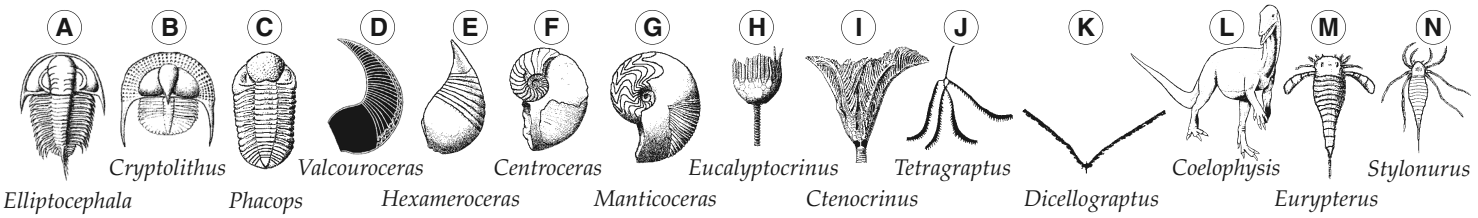
GEOLOGIC HISTORY

Million years ago	Eon	Era	Period	Epoch	Life on Earth	NY Rock Record
				Million years ago		Sediment / Bedrock
0	PHANEROZOIC	CENOZOIC	QUATERNARY	HOLOCENE 0		
				0.01		
				PLEISTOCENE 1.8	Humans, mastodonts, mammoths	
			NEOGENE	PLIOCENE 5.3	Large carnivorous mammals	
				MIOCENE 23.0	Abundant grazing mammals	
500			PALEOGENE	OLIGOCENE 33.9	Earliest grasses	
				EOCENE 55.8	Many modern groups of mammals	
				PALEOCENE 65.5	Mass extinction of dinosaurs, ammonoids, and many land plants	
		MESOZOIC	CRETACEOUS	LATE		
1000				EARLY	Earliest flowering plants Diverse bony fishes	
				146		
			JURASSIC	LATE	Earliest birds	
				MIDDLE	Abundant dinosaurs and ammonoids	
				EARLY		
				200		
			TRIASSIC	LATE	Earliest mammals	
2000					Earliest dinosaurs	
				MIDDLE		
				EARLY		
				251	Mass extinction of many land and marine organisms (including trilobites)	
		PALEOZOIC	PERMIAN	LATE		
				MIDDLE	Mammal-like reptiles	
				EARLY	Abundant reptiles	
				299		
			CARBONIFEROUS: PENNSYLVANIAN	LATE		
				EARLY	Extensive coal-forming forests	
				318		
			CARBONIFEROUS: MISSISSIPPIAN	LATE	Abundant amphibians	
3000				MIDDLE	Large and numerous scale trees and seed ferns (vascular plants); earliest reptiles	
				EARLY		
				359		
			DEVONIAN	LATE	Earliest amphibians and plant seeds Extinction of many marine organisms	
				MIDDLE	Earth's first forests Earliest ammonoids and sharks	
				EARLY	Abundant fish	
				416		
			SILURIAN	LATE	Earliest insects Earliest land plants and animals	
				EARLY	Abundant eurypterids	
				444		
			ORDOVICIAN	LATE		
				MIDDLE	Invertebrates dominant Earth's first coral reefs	
				EARLY		
				488		
			CAMBRIAN	LATE		
				MIDDLE	Burgess shale fauna (diverse soft-bodied organisms) Earliest fishes	
				EARLY	Extinction of many primitive marine organisms Earliest trilobites	
				542	Great diversity of life-forms with shelly parts	
				580	Ediacaran fauna (first multicellular, soft-bodied marine organisms)	
	PROTEROZOIC					
				1300	Abundant stromatolites	
	ARCHEAN					
4000						
4600						

LATE / MIDDLE / EARLY

- First sexually reproducing organisms
- Oceanic oxygen begins to enter the atmosphere
- Oceanic oxygen produced by cyanobacteria combines with iron, forming iron oxide layers on ocean floor
- Earliest stromatolites
- Oldest microfossils
- Evidence of biological carbon
- Oldest known rocks
- Estimated time of origin of Earth and solar system

(Index fossils not drawn to scale)