

Appendix to:**Eocene cetaceans from the Helmstedt region, Germany, with some remarks on *Platysphys*, *Basilotritus* and *Pachycetus***

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Appendix table 1a. Dimensions of cheek teeth, morphotype A, *Pachycetus* sp., from the Helmstedt region (in mm).

Collection number & tooth	Taxon	H	H crown	Le crown ant-post	Transverse diameter crown	Transverse diameter root	References
ID21 ?Upper premolar (?P2,3, or 4)	<i>Pachycetus</i> sp.	94	47	33 e<66	35	34	This paper
GPIM P 4010 ?Upper molar (?M1, or 2)	<i>Pachycetus</i> sp. Dorudontidae <i>gen. et sp. indet.</i>	77	32	28 e<56	19	17	This paper Lienau, 1984

Appendix table 1b. Cheek teeth of *Pachycetus* sp. from Ukraine (in mm).

Collection number & tooth	Taxon	H	H crown	Le crown ant-post	Transverse diameter crown	Reference
GMTSNUK 15/5 ?P1	<i>Pachycetus</i> sp.	>55	>13	>22	14	Gol'din <i>et al.</i> , 2014, appendix B
GMTSNUK 15/2 P2	<i>Pachycetus</i> sp.	>93 e119	>27	50	16	Gol'din <i>et al.</i> , 2014, appendix B
GMTSNUK 15/3 M1	<i>Pachycetus</i> sp.	>55	>10	26	11	Gol'din <i>et al.</i> , 2014, appendix B
GMTSNUK 15/1 M2	<i>Pachycetus</i> sp.	>65	>19	26	11	Gol'din <i>et al.</i> , 2014, appendix B

Appendix table 1c. Transverse width of cheek teeth (L–R) in some basilosaurids (in mm).

Taxon	P1 (L–R) p1 (L–R)	P2 (L–R) p2 (L–R)	P3 (L–R) p3 (L–R)	P4 (L–R) p4 (L–R)	M1 (L–R) m1 (L–R)	M2 (L–R) m2 (L–R)	– m3 (L–R)	References
MNHN.F.PRU10 <i>Cynthiacetus peruvianus</i>	21–21 22–21	28–28 21–22	33–31 23–20	21–22 22–21	11–12 20–18	10–9.5 21–20	– 20.5–21	Martínez-Cáceres <i>et al.</i> , 2017, table 5
USMN 4674 <i>Basilosaurus cetoides</i>	17–16.5 17–?	31.5–? 25.8–?	30–? ?–?	25–? ?–?	?–? ?–?	?–? ?–?	– 21.4–?	Kellogg, 1936, table 5 & 6

Appendix table 2a. Dimensions of vertebral centrum, *Pachycetus robustus*, from the Helmstedt region (in mm).

Collection number & vertebra	Taxon	Le	H	W	Rel L Ld/Wa	Width neural arch (ant)	References
NsT90 Posterior Th (?Anterior Lu)	<i>Pachycetus robustus</i>	166 (dors) 162 (vent)	>81 (ant) 96 (post)	>114 (ant) 129 (post)	<1.46 (>1.28) ¹⁾	57	This paper
	Cetacean vertebra	155	95	180			Geinitz, 1883a
	<i>Pachycetus robustus</i>	160	85 (ant) 95 (post)	123 (ant) 125 (post)			Van Beneden, 1883
	Large archaeocete, (elongated vertebra) ' <i>Zeuglodon</i> ' cf. <i>isis</i>	150	95 (ant) ? (post)	120 (ant) 110 (post)			Kuhn, 1935 (ant = post?)

¹⁾ Dorsal length / posterior width

Appendix table 2b. Dimensions of vertebrae in morphotype A, *Pachycetus* sp., from the Helmstedt region (in mm).

