

MAthesis

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Table 1: Time bins with age range, epoch name, mean age and corresponding sample sizes (on individual, species and genus level)

bin	EpochBins	MeanBins	nIndividuals	nSpecies	nGenera
(0,0.0117]	Modern	0.00585	252	64	18
(0.0117,0.126]	Upper Pleistocene	0.06885	47	16	8
(0.126,0.781]	Middle Pleistocene	0.45350	48	11	6
(0.781,2.59]	Lower Pleistocene	1.68450	73	27	11
(2.59,3.6]	Upper Pliocene	3.09400	23	15	9
(3.6,5.33]	Lower Pliocene	4.46600	29	17	8
(5.33,11.6]	Upper Miocene	8.47000	52	23	9
(11.6,16]	Middle Miocene	13.78900	38	17	11
(16,23]	Lower Miocene	19.50000	25	13	9
(23,50]	Oligocene and Eocene	36.51500	7	5	5

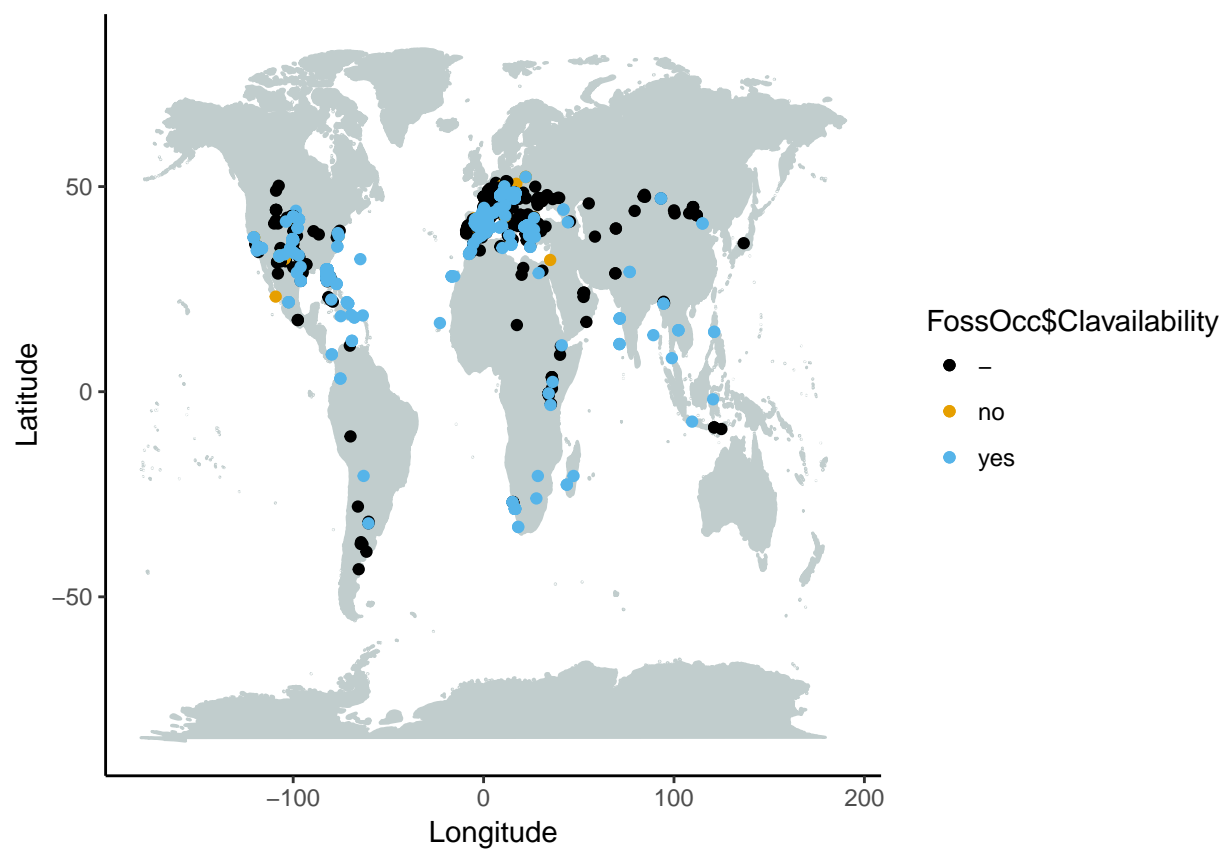


Figure 1: Map displaying all fossil occurrences of testudinids, with color indicating whether relevant literature was available (black if not) and if it was, whether body size data was available or not (yes and no, respectively).

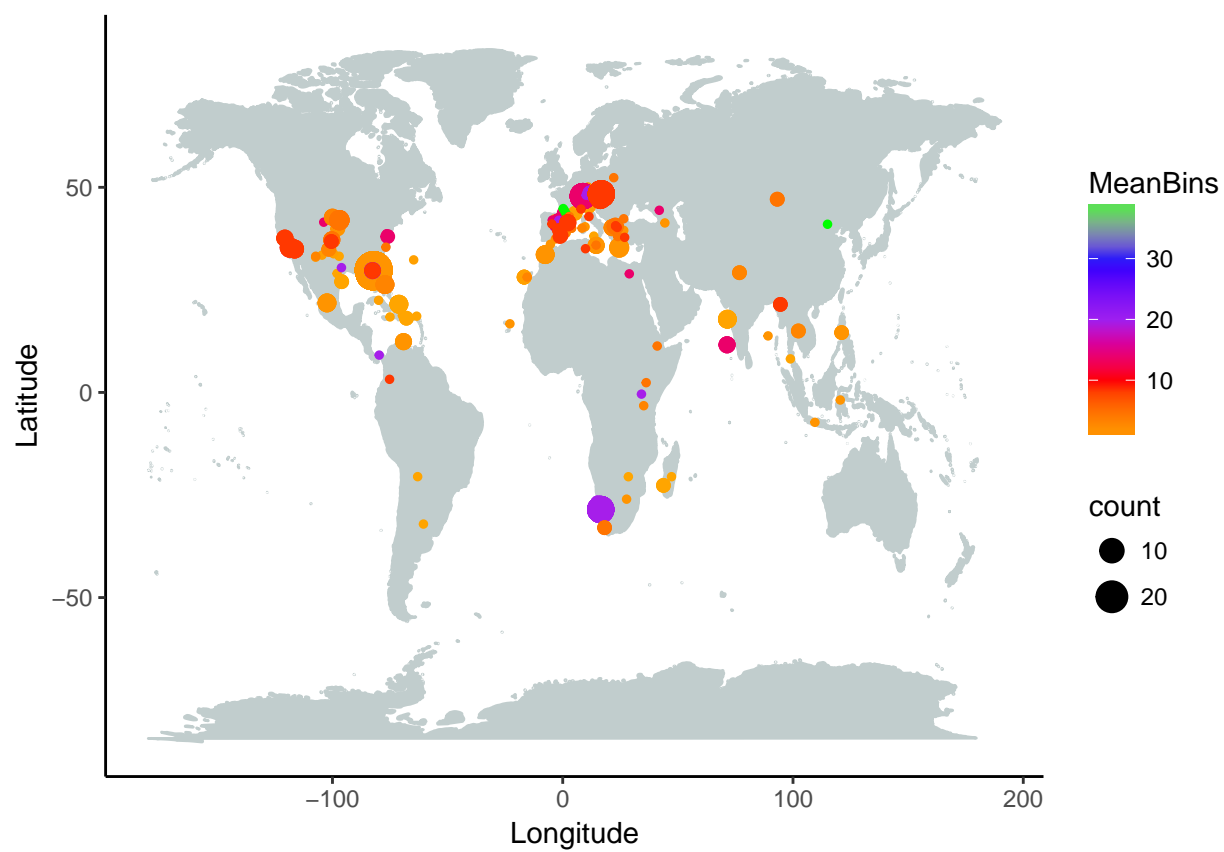


Figure 2: Map displaying all localities for which body size data for testudinids was available in the literature. Size of points denotes sample size, color denotes approximate age.

