Fingers zipped up or baby mittens? Two main tetrapod strategies to return to the sea

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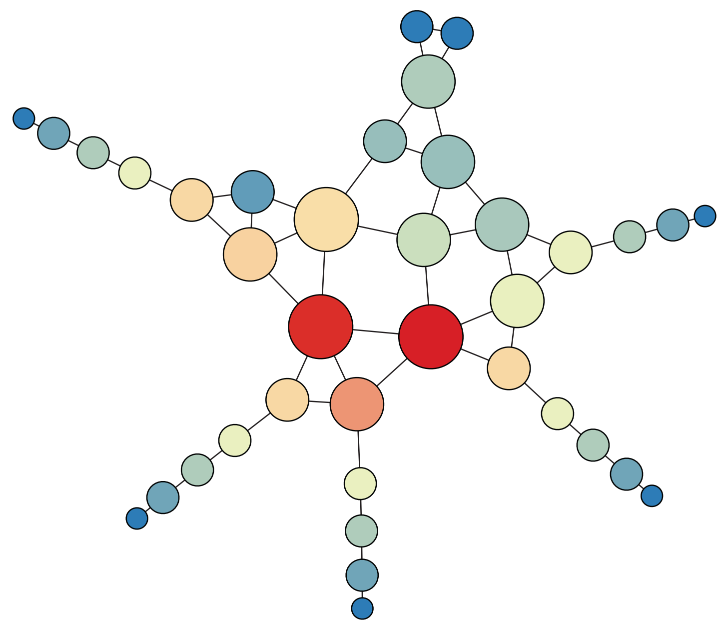
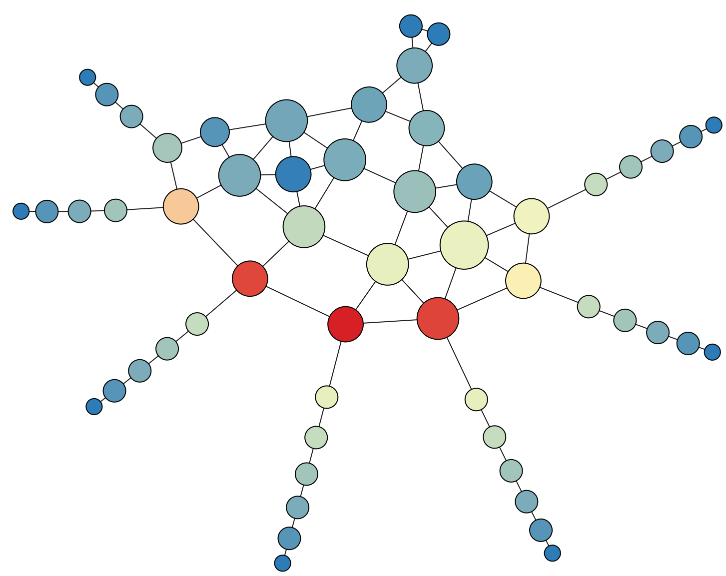
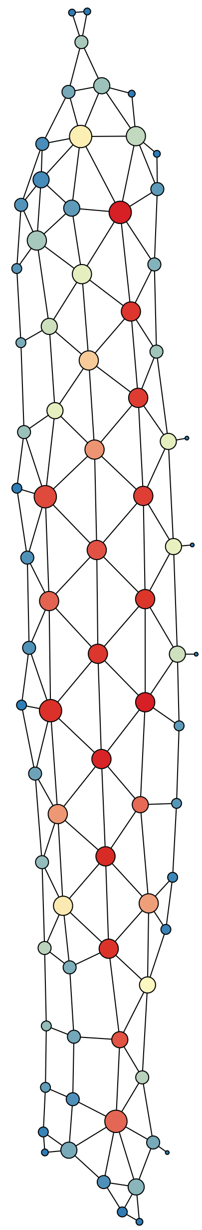
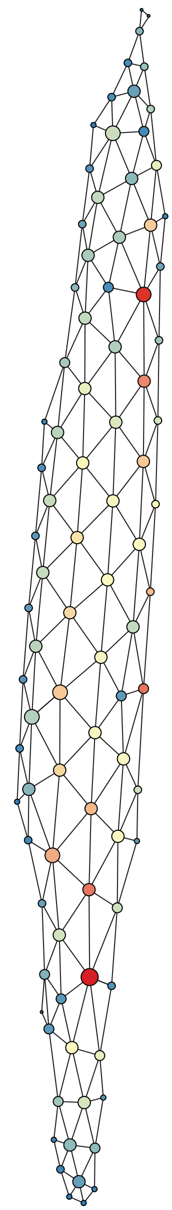
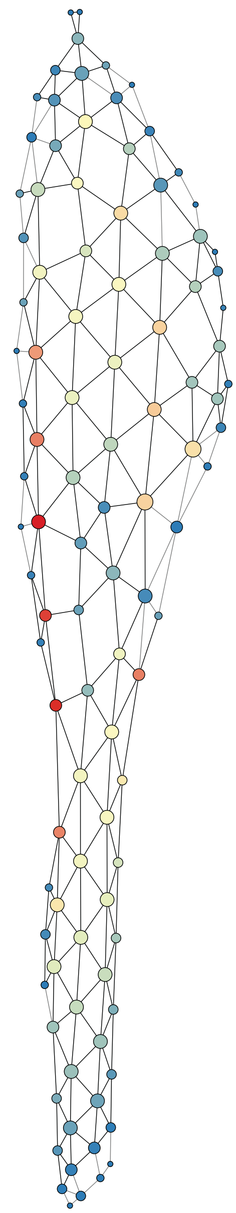
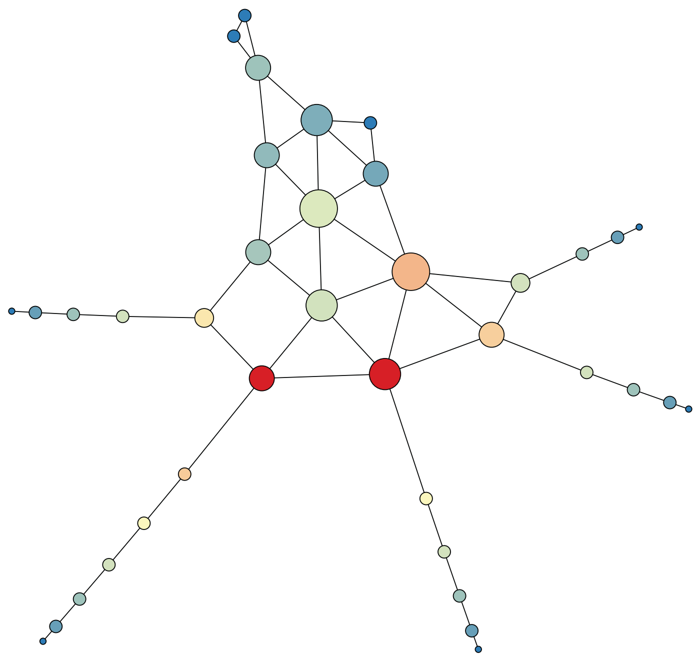
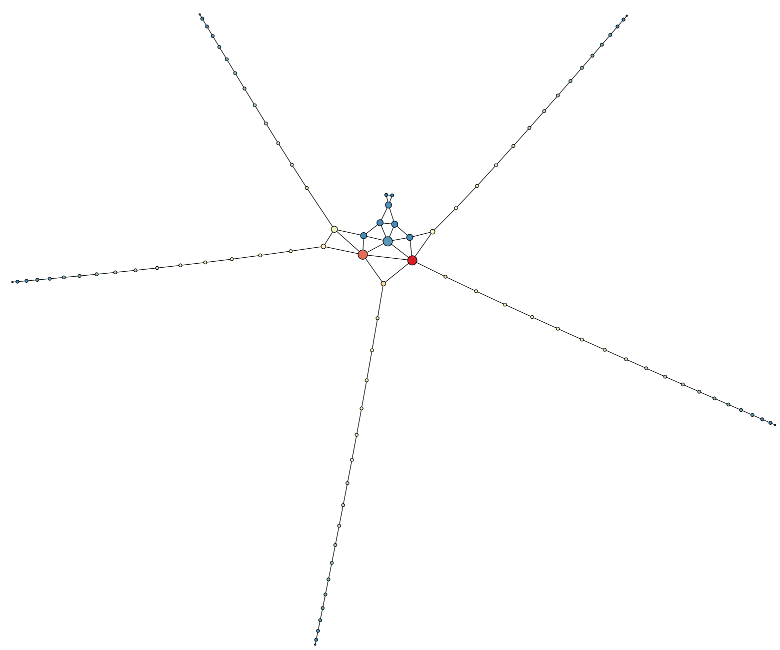
SUPPLEMENTARY INFORMATION

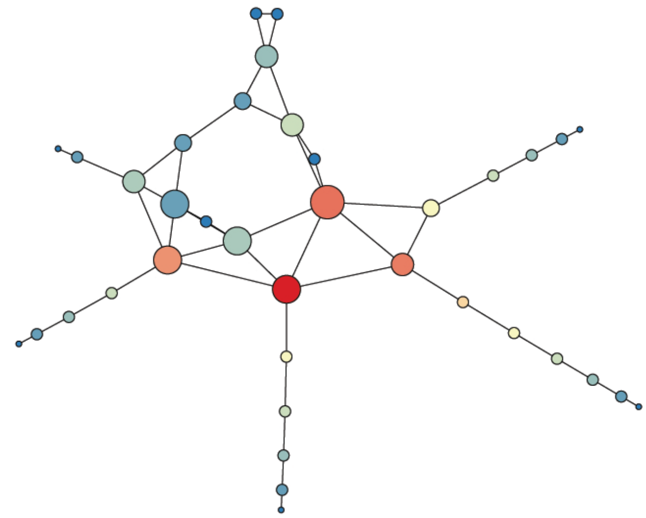
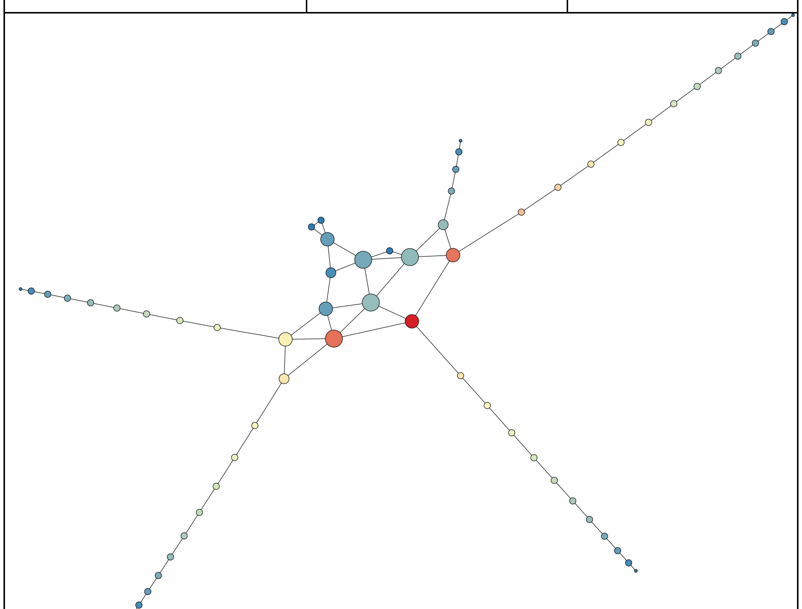
Table S1: List of the specimens used for the construction of the anatomical networks of the forefins, and their networks.
File S2: Information on how the different network metrics and other analyses used herein are calculated.
Table S3: Information on the various runs to calculate the modularity Q and the Parcellation P.

