

# MAthesis

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## Time bins (stratigraphic stages)

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

bin	EpochBins	Stages	MeanBins	nIndividuals	nSpecies	nGenera
(0,0.0117]	Modern	Modern	0.00585	253	65	18
(0.0117,0.126]	Upper Pleistocene	Upper Pleistocene	0.06885	49	18	8
(0.126,0.781]	Middle Pleistocene	Middle Pleistocene	0.45350	53	13	7
(0.781,1.81]	Lower Pleistocene	Lower Pleistocene	1.29350	57	27	12
(1.81,2.59]	Gelasian	Lower Pleistocene	2.19700	31	14	8
(2.59,3.6]	Piacencian	Upper Pliocene	3.09400	21	14	9
(3.6,5.33]	Zanclean	Lower Pliocene	4.46600	26	14	8
(5.33,7.25]	Messinian	Upper Miocene	6.28900	10	7	4
(7.25,11.6]	Tortonian	Upper Miocene	9.42700	45	20	9
(11.6,13.8]	Serravallian	Middle Miocene	12.71400	27	8	6
(13.8,16]	Langhian	Middle Miocene	14.89500	14	10	7
(16,23]	Burdigalian/Aquitania	Lower Miocene	19.50000	30	14	9

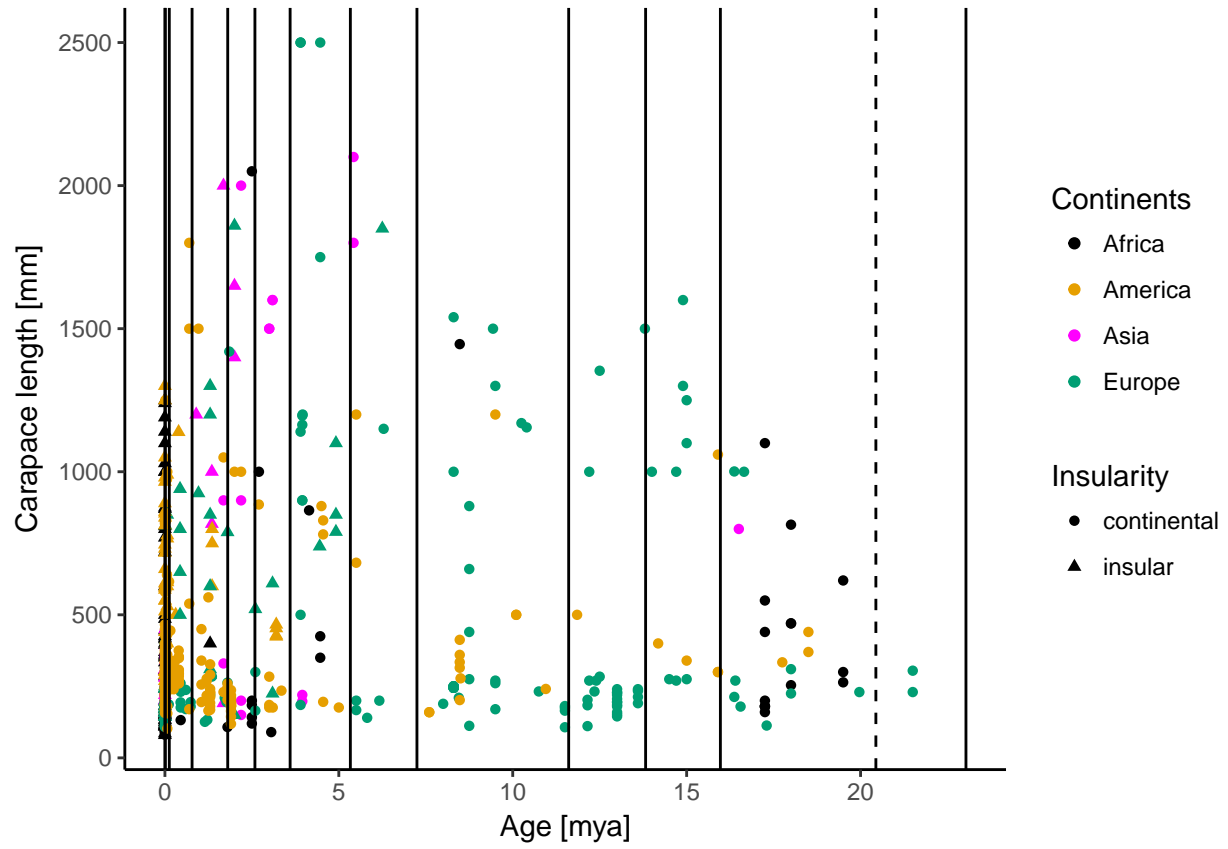


Figure 1: Scatterplot of carapace length over time, indicating insular (triangle) and continental (circles) and colour indicating continents. Lines indicate stratigraphic stages which were used as time bins, the dashed line is the border between the two stages of the Lower Miocene, which were considered as one time bin.

# Maps

## fossil occurrences of testudinidae

## [1] 193

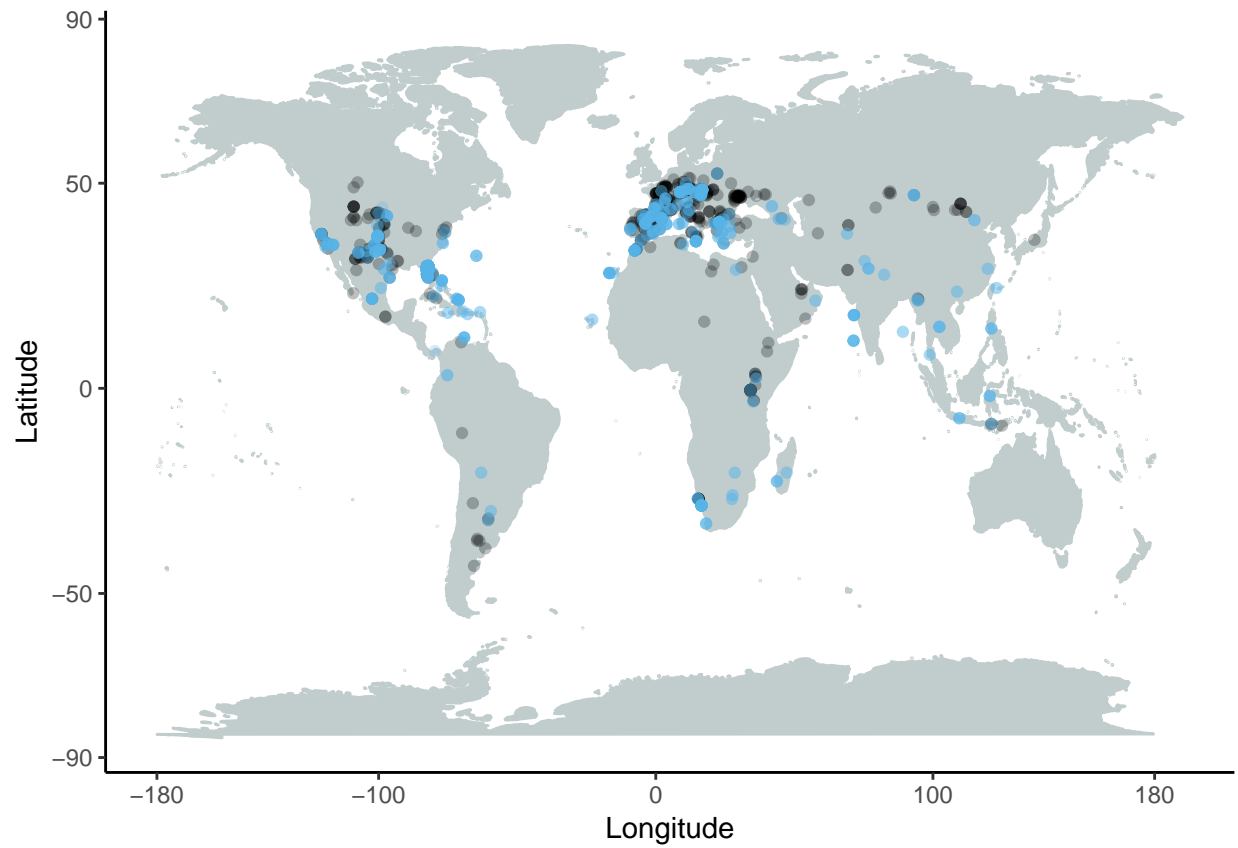


Figure 2: Map displaying all fossil occurrences of testudinids, with color indicating whether relevant literature was available (black if not) and if it was, whether body size data was available or not (yes and no, respectively).

## body size of testudinidae

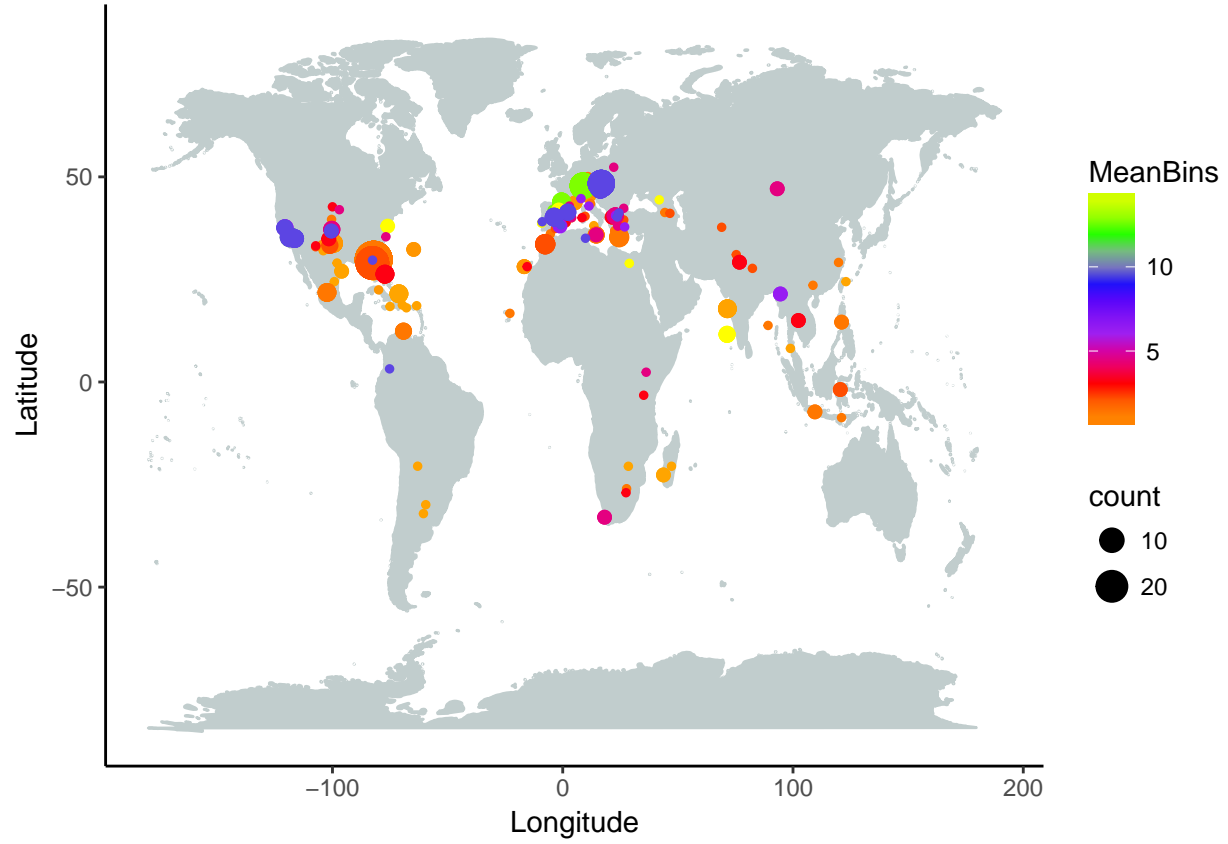


Figure 3: Map displaying all localities for which body size data for testudinids was available in the literature. Size of points denotes sample size, color denotes approximate age.

Table 2: Overview over fossil species per time bin, with sample size and mean CL.

EpochBins	Taxon	n	meanCL
Upper Pleistocene	<i>Centrochelys robusta</i>	1	850.0000
Upper Pleistocene	<i>Chelonoidis denticulata</i>	1	616.0000
Upper Pleistocene	<i>Chelonoidis lutzae</i>	1	830.0000
Upper Pleistocene	<i>Chelonoidis marcanoi</i>	4	672.2500
Upper Pleistocene	<i>Chelonoidis monensis</i>	1	500.0000
Upper Pleistocene	<i>Chelonoidis sombrerensis</i>	1	990.0000
Upper Pleistocene	<i>Chelonoidis</i> sp.	3	666.6667
Upper Pleistocene	<i>Eurotestudo hermanni</i>	1	187.0000

EpochBins	Taxon	n	meanCL
Upper Pleistocene	gen. indet.	1	813.0000
Upper Pleistocene	Geochelone sp.	2	475.0000
Upper Pleistocene	Gopherus agassizi	1	252.0000
Upper Pleistocene	Gopherus polyphemus	20	292.9700
Upper Pleistocene	Gopherus praecedens	1	360.0000
Upper Pleistocene	Hesperotestudo crassiscutata	6	435.1667
Upper Pleistocene	Hesperotestudo incisa	1	232.7600
Upper Pleistocene	Hesperotestudo sp.	2	806.5000
Upper Pleistocene	Hesperotestudo wilsoni	1	226.0000
Upper Pleistocene	Indotestudo elongata	1	270.0000
Middle Pleistocene	Centrochelys burchardi	4	722.5000
Middle Pleistocene	Chelonoidis cubensis	1	1139.0000
Middle Pleistocene	Eurotestudo aff. hermanni	2	187.0000
Middle Pleistocene	Eurotestudo hermanni	2	204.0500
Middle Pleistocene	Geochelone sp.	1	170.0000
Middle Pleistocene	Gopherus agassizi	1	445.0000
Middle Pleistocene	Gopherus laticaudatus	1	375.0000
Middle Pleistocene	Gopherus polyphemus	31	300.4316
Middle Pleistocene	Hesperotestudo bermudae	2	385.0000
Middle Pleistocene	Hesperotestudo equicomes	1	340.0000
Middle Pleistocene	Hesperotestudo sp.	2	1650.0000
Middle Pleistocene	Testudo kenitrensis	1	132.0000
Middle Pleistocene	Testudo lunellensis	4	215.4250
Lower Pleistocene	Centrochelys atlantica	1	400.0000
Lower Pleistocene	Centrochelys robusta	3	883.3333
Lower Pleistocene	Cheirogaster cf. gymnesica	1	789.0000
Lower Pleistocene	Cheirogaster sp.	1	925.0000
Lower Pleistocene	Chelonoidis sp.	3	716.6667
Lower Pleistocene	Eurotestudo globosa	1	263.0000
Lower Pleistocene	Eurotestudo hermanni	2	205.0000
Lower Pleistocene	gen. indet.	1	900.0000

EpochBins	Taxon	n	meanCL
Lower Pleistocene	<i>Geochelone</i> sp.	1	340.0000
Lower Pleistocene	<i>Gopherus berlandieri</i>	2	225.6500
Lower Pleistocene	<i>Gopherus flavomarginatus</i>	1	450.0000
Lower Pleistocene	<i>Gopherus pertenuis</i>	1	1050.0000
Lower Pleistocene	<i>Gopherus polyphemus</i>	3	254.4667
Lower Pleistocene	<i>Gopherus</i> sp.	6	233.9667
Lower Pleistocene	<i>Hesperotestudo crassiscutata</i>	5	285.6000
Lower Pleistocene	<i>Hesperotestudo incisa</i>	7	234.6286
Lower Pleistocene	<i>Hesperotestudo mlynarskii</i>	2	184.2500
Lower Pleistocene	<i>Hesperotestudo</i> sp.	1	1500.0000
Lower Pleistocene	<i>Hesperotestudo turgida</i>	1	230.0000
Lower Pleistocene	<i>Megalochelys sondaari</i>	2	909.0000
Lower Pleistocene	<i>Megalochelys</i> sp.	3	1130.4667
Lower Pleistocene	<i>Psammobates antiquorum</i>	1	107.8000
Lower Pleistocene	<i>Testudo changshanesis</i>	1	330.0000
Lower Pleistocene	<i>Testudo graeca</i>	1	195.0000
Lower Pleistocene	<i>Testudo hermanni</i>	2	176.5500
Lower Pleistocene	<i>Testudo marginata</i>	3	270.0000
Lower Pleistocene	<i>Titanochelon gymnesica</i>	1	1300.0000
Gelasian	<i>Centrochelys marocana</i>	1	2050.0000
Gelasian	<i>Eurotestudo</i> cf. <i>hermanni</i>	1	150.0000
Gelasian	<i>Gopherus</i> sp.	15	185.7467
Gelasian	<i>Hesperotestudo campester</i>	1	1000.0000
Gelasian	<i>Hesperotestudo</i> sp.	1	1000.0000
Gelasian	<i>Manouria punjabiensis</i>	1	900.0000
Gelasian	<i>Megalochelys atlas</i>	3	1683.3333
Gelasian	<i>Testudo</i> aff. <i>kenitrensis</i>	1	142.0000
Gelasian	<i>Testudo oughlamensis</i>	1	120.0000
Gelasian	<i>Testudo ranovi</i>	1	200.0000
Gelasian	<i>Testudo</i> sp.	2	192.0000
Gelasian	<i>Testudo transcaucasia</i>	1	150.0000

EpochBins	Taxon	n	meanCL
Gelasian	Titanochelon aff. schafferi	1	1860.0000
Gelasian	Titanochelon sp.	1	1420.0000
Piacencian	“Aldabrachelys” laetoliensis	1	1000.0000
Piacencian	Aldabrachelys ? sp.	2	1500.0000
Piacencian	Centrochelys vulcanica	1	610.0000
Piacencian	Chelonoidis alburyorum	4	442.7500
Piacencian	Gopherus canyonensis	1	885.5000
Piacencian	Hesperotestudo johnstoni	1	235.0000
Piacencian	Hesperotestudo oelrichi	1	283.8000
Piacencian	Hesperotestudo riggsi	2	180.5000
Piacencian	Hesperotestudo sp.	1	176.0000
Piacencian	Homopus fenestratus	1	90.0000
Piacencian	Megalochelys atlas	2	1600.0000
Piacencian	Testudo brevitesta	2	232.5000
Piacencian	Testudo pecorinii	1	225.0000
Piacencian	Titanochelon sp.	1	520.0000
Zanclean	Caudochelys rexroadensis	2	805.5000
Zanclean	Centrochelys robusta	3	913.3333
Zanclean	Cheirogaster gymnesica	1	739.0000
Zanclean	Ergilemys oskarkuhni	2	209.0000
Zanclean	Geochelone crassa	1	865.0000
Zanclean	Geochelone s. l.	1	1750.0000
Zanclean	Geochelone sp.	2	528.0000
Zanclean	Geochelone stromeri	2	387.5000
Zanclean	Hesperotestudo riggsi	1	195.8000
Zanclean	Testudo cf. graeca	1	185.0000
Zanclean	Testudo sp.	4	1675.0000
Zanclean	Titanochelon bacharidisi	4	1040.0000
Zanclean	Titanochelon perpiniana	1	1140.0000
Zanclean	Titanochelon schafferi	1	2500.0000
Messinian	Hesperotestudo orthopygia	2	941.0000



EpochBins	Taxon	n	meanCL
Messinian	Megalochelys atlas	2	1950.0000
Messinian	Testudo amiatae	1	140.0000
Messinian	Testudo graeca	2	183.5000
Messinian	Testudo sp.	1	200.0000
Messinian	Titanochelon bolivari	1	1150.0000
Messinian	Titanochelon schafferi	1	1850.0000
Tortonian	“Hadrianus sp.”	1	1000.0000
Tortonian	Cheirogaster richardi	1	1155.0000
Tortonian	Cheirogaster sp.	2	1355.0000
Tortonian	gen. indet.	3	660.0000
Tortonian	Geochelone hesterna	1	278.0000
Tortonian	Geochelone sp.	2	973.0000
Tortonian	Gopherus ? sp.	1	500.0000
Tortonian	Gopherus mohavetus	5	324.8000
Tortonian	Hesperotestudo alleni	1	240.9000
Tortonian	Hesperotestudo riggsi	2	159.5000
Tortonian	Hesperotestudo sp.	1	1200.0000
Tortonian	Paleotestudo sp.	3	233.6667
Tortonian	Testudo burgenlandica	2	193.5000
Tortonian	Testudo catalaunica	4	157.0000
Tortonian	Testudo cf. promarginata	5	250.0000
Tortonian	Testudo graeca	1	210.0000
Tortonian	Testudo s. s.	1	189.0000
Tortonian	Testudo sp.	7	243.1571
Tortonian	Titanochelon bolivari	1	1300.0000
Tortonian	Titanochelon cf. bolivari	1	1500.0000
Serravallian	Cheirogaster sp.	2	1250.0000
Serravallian	gen. indet.	1	270.0000
Serravallian	Gopherus ? sp.	1	500.0000
Serravallian	Paleotestudo antiqua	18	203.0556
Serravallian	Paleotestudo cf. sp.	1	270.0000

EpochBins	Taxon	n	meanCL
Serravallian	<i>Testudo catalaunica</i>	1	232.0000
Serravallian	<i>Testudo steinheimensis</i>	2	169.3500
Serravallian	<i>Titanochelon bolivari</i>	1	1353.0000
Langhian	<i>Caudochelys ducateli</i>	1	339.9000
Langhian	<i>Chelonoidis</i> sp.	3	553.3333
Langhian	<i>Ergilemys</i> sp.	1	1000.0000
Langhian	gen. indet.	1	1000.0000
Langhian	<i>Paleotestudo antiqua</i>	1	275.0000
Langhian	<i>Paleotestudo</i> cf. sp.	1	270.0000
Langhian	<i>Testudo kalksburgensis</i>	1	275.0000
Langhian	<i>Testudo</i> sp.	1	400.0000
Langhian	<i>Titanochelon bolivari</i>	2	1175.0000
Langhian	<i>Titanochelon</i> cf. <i>bolivari</i>	2	1450.0000
Burdigalian/Aquitania	<i>Caudochelys williamsi</i>	1	334.0000
Burdigalian/Aquitania	gen. indet.	1	270.0000
Burdigalian/Aquitania	<i>Geochelone</i> sp.	2	900.0000
Burdigalian/Aquitania	<i>Geochelone tedwhitei</i>	2	405.0000
Burdigalian/Aquitania	<i>Impregnochelys pachytectis</i>	1	620.0000
Burdigalian/Aquitania	<i>Mesocherus orangeus</i>	5	180.0000
Burdigalian/Aquitania	<i>Namibchersus</i> aff. <i>namaquensis</i>	3	696.6667
Burdigalian/Aquitania	<i>Namibchersus namaquensis</i>	6	428.8333
Burdigalian/Aquitania	<i>Paleotestudo</i> cf. <i>antiqua</i>	1	113.0000
Burdigalian/Aquitania	<i>Paleotestudo</i> sp.	1	179.3000
Burdigalian/Aquitania	<i>Testudo kalksburgensis</i>	2	227.5000
Burdigalian/Aquitania	<i>Testudo promarginata</i>	3	281.5667
Burdigalian/Aquitania	<i>Testudo rectogularis</i>	1	213.0000
Burdigalian/Aquitania	<i>Titanochelon</i> cf. <i>perpiniana</i>	1	1001.0000

Table 3: General overview over fossil species, with sample size and mean CL

Taxon	n	meanCL
“Aldabrachelys” laetoliensis	1	1000.0000
“Hadrianus sp.”	1	1000.0000
Aldabrachelys ? sp.	2	1500.0000
Caudochelys ducateli	1	339.9000
Caudochelys rexroadensis	2	805.5000
Caudochelys williamsi	1	334.0000
Centrochelys atlantica	1	400.0000
Centrochelys burchardi	4	722.5000
Centrochelys marocana	1	2050.0000
Centrochelys robusta	7	891.4286
Centrochelys vulcanica	1	610.0000
Cheirogaster cf. gymnesica	1	789.0000
Cheirogaster gymnesica	1	739.0000
Cheirogaster richardi	1	1155.0000
Cheirogaster sp.	5	1227.0000
Chelonoidis alburyorum	4	442.7500
Chelonoidis cubensis	1	1139.0000
Chelonoidis denticulata	1	616.0000
Chelonoidis lutzae	1	830.0000
Chelonoidis marcanoi	4	672.2500
Chelonoidis monensis	1	500.0000
Chelonoidis sombrerensis	1	990.0000
Chelonoidis sp.	9	645.5556
Ergilemys oskarkuhni	2	209.0000
Ergilemys sp.	1	1000.0000
Eurotestudo aff. hermanni	2	187.0000
Eurotestudo cf. hermanni	1	150.0000
Eurotestudo globosa	1	263.0000

Taxon	n	meanCL
<i>Eurotestudo hermanni</i>	5	201.0200
gen. indet.	8	654.1250
<i>Geochelone crassa</i>	1	865.0000
<i>Geochelone hesternae</i>	1	278.0000
<i>Geochelone</i> s. l.	1	1750.0000
<i>Geochelone</i> sp.	10	626.2000
<i>Geochelone stromeri</i>	2	387.5000
<i>Geochelone tedwhitei</i>	2	405.0000
<i>Gopherus</i> ? sp.	2	500.0000
<i>Gopherus agassizi</i>	2	348.5000
<i>Gopherus berlandieri</i>	2	225.6500
<i>Gopherus canyonensis</i>	1	885.5000
<i>Gopherus flavomarginatus</i>	1	450.0000
<i>Gopherus laticaudatus</i>	1	375.0000
<i>Gopherus mohavetus</i>	5	324.8000
<i>Gopherus pertenuis</i>	1	1050.0000
<i>Gopherus polyphemus</i>	54	295.1144
<i>Gopherus praecedens</i>	1	360.0000
<i>Gopherus</i> sp.	21	199.5238
<i>Hesperotestudo alleni</i>	1	240.9000
<i>Hesperotestudo bermudae</i>	2	385.0000
<i>Hesperotestudo campester</i>	1	1000.0000
<i>Hesperotestudo crassiscutata</i>	11	367.1818
<i>Hesperotestudo equicomes</i>	1	340.0000
<i>Hesperotestudo incisa</i>	8	234.3950
<i>Hesperotestudo johnstoni</i>	1	235.0000
<i>Hesperotestudo mlynarskii</i>	2	184.2500
<i>Hesperotestudo oelrichi</i>	1	283.8000
<i>Hesperotestudo orthopygia</i>	2	941.0000
<i>Hesperotestudo riggsi</i>	5	175.1600
<i>Hesperotestudo</i> sp.	8	1098.6250

Taxon	n	meanCL
Hesperotestudo turgida	1	230.0000
Hesperotestudo wilsoni	1	226.0000
Homopus fenestratus	1	90.0000
Impregnochelys pachytectis	1	620.0000
Indotestudo elongata	1	270.0000
Manouria punjabiensis	1	900.0000
Megalochelys atlas	7	1735.7143
Megalochelys sondaari	2	909.0000
Megalochelys sp.	3	1130.4667
Mesocherus orangeus	5	180.0000
Namibchersus aff. namaquensis	3	696.6667
Namibchersus namaquensis	6	428.8333
Paleotestudo antiqua	19	206.8421
Paleotestudo cf. antiqua	1	113.0000
Paleotestudo cf. sp.	2	270.0000
Paleotestudo sp.	4	220.0750
Psammobates antiquorum	1	107.8000
Testudo aff. kenitrensis	1	142.0000
Testudo amiatae	1	140.0000
Testudo brevitesta	2	232.5000
Testudo burgenlandica	2	193.5000
Testudo catalaunica	5	172.0000
Testudo cf. graeca	1	185.0000
Testudo cf. promarginata	5	250.0000
Testudo changshanesis	1	330.0000
Testudo graeca	4	193.0000
Testudo hermanni	2	176.5500
Testudo kalksburgensis	3	243.3333
Testudo kenitrensis	1	132.0000
Testudo lunellensis	4	215.4250
Testudo marginata	3	270.0000

Taxon	n	meanCL
Testudo oughlamensis	1	120.0000
Testudo pecorinii	1	225.0000
Testudo promarginata	3	281.5667
Testudo ranovi	1	200.0000
Testudo rectogularis	1	213.0000
Testudo s. s.	1	189.0000
Testudo sp.	15	625.7400
Testudo steinheimensis	2	169.3500
Testudo transcaucasia	1	150.0000
Titanochelon aff. schafferi	1	1860.0000
Titanochelon bacharidisi	4	1040.0000
Titanochelon bolivari	5	1230.6000
Titanochelon cf. bolivari	3	1466.6667
Titanochelon cf. perpiniana	1	1001.0000
Titanochelon gymnesica	1	1300.0000
Titanochelon perpiniana	1	1140.0000
Titanochelon schafferi	2	2175.0000
Titanochelon sp.	2	970.0000

Table 4: Overview over genera (modern and fossil) per time bin, with sample sizes and mean CL.

EpochBins	Genus	n	meanCL
Modern	Aldabrachelys	12	974.5833
Modern	Astrochelys	14	366.2143
Modern	Centrochelys	3	493.3333
Modern	Chelonoidis	45	531.5178
Modern	Chersina	15	176.2667
Modern	Cylindraspis	5	724.0000
Modern	Geochelone	8	252.1250
Modern	Gopherus	23	302.4839

EpochBins	Genus	n	meanCL
Modern	Hesperotestudo	1	250.0000
Modern	Homopus	7	139.2857
Modern	Indotestudo	16	242.9875
Modern	Kinixys	15	213.0667
Modern	Malacochersus	2	166.5000
Modern	Manouria	9	380.7778
Modern	Psammobates	17	113.4118
Modern	Pyxis	16	124.1875
Modern	Stigmochelys	6	405.3333
Modern	Testudo	39	197.5436
Upper Pleistocene	Centrochelys	1	850.0000
Upper Pleistocene	Chelonoidis	11	693.1818
Upper Pleistocene	Eurotestudo	1	187.0000
Upper Pleistocene	gen.	1	813.0000
Upper Pleistocene	Geochelone	2	475.0000
Upper Pleistocene	Gopherus	22	294.1545
Upper Pleistocene	Hesperotestudo	10	468.2760
Upper Pleistocene	Indotestudo	1	270.0000
Middle Pleistocene	Centrochelys	4	722.5000
Middle Pleistocene	Chelonoidis	1	1139.0000
Middle Pleistocene	Eurotestudo	4	195.5250
Middle Pleistocene	Geochelone	1	170.0000
Middle Pleistocene	Gopherus	33	307.0721
Middle Pleistocene	Hesperotestudo	5	882.0000
Middle Pleistocene	Testudo	5	198.7400
Lower Pleistocene	Centrochelys	4	762.5000
Lower Pleistocene	Cheirogaster	2	857.0000
Lower Pleistocene	Chelonoidis	3	716.6667
Lower Pleistocene	Eurotestudo	4	201.5250
Lower Pleistocene	gen.	1	900.0000
Lower Pleistocene	Geochelone	1	340.0000

EpochBins	Genus	n	meanCL
Lower Pleistocene	Gopherus	13	316.8077
Lower Pleistocene	Hesperotestudo	16	323.0562
Lower Pleistocene	Megalochelys	5	1041.8800
Lower Pleistocene	Psammobates	1	107.8000
Lower Pleistocene	Testudo	6	259.1667
Lower Pleistocene	Titanochelon	1	1300.0000
Gelasian	Centrochelys	1	2050.0000
Gelasian	Eurotestudo	1	150.0000
Gelasian	Gopherus	15	185.7467
Gelasian	Hesperotestudo	2	1000.0000
Gelasian	Manouria	1	900.0000
Gelasian	Megalochelys	3	1683.3333
Gelasian	Testudo	6	166.0000
Gelasian	Titanochelon	2	1640.0000
Piacencian	Aldabrachelys	3	1333.3333
Piacencian	Centrochelys	1	610.0000
Piacencian	Chelonoidis	4	442.7500
Piacencian	Gopherus	1	885.5000
Piacencian	Hesperotestudo	5	211.1600
Piacencian	Homopus	1	90.0000
Piacencian	Megalochelys	2	1600.0000
Piacencian	Testudo	3	230.0000
Piacencian	Titanochelon	1	520.0000
Zanclean	Caudochelys	2	805.5000
Zanclean	Centrochelys	3	913.3333
Zanclean	Cheirogaster	1	739.0000
Zanclean	Ergilemys	2	209.0000
Zanclean	Geochelone	6	741.0000
Zanclean	Hesperotestudo	1	195.8000
Zanclean	Testudo	5	1377.0000
Zanclean	Titanochelon	6	1300.0000



EpochBins	Genus	n	meanCL
Messinian	Hesperotestudo	2	941.0000
Messinian	Megalochelys	2	1950.0000
Messinian	Testudo	4	176.7500
Messinian	Titanochelon	2	1500.0000
Tortonian	“Hadrianus”	1	1000.0000
Tortonian	Cheirogaster	3	1288.3333
Tortonian	gen.	3	660.0000
Tortonian	Geochelone	3	741.3333
Tortonian	Gopherus	6	354.0000
Tortonian	Hesperotestudo	4	439.9750
Tortonian	Paleotestudo	3	233.6667
Tortonian	Testudo	20	218.3050
Tortonian	Titanochelon	2	1400.0000
Serravallian	Cheirogaster	2	1250.0000
Serravallian	gen.	1	270.0000
Serravallian	Gopherus	1	500.0000
Serravallian	Paleotestudo	19	206.5789
Serravallian	Testudo	3	190.2333
Serravallian	Titanochelon	1	1353.0000
Langhian	Caudochelys	1	339.9000
Langhian	Chelonoidis	3	553.3333
Langhian	Ergilemys	1	1000.0000
Langhian	gen.	1	1000.0000
Langhian	Paleotestudo	2	272.5000
Langhian	Testudo	2	337.5000
Langhian	Titanochelon	4	1312.5000
Burdigalian/Aquitania	Caudochelys	1	334.0000
Burdigalian/Aquitania	gen.	1	270.0000
Burdigalian/Aquitania	Geochelone	4	652.5000
Burdigalian/Aquitania	Impregnochelys	1	620.0000
Burdigalian/Aquitania	Mesocherus	5	180.0000

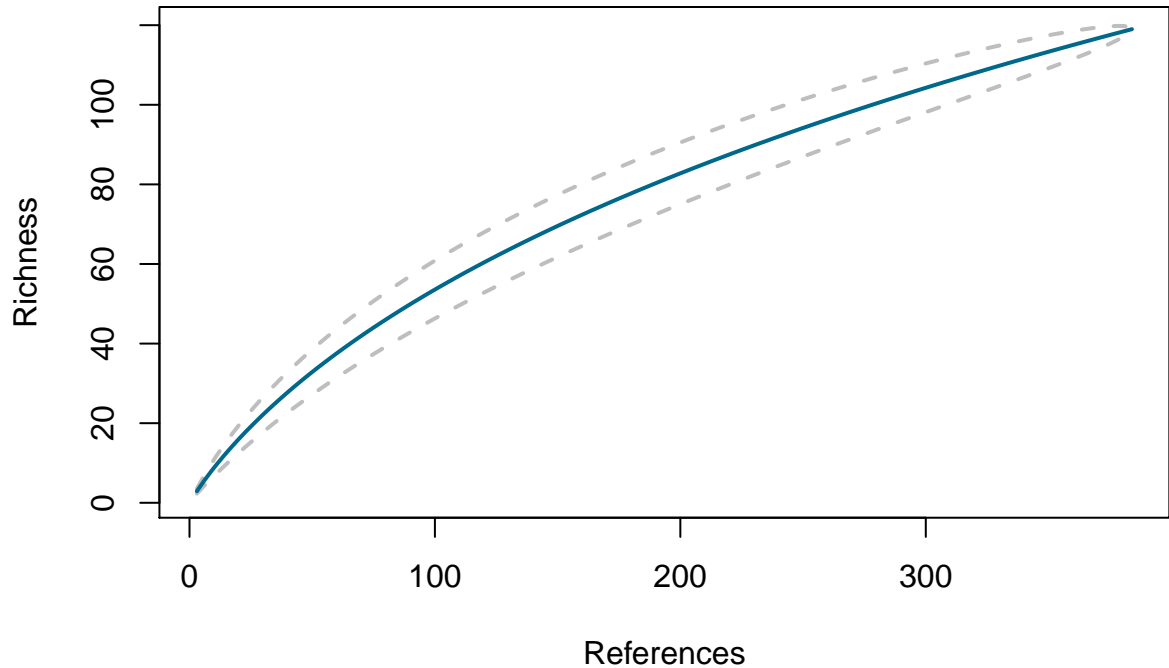
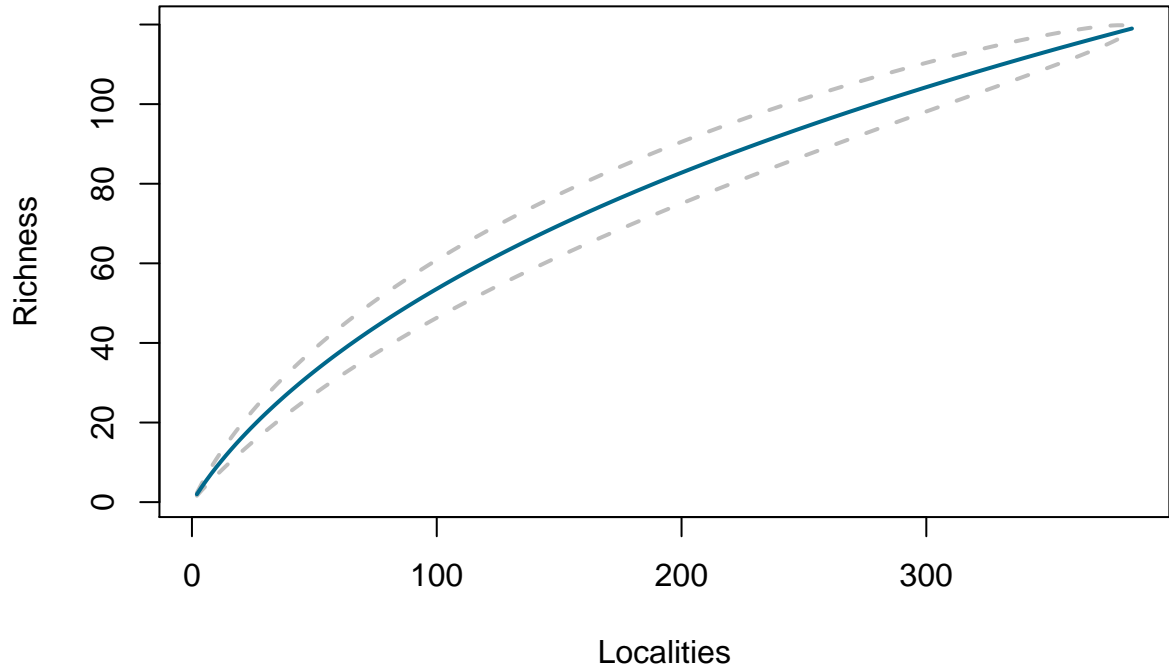
EpochBins	Genus	n	meanCL
Burdigalian/Aquitania	Namibchersus	9	518.1111
Burdigalian/Aquitania	Paleotestudo	2	146.1500
Burdigalian/Aquitania	Testudo	6	252.1167
Burdigalian/Aquitania	Titanochelon	1	1001.0000

Table 5: General overview over genera, with sample sizes and mean CL.