Collection number & vertebrae	Taxon	Le	H	W	Rel L Ld/Wa	Width neural arch (ant)	References
NsT94 Anterior Th	<i>Pachycetus</i> sp.	43 (dors) 42 (vent)	57 (ant) 57 (post)	65 (ant) 76 (post)	0.66	35	This paper
	<i>Pachycetus humilis</i>	40	55	63			Van Beneden, 1883
	Small archaeocete ' <i>Zeuglodon</i> ' cf. <i>osiris</i>	44	57	77 (ant)			Kuhn, 1935 (ant = post?)
NsT93 Anterior Th	<i>Pachycetus</i> sp.	71 (dors) 73 (vent)	56 (ant) 57 (post)	>49; e98 (ant) >55; e110 (post)	e0.72	e38	This paper
	<i>Pachycetus humilis</i>	70	57 (ant) 59 (post)	98 (ant) 120 (post)			Van Beneden, 1883
	Large(?) archaeocete, not-elongated vertebra	73	57	>90			Kuhn, 1935
ID20-A Anterior-central Th	<i>Pachycetus</i> sp.	72 (dors) 68 (vent)	70 (ant) 77 (post)	112 (ant) 108 (post)	0.64	58	This paper
NsT91 Anterior-central Th	<i>Pachycetus</i> sp.	87 (dors) e85 (vent)	59 (ant) 65 (post)	82 (ant) 82 (post)	1.06	50	This paper
	<i>Pachycetus humilis</i>	92	65	84			Van Beneden, 1883
	Large(?) archaeocete, not-elongated vertebra	87	60–62	65–82			Kuhn, 1935
NMR999100151793 Anterior-central Th	<i>Pachycetus</i> sp.	>80	>73; e146 (ant)?	>109; e146 (ant)	?	e90	This paper
NMR999100151794 Central-posterior Th	<i>Pachycetus</i> sp.	>71 (dors) >69 (vent)	88 (ant)	65, e130 (ant)	e>0.55	e76	This paper

continued on next page

Appendix table 2b continued

Collection number & vertebrae	Taxon	Le	H	W	Rel L Ld/Wa	Width neural arch (ant)	References
ID20-B Posterior Th	<i>Pachycetus</i> sp.	154 (dors) 134 (vent)	87 (ant) 91 (post)	124 (ant) e131 (post)	1.24	53	This paper
ID20-3 Inner part centrum Th or Lu	<i>Pachycetus</i> sp.	?	123 96	132 111			This paper
NMR999100151795 Lu	<i>Pachycetus</i> sp.	>223 (dors) >223 (vent)	>117 (ant) 130 (post)	70; e140 (ant) 89; e178 (post)	e>1.59	?	This paper
ID20-2 Lu	<i>Pachycetus</i> sp.	235 (dors) 239 (vent)	131 (ant) 124 (post)	>65; e130 (ant) >70; 140 (post)	e1.81	e70	This paper
Lienau-A	<i>Pachycetus</i> sp.	?	?	?			This paper
	<i>Pachycetus robustus</i>	e~260 ¹⁾	e~150 ¹⁾	?			Lienau, 1984
NMR999100151796 Anterior-central Ca	<i>Pachycetus</i> sp.	75 (dors) 73 (vent)	95 (ant) 90 (post)	108 (ant) 106 (post)	0.69	10	This paper

¹⁾ Estimation based on Lienau, 1984, table IX, figure 13

Appendix table 2c. Comparison of caudal vertebra from the Helmstedt region with caudal vertebrae in some basilosaurids.

Collection number & taxon	Presence neural spine	Direction transverse processes	Vertebrarterial foramen in transverse processes	Ventral foramina	Reference
NMR999100151796 <i>Pachycetus</i> sp.	Ridge	Laterally	+	one	This paper
Göttingen-A	+	?	?	?	Poster exposition Göttingen (2008); this paper
MNHN.F.PRU10 <i>Cynthiacetus peruvianus</i>	Ca1-3: + Ca4-6: ridge?	Ca1-3: ventro-laterally Ca4-10?: more laterally	Ca5-9 Ca10: notch	Ca1-2: two Ca3-8: one	Martínez-Cáceres <i>et al.</i> , 2017, pp.102-106
USNM12261 <i>Basilosaurus cetoides</i>	Ca1-3: + Ca4-9: ridge	Ca1-10: ventrally Ca11?-13: ridge	Ca6-10: + Ca11-12: notch	Ca1-17: two Ca16: one	Kellogg, 1936, pp.54-60
USNM12063 USNM12335 USNM4679 <i>Zygorhiza kochii</i>	Ca1-5: + Ca6-7: ?	Ca1-5: ventro-laterally Ca6-7:? Ca8-16: laterally	Ca1-7: - Ca8-11 + Ca12-18: notch	Ca1-12: two Ca13: ? Ca14-18: one Ca19-20: two	Kellogg, 1936, pp.151-157
UM101215 UM101222 <i>Dorudon atrox</i>	Ca1: + Ca3-4+? Ca5-6: ridge	Ca1-4: ventrally Ca5-12: more laterally	Ca4: sometimes 1 Ca5-9: + Ca10-12: notch	?	Uhen, 2004, pp.96-98

Appendix table 3a. Dimensions of rib fragment, *Pachycetus robustus*, from the Helmstedt region (in mm).

