## Supplementary Data to A Total-Group Phylogenetic Metatree for Cetacea and the Importance of Fossil Data in Diversification Analyses

## Graeme T. Lloyd and Graham J. Slater

**Table S1:** Maximum and minimum dates for first appearances of fossil cetacean taxa used in Bayesian estimation of topology and divergence times. Citations are provided for data that superceded ranges obtained from the Paleobiology Database

Taxon	Max	Min	Source
Acrophyseter deinodon	7.246	5.333	PBDB
Acrophyseter robustus	13.82	11.62	PBDB
Acrophyseter sp. MUSM 2182	6.9	6.7	Lambert et al. (2014)
Aegicetus gehennae	38.0	33.9	PBDB
Aegyptocetus tarfa	41.3	38	PBDB
Aetiocetidae OCPC 1178	18.8	17.2	Marx and Fordyce (2015)
Aetiocetidae UWBM 82941	27.82	23.03	Burke Museum collections record
Aetiocetidae UWBM 87135	27.82	23.03	Burke Museum collections record
Aetiocetus cotylalveus	31	28	Marx and Fordyce (2015)
Aetiocetus polydentatus	26.1	23.03	Marx and Fordyce (2015)
Aetiocetus weltoni	28.1	28	Marx and Fordyce (2015)
aff Huaridelphis raimondii MUSM 603	20.44	15.97	Lambert et al. (2016)
Africanacetus gracilis	5.333	3.6	PBDB
Africanacetus ceratopsis	11.60800	5.6	PBDB
Aglaocetus burtinii	11.62	7.246	Steeman (2010)
Aglaocetus latifrons	15.97	11.62	Steeman (2010)
Aglaocetus longifrons	15.97	11.62	Steeman (2010)
Aglaocetus moreni	19.8	18.2	Marx and Fordyce (2015)
Aglaocetus patulus	14.5	13.9	Marx and Fordyce (2015)
$Agla ocetus \ rotundus$	11.62	7.246	Steeman (2010)
Agorophiidae ChM PV5852	27.82	23.03	Boessenecker and Geisler (2018)
Agorophius pygmaeus	27.82	23.03	Boessenecker and Geisler (2018)
Albertocetus meffordorum	29	26.2	Boessenecker et al. (2017)
Albertocetus sp ChM PV4834	27.82	23.03	Geisler et al. (2011)
Albicetus oxymycterus	15.97	13.82	Boersma and Pyenson (2015)
Albireo savagei	3.6	2.588	PBDB
Albireo whistleri	7.246	5.333	PBDB
Allodelphis pratti	22	21	Toshiyuki and Barnes (2016)
$Allodelphis\ woodburnei$	22	21	Toshiyuki and Barnes (2016)
Ambulocetus natans	47.8	41.3	PBDB
Amphicetus later	11.62	7.246	PBDB
Anacharsis orbus	12.7	11.608	PBDB
$Ancalecetus\ simonsi$	37.8	33.9	Gingerich and Uhen (1996)
Andrewsiphius sloani	47.8	44.5	Bebej (2011)
$Anoplonassa\ forcipata$	5.3	3.5	PBDB
Aondelphis talen	18.3	15.97	Viglino et al. (2018); Bown and Larriestra (199
Aporotus recurvirostris	15.97	11.62	PBDB
Aporotus dicyrtus	11.6	2.588	Bianucci et al. (2016)
Aprixokogia kelloggi	5.333	3.6	PBDB

Archaebalaenoptera acastriaryaati	Araeodelphis natator	17	16	Godfrey et al. (2017)
Archaeodelnopteru tiesselemiss         8.1         7.5         Biscoutt et al. (2020)           Archaeodephocaena teshioensis         7.246         5.333         PBDB           Archaeosphinis microglenoideus         15         13.2         PBDB           Archaeoscrichtius ruggerori         11.62         7.246         Biscouti and Varola (2006)           Argymocetus padagmiensis         28.1         23.030         PBDB           Argymocetus padagmiensis         18.3         15.97         PBDB           Artinadelphis sorbinii         3.6         15.06         PBDB           Arktocaru yakataga         28.1         23.03         PBDB           Arktocaru yakataga         47.8         41.3         PBDB           Arktocaru yakataga         47.8         41.3         PBDB           Arktocaru yakataga         47.8         41.3         PBDB           Artiocetus guensiis         38.2         11.62         PBDB           Attockus jugusastaldii         5.33         2.58         PBDB           Atockus inasalis         11.62         7.246         PBDB           Attockicus praecursor         47.8         41.3         PBDB           Altockius nasalis         11.62         7.246         PBDB	<u> •</u>			,
Archaeoptoena teshienenis         7.2.16         5.3.33         PBDB           Archaeoptoena teshienenis         7.2.16         5.3.33         PBDB           Archaeoziphius microglenoideus         11.5         13.2         PBDB           Archaeoziphius microglenoideus         28.1         23.030         PBDB           Argyrocctus paderenicus         28.1         23.0300         PBDB           Argyrocctus padagomicus         18.3         15.97         PBDB           Arinidelphis sorbini         3.6         1.806         PBDB           Artiocat qualidaga         28.1         23.03         PBDB           Artiocat clavis         47.8         41.3         PBDB           Artiocatus iquensis         33.9         28.1         PBDB           Atoctus iquensis         11.62         7.246         PBDB           Atocetus iquenticus				- ,
Archaeosphocena teshicensis         7.246         5.333         PBDB           Archaeosphichtius microglenoideus         11.62         7.246         Bisconti and Varola (2006)           Archaeosphichtius microglenoideus         11.62         7.246         Bisconti and Varola (2006)           Argyrocetus padegonicus         18.3         15.97         PBDB           Arthocetus statagonicus         18.3         15.97         PBDB           Arkocara yakataga         28.1         23.03         PBDB           Arkocatus clavis         47.8         41.3         PBDB           Asheleyetus planicapitis         33.9         28.1         PBDB           Astadelphis gastaldii         5.333         2.588         PBDB           Astocetus iquensis         11.62         7.246         PBDB           Atocetus iquensis         11.62         7.246         PBDB           Atockicetus praceitus praceitus sedecue         5.33         3.6         PBDB           Attockicetus praceitus sedecue         5.33         3.				