Genus	n	meanCL
“Hadrianus”	1	1000.0000
Aldabrachelys	15	1046.3333
Astrochelys	14	366.2143
Caudochelys	4	571.2250
Centrochelys	17	804.1176
Cheirogaster	8	1102.2500
Chelonoidis	67	571.0940
Chersina	15	176.2667
Cylindraspis	5	724.0000
Ergilemys	3	472.6667
Eurotestudo	10	192.5200
gen.	8	654.1250
Geochelone	25	510.2800
Gopherus	114	298.0361
Hesperotestudo	46	465.3296
Homopus	8	133.1250
Impregnochelys	1	620.0000
Indotestudo	17	244.5765
Kinixys	15	213.0667
Malacochersus	2	166.5000
Manouria	10	432.7000
Megalochelys	12	1446.6167

Genus	n	meanCL
Mesocherus	5	180.0000
Namibchersus	9	518.1111
Paleotestudo	26	210.1269
Psammobates	18	113.1000
Pyxis	16	124.1875
Stigmochelys	6	405.3333
Testudo	99	269.2465
Titanochelon	20	1315.2000

Sampling Accumulation Curves



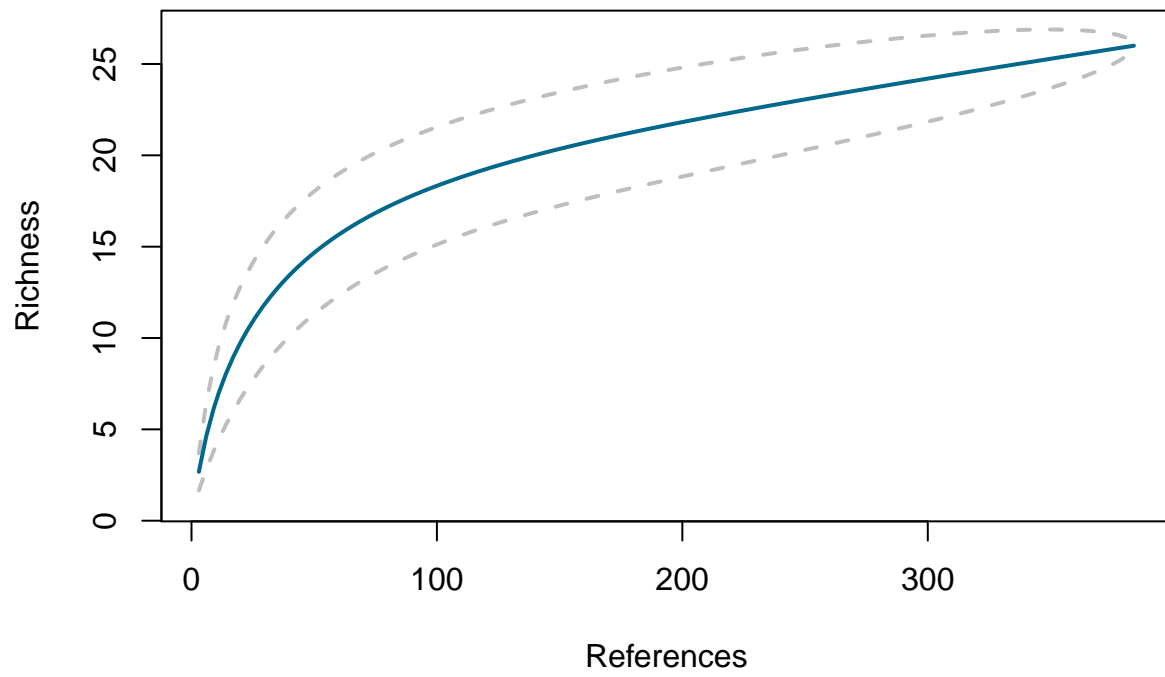


Figure 4: Sampling Accumulation Curve of fossil genera per reference

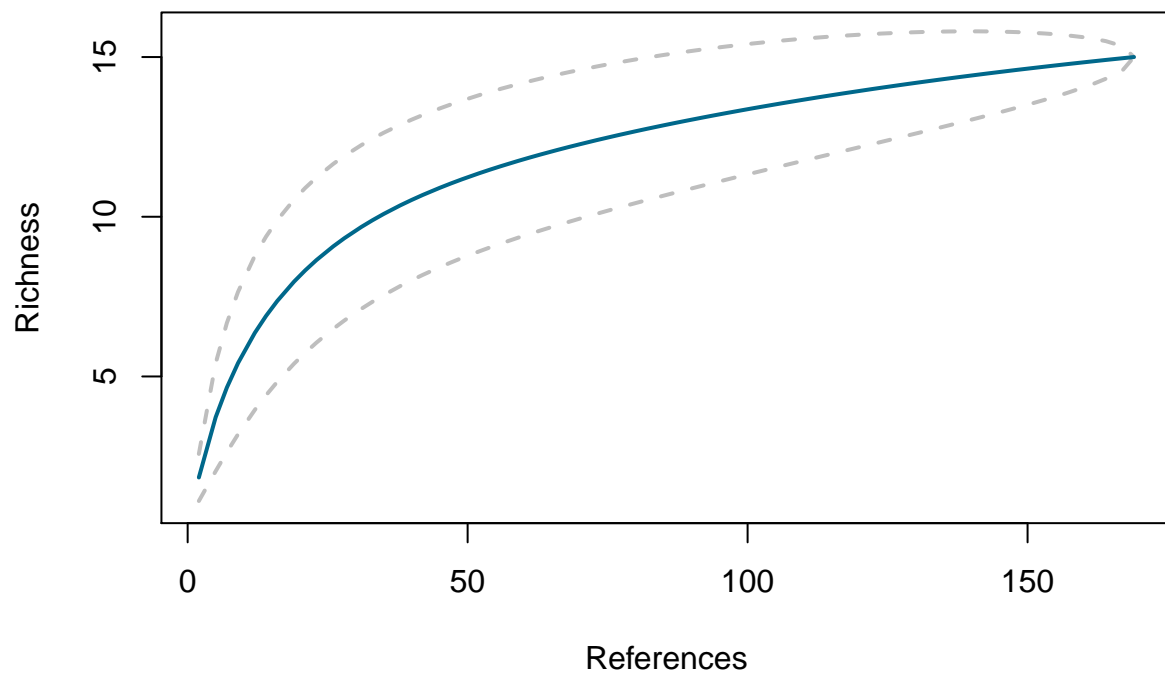


Figure 5: Sampling Accumulation Curve of fossil genera per reference, Eurasia

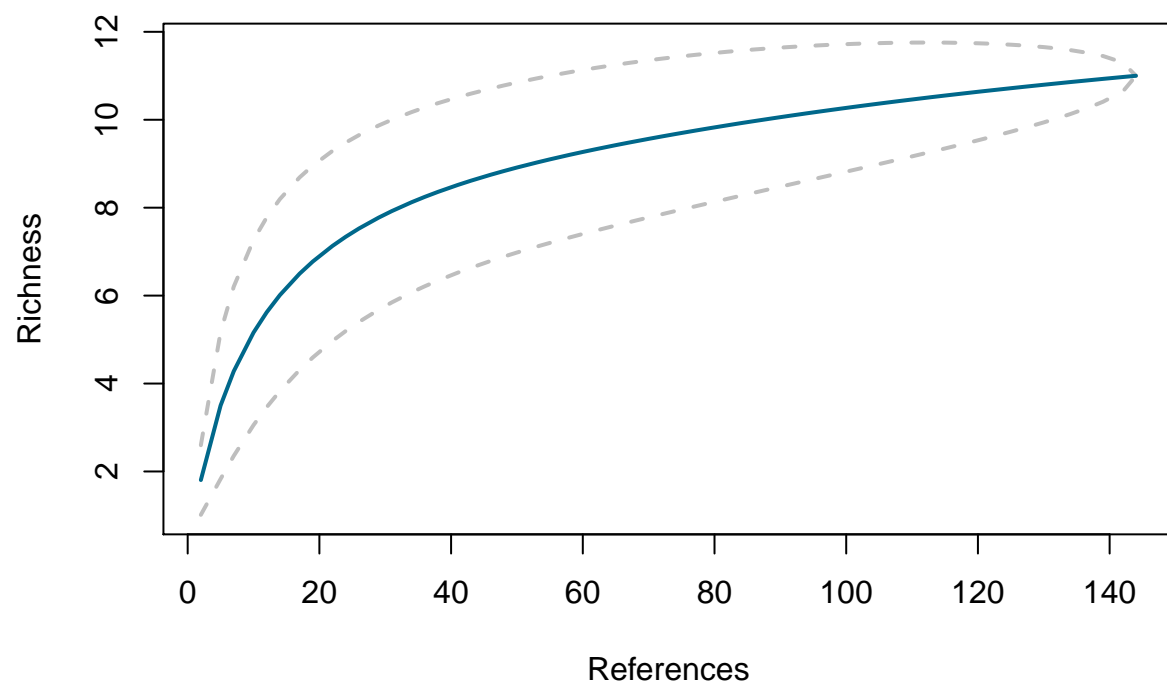


Figure 6: Sampling Accumulation Curve of fossil genera per reference, Europe

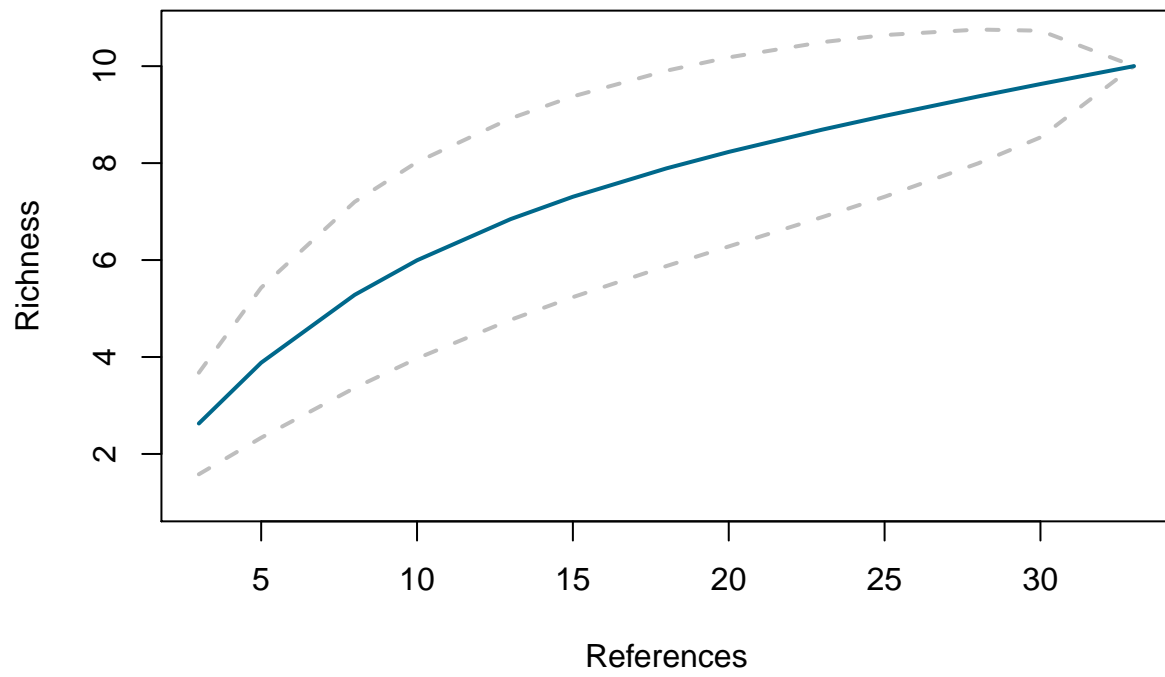


Figure 7: Sampling Accumulation Curve of fossil genera per reference, Africa



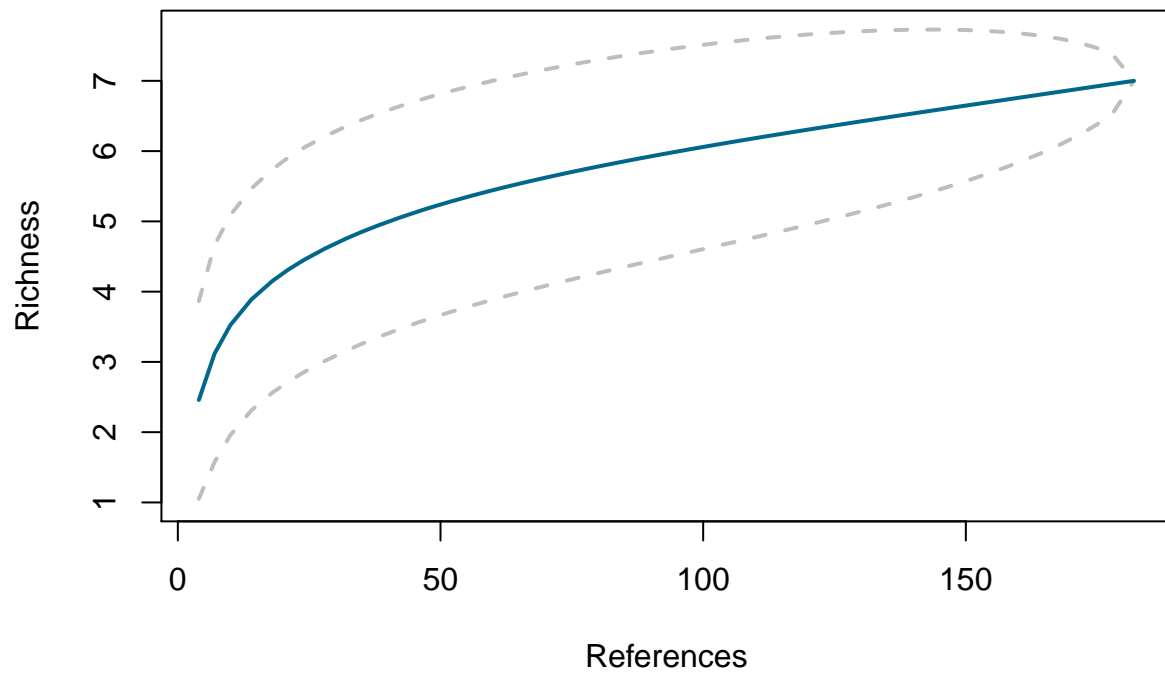


Figure 8: Sampling Accumulation Curve of fossil genera per reference, America

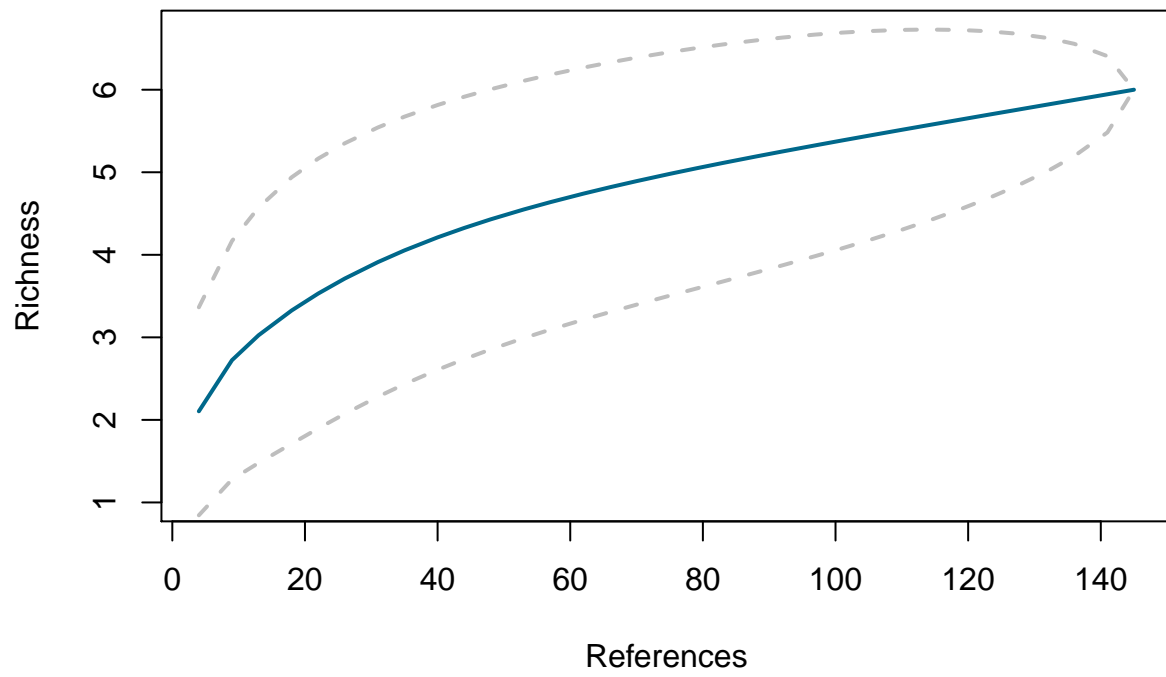


Figure 9: Sampling Accumulation Curve of fossil genera per reference, N-America

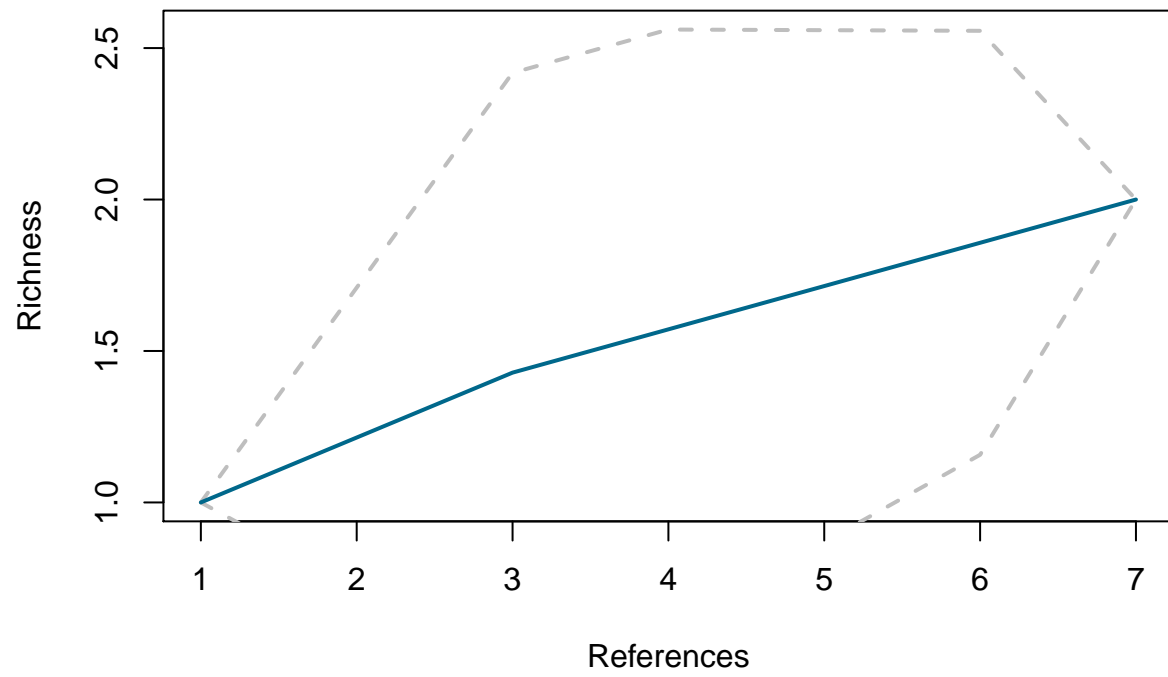


Figure 10: Sampling Accumulation Curve of fossil genera per reference, S-America

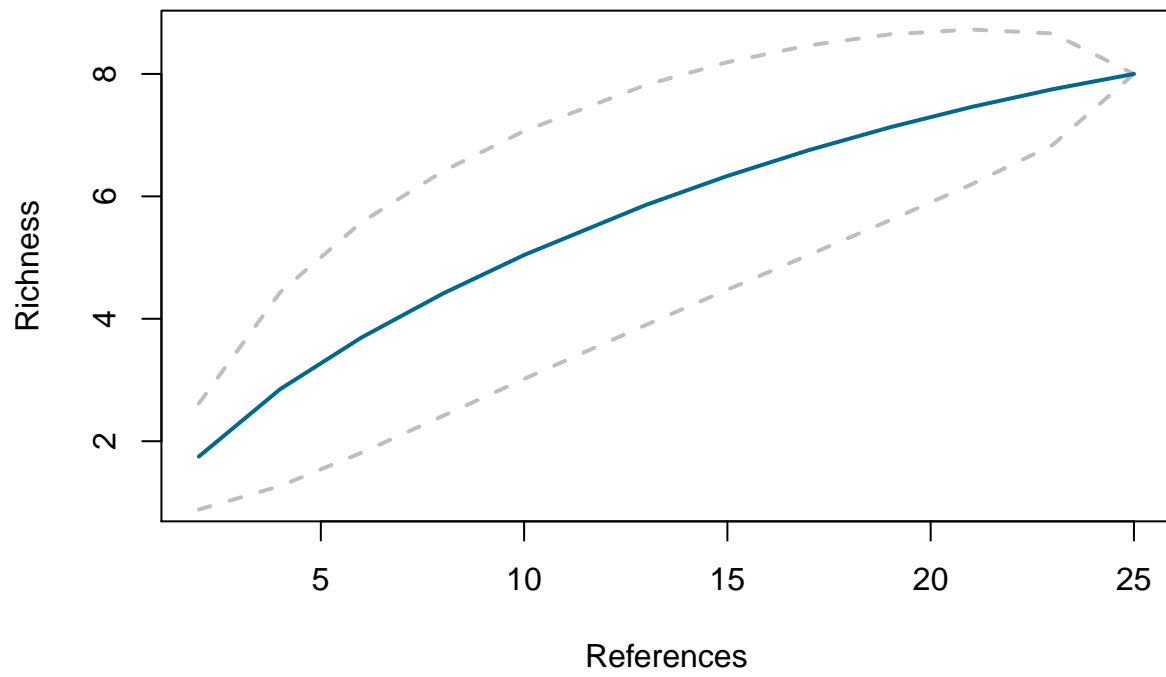
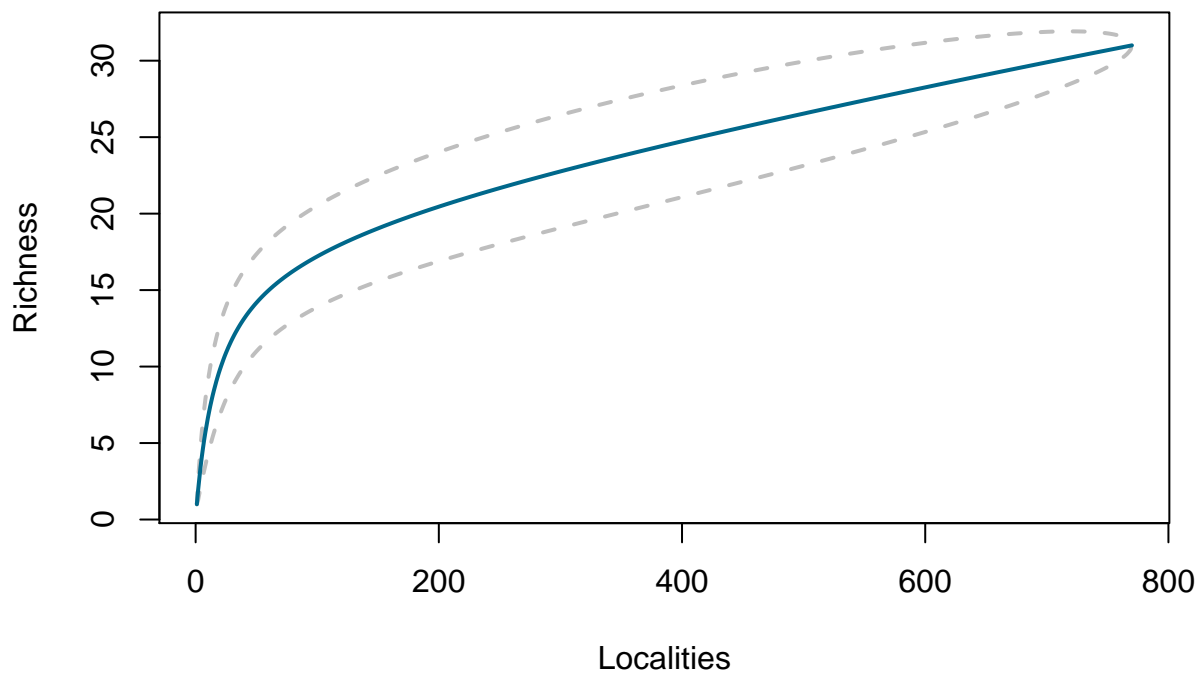


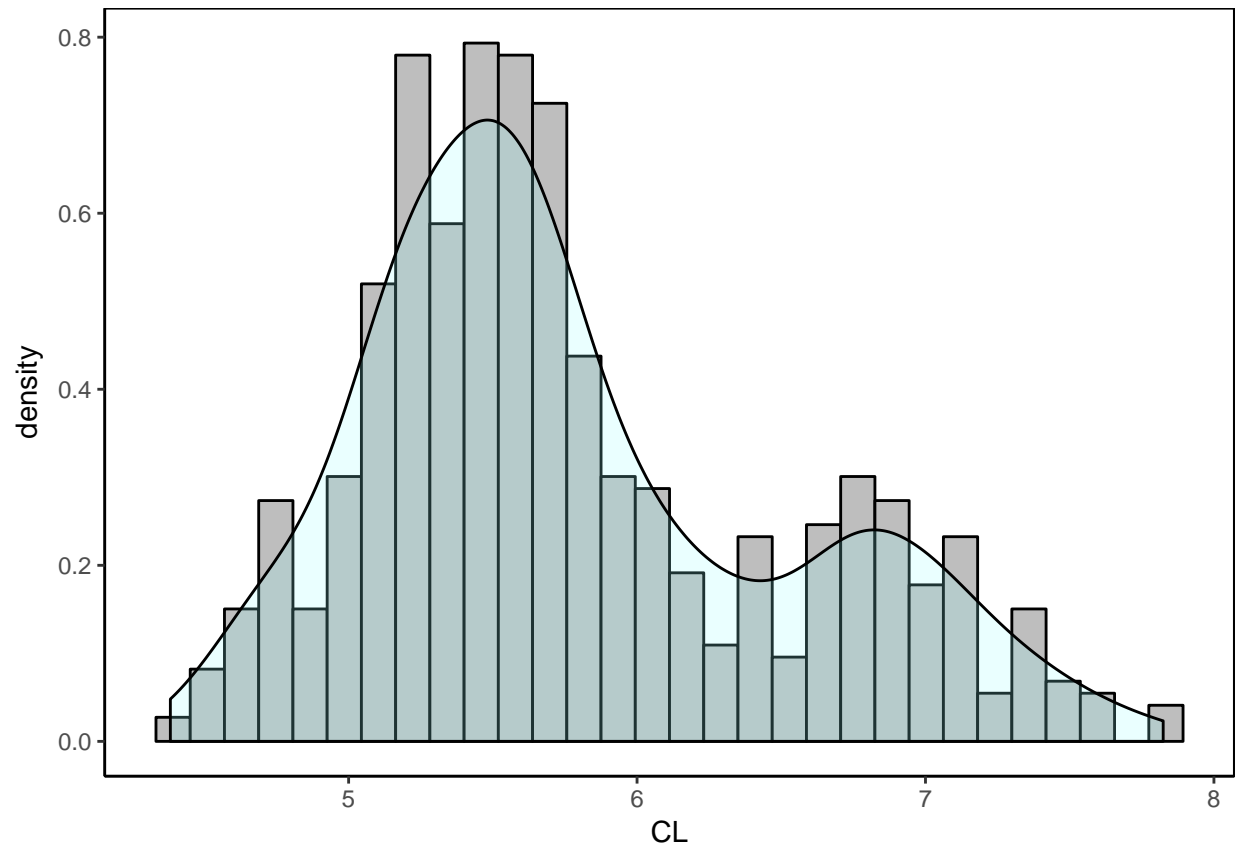
Figure 11: Sampling Accumulation Curve of fossil genera per reference, Asia



