352.84
		RHENANIDA (Devonian Rays)	http://www.palaeos.com/palaeos.org/Rhenanida	407.57	372.24
		STENSIOELLIDA (blocky and pug-nosed)	http://tolweb.org/Gnathostomata	407.57	400.41
		UNCERTAIN PLACODERMI	http://tolweb.org/Gnathostomata	407.57	372.24
PTERASPIDOMORPHI (early jawless fish with heavily shielded head)					
		ASTRASPIDIFORMES	http://tolweb.org/Pteraspidomorphi	457.01	433.35
		FURCACUDIFORMES	http://tolweb.org/Pteraspidomorphi	433.35	410.78
		PTERASPIDOMORPHES (=Heterostraci, broad dermic armour on the head, single dorsal fin)	http://tolweb.org/Pteraspidomorphi	477.72	372.24
		THELODONTIFORMES (=Coelolepida, small denticle-like scales instead of plates or solid armour)	http://tolweb.org/Pteraspidomorphi	438.49	379.24
		UNCERTAIN PTERASPIDOMORPHI	http://tolweb.org/Pteraspidomorphi	427.36	382.69
REPTILIA (reptiles)					
		CHELONIA (green turtles)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/Unit200/200.300.html	157.25	0 (Present)
		CROCODILIA (crocodiles, alligators, caimans)	http://animaldiversity.ummz.umich.edu/site/accounts/information/Crocodylia.html	196.5	33.89
		ICHTHYOSAURIA (giant marine reptiles resembling fish and dolphins)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/210Eureptilia/300.html#ichthyosauria	252.16	96.24
		NOTOSAURIA (aquatic reptiles with radical adaptation of shoulder to support flipper strokes)	http://tolweb.org/Amniota	250.01	201.3
		PLACODONTIA (marine reptiles with short limbs, heavy armour plating, and had large, flat teeth)	http://tolweb.org/Diapsida	248.46	201.3
		PLESIOSAURIA (marine reptiles, broad body, short tail, four paddle-shaped flipper limbs)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/220Leptodactylomorpha/220.400.html	247.06	66.04
		SPHEODONTIA (beaked reptile)	http://tolweb.org/Amniota	183	139.39
		SQUAMATA (scaled reptiles, includes lizards and snakes)	http://www.palaeos.com/palaeos.com/Vertebrates/Units/240Squamata/240.000.html	152.06	0
		THALATTOSAURIA (marine reptiles in the mid Triassic)	http://www.palaeos.com/palaeos.org/Thalattosauria	241.5	228.35

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		ANASPIDA INCERTAE SEDIS (skull lacks openings near the temples)	http://tolweb.org/Anaspida	282.01	272.3
OROCHORDATA (tunicates and sea squirts; underwater saclike filter feeders)					
		Not named OROCHORDATA	http://tolweb.org/Urochordata	275.6	0 (Present)
Ciliophora					
POLYHYMENOPHORA					
		SPIROTRICHIA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=720&is_real_user=0	448.84	0 (Present)
INCERTAE SEDIS					
		CALPIONELLIDA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=720&is_real_user=0	182.7	110.22
Cnidaria (sea anemones, corals, jellyfish, sea pens, hydra)					
ANTHOZOA (sea anemones, corals, sea pens)					
		ACTINIARIA (sea anemones)	http://www.palaeos.com/Invertebrates/Cnidaria/Hexacorallia.html	566	504.68
		ALCYONACEA (soft corals)	http://www.accessscience.com/content.aspx?id=021400	438.49	0 (Present)
		ANTIPATHARIA (black or horny corals)	http://www.accessscience.com/content.aspx?id=041600	23.03	0 (Present)
		GORGONIDA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4761&is_real_user=1	145.01	0 (Present)
		HELIOPORACEA (= Coenothecalia, no spicules, massive skeleton)	http://tolweb.org/Helioporacea	145.01	0 (Present)