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Argymectus patagonicus         18.3         15.97         PBDB           Arimidelphis sorbinii         3.6         1.806         PBDB           Arktocara yakataga         28.1         23.03         PBDB           Arktocetus clavis         47.8         41.3         PBDB           Astadelphis gastaldii         5.333         2.588         PBDB           Atocekus iquensis         11.62         7.246         PBDB           Atocekus nasalis         11.62         7.246         PBDB           Attochecus praccursor         47.8         41.3         PBDB           Attophyseter mediatlanticus         11.62         7.246         PBDB           Aulophyseter morricei         15.97         13.82         PBDB           Auvoracetus bakerae         5.333         3.6         PBDB           Australdelphis mirus         5.333         3.6         PBDB           Australdelphis mirus         5.333         3.6         PBDB           Australdelphis hirus         5.333         9BDB         Australdelphis hirus           Awandook otkarahi         27.3         25.2         PBDB           Autstrosqualdon trithizodonta         27.3         25.2         PBDB           Abuatilitas	$Argyrocetus\ bakers fieldens is$	28.1	23.03	PBDB
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Atropatenocetus posteocenicus         28.1         23.03         PBDB           Attockicetus praecursor         47.8         41.3         PBDB           Aulophystet mediatlanticus         11.62         7.246         PBDB           Aulophystet mediatlanticus         15.97         13.82         PBDB           Australides bakerae         5.333         3.6         PBDB           Australodelphis inrus         5.333         3.6         PBDB           Austrosqualodon trirhizodonta         27.3         25.2         PBDB           Awadelphis hiruyamai         7.246         5.333         PBDB           Awanokoa tokurahi         27.3         25.2         PBDB           Babiacetus indicus         47.8         41.3         PBDB           Babiacetus mishrai         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena affinis         4.5         3.9         Marx and Fordyce (2015)           Balaena pampaea         1.806         0.781         PBDB           Balaena arcicei         4.9         4.4         Marx and Fordyce (2015)           Balaena prampaea         16.5         15.1         Louwye et al. (2010)				
Attockicetus praecursor         47.8         41.3         PBDB           Aulophyseter mediatlanticus         11.62         7.246         PBDB           Aulophyseter morricei         15.97         13.82         PBDB           Australithax intermedia         9.1         9         Laime (2013)           Australodelphis mirus         5.333         3.6         PBDB           Austrosqualodon trirhizodonta         27.3         25.2         PBDB           Awamokoa tokarahi         27.3         25.2         PBDB           Awamokoa tokarahi         27.3         25.2         PBDB           Babiacetus indicus         47.8         38         PBDB           Babiacetus mishrai         47.8         41.3         PBDB           Balaena flinis         2.588         1.806         PBDB           Balaena pampaea         1.806         0.781         PBDB           Balaena pampaea         16.5         15.1         Louwye et al. (2010)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena parecephalus         15.97         13.52         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenella brachyh				
Aulophyseter mediatlanticus         11.62         7.246         PBDB           Aulophyseter morricei         15.97         13.82         PBDB           Auvoracetus bakerae         5.333         3.6         PBDB           Australithax intermedia         9.1         9         Laime (2013)           Australodelphis mirus         5.333         3.6         PBDB           Austrosqualodon trirhizodonta         27.3         25.2         PBDB           Awadelphis hirayamai         7.246         5.333         PBDB           Awamokoa tokarahi         27.3         25.2         PBDB           Babiacetus mishrai         47.8         38         PBDB           Babiacetus mishrai         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena pampaea         1.806         0.781         PBDB           Balaena pampaea         1.806         0.781         PBDB           Balaena arcicet         4.9         4.4         Marx and Fordyce (2015)           Balaena pampaea         16.5         15.1         Louwye et al. (2010)           Balaena sier         4.9         4.4         Marx and Fordyce (2015)           Balaena pat				
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Australithax intermedia         9.1         9         Laime (2013)           Austrolodelphis mirus         5.333         3.6         PBDB           Austrosquolodon trirhizodonta         27.3         25.2         PBDB           Awadelphis hirayamai         7.246         5.333         PBDB           Awamokoa tokarahi         27.3         25.2         PBDB           Babiacetus indicus         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena pampaea         1.806         0.781         PBDB           Balaena ricei         4.9         4.4         Marx and Fordyce (2015)           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena ps SDSNH 43880         5.3         2.58         PBDB           Balaenidae OU 22224         27.3         2.6         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera davidsonii         3.6         2.588         PBDB				
Australodelphis mirus         5.333         3.6         PBDB           Austrosqualodon trirhizodonta         27.3         25.2         PBDB           Awadelphis hirayamai         7.246         5.333         PBDB           Awamokoa tokarahi         27.3         25.2         PBDB           Babiacetus indicus         47.8         41.3         PBDB           Babiacetus mishrai         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena montalionis         4.5         3.9         Marx and Fordyce (2015)           Balaena pampaea         1.806         0.781         PBDB           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena bella brachyrhynus         5.0         4.4         Marx and Fordyce (2015)           Balaenotla brachyrhynus         5.0         4.4         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.58         P				