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```

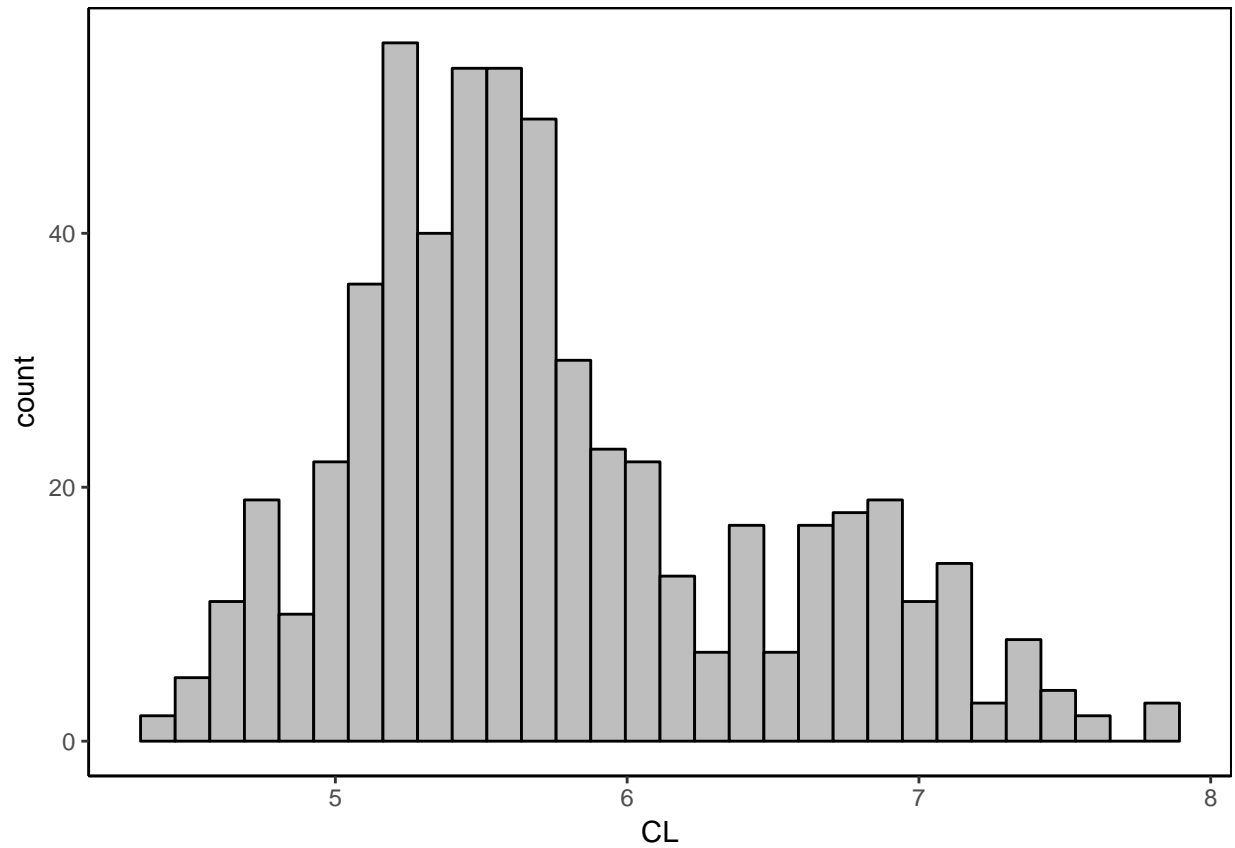


Figure 3: Distribution of body size data, logtransformed, all data.

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```

```
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```

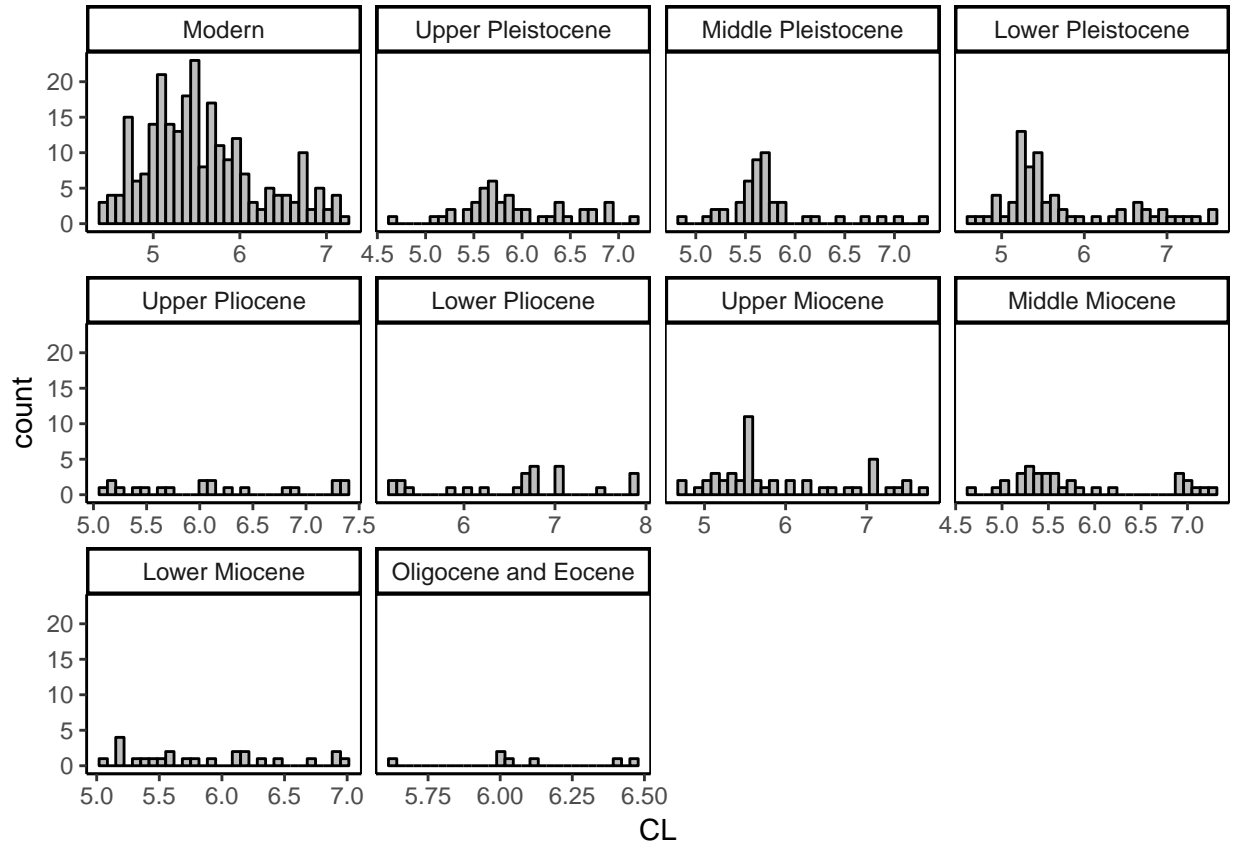


Figure 4: Distribution of body size data per time bin, logtransformed.

