



Curso de posgrado “Herpetología neotropical”

Gymnophiona y Urodela “Arqueobatrachia”

Raúl Maneyro
Laboratorio de Herpetología. Facultad de Ciencias (UdelaR)

Gymnophiona



234 spp



Batrachia

367 ma

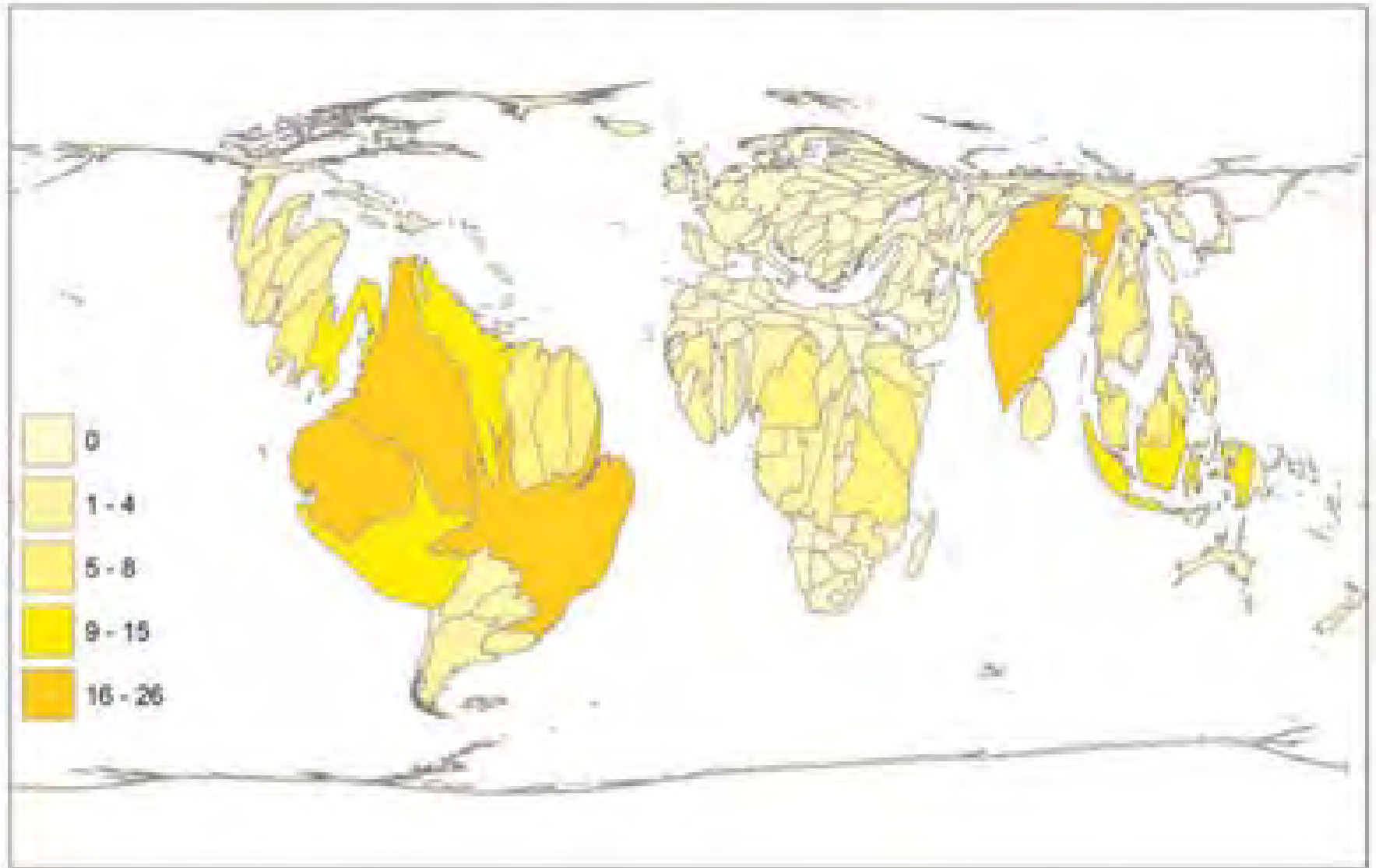
Lissamphibia

AMPHIBIA

GYMNOPHIONA Müller, 1832

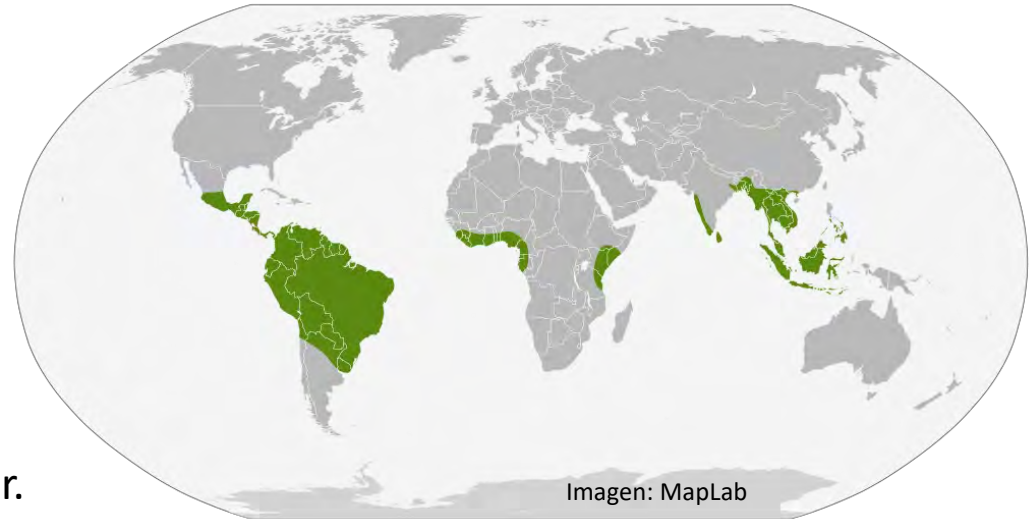


Distribución de la diversidad de las especies de Gymnophiona



GYMNOPHIONA Müller, 1832

- Fosoriales.
- Cuerpo segmentado.
- Ojos subepidérmicos.
- Tentáculos.
- Epignatos.
- Músculos para elevación mandibular.
- Cráneos compactos.
- Sin abertura del oído externo.
- Vértebras anficélicas.
- Sin miembros ni cinturas.
- Escamas dérmicas.
- Pulmones.
- Cola verdadera.
- Fecundación interna.



GYMNOPHIONA 10 Families – 234 species

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A nine-family classification of caecilians (Amphibia: Gymnophiona)

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¹Department of Zoology, The Natural History Museum, London SW7 5BD, UK

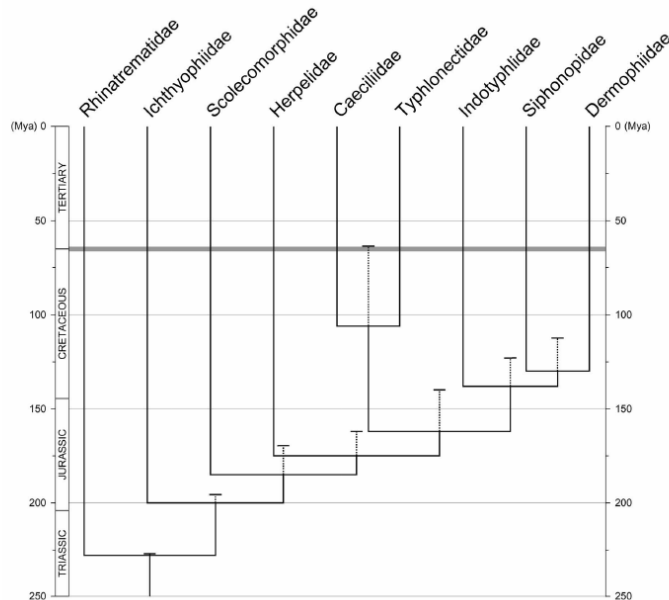
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Abstract

We propose a new family-level classification of caecilians that is based on current understanding of phylogenetic relationships and diversity. The 34 currently recognised genera of caecilians are diagnosed and partitioned into nine family-level taxa. Each family is an hypothesised monophylum, that, subject to limitations of taxon sampling, is well-supported by phylogenetic analyses and is of ancient (Mesozoic) origin. Each family is diagnosed and also defined phylogenetically. The proposed classification provides an alternative to an exclusive reliance upon synonymy in solving the longstanding problem of paraphyly of the Caeciliidae.

Key words: amphibians, herpetology, phylogeny, systematics, taxonomy



Discovery of a new family of amphibians from northeast India with ancient links to Africa

Rachunliu G. Kamei¹, Diego San Mauro^{3,4}, David J. Gower³, Ines Van Bocxlaer⁴, Emma Sherratt^{3,5}, Ashish Thomas¹, Suresh Babu², Franky Bossuyt⁴, Mark Wilkinson³ and S. D. Biju^{1,*}

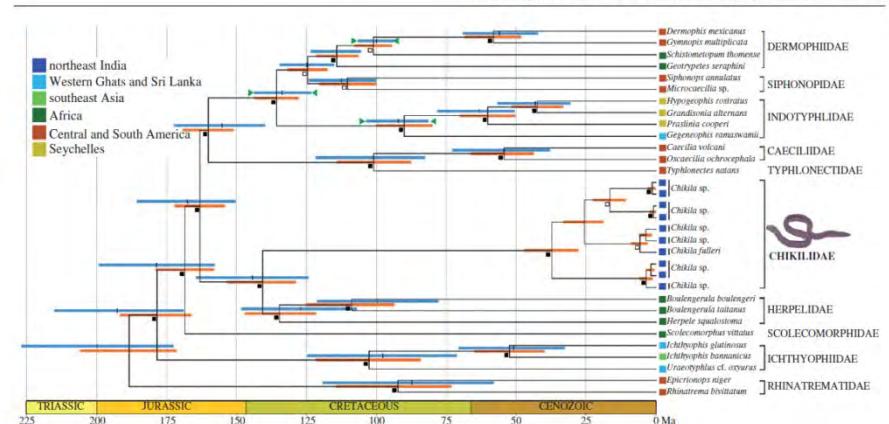
¹Department of Environmental Studies, Systematics Laboratory, and ²Centre of Excellence Programme, Centre for Environmental Management of Degraded Ecosystems, University of Delhi, Delhi, 110 007, India

³Department of Zoology, The Natural History Museum, London SW7 5BD, UK

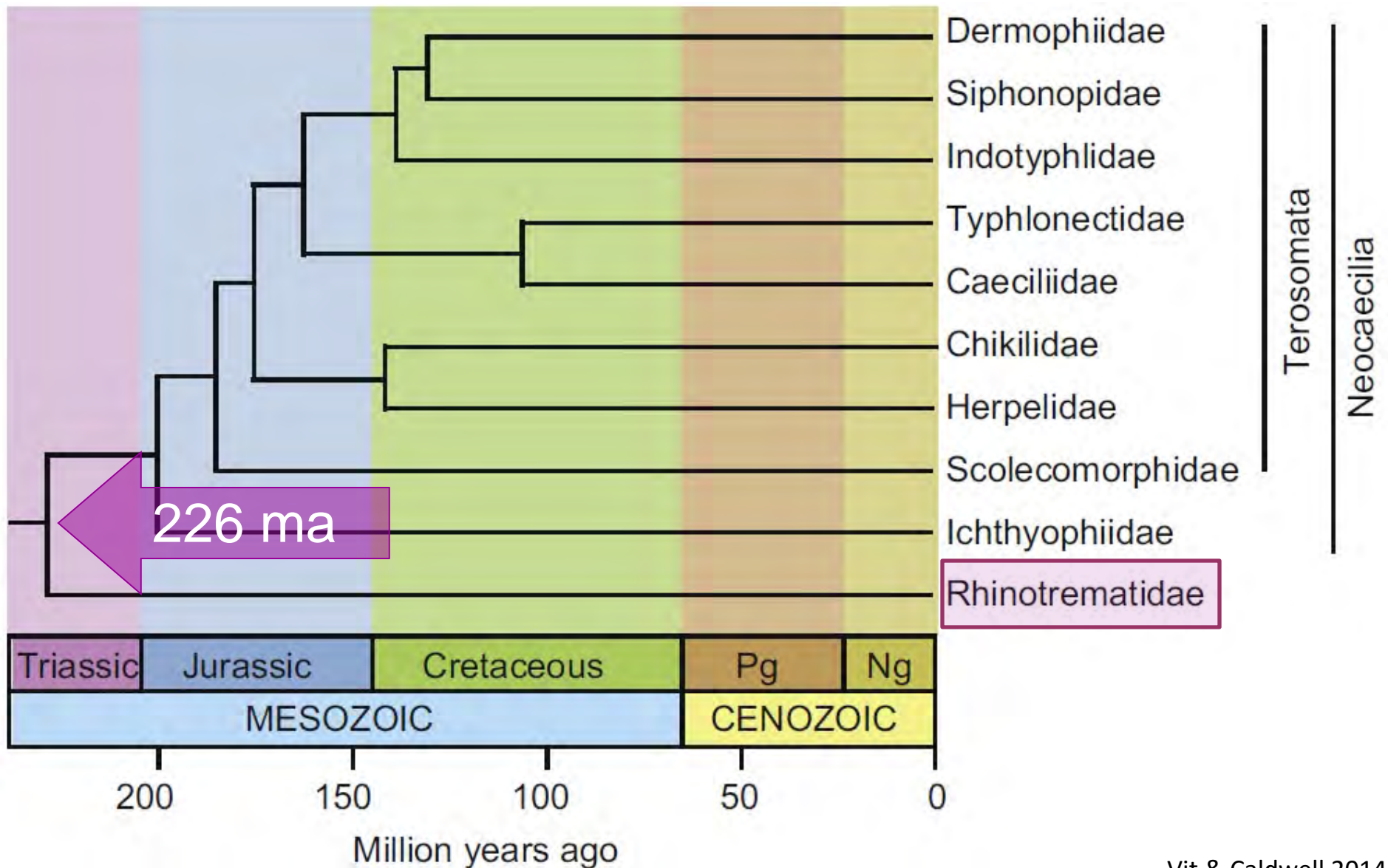
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⁵Faculty of Life Sciences, University of Manchester, Oxford Road, Manchester M13 9PT, UK

New amphibian family from India R. G. Kamei et al. 3



GYMNOPHIONA 10 Families – 234 species



RHINATREMATIDAE

(3 géneros, 15 spp)

- Tamaño mediano (200 – 330 mm).
- Con verdadera cola (vertebras caudales, miómeros y anillos cutáneos).
- Ojos visibles externamente debajo de la piel.
- Apertura tentacular adyacente al ojo.
- Boca terminal.
- Oído medio con columela.
- Región temporal del cráneo parcialmente abierta: cráneo zigocrotáfico.
- Ovíparas.

