MAthesis

Contents

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/Aquitanian	Lower Miocene	19.50000	30	14	9

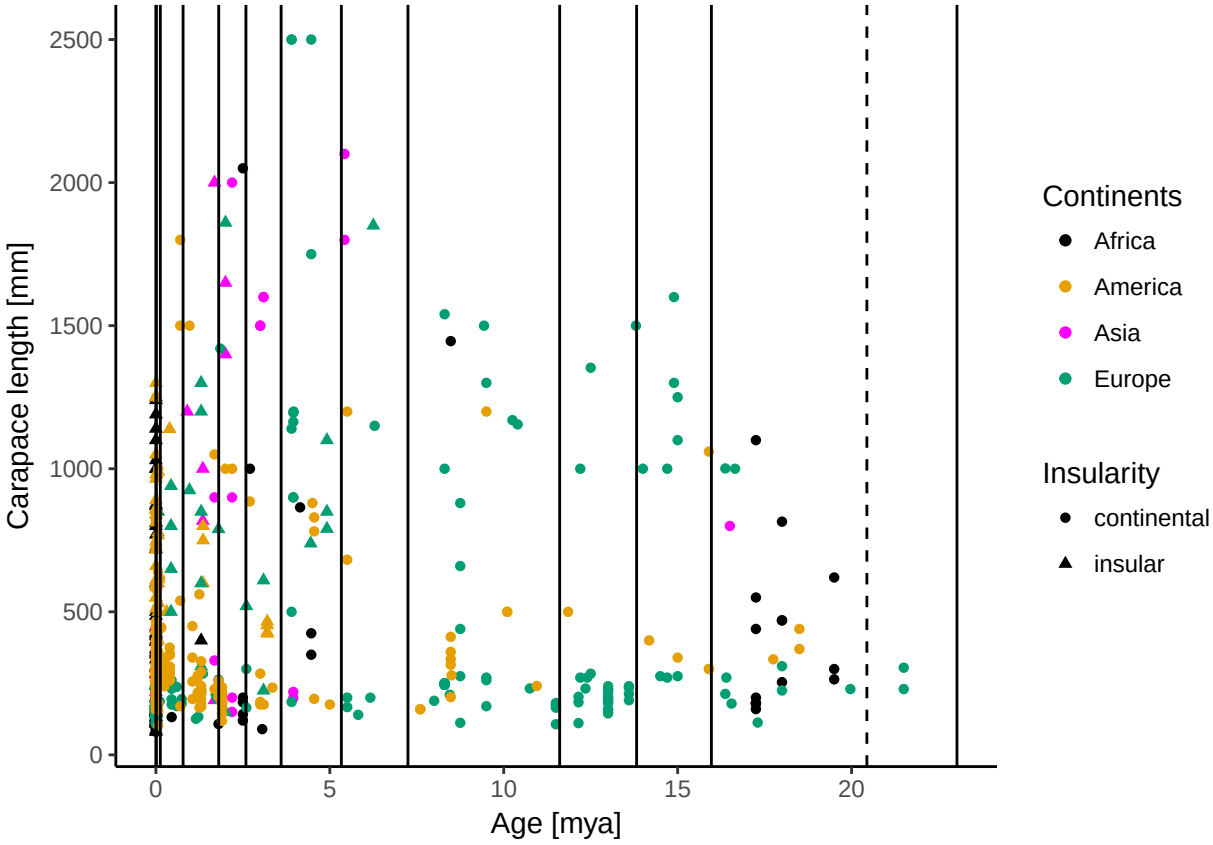

Figure 1: Scatterplot of carapace length over time, indicating insular (triangle) and continental (circles) and colour indicating continents. Lines indicate stratigraphic stages which were used as time bins, the dashed line is the border between the two stages of the Lower Miocene, which were consideres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

Maps

fossil occurences of testudinidae

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Locality	Country
Kabyle 2 km N, Yambol Region	Bulgaria
El Harhoura 2 (Temara)	Morocco
El Harhoura 2 (Temara)	Morocco
Guenfouda Cave (Ghar Zebouj, ??????), Jerada Province	Morocco
Zebbug and Gahr Dalam Cave deposits	Malta
Rancho La Brea, California	USA
Blackwater Loc. No. 1, Roosevelt County, New Mexico	USA
Pendejo Cave, Rough Canyon on Fort Bliss land, 21 km east of Orogrande, Otero County, New Mexico	USA
Robledo Cave, west side of the Robledo Mountains, Doña Ana County, New Mexico	USA
Schulze Cave Fauna, Edwards County, Texas	USA
Arredondo IIA, Alachua County, Florida	USA
Orange Lake 2 miles south, Marion County, Florida	USA
Pecos River near Melena and Acme, 10-15 km NE Roswell, Chaves County, New Mexico	USA
Reddick IA+B, Marion County, Florida	USA
Reddick IA+B, Marion County, Florida	USA
Friesenhahn Cave, Bexar County, Texas	USA
Clear Creek Local Fauna, Denton County, Texas	USA
Ingleside Local Fauna, San Patricio County, Texas	USA
Kénitra, Guilloux quarry, near Rabat	Morocco
Cova de Gràcia, Park Güell, Barcelona	Spain
Rock-Cavities, Gibraltar Peninsula	England
Caverna de Gràcia, Güell park, Barcelona	Spain
Cragin Quarry Local Fauna, Meade County, Kansas	USA
Saint-Estève-Janson, l'Escale Cave (Bouches du Rhône)	France
Soave, Zoppega 2 cave, Verona	Italy
Leisey Shell Pit 1A, Hillsborough County, Florida	USA

Locality	Country
Leisey Shell Pit 1A, Hillsborough County, Florida	USA
Leisey Shell Pit 2, Hillsborough County, Florida	USA
Sima del Elefante TE14, Sierra de Atapuerca, Burgos	Spain
Monte Tuttavista VII mustelide, Sardinia	Italy
Dmanisi	Georgia
White Rock local fauna, Republic County, Kansas	USA
Capo Mannu near San Vero Milis, base of D4 dune, Sardinia	Italy
Lesbos Island, F-Site	Greece
Ahl al Oughlam (near Casablanca)	Morocco
Ahl al Oughlam (near Casablanca)	Morocco
Cova de Ca Na Reia, Eivissa, Ibiza	Spain
Sabertooth Cave, Lecanto 2A, Citrus County, Florida	USA
Stazione Ferroviaria, Comiso (RG), Sicily	Italy
Contrada Annunziata, Ragusa (RG), Sicily	Italy
Contrada Castellazzo, Vittoria (RG), Sicily	Italy
Qesem Cave ~12 km east of Tel Aviv, western slopes Samaria hills	Israel
Caverna de Gràcia, Güell park, Barcelona	Spain
Caverna de Gràcia, Güell park, Barcelona	Spain
Sima del Elefante TE18+TE19, Sierra de Atapuerca, Burgos	Spain
Sima del Elefante TE11, Sierra de Atapuerca, Burgos	Spain
Sima del Elefante TE12, Sierra de Atapuerca, Burgos	Spain
Sima del Elefante TE13, Sierra de Atapuerca, Burgos	Spain
Sima del Elefante TE9, Sierra de Atapuerca, Burgos	Spain
Pirro Nord (Cava dell'Erba, Cava Pirro); Apricena, Apulia Italy	Italy
Ahl al Oughlam (near Casablanca)	Morocco
Lewisville Site, Denton County, Texas	USA
Libertador San Martín north bank Ensenada stream, 15 km E Diamante, Entre Rios Province	Argentina
Šandalja near Pula	Croatia
Valle de Fontechevade, Charente	France
Bate Cave, Rethymnon	Greece
Süttö Upper Pleistocene strata, Gerecse Mountains	Hungary

Locality	Country
Caprine, Rome	Italy
Monsummano	Italy
Palombara Marcellina, Rome	Italy
Sternatia, Lecce	Italy
Tarquina, Rome	Italy
Torre del Pagliaccetto, Rome	Italy
El Harhoura 1 (Temara)	Morocco
Crevene Stijena Cave, Petrovica	Serbia
Crevene Stijena Cave, Petrovica	Serbia
Crevene Stijena Cave, Petrovica	Serbia
Cueva del Boquete de Zafarraya, Sierra de Alhama, Málaga	Spain
Cueva Horá (Darro, Granada)	Spain
Brown Sand Wedge Local Fauna, Roosevelt County, New Mexico	USA
Domebo Local Fauna, Caddo County, Oklahoma	USA
Arredondo IIA, Alachua County, Florida	USA
Melbourne, Brevard County, Florida	USA
Salt Creek, 4.7 mi S and 5.7 mi. W Orla, Reeves County, Texas	USA
Shelter Cave (LACM 1010, UTEP 30), Doña Ana County, New Mexico	USA
Vero Beach, Indian River County, Florida	USA
Vero Beach, Indian River County, Florida	USA
U-Bar Cave Late Wiskonsin, Hidalgo County, New Mexico	USA
Gorham's cave IIIb, Gibraltar Peninsula	England
Gruta do Caldeirão, Tomar	Portugal
Gruta do Escoural, Évora	Portugal
Sims Bayou Local Fauna, Harris County, Texas	USA
Megenity Peccary Cave, Crawford County, Indiana	USA
Sabertooth Camel Maze, Dry Cave (UTEP 5), Eddy County, New Mexico	USA
Sabertooth Camel Maze, Dry Cave (UTEP 5), Eddy County, New Mexico	USA
U-Bar Cave Mid Wiskonsin, Hidalgo County, New Mexico	USA
Gruta Nova da Columbeira, Bombarral	Portugal
Gorham's cave IV, Gibraltar Peninsula	England

Locality	Country
Moore Pit, Dallas County, Texas	USA
Gruta da Figueira Brava, Arrábida	Portugal
Room of the Vanishing Floor, Dry Cave (UTEP 26, 27), Eddy County, New Mexico	USA
Easley Ranch Local Fauna, Foard County, Texas	USA
Easley Ranch Local Fauna, Foard County, Texas	USA
Ingleside Local Fauna, San Patricio County, Texas	USA
Cova del Rinoceront, eastern Garraf Massif, Can´Aymerich quarry, Castelldelfs	Spain
Hopwood Farm Site, near Fillmore, Montgomery County, Illinois	USA
Peace Creek, Florida	USA
Cueva del Camino Secteur Central, Pinilla del Valle, Madrid	Spain
Cueva del Camino Secteur Nord, Pinilla del Valle, Madrid	Spain
San Vito Lo Capo K22, Sicily	Italy
Mealhada, Coimbra	Portugal
Vanguard Cave, Gibraltar Peninsula	England
Raebia, Atambua area, Timor	Indonesia
Marjan	Croatia
Loreto di Venosa, Potenza	Italy
Spinagallo Cave, Siracusa, Sicily	Italy
Riparo di Visogliano (TS)	Italy
Slaughter Canyon Cave, Eddy County, New Mexico	USA
Dry Cave Fauna, Eddy County, New Mexico	USA
Dry Cave Fauna, Eddy County, New Mexico	USA
Lunel-Viel, Mas des Caves (Hérault)	France
Butler Spring XI Ranch (KU Locality 7), Meade County, Kansas	USA
Butler Spring XI Ranch (UM-K2-62), Meade County, Kansas	USA
Butler Spring XI Ranch (UM-K3-59), Meade County, Kansas	USA
Butler Spring XI Ranch (UM-K3-59), Meade County, Kansas	USA
Nye Sink Local Fauna, Beaver County, Oklahoma	USA
Alcamo travertini (TP)	Italy
Grotta Marasà (PA)	Italy
Angus Local Fauna (UNSM No-101), Nuckolls County, Nebraska	USA

Locality	Country
Berends Local Biota, Beaver County, Oklahoma	USA
Kanopolis Local Fauna, Ellsworth County, Kansas	USA
Arkalon Local Fauna, Seward County, Kansas	USA
Arkalon Local Fauna, Seward County, Kansas	USA
Cava Dell'Erba Apricena, Foggia	Italy
Cava Pirro Apricena, Foggia	Italy
Valdemino Cave, 20-24 (Borgio Verezzi, Liguria)	Italy
Gilliland local fauna, Burnett Ranch, 7 miles W of Vera, Knox County, Texas	USA
Casimba de Jatibonica, Santa Clara Province	Cuba
Chapepote spring at Banos de Ciego Montero, Santa Clara Province	Cuba
Tangi Talo, Dhozo Dhalu, Flores	Indonesia
Hato Nuevo, Matanzas Province	Cuba
Wolo Sege, Flores	Indonesia
Gervasio 5 (FG)	Italy
Leisey Shell Pit 1A, Hillsborough County, Florida	USA
Leisey Shell Pit 2, Hillsborough County, Florida	USA
Leisey Shell Pit 3, Hillsborough County, Florida	USA
Leisey Shell Pit 3A, Hillsborough County, Florida	USA
Cueva de la Victoria-1 (CV-1), Carthagène, Murcia	Spain
Mesilla Basin Fauna C, Doña Ana County, New Mexico	USA
Mesilla Basin Fauna C, Doña Ana County, New Mexico	USA
El Paso, eastern side of the Franklin Mountains and along the Rio Grande, El Paso County, Texas	USA
Tijeras Arroyo, Bernalillo County, New Mexico	USA
Barranco León 5 (BL-5=Capa D), Dépression de Guadix-Baza, Grenade	Spain
Sierra de Quibas, Abanilla, Murcia	Spain
La Union, Doña Ana County, New Mexico	USA
La Union, Doña Ana County, New Mexico	USA
Pearson Mesa near Virden, Hidalgo County, New Mexico	USA
Lakonia	Greece
Kisláng, Fejer	Hungary
Figline, Upper Valdarno	Italy

Locality	Country
Il Tasso, S. Giovanni (AR), Upper Valdarno	Italy
Le Mignaie, Upper Valdarno	Italy
Le Ville, Upper Valdarno	Italy
L'Inferno, Upper Valdarno	Italy
Montecarlo, Upper Valdarno	Italy
Big Springs Gravel Pit (UNSM Ap-103), Antelope County, Nebraska	USA
Montoussé 5, Hautes Pyrenees	France
Varshets 6 km NNE, Michajlovrad Province	Bulgaria
MacAsphalt Shell Pit, Sarasota County, Florida	USA
St. Petersburg Times Site, Pinellas County, Florida	USA
Kelatchay (Dushak)	Turkmenistan
Es Pujol d´es Fum, Formentera	Spain
Kryshanovka 1	Ukraine
Abime de la Fage, Correze	France
Hortus Cave, Valflaunès, Herault	France
Tha Chang area, Chaloem Pra Kiat district, Nakhon Ratchasima Province	Thailand
North Cita Canyon (Middle Stratum), Randall County, Texas	USA
Cita Canyon, UCMP V-3721, Harrell Ranch, Randall County, Texas	USA
Caballo Local Fauna, Palomas Basin, Sierra County, New Mexico	USA
Caballo Local Fauna, Palomas Basin, Sierra County, New Mexico	USA
Cita Canyon, UCMP V-3721, Harrell Ranch, Randall County, Texas	USA
Las Tunas, Baja California Sur	Mexico
Novaya Etulia 2	Moldova
Epanomi (EPN I), western Chalkidiki Peninsula, Thessaloniki area	Greece
Epanomi (EPN II), western Chalkidiki Peninsula, Thessaloniki area	Greece
Altan-Teli main fossiliferous bed (Dzereg valley)	Mongolia
Nea Kallikratia, western Chalkidiki Peninsula, Thessaloniki area	Greece
Nea Michaniona, western Chalkidiki Peninsula, Thessaloniki area	Greece
Milia, Grevena, W Macedonia	Greece
Milia, Grevena, W Macedonia	Greece
Sand Draw local fauna, Brown County, Nebraska	USA