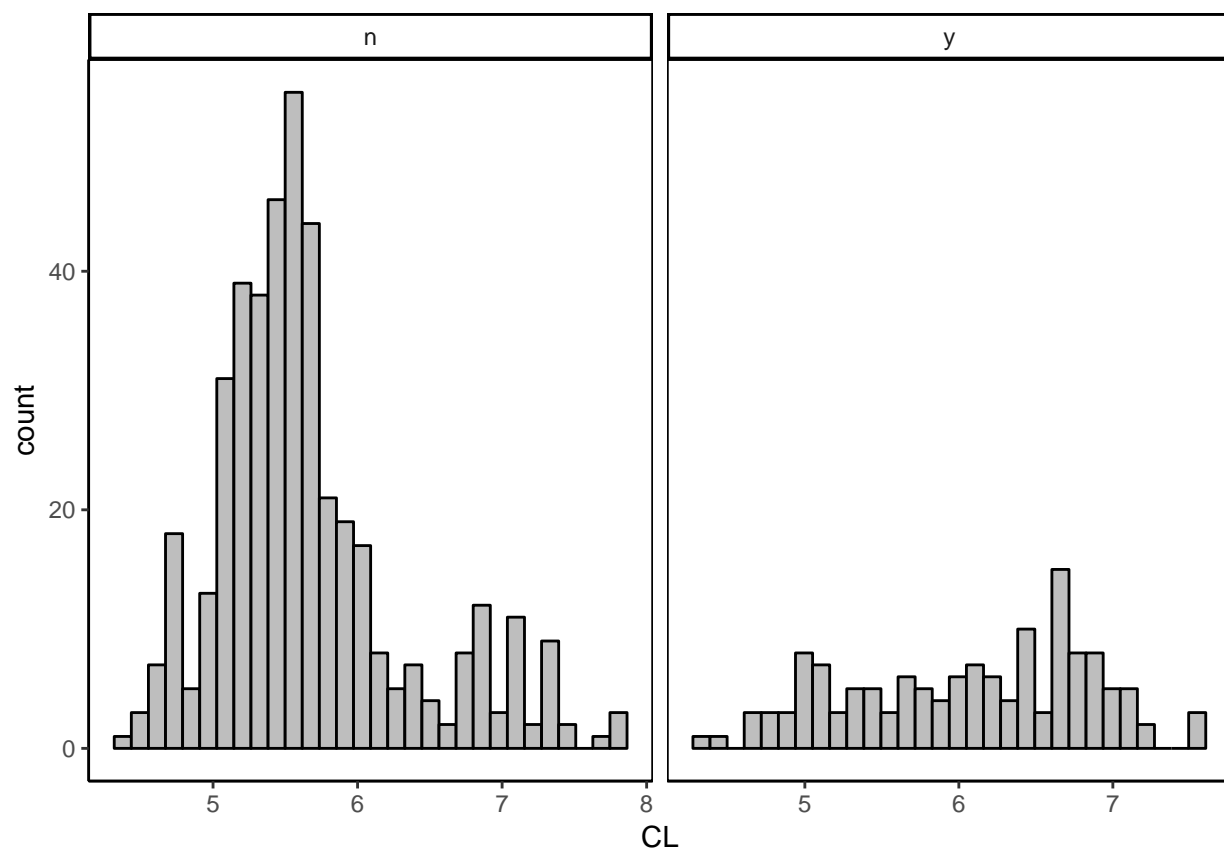


Figure 5: Distribution of body site data of continental (n) and insular(y) species, logtransformed.

Table 2: General statistics of body size data: all, per time bin,
insular and continental

nCL	min	max	var	mean	logm	med	logmed	skew	logsk	kurt	logku	Variable
573	80.00	2500	146793.95	419.2	2.5	270.0	2.4	2.30	0.70	9.25	2.84	all
251	80.00	1300	67716.64	328.9	2.4	242.0	2.4	1.85	0.60	5.91	2.73	Modern
46	102.44	1250	69637.75	438.4	2.6	331.1	2.5	1.30	0.29	3.89	2.69	Upper Pleistocene
47	132.00	1500	64523.61	357.3	2.5	285.6	2.5	2.99	1.58	12.00	5.93	Middle Pleistocene
71	107.80	2000	176257.96	417.4	2.5	224.1	2.4	2.08	1.06	6.77	2.99	Lower Pleistocene
20	165.00	1600	269797.71	636.6	2.7	440.5	2.6	0.96	0.29	2.38	1.78	Upper Pliocene
24	176.00	2500	516172.48	953.5	2.8	847.5	2.9	1.08	-0.31	3.32	2.13	Lower Pliocene
49	107.00	2100	274774.35	542.8	2.6	250.0	2.4	1.46	0.66	4.00	2.17	Upper Miocene
34	111.00	1500	169511.65	454.8	2.5	255.0	2.4	1.32	0.83	3.16	2.29	Middle Miocene
24	160.00	1100	81679.97	425.8	2.5	317.0	2.5	1.20	0.48	3.25	2.06	Lower Miocene
7	275.00	635	15613.99	453.2	2.6	412.5	2.6	0.29	-0.17	2.06	2.36	Oligocene and Eocene
434	81.00	2500	137816.81	375.5	2.5	250.0	2.4	2.90	1.08	12.62	3.97	continental
139	80.00	2000	151260.27	555.7	2.6	466.0	2.7	1.08	-0.24	4.33	2.01	insular

Boxplots (continental (n) vs. Island (y) species)

Warning: Removed 9 rows containing missing values (geom_pointrange).

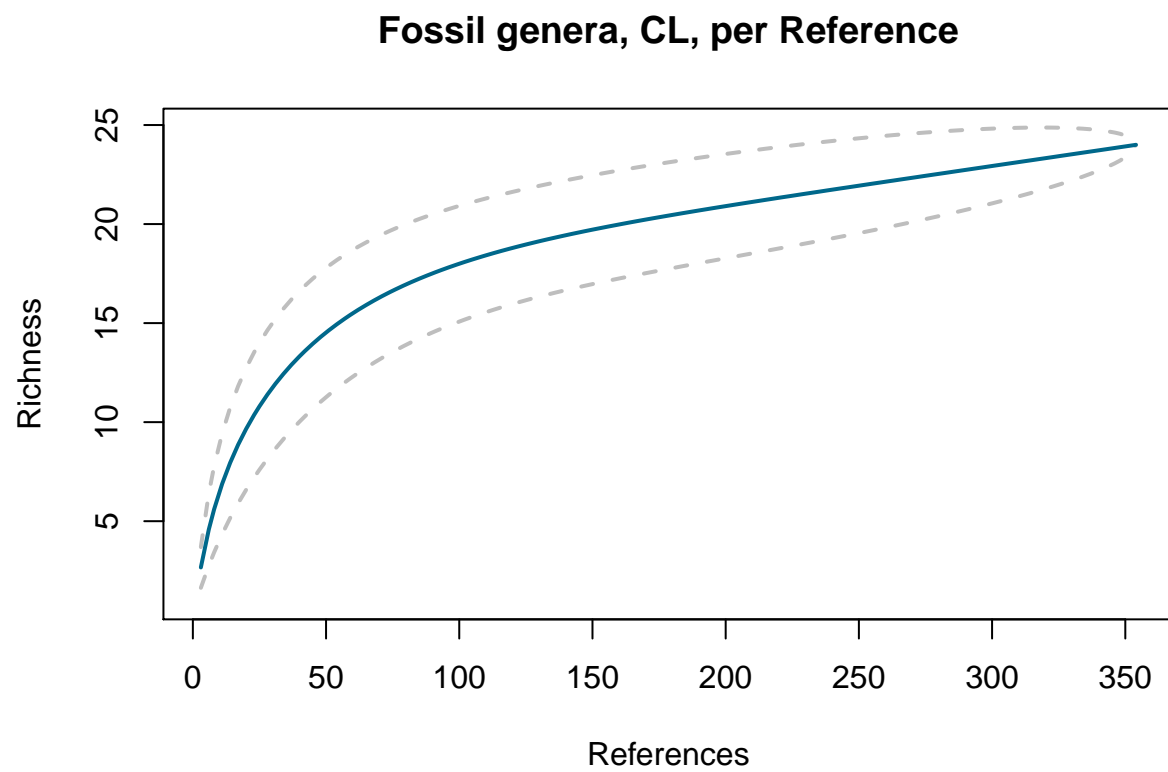


Figure 6: Sampling Accumulation Curve of fossil genera per reference

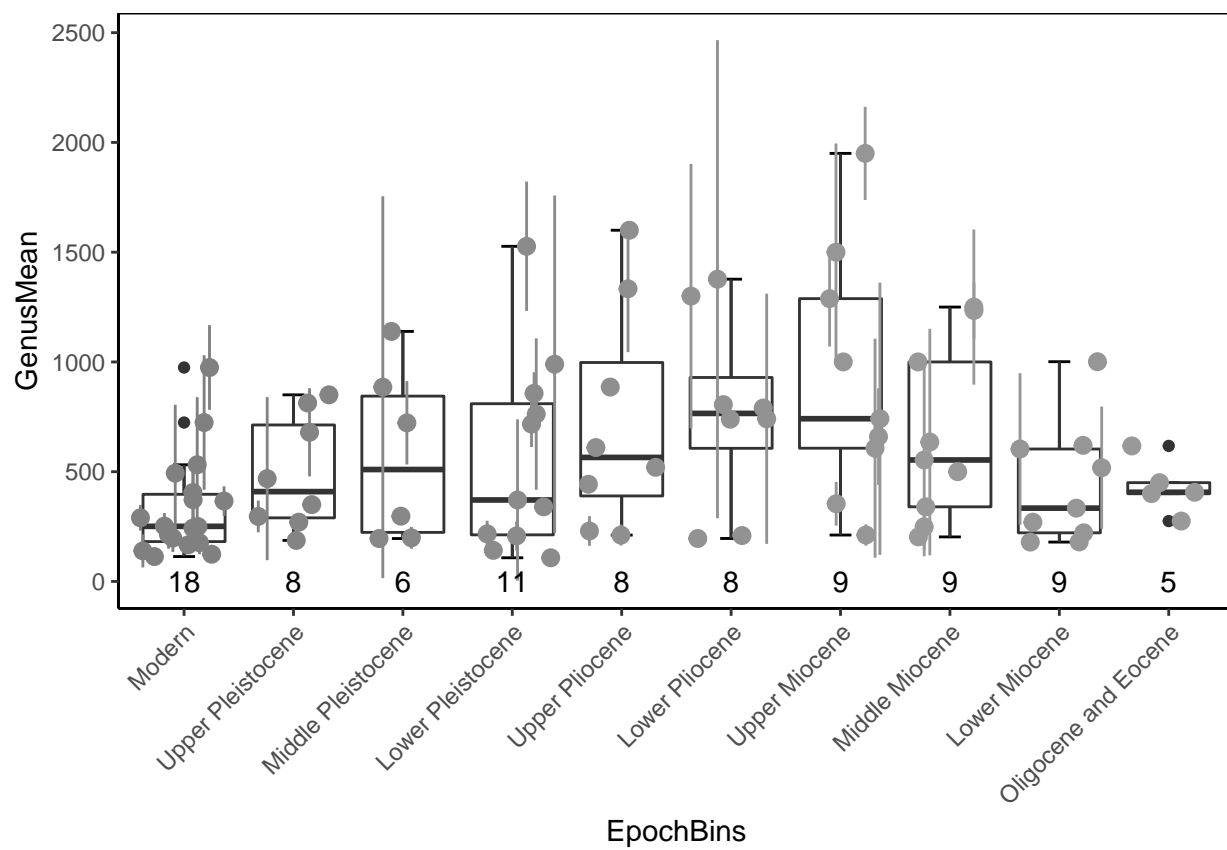


Figure 7: Boxplots of generic mean CL per time bin, including mean and sd CL for each genus (as pointrange).