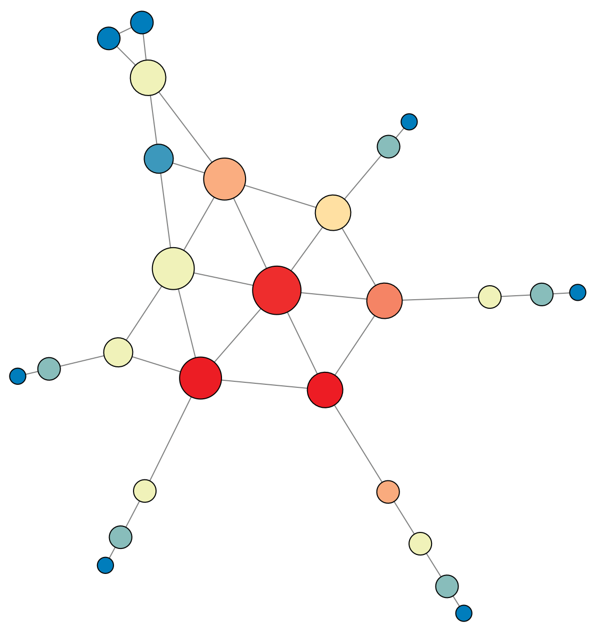
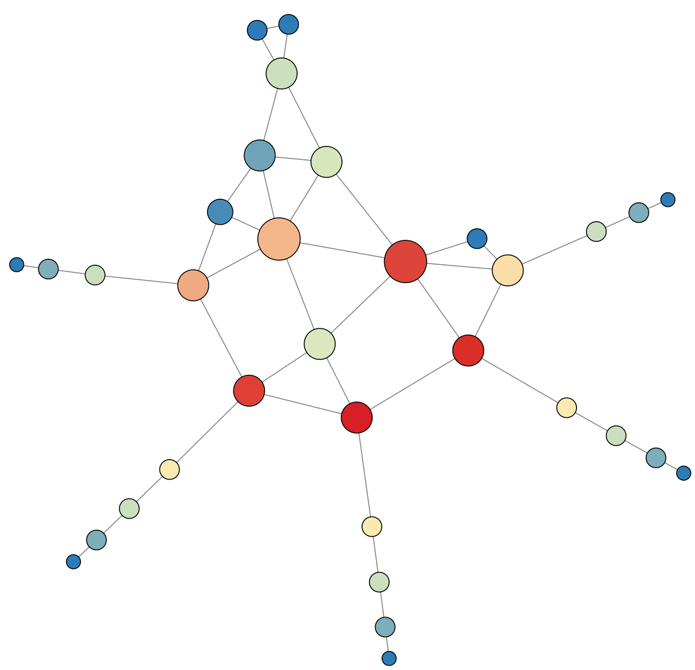
Table S1: List of the specimens used for the construction of the anatomical networks of the forefin.

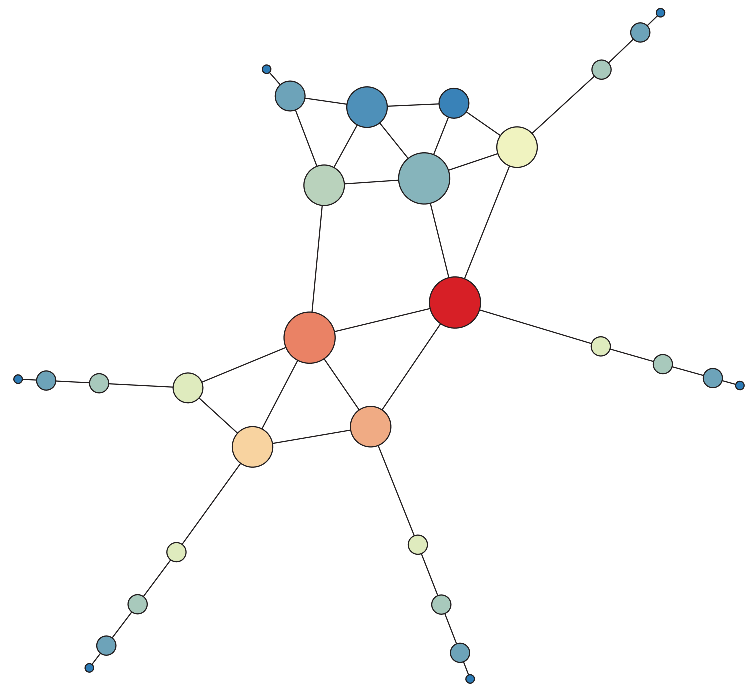
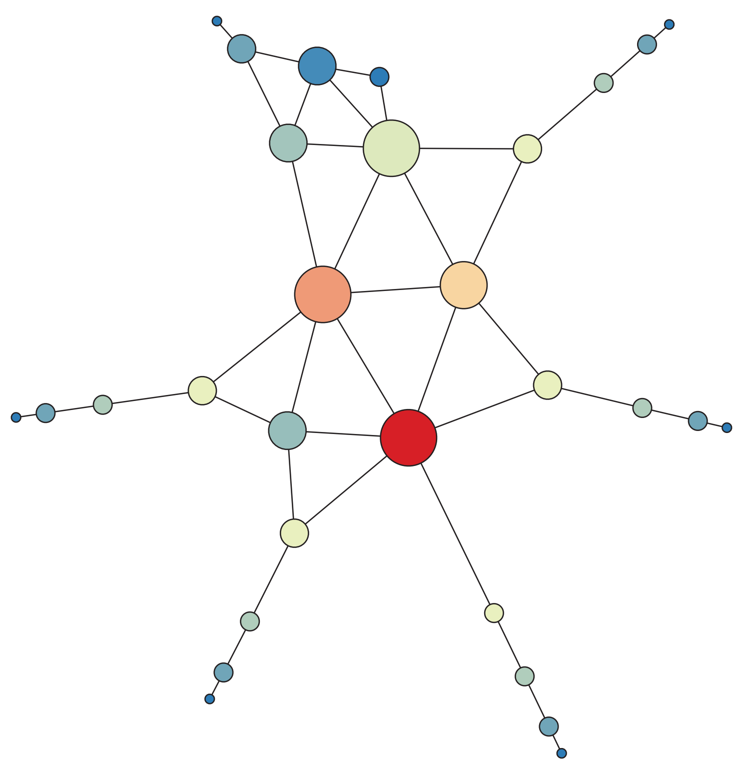
	TAXA	Species	Collectionnumber	Reference
REPTILIA	Ichthyosauromorpha	*Hupehsuchus nanchangensis*	IVPP V3232	Chen X.H. et al. (2014:fig. 4C-D)
				
		Nanchangosaurus sp.	SSTM 5025	Wu et al. (2003:S1)
				
	Ichthyosauria	*Mixosaurus cornalianus*	PIMUZ 2405	Maxwell (2012)

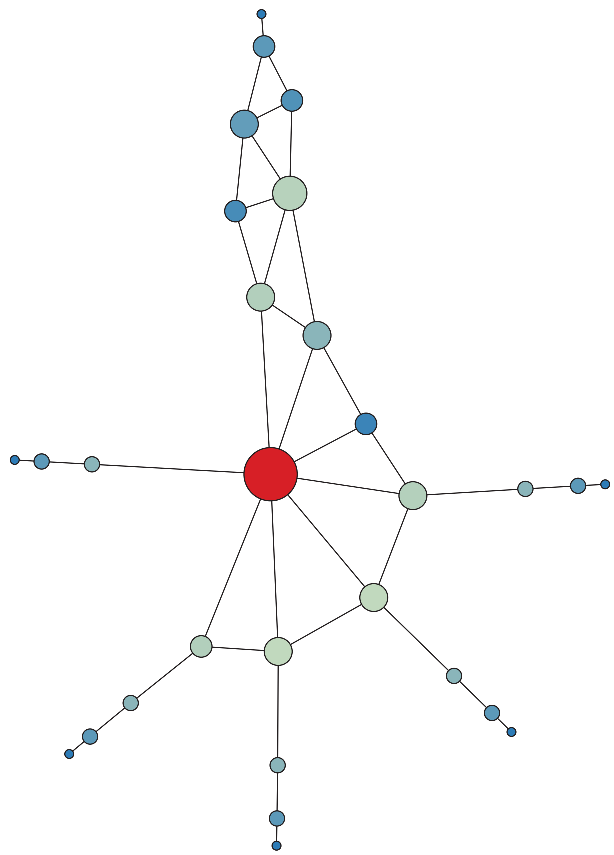
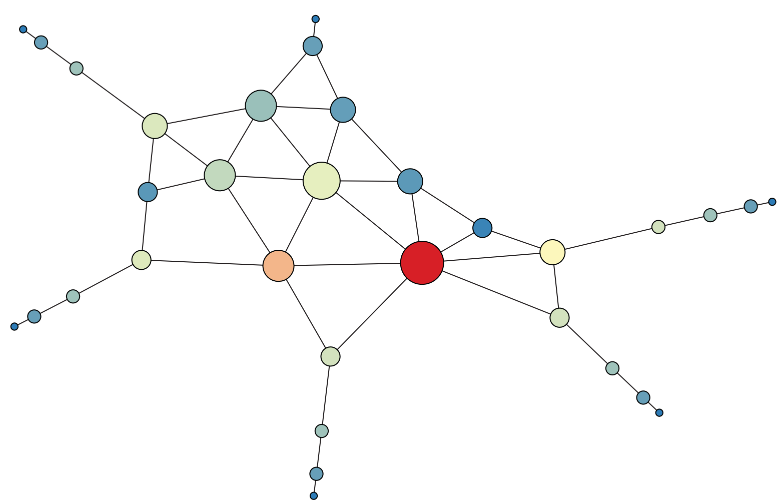
		Ichthyosaurus somersetensis	ANSP 15766	Lomax & Massare (2017:fig. 3)
		Caypullisaurus bonapartei	MACN-N-32	Fernández (2001)
				
