

Atlantis' Rise and Demise

Esoteric Geochronology

TABLE on p. 3 and the explanatory notes are based on a Wikipedia article (2006).¹ The figures on the right hand side column, headed “Secret Doctrine,” were excerpted from D Pratt’s paper on “Geochronology: Theosophy and Science” (1999).² Time is expressed as “million years” ago.

The background notes below have been edited from Wikipedia’s encyclopaedic article:

The table of geologic periods presented here is in accordance with the dates and nomenclature proposed by the International Commission on Stratigraphy, and uses the standard color codes of the United States Geologic Survey.

Current geologic evidence holds that the age of the Earth is about 4570 million years old. The geologic or *deep time* of Earth's past has been organized into various units according to events which took place in each period. Different spans of time on the time scale are usually delimited by major geologic or paleontologic events, such as mass extinctions. For example, the boundary between the Cretaceous period and the Palaeogene period is defined by the extinction event that marked the demise of the dinosaurs and of many marine species.

Geologists tend to talk in terms of Upper/Late, Lower/Early and Middle parts of periods and other units — *e.g.* “Upper Jurassic”, “Middle Cambrian”. Because geologic units occurring at the same time but from different parts of the world can often look different and contain different fossils, there are many examples where the same period was historically given different names in different locales. For example, in North America the Early Cambrian is referred to as the Waucoban series that is then subdivided into zones based on trilobites. The same time span is split into Tommotian, Atdabanian and Botomian stages in East Asia and Siberia.

In 1977, the Global Commission on Stratigraphy (now the International Commission) started an effort to define global references (Global Boundary Stratotype Sections and Points) for geologic periods and faunal stages. Their

¹ Cf. http://en.wikipedia.org/wiki/Geologic_time_scale

² Cf. <http://ourworld.compuserve.com/homepages/dp5/geochron.htm>



most recent work is described in the 2004 geologic time scale of Gradstein et al. (ISBN 0521786738), and used as the foundation of this page.

The following notes have been edited from D Pratt's theosophical article:

Modern geological nomenclature differs in some respects from that used by Blavatsky. For instance, the Eocene is now divided into Paleocene, Eocene, and Oligocene, and the Ordovician period has been inserted between the Cambrian and Silurian, and comprises part of both. The Cambrian is now taken as the beginning of the Paleozoic era. The Laurentian would fall into the Precambrian era; in Blavatsky's time 'Laurentian' denoted the 30,000 ft of rocks underlying the Cambrian strata, but the term is no longer used in this sense.

The theosophical figures are those given by Dick & Scott,³ with a few alterations and additions. The duration of the Paleocene, Eocene, and Oligocene has been determined by dividing up Dick & Scott's Eocene according to the maximum thickness of the Paleocene, Eocene, and Oligocene strata according to science.⁴ The duration of the Cambrian, Ordovician, and Silurian has been determined using the same method.

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³ F.J. Dick & W. Scott: *The Age of the Earth in: The Theosophical Path*, April 1919, pp. 369-79

⁴ R. Milton: *The Facts of Life*, 1992, plate 1.