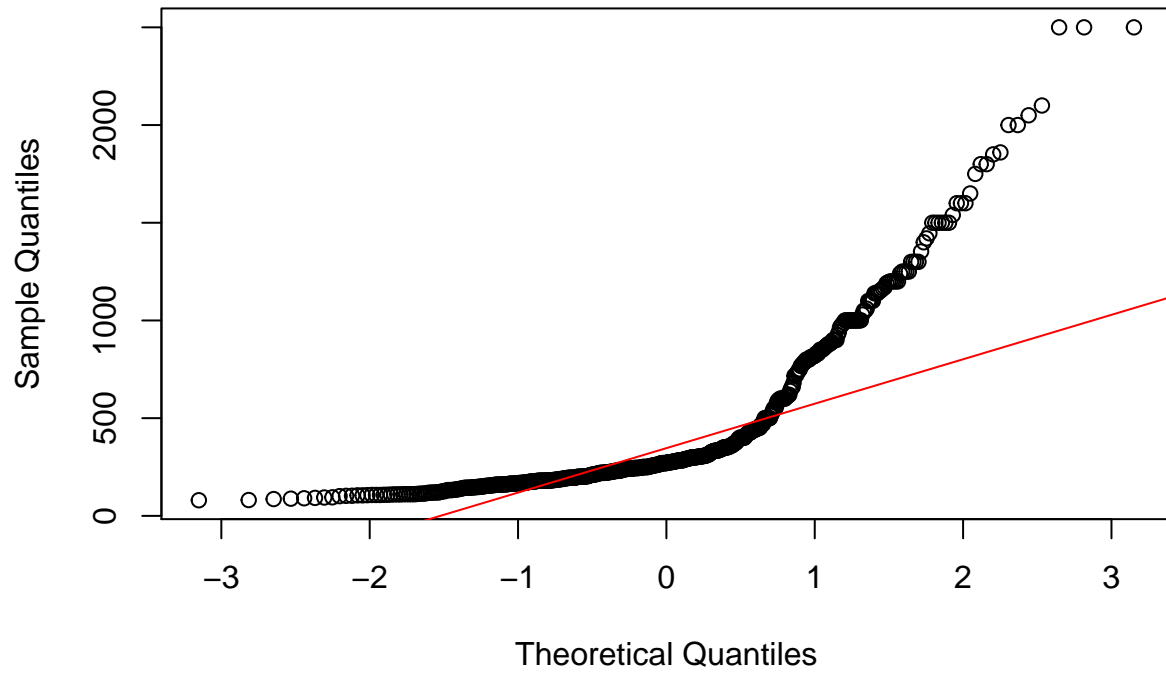
# Histograms

all

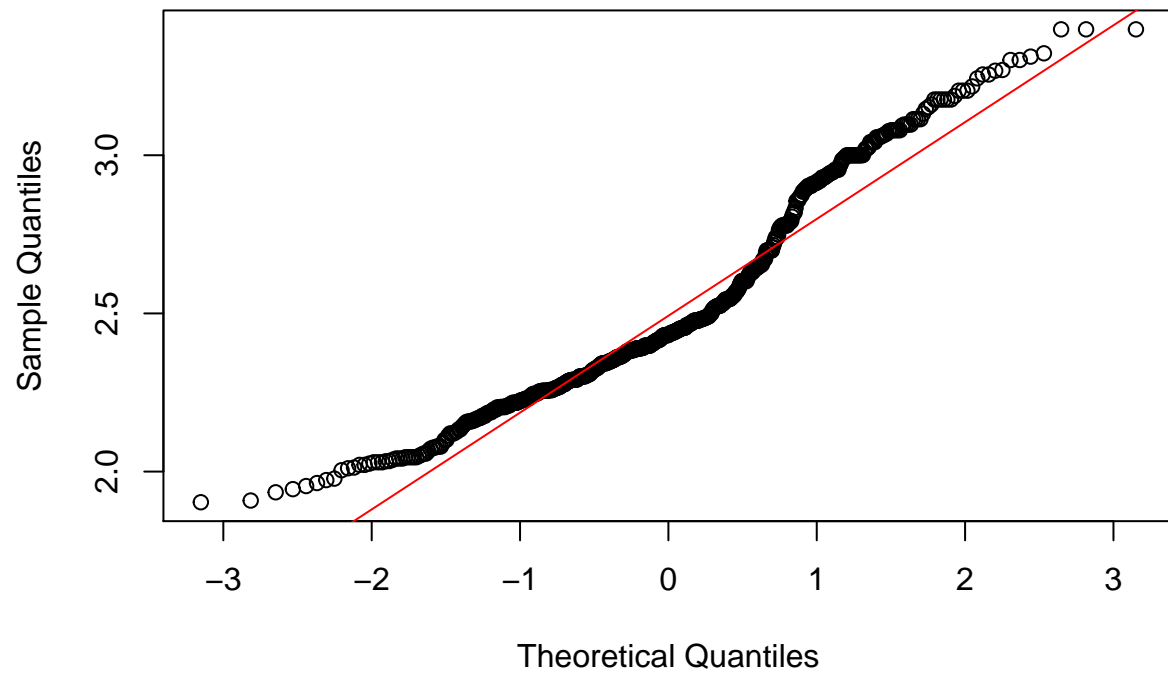
```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



Normal Q-Q Plot



Normal Q-Q Plot





per time bin

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

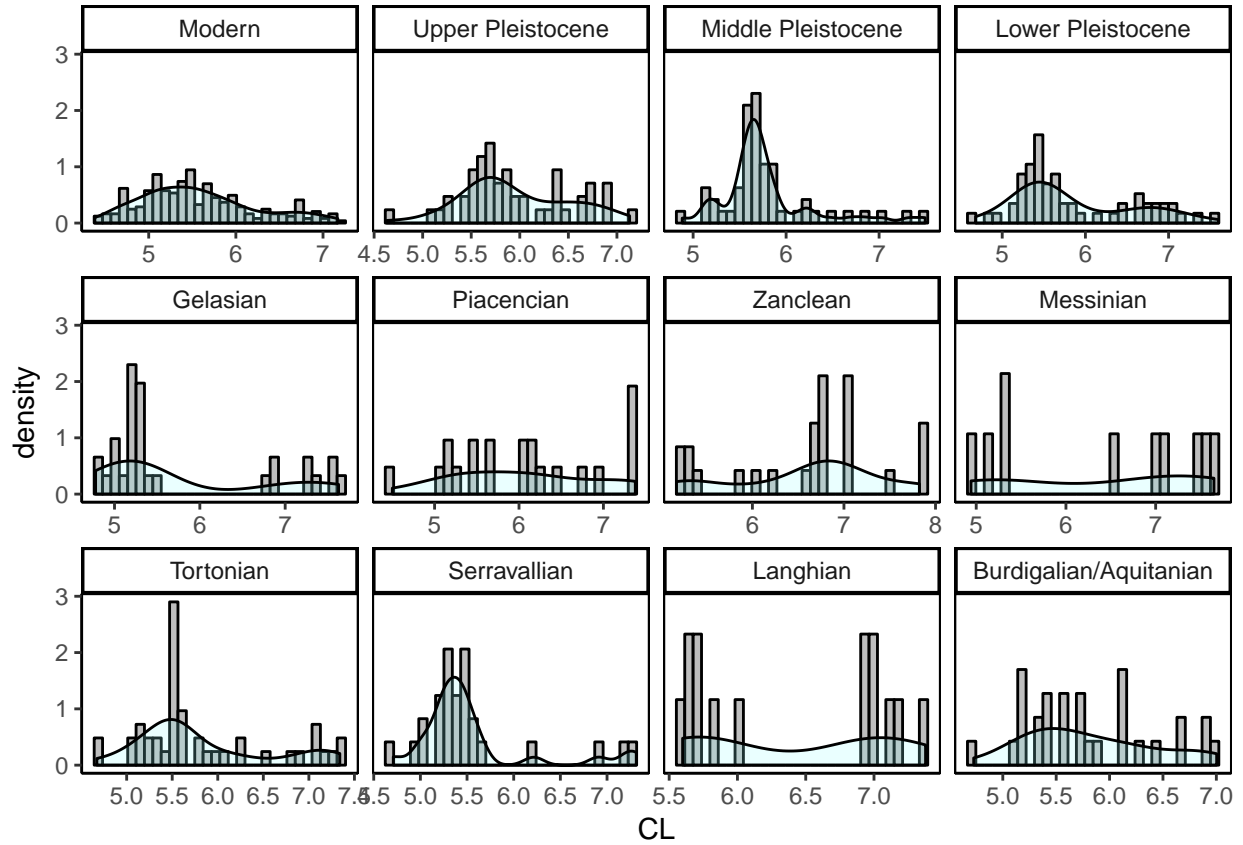


Figure 12: Distribution of body size data per time bin, logtransformed.

## modern vs. fossil

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

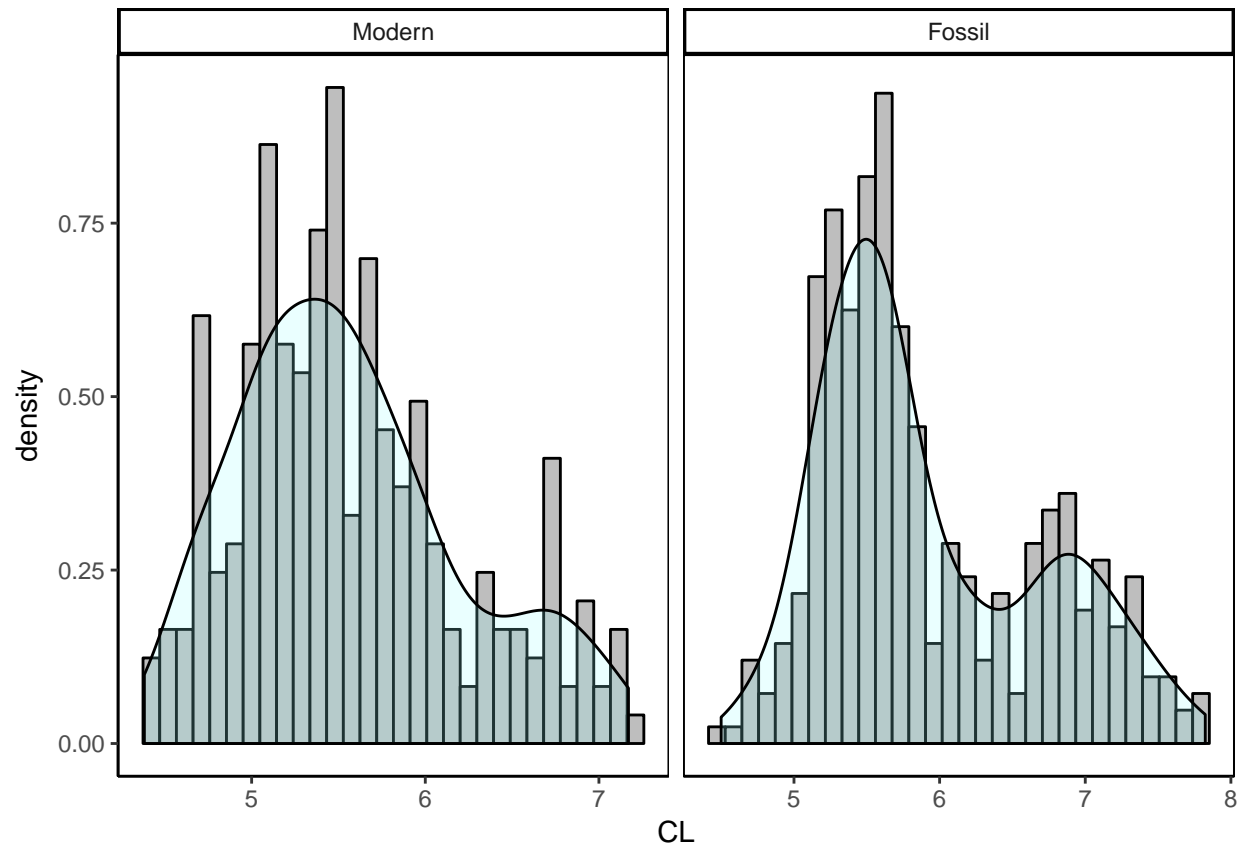


Figure 13: Distribution of body size data modern vs. fossil, logtransformed.

## modern vs. fossil, continental vs. insular

## `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.

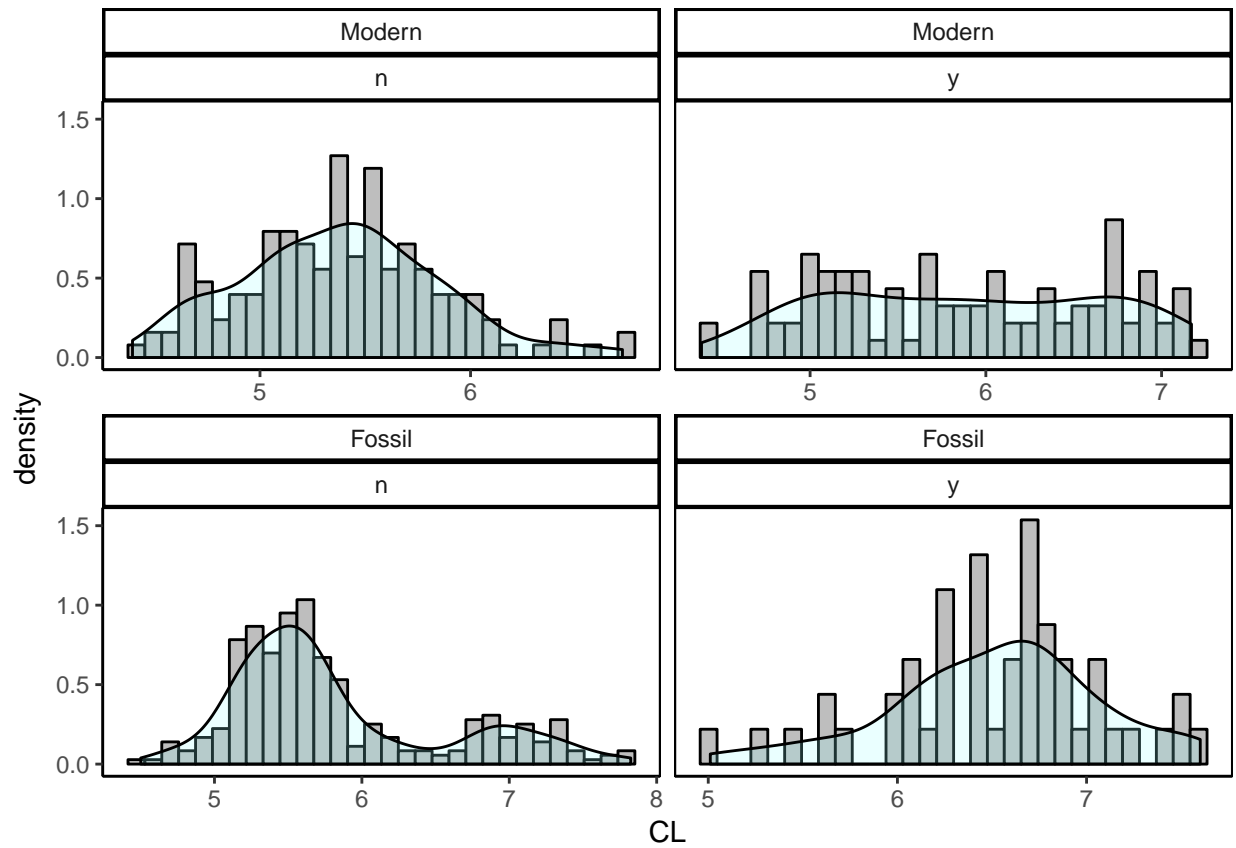


Figure 14: Distribution of body size data modern vs. fossil, continental vs. insular logtransformed.

## continental vs. insular

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

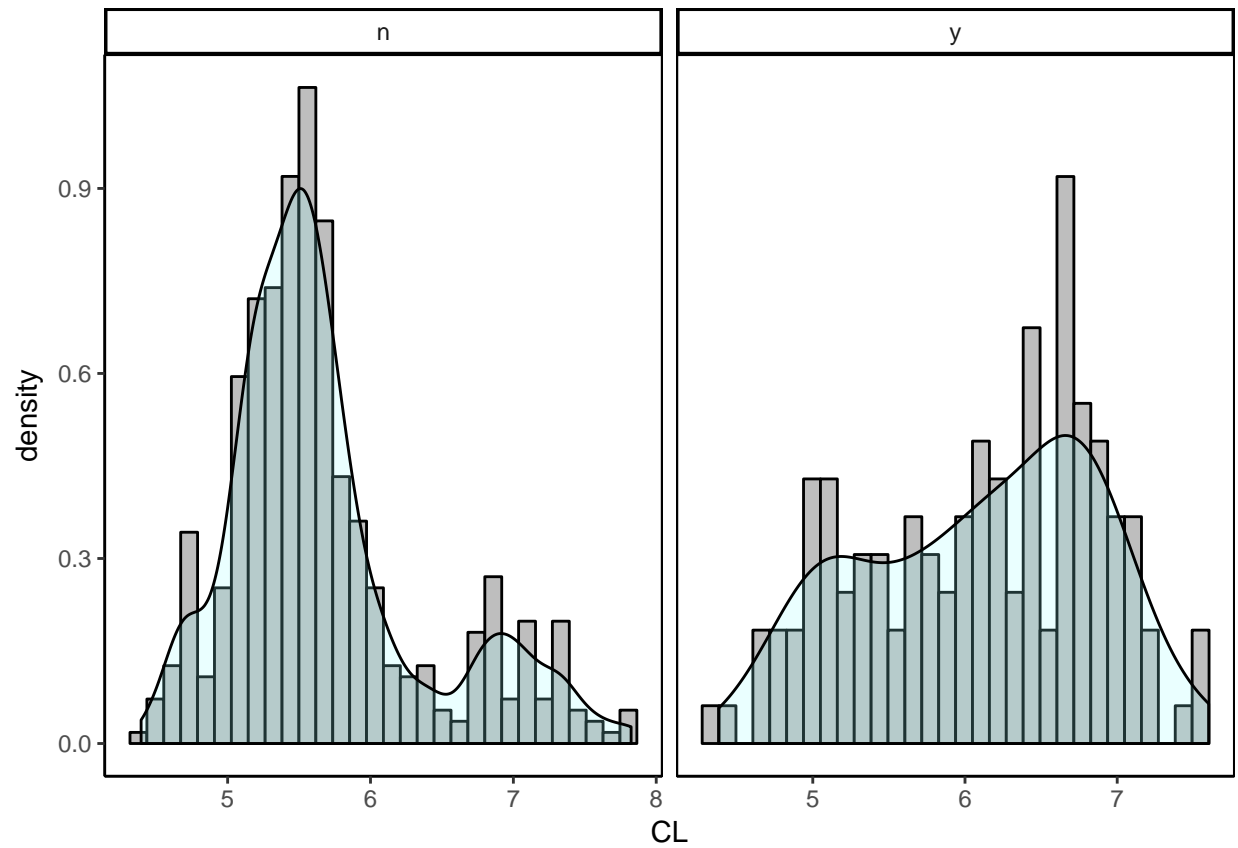


Figure 15: Distribution of body site data of continental (n) and insular(y) species, logtransformed.

## continents

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

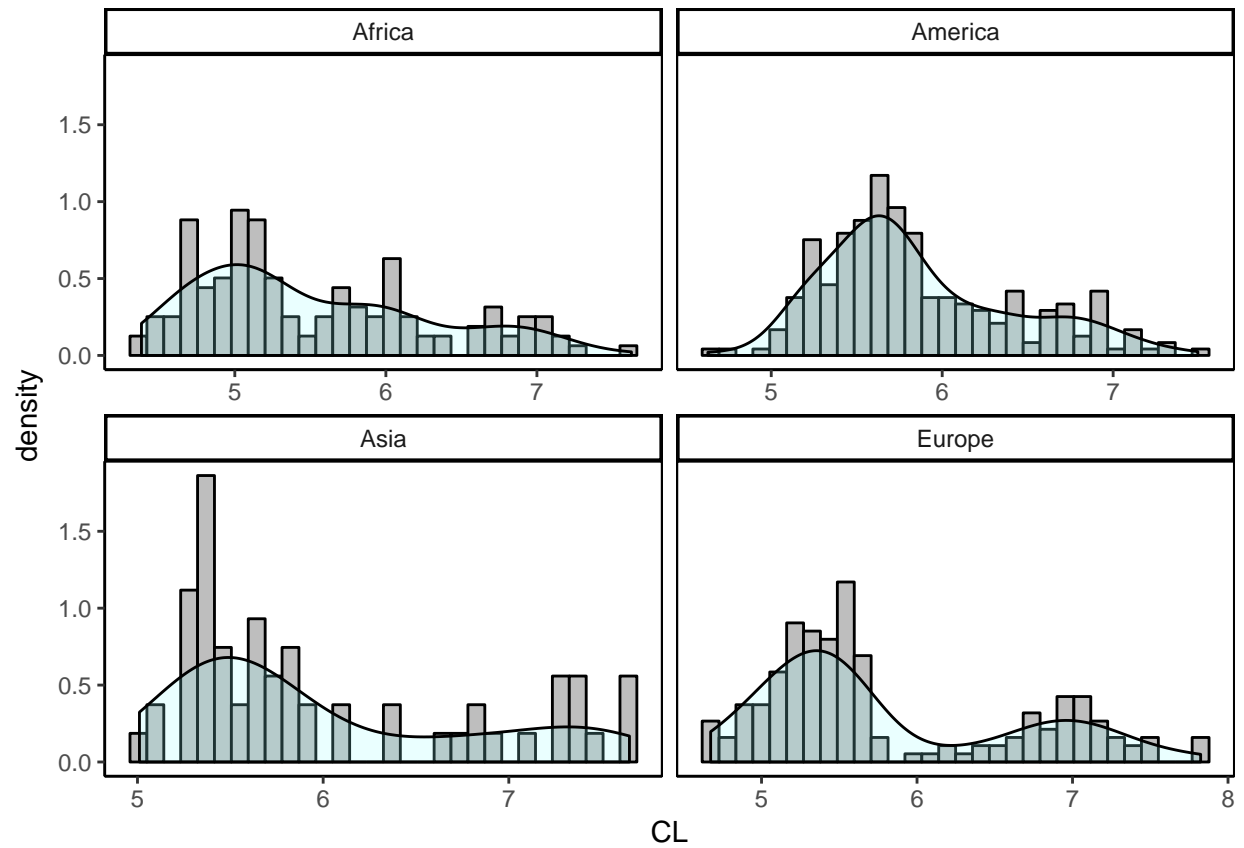


Figure 16: Distribution of body site data per continent, logtransformed.

## Descriptive statistics

Table 6: General statistics of body size data: all, per time bin, insular and continental, per continent (all referring to CL: min, max, variance, mean, logmean, median, logmedian, skewness, logskewness, kurosis, logkurtosis)

nCL	min	max	var	mean	logm	med	logmed	skew	logsk	kurt	logku	Variable
616	80.00	2500	164537.80	437.2	2.5	270.5	2.4	2.14	0.69	8.00	2.73	all
253	80.00	1300	67485.50	330.3	2.4	242.0	2.4	1.83	0.58	5.87	2.69	Modern
49	102.44	1250	69690.66	445.9	2.6	334.7	2.5	1.20	0.24	3.61	2.56	Upper Pleistocene
53	132.00	1800	97910.83	387.1	2.5	292.9	2.5	3.03	1.52	12.24	5.55	Middle Pleistocene
57	107.80	2000	161948.82	463.5	2.5	263.0	2.4	1.74	0.73	5.76	2.40	Lower Pleistocene
31	118.90	2050	411224.51	555.2	2.5	194.9	2.3	1.31	0.93	3.12	2.11	Gelasian
21	90.00	1600	270535.82	610.6	2.6	428.0	2.6	1.00	0.14	2.50	1.99	Piacencian
26	176.00	2500	476162.71	955.2	2.9	857.5	2.9	1.11	-0.40	3.56	2.30	Zanclean
10	140.00	2100	602611.21	948.9	2.8	916.0	2.9	0.26	-0.22	1.49	1.29	Messinian
45	107.00	1540	175470.12	462.7	2.5	250.0	2.4	1.49	0.81	3.74	2.54	Tortonian
27	111.00	1500	126060.40	337.7	2.4	220.0	2.3	2.49	1.77	7.77	5.30	Serravallian
14	270.00	1600	230451.33	747.9	2.8	700.0	2.8	0.30	0.03	1.55	1.18	Langhian
30	113.00	1100	76288.76	406.8	2.5	302.4	2.5	1.27	0.45	3.45	2.26	Burdigalian/Aquitanian
253	80.00	1300	67485.50	330.3	2.4	242.0	2.4	1.83	0.58	5.87	2.69	Modern
363	90.00	2500	219004.66	511.7	2.6	285.6	2.5	1.83	0.68	6.11	2.42	Fossil
469	81.00	2500	157808.79	392.9	2.5	250.0	2.4	2.65	1.07	10.57	3.74	continental
147	80.00	2000	160834.35	578.5	2.6	500.0	2.7	1.02	-0.27	3.95	2.05	insular
157	81.00	830	17009.02	244.0	2.3	221.0	2.3	1.92	0.29	8.09	2.98	modern-con
96	80.00	1300	118641.09	471.5	2.6	353.0	2.5	0.82	0.01	2.47	1.77	modern-ins
312	90.00	2500	212116.79	467.9	2.5	270.0	2.4	2.11	0.96	7.25	2.96	fossil-con
51	150.00	2000	180825.40	780.0	2.8	750.0	2.9	1.11	-0.40	4.02	3.18	fossil-ins
142	80.00	2050	112417.26	347.7	2.4	193.5	2.3	2.10	0.68	7.97	2.48	Africa
242	102.44	1800	82209.71	415.0	2.5	302.2	2.5	1.92	0.75	6.79	2.91	America
59	150.00	2100	323123.20	585.5	2.6	280.0	2.4	1.43	0.85	3.61	2.24	Asia
173	107.00	2500	254222.84	491.2	2.5	245.0	2.4	1.86	0.81	6.30	2.34	Europe

nCL	min	max	var	mean	logm	med	logmed	skew	logsk	kurt	logku	Variable
-----	-----	-----	-----	------	------	-----	--------	------	-------	------	-------	----------

## Boxplots

genera per time bins

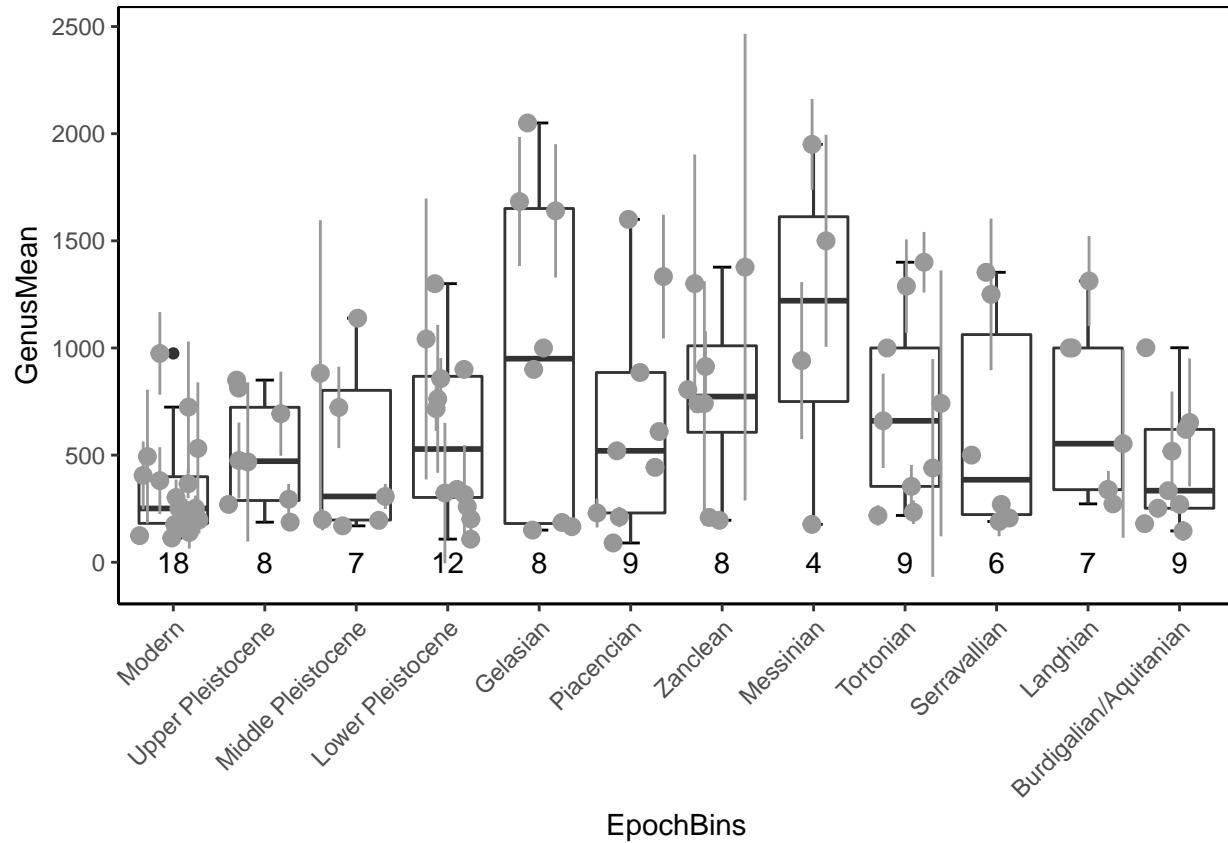


Figure 17: Boxplots of mean CL per time bin, including mean and sd CL for each genus (as pointrange).

```
## [1] "EpochBins" "Genus"      "GenusMean" "GenusSD"    "n"

## Multiple comparison test after Kruskal-Wallis
## p.value: 0.05
## Comparisons

##                                obs.dif critical.dif
## Modern-Upper Pleistocene      16.7916667    43.58276
## Modern-Middle Pleistocene     11.5238095    45.68715
## Modern-Lower Pleistocene      20.7500000    38.22461
## Modern-Gelasian              28.6666667    43.58276
## Modern-Piacencian             21.0000000    41.87296
```



## Modern-Zanclean	31.3541667	43.58276
## Modern-Messinian	40.1666667	56.69626
## Modern-Tortonian	28.2777778	41.87296
## Modern-Serravallian	18.5000000	48.35073
## Modern-Langhian	30.2380952	45.68715
## Modern-Burdigalian/Aquitania	9.8888889	41.87296
## Upper Pleistocene-Middle Pleistocene	5.2678571	53.08367
## Upper Pleistocene-Lower Pleistocene	3.9583333	46.81540
## Upper Pleistocene-Gelasian	11.8750000	51.28370
## Upper Pleistocene-Piacencian	4.2083333	49.83880
## Upper Pleistocene-Zanclean	14.5625000	51.28370
## Upper Pleistocene-Messinian	23.3750000	62.80945
## Upper Pleistocene-Tortonian	11.4861111	49.83880
## Upper Pleistocene-Serravallian	1.7083333	55.39273
## Upper Pleistocene-Langhian	13.4464286	53.08367
## Upper Pleistocene-Burdigalian/Aquitania	6.9027778	49.83880
## Middle Pleistocene-Lower Pleistocene	9.2261905	48.78053
## Middle Pleistocene-Gelasian	17.1428571	53.08367
## Middle Pleistocene-Piacencian	9.4761905	51.68911
## Middle Pleistocene-Zanclean	19.8303571	53.08367
## Middle Pleistocene-Messinian	28.6428571	64.28752
## Middle Pleistocene-Tortonian	16.7539683	51.68911
## Middle Pleistocene-Serravallian	6.9761905	57.06323
## Middle Pleistocene-Langhian	18.7142857	54.82458
## Middle Pleistocene-Burdigalian/Aquitania	1.6349206	51.68911
## Lower Pleistocene-Gelasian	7.9166667	46.81540
## Lower Pleistocene-Piacencian	0.2500000	45.22797
## Lower Pleistocene-Zanclean	10.6041667	46.81540
## Lower Pleistocene-Messinian	19.4166667	59.21731
## Lower Pleistocene-Tortonian	7.5277778	45.22797
## Lower Pleistocene-Serravallian	2.2500000	51.28370
## Lower Pleistocene-Langhian	9.4880952	48.78053
## Lower Pleistocene-Burdigalian/Aquitania	10.8611111	45.22797

## Gelasian-Piacencian	7.6666667	49.83880
## Gelasian-Zanclean	2.6875000	51.28370
## Gelasian-Messinian	11.5000000	62.80945
## Gelasian-Tortonian	0.3888889	49.83880
## Gelasian-Serravallian	10.1666667	55.39273
## Gelasian-Langhian	1.5714286	53.08367
## Gelasian-Burdigalian/Aquitania	18.7777778	49.83880
## Piacencian-Zanclean	10.3541667	49.83880
## Piacencian-Messinian	19.1666667	61.63534
## Piacencian-Tortonian	7.2777778	48.35073
## Piacencian-Serravallian	2.5000000	54.05776
## Piacencian-Langhian	9.2380952	51.68911
## Piacencian-Burdigalian/Aquitania	11.1111111	48.35073
## Zanclean-Messinian	8.8125000	62.80945
## Zanclean-Tortonian	3.0763889	49.83880
## Zanclean-Serravallian	12.8541667	55.39273
## Zanclean-Langhian	1.1160714	53.08367
## Zanclean-Burdigalian/Aquitania	21.4652778	49.83880
## Messinian-Tortonian	11.8888889	61.63534
## Messinian-Serravallian	21.6666667	66.20697
## Messinian-Langhian	9.9285714	64.28752
## Messinian-Burdigalian/Aquitania	30.2777778	61.63534
## Tortonian-Serravallian	9.7777778	54.05776
## Tortonian-Langhian	1.9603175	51.68911
## Tortonian-Burdigalian/Aquitania	18.3888889	48.35073
## Serravallian-Langhian	11.7380952	57.06323
## Serravallian-Burdigalian/Aquitania	8.6111111	54.05776
## Langhian-Burdigalian/Aquitania	20.3492063	51.68911
##	difference	
## Modern-Upper Pleistocene	FALSE	
## Modern-Middle Pleistocene	FALSE	
## Modern-Lower Pleistocene	FALSE	
## Modern-Gelasian	FALSE	

## Modern-Piacencian	FALSE
## Modern-Zanclean	FALSE
## Modern-Messinian	FALSE
## Modern-Tortonian	FALSE
## Modern-Serravallian	FALSE
## Modern-Langhian	FALSE
## Modern-Burdigalian/Aquitania	FALSE
## Upper Pleistocene-Middle Pleistocene	FALSE
## Upper Pleistocene-Lower Pleistocene	FALSE
## Upper Pleistocene-Gelasian	FALSE
## Upper Pleistocene-Piacencian	FALSE
## Upper Pleistocene-Zanclean	FALSE
## Upper Pleistocene-Messinian	FALSE
## Upper Pleistocene-Tortonian	FALSE
## Upper Pleistocene-Serravallian	FALSE
## Upper Pleistocene-Langhian	FALSE
## Upper Pleistocene-Burdigalian/Aquitania	FALSE
## Middle Pleistocene-Lower Pleistocene	FALSE
## Middle Pleistocene-Gelasian	FALSE
## Middle Pleistocene-Piacencian	FALSE
## Middle Pleistocene-Zanclean	FALSE
## Middle Pleistocene-Messinian	FALSE
## Middle Pleistocene-Tortonian	FALSE
## Middle Pleistocene-Serravallian	FALSE
## Middle Pleistocene-Langhian	FALSE
## Middle Pleistocene-Burdigalian/Aquitania	FALSE
## Lower Pleistocene-Gelasian	FALSE
## Lower Pleistocene-Piacencian	FALSE
## Lower Pleistocene-Zanclean	FALSE
## Lower Pleistocene-Messinian	FALSE
## Lower Pleistocene-Tortonian	FALSE
## Lower Pleistocene-Serravallian	FALSE
## Lower Pleistocene-Langhian	FALSE

## Lower Pleistocene-Burdigalian/Aquitania	FALSE
## Gelasian-Piacencian	FALSE
## Gelasian-Zanclean	FALSE
## Gelasian-Messinian	FALSE
## Gelasian-Tortonian	FALSE
## Gelasian-Serravallian	FALSE
## Gelasian-Langhian	FALSE
## Gelasian-Burdigalian/Aquitania	FALSE
## Piacencian-Zanclean	FALSE
## Piacencian-Messinian	FALSE
## Piacencian-Tortonian	FALSE
## Piacencian-Serravallian	FALSE
## Piacencian-Langhian	FALSE
## Piacencian-Burdigalian/Aquitania	FALSE
## Zanclean-Messinian	FALSE
## Zanclean-Tortonian	FALSE
## Zanclean-Serravallian	FALSE
## Zanclean-Langhian	FALSE
## Zanclean-Burdigalian/Aquitania	FALSE
## Messinian-Tortonian	FALSE
## Messinian-Serravallian	FALSE
## Messinian-Langhian	FALSE
## Messinian-Burdigalian/Aquitania	FALSE
## Tortonian-Serravallian	FALSE
## Tortonian-Langhian	FALSE
## Tortonian-Burdigalian/Aquitania	FALSE
## Serravallian-Langhian	FALSE
## Serravallian-Burdigalian/Aquitania	FALSE
## Langhian-Burdigalian/Aquitania	FALSE
## Multiple comparison test after Kruskal-Wallis	
## p.value: 0.05	
## Comparisons	