Austrosqualodon trirhizodonta         27.3         25.2         PBDB           Awadelphis hirayamai         7.246         5.333         PBDB           Awamokoa tokarahi         27.3         25.2         PBDB           Babiacetus indicus         47.8         38         PBDB           Babiacetus mishrai         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena pampaea         1.806         0.781         PBDB           Balaena ricci         4.9         4.4         Marx and Fordyce (2015)           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena ps SDSNH 43880         5.3         2.58         PBDB           Balaenella brachyrhynus         5.0         4.4         Marx and Fordyce (2015)           Balaenoplera davidsonii         3.6         2.588         PBDB           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)				
Awadelphis hirayamai         7.246         5.333         PBDB           Awamokoa tokarahi         27.3         25.2         PBDB           Babiacetus indicus         47.8         38         PBDB           Babiacetus mishrai         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena mantalionis         4.5         3.9         Marx and Fordyce (2015)           Balaena pampaea         1.806         0.781         PBDB           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena aucrocephalus         16.5         15.1         Louwye et al. (2010)           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenaled brachyrhynus         5.0         4.4         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera dwidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera deephalus         15.97         13.82         PBDB           Balaenopteridaeieri         5.3         3.0         Marx and Ford	•			
Awamokoa tokarahi         27.3         25.2         PBDB           Babiacetus indicus         47.8         38         PBDB           Babiacetus mishrai         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena montalionis         4.5         3.9         Marx and Fordyce (2015)           Balaena pampaea         1.806         0.781         PBDB           Balaena ricei         4.9         4.4         Marx and Fordyce (2015)           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena Sp SDSNH 43880         5.3         2.58         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenidae OU 22224         27.3         2.6         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera sursiplana         15.97         13.82         PBDB	<del>-</del>			
Babiacetus mishrai         47.8         41.3         PBDB           Babiacetus mishrai         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena montalionis         4.5         3.9         Marx and Fordyce (2015)           Balaena pampaea         1.806         0.781         PBDB           Balaena ricei         4.9         4.4         Marx and Fordyce (2015)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera siberi         8         7         Marx and Fo				
Babiacetus mishrai         47.8         41.3         PBDB           Balaena affinis         2.588         1.806         PBDB           Balaena montalionis         4.5         3.9         Marx and Fordyce (2015)           Balaena pampaea         1.806         0.781         PBDB           Balaena ricei         4.9         4.4         Marx and Fordyce (2015)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera teiwanica         5.33         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenopteridae Aka portisi         3.6         2.588         Bis				
Balaena affinis         2.588         1.806         PBDB           Balaena montalionis         4.5         3.9         Marx and Fordyce (2015)           Balaena pampaea         1.806         0.781         PBDB           Balaena ricei         4.9         4.4         Marx and Fordyce (2015)           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera sursipian         15.97         13.82         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenopteridae ka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307				
Balaena montalionis         4.5         3.9         Marx and Fordyce (2015)           Balaena pampaea         1.806         0.781         PBDB           Balaena ricei         4.9         4.4         Marx and Fordyce (2015)           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera suiseri         8         7         Marx and Fordyce (2015)           Balaenoptera devidsonii         3.6         2.588         PBDB           Balaenoptera cuvieri         5.3         3.6         PBDB           Balaenoptera davidsonii         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6				
Balaena pampaea         1.806         0.781         PBDB           Balaena ricei         4.9         4.4         Marx and Fordyce (2015)           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenella brachyrhynus         5.0         4.4         Marx and Fordyce (2015)           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cuvieri         5.3         3.0         Marx and Fordyce (2015)           Balaenoptera davisa         15.97         13.82         PBDB           Balaenopteridae EGAPA MPTAM 207.13307				
Balaena ricei         4.9         4.4         Marx and Fordyce (2015)           Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera wirsiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae MHNL 1613         3.6         2.588         Bisconti and Varola (2006) <th< td=""><td></td><td>1.806</td><td></td><td></td></th<>		1.806		
Balaena arcuata         16.5         15.1         Louwye et al. (2010)           Balaena dubusi         16.5         15.1         Louwye et al. (2010)           Balaena macrocephalus         15.97         13.82         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenella brachyrhynus         5.0         4.4         Marx and Fordyce (2015)           Balaenoldae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera wirsiplana         15.97         13.82         PBDB           Balaenopteridae Balaenopteridae BGAPA MPTAM 207.13307         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti and Varola (2006)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae NMN 999100007096         3.6         2.588 <t< td=""><td>* *</td><td></td><td>4.4</td><td>Marx and Fordyce (2015)</td></t<>	* *		4.4	Marx and Fordyce (2015)