		HETEROCORALLIA (sea anemones and corals)	http://www.accessscience.com/content.aspx?id=315700	393.25	530.92
		KILBUCHOPHYLLIDA (sea anemones and corals)	http://tolweb.org/zoantharia	455.14	451.28
		PENNATULACEA (sea pens and sea pansies)	http://www.accessscience.com/content.aspx?id=496200	209.46	0 (Present)
		RUGOSA (coral-type structures with cup, cylinder, plate skeleton)	http://www.palaeos.com/Invertebrates/Cnidaria/Rugosa.htm	465.32	252.16
		SCLERACTINA (true/stony corals)	http://www.accessscience.com/content.aspx?id=607500	252.16	0 (Present)
		STOLONIFERA (no coenenchyme)	http://tolweb.org/Alcyonaria	23.03	0 (Present)
		TABULATA (colonial corals)	http://www.accessscience.com/content.aspx?id=676100	516.1	252.16
		UNCERTAIN ANTHOZOA	http://www.palaeos.com/Invertebrates/Cnidaria/Anthozoa.htm	541	419.2
CYCLOZOA					
		Order unknown - Cyclozoa	http://paleodb.geology.wisc.edu/	566	485.78
HYDROCONOZOA					
		Order unknown - Hydroconozoa	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4706&is_real_user=1	521	506.91
HYDROZOA (fresh-water hydras, marine hydroids, smaller jellyfish, corals, Portuguese man-of-war)					
		HYDROIDA	http://www.accessscience.com/content.aspx?id=329500	566	0 (Present)
		LEMNISCATERINA	http://paleodb.geology.wisc.edu/	239.1	217.42
		MILLEPORINA (stinging corals)	http://www.accessscience.com/content.aspx?id=425400	213.97	0 (Present)
		SIPHONOPHORIDA	http://tolweb.org/Siphonophorida	521	375.79
		SPHAERACTINIDA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4659&is_real_user=1	237	28.09
		STYLASTERINA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4647&is_real_user=1	72.05	0 (Present)
		TRACHYLINIDA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4597&is_real_user=1	152.06	148.53
		UNCERTAIN - Hydrozoa	http://www.palaeos.com/Invertebrates/Cnidaria/Hydrozoa.htm	566	23.03
MEDUSAE INCERTAE SEDIS					
		Order unknown - Medusae Incertae Sedis	http://tolweb.org/Cnidaria	566	148.53
PETALONAMAE (may be separate phylum)					
		ERNIETTAMORPHA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4715&is_real_user=1	566	541
		RANGEOMORPHA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4728&is_real_user=1	566	541

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		UNCERTAIN PETALONAMAE	http://tolweb.org/Cnidaria (sea anemones, corals, jellyfish, sea pens, hydra)	566	512.83
		SCYPHOZOA (resemble vases and wine glasses)			
		CARYBDEIDA (= Cubomedusae, tropical and leg	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4536&is_real_user=1	311.08	148.53
		CONULARIIDA (pyramidal exoskeleton)	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=123859&is_real_user=1	566	201.3
		CORONATIDA (circular, horizontal, coronal groove)	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4539&is_real_user=1	481.55	33.89
		LITHORHIZOSTOMATIDA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4549&is_real_user=1	152.06	148.53
		RHIZOSTOMATIDA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4551&is_real_user=1	311.08	41.15
		SEMAEOSTOMATIDA	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=4545&is_real_user=1	311.08	148.53
		UNCERTAIN - Scyphozoa	http://www.accessscience.com/content.aspx?id=609100	566	485.78
		UNCERTAIN Cnidaria			
		Order unknown - Uncertain Cnidaria	http://tolweb.org/Cnidaria	521	306.99
		UNCERTAIN ("melanosclerites"--Scyphozoa or Hy..)			
