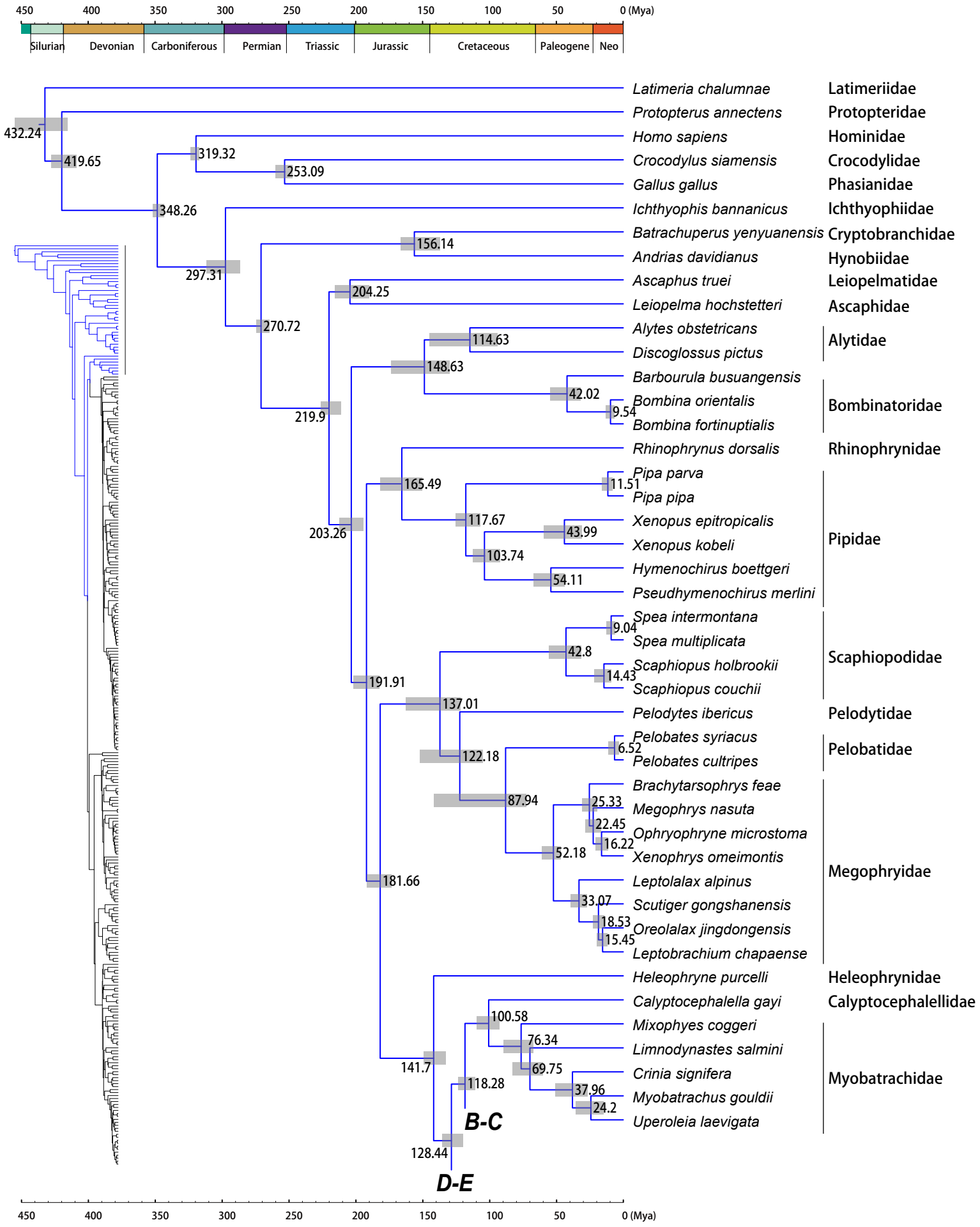
450
400
350
300
250
200
150
100
50
0 (Mya)
Silurian
Devonian
Carboniferous
Permian
Triassic
Jurassic
Cretaceous
Paleogene
Neo
Latimeria chalumnae
Protopterus annectens
Homo sapiens
Crocodylus siamensis
Gallus gallus
Ichthyophis bannanicus
Batrachuperus yenyuanensis
Andrias davidianus
Ascaphus truei
Leiopelma hochstetteri
Alytes obstetricans
Discoglossus pictus
Barbourula busuangensis
Bombina orientalis
Bombina fortinuptialis
Rhinophrynus dorsalis
Pipa parva
Pipa pipa
Xenopus epitropicalis
Xenopus kobeli
Hymenochirus boettgeri
Pseudhymenochirus merlini
Spea intermontana
Spea multiplicata
Scaphiopus holbrookii
Scaphiopus couchii
Pelodytes ibericus
Pelobates syriacus
Pelobates cultripes
Brachytarsophrys feae
Megophrys nasuta
Ophryophryne microstoma
Xenophrys omeimontis
Leptolalax alpinus
Scutiger gongshanensis
Oreolalax jingdongensis
Leptobrachium chapaense
Heleophryne purcelli
Calyptocephalella gayi
Mixophyes coggeri
Limnodynastes salmini
Crinia signifera
Myobatrachus gouldii
Uperoleia laevigata
Latimeriidae
Protopteridae
Hominidae
Crocodylidae
Phasianidae
Ichthyophiidae
Cryptobranchidae
Hynobiidae
Leiopelmatidae
Ascaphidae
Alytidae
Bombinatoridae
Rhinophrynidae
Pipidae
Scaphiopodidae
Pelodytidae
Pelobatidae
Megophryidae
Heleophrynidae
Calyptocephalellidae
Myobatrachidae
432.24
419.65
319.32
253.09
348.26
297.31
156.14
204.25
270.72
114.63
148.63
42.02
9.54
219.9
165.49