Balaena macrocephalus         15.97         13.82         PBDB           Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenida brachyrhynus         5.0         4.4         Marx and Fordyce (2015)           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae MHNL 1613         3.6         1.806         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Biscon	Balaena arcuata	16.5	15.1	
Balaena sp SDSNH 43880         5.3         2.58         PBDB           Balaenella brachyrhynus         5.0         4.4         Marx and Fordyce (2015)           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae MHNL 1613         3.6         1.806         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae RBINS M.2231         5.333         3.6<	Balaena dubusi	16.5	15.1	Louwye et al. (2010)
Balaenella brachyrhymus         5.0         4.4         Marx and Fordyce (2015)           Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti and Varola (2006)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M 2315	Balaena macrocephalus	15.97	13.82	PBDB
Balaenidae OU 22224         27.3         26         Marx and Fordyce (2015)           Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae MMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M 2315         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred	Balaena sp SDSNH 43880	5.3	2.58	PBDB
Balaenoptera bertae         3.4         2.5         Marx and Fordyce (2015)           Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti and Varola (2006)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         1.806         Bisconti and Varola (2006)           Balaenopteridae RBINS M.2231         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti et al. (2020)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU		5.0	4.4	Marx and Fordyce (2015)
Balaenoptera davidsonii         3.6         2.588         PBDB           Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera cuvieri         5.3         3.0         Marx and Fordyce (2015)           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae NMR2 MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M 2315         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti et al. (2020)           Balaenopteridae SAMPQL				
Balaenoptera siberi         8         7         Marx and Fordyce (2015)           Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera cuvieri         5.3         3.0         Marx and Fordyce (2015)           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti and Varola (2006)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M 2315         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU13842 /5         5.333         3.6         Bisconti et al. (2020)				
Balaenoptera taiwanica         5.333         3.6         PBDB           Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera cuvieri         5.3         3.0         Marx and Fordyce (2015)           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M 2315         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti and Varola (2006)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU13842 /5         5.333         3.6         Bisconti et al. (2020)				
Balaenoptera cephalus         15.97         13.82         PBDB           Balaenoptera cuvieri         5.3         3.0         Marx and Fordyce (2015)           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae MHNL 1613         3.6         1.806         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M.2231         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti et al. (2020)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU13842 /5         5.333         3.6         Bisconti et al. (2020)	•			
Balaenoptera cuvieri         5.3         3.0         Marx and Fordyce (2015)           Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M.2231         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti et al. (2020)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU13842 /5         5.333         3.6         Bisconti et al. (2020)				
Balaenoptera sursiplana         15.97         13.82         PBDB           Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M.2231         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti and Varola (2006)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU13842 /5         5.333         3.6         Bisconti et al. (2020)				
Balaenopteridae aka portisi         3.6         2.588         Bisconti et al. (2020)           Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae MHNL 1613         3.6         1.806         Bisconti and Varola (2006)           Balaenopteridae NMR M001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae RBINS M.2231         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS M.2315         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti and Varola (2006)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU13842 /5         5.333         3.6         Bisconti et al. (2020)				
Balaenopteridae EGAPA MPTAM 207.13307         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae IPMM 40063         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae MHNL 1613         3.6         1.806         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M.2231         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti and Varola (2006)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU13842 /5         5.333         3.6         Bisconti et al. (2020)	*			