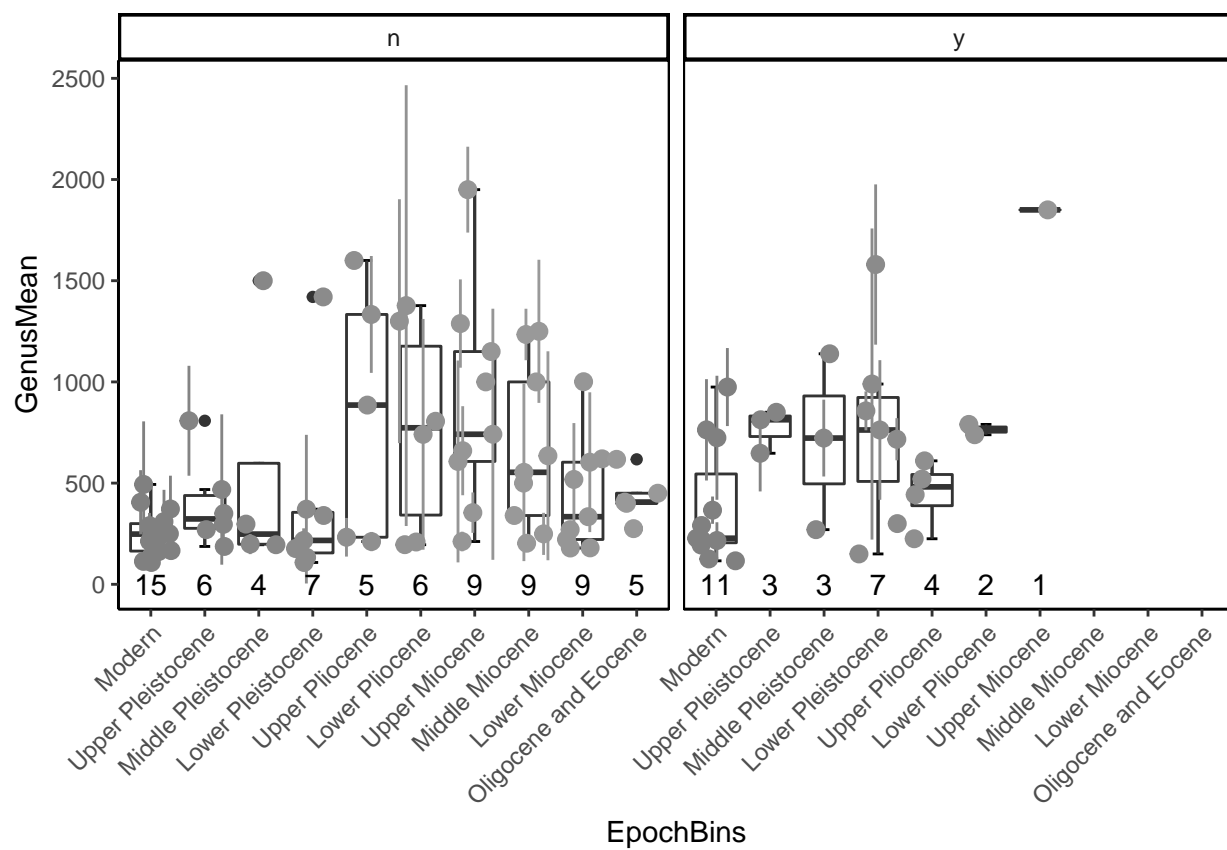


Figure 8: Boxplots of each genus per time bin, continental vs. insular species.

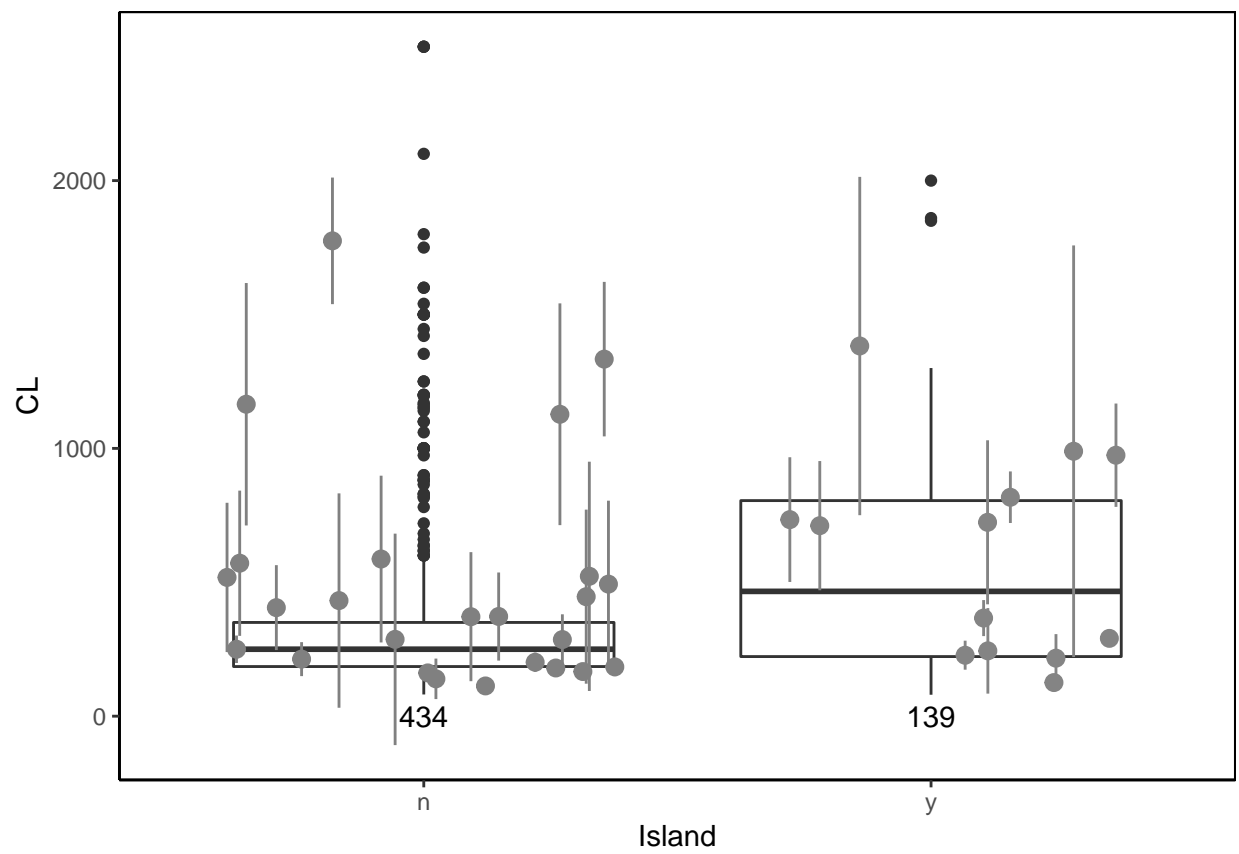


Figure 9: Boxplot continental vs. insular, genera summarised

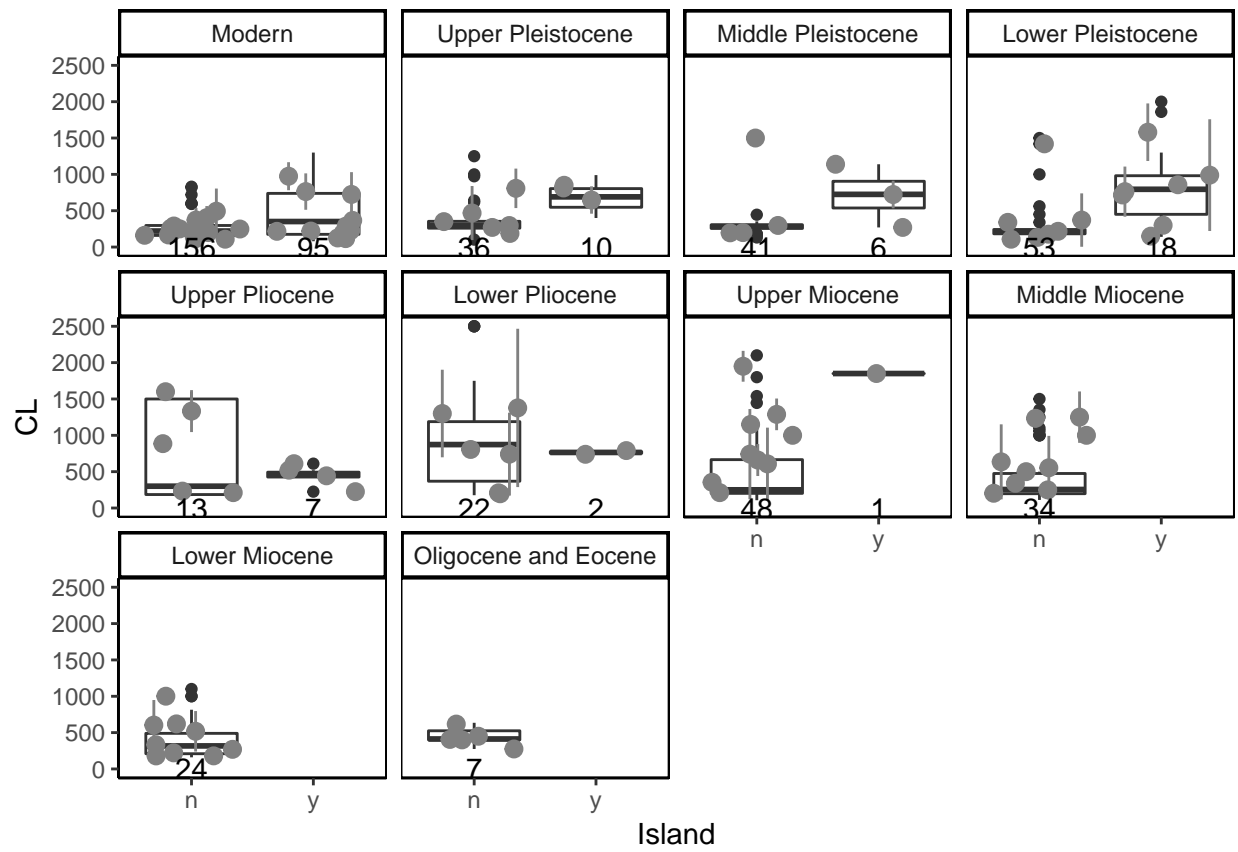


Figure 10: Boxplot continental vs. insular, genera summarised

paleoTS analysis

all (continental and insular)

individuals (all)

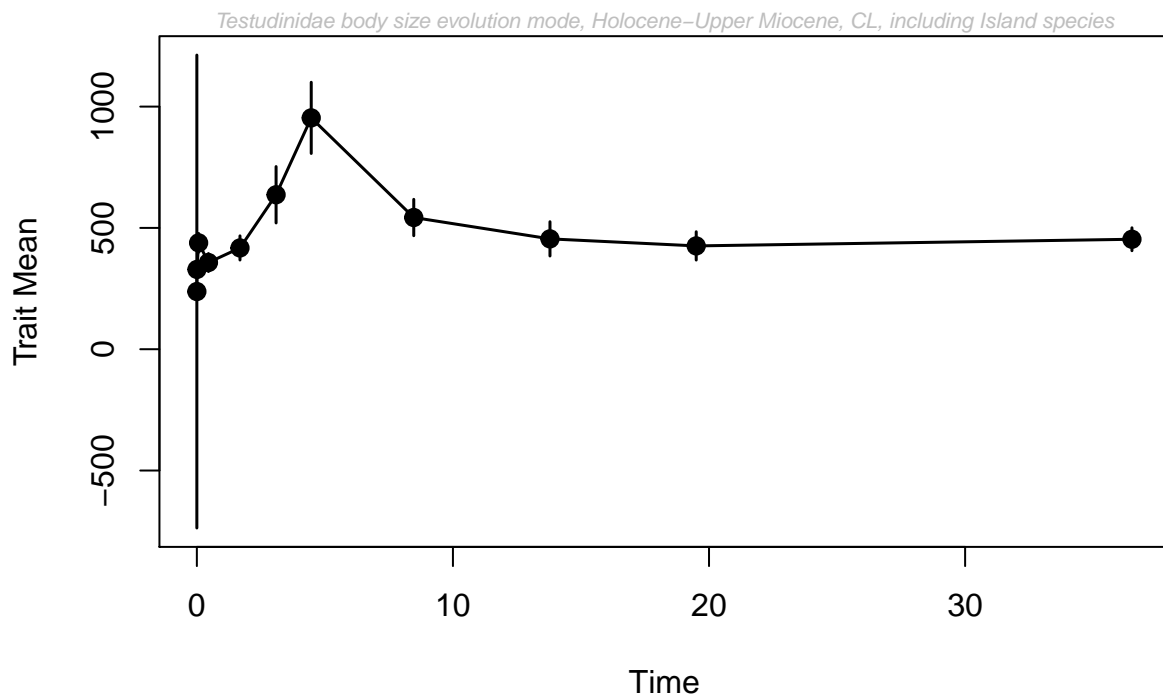


Figure 11: individuals, including island species

Table 3: Model-fitting results for testudinidae, individuals, including island species

	logL	K	AICc	Akaike.wt
GRW	-68.07841	2	141.8711	0.008
URW	-68.07845	1	138.6569	0.040
Stasis	-63.29025	2	132.2948	0.952

species (all)

