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
(0,1e-06]	Modern	0.0000005	240	58	17
(1e-06,0.0117]	Holocene	0.0058500	12	6	4
(0.0117,0.126]	Upper Pleistocene	0.0688500	46	15	7
(0.126,0.781]	Middle Pleistocene	0.4535000	46	9	6
(0.781,2.59]	Lower Pleistocene	1.6845000	68	24	11
(2.59,3.6]	Upper Pliocene	3.0940000	21	14	9
(3.6,5.33]	Lower Pliocene	4.4660000	27	16	8
(5.33,11.6]	Upper Miocene	8.4700000	41	21	9

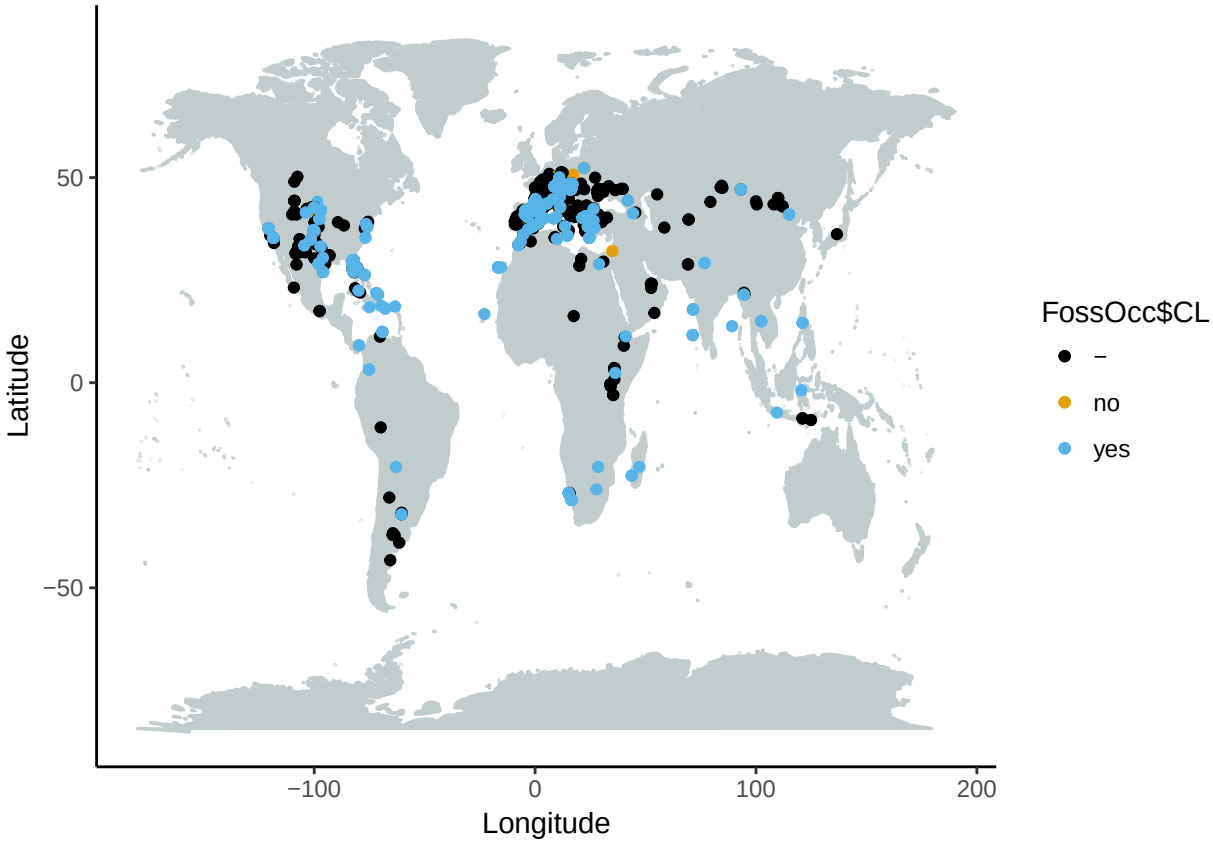


Figure 1: Map displaying all fossil occurrences of testudinids, with color indicating whether relevant literature was available (black if not) and if it was, whether body size data was available or not (yes and no, respectively).