Collection number	Taxon	Le	W	H	References
NSt 92-A	<i>Pachycetus</i> sp.	357	60 (prox) 81 (max)	44 (prox) 47 (dist)	This paper
	' <i>Pachycetus robustus</i> '	<450	61 (prox) 80 (dist)	36 (prox) 46 (dist)	Van Beneden, 1883
	Cetacean rib	~460	?	?	Geinitz, 1883a

Appendix table 3b. Dimensions of rib fragments, ascribed to morphotype A, *Pachycetus* sp., from the Helmstedt region (in mm).

Collection number	Taxon	Le	W	H	References
NSt 92-B	<i>Pachycetus</i> sp.	229	57 (prox) 77 (max)	38 (prox) 48 (max)	This paper
ID20-6	<i>Pachycetus</i> sp.	159 (ant) 117 (post)	e27 (prox) 25 (dist)	52 (prox) 61 (dist)	This paper
NsT 41	<i>Pachycetus</i> sp.	121	40	64	This paper
	Unnamed	?	?	?	Van Beneden, 1883 ¹⁾
NsT-A	<i>Pachycetus</i> sp.	61	32 (prox?) 31 (dist?)	27 (prox?) 28 (dist?)	This paper
Lienau-B	<i>Pachycetus</i> sp.	?	?	?	This paper
	Rib archaeocete	e~300	?	e~60	Lienau, 1984
NMR999100151797	<i>Pachycetus</i> sp.	261	28 (prox) 27 (dist)	39 (prox) 37 (dist)	This paper

¹⁾ Presumably mentioned by Van Beneden, 1883

Appendix table 4a. Dimensions of rostrum, morphotype B?, *Basilosauridae indet.* from the Helmstedt region (in mm).

Collection number	Taxon	Le	H	W	Reference
ID20-7 (fragment)	<i>Basilosauridae indet.</i>	124	39	46 (min) 64 (max)	This paper

Appendix table 4b. Dimensions of rostra in *Cynthiacetus peruvianus*, *Pachycetus wardii* & *Dorudon atrox* (in mm).

Collection number	Taxon	Le	H	W	References
MNHN.F.PRU10	<i>Cynthiacetus peruvianus</i>	670	?	RBI1: 58 RBI2: 80 RBI3: 92.5 RBC: 113	Martínez-Cáceres <i>et al.</i> 2017, table 3
USNM 310633 (fragment)	<i>Pachycetus wardii</i>	275	e57 ¹⁾	RBI2: e74 ²⁾ RBI3: e83 ²⁾	Uhen, 1999, figure 1
UM 97512 UM 101222 NSFM 4451	<i>Dorudon atrox</i>	?	?	RBI1: 45.8 to 53.9 Me=48.6	Uhen, 2004, table 7 & appendix IVA
BMNH M 21896 NSFM 4451	<i>Dorudon atrox</i>	?	?	RBC: 82.0 to 91.8 Me=86.9	Uhen, 2004, table 7 & appendix IVA

¹⁾ Estimation based on Uhen, 1999, figure 1,2²⁾ Estimation based on Uhen, 1999, figure 1,4

Appendix table 5a. Dimensions of tooth, morphotype B, Basilosauridae *indet.* from the Helmstedt region (in mm).

Collection number & tooth	Taxon	H	H crown	Le crown ant-post	Transverse diameter crown	Reference
ID24 Deciduous incisor (?dI3, dI1, or di1)	Basilosaurid <i>indet.</i>	54	20	13	?	This paper

Appendix table 5b. Comparison with incisors of *Pachycetus* sp. from Ukraine (in mm).