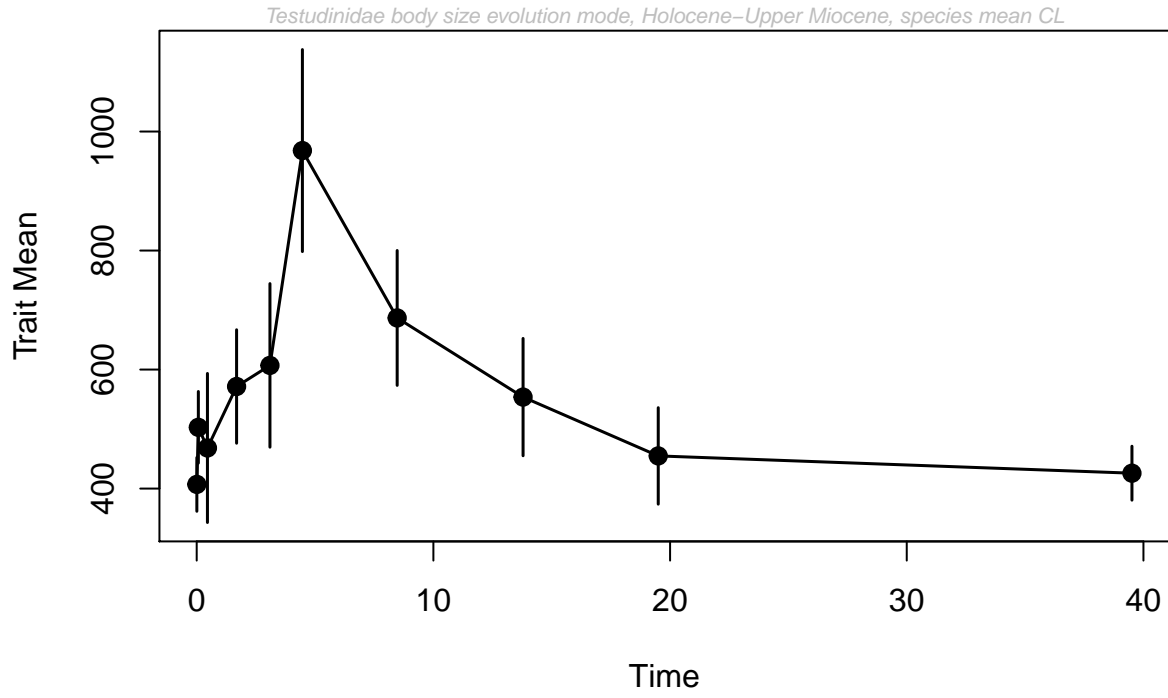


Figure 12: paleoTS plot with species mean, including island species

Table 4: Model-fitting results for testudinidae, species, including island species

	logL	K	AICc	Akaike.wt
GRW	-56.73574	2	119.4715	0.145
URW	-56.93847	1	116.4484	0.656
Stasis	-56.41523	2	118.8305	0.199

genera (all)

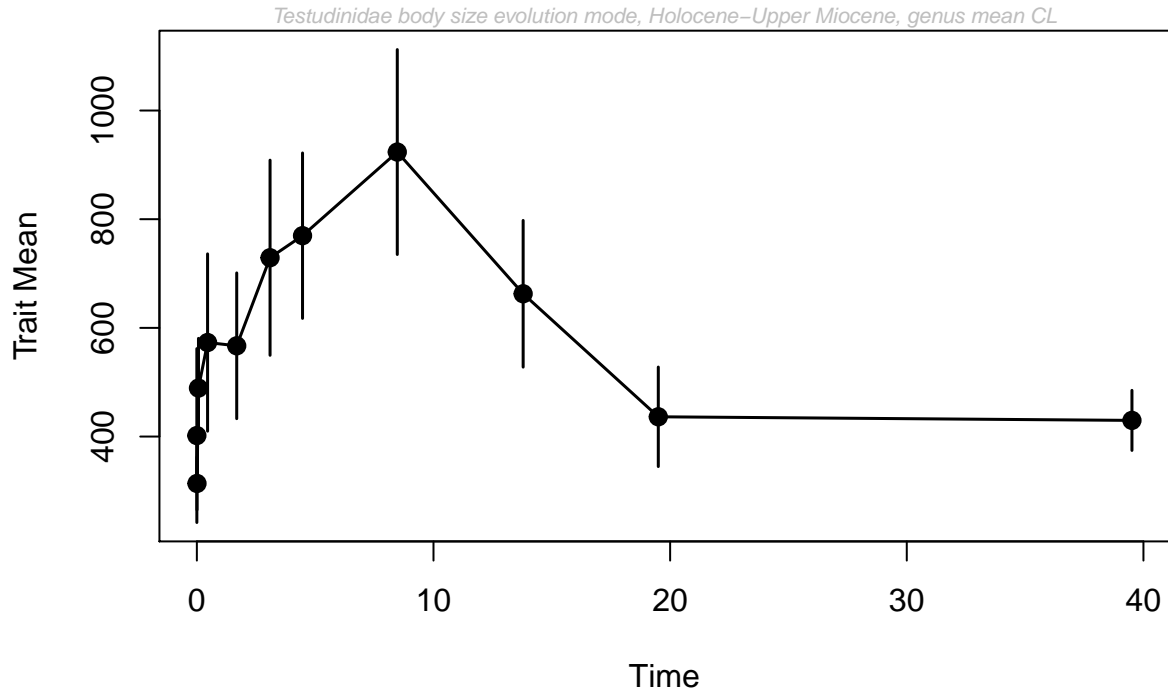


Figure 13: paleoTS plot with genus mean, including island species

Table 5: Model-fitting results for testudinidae, genera, including island species

	logL	K	AICc	Akaike.wt
GRW	-64.79973	2	135.3137	0.164
URW	-64.86224	1	132.2245	0.768
Stasis	-65.68705	2	137.0884	0.068

continental (excluding insular species)

individuals (continental)

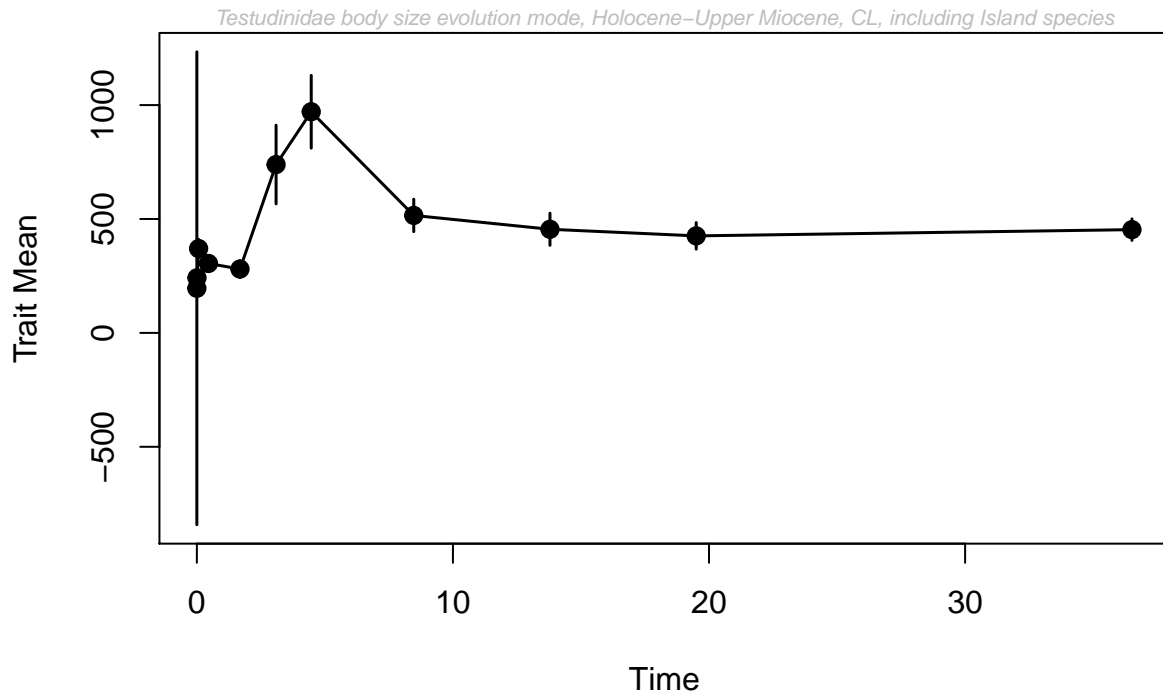