Locality	Country
Sawrock Canyon local fauna, Seward County, Kansas	USA
Cala Es Pous near Ciutadella, Minorca	Spain
Serrat-d´en-Vacquer near Perpignan, Pyrénées-Orientales	France
Megalo Emvolon 1 (MEV), 20 km SW Thessaloniki	Greece
Megalo Emvolon 1 (MEV), 20 km SW Thessaloniki	Greece
W??e 1	Poland
Punta Nati near Ciutadella, Minorca	Spain
Lee Creek Mine, Yorktown Sample, Beaufort County, North Carolina	USA
Rexroad local fauna (Fox Canyon locality 3), Meade County, Kansas	USA
Rexroad local fauna (Fox Canyon locality 3), Meade County, Kansas	USA
Santee, Knox County, Nebraska	USA
W??e 1	Poland
W??e 1	Poland
Farola Monte Hermoso, 12 km SW Pehuen Có Beach, Buenos Aires Province	Argentina
Palomas Creek Fauna, Palomas Basin, Sierra County, New Mexico	USA
UCMP V6327, La Porteria, Kettleman Hills, Kings County, California	USA
Laetoli	Tanzania
Laetoli	Tanzania
Sand Draw local fauna, Brown County, Nebraska	USA
Sand Draw local fauna, Brown County, Nebraska	USA
Cuchillo Negro Creek Local Fauna, Engle Basin, Sierra County, New Mexico	USA
Elephant Butte Lake Fauna, Engle Basin, Sierra County, New Mexico	USA
Las Higueruelas, Alcolea de Calatrava, Ciudad Real	Spain
Las Higueruelas, Alcolea de Calatrava, Ciudad Real	Spain
Dikika (DIK-1)	Ethiopia
Jambol, Tenovo or General Insovo sandstone quarries	Bulgaria
Montpellier, Hérault	France
Perpignan et sa région, Pyrénées-Orientales	France
Perpignan et sa région, Pyrénées-Orientales	France
Serrat-d´en-Vacquer near Perpignan, Pyrénées-Orientales	France
Musaid right bank of Big Salcha River, Vulkaneshty Region	Moldova

Locality	Country
Novo-Savitzkaya	Moldova
Liventsovka horizon 5, near Rostov-on-Don	Russia
Novopetrovka	Ukraine
Çalta	Turkey
Ptolemais 6A = Notio 1 (NO 1)	Greece
Ptolemais 6B = Notio 1	Greece
Ptolemais 6C = Notio 1 (NO 1)	Greece
Tchelopetchene 1 (sand facies)	Bulgaria
El Arquillo 3 (ARQ3)	Spain
Kanapoi	Kenya
Kanapoi	Kenya
Kanapoi	Kenya
Nikolskoe	Moldova
Aramis, ARA-VP-6/500, Middle Awash Valley	Ethiopia
Devil´s Nest Airstrip, Knox County, Nebraska	USA
Devil´s Nest Airstrip, Knox County, Nebraska	USA
Santee, Knox County, Nebraska	USA
Devil´s Nest Airstrip, Knox County, Nebraska	USA
Kuchurgan	Ukraine
Kuchurgan	Ukraine
Osztramos 1C	Hungary
Buis Ranch Local Fauna, Beaver County, Oklahoma	USA
UCMP V71137, Turlock Lake 10, Stanislaus County, California	USA
UCMP V81248, Turlock Lake 11, Stanislaus County, California	USA
Allatini, eastern part of Thessaloniki, western Chalkidiki peninsula	Greece
Pylea, eastern part of Thessaloniki, western Chalkidiki peninsula	Greece
As Sahabi	Libya
Yepómera, Chihuahua	Mexico
UCMP V65711, Turlock Lake General, Stanislaus County, California	USA
UCMP V6878, Turlock Lake, Stanislaus County, California	USA
UCMP V71138, Dallas-Warner Reservoir 1, Stanislaus County, California	USA

Locality	Country
UCMP V90007, Turlock Lake 13, Stanislaus County, California	USA
UCMP V90008, Turlock Lake 14, Stanislaus County, California	USA
Withlacoochee River Site 4A, Marion County, Florida	USA
Kohfidisch	Austria
Kohfidisch	Austria
Teiritzberg (T1 = 001/D/C), Korneuburg Basin, Lower Austria	Austria
Eggenburg-Schindergraben, Lower Austria	Austria
Holzmannsdorfberg bei St. Marein	Austria
McGehee Farm near Newberry, Alachua County, Florida	USA
Wessington Springs local fauna, Jerauld County, South Dakota	USA
Iron Canyon Fauna, Mojave Desert, Kern County, California	USA
Chañe, Segovia	Spain
Cerro del Otero, Palencia	Spain
La Ciesma 1, Aragón	Spain
La Ciesma 1, Aragón	Spain
El Buste, Aragón	Spain
Steinheim a. Albuch	Germany
Hohenhöwen, Engen, Hegau, southwestern Germany	Germany
Wien-Kalksburg	Austria
Belomechetskaya	Russia
Sansan, Gers (lake)	France
Alcalá de Henares, Cerro del Viso (Barranco de los Mártires y Santos de la Humosa), Madrid	Spain
Vallecas, Madrid	Spain
Tarazona de Aragón	Spain
Tarazona de Aragón	Spain
Randle Cliff, Calvert County, Maryland	USA
Burgerbachtobel 1 near Wippertsweiler	Germany
Monteagudo, Aragón	Spain
Sandelzhausen	Germany
Sandelzhausen unterer Geröllmergel (B)	Germany
Kirchdorf an der Iller	Germany

Locality	Country
Arrisdrift	Namibia
Arrisdrift	Namibia
Thomas Farm Local Fauna, Gilchrist County, Florida	USA
Auchas	Namibia
Elisabethfeld (= Elisabeth Bay) area, northern Sperrgebiet	Namibia
Samos 1	Greece
Santa-Vittoria d'Alba	Italy
Torrente Melacce, Cinigiano (GR)	Italy
San Nicolas, UCMP locality V4536	Colombia
Prottes	Austria
Prottes	Austria
Prottes	Austria
Crevillente 2	Spain
Crevillente 2	Spain
UCMP V-3952, Ingram Creek site 8, Stanislaus County, California	USA
Ricardo Fauna, Mojave Desert, Kern County, California	USA
Ricardo Fauna, Mojave Desert, Kern County, California	USA
El Lugarejo (Arévalo), Ávilla, Castilla	Spain
Hostalets de Piérola, Barcelone province, Cataluña, Vallés-Penedés basin	Spain
Kohfidisch	Austria
Teiritzberg (T1 = 001/D/C), Korneuburg Basin, Lower Austria	Austria
Fuensaldaña, Valladoid	Spain
Illescas, Toledo	Spain
Illescas, Toledo	Spain
La Cistérniga, Valladolid	Spain
Puente de la Princessa, Madrid	Spain
Villalcón, Palencia	Spain
Coca cemetery, Segovia	Spain
Przeworno I	Poland
Barajas, Madrid	Spain
Barajas, Madrid	Spain

Locality	Country
Ciudad Universitaria, Madrid	Spain
Henares 1, Los Santos de la Humosa, Madrid	Spain
Puente de los Franceses, Madrid	Spain
Puente de los Franceses, Madrid	Spain
Vallecas, Madrid	Spain
Egelhoff Ranch Local Fauna, Keya Paha County, Nebraska	USA
Plum Point, Calvert County, Maryland	USA
Furth 460m	Germany
Puttenhausen E	Germany
Puttenhausen B	Germany
Puttenhausen A	Germany
Ba?a Dolina in Ve?ký Krtíš	Slovakia
Fosso della Fittaia 2013, Baccinello-Cinigiano Basin, Tuscany	Italy
Prottes	Austria
Crevillente 2	Spain
Autovía A6, Arévola, Ávila	Spain
Hammerschmiede 1	Germany
Hammerschmiede 5 (HAM 5)	Germany
Salinas Grandes de Hidalgo, Atreucó, La Pampa	Argentina
Toros-Menalla, Djurab desert (TM 266)	Chad
Patos (= Acre 6, LACM Locality 4611), Assisbrasil County, Acre	Brazil
Götzendorf	Austria
Vösendorf-Brunn, near Wien	Austria
Atzelsdorf, 35 km NE Vienna, Lower Austria	Austria
Eibiswald	Austria
Karingarab D. wardi level	Namibia
North of Gypsum Plate Pan D. wardi level	Namibia
Rooilepel D. wardi level	Namibia
Tataru?-Brusturi	Romania
Jebel Semama	Tunisia
Küçükçekmece	Turkey

Locality	Country
Höwenegg	Germany
Höwenegg	Germany
Ecoparc de Can Mata (els Hostalets de Pierola), Vallés-Penedés basin, Cataluña	Spain
Petersbuch 14	Germany
Sant Quirze de Terrassa/de Galliners (del Vallès), Barcelona	Spain
Gritsev (Khmelnitsk area, Shepetovski district)	Ukraine
Sofca (125) - F 434	Turkey
Can Mata (els Hostalets de Pierola), Vallés-Penedés basin, Cataluña	Spain
Nombrevilla 2. NOM 2	Spain
Gratkorn, clay pit St. Stefan, Styria	Austria
Gratkorn, clay pit St. Stefan, Styria	Austria
Bois de Fabregues, Aups, Var	France
Abocador de Can Mata (els Hostalets de Pierola)(ACM/BDA), Vallés-Penedés basin, Cataluña	Spain
La-Grive-Saint-Alban (M+L7), Isère	France
Toril 3A. TOR 3A, near Daroca, Zaragoza province	Spain
Toril 3B. TOR 3B, near Daroca, Zaragoza province	Spain
Oehningen, oberer Bruch, Schienerberg N Oehningen-Wangen	Germany
Steinheim a. Albuch	Germany
Fort Niobrara, UCMP V-3218, Cherry County, Nebraska	USA
Valentine Railway Quarry A, UNSM Cr 12, Cherry County, Nebraska	USA
Valentine Railway Quarry B, UNSM Cr 13, Cherry County, Nebraska	USA
Coca-Villeguillo, Segovia	Spain
Uitikon-Schlieren, quarry on road, near Zürich	Switzerland
Veltheim-Winterthur	Switzerland
Myers Farm, Webster County, Nebraska	USA
Myers Farm, Webster County, Nebraska	USA
Mynsualmas	Kazakhstan
DISC Cluster Sites, conglomerate, Fort Polk, Louisiana	USA
Goldberg near Pflaumloch, Nördlinger Ries (without number)	Germany
Kirrberg b. Balzhausen - Tongrube	Germany
Kirrberg b. Balzhausen - Tongrube	Germany

Locality	Country
Petersbuch 31 - oben	Germany
Ursberg (nördliche Sandgrube)	Germany
Somosaguas Sur, Madrid Basin	Spain
Hottell Ranch rhino quarries, Banner County, Nebraska	USA
Lassé, Maine-et-Loire	France
Pontigné-les-Buisseneaux, Maine-et-Loire	France
Vieux-Collonges, Saint-Cyr-au-Mont-d´Or, Rhône, France	France
Vieux-Collonges, Saint-Cyr-au-Mont-d´Or, Rhône, France	France
Calle Moratines, Madrid	Spain
Calle Paseo de Moret, Madrid	Spain
La Barranca, Zaragoza	Spain
Paracuellos de Jarama, Madrid	Spain
Bohlinger Schlucht 6	Germany
Stätzling	Germany
Bonlanden, Illertal	Germany
Bonlanden, Illertal	Germany
Georgensgmünd, Reznat-Altmühl-Stausee	Germany
Hambach 6C	Germany
Unterzell 1a	Germany
Norden Bridge Local Fauna, Brown County, Nebraska	USA
Norden Bridge Local Fauna, Brown County, Nebraska	USA
Laimering 3	Germany
Ziemetshausen 1e	Germany
Dénezé-sous-le-Lude, Maine-et-Loire	France
Noyant-sous-le-Lude, Maine-et-Loire	France
Pontlevoy-Thenay, Loir-et-Cher	France
Pontlevoy-Thenay, Loir-et-Cher	France
Savigné-sur-Lathan, Indre-et-Loire	France
Aresing (shallow lake)	Germany
Edelbeuren-Schlachtberg	Germany
Griesbeckerzell 1a	Germany

Locality	Country
Griesbeckerzell 1a	Germany
Tobel Oelhalde Nord 1	Germany
Tobel Oelhalde Süd	Germany
Tobel Oelhalde Süd	Germany
Ziemetshausen 1b	Germany
Ziemetshausen 1b	Germany
Ziemetshausen 1g	Germany
Valdemoros 3B. VA 3B	Spain
Derching 1b (unten)	Germany
Edelbeuren-Maurerkopf	Germany
Edelbeuren-Maurerkopf	Germany
Castelnau d´Arbieu, Gers	France
Benistobel (Kohltobel)	Germany
Biberach-Jordanbad	Germany
Burgerbachtobel 1 near Wippertsweiler	Germany
Burgerbachtobel 1 near Wippertsweiler	Germany
Ettishofener Ach between Inntobel and Berg-Ettishofen	Germany
Ettishofener Ach between Inntobel and Berg-Ettishofen	Germany
Griesbeckerzell 1b	Germany
Heggbach am Buchhaldenberg, Maselheim, near Biberach	Germany
Heggbach am Buchhaldenberg, Maselheim, near Biberach	Germany
Hotterloch-Tobel SW Ravensburg	Germany
Lattentobel	Germany
Ochsenhausen am Heselsberg, Baustelle Remmele	Germany
Schmalegger Tobel	Germany
Schmalegger Tobel	Germany
Ziemetshausen 1d	Germany
Ziemetshausen 1f	Germany
Grund near Hollabrunn (Collection Schaffer)	Austria
Petersbuch 41	Germany
Eberstetten 2 (unter Weg)	Germany