		Order unknown - Uncertain ("melanosclerites")	http://tolweb.org/Cnidaria	485.37	387.72
		CTENOPHORA (comb jellies)			
		Unknown Unknown Ctenophora	http://tolweb.org/ctenophora	506.905	400.41
		Echinodermata (spiny skinned animals: sea urchins, starfish, and allies)			
		ASTEROZOA, ASTEROIDEA (true starfish)			
		FORCIPULATIDA (conspicuous forcipulate pedicellariae)	http://tolweb.org/Asteroidea	201.3	0 (Present)
		HEMIZONIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31376&is_real_user=1	458.36	327.08
		NOTOMYOTIDA (deep sea dwellers with flexible arms)	http://tolweb.org/Asteroidea	200.3	0 (Present)
		PAXILLOSIDA (lack an anus and suckers on the tube feet)	http://www.accessscience.com/content.aspx?id=492800	200.3	0 (Present)
		PLATYASTERIDA	http://www.accessscience.com/content.aspx?id=527300	457.01	383.95
		PUSTULOSIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=101204&is_real_user=1	477.72	272.3
		SPINULOSIDA (lack pedicellariae)	http://tolweb.org/Asteroidea	37.75	0 (Present)
		TRICHAETEROPSIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31406&is_real_user=1	243.99	239.1
		URACTINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=101203&is_real_user=1	469.96	275.6
		VALVATIDA (conspicuous marginal ossicles)	http://tolweb.org/Asteroidea	200.3	0 (Present)
		UNCERTAIN ASTEROIDEA	http://tolweb.org/Asteroidea	387.72	130.77
		ASTEROZOA, SOMASTEROIDEA (filter/detrius feeders with rigid arms)			
		GONIACTINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31332&is_real_user=1	481.55	372.24
		BLASTOIDEA (long stalk with a head or theca at the top)			
		FISSICULATA (slitted)	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30821&is_real_user=1	433.35	259.81
		SPIRACULATA (pores)	http://www.wikipedia.org/wiki/Blastoid	433.35	259.81
		UNCERTAIN BLASTOIDEA	http://animaldiversity.ummz.umich.edu/Invertebrates/Echinoderms/Blastoidea/Blastoidea.htm	457.01	455.14
		CAMPTOSTROMOIDEA			
		CAMPTOSTROMATOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30741&is_real_user=1	514.47	512.83
		CORONATA			
		Unknown CORONATA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31099&is_real_user=2	457.01	425.57
		CRINOIDEA (sea lillies and feather stars)			
		BOURGUETICRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32590&is_real_user=1	93.9	0 (Present)

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		CLADIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32021&is_real_user=1	481.55	252.16
		COMATULIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32633&is_real_user=1	228.35	0 (Present)
		CYRTOCRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32548&is_real_user=1	195.31	0 (Present)
		DIPLOBATHRIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31593&is_real_user=1	477.72	330.92
		DISPARIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31875&is_real_user=1	477.72	259.81
		ECHMATOCRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31591&is_real_user=1	505.79	504.68
		ENCRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32695&is_real_user=1	247.06	119.63
		HEMISTREPTOCRINIDA (?Cl. Hemistreptoconoidea)	http://animaldiversity.ummz.umich.edu/Crinoidea	471.52	458.36
		HYBOCRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32013&is_real_user=1	489.5	440.77
		ISOCRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32598&is_real_user=1	248.46	0 (Present)
		MILLERICRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32534&is_real_user=1	248.46	110.22
		MONOBATHRIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31678&is_real_user=1	477.72	252.16
		ROVEACRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32679&is_real_user=1	244.94	66.04
		SAGENOCRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32471&is_real_user=1	447.86	157.25
		TAXOCRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32455&is_real_user=1	471.52	290.06
		UINTACRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32676&is_real_user=1	84.95	84.95
		UNCERTAIN CRINOIDEA	http://tolweb.org/Crinoidea	469.96	145.01
		CTENOCYSTOIDEA (bilaterally symmetrical)			
		Unknown CTENOCYSTOIDEA	http://animaldiversity.ummz.umich.edu/Invertebrates/Deuterostomia/Homalozoa/BOA020Ctenocystoidea.html	506.91	499.1
		CYSTOIDEA, DIPLOPORITA			
