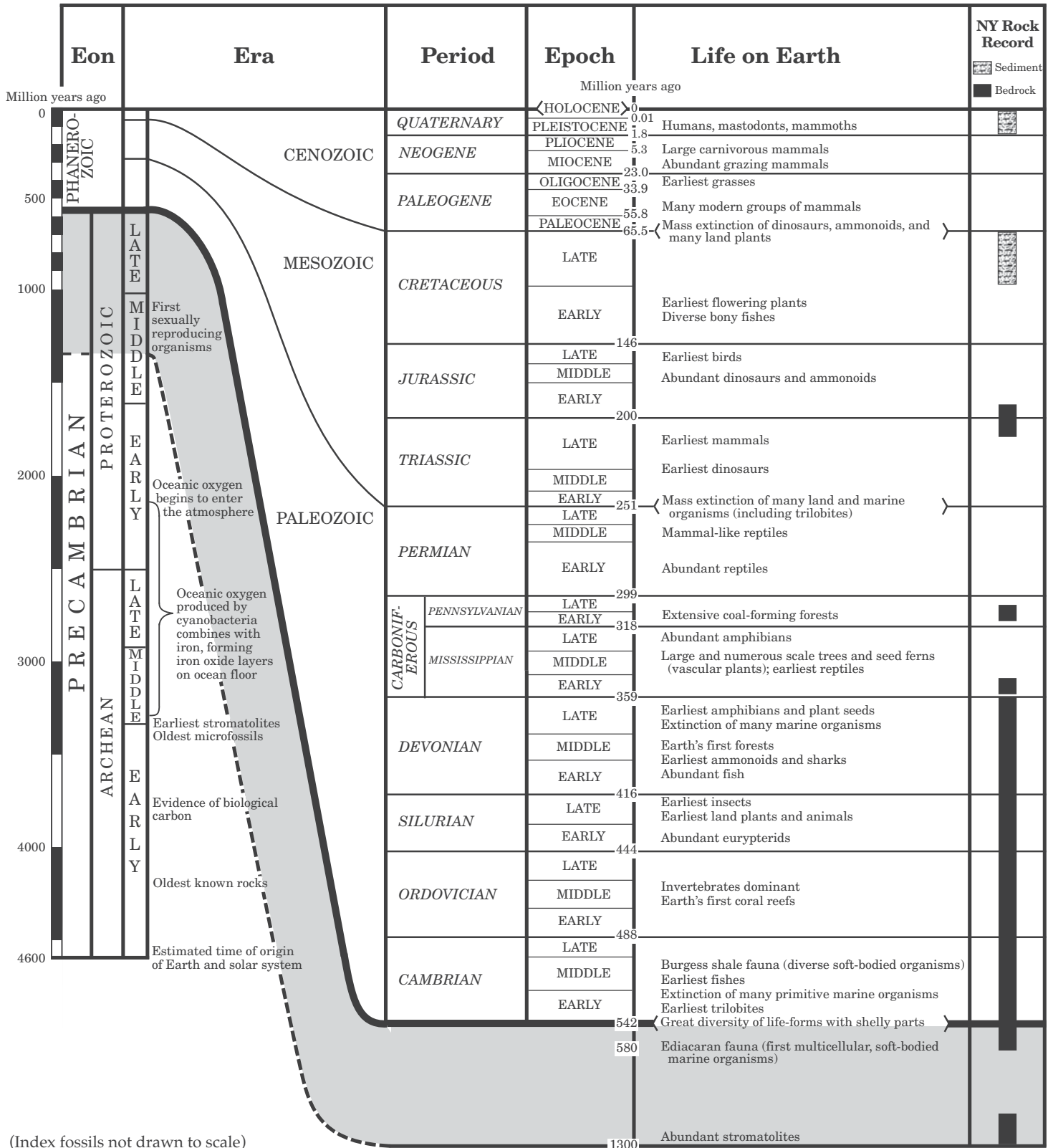
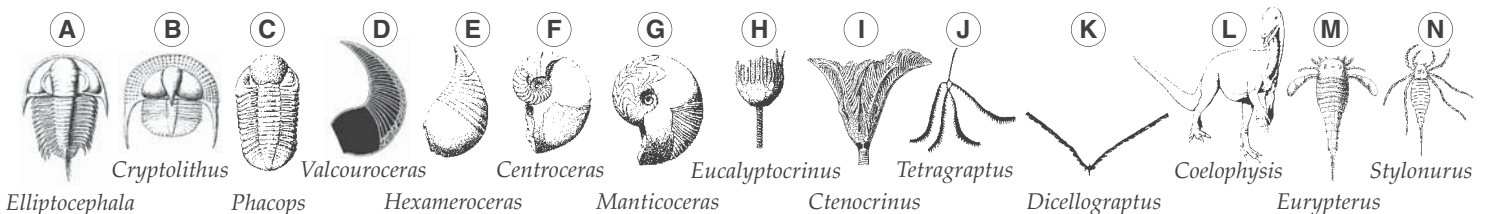


