

SUPPLEMENTARY DATA 6

**Unriddling an old dolphin: platanistoid *Notocetus vanbenedeni* Moreno, 1892 from the
early Miocene of Patagonia (Argentina)**

MARIANA VIGLINO¹, MÓNICA R. BUONO¹, YOSHIHIRO TANAKA², JOSÉ I. CUTIÑO¹
and R. EWAN FORDYCE³

¹Instituto Patagónico de Geología y Paleontología, CCT CONICET-CENPAT, Bvd. Brown
2915, Puerto Madryn, Chubut, U9120ACD, Argentina.

²Osaka Museum of Natural History, Nagai Park 1-23, Higashi-Sumiyoshi-ku, Osaka, 546-0034,
Japan.

³Department of Geology, University of Otago, Box 56, Dunedin, 9054, New Zealand.

Supplementary Data 6. Data for calibrated phylogenetic hypothesis

Below is the list of species included in the morphological matrix with their oldest and youngest record (chronostratigraphic range). Whenever a narrow chronostratigraphic range was available. Then, we used the data to obtain a calibrated phylogenetic hypothesis (see Materials and methods section). Additional references not included in the manuscript are listed at the end.

Species	Oldest record	Youngest record	Source
<i>Georgiacetus vogtlensis</i>	40	40	Hulbert <i>et al.</i> (1998); Uhen (2008)
<i>Zygorhiza kochii</i>	37.8	33.9	Buono <i>et al.</i> (2017)
<i>Archaeodelphis patrius</i>	27.2	24.5	Marx & Fordyce (2015)
<i>Xenorophus sloanii</i>	29.2	29.1	Sanders & Geisler (2015)
<i>Agorophius pygmaeus</i>	33.9	23	Godfrey <i>et al.</i> (2016)
<i>Patriocetus kazakhstanicus</i>	28.1	23	Dubrovo & Sanders (2000)
<i>Simocetus rayi</i>	33.7	30.6	Prothero <i>et al.</i> (2001); Fordyce (2002)
<i>Xiphiacetus bossi</i>	13.4	13	Kellogg (1925); Andrews (1978)
<i>Orycterocetus crocodilinus</i>	20	13.2	Andrews (1978); Gottfried <i>et al.</i> (1994)
<i>Physeter catodon</i>	0	0	-
<i>Kogia breviceps</i>	0	0	-
<i>Tasmacetus shepherdi</i>	0	0	-
<i>Berardius bairdii</i>	0	0	-
<i>Ziphius cavirostris</i>	0	0	-
<i>Mesoplodon ginkgodens</i>	0	0	-
<i>Lipotes vexillifer</i>	0	0	-
<i>Parapontoporia sternbergi</i>	4	2	Barnes (1985)
<i>Inia geoffrensis</i>	0	0	-
<i>Pontoporia blainvillei</i>	0	0	-
<i>Pliopontos littoralis</i>	6.6	5.9	Muizon & De Vries (1985); Amiot <i>et al.</i> (2008); Lambert & Muizon (2013); Ochoa <i>et al.</i> (2021)
<i>Brachydelphis mazeasi</i>	9.5	6.7	Muizon (1988a); Lambert & Muizon (2013); Di Celma <i>et al.</i> (2017); Bosio <i>et al.</i> (2019)
<i>Kentriodon pernix</i>	15.9	14.8	Benson (1998); Gottfried <i>et al.</i> (1994)
<i>Atocetus iquensis</i>	8.4	6.7	Muizon (1988a); Lambert <i>et al.</i> (2014); Di Celma <i>et al.</i> (2017); Bosio <i>et al.</i> (2019)
<i>Hadrodelphis calvertense</i>	19	14.2	Andrews (1978); Dawson (1996); Gottfried <i>et al.</i> (1994)
<i>Albireo whistleri</i>	8	6	Barnes (1984)
<i>Denebola brachycephala</i>	8	6	Barnes (1984)
<i>Delphinapterus leucas</i>	0	0	-
<i>Monodon monoceros</i>	0	0	-
<i>Odobenocetops peruvianus</i>	6.6	5.9	Muizon & De Vries (1985); Amiot <i>et al.</i> (2008); Lambert & Muizon (2013); Ochoa <i>et al.</i> (2021)