11.51
117.67
43.99
203.26
103.74
54.11
9.04
42.8
14.43
191.91
137.01
122.18
6.52
87.94
25.33
22.45
16.22
52.18
181.66
33.07
18.53
15.45
100.58
76.34
69.75
141.7
118.28
37.96
24.2
128.44
B-C
D-E

A

150
100
50
0 (Mya)
Cretaceous
Paleogene
Neogene
A
B
C
Insuetophrynus acarpicus
Rhinoderma darwinii
Alsodes gargola
Eupsophus calcaratus
Hylodes nasus
Atelognathus reverberii
Batrachyla taeniata
Batrachyla leptopus
Batrachophrynus macrostomus
Telmatobius vellardi
Lepidobatrachus laevis
Lepidobatrachus sp.
Ceratophrys ornata
Ceratophrys cornuta
Cryptobatrachus boulengeri
Flectonotus fitzgeraldi
Hemiphractus bubalus
Stefania ginesi
Gastrotheca weinlandii
Gastrotheca pseustes
Nyctimystes pulcher
Nyctimystes kubori
Cyclorana maini
Litoria caerulea
Cruziohyla calcarifer
Phyllomedusa hypochondrialis
Phyllomedusa tomopterna
Agalychnis lemur
Agalychnis saltator
Agalychnis callidryas
Hyloscirtus lindae
Hypsiboas fasciatus
Aplastodiscus perviridis
Scinax ruber
Trachycephalus typhonius
Osteocephalus taurinus
Pseudis paradoxa
Dendropsophus parviceps
Acris crepitans
Hyla chinensis
Hyla cinerea
Hyla arenicolor
Allobates femoralis
Epipedobates tricolor
Hyloxalus jacobuspetersi
Phyllobates vittatus
Ranitomeya imitator
Dendrobates auratus
Ceuthomantis smaragdinus
Brachycephalus ephippium
Ischnocnema guentheri
Eleutherodactylus marnockii
Eleutherodactylus planirostris
Diasporus diastema
Eleutherodactylus coqui
Craugastor augusti
