



BRACHIOPOD TAXONOMY
 from the original (1965) to the revised (1997-2007)
Treatise on Invertebrate Paleontology
 Volume H: Brachiopoda

Yale Peabody Museum

This chart explains the revisions made to the *Treatise on Invertebrate Paleontology*, Volume H: Brachiopoda. The left column shows the taxonomy (to Superfamily) as it is presented in the 1965 *Treatise*. The right column explains how the taxon in the left column has been incorporated into the revised (1997-2007) *Treatise on Invertebrate Paleontology*. Of course, there are many exceptions to what has been described below, but this chart provides the basics. You are welcome to use this PDF or a printout of this PDF for educational purposes.

More detailed information on the reclassification can be found in Holmer (2001) and Carlson and Leighton (2001) which were used in the creation of this chart:

Holmer, L. E. 2001. Phylogeny and Classification: Linguiliformea and Craniiformea, p. 11-26. *In*: White and Allmon (Eds.), *Brachiopods Ancient and Modern: A Tribute to G. Arthur Cooper*.

Carlson, S. J. and Leighton, L. R. 2001. The Phylogeny and Classification of Rhynchonelliformea, p.27-52. *In*: White and Allmon (Eds.), *Brachiopods Ancient and Modern: A Tribute to G. Arthur Cooper*.

Original (1965) <i>Treatise</i> classification	Revised position (1997-2007) <i>Treatise</i> classification
Class Inarticulata	Includes Subphyla Linguiliformea (organophosphate shells) and Craniiformea (articulated and partially articulated organocarbonate shells) , plus a couple of representatives of Subphylum Rhynchonelliformea (most genera in the Chileida and Obolellida orders)
Order Lingulida	Includes most of current Order Lingulida, minus those now placed in Craniiformea (Craniopsida, Craniida, and Trimerellida orders)
Superfamily Lingulacea	Superfamily Linguloidea and the orders Paterinida and Craniopsida
Superfamily Trimerellacea	Class Craniata, Order Trimerellida

Order Acrotretida	Class Lingulata, Order Acrotretida
Suborder Acrotretidina	Class Lingulata, Acrotretida and Siphonotretida orders Class Lingulata, Order Lingulida, Superfamily Discinoidea
Superfamily Acrotretacea	Class Lingulata, Order Acrotretida
Superfamily Discinacea	Class Lingulata, Superfamily Discinoidea
Superfamily Siphonotretacea	Class Lingulata, Order, Siphonotretida
Suborder Craniidina	Class Craniata, Order Craniida
Superfamily Craniacea	Superfamily Cranioida (Class Craniata, Order Craniida)
Order Obolellida	Superfamily Rhynchonelliformea, Order Obolellida
Superfamily Obelellacea	Superfamily Obelelloidea
Order Paterinida	Class Paterinata, Order Paterinida
Superfamily Paterinacea	Superfamily Paterinoidea (Class Paterinata, Order Paterinida)
Class Uncertain	
Order Kutorginida	Class Kutorginata, Order Kutorginida
Superfamily Kutoriginacea	Superfamily Kutorginoidea (Class Kutorginata, Order Kutorginida)
Class Articulata	Includes taxa in Subphylum Rhynchonelliformea
Order Orthida	Order Orthida, Class Rhynchonellata
Suborder Orthidina	
Superfamily Billingsellacea	Class Strophomenata, Order Billingsellida, except Nisusiidae (Class Kutorginata, Order Kutorginida)
Superfamily Orthacea	Class Rhynchonellata, Order Protorthida
Superfamily Entelacea	Class Rhynchonellata, Order Orthida (except Schizophoriinae, Paurothridae, Dalmenellidae, Rhipidomellidae)
Suborder Clitambonitidina	Suborder Clitambonitidina (Class Strophomenata, Order Billingsellida)
Superfamily Clitambonitacea	Family Clitambonitidae (Class Strophomenata, Order Billingsellida, Suborder Clitambonitoidea)
Superfamily Gonambonitacea	Family Gonambonitidae (Class Strophomenata, Order Billingsellida, Suborder Clitambonitoidea)
Suborder Triplesiidina	
Superfamily Triplesiacea	Suborder Triplesiidina (Order Orthotetidae)
Order Uncertain	
Suborder Dictyonellidina	Class Chileata, Order Dictyonellida
Superfamily Eichwaldiacea	Superfamily Eichwaldoidea (Class Chileata, Order Dictyonellida)
Order Strophomenida	Expanded to Class Strophomenata, including the orders Strophomenida, Productida, Orthotetida and Billingsellida
Suborder Strophomenidina	

