

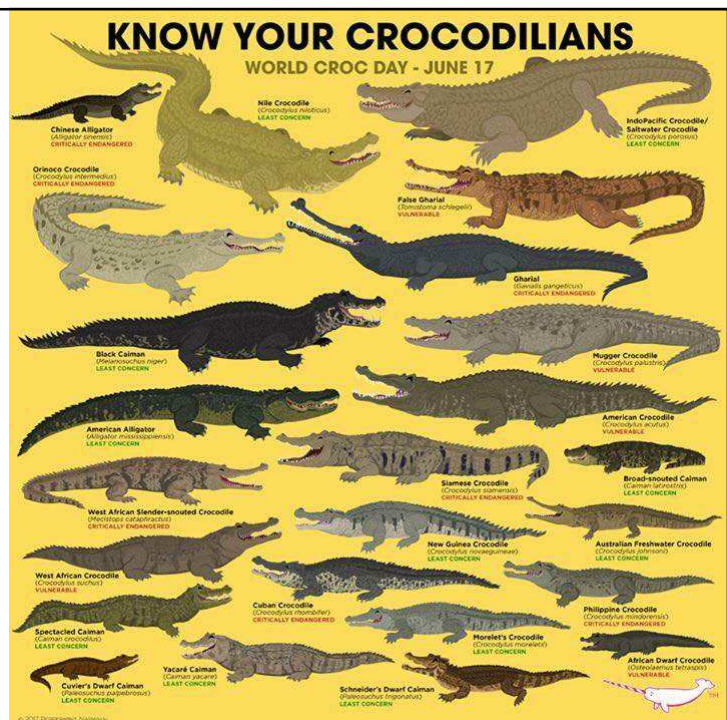
Mas afinal, jacarés são fósseis vivos?

Dra. Lucy Gomes de Souza
(Museu da Amazônia)