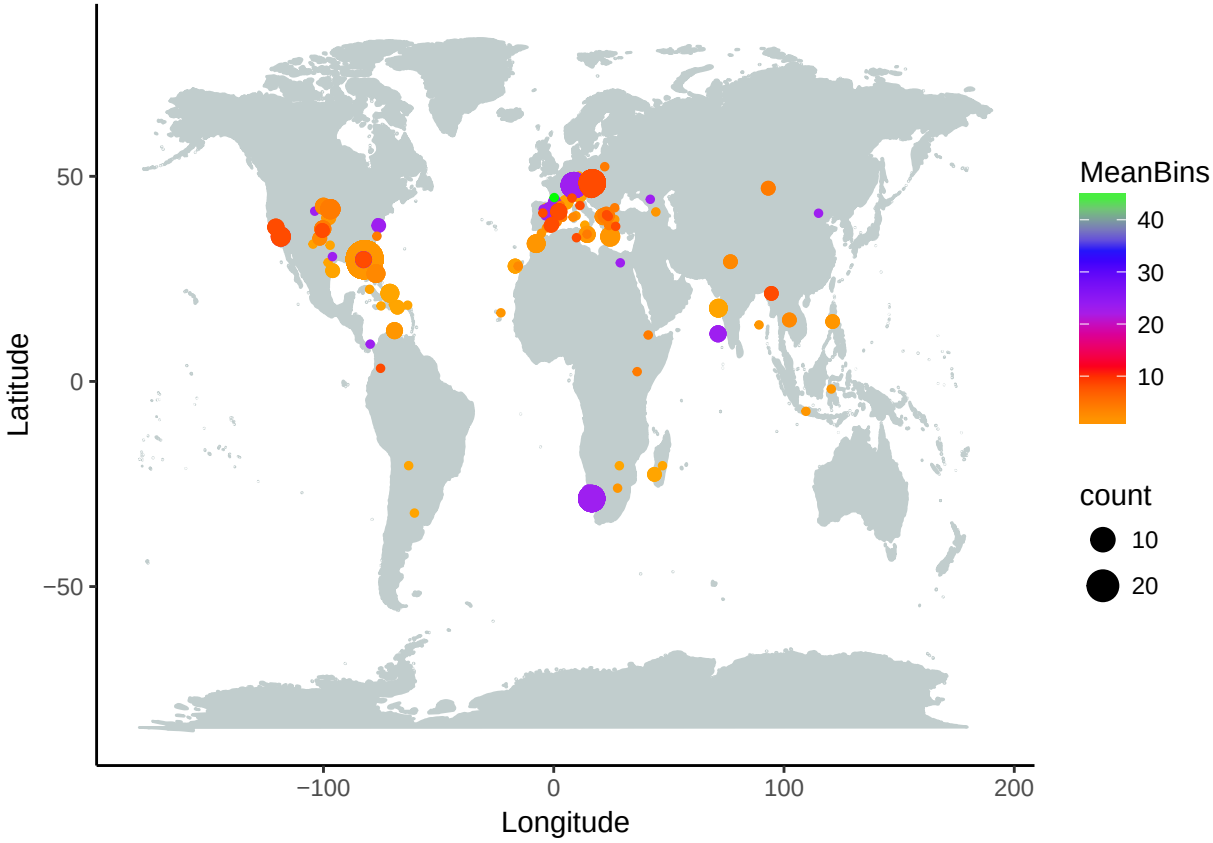
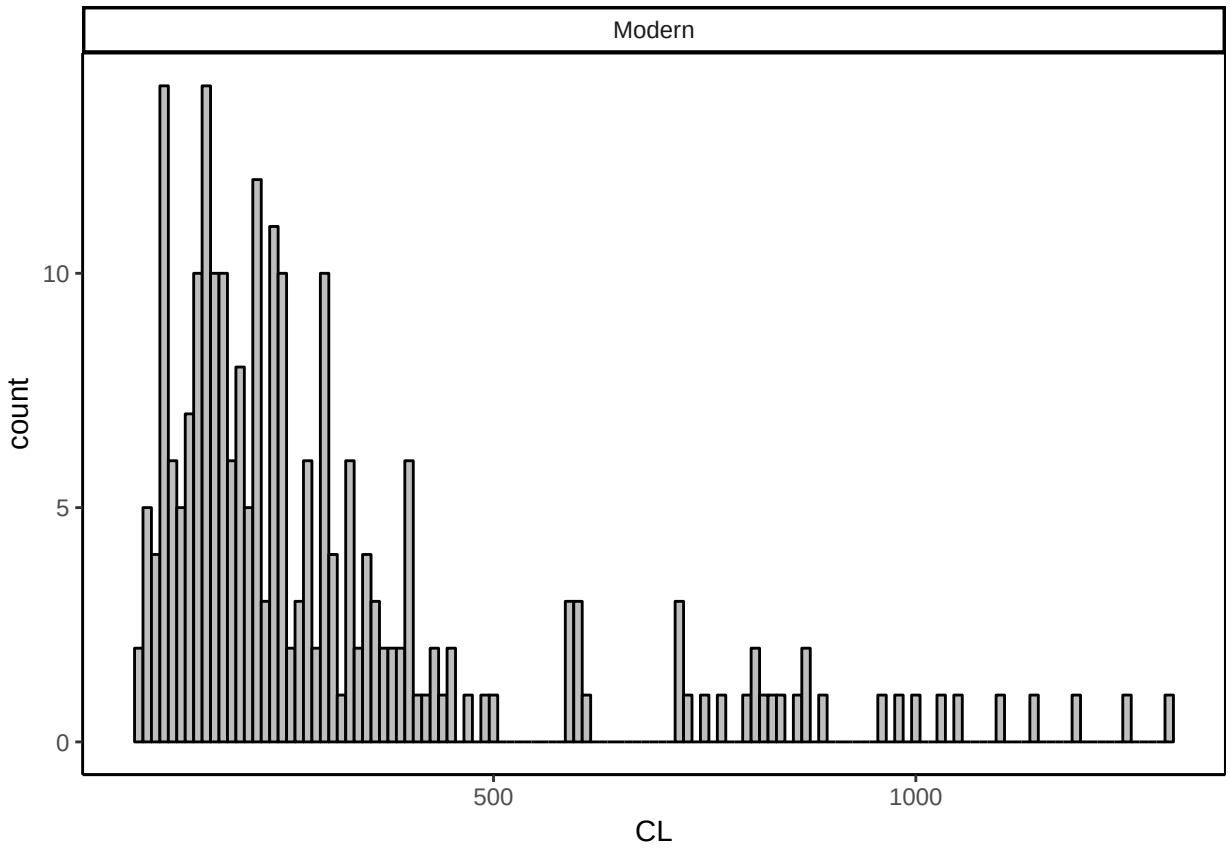