```

##      obs.dif critical.dif difference
## A-B 6.666667      7.378741      FALSE
## A-C 9.333333      7.378741      TRUE
## B-C 2.666667      7.378741      FALSE

## [1] "bin"          "Taxon"          "CL"             "extraCL"
## [5] "PL"              "size"           "estimated"       "Age"
## [9] "Island"          "Continent"      "Genus"           "EpochBins"
## [13] "Stages"          "MeanBins"       "nIndividuals"    "nSpecies"
## [17] "nGenera"

## Multiple comparison test after Kruskal-Wallis
## p.value: 0.05
## Comparisons
##
##                                obs.dif critical.dif
## Modern-Upper Pleistocene      116.987013    93.54915
## Modern-Middle Pleistocene      80.140652    90.54349
## Modern-Lower Pleistocene       66.123604    87.87753
## Modern-Gelasian               1.627566    114.05459
## Modern-Piacencian             113.296537    136.11314
## Modern-Zanclean               205.945804    123.43828
## Modern-Messinian              137.122727    193.24680
## Modern-Tortonian              61.739394     96.96976
## Modern-Serravallian           21.764310    121.34770
## Modern-Langhian               202.487013    164.56067
## Modern-Burdigalian/Aquitania  70.472727    115.73561
## Upper Pleistocene-Middle Pleistocene 36.846361    118.78423
## Upper Pleistocene-Lower Pleistocene 50.863409    116.76486
## Upper Pleistocene-Gelasian    115.359447    137.55006
## Upper Pleistocene-Piacencian    3.690476    156.32773
## Upper Pleistocene-Zanclean     88.958791    145.42551
## Upper Pleistocene-Messinian    20.135714    207.98052
## Upper Pleistocene-Tortonian    55.247619    123.75260
## Upper Pleistocene-Serravallian 138.751323    143.65527

```

## Upper Pleistocene-Langhian	85.500000	181.63641
## Upper Pleistocene-Burdigalian/Aquitanian	46.514286	138.94713
## Middle Pleistocene-Lower Pleistocene	14.017047	114.37094
## Middle Pleistocene-Gelasian	78.513086	135.52379
## Middle Pleistocene-Piacencian	33.155885	154.54785
## Middle Pleistocene-Zanclean	125.805152	143.51048
## Middle Pleistocene-Messinian	56.982075	206.64601
## Middle Pleistocene-Tortonian	18.401258	121.49644
## Middle Pleistocene-Serravallian	101.904962	141.71632
## Middle Pleistocene-Langhian	122.346361	180.10681
## Middle Pleistocene-Burdigalian/Aquitanian	9.667925	136.94153
## Lower Pleistocene-Gelasian	64.496038	133.75738
## Lower Pleistocene-Piacencian	47.172932	153.00123
## Lower Pleistocene-Zanclean	139.822200	141.84356
## Lower Pleistocene-Messinian	70.999123	205.49188
## Lower Pleistocene-Tortonian	4.384211	119.52289
## Lower Pleistocene-Serravallian	87.887914	140.02804
## Lower Pleistocene-Langhian	136.363409	178.78144
## Lower Pleistocene-Burdigalian/Aquitanian	4.349123	135.19364
## Gelasian-Piacencian	111.668971	169.39706
## Gelasian-Zanclean	204.318238	159.39129
## Gelasian-Messinian	135.495161	217.97454
## Gelasian-Tortonian	60.111828	139.89893
## Gelasian-Serravallian	23.391876	157.77782
## Gelasian-Langhian	200.859447	192.99946
## Gelasian-Burdigalian/Aquitanian	68.845161	153.50345
## Piacencian-Zanclean	92.649267	175.85199
## Piacencian-Messinian	23.826190	230.28513
## Piacencian-Tortonian	51.557143	158.39839
## Piacencian-Serravallian	135.060847	174.39088
## Piacencian-Langhian	89.190476	206.80215
## Piacencian-Burdigalian/Aquitanian	42.823810	170.53342
## Zanclean-Messinian	68.823077	223.02794

## Zanclean-Tortonian	144.206410	147.64914
## Zanclean-Serravallian	227.710114	164.68880
## Zanclean-Langhian	3.458791	198.68908
## Zanclean-Burdigalian/Aquitania	135.473077	160.59847
## Messinian-Tortonian	75.383333	209.54137
## Messinian-Serravallian	158.887037	221.87771
## Messinian-Langhian	65.364286	248.16258
## Messinian-Burdigalian/Aquitania	66.650000	218.85882
## Tortonian-Serravallian	83.503704	145.90588
## Tortonian-Langhian	140.747619	183.42158
## Tortonian-Burdigalian/Aquitania	8.733333	141.27276
## Serravallian-Langhian	224.251323	197.39708
## Serravallian-Burdigalian/Aquitania	92.237037	158.99725
## Langhian-Burdigalian/Aquitania	132.014286	193.99761
##	difference	
## Modern-Upper Pleistocene	TRUE	
## Modern-Middle Pleistocene	FALSE	
## Modern-Lower Pleistocene	FALSE	
## Modern-Gelasian	FALSE	
## Modern-Piacencian	FALSE	
## Modern-Zanclean	TRUE	
## Modern-Messinian	FALSE	
## Modern-Tortonian	FALSE	
## Modern-Serravallian	FALSE	
## Modern-Langhian	TRUE	
## Modern-Burdigalian/Aquitania	FALSE	
## Upper Pleistocene-Middle Pleistocene	FALSE	
## Upper Pleistocene-Lower Pleistocene	FALSE	
## Upper Pleistocene-Gelasian	FALSE	
## Upper Pleistocene-Piacencian	FALSE	
## Upper Pleistocene-Zanclean	FALSE	
## Upper Pleistocene-Messinian	FALSE	
## Upper Pleistocene-Tortonian	FALSE	

## Upper Pleistocene-Serravallian	FALSE
## Upper Pleistocene-Langhian	FALSE
## Upper Pleistocene-Burdigalian/Aquitania	FALSE
## Middle Pleistocene-Lower Pleistocene	FALSE
## Middle Pleistocene-Gelasian	FALSE
## Middle Pleistocene-Piacencian	FALSE
## Middle Pleistocene-Zanclean	FALSE
## Middle Pleistocene-Messinian	FALSE
## Middle Pleistocene-Tortonian	FALSE
## Middle Pleistocene-Serravallian	FALSE
## Middle Pleistocene-Langhian	FALSE
## Middle Pleistocene-Burdigalian/Aquitania	FALSE
## Lower Pleistocene-Gelasian	FALSE
## Lower Pleistocene-Piacencian	FALSE
## Lower Pleistocene-Zanclean	FALSE
## Lower Pleistocene-Messinian	FALSE
## Lower Pleistocene-Tortonian	FALSE
## Lower Pleistocene-Serravallian	FALSE
## Lower Pleistocene-Langhian	FALSE
## Lower Pleistocene-Burdigalian/Aquitania	FALSE
## Gelasian-Piacencian	FALSE
## Gelasian-Zanclean	TRUE
## Gelasian-Messinian	FALSE
## Gelasian-Tortonian	FALSE
## Gelasian-Serravallian	FALSE
## Gelasian-Langhian	TRUE
## Gelasian-Burdigalian/Aquitania	FALSE
## Piacencian-Zanclean	FALSE
## Piacencian-Messinian	FALSE
## Piacencian-Tortonian	FALSE
## Piacencian-Serravallian	FALSE
## Piacencian-Langhian	FALSE
## Piacencian-Burdigalian/Aquitania	FALSE



```

## Zanclean-Messinian                FALSE
## Zanclean-Tortonian                FALSE
## Zanclean-Serravallian              TRUE
## Zanclean-Langhian                 FALSE
## Zanclean-Burdigalian/Aquitania    FALSE
## Messinian-Tortonian               FALSE
## Messinian-Serravallian            FALSE
## Messinian-Langhian                FALSE
## Messinian-Burdigalian/Aquitania   FALSE
## Tortonian-Serravallian            FALSE
## Tortonian-Langhian                FALSE
## Tortonian-Burdigalian/Aquitania   FALSE
## Serravallian-Langhian              TRUE
## Serravallian-Burdigalian/Aquitania FALSE
## Langhian-Burdigalian/Aquitania     FALSE

##
## Kruskal-Wallis rank sum test

##
## data:  list(M, UPle, MPle, LPle, G, Pia, Z, Mess, Tort, S, L, BA)
## Kruskal-Wallis chi-squared = 71.441, df = 11, p-value = 6.496e-11

##
## Wilcoxon rank sum test with continuity correction

##
## data:  M and UPle
## W = 3853.5, p-value = 1.392e-05
## alternative hypothesis: true location shift is less than 0

## [1] TRUE

##
## Wilcoxon rank sum test with continuity correction

##
## data:  UPle and MPle

```

```

## W = 1560, p-value = 0.08043
## alternative hypothesis: true location shift is not equal to 0
## [1] FALSE

##
## Wilcoxon rank sum test with continuity correction
##
## data:  MPle and LPle
## W = 1643.5, p-value = 0.428
## alternative hypothesis: true location shift is not equal to 0
## [1] FALSE

##
## Wilcoxon rank sum test with continuity correction
##
## data:  LPle and G
## W = 1124, p-value = 0.01802
## alternative hypothesis: true location shift is greater than 0
## [1] TRUE

## Warning in wilcox.test.default(G, Pia, paired = FALSE): cannot compute
## exact p-value with ties

##
## Wilcoxon rank sum test with continuity correction
##
## data:  G and Pia
## W = 246, p-value = 0.1406
## alternative hypothesis: true location shift is not equal to 0
## [1] FALSE

## Warning in wilcox.test.default(Pia, Z, paired = FALSE): cannot compute
## exact p-value with ties

##
## Wilcoxon rank sum test with continuity correction

```

```

##
## data:  Pia and Z
## W = 185.5, p-value = 0.06256
## alternative hypothesis: true location shift is not equal to 0
## [1] FALSE

## Warning in wilcox.test.default(Z, Mess, paired = FALSE): cannot compute
## exact p-value with ties

##
## Wilcoxon rank sum test with continuity correction
##
## data:  Z and Mess
## W = 134.5, p-value = 0.8876
## alternative hypothesis: true location shift is not equal to 0
## [1] FALSE

## Warning in wilcox.test.default(Mess, Tort, paired = FALSE): cannot compute
## exact p-value with ties

##
## Wilcoxon rank sum test with continuity correction
##
## data:  Mess and Tort
## W = 274.5, p-value = 0.2844
## alternative hypothesis: true location shift is not equal to 0
## [1] FALSE

## Warning in wilcox.test.default(Tort, S, paired = FALSE, alternative = "g"):
## cannot compute exact p-value with ties

##
## Wilcoxon rank sum test with continuity correction
##
## data:  Tort and S
## W = 810, p-value = 0.009363

```

```

## alternative hypothesis: true location shift is greater than 0

## [1] TRUE

## Warning in wilcox.test.default(S, L, paired = FALSE, alternative = "l"):
## cannot compute exact p-value with ties

##

## Wilcoxon rank sum test with continuity correction

##

## data:  S and L

## W = 45, p-value = 3.952e-05

## alternative hypothesis: true location shift is less than 0

## [1] TRUE

## Warning in wilcox.test.default(L, BA, paired = FALSE, alternative = "g"):
## cannot compute exact p-value with ties

##

## Wilcoxon rank sum test with continuity correction

##

## data:  L and BA

## W = 311, p-value = 0.005639

## alternative hypothesis: true location shift is greater than 0

## [1] TRUE

```

lineage	pvalue	Bonferroni
M and UPle	0.0000139	0.0001531
S and L	0.0000395	0.0004347
L and BA	0.0056389	0.0620282
Tort and S	0.0093632	0.1029949
LPle and G	0.0180154	0.1981690
Pia and Z	0.0625644	0.6882088
UPle and MPle	0.0804319	0.8847504
G and Pia	0.1405871	1.0000000
Mess and Tort	0.2844360	1.0000000

lineage	pvalue	Bonferroni
MPl <sub>e</sub> and LPl <sub>e</sub>	0.4279860	1.0000000
Z and Mess	0.8876030	1.0000000

continental vs. insular per time bin

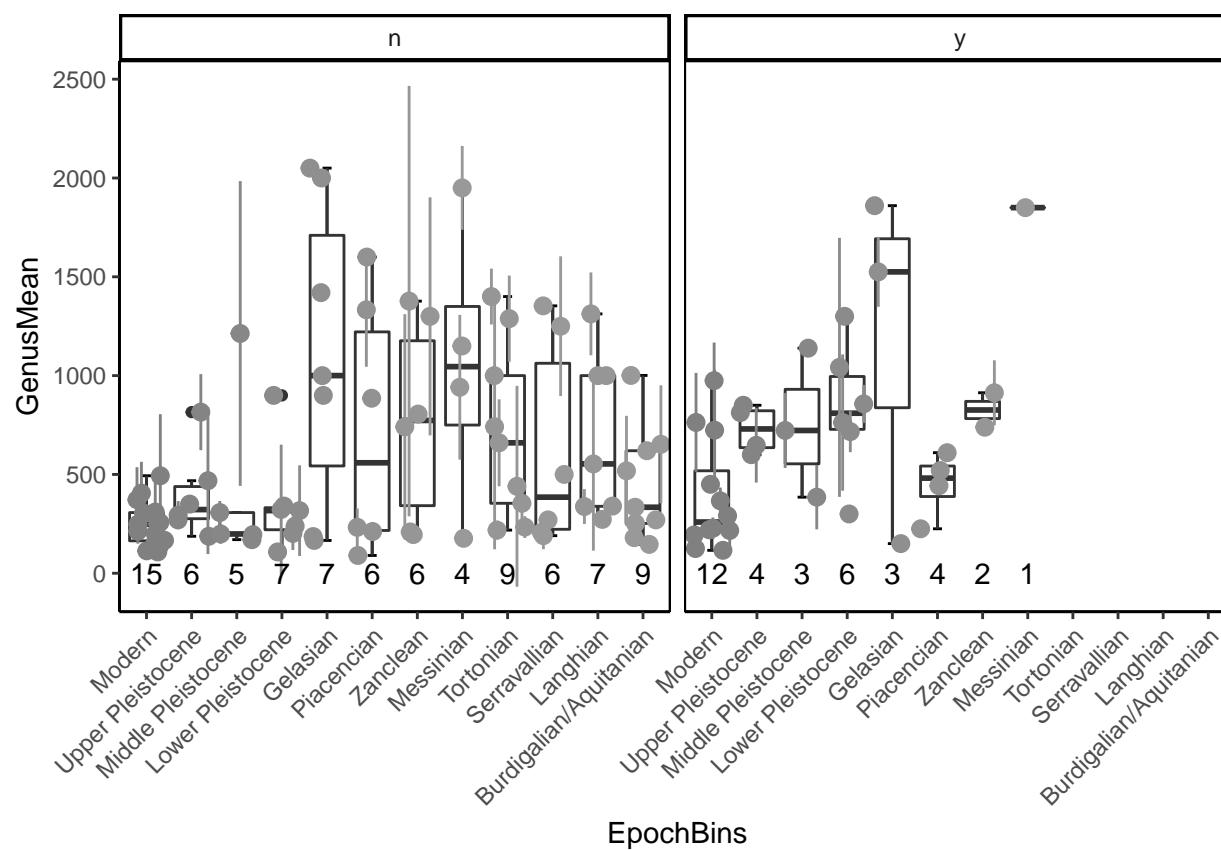


Figure 18: Boxplots of each genus per time bin, continental vs. insular species.

fossil vs. modern

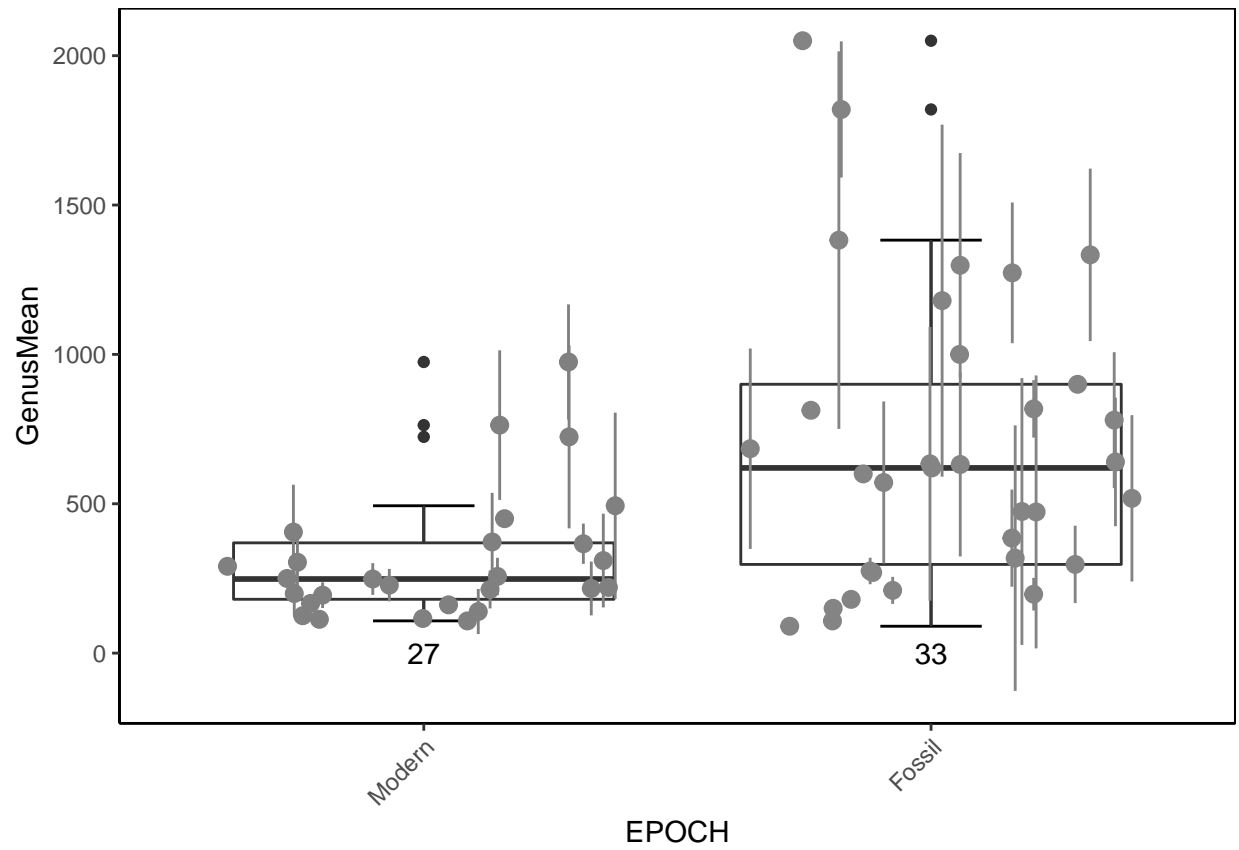
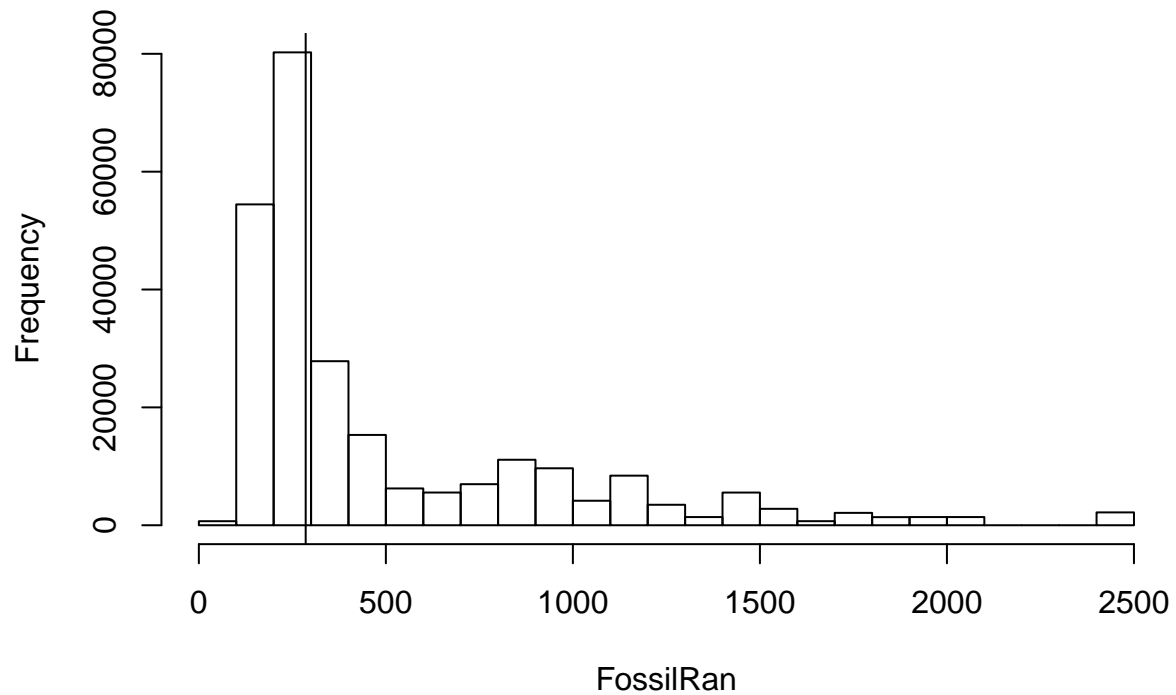


Figure 19: Boxplots fossil vs. modern.

## Fossil, random sampling



```
## [1] 330.3495
```

```
## [1] 524.9686
```

```
##
```

```
## Wilcoxon rank sum test with continuity correction
```

```
##
```

```
## data: Modern and Fossil
```

```
## W = 22962, p-value = 3.793e-08
```

```
## alternative hypothesis: true location shift is less than 0
```

Wilcoxon Rank Sum Test (unpaired data):

modern < fossil ( $P = 3.7925942 \times 10^{-8}$ )



fossil vs. modern, continental vs. insular

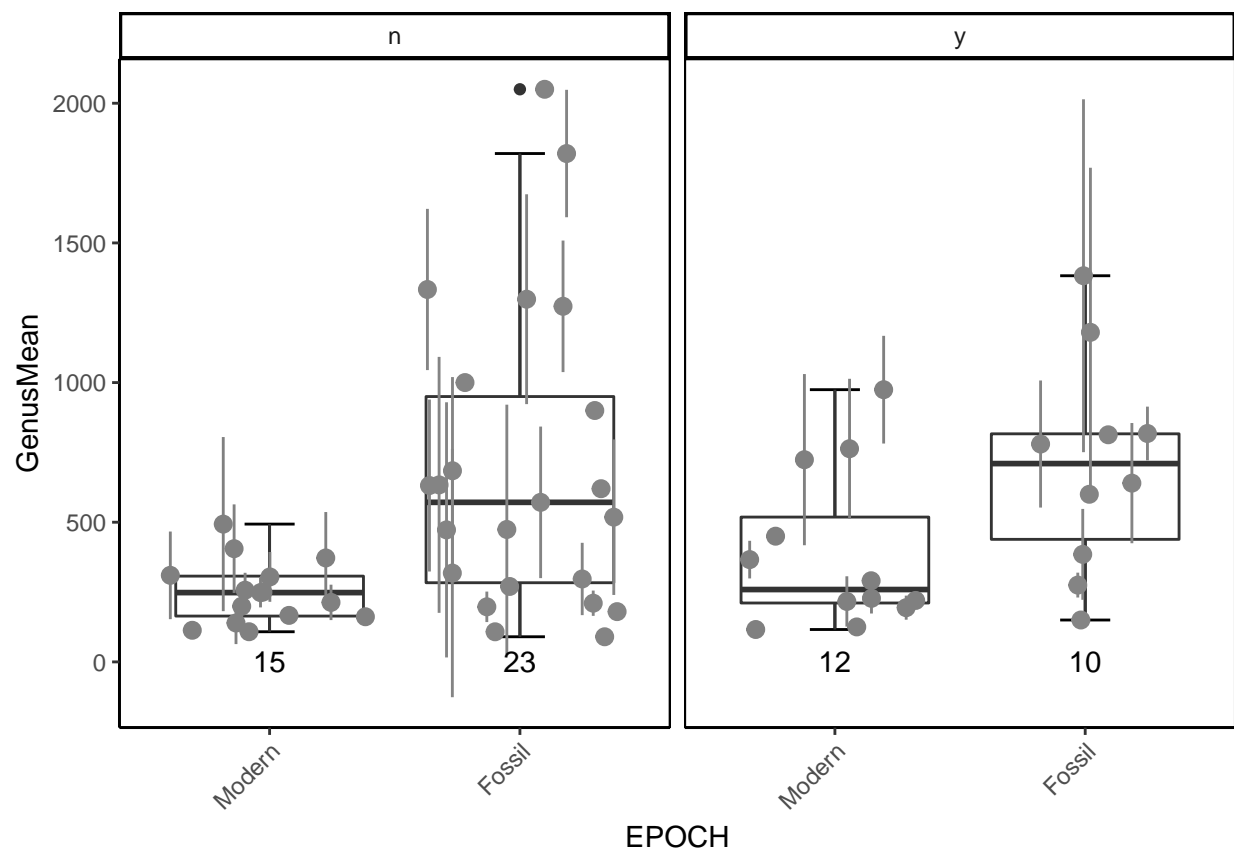
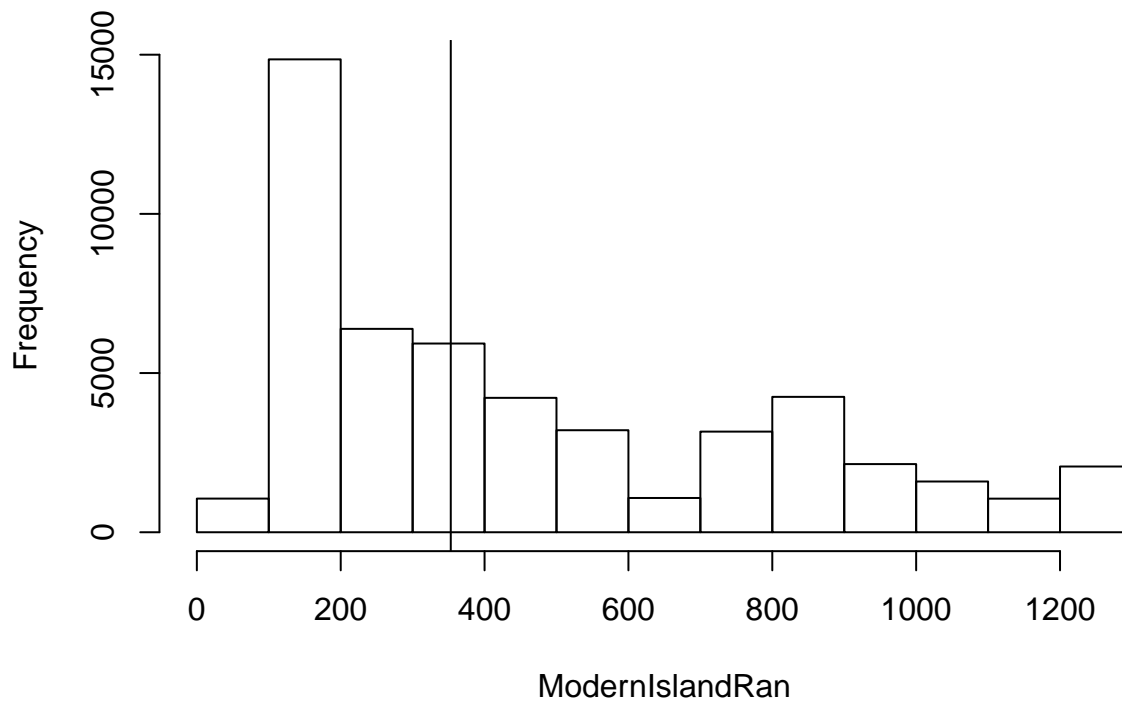


Figure 20: Boxplots fossil vs. modern, continental vs. insular species.

## [1] 51

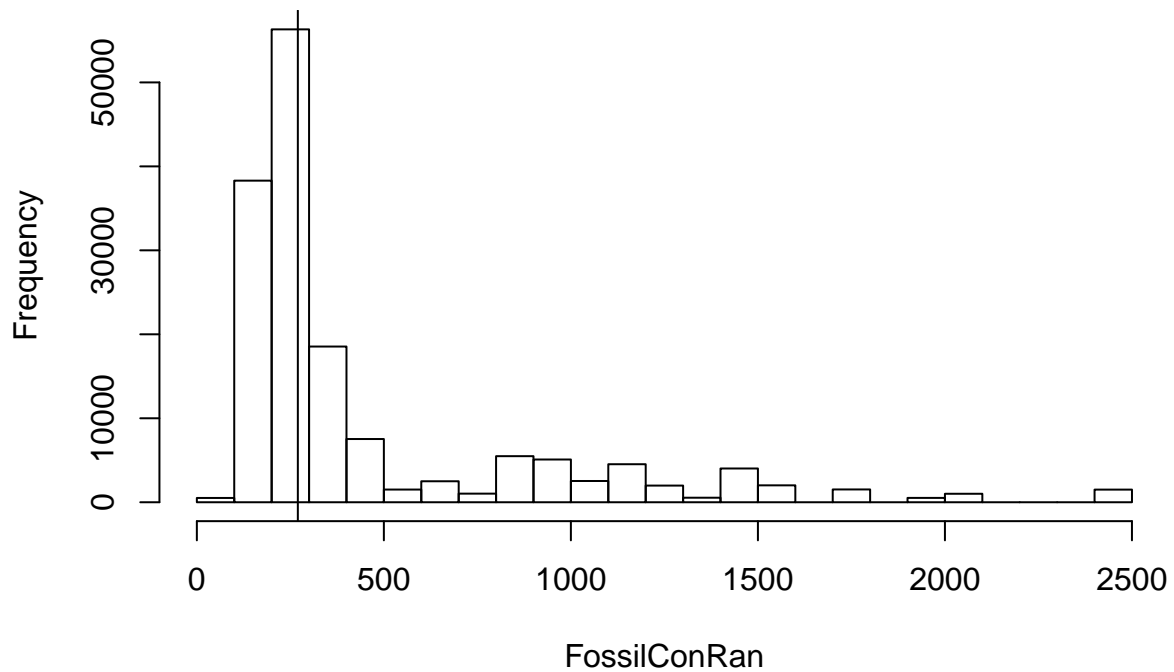
## [1] 51

### Modern, insular, random sampling



```
##
## Wilcoxon rank sum test with continuity correction
##
## data: ModernIsland and FossilIsland
## W = 616, p-value = 2.343e-06
## alternative hypothesis: true location shift is less than 0
## [1] 157
## [1] 157
```

## Fossil, continental, random sampling