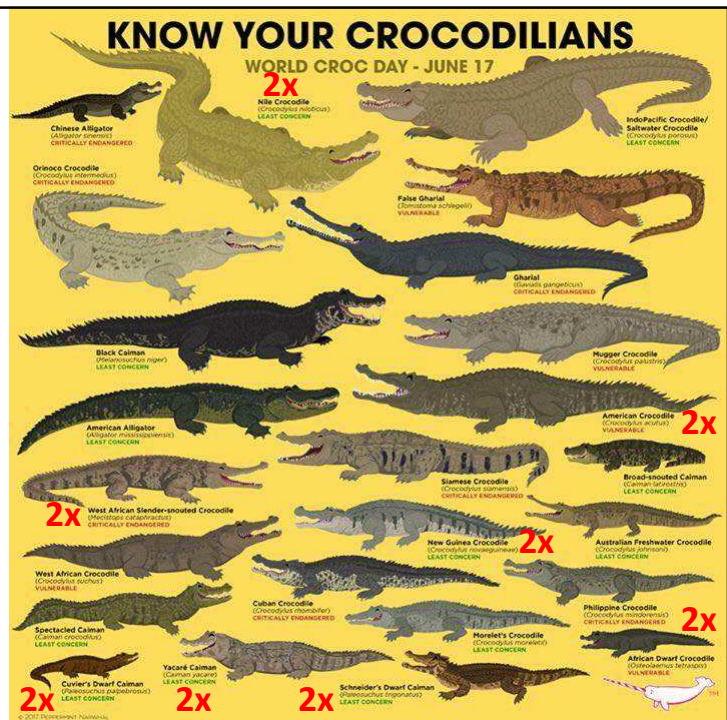
Diversidade atual

TOTAL (?)
= 24

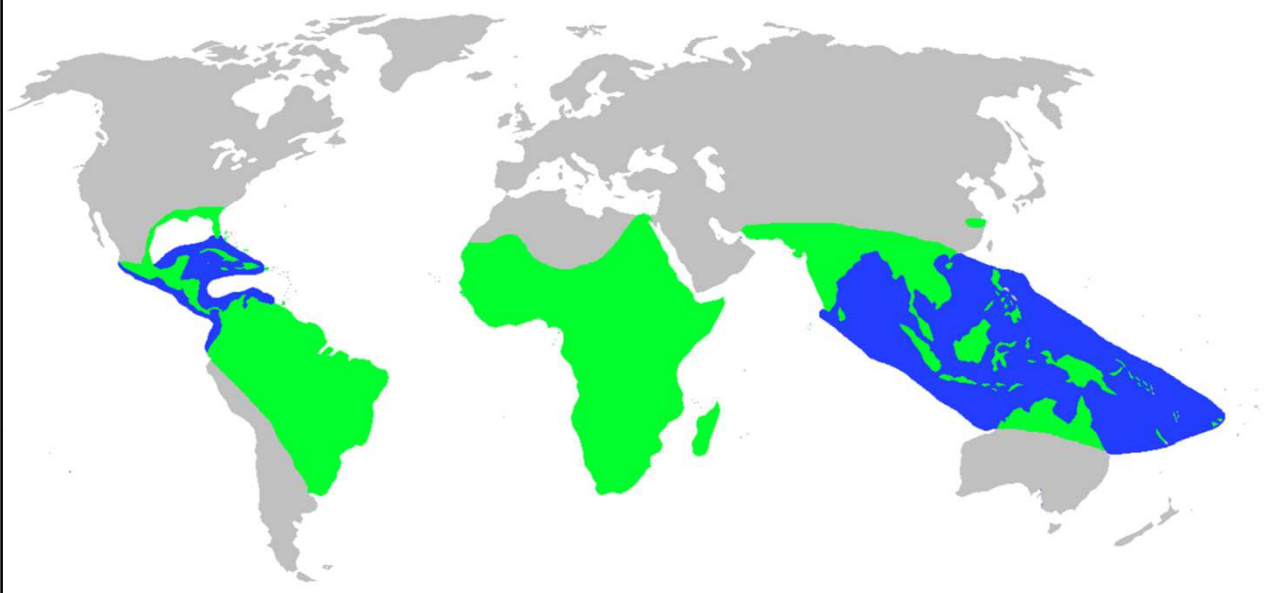


Diversidade atual

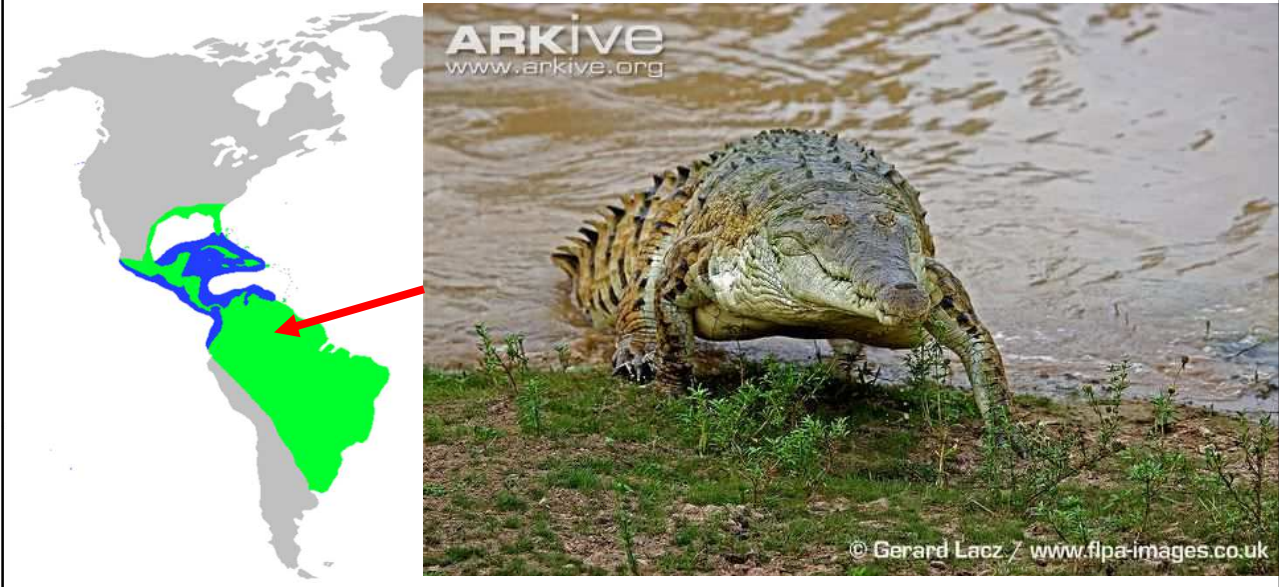
TOTAL (?)
= 32



Distribuição dos Crocodylia vivos



Distribuição dos Crocodylia viventes



América do Sul e Brasil!