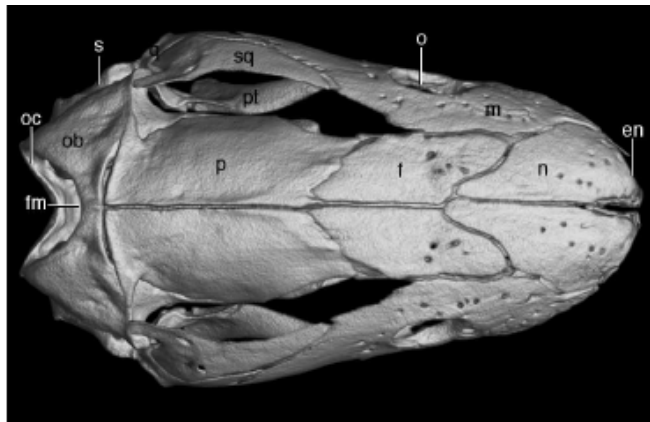
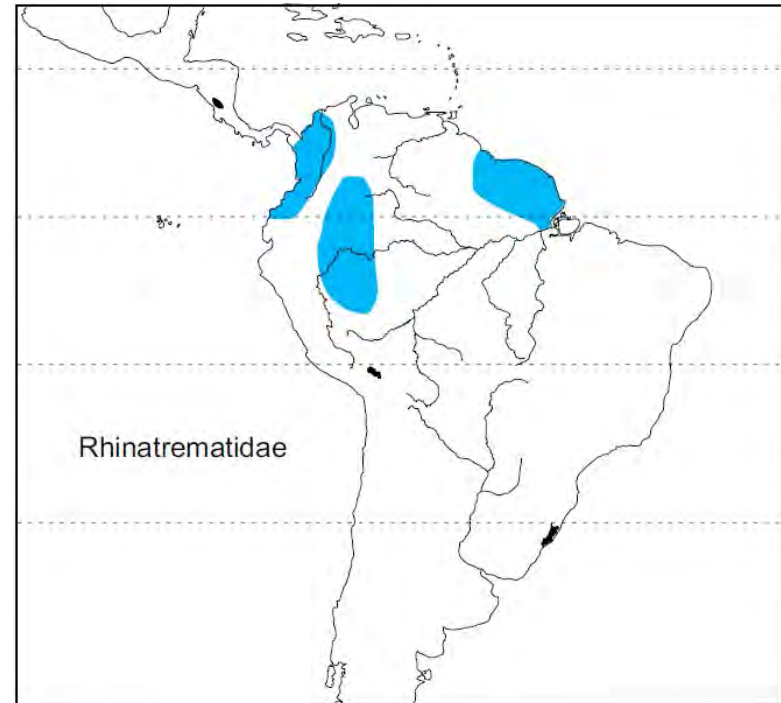
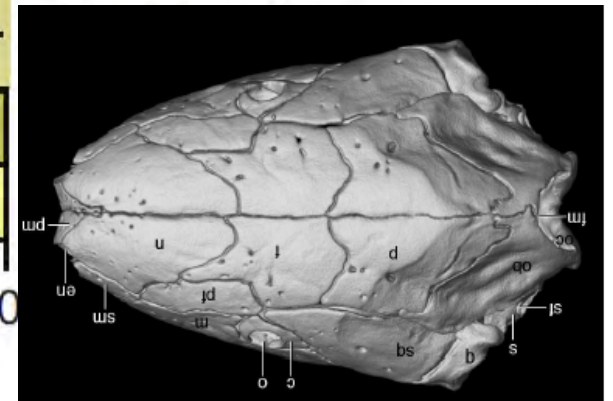
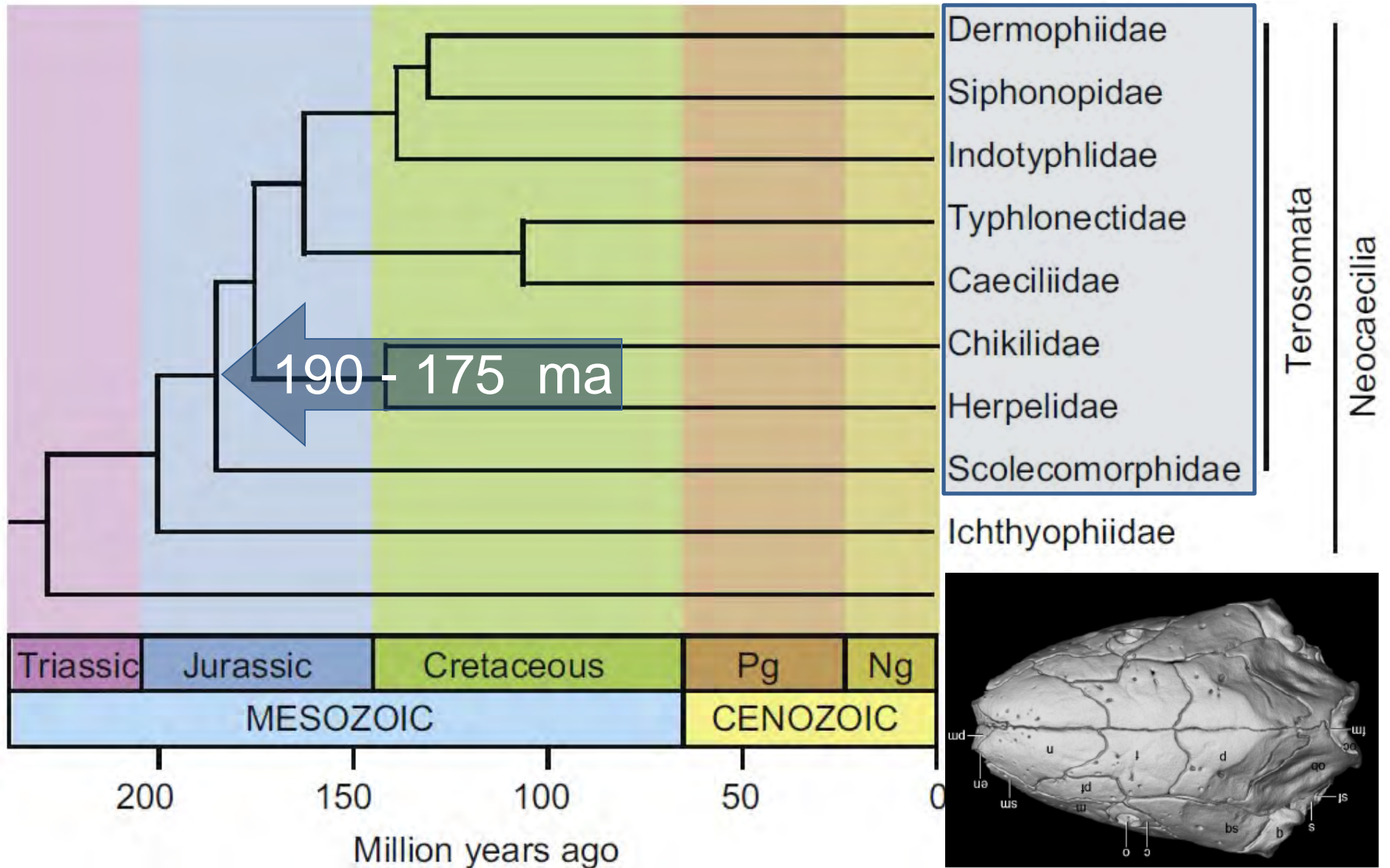


Foto: M. Bustamante

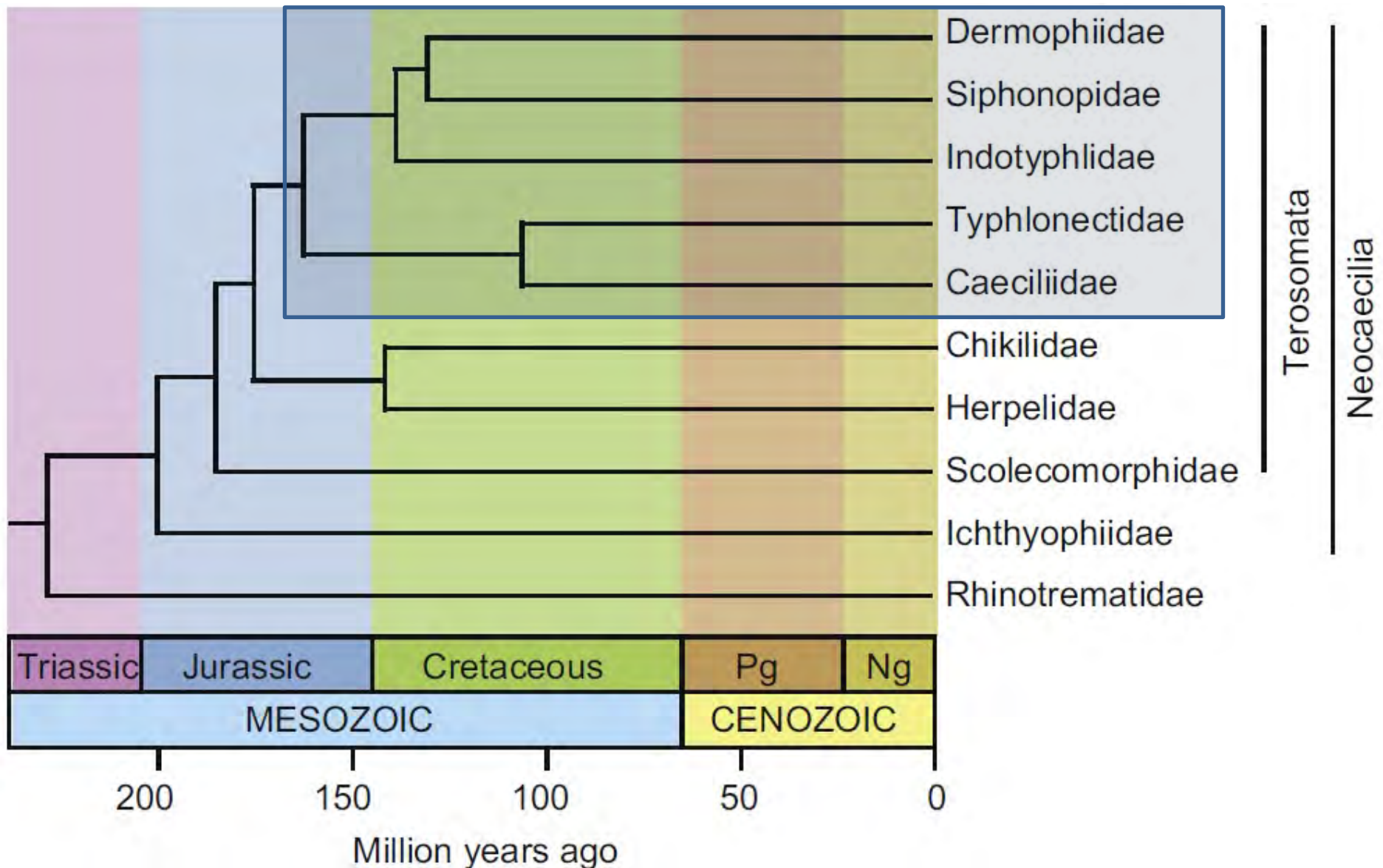
Epicrionops bicolor



Terosomata 8 Families

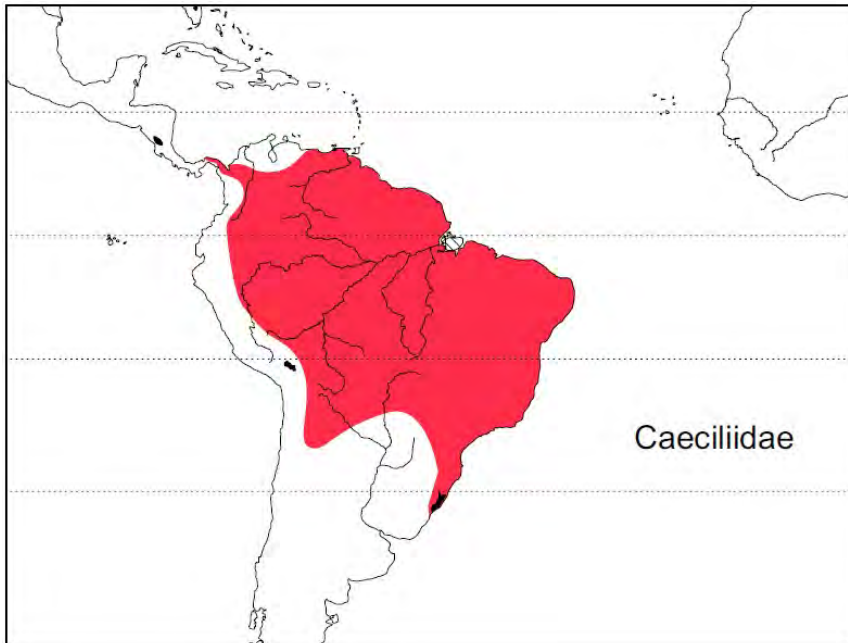


5 Families



CAECILIIDAE (2 géneros, 55 spp)

- Sin cola.
- Boca ventral.
- Tentáculos evidentes.
- Cuerpo con anillos.
- Ojos poco desarrollados.
- Vivíparas y ovíparas.



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Foto: P. Weish



Oscaecilia osae

Foto: E. Alzate

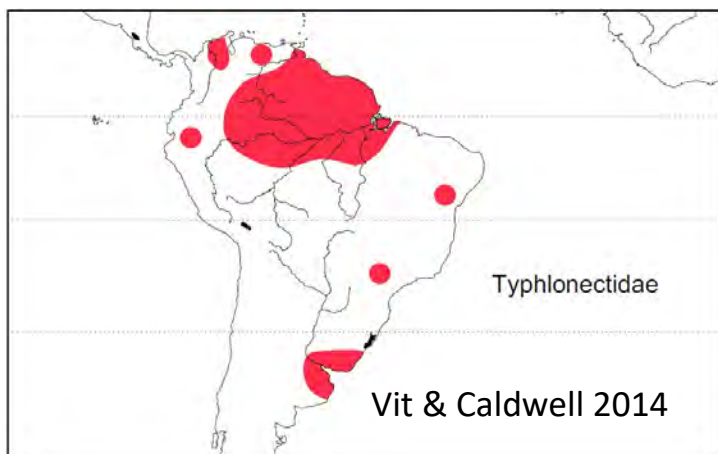


Esteban Alzate

Caecilia thompsoni

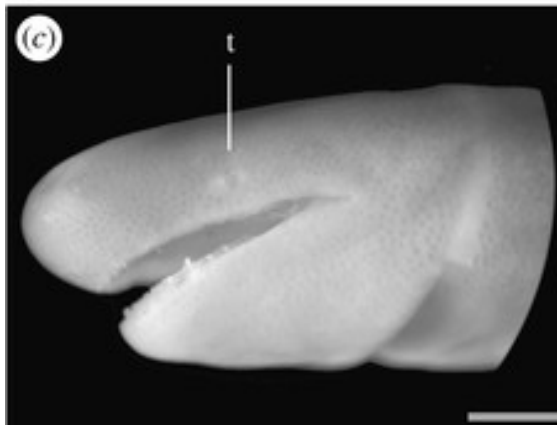
THYPHLONECTIDAE (5 géneros, 14 spp)

- Acuáticas y semiacuáticas
- Anillos primarios indiviso.
- Sin escamas dérmicas.
- Ojos visibles.
- Tentáculos poco protusibles.
- Columela.
- Sin cola.
- Vivíparos.



SIPHONOPIDAE (5 géneros, 28 spp)

- Anillos primarios.
- Escamas.
- Sin cola.
- Ojos subepidérmicos.
- Tentáculos en distinta posición.
- Columela imperforada.
- Ovíparos.
- Fosoriales.



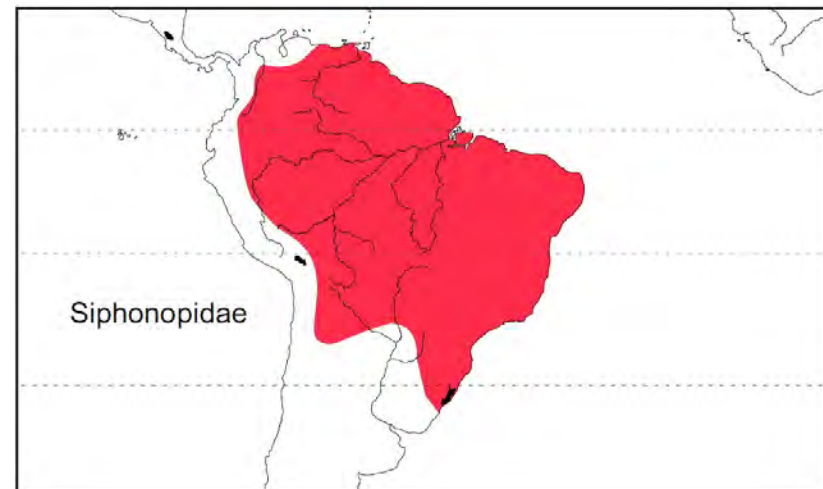
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Proc. R. Soc. B (2010) 277, 915–922
doi:10.1098/rspb.2009.1662
Published online 18 November 2009

A new lungless caecilian (Amphibia: Gymnophiona) from Guyana

Marvalee H. Wake^{1,*} and Maureen A. Donnelly²



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DERMOPHIIDAE (4 géneros, 15 spp)

- Con anillos y escamas dérmicas.
- Sin cola.
- Vivíparos.