Figure 14: individuals, excluding island species

Table 6: Model-fitting results for testudinidae, individuals, excluding island species

	logL	K	AICc	Akaike.wt
GRW	-70.13728	2	145.9888	0.018
URW	-70.14070	1	142.7814	0.090
Stasis	-66.24073	2	138.1957	0.892

species (continental)

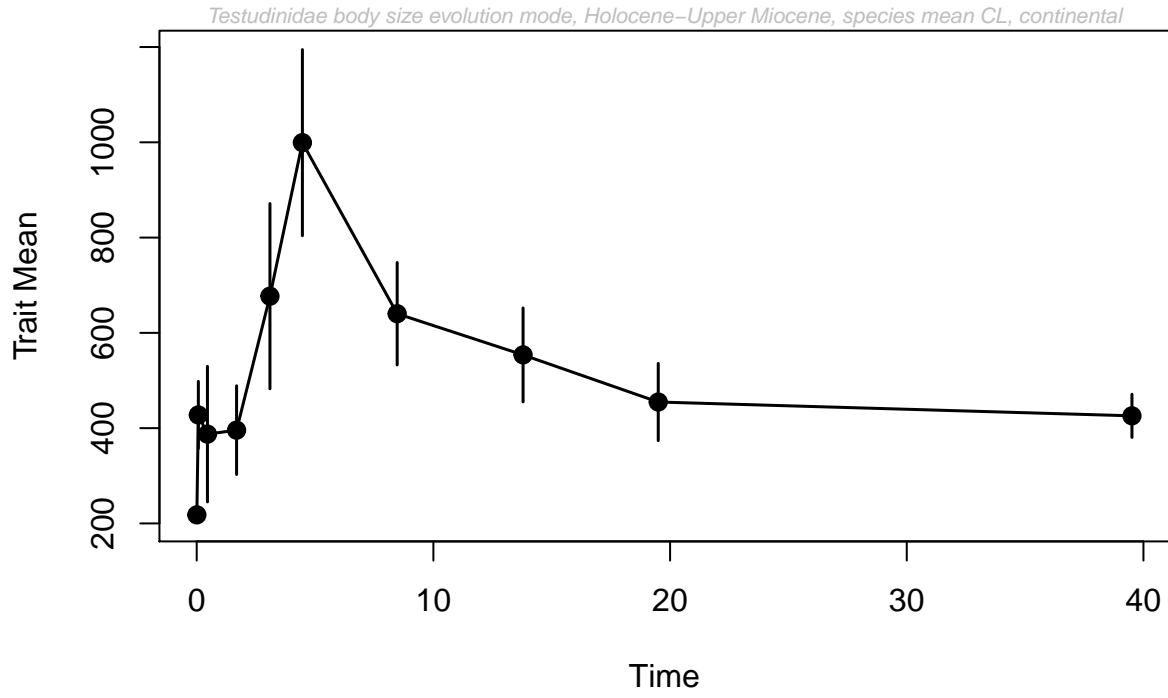


Figure 15: paleoTS plot with species mean, excluding island species

Table 7: Model-fitting results for testudinidae, species, excluding island species

	logL	K	AICc	Akaike.wt
GRW	-60.94204	2	127.8841	0.019
URW	-62.39001	1	127.3515	0.025
Stasis	-57.04727	2	120.0945	0.955

genera (continental)

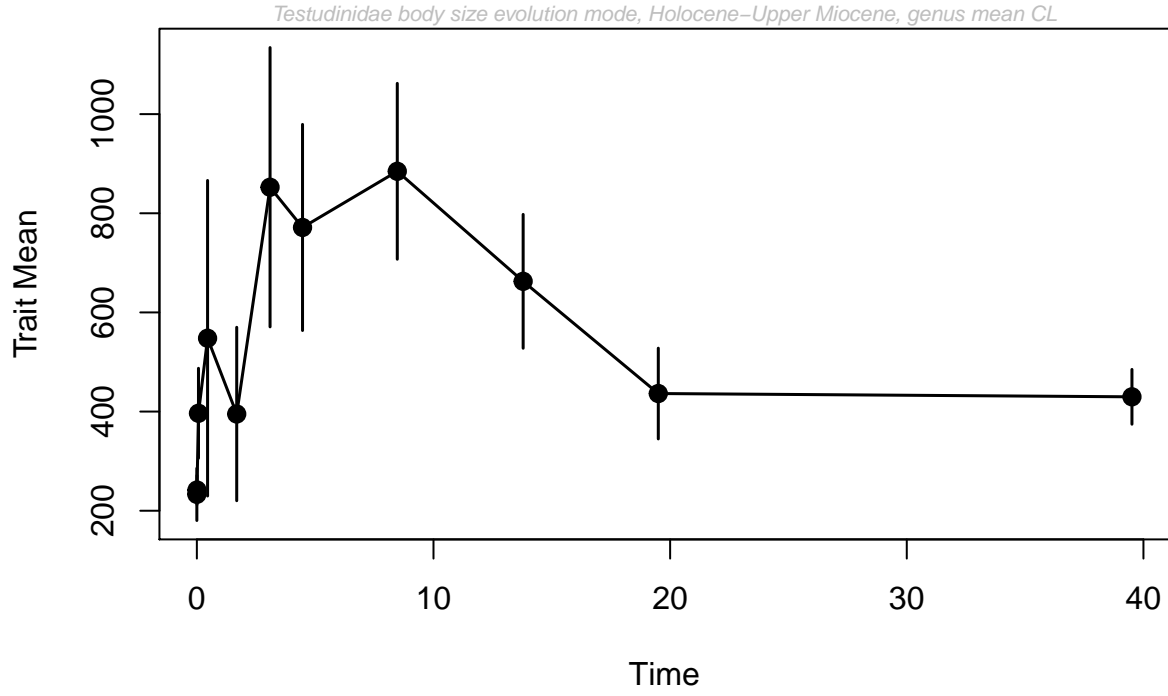


Figure 16: paleoTS plot with genus mean, excluding island species