Collection number & tooth	Taxon	H	H crown	Le crown ant-post	Transverse diameter crown	References
Unknown ID I1	<i>Pachycetus</i> sp.	>40	?	?	?	Gol'din <i>et al.</i> , 2014 appendix B
GMTSNUK 15/6 ?I2	<i>Pachycetus</i> sp.	>95 e103	>10	22	15	Gol'din <i>et al.</i> , 2014 appendix B
Unknown ID I3 (?i3)	<i>Pachycetus</i> sp.	>90	>22	25	13	Gol'din <i>et al.</i> , 2014 appendix B
NMNH-P Ngr-1 i1	<i>Pachycetus</i> sp.	>70	>18	19	13	Gol'din <i>et al.</i> , 2014 appendix B
GMTSNUK 15/7 i2	<i>Pachycetus</i> sp.	>99	>19	21	13	Gol'din <i>et al.</i> , 2014 appendix B

Appendix table 5c. Comparison with deciduous incisors of *Zygorhiza kochii* from Mississippi and *Dorudon atrox* from Egypt (in mm).

Tooth	Taxon	H	H crown	Le crown ant-post	Transverse diameter crown	References
MCM di1	<i>Zygorhiza kochii</i>	57.8	19.5	12.8	9.5	Kellogg, 1936, table 32
dI1	<i>Dorudon atrox</i>	e63 ¹⁾	?	Me=14.5 ²⁾	Me=11.2 ²⁾	Uhen, 2004, table 3
dI2	<i>Dorudon atrox</i>	e71 ¹⁾	32.3 ³⁾	Me=20.2 ³⁾	Me=12.8 ³⁾	Uhen, 2004, table 3
dI3	<i>Dorudon atrox</i>	e51 ¹⁾	Me=22.5 ³⁾	Me=16.1 ³⁾	Me=11.0 ³⁾	Uhen, 2004, table 3
di1	<i>Dorudon atrox</i>	e30 ²⁾	14.9 ³⁾	Me=12.0 ³⁾	Me=9.3 ³⁾	Uhen, 2004, table 4
di2	<i>Dorudon atrox</i>	e79 ²⁾	Me=24.9 ³⁾	Me=16.4 ³⁾	Me=10.7 ³⁾	Uhen, 2004, table 4
di3	<i>Dorudon atrox</i>	e77 ²⁾	25.6 ³⁾	Me=17.4 ³⁾	Me=11.3 ³⁾	Uhen, 2004, table 4

¹⁾ estimation based on Uhen, 2004, figure 10 (dI1: UM101223; dI2, dI3: UM94814)²⁾ estimation based on Uhen, 2004, figure 13 (di1: UM94814; di2, di3: UM101223)³⁾ mean value dimensions teeth of one to several individuals

Appendix table 6a. Dimensions of cervical vertebral centrum, Ce2, morphotype B, *Basilosauridae indet.* from the Helmstedt region (in mm).

Collection number & vertebra	Taxon	Ld	H	W	Reference
ID75-A Ce2	<i>Basilosauridae indet.</i> small 'dorudontine'	28 (dors, -D)	23 (ant)	91 (ant)	This paper
		48 (dors, +D)			
		39 (vent, -D)	44 (post)	53 (post)	
		53 (vent, +D)			

Appendix table 6b. Dimensions of cervical vertebral centra, Ce2, in some basilosaurids and protocetids (in mm).

Collection number & vertebra	Taxon	Le	H	W	References
WH74 Ce2	<i>Basilosaurus isis</i>	65 (dors)	48 (ant)	47 (ant)	Antar, 2011, table 1
		43 (vent)	75 (post)	76 (post)	
USNM 4675 Ce	<i>Basilosaurus cetoides</i>	56 (+D?)	84 (ant)	91 (ant)	Kellogg, 1936, table 8
UM101215 Ce2	<i>Dorudon atrox</i>	35	33	~110	Uhen, 2004, appendix V
USNM 4679 Ce2	<i>Zygorhiza kochii</i>	65 (+D)	51 (post)	63 (post)	Kellogg, 1936, table 33
MCM Ce2	<i>Zygorhiza kochii</i>	55 (+D)	43 (post)	57 (post)	Kellogg, 1936, table 33
Mn9 Ce2	? <i>Saghacetus osiris</i>	30 (-D)	43 (post)	57 (post)	Stromer, 1908, table 3
		?60 (+D)			
Mn12 Ce2	? <i>Saghacetus osiris</i>	25 (-D)	37 (post)	51 (post)	Stromer, 1908, table 3
		55 (+D)			

Appendix table 6c. Dimensions of cervical vertebral centrum, Ce6, morphotype B, from the Helmstedt region (in mm).