		Mixosaurus	*Ichthyosaurus*	*Caypullisaurus*
	Basal Diapsid	*Petrolacosaurus kansensis*		Reiz (1981:fig. 21)

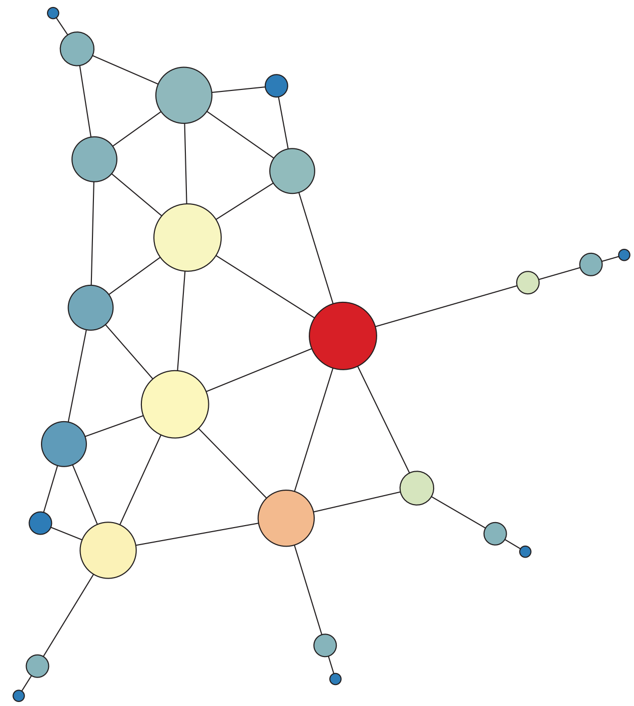
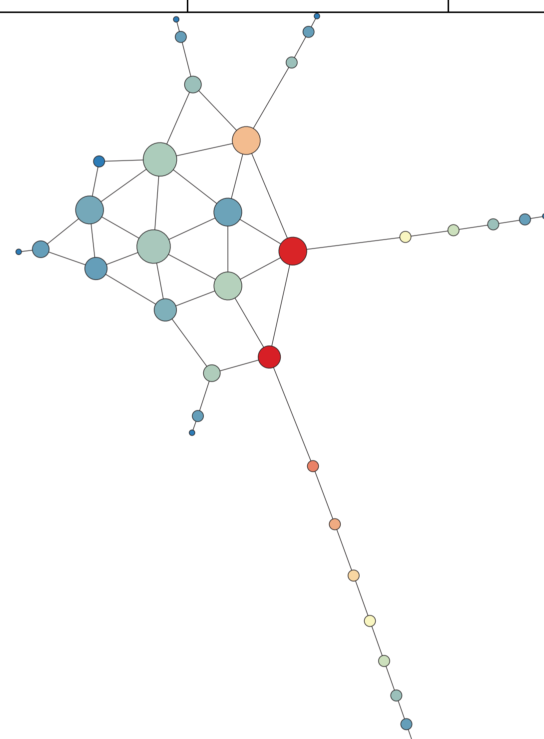
				
	Plesiosauria	*Styxosaurus snowii*	SDSM 401	Caldwell (1997)
				
	Mosasauroidea	*Portunatasaurus*	HPM 10807	Mekarski et al. (2019)

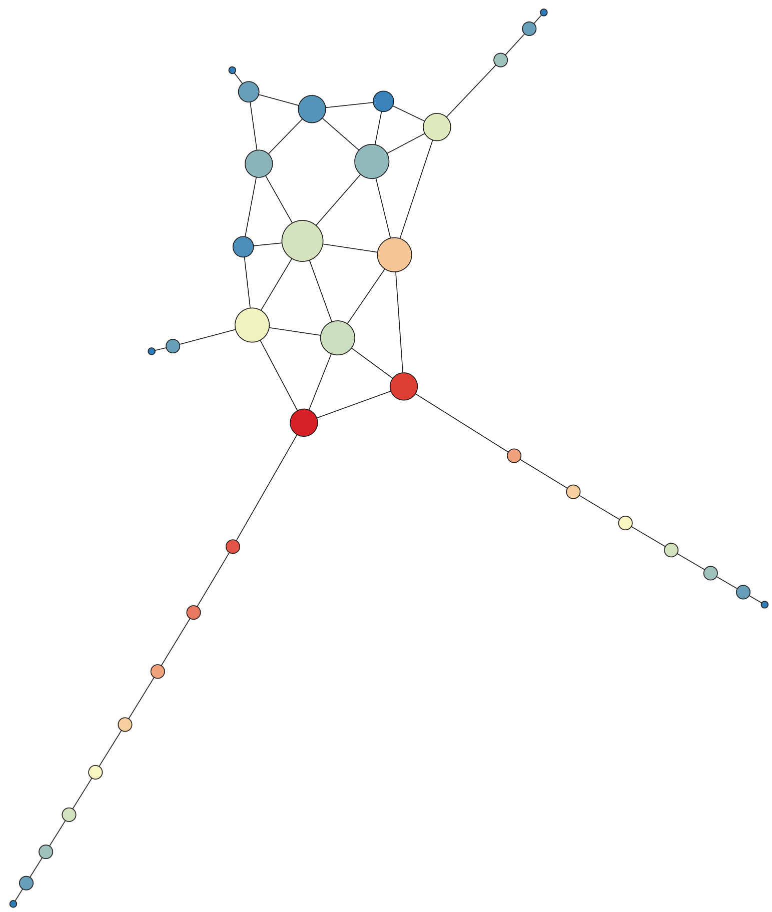
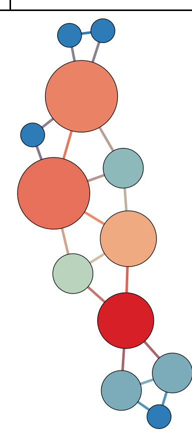
				
	Mosasauridae	*Mosasaurus conodon*		Russell (1967:fig. 5)
				
	Crocodylomorpha	*Cricosaurus suevicus*	SMNS 9808	Fraas (1902:taf. VIII, fig. 3)

				
	Testudines	*Dermochelys coriacea*	MLP no number (in exhibit)	
				

MAMMALIA	Pinnipedia	*Zalophus californianus*		English (1976:fig. 1)
				
		Ommatophoca rossi		King (1969:fig. 33)
				
	Sirenia	*Dugong dugon*		Kaiser (1974:figs. 60 and 63)

				
	Cetacea	*Maiacetus innus*		Gingerich et al. (2009:fig. 7)
				
		Dorudon atrox		Uhen (2004:fig. 104)

				
		Lagenorhynchus obscurus	CNP-MAM0932	
				
		Megaptera sp.		Finney (2019)

				
AVES	Sphenisciforme	*Megadyptes antipodes*	OM 1645	Thomas & Fordyce (2012:fig. 2)
				

Institutional abbreviations. ANSP, Academy of Natural Sciences, Philadelphia, Pennsylvania, USA; **CNP-MAM**, Colección de mamíferos marinos, CCT CENPAT, Puerto Madryn, Argentina; **HPM**, Hrvatski prirodoslovni muzej, Zagreb, Croatia; **IVPP**, Institute of Vertebrate Paleontology and Paleoanthropology, Beijing, China; **MACN**, Museo Argentino de Ciencias Naturales 'Bernardino Rivadavia', CABA, Argentina; **MLP**, Museo de La Plata, La Plata, Argenina; **OM**, Ontario Museum, Otago, New Zealand; **PIMUZ**, Paläontologisches Institut und Museum, Universität Zürich, Switzerland; **SDSM**, South Dakota School of Mines and Technology, Rapid City, SD, USA; **SMNS**, Staatliches Museum für Naturkunde, Stuttgart, Germany; **SSTM**, Shanghai Science and Technology Museum, Shanghai, China.

File S2. Information on how the different network metrics and other analyses used herein are calculated.

All metrics have been calculated mostly with the built-in algorithms in Gephi (Bastian et al., 2009), complemented with the manual calculation of some derivative metrics as in Esteve-Altava et al., 2019). In particular:

Density is calculated automatically, by dividing the number of edges of the network with the maximum possible number of edges in the network.

The average clustering coefficient (used as Clustering herein) is calculated based on the algorithm of Latapy (2009), that is built-in in Gephi.

The average path length is calculated based on the algorithm of Brandes (2001), that is built-in in Gephi.

Heterogeneity is calculated manually in Microsoft Excel, based on the equation of Esteve-Altava et al. (2019).

Parcellation is calculated manually in Microsoft Excel, based on the equation of Esteve-Altava et al. (2019), using the modules that are calculated in Gephi based on the built-in algorithm of Blondel et al. (2008). In particular, the Blondel et al. (2008) algorithm was run with the following parameters, following also the rational of Calatayud et al. (2019): a random starting point; a resolution of 1.0, aiming to find large communities; it was run as many times as the nodes. Our aim was to maximize the Q value, which was then used to calculate the Parcellation. In case when the maximum Q value produced different Parcellation value (due to the distribution of nodes on the recovered modules), we opted for the maximum P value. The standard deviation of both Q and P values was calculated. This detailed information is given in the Table S3.

The betweenness centrality for each node is calculated based on the algorithm of Brandes (2001), that is built-in in Gephi.

One-way PERMANOVA for the analyzed groups has been calculated for the variables Density, Clustering, Heterogeneity, and Parcellation, in Past (Hammer et al., 2001), using the Anderson (2001) built-in algorithm.