Locality	Country
Untereichen-Altenstadt 565m	Germany
Untereichen-Altenstadt 565m	Germany
Coldspring Trinity River Local Fauna, San Jacinto County, Texas	USA
Chesapeak Beach RR Station, Maryland	USA
Oberbernbach a	Germany
Oggenhof near Häder	Germany
Moratilla 2. MOR 2	Spain
Gisseltshausen 1b	Germany
Gisseltshausen 1a	Germany
Häder	Germany
Sainbach (bei Ichenhofen)	Germany
Culebra Reach, Station 1998 + 00, 600 feet W of center line of Panama Canal	Panama
Chubut Valley south side between Gaiman and Dolavon, Patagonia	Argentina
Leithagebirge between Au and Loretto	Austria
Marsolan, Gers	France
Neuville-aux-Bois, Loiret	France
Unterempfenbach 1d	Germany
Wackersdorf Westfeld	Germany
Altheim-Breitenlauh 2	Germany
Eggingen-Schleiche B	Germany
Eggingen-Schleiche B	Germany
Walda 2 (oben)	Germany
Walda 2 (oben)	Germany
Sandelzhausen	Germany
Sandelzhausen oberer Geröllmergel (D2)	Germany
Sandelzhausen oberer Geröllmergel (E)	Germany
Sandelzhausen unterer Geröllmergel (B)	Germany
Sandelzhausen unterer Geröllmergel (C1)	Germany
Sandelzhausen unterer Geröllmergel (C2)	Germany
Sandelzhausen unterer Geröllmergel (C3/D1)	Germany
Maßendorf	Germany

Locality	Country
Maßendorf	Germany
Walda 1 (unten)	Germany
Walda 1 (unten)	Germany
San Roque 3. SR 3	Spain
Kleinebersdorf, Wolmuth-Sandgrube (010/G/Liegendes), Korneuburg Basin, Lower Austria	Austria
Obergänserndorf (OG2), Korneuburg Basin, Lower Austria	Austria
Teiritzberg (001/X/C), Korneuburg Basin, Lower Austria	Austria
Teiritzberg (001/X/C), Korneuburg Basin, Lower Austria	Austria
Weinsteig (107), Korneuburg Basin, Lower Austria	Austria
Weinsteig (107/S/B), Korneuburg Basin, Lower Austria	Austria
Puttenhausen 2	Germany
Randecker Maar	Germany
Contres, Loir-et-Cher	France
Schießen	Germany
Schießen	Germany
Schönenberg near Jettingen	Germany
Schönenberg near Jettingen	Germany
Illerkirchberg 1	Germany
Illerkirchberg 1	Germany
Langenmosen	Germany
Eitensheim	Germany
Eitensheim	Germany
Can Mas near El Papiol, Barcelone province, Cataluña, Vallés-Penedés basin	Spain
Aerotrain a Chevilly pres d'Artenay (Loiret)	France
Baigneaux-en-Beauce (Eure-et-Loir)	France
Suèvres aux Imberts, Loir-et-Cher	France
Suèvres aux Imberts, Loir-et-Cher	France
Erkertshofen 1	Germany
Erkertshofen 2	Germany
Freudenegg 2 Baggersee	Germany
Freudenegg 3 Baggersee	Germany

Locality	Country
Freudenegg 3 Baggersee	Germany
Gerlenhofen	Germany
Günzburg 2/1 Umgehungsstrasse Sande	Germany
Günzburg 2/2 Umgehungstr höhere Bereiche der Sande	Germany
Günzburg 2/5 Umgehung Sande im Süden Aufschluss	Germany
Günzburg 2/6 Umgehung Sande im Norden Aufschluss	Germany
Petersbuch 4	Germany
Djebel Zelten	Libya
Torralba de Ribota (Zaragoza)	Spain
La Romieu, Gers	France
Forsthart	Germany
Béon 1 (Montréal-du-Gers)	France
Béon 1 (Montréal-du-Gers)	France
Reisensburg near Günzburg	Germany
Reisensburg near Günzburg	Germany
Petersbuch 7	Germany
Pamunkey River, between King William and New Kent Counties, Virginia	USA
Pollack Farm Site near Cheswold, Kent County, Delaware	USA
Rauscheröd near Passau, Bavaria	Germany
Hiwegi loc. R 1	Kenya
Hiwegi loc. R 106	Kenya
Hiwegi loc. R 3	Kenya
Hiwegi loc. R 5	Kenya
Mfangano	Kenya
Nira and Kachuku near Karungu	Kenya
Rangoye, Uyoma peninsula lake Victoria	Kenya
Langenau 1	Germany
Langenau 1	Germany
Langenau 2	Germany
Langenau 2	Germany
Eggingen-Mittelhart	Germany

Locality	Country
Eggingen-Mittelhart	Germany
Grimmelfingen	Germany
Walangani	Kenya
Kiahera loc. R 120	Kenya
Chilleurs-aux-Bois, Loiret (Burdigalian)	France
Chitenay, Loir-et-Cher	France
La Brosse, Maine-et-Loire	France
Mauvieres, Marcilly-sur-Maulne, Indre-et-Loire	France
Stubersheim 3	Germany
Thomas Farm Local Fauna, Gilchrist County, Florida	USA
Baltringen	Germany
Baltringen	Germany
Fiskus	Namibia
Glastal	Namibia
Grillental, northern Sperrgebiet	Namibia
Langental, nothern Sperrgebiet	Namibia
Marsland Quadrangle, Box Butte County, Nebraska	USA
Auterive, Haute-Garonne	France
Grépiac, Haute-Garonne	France
Grépiac, Haute-Garonne	France
Landes-le-Gaulois, Loir-et-Cher	France
Tréteau, Allier	France
Barbotan-les-Thermes (Gers)	France
Marcoin, Volvic, Puy-de-Dôme	France
Saint-Gérand-le-Puy, Allier	France
Saint-Gérand-le-Puy, Allier	France
Saint-Gérand-le-Puy, Allier	France
Wallenried Channel, 10 km N Fribourg	Switzerland
Montaigu-le-Blin, La Chacotte, Allier	France
Pechbonnieu, Haute-Garonne	France
Pechbonnieu, Haute-Garonne	France

Locality	Country
Saulcet, Allier	France
Toledo Bend Dam, Newton County, Texas	USA
Paulhiac, Lot-et-Garonne	France
Chiquimil, Catamarca	Argentina
Stanianzi	Bulgaria
Brisghella Cava Monticino	Italy
Gretoni, Stazione Monte Amiata (SI)	Italy
Polenzo section along Tanaro River, Verduno, Piedmont Italy	Italy
Altan-Teli Oshi horizon (Dzereg valley)	Mongolia
Polgárdi 2	Hungary
Autovía A-30, Murcia	Spain
Casa Castillo near Jumilla, Murcia	Spain
Tudorovo	Moldova
Venta del Moro (Cabriel Basin)	Spain
Kuyalnik	Ukraine
Shkodova Gora	Ukraine
Cliffs in the Paraná eastern riverside near Paraná, Entre Ríos	Argentina
Megalo Rema near Paleomilos	Greece
Cava Monticino, near Brisigella, Emilia-Romana	Italy
Lothagam 1	Kenya
Lothagam 2	Kenya
Lukeino	Kenya
Barranco del Cigarrón (B-Cg1), S El Palmar, Murcia	Spain
Hamra	United Arabian E
Jebel Dhannah	United Arabian E
Kihal	United Arabian E
Shuwaihat	United Arabian E
El Hatillo, 1.5 km north of, Falcón State	Venezuela
Bajo Giuliani, La Pampa	Argentina
Quehué, La Pampa	Argentina
Tardosbánya 3	Hungary

Locality	Country
Chimishlia	Moldova
Taraklia	Moldova
Azmaka quarry 2.5 km NNE Chirpan	Bulgaria
Morskaya 2 locality of the Sea of Azov region	Russia
Kalimantsi 2-4	Bulgaria
Kalimantsi 2-4	Bulgaria
Montagne du Lubéron à Cucuron, Vaucluse et Alpes-de-Haute-Provence	France
Montagne du Lubéron à Cucuron, Vaucluse et Alpes-de-Haute-Provence	France
Aubignas 1+2, Ardèche	France
Chobruchi	Moldova
Novoelizavetovka	Ukraine
Yurievka	Ukraine
Ambérieu-en-Bugey, Ain	France
Csákvár, Esterh?y Cave, Fejér Province	Hungary
Dorn-Dürkheim, Giloth Quarry, about 25 km S Mainz	Germany
Belka	Ukraine
Saint-Bauzile, Ardèche	France
Rooilepel D. laini level	Namibia
Kamenica nad Hronom	Slovakia
Grebeniki 1	Ukraine
Dove Spring Fauna, Mojave Desert, Kern County, California	USA
Dove Spring Fauna, Mojave Desert, Kern County, California	USA
Kainary	Moldova
Novoukrainka 1 (= Budenovka)	Ukraine
Montredon, Aude	France
Udabno	Georgia
Krivoj Rog	Ukraine
Sabadell	Spain
Saint-Fons, Rhône	France
Poc?e?ti right side Ikel River valley	Moldova
Autovía Orbital de Barcelona B-40 (B40OV/S4K), Vallés-Penedés basin, Cataluña	Spain

Locality	Country
Autovía Orbital de Barcelona B-40 (B40OV/S4K), Vallés-Penedés basin, Cataluña	Spain
Can Filuà, Santa Perpétua, Vallès Occidental, Barcelona	Spain
Can Gavarra, Polinyá, Vallès Occidental, Barcelona	Spain
Can Vinyalets, Barcelona	Spain
Cerro de los Batallones, Madrid	Spain
Cerro de los Batallones, Madrid	Spain
Djebel Krechem el Artsouma	Tunisia
Love Bone Bed along State Road 241 near Archer, Alachua County, Florida	USA
Varnitza	Moldova
Bushor 1	Moldova
Kalfa	Moldova
Borský Svätý Jur	Slovakia
Arevalillo River (Arévola), Ávila	Spain
Arévalo, Ávila, Castilla	Spain
Benavente, Zamora	Spain
WaKeeney Local Fauna (UM-K6-59 on the Lowell Hillman Ranch), Trego County, Kansas	USA
WaKeeney Local Fauna (UM-K6-59 on the Lowell Hillman Ranch), Trego County, Kansas	USA
Lapushna	Moldova
Valles de Fuentidueña, Segovia Province	Spain
Valles de Fuentidueña, Segovia Province	Spain
Valles de Fuentidueña, Segovia Province	Spain
Estació Depuradora d´Aigües Residuals Sabadell Riu-Ripoll, Cataluña, Vallés-Penedés basin	Spain
Hostalets de Piérola Superior, Barcelone province, Cataluña, Vallés-Penedés basin	Spain
Rudabanya (grey green marl 5C)	Hungary
Rudabánya, Borsod-Abaúj-Zemplén Province (all)	Hungary
Hammerschmiede 3	Germany
Prairéal, Vaumas, Allier	France
Langy, Allier	France
Veauche, Loire	France
Toulouse Puits Borderouge niveau inférieur, Haute-Garonne	France
La Milloque, Hautefage, Lot-et-Garonne	France

Locality	Country
Oberleichtersbach	Germany
Oberleichtersbach	Germany
Créchy, Allier	France
Dieupentale, Tarn-et-Garonne	France
Moissac 2, Tarn-et-Garonne	France
Moissac 2, Tarn-et-Garonne	France
Peublanc, Sorbier, Allier	France
Venelles 35 km N Marseille	France
Hautesvignes, Lot-et-Garonne	France
Mine des Rois, Dallet et Pont-du-Château, Puy-de-Dôme	France
Saint-Thomas, Hautefage, Lot-et-Garonne	France
Aktau Chul´adyr Formatioon Lower Member	Kazakhstan
Coderet, Bransat, Allier	France
Gannat, Allier (shallow lake)	France
Pech-Desse, Moulliac, Tarn-et-Garonne, Phosphorite du Quercy	France
Pech-Desse, Moulliac, Tarn-et-Garonne, Phosphorite du Quercy	France
Paali Nala level 1, Balochistan	Pakistan
Pech-du-Fraysse, Saint-Projet, Tarn-et-Garonne, Phosporites du Quercy	France
Pech-du-Fraysse, Saint-Projet, Tarn-et-Garonne, Phosporites du Quercy	France
Pech-du-Fraysse, Saint-Projet, Tarn-et-Garonne, Phosporites du Quercy	France
Paali Nala level C2, Balochistan	Pakistan
Marseille, Saint-André, Bouches-du-Rhône	France
Marseille, Saint-André, Bouches-du-Rhône	France
Le Crozatier, Brons, Cantal	France
Le Crozatier, Brons, Cantal	France
North Mesa, Shara Murun region, Inner Mongolia	China
Twin Oboes, Shara Murun region, Inner Mongolia	China
Ardyn Obo basin, Chinese Postroad	Mongolia
Ardyn Obo basin, Chinese Postroad	Mongolia
Ardyn Obo basin, Chinese Postroad	Mongolia
Promontory Bluff (Sair Usu 150- Kalgan 350 miles)	Mongolia

Locality	Country
Le Garouillas, Phosphorites du Quercy	France
Neschers à La Sauvetat, Puy-de-Dôme	France
Rigal-Jouet, Phosphorites du Quercy	France
Saint-Germain-Lembron, Puy-de-Dôme	France
Vaumas, Allier	France
Espenhain near Leipzig	Germany
Bournoncle-Saint-Pierre, Auvergne, Haute-Loire	France
Puylaurens, Tarn	France
Saint-Vivien-de-Monségur, Gironde	France
Talagay (Tayzhuzgen section)	Kazakhstan
Los Barros quarry, 4 km SE Àvila	Spain
Pichovet, Vachères, Lubéron, Provence-Alpes-Côte d´Azur	France
Itardies (Caylus, Tarn-et-Garonne)	France
Mounayne, Phosphorites du Quercy	France
Pech-Crabit, Bach, Lot, Phosphorites du Quercy	France
Pech-Crabit, Bach, Lot, Phosphorites du Quercy	France
Roqueprune, Mouillac, Tarn-et-Garonne, Phosphorites du Quercy	France
La Plante 2, Concots, Lot, Phosporite du Quercy	France
Mas de Got A, Phosphorites du Quercy	France
Mas de Got B, Phosphorites du Quercy	France
AMNH quarries A, B, C, Fayyum	Egypt
Gua Teg	Mongolia
Neumühle near Weinheim/Alzey	Germany
Thaytiniti, Dhofar	Oman
Ravet-Lupo, Caylus, Lot, Phosphorites du Quercy	France
Ruch, Gironde	France
Sainte-Marthe, Eymet, Dordogne	France
Soumaille, Pardaillan, Lot-et-Garonne	France
Aubrelong 1, Phosphorites du Quercy, Lot	France
Kalgan area	China
Quercy (Phosphorites du Quercy)	France