Craugastor fitzingeri
Craugastor podiciferus
Barycholos pulcher
Pristimantis thymelensis
Strabomantis sulcatus
Strabomantis biporcatus
Phrynopus bracki
Hypodactylus brunneus
Rhinodermatidae
Alsodidae
Hylodidae
Batrachylidae
Telmatobiidae
Ceratophryidae
Hemiphractidae
Pelodryadinae
Phyllomedusinae
Hylinae
Hylidae
Dendrobatidae
Ceuthomantidae
Brachycephalidae
Eleutherodactylidae
Craugastoridae
Strabomantidae
60.75
19.28
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52.04
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65.63
25.04
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27.24
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24.54
17.09
58.21
3.54
31.18
24.27
48.54
23.52
45.32
64.17
43.14
34.48
40.4
26.81
17.31
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36.85
27.13
31.32
22.36
17.6
35.08
53.92
33.54
50.14
32.14
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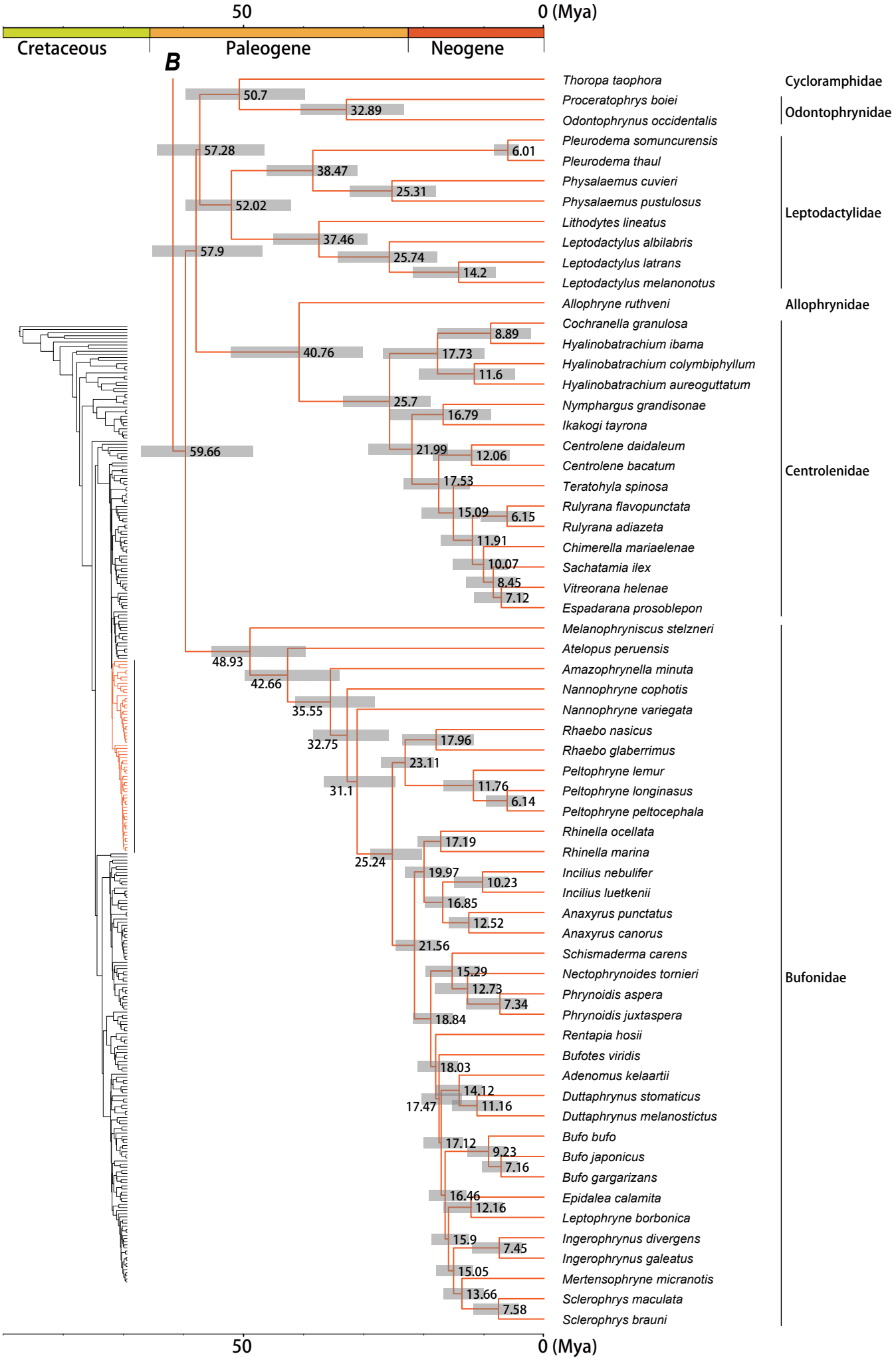
50
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Cretaceous
Paleogene
Neogene
B
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52.02
37.46
57.9
25.74
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8.89
40.76
17.73
11.6
25.7
16.79
59.66
21.99
12.06
17.53
15.09
6.15
11.91
10.07
8.45
7.12
48.93
42.66
35.55
32.75
17.96
23.11
31.1
11.76
6.14
17.19
25.24
19.97
10.23
16.85
12.52
21.56
15.29
12.73
7.34
18.84
18.03
14.12
17.47
11.16
17.12
9.23
7.16
16.46
12.16
15.9