```
##
## Wilcoxon rank sum test with continuity correction
##
## data: ModernCon and FossilCon
## W = 7793, p-value = 8.857e-09
## alternative hypothesis: true location shift is less than 0
```

Wilcoxon Rank Sum Test (unpaired data):

modern continental < fossil continental ( $P = 8.8565171 \times 10^{-9}$ )

modern insular < fossil insular ( $P = 2.3433736 \times 10^{-6}$ )

continental vs. insular

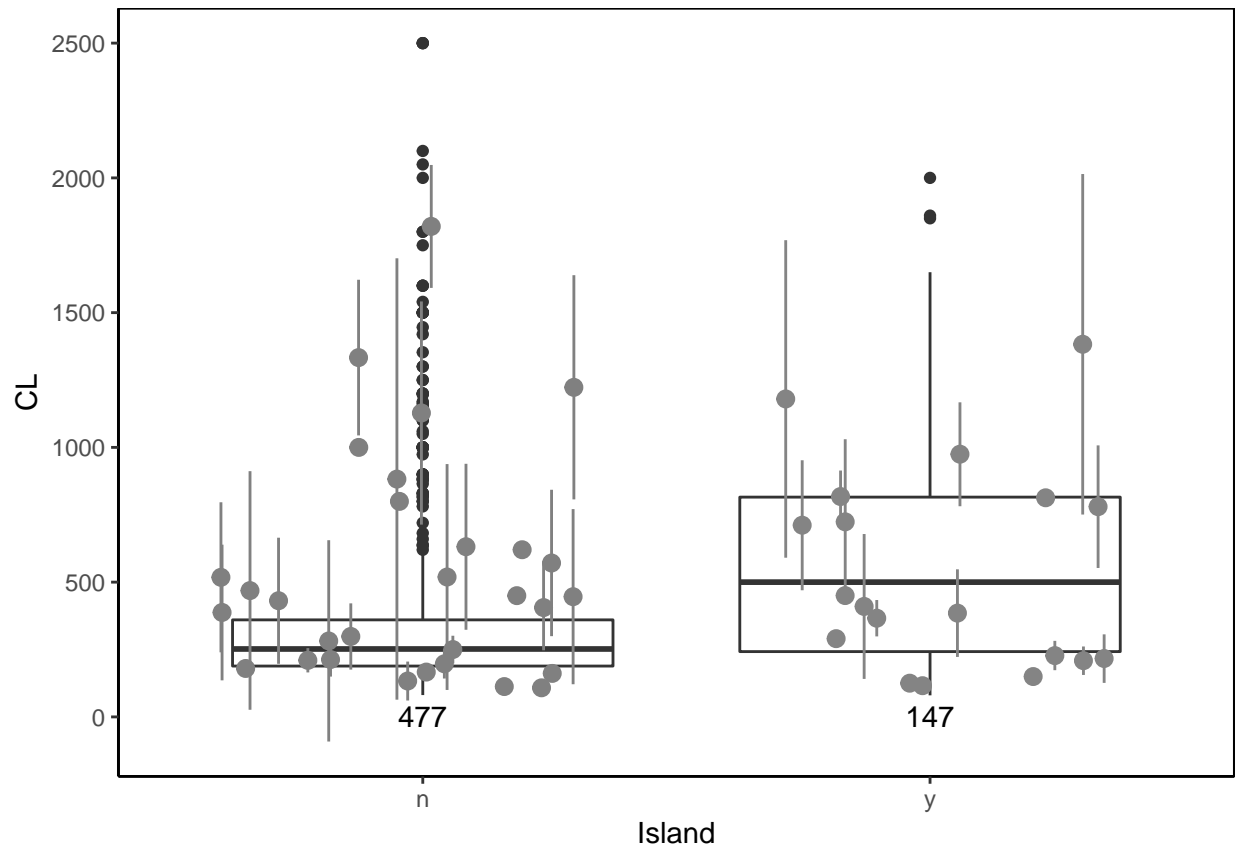
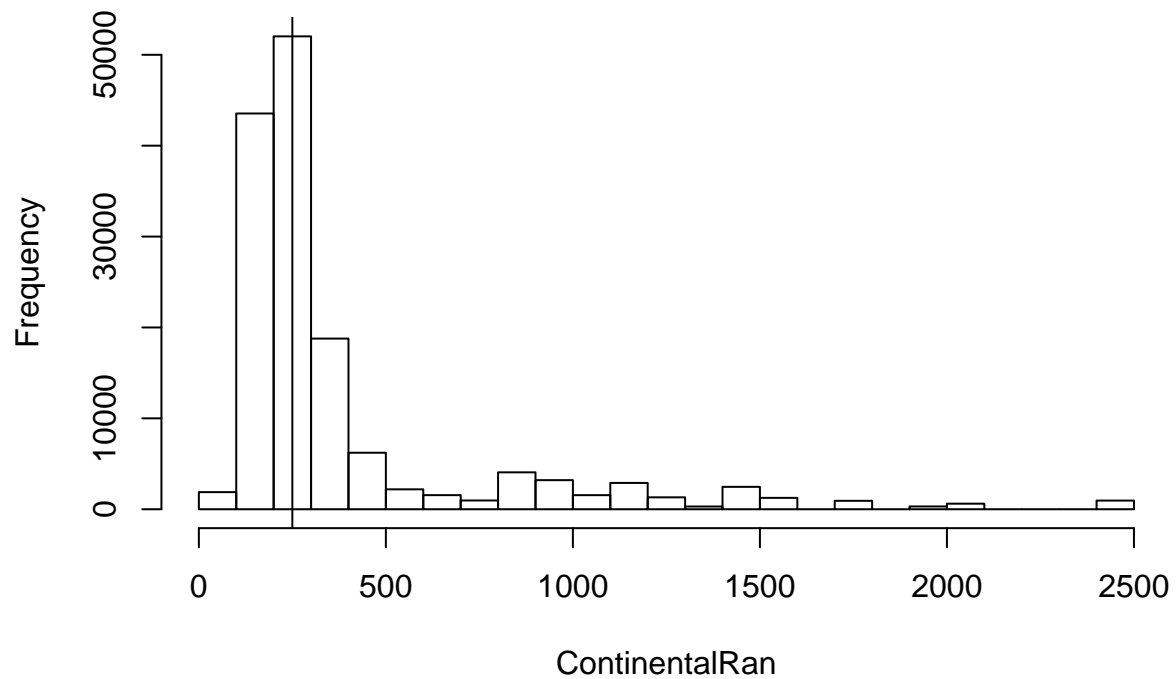


Figure 21: Boxplot continental vs. insular, genera summarised

```
## [1] 147
```

```
## [1] 147
```

## Continental, random sampling



```
##
## Wilcoxon rank sum test with continuity correction
##
## data: Insular and Continental
## W = 13991, p-value = 6.173e-06
## alternative hypothesis: true location shift is greater than 0

Wilcoxon Rank Sum Test (unpaired data):

continental < insular (P = 6.1729949 × 10-6)
```

# continental vs. insular per time bin

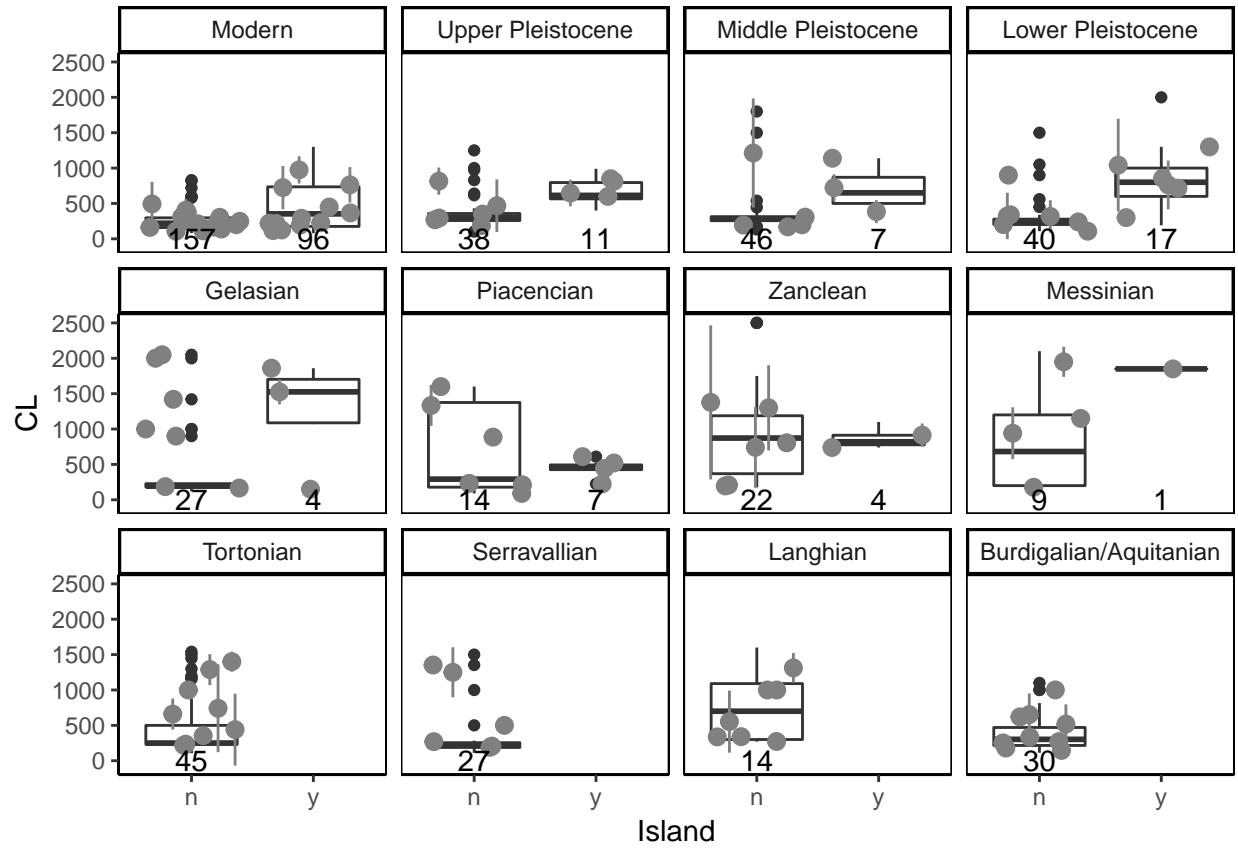


Figure 22: Boxplot continental vs. insular, genera summarised

continents

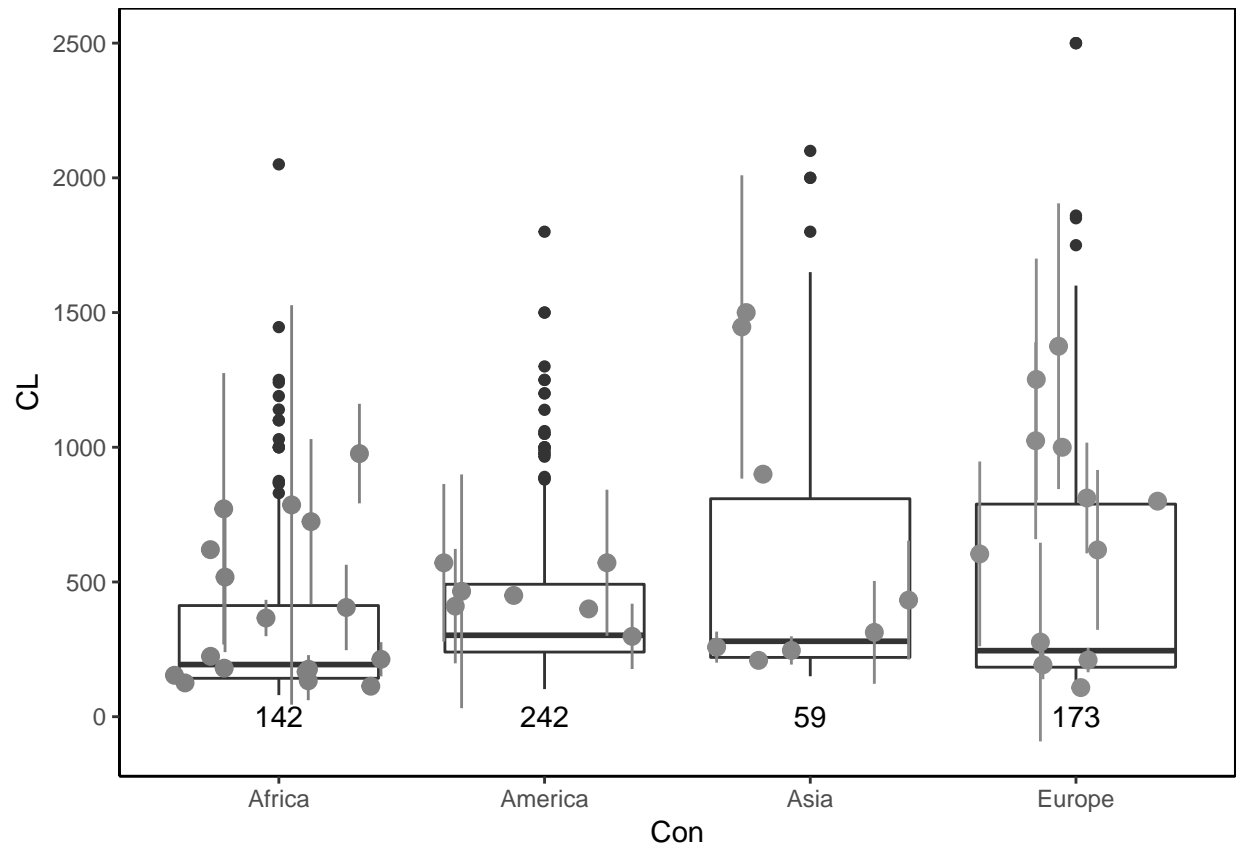


Figure 23: Boxplot: body size on different continents, genera summarised

```
## [1] "Continent"      "bin"             "Taxon"           "CL"
## [5] "extraCL"         "PL"              "size"            "estimated"
## [9] "Age"             "Island"          "Genus"           "EpochBins"
## [13] "Stages"          "MeanBins"        "nIndividuals"    "nSpecies"
## [17] "nGenera"         "Con"

## Multiple comparison test after Kruskal-Wallis
## p.value: 0.05
## Comparisons
##               obs.dif critical.dif difference
## Africa-America 108.957339    49.63331      TRUE
## Africa-Asia    118.618286    72.72560      TRUE
## Africa-Europe  58.612310    53.16766      TRUE
```

```
## America-Asia      9.660947    68.17247    FALSE
## America-Europe   50.345029    46.74690     TRUE
## Asia-Europe      60.005976    70.78714    FALSE

## [1] 142

## [1] 347.6887

## [1] 142

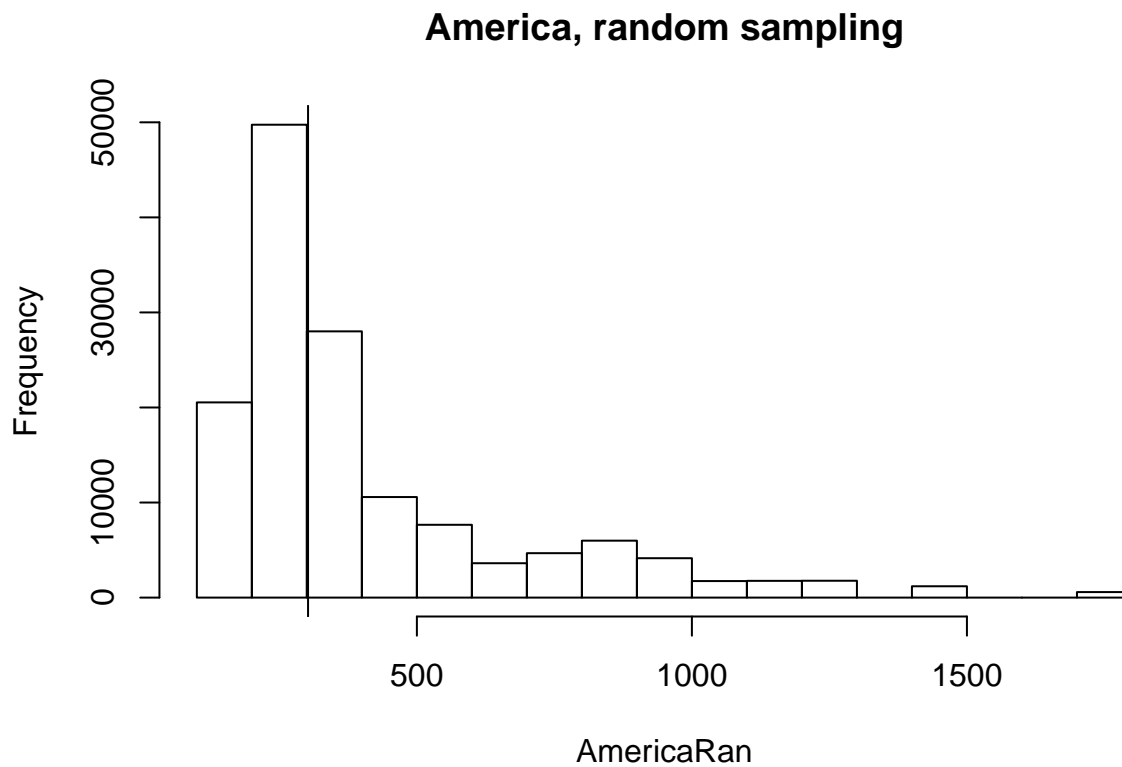
## [1] 422.2713

## [1] 59

## [1] 173

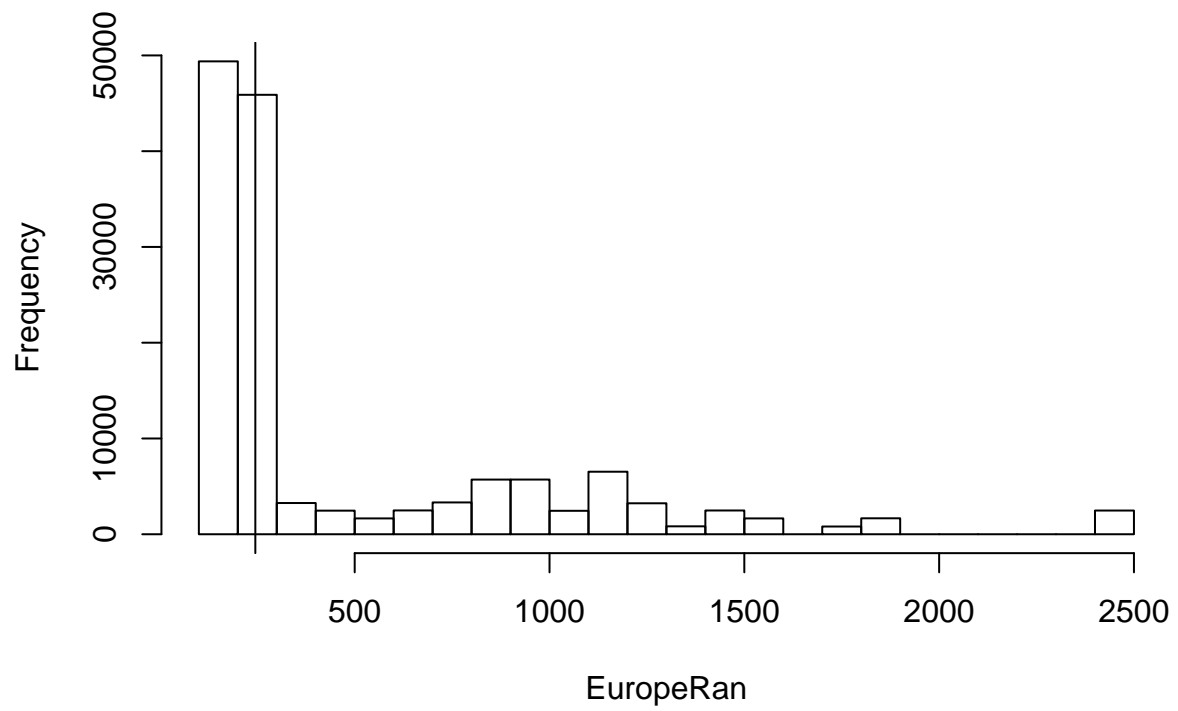
## [1] 142

## [1] 491.843
```

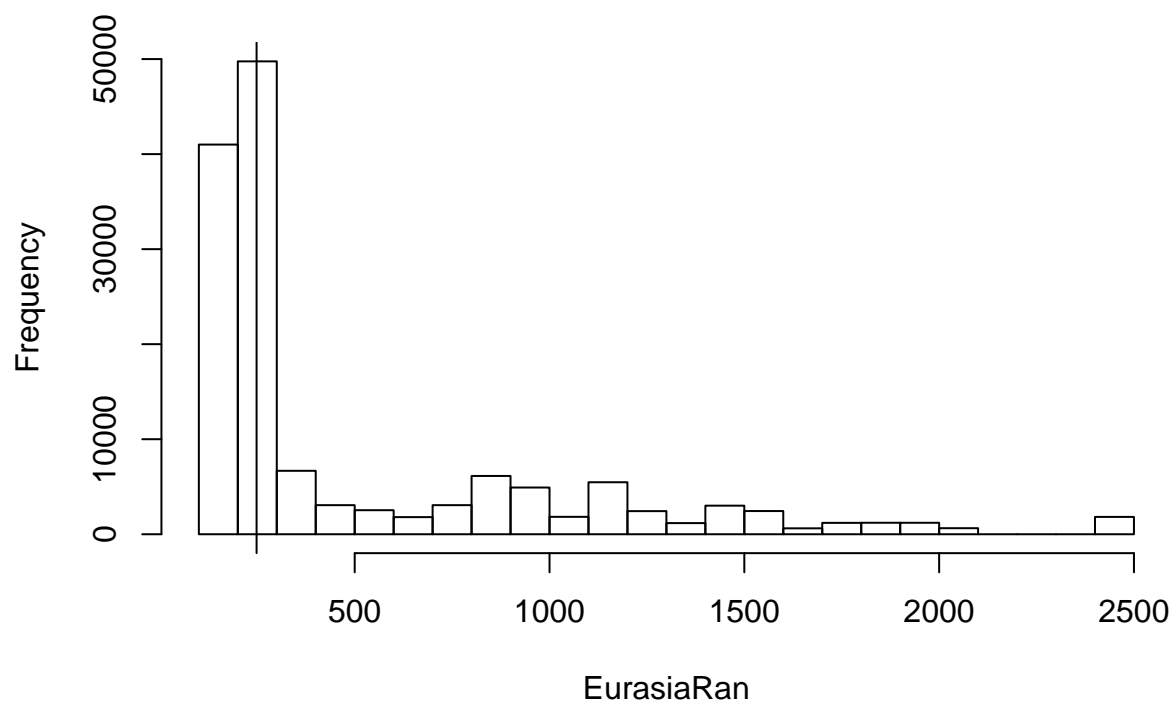




### Europe, random sampling



## Eurasia, random sampling