Locality	Country
Quercy (Phosphorites du Quercy)	France
Baby 2, Saint-André-et-Appelles, Gironde	France
Haunsberg near St. Pankraz, Salzburg	Austria
Swift Current Creek, southern Saskatchewan	Canada
Korablik Kiinkerish	Kazakhstan
Ardyn Obo (Ergelyeen Dzo), SE Gobi	Mongolia
Saint-Capraise-d´Eymet, Dordogne	France
Sainte-Néboule, Béduer, Lot	France
Escamps, Phosphorites du Quercy	France
Lostange, Beduer, Lot	France
Lostange, Beduer, Lot	France
Rosières, Escamps, Lot, Phosporites du Quercy	France
Sainte-Croix-de-Brignon, Gard	France
Sindou D, Phosphorites du Quercy	France
Côja, Cerâmica da Carriça	Portugal
Paris Montmartre	France
La Débruge = Butte de Sainte Radegonde (pres d´Apt, Gargas, Vaucluse)	France
La Grave, Bonsac, Gironde	France
Langlès, Saint-Martin-de-Villeréal, Lot-et-Garonne	France
Santiago Yolomécatl, Oaxaca	Mexico
Santiago Yolomécatl, Oaxaca	Mexico
Calf Creek near Eastend, Saskatchewan	Canada
Rocourt-Saint-Martin, Aisne	France
Rocourt-Saint-Martin, Aisne	France
Myaing UCMP locality V6204	Myanmar
Thandaung kyitchaung, UCMP locality V78090	Myanmar
Chéry-Chartreuve (Aisne)	France
Grisolles, Est du Basin de Paris, Aisne	France
Castres, Bassin de l´Agout, Tarn	France
Lautrec, Tarn	France
Robiac, Saint-Mamert, Gard	France

Locality	Country
Robiac, Saint-Mamert, Gard	France
Naia, Tondela, Viseu	Portugal
Mazaterón, Soria Province, Castilla y León	Spain
Geiseltal near Halle (Mücheln), Sachsen-Anhalt	Germany
Issel, Department Aude	France
Le Guépelle, Saint-Witz, Val d´Oise	France
La Défense, Hauts-de-Seine	France
Aigues-Vives 2, Hérault	France
Jumencourt, Aisne	France
Bouxwiller, Bas-Rhin	France
Stena	Kazakhstan
Saint-Papoul NE Carcasonne, Aude	France
North Fork, Wapiti Valley north Shoshone River (NF-5 Wapiti III), Park County, Wyoming	USA
UCMP V98009, Uinta County, Wyoming	USA
Cuis (Marne)	France
Grauves (Marne)	France
Mancy, Marne	France
Monthelon, Marne	France
Andarak 1, Osh Region	Kyrgyzstan
Andarak 2, Osh Region	Kyrgyzstan
Khayzhin-Ula 2	Mongolia
North Fork, Wapiti Valley north Shoshone River (NF-16 Wapiti II), Park County, Wyoming	USA
North Fork, Wapiti Valley north Shoshone River (NF-17 Wapiti II), Park County, Wyoming	USA
North Fork, Wapiti Valley north Shoshone River (NF-3 Wapiti II), Park County, Wyoming	USA
North Fork, Wapiti Valley north Shoshone River (NF-8 Wapiti II), Park County, Wyoming	USA
UCMP V70251, Patrick Draw S, Sweetwater County, Wyoming	USA
UCMP V70251, Patrick Draw S, Sweetwater County, Wyoming	USA
UCMP V74024, Turtle Graveyard General, Sweetwater County, Wyoming	USA
Tsagan-Khushu (Naran member, layer 2)	Mongolia
Kaseki-Kabe near Shiramine, Kuwajima, Hakusan City, Ishikawa Prefecture, Honshu	Japan
Cedazo local fauna, Aguascalientes, Mexico	Mexico

Locality	Country

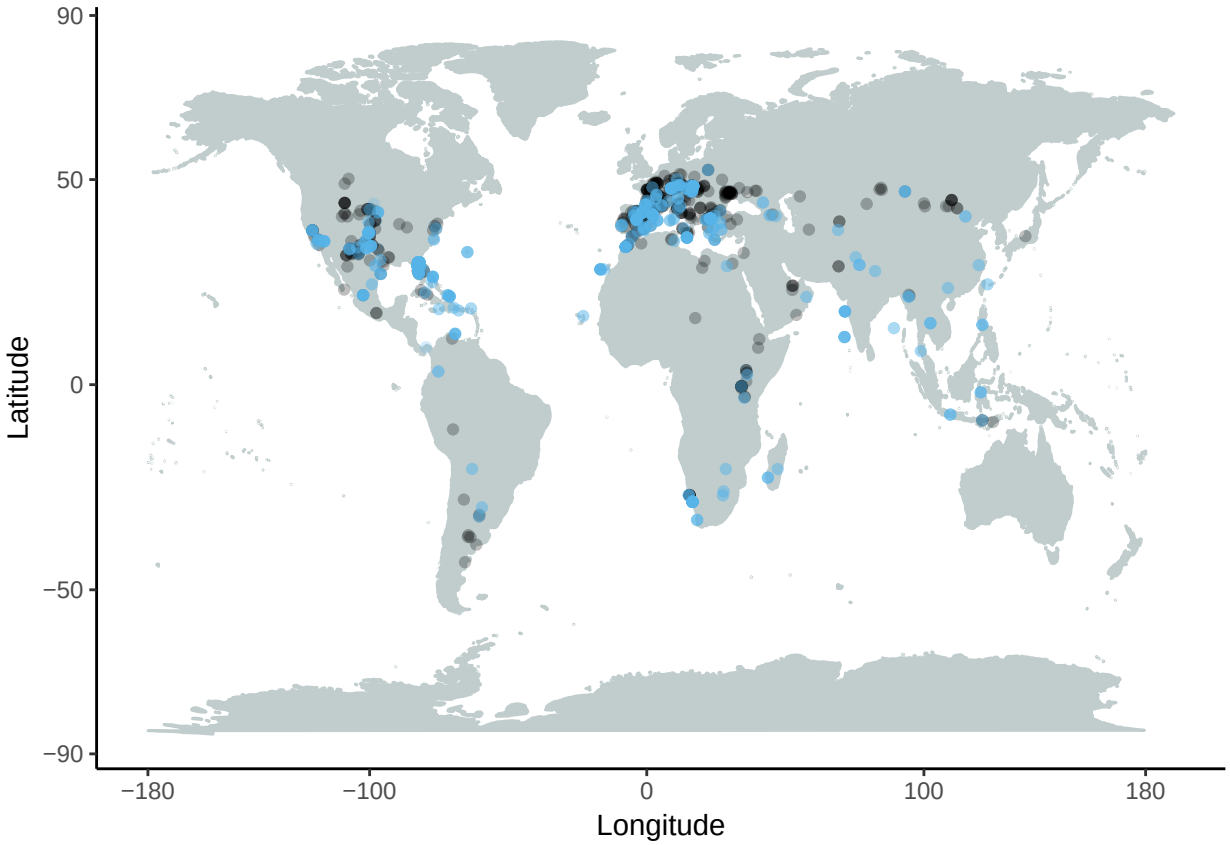


Figure 2: Map displaying all fossil occurrences of testudinids, with color indicating whether relevant literature was available (black if not) and if it was, whether body size data was available or not (yes and no, respectively).

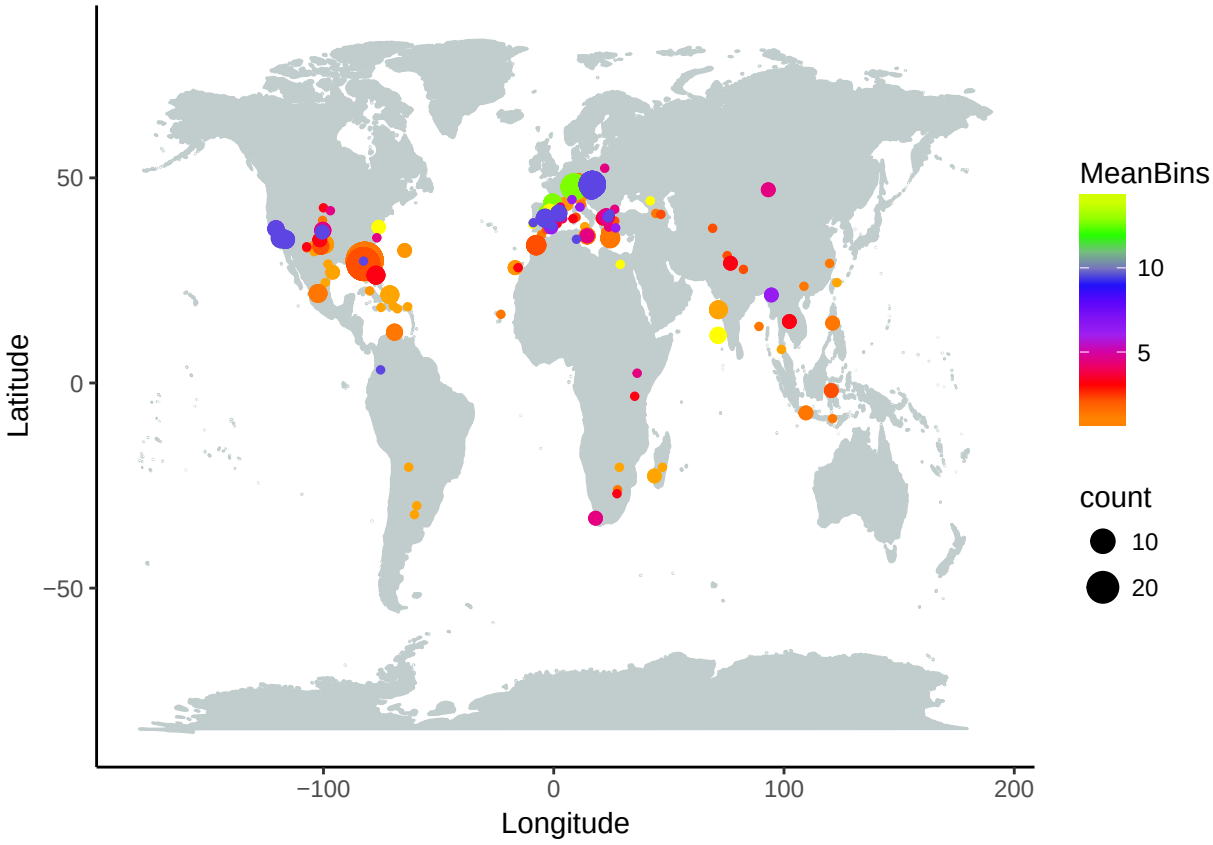


Figure 3: Map displaying all localities for which body size data for testudinids was available in the literature. Size of points denotes sample size, color denotes approximate age.

Table 3: Overview over fossil species per time bin, with sample size and mean CL.

EpochBins	Taxon	n	meanCL
Upper Pleistocene	Centrochelys robusta	1	850.0000
Upper Pleistocene	Chelonoidis denticulata	1	616.0000
Upper Pleistocene	Chelonoidis lutzae	1	830.0000
Upper Pleistocene	Chelonoidis marcanoi	4	672.2500
Upper Pleistocene	Chelonoidis monensis	1	500.0000
Upper Pleistocene	Chelonoidis sombrerensis	1	990.0000
Upper Pleistocene	Chelonoidis sp.	3	666.6667
Upper Pleistocene	Eurotestudo hermanni	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	Geochelone sp.	1	340.0000
Lower Pleistocene	Gopherus berlandieri	2	225.6500
Lower Pleistocene	Gopherus flavomarginatus	1	450.0000
Lower Pleistocene	Gopherus pertenuis	1	1050.0000
Lower Pleistocene	Gopherus polyphemus	3	254.4667
Lower Pleistocene	Gopherus sp.	6	233.9667
Lower Pleistocene	Hesperotestudo crassiscutata	5	285.6000
Lower Pleistocene	Hesperotestudo incisa	7	234.6286
Lower Pleistocene	Hesperotestudo mlynarskii	2	184.2500
Lower Pleistocene	Hesperotestudo sp.	1	1500.0000
Lower Pleistocene	Hesperotestudo turgida	1	230.0000
Lower Pleistocene	Megalochelys sondaari	2	909.0000
Lower Pleistocene	Megalochelys sp.	3	1130.4667
Lower Pleistocene	Psammobates antiquorum	1	107.8000
Lower Pleistocene	Testudo changshanesis	1	330.0000
Lower Pleistocene	Testudo graeca	1	195.0000
Lower Pleistocene	Testudo hermanni	2	176.5500
Lower Pleistocene	Testudo marginata	3	270.0000
Lower Pleistocene	Titanochelon gymnesica	1	1300.0000
Gelasian	Centrochelys marocana	1	2050.0000
Gelasian	Eurotestudo cf. hermanni	1	150.0000
Gelasian	Gopherus sp.	15	185.7467
Gelasian	Hesperotestudo campester	1	1000.0000
Gelasian	Hesperotestudo sp.	1	1000.0000
Gelasian	Manouria punjabiensis	1	900.0000
Gelasian	Megalochelys atlas	3	1683.3333
Gelasian	Testudo aff. kenitrensis	1	142.0000
Gelasian	Testudo oughlamensis	1	120.0000
Gelasian	Testudo ranovi	1	200.0000
Gelasian	Testudo sp.	2	192.0000
Gelasian	Testudo transcaucasia	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	Testudo catalaunica	1	232.0000
Serravallian	Testudo steinheimensis	2	169.3500
Serravallian	Titanochelon bolivari	1	1353.0000
Langhian	Caudochelys ducateli	1	339.9000
Langhian	Chelonoidis sp.	3	553.3333
Langhian	Ergilemys sp.	1	1000.0000
Langhian	gen. indet.	1	1000.0000
Langhian	Paleotestudo antiqua	1	275.0000
Langhian	Paleotestudo cf. sp.	1	270.0000
Langhian	Testudo kalksburgensis	1	275.0000
Langhian	Testudo sp.	1	400.0000
Langhian	Titanochelon bolivari	2	1175.0000
Langhian	Titanochelon cf. bolivari	2	1450.0000
Burdigalian/Aquitanian	Caudochelys williamsi	1	334.0000
Burdigalian/Aquitanian	gen. indet.	1	270.0000
Burdigalian/Aquitanian	Geochelone sp.	2	900.0000
Burdigalian/Aquitanian	Geochelone tedwhitei	2	405.0000
Burdigalian/Aquitanian	Impregnochelys pachytectis	1	620.0000
Burdigalian/Aquitanian	Mesocherus orangeus	5	180.0000
Burdigalian/Aquitanian	Namibchersus aff. namaquensis	3	696.6667
Burdigalian/Aquitanian	Namibchersus namaquensis	6	428.8333
Burdigalian/Aquitanian	Paleotestudo cf. antiqua	1	113.0000
Burdigalian/Aquitanian	Paleotestudo sp.	1	179.3000
Burdigalian/Aquitanian	Testudo kalksburgensis	2	227.5000
Burdigalian/Aquitanian	Testudo promarginata	3	281.5667
Burdigalian/Aquitanian	Testudo rectogularis	1	213.0000
Burdigalian/Aquitanian	Titanochelon cf. perpiniana	1	1001.0000