Balaenopteridae IPMM 40063       5.333       3.6       Bisconti et al. (2020)         Balaenopteridae MHNL 1610       11.608       5.332       Bisconti and Varola (2006)         Balaenopteridae MHNL 1613       3.6       1.806       Bisconti and Varola (2006)         Balaenopteridae NMR MM001630       5.3       3.6       Bisconti and Varola (2006)         Balaenopteridae NMR 999100007096       3.6       2.588       Bisconti and Varola (2006)         Balaenopteridae RBINS M.2231       5.333       3.6       Bisconti et al. (2020)         Balaenopteridae RBINS W 2315       5.333       3.6       Bisconti et al. (2020)         Balaenopteridae RBINS Unreferred       5.332       3.6       Bisconti and Varola (2006)         Balaenopteridae SAMPQL 55001       11.63       5.33       Bisconti et al. (2020)         Balaenopteridae UT PU13842 /5       5.333       3.6       Bisconti et al. (2020)				,
Balaenopteridae MHNL 1610         11.608         5.332         Bisconti and Varola (2006)           Balaenopteridae MHNL 1613         3.6         1.806         Bisconti and Varola (2006)           Balaenopteridae NMNZ MM001630         5.3         3.6         Bisconti and Varola (2006)           Balaenopteridae NMR 999100007096         3.6         2.588         Bisconti and Varola (2006)           Balaenopteridae RBINS M.2231         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS W 2315         5.333         3.6         Bisconti et al. (2020)           Balaenopteridae RBINS Unreferred         5.332         3.6         Bisconti and Varola (2006)           Balaenopteridae SAMPQL 55001         11.63         5.33         Bisconti et al. (2020)           Balaenopteridae UT PU13842 /5         5.333         3.6         Bisconti et al. (2020)				. ,
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Balaenopteridae UT PU13842 /5 5.333 3.6 Bisconti et al. (2020)				, ,
		5.333	1.806	

Balaenotus orcianensis	3.6	2.588	PBDB
Balaenula astensis	4	3	Marx and Fordyce (2015)
Balaenula balaenopsis	4	2.5	Bisconti (2003)
$Balaenula\ for sythmajori$	3.6	2.588	PBDB
Balaenula sp HUES 10003	5.332	3.6	PBDB
Balaenula sp SMAC 1309	6.4	4.1	PBDB
Basilosauridae MUSM 1443	40.4	37.2	PBDB
$Basilosaurus\ cetoides$	38	33.9	PBDB
Basilosaurus drazindai	41.3	38	PBDB
Basilosaurus isis	38	33.9	PBDB
Basiloterus hussaini	41.3	38	PBDB
Basilotritus uheni	47.8	38	PBDB
Basilotritus wardii	41.3	38	PBDB
Basilotritus sp GMTSNUK 15	41.2	37.8	PBDB
Belemnoziphius compressus	3.6	1.806	PBDB
Belemnoziphius prorops	5.333	3.6	PBDB
Belonodelphis peruanus	13.82	11.62	PBDB
Beneziphius cetariensis	7.246	3.6	PBDB
Beneziphius brevirostris	13.2	12.8	PBDB
$Bohaskaia\ monodontoides$	5.333	3.6	PBDB
Borealodon osedax	30.6	28.3	Shipps et al. (2019)
Brabocetus gigaseorum	5.333	3.6	PBDB
Brachydelphis jahuayensis	9.63	9.38	Lambert and De Muizon (2013)
Brachydelphis mazeasi	13.82	9.63	Lambert and De Muizon (2013)
Brandtocetus chongulek	11.2	9.6	Marx and Fordyce (2015)
Brujadelphis ankylorostris	13.82	11.62	PBDB
Brygmophyseter shigensis	15.97	13.82	PBDB
Carolinacetus gingerichi	41.3	38	PBDB
Casatia thermophila	5.08	4.52	Bianucci et al. (2019)
Caviziphius altirostris	15.97	5.33	PBDB
Cephalotropis coronatus	11.7	8.5	Marx and Fordyce (2015)
Cetacea ZMT 62	33.8	28	Fordyce (1989)
Ceterhinops longifrons	29	24.7	PBDB
Cetorhynchus atavus	11.62	7.246	PBDB
Cetorhynchus christoli	15.97	11.63	PBDB
Cetotheriidae ZIRM V28 1	15.97	11.63	PBDB
Cetotheriophanes capellinii	3.6	2.58	PBDB
Cetotheriopsis lintianus	26.84	23.19	PBDB
Cetotherium capellinii	5.333	2.588	PBDB
Cetotherium furlongi	20.44	15.97	PBDB
Cetotherium parvum	15.97	13.82	PBDB
Cetotherium rathkii Cetotherium riabinini	11.2	9.6	Mary and Fordyce (2015)
	$11.2 \\ 5.33$	9.6	Marx and Fordyce (2015) PBDB
Cetotherium crassangulum	5.55 11.7	$\frac{2.58}{10}$	
Cetotherium megalophysum	4.9	2.8	Marx and Fordyce (2015) PBDB
Cetotherium polyporum Chaeomysticeti OU 22705	$\frac{4.9}{21.7}$	$\frac{2.6}{20.5}$	Marx and Fordyce (2015)
Chaeomysticeti ZMT 67	$\frac{21.7}{21.7}$	$20.5 \\ 20.5$	Marx and Fordyce (2015)
v	6.93	6.71	PBDB
Chavinziphius maxillocristatus Chilcacetus cavirhinus	20.44	15.97	PBDB
	8.9	7.249	PBDB
Chimuziphius coloradensis Chonecetus sookensis	24.8	24.1	
Chonecetus tomitai	24.6	23.03	Marx and Fordyce (2015) PBDB
Choneziphius chonops Choneziphius leidyi	5.333 $6.1$	$3.6 \\ 4.4$	PBDB PBDB
Choneziphius liops	5.333	$\frac{4.4}{3.6}$	PBDB
Choneziphius planirostris	5.333 9.5	$\frac{3.6}{7.5}$	PBDB
		7.5 3.6	PBDB
Choneziphius trachops	5.333		PBDB
Choneziphius macrops	29	24.7	L DND

Chrysocetus fouadassii	41.3	38	PBDB
Chrysocetus healyorum	38	33.9	PBDB
Ciuciulea davidi	13.82	12.65	PBDB
Cophocetus oregonensis	20.44	15.97	PBDB
Coronodon havensteini	33.9	28.1	PBDB
Cotylocara macei	28.1	23.03	PBDB
Crenatocetus rayi	47.8	41.2	PBDB
Cynthiacetus maxwelli	41.3	33.9	PBDB
Cynthiacetus peruvianus	38	33.9	PBDB
Dagonodum mojnum	11.62	7.246	PBDB
Dalanistes ahmedi	47.8	41.3	PBDB
Dalpiazina ombonii	23.03	15.97	PBDB
Delphinapterus brocchii	3.6	2.588	PBDB
Delphinavus newhalli	13.6	10.3	PBDB
Delphinodon carniolicus	15.97	13.82	PBDB
Delphinodon dividum	20.44	15.97	PBDB
Delphinoidea NMV 72	23.03	15.97	PBDB
Delphinus delannoy	13.82	11.62	PBDB
Delphinus domeykoi	5.333	3.6	PBDB
Delphinus rikuzenensis	5.3	3.6	PBDB
Denebola brachycephala	7.246	5.333	PBDB
Dhedacetus hyaeni	47.8	41.3	PBDB
$Diaphorocetus\ poucheti$	23.03	20.44	PBDB
$Dilophodelphis\ for dycei$	20.44	15.97	PBDB
Diorocetus chichibuensis	16.4	15.1	Marx and Fordyce (2015)
Diorocetus hiatus	14.5	13.9	Marx and Fordyce (2015)
$Diorocetus\ shobarensis$	17	14.9	Marx and Fordyce (2015)
$Diunatans\ luctoretemergo$	5	4.4	Marx and Fordyce (2015)
Dorudon atrox	38	33.9	PBDB
Dorudon serratus	38	33.9	PBDB
$Echove nator\ sanders i$	27	24	Churchill et al. (2016)
$Ediscetus\ osbornei$	28.75	28.43	Albright III et al. (2018)
$Eobala en optera\ harrisoni$	13.82	11.63	PBDB
Eocetus schweinfurthi	41.3	38	PBDB
Eodelphinus kabatensis	11.62	7.246	PBDB
Eomysticetus carolinensis	24.7	23.5	PBDB
Eomysticetus whitmorei	28.1	26.8	Marx and Fordyce (2015)
Eoplatanista gresalensis	23.03	20.44	PBDB
Eoplatanista italica	23.03	20.44	PBDB
Eoplatanista miocaenus	23.03	20.44	PBDB
Eoplatanista taurinensis	20.44	15.97	PBDB
Eosqualodon langewieschei	28.1	23.03	PBDB
Eosqualodon latirostris	23.03	20.44	PBDB
Eschrichtiidae SDSNH 90517	5.3	2.58	PBDB
Eschrichtioides gastaldii	4	3	Marx and Fordyce (2015)
Eschrichtius akishimaensis	1.95	1.77	PBDB
Etruridelphis giulii	5.333	1.806	PBDB
Eubalaena ianitrix	3.2	2.8	PBDB
Eubalaena shinshuensis	6.1	5.9	Marx and Fordyce (2015)