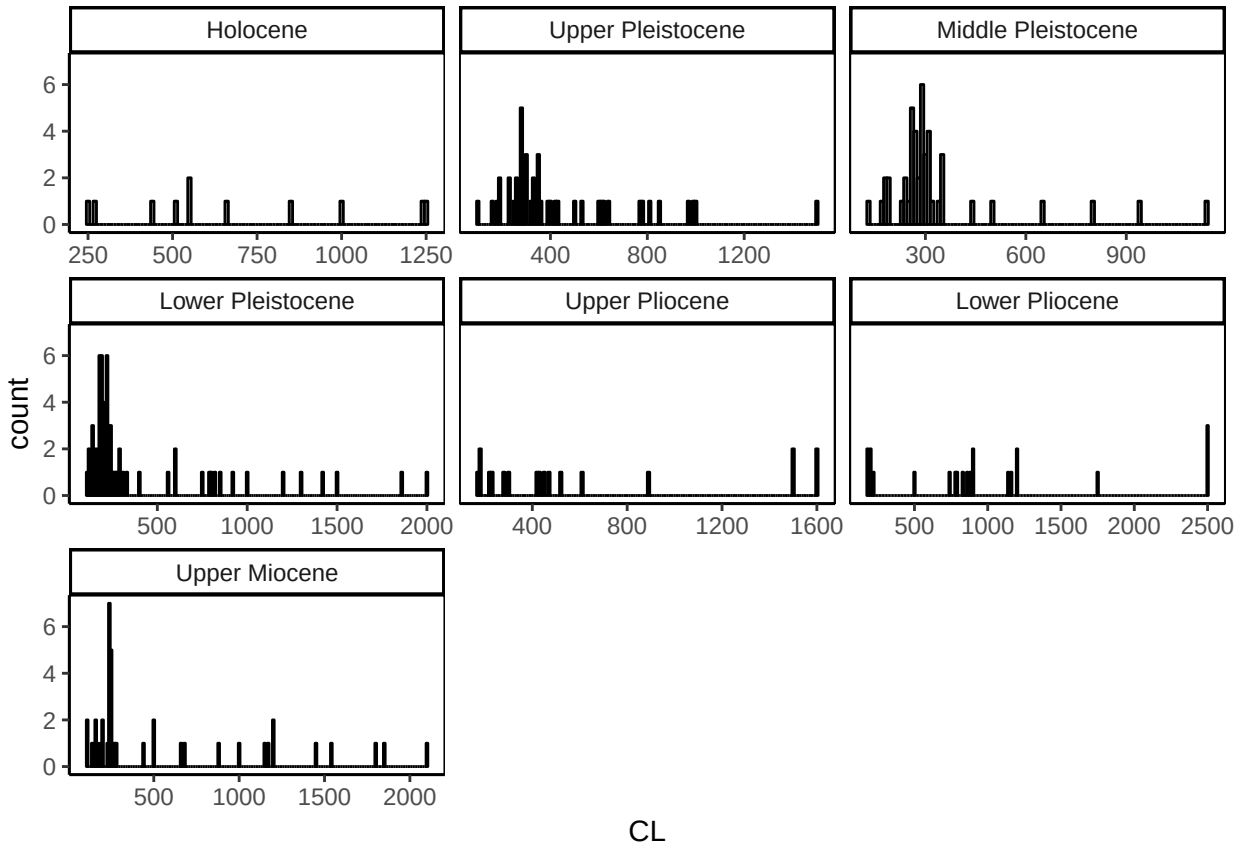