Collection number & vertebra	Taxon	Ld	H	W	Rel L Ld/Wa	Reference
ID75-B Ce6	<i>Basilosauridae indet.</i> small 'dorudontine'	32 (dors)	e37 (ant)	52 (ant)	0.62	This paper
		38 (vent)	39 (post)	54 (post)		

continued on next page (Appendix table 6d)

*Appendix table 6 continued***Appendix table 6d.** Dimensions of cervical vertebral centra, Ce4, 5, 6 in some basilosaurids and protocetids (in mm).

Collection number & vertebra	Taxon	Le	H	W	Rel L Ld/Wa	References
NMHN-P Ngr1-6 Ce4	<i>Pachycetus</i> sp.	37	65	72	0.51	Gol'din <i>et al.</i> , 2014, appendix C
NMHN-P Ngr1-7 Ce5	<i>Pachycetus</i> sp.	39	58	63	0.62	Gol'din <i>et al.</i> , 2014, appendix C
NMHN-P Ngr 1-8 Ce7	<i>Pachycetus</i> sp.	48	64	74	0.65	Gol'din <i>et al.</i> , 2014, appendix C
WH74 Ce6	<i>Basilosaurus isis</i>	39 (dors) 44 (vent)	86 (ant) 88 (post)	82 (ant) 90 (post)	0.48	Antar, 2011, table 1
USNM 4675 Ce6	<i>Basilosaurus cetoides</i>	59	98 (ant)	93 (ant)	0.63	Kellogg, 1936, table 8
UM101215 Ce6	<i>Dorudon atrox</i>	25	62	71	0.35	Uhen, 2004, appendix V
USNM 4680 Ce6	<i>Zygorhiza kochii</i>	34	51	56	0.61	Kellogg, 1936, table 33
GSP-UM 3410 Ce6	<i>Qaisracetus arifi</i>	35	41 (ant) 41 (post)	45 (ant) 51 (post)	0.78	Gingerich <i>et al.</i> , 2001, table 5
KPG-M 64 Ce6	<i>Togocetus traversi</i>	30	42	36	0.83	Gingerich & Capetta, 2014, table 3

Appendix table 7a. Dimensions of vertebrae, morphotype B, Basilosauridae *indet.* from the Helmstedt region (in mm).

Collection number & vertebra	Taxon	Le	H	W	Rel L Ld/Wa	Width neural arch(ant)	References
ID20-C Processus spinosus	Basilosauridae <i>indet.</i> small 'dorudontine'		84	76	?	?	This paper
Lienau-C Anterior thoracic	Basilosauridae <i>indet.</i> small 'dorudontine'	?	e~40 ¹⁾	e~45 ¹⁾	?	?	This paper
	<i>Pachycetus humilis</i>	?	?	?	?	?	Lienau, 1984
Kuhn-A Central Th	Basilosauridae <i>indet.</i> small 'dorudontine'	?	?	?	?	?	This paper
	' <i>Zeuglodon</i> ' cf. <i>osiris</i>	45 (dors) 44 (vent)	62 (ant) 61 (post)	74 (ant) 68 (post)	0.61	36	Kuhn, 1935
Kuhn-B Anterior Ca	Basilosauridae <i>indet.</i> small 'dorudontine'	?	?	?	?	?	This paper
	' <i>Zeuglodon</i> ' cf. <i>osiris</i>	40	>47	?	?	?	Kuhn, 1935
Kuhn-C Central-posterior Ca	Basilosauridae <i>indet.</i> small 'dorudontine'	?	?	?	?	?	This paper
	' <i>Zeuglodon</i> ' cf. <i>osiris</i>	55	90	86	0.64	18	Kuhn, 1935

¹⁾ Estimation based on Lienau, 1984, table IX, figure 14

Appendix table 7b. Dimensions of rib fragment, ascribed to morphotype B, Basilosauridae *indet.* from the Helmstedt region (in mm).

Collection number	Taxon	Le	W	H	References
NsT37	Basilosauridae <i>indet.</i>	77	38 (prox) 39 (dist)	14 (prox) 26 (dist)	This paper
	<i>Pachycetus humilis</i>	70–80	?	14 (prox) 22 (dist)	Van Beneden, 1883

Appendix table 8. Dimensions of possible supraorbital process, Basilosauridae *indet.* from the Helmstedt region (in mm).