Table 4: 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
Eurotestudo hermanni	5	201.0200
gen. indet.	8	654.1250
Geochelone crassa	1	865.0000
Geochelone hesterna	1	278.0000
Geochelone s. l.	1	1750.0000
Geochelone sp.	10	626.2000
Geochelone stromeri	2	387.5000
Geochelone tedwhitei	2	405.0000
Gopherus ? sp.	2	500.0000
Gopherus agassizi	2	348.5000
Gopherus berlandieri	2	225.6500
Gopherus canyonensis	1	885.5000
Gopherus flavomarginatus	1	450.0000
Gopherus laticaudatus	1	375.0000
Gopherus mohavetus	5	324.8000
Gopherus pertenuis	1	1050.0000
Gopherus polyphemus	54	295.1144
Gopherus praecedens	1	360.0000
Gopherus sp.	21	199.5238
Hesperotestudo alleni	1	240.9000
Hesperotestudo bermudae	2	385.0000
Hesperotestudo campester	1	1000.0000
Hesperotestudo crassiscutata	11	367.1818
Hesperotestudo equicomes	1	340.0000
Hesperotestudo incisa	8	234.3950
Hesperotestudo johnstoni	1	235.0000
Hesperotestudo mlynarskii	2	184.2500
Hesperotestudo oelrichi	1	283.8000
Hesperotestudo orthopygia	2	941.0000
Hesperotestudo riggsi	5	175.1600
Hesperotestudo 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 5: 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/Aquitanian	Caudochelys	1	334.0000
Burdigalian/Aquitanian	gen.	1	270.0000
Burdigalian/Aquitanian	Geochelone	4	652.5000
Burdigalian/Aquitanian	Impregnochelys	1	620.0000
Burdigalian/Aquitanian	Mesocherus	5	180.0000

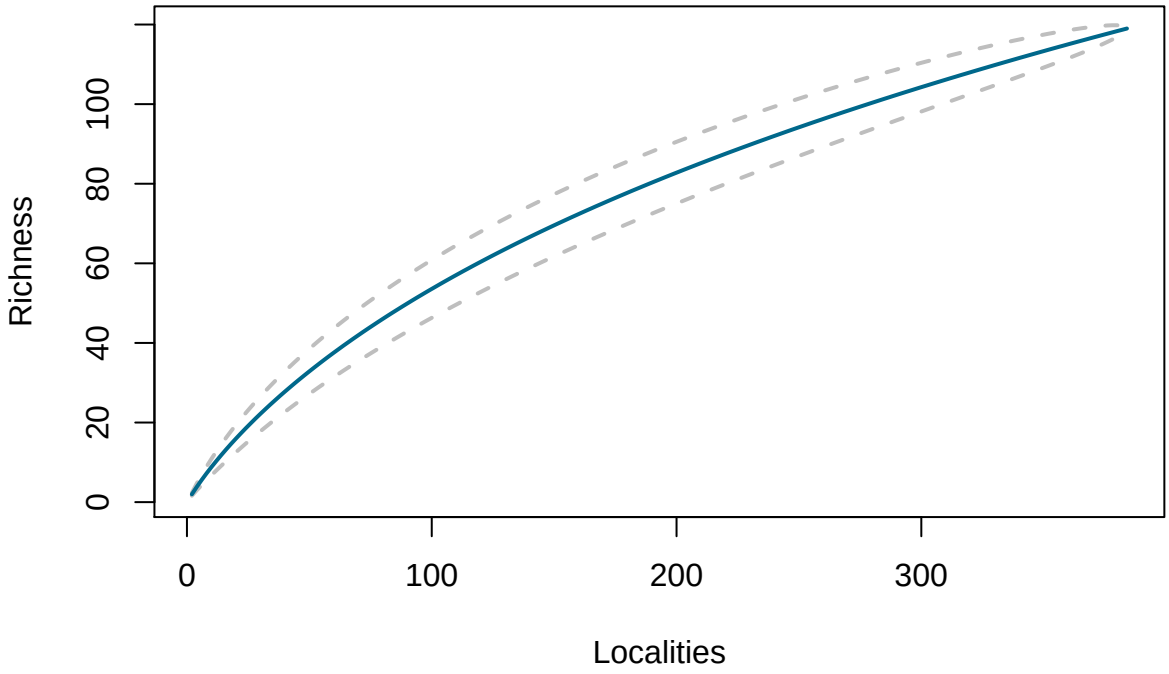
EpochBins	Genus	n	meanCL
Burdigalian/Aquitanian	Namibchersus	9	518.1111
Burdigalian/Aquitanian	Paleotestudo	2	146.1500
Burdigalian/Aquitanian	Testudo	6	252.1167
Burdigalian/Aquitanian	Titanochelon	1	1001.0000

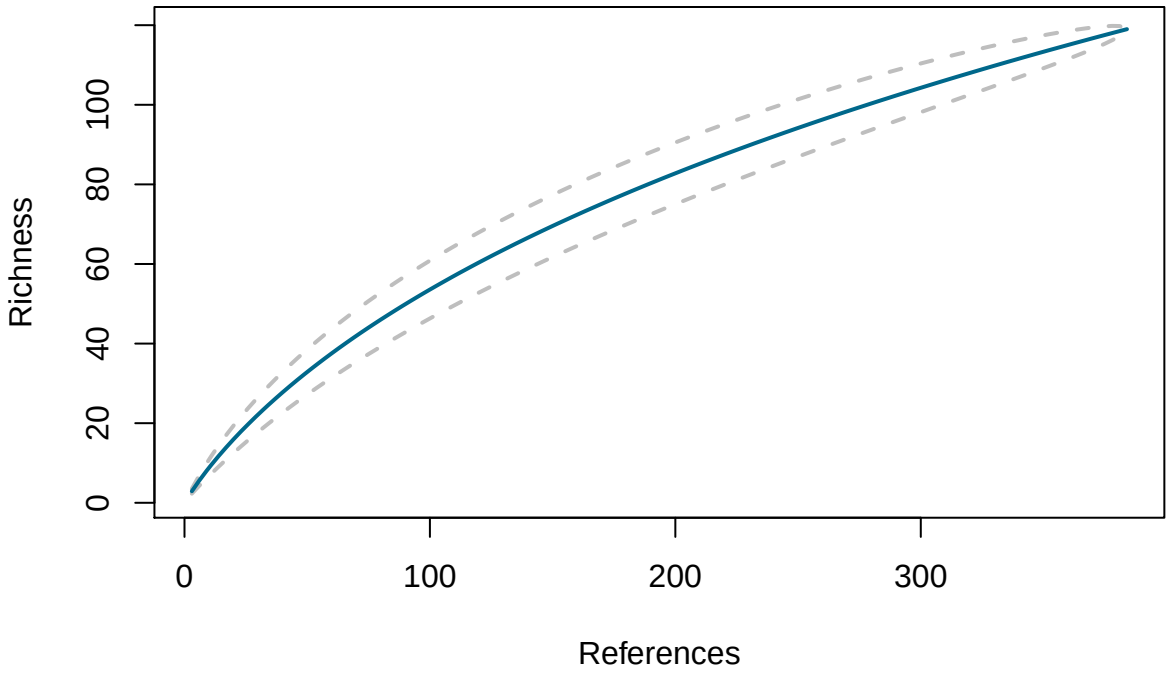
Table 6: General overview over genera, with sample sizes and mean CL.