GEOLOGIC HISTORY

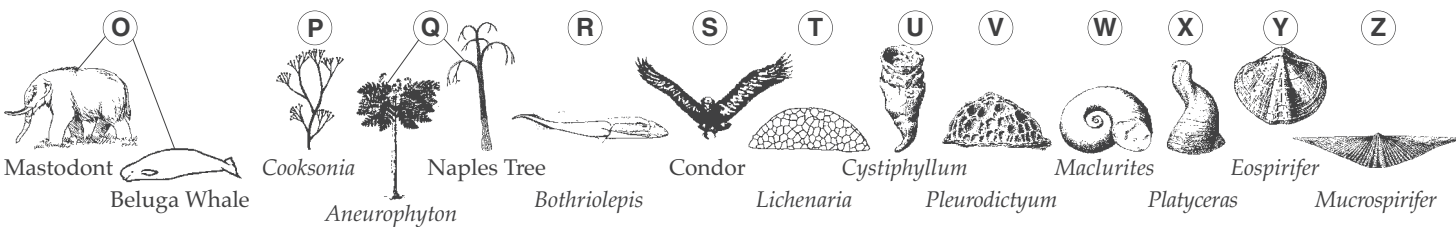


(Index fossils not drawn to scale)



OF NEW YORK STATE

Time Distribution of Fossils (including important fossils of New York) The center of each lettered circle indicates the approximate time of existence of a specific index fossil (e.g. Fossil A) lived at the end of the Early Cambrian).	Important Geologic Events in New York	Inferred Positions of Earth's Landmasses
	Advance and retreat of last continental ice	
	Sands and clays underlying Long Island and Staten Island deposited on margin of Atlantic Ocean Dome-like uplift of Adirondack region begins	59 million years ago
	Initial opening of Atlantic Ocean North America and Africa separate { Intrusion of Palisades sill } Pangaea begins to break up	119 million years ago
	Alleghenian orogeny caused by collision of North America and Africa along transform margin, forming Pangaea	232 million years ago
	Catskill delta forms Erosion of Acadian Mountains Acadian orogeny caused by collision of North America and Avalon and closing of remaining part of Iapetus Ocean	359 million years ago
	Salt and gypsum deposited in evaporite basins	458 million years ago
	Erosion of Taconic Mountains; Queenston delta forms Taconian orogeny caused by closing of western part of Iapetus Ocean and collision between North America and volcanic island arc	458 million years ago
	Widespread deposition over most of New York along edge of Iapetus Ocean	458 million years ago
	Rifting and initial opening of Iapetus Ocean Erosion of Grenville Mountains Grenville orogeny: metamorphism of bedrock now exposed in the Adirondacks and Hudson Highlands	



ESC / BW / TN (2009)