THE UNIVERSITY OF CHICAGO

LATE CRETACEOUS TO PLEISTOCENE CLIMATES: NATURE OF THE TRANSITION FROM A 'HOT-HOUSE' TO AN 'ICE-HOUSE' WORLD

VOLUME FOUR

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE DIVISION OF THE PHYSICAL SCIENCES
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

DEPARTMENT OF THE GEOPHYSICAL SCIENCES

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JUNE, 1996

APPENDIX C

GENUS AGE RANGES

"It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts."

Sherlock Holmes
"A Scandal in Bohemia", Sir Arthur Conan Doyle

This appendix lists the age ranges and number of records for crocodilian genera used in this study. Genera are listed in order of classification (suborder, family and genus) and thence alphabetical order. Temporal ranges are derived from the occurrences stored in the database and that are listed in Appendix B. Ages are given in millions of years based on the Harland time scale[1] The classification used is that given in Carroll[2].

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1 1. Harland, W. B., R. L. Armstrong, A. V. Cox, L. E. Craig, A. G. Smith, and D. G. Smith, 1990, A Geologic Time Scale 1989: Cambridge, Cambridge University Press, 263 p.

2 2. Carroll, R. L., 1988, Vertebrate Paleontology and Evolution: New York, W.H. Freeman and Company, 698 p.

Order / Suborder / Family	*Genus name*	Age range (Ma)		Occs
Crocodylia				
Mesosuchia				
Artzosuchidae				
	Artzosuchus	89.13	77.00	3
Baurusuchidae ("Sebecosuchid")				
	Baurusuchus	124.50	65.00	3
	Bergisuchus	50.00	42.10	1
	Cynodontosuchus	97.00	65.00	3
	Iberosuchus	56.50	35.40	5
Bretesuchidae ("Sebecosuchid")				
	Bretesuchus	60.50	56.50	1
Dyrosauridae				
	Congosaurus (syonymized to *Hyposaurus*)			
	Dyrosaurus	112.00	35.40	21
	Hyposaurus	74.00	50.00	14
	Phosphatosaurus	65.00	50.00	4
	Rhabdognathus	56.50	50.00	4
	Rhabdosaurus (syonymized to *Rhabognathus*)			
	Sokotosaurus (syonymized to *Hyposaurus*)			
	Sulcusuchus	74.00	65.00	1
	Tilemsisuchus	50.00	38.60	1
	Wurnosaurus (syonymized to *Hyposaurus*)			
Edentosuchidae				
	Edentosuchus	145.60	97.00	1
Gobiosuchidae				
	Gobiosuchus	89.13	68.00	7
Goniopholididae				
	Coelosuchus	97.00	65.00	1
	Dakotasuchus	102.00	94.80	1
	Goniopholis	154.70	59.17	11
	Itasuchus	74.00	65.00	1
	Kansajsuchus	90.40	83.00	8
	Microsuchus	97.00	65.00	1
	Oweniasuchus	97.00	90.40	2
	Pinacosuchus	74.00	56.50	1
	Pliogonodon	97.00	65.00	1
	Polydectes	97.00	65.00	3
	Symptosuchus	97.00	65.00	1
	Turanosuchus	89.13	85.40	4
	Vectisuchus	145.60	97.00	1
Hsisosuchidae				
	Doratodon	97.00	65.00	4
	Hsisosuchus			0
Libycosuchidae				
	Libycosuchus	97.00	65.00	2

Order / Suborder / Family	*Genus name*	Age range (Ma)		Occs
	Notosuchidae			
	Brasileosaurus	97.00	74.00	1
	Notosuchus	124.50	65.00	4
	Paralligatoridae			
	Paralligator	97.00	65.00	4
	Shamosuchus	124.50	65.00	43
	Pholidosauridae			
	Teleorhinus	145.60	88.50	2
	Sebecidae ("Sebecosuchid")			
	Ayllusuchus	55.00	50.00	1
	Ilchunaia	43.00	23.30	2
	Sebecus	61.70	11.67	14
	Sphagesauridae			
	Sphagesaurus	97.00	65.00	3
	Trematochampsidae			
	Amargasuchus	135.00	124.50	1
	Baharijodon	97.00	90.40	1
	Caririsuchus	116.17	97.00	1
	Eremosuchus	52.17	50.00	1
	Trematochampsa	88.50	65.00	3
	Uruguaysuchidae			
	Araripesuchus	145.60	97.00	3
	Peirosaurus	88.50	65.00	2
	Uruguaysuchus	86.60	74.00	3
	Lomasuchus	88.50	65.00	1
	Wanosuchidae			
	Wanosuchus	65.00	56.50	1
"Thalattosuchia"				
	Thalattosuchia indet.	145.60	131.80	1
Eusuchia				
	Baryphracta	50.00	42.10	2
	Alligatoridae			
	Akanthosuchus	65.00	56.50	4
	Alligator	38.60	0.00	45
	Allognathosuchus	65.00	29.30	40
	Arambourgia (synonymized to *Allognathosuchus*)			
	Balanerodus	35.40	29.30	1
	Bottosaurus	97.00	59.17	10
	Brachychampsa	86.60	60.50	17
	Brachygnathosuchus (synonymized to *Caiman*)			
	Caiman	64.00	0.00	25
	Caimanosuchus (synonymized to *Diplocynodon*)			
	Carandaisuchus	10.50	2.81	1
	Ceratosuchus	60.50	54.33	2
	Chrysochampsa	55.93	47.37	1
	Colossoemys	23.30	5.20	2