Eustath with the language of the second of t	3.5	3.3	Bisconti (2002)
Eucetotherium helmersenii	12.7	11.608	PBDB
Eudelphis mortezelensis	16.5	15.1	PBDB PBDB
Eurhinodelphis cocheteuxi  Eurhinodelphis longinostris	$16.5 \\ 16.5$	15.1 $15.1$	PBDB
Eurhinodelphis longirostris	28.1	23.03	PBDB
Fragilicatus velnoni	$\frac{28.1}{5.333}$	$\frac{23.03}{3.6}$	PBDB
Fragilicetus velponi	5.555 28.1	$\frac{3.6}{26.5}$	
Fucaia goedertorum Fucaia buelli	33.2	20.5 31	Marx and Fordyce (2015) Marx and Fordyce (2015)
Gandakasia potens	33.2 47.8	41.3	PBDB
Синиинивш россив	41.0	41.9	י חחח

Gaviacetus razai	47.8	41.3	PBDB
Georgiacetus vogtlensis	47.8	38	PBDB
Globicephala etruriae	3.6	2.588	PBDB
Globicephala uncidens	2.588	1.806	PBDB
Globicetus hiberus	6.1	4.4	PBDB
Goedertius oregonensis	23.03	20.44	PBDB
$Goniodelphis\ hudsoni$	13.82	11.62	PBDB
Graamocetus longicollis	11.62	7.246	PBDB
Gricetoides aurorae	4.9	3.9	Marx and Fordyce (2015)
Haborodelphis japonicus	5.33	3.6	Bianucci et al. (2019)
Haborophocoena minutus	5.333	3.6	PBDB
Haborophocoena toyoshimai	5.333	3.6	PBDB
Hadrodelphis calvertense	15.97	13.82	PBDB
Hadrodelphis poseidon	15.97	13.82	PBDB
Halicetus ignotus	13.82	11.62	PBDB
Hemisyntrachelus cortesii	5.333	2.588	PBDB
$Hemisyntrachelus\ oligodon$	7.246	5.333	PBDB
Herentalia nigra	11.62	7.246	PBDB
Herpetocetus bramblei	6.4	4.9	Marx and Fordyce (2015)
$Herpetocetus\ morrowi$	3.5	2.5	Marx and Fordyce (2015)
$Herpetocetus\ scaldiensis$	16.5	15.1	Louwye et al. (2010)
$Herpetocetus\ sendaicus$	5.333	3.6	PBDB
$Herpetocetus\ transatlanticus$	4.9	4.4	Marx and Fordyce (2015)
Herpetocetus sp NMNS PV19540	5.332	3.6	PBDB
Herpetocetus sp (NMNS PV19540, USNM 362901)	5.333	3.6	El Adli et al. (2014)
Herpetocetus  sp VMW  65	2.1	0.7	PBDB
Heterocetus brevifrons	16.5	15.1	Louwye et al. (2010)
Heterocetus guiscardii	5.333	3.6	PBDB
Heterocetus scriptus	11.62	7.246	PBDB
Heterocetus major	5.33	2.588	PBDB
Heterodelphis croatica	12.7	11.608	PBDB
Heterodelphis klinderi	11.62	7.246	PBDB
Heterodelphis leiodontus	13.82	11.62	PBDB
Hibacetus hirosei	20.44	15.97	PBDB
Himalayacetus subathuensis	54	53	Bajpai and Gingerich (1998)
Hoplocetus borgerhoutensis	11.62	1.806	PBDB
Hoplocetus crassidens	20.44	15.97	PBDB
Hoplocetus ritzi	13.82	11.62	PBDB
Hoplocetus curvidens	5.333	3.6	PBDB
Horopeta umarere	27.3	25.2	PBDB
Huaridelphis raimondii	20.44	15.97	PBDB
Ichthyolestes pinfoldi	$47.8 \\ 3.2$	41.3	PBDB
Idiocetus guicciardinii	$\frac{5.2}{15.97}$	$2.588 \\ 13.82$	PBDB PBDB
Idiophyseter merriami Idiorophus bolzanensis	21.73	20.43	Hampe (2006)
	21.73 $20.44$	15.97	PBDB
Idiorophus patagonicus Ihlengesi saldanhae	20.44 16	5.3	Bianucci et al. (2007)
Imerocetus karaganicus	11.62	7.246	PBDB
Imerodelphis thabagarii	13.82	11.62	PBDB
Imocetus piscatus	7.246	3.6	PBDB
Incacetus broggii	23.03	20.44	PBDB
Incakujira anillodefuego	11.62	7.246	PBDB
Indocetus ramani	47.8	41.3	PBDB
Inermorestrum xenops	33.9	28.1	PBDB
Iniopsis caucasica	28.1	23.03	PBDB
Inticetus vertizi	20.44	$\frac{25.05}{15.97}$	PBDB
Isanacetus laticephalus	17.5	16	Marx and Fordyce (2015)
Ischyrorhynchus vanbenedeni	11.62	7.246	PBDB
Isocetus depauwi	15.97	11.62	PBDB
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Isthminia panamensis	7.246	5.333	PBDB
Izikoziphius angustus	16	5.3	Bianucci et al. (2007)
Izikoziphius rossi	$\frac{16}{28.1}$	5.3	Bianucci et al. (2007)
Janjucetus hunderi Journocetus shimizui	$\frac{26.1}{11.3}$	$25.6 \\ 11.0$	Marx and Fordyce (2015) Marx and Fordyce (2015)
	11.3 $13.82$	11.62	PBDB
Kampholophos serrulus	$\frac{13.62}{27.3}$	$\frac{11.02}{25.2}$	PBDB
Kekenodon onamata Kentriodon diusinus	$\frac{27.3}{15.97}$	13.82	PBDB
Kentriodon fuchsii	15.97 $15.97$	13.82 $13.82$	PBDB
Kentriodon hoepfneri	13.82	13.62 $11.62$	PBDB
Kentriodon obscurus	15.02 $15.97$	13.82	PBDB
Kentriodon pernix	20.44	13.82 $13.82$	PBDB
Kentriodon schneideri	20.44	13.82 $13.82$	Kazár and Hampe (2014)
Kentriodon hobetsu	15.97	11.63	PBDB
Kentriodon nakajimai	11.87	11.25	Kimura and Hasegawa (2019)
Kharodacetus sahnii	47.8	41.3	PBDB
Khoikhoicetus agulhasis	16	5.3	Bianucci et al. (2007)
Khoikhoicetus kergueleni	16	5.3	Bianucci et al. (2007)
Kogia pusilla	3.6	2.588	PBDB
Kogia sp MSNTUP I13798	5.333	2.58	PBDB
Kogiinae ChM VP4994	5.333	2.58	PBDB
Kogiopsis floridana	13.82	11.62	PBDB
Koristocetus pescei	11.62	7.246	PBDB
Kurdalagonus maicopicum	13.82	11.608	PBDB
Kurdalagonus mchedlidzei	12.1	11.2	Marx and Fordyce (2015)
Kutchicetus minimus	47.8	41.3	PBDB
Kwanzacetus khoisani	11.62	5.33	Lambert et al. (2018a)
Lagenorhynchus harmatuki	5.333	3.6	PBDB
Lamprolithax annectens	15.97	13.82	PBDB
Lamprolithax simulans	15.97	13.82	PBDB
Leptodelphis stavropolitanus	12.7	11.608	PBDB
Liolithax kernensis	15.97	13.82	PBDB
Liolithax pappus	15.97	13.82	PBDB
Lissodelphis fockii	13.82	11.608	PBDB
$Lissodelphis \ nordmanni$	12.7	11.608	PBDB
$Livyatan\ melvillei$	9.9	8.9	PBDB
$Llanocetus\ denticrenatus$	34.2	34	Marx and Fordyce (2015)
Lomacetus ginsburgi	11.62	7.246	PBDB
$Lonchodelphis\ occiduus$	11.6	5.3	PBDB
$Lophocetus\ calvertensis$	11.62	7.246	PBDB
$Lophocetus\ repenningi$	11.62	7.246	PBDB
$Loxolithax\ sinuosa$	15.97	13.82	PBDB
$Macrodelphinus\ kelloggi$	28.1	23.03	PBDB
$Macrokentriodon\ morani$	13.82	11.62	PBDB
$Macrosqualodelphis\ ukupachai$	18.86	18.7	PBDB
$Maiabalaena\ nesbittae$	33.7	30.6	Prothero et al. (2001); Peredo et al. (2018)
Maiacetus inuus	47.8	41.3	PBDB
Makaracetus bidens	47.8	41.3	PBDB
Mammalodon colliveri	25.7	23.9	Marx and Fordyce (2015)
Mammalodon hakataramea	27.3	26	Marx and Fordyce (2015)
Masracetus markgrafi	38	33.9	PBDB
Matapanui waihao	28.1	27.3	PBDB
Mauicetus parki	25.2	23	Marx and Fordyce (2015)
Medocinia tetragorhina	20.44	15.97	PBDB
Megaptera hubachi	5.33	3.6	PBDB
Meherrinia isoni	7.246	5.333	PBDB
Mesocetus agrami	12.7	11.608	PBDB
Mesocetus aquitanicus	20.44	15.97	PBDB
Mesocetus brachyspondylus	15.97	13.82	PBDB

Mesocetus hungaricus	13.82	11.1	PBDB
Mesocetus longirostris	16.5	15.1	Louwye et al. (2010)
$Mesocetus\ siphunculus$	20.44	15.97	PBDB
Mesoplodon longirostris	5.333	1.806	PBDB
$Mesoplodon\ posti$	4.86	3.9	PBDB
Mesoplodon tumidirostris	5.333	3.6	PBDB
Mesoplodon slangkopi	16	5.3	Bianucci et al. (2007)
Messapicetus gregarius	9.1	8.1	PBDB
Messapicetus longirostris	10.5	8.14	PBDB
Metasqualodon symmetricus	28.1	23.03	PBDB
Metopocetus durinasus	11.7	10.00	Marx and Fordyce (2015)