Eon	Era	Period	Series/Epoch (million years)		Secret Doctrine
Phanerozoic	Cenozoic	Neogene	Holocene ¹	0.011430	Start of 4 th Round 320.000
			Pleistocene ²	1.806	
			Pliocene ³	5.332	
			Miocene ⁴	23.030	
		Paleogene	Oligocene ⁵	33.900	
			Eocene ⁶	55.800	
			Paleocene ⁷	65.500	
	Mesozoic	Cretaceous ⁸	Upper/Late	99.600	Start of 3 rd Round 720.000
			Lower/Early	145.500	
		Jurassic ⁹	Upper/Late	161.200	
			Middle	175.600	
		Triassic ¹⁰	Lower/Early	199.600	
			Upper/Late	228.000	
	Paleozoic	Permian ¹¹	Middle	245.000	Start of 2 nd Round 1.300.000
			Lower/Early	251.000	
			Lopingian	260.400	
		Carboniferous Pennsylvanian ¹²	Guadalupian	270.600	Start of 1 st Round 1.973.000
			Cisuralian	299.000	
			Upper/Late	306.500	
		Carboniferous Mississippian ¹³	Middle	311.700	
			Lower/Early	318.100	
			Upper/Late	326.400	
		Devonian ¹⁴	Middle	345.300	
			Lower/Early	359.200	
			Upper/Late	385.300	
		Silurian ¹⁵	Middle	397.500	
			Lower/Early	416.000	
			Pridoli	418.700	
			Ludlow	422.900	
	Ordovician ¹⁶	Wenlock	428.200		
		Llandovery	443.700		
		Upper/Late	460.900		
	Cambrian ¹⁷	Middle	471.800		
Lower/Early		488.300			
Furongian		501.000			
		(Laurentian)			
Proterozoic	Neo-proterozoic	Middle	513.000	Start of 1 st Round 1.973.000	
		Lower/Early	542.000		
		Ediacaran ¹⁸	630.000		
	Meso-proterozoic	Cryogenian ¹⁹	850.000		
		Tonian ²⁰	1.000.000		
		Stenian ²¹	1.200.000		
		Ectasian ²²	1.400.000		
Paleo-proterozoic	Calymmian ²³	1.600.000			
	Statherian ²⁴	1.800.000			
	Orosirian ²⁵	2.050.000			
	Rhyacian ²⁶	2.300.000			
		Siderian ²⁷	2.500.000		
Archean	Neoarchean ²⁸		2.800.000		
	Mesoarchean ²⁹		3.200.000		
	Paleoarchean ³⁰		3.600.000		
	Eoarchean ³¹		3.800.000		
Hadean	Lower Imbrian		c. 3.850.000		
	Nectarian		c. 3.920.000		
	Basin groups ³²		c. 4.150.000		
	Cryptic ³³		c. 4.570.000		

Annotations to Table

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- ¹ End of recent glaciation and a rise of modern civilization.
- ² Flourishing and then extinction of many large mammals (Pleistocene mega fauna); Evolution of fully modern humans.
- ³ Intensification of present ice age. Cool and dry climate; Australopithecines appear, many of the existing genera of mammals, and recent molluscs appear.
- ⁴ Moderate climate; Mountain building in northern hemisphere; Modern mammal and bird families became recognizable. Horses and mastodonts diverse. Grasses become ubiquitous. First hominoids appear.
- ⁵ Warm climate; Rapid evolution and diversification of fauna, especially mammals. Major evolution and dispersal of modern types of angiosperms.
- ⁶ Archaic mammals (*e.g.* Creodonts, Condylarths, Uintatheres, etc) flourish and continue to develop during the epoch. Appearance of several “modern” mammal families. Primitive whales diversify. First grasses. Reglaciation of Antarctica; start of current ice age.
- ⁷ Climate tropical. Modern plants; Mammals diversify into a number of primitive lineages following the extinction of the dinosaurs. First large mammals (up to bear or small hippo size).
- ⁸ Flowering plants appear, along with new types of insects. More modern teleost fish begin to appear. Ammonites, belemnites, rudists, echinoids and sponges all common. Many new types of dinosaurs (*e.g.* Tyrannosaurs, Titanosaurs, duck bills, and horned dinosaurs) evolve on land, as do modern crocodilians; and mosasaurs and modern sharks appear in the sea. Primitive birds gradually replace pterosaurs. Monotremes, marsupials and placental mammals appear. Break up of Gondwana.
- ⁹ Gymnosperms (especially conifers, Bennettitales and cycads) and ferns common. Many types of dinosaurs, such as sauropods, carnosaurs, and stegosaurs. Mammals common but small. First birds and lizards. Ichthyosaurs and plesiosaurs diverse. Bivalves, Ammonites and belemnites abundant. Echinoids very common, also crinoids, starfish, sponges, and terebratulid and rhynchonellid brachiopods. Break-up of Pangea into Gondwana and Laurasia.
- ¹⁰ Archosaurs dominant and diverse on land, include many large forms; cynodonts become smaller and more mammal-like. First dinosaurs, mammals, pterosaurs, and crocodilia. *Dicroidium* flora common on land. Many large aquatic temnospondyl amphibians. Ichthyosaurs and nothosaurs common in the seas. Ceratite ammonoids extremely common. Modern corals and teleost fish appear, as do many modern insect clades.
- ¹¹ Landmass unites in the supercontinent of Pangea. Synapsid reptiles become common (Pelycosaur and Therapsids), parareptiles and temnospondyl amphibians also remain common. Carboniferous flora replaced by gymnosperms in the middle of the period. Beetles and flies evolve. Marine life flourishes in the warm shallow reefs. Productid and spiriferid brachiopods, bivalves, foraminifera, and ammonoids all