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





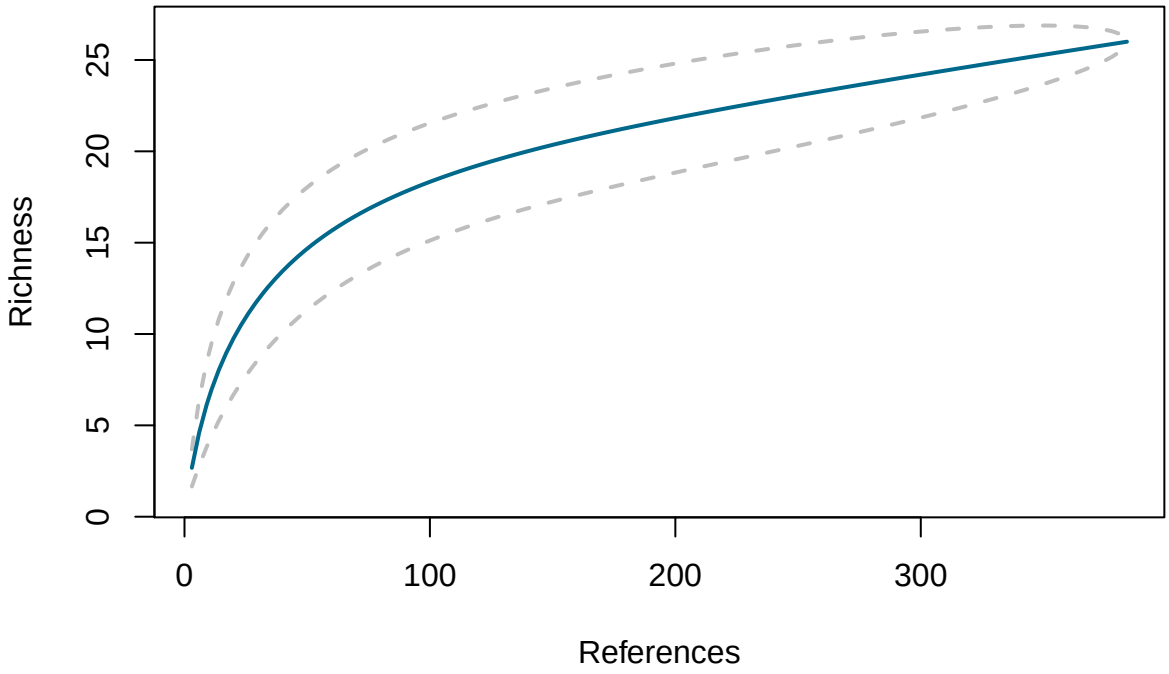


Figure 4: Sampling Accumulation Curve of fossil genera per reference

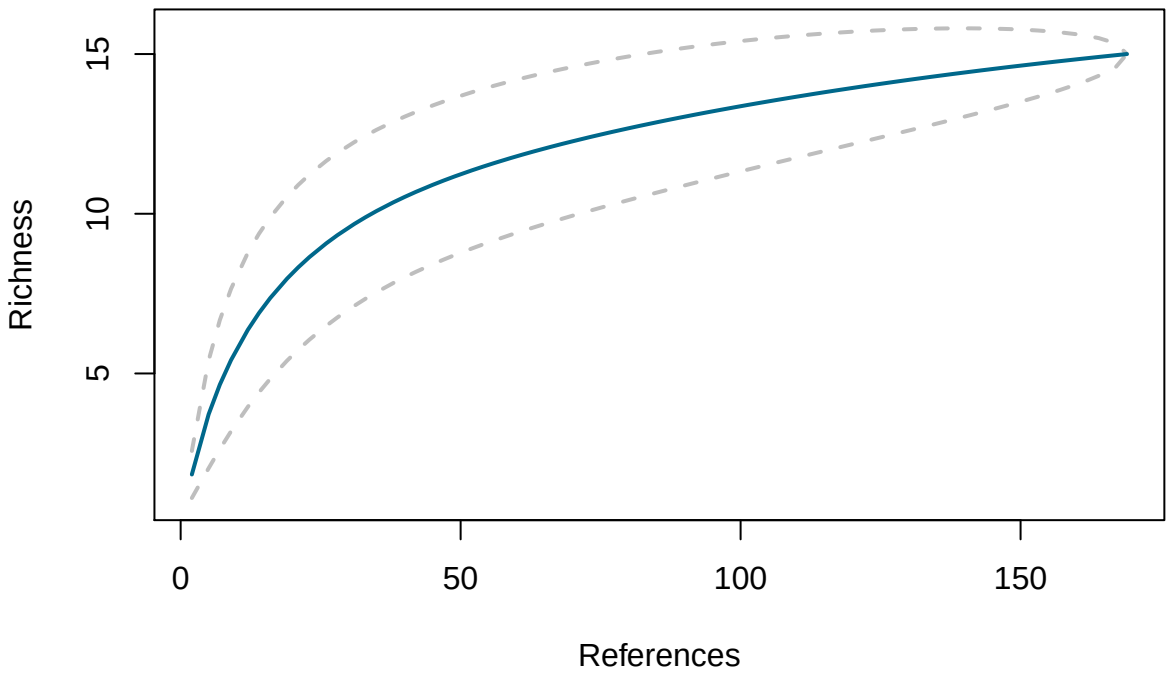


Figure 5: Sampling Accumulation Curve of fossil genera per reference, Eurasia

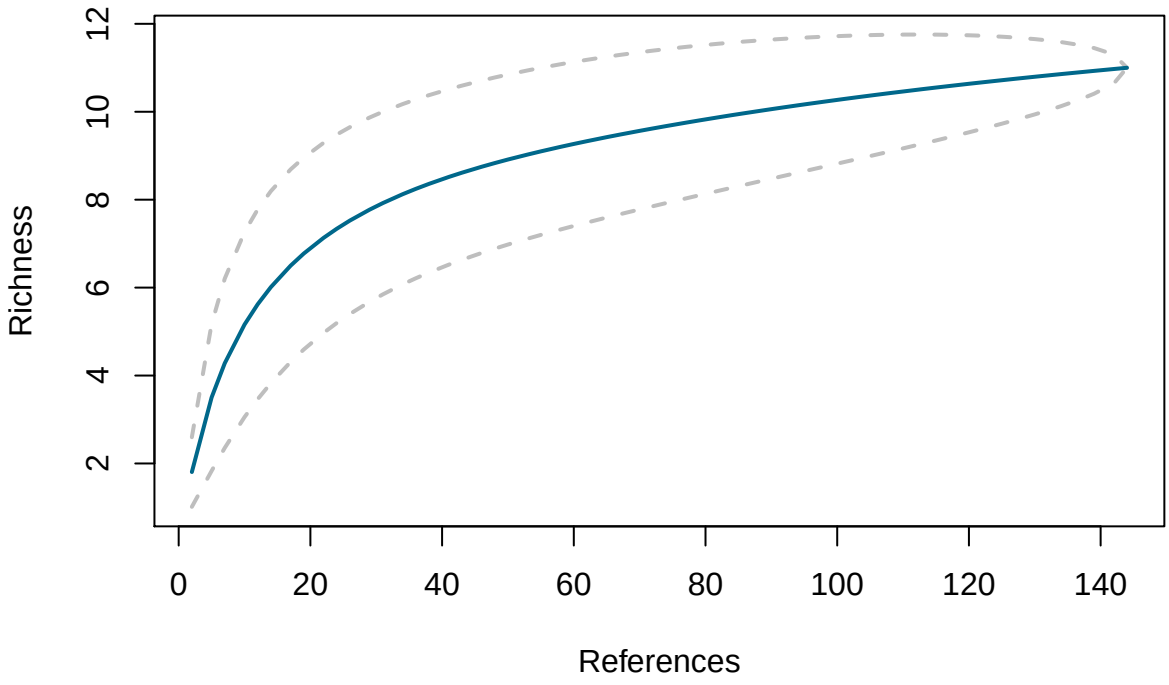


Figure 6: Sampling Accumulation Curve of fossil genera per reference, Europe

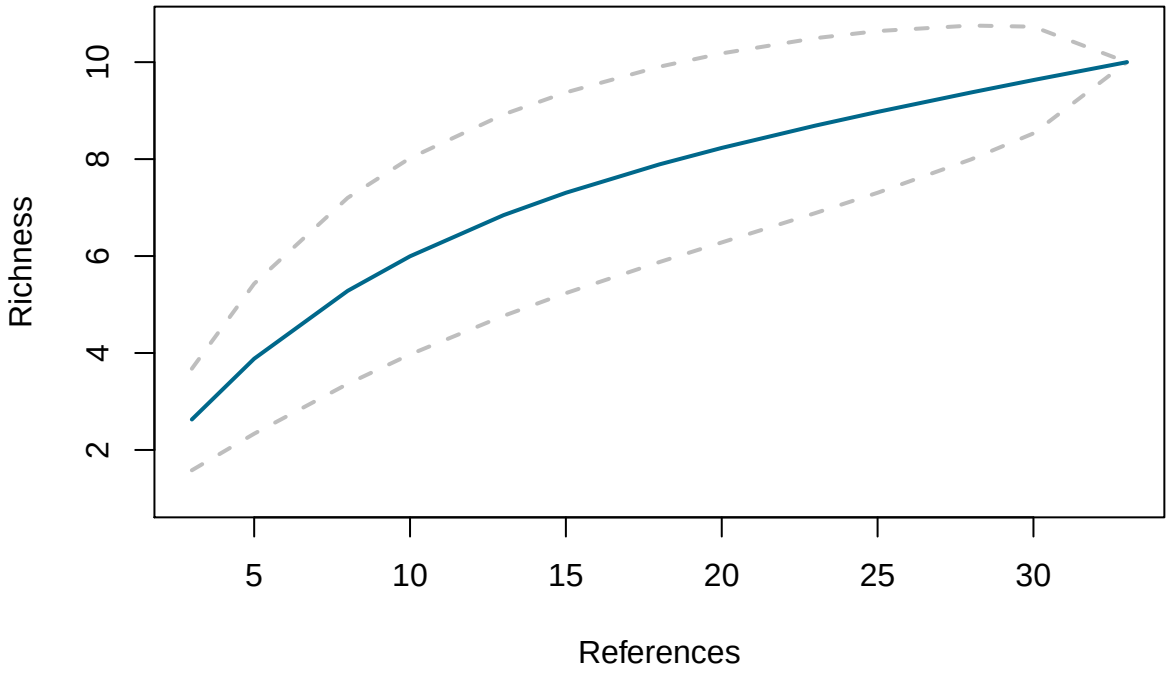


Figure 7: Sampling Accumulation Curve of fossil genera per reference, Africa

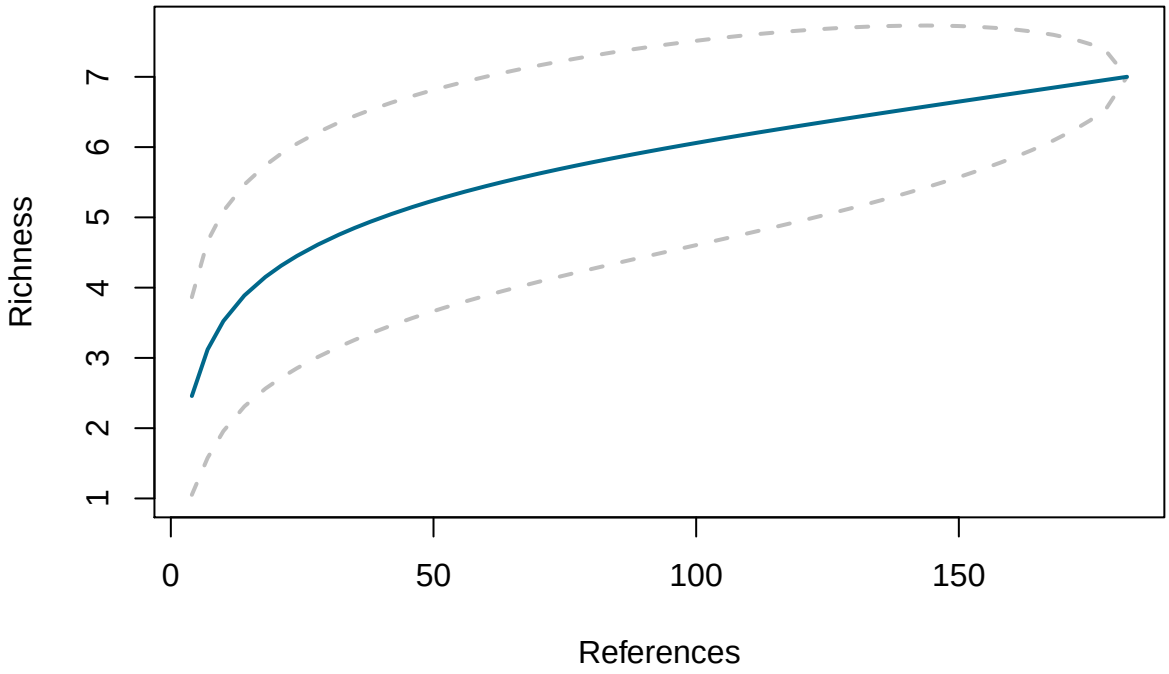


Figure 8: Sampling Accumulation Curve of fossil genera per reference, America

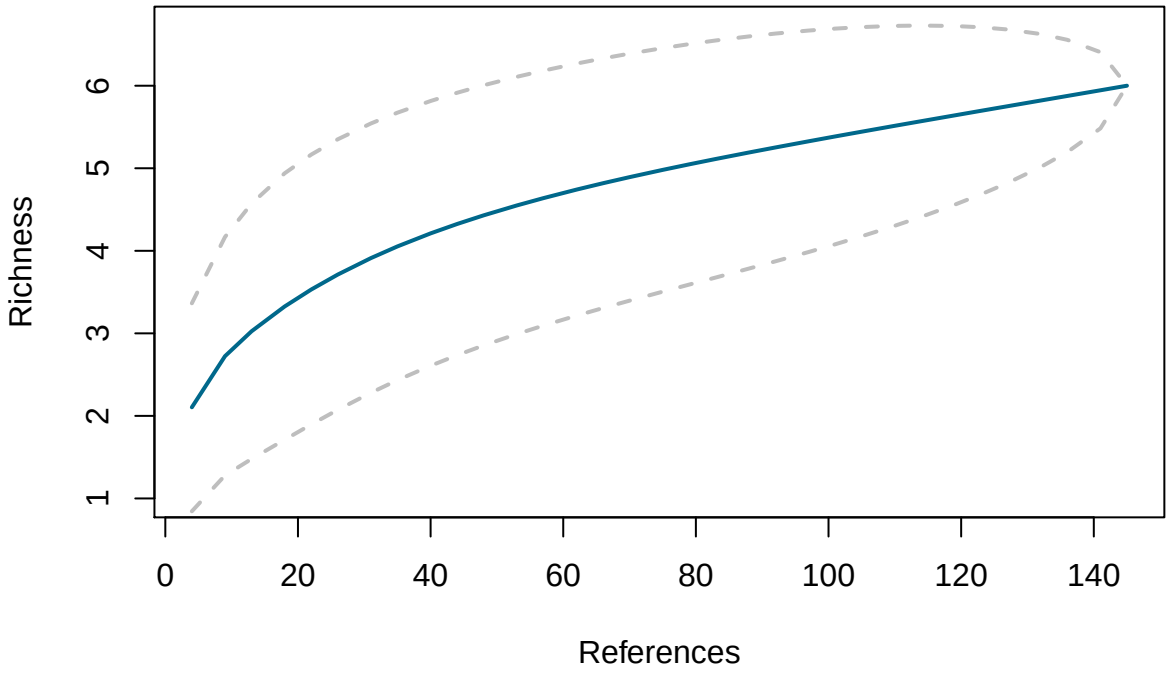


Figure 9: Sampling Accumulation Curve of fossil genera per reference, N-America

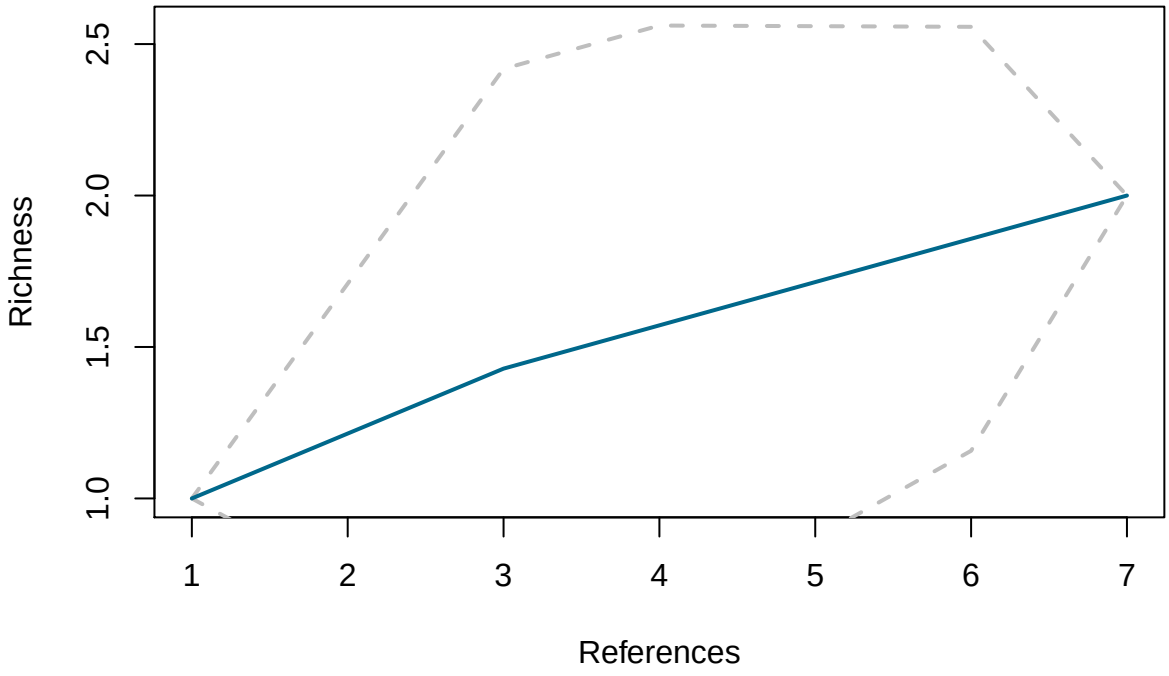


Figure 10: Sampling Accumulation Curve of fossil genera per reference, S-America

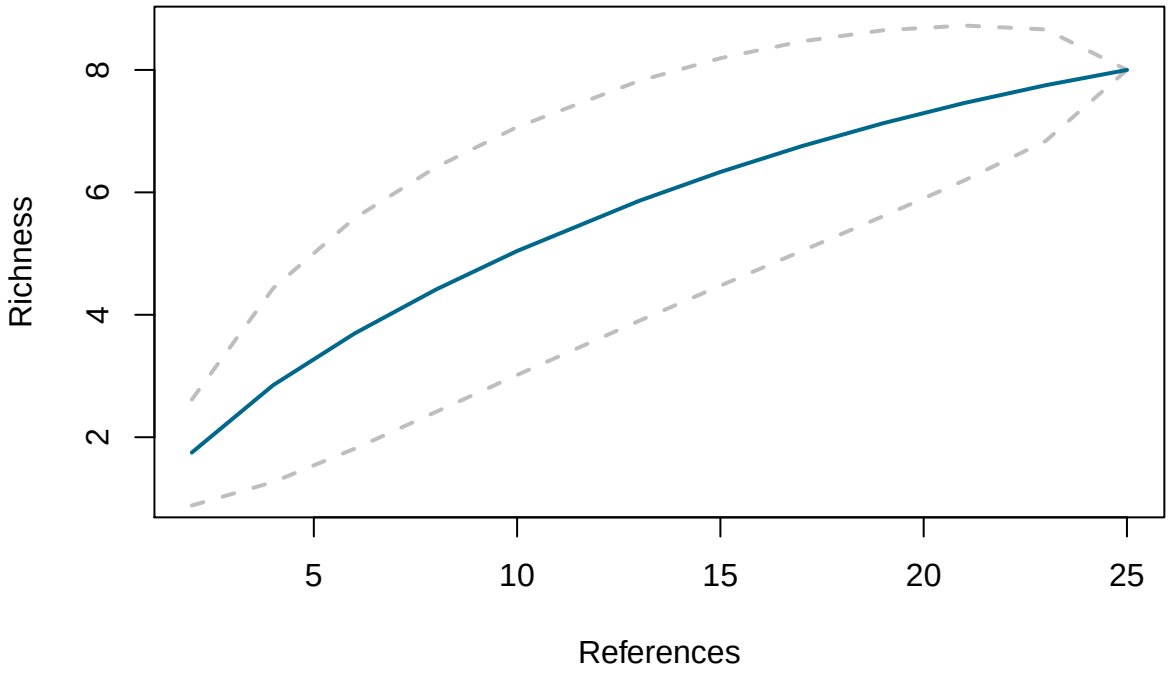
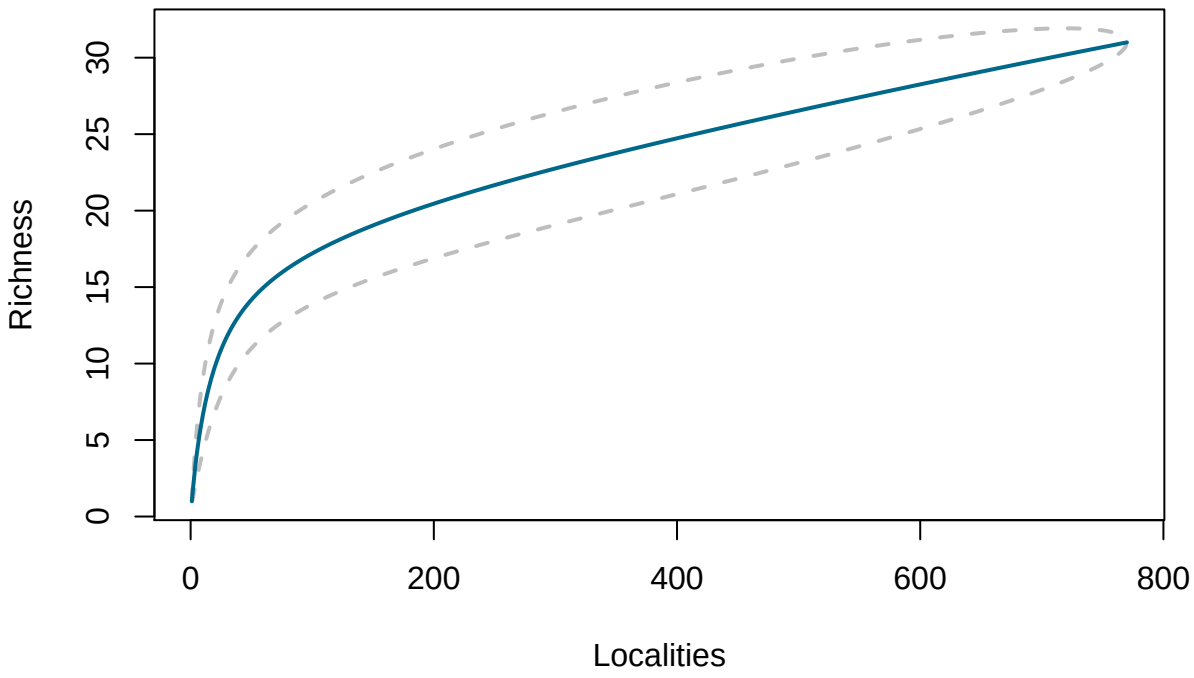