Table 8: Model-fitting results for testudinidae, genera, excluding insular species

	logL	K	AICc	Akaike.wt
GRW	-65.96537	2	137.6450	0.172
URW	-66.03667	1	134.5733	0.799
Stasis	-67.73195	2	141.1782	0.029

insular (excluding continental)

individuals (insular)

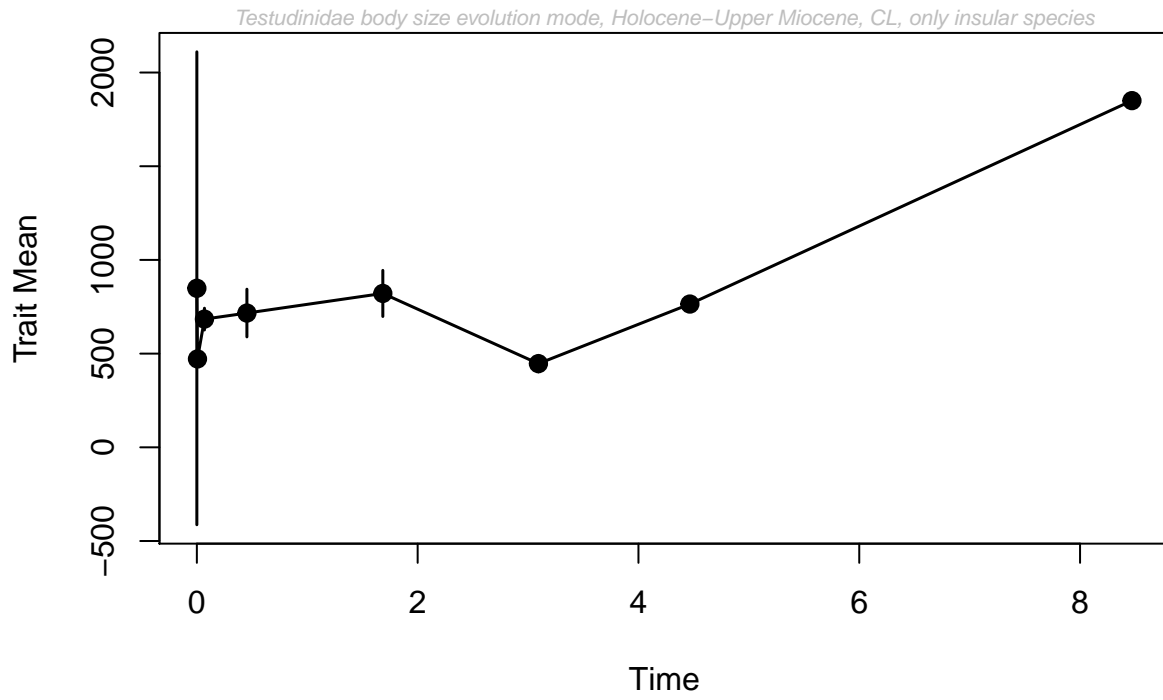


Figure 17: individuals, excluding continental species

Table 9: Model-fitting results for testudinidae, individuals, only insular species

	logL	K	AICc	Akaike.wt
GRW	-62.23202	2	131.4640	0.000
URW	-52.89195	1	108.5839	0.999
Stasis	-58.14309	2	123.2862	0.001

species (insular)

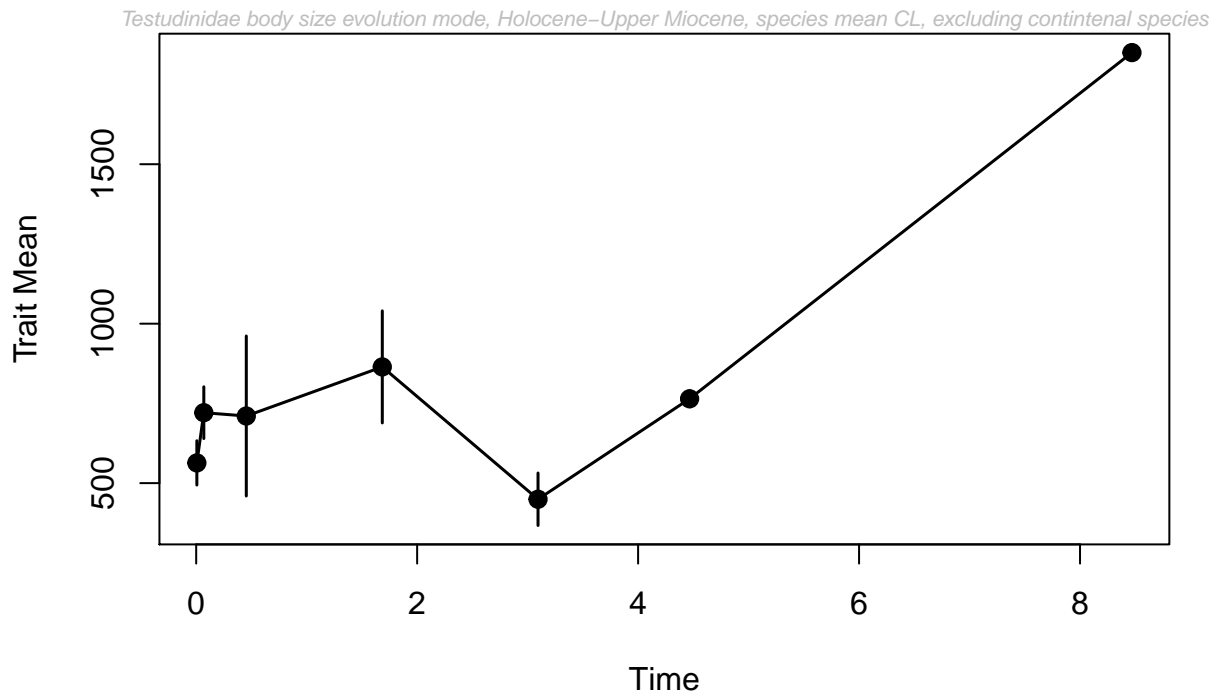


Figure 18: paleoTS plot with species mean, only insular species