Metopocetus hunteri	11.62	7.246	PBDB
Microberardius africanus	16	5.3	Bianucci et al. (2007)
Microcetus ambiguus	28.1	23.03	PBDB
Microcetus sharkovi	28.1	23.03	PBDB
Micromysticetus rothauseni	29.6	28.1	Marx and Fordyce (2015)
Micromysticetus tobieni	28.73	26.57	PBDB
Microphocaena podolica	12.7	11.608	PBDB
Microzeuglodon caucasicum	41.2	33.9	PBDB
Miobalaenoptera numataensis	6.8	6.5	Tanaka and Watanabe (2019)
Miocaperea pulchra	7.5	7.3	Marx and Fordyce (2015)
Miodelphis californicus	28.1	23.03	PBDB
Miokogia elongatus	20.44	15.97	PBDB
Miophocaena nishinoi	7.246	5.333	PBDB
Mirocetus riabinini	33.9	28.1	PBDB
Mithridatocetus adygeicus	11.62	7.246	PBDB
$Mithridatocetus\ eichwaldi$	11.62	7.246	PBDB
Mixocetus elysius	11.62	7.246	PBDB
Monodontidae IRSNB M 1922	5.333	3.6	Bianucci et al. (2019)
Morawanocetus yabukii	26.1	23.3	Marx and Fordyce (2015)
Morenocetus parvus	19.8	18.2	Marx and Fordyce (2015)
Mycteriacetus bellunensis	23.03	20.44	PBDB
Mystacodon selenensis	38	33.9	PBDB
Mysticeti ChM PV4745	29.6	28.1	Marx and Fordyce (2015)
Mysticeti ChM PV5720	28.4	23.03	PBDB
Mysticeti OU GS10897	33	32	Marx and Fordyce (2015)
Mysticeti USNM 314627	33.7	30.6	PBDB
Nalacetus ratimitus	47.8	41.3	PBDB
Nannocetus eremus	11.62	7.246	PBDB
Nannolithax gracilis	15.97	13.82	PBDB
$Nanokogia\ isthmia$	11.62	7.246	PBDB
$Natchitochia\ jonesi$	41.3	38	PBDB
Nazcacetus urbinai	7.55	7.3	PBDB
$Nehalaennia\ devossi$	8.7	8.1	Bisconti et al. (2020)
Nenga meganasalis	16	5.3	Bianucci et al. (2007)
$Neosqualodon\ assenzae$	20.44	15.97	PBDB
Neosqualodon gastaldii	20.44	15.97	PBDB
Ninjadelphis ujiharai	20.44	15.97	PBDB
Ninoziphius platyrostris	5.9	3.9	PBDB
Niparajacetus palmadentis	28.1	23.03	Solis-Añorve et al. (2019)
Norrisanima miocaena	7.6	7.3	Marx and Fordyce (2015); Leslie et al. (2019)
Notiocetus romerianus	1.806	0.781	PBDB
Notiocetus platensis	2.588	0.0117	PBDB
Notocetus vanbenedeni	23.03	20.44	PBDB
Notoziphius bruneti	11.62	7.246	PBDB
Numataphocoena yamashitai	5.333	3.6	PBDB
Ocucajea picklingi	41.3	38 5 222	PBDB
Odobenocetops leptodon	$7.246 \\ 7.246$	5.333 $5.333$	PBDB PBDB
Odobenocetops peruvianus	1.440	ა.ააა	ניסט ז

Odontoceti CCNHM 1000	30.5	26.5	Paginet et al. (2010)
Odontoceti ChM PV2764	28.4	23.03	Racicot et al. (2019) PBDB
Odontoceti ChM PV4178	33.9	28.1	PBDB
Odontoceti ChM PV4802	28.4	23.03	PBDB
Oedolithax mira	15.97	13.82	PBDB
Oligodelphis azerbajdzanicus	28.1	23.03	PBDB
Olympicetus avitus	30.5	26.5	PBDB
Orcinus citoniensis	3.6	1.806	PBDB
Orcinus paleorca	1.806	0.781	PBDB
Orycterocetus cornutidens	5.333	3.6	PBDB
Orycterocetus crocodilinus	20.44	7.246	PBDB
Orycterocetus quadratidens	5.333	3.6	PBDB
Orycterocetus sp MAUL 29/1	18	6	Bianucci et al. (2004)
Otekaikea huata	27.3	25.2	PBDB
Otekaikea marplesi	25.2	21.7	PBDB
Otradnocetus sp VSEGEI 2401	11.608	7.246	PBDB
Otradnocetus virodovi	15.97	11.608	PBDB
Pachyacanthus suessii	15.97	11.608	PBDB
Pakicetus attocki	47.8	41.3	PBDB
Pakicetus calcis	47.8	41.3	PBDB
Pakicetus chittas	47.8	41.3	PBDB
Pakicetus inachus	47.8	41.3	PBDB
Palaeobalaena bergi	15.97	13.82	PBDB
$Palaeophocaena\ and russowi$	13.82	11.62	PBDB
Papahu taitapu	21.7	19	PBDB
Papahu sp ZMT73	23	18.7	PBDB
Pappocetus lugardi	41.3	38	PBDB
Parabalaenoptera baulinensis	7.6	6.7	Marx and Fordyce (2015)
Parapontoporia pacifica	7.246	5.333	PBDB
$Parapontoporia\ sternbergi$	3.6	2.588	PBDB
$Parapontoporia\ wilsoni$	11.62	7.246	PBDB
Parietobalaena affinis	20.44	15.97	PBDB
Parietobalaena campiniana	15.0	13.2	Marx and Fordyce (2015)
Parietobalaena laxata	15.97	11.62	PBDB
Parietobalaena palmeri	16.4	14.5	Marx and Fordyce (2015)
Parietobalaena securis	15.97	13.82	PBDB
Parietobalaena yamaokai	17	14.9	Marx and Fordyce (2015)
Parietobalaena sp SMNH VeF62	16.4	15.1	Marx and Fordyce (2015)
Patriocetidae ChM PV2761	28.4	23.03	PBDB
Patriocetus denggi	28.1	23.03	PBDB
Patriocetus ehrlichii	28.1	23.03	PBDB
Patriocetus kazakhstanicus	28.1	23.03	PBDB
Pelocetus calvertensis	15.5	14.5	Marx and Fordyce (2015)
Pelocetus mirabilis	13.82	7.246	PBDB
Peregocetus pacificus	47.8	41.3	Lambert et al. (2019)
Peripolocetus vexillifer	16	15.2	Marx and Fordyce (2015)
Phoberodon arctirostris	20.44	15.97	PBDB
Phocaenopsis mantelli	19	15.9	PBDB
Phocaenopsis scheynensis	13.82	11.62	PBDB
Phocageneus venustus	20.44	15.97	PBDB
Phococetus vasconum	20.44	15.97	PBDB
Physeter vetus	15.97	13.82	PBDB
Physeter antiquus	5.33	2.588	PBDB
Physeteridae IRSNB M 1937	11.608	5.333	PBDB
Physeterula dubusi	20.44	15.97	PBDB
Physeterula neolassicus	2.588	0.0117	PBDB
Pinocetus polonicus	15.97	13.82	PBDB Marriand Fording (2015)
Piscobalaena nana	7.5	5.9	Marx and Fordyce (2015)
Piscocetus sacaco	7.246	5.333	PBDB

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Piscolithax aenigmaticus Piscolithax boreios	$11.62 \\ 7.246$	7.246 $5.333$	PBDB PBDB
Piscolithax longirostris	7.246	5.333	PBDB
Piscolithax tedfordi	7.246	5.333	PBDB
Pithanodelphis cornutus	16.5	15.1	Louwye et al. (2010)
Placoziphius duboisii	23.03	15.97	PBDB
Platalearostrum hoekmani	3.6	0.8	PBDB
Platanistinae MUSM 1611	13.2	12.5	PBDB
Platanistoidea OU 22670	23.03	20.44	PBDB
Platylithax robusta	15.97	13.82	PBDB
Platyosphys aithai	41.3	38	PBDB
Platyosphys paulsonii	38	33.9	PBDB
Platyosphys einori	41.2	37.8	PBDB
Plesiobalaenoptera quarantellii	11.6	9.4	Marx and Fordyce (2015)
Plesiocetopsis hupschii	16.5	15.1	Louwye et al. (2010)
Plesiocetopsis notopelagicus	5.33	2.58	PBDB
Plesiocetus dyticus	20.44	15.97	PBDB
Plesiocetus giganteus	11.62	7.246	PBDB
Plesiocetus intermedius	11.62	7.246	PBDB
Plesiocetus minor	11.62	7.246	PBDB
Plesiocetus rostratus	11.62	7.246	PBDB
Plesiocetus tertius	11.62	7.246	PBDB
Plesiocetus occidentalis	16.3	13.6	PBDB
Pliokogia apenninica	5.08	5.04	Collareta et al. (2019)
Pliopontos littoralis	7.246	3.6	PBDB
$Pomatodelphis\ bobengi$	13.82	10.3	PBDB
$Pomatodelphis\ inaequalis$	13.82	4.9	PBDB
$Pomatodelphis\ stenorhynchus$	20.44	15.97	PBDB
Pomatodelphis sp USNM 187414	13.82	11.63	PBDB
Pontistes rectifrons	13.82	11.62	PBDB
Praekogia cedrosensis	7.246	5.333	PBDB
Praemegaptera pampauensis	13.82	11.62	PBDB
Preaulophyseter gualichensis	23.03	15.97	PBDB
Prepomatodelphis korneuburgensis	15.97	13.65	PBDB
Priscophyseter typus	5.33	2.58	PBDB
Prosqualodon australis	23.03	15.97	PBDB
Prosqualodon davidis	23.03	20.44	PBDB