Melanosuchus niger



Caiman latirostris



Paleosuchus palpebrosus



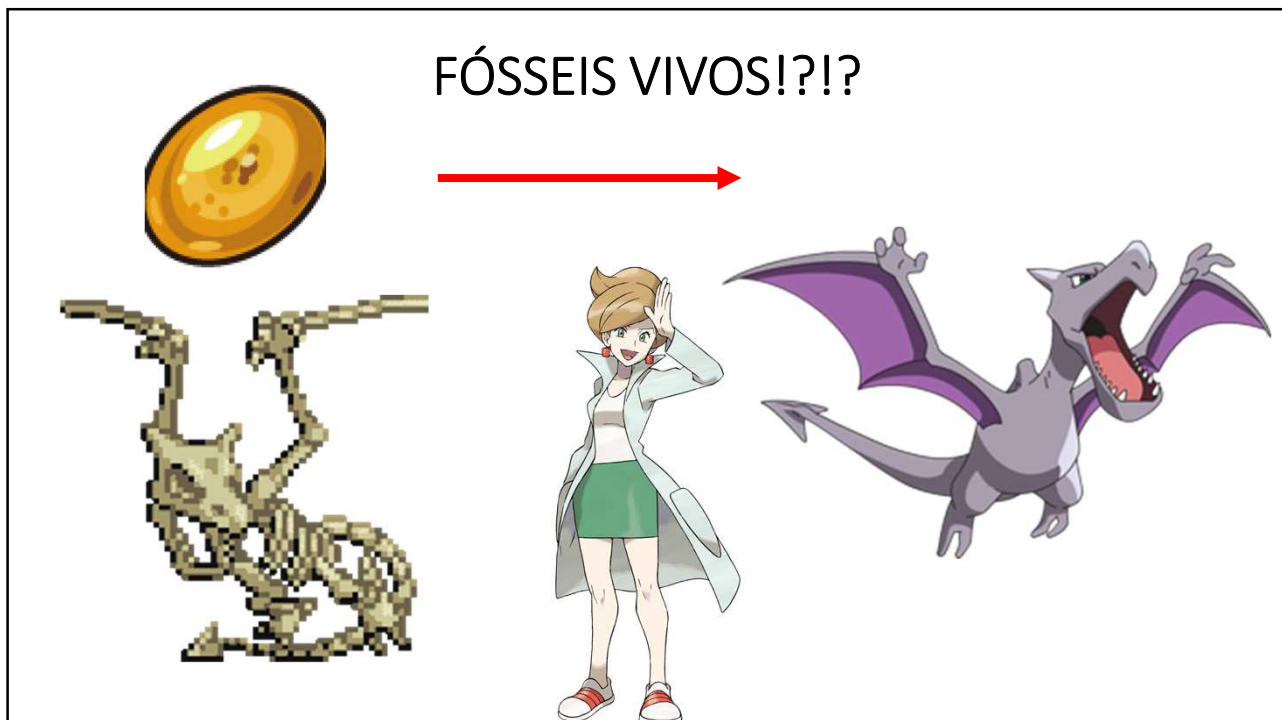
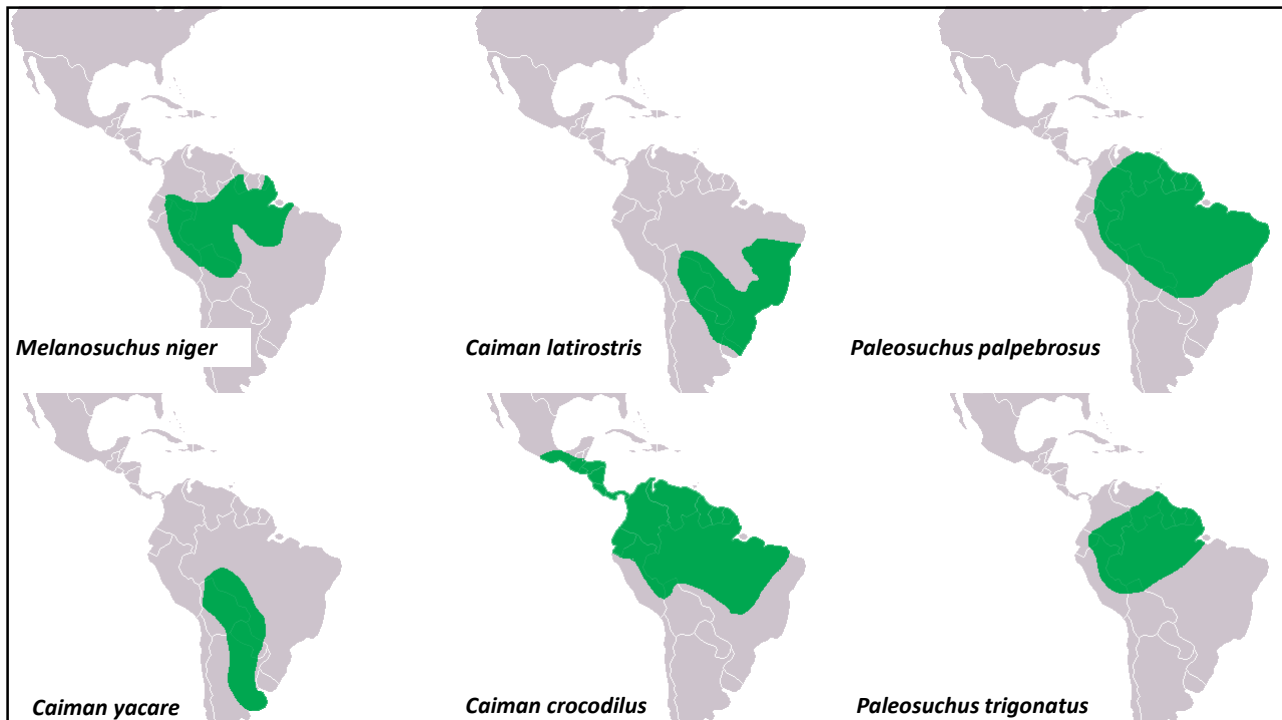
Caiman yacare