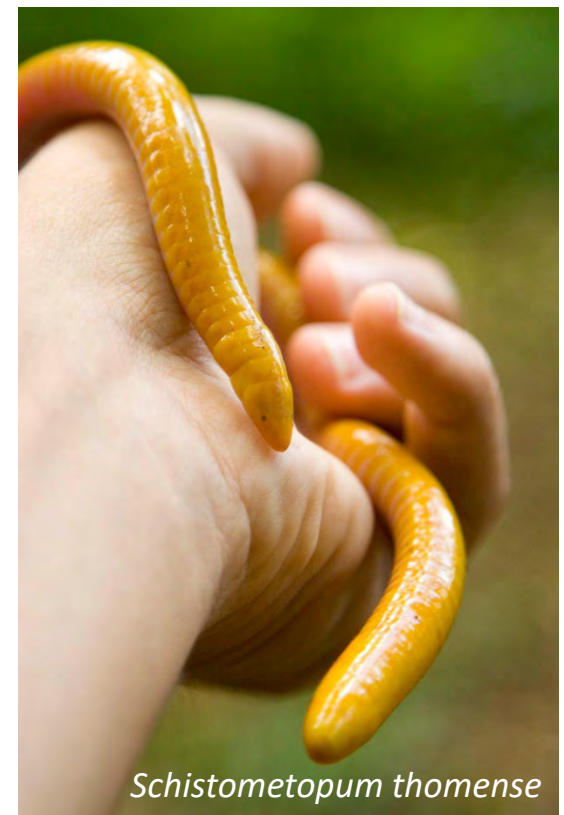
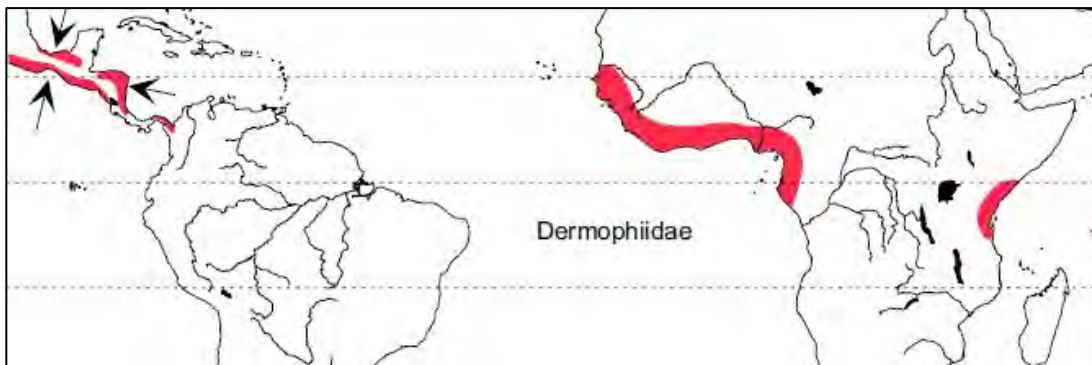