```
##
```

```
## Kruskal-Wallis rank sum test
```

```
##
```

```
## data: list(Africa, America, Eurasia, Europe)
```

```
## Kruskal-Wallis chi-squared = 32.935, df = 3, p-value = 3.324e-07
```

Kruskal-Wallis-Test:

Continent means differ ( $P = 3.3236569 \times 10^{-7}$ ) (still have to look into the details...)

continents, continental vs. insular

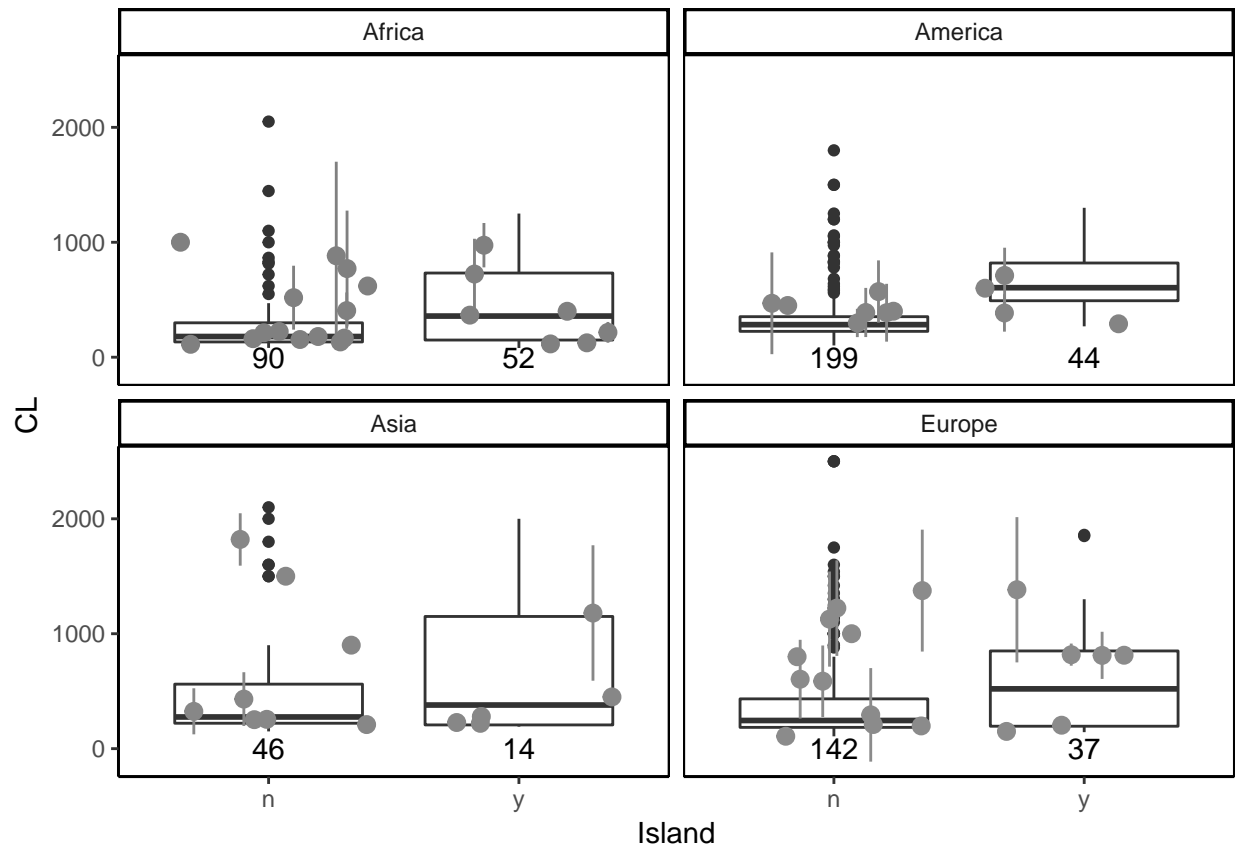


Figure 24: Boxplot: body size on different continents, genera summarised

## paleoTS analysis

all (continental and insular)

genera (all)

Table 8: paleoTS object, all data

tt	mm	vv	nn
0.0000005	401.9641	102306.64	4
0.0058500	314.1859	42607.58	18
0.0688500	506.3265	64620.11	8
0.4535000	516.4053	155241.85	7
1.2935000	593.8669	147507.20	12
2.1970000	971.8850	580540.76	8
3.0940000	658.0826	271043.73	9
4.4660000	785.0792	187937.61	8
6.2890000	1141.9375	584378.85	4
9.4270000	703.9570	195766.19	9
12.7140000	628.3020	285258.36	6
14.8950000	687.9619	169914.58	7
19.5000000	441.5420	78467.65	9

Table 9: Model-fitting results for testudinidae, genera, all

	logL	K	AICc	Akaike.wt
GRW	-81.31790	2	167.9691	0.161
URW	-82.05721	1	166.5144	0.332
Stasis	-80.16802	2	165.6694	0.507

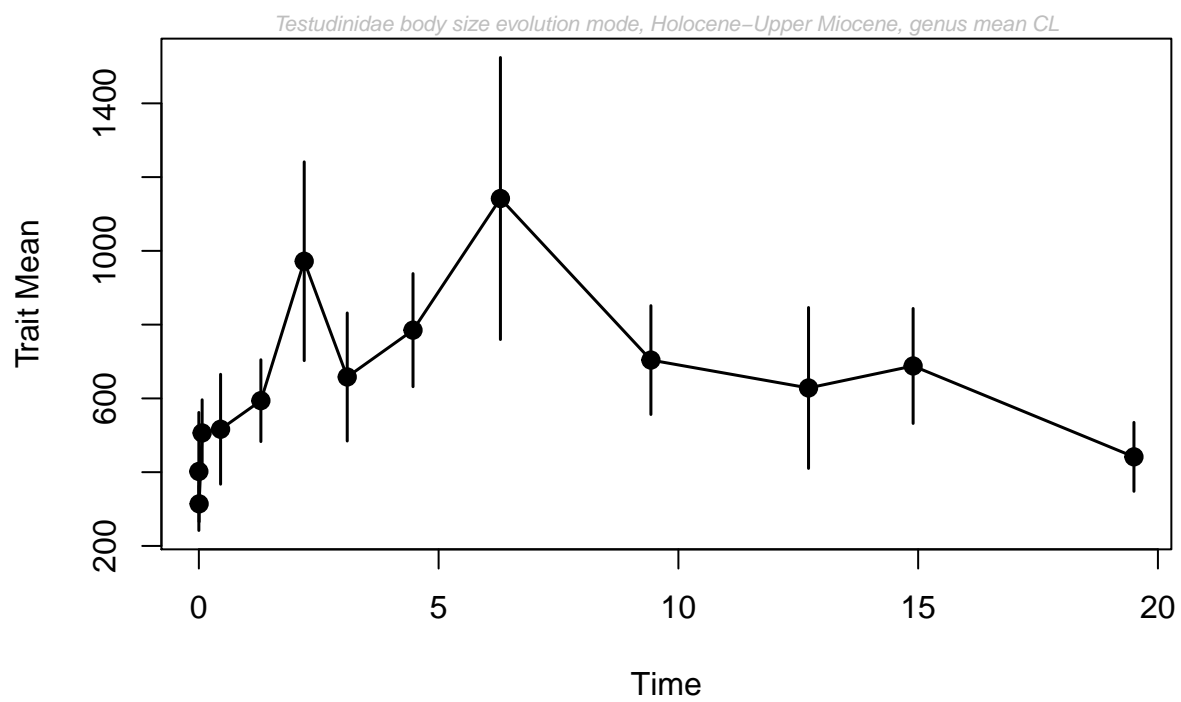


Figure 25: paleoTS plot with genus mean, all

## continental (excluding insular species)

### genera (continental)

Table 10: paleoTS object, continental

tt	mm	vv	nn
0.0000005	233.1680	8331.753	3
0.0058500	241.7917	13004.928	15
0.0688500	397.4606	50619.392	6
0.4535000	416.9341	200982.124	5
1.2935000	346.8484	66240.066	7
2.1970000	1103.1067	595507.933	7
3.0940000	725.4156	414253.291	6
4.4660000	771.3833	259173.082	6
6.2890000	1054.4375	531455.932	4
9.4270000	703.9570	195766.185	9
12.7140000	628.3020	285258.362	6
14.8950000	687.9619	169914.577	7
19.5000000	441.5420	78467.646	9

Table 11: Model-fitting results for testudinidae, genera, continental

	logL	K	AICc	Akaike.wt
GRW	-82.26287	2	169.8591	0.300
URW	-83.12577	1	168.6515	0.548
Stasis	-82.93984	2	171.2130	0.152

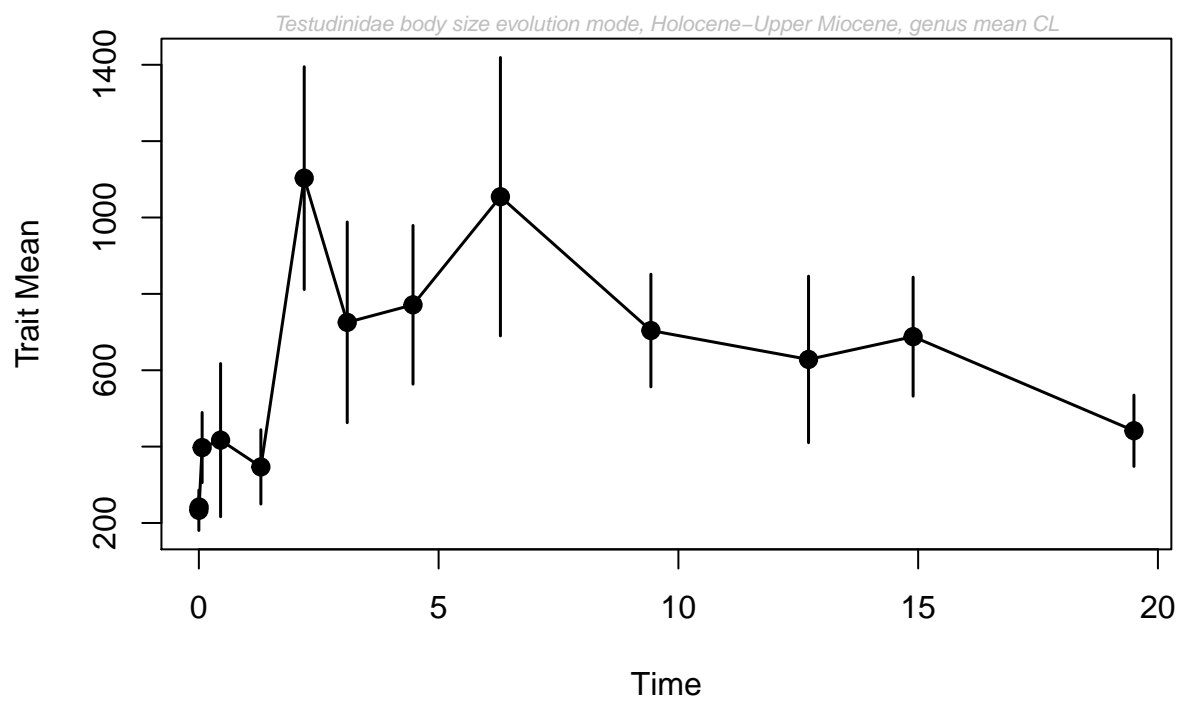


Figure 26: paleoTS plot with genus mean, continental

## insular (excluding continental)

### genera (insular)

Table 12: paleoTS object, insular

	tt	mm	vv	nn
0.0000005	860.9268		0.00	1
0.0058500	379.5354		68570.44	12
0.0688500	727.5938		14997.58	4
0.4535000	748.8333		142649.08	3
1.2935000	829.6744		112964.44	6
2.1970000	1178.3333		821158.33	3
3.0940000	449.4375		27058.77	4
4.4660000	826.1667		15196.06	2
6.2890000	1850.0000		0.00	1

Table 13: Model-fitting results for testudinidae, genera, insular

	logL	K	AICc	Akaike.wt
GRW	-68.57344	2	143.5469	0
URW	-75.76576	1	154.1982	0
Stasis	-60.41581	2	127.2316	1



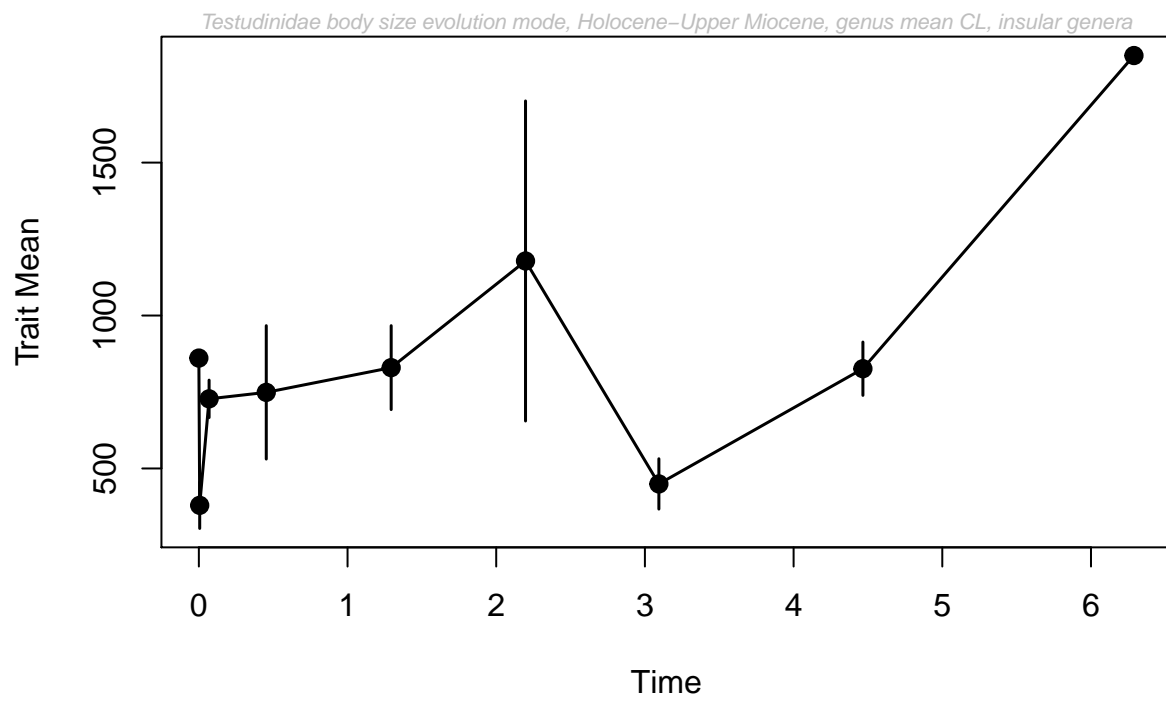


Figure 27: paleoTS plot with genus mean, insular

per continent

Europe, genera

Table 14: paleoTS object, Europe

mm	nn	vv	tt
148.8559	2	3338.406	0.00585
616.6667	3	138802.333	0.06885
377.8167	3	89203.953	0.45350
697.3717	5	218431.974	1.29350
895.0000	2	1110050.000	2.19700
453.3333	3	39433.333	3.09400
1215.8667	5	159317.256	4.46600
838.3750	2	875495.281	6.28900
800.0508	6	263434.389	9.42700
653.9625	5	351634.528	12.71400
772.0000	5	223154.375	14.89500
533.8533	5	183706.682	19.50000

Table 15: Model-fitting results for testudinidae, genera, Europe

	logL	K	AICc	Akaike.wt
GRW	-84.14010	2	173.7802	0.006
URW	-85.90727	1	174.2590	0.005
Stasis	-79.01365	2	163.5273	0.990

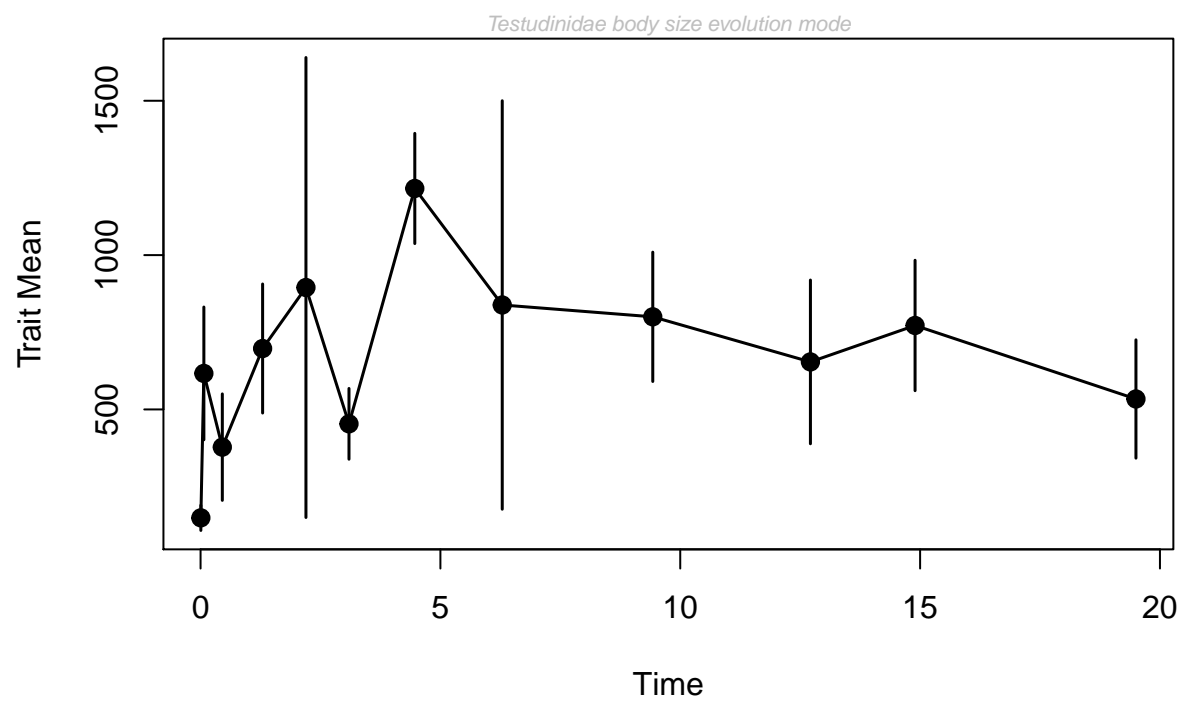


Figure 28: Genera, Europe

Europe, smaller original bins (see Table 2), genera, continental

Table 16: paleoTs object, Europe, continental

mm	nn	vv	tt
149.5381	2	3450.8267	0.00585
187.0000	1	0.0000	0.06885
205.4750	2	198.0050	0.45350
204.9292	2	23.1767	1.29350
1420.0000	1	0.0000	2.19700
232.5000	1	0.0000	3.09400
1475.6667	3	57926.3333	4.46600
663.3750	2	473607.7812	6.28900
800.0508	6	263434.3893	9.42700
653.9625	5	351634.5281	12.71400
772.0000	5	223154.3750	14.89500
533.8533	5	183706.6821	19.50000

Table 17: Model-fitting results for testudinidae, genera, Europe, continental

	logL	K	AICc	Akaike.wt
GRW	-87.93137	2	181.3627	0.009
URW	-92.56882	1	187.5821	0.000
Stasis	-83.21073	2	171.9215	0.991

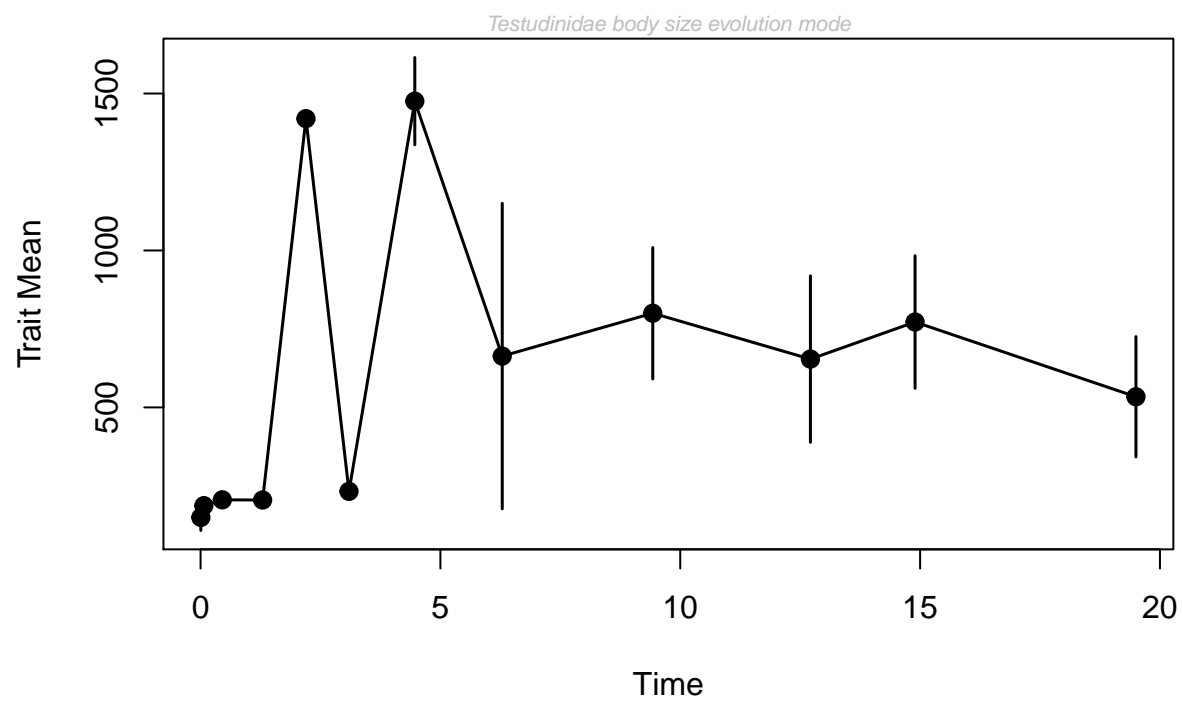


Figure 29: paleoTS, genera, Europe, continental

Europe, smaller original bins (see Table 2), genera, insular

Table 18: paleoTs object, Europe, insular

	mm	nn	vv	tt
	187.5077	1	0.00	0.00585
	831.5000	2	684.50	0.06885
	722.5000	1	0.00	0.45350
	835.0833	4	168423.36	1.29350
	1005.0000	2	1462050.00	2.19700
	451.6667	3	40558.33	3.09400
	826.1667	2	15196.06	4.46600
	1850.0000	1	0.00	6.28900

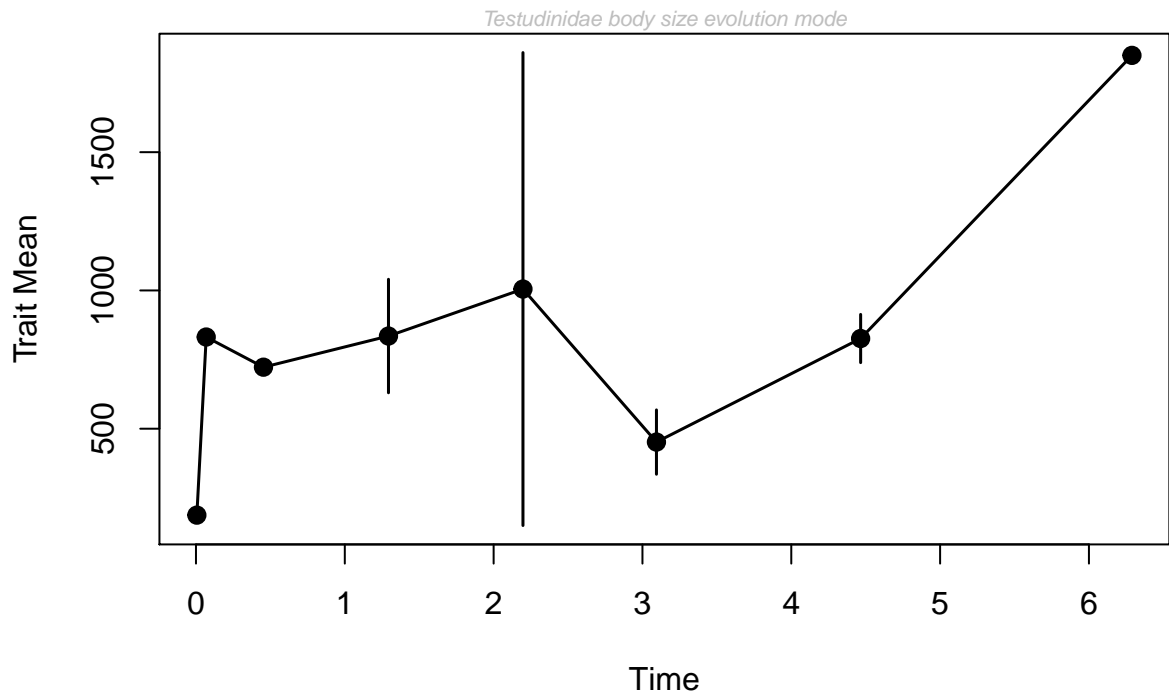


Figure 30: paleoTS, genera, Europe, insular

Table 19: Model-fitting results for testudinidae, genera, Europe,  
insular

	logL	K	AICc	Akaike.wt
GRW	-67.12192	2	141.2438	0.000
URW	-57.51634	1	117.8327	0.074
Stasis	-52.89638	2	112.7928	0.926

Eurasia, smaller original bins (See Table 2), genera

Table 20: paleoTS object, Eurasia

tt	mm	vv	nn
0.0000005	137.2637	0.000	1
0.0058500	236.8217	9760.467	5
0.0688500	530.0000	122579.333	4
0.4535000	377.8167	89203.953	3
1.2935000	777.5579	162641.142	7
2.1970000	909.6667	562217.222	5
3.0940000	892.0000	381770.000	5
4.4660000	1048.0556	296417.219	6
6.2890000	1208.9167	849651.021	3
9.4270000	800.0508	263434.389	6
12.7140000	653.9625	351634.528	5
14.8950000	772.0000	223154.375	5
19.5000000	513.8533	162399.349	5

Table 21: Model-fitting results for testudinidae, genera, Eurasia

	logL	K	AICc	Akaike.wt
GRW	-85.25195	2	175.8372	0.149
URW	-85.39072	1	173.1814	0.562
Stasis	-84.58890	2	174.5111	0.289



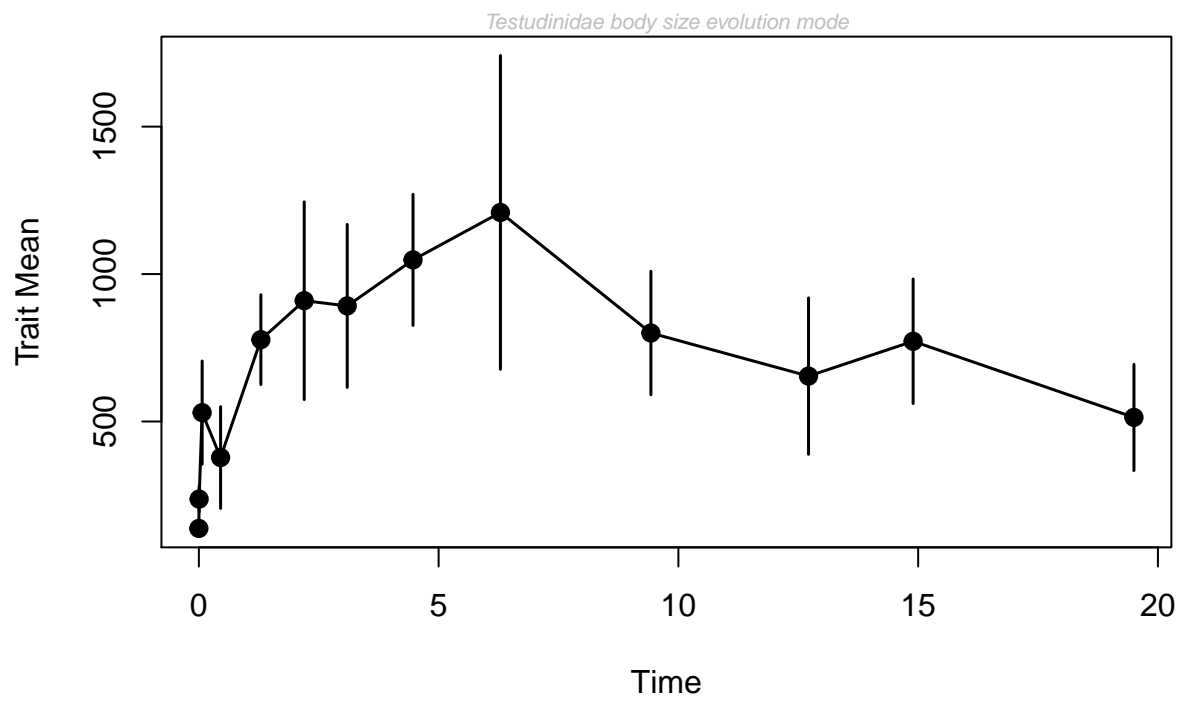


Figure 31: paleoTS, genera, Eurasia

Eurasia, smaller original bins (See Table 2), genera, continental

Table 22: paleoTS object, Eurasia, continental

tt	mm	vv	nn
0.0000005	137.2637	0.000	1
0.0058500	238.0120	9654.865	5
0.0688500	228.5000	3444.500	2
0.4535000	205.4750	198.005	2
1.2935000	595.5388	191487.404	4
2.1970000	1044.5833	442006.250	4
3.0940000	1110.8333	581102.083	3
4.4660000	1159.0000	439728.667	4
6.2890000	1092.2500	788605.188	3
9.4270000	800.0508	263434.389	6
12.7140000	653.9625	351634.528	5
14.8950000	772.0000	223154.375	5
19.5000000	513.8533	162399.349	5

Table 23: Model-fitting results for testudinidae, genera, Eurasia, continental

	logL	K	AICc	Akaike.wt
GRW	-82.20698	2	169.7473	0.222
URW	-82.42344	1	167.2469	0.776
Stasis	-87.19538	2	179.7241	0.002

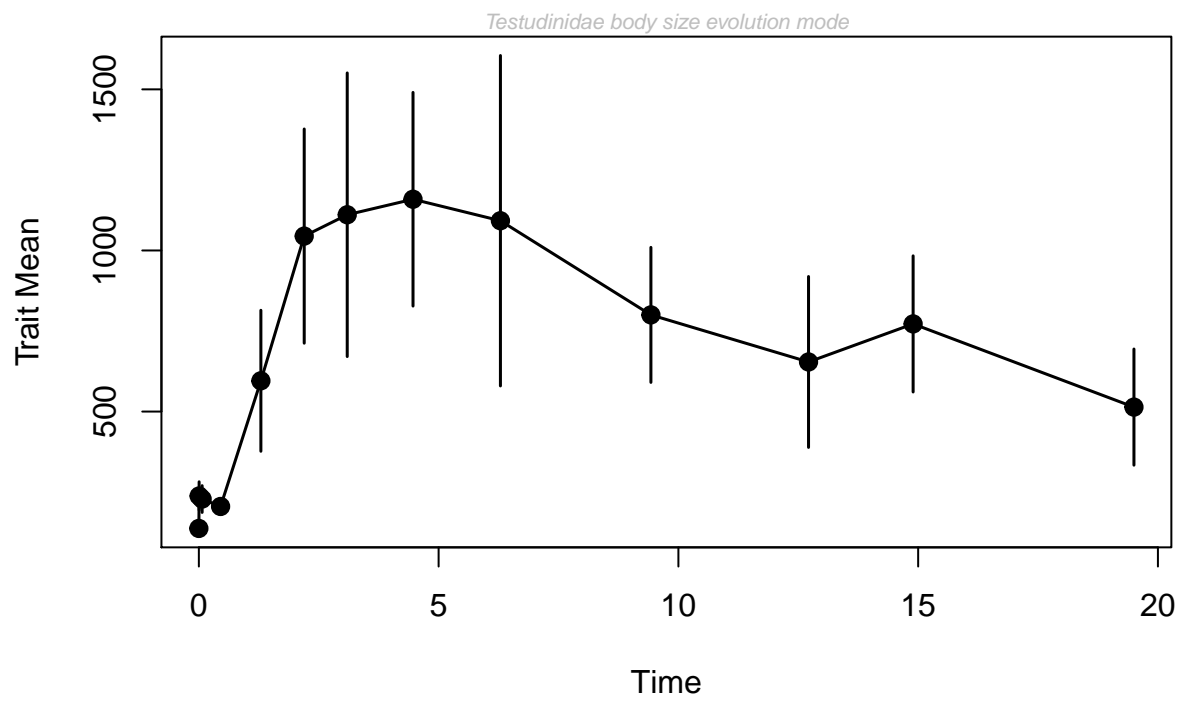


Figure 32: paleoTS, genera, Eurasia, continental

Eurasia, smaller original bins (See Table 2), genera, insular

Table 24: paleoTS object, Eurasia, insular

tt	mm	vv	nn
0.0000005	137.2637	0.000	1
0.0058500	271.4596	5668.485	4
0.0688500	644.3333	105436.333	3
0.4535000	722.5000	0.000	1
1.2935000	882.0356	105684.077	6
2.1970000	953.6667	652233.889	5
3.0940000	891.0000	383430.000	5
4.4660000	620.4444	134562.926	3
6.2890000	1900.0000	5000.000	2
19.5000000	800.0000	0.000	1

Table 25: Model-fitting results for testudinidae, genera, Eurasia, insular

	logL	K	AICc	Akaike.wt
GRW	-69.56419	2	145.1284	0.193
URW	-71.67437	1	145.9202	0.130
Stasis	-68.31026	2	142.6205	0.677

Table 26: Data set, fossil.

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Homopus	Homopus aerolatus	88.00	m	Modern	0.000001	n	A
Chersina	Chersina angulata	120.00	m	Modern	0.000001	n	A
Aldabrachelys	Aldabrachelys gigantea	870.00	m	Modern	0.000001	y	A
Chersina	Chersina angulata	170.00	m	Modern	0.000001	n	A
Indotestudo	Indotestudo travancorica	224.00	m	Modern	0.000001	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Cylindraspis	Cylindraspis vosmaeri	500.00	m	Modern	0.000001	y	A
Centrochelys	Centrochelys sulcata	435.00	m	Modern	0.000001	n	A
Kinixys	Kinixys homeana	193.00	m	Modern	0.000001	n	A
Stigmochelys	Stigmochelys pardalis	315.00	m	Modern	0.000001	n	A
Kinixys	Kinixys belliana	180.00	m	Modern	0.000001	n	A
Testudo	Testudo kenitrensis	132.00	mo	Middle Pleistocene	0.453500	n	A
Cylindraspis	Cylindraspis indica	600.00	m	Modern	0.000001	y	A
Psammobates	Psammobates geometricus	92.00	m	Modern	0.000001	n	A
Aldabrachelys	Aldabrachelys gigantea	800.00	m	Modern	0.000001	y	A
Cylindraspis	Cylindraspis triserrata	1100.00	m	Modern	0.000001	y	A
Astrochelys	Astrochelys yniphora	307.00	m	Modern	0.000001	y	A
Stigmochelys	Stigmochelys pardalis	405.00	m	Modern	0.000001	n	A
Astrochelys	Astrochelys radiata	334.00	m	Modern	0.000001	y	A
Stigmochelys	Stigmochelys pardalis	297.00	m	Modern	0.000001	n	A
Astrochelys	Astrochelys radiata	285.00	m	Modern	0.000001	y	A
Testudo	Testudo sp.	200.00	mf	Gelasian	2.500000	n	A
Astrochelys	Astrochelys radiata	242.00	m	Modern	0.000001	y	A
Astrochelys	Astrochelys radiata	355.00	m	Modern	0.000001	y	A
Pyxis	Pyxis planicauda	126.00	m	Modern	0.000001	y	A
Homopus	Homopus aerolatus	300.00	m	Modern	0.000001	n	A
Aldabrachelys	Aldabrachelys gigantea	770.00	m	Modern	0.000001	y	A
Aldabrachelys	Aldabrachelys gigantea	720.00	m	Modern	0.000001	y	A
Centrochelys	Centrochelys sulcata	215.00	m	Modern	0.000001	n	A
Homopus	Homopus solus	109.00	m	Modern	0.000001	n	A
Psammobates	Psammobates oculifer	101.00	m	Modern	0.000001	n	A
Homopus	Homopus signatus	94.00	m	Modern	0.000001	n	A
Kinixys	Kinixys belliana	194.00	m	Modern	0.000001	n	A
Kinixys	Kinixys belliana	230.00	m	Modern	0.000001	n	A
Kinixys	Kinixys belliana	174.00	m	Modern	0.000001	n	A
Psammobates	Psammobates geometricus	107.00	m	Modern	0.000001	n	A
Kinixys	Kinixys lobatsiana	200.00	m	Modern	0.000001	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Kinixys	Kinixys natalensis	160.00	m	Modern	0.000001	n	A
Chersina	Chersina angulata	202.00	m	Modern	0.000001	n	A
Chersina	Chersina angulata	351.00	m	Modern	0.000001	y	A
Aldabrachelys	Aldabrachelys gigantea	1030.00	m	Modern	0.000001	y	A
Chersina	Chersina angulata	160.00	m	Modern	0.000001	n	A
Chersina	Chersina angulata	148.00	m	Modern	0.000001	n	A
Chersina	Chersina angulata	181.00	m	Modern	0.000001	n	A
Psammobates	Psammobates tentorius	145.00	m	Modern	0.000001	n	A
Pyxis	Pyxis arachnoides	150.00	m	Modern	0.000001	y	A
Pyxis	Pyxis planicauda	160.00	m	Modern	0.000001	y	A
Stigmochelys	Stigmochelys pardalis	720.00	m	Modern	0.000001	n	A
Malacochersus	Malacochersus tornieri	153.00	m	Modern	0.000001	n	A
Chersina	Chersina angulata	179.30	m	Modern	0.000001	n	A
Aldabrachelys	Aldabrachelys gigantea	810.00	m	Modern	0.000001	y	A
Testudo	Testudo kleinmanni	144.00	m	Modern	0.000001	n	A
Astrochelys	Astrochelys yniphora	415.00	m	Modern	0.000001	y	A
Cylindraspis	Cylindraspis inepta	1000.00	m	Modern	0.000001	y	A
Cylindraspis	Cylindraspis peltastes	420.00	m	Modern	0.000001	y	A
Astrochelys	Astrochelys yniphora	486.00	m	Modern	0.000001	y	A
Pyxis	Pyxis planicauda	148.00	m	Modern	0.000001	y	A
Astrochelys	Astrochelys yniphora	426.00	m	Modern	0.000001	y	A
Pyxis	Pyxis arachnoides	110.00	m	Modern	0.000001	y	A
Aldabrachelys	“Aldabrachelys” laetoliensis	1000.00	mo	Piacencian	2.703000	n	A
Centrochelys	Centrochelys sulcata	830.00	m	Modern	0.000001	n	A
Homopus	Homopus fenestratus	90.00	mo	Piacencian	3.056500	n	A
Astrochelys	Astrochelys radiata	395.00	m	Modern	0.000001	y	A
Pyxis	Pyxis arachnoides	110.00	m	Modern	0.000001	y	A
Psammobates	Psammobates tentorius	116.00	m	Modern	0.000001	y	A
Pyxis	Pyxis planicauda	132.00	m	Modern	0.000001	y	A
Pyxis	Pyxis planicauda	114.00	m	Modern	0.000001	y	A
Pyxis	Pyxis planicauda	134.00	m	Modern	0.000001	y	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Homopus	Homopus signatus	106.00	m	Modern	0.000001	n	A
Kinixys	Kinixys erosa	164.00	m	Modern	0.000001	n	A
Pyxis	Pyxis arachnoides	111.00	m	Modern	0.000001	y	A
Mesocherus	Mesocherus orangeus	180.00	mo	Burdigalian/Aquitanian	17.250000	n	A
Pyxis	Pyxis arachnoides	80.00	m	Modern	0.000001	y	A
Pyxis	Pyxis arachnoides	144.00	m	Modern	0.000001	y	A
Kinixys	Kinixys erosa	400.00	m	Modern	0.000001	n	A
Kinixys	Kinixys homeana	223.00	m	Modern	0.000001	n	A
Kinixys	Kinixys belliana	157.00	m	Modern	0.000001	n	A
Kinixys	Kinixys belliana	162.00	m	Modern	0.000001	n	A
Chersina	Chersina angulata	166.40	m	Modern	0.000001	n	A
Chersina	Chersina angulata	171.60	m	Modern	0.000001	y	A
Chersina	Chersina angulata	136.00	m	Modern	0.000001	n	A
Mesocherus	Mesocherus orangeus	180.00	mo	Burdigalian/Aquitanian	17.250000	n	A
Chersina	Chersina angulata	161.30	m	Modern	0.000001	y	A
Kinixys	Kinixys erosa	271.00	m	Modern	0.000001	n	A
Psammobates	Psammobates oculifer	111.00	m	Modern	0.000001	n	A
Namibchersus	Namibchersus aff. namaquensis	550.00	mo	Burdigalian/Aquitanian	17.250000	n	A
Astrochelys	Astrochelys radiata	305.00	m	Modern	0.000001	y	A
Impregnochelys	Impregnochelys pachytectis	620.00	m	Burdigalian/Aquitanian	19.500000	n	A
Stigmochelys	Stigmochelys pardalis	345.00	m	Modern	0.000001	n	A
Stigmochelys	Stigmochelys pardalis	350.00	m	Modern	0.000001	n	A
Aldabrachelys	Aldabrachelys gigantea	875.00	m	Modern	0.000001	y	A
Namibchersus	Namibchersus aff. namaquensis	1100.00	mo	Burdigalian/Aquitanian	17.250000	n	A
Geochelone	Geochelone sp.	1446.00	eh	Tortonian	8.476000	n	A
Testudo	Testudo sp.	184.00	mf	Gelasian	2.500000	n	A
Chersina	Chersina angulata	153.50	m	Modern	0.000001	n	A
Psammobates	Psammobates oculifer	119.00	m	Modern	0.000001	n	A
Psammobates	Psammobates oculifer	107.00	m	Modern	0.000001	n	A
Psammobates	Psammobates geometricus	165.00	m	Modern	0.000001	n	A
Aldabrachelys	Aldabrachelys grandidieri	1250.00	mo	Modern	0.001500	y	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Psammobates	Psammobates oculifer	103.00	m	Modern	0.000001	n	A
Centrochelys	Centrochelys atlantica	400.00	mo	Lower Pleistocene	1.300000	y	A
Pyxis	Pyxis arachnoides	86.00	m	Modern	0.000001	y	A
Pyxis	Pyxis arachnoides	154.00	m	Modern	0.000001	y	A
Psammobates	Psammobates geometricus	118.00	m	Modern	0.000001	n	A
Aldabrachelys	Aldabrachelys gigantea	1190.00	m	Modern	0.000001	y	A
Psammobates	Psammobates tentorius	95.00	m	Modern	0.000001	n	A
Psammobates	Psammobates tentorius	81.00	m	Modern	0.000001	n	A
Psammobates	Psammobates tentorius	111.00	m	Modern	0.000001	n	A
Astrochelys	Astrochelys yniphora	370.00	m	Modern	0.000001	y	A
Testudo	Testudo aff. kenitrensis	142.00	mf	Gelasian	2.500000	n	A
Pyxis	Pyxis planicauda	120.00	m	Modern	0.000001	y	A
Psammobates	Psammobates oculifer	147.00	m	Modern	0.000001	n	A
Namibchersus	Namibchersus namaquensis	815.00	m	Burdigalian/Aquitania	18.000000	n	A
Psammobates	Psammobates oculifer	105.00	m	Modern	0.000001	n	A
Kinixys	Kinixys sp.	268.00	ef	Modern	0.009500	n	A
Aldabrachelys	Aldabrachelys grandidieri	1240.00	m	Modern	0.001500	y	A
Namibchersus	Namibchersus namaquensis	264.00	m	Burdigalian/Aquitania	19.500000	n	A
Psammobates	Psammobates geometricus	105.00	m	Modern	0.000001	n	A
Chersina	Chersina angulata	162.00	m	Modern	0.000001	n	A
Astrochelys	Astrochelys radiata	400.00	m	Modern	0.000001	y	A
Astrochelys	Astrochelys yniphora	446.00	m	Modern	0.000001	y	A
Homopus	Homopus boulengeri	110.00	m	Modern	0.000001	n	A
Astrochelys	Astrochelys yniphora	361.00	m	Modern	0.000001	y	A
Aldabrachelys	Aldabrachelys abrupta	1000.00	mo	Modern	0.002000	y	A
Namibchersus	Namibchersus namaquensis	470.00	m	Burdigalian/Aquitania	18.000000	n	A
Namibchersus	Namibchersus namaquensis	254.00	m	Burdigalian/Aquitania	18.000000	n	A
Namibchersus	Namibchersus aff. namaquensis	440.00	mo	Burdigalian/Aquitania	17.250000	n	A
Mesocherus	Mesocherus orangeus	200.00	mo	Burdigalian/Aquitania	17.250000	n	A
Testudo	Testudo oughlamensis	120.00	mo	Gelasian	2.500000	n	A
Geochelone	Geochelone stromeri	425.00	m	Zanclean	4.466000	n	A



Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Mesocherus	Mesocherus orangeus	180.00	mo	Burdigalian/Aquitanian	17.250000	n	A
Chersina	Chersina angulata	181.90	m	Modern	0.000001	y	A
Geochelone	Geochelone stromeri	350.00	m	Zanclean	4.466000	n	A
Mesocherus	Mesocherus orangeus	160.00	mo	Burdigalian/Aquitanian	17.250000	n	A
Malacochersus	Malacochersus tornieri	180.00	m	Modern	0.000001	n	A
Homopus	Homopus femoralis	168.00	m	Modern	0.000001	n	A
Centrochelys	Centrochelys marocana	2050.00	mo	Gelasian	2.500000	n	A
Kinixys	Kinixys spekii	220.00	m	Modern	0.000001	n	A
Psammobates	Psammobates antiquorum	107.80	m	Lower Pleistocene	1.800000	n	A
Geochelone	Geochelone crassa	865.00	mf	Zanclean	4.145000	n	A
Namibchersus	Namibchersus namaquensis	470.00	m	Burdigalian/Aquitanian	18.000000	n	A
Namibchersus	Namibchersus namaquensis	300.00	m	Burdigalian/Aquitanian	19.500000	n	A
Aldabrachelys	Aldabrachelys gigantea	1140.00	m	Modern	0.000001	y	A
Geochelone	Geochelone elegans	208.00	m	Modern	0.000001	n	A
Geochelone	Geochelone elegans	245.00	m	Modern	0.000001	n	A
Geochelone	Geochelone elegans	221.00	m	Modern	0.000001	n	A
Geochelone	Geochelone elegans	220.00	m	Modern	0.000001	y	A
Geochelone	Geochelone elegans	221.00	m	Modern	0.000001	n	A
Geochelone	Geochelone platynota	222.00	m	Modern	0.000001	n	A
Indotestudo	Indotestudo forstenii	202.00	m	Modern	0.000001	y	A
Indotestudo	Indotestudo travancorica	249.70	m	Modern	0.000001	n	A
Indotestudo	Indotestudo forstenii	309.00	m	Modern	0.000001	y	A
Aldabrachelys	Aldabrachelys ? sp.	1500.00	mo	Piacencian	3.000000	n	A
Indotestudo	Indotestudo forstenii	199.00	m	Modern	0.000001	y	A
Indotestudo	Indotestudo elongata	244.20	m	Modern	0.000001	n	A
Indotestudo	Indotestudo travancorica	244.20	m	Modern	0.000001	n	A
gen.	gen. indet.	900.00	mo	Lower Pleistocene	1.684500	n	A
Testudo	Testudo changshanensis	330.00	mo	Lower Pleistocene	1.684500	n	A
Indotestudo	Indotestudo elongata	276.00	m	Modern	0.000001	n	A
Indotestudo	Indotestudo elongata	235.00	m	Modern	0.000001	n	A
Indotestudo	Indotestudo elongata	208.00	m	Modern	0.000001	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Indotestudo	Indotestudo elongata	166.00	m	Modern	0.000001	n	A
Geochelone	Geochelone sp.	800.00	ev	Burdigalian/Aquitanian	16.500000	n	A
Megalochelys	Megalochelys sp.	1200.00	ev	Lower Pleistocene	0.900000	y	A
Testudo	Testudo graeca	280.00	m	Modern	0.000001	y	A
Manouria	Manouria emys	212.00	m	Modern	0.000001	n	A
Manouria	Manouria emys	445.00	m	Modern	0.000001	n	A
Manouria	Manouria emys	330.00	m	Modern	0.000001	n	A
Ergilemys	Ergilemys oskarkuhni	198.00	m	Zanclean	3.950000	n	A
Testudo	Testudo transcaucasia	150.00	mo	Gelasian	2.190500	n	A
Manouria	Manouria impressa	165.00	m	Modern	0.000001	n	A
Testudo	Testudo horsfieldii	280.00	m	Modern	0.000001	n	A
Indotestudo	Indotestudo travancorica	219.60	m	Modern	0.000001	n	A
Aldabrachelys	Aldabrachelys ? sp.	1500.00	mo	Piacencian	3.000000	n	A
Manouria	Manouria emys	600.00	m	Modern	0.000001	n	A
Manouria	Manouria impressa	275.00	m	Modern	0.000001	n	A
Megalochelys	Megalochelys sondaari	1000.00	ec	Lower Pleistocene	1.350000	y	A
Testudo	Testudo graeca	250.00	m	Modern	0.000001	n	A
Megalochelys	Megalochelys sp.	191.40	m	Lower Pleistocene	1.684500	y	A
Geochelone	Geochelone platynota	300.00	m	Modern	0.000001	n	A
Megalochelys	Megalochelys atlas	1400.00	mo	Gelasian	2.000000	y	A
Indotestudo	Indotestudo elongata	270.00	m	Upper Pleistocene	0.037000	n	A
Manouria	Manouria oyamai	450.00	mo	Modern	0.011000	y	A
Indotestudo	Indotestudo forstenii	200.50	m	Modern	0.000001	y	A
Indotestudo	Indotestudo elongata	219.60	m	Modern	0.000001	n	A
Ergilemys	Ergilemys oskarkuhni	220.00	m	Zanclean	3.950000	n	A
Testudo	Testudo ranovi	200.00	mo	Gelasian	2.190500	n	A
Megalochelys	Megalochelys atlas	1600.00	mo	Piacencian	3.094000	n	A
Megalochelys	Megalochelys atlas	1600.00	mo	Piacencian	3.094000	n	A
Manouria	Manouria impressa	350.00	m	Modern	0.000001	n	A
Megalochelys	Megalochelys sp.	2000.00	m	Lower Pleistocene	1.684500	y	A
Manouria	Manouria punjabiensis	900.00	mo	Gelasian	2.190500	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Indotestudo	Indotestudo elongata	360.00	m	Modern	0.000001	n	A
Indotestudo	Indotestudo travancorica	331.00	m	Modern	0.000001	n	A
Megalochelys	Megalochelys atlas	1800.00	m	Messinian	5.423000	n	A
Megalochelys	Megalochelys sondaari	818.00	ec	Lower Pleistocene	1.350000	y	A
Megalochelys	Megalochelys atlas	1650.00	mo	Gelasian	2.000000	y	A
Megalochelys	Megalochelys atlas	2000.00	mo	Gelasian	2.190500	n	A
Megalochelys	Megalochelys atlas	2100.00	mo	Messinian	5.423000	n	A
Manouria	Manouria emys	600.00	m	Modern	0.000001	n	A
Geochelone	Geochelone elegans	380.00	m	Modern	0.000001	n	A
Testudo	Testudo graeca	300.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis marcanoi	778.00	eh	Upper Pleistocene	0.069000	y	A
Chelonoidis	Chelonoidis sp.	440.00	mo	Modern	0.001000	y	A
Gopherus	Gopherus morafkai	299.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis alburyorum	424.00	m	Piacencian	3.201500	y	A
Chelonoidis	Chelonoidis sp.	400.00	mo	Upper Pleistocene	0.069000	y	A
Chelonoidis	Chelonoidis marcanoi	614.00	eh	Upper Pleistocene	0.069000	y	A
Gopherus	Gopherus flavomarginatus	450.00	m	Lower Pleistocene	1.050000	n	A
Gopherus	Gopherus berlandieri	256.30	m	Lower Pleistocene	1.050000	n	A
Chelonoidis	Chelonoidis cubensis	1139.00	ef	Middle Pleistocene	0.393500	y	A
Chelonoidis	Chelonoidis monensis	500.00	m	Upper Pleistocene	0.064500	y	A
Hesperotestudo	Hesperotestudo sp.	1500.00	mo	Lower Pleistocene	0.966000	n	A
Geochelone	Geochelone sp.	340.00	mo	Lower Pleistocene	1.050000	n	A
Chelonoidis	Chelonoidis marcanoi	530.00	eh	Upper Pleistocene	0.069000	y	A
Gopherus	Gopherus donlatoi	580.00	mo	Modern	0.000175	n	A
Chelonoidis	Chelonoidis sombreroensis	990.00	m	Upper Pleistocene	0.069000	y	A
Chelonoidis	Chelonoidis marcanoi	767.00	eh	Upper Pleistocene	0.069000	y	A
Chelonoidis	Chelonoidis alburyorum	428.00	m	Piacencian	3.201500	y	A
Chelonoidis	Chelonoidis sp.	750.00	mo	Lower Pleistocene	1.357000	y	A
Chelonoidis	Chelonoidis sp.	600.00	mo	Lower Pleistocene	1.357000	y	A
Hesperotestudo	Hesperotestudo bermudae	270.00	m	Middle Pleistocene	0.310000	y	A
Chelonoidis	Chelonoidis alburyorum	453.00	m	Piacencian	3.201500	y	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Gopherus	Gopherus flavomarginatus	400.00	m	Modern	0.000001	n	A
Gopherus	Gopherus berlandieri	240.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis sp.	660.00	mo	Modern	0.001000	y	A
Chelonoidis	Chelonoidis sp.	800.00	mo	Lower Pleistocene	1.357000	y	A
Chelonoidis	Chelonoidis sp.	550.00	mo	Modern	0.001000	y	A
Chelonoidis	Chelonoidis sp.	854.00	mo	Modern	0.001000	y	A
Chelonoidis	Chelonoidis sp.	600.00	mo	Upper Pleistocene	0.069000	y	A
Gopherus	Gopherus berlandieri	195.00	m	Lower Pleistocene	1.050000	n	A
Chelonoidis	Chelonoidis alburyorum	466.00	m	Piacencian	3.201500	y	A
Hesperotestudo	Hesperotestudo bermudae	500.00	m	Middle Pleistocene	0.310000	y	A
Chelonoidis	Chelonoidis sp.	512.00	mo	Modern	0.001000	y	A
Chelonoidis	Chelonoidis sp.	550.00	m	Modern	0.001000	y	A
Ergilemys	Ergilemys sp.	1000.00	m	Langhian	14.000000	n	E
Testudo	Testudo graeca	195.00	mf	Lower Pleistocene	1.770000	n	E
Testudo	Testudo hermanni	138.50	m	Modern	0.000001	n	E
Testudo	Testudo lunellensis	194.00	mf	Middle Pleistocene	0.450000	n	E
Titanochelon	Titanochelon bacharidisi	900.00	mo	Zanclean	3.950000	n	E
Paleotestudo	Paleotestudo antiqua	183.70	m	Serravallian	12.150000	n	E
Paleotestudo	Paleotestudo antiqua	229.00	mf	Serravallian	13.000000	n	E
Pyxis	Pyxis arachnoides	108.00	m	Modern	0.000001	n	E
Testudo	Testudo hermanni	145.90	m	Modern	0.000001	y	E
Titanochelon	Titanochelon sp.	1420.00	mo	Gelasian	1.850000	n	E
Centrochelys	Centrochelys robusta	850.00	mo	Zanclean	4.917000	y	E
Testudo	Testudo marginata	246.00	m	Modern	0.000001	n	E
Testudo	Testudo horsfieldii	114.00	m	Modern	0.000001	n	E
Cheirogaster	Cheirogaster sp.	1000.00	mo	Serravallian	12.200000	n	E
Testudo	Testudo graeca	178.20	m	Modern	0.000001	n	E
Eurotestudo	Eurotestudo aff. hermanni	179.30	mf	Middle Pleistocene	0.740000	n	E
Titanochelon	Titanochelon bacharidisi	1164.00	m	Zanclean	3.950000	n	E
Testudo	Testudo marginata	242.50	m	Modern	0.000001	y	E
Testudo	Testudo hermanni	130.00	m	Modern	0.000001	n	E

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Testudo	Testudo horsfieldii	136.00	m	Modern	0.000001	n	E
Testudo	Testudo graeca	200.00	mf	Messinian	5.500000	n	E
Testudo	Testudo kalksburgensis	225.00	mo	Burdigalian/Aquitania	18.000000	n	E
Testudo	Testudo horsfieldii	132.00	m	Modern	0.000001	n	E
Testudo	Testudo brevitesta	165.00	mf	Piacencian	2.600000	n	E
Testudo	Testudo hermanni	200.00	m	Modern	0.000001	y	E
Testudo	Testudo hermanni	168.30	m	Modern	0.000001	y	E
Testudo	Testudo marginata	310.00	m	Lower Pleistocene	1.300000	y	E
Centrochelys	Centrochelys robusta	1200.00	ev	Lower Pleistocene	1.300000	y	E
Testudo	Testudo graeca	167.00	m	Messinian	5.500000	n	E
Eurotestudo	Eurotestudo cf. hermanni	150.00	mo	Gelasian	2.000000	y	E
Titanochelon	Titanochelon bacharidisi	900.00	mo	Zanclean	3.950000	n	E
Testudo	Testudo hermanni	143.50	m	Modern	0.000001	y	E
gen.	gen. indet.	270.00	mo	Burdigalian/Aquitania	16.400000	n	E
Testudo	Testudo marginata	290.00	m	Modern	0.000001	n	E
Centrochelys	Centrochelys burchardi	940.00	mo	Middle Pleistocene	0.435000	y	E
Testudo	Testudo lunellensis	260.70	mf	Middle Pleistocene	0.450000	n	E
Geochelone	Geochelone s. l.	1750.00	mo	Zanclean	4.466000	n	E
Testudo	Testudo marginata	210.00	m	Lower Pleistocene	1.720000	n	E
Testudo	Testudo hermanni	183.30	m	Modern	0.000001	y	E
Testudo	Testudo hermanni	196.00	m	Modern	0.000001	n	E
Testudo	Testudo hermanni	176.90	m	Modern	0.000001	n	E
Testudo	Testudo graeca	194.60	m	Modern	0.000001	n	E
Testudo	Testudo hermanni	250.00	m	Modern	0.000001	n	E
Paleotestudo	Paleotestudo sp.	179.30	m	Burdigalian/Aquitania	16.550000	n	E
gen.	gen. indet.	660.00	m	Tortonian	8.750000	n	E
Testudo	Testudo marginata	400.00	m	Modern	0.000001	n	E
Testudo	Testudo hermanni	176.60	m	Modern	0.000001	y	E
Testudo	Testudo catalaunica	232.00	m	Serravallian	12.350000	n	E
gen.	gen. indet.	1000.00	mo	Langhian	14.700000	n	E
Paleotestudo	Paleotestudo sp.	261.00	mf	Tortonian	9.500000	n	E

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
gen.	gen. indet.	270.00	mo	Serravallian	12.200000	n	E
Paleotestudo	Paleotestudo antiqua	275.00	mf	Langhian	15.000000	n	E
Testudo	Testudo horsfieldii	123.00	m	Modern	0.000001	n	E
Testudo	Testudo marginata	242.50	m	Modern	0.000001	y	E
Testudo	Testudo sp.	200.00	mf	Messinian	6.165000	n	E
Cheirogaster	Cheirogaster sp.	925.00	ef	Lower Pleistocene	0.965000	y	E
Titanochelon	Titanochelon cf. perpiniana	1001.00	mo	Burdigalian/Aquitania	16.370000	n	E
Testudo	Testudo marginata	250.00	m	Modern	0.000001	y	E
Testudo	Testudo lunellensis	231.00	ev	Middle Pleistocene	0.453500	n	E
Testudo	Testudo sp.	2500.00	mf	Zanclean	3.900000	n	E
Centrochelys	Centrochelys burchardi	500.00	mo	Middle Pleistocene	0.435000	y	E
Cheirogaster	Cheirogaster sp.	1170.00	m	Tortonian	10.250000	n	E
Testudo	Testudo sp.	1200.00	mf	Zanclean	3.960000	n	E
Paleotestudo	Paleotestudo antiqua	145.00	mf	Serravallian	13.000000	n	E
Testudo	Testudo hermanni	160.00	m	Modern	0.000001	y	E
Testudo	Testudo hermanni	157.00	m	Modern	0.000001	y	E
Eurotestudo	Testudo hermanni	133.10	mf	Lower Pleistocene	1.220000	n	E
Testudo	Testudo marginata	246.00	m	Modern	0.000001	n	E
Testudo	Testudo marginata	290.00	m	Lower Pleistocene	1.300000	y	E
Testudo	Testudo kalksburgensis	230.00	m	Burdigalian/Aquitania	19.965000	n	E
Testudo	Testudo marginata	246.70	m	Modern	0.000001	n	E
Testudo	Testudo kalksburgensis	275.00	m	Langhian	14.500000	n	E
Testudo	Testudo lunellensis	176.00	mo	Middle Pleistocene	0.453500	n	E
Paleotestudo	Paleotestudo antiqua	240.00	mf	Serravallian	13.600000	n	E
Centrochelys	Centrochelys robusta	1100.00	mo	Zanclean	4.917000	y	E
Testudo	Testudo catalaunica	107.00	m	Tortonian	11.500000	n	E
Testudo	Testudo brevitesta	300.00	mf	Piacencian	2.600000	n	E
gen.	gen. indet.	813.00	ef	Upper Pleistocene	0.012500	y	E
Testudo	Testudo hermanni	147.00	m	Modern	0.000001	n	E
Centrochelys	Centrochelys vulcanica	610.00	mo	Piacencian	3.094000	y	E
Eurotestudo	Eurotestudo hermanni	170.50	mf	Middle Pleistocene	0.600000	n	E

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Testudo	Testudo horsfieldii	111.00	m	Modern	0.000001	n	E
Titanochelon	Titanochelon sp.	520.00	mo	Piacencian	2.600000	y	E
Paleotestudo	Paleotestudo cf. sp.	270.00	mo	Langhian	14.700000	n	E
Testudo	Testudo burgenlandica	112.00	m	Tortonian	8.750000	n	E
Testudo	Testudo promarginata	310.00	mf	Burdigalian/Aquitania	18.000000	n	E
Centrochelys	Centrochelys burchardi	800.00	m	Middle Pleistocene	0.435000	y	E
Testudo	Testudo steinheimensis	111.00	m	Serravallian	12.150000	n	E
Paleotestudo	Paleotestudo antiqua	152.00	m	Serravallian	13.000000	n	E
Paleotestudo	Paleotestudo antiqua	185.00	mf	Serravallian	13.000000	n	E
Titanochelon	Titanochelon bacharidisi	1196.00	m	Zanclean	3.950000	n	E
gen.	gen. indet.	880.00	m	Tortonian	8.750000	n	E
Testudo	Testudo hermanni	154.00	m	Modern	0.000001	n	E
Testudo	Testudo hermanni	173.00	m	Modern	0.000001	y	E
Testudo	Testudo hermanni	161.00	m	Modern	0.000001	n	E
Testudo	Testudo hermanni	195.00	m	Modern	0.000001	y	E
Titanochelon	Titanochelon perpiniana	1140.00	m	Zanclean	3.900000	n	E
Geochelone	Geochelone sp.	1000.00	m	Burdigalian/Aquitania	16.650000	n	E
Testudo	Testudo pecorinii	225.00	m	Piacencian	3.094000	y	E
Titanochelon	Titanochelon bolivari	1353.00	mo	Serravallian	12.500000	n	E
Testudo	Testudo cf. graeca	185.00	m	Zanclean	3.900000	n	E
Cheirogaster	Cheirogaster sp.	1540.00	ef	Tortonian	8.300000	n	E
Testudo	Testudo sp.	245.00	m	Tortonian	8.300000	n	E
Eurotestudo	Eurotestudo globosa	263.00	m	Lower Pleistocene	1.800000	n	E
Cheirogaster	Cheirogaster sp.	1500.00	e	Serravallian	13.800000	n	E
Cheirogaster	Cheirogaster gymnesica	739.00	ef	Zanclean	4.450000	y	E
Paleotestudo	Paleotestudo antiqua	180.00	m	Serravallian	13.000000	n	E
Paleotestudo	Paleotestudo cf. sp.	270.00	mo	Serravallian	12.400000	n	E
Eurotestudo	Eurotestudo hermanni	237.60	mf	Middle Pleistocene	0.600000	n	E
Eurotestudo	Eurotestudo aff. hermanni	194.70	mf	Middle Pleistocene	0.740000	n	E
Titanochelon	Titanochelon schafferi	2500.00	mo	Zanclean	4.466000	n	E
Paleotestudo	Paleotestudo cf. antiqua	113.00	mf	Burdigalian/Aquitania	17.300000	n	E

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Testudo	Testudo marginata	241.70	m	Modern	0.000001	n	F
Titanochelon	Titanochelon bolivari	1100.00	mo	Langhian	15.000000	n	F
Testudo	Testudo sp.	245.00	m	Tortonian	8.300000	n	F
Paleotestudo	Paleotestudo antiqua	195.00	mf	Serravallian	13.000000	n	F
Testudo	Testudo cf. promarginata	250.00	m	Tortonian	8.300000	n	F
Testudo	Testudo sp.	245.00	m	Tortonian	8.300000	n	F
Cheirogaster	Cheirogaster richardi	1155.00	mo	Tortonian	10.400000	n	F
Centrochelys	Centrochelys burchardi	650.00	mo	Middle Pleistocene	0.435000	y	F
Titanochelon	Titanochelon cf. bolivari	1600.00	ef	Langhian	14.895000	n	F
Titanochelon	Titanochelon bolivari	1250.00	mo	Langhian	15.000000	n	F
Titanochelon	Titanochelon cf. bolivari	1300.00	ev	Langhian	14.895000	n	F
Paleotestudo	Paleotestudo sp.	270.00	mf	Tortonian	9.500000	n	F
Paleotestudo	Paleotestudo antiqua	159.50	m	Serravallian	13.000000	n	F
Paleotestudo	Paleotestudo antiqua	213.00	mf	Serravallian	13.600000	n	F
“Hadrianus”	“Hadrianus sp.”	1000.00	m	Tortonian	8.300000	n	F
Testudo	Testudo sp.	245.00	m	Tortonian	8.300000	n	F
Titanochelon	Titanochelon schafferi	1850.00	m	Messinian	6.250000	y	F
Paleotestudo	Paleotestudo antiqua	191.00	mf	Serravallian	13.600000	n	F
Testudo	Testudo amiatae	140.00	mo	Messinian	5.815000	n	F
Testudo	Testudo sp.	245.00	m	Tortonian	8.300000	n	F
Testudo	Testudo catalaunica	175.00	m	Tortonian	11.500000	n	F
Testudo	Testudo rectogularis	213.00	mo	Burdigalian/Aquitania	16.370000	n	F
Eurotestudo	Eurotestudo hermanni	284.00	mf	Lower Pleistocene	1.350000	n	F
Centrochelys	Centrochelys robusta	600.00	ev	Lower Pleistocene	1.300000	y	F
Paleotestudo	Paleotestudo antiqua	240.00	m	Serravallian	13.000000	n	F
Testudo	Testudo cf. promarginata	250.00	m	Tortonian	8.300000	n	F
Testudo	Testudo sp.	500.00	mo	Zanclean	3.900000	n	F
Testudo	Testudo sp.	2500.00	mf	Zanclean	3.900000	n	F
Paleotestudo	Paleotestudo antiqua	283.80	mf	Serravallian	12.500000	n	F
Paleotestudo	Paleotestudo antiqua	234.00	mf	Serravallian	13.600000	n	F
Testudo	Testudo cf. promarginata	250.00	m	Tortonian	8.300000	n	F



Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Testudo	Testudo sp.	232.10	m	Tortonian	10.750000	n	E
Titanochelon	Titanochelon bolivari	1300.00	mf	Tortonian	9.500000	n	E
Paleotestudo	Paleotestudo antiqua	195.00	m	Serravallian	13.000000	n	E
Testudo	Testudo promarginata	304.70	mf	Burdigalian/Aquitanian	21.500000	n	E
Titanochelon	Titanochelon aff. schafferi	1860.00	m	Gelasian	2.000000	y	E
Paleotestudo	Paleotestudo antiqua	220.00	mf	Serravallian	13.000000	n	E
Paleotestudo	Paleotestudo antiqua	206.00	mf	Serravallian	13.000000	n	E
Testudo	Testudo promarginata	230.00	mf	Burdigalian/Aquitanian	21.500000	n	E
Testudo	Testudo hermanni	220.00	mf	Lower Pleistocene	1.300000	n	E
Testudo	Testudo s. s.	189.00	m	Tortonian	8.000000	n	E
Testudo	Testudo sp.	245.00	m	Tortonian	8.300000	n	E
Eurotestudo	Eurotestudo hermanni	126.00	mf	Lower Pleistocene	1.150000	n	E
Centrochelys	Centrochelys robusta	850.00	ev	Lower Pleistocene	1.300000	y	E
Centrochelys	Centrochelys robusta	790.00	ef	Zanclean	4.917000	y	E
Eurotestudo	Eurotestudo hermanni	187.00	mf	Upper Pleistocene	0.110500	n	E
Testudo	Testudo catalaunica	181.00	m	Tortonian	11.500000	n	E
Testudo	Testudo steinheimensis	227.70	mf	Serravallian	13.000000	n	E