Caiman crocodilus



Paleosuchus trigonatus



Fóssil vivo (1)



Cachorro-vinagre



Peter Wilhelm Lund

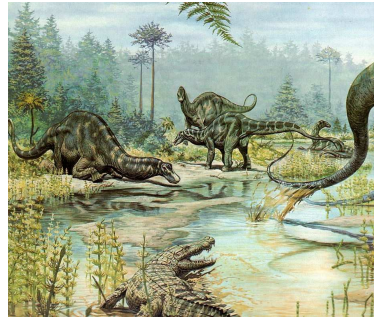


Celacanto

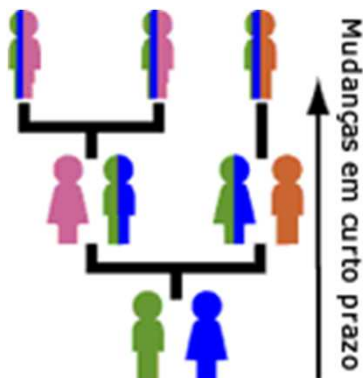


Voay robustus

© Alexander Lovegrove



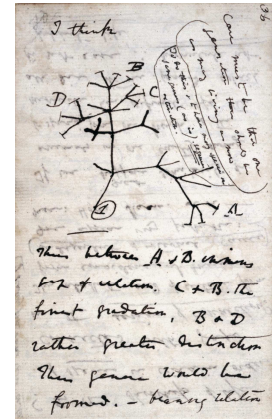
Fóssil vivo (2)



evoluir

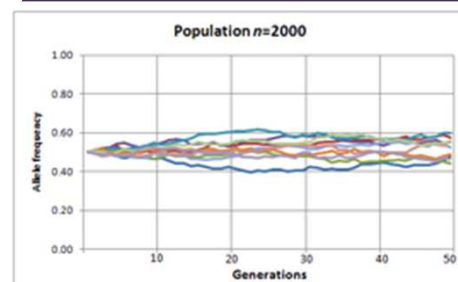
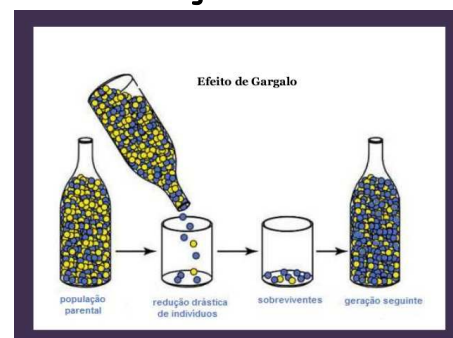
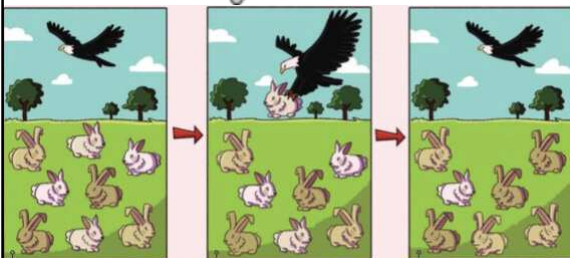
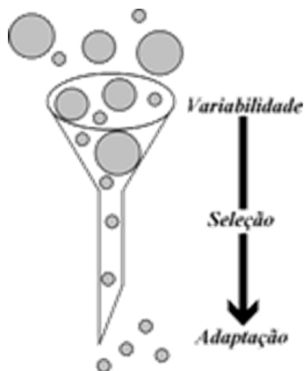
Sofrer evolução ou transformações; progredir: a humanidade evolui incessantemente. Atualizar-se no que diz respeito a ideias ou convicções: sua mentalidade evoluiu.

l) Dicio.com.br



Evolução... OU... Evoluções??

Mecanismos (?) da Evolução!