abundant. End of Permo-carboniferous ice age. At the end of the period the Permian extinction event 95% of life on Earth becomes extinct.

¹² Winged insects appear and are abundant, some (esp. Protodonata and Palaeodictyoptera) growing to large size. Amphibians common and diverse. First reptiles, coal forests (*Lepidodendron*, *Sigillaria*, *Calamites*, *Cordaites*, etc), very high atmospheric oxygen content. In the seas, Goniatites, brachiopods, bryozoa, bivalves, corals, etc all common.

¹³ Large primitive trees, first land vertebrates, brackish water and amphibious eurypterids; rhizodonts dominant fresh-water predators. In the seas primitive sharks common and very diverse, echinoderms (especially crinoids and blastoids) abundant, Corals, bryozoa, and brachiopods (Productida, Spriferida, etc) very common; Goniatites common, trilobites and nautiloids in decline. Glaciation in East Gondwana.

¹⁴ First clubmosses and horsetails appear, progymnosperms (first seed bearing plants) appear, first trees (Archaeopteris). First (wingless) insects. In the sea strophomenid and atrypid brachiopods, rugose and tabulate corals, and crinoids are abundant. Goniatite ammonoids are common, and coleoids appear. Trilobites reduced in numbers. Armoured agnaths decline; Jawed fish (Placoderms, lobe-finned and ray-finned fish, and early sharks) important life in the sea. First amphibians (but still aquatic). "Old Red Continent" (Euramerica).

¹⁵ First vascular land plants, millipedes and arthropleurids, first jawed fish, as well as many types of armoured jawless forms. Sea scorpions reach large size. tabulate and rugose corals, brachiopods (Pentamerida, Rhynchonellida, etc), and crinoids all abundant; trilobites and molluscs diverse. Graptolites not as varied.

¹⁶ Invertebrates very diverse and include many new types. Early corals, Brachiopods (Orthida, Strophomenida, etc), bivalves, nautiloids, trilobites, ostracods, bryozoa, many types of echinoderms (cystoids, crinoids, starfish, etc), branched graptolites, and other taxa all common. Conodonts were planktonic primitive vertebrates that appear at the start of the Ordovician. Ice age at the end of the period. First very primitive land plants.

¹⁷ Major diversification of life in the Cambrian Explosion; more than half of modern animal phyla appear, along with a number of extinct and problematic forms. Archeocyatha abundant in the early Cambrian. Trilobites, Priapulida, sponges, inarticulate brachiopods, and many other forms all common. First chordates appear. Anomalocarids are top predators. Edicarian animals rare, then die out.

¹⁸ First multi-celled animals. Edicarian fauna (vendobionta) flourish worldwide. Simple trace fossils from worm-like animals. First sponges.

¹⁹ Possible snowball Earth period, Rodinia begins to break up.

²⁰ First acritarch radiation.

²¹ Narrow highly metamorphic belts due to orogeny as Rodinia formed.

²² Platform covers continue to expand.

²³ Platform covers expand.



- ²⁴ First complex single-celled life. Columbia (supercontinent).
- ²⁵ The atmosphere became oxygenic. Vredefort and Sudbury Basin asteroid impacts. Much orogeny.
- ²⁶ Bushveld Formation formed. Huronian glaciation.
- ²⁷ Banded iron formations formed.
- ²⁸ Stabilization of most modern cratons, possible mantle overturn event.
- ²⁹ First stromatolites.
- ³⁰ First known oxygen producing bacteria.
- ³¹ Simple single-celled life.
- ³² 4100 Ma — Oldest known rock.
- ³³ 4400 Ma — Oldest known mineral; 4570 Ma (Formation of Earth).