Prosqualodon hamiltoni	28.1	23.03	PBDB
Protocetus atavus	47.8	41.3	PBDB
Protodelphinus capellinii	23.03	20.44	PBDB
Protoglobicephala mexicana	3.6	2.588	PBDB
Protophocaena minima	11.62	7.246	PBDB
Protororqualus cuvieri	12.7	11.608	PBDB
Pseudorca yokoyamai	1.806	0.781	PBDB
Pterocetus benguelae	16	5.3 7.246	Bianucci et al. (2007)
Pterophocaena nishinoi	11.62	7.246	PBDB
Qaisracetus arifi	$47.8 \\ 47.8$	$41.3 \\ 41.3$	PBDB PBDB
Rayanistes afer Remingtonocetus domandaensis	47.8	41.3	PBDB
Remingtonocetus harudiensis	47.8	41.3	PBDB
Rhinostodes lovisatoi	11.63	7.246	PBDB
Rodhocetus balochistanensis	47.8	41.3	PBDB
Rodhocetus kasranii	46.5	46.5	PBDB
Rudicetus squalodontoides	15.97	7.246	PBDB
Sachalinocetus cholmicus	23	11.6	PBDB
Saghacetus osiris	38	33.9	PBDB
Salishicetus meadi	27.82	23.03	PBDB
Salumiphocaena stocktoni	11.62	7.246	PBDB
Sarmatodelphis moldavicus	12.7	11.608	PBDB
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Saurocetes argentinus	11.62	7.246	PBDB
Saurocetes gigas	9	6.8	PBDB
Saurocetus gibbesii	33.9	28.1	PBDB
Scaldicetus bellunensis	23.03	20.44	PBDB
Scaldicetus caretti	11.62	1.806	PBDB
Scaldicetus degiorgii	15.97	7.246	PBDB
Scaldicetus grandis	11.63	5.33	PBDB
Scaldicetus inflatus	13.82	11.62	PBDB
Scaldicetus macgeei	7.246	5.333	PBDB
Scaldicetus minor	5.333	2.588	PBDB
Scaldicetus perpinguis	20.44	15.97	PBDB
Scaldicetus antwerpiensis	16.5	15.1	Louwye et al. (2010)
Scaldiporia vandokkumi	7.6	5	Post et al. (2017)
Scaphokogia cochlearis	11.62	7.246	PBDB
Scaphokogiinae MUSM 3291 and 3405	11.608	5.332	PBDB
Schizodelphis barnesi	20.44	15.97	PBDB
Schizodelphis bogatshowi	13.82	11.62	PBDB
Schizodelphis morekhoviensis	15.97	11.62	PBDB
Schizodelphis planus	20.44	15.97	PBDB
Schizodelphis squalodontoides	20.44	15.97	PBDB
Schizodelphis sulcatus	20.44	15.97	PBDB
Schizodelphis compressus	11.608	5.332	PBDB
Semirostrum ceruttii	5.333	$\frac{3.532}{2.588}$	PBDB
Septemtriocetus bosselaersi	3.6	2.588	PBDB
Septidelphis morii	5.333	2.588	PBDB
Simocetus rayi	33.7	30.6	PBDB
Sinanodelphis izumidaensis	15.97	13.82	PBDB
Sitsqwayk cornishorum	28.1	23.03	PBDB
Sophianacetus commenticius	13.82	11.62	PBDB
Squalodelphinidae USNM 475596	23.03	20.43	PBDB
Squalodelphinidae UWBM 87105	23.03	20.43	PBDB
Squalodelphis fabianii	23.03	20.44	PBDB
Squalodon antverpiensis	16.5	15.1	Louwye et al. (2010)
Squalodon atlanticus	15.97	13.82	PBDB
Squalodon barbarus	28.1	23.03	PBDB
Squalodon bariensis	23.03	15.97	PBDB
Squalodon bellunensis	23.04	20.44	PBDB
$Squalodon\ bordae$	20.44	15.97	PBDB
Squalodon calvertensis	23.03	20.44	PBDB
Squalodon catulli	23.03	20.44	PBDB
$Squalodon\ dalpiazi$	20.44	15.97	PBDB
$Squalodon\ grateloupii$	28.1	23.03	PBDB
$Squalodon\ hypsispondylus$	28.1	23.03	PBDB
$Squalodon\ imperator$	13.82	11.62	PBDB
$Squalodon\ linzianus$	28.1	23.03	PBDB
$Squalodon\ melitensis$	20.44000	15.97	PBDB
$Squalodon\ meyeri$	20.44	15.97	PBDB
$Squalodon\ molassicus$	20.44	15.97	PBDB
Squalodon peregrinus	23.03	20.44	PBDB
$Squalodon\ protervus$	15.97	11.62	PBDB
$Squalodon\ servatus$	20.44	15.97	PBDB
$Squalodon\ tiedemani$	23.03	20.43	PBDB
$Squalodon\ vocontiorum$	20.44	15.97	PBDB
$Squalodon\ whitmorei$	20.44	15.97	PBDB
$Squalodon\ mirabilis$	15.97	11.608	PBDB
Squalodon  sp MAUL  8	20.43	15.97	PBDB
Squalodon sp OU 21798	27.82	23.03	PBDB
Squalodontidae ChM PV4961	27.82	23.03	PBDB
Squalodontidae ChM PV4991	27.82	23.03	PBDB

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Squalodontidae OU 21798	27.82	23.03	Fordyce (1994) PBDB
Squaloziphius emlongi	23.03	20.44 $7.246$	PBDB
Stenasodelphis russellae	11.62 $5.333$	3.6	PBDB
Stenella rayi			PBDB
Stromerius nidensis	38	33.9	
Sulaimanitherium dhanotri	41.3	38	PBDB
Sulakocetus dagestanicus	28.1	23.03	PBDB
Supayacetus muizoni	41.3	38	PBDB
Tagicetus joneti	13.82	11.62	PBDB
Taikicetus inouei	15.97	11.62	PBDB
Takracetus simus	47.8	41.3	PBDB
Tangaroasaurus kakanuiensis	15.97	13.82	PBDB
Thalassocetus antwerpiensis	16.5	15.1	Louwye et al. (2010)
Thalassotherii USNM 187416	15.97	13.63	PBDB
Thinocetus arthritus	13.5	13.4	Marx and Fordyce (2015)
$Tiphyocetus\ temblorensis$	16	15.2	Marx and Fordyce (2015)
Titanocetus sammarinensis	16.4	14.7	Marx and Fordyce (2015)
Tiucetus rosae	11	9	Marx et al. (2017)
$Tlax callicetus\ guay curae$	28.4	23.03	PBDB
Tlaxcallicetus sp MU EcSj5/18/95	28.4	23.03	PBDB
Togocetus traversei	47.8	41.3	PBDB
Tohoraata raekohao	27.3	25.2	PBDB
Tohoraata waitakiensis	27.3	25.2	PBDB
Toipahautea waitaki	27.3	25.2	PBDB
Tokarahia kauaeroa	27.3	25.2	PBDB
Tokarahia lophocephalus	27.3	25.2	PBDB
Tranatocetus argillarius	11.62	7.246	PBDB
Tranatocetus maregermanicum	8.1	7.5	Marx et al. (2019)
Tupelocetus palmeri	41.3	38	Gibson et al. (2018)
Tursiops brochii	3.6	2.588	PBDB
Tursiops capellinii	5.333	2.588	PBDB
Tursiops osennae	3.6	2.588	PBDB
Tursiops astensis	3.5	3	PBDB
Tusciziphius atlanticus	6.1	4.4	PBDB
Tusciziphius crispus	4.12	3.84	PBDB
Uranocetus gramensis	8.6	7.5	Marx and Fordyce (2015)
Urkudelphis chawpipacha	26	24	Tanaka et al. (2017)
Vampalus sayasanicus	15.97	5.33	PBDB
Vanbreenia trigonia	15.97	13.82	PBDB
Waharoa ruwhenua	25.4	25.3	Marx and Fordyce (2015)
Waipatia maerewhenua	27.2	24.5	Marx and Fordyce (2015)
Waipatia hectori	27.3	25.2	PBDB
Whakakai waipata	27.3	25.2	PBDB
Wimahl chinookensis	23.03	15.97	PBDB
Xenorophidae ChM PV2758	27.82	23.03	PBDB
Xenorophidae ChM PV4746	27.82	23.03	PBDB
Xenorophidae ChM PV5711	27.82	23.03	PBDB
Xenorophus sloanii	33.9	28.1	PBDB
Xenorophus sp ChM PV4823	30	27	PBDB
Xhosacetus hendeysi	16	5.3	Bianucci et al. (2007)
Xiphiacetus bossi	20.44	15.97	PBDB
Xiphiacetus cristatus	16.5	15.97	Louwye et al. (2010)
Yamatocetus canaliculatus	29.2	28.1	Marx and Fordyce (2015)
	24		
Yaquinacetus meadi		19.2	Lambert et al. (2018b)
Zarhachis crassangulum	15.97	11.62	PBDB
Zarhachis flagellator	23.03	20.44	PBDB
Zarhachis tysonii	11.62	7.246	PBDB
Zarhachis velox	15.97	13.82	PBDB
Zarhinocetus donnamatsonae	20.44	13.82	PBDB

15.97	11.62	PBDB
23.3	16.1	PBDB
23.03	20.44	PBDB
23.03	20.44	PBDB
9.5	7.5	PBDB
15.97	5.33	PBDB
11.6	2.588	PBDB
2.588	1.806	PBDB
7.246	5.333	PBDB
10.5	8.14	Bianucci and Landini (2006)
38	33.9	PBDB
	23.03 23.03 9.5 15.97 11.6 2.588 7.246 10.5	23.3 16.1 23.03 20.44 23.03 20.44 9.5 7.5 15.97 5.33 11.6 2.588 2.588 1.806 7.246 5.333 10.5 8.14

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