Foto: M. W. Itgen



Gymnophiona

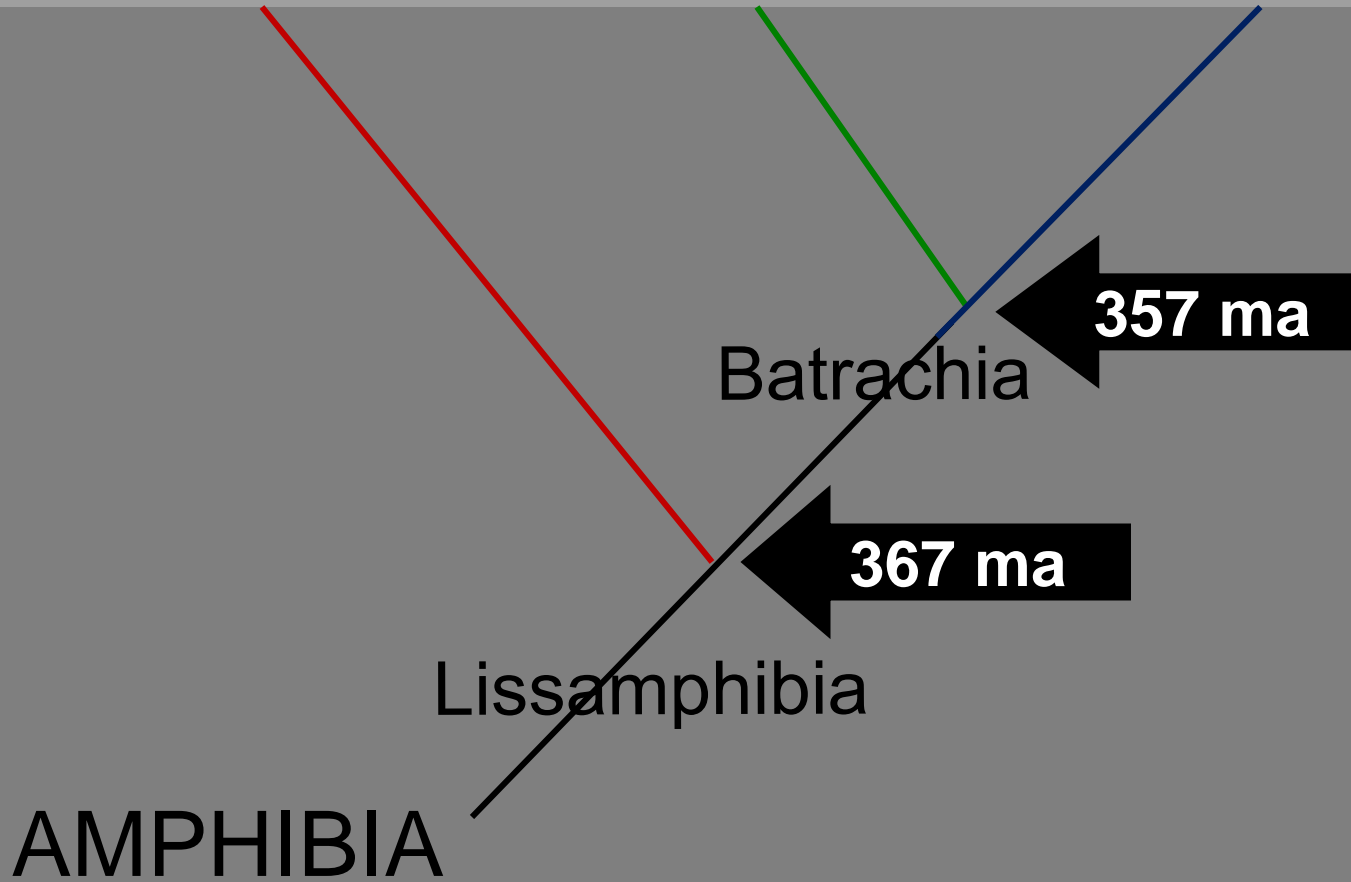


234 spp

Caudata



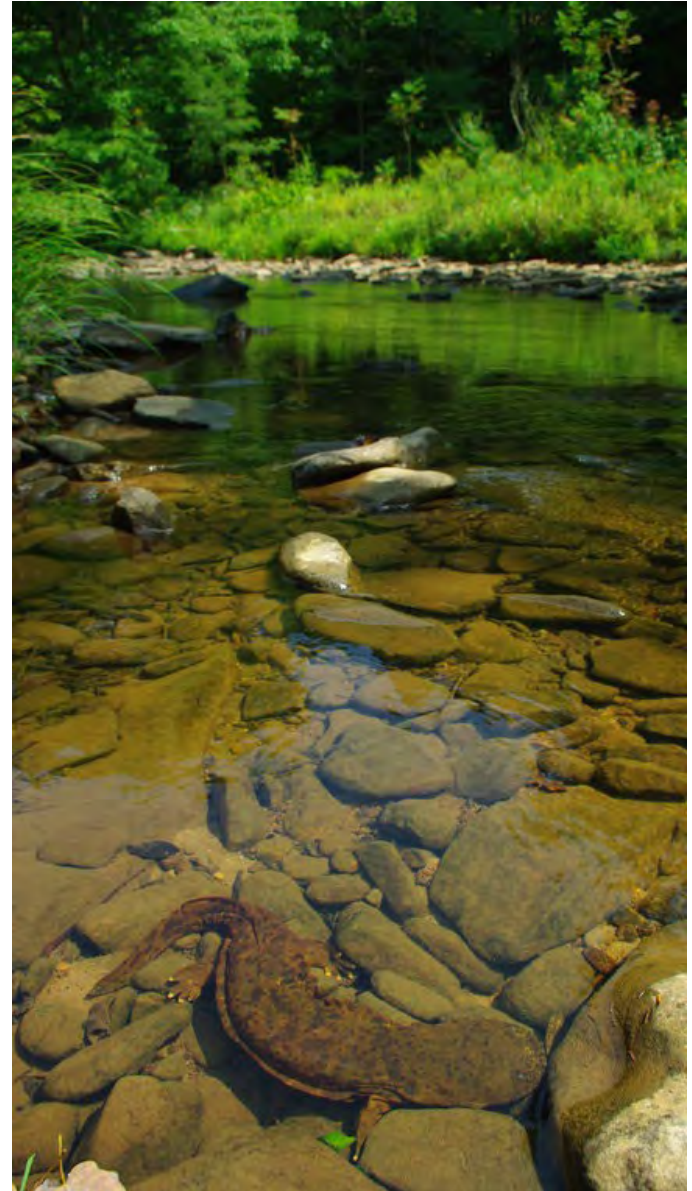
839 spp



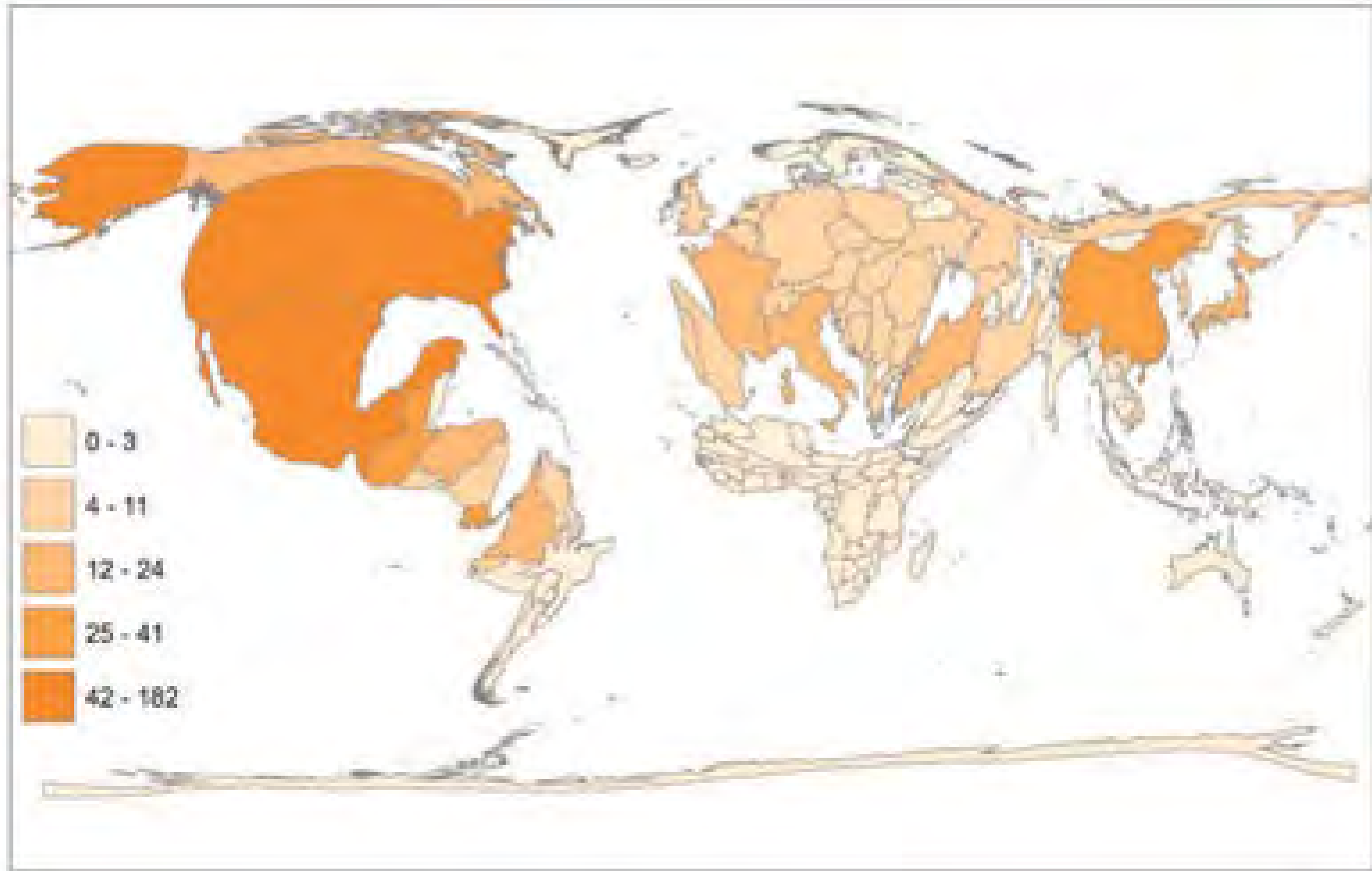
CAUDATA Fischer von Waldheim, 1813



Foto: T. Pierson

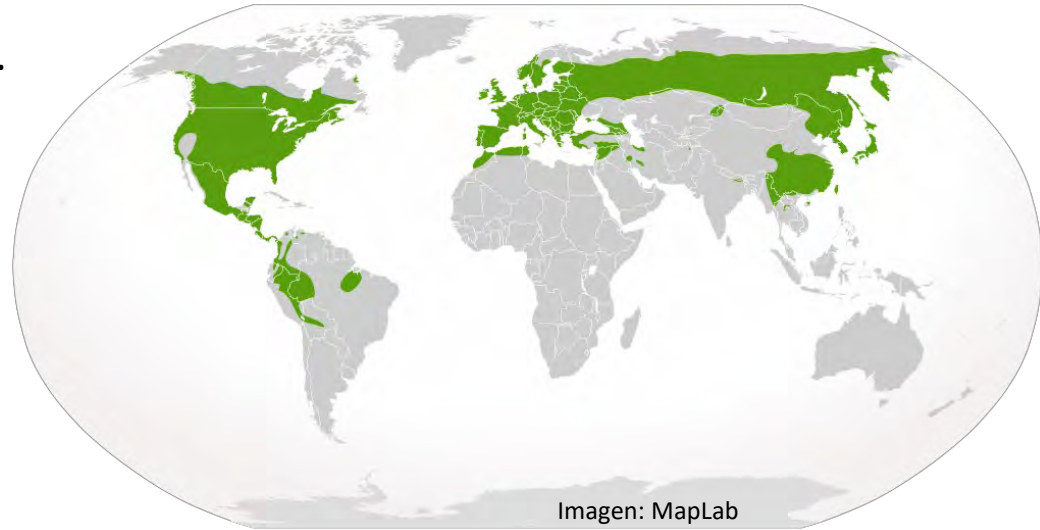


Distribución de la diversidad de las especies de Caudata

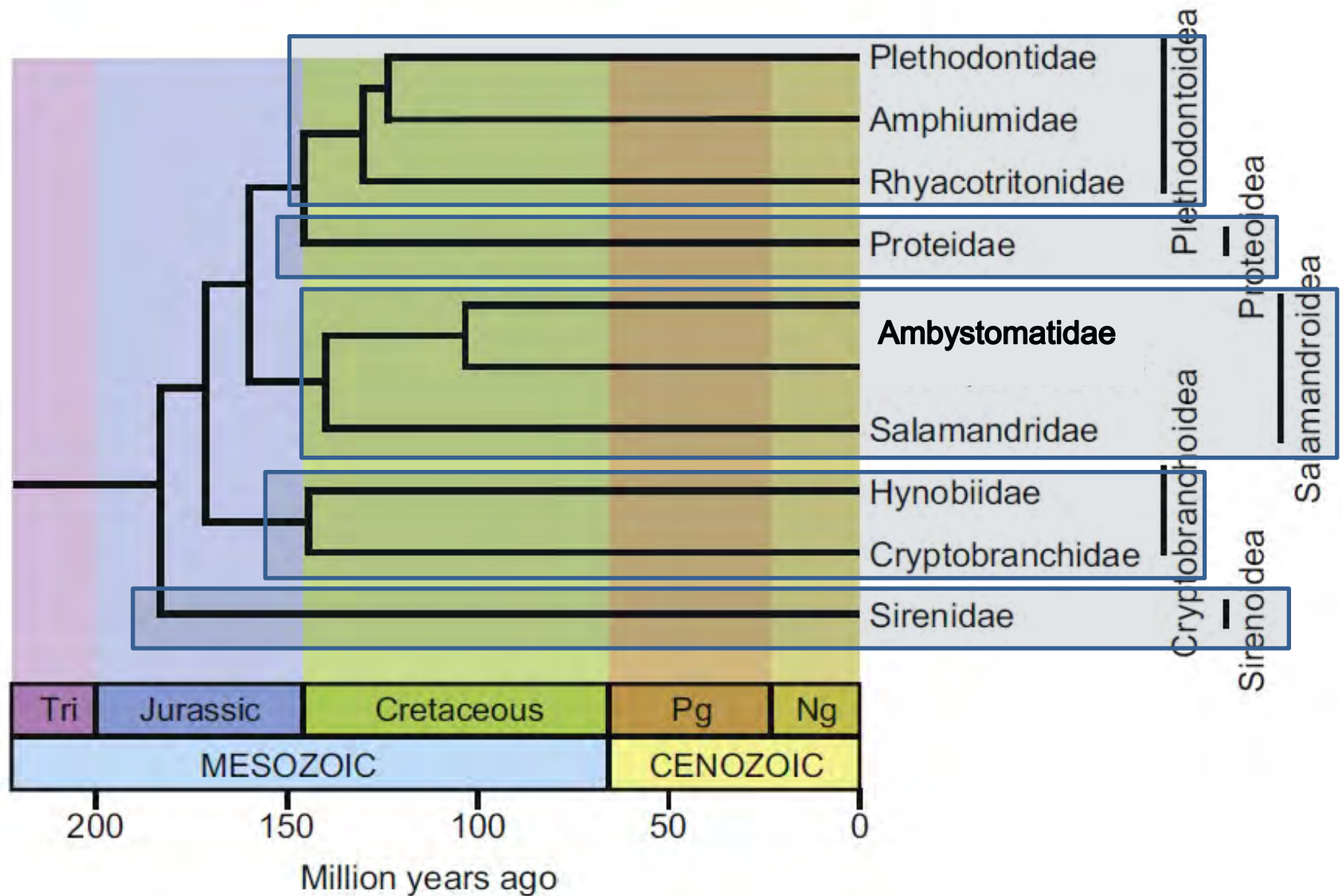


CAUDATA Fischer von Waldheim, 1813

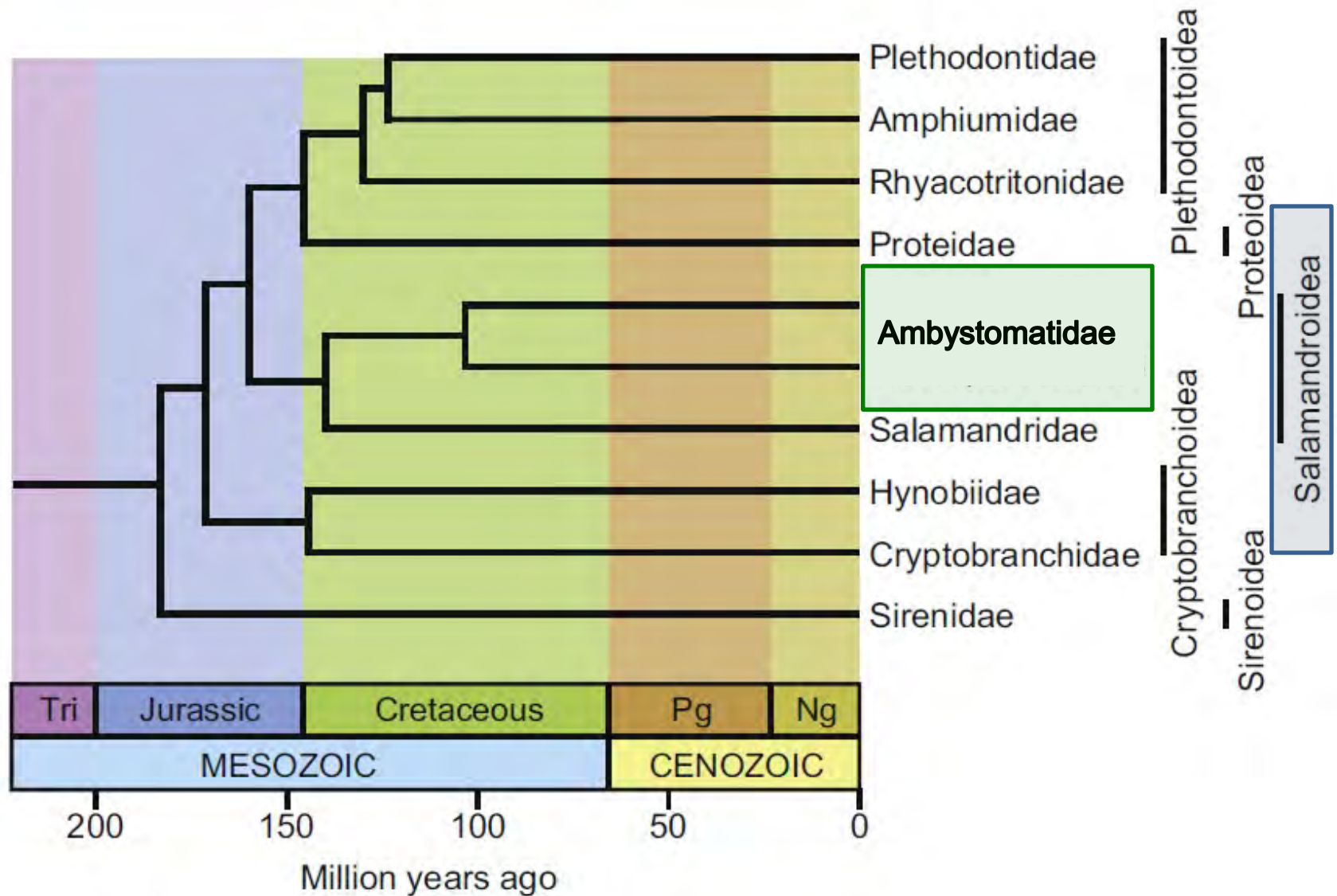
- Cabeza, cuerpo y cola bien diferenciados.
- Miembros presentes y desarrollados (salvo dos clados).
- Reducción en los huesos del cráneo.
- Fecundación externa.
- Holárticos.



CAUDATA 9 familias – 839 especies

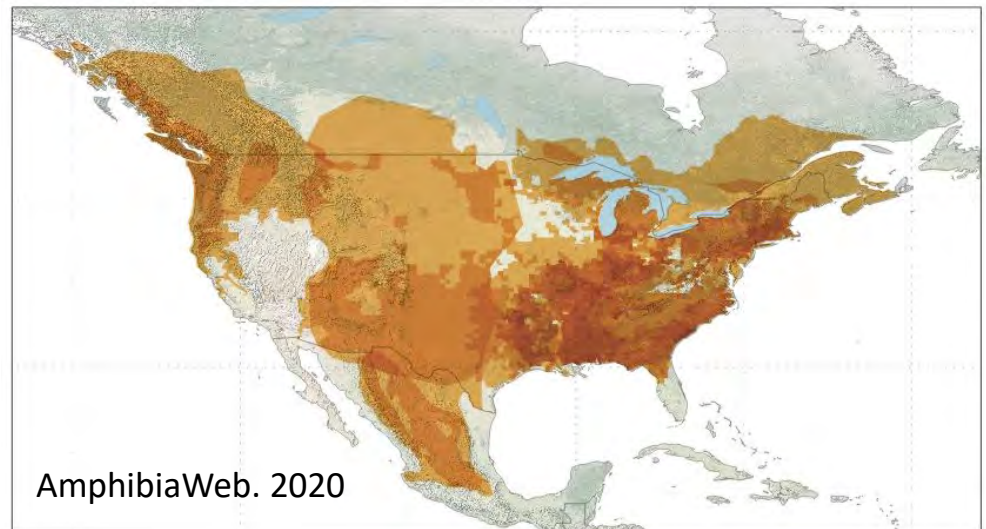
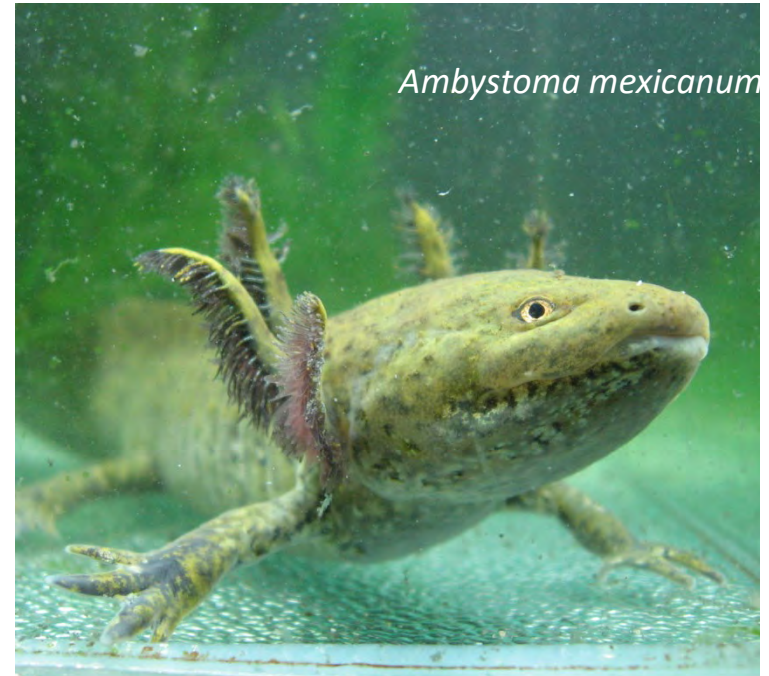


CAUDATA 9 familias – 839 especies

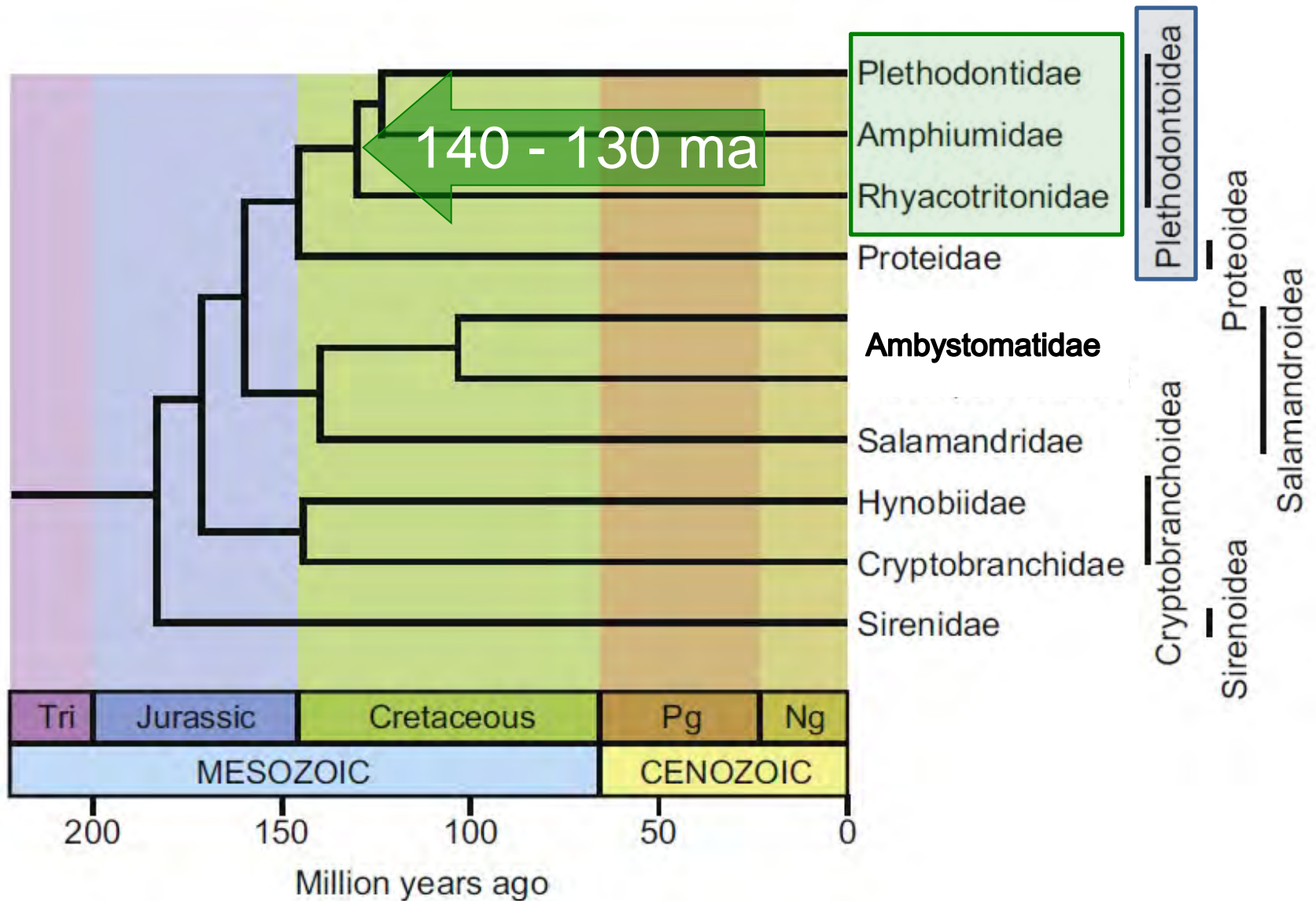


AMBYSTOMATIDAE (2 géneros, 30 spp)

- Contiene 2 géneros *Ambystoma* y *Dicamptodon*.
- *Dicamptodon*: voraces, algunos pedomórficos.
- *Ambystoma*: medianos, muchos pedomórficos

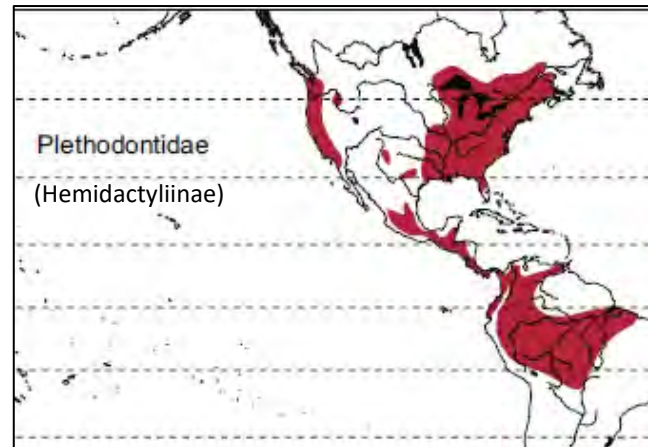


CAUDATA 9 familias – 839 especies



PLETODONTIDAE (29 géneros, 522 spp)

- Ausencia de pulmones.
- Presencia de surco naso-labial.
- Ambientes templados y tropicales húmedos.
- Lengua “bolitoide”
- Fecundación interna.