Table S3. Information on the various runs to calculate the modularity Q and the Parcellation P. Other Abbreviations: N, number of Nodes, NM, number of Modules; M1–10, number of nodes in each module, σ^Q, standard deviation of Q, σ^P, standard deviation of P

Petrolacosaurus							N=38		σ^Q=0.01		σ^P=0.01	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.593	7	6	9	5	6	5	4	3				0.842
0.553	8	6	6	4	3	6	6	3	4			0.866
0.551	7	6	5	7	8	3	5	4				0.845
0.566	7	6	6	7	4	6	5	4				0.852
0.593	7	3	5	4	6	9	5	6				0.842
0.568	6	4	7	7	3	12	5					0.798
0.593	7	3	5	4	6	9	5	6				0.842
0.593	7	3	4	5	9	6	6	5				0.842
0.553	7	6	8	6	6	5	4	3				0.846
0.578	7	7	4	3	7	6	6	5				0.848
0.593	7	3	5	4	5	9	6	6				0.842
0.593	7	9	6	5	6	5	4	3				0.842
0.578	7	3	7	6	7	6	5	4				0.848
0.593	7	9	6	3	5	4	5	6				0.842
0.593	7	9	6	5	3	4	6	5				0.842
0.593	7	9	5	6	3	6	5	4				0.842
0.566	6	9	5	10	5	4	5					0.812
0.593	7	6	5	3	5	4	9	6				0.842
0.593	7	9	6	3	5	6	5	4				0.842
0.552	7	10	3	4	4	6	6	5				0.835
0.593	7	9	5	5	6	6	4	3				0.842
0.561	8	7	8	6	3	3	4	3	4			0.856
0.593	7	9	6	5	6	5	4	3				0.842
0.566	7	6	6	7	4	6	5	4				0.852
0.552	7	6	8	5	7	5	4	3				0.845
0.561	6	9	7	9	3	5	5					0.813
0.593	7	9	6	5	6	5	4	3				0.842
0.553	8	6	6	4	6	6	3	4	3			0.866
0.562	7	6	5	9	3	6	3	6				0.839
0.573	7	7	7	3	4	8	5	4				0.842
0.593	7	3	9	6	5	6	5	4				0.842
0.568	6	12	4	7	3	7	5					0.798
0.593	7	9	3	4	5	6	6	5				0.842
0.593	7	9	6	6	5	4	5	3				0.842
0.553	7	6	8	6	3	6	5	4				0.846

0.593	7	9	5	5	4	6	6	3				0.842
0.567	7	9	7	3	4	6	5	4				0.839
0.593	7	3	5	4	5	9	6	6				0.842
Mixosaurus							**N=78**		**σ^Q=0.007**		**σ^P=0.01**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.616	5	13	19	13	16	17						0.796
0.6	5	15	17	13	22	13						0.780
0.62	6	20	8	10	9	15	16					0.815
0.609	6	21	3	18	9	14	13					0.799
0.61	5	17	15	16	18	12						0.797
0.614	6	14	16	13	13	12	10					0.830
0.614	6	20	3	13	16	11	15					0.806
0.615	5	20	3	17	21	17						0.765
0.612	5	17	16	17	15	13						0.798
0.623	5	20	10	16	17	15						0.791
0.605	6	23	11	12	12	7	13					0.810
0.601	5	15	17	19	12	13						0.805
0.598	5	23	14	12	16	13						0.787
0.601	6	20	3	21	10	7	17					0.788
0.613	6	3	20	5	22	16	12					0.783
0.604	6	20	3	11	9	16	19					0.798
0.617	6	20	3	16	7	16	16					0.798
0.615	6	19	11	10	14	8	16					0.820
0.624	5	20	12	13	17	16						0.793
0.619	5	13	19	12	18	16						0.794
0.612	6	20	3	4	21	17	13					0.782
0.601	6	3	20	21	10	7	17					0.788
0.612	5	20	11	20	13	14						0.789
0.618	6	20	13	3	8	17	17					0.799
0.612	5	22	16	18	16							0.783
0.614	5	21	15	14	13	17						0.783
0.607	6	20	3	13	12	10	20					0.799
0.607	5	20	12	16	12	18						0.792
0.625	5	19	14	12	17	16						0.795
0.606	6	20	12	11	7	14	14					0.818
0.612	5	21	21	9	11	16						0.780
0.618	4	23	18	16	21							0.745
0.615	6	7	20	10	12	17	12					0.815
0.594	6	14	18	7	12	10	17					0.819

0.614	5	21	15	14	17	11						0.791
0.608	6	23	13	8	15	7	12					0.806
0.604	6	15	11	6	13	17	16					0.820
0.618	5	21	17	9	16	15						0.788
0.607	5	14	15	16	22	11						0.789
0.612	6	6	18	11	15	10	18					0.814
0.614	6	24	5	9	11	16	13					0.798
0.612	5	23	16	11	12	16						0.785
0.612	5	20	3	6	13	19	17					0.792
0.607	4	21	17	23	17							0.746
0.601	7	13	16	6	10	7	14	12				0.844
0.62	6	17	6	17	12	10	16					0.817
0.612	5	21	14	9	19	15						0.786
0.619	5	19	13	12	18	16						0.794
0.612	5	21	21	6	17	13						0.774
0.625	5	20	9	17	16	13						0.804
0.621	5	20	21	11	10	16						0.783
0.621	6	20	11	7	16	9	17					0.803
0.618	6	20	17	16	8	8	9					0.810
0.607	6	20	7	9	17	10	15					0.812
0.615	5	21	18	11	12	16						0.789
0.618	4	23	21	18	16							0.745
0.618	5	22	3	19	18	16						0.764
0.605	6	12	18	11	11	12	14					0.827
0.61	5	21	12	15	12	16						0.801
0.612	6	20	7	13	17	18						0.798
0.595	5	21	10	26	9	12						0.763
0.61	6	20	21	12	12	10						0.798
0.609	5	25	9	16	11	17						0.774
0.616	5	9	21	13	18	17						0.786
0.611	5	25	9	16	17	11						0.774
0.612	5	17	12	16	17	16						0.797
0.607	6	11	10	11	18	12	16					0.825
0.615	5	19	13	18	12	16						0.794
0.619	5	20	14	16	15	13						0.795
0.61	6	20	3	14	21	11	9					0.795
0.601	6	3	20	21	7	10	17					0.788
0.61	7	17	3	20	10	7	14	7				0.821
0.618	6	22	3	16	15	12	10					0.800
0.615	6	20	7	17	10	14	10					0.814

0.597	5	20	12	18	11	17						0.790
0.613	5	21	10	10	21	16						0.780
0.617	5	21	13	17	11	16						0.790
0.622	6	20	3	7	17	15	16					0.798
Portunatasaurus							**N=37**		**σ^Q=0.008**		**σ^P=0.01**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.589	6	7	9	8	4	5	4					0.817
0.604	7	6	6	4	8	4	5	4				0.847
0.604	7	4	6	8	4	5	6	4				0.847
0.595	6	5	7	9	4	5	7					0.821
0.589	6	7	9	4	5	4	8					0.817
0.604	6	8	5	6	4	4	4					0.874
0.613	7	6	4	4	4	5	6	8				0.847
0.595	6	7	6	4	9	5	6					0.822
0.613	7	6	4	8	4	5	6	4				0.847
0.592	6	9	9	4	5	6	4					0.814
0.604	7	4	6	6	8	4	5	4				0.847
0.595	6	7	5	5	9	4	7					0.821
0.613	7	6	8	4	4	4	5	6				0.847
0.596	7	5	4	4	9	4	5	6				0.843
0.595	6	5	7	9	4	5	7					0.821
0.613	7	4	4	6	8	4	5	6				0.847
0.604	7	6	4	6	8	5	4	4				0.847
0.613	7	4	4	5	6	6	8	4				0.847
0.593	6	7	7	9	4	5	5					0.821
0.593	6	7	9	7	4	5	5					0.821
0.595	6	7	9	4	5	7	5					0.821
0.602	7	6	8	4	6	3	6	4				0.844
0.613	7	4	4	5	6	8	4	6				0.847
0.595	6	5	4	5	9	7	7					0.821
0.613	6	4	4	4	5	8	6					0.874
0.595	6	7	6	4	9	5	6					0.822
0.594	7	7	3	8	4	5	6	4				0.843
0.592	6	9	4	9	4	5	6					0.814
0.613	7	4	4	6	6	8	4	5				0.847
0.596	7	4	5	9	4	5	6	4				0.843
0.604	7	6	4	4	6	8	5	4				0.847
0.613	7	6	4	8	4	5	6	4				0.847
0.585	7	10	5	4	4	4	4	6				0.836

0.589	6	7	4	9	4	5	8					0.817
0.613	7	6	4	4	8	5	6	4				0.847
0.596	7	4	5	9	4	5	6	4				0.843
0.594	7	3	7	8	4	5	6	4				0.843
Mosasaurus							**N=62**		**σ^Q=0.007**		**σ^P=0.01**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.701	7	10	9	5	4	13	11	10				0.841
0.694	8	5	10	6	7	11	10	5				0.881
0.716	8	6	7	6	8	5	11	10	9			0.867
0.698	7	9	10	10	12	9	6	6				0.850
0.709	8	9	6	8	7	5	8	11	8			0.869
0.699	8	8	8	4	13	10	10	5	4			0.856
0.716	7	6	7	9	10	11	10	9				0.852
0.713	7	8	9	6	11	9	10	9				0.853
0.713	7	9	9	4	8	13	9	10				0.846
0.713	7	7	8	10	9	10	9	9				0.855
0.701	8	5	10	4	8	5	11	10	9			0.862
0.71	7	13	9	6	5	8	11	10				0.845
0.701	8	9	5	10	10	4	8	5	11			0.862
0.712	7	9	8	7	9	10	9	10				0.855
0.713	9	7	10	9	9	8	10					0.876
0.7	9	4	12	10	10	6	7	4				0.880
0.698	8	9	10	5	6	5	8	11	8			0.866
0.713	7	9	9	8	6	11	9	10				0.853
0.712	8	0	0	5	8	11	8	8	4			0.908
0.7	7	8	9	6	11	10	10	8				0.853
0.697	7	6	9	10	4	13	10	10				0.843
0.701	8	10	9	5	4	6	7	11	10			0.863
0.696	9	10	5	8	7	5	8	6	9	4		0.880
0.71	6	9	13	13	11	10						0.834
0.717	8	9	9	6	8	5	11	10	4			0.864
0.713	7	7	8	9	10	9	10	9				0.855
0.705	9	8	4	4	8	5	10	8	6	9		0.879
0.698	8	8	4	9	5	8	9	10	9			0.867
0.697	8	11	8	8	8	4	8	6	9			0.867
0.711	7	8	7	8	11	9	10	9				0.854
0.716	7	6	9	10	7	9	11	10				0.852
0.7	7	8	10	9	9	7	10	9				0.855
0.699	7	12	6	13	10	10	7	4				0.840