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Paleontologia: Cenários de Vida

PORQUE UM “FÓSSIL VIVO” NÃO PODE EXISTIR: DEDUÇÃO LÓGICA ATRAVÉS DE ABORDAGEM SISTEMÁTICA

WHY A ‘LIVING FOSSIL’ CAN NOT EXIST: LOGICAL DEDUCTION
THROUGH A SYSTEMATIC APPROACH

Pedro Seyferth R. Romano¹, Douglas Riff² & Gustavo R. Oliveira¹

¹Departamento de Geologia e Paleontologia, Museu Nacional, Universidade Federal do Rio de Janeiro.
Quinta da Boa Vista, s/n°, São Cristóvão, 20940-040, Rio de Janeiro, RJ, Brasil

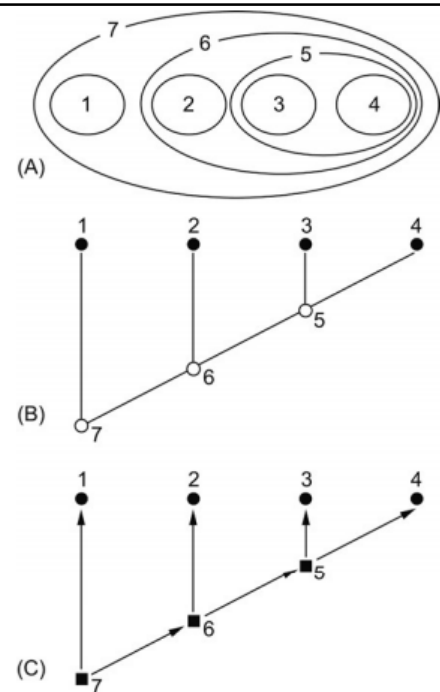
²Departamento de Ciências Naturais, Universidade Estadual do Sudoeste da Bahia
Estrada do Bem Querer, Km 04, 45083-900, Vitória da Conquista, BA, Brasil

E-mail: psrromano@gmail.com, driff@mn.ufrj.br, gustavoliveira@gmail.com

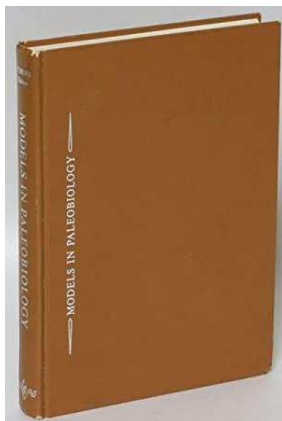
RESUMO

De maneira geral, um “fóssil vivo” pode ser identificado como uma espécie vivente (ou grupo) que é anatomicamente bastante similar a uma espécie fóssil que ocorra bem cedo na história de uma linhagem. Este conceito é falho já que a maioria dos autores reconhece “fósseis vivos” baseando-se em um caráter arbitrário que permanece imutável nas linhagens. Um conceito de espécie utilizado por muitos sistematas a reconhece como uma entidade evolutiva que muda ao longo do tempo e espaço, denominada de eidoforonte por Willi Hennig. Embora nem toda mudança em um eidoforonte possa ser verificada, está implícito que ela ocorra tanto nas linhagens como na origem de novas linhagens (respectivamente, anagênese e cladogênese). Portanto, se a identificação de estabilidade em algumas linhagens é um problema amostral, é impossível se identificar um “fóssil vivo” rigorosamente. Assim, sugerimos que o termo seja abandonado.

Palavras-chave: “Fóssil vivo”, Conceito de espécie, Filogenia



Equilíbrio pontuado



SPECIATION

5

PUNCTUATED EQUILIBRIA: AN ALTERNATIVE TO PHYLETIC GRADUALISM

Niles Eldredge • Stephen Jay Gould

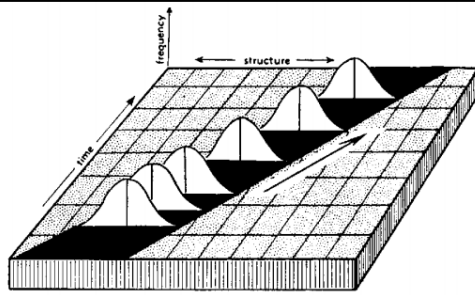


Figure 5-2: A standard textbook view of evolution *via* phyletic gradualism. From Moore, Lalicker, and Fischer, 1952; figure 1-14.

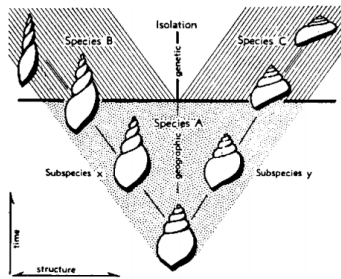


Figure 5-3: A hypothetical case of geographic speciation viewed from the perspective of phyletic gradualism—slow and gradual transformation in two lineages. From Moore, Lalicker, and Fischer, 1952; figure 1-15.