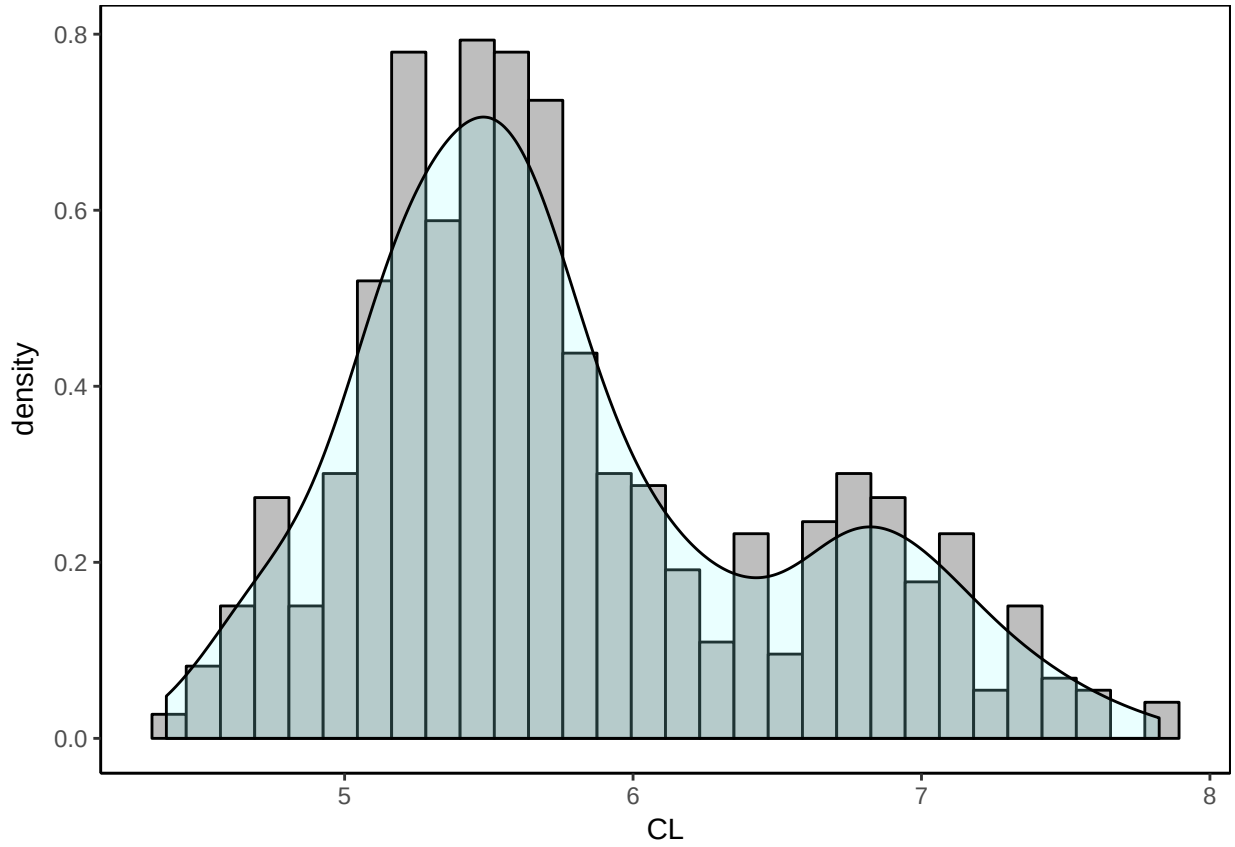
Figure 11: Sampling Accumulation Curve of fossil genera per reference, Asia

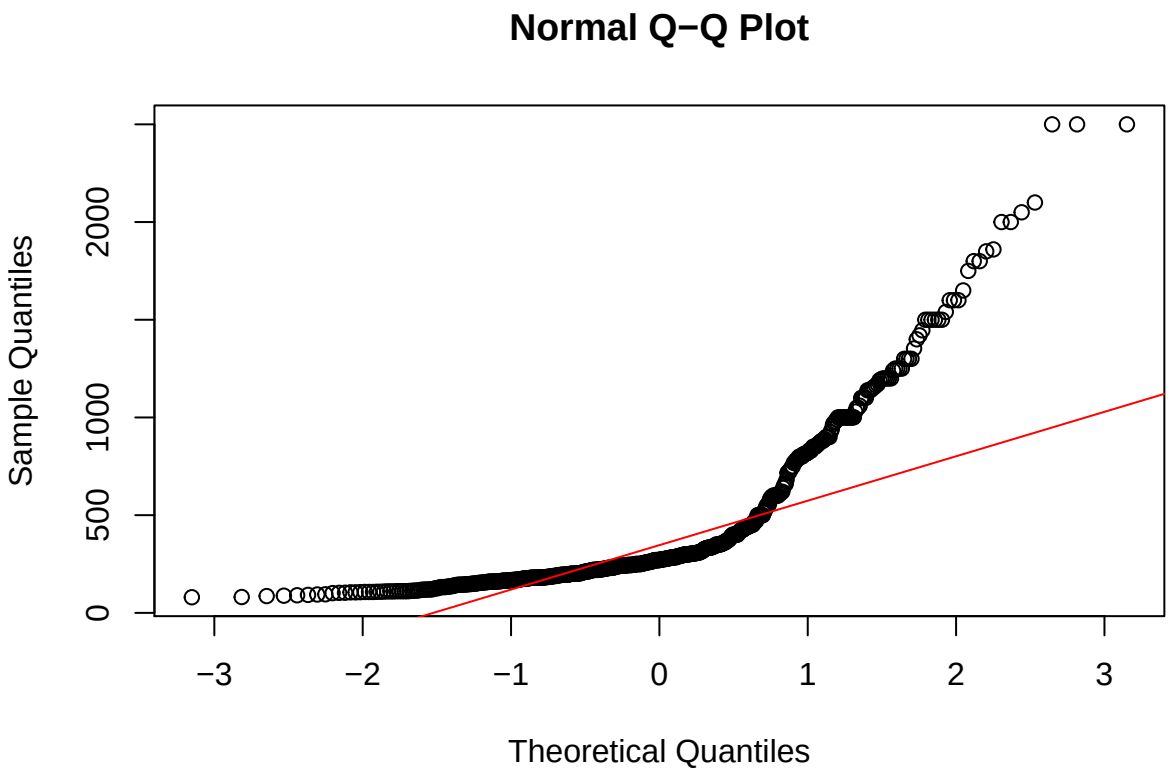

Richness
0
5
10
15
20
25
30
0
200
400
600
800
Localities

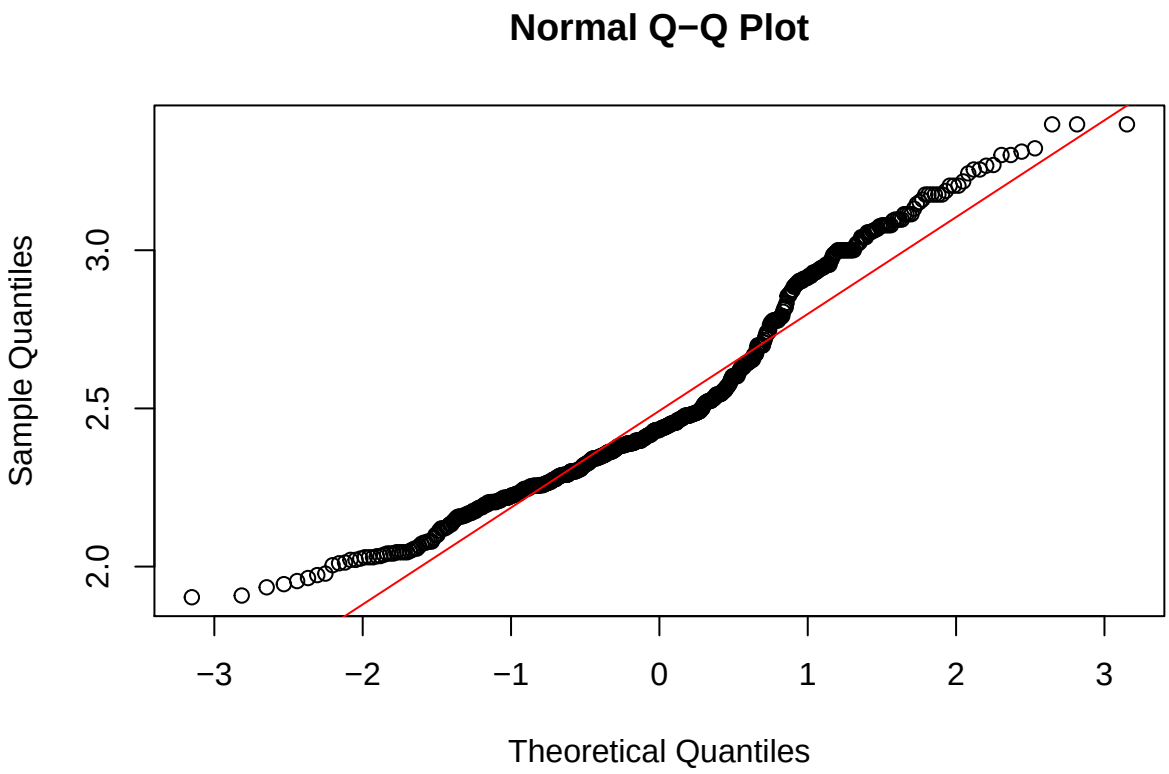
Histograms

all

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




Normal Q−Q Plot
Sample Quantiles
0
500
1000
2000
−3
−2
−1
0
1
2
3
Theoretical Quantiles


Normal Q−Q Plot
Sample Quantiles
2.0
2.5
3.0
−3
−2
−1
0
1
2
3
Theoretical Quantiles

per time bin

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

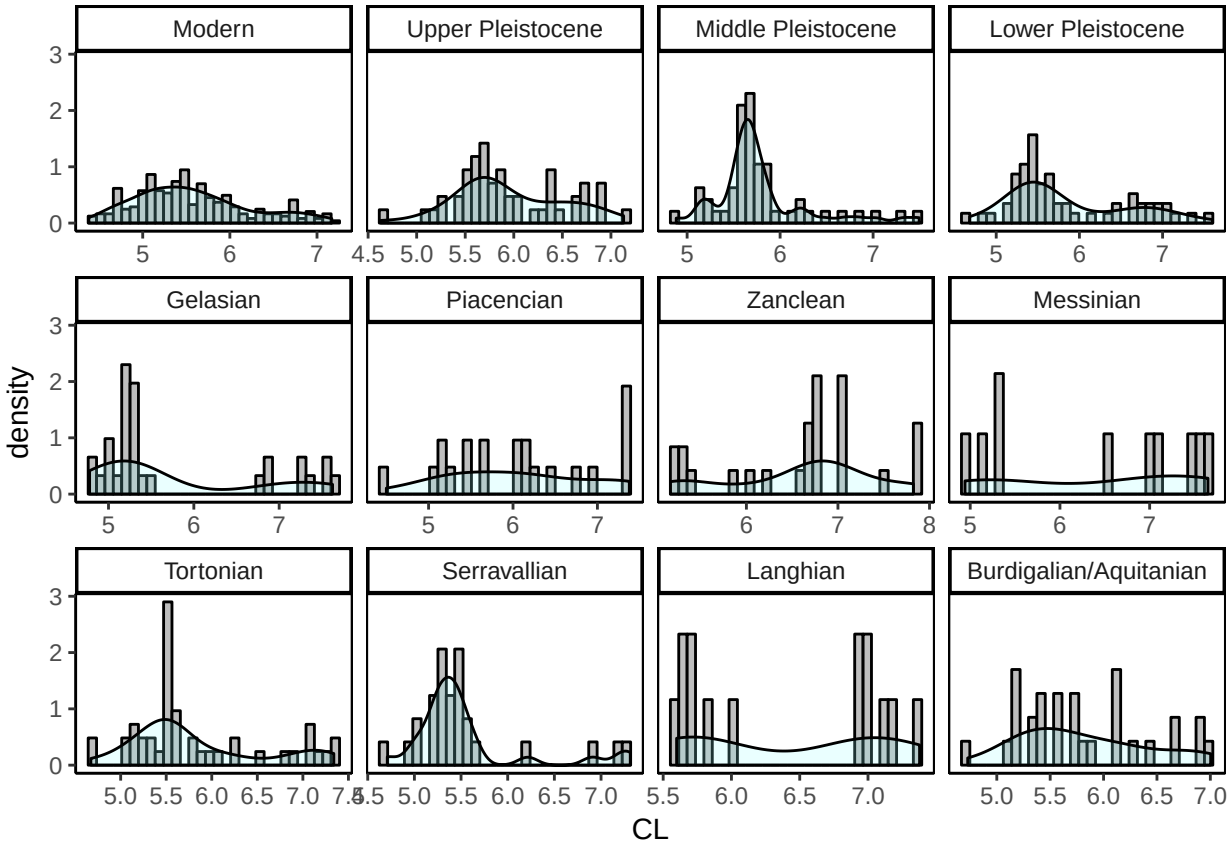


Figure 12: Distribution of body size data per time bin, logtransformed.