0.713	7	9	9	4	8	13	9	10				0.846
0.717	8	6	9	9	8	5	11	10	4			0.864
0.7	7	8	6	9	10	10	10	9				0.854
0.705	9	9	8	4	6	7	10	8	6	4		0.880
0.691	9	10	6	5	8	6	10	5	8	4		0.879
0.697	8	9	10	4	10	7	6	7	9			0.867
0.694	8	8	10	8	5	11	10	5	5			0.864
0.694	8	8	12	4	6	7	10	10	5			0.861
0.711	7	9	7	8	6	13	11	8				0.848
0.711	7	8	7	9	10	11	10	7				0.853
0.698	7	10	5	13	11	8	6	9				0.845
0.716	9	6	13	11	10	9	4					0.864
0.703	8	8	4	4	13	10	7	7	9			0.858
0.712	7	8	10	6	10	9	10	9				0.854
0.702	9	8	6	4	8	5	11	8	9	3		0.875
0.696	8	8	9	9	10	6	6	6	8			0.870
0.705	9	8	6	4	8	5	10	8	9	4		0.879
0.698	7	9	10	5	6	13	11	8				0.845
0.716	7	6	9	9	7	10	11	10				0.852
0.7	8	6	9	8	10	7	5	8	9			0.870
0.713	8	9	6	11	9	10	9					0.870
0.699	8	10	4	5	5	8	11	10	9			0.862
0.694	8	8	8	10	8	9	9	5	5			0.869
0.716	7	6	7	10	11	10	9	9				0.852
0.701	7	9	10	5	4	13	11	10				0.841
0.698	8	8	4	10	6	7	8	10	9			0.867
0.701	7	9	10	5	4	13	11	10				0.841
0.694	8	8	8	6	10	6	10	5	9			0.868
0.703	8	9	4	12	10	8	6	9	4			0.860
Styxosaurus							**N=95**		**σ^Q=0.002**		**σ^P=0.005**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.78	9	13	13	8	8	10	9	9	10	15		0.883
0.779	8	13	13	16	10	9	8	11	15			0.869
0.776	9	15	12	9	7	11	7	15	15			0.876
0.78	9	13	10	13	8	8	9	10	9	15		0.883
0.785	9	14	15	13	8	8	9	9	10	9		0.882
0.78	8	15	13	16	10	7	9	10	15			0.866
0.78	9	13	13	8	8	9	10	8	11	15		0.883
0.78	9	13	13	9	7	8	11	9	10	15		0.883

0.784	9	14	13	9	7	10	8	9	10	15		0.882
0.784	9	14	13	9	7	10	8	11	8	15		0.882
0.781	9	15	13	9	7	9	8	10	9	15		0.881
0.78	9	13	13	8	8	9	10	8	11	15		0.883
0.779	9	13	13	10	6	10	9	8	11	15		0.882
0.784	9	14	13	9	7	9	9	8	11	15		0.882
0.775	9	13	15	13	10	6	9	10	15			0.878
0.78	9	13	13	8	8	8	11	8	11	15		0.882
0.78	9	13	13	8	8	9	10	10	9	15		0.883
0.782	8	14	13	16	9	9	12	7	15			0.867
0.778	9	13	13	10	6	9	10	12	7	15		0.881
0.78	9	13	13	9	7	9	10	9	10	15		0.883
0.78	9	13	13	8	8	9	10	11	8	15		0.883
0.785	9	14	13	9	7	9	9	10	9	15		0.882
0.78	9	13	13	8	8	9	10	8	11	15		0.883
0.781	9	15	13	9	7	9	8	10	9	15		0.881
0.78	9	13	13	8	8	9	10	8	11	15		0.883
0.781	9	15	13	8	8	10	7	9	10	15		0.881
0.781	9	13	13	9	7	10	9	9	10	15		0.883
0.777	9	13	13	10	6	8	11	13	6	15		0.879
0.778	9	5	14	13	9	7	14	14	15	4		0.872
0.78	9	13	13	8	8	9	10	9	10	15		0.883
0.78	9	13	13	9	7	9	10	8	11	15		0.883
0.778	9	15	5	13	9	7	8	9	14	15		0.876
0.785	9	14	13	9	7	8	10	9	10	15		0.882
0.779	9	13	13	8	8	12	7	10	9	15		0.882
0.784	9	14	13	8	8	11	7	9	10	15		0.882
0.784	9	14	13	9	7	10	8	10	9	15		0.882
0.78	9	13	9	13	9	7	9	10	10	15		0.883
0.78	9	13	13	8	8	10	9	8	11	15		0.883
0.781	9	15	13	9	7	8	9	10	9	15		0.881
0.772	9	13	4	13	9	7	5	14	15	15		0.872
0.779	8	13	13	16	9	10	9	10	15			0.869
0.78	9	13	10	13	8	8	10	9	9	15		0.883
0.773	9	13	4	13	8	8	5	14	15	15		0.872
0.78	9	13	13	8	8	9	10	9	10	15		0.883
0.782	9	15	12	8	8	8	10	10	9	15		0.882
0.784	9	14	13	10	6	9	9	10	9	15		0.882
0.778	8	15	15	13	10	6	17	8	11			0.864
0.785	9	14	13	9	7	9	9	9	10	15		0.882

0.78	9	13	13	9	7	10	9	10	9	15		0.883
0.78	9	13	13	9	7	10	9	8	11	15		0.883
0.779	8	13	13	16	9	10	9	10	15			0.869
0.769	10	11	14	9	8	9	9	9	10	10	6	0.896
0.78	9	13	13	9	7	9	10	10	9	15		0.883
0.779	9	15	4	14	13	9	7	7	11	15		0.875
0.78	9	13	10	13	8	8	10	9	9	15		0.883
0.782	9	14	13	10	6	5	13	10	9	15		0.878
0.782	9	15	12	9	7	10	8	9	10	15		0.882
0.776	9	13	4	9	13	9	7	15	10	15		0.876
0.782	9	14	13	10	6	11	7	12	7	15		0.879
0.778	9	15	13	9	7	8	9	5	14	15		0.876
0.78	9	15	13	8	8	8	9	12	7	15		0.880
0.784	8	14	13	16	10	8	9	10	15			0.868
0.779	9	13	15	8	13	10	6	10	9	11		0.882
0.779	9	13	13	10	6	10	9	9	10	15		0.882
0.778	9	13	13	10	6	11	8	11	8	15		0.882
0.784	8	14	13	16	10	8	9	10	15			0.868
0.784	9	14	13	9	7	9	9	8	11	15		0.882
0.784	9	14	13	9	7	10	8	10	9	15		0.882
0.78	9	13	9	13	8	8	8	11	10	15		0.883
0.784	9	14	13	10	6	9	9	8	11	15		0.881
0.782	9	15	9	12	9	7	9	9	10	15		0.882
0.78	9	15	15	13	9	7	9	8	12	7		0.880
0.777	9	13	13	10	6	10	9	13	6	15		0.880
0.779	9	13	8	13	9	7	11	8	11	15		0.882
0.784	9	14	13	10	6	8	10	11	8	15		0.881
0.78	9	13	13	9	7	9	10	10	9	15		0.883
0.78	9	13	13	8	8	8	11	9	10	15		0.883
0.783	9	15	14	13	9	7	8	10	12	7		0.881
0.779	8	13	13	16	8	11	9	10	15			0.869
0.779	9	13	15	13	9	7	8	11	12	7		0.881
0.78	9	13	13	8	8	8	11	9	10	15		0.883
0.785	9	14	13	8	8	9	9	9	10	15		0.882
0.779	9	13	13	10	6	10	9	10	9	15		0.882
0.783	9	14	13	9	7	10	8	12	7	15		0.881
0.784	9	14	13	9	7	10	8	9	10	15		0.882
0.778	8	13	13	16	9	10	12	7	15			0.868
0.781	9	15	13	9	7	9	8	8	11	15		0.880
0.781	9	15	12	8	8	9	9	7	12	15		0.881

0.78	9	13	13	9	7	9	10	11	8	15		0.883
0.779	9	13	13	10	6	9	10	10	9	15		0.882
0.779	9	13	13	10	6	8	11	10	9	15		0.882
0.777	9	15	12	8	8	10	8	15	15			0.877
0.78	8	15	9	13	16	8	9	10	15			0.867
0.78	9	13	13	8	8	9	10	8	11	15		0.883
0.785	9	14	13	8	8	9	9	8	11	15		0.882
Ichthyosaurus							**N=91**		**σ^Q=0.007**		**σ^P=0.02**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.627	6	19	15	15	14	20	8					0.822
0.627	6	15	13	16	19	20	8					0.822
0.617	6	19	10	18	18	18	8					0.819
0.635	7	17	11	12	14	15	7	15				0.849
0.632	6	24	3	17	10	17	20					0.799
0.638	7	8	20	9	8	11	15	20				0.836
0.628	6	19	14	6	19	16	17					0.819
0.607	5	9	24	26	19	13						0.775
0.631	6	18	18	7	10	19	19					0.817
0.631	6	18	16	14	20	15	8					0.823
0.616	7	22	7	12	20	5	17	8				0.824
0.638	6	22	16	10	12	11	20					0.818
0.627	6	20	12	12	19	13	15					0.826
0.63	5	15	20	14	23	19						0.793
0.626	7	22	7	10	15	11	18	8				0.835
0.626	6	20	13	9	21	20	8					0.812
0.627	6	20	13	9	21	20	8					0.812
0.639	7	14	13	14	10	14	13	13				0.856
0.624	6	14	15	17	14	11	20					0.828
0.63	6	22	16	8	15	20	10					0.815
0.63	7	16	8	14	11	14	20	8				0.843
0.62	5	17	28	20	18	8						0.775
0.629	6	14	19	16	9	11	22					0.819
0.621	7	21	7	12	14	11	11	15				0.843
0.63	6	22	16	14	14	17	8					0.821
0.623	6	21	7	11	19	11	22					0.810
0.62	7	18	11	12	17	5	20	8				0.835
0.639	7	15	13	12	14	10	13	14				0.855
0.626	6	24	11	17	11	20	8					0.810
0.618	6	9	18	10	17	11	26					0.808