		Unknown CYSTOIDEA, DIPLOPORITA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31012&is_real_user=2	503.56	387.72
		CYSTOIDEA, RHOMBIFERA			
		Unknown CYSTOIDEA, RHOMBIFERA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30939	485.37	372.24
		ECHINOIDEA (sea urchins)			
		BOTHRIODAROIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32734&is_real_user=1	461.84	445.23
		CASSIDULOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33187&is_real_user=1	178.42	0 (Present)
		CIDAROIDA (pencil urchin)	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32782&is_real_user=1	393.25	0 (Present)
		CLYPEASTEROIDA (sand dollar)	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33109&is_real_user=1	72.05	0 (Present)
		DIADEMATOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32851&is_real_user=1	201.3	0 (Present)
		DISASTEROIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33261&is_real_user=1	199.3	100.5
		ECHINOCYSTITOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32738&is_real_user=1	447.86	252.16
		ECHINOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33044&is_real_user=1	145.01	0 (Present)
		ECHINOTHURIOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32846&is_real_user=1	169.45	0 (Present)
		HEMICIDAROIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32907&is_real_user=1	209.46	33.89
		HOLASTEROIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33281&is_real_user=1	145.01	0 (Present)
		HOLECTYPOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33079&is_real_user=1	166.07	47.84
		NEOLAMPADOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33500&is_real_user=1	37.75	0 (Present)

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		OLIGOPYGOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33103&is_real_user=1	47.84	33.89
		ORTHOPSIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33072&is_real_user=1	186.76	66.04
		PEDINOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32868&is_real_user=1	233.5	5.33
		PHYMOSOMATOIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32932&is_real_user=1	201.3	0 (Present)
		PYGASTEROIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32884&is_real_user=1	199.3	93.9
		SALENOIDA (= Calycina)	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32889&is_real_user=1	174.15	0 (Present)
		SPATANGOIDA (heart urchin)	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=98614&is_real_user=1	168.28	0 (Present)
		TEMNOPLEUROIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32997&is_real_user=1	133.88	0 (Present)
		UNCERTAIN ECHINOIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=32733&is_real_user=1	433.35	145.01
		EDRIOASTEROIDEA			
		EDRIOASTERIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30800&is_real_user=1	508.02	400.41
		ISOROPHIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30744&is_real_user=1	511.54	302.63
		STROMATOCYSTITIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30812&is_real_user=1	514.47	499.1
		UNCERTAIN EDRIOASTEROIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30743&is_real_user=1	508.02	499.1
		EOCRINOIDEA (dawn crinoids)			
		ASCOCYSTITIDA ("Order Number 2")	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31070&is_real_user=1	521	455.14
		GOGIIDA ("Order Number 1")	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31062&is_real_user=1	514.47	458.36
		IMBRICATA (= Lepidocystoidea)	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31059&is_real_user=1	514.47	512.83
		TRACHELOCRINIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31078&is_real_user=1	491.75	489.5
		UNCERTAIN EOCRINOIDEA	http://paleodb.org/Invertebrates/Echinoderms/Eocrinoidea/Eocrinoidea.htm	510.25	427.36
		HELICOPLACOIDEA (football shaped body with spiral ambulacra)			
		Unknown HELICOPLACOIDEA	http://animaldiversity.ummz.umich.edu/Invertebrates/Deuterostomia/Homalozoa/BOA030Helicoplacoidea.html	521	514.47
		HOLOTHUROIDEA (sea cucumbers)			
		APODIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31285&is_real_user=1	387.72	0 (Present)
		ARTHROCHIROTIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31314&is_real_user=1	407.57	0 (Present)
		DACTYLOCHIROTIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31318&is_real_user=1	200.3	195.31
