

APPENDIX III — Geologic Time Scale

Eras	Periods	Epochs	Major Event
		Holocene (Recent)	
	Quaternary	10,000	Many extinctions of large mammals
		Pleistocene	Ice Ages; Sequoia established near Santa Barbara
		2,500,000	Sequoia restricted to western North America, Metasequoia to China
		Pliocene	Southernmost record of Sequoia distribution at 26° (China)
		6,000,000	Early hominids (human family)
Cenozoic		Miocene	Metasequoia extinct in North America
		26,000,000	Sequoiadendron restricted to west-central North America
	Tertiary	Oligocene	Retreat of sequoias southward; central Asia expansion of
		38,000,000	Metasequoia and Sequoia; Metasequoia most abundant and widely distributed sequoia in North America
		Eocene	Increasing specialization and modernization of mammals
		55,000,000	Northernmost sequoia distribution: 83° for Metasequoia (Ellesmere Island); 79° for Sequoia and Sequoiadendron (Spitzbergen)
		Paleocene	Great spread of primitive and archaic mammals
		65,000,000	Extinction of dinosaurs
	Cretaceous		Sequoia, Sequoiadendron and Metasequoia forests widespread. First primates, and many other animals; spread of flowering plants
Mesozoic		135,000,000	First birds; earliest sequoia fossils (Manchuria)

Eras	Periods	Epochs	Major Event
	Jurassic		
		190,000,000	First mammals
	Triassic		First dinosaurs
		225,000,000	
	Permian		Many extinctions of invertebrates
		280,000,000	
	Carboniferous		First reptiles
		345,000,000	
	Devonian		First amphibians; spread of fishes
Paleozoic		395,000,000	First forests
	Silurian		First air-breathing animals
		430,000,000	First land plants
	Ordovician		
		500,000,000	First vertebrates
	Cambrian		
		570,000,000	
			Great spread of marine invertebrates
		700,000,000	First animals
Pre-cambrian		3,400,000,000	Possible bacteria and blue-green algae; possible first organisms
		4,600,000,000	Origin of earth

(After Florin, 1963; Simpson, 1983)