Superfamily Plectambonitacea	Superfamily Plectorthoidea (Class Rhynchonellata, Order Orthida)
Superfamily Strophomenacea	Class Strophomenata, Order Strophomenida
Superfamily Davidsoniacea	Class Strophomenata, Order Orthothetida (Meekellidae, Schuchertellidae, Orthotetidae families) Class Rhynchonellata, Order Atrypida (Family Davidsoniidae)
Suborder Chonetidina	Suborder Chonetidina (Class Strophomenata, Order Productida)
Superfamily Chonetacea	Superfamily Chonetoidea (Class Strophomenata, Order Productida)
Superfamily Cadomellacea	Uncertain (Class Rhynchonellata, Order Terebratulida)
Suborder Productidina	Class Strophomenata, Order Productida
Superfamily Strophalosiacea	Superfamily Stropahlosiida (Class Strophomenata, Order Productida)
Superfamily Richthofenoidea	Superfamily Richthofenioidea (Class Strophomenata, Order Productida), except Family Aulostegidae (Superfamily Aulostegoidea, Order Productida)
Superfamily Productacea	Includes Superfamily Productoidea, Superfamily Echinoconchoidea, and Superfamily Linoproductoidea (all Order Productida)
Suborder Oldhaminidina	Included in Superfamily Lyttonioidea (Class Strophomenata, Class Productida)
Superfamily Lyttoniaceae	Superfamily Lyttonioidea (Class Strophomenata, Class Productida)
Order Pentamerida	Class Rhynchonellata, Order Pentamerida
Suborder Syntrophiidina	Suborder Syntrophiidina
Superfamily Porambonitacea	Superfamily Porambonitoidea, except Camerellidae, which is Superfamily Camerelloidea
Suborder Pentameridina	Suborder Pentameridina
Superfamily Pentameracea	Superfamily Pentameroidea
Order Rhynchonellida	Class Rhynchonellata, Order Rhynchonellida - the order has been expanded to 14 superfamilies (from 3 original superfamilies) – sometimes this correspond to the families named in the original Treatise, but not universally
Superfamily Rhynchonellacea	Includes representatives from superfamilies Ancistrophynchoidea, Rhynchotrematoidea, Uncinuloidea, Pugnacoidea, Camaratoecheoidea, Rhynchotetradoidea, Wellerelloidea, Dimerelloidea, Rhynchonelloidea, Norelloidea, and Hemithyridoidea (Class Rhynchonellata, Order Rhynchonellida)
Superfamily Stenoscismatacea	Superfamily Stenocismatoidea (Class Rhynchonellata, Order Rhynchonellida)
Superfamily Rhynchoporacea	Superfamily Rhynchoporida (Class Rhynchonellata, Order Rhynchonellida)
Order Spiriferida	Divided (based on orientation of spirillum, jugum, and/or punctae) into Spiriferida, Spiriferinida, Atrypida, and Athyridida orders (Class Rhynchonellata)
Suborder Atrypidina	Class Rhynchonellata, Order Atrypida
Superfamily Atrypacea	Superfamily Atrypoidea
Superfamily Dayiacea	Family Dayiidae, now in Order Athyrididae, Suborder Uncertain (Superfamily Dayioidea); families Anoplothecidae and Kayseriidaenow in Order Athyrididae, Suborder Uncertain