7.45
15.05
13.66
7.58
Thoropa taophora
Proceratophrys boiei
Odontophrynus occidentalis
Pleurodema somuncurensis
Pleurodema thaul
Physalaemus cuvieri
Physalaemus pustulosus
Lithodytes lineatus
Leptodactylus albilabris
Leptodactylus latrans
Leptodactylus melanonotus
Allophryne ruthveni
Cochranella granulosa
Hyalinobatrachium ibama
Hyalinobatrachium colymbiphyllum
Hyalinobatrachium aureoguttatum
Nymphargus grandisonae
Ikakogi tayrona
Centrolene daidaleum
Centrolene bacatum
Teratohyla spinosa
Rulyrana flavopunctata
Rulyrana adiazeta
Chimerella mariaelenae
Sachatamia ilex
Vitreorana helenae
Espadarana prosoblepon
Melanophryniscus stelzneri
Atelopus peruensis
Amazophrynella minuta
Nannophryne cophotis
Nannophryne variegata
Rhaebo nasicus
Rhaebo glaberrimus
Peltophryne lemur
Peltophryne longinasus
Peltophryne peltocephala
Rhinella ocellata
Rhinella marina
Incilius nebulifer
Incilius luetkenii
Anaxyrus punctatus
Anaxyrus canorus
Schismaderma carens
Nectophrynoides tornieri
Phrynoidis aspera
Phrynoidis juxtaspera
Rentapia hosii
Bufotes viridis
Adenomus kelaartii
Duttaphrynus stomaticus
Duttaphrynus melanostictus
Bufo bufo
Bufo japonicus
Bufo gargarizans
Epidalea calamita
Leptophryne borbonica
Ingerophrynus divergens
Ingerophrynus galeatus
Mertensophryne micranotis
Sclerophrys maculata
Sclerophrys brauni
Cycloramphidae
Odontophrynidae
Leptodactylidae
Allophrynidae
Centrolenidae
Bufonidae