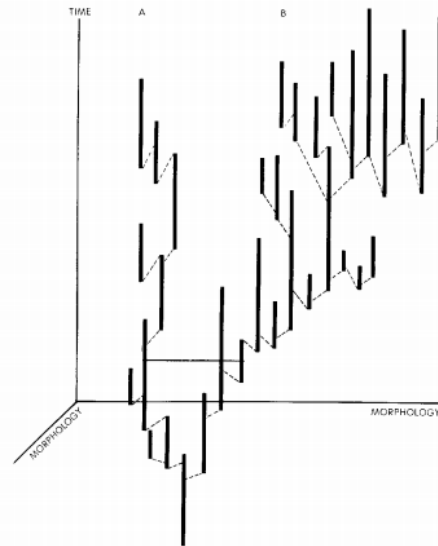
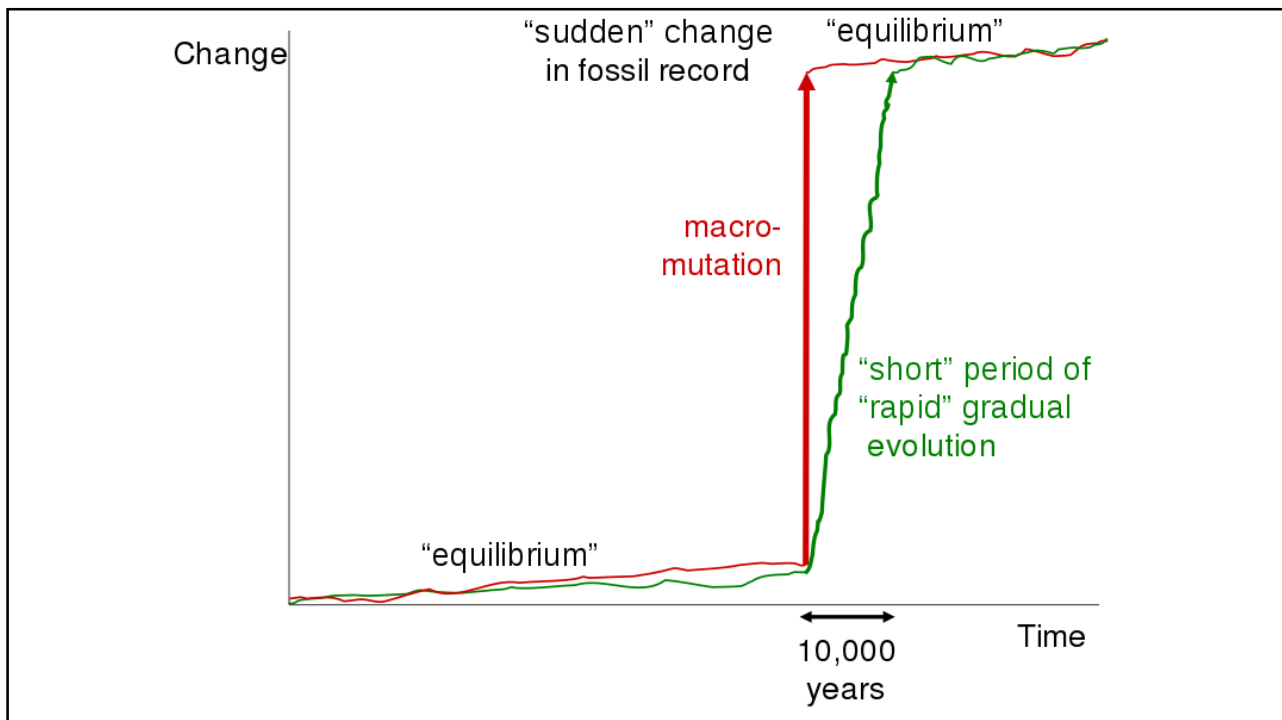
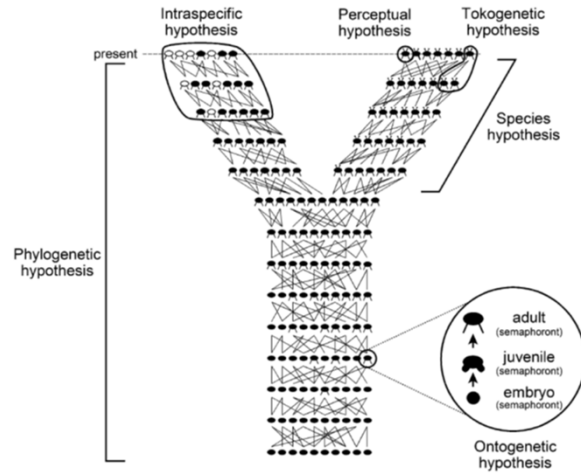


Figure 5-10: Three-dimensional sketch contrasting a pattern of relative stability (A) with a trend (B), where speciation (dashed lines) is occurring in both major lineages. Morphological change is depicted here along the horizontal axis, while the vertical axis is time. Though a retrospective pattern of directional selection might be fitted as a straight line in (B), the actual pattern is stasis within species, and differential success of species exhibiting morphological change in a particular direction. For further explanation, see text.