Species	Oldest record	Youngest record	Source
<i>Australithax intermedia</i>	9.45	7.46	Muizon (1988a); Lambert & Muizon (2013); Ochoa <i>et al.</i> (2021)
<i>Lomacetus ginsburgi</i>	8.8	7.9	Muizon & Bellon (1986); Marx & Fordyce (2015); Ochoa <i>et al.</i> (2021)
<i>Miophocaena nishinoi</i>	6.4	5.5	Murakami <i>et al.</i> (2012b)
<i>Archaeophocaena teshioensis</i>	6.4	5.5	Murakami <i>et al.</i> (2012b)
<i>Pterophocaena nishinoi</i>	10	9.2	Murakami <i>et al.</i> (2012a)
<i>Haborophocoena minutus</i>	5.6	4.9	Ichishima & Kimura (2005)
<i>Haborophocoena toyoshimai</i>	3.9	2	Ichishima & Kimura (2005)
<i>Piscolithax boreios</i>	8	6	Barnes (1984)
<i>Piscolithax longirostris</i>	6.6	5.9	Muizon & De Vries (1985); Amiot <i>et al.</i> (2008); Lambert & Muizon (2013); Ochoa <i>et al.</i> (2021)
<i>Piscolithax tedfordi</i>	8	6	Barnes (1984)
<i>Salumiphocaena stocktoni</i>	15	7	Blake (1991)
<i>Septemtriocetus bosselaersi</i>	3.5	2.6	Lambert (2008)
<i>Phocoena sinus</i>	0	0	-
<i>Phocoena spinipinnis</i>	0	0	-
<i>Phocoena dioptrica</i>	0	0	-
<i>Phocoena phocoena</i>	0	0	-
<i>Phocoenoides dalli</i>	0	0	-
<i>Neophocaena phocaenoides</i>	0	0	-
<i>Lissodelphis borealis</i>	0	0	-
<i>Cephalorhynchus hectori</i>	0	0	-
<i>Lagenorhynchus acutus</i>	0	0	-
<i>Orcaella brevirostris</i>	0	0	-
<i>Orcinus orca</i>	0	0	-
<i>Feresa attenuata</i>	0	0	-
<i>Globicephala macrorhynchus</i>	0	0	-
<i>Grampus griseus</i>	0	0	-
<i>Hemisyntachelus cortesii</i>	5.3	2.6	Murakami <i>et al.</i> (2014)
<i>Peponocephala electra</i>	0	0	-
<i>Pseudorca crassidens</i>	0	0	-
<i>Delphinus delphis</i>	0	0	-
<i>Lagenodelphis hosei</i>	0	0	-
<i>Sousa chinensis</i>	0	0	-
<i>Stenella attenuata</i>	0	0	-
<i>Tursiops truncatus</i>	0	0	-
<i>Sotalia fluviatilis</i>	0	0	-
<i>Steno bredanensis</i>	0	0	-
<i>Eodelphinus kabatensis</i>	13	8.5	Murakami <i>et al.</i> (2014)
<i>Papahu taitapu</i>	21.7	18.7	Aguirre-Fernández & Fordyce (2014)
<i>Waipatia hectori</i>	25.2	25.2	Tanaka & Fordyce (2015a)
<i>Awamokoia tokarahi</i>	27.3	25.2	Tanaka & Fordyce (2017)
<i>Waipatia maerewhenua</i>	27.3	25.2	Fordyce (1994); Marx & Fordyce (2015)
<i>Otekaikea marplei</i>	23.9	23.9	Tanaka & Fordyce (2014)
<i>Otekaikea huata</i>	24.6	22.3	Tanaka & Fordyce (2015b)

Species	Oldest record	Youngest record	Source
<i>Squalodon calvertensis</i>	15.9	14.8	Benson (1998); Gottfried <i>et al.</i> (1994)
<i>Notocetus vanbenedeni</i>	20.4	16	Buono <i>et al.</i> (2017); Gaetán <i>et al.</i> (2019); Viglino <i>et al.</i> (2018a,b); Cuitiño <i>et al.</i> (2019)
<i>Squalodelphis fabianii</i>	20.4	16	Müller <i>et al.</i> (2010)
<i>Prosqualodon davidis</i>	23.9	21	Fitzgerald (2004)
<i>Squaloziphius emlongi</i>	24.2	23.8	Prothero & Burns (2001)
<i>Zarhachis flagellator</i>	15	13	Barnes (2006); Gottfried <i>et al.</i> (1994)
<i>Pomatodelphis inaequalis</i>	13.5	10.5	Morgan (1994); Barnes (2006)
<i>Platanista gangetica</i>	0.1	0	-
<i>Phocageneus venustus</i>	19	17.7	Andrews (1978); Gottfried <i>et al.</i> (1994); Benson (1998)
ZMT 73	23	18.7	Tanaka & Fordyce (2016)
OU 22670	18.7	15.9	Fordyce, R.E. (pers. comm.)
<i>Phoberodon arctirostris</i>	20.4	16	Buono <i>et al.</i> (2017); Gaetán <i>et al.</i> (2019); Viglino <i>et al.</i> (2018a,b); Cuitiño <i>et al.</i> (2019)
OU 21798	26	23	Ayress (1993)
<i>Aondelphis talen</i>	20.4	16	Buono <i>et al.</i> (2017); Gaetán <i>et al.</i> (2019); Viglino <i>et al.</i> (2018a,b); Cuitiño <i>et al.</i> (2019)
<i>Arktocara yakataga</i>	28.1	23	Boersma & Pyenson (2016)
<i>Dilophodelphis fordycei</i>	20	19	Boersma <i>et al.</i> (2017)
<i>Araeodelphis natator</i>	20	17	Godfrey <i>et al.</i> (2017)
<i>Huaridelphis raimondii</i>	19	18	Di Celma <i>et al.</i> (2018)
<i>Allodelphis pratti</i>	22	21	Kimura & Barnes (2016)
<i>Ninjadelpis ujiharai</i>	17	17	Kimura & Barnes (2016)
<i>Zarhinocetus errabundus</i>	16.1	14.5	Kimura & Barnes (2016)
<i>Goedertius oregonensis</i>	21	20	Kimura & Barnes (2016)
<i>Medocinia tetragorhina</i>	20.4	16	Cahuzac <i>et al.</i> (2007)
<i>Inticetus vertizi</i>	18.8	18	Lambert <i>et al.</i> (2017)
<i>Macrosqualodelphis ukupachai</i>	19	18	Bianucci <i>et al.</i> (2018)
<i>Prosqualodon davidis</i>	20.4	16	Buono <i>et al.</i> (2017); Gaetán <i>et al.</i> (2019); Viglino <i>et al.</i> (2018a,b); Cuitiño <i>et al.</i> (2019)
MUSM 1395/3894/3895/1484	19	18	Di Celma <i>et al.</i> (2018); Bianucci <i>et al.</i> (2020)

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