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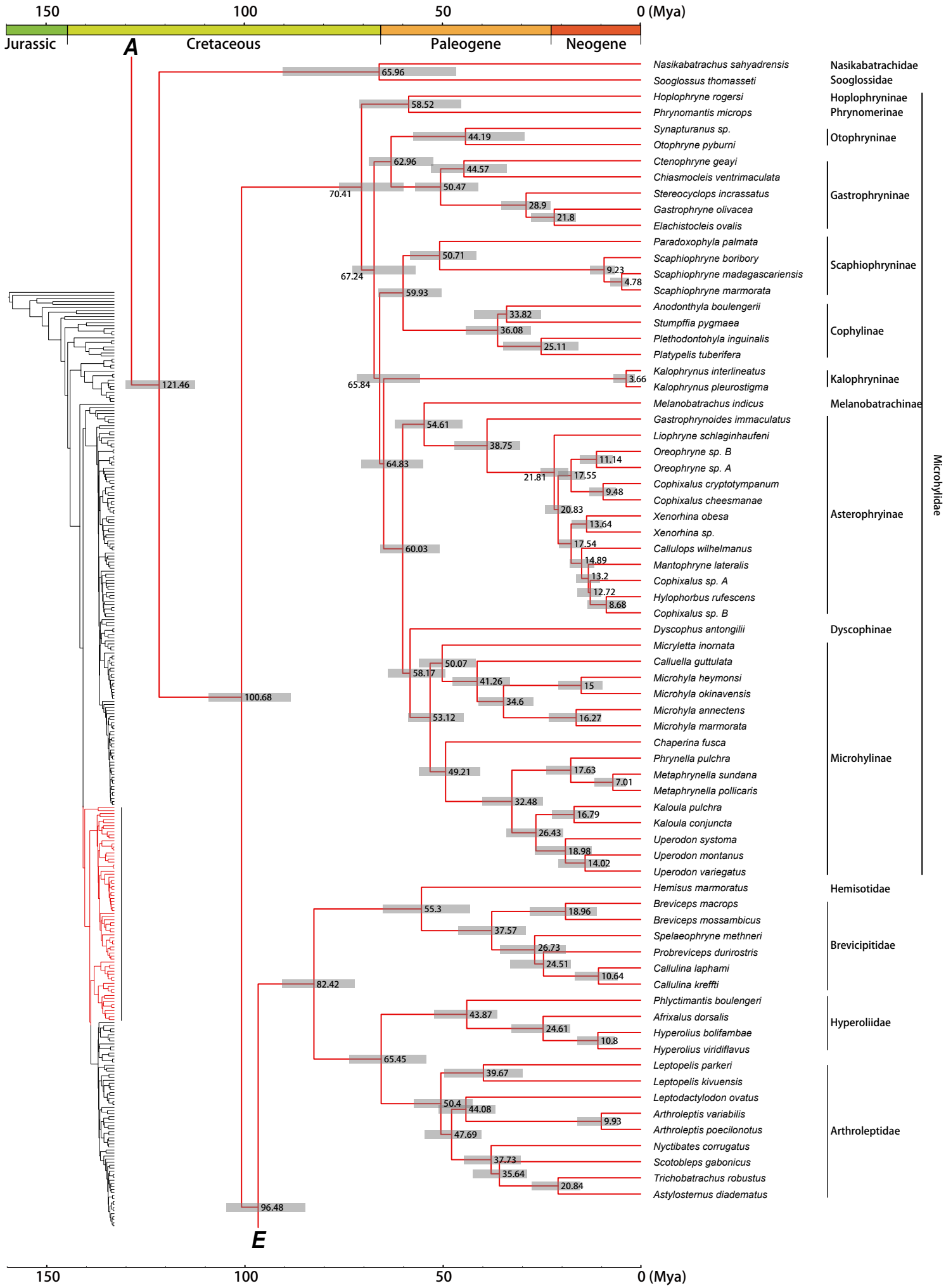
0 (Mya)

C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Jurassic
Cretaceous
Paleogene
Neogene
A
E
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62.96
44.57
70.41
50.47
28.9
21.8
50.71
67.24
9.23
4.78
59.93
33.82
36.08
25.11
65.84
3.66
54.61
38.75
64.83
11.14
21.81
17.55
9.48
20.83
13.64
17.54
60.03
14.89
13.2
12.72
8.68
50.07
58.17
41.26
15
34.6
100.68
53.12
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17.63
49.21
7.01
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26.43
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18.96
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43.87
24.61
10.8
65.45
39.67
50.4
44.08
9.93
47.69
37.73
35.64
20.84
96.48
Nasikabatrachus sahyadrensis
Sooglossus thomasseti
Hoplophryne rogersi
Phrynomantis microps
Synapturanus sp.
Otophryne pyburni
Ctenophryne geayi
Chiasmocleis ventrimaculata
Stereocyclops incrassatus
Gastrophryne olivacea
Elachistocleis ovalis
Paradoxophyla palmata
Scaphiophryne boribory
Scaphiophryne madagascariensis
Scaphiophryne marmorata
Anodonthyla boulengerii
Stumpffia pygmaea
Plethodontohyla inguinalis
Platypelis tuberifera
Kalophrynus interlineatus
Kalophrynus pleurostigma
Melanobatrachus indicus
Gastrophrynoides immaculatus
Liophryne schlaginhaufeni
Oreophryne sp. B
Oreophryne sp. A
Cophixalus cryptotympanum
Cophixalus cheesmanae
Xenorhina obesa
Xenorhina sp.