Paleotestudo	Paleotestudo sp.	170.00	mf	Tortonian	9.500000	n	E
Testudo	Testudo burgenlandica	275.00	m	Tortonian	8.750000	n	E
Paleotestudo	Paleotestudo antiqua	203.00	m	Serravallian	12.150000	n	E
Cheirogaster	Cheirogaster cf. gymnesica	789.00	mo	Lower Pleistocene	1.800000	y	E
gen.	gen. indet.	440.00	m	Tortonian	8.750000	n	E
Testudo	Testudo catalaunica	165.00	m	Tortonian	11.500000	n	E
Testudo	Testudo graeca	210.00	mf	Tortonian	8.450000	n	E
Titanochelon	Titanochelon gymnesica	1300.00	ef	Lower Pleistocene	1.300000	y	E
Centrochelys	Centrochelys robusta	850.00	mo	Upper Pleistocene	0.066000	y	E
Testudo	Testudo cf. promarginata	250.00	m	Tortonian	8.300000	n	E
Titanochelon	Titanochelon cf. bolivari	1500.00	mf	Tortonian	9.433000	n	E
Titanochelon	Titanochelon bolivari	1150.00	m	Messinian	6.289000	n	E
Testudo	Testudo cf. promarginata	250.00	m	Tortonian	8.300000	n	E
Hesperotestudo	Hesperotestudo mlynarskii	165.00	m	Lower Pleistocene	1.250000	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Gopherus	Gopherus agassizi	252.00	m	Upper Pleistocene	0.025500	n	A
Gopherus	Gopherus polyphemus	273.24	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus flavomarginatus	371.00	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	301.97	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	238.90	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	268.80	m	Modern	0.000001	y	A
Gopherus	Gopherus sp.	216.37	m	Modern	0.000001	n	A
Hesperotestudo	Hesperotestudo crassiscutata	180.40	m	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	102.44	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	308.00	m	Modern	0.000001	n	A
Hesperotestudo	Hesperotestudo crassiscutata	327.00	m	Lower Pleistocene	1.300000	n	A
Gopherus	Gopherus polyphemus	350.00	mo	Upper Pleistocene	0.069000	n	A
Hesperotestudo	Hesperotestudo crassiscutata	425.00	mo	Upper Pleistocene	0.012000	n	A
Hesperotestudo	Hesperotestudo wilsoni	226.00	m	Upper Pleistocene	0.018000	n	A
Gopherus	Gopherus flavomarginatus	246.00	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	431.48	mo	Upper Pleistocene	0.069000	n	A
Hesperotestudo	Hesperotestudo incisa	216.00	m	Lower Pleistocene	1.300000	n	A
Gopherus	Gopherus polyphemus	303.00	m	Modern	0.000001	y	A
Hesperotestudo	Hesperotestudo crassiscutata	1250.00	ev	Upper Pleistocene	0.012000	n	A
Hesperotestudo	Hesperotestudo sp.	1000.00	mo	Gelasian	2.000000	n	A
Gopherus	Gopherus polyphemus	391.90	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	155.50	mo	Upper Pleistocene	0.069000	n	A
Hesperotestudo	Hesperotestudo crassiscutata	282.70	m	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	239.80	mo	Middle Pleistocene	0.250000	n	A
Hesperotestudo	Hesperotestudo incisa	224.00	m	Lower Pleistocene	1.300000	n	A
Hesperotestudo	Hesperotestudo equicomis	340.00	ev	Middle Pleistocene	0.300000	n	A
Gopherus	Gopherus sp.	194.90	mo	Gelasian	1.900000	n	A
Hesperotestudo	Hesperotestudo incisa	212.00	m	Lower Pleistocene	1.300000	n	A
Hesperotestudo	Hesperotestudo crassiscutata	180.00	m	Lower Pleistocene	1.300000	n	A
Gopherus	Gopherus sp.	241.56	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	279.94	mo	Upper Pleistocene	0.069000	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Hesperotestudo	Hesperotestudo crassiscutata	188.00	mo	Upper Pleistocene	0.012000	n	A
Gopherus	Gopherus sp.	211.31	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	304.70	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus polyphemus	327.60	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus sp.	264.11	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	260.11	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus sp.	259.50	mo	Lower Pleistocene	1.800000	n	A
Hesperotestudo	Hesperotestudo incisa	232.76	m	Upper Pleistocene	0.069000	n	A
Hesperotestudo	Hesperotestudo crassiscutata	284.90	m	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	302.40	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus sp.	209.60	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus polyphemus	342.00	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	300.00	m	Modern	0.000001	y	A
Gopherus	Gopherus polyphemus	272.48	mo	Middle Pleistocene	0.250000	n	A
Gopherus	Gopherus polyphemus	283.41	mo	Middle Pleistocene	0.250000	n	A
Hesperotestudo	Hesperotestudo sp.	639.00	m	Upper Pleistocene	0.060000	n	A
Gopherus	Gopherus sp.	181.00	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus polyphemus	387.00	m	Modern	0.000001	n	A
Gopherus	Gopherus praecedens	360.00	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	348.70	mo	Middle Pleistocene	0.400000	n	A
Testudo	Testudo sp.	400.00	mo	Langhian	14.181000	n	A
Hesperotestudo	Hesperotestudo sp.	1500.00	mo	Middle Pleistocene	0.700000	n	A
Gopherus	Gopherus sp.	204.40	mo	Gelasian	1.900000	n	A
Hesperotestudo	Hesperotestudo crassiscutata	561.00	m	Lower Pleistocene	1.250000	n	A
Gopherus	Gopherus polyphemus	292.00	mo	Middle Pleistocene	0.250000	n	A
Gopherus	Gopherus sp.	163.50	mo	Gelasian	1.900000	n	A
Hesperotestudo	Hesperotestudo turgida	230.00	mo	Lower Pleistocene	1.684500	n	A
Gopherus	Gopherus flavomarginatus	222.00	m	Modern	0.000001	n	A
Caudochelys	Caudochelys ducатели	339.90	m	Langhian	15.000000	n	A
Gopherus	Gopherus flavomarginatus	281.00	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	272.57	mo	Middle Pleistocene	0.400000	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Gopherus	Gopherus polyphemus	314.60	mo	Middle Pleistocene	0.250000	n	A
Gopherus	Gopherus polyphemus	217.90	mo	Lower Pleistocene	1.200000	n	A
Gopherus	Gopherus polyphemus	294.16	mo	Upper Pleistocene	0.069000	n	A
Geochelone	Geochelone sp.	350.00	ef	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus mohavetus	412.50	m	Tortonian	8.476000	n	A
Gopherus	Gopherus sp.	230.10	mo	Lower Pleistocene	1.800000	n	A
Gopherus	Gopherus polyphemus	334.70	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	285.60	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus sp.	256.08	m	Modern	0.000001	n	A
Gopherus	Gopherus mohavetus	334.50	m	Tortonian	8.476000	n	A
Hesperotestudo	Hesperotestudo incisa	231.00	m	Lower Pleistocene	1.300000	n	A
Hesperotestudo	Hesperotestudo incisa	228.00	m	Lower Pleistocene	1.300000	n	A
Gopherus	Gopherus sp.	118.90	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus polyphemus	304.20	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus agassizi	445.00	mo	Middle Pleistocene	0.156000	n	A
Gopherus	Gopherus polyphemus	278.00	mo	Upper Pleistocene	0.069000	n	A
Caudochelys	Caudochelys rexroadensis	781.00	m	Zanclean	4.550000	n	A
Gopherus	Gopherus polyphemus	252.56	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus polyphemus	284.90	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus sp.	180.90	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus polyphemus	306.00	mo	Middle Pleistocene	0.250000	n	A
Hesperotestudo	Hesperotestudo crassiscutata	168.00	m	Lower Pleistocene	1.300000	n	A
Hesperotestudo	Hesperotestudo incisa	241.00	m	Lower Pleistocene	1.300000	n	A
Geochelone	Geochelone tedwhitei	440.00	m	Burdigalian/Aquitania	18.500000	n	A
Gopherus	Gopherus polyphemus	257.80	mo	Middle Pleistocene	0.250000	n	A
Hesperotestudo	Hesperotestudo mlynarskii	203.50	m	Lower Pleistocene	1.250000	n	A
Geochelone	Geochelone tedwhitei	370.00	m	Burdigalian/Aquitania	18.500000	n	A
Caudochelys	Caudochelys williamsi	334.00	m	Burdigalian/Aquitania	17.750000	n	A
Gopherus	Gopherus polyphemus	267.00	mo	Middle Pleistocene	0.250000	n	A
Gopherus	Gopherus pertenuis	1050.00	mo	Lower Pleistocene	1.684500	n	A
Hesperotestudo	Hesperotestudo sp.	974.00	ep	Upper Pleistocene	0.060000	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Hesperotestudo	Hesperotestudo incisa	290.40	m	Lower Pleistocene	1.300000	n	A
Geochelone	Geochelone sp.	880.00	m	Zanclean	4.500000	n	A
Caudochelys	Caudochelys rexroadensis	830.00	m	Zanclean	4.550000	n	A
Hesperotestudo	Hesperotestudo sp.	176.00	mf	Piacencian	3.100000	n	A
Hesperotestudo	Hesperotestudo oelrichi	283.80	m	Piacencian	3.000000	n	A
Gopherus	Gopherus sp.	224.10	mo	Lower Pleistocene	1.800000	n	A
Hesperotestudo	Hesperotestudo johnstoni	235.00	m	Piacencian	3.350000	n	A
Hesperotestudo	Hesperotestudo riggsi	185.00	m	Piacencian	3.000000	n	A
Gopherus	Gopherus agassizii	400.00	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	292.94	mo	Middle Pleistocene	0.250000	n	A
Hesperotestudo	Hesperotestudo crassiscutata	192.00	m	Lower Pleistocene	1.300000	n	A
Gopherus	Gopherus polyphemus	258.30	mo	Upper Pleistocene	0.069000	n	A
Gopherus	Gopherus sp.	236.70	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus sp.	218.80	mo	Gelasian	1.900000	n	A
Hesperotestudo	Hesperotestudo orthopygia	682.00	mo	Messinian	5.500000	n	A
Gopherus	Gopherus polyphemus	293.57	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus polyphemus	302.40	mo	Middle Pleistocene	0.250000	n	A
Hesperotestudo	Hesperotestudo sp.	1800.00	mo	Middle Pleistocene	0.700000	n	A
Geochelone	Geochelone sp.	170.00	mf	Middle Pleistocene	0.700000	n	A
Gopherus	Gopherus canyonensis	885.50	m	Piacencian	2.700000	n	A
Gopherus	Gopherus polyphemus	276.60	mo	Lower Pleistocene	1.200000	n	A
Gopherus	Gopherus ? sp.	500.00	m	Serravallian	11.850000	n	A
Hesperotestudo	Hesperotestudo riggsi	176.00	m	Piacencian	3.000000	n	A
Gopherus	Gopherus polyphemus	324.00	mo	Upper Pleistocene	0.069000	n	A
Geochelone	Geochelone sp.	600.00	mo	Upper Pleistocene	0.012500	y	A
Gopherus	Gopherus mohavetus	315.00	m	Tortonian	8.476000	n	A
Gopherus	Gopherus mohavetus	360.00	m	Tortonian	8.476000	n	A
Gopherus	Gopherus polyphemus	260.51	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus polyphemus	283.00	mo	Middle Pleistocene	0.250000	n	A
Hesperotestudo	Hesperotestudo campester	1000.00	mo	Gelasian	2.190500	n	A
Gopherus	Gopherus polyphemus	306.00	mo	Middle Pleistocene	0.250000	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Gopherus	Gopherus polyphemus	352.00	mo	Upper Pleistocene	0.012000	n	A
Gopherus	Gopherus sp.	181.00	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus flavomarginatus	303.00	m	Modern	0.000001	n	A
Gopherus	Gopherus polyphemus	350.83	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus laticaudatus	375.00	mo	Middle Pleistocene	0.396350	n	A
Gopherus	Gopherus sp.	188.30	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus polyphemus	285.20	mo	Middle Pleistocene	0.250000	n	A
Gopherus	Gopherus polyphemus	308.20	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus ? sp.	500.00	m	Tortonian	10.100000	n	A
Gopherus	Gopherus sp.	143.90	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus sp.	193.30	mo	Gelasian	1.900000	n	A
Geochelone	Geochelone sp.	176.00	e	Zanclean	5.000000	n	A
Gopherus	Gopherus sp.	182.30	mo	Gelasian	1.900000	n	A
Hesperotestudo	Hesperotestudo riggsi	195.80	m	Zanclean	4.550000	n	A
Hesperotestudo	Hesperotestudo orthopygia	1200.00	mo	Messinian	5.500000	n	A
Gopherus	Gopherus polyphemus	293.00	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus sp.	188.70	mo	Gelasian	1.900000	n	A
Gopherus	Gopherus polyphemus	268.90	mo	Lower Pleistocene	1.200000	n	A
Gopherus	Gopherus polyphemus	295.90	mo	Middle Pleistocene	0.400000	n	A
Hesperotestudo	Hesperotestudo incisa	250.00	e	Modern	0.007500	n	A
Geochelone	Geochelone sp.	500.00	m	Tortonian	10.100000	n	A
Gopherus	Gopherus polyphemus	353.30	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus sp.	241.90	mo	Lower Pleistocene	1.800000	n	A
Gopherus	Gopherus polyphemus	260.50	mo	Middle Pleistocene	0.400000	n	A
Gopherus	Gopherus polyphemus	539.00	mf	Middle Pleistocene	0.700000	n	A
Gopherus	Gopherus sp.	202.80	mo	Lower Pleistocene	1.800000	n	A
Hesperotestudo	Hesperotestudo riggsi	159.50	mo	Tortonian	7.600000	n	A
Hesperotestudo	Hesperotestudo riggsi	159.50	mo	Tortonian	7.600000	n	A
Gopherus	Gopherus polyphemus	256.44	mo	Middle Pleistocene	0.250000	n	A
Gopherus	Gopherus polyphemus	253.70	mo	Middle Pleistocene	0.250000	n	A
Gopherus	Gopherus polyphemus	322.63	mo	Middle Pleistocene	0.250000	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Gopherus	Gopherus polyphemus	337.30	mo	Middle Pleistocene	0.250000	n	A
Gopherus	Gopherus flavomarginatus	278.00	m	Modern	0.000001	n	A
Hesperotestudo	Hesperotestudo alleni	240.90	m	Tortonian	10.950000	n	A
Gopherus	Gopherus sp.	245.40	mo	Lower Pleistocene	1.800000	n	A
Gopherus	Gopherus polyphemus	274.30	mo	Middle Pleistocene	0.250000	n	A
Hesperotestudo	Hesperotestudo sp.	1200.00	ev	Tortonian	9.500000	n	A
Gopherus	Gopherus mohavetus	202.00	m	Tortonian	8.476000	n	A
Chelonoidis	Chelonoidis sp.	300.00	mo	Langhian	15.900000	n	A
Chelonoidis	Chelonoidis becki	1050.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis carbonaria	226.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis denticulata	333.40	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis denticulata	333.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis carbonaria	593.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis denticulata	466.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis darwini	965.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis sp.	300.00	mo	Langhian	15.900000	n	A
Chelonoidis	Chelonoidis sp.	1060.00	ec	Langhian	15.900000	n	A
Chelonoidis	Chelonoidis chathamensis	890.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis abingdonii	980.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis carbonaria	253.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis denticulata	317.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis nigra	745.70	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis vicina	1250.00	m	Modern	0.000001	y	A
Geochelone	Geochelone hesterna	278.00	m	Tortonian	8.500000	n	A
Chelonoidis	Chelonoidis nigra	595.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis denticulata	377.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis nigra	610.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis nigra	717.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis chilensis	222.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis denticulata	820.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis chilensis	157.00	m	Modern	0.000001	n	A

Genus	Taxon	CL	estimated	EpochBins	Age	Island	C
Chelonoidis	Chelonoidis carbonaria	189.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis chilensis	169.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis chilensis	450.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis carbonaria	242.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis carbonaria	290.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis carbonaria	333.40	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis carbonaria	296.50	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis duncanensis	840.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis lutzae	830.00	m	Upper Pleistocene	0.038500	n	A
Chelonoidis	Chelonoidis sp.	1000.00	mo	Upper Pleistocene	0.069000	n	A
Chelonoidis	Chelonoidis nigra	1300.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis nigra	588.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis chilensis	200.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis carbonaria	247.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis phantastica	860.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis chilensis	186.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis nigra	731.30	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis chilensis	183.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis hoodensis	813.00	m	Modern	0.000001	y	A
Chelonoidis	Chelonoidis chilensis	169.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis denticulata	365.00	m	Modern	0.000001	n	A
Chelonoidis	Chelonoidis denticulata	616.00	m	Upper Pleistocene	0.120000	n	A

Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Kinixys	Kinixys belliana	ZMB 37388	162.0	16.20	22.5	15.5	21.5	164.0	12.6	m
Aldabrachelys	Aldabrachelys gigantea	ZMB 51996	770.0	77.00	106.0	52.0	112.0	NA	NA	m
Astrochelys	Astrochelys yniphora	-	426.0	42.60	NA	NA	NA	NA	NA	m
Centrochelys	Centrochelys sulcata	ZMB 63203	215.0	21.50	29.5	16.5	27.0	214.0	14.8	m
Malacochersus	Malacochersus tornieri	ZMB 63174	153.0	15.30	17.0	10.5	14.0	149.0	9.8	m



Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Astrochelys	Astrochelys radiata	-	395.0	39.50	NA	NA	NA	NA	NA	m
Pyxis	Pyxis arachnoides	ZMB 37616	110.0	11.00	15.0	8.0	14.0	75.0	7.6	m
Kinixys	Kinixys homeana	ZMB 17747	193.0	19.30	25.0	14.0	21.0	175.0	11.8	m
Aldabrachelys	Aldabrachelys gigantea	ZMB 47494	870.0	87.00	116.0	57.0	110.0	NA	NA	m
Psammobates	Psammobates tentorius	ZMB 28782	111.0	11.10	15.0	8.5	14.0	95.0	7.9	m
Psammobates	Psammobates oculifer	ZMB 25439	119.0	11.90	17.0	9.0	14.5	99.0	8.4	m
Psammobates	Psammobates oculifer	ZMB 37472	107.0	10.70	15.0	8.4	13.5	106.0	8	m
Astrochelys	Astrochelys yniphora	-	307.0	30.70	NA	NA	NA	NA	NA	m
Homopus	Homopus aerolatus	ZMB 229	88.0	8.80	10.5	6.9	9.0	78.0	6.1	m
Homopus	Homopus signatus	ZMB 63173	94.0	9.40	12.5	7.7	11.0	82.0	5.6	m
Kinixys	Kinixys belliana	ZMB 63191	194.0	19.40	25.5	12.5	19.0	173.0	12	m
Astrochelys	Astrochelys radiata	-	285.0	28.50	NA	NA	NA	NA	NA	m
Kinixys	Kinixys belliana	ZMB 63192	174.0	17.40	24.5	11.5	20.5	143.0	11.1	m
Kinixys	Kinixys belliana	ZMB 63193	157.0	15.70	21.0	9.9	16.5	141.0	9.4	m
Aldabrachelys	Aldabrachelys gigantea	ZMB 37545	810.0	81.00	110.0	52.0	NA	NA	NA	m
Chersina	Chersina angulata	ZMB 49400	162.0	16.20	21.5	10.9	17.5	170.0	9.2	m
Chersina	Chersina angulata	ZMB 63181	170.0	17.00	23.0	11.4	19.0	169.0	10	m
Chersina	Chersina angulata	ZMB 63183	120.0	12.00	17.0	8.6	15.5	118.0	7.3	m
Chersina	Chersina angulata	ZMB 63182	136.0	13.60	18.0	9.9	16.0	138.0	8	m
Kinixys	Kinixys erosa	ZMB 63190	164.0	16.40	21.0	11.2	16.5	163.0	10.6	m
Centrochelys	Centrochelys sulcata	ZMB 37387	435.0	43.50	54.0	29.9	53.0	405.0	29.1	m
Indotestudo	Indotestudo travancorica	ZMB 37717	224.0	22.40	28.0	15.2	23.0	200.0	15.4	m
Stigmochelys	Stigmochelys pardalis	ZMB 37344	405.0	40.50	55.0	27.0	50.5	350.0	24.3	m
Stigmochelys	Stigmochelys pardalis	ZMB 63235	315.0	31.50	43.5	23.4	39.0	298.0	22.1	m
Stigmochelys	Stigmochelys pardalis	ZMB 37495	297.0	29.70	41.5	21.4	36.0	271.0	19.2	m
Stigmochelys	Stigmochelys pardalis	ZMB 42400	345.0	34.50	46.5	24.0	40.0	285.0	21.3	m
Stigmochelys	Stigmochelys pardalis	ZMB 63232	350.0	35.00	46.0	23.9	45.0	303.0	21.1	m
Psammobates	Psammobates geometricus	ZMB 192	92.0	9.20	13.5	7.1	13.0	68.0	6.3	m
Chersina	Chersina angulata	-	181.9	18.19	NA	NA	NA	NA	NA	m
Aldabrachelys	Aldabrachelys gigantea	ZMB 47443	800.0	80.00	105.0	51.5	105.0	NA	NA	m
Astrochelys	Astrochelys yniphora	-	415.0	41.50	NA	NA	NA	NA	NA	m

Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Astrochelys	Astrochelys yniphora	-	370.0	37.00	NA	NA	NA	NA	NA	m
Aldabrachelys	Aldabrachelys gigantea	ZMB 51995	1030.0	103.00	138.0	NA	NA	NA	NA	m
Aldabrachelys	Aldabrachelys gigantea	ZMB ???	720.0	72.00	105.5	55.0	117.0	NA	NA	m
Cylindraspis	Cylindraspis triserrata	-	1100.0	110.00	NA	NA	NA	NA	NA	m
Cylindraspis	Cylindraspis vosmaeri	-	500.0	50.00	NA	NA	NA	NA	NA	m
Astrochelys	Astrochelys radiata	-	334.0	33.40	NA	NA	NA	NA	NA	m
Astrochelys	Astrochelys radiata	-	305.0	30.50	NA	NA	NA	NA	NA	m
Centrochelys	Centrochelys sulcata	-	830.0	83.00	NA	NA	NA	NA	NA	m
Psammobates	Psammobates geometricus	ZMB 186	105.0	10.50	13.5	7.4	13.0	90.0	6.9	m
Astrochelys	Astrochelys radiata	-	242.0	24.20	NA	NA	NA	NA	NA	m
Psammobates	Psammobates tentorius	ZMB 37627	116.0	11.60	15.0	9.4	14.5	117.0	8.9	m
Psammobates	Psammobates tentorius	ZMB 50571	95.0	9.50	12.0	7.3	12.0	79.0	7	m
Psammobates	Psammobates tentorius	ZMB 14766	81.0	8.10	10.5	6.8	10.0	67.0	5.9	m
Pyxis	Pyxis planicauda	-	114.0	11.40	NA	NA	NA	NA	NA	m
Pyxis	Pyxis planicauda	-	134.0	13.40	NA	NA	NA	NA	NA	m
Pyxis	Pyxis planicauda	-	120.0	12.00	NA	NA	NA	NA	NA	m
Psammobates	Psammobates oculifer	ZMB 16399	111.0	11.10	16.0	8.8	14.0	108.0	7.9	m
Psammobates	Psammobates oculifer	ZMB 14772	101.0	10.10	15.0	8.0	14.0	98.0	7.3	m
Psammobates	Psammobates oculifer	ZMB 24261	103.0	10.30	14.0	8.2	13.5	100.0	7.8	m
Psammobates	Psammobates oculifer	ZMB 37623	105.0	10.50	14.5	7.9	13.5	93.0	7.4	m
Kinixys	Kinixys belliana	ZMB 37489	180.0	18.00	24.0	12.0	20.5	176.0	11.8	m
Pyxis	Pyxis planicauda	-	160.0	16.00	NA	NA	NA	NA	NA	m
Psammobates	Psammobates geometricus	ZMB 50568	107.0	10.70	15.0	7.9	14.5	79.0	7.3	m
Aldabrachelys	Aldabrachelys gigantea	-	875.0	87.50	NA	NA	NA	NA	NA	m
Aldabrachelys	Aldabrachelys gigantea	-	1190.0	119.00	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	-	202.0	20.20	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	-	351.0	35.10	NA	NA	NA	NA	NA	m
Astrochelys	Astrochelys yniphora	-	446.0	44.60	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	ZMB 37393	160.0	16.00	20.0	10.0	17.5	158.0	9.2	m
Kinixys	Kinixys erosa	ZMB 50198	271.0	27.10	31.5	18.5	26.0	231.0	15.9	m
Chersina	Chersina angulata	ZMB 37392	181.0	18.10	22.5	11.6	19.0	177.0	9.7	m

Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Psammobates	Psammobates oculifer	-	147.0	14.70	NA	NA	NA	NA	NA	m
Psammobates	Psammobates tentorius	-	145.0	14.50	NA	NA	NA	NA	NA	m
Pyxis	Pyxis arachnoides	-	150.0	15.00	NA	NA	NA	NA	NA	m
Psammobates	Psammobates geometricus	ZMB 185	118.0	11.80	18.0	9.1	16.5	112.0	8.2	m
Stigmochelys	Stigmochelys pardalis	-	720.0	72.00	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	-	179.3	17.93	NA	NA	NA	NA	NA	m
Astrochelys	Astrochelys radiata	-	355.0	35.50	NA	NA	NA	NA	NA	m
Pyxis	Pyxis planicauda	-	126.0	12.60	NA	NA	NA	NA	NA	m
Testudo	Testudo kleinmanni	-	144.0	14.40	NA	NA	NA	NA	NA	m
Cylindraspis	Cylindraspis indica	-	600.0	60.00	NA	NA	NA	NA	NA	m
Astrochelys	Astrochelys yniphora	-	361.0	36.10	NA	NA	NA	NA	NA	m
Astrochelys	Astrochelys yniphora	-	486.0	48.60	NA	NA	NA	NA	NA	m
Pyxis	Pyxis planicauda	-	148.0	14.80	NA	NA	NA	NA	NA	m
Pyxis	Pyxis arachnoides	-	111.0	11.10	NA	NA	NA	NA	NA	m
Pyxis	Pyxis arachnoides	-	110.0	11.00	NA	NA	NA	NA	NA	m
Pyxis	Pyxis arachnoides	-	80.0	8.00	NA	NA	NA	NA	NA	m
Kinixys	Kinixys lobatsiana	-	200.0	20.00	NA	NA	NA	NA	NA	m
Pyxis	Pyxis arachnoides	-	86.0	8.60	NA	NA	NA	NA	NA	m
Pyxis	Pyxis arachnoides	-	154.0	15.40	NA	NA	NA	NA	NA	m
Kinixys	Kinixys homeana	-	223.0	22.30	NA	NA	NA	NA	NA	m
Homopus	Homopus femoralis	-	168.0	16.80	NA	NA	NA	NA	NA	m
Pyxis	Pyxis planicauda	-	132.0	13.20	NA	NA	NA	NA	NA	m
Homopus	Homopus aerolatus	-	300.0	30.00	NA	NA	NA	NA	NA	m
Homopus	Homopus boulengeri	-	110.0	11.00	NA	NA	NA	NA	NA	m
Kinixys	Kinixys erosa	-	400.0	40.00	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	ZMB 37479	148.0	14.80	20.0	10.1	17.0	142.0	9.5	m
Psammobates	Psammobates geometricus	-	165.0	16.50	NA	NA	NA	NA	NA	m
Homopus	Homopus solus	-	109.0	10.90	NA	NA	NA	NA	NA	m
Malacochersus	Malacochersus tornieri	-	180.0	18.00	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	-	153.5	15.35	NA	NA	NA	NA	NA	m
Pyxis	Pyxis arachnoides	-	144.0	14.40	NA	NA	NA	NA	NA	m

Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Kinixys	Kinixys belliana	-	230.0	23.00	NA	NA	NA	NA	NA	m
Aldabrachelys	Aldabrachelys gigantea	-	1140.0	114.00	NA	NA	NA	NA	NA	m
Astrochelys	Astrochelys radiata	-	400.0	40.00	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	-	166.4	16.64	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	-	171.6	17.16	NA	NA	NA	NA	NA	m
Cylindraspis	Cylindraspis peltastes	-	420.0	42.00	NA	NA	NA	NA	NA	m
Chersina	Chersina angulata	-	161.3	16.13	NA	NA	NA	NA	NA	m
Homopus	Homopus signatus	-	106.0	10.60	NA	NA	NA	NA	NA	m
Kinixys	Kinixys spekii	-	220.0	22.00	NA	NA	NA	NA	NA	m
Cylindraspis	Cylindraspis inepta	-	1000.0	100.00	NA	NA	NA	NA	NA	m
Kinixys	Kinixys natalensis	-	160.0	16.00	NA	NA	NA	NA	NA	m
Geochelone	Geochelone elegans	ZMB 63222	208.0	20.80	29.5	14.6	28.5	199.0	13.3	m
Geochelone	Geochelone elegans	ZMB 37523	245.0	24.50	32.0	16.6	32.0	228.0	14.6	m
Geochelone	Geochelone elegans	ZMB 63220	221.0	22.10	32.0	16.0	31.0	179.0	13.5	m
Geochelone	Geochelone elegans	ZMB 63221	220.0	22.00	31.0	15.4	27.0	209.0	14	m
Geochelone	Geochelone elegans	ZMB 63218	221.0	22.10	31.5	15.1	30.0	203.0	13.7	m
Geochelone	Geochelone platynota	ZMB 6096	222.0	22.20	29.5	15.1	27.0	NA	MA	m
Manouria	Manouria emys	-	600.0	60.00	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo forstenii	-	202.0	20.20	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo travancorica	-	249.7	24.97	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo forstenii	-	309.0	30.90	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo elongata	-	360.0	36.00	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo forstenii	-	199.0	19.90	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo elongata	-	244.2	24.42	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo travancorica	-	244.2	24.42	NA	NA	NA	NA	NA	m
Manouria	Manouria impressa	ZMB 63172	165.0	16.50	20.0	12.9	18.0	157.0	10.5	m
Indotestudo	Indotestudo elongata	ZMB 50492	276.0	27.60	33.0	19.4	28.5	246.0	17.1	m
Indotestudo	Indotestudo elongata	ZMB 63175	235.0	23.50	30.5	16.0	29.5	202.0	14.4	m
Indotestudo	Indotestudo elongata	ZMB 4174	208.0	20.80	26.0	13.4	20.0	180.0	11.6	m
Indotestudo	Indotestudo elongata	ZMB 6106	166.0	16.60	21.0	11.3	18.0	151.0	11.3	m
Manouria	Manouria emys	-	600.0	60.00	NA	NA	NA	NA	NA	m

Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Testudo	Testudo graeca	-	250.0	25.00	NA	NA	NA	NA	NA	m
Testudo	Testudo graeca	-	280.0	28.00	NA	NA	NA	NA	NA	m
Manouria	Manouria emys	ZMB 49049	212.0	21.20	26.5	16.5	25.0	NA	NA	m
Manouria	Manouria emys	ZMB 37350	445.0	44.50	52.0	32.0	50.0	455.0	29.8	m
Manouria	Manouria emys	ZMB 37342	330.0	33.00	40.5	26.7	37.0	330.0	23.4	m
Indotestudo	Indotestudo travancorica	-	331.0	33.10	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo travancorica	-	219.6	21.96	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo forstenii	-	200.5	20.05	NA	NA	NA	NA	NA	m
Testudo	Testudo horsfieldii	-	280.0	28.00	NA	NA	NA	NA	NA	m
Manouria	Manouria impressa	-	350.0	35.00	NA	NA	NA	NA	NA	m
Geochelone	Geochelone elegans	-	380.0	38.00	NA	NA	NA	NA	NA	m
Manouria	Manouria impressa	-	275.0	27.50	NA	NA	NA	NA	NA	m
Indotestudo	Indotestudo elongata	-	219.6	21.96	NA	NA	NA	NA	NA	m
Geochelone	Geochelone platynota	-	300.0	30.00	NA	NA	NA	NA	NA	m
Testudo	Testudo graeca	-	300.0	30.00	NA	NA	NA	NA	NA	m
Gopherus	Gopherus flavomarginatus	-	400.0	40.00	NA	NA	NA	NA	NA	m
Gopherus	Gopherus morafkai	-	299.0	29.90	NA	NA	NA	NA	NA	m
Gopherus	Gopherus berlandieri	-	240.0	24.00	NA	NA	NA	NA	NA	m
Testudo	Testudo horsfieldii	ZMB 63259	111.0	11.10	14.0	10.0	15.0	108.0	9.5	m
Pyxis	Pyxis arachnoides	ZMB 37615	108.0	10.80	15.0	7.9	13.0	96.0	7.1	m
Testudo	Testudo marginata	-	241.7	24.17	NA	NA	NA	NA	NA	m
Testudo	Testudo horsfieldii	ZMB 63258	123.0	12.30	14.5	10.9	15.0	121.0	9.8	m
Testudo	Testudo hermanni	-	183.3	18.33	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	176.9	17.69	NA	NA	NA	NA	NA	m
Testudo	Testudo horsfieldii	ZMB 63257	114.0	11.40	14.5	10.2	14.0	110.0	9.9	m
Testudo	Testudo marginata	-	246.7	24.67	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	196.0	19.60	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	143.5	14.35	NA	NA	NA	NA	NA	m
Testudo	Testudo graeca	-	194.6	19.46	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	200.0	20.00	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	250.0	25.00	NA	NA	NA	NA	NA	m

Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Testudo	Testudo marginata	-	246.0	24.60	NA	NA	NA	NA	NA	m
Testudo	Testudo marginata	-	242.5	24.25	NA	NA	NA	NA	NA	m
Testudo	Testudo marginata	-	246.0	24.60	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	147.0	14.70	NA	NA	NA	NA	NA	m
Testudo	Testudo marginata	-	290.0	29.00	NA	NA	NA	NA	NA	m
Testudo	Testudo marginata	-	250.0	25.00	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	145.9	14.59	NA	NA	NA	NA	NA	m
Testudo	Testudo graeca	-	178.2	17.82	NA	NA	NA	NA	NA	m
Testudo	Testudo marginata	-	400.0	40.00	NA	NA	NA	NA	NA	m
Testudo	Testudo horsfieldii	ZMB 63255	136.0	13.60	18.0	13.0	16.5	129.0	12.2	m
Testudo	Testudo horsfieldii	ZMB 63256	132.0	13.20	17.0	12.4	17.0	133.0	11.3	m
Testudo	Testudo hermanni	-	168.3	16.83	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	160.0	16.00	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	154.0	15.40	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	138.5	13.85	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	173.0	17.30	NA	NA	NA	NA	NA	m
Testudo	Testudo marginata	-	242.5	24.25	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	195.0	19.50	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	157.0	15.70	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	176.6	17.66	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	130.0	13.00	NA	NA	NA	NA	NA	m
Testudo	Testudo hermanni	-	161.0	16.10	NA	NA	NA	NA	NA	m
Gopherus	Gopherus polyphemus	-	300.0	30.00	NA	NA	NA	NA	NA	m
Gopherus	Gopherus sp.	MVZ 210020	NA	NA	NA	NA	NA	219.6	NA	m
Gopherus	Gopherus sp.	MVZ 210003	NA	NA	NA	NA	NA	192.1	NA	m
Gopherus	Gopherus polyphemus	-	268.8	26.88	NA	NA	NA	NA	NA	m
Gopherus	Gopherus sp.	MVZ 120004	NA	NA	NA	NA	NA	196.7	NA	m
Gopherus	Gopherus sp.	MVZ 210009	NA	NA	NA	NA	NA	232.8	NA	m
Gopherus	Gopherus sp.	MVZ 210010	NA	NA	NA	NA	NA	240.1	NA	m
Gopherus	Gopherus agassizii	-	400.0	40.00	NA	NA	NA	NA	NA	m
Gopherus	Gopherus flavomarginatus	KU 39415	303.0	30.30	NA	23.2	NA	NA	NA	m

Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Gopherus	Gopherus polyphemus	-	308.0	30.80	NA	NA	NA	NA	NA	m
Gopherus	Gopherus polyphemus	-	303.0	30.30	NA	NA	NA	NA	NA	m
Gopherus	Gopherus polyphemus	-	387.0	38.70	NA	NA	NA	NA	NA	m
Gopherus	Gopherus polyphemus	-	342.0	34.20	NA	NA	NA	NA	NA	m
Gopherus	Gopherus flavomarginatus	USNM 61253	222.0	22.20	NA	16.6	NA	212.0	NA	m
Gopherus	Gopherus flavomarginatus	USNM 61254	371.0	37.10	NA	29.2	NA	358.0	NA	m
Gopherus	Gopherus polyphemus	-	238.9	23.89	NA	NA	NA	NA	NA	m
Gopherus	Gopherus flavomarginatus	USNM 60976	246.0	24.60	NA	21.2	NA	252.0	NA	m
Gopherus	Gopherus flavomarginatus	IU 42953	281.0	28.10	NA	22.0	NA	NA	NA	m
Gopherus	Gopherus flavomarginatus	IU 42954	278.0	27.80	NA	21.4	NA	NA	NA	m
Chelonoidis	Chelonoidis nigra	USNM 51069	588.0	58.80	68.3	44.5	NA	506.0	NA	m
Chelonoidis	Chelonoidis nigra	USNM1 102904	610.0	61.00	67.5	44.4	NA	515.0	NA	m
Chelonoidis	Chelonoidis carbonaria	-	593.0	59.30	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis abingdonii	-	980.0	98.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis denticulata	-	333.4	33.34	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis chilensis	UF33604	169.0	16.90	21.5	13.2	NA	161.0	NA	m
Chelonoidis	Chelonoidis chilensis	UF33618	186.0	18.60	25.0	14.7	NA	169.0	NA	m
Chelonoidis	Chelonoidis nigra	-	717.0	71.70	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis chilensis	UF33617	169.0	16.90	22.8	14.6	NA	162.0	NA	m
Chelonoidis	Chelonoidis carbonaria	UF27384	242.0	24.20	31.7	15.5	NA	219.0	NA	m
Chelonoidis	Chelonoidis carbonaria	UF33597	253.0	25.30	31.7	15.3	NA	215.0	NA	m
Chelonoidis	Chelonoidis nigra	USNM1 222494	595.0	59.50	68.0	43.6	NA	533.0	NA	m
Chelonoidis	Chelonoidis carbonaria	-	333.4	33.34	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis carbonaria	UF5259	226.0	22.60	28.7	12.9	NA	198.0	NA	m
Chelonoidis	Chelonoidis becki	-	1050.0	105.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis denticulata	UF33661	333.0	33.30	38.0	21.4	NA	305.0	NA	m
Chelonoidis	Chelonoidis denticulata	UF61931	317.0	31.70	41.2	18.5	NA	291.0	NA	m
Chelonoidis	Chelonoidis denticulata	UF33670	365.0	36.50	47.0	22.0	NA	326.0	NA	m
Chelonoidis	Chelonoidis chilensis	UF33603	183.0	18.30	23.4	14.5	NA	166.0	NA	m
Chelonoidis	Chelonoidis nigra	-	731.3	73.13	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis chilensis	-	200.0	20.00	NA	NA	NA	NA	NA	m

Genus	Taxon	CollNr	SCL	CCL	SCW	CCW	CH	PL	PW	es
Chelonoidis	Chelonoidis carbonaria	UF48278	247.0	24.70	33.9	15.5	NA	214.0	NA	m
Chelonoidis	Chelonoidis carbonaria	-	296.5	29.65	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis carbonaria	-	290.0	29.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis carbonaria	UF33596	189.0	18.90	24.7	12.1	NA	174.0	NA	m
Chelonoidis	Chelonoidis nigra	-	745.7	74.57	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis chathamensis	-	890.0	89.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis denticulata	UF19242	466.0	46.60	59.7	26.5	NA	410.0	NA	m
Chelonoidis	Chelonoidis denticulata	UF23231	377.0	37.70	47.1	23.8	NA	334.0	NA	m
Chelonoidis	Chelonoidis denticulata	-	820.0	82.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis duncanensis	-	840.0	84.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis chilensis	-	222.0	22.20	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis chilensis	UF33600	157.0	15.70	20.8	11.9	NA	145.0	NA	m
Chelonoidis	Chelonoidis phantastica	-	860.0	86.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis vicina	-	1250.0	125.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis hoodensis	-	813.0	81.30	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis nigra	-	1300.0	130.00	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis darwini	-	965.0	96.50	NA	NA	NA	NA	NA	m
Chelonoidis	Chelonoidis chilensis	-	450.0	45.00	NA	NA	NA	NA	NA	m