REVIEW

Modern cryptic species and crocodylian diversity in the fossil record

CHRISTOPHER A. BROCHU^{1*} and COLIN D. SUMRALL²

¹Department of Earth and Environmental Sciences, University of Iowa, Iowa City, IA 52242, USA

²Department of Earth and Planetary Sciences, University of Tennessee, Knoxville, TN 37996, USA

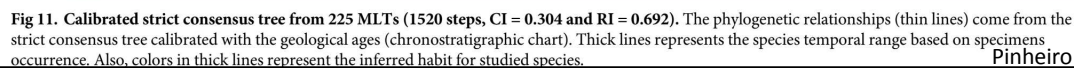
Received 21 February 2020; revised 23 March 2020; accepted for publication 24 March 2020

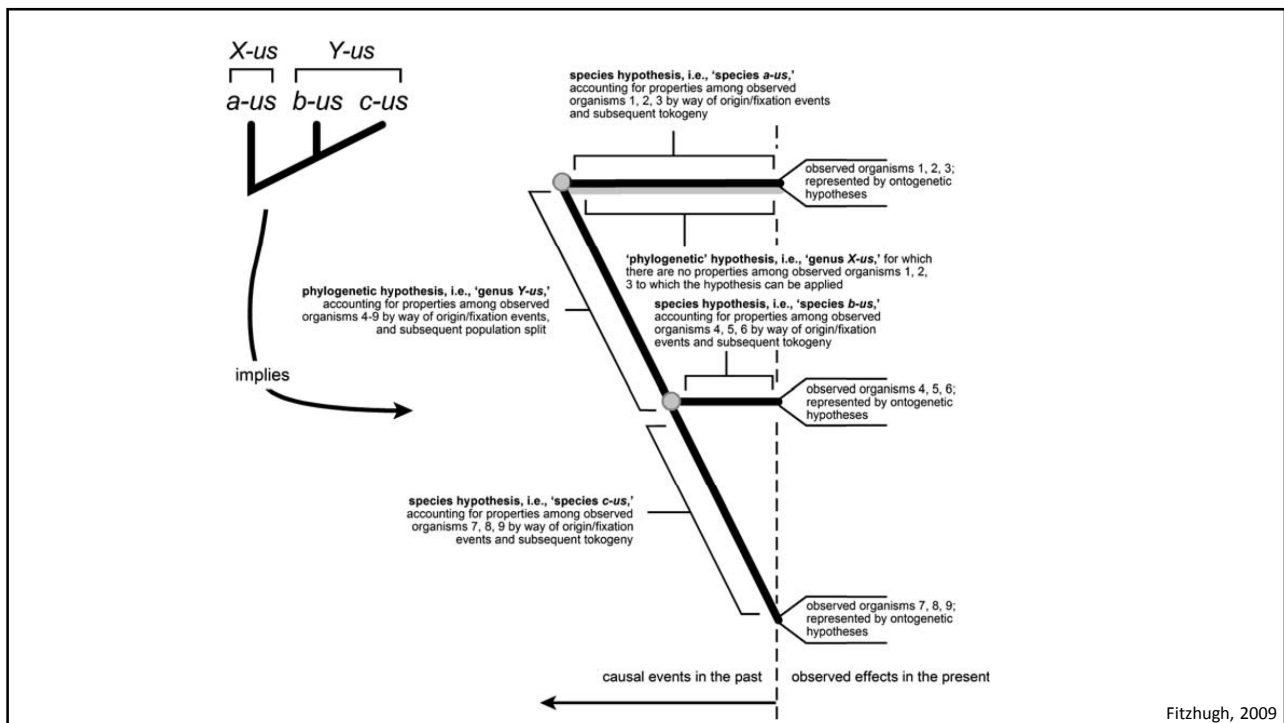
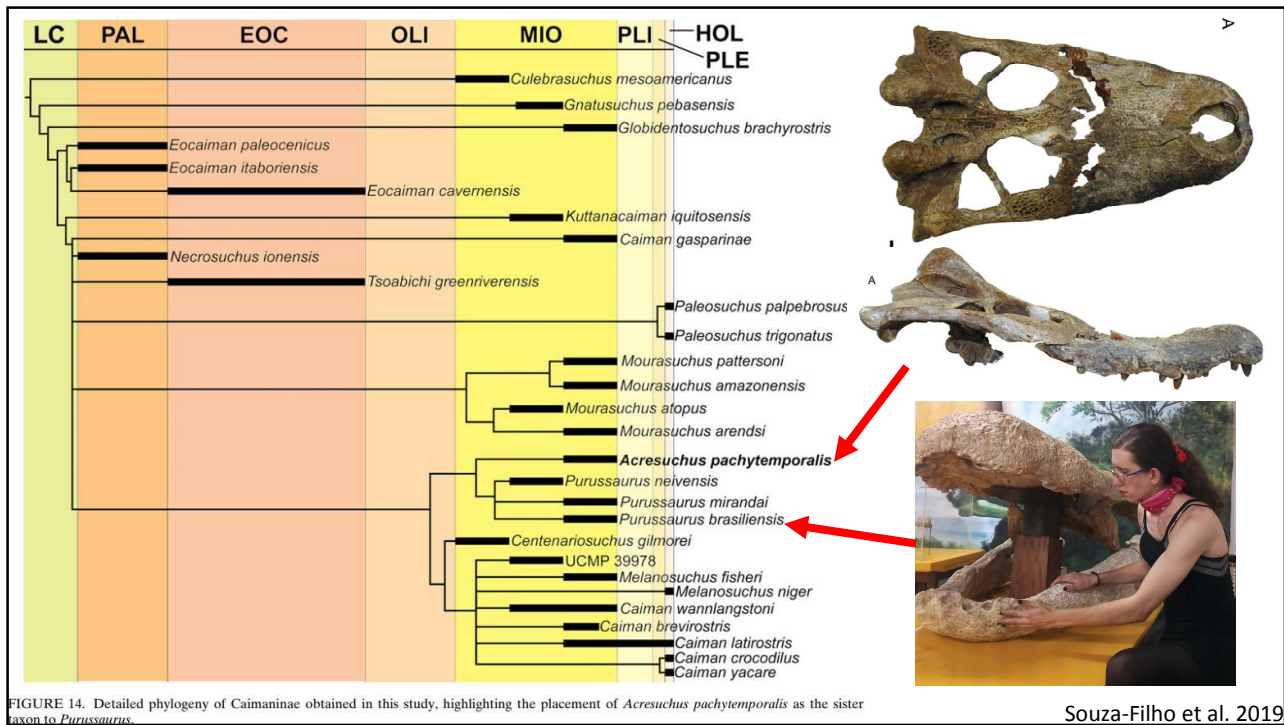
With crocodylians, we face the additional widespread perception that they evolved slowly, had broad geographic ranges (as many modern crocodiles are thought to have) and (at least in the late Cenozoic) were directly ancestral to whatever living species occur in the same area. The latter is a reflection of the long-held misperception that crocodylians are evolutionarily static “living fossils” (e.g. Meyer, 1984). These encouraged a conservative nomenclatural approach to crocodyliform systematics. The discovery of cryptic species complexes among crocodylians suggests that our approach may have been too conservative.