Callulops wilhelmanus
Mantophryne lateralis
Cophixalus sp. A
Hylophorbus rufescens
Cophixalus sp. B
Dyscophus antongilii
Micryletta inornata
Calluella guttulata
Microhyla heymonsi
Microhyla okinavensis
Microhyla annectens
Microhyla marmorata
Chaperina fusca
Phrynella pulchra
Metaphrynella sundana
Metaphrynella pollicaris
Kaloula pulchra
Kaloula conjuncta
Uperodon systoma
Uperodon montanus
Uperodon variegatus
Hemisus marmoratus
Breviceps macrops
Breviceps mossambicus
Spelaeophryne methneri
Probreviceps durirostris
Callulina laphami
Callulina kreffti
Phlyctimantis boulengeri
Afrixalus dorsalis
Hyperolius bolifambae
Hyperolius viridiflavus
Leptopelis parkeri
Leptopelis kivuensis
Leptodactylodon ovatus
Arthroleptis variabilis
Arthroleptis poecilonotus
Nyctibates corrugatus
Scotobleps gabonicus
Trichobatrachus robustus
Astylosternus diadematus
Nasikabatrachidae
Sooglossidae
Hoplophryninae
Phrynomerinae
Otophryninae
Gastrophryninae
Scaphiophryninae
Cophylinae
Kalophryninae
Melanobatrachinae
Asterophryinae
Dyscophinae
Microhylinae
Microhylidae
Hemisotidae
Brevicipitidae
Hyperoliidae
Arthroleptidae
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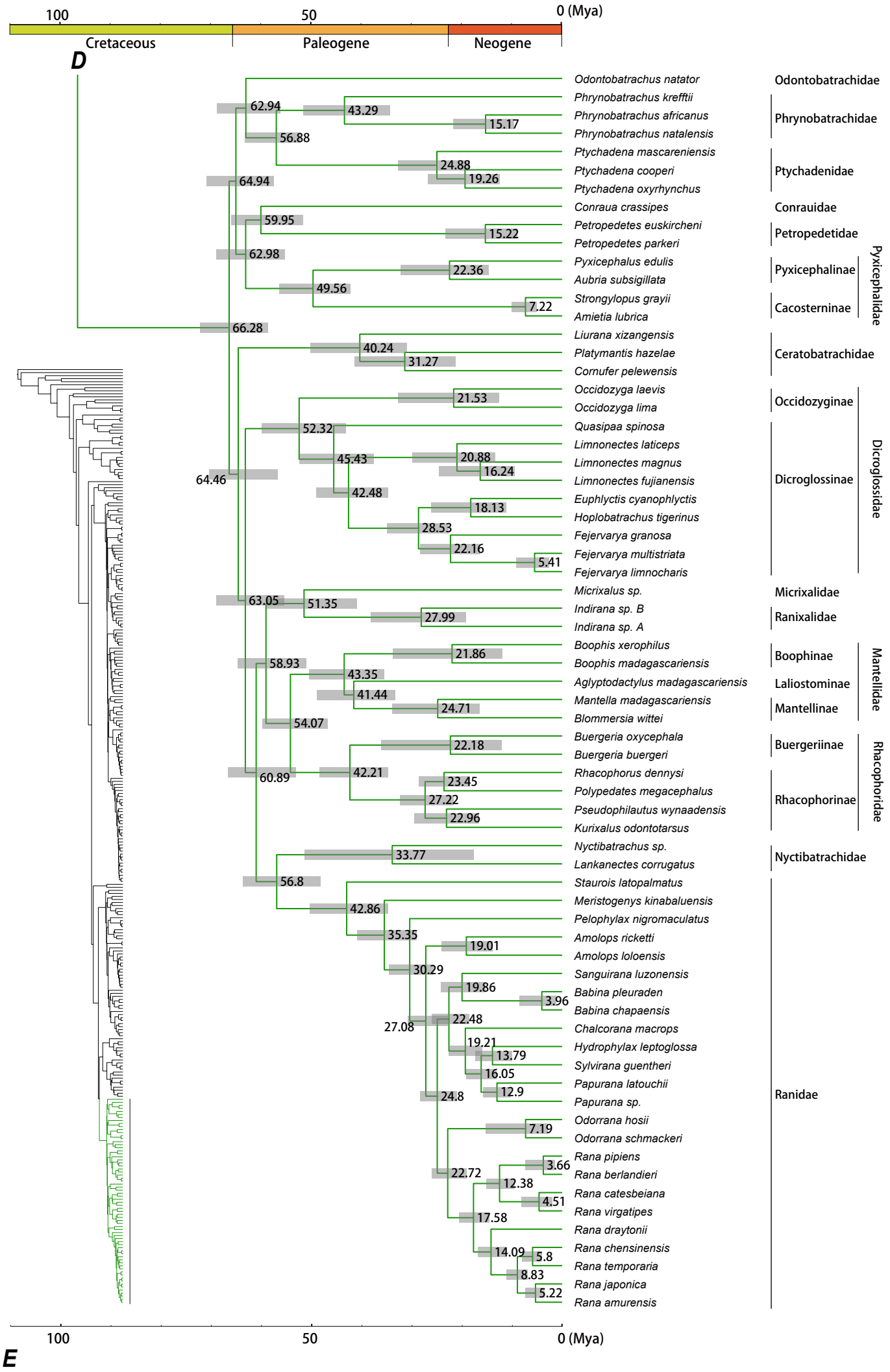
D


100
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Cretaceous
Paleogene
Neogene
D
Odontobatrachus natator
Phrynobatrachus krefftii
Phrynobatrachus africanus
Phrynobatrachus natalensis
Ptychadena mascareniensis
Ptychadena cooperi
Ptychadena oxyrhynchus
Conraua crassipes
Petropedetes euskircheni
Petropedetes parkeri
Pyxicephalus edulis
Aubria subsigillata
Strongylopus grayii
Amietia lubrica
Liurana xizangensis
Platymantis hazelae
Cornufer pelewensis
Occidozyga laevis