		DENDROCHIROTIDA (suspension-feeding cucumbers)	http://tolweb.org/Holothuroidea	419.2	0 (Present)
		ELASIPODIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31276&is_real_user=1	393.25	157.25
		MOLPADIIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31306&is_real_user=1	243.99	0 (Present)
		UNCERTAIN HOLOTHUROIDEA	http://tolweb.org/Holothuroidea	323.23	11.63
		HOMIOSTELEA			
		SOLUTA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31137&is_real_user=1	512.83	387.72
		HOMOSTELEA			
		CINCTA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31131&is_real_user=1	505.79	499.1
		OPHIOCISTIOIDEA			
		Unknown OPHIOCISTIOIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31220&is_real_user=1	471.52	382.69
		OPHIUROIDEA (basket stars and brittle stars)			
		OEGOPHIURIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31523&is_real_user=1	471.52	305.12
		OPHIURIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31552&is_real_user=1	419.2	0 (Present)

Group	SubGroup	Columns	URL (SubGroup)	Oldest tax (Ma)	Youngest tax (Ma)
		PHRYNOPHIURIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31547&is_real_user=1	410.78	23.03
		STENURIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31509&is_real_user=1	477.72	372.24
		UNCERTAIN OPHIUROIDEA	http://animaldiversity.ummz.umich.edu/Invertebrates/Echinoderms/Ophiuroidea/Ophiuroidea.htm	346.73	338.83
		PARABLASTOIDEA			
		Unknown PARABLASTOIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30933&is_real_user=1	494	455.14
		PARACRINOIDEA			
		COMAROCYSTITIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31107&is_real_user=1	469.96	433.35
		PLATYCYSTITIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=31118&is_real_user=1	465.32	455.14
		UNCERTAIN PARACRINOIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=30933&is_real_user=1	457.01	455.14
		STYLOPHORA (stem echinoderms with gill slits)			
		CORNUTA (asymmetrical)	http://animaldiversity.ummz.umich.edu/Invertebrates/Deuterostomia/Homalozoa/Stylophora.html	508.02	445.23
		MITRATA (bilateral)	http://animaldiversity.ummz.umich.edu/Invertebrates/Deuterostomia/Homalozoa/Stylophora.html	485.37	315.16
		Echiurida (spoon worms)			
		Coprinoscolex			
		Coprinoscolex	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7013&is_real_user=1	311.08	306.99
		Entoprocta (goblet worms, nodding heads, kamptozoans)			
		Barentsia			
		Barentsia	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=26321&is_real_user=1	157.25	0 (Present)
		Hemichordata (acorn worms and pretobranchs)			
		ENTEROPNEUSTA			
		Unknown ENTEROPNEUSTA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33519&is_real_user=1	505.79	195.31
		GRAPTOLITHINA (graptolites)			
		CAMAROIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33586&is_real_user=1	485.37	465.32
		CRUSTOIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33593&is_real_user=1	465.32	422.96
		DENDROIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33535&is_real_user=1	502.45	327.08
		GRAPTOLOIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33804&is_real_user=1	485.37	410.78
		STOLONOIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33603&is_real_user=1	485.37	443.83
		TUBOIDEA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33574&is_real_user=1	499.1	422.96
		UNCERTAIN GRAPTOLITHINA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33534&is_real_user=1	541	410.78
		PTEROBRANCHIA			
		CEPHALODISCIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33530&is_real_user=1	481.55	0 (Present)
		RHABDOPLEURIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=33522&is_real_user=1	505.79	0 (Present)
		Hyalolitha			
		HYOLITHOMORPHA			
		HYOLITHIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7714&is_real_user=1	541	259.81
		ORTHOTHECIMORPHA			
		CIRCOTHECIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7631&is_real_user=1	566	422.96
		EXILITHECIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7654&is_real_user=1	525.4	503.56

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		GLOBORILIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7662&is_real_user=1	541	510.25
		ORTHOTHECIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7669&is_real_user=1	541	387.72