0.619	6	14	15	13	16	7	26					0.810
0.623	6	24	11	20	10	15	11					0.814
0.618	7	19	9	12	18	5	20	8				0.831
0.616	7	19	10	11	12	13	18	8				0.845
0.64	6	27	11	10	12	11	20					0.805
0.612	7	21	13	5	11	20	13	8				0.832
0.622	5	27	17	16	14	17						0.788
0.621	6	17	11	15	17	23	8					0.817
0.623	6	22	13	7	21	20	8					0.806
0.626	7	21	8	12	13	20	9	8				0.835
0.633	6	16	18	13	16	20	8					0.823
0.618	6	22	13	17	11	20	8					0.816
0.63	7	14	9	17	6	14	11	20				0.841
0.626	7	21	8	12	13	20	9	8				0.835
0.62	6	21	16	14	12	20	8					0.819
0.643	6	16	11	14	13	17	20					0.827
0.627	6	27	14	8	14	20	8					0.801
0.632	7	12	14	7	11	20	12	15				0.846
0.617	5	14	20	19	12	26						0.785
0.617	6	19	12	16	13	7	24					0.812
0.618	6	22	12	13	16	20	8					0.817
0.632	5	22	16	11	21	21						0.790
0.621	5	19	23	21	20	8						0.783
0.608	5	29	13	16	26	7						0.760
0.638	6	19	15	11	11	16	19					0.826
0.616	7	13	16	9	11	14	20	8				0.845
0.616	6	13	20	20	15	12	11					0.824
0.622	7	11	18	13	16	20	5	8				0.836
0.619	6	8	21	12	13	11	26					0.805
0.618	7	19	9	12	18	20	8					0.834
0.628	7	22	7	13	16	11	7	15				0.837
0.607	5	28	9	17	15	22						0.775
0.621	6	19	13	12	19	20	8					0.819
0.642	6	16	11	10	14	20	20					0.822
0.629	6	15	16	12	20	20	8					0.820
0.617	6	9	21	16	17	20	8					0.815
0.626	6	18	23	9	13	20	8					0.811
0.615	5	14	16	24	11	26						0.780
0.63	6	14	18	12	19	17	11					0.827
0.621	7	16	13	12	17	20	8					0.840

0.628	6	24	10	15	14	20	8					0.811
0.629	7	8	20	14	8	12	16	13				0.844
0.628	6	19	18	12	14	20	8					0.820
0.617	7	12	14	10	11	16	20	8				0.845
0.613	5	27	13	12	13	26						0.772
0.629	7	16	13	17	6	13	11	15				0.847
0.63	6	19	14	16	14	20	8					0.822
0.62	6	16	13	12	22	20	8					0.817
0.617	5	13	22	14	16	26						0.785
0.618	5	14	19	13	19	26						0.787
0.612	6	28	11	18	19	8						0.800
0.623	6	18	11	17	17	20	8					0.820
0.616	5	20	24	19	20	8						0.783
0.626	7	14	14	8	15	12	20	8				0.844
0.625	6	17	16	19	11	20	8					0.820
0.618	7	13	18	9	12	13	18	8				0.846
0.614	6	14	10	20	20	19	8					0.816
0.628	6	21	13	14	12	11	20					0.822
0.637	6	16	17	17	15	6	20					0.819
0.621	7	19	9	11	15	21	8	8				0.836
0.626	7	22	7	12	8	14	20	8				0.831
Caypullisaurus							**N=103**		**σ^Q=0.006**		**σ^P=0.02**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.632	5	21	23	24	25	10	8					0.780
0.649	7	18	10	11	17	12	18	17				0.850
0.649	7	14	12	15	8	21	18	15				0.847
0.645	7	18	10	15	11	12	19	18				0.849
0.647	6	20	21	22	11	11	18					0.822
0.644	6	20	21	15	15	22	10					0.823
0.648	8	17	14	8	11	12	12	16	13			0.870
0.642	7	22	13	15	16	8	19	10				0.844
0.647	6	21	14	18	13	18	19					0.829
0.649	7	17	14	9	11	15	19	18				0.849
0.651	6	21	14	10	19	18	21					0.824
0.64	5	16	21	22	15	29						0.788
0.645	8	13	10	13	12	18	19	8	10			0.865
0.641	5	23	21	24	16	19						0.796
0.648	7	15	13	23	7	16	13	16				0.844
0.647	6	23	18	14	11	25	12					0.817

0.644	6	23	14	21	16	14	15					0.826
0.641	7	15	11	16	18	7	23	13				0.842
0.652	6	24	20	19	11	13	16					0.823
0.647	6	20	15	21	11	24	12					0.820
0.64	7	12	16	16	19	11	9	20				0.847
0.644	7	17	14	15	17	11	19	10				0.851
0.642	7	16	20	11	8	15	12	21				0.844
0.649	6	21	16	26	7	20	13					0.812
0.655	6	20	21	15	15	16	16					0.830
0.628	7	22	15	8	15	11	20					0.857
0.642	7	11	10	21	16	13	22	10				0.842
0.663	6	19	15	13	19	22	15					0.828
0.637	6	19	10	21	12	21	20					0.822
0.639	6	17	14	19	15	8	30					0.808
0.653	7	16	13	12	13	13	20	16				0.853
0.651	6	17	18	17	15	11	25					0.823
0.645	5	21	20	15	22	25						0.795
0.648	6	15	8	21	24	19	16					0.819
0.645	6	22	14	11	18	12	26					0.817
0.651	6	21	23	19	10	19	11					0.820
0.648	6	9	15	23	24	15	17					0.819
0.635	6	21	15	8	24	6	29					0.794
0.652	6	20	15	19	12	24	13					0.823
0.647	6	22	13	23	12	20	13					0.821
0.645	7	13	18	17	16	14	10	15				0.853
0.648	7	16	13	12	6	18	23	15				0.841
0.648	5	21	23	23	14	22						0.795
0.647	6	14	15	21	14	20	19					0.829
0.644	7	17	12	17	13	15	13	16				0.855
0.65	6	18	13	23	12	22	15					0.823
0.636	7	19	14	9	13	11	8	29				0.827
0.648	6	26	11	15	15	14	22					0.818
0.643	6	18	13	17	16	20	19					0.830
0.643	5	21	23	20	18	21						0.799
0.645	6	24	12	18	10	10	29					0.803
0.642	6	8	23	21	17	18	16					0.821
0.645	6	20	16	8	16	18	25					0.819
0.651	6	24	23	16	11	14	15					0.821
0.642	6	12	14	18	18	25	16					0.824
0.642	6	25	13	9	22	19	15					0.817

0.638	6	17	17	22	12	25	10					0.818
0.65	8	17	13	8	13	13	10	13	16			0.869
0.648	6	16	21	8	19	10	29					0.806
0.645	6	22	13	9	19	11	29					0.806
0.646	7	11	18	16	13	16	18	11				0.852
0.647	7	18	9	14	12	13	10	27				0.836
0.655	8	8	14	13	16	11	7	21	13			0.862
0.641	8	19	15	9	7	8	16	19	10			0.859
0.656	7	16	13	15	12	14	17	16				0.855
0.653	7	13	10	12	19	21	16	12				0.848
0.657	6	21	23	19	13	11	16					0.823
0.649	7	18	16	14	18	8	15	14				0.851
0.65	7	20	15	7	12	14	17	18				0.847
0.656	6	15	21	11	20	20	16					0.826
0.652	6	24	11	18	13	21	16					0.822
0.652	7	19	13	14	18	7	18	14				0.847
0.66	7	16	16	8	14	11	22	16				0.846
0.643	7	18	14	8	16	18	19	10				0.847
0.649	6	22	14	21	14	15	17					0.827
0.647	8	13	11	13	16	7	9	18	16			0.866
0.649	7	13	15	12	13	13	22	15				0.851
0.647	6	17	15	11	20	11	29					0.812
0.648	7	15	19	18	8	18	9	16				0.846
0.646	8	12	17	9	15	13	8	16	13			0.868
0.644	6	12	13	18	19	20	21					0.827
0.645	5	26	20	18	21	18						0.796
0.642	7	16	20	14	14	10	19	10				0.848
0.652	7	17	12	15	14	15	15	15				0.856
0.645	6	23	21	19	8	21	11					0.816
0.649	7	17	20	19	8	7	16	16				0.842
0.636	6	15	29	17	9	23	10					0.805
0.654	7	21	16	7	14	16	13	16				0.847
0.648	7	18	21	10	7	15	21	11				0.840
0.651	7	10	15	14	20	8	22	14				0.843
0.65	7	14	14	8	15	15	19	18				0.850
0.657	7	14	14	18	8	20	14	15				0.849
0.649	7	19	15	12	7	15	19	16				0.847
0.666	7	23	13	15	7	13	16	16				0.844
0.653	6	21	15	16	12	23	16					0.826
0.649	6	21	14	8	26	19	15					0.815

0.653	7	17	18	8	15	15	13	17				0.851
0.642	6	15	15	14	20	10	29					0.813
0.641	5	16	23	19	15	30						0.786
0.635	7	19	14	9	7	9	16	29				0.824
0.642	5	22	22	23	21	15						0.796
0.634	6	19	11	14	20	10	29					0.810
0.641	6	16	23	8	21	9	26					0.807
Dermochelys							**N=33**		**σ^Q=0.006**		**σ^P=0.007**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.567	6	8	7	4	7	3	4					0.814
0.567	6	8	7	3	4	4	7					0.814
0.567	6	8	7	7	4	3	4					0.814
0.567	6	3	8	4	7	4	7					0.814
0.545	7	8	7	4	4	3	3	4				0.836
0.567	6	7	4	4	3	7	8					0.814
0.567	6	7	7	4	8	3	4					0.814
0.567	6	8	3	7	7	4	4					0.814
0.567	6	7	4	7	4	3	8					0.814
0.567	6	8	3	4	7	4	7					0.814
0.567	6	8	7	4	3	7	4					0.814
0.567	6	7	3	7	8	4	4					0.814
0.567	6	7	7	8	3	4	4					0.814
0.545	7	7	5	7	4	3	3	4				0.841
0.567	6	7	7	8	3	4	4					0.814
0.567	6	7	7	3	8	4	4					0.814
0.567	6	8	7	4	7	4	3					0.814
0.567	6	8	7	7	4	3	4					0.814
0.567	6	8	7	7	4	4	3					0.814
0.567	6	8	7	7	3	4	4					0.814
0.559	6	8	3	4	7	8	3					0.806
0.567	6	7	7	4	8	3	4					0.814
0.567	6	8	7	7	4	3	4					0.814
0.567	6	8	7	7	4	3	4					0.814
0.567	6	8	7	4	7	3	4					0.814
0.567	6	8	7	4	7	4	3					0.814
0.567	6	7	8	3	7	4	4					0.814
0.567	6	7	4	8	3	4	7					0.814
0.567	6	7	8	7	3	4	4					0.814
0.545	7	8	7	4	4	3	3	4				0.836