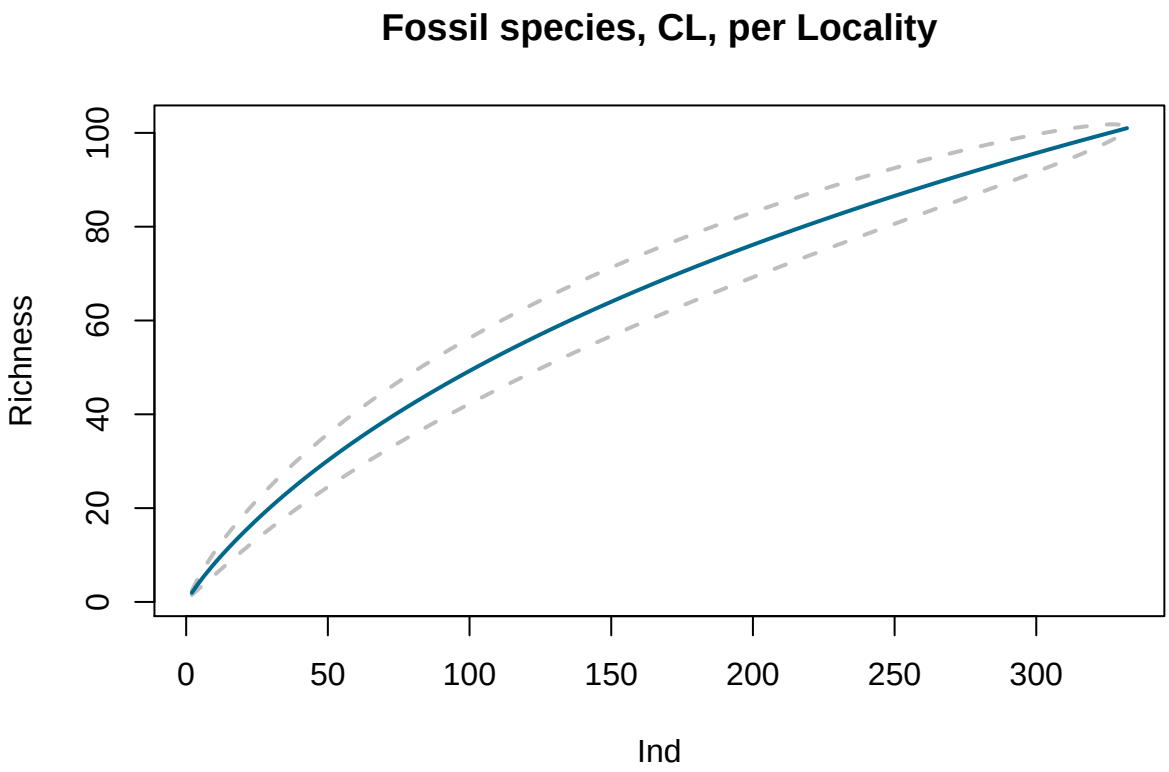
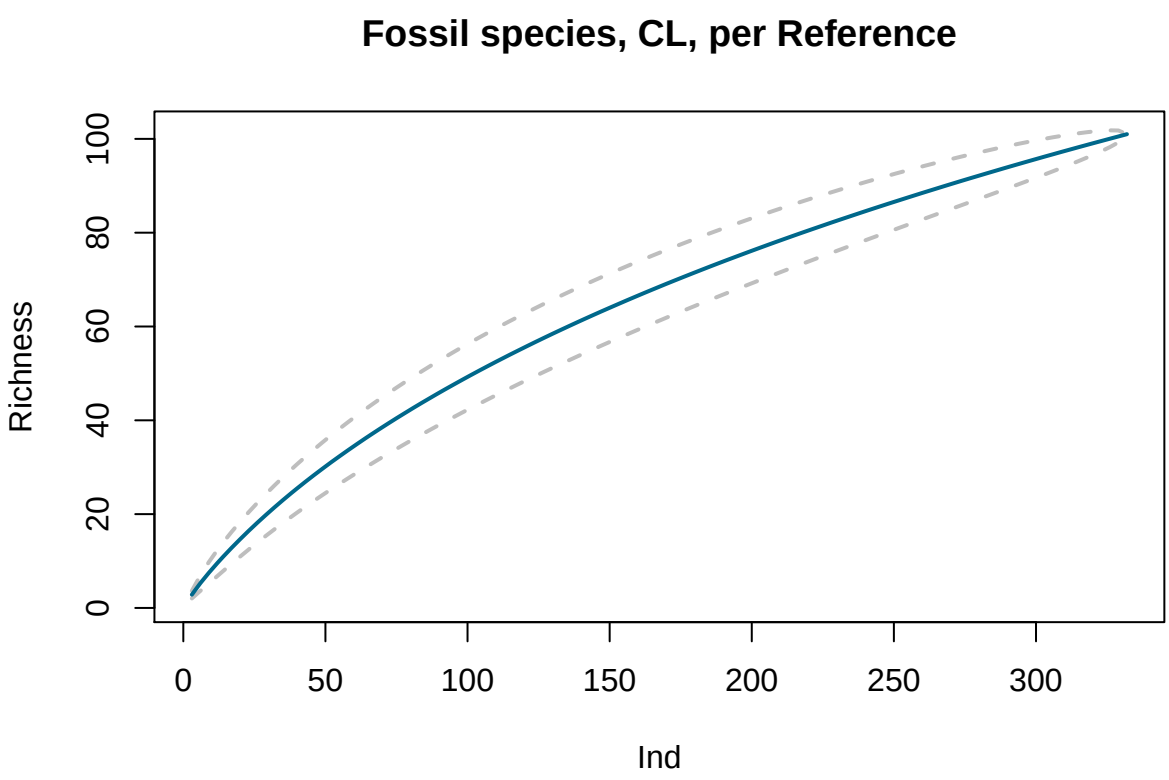