	UNCERTAIN Hyolitha				
		TOXEUMORPHORIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7793&is_real_user=1	330.92	252.16
		HYOLITH UNCERTAIN	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=112071&is_real_user=1	541	448.84
Lobopoda (Onychophora, velvet worms)					
	Unknown Lobopoda				
		Unknown Unknown Lobopoda	http://tolweb.org/onychophora	523.2	422.96
BIVALVIA (Mussels, clams, oysters, cockles)					
		ARCOIDA ("arc shells")	http://tolweb.org/Bivalvia	477.72	0 (Present)
		HIPPURITOIDA (coral-like and thick-shelled)	http://tolweb.org/Bivalvia	469.96	55.96
		MODIOMORPHOIDA (ancestor of higher bivalves)	http://tolweb.org/Bivalvia	541	259.81
		MYOIDA (thin-shelled burrowers and borers)	http://tolweb.org/Bivalvia	265.14	0 (Present)
		MYTILOIDA (mussels and relatives)	http://tolweb.org/Bivalvia	477.72	0 (Present)
		NUCULOIDA (near-surface-dwelling detritus-feeders)	http://tolweb.org/Bivalvia	521	0 (Present)
		PHOLADOMYOIDA (rock-borers with septibranch gills)	http://tolweb.org/Bivalvia	477.72	0 (Present)
		PRAECARDIOIDA (taxodont dentition)	http://tolweb.org/Bivalvia	460.45	323.23
		PTERIOIDA (adults fixed by byssus or cementation)	http://tolweb.org/Bivalvia	485.37	0 (Present)
		SOLEMYOIDA (no hinge teeth)	http://tolweb.org/Bivalvia	477.72	0 (Present)
		TRIGONIOIDA (large, trigonal teeth with parallel grooves)	http://tolweb.org/Bivalvia	430.45	0 (Present)
		UNIONOIDA (freshwater clams)	http://tolweb.org/Bivalvia	252.16	182.7
		VENEROIDA (true heterodont teeth)	http://tolweb.org/Bivalvia	460.45	0 (Present)
		UNCERTAIN BIVALVIA	http://tolweb.org/Bivalvia	471.52	61.61
CEPHALOPODA (Ammonoids, octopods, squids, nautilus)					
		ACTINOCERIDA (long straight shells)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Cephalopoda/Actinocerida.html	477.72	327.08
		AMMONOIDEA (curved "ram-horn-shaped" shells)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Neocephalopoda/Ammonoidea.html	201.3	66.04
		ANARCESTIDA	http://tolweb.org/Cephalopoda	477.72	228.35
		ASCOCERIDA (no counterweighted shell)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Neocephalopoda/Ascocerida.html	459.41	419.2
		AULACOCERIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=15985&is_real_user=0	407.57	174.15
		BARRANDEOCERIDA (tubular siphuncle)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Nautiloidea/Barrandeocerina.html	477.72	382.69
		BELEMNITIDA (squid-like with an internal shell)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Coleoidea/Belemnitida.html	330.92	33.89
		BOLETZKIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=15982&is_real_user=1	407.57	400.41
		CERATITIDA	http://tolweb.org/Cephalopoda	275.6	201.3
		CLYMENIIDA	http://tolweb.org/Cephalopoda	367.85	358.94
		DISCOSORIDA (short and curved shells)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Cephalopoda/Discosorida.html	465.32	358.94
		ELLESROCERIDA (straight or curved conch)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Cephalopoda/Ellesmerocerida.html	489.5	445.23
		ENDOCERIDA (unusually large siphuncle)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Cephalopoda/Endocerida.html	489.5	427.36
		GONIATITIDA	http://tolweb.org/Cephalopoda	390.49	252.16
		INTEJOCERIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=12649&is_real_user=1	485.37	458.36
		NAUTILIDA (generally tightly coiled shells)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Nautiloidea/Nautilida.html	433.35	0 (Present)
		OCTOPIIDA (octopoda and devilfishes)	http://tolweb.org/Octopoda	166.07	0 (Present)

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		ONCOCERIDA (mostly short, curved shells)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Nautiloidea/Oncocerida.html	477.72	323.23
		ORTHO CERIDA (long, straight, slender shells)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Necephalopoda/Orthocerida.html	485.37	112.95
		PHRAGMOT EUTHIDA	http://tolweb.org/Cephalopoda	272.3	152.06
		PHYLLOCERATIDA	http://tolweb.org/Cephalopoda	250.01	66.04
		PLECTONOCERIDA	http://tolweb.org/Cephalopoda	491.75	485.37
		PROLECANITIDA	http://tolweb.org/Cephalopoda	358.94	249.6
		PROTACTINOCERIDA (small, straight or gently curved shells)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Cephalopoda/Plectonocerida.html	487.44	485.37