Collection number	Le	H	W	Reference
NMR999100151798 Skull fragment (?supraorbital process)	>97	27	95	This paper

Appendix table 9. ‘*ossa insertae sedis*’, from the Helmstedt region.**Appendix table 9a.** Dimensions of ?sternal element (in mm).

Collection number	Anterior width	W dorso-ventral (anterior)	Le	W midpart	W dorso-ventral (midpart)	W posterior	W dorso-ventral (posterior)	References
NsT89 ?Sternal element	64	46	112	43	33	70	37	This paper; Van Beneden, 1883; Geinitz, 1883b

Appendix table 9b. Dimensions of ?cetacean tibia (in mm).

Collection number	W antero-posterior (proximal)	W transverse (proximal)	Le	W antero-posterior (distal)	W transverse (distal)	Reference
NMR999100151799 ?Distal tibia fragment	40	50	>150 ¹⁾	62	56	This paper

¹⁾ Without epiphyses**Appendix table 9c.** Dimensions of indeterminable bone fragments (in mm).

Collection number	Taxon	Le	W	H	Reference
NsT49 Bone fragment	Indet. basilosaurid.	56	32 (max)	22 (max)	This paper
NMR999100151800 Bone fragment	Indet. basilosaurid	94	32 (max)	51 (max)	This paper
NMR999100151801 Triangular bone fragment	Indet. basilosaurid	59	22	23	This paper
NMR999100151802 Bone fragment	Indet. basilosaurid	70		32	This paper
NMR999100151803 Bone fragment	Indet. basilosaurid	32		29	This paper
NMR999100151804 Bone fragment	Indet. basilosaurid	45		42	This paper
NMR999100151805 Bone fragment	Indet. basilosaurid	21		14	This paper

Abbreviations

ant, anterior
ant-post, anteroposterior;
BMNH, Natural History Museum, London, England;
Ca, caudal vertebral centrum;
Ce, cervical vertebral centrum;
cf, confer;
d, deciduous;
D, dens;
dist, distal;
dors, dorsal;
e, estimated;
et al., et alii;
GMTSNUK, Geological Museum of Taras Shevchenko National University of Kiev, Ukraine;
GPIM, Institut für Geowissenschaften, Paläontologie, Universität Mainz, Germany;
GSP-UM, Geological Survey of Pakistan University of Michigan collection, Quetta (Pakistan);
H, height;
I, upper incisor;
i, lower incisor;
ID, identification number;
indet, indeterminate;
KPG-M, Laboratoire de Paléontologie, Institut des Sciences de l'Evolution, Université de Montpellier, France;
L, left;
Ld, dorsal length;
Le, length;
Lu, lumbar vertebral centrum;
M, upper molar;
m, lower molar;
max, maximum;
MCM, Millsaps College Museum, Mississippi, U.S.A.;
Me, mean value;
Mn, Paläontologische Sammlung, Alte Akademie, München, Germany;
MNHM, Muséum national d'Histoire naturelle, Paris, France;
Ngr, Nagornoje (Nagirne);
NMNH-P, Paleontological Museum, National Natural History Museum of the Academy of Sciences of Ukraine, Kiev, Ukraine;
NMR, Natuurhistorisch Museum Rotterdam;
NSFM, Naturmuseum Senckenberg, Frankfurt am Main, Germany;
NsT, Staatlichen Naturhistorische Sammlungen, Museum für Geologie und Mineralogie: Niedersachsen Tertiär, Senckenberg Naturhistorischen Sammlungen, Dresden, Germany;
P, upper premolar;
p, lower premolar;
post, posterior;
prox, proximal;
R, right;
RBC, width rostrum at level C;
RBI1, width rostrum at level upper incisor 1;
RBI2, width rostrum at level upper incisor 2;
RBI3, width rostrum at level upper incisor 3;
Rel L, relative length;
sp., species;
Th, thoracic vertebral centrum;
UM, University of Michigan Museum of Paleontology, Ann Arbor, Michigan, U.S.A.;
USNM, United States National Museum of Natural History, Smithsonian Institution, Washington D.C., U.S.A.;
vent, ventral;
W, width;
Wa, anterior width;
WH, Wadi El-Hitan, Egypt;
>, original size was greater;
<, original size was smaller;
–, absent, or without;
+, with;
~, about;
/, fraction;
?, uncertain or unknown