Figure 2: Map displaying all localities for which body size data for testudinids was available in the literature. Size of points denotes sample size, color denotes approximate age.


Modern
count
10
5
0
500
1000
CL


Holocene
Upper Pleistocene
Middle Pleistocene
Lower Pleistocene
Upper Pliocene
Lower Pliocene
Upper Miocene
count
CL


Fossil species, CL, per Locality
Richness
0
20
40
60
80
100
0
50
100
150
200
250
300
Ind


Fossil species, CL, per Reference
Richness
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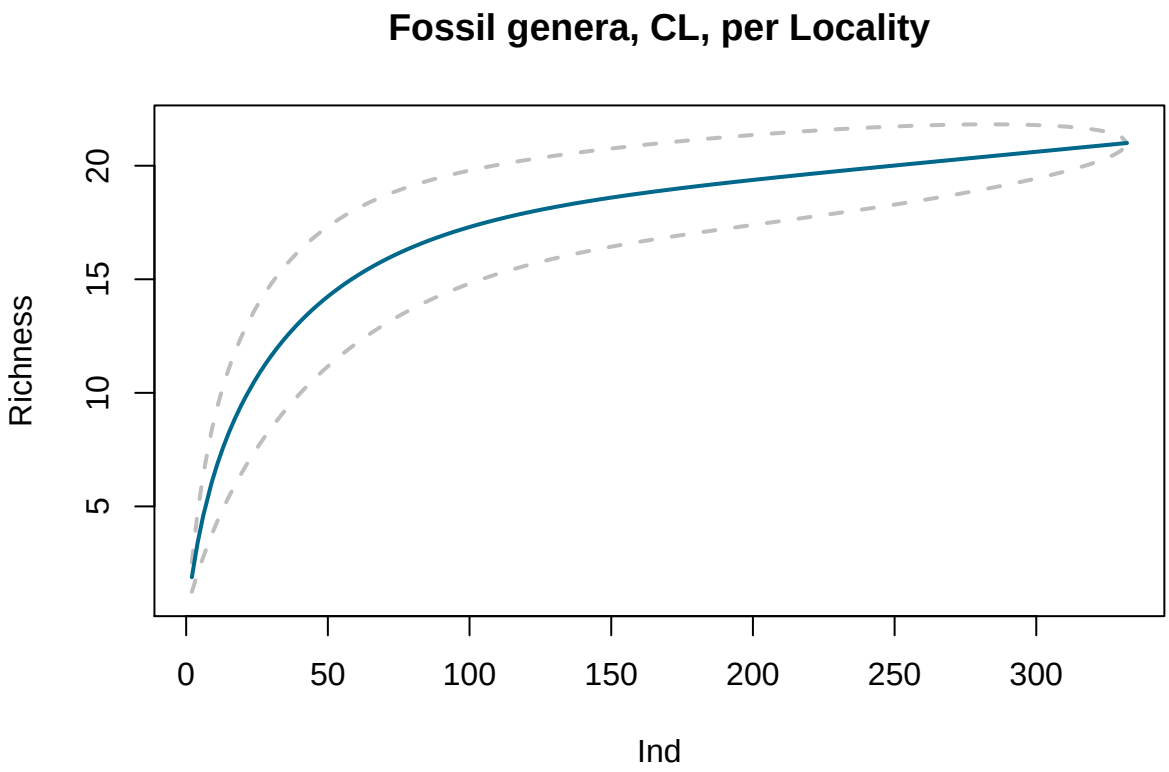
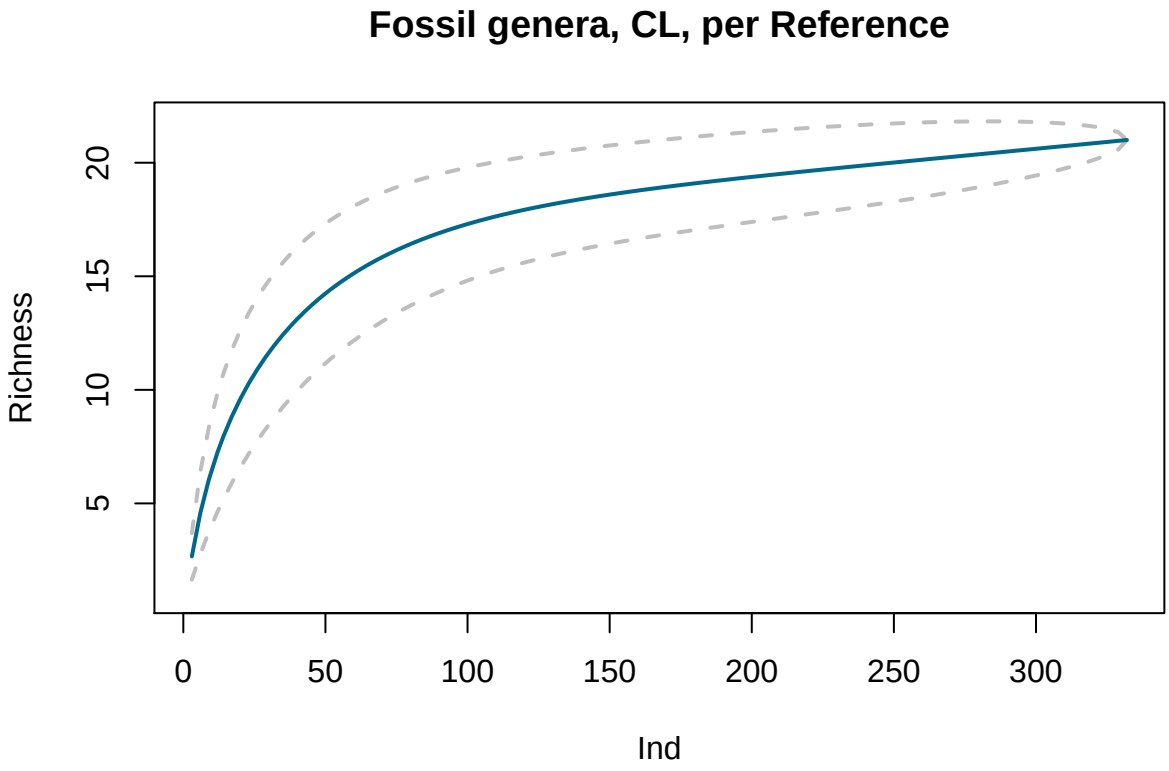
20
40
60
80
100
0
50
100
150
200
250
300
Ind