Table 10: Model-fitting results for testudinidae, species, only insular species

	logL	K	AICc	Akaike.wt
GRW	-60.94204	2	127.8841	0.019
URW	-62.39001	1	127.3515	0.025
Stasis	-57.04727	2	120.0945	0.955

genera (insular)

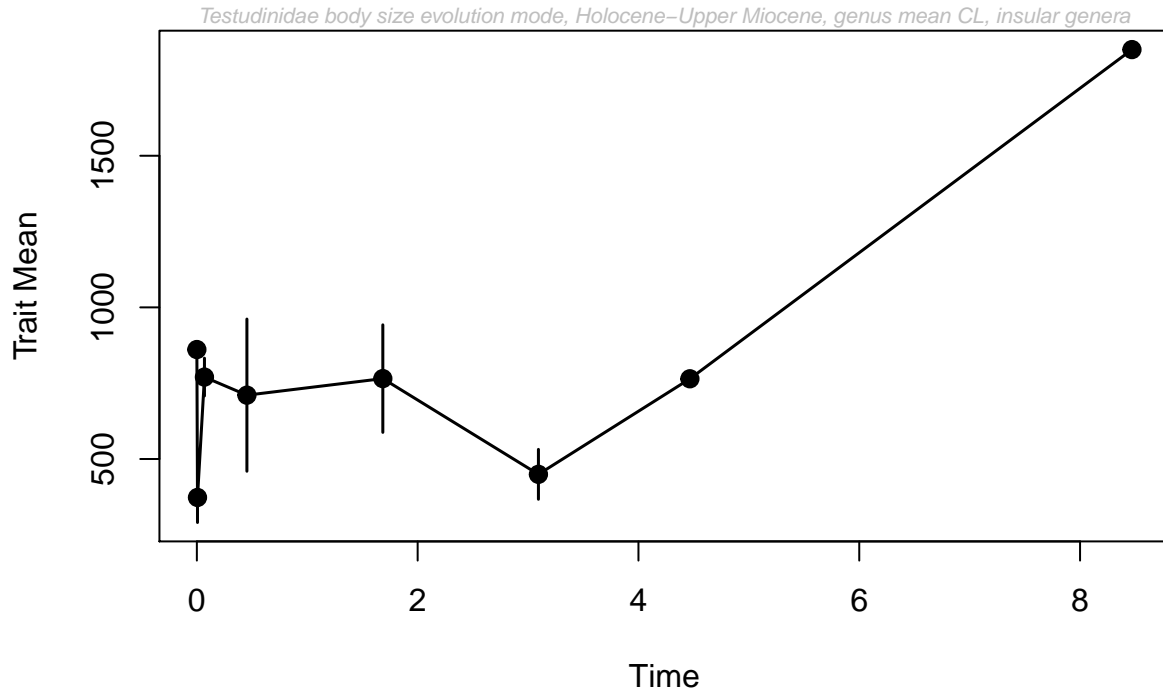


Figure 19: paleoTS plot with genus mean, only insular species

Table 11: Model-fitting results for testudinidae, genera, only insular species

	logL	K	AICc	Akaike.wt
GRW	-60.79557	2	128.5911	0
URW	-67.79820	1	138.3964	0
Stasis	-52.91882	2	112.8376	1

play with time bins

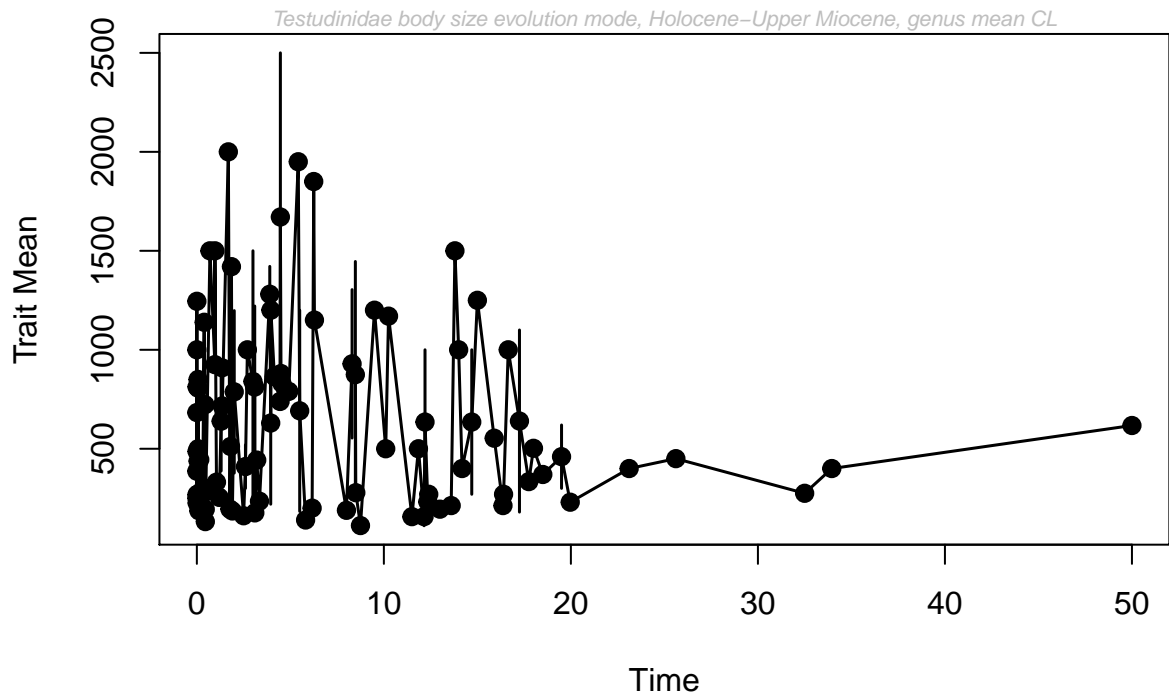


Table 12: Model-fitting results for testudinidae, genera, only insular species

	logL	K	AICc	Akaike.wt
GRW	-6491.7067	2	12987.54	0
URW	-6564.3336	1	13130.71	0
Stasis	-817.7247	2	1639.58	1