	(Superfamily Anoplothecoidea) ; Family Leptocoeliidae now in Order Rhynchonellida, Suborder Rhynchonelloidea; Family Uncinitidae now in Order Athyrididae, Suborder Uncertain (Superfamily Uncitoidea)
Suborder Retziidina	Suborder Retziidina (Class Rhynchonellata, Order Athyridida)
Superfamily Retziacea	Superfamily Retzioidea (Class Rhynchonellata, Order Athyridida)
Superfamily Athyrisinacea	Included with Superfamily Athyridoidea (Class Rhynchonellata, Order Athyridida)
Suborder Athyrididina	Order Athyridida (Class Rhynchonellata) – divided based on presence of punctae/endopunctae, strophic/astrophic hinge line, and spiralia orientation)
Superfamily Athyridacea	Family Meristellidae is now in Superfamily Meristelloidea (Order Athyridida); Family Athyrididae is now in Superfamily Athyrididoidea (Order Athyridida); Family Nucleospiridae is now in Superfamily Nucleospiroidea
Superfamily Koninckinacea	Suborder Koninckinoidea (Class Rhynchonellata, Order Athyridida)
Suborder Spiriferidina	Split to Spiriferida (without punctae) and Spiriferinida (with punctae – two suborders Cyrtinidina and Spiriferinidina)
Superfamily Cyrtiacea	Superfamily Cyrtioidea (Order Spiriferida, Suborder Spiriferidina) except Family Ambocoeliidae (which is now in Superfamily Ambocoelioidea)
Superfamily Suessiacea	Superfamily Suessioidea (Order Spiriferinida, Suborder Cyrtinidina), except Family Cyrtinidae which is Superfamily Cyrtinoidea (Order Spiriferinida, Suborder Cyrtinidina)
Superfamily Spiriferacea	families Delthyrididae, Mucrospiriferidae, and Fimbrispirifidae are now in Superfamily Delthyridoidea (Order Spiriferida, Suborder Delthyridina); Family Spinocyrtiidae is now in Superfamily Cyrtospiriferoidea (Order Spiriferida); Family Syringothyridae is now in Superfamily Syringothyridoidea (Superfamily Syringothyridoidea, Suborder Spiriferinidina); Family Costispiriferidae is now in both the Superfamily Delthyridoidea (Order Spiriferida, Suborder Delthyridina) and also Superfamily Theodissioidea (Order Spiriferida, Suborder Spiriferidina); Family Cyrtospiriferidae is now in Superfamily Cyrtospiriferoidea (Order Spiriferida, Suborder Spiriferidina); Family Spiriferidea is now in Superfamily Spiriferoidea (Order Spiriferida, Suborder Spiriferidina); Family Brachythyrididae is now in Superfamily Brachythyridoidea (Order Spiriferida, Suborder Spiriferidina)
Superfamily Spiriferinacea	Divided between superfamilies Syringothyridoidea and Pennospiriferoidea (Suborder Spiriferinidina)
Superfamily Reticulariacea	Family Reticulariidae is now in Superfamily Pennospiriferinoidea; Family Martiniidae is now in Superfamily Martinioidea; Family Elythidae is now in Superfamily Reticularioidea
Order Terebratulida	Still divided into two Suborders: Terebratulidina (short loop), and Terebratellidina (long loop and median septum))
Suborder Centronellidina	Included within Superfamily Stringocephaloidea (Suborder Terebratulidina)
Superfamily Stringocephalacea	Superfamily Stringocephaloidea

Suborder Terebratulidina	Suborder Terebratulidina
Superfamily Dielasmatacea	Superfamily Dielasmatoidea (Suborder Terebratulidina, Order Terebratulida)
Superfamily Terebratulacea	Superfamily Terebratuloidea (Suborder Terebratulidina, Order Terebratulida) except certain Family Terebralidae genera which are relocated to Superfamily Loboidothyrididoidea); families Cheniothyrididae, Dictyothyrididae, Tegulothyrididae are now in Superfamily Loboidothyrididoidea; Family Pygopidae and Family Discoliidae are now in Superfamily Dyscolioidea; Family Cencellothyrididae is now in Superfamily Cancellothyridoidea
Suborder Terebratellidina	Suborder Terebratellidina (Suborder Terebratulidina, Order Terebratulida)
Superfamily Cryptonellacea	Superfamily Cryptonelloidea (Suborder Terebratulidina, Order Terebratulida)
Superfamily Zeilleriacea	Superfamily Zellerioidea (Suborder Terebratellidina, Order Terebratulida)
Superfamily Terebratellacea	Suborder Terebratellidina (Order Terebratulida)
Order Uncertain	
Suborder Thecideidina	Order Thecideida (includes two superfamilies: Thecospirioidea and Thecideoidea)
Superfamily Thecideacea	families Thecidellinidae and Thecideidae are now in Superfamily Thecideooidea; with the exception of the genera Thecospira and Thecospirella with are now in Superfamily Thecospirioidea



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