Fossil genera, CL, per Locality
Richness
5
10
15
20
0
50
100
150
200
250
300
Ind

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## Warning: Removed 16 rows containing missing values (geom_pointrange).
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## Warning: Removed 16 rows containing missing values (geom_pointrange).
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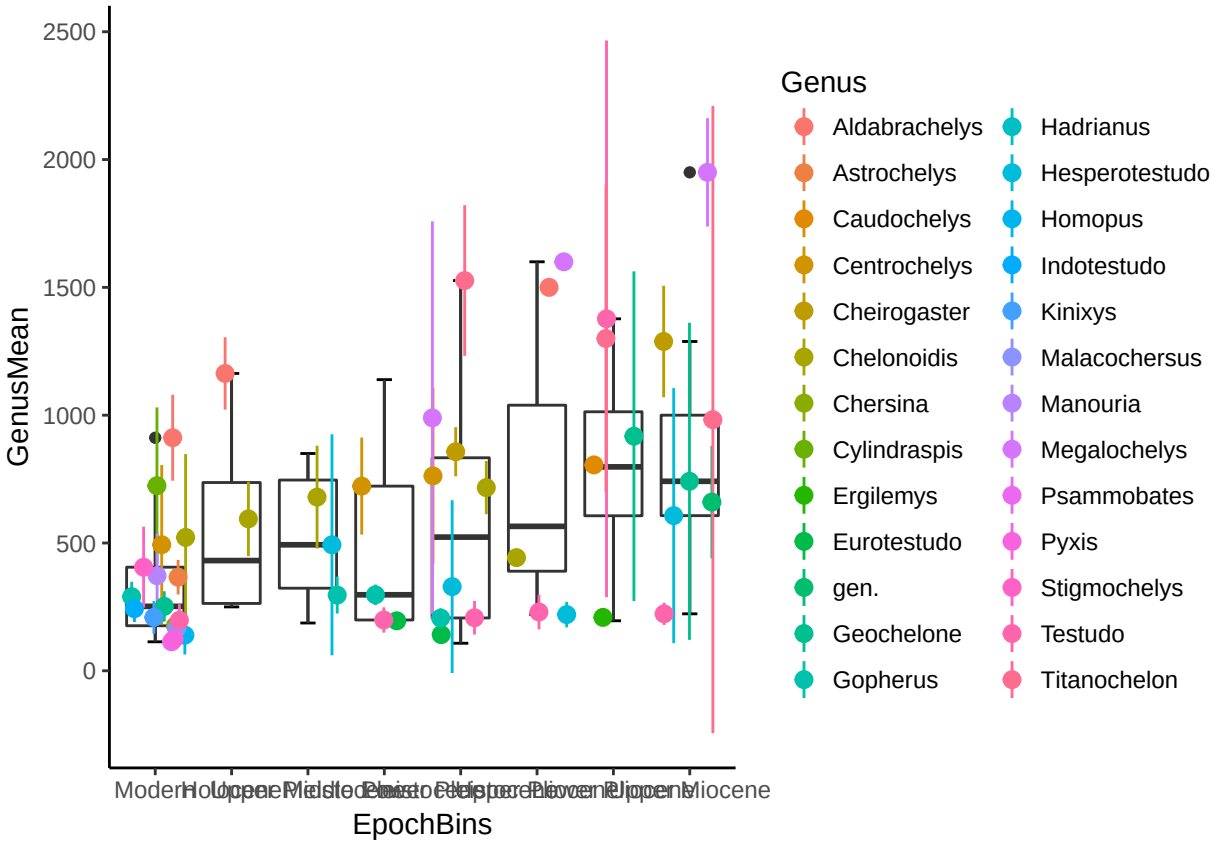