Gymnophiona



234 spp

Caudata

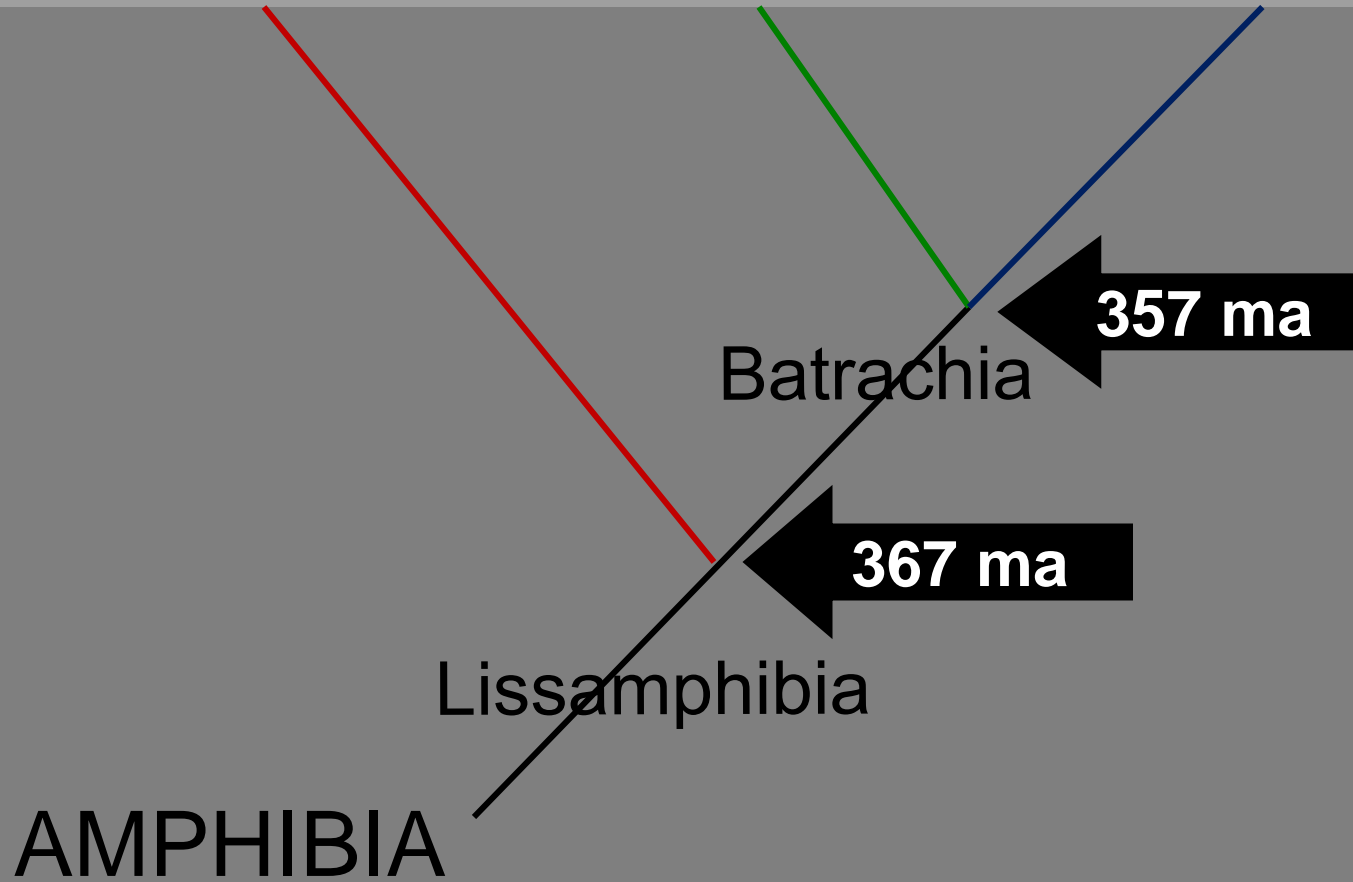


839 spp

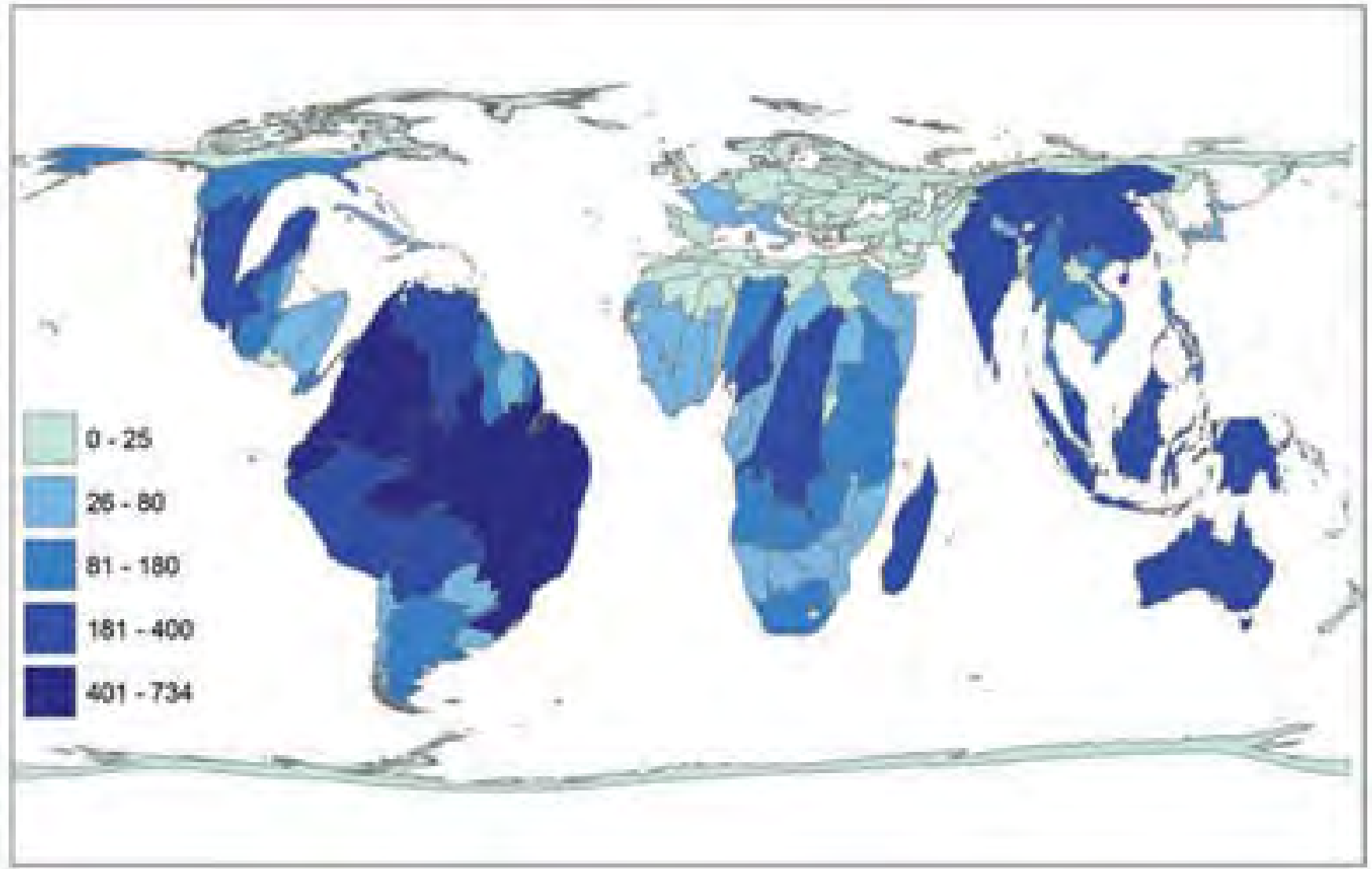
Anura



7960 spp

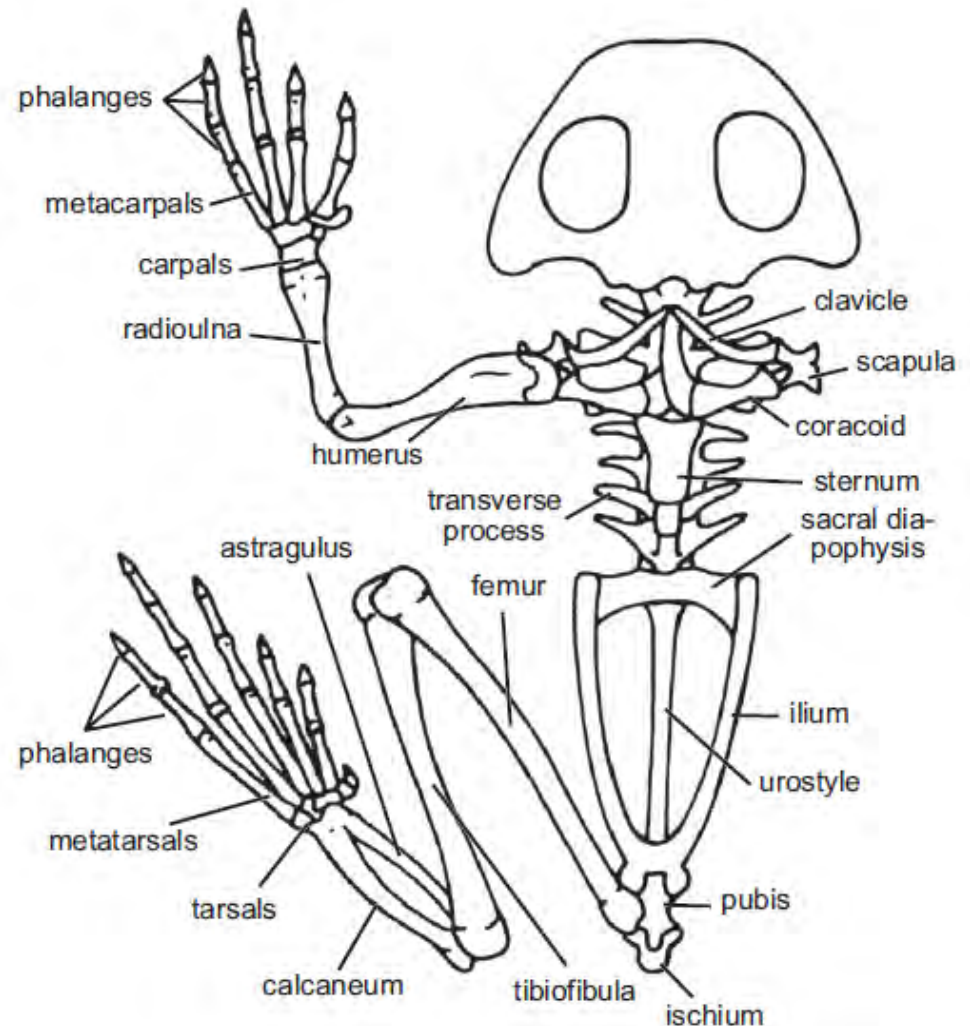


Distribución de la diversidad de las especies de Anura



ANURA Fischer von Waldheim, 1813

- Ausencia de cola.
- Cabezas anchas y planas.
- Extremidades desarrolladas
- Fusión de huesos largos.
- Pocas vertebras.
- Urostilo.
- Modos reproductivos.
- Cosmopolitas.



Amphibian Species of the World: <https://amphibiansoftheworld.amnh.org/>

American Museum
of Natural History

Amphibian Species of the World 6.2, an Online Reference

05/07/2026 03:04 pm GMT ASW home Herpetology Site

BASIC SEARCH [?]

Search only within taxon
(autocomplete list)

Search

SPECIES COUNT

Filter by taxon (autocomplete list)

Country

Click to select

Afghanistan

Albania

Algeria

Andorra

Class: [Amphibia](#) (9050 sp.)

Order: [Anura](#) (7973 sp.)

Family: [Allophrynidae](#) (3 sp.)

Family: [Alsodidae](#) (30 sp.)

Family: [Alytidae](#) (12 sp.)

Family: [Arthroleptidae](#) (154 sp.)

Subfamily: [Arthroleptinae](#) (68 sp.)

Subfamily: [Astylosterninae](#) (30 sp.)

Subfamily: [Leptopelinae](#) (56 sp.)

Family: [Ascaphidae](#) (2 sp.)

Family: [Batrachylidae](#) (12 sp.)

Family: [Bombinatoridae](#) (9 sp.)

Superfamily: [Brachycephaloidea](#) (1299 sp.)

Family: [Brachycephalidae](#) (84 sp.)

Family: [Caligophrynidae](#) (1 sp.)

Family: [Ceuthomantidae](#) (4 sp.)

How to cite:

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A large-scale phylogeny of Amphibia including over 2800 species, and a revised classification of extant frogs, salamanders, and caecilians

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Phylogeny

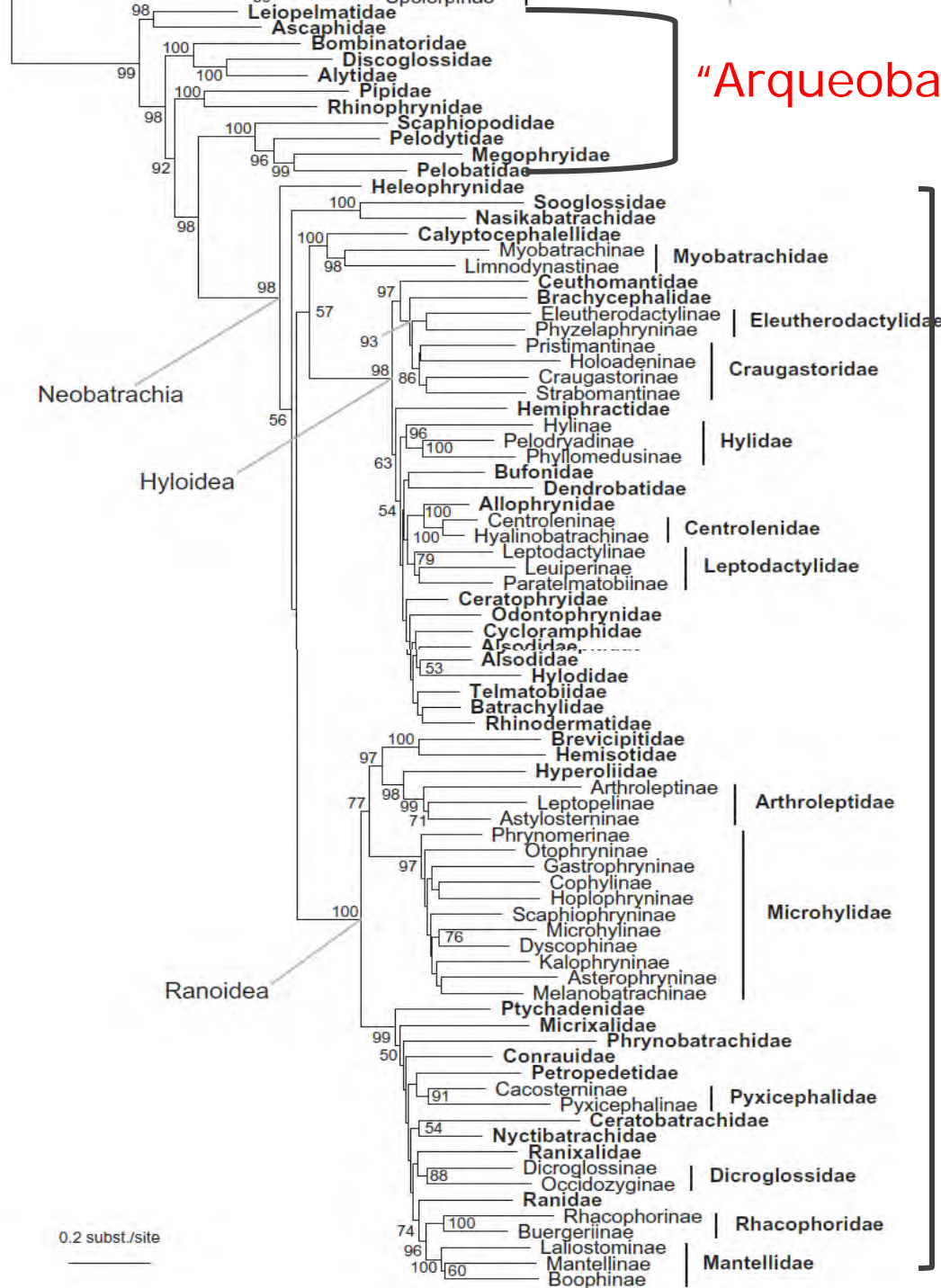
Supermatrix

Systematics

ABSTRACT

The extant amphibians are one of the most diverse radiations of terrestrial vertebrates (>6800 species). Despite much recent focus on their conservation, diversification, and systematics, no previous phylogeny for the group has contained more than 522 species. However, numerous studies with limited taxon sampling have generated large amounts of partially overlapping sequence data for many species. Here, we combine these data and produce a novel estimate of extant amphibian phylogeny, containing 2871 species (~40% of the known extant species) from 432 genera (~85% of the ~500 currently recognized extant genera). Each sampled species contains up to 12,712 bp from 12 genes (three mitochondrial, nine nuclear), with an average of 2563 bp per species. This data set provides strong support for many groups recognized in previous studies, but it also suggests non-monophyly for several currently recognized families, particularly in hyloid frogs (e.g., Ceratophryidae, Cycloramphidae, Leptodactylidae, Strabomantidae). To correct these and other problems, we provide a revised classification of extant amphibians for taxa traditionally delimited at the family and subfamily levels. This new taxonomy includes several families not recognized in current classifications (e.g., Alsodidae, Batrachyliidae, Rhinodermatidae, Odontophrynidae, Telmatobiidae), but which are strongly supported and important for avoiding non-monophyly of current families. Finally, this study provides further evidence that the supermatrix approach provides an effective strategy for inferring large-scale phylogenies using the combined results of previous studies, despite many taxa having extensive missing data.

