APPENDIX

ERAS	PERIOI	DS AND SYSTEMS		M YE at beg	DATES ILLION ARS (A) inning of	IN SOF pprox.) f period
CENOZOIC ($\kappa \alpha \iota \nu \delta \varsigma = \text{recent}$; $\zeta \omega \eta = \text{life}$)	QUATERNARY	$\begin{cases} \text{HOLOCENE} \\ (\delta \lambda o_S = \text{complete}; \\ \kappa \alpha \iota \nu o_S = \text{recent}) \\ \text{PLEISTOCENE} \end{cases}$. 1	
		$\begin{cases} (\pi \lambda \epsilon \hat{i} \sigma \tau \sigma s = \text{most}) \\ \text{PLIOCENE} \end{cases}$		•	. 12	:J
		$ \begin{array}{l} (\pi\lambda\epsilon i\omega\nu = \text{more}) \\ \text{MIOCENE} \\ (\omega\tau i\omega = \log \alpha) \end{array} $	•	•	. 29	
	TERTIARY	$\begin{cases} (\mu e tab \nu = tess) \\ OLIGOCENE \\ (d)(vas = few) \end{cases}$		•	. 40	}
		$ \begin{array}{c} \text{EOCENE} \\ \textbf{OCENE} \\ \textbf{Ocenser} \\ $		•	. 60	
		$\begin{bmatrix} PAL & OCENE \\ \pi \alpha \lambda \alpha \iota \delta s = ancient \end{bmatrix}$	•	•	. 75	
MESOZOIC ($\mu \epsilon \sigma \sigma s = \text{middle}$)		$ \left\{ \begin{array}{l} \text{CRETACEOUS} \\ (Creta = \text{chalk}) \end{array} \right. $		•	. 135	5
		{ JURASSIC .		•	. 175	5
		TRIASSIC . (Threefold division in	Germ	any)	. 210)
PALÆOZOIC (παλαιός = ancient)	Upper	$ \left(\begin{array}{c} \text{PERMIAN} \\ \text{(Permia} = \text{ancient kin} \\ \text{Permia} = ancient$	1gdon	1	. 240)
		<pre>{ E. of Volga) { CARBONIFEROUS</pre>	•	•	. 290	,
		DEVONIAN . (Devon's marine rocks	8)		. 320)
		SILURIAN . (Silures = ancient tril of Welsh horders)	De	•	. 350)
	Lower	$\begin{cases} ORDOVICIAN \\ ORDOVICIAN \\ (Ordovices = ancient) \end{cases}$	tribe	of	. 420)
		N. Wales) CAMBRIAN (Cambria = Wales)			. 500)
		PROTEROZOIC			. ș	
PRE-CAMBRIAN ERAS		$\begin{cases} (\pi\rho\sigma\tau\epsilon\rho\sigmas = \text{earlier}) \\ \text{ARCH}\text{EOZOIC} \\ (\dot{a}\rho\chi\alpha\hat{i}\sigmas = \text{prim}\text{aval}) \\ ^{754} \end{cases}$		•	. ?	

PALÆONTOLOGICAL TABLE

Australopithecus ; Pithecanthropus ; Homo

Eutherian mammals become numerous and diverse. Grasses appear in Miocene. Brachiopods diminish in importance; lamellibranchs abundant. Insects associated with flowering plants radiate now.

- First appearance of : urodeles, snakes, marsupials, insectivores, modern-type flowering plants. At end of period extinction of saurischian and ornithischian dinosaurs, pterosaurs, plesiosaurs, ichthyosaurs, ammonites.
- First appearance of : plesiosaurs, ornithischian dinosaurs, pterosaurs, birds, anurans, flowering plants. Radiation of cartilaginous and actinopterygian fishes.
- First appearance of : saurischian dinosaurs, ichthyosaurs, chelonians, erocodiles, rhynchocephalians, lizards, and, at end of period, mammals. First moss. Hexacorals and lamellibranchs rise to prominence in marine faunas. By end of period extinction of "labyrinthodonts" and cotylosaurs.
- First appearance of : true ammonites, holostean fish. Trilobites and rugose corals extinct at end of period, also acanthodians. Endopterygote insects appear at beginning of period.
- First appearance of : reptiles and conifers (upper Carb.). All arachnid groups have now appeared except possibly mites. Foraminifera become abundant.
- First appearance of : placoderms, rhipidistia, dipnoi, sharks, actinopterygians, insects, myriapods, and at end of period, cœlacanths and amphibia. Placoderms except acanthodians, become extinct at end of period, as do the bony ostracoderms.
- First appearance of : ammonoids, scorpions and, at end of period, land-plants, 4 groups agnathan fish, acanthodians. Graptoloids become extinct at end of period.
- First appearance of : eorals, echinoderms (blastoids, erinoids, starfish, echinoids), lamellibranchs, ectoprocts (polyzoa), ostracods, graptolites, ostracoderms (fragmentary), eurypterids.
- First appearance of : sponges (siliceous), cœlenterates (medusæ), echinoderms (cystids and some which are probably Holothurian), annelids, brachiopods (small " horny " hingeless), molluses (gastropods, pteropods, nautiloids), arthropods (onychophora, trilobites, crustacea), graptolites. Algæ present.