Figure 3: Boxplots of each genus per time bin

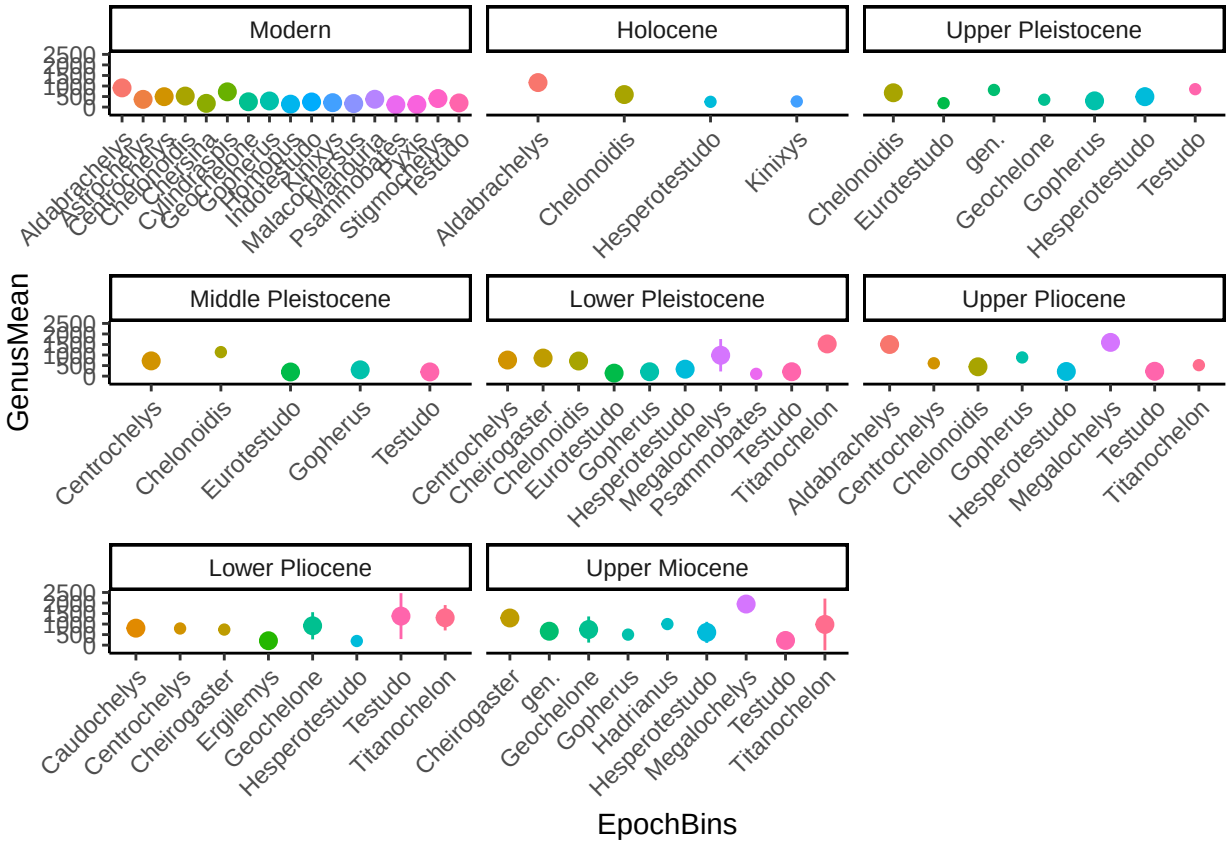

Figure 4: Mean body size and standard deviation per genus in each time bin

1 including Island species (n=2215)

Table 2: paleoTS object (mm= mean CL, nn = sample size, vv = variance (CL), tt = Age)

mm	nn	vv	tt
246.8335	1968	2.126636e+09	0.0000005
688.5455	11	1.245041e+05	0.0058500
447.6480	45	8.098707e+04	0.0688500
333.8707	45	3.704545e+04	0.4535000
415.0939	66	1.833202e+05	1.6845000
642.0167	18	2.812598e+05	3.0940000
1004.9909	22	5.319102e+05	4.4660000
582.7750	40	3.097159e+05	8.4700000

```
##
## Comparing 3 models [n = 7, method = AD]
##
##             logL K     AICc Akaike.wt
## GRW    -50.30596 2 107.6119     0.038
## URW    -50.78070 1 104.3614     0.191
## Stasis -47.28232 2 101.5646     0.772
```

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

	logL	K	AICc	Akaike.wt
GRW	-50.30596	2	107.6119	0.038
URW	-50.78070	1	104.3614	0.191
Stasis	-47.28232	2	101.5646	0.772

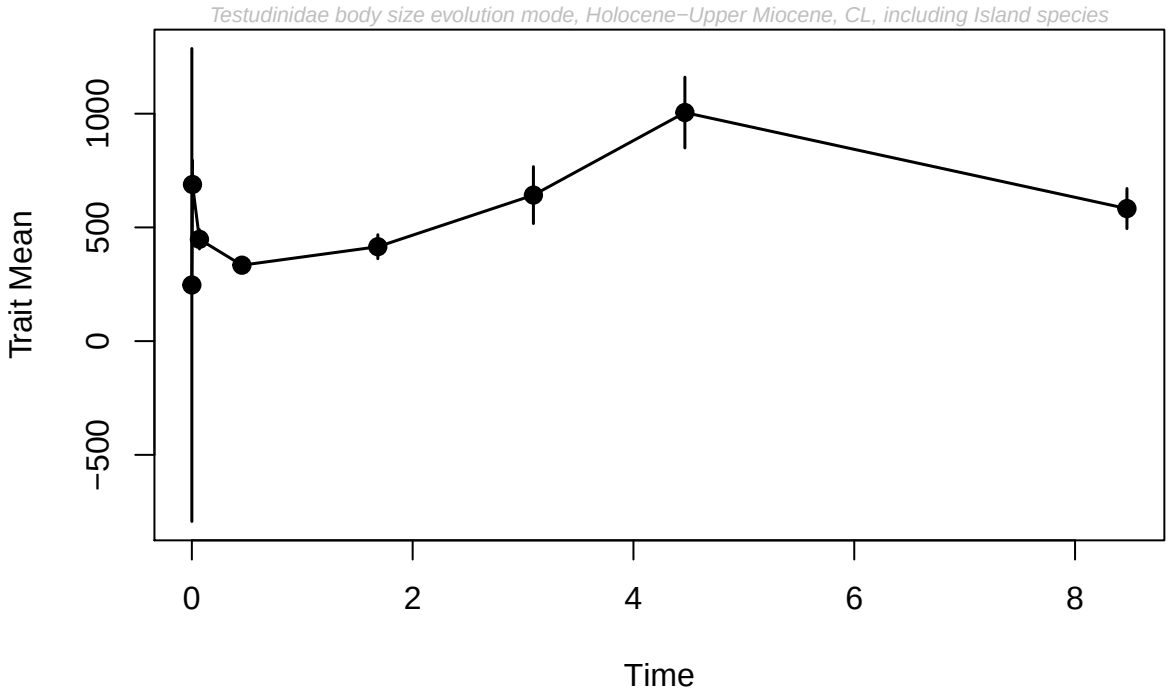

Figure 5: individuals, including island species

EpochBins	meanSpeciesCL	nSpecies	MeanBins
Holocene	671.4667	5	0.00585
Upper Pleistocene	521.4533	17	0.06885
Middle Pleistocene	384.8626	10	0.45350
Lower Pleistocene	581.2039	28	1.68450
Upper Pliocene	610.4591	11	3.09400
Lower Pliocene	1009.4738	14	4.46600
Upper Miocene	680.7708	24	8.47000