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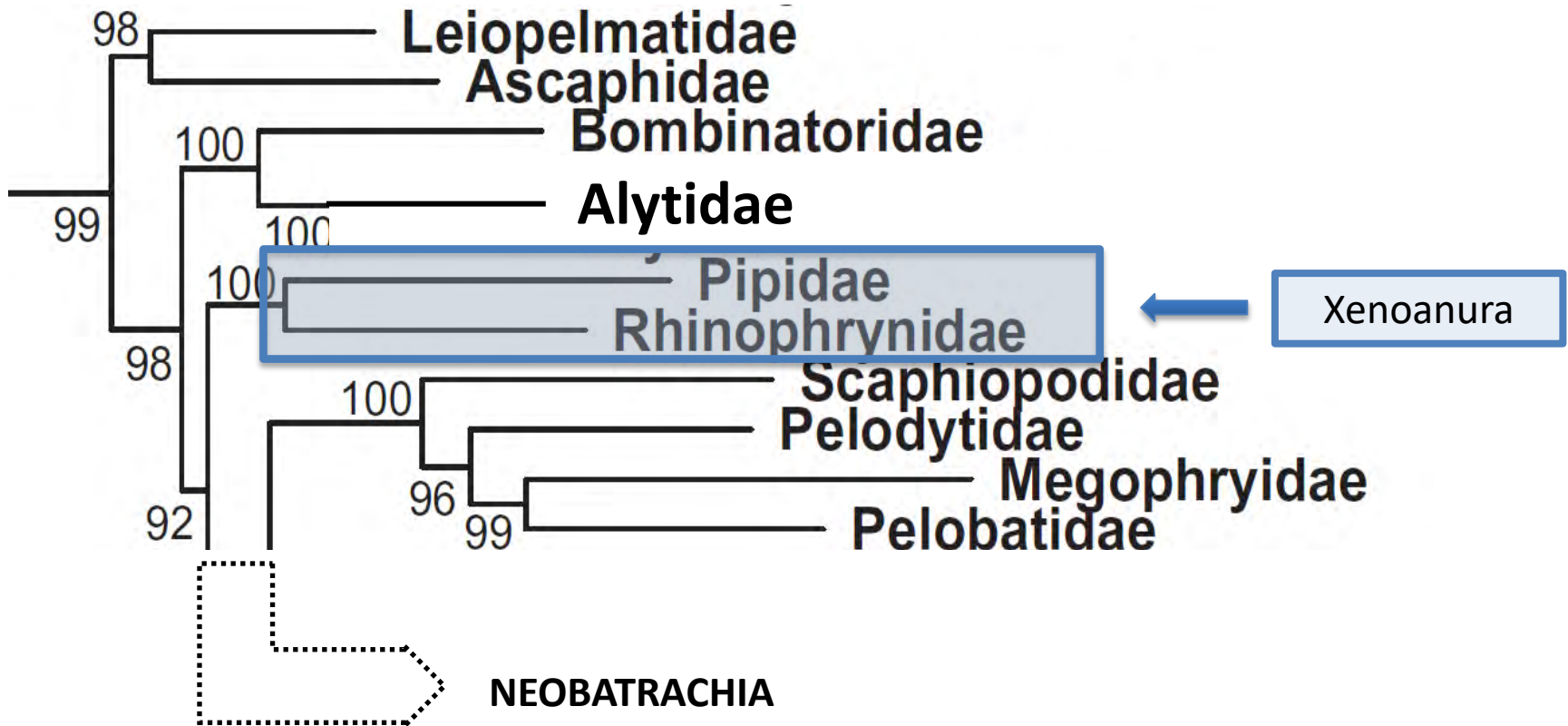


Neobatrachia

Pyron & Wiens, 2011

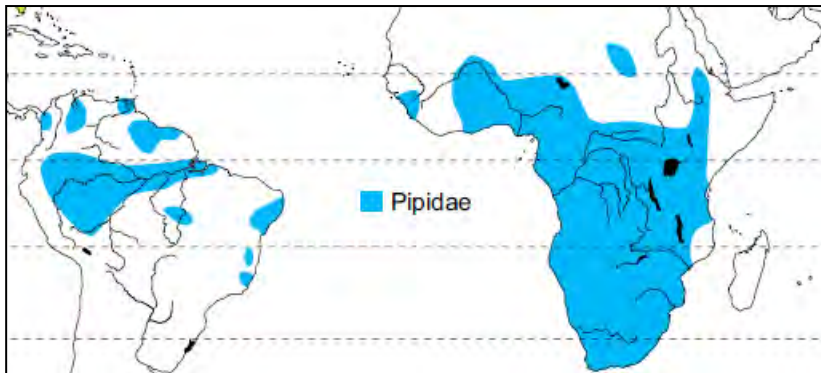
ANURA - 52 Familias

“ARQUEOBATRACHIA” - 10 Families



PIPIDAE (4 géneros, 41 spp)

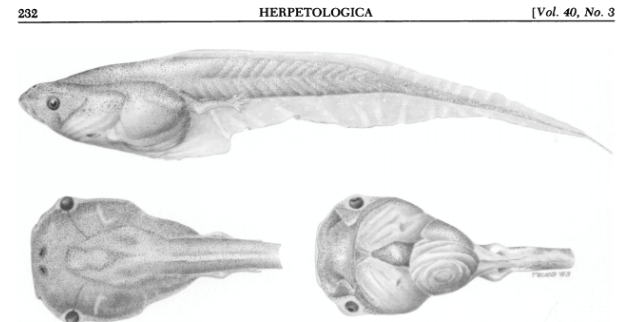
- Acuáticos.
- Opistocélicos.
- Carecen de lengua.
- Sin cuerdas vocales.



Vit & Caldwell 2014



Daniel Vásquez-Restrepo



PIPIDAE (4 géneros, 41 spp)

- Género *Xenopus* en Chile.
- Buena tolerancia térmica
- Desplaza especies nativas
- Patógenos (Bd y ranavirus)



Tim Vickers

Xenopus laevis



Larva de *Xenopus*

RHINOPHRYNIDAE (1 géneros, 1 sp)

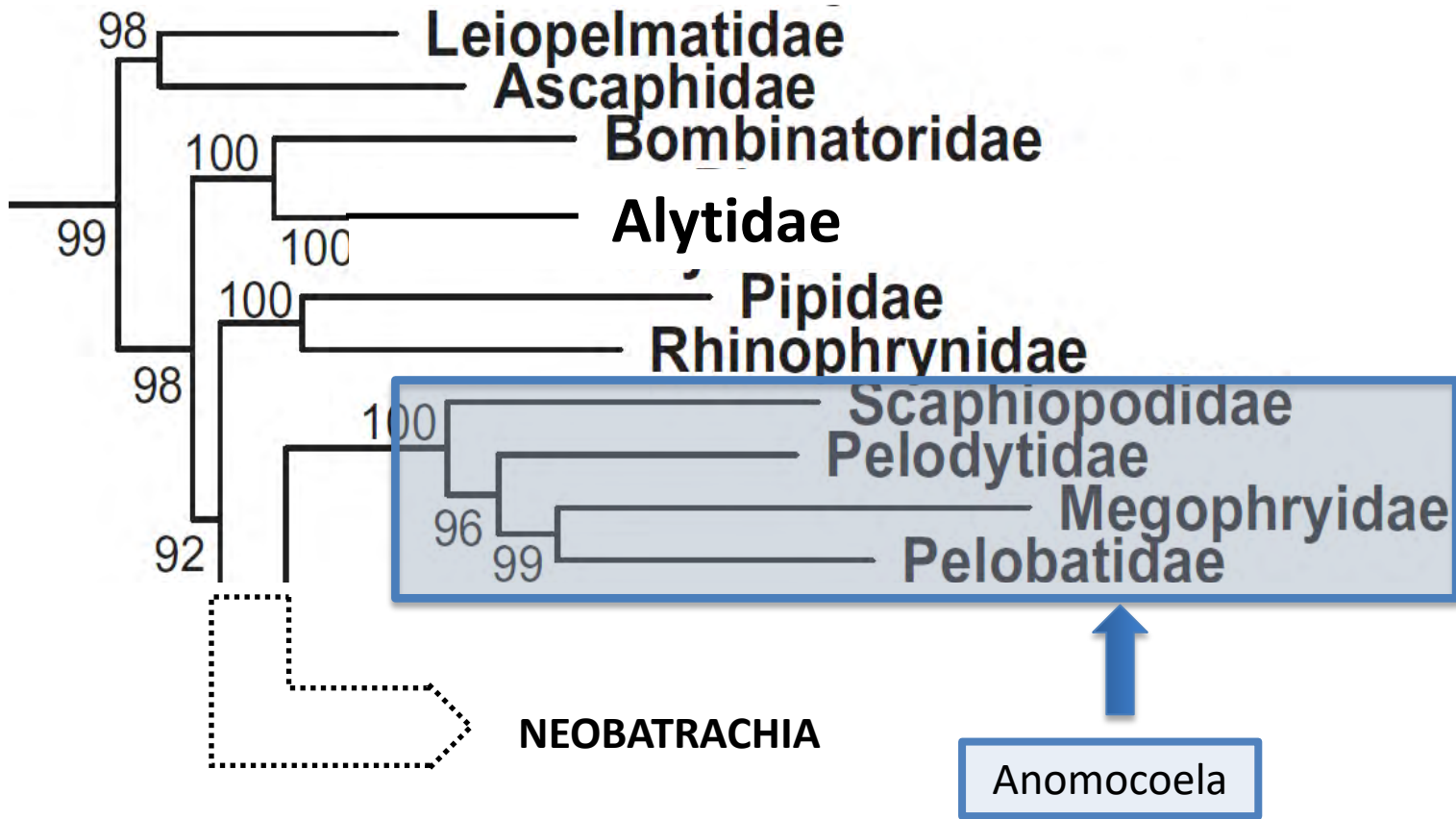
- Arcíferos
- Opistocélicos.
- Fosoriales.
- Amplexo inguinal.



Rhinophrynus dorsalis

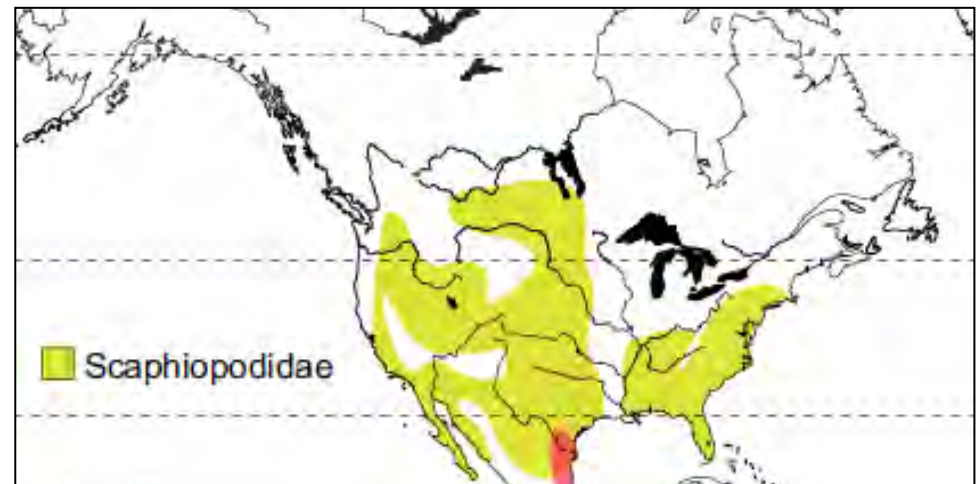


“ARQUEOBATRACHIA” - 10 Families

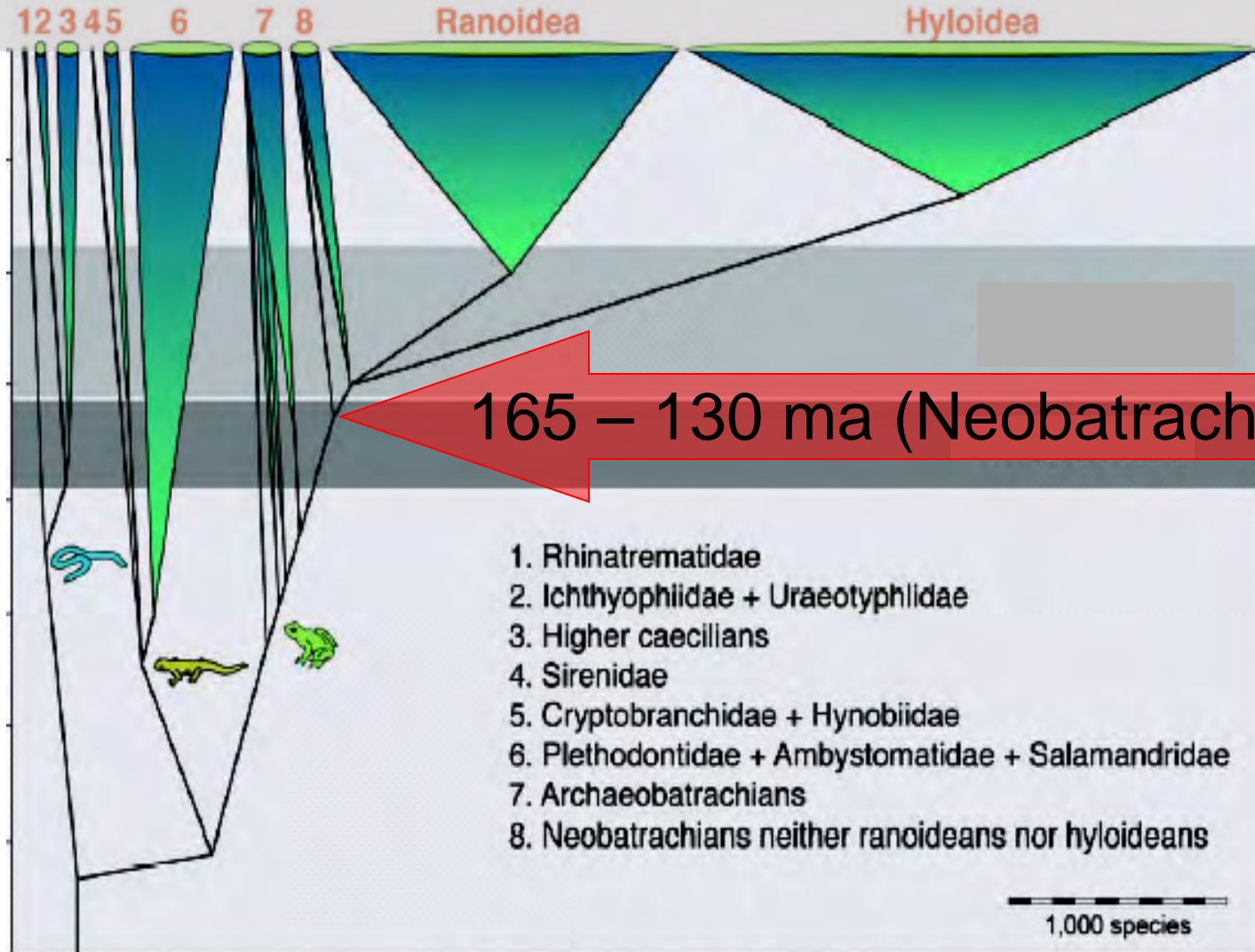


SCAPHIOPODIDAE (2 géneros, 7 spp)

- Fosoriales,.
- Arcíferos.
- Amplexo inguinal.
- Algunas larvas caníbales.