		SEPIIDA	http://tolweb.org/Cephalopoda	119.63	0 (Present)
		TARPHYCERIDA (loosely to tightly coiled cephalopods)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Nautiloidea/Tarphycerida.html	481.55	379.24
		TEUTHIDA	http://tolweb.org/Cephalopoda	282.01	0 (Present)
		YANHECERIDA (small, straight or gently curved with close-spaced septa)	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Cephalopoda/Plectonocerida.html	482.44	485.37
		UNCERTAIN - Cephalopoda	http://tolweb.org/Cephalopoda	440.77	422.96
Mollusca (snails, clams, mussels, squids, octopi, chitons, and tusk shells)					
		GASTROPODA (terrestrial snails and slugs; marine limpets, periwinkles, abalones, whelks, and relatives)			
		ARCHAEOGASTROPODA	http://tolweb.org/Gastropoda	499.1	0 (Present)
		ARCHITAENOGLOSSA (primitive gastropods)	http://tolweb.org/Gastropoda	447.86	168.28
		BELLEROPHONTIDA (symmetrically coiled shell with distinct planospiral)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Tergomya/Bellerophontida.html	501.33	201.3
		EUOMPHALINA (low-spired to planispiral)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Euomphalida.html	489.5	0 (Present)
		MACLURITINA (upside down spiral)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Gastropoda.html	447.72	443.83
		NEOGASTROPODA (predatory gastropoda that swallows prey whole)	http://tolweb.org/Gastropoda	152.06	0 (Present)
		NEOTAENIOGLOSSA (paraphyletic)	http://tolweb.org/Gastropoda	485.37	0 (Present)
		PATELLOGASTROPODA	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Patellogastropoda.html	489.5	0 (Present)
		GASTROPODA, SubOPISTHOBRANCHIA			0 (Present)
		ANASPIDEA (= Aplysiomorpha, Aplysioidea)	http://www.palaeos.com/Invertebrates/Molluscs/Pulmonata/Pulmonata.html	164.35	0 (Present)
		BASOMMATOPHORA (marine only, single pair of tentacles)	http://www.palaeos.com/Invertebrates/Molluscs/Pulmonata/Basommatophora.html	145.01	0 (Present)
		CEPHALASPIDA	http://www.palaeos.com/Invertebrates/Molluscs/Pulmonata/Pulmonata.html	358.94	0 (Present)
		HETEROSTROPHIA (= Entomotaeniata)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Gastropoda.html	387.72	0 (Present)
		SACOGLOSSA (= Ascoglossa)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Gastropoda.html	55.96	0 (Present)
		THECOSOMATA (Pteropoda)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Gastropoda.html	201.3	0 (Present)
		UMBRACULOMORPHA (Notaspidea)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Gastropoda.html	55.96	0 (Present)
		UNCERTAIN - Gastropoda, SubOpisthobranchia	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Gastropoda.html	247.06	0 (Present)
		CRICOCONARIDA (= Tentaculitoidea, small pelagic forms with tubular shells)			
		DACRYOCONARIDA	http://www.palaeos.com/Invertebrates/Molluscs/Mollusca.htm	440.77	367.85
		HOMOCTENIDA	http://www.palaeos.com/Invertebrates/Molluscs/Mollusca.htm	393.25	372.24
		TENTACULITIDA	http://www.palaeos.com/Invertebrates/Molluscs/Mollusca.htm	485.37	327.08
		HELACIONELLOIDA "MONOPLACOPHORA" (polyphyletic)			
		Unknown - Helcionelloida	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Monoplacophora.html	553.5	393.25
		PARAGASTROPODA (asymmetrically (helically) coiled shells)			
		HYPERSTROPHINA	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Paragastropoda.html	518.55	382.69
		POLYPLACOPHORA (= Amphineura, chitons)			
		NEOLORICATA	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Polyplacophora.html	477.72	0 (Present)
		PALEOLORICATA	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Polyplacophora.html	491.75	78.1
		ROSTROCONCHIA (single, pseudobivalved shell)			
		CONOCARDIOIDA	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Rostroconchia/Conocardioida.html	504.5	259081
		RIBEIROIDA	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Rostroconchia/Ribeiroida.html	566	433.35
		SCAPHOPODA (tusk shells)			

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		Unknown - Scaphopoda	http://www.palaeos.com/Invertebrates/Molluscs/Cyrtosoma/Scaphopoda.html	455.14	0 (Present)
	STENOTHECOIDEA				
		Unknown - Stenothecoidea	http://www.palaeos.com/Invertebrates/Molluscs/Mollusca.htm	525.4	499.1
	TERGOMYA "MONOPLACOPHORA"				