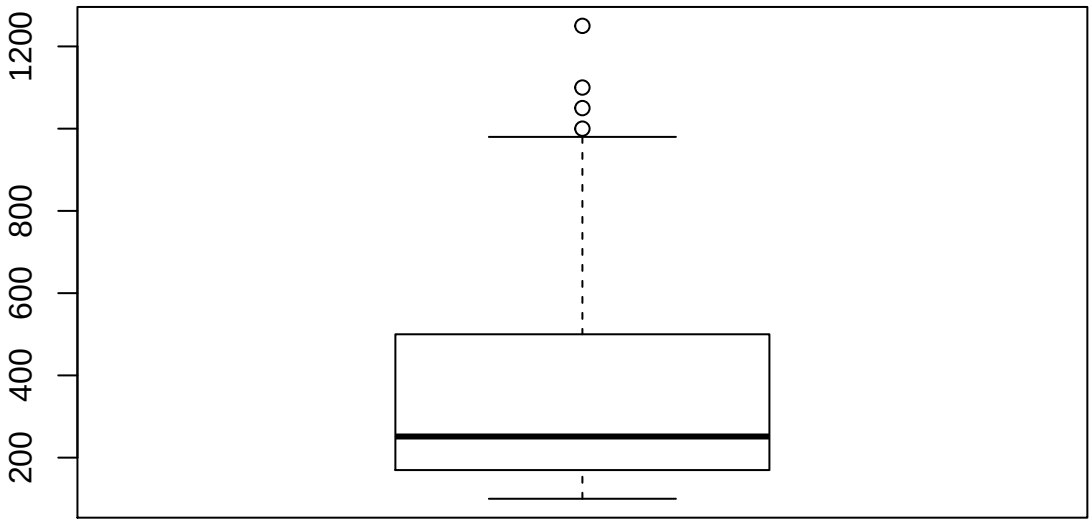

Figure 6: paleoTS plot with species mean, including island species

tt	mm	vv	nn
0.0000005	400.5972	104321.19	50
0.0058500	671.4667	195810.92	5
0.0688500	521.4533	67149.55	17

tt	mm	vv	nn
0.4535000	384.8626	99603.12	10
1.6845000	581.2039	319998.46	28
3.0940000	610.4591	260640.34	11
4.4660000	1009.4738	437400.60	14
8.4700000	680.7708	349806.99	24

```
##
## Comparing 3 models [n = 7, method = AD]
##
##             logL K      AICc Akaike.wt
## GRW    -47.86862 2 102.73724     0.059
## URW    -47.99319 1  98.78638     0.422
## Stasis -45.68754 2  98.37508     0.519
```

	logL	K	AICc	Akaike.wt
GRW	-47.86862	2	102.73724	0.059
URW	-47.99319	1	98.78638	0.422
Stasis	-45.68754	2	98.37508	0.519

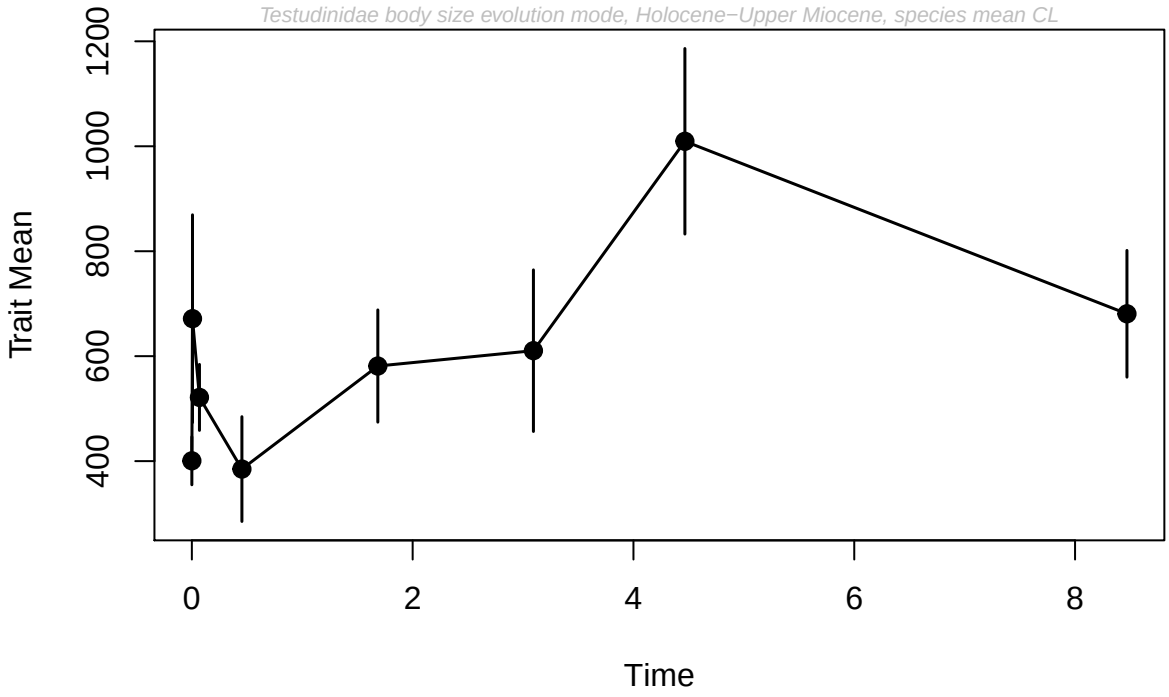

Figure 7: paleoTS plot with species mean, including island species