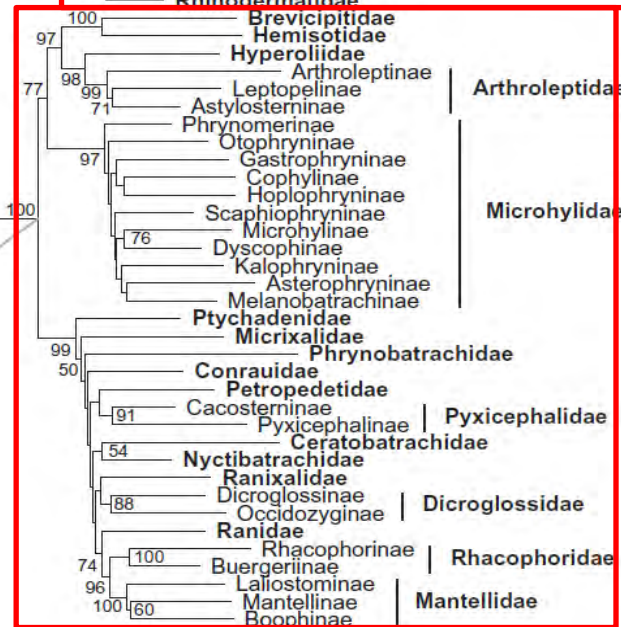
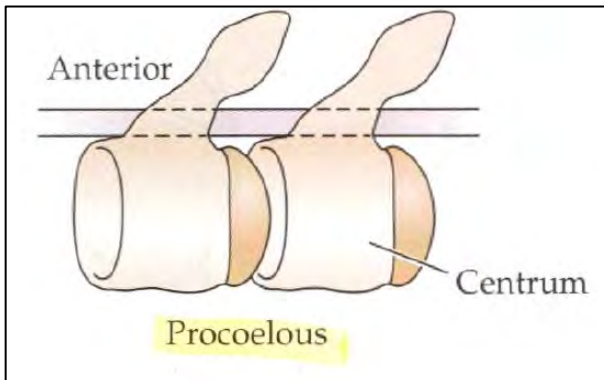
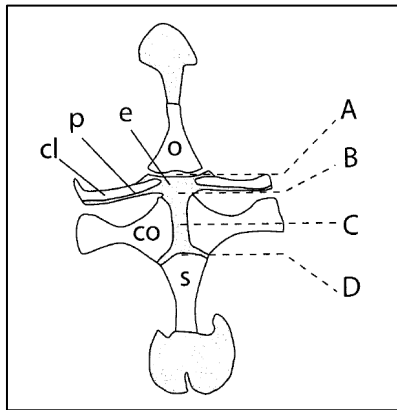
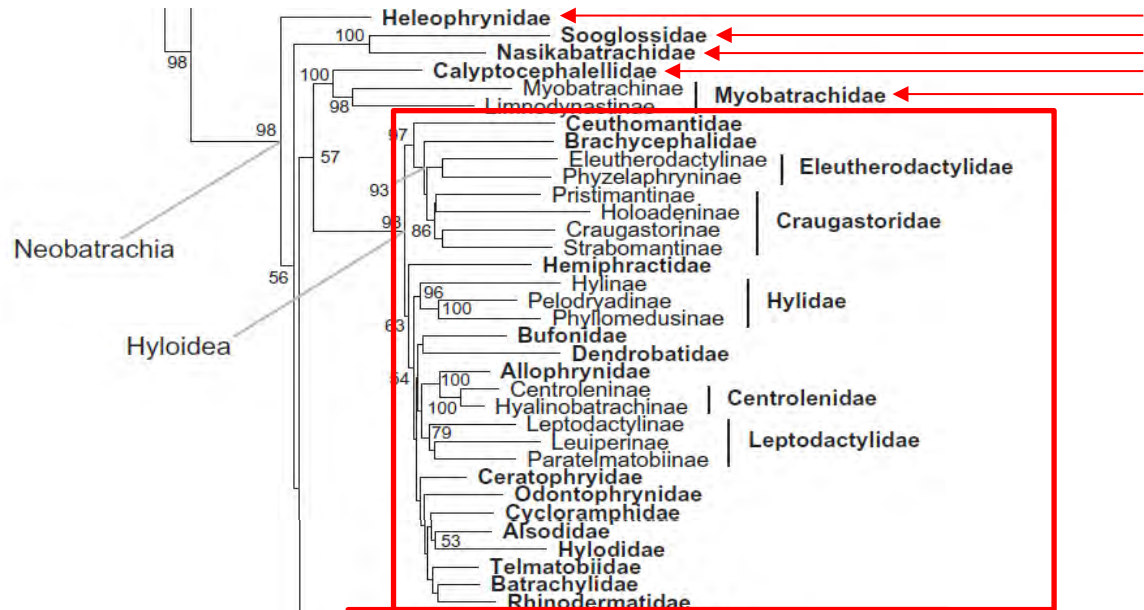


NEOBATRACHIA

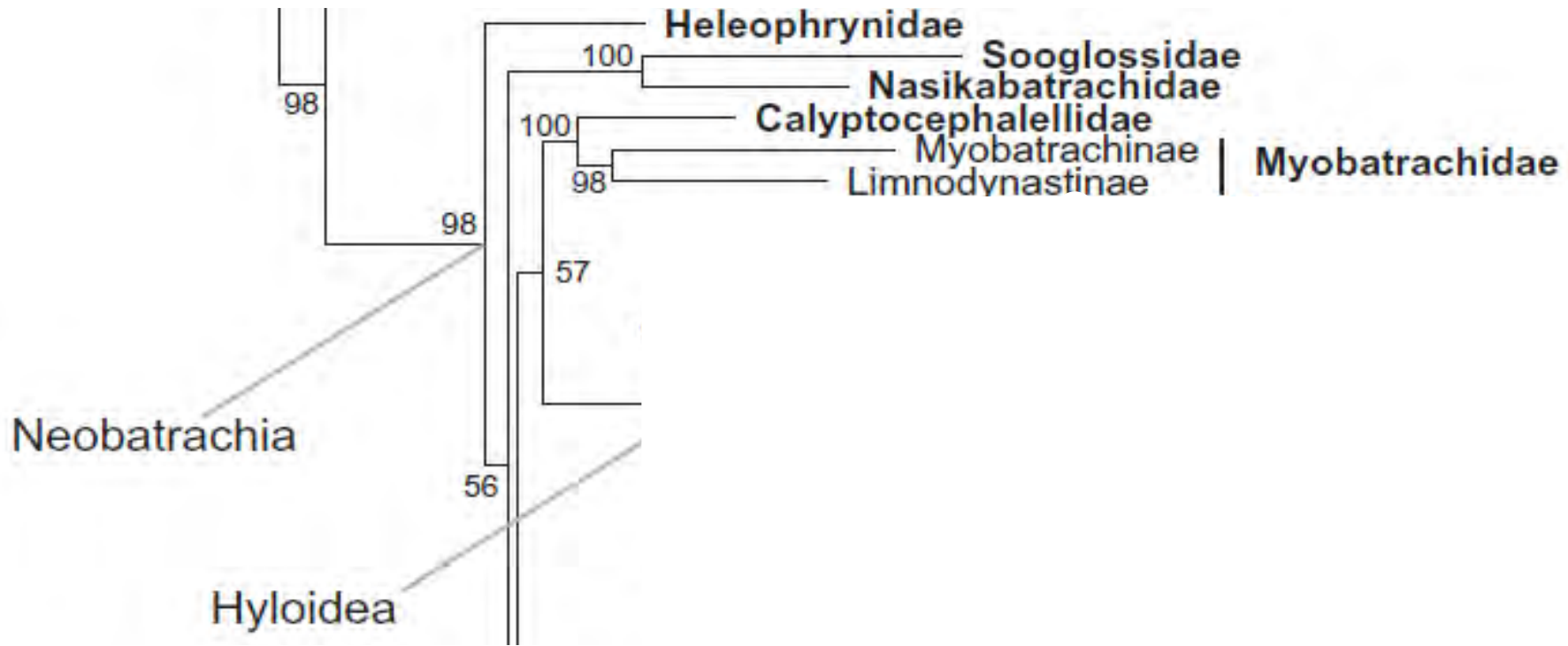


Taxonomic diversity (no. of taxa)

NEOBATRACHIA (41 families)

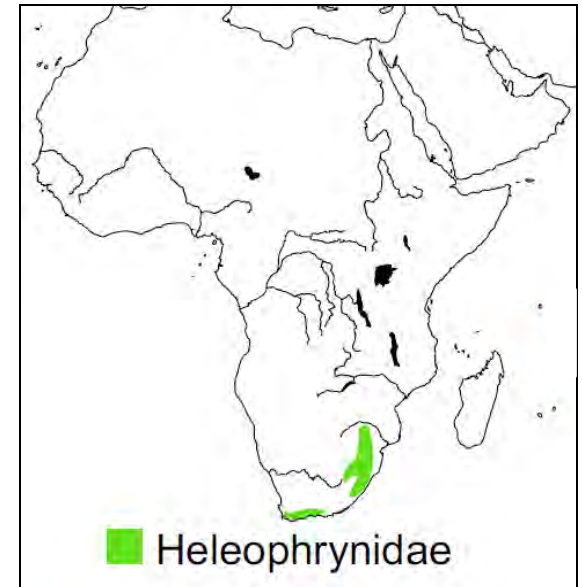


NEOBATRACHIA (41 familias)



HELEOPHRYNIDAE (2 géneros, 7 spp)

- Zonas montañosas.
- Arcíferos y anficélicos.
- Amplexo inguinal.
- Larvas modificadas
- Cortejos complejos



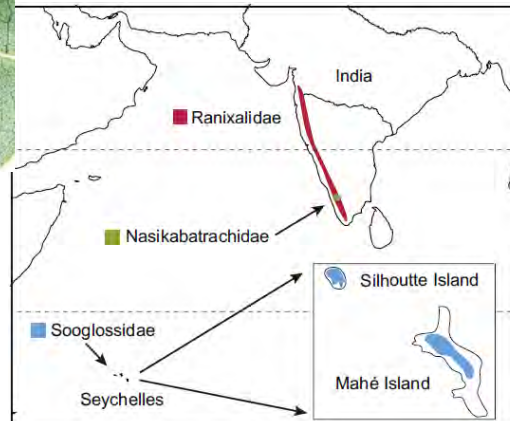
SOOGLOSSIDAE (2 géneros, 4 spp)

- Endémicos Islas Seyschelles.
- Procélicos y arcíferos.
- Pequeño saco vocal interno.
- Sin tímpano.
- Huevos es terrestre.
- Distintas estrategias reproductivas



NASIKABATRACHIDAE (2 spp)

- Endémico de la India occidental.
- Fosoriales
- Sin tímpano ni columela.
- Desarrollo indirecto.
- Dieta especializada .



MYOBATRACHOIDEA (21 géneros, 138 spp)

- Endémicos de oceanía.
- Arcíferos y procélicos.
- Desarrollo directo e indirecto
- Larvas con espiráculo izquierdo.
- Modos reproductivos derivados

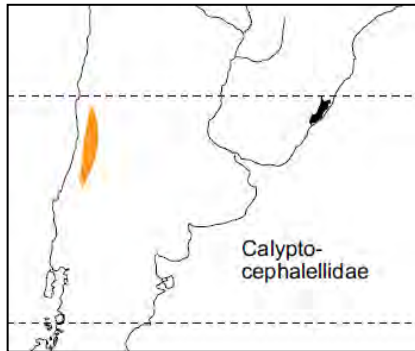
Myobatrachidae (14 géneros, 92 spp)

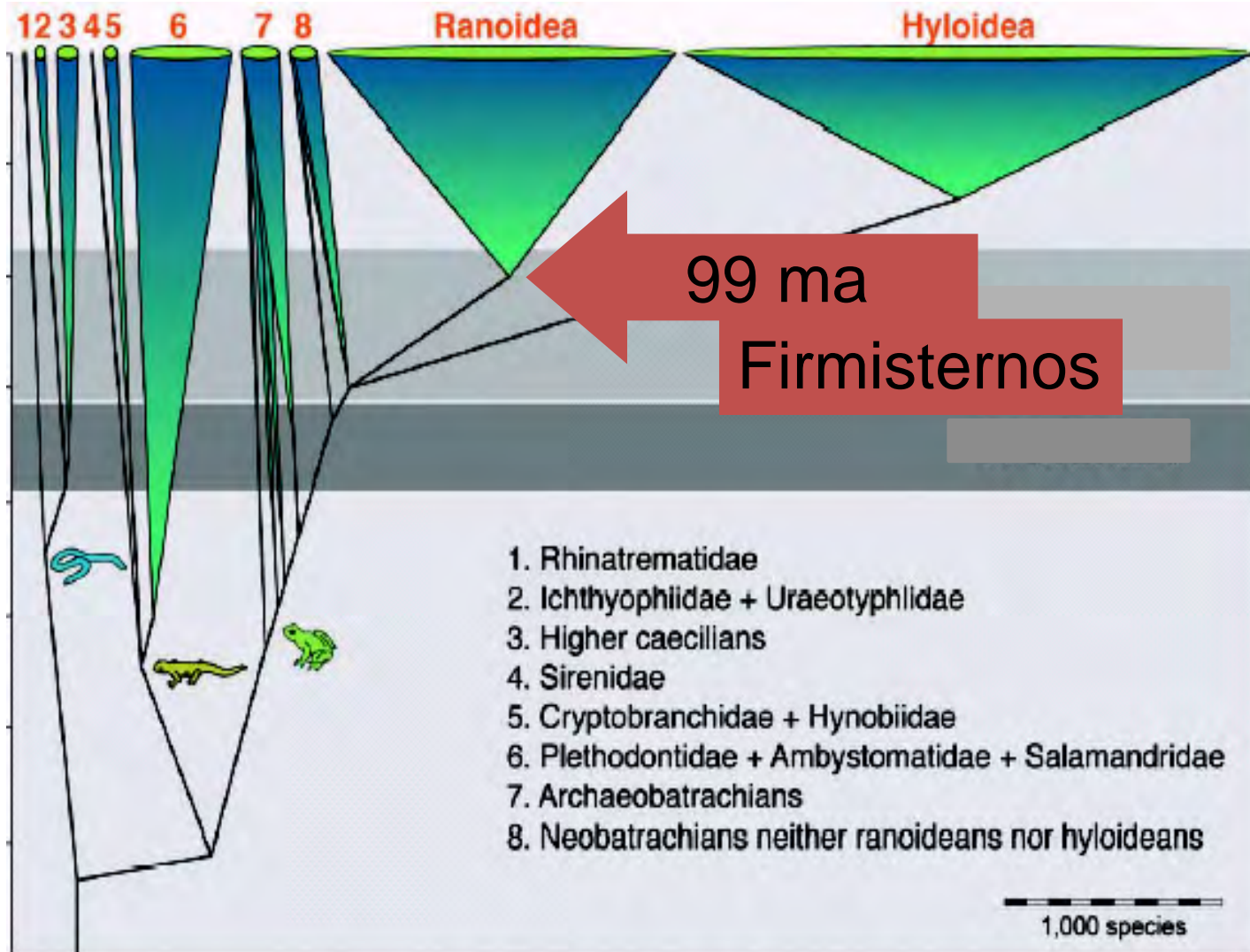
Lymnodynastidae (7 géneros, 46 spp)