```
length(unique(tidyCL$Locality))
```

```
## [1] 193
```

```
length(unique(tidyCL$Locality[which(tidyCL$Age < 23.000)]))
```

```
## [1] 186
```

```
length(unique(FossilOccurrences$Locality))
```

```
## [1] 647
```

```
length(unique(FossilOccurrences$Locality[which(FossilOccurrences$Clavailability=="yes")]))
```

```
## [1] 112
```



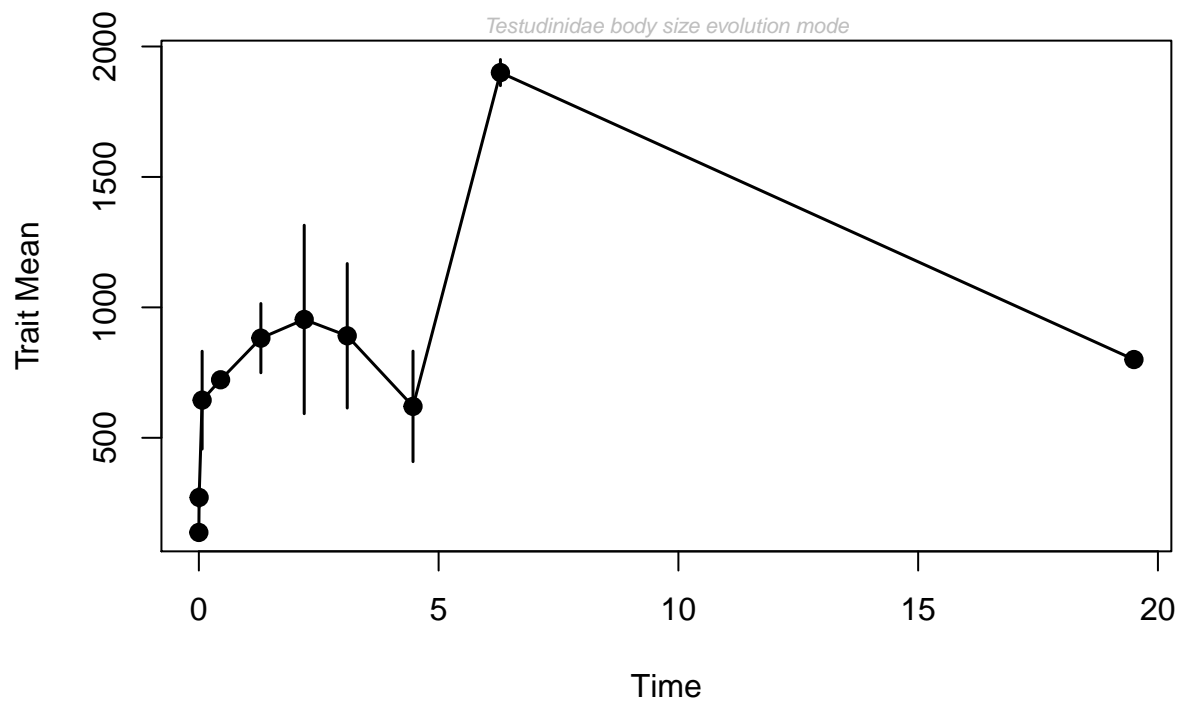


Figure 33: paleoTS, genera, Eurasia, insular

```
Fossil0cMiocene <- FossilOccurrences %>%
```

```
  mutate(Age=(MA.min+Ma.max)/2) %>%
```

```
  filter(Age < 23.000)
```

```
length(unique(Fossil0cMiocene$Locality))
```

```
## [1] 534
```

```
length(unique(Fossil0cMiocene$Locality[which(FossilOccurrences$Clavailability=="yes")]))
```

```
## [1] 108
```

number of all fossil localities with body size data (body size data set) 193

number of fossil localities that match the relevant age 186

number of localities according to FosFarBase 647

number of FosFarBase localities for which body size was available 112

number of FosFarBase localities of relevant age 534

number of FosFarBase localities of relevant age for which body size data was available 106

Body size data set: number of data records 384

number of data records of relevant age 376

number of Countries where data records occurred 54

number of measured SCLs 97

number of measured SCLs 33

number of estimated SCLs 254

number of SCLs measured from figure 38

number of SCLs estimated from PL 61

number of SCLs that were estimated by original authors 158

Occurrences: number of data records 770

number of data records of relevant age 641

number of data available body sizes 132

number of available body sizes of relevant age 126

Extant:

number of extant data records 240

number of specimens from MFN collection 67

number of specimens fro literature 173

## [1] 384

## [1] 119

## [1] 384

## [1] 26

## [1] 144

## [1] 11

## [1] Ergilemys Testudo Cheirogaster Titanochelon Paleotestudo

## [6] Geochelone Centrochelys gen. "Hadrianus" Eurotestudo

## [11] Taraschelon

## 26 Levels: "Hadrianus" Aldabrachelys Caudochelys ... Titanochelon

## [1] 7

## [1] 2

## [1] Geochelone Chelonoidis

## 26 Levels: "Hadrianus" Aldabrachelys Caudochelys ... Titanochelon

## [1] 167

## [1] 15

## [1] Testudo Geochelone Ergilemys Aldabrachelys Megalochelys

## [6] Manouria Indotestudo gen. Cheirogaster Titanochelon

## [11] Paleotestudo Centrochelys "Hadrianus" Eurotestudo Taraschelon

## 26 Levels: "Hadrianus" Aldabrachelys Caudochelys ... Titanochelon

Table 28: Relative abundances of individuals per genera across the continents. Basis for sampling accumulation curves.

Genus	Africa.x	America	N-America	S-America	Asia.x	Europe.x	n
“Hadrianus”	-	-	-	-	-	1	1
Aldabrachelys	4	-	-	-	2	-	2
Caudochelys	-	4	4	-	-	-	-
Centrochelys	2	-	-	-	-	12	12
Cheirogaster	-	-	-	-	-	9	9
Chelonoidis	-	28	-	6	-	-	-
Ergilemys	-	-	-	-	2	3	4
Eurotestudo	-	-	-	-	-	10	10
gen.	-	-	-	-	1	7	8
Geochelone	4	10	8	1	1	2	3
Gopherus	-	92	88	-	-	-	-
Hesperotestudo	-	46	43	-	-	-	-
Homopus	1	-	-	-	-	-	-
Impregnochelys	1	-	-	-	-	-	-
Indotestudo	-	-	-	-	1	-	1
Kinixys	1	-	-	-	-	-	-
Manouria	-	-	-	-	2	-	2
Megalochelys	-	-	-	-	12	-	12
Mesocherus	5	-	-	-	-	-	-
Namibchersus	9	-	-	-	-	-	-
Paleotestudo	-	-	-	-	-	26	26
Psammobates	1	-	-	-	-	-	-
Stylemys	-	1	1	-	-	-	-
Taraschelon	-	-	-	-	-	1	1
Testudo	5	1	1	-	4	51	54
Titanochelon	-	-	-	-	-	22	22