		CYRTONELLIDA (planispiral shell)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Tergomya/Tergomya.html	523.2	382.69
		HYPSELOCONIDA (conical)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Tergomya/Tergomya.html	500.22	469.96
		TRYBLIDIIDA (cap-shaped shells)	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Monoplacophora.html	518.55	0.01
	INCERTAE SEDIS "MONOPLACOPHORA"				
		HEMITHECELLITINA	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Monoplacophora.html	489.5	477.72
		INCERTAE SEDIS (many may not be molluscs)	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Monoplacophora.html	541	419.2
		PELAGIELLIDA (some question if these are molluscs)	http://www.palaeos.com/Invertebrates/Molluscs/Gastropoda/Paragastropoda/Pelagiellda.html	525.4	489.5
		TUARANGIIDA	http://www.palaeos.com/Invertebrates/Molluscs/BasalMollusca/Monoplacophora.html	503.56	494
	UNCERTAIN Mollusca				
		Unknown - Uncertain Mollusca	http://www.palaeos.com/Invertebrates/Molluscs/Mollusca.htm	518.55	516.1
	Nematoda (roundworms)				
	Unknown Nematoda				
		Unknown Unknown Nematoda	http://tolweb.org/Nematoda	199.3	195.31
	Nemertina				
	Unknown Nemertina				
		Unknown Unknown Nemertina		330.92	148.53
	Pognophora				
	Unknown Pognophora				
		Unknown Unknown Pognophora	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7014&is_real_user=1	28.09	2.59
	Priapulida (penis worms)				
	Unknown Priapulida				
		Unknown Unknown Priapulida	[For details click http://tolweb.org/Priapulida]-Unknown Unknown Priapulida]	518.55	306.99
	Problematica				
	CAMBROCLAVIDA				
		Unknown CAMBROCLAVIDA	http://paleodb.org/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=7286&is_real_user=0	525.4	512.83
	COELOSCLERITOPHORA				
		CHANCELLORIIDA	http://www.palaeos.com/Invertebrates/Procoelomates/Chancellorida.html	566	485.78
		SACHITIDA (= Thambetolepida)	http://www.palaeos.com/Invertebrates/Procoelomates/Coeloscleritophora.html	553.5	499.1
	CRIBRICYATHEA				
		Unknown CRIBRICYATHEA	http://www.palaeos.com/Invertebrates/Procoelomates/Procoelomates.html	566	510.25
	DINOCARDIA ("anomalocarids")				
		RADIODONTA	http://www.palaeos.com/Invertebrates/Arthropods/Anomalocarida/index.html	525.4	501.33
	MACHAERIDIA				
		HERCOLEPADIDA	http://www.palaeos.com/Invertebrates/Procoelomates/Machaeridia.html	433.35	306.99
		LEPIDOCOLEOMORPHA	[For details click http://www.palaeos.com/Invertebrates/Procoelomates/Machaeridia.html]-LEPIDOCOLEOMORPHA]	481.55	272.3
		TURRILEPADIDA	http://www.palaeos.com/Invertebrates/Procoelomates/Machaeridia.html	471.52	302.63
	MULTIPLACOPHORA				
		STROBILEPIDA	http://paleobackup.nceas.ucsb.edu:8110/Invertebrates/Procoelomates/Machaeridia.html	385.21	315.16
	TOMMOTIIDA				

Group	SubGroup	Columns	URL (SubGroup)	Oldest taxa (Ma)	Youngest taxa (Ma)
		MITROSAGOPHORA	http://www.palaeos.com/Invertebrates/Procoelomates/Procoelomates.html	525.4	506.91
		UNNAMED TOMMOTIIDA	http://www.palaeos.com/Invertebrates/Procoelomates/Procoelomates.html	525.4	503.56
		UNCERTAIN Problematica			
		COLEOLOIDA	http://www.accessscience.com/content.aspx?id=148100	525.4	352.84
		COLEOLOIDA Fm. CORNULITIDAE	Not found.	469.96	327.08
		HYOLITHELMINTHES	http://www.palaeos.com/Invertebrates/Procoelomates/Procoelomates.html	553.5	290.06
		PAIUTIIDA	http://www.palaeos.com/Invertebrates/Procoelomates/Procoelomates.html	566	516.1
		SABELLIDITIDA	http://www.palaeos.com/Invertebrates/Procoelomates/Procoelomates.html	566	506.91
		VOLBORTHELLIDA (= Agmata)	http://www.palaeos.com/Invertebrates/Procoelomates/Procoelomates.html	521	499.1
		UNCERTAIN PROBLEMATICA - INCERTAE SEDIS	Not found.	541	23.03
Rhizopodea (protozoa that feed and move with lobopodia/filopodia)					
RHIZOPODEA (protozoa with lobopodia/filopodia)					
		CHITINOZOA (flask-shaped organic walled marine microfossils)	http://www.chitinozoa.com/	485.37	327.08
		FORAMINIFERIDA (amoeba-like microorganisms with reticulating pseudopods)	http://www.accessscience.com/content.aspx?id=267800	524	0 (Present)
Trilobozoa (three-lobed animals with tri-radial symmetry)					
		Trilobozoa Class unnamed			
		Anabaritida	http://paleodb.geology.wisc.edu/cgi-bin/bridge.pl?action=checkTaxonInfo&taxon_no=118915&is_rea_l_user=1	566	512.83
		Trilobozoa Order unnamed	http://www.palaeos.org/Trilobozoa	566	541