CALYPTOCEPHALELLIDAE (2 géneros, 5 sp)

- Endémica de Chile
- *Calyptocephalella* con dimorfismo
- *Telmatobufo* habita arroyos
- Larvas con discos orales

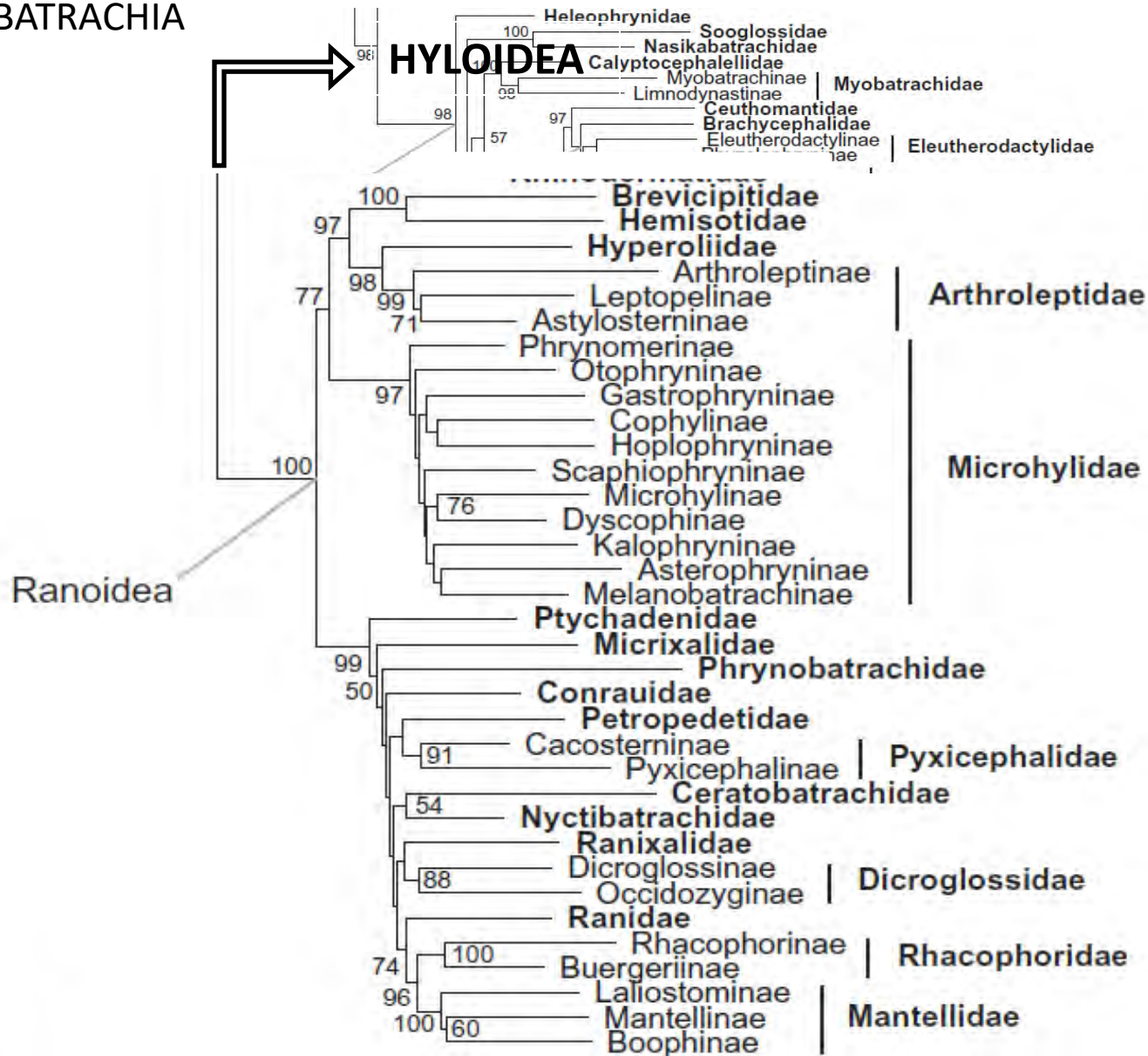




Taxonomic diversity (no. of taxa)

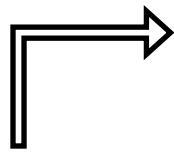
RANOIDEA (18 families)

NEOBATRACHIA

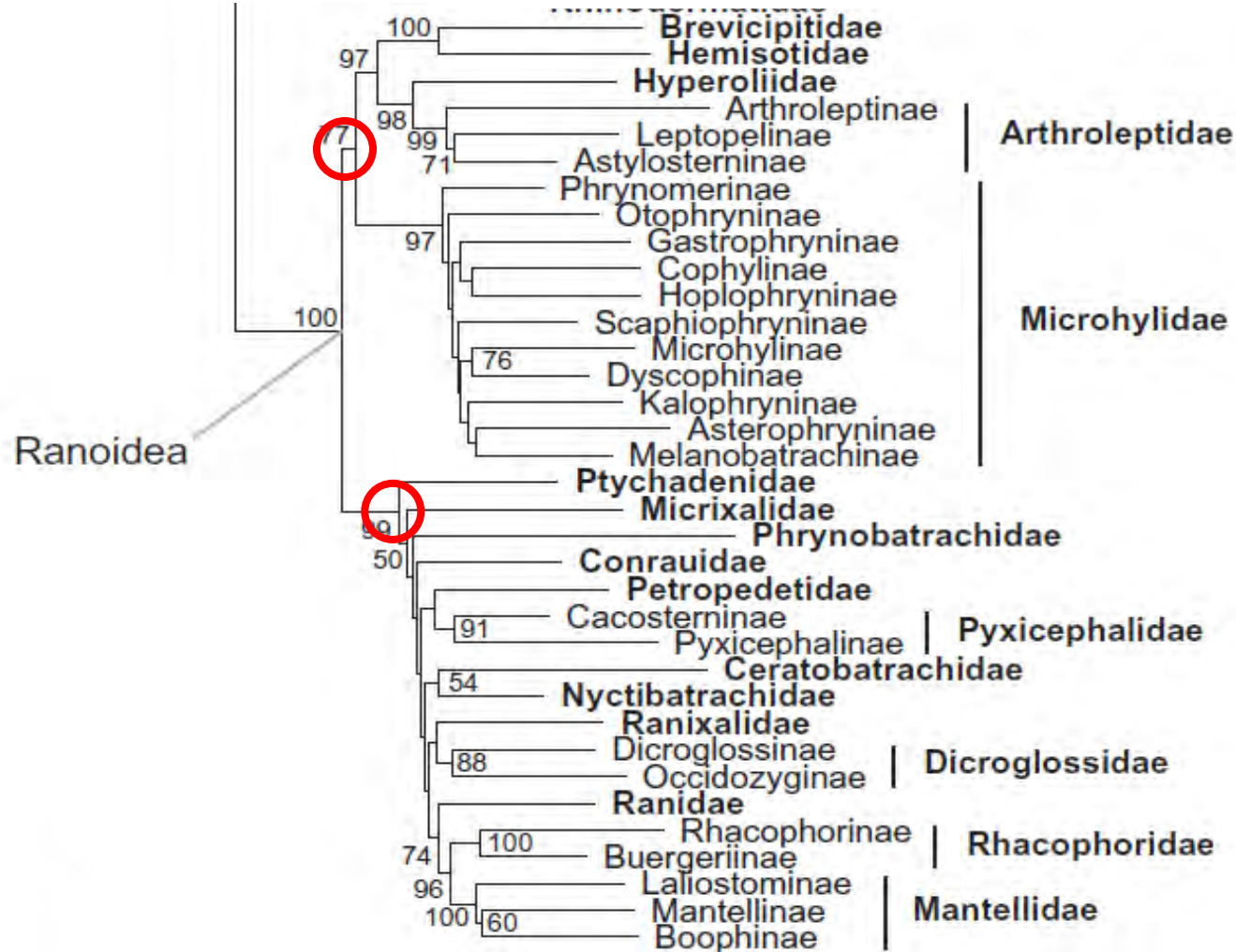


RANOIDEA (18 familias)

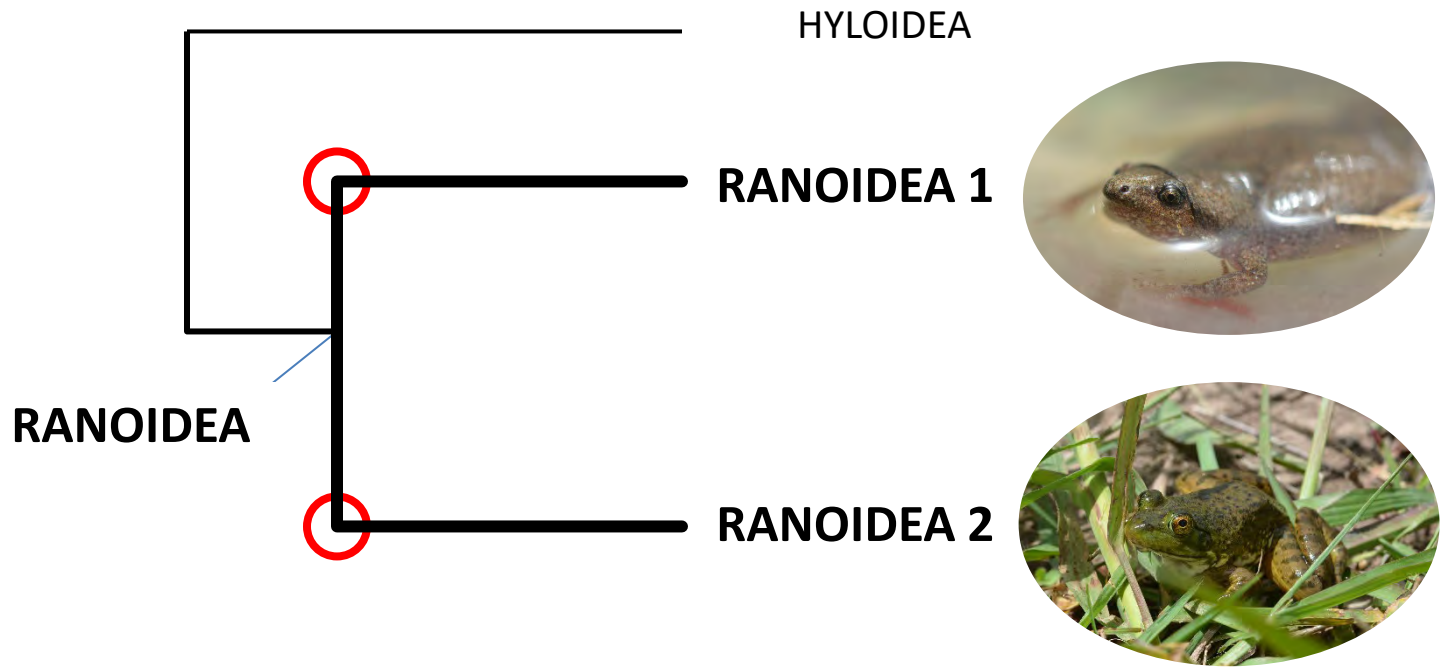
NEOBATRACHIA



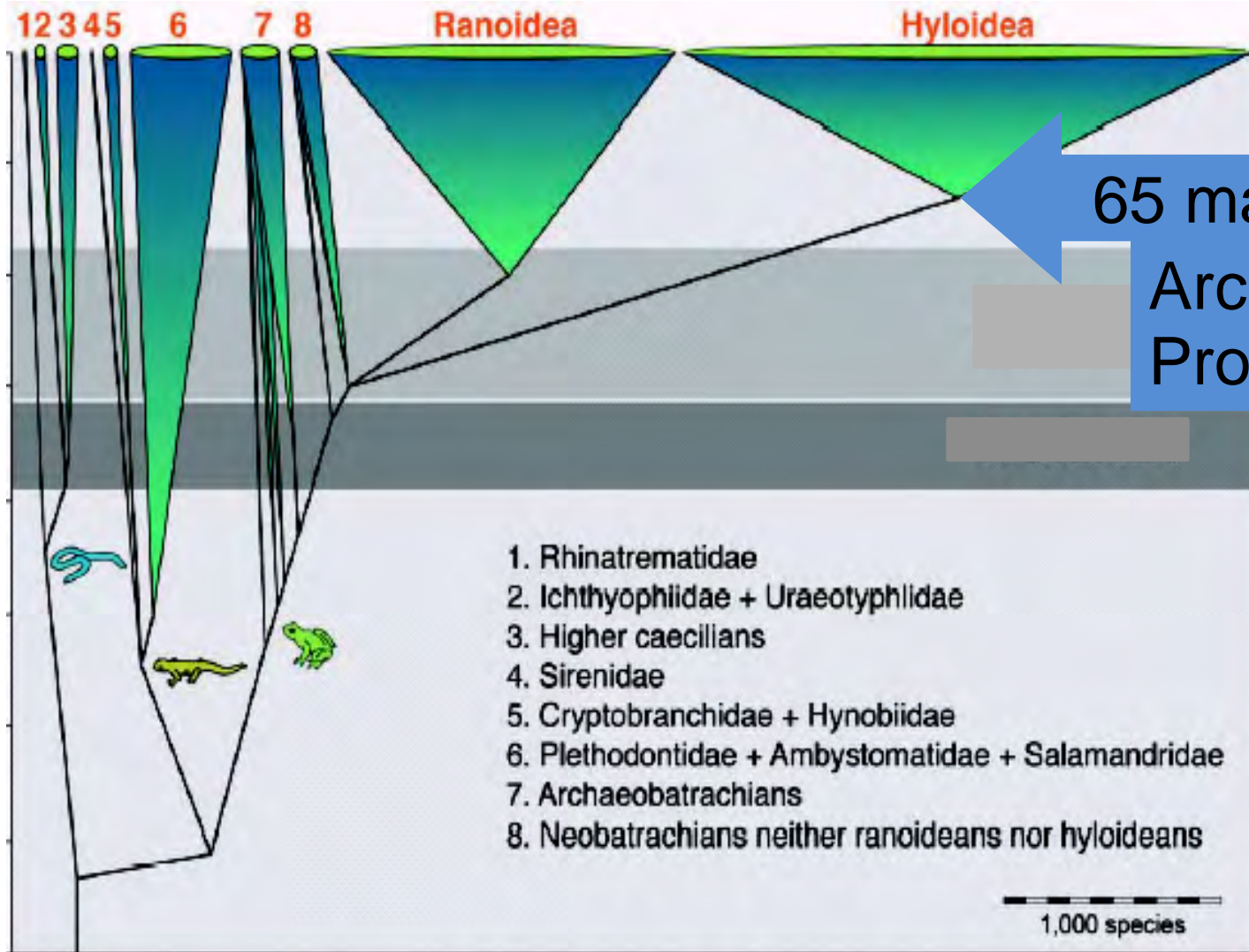
HYLOIDEA



RANOIDEA (18 familias)



HYLOIDEA



Taxonomic diversity (no. of taxa)

Curso de posgrado “Herpetología neotropical” - 2026

Origen y composición de la fauna Neotropical de anfibios

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