0.567	6	7	4	3	8	7	4					0.814
0.567	6	7	4	8	3	7	4					0.814
0.567	6	8	7	7	3	4	4					0.814
Cricosaurus							**N=26**		**σ^Q=0.01**		**σ^P=0.02**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.467	6	3	6	3	7	4	3					0.811
0.464	6	3	3	7	7	2	4					0.799
0.467	5	7	5	7	4	3						0.781
0.47	5	7	4	5	7	3						0.781
0.47	5	7	5	7	3	4						0.781
0.5	6	5	3	4	5	3	6					0.822
0.487	6	6	7	3	4	3	3					0.811
0.5	6	5	6	4	5	3	3					0.822
0.487	6	6	7	3	4	3	3					0.811
0.473	6	3	7	4	3	3	6					0.811
0.473	6	7	4	3	3	3	6					0.811
0.464	7	3	8	4	3	3	3					0.828
0.467	5	7	4	5	7	3						0.781
0.461	6	3	7	4	4	3	5					0.817
0.496	5	6	7	6	4	3						0.784
0.455	7	3	2	7	5	4	2	3				0.828
0.467	5	7	4	5	7	3						0.781
0.487	6	6	3	7	4	3	3					0.811
0.467	5	7	5	4	7	3						0.781
0.469	6	3	6	3	5	2	7					0.805
0.487	6	4	3	3	3	6	7					0.811
0.467	5	7	7	5	4	3						0.781
0.5	6	4	5	3	5	3	6					0.822
0.5	6	5	5	4	3	3	6					0.822
0.467	5	3	7	4	7	5						0.781
0.496	5	6	8	4	3	5						0.778
Hupehsuchus							**N=37**		**σ^Q=0.005**		**σ^P=0.02**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.575	7	6	8	8	4	4	4	3				0.839
0.591	8	6	4	4	6	4	4	4	5			0.871
0.585	7	7	7	7	4	4	4	4				0.846
0.584	7	7	5	7	4	5	5	4				0.850
0.581	7	5	5	4	7	4	8	4				0.846

0.59	8	7	4	6	4	4	4	4	4			0.868
0.578	7	5	3	5	9	5	5	5				0.843
0.579	7	5	6	7	5	4	5	5				0.853
0.585	8	7	4	4	5	4	4	4	5			0.869
0.585	6	6	6	8	4	8	5					0.824
0.581	7	4	8	4	5	4	8	4				0.841
0.587	8	5	5	3	5	4	5	5	5			0.872
0.579	7	5	7	6	5	5	4	5				0.853
0.58	6	5	8	7	8	4	5					0.822
0.583	6	7	7	4	8	7	4					0.822
0.592	8	4	7	5	4	5	5	3	3			0.873
0.587	7	4	6	6	4	8	4	5				0.847
0.591	8	4	6	6	4	5	4	4	4			0.871
0.585	7	7	7	7	4	4	4	4				0.846
0.583	7	5	7	3	9	5	5	3				0.837
0.583	6	6	5	7	7	4	8					0.825
0.587	6	6	4	4	4	8	5					0.874
0.585	8	7	4	4	5	4	4	4	5			0.869
0.569	6	5	6	7	9	5	5					0.824
0.587	7	6	4	6	4	4	8	5				0.847
0.584	7	7	4	5	8	4	4	5				0.846
0.585	7	7	7	4	4	4	7	4				0.846
0.583	6	6	4	7	7	8	5					0.825
0.576	7	4	7	5	5	8	4	4				0.846
0.585	8	7	4	4	5	4	4	4	5			0.869
0.578	6	5	8	9	5	5	5					0.821
0.592	8	7	5	5	4	5	5	3	3			0.866
0.588	7	8	7	4	4	6	4	4				0.844
0.59	8	6	4	7	4	4	4	4	4			0.868
0.58	8	9	4	4	3	4	4	4	5			0.858
0.591	8	6	4	6	4	4	4	4	5			0.871
0.583	7	5	8	4	6	5	5	4				0.849
Nachangosaurus							**N=56**		**σ^Q=0.007**		**σ^P=0.007**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.658	9	9	5	5	7	3	9	6	6	6		0.879
0.649	10	9	3	9	4	4	5	6	6	5	5	0.888
0.64	8	12	5	5	7	10	5	6	6			0.860
0.658	9	9	7	3	9	6	6	6	5	5		0.879
0.641	9	9	5	6	6	10	6	5				0.892

0.653	9	9	7	3	4	11	6	6	5	5		0.873
0.658	9	7	9	6	3	9	6	6	5	5		0.879
0.649	10	9	3	9	4	4	5	6	6	5	5	0.888
0.653	9	9	5	5	7	3	4	11	6	6		0.873
0.65	10	3	9	9	3	4	6	6	6	5	5	0.887
0.65	10	9	3	3	9	4	6	6	6	5	5	0.887
0.655	9	9	3	7	10	5	6	6	5	5		0.877
0.649	10	3	9	5	9	4	4	5	6	6	5	0.888
0.644	10	9	5	5	3	10	3	3	6	6	6	0.883
0.653	10	9	3	10	3	4	5	6	6	5	5	0.885
0.66	9	8	5	5	6	9	6	6	6	5		0.884
0.649	10	9	3	9	4	4	5	6	6	5	5	0.888
0.656	9	5	8	6	4	11	6	6	5	5		0.878
0.657	5	8	6	10	5	6	6	5	5			0.889
0.649	10	9	3	4	9	4	5	6	6	5	5	0.888
0.646	9	5	6	10	5	6	6	10	3	5		0.875
0.649	10	9	6	5	9	3	4	4	5	6	5	0.888
0.639	9	7	6	6	4	11	6	6	5	5		0.879
0.652	9	9	3	7	11	4	6	6	5	5		0.873
0.65	9	5	6	9	6	10	4	6	5	5		0.879
0.649	10	9	9	6	5	3	4	4	5	6	5	0.888
0.646	9	9	3	12	4	6	6	6	5	5		0.870
0.649	10	9	9	3	4	4	5	6	6	5	5	0.888
0.66	9	6	8	5	9	6	6	6	5	5		0.884
0.658	9	9	3	7	9	6	6	6	5	5		0.879
0.653	9	9	7	3	4	11	6	6	5	5		0.873
0.643	8	12	7	9	6	6	6	5	5			0.862
0.649	10	9	3	9	4	4	5	6	6	5	5	0.888
0.649	10	9	3	9	4	4	5	6	6	5		0.896
0.658	9	3	9	5	5	7	9	6	6	6		0.879
0.649	10	3	9	9	6	6	4	4	5	5	5	0.888
0.647	9	9	5	3	8	11	3	6	6	5		0.871
0.658	9	9	5	6	7	3	9	6	6	5		0.879
0.65	10	9	3	9	3	4	6	6	6	5	5	0.887
0.647	9	9	8	3	3	11	6	6	5	5		0.871
0.658	9	9	5	7	3	9	6	6	6	5		0.879
0.655	9	9	7	3	10	5	6	6	5	5		0.877
0.649	10	9	6	5	3	9	4	4	6	5	5	0.888
0.649	10	9	5	6	5	3	9	4	4	5	6	0.888
0.658	9	9	5	7	3	9	6	6	6	5		0.879

0.65	10	3	9	5	9	3	4	6	6	6	5	0.887
0.65	10	9	5	3	3	9	4	6	6	6	5	0.887
0.655	9	3	9	5	7	10	5	6	6	5		0.877
0.647	9	9	8	3	3	11	6	6	5	5		0.871
0.644	9	10	5	6	11	4	6	4	5	5		0.872
0.653	10	9	5	6	5	3	10	3	4	6	5	0.885
0.658	9	9	5	7	3	9	6	6	6	5		0.879
0.653	9	9	7	3	4	11	6	6	5	5		0.873
0.633	9	12	9	4	4	5	6	6	5	5		0.871
0.645	9	5	5	6	4	11	6	10	4	5		0.872
0.619	10	6	5	10	3	3	6	6	6	8	3	0.885
0.658	9	3	9	7	9	6	6	6	5	5		0.879
0.65	10	9	3	3	9	4	6	6	6	5	5	0.887
0.65	10	9	3	3	9	4	6	6	6	5	5	0.887
0.649	10	9	5	5	3	9	4	4	5	6	6	0.888
0.655	9	9	10	5	3	7	5	6	6	5		0.877
0.65	9	5	6	9	6	10	4	6	5	5		0.879
0.648	9	9	6	5	5	3	13	4	6	5		0.865
0.658	9	3	9	7	9	6	6	6	5	5		0.879
0.649	10	9	5	3	9	4	4	5	6	6	5	0.888
0.658	9	3	7	9	5	6	9	6	6	5		0.879
Megadyptes							**N=12**		**σ^Q=0.02**		**σ^P=0.02**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.398	3	4	4	4								0.667
0.398	3	4	4	4								0.667
0.343	3	6	4	2								0.611
0.398	3	4	4	4								0.667
0.398	3	4	4	4								0.667
0.398	3	4	4	4								0.667
0.359	3	6	3	3								0.625
0.398	3	4	4	4								0.667
0.359	3	3	3	6								0.625
0.398	3	4	4	4								0.667
0.359	3	3	3	6								0.625
0.398	3	4	4	4								0.667
Zalophus							**N=30**		**σ^Q=0.005**		**σ^P=0.008**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.579	7	7	5	4	3	4	4	3				0.844

0.579	7	5	7	3	4	4	4	3				0.844
0.579	7	7	5	3	3	4	4	4				0.844
0.579	7	7	3	5	4	4	4	3				0.844
0.579	7	5	7	3	4	4	4	3				0.844
0.579	7	7	5	4	4	4	3	3				0.844
0.579	7	7	5	4	4	3	4	3				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	5	7	3	4	4	4	3				0.844
0.565	7	4	8	4	4	3	4	3				0.838
0.579	7	7	5	4	4	4	3	3				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	7	5	4	3	4	4	3				0.844
0.579	7	7	5	3	4	3	4	4				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	7	5	4	4	4	3	3				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	7	5	3	4	3	4	4				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.553	6	8	8	4	3	4	3					0.802
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	7	5	3	3	4	4	4				0.844
0.579	7	7	5	4	3	4	4	3				0.844
0.579	7	7	5	4	4	4	3	3				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	7	5	4	4	3	4	3				0.844
0.579	7	7	5	3	4	4	4	3				0.844
0.579	7	7	5	4	3	4	4	3				0.844
Ommatophoca							**N=30**		**σ^Q=0.01**		**σ^P=0.01**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.522	7	8	5	4	3	3	4	3				0.836
0.542	7	6	3	7	3	4	3	4				0.840
0.542	7	6	7	3	3	4	3	4				0.840
0.522	7	8	5	3	3	4	4	3				0.836
0.542	7	6	3	7	3	3	4	4				0.840
0.528	6	6	6	6	4	4	4					0.827
0.512	6	9	4	4	4	6	3					0.807
0.528	6	6	6	4	6	4	4					0.827