Occidozyga lima
Quasipaa spinosa
Limnonectes laticeps
Limnonectes magnus
Limnonectes fujianensis
Euphlyctis cyanophlyctis
Hoplobatrachus tigerinus
Fejervarya granosa
Fejervarya multistriata
Fejervarya limnocharis
Micrixalus sp.
Indirana sp. B
Indirana sp. A
Boophis xerophilus
Boophis madagascariensis
Aglyptodactylus madagascariensis
Mantella madagascariensis
Blommersia wittei
Buergeria oxycephala
Buergeria buergeri
Rhacophorus dennysi
Polypedates megacephalus
Pseudophilautus wynaadensis
Kurixalus odontotarsus
Nyctibatrachus sp.
Lankanectes corrugatus
Staurois latopalmatus
Meristogenys kinabaluensis
Pelophylax nigromaculatus
Amolops ricketti
Amolops loloensis
Sanguirana luzonensis
Babina pleuraden
Babina chapaensis
Chalcorana macrops
Hydrophylax leptoglossa
Sylvirana guentheri
Papurana latouchii
Papurana sp.
Odorrana hosii
Odorrana schmackeri
Rana pipiens
Rana berlandieri
Rana catesbeiana
Rana virgatipes
Rana draytonii
Rana chensinensis
Rana temporaria
Rana japonica
Rana amurensis
Odontobatrachidae
Phrynobatrachidae
Ptychadenidae
Conrauidae
Petropedetidae
Pyxicephalinae
Cacosterninae
Pyxicephalidae
Ceratobatrachidae
Occidozyginae
Dicroglossinae
Dicroglossidae
Micrixalidae
Ranixalidae
Boophinae
Laliostominae
Mantellinae
Mantellidae
Buergeriinae
Rhacophorinae
Rhacophoridae
Nyctibatrachidae
Ranidae
62.94
43.29
15.17
56.88
24.88
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64.94
59.95
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62.98
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7.19
3.66
22.72
12.38
4.51
17.58
14.09
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8.83
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100
50
0 (Mya)
E