Uma breve história dos jacarés...



Two phylogenetic trees illustrating the evolution of crocodylomorphs. The left tree shows a traditional classification with Crocodylomorpha (Crocodylia) as a sister group to Pseudosuchia, which includes Aetosauria, 'Rauisuchia', and Crocodylia (Crocodylomorph crown-group). The right tree shows a more recent classification where Crocodylia is nested within Pseudosuchia, and the 'longirostrine clade' (Tethysuchia) is sister to Neosuchia. Various groups like Metriorhynchidae, Teleosauridae, Pholidosauridae, Dinosaurs, Goniatoididae, Bernissartia, Crocodylia, Atraposauridae, Araripesuchus, Baurusuchidae, and Protorosuchidae are also labeled.





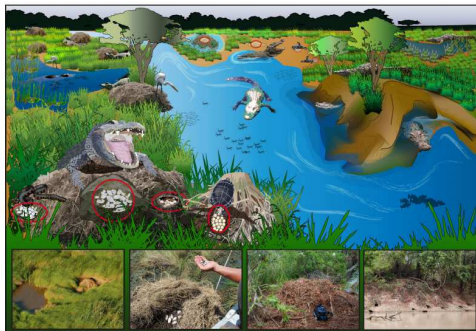
BIOLOGICAL
REVIEWS

Biol. Rev. (2020), pp. 000–000.
doi: 10.1111/brv.12594

Cambridge
Philosophical Society

The ecological importance of crocodylians: towards evidence-based justification for their conservation

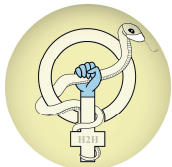
Ruchira Somaweera^{1,2*}, James Nifong³, Adam Rosenblatt⁴, Mathew L. Brien⁵, Xander Combrink⁶, Ruth M. Elsey⁷, Gordon Grigg⁸, William E. Magnusson⁹, Frank J. Mazzotti¹⁰, Ashley Pearcy¹¹, Steven G. Platt¹², Matthew H. Shirley¹³, Marisa Tellez¹⁴, Jan van der Ploeg¹⁵, Grahame Webb^{16,17}, Rom Whitaker¹⁸ and Bruce L. Webber^{1,2,19}



Obrigada!

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Herpetologia Segundo as
Herpetólogas



Rede Kunhã Asé

Do a loony-goony dance
'Cross the Kitchen floor,
Put something silly in the world
That ain't been there before.

- Shel Silverstein,
A Light in the Attic



JB

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