0.542	7	6	7	3	3	4	3	4				0.840
0.535	7	6	5	5	3	3	4	4				0.849
0.504	6	9	4	3	7	4	3					0.800
0.538	7	6	6	3	4	4	3	4				0.847
0.538	7	6	6	4	4	4	3	3				0.847
0.542	7	7	3	6	3	4	3	4				0.840
0.528	6	6	6	6	4	4	4					0.827
0.542	7	6	7	3	3	4	3	4				0.840
0.542	7	6	3	7	4	3	4	3				0.840
0.522	7	8	5	3	3	4	4	3				0.836
0.535	7	5	6	5	4	3	3	4				0.849
0.522	7	5	8	3	3	4	4	3				0.836
0.542	7	6	7	4	4	3	3	3				0.840
0.504	6	9	3	4	3	7	4					0.800
0.522	7	8	5	4	3	3	4	3				0.836
0.528	6	6	6	6	4	4	4					0.827
0.542	7	6	7	4	3	3	3	4				0.840
0.542	7	6	7	3	3	4	3	4				0.840
0.528	6	6	6	4	4	6	4					0.827
0.542	7	6	7	4	3	3	3	4				0.840
0.542	7	6	3	7	3	4	3	4				0.840
0.522	7	8	5	4	4	3	3	3				0.836
Dugong							**N=29**		**σ^Q=0.006**		**σ^P=0.006**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.543	7	6	3	3	3	3	3	8				0.828
0.539	7	7	7	3	3	3	3	3				0.830
0.543	7	6	3	3	3	3	3	8				0.828
0.543	7	8	6	3	3	3	3	3				0.828
0.543	7	6	3	3	3	3	3	8				0.828
0.543	7	8	6	3	3	3	3	3				0.828
0.543	7	6	3	3	3	3	3	8				0.828
0.53	6	6	6	8	3	3	3					0.806
0.543	7	8	6	3	3	3	3	3				0.828
0.543	7	8	6	3	3	3	3	3				0.828
0.543	7	8	3	3	6	3	3	3				0.828
0.52	7	7	3	7	4	2	3	3				0.828
0.543	7	6	3	3	3	3	3	8				0.828
0.543	7	8	3	6	3	3	3	3				0.828
0.543	7	8	6	3	3	3	3	3				0.828

0.543	7	8	6	3	3	3	3	3				0.828
0.539	7	7	3	7	3	3	3	3				0.830
0.543	7	3	3	6	3	3	3	8				0.828
0.543	7	8	3	6	3	3	3	3				0.828
0.539	7	7	7	3	3	3	3	3				0.830
0.52	7	7	3	7	4	2	3	3				0.828
0.536	6	7	5	8	3	3	3					0.804
0.543	7	8	6	3	3	3	3	3				0.828
0.543	7	8	3	6	3	3	3	3				0.828
0.543	3	6	3	3	3	3	3	8				0.828
0.543	7	6	3	3	3	3	3	8				0.828
0.539	7	7	3	7	3	3	3	3				0.830
0.543	7	8	6	3	3	3	3	3				0.828
0.539	7	7	3	7	3	3	3	3				0.830
Maiacetus							**N=32**		**σ^Q=0.008**		**σ^P=0.02**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.512	7	3	10	4	3	4	3	5				0.820
0.495	7	6	7	5	5	4	7	4				0.789
0.519	7	8	4	5	3	4	3	5				0.840
0.516	7	5	6	5	4	3	5	4				0.852
0.51	7	8	4	7	3	4	3	3				0.832
0.494	6	6	3	4	3	7	9					0.805
0.49	7	6	3	4	3	3	4	9				0.828
0.519	7	8	3	5	4	4	3	5				0.840
0.495	6	7	5	7	4	5	4					0.824
0.511	7	7	4	5	4	3	4	5				0.848
0.516	6	8	5	9	3	3	4					0.801
0.507	6	9	4	3	7	5	4					0.809
0.498	6	3	10	9	3	4	3					0.781
0.516	6	8	3	9	3	4	5					0.801
0.516	7	5	6	5	4	3	4	5				0.852
0.504	7	6	9	4	4	3	3	3				0.828
0.503	5	9	4	3	9	7						0.770
0.507	6	9	4	5	3	7	4					0.809
0.519	7	8	5	3	4	3	4	5				0.840
0.51	7	8	7	3	4	3	3	4				0.832
0.507	6	9	4	3	4	5	7					0.809
0.513	7	6	6	4	6	4	3	3				0.846
0.51	7	3	8	4	4	7	3	3				0.832

0.512	7	10	5	4	3	3	4	3				0.820
0.519	7	8	5	3	5	4	3	4				0.840
0.51	7	8	3	3	4	7	3	4				0.832
0.516	6	8	9	3	3	4	5					0.801
0.512	7	3	10	3	4	3	4	5				0.820
0.506	6	6	4	3	6	4	9					0.811
0.519	7	8	5	4	4	3	3	5				0.840
0.516	6	6	6	4	5	7	4					0.826
0.519	7	8	3	4	5	3	4	5				0.840
Dorudon							**N=24**		**σ^Q=0.02**		**σ^P=0.03**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P
0.46	4	7	7	7	3							0.729
0.453	4	7	7	4	6							0.740
0.45	3	7	10	7								0.656
0.418	6	8	7	2	2	2	3					0.767
0.402	6	6	6	5	2	2	3					0.802
0.436	5	7	6	7	2	2						0.753
0.453	4	8	3	6	7							0.726
0.46	4	7	7	7	3							0.729
0.418	6	8	7	2	2	2	3					0.767
0.436	5	7	6	2	2	7						0.753
0.4	5	6	6	7	2	3						0.767
0.45	3	7	7	10								0.656
0.46	4	7	7	7	3							0.729
0.435	4	8	7	2	7							0.712
0.453	4	8	6	3	7							0.726
0.436	5	7	6	2	2	7						0.753
0.45	3	7	7	10								0.656
0.439	4	8	8	5	3							0.719
0.436	5	7	6	2	2	7						0.753
0.46	4	7	7	3	7							0.729
0.436	5	7	6	2	2	7						0.753
0.46	4	7	3	7	7							0.729
0.435	4	8	7	2	7							0.712
0.46	4	7	7	3	7							0.729
Lagenorhynchus							**N=35**		**σ^Q=0.01**		**σ^P=0.02**	
Q	NM	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	P

0.528	6	5	7	2	8	8	5					0.811
0.518	6	9	4	6	3	8	5					0.811
0.526	6	7	8	5	5	3	7					0.820
0.539	7	8	8	3	5	3	3	5				0.833
0.527	6	7	4	8	3	8	5					0.815
0.516	6	8	2	8	5	5	7					0.811
0.537	7	7	5	3	4	5	3	8				0.839
0.539	7	8	8	5	3	3	3	5				0.833
0.533	6	6	6	9	3	4	5	8				0.782
0.514	6	5	8	6	4	7	5					0.824
0.506	7	6	7	4	8	3	5					0.838
0.521	6	6	9	3	6	8	3					0.808
0.514	6	5	6	4	7	8	5					0.824
0.529	6	7	6	2	8	7	5					0.815
0.529	6	7	6	2	5	7	8					0.815
0.526	6	6	9	3	6	6	5					0.818
0.514	6	5	6	4	7	8	5					0.824
0.539	7	8	3	5	8	5	3	3				0.833
0.539	7	8	5	3	3	3	8	5				0.833
0.539	7	8	5	3	3	5	3	8				0.833
0.539	7	8	5	3	5	3	3	8				0.833
0.515	6	5	6	7	6	6	5					0.831
0.527	6	8	7	6	5	3	6					0.821
0.526	6	8	4	8	5	3	7					0.815
0.539	7	8	3	5	3	5	3	8				0.833
0.525	5	10	4	7	8	6						0.784
0.504	5	8	8	8	6	5						0.793
0.529	6	7	2	6	8	5	7					0.815
0.52	5	10	6	7	8	4						0.784
0.525	5	10	4	8	7	6						0.784
0.524	6	4	8	7	9	2	5					0.805
0.516	6	5	2	8	7	8	5					0.811
0.501	7	7	7	5	5	3	2	6				0.839
0.525	5	10	4	7	8	6						0.784
0.539	7	8	3	5	3	3	8	5				0.833
Megaptera							**N=35**		**σ^Q=0.006**		**σ^P=0.01**	
Q	NM	M1	M2	M3	M4	M5	M6	M 7	M8	M9	M10	P
0.572	6	7	7	2	7	3	9					0.803

0.569	6	4	6	2	7	9	7					0.808
0.569	6	4	7	6	2	9	7					0.808
0.569	6	4	7	6	2	9	7					0.808
0.569	6	6	7	2	4	9	7					0.808
0.572	6	7	7	2	3	9	7					0.803
0.557	5	6	9	4	7	9						0.785
0.569	6	4	6	7	2	9	7					0.808
0.569	6	4	7	2	6	9	7					0.808
0.557	5	8	7	4	9	7						0.789
0.569	6	4	6	7	2	7	9					0.808
0.572	6	7	7	2	3	9	7					0.803
0.561	6	6	8	2	3	9	7					0.802
0.56	5	9	8	2	9	7						0.772
0.557	5	8	7	4	9	7						0.789
0.557	5	8	7	4	9	7						0.789
0.561	6	8	6	9	3	2	7					0.802
0.569	6	4	7	6	2	9	7					0.808
0.561	6	6	2	8	9	7	3					0.802
0.561	6	6	8	2	3	9	7					0.802
0.561	6	6	2	8	9	3	7					0.802
0.569	6	4	6	7	2	9	7					0.808
0.542	5	9	6	6	7	7						0.795
0.562	5	10	9	6	3	7						0.776
0.557	5	8	7	4	9	7						0.789
0.572	6	7	7	3	2	9	7					0.803
0.572	6	7	7	2	7	3	9					0.803
0.558	6	6	6	4	3	9	7					0.815
0.561	6	6	2	8	3	9	7					0.802
0.561	6	6	8	2	3	9	7					0.802
0.557	5	7	8	4	9	7						0.789
0.561	6	6	2	8	3	9	7					0.802
0.557	5	8	4	7	9	7						0.789
0.572	6	7	7	2	9	3	7					0.803
0.562	5	10	6	3	9	7						0.776

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