Order / Suborder / Family	*Genus name*	Age range (Ma)		Occs
	Dinosuchus (synonymized to *Caiman*)			
	Diplocynodon	68.00	1.64	55
	Diplocynodus (synonymized to *Allognathosuchus*)			
	Eoalligator	65.00	56.50	3
	Eocaiman (synonymized to *Caiman*)			
	Eocenosuchus (synonymized to *Diplocynodon*)			
	Ferganosuchus	56.50	38.60	2
	Hispanochampsa	33.37	25.30	1
	Manracosuchus (synonymized to *Allognathosuchus*)			
	Melanosuchus	9.00	0.00	2
	Menatalligator	56.50	35.40	1
	Notocaiman	65.00	56.50	1
	Orthosaurus (synonymized to *Diplocynodon*)			
	Paleosuchus	0.00	0.00	2
	Proalligator (synonymized to *Caiman*)			
	Procaimanoidea	68.00	38.60	4
	Prodiplocynodon	74.00	65.00	1
	Purrusaurus (synonymized to *Caiman*)			
	Sajkanosuchus	65.00	1.64	3
	Wannaganosuchus	59.08	57.83	1
	Xenosuchus (synonymized to *Caiman*)			
Crocodylidae				
	Aigialosuchus	83.00	80.00	1
	Allodaposuchus	74.00	65.00	2
	Asiatosuchus	65.00	1.64	16
	Australosuchus	29.30	10.40	4
	Baru	29.30	5.20	4
	Bombifrons (synonymized to *Crocodylus*)			
	Brachyuranochampsa	48.76	38.60	2
	Charactosuchus	50.00	5.20	4
	Crocodylus	97.00	0.00	189
	Deinosuchus	83.00	65.00	4
	Dollosuchus	50.00	38.60	2
	Dzungarisuchus	38.60	35.40	1
	Eosuchus	56.50	38.60	2
	Eotomistoma	97.00	65.00	1
	Euthecodon	23.30	0.01	17
	Holops (synonymized to *Holopsisuchus*)			
	Holopsisuchus	68.00	56.50	8
	Kentisuchus	56.50	35.40	2
	Leidyosuchus[3]	83.00	38.60	75

[3]In the cladistic hypothesis of Benton and Clark (1988) *Leidyosauchus* falls outside of the crown group. However, the authors note that this genus "*may be more closely related to crocodilians than the other two* [Stomatosuchus and Hylaeochampsa], *but its synapomorphies with crocodilians are unknown for the latter* [Stomatosuchus]." (p.323, Benton and Clark, 1988).

Order / Suborder / Family	*Genus name*	Age range (Ma)		Occs
	Leptorrhamphus	5.20	3.40	1
	Lianghusuchus	50.00	38.60	1
	Megadontosuchus	56.50	35.40	3
	Mourasuchus	16.00	1.64	5
	Navajosuchus	65.00	57.83	3
	Necrosuchus	64.00	62.00	1
	Nettosuchus (synonymized to Mourasuchus)			
	Orthogenysuchus	56.50	50.00	1
	Osteolaemus	0.00	0.00	1
	Oxysdonsaurus	35.40	23.30	1
	Pallimnarchus	10.40	0.01	4
	Phobosuchus (synonymized to *Deinosuchus*)			
	Pristichampsus	60.50	0.01	38
	Quinkana	1.64	0.01	2
	Tadzhikosuchus	89.13	85.40	10
	Thoracosaurus	97.00	56.50	26
	Tienosuchus	50.00	38.60	1
	Tomistoma	65.00	0.00	40
	Trilophosuchus	23.30	16.30	1
	Tzaganosuchus	60.50	50.00	1
Dolichochampsidae				
	Dolichochampsa	83.00	65.00	6
Gavialidae				
	Gavialis	68.00	0.00	44
	Gavialosuchus	29.30	1.64	25
	Gryposuchus	12.93	1.64	2
	Ikanogavialis	5.20	1.64	1
	Rhamphostomopsis	16.00	1.64	6
	Rhamphosuchus	5.20	1.64	1
Mekosuchidae				
	Mekosuchus	0.02	0.00	1
Stomatosuchidae				
	Chiayüsuchus	145.60	65.00	2