modern vs. fossil

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

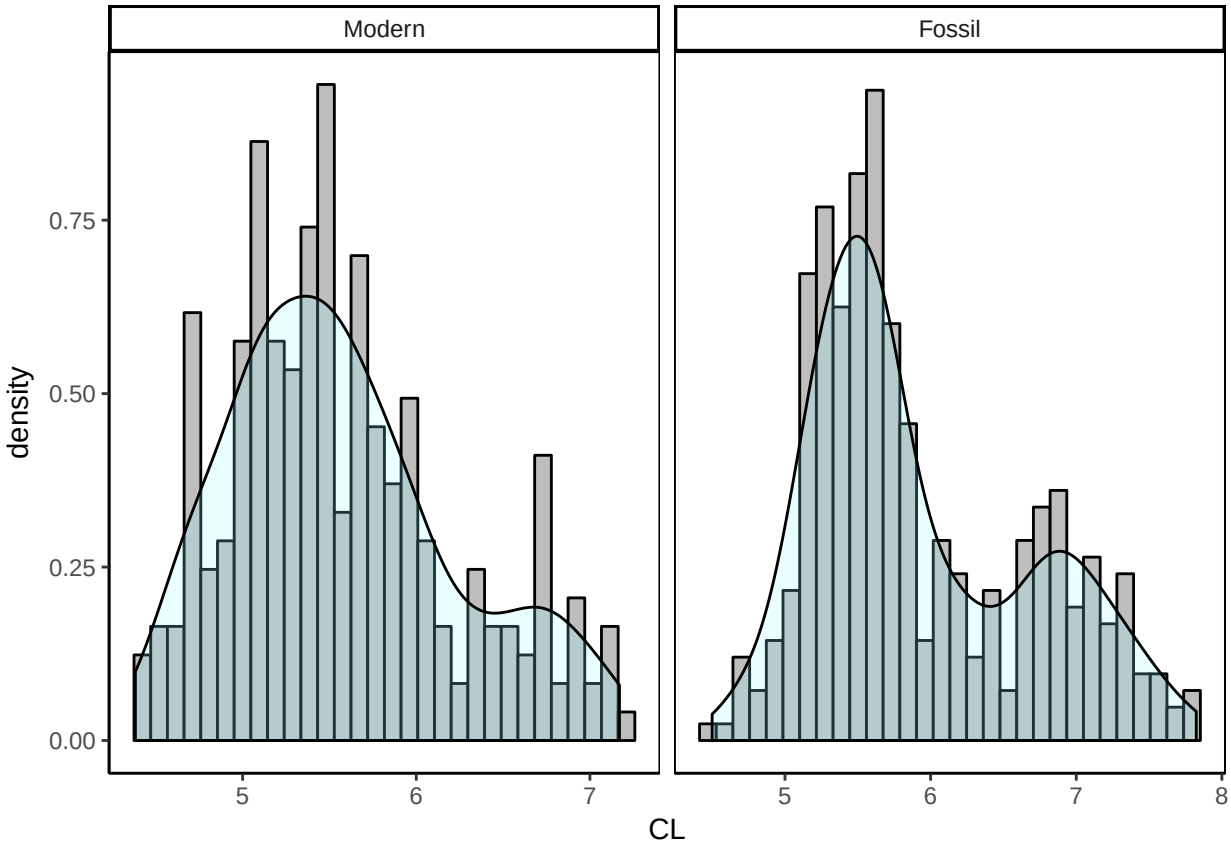


Figure 13: Distribution of body size data modern vs. fossil, logtransformed.

modern vs. fossil, continental vs. insular

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

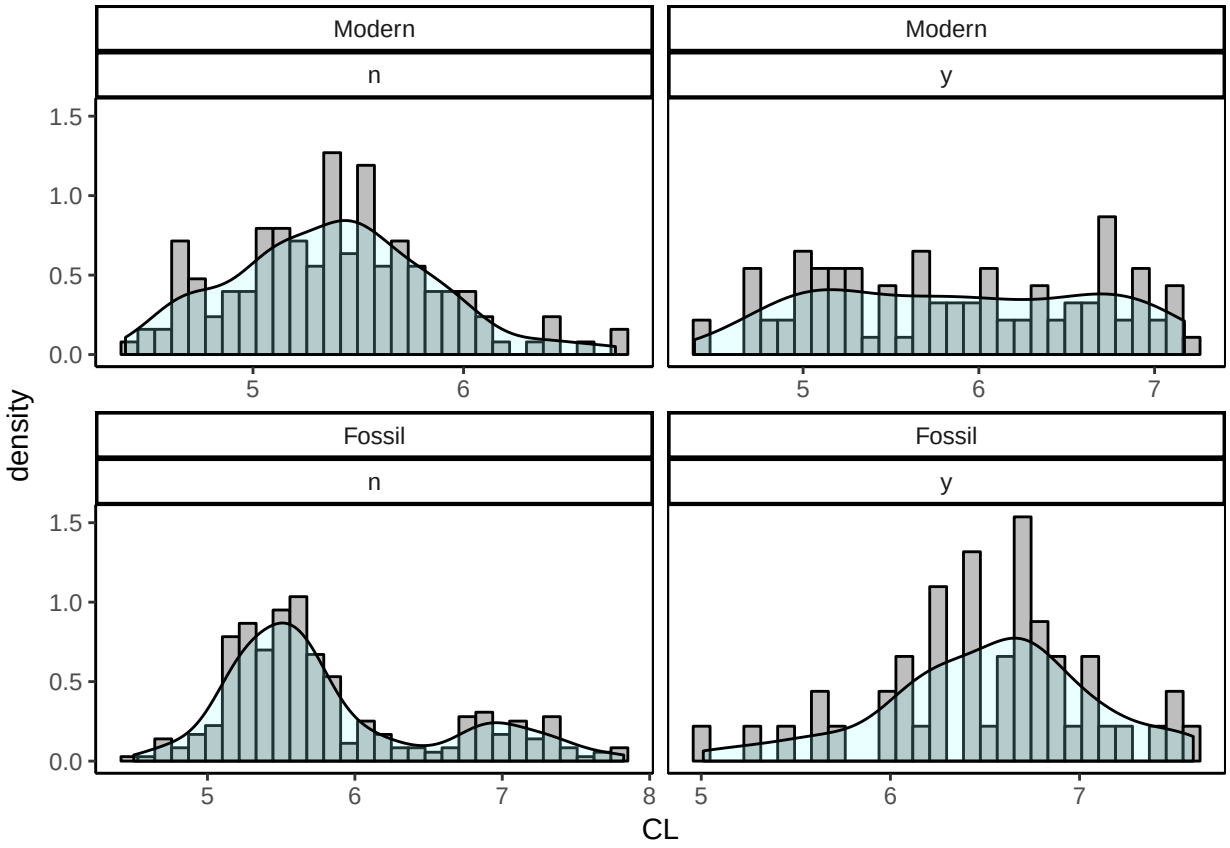


Figure 14: Distribution of body size data modern vs. fossil, continental vs. insular logtransformed.

continental vs. insular

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

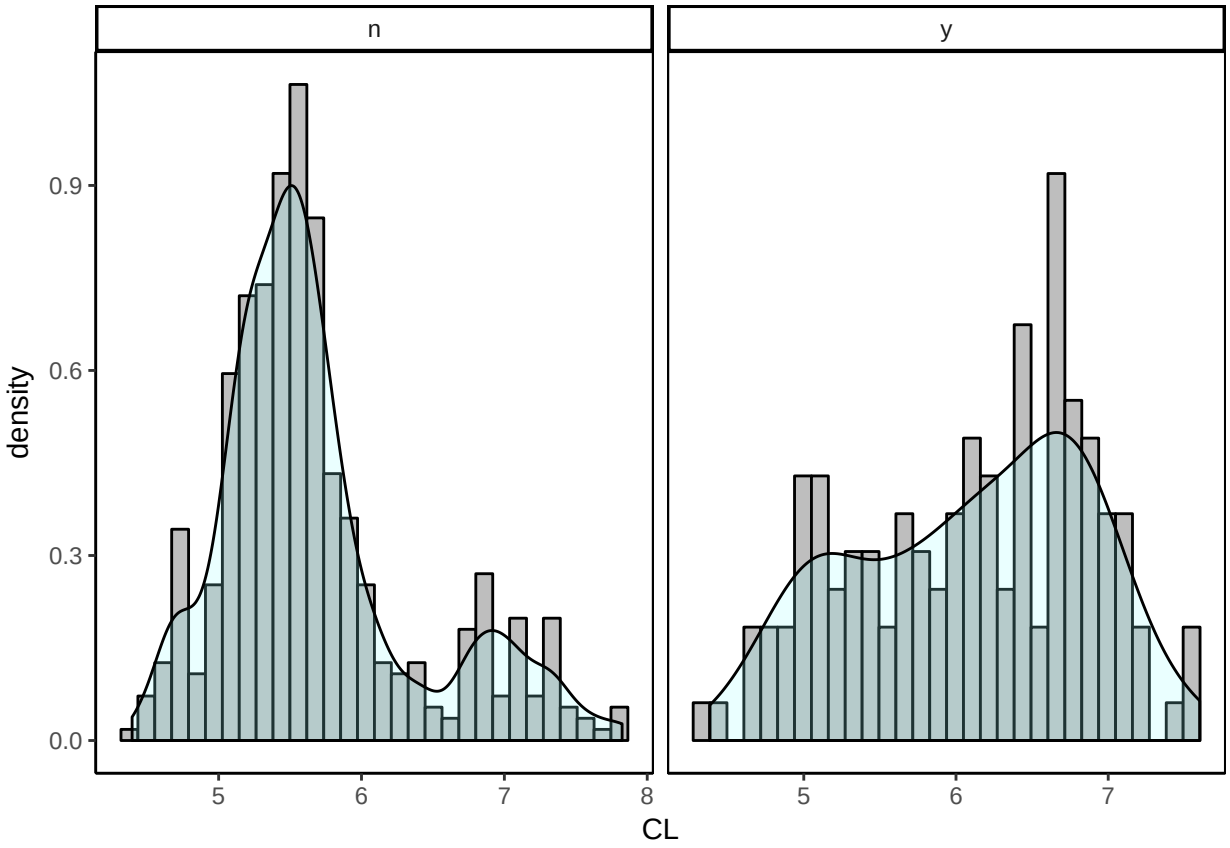


Figure 15: Distribution of body site data of continental (n) and insular(y) species, logtransformed.

continents

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

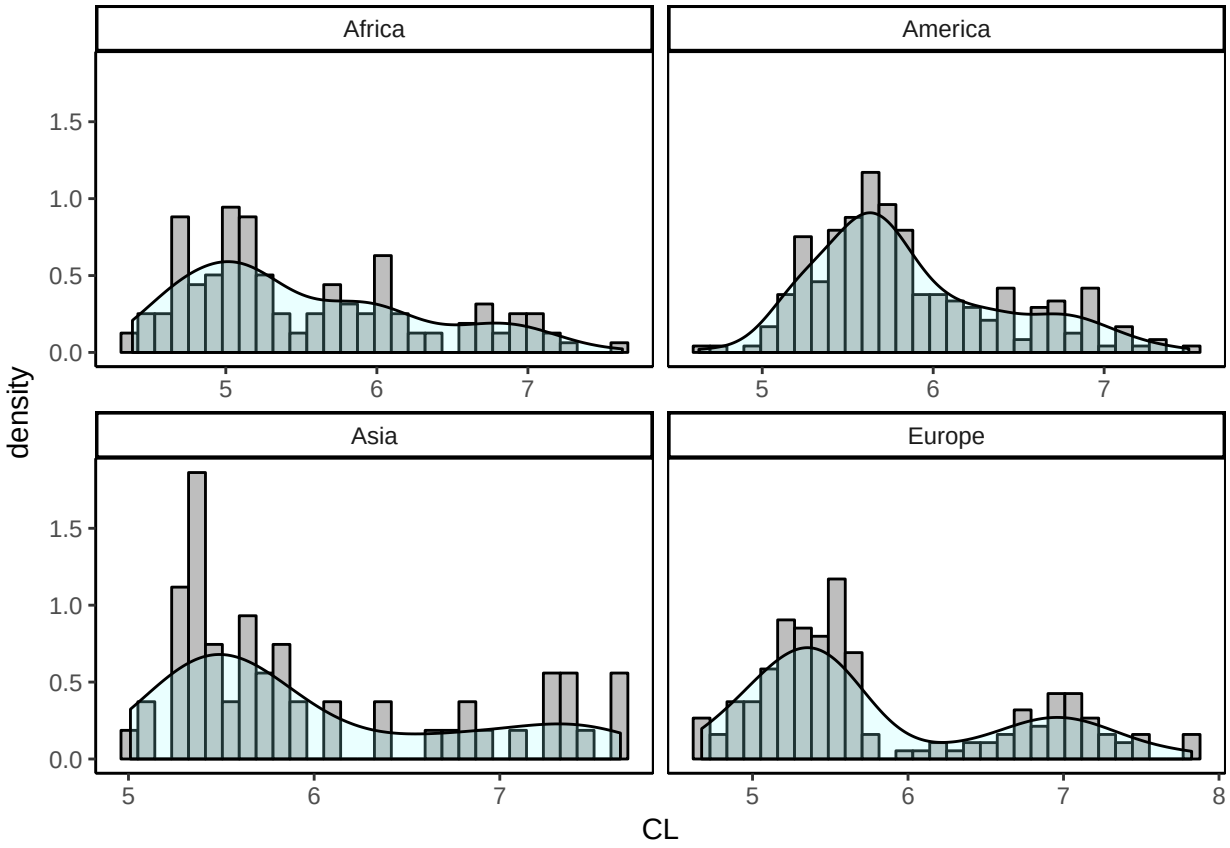


Figure 16: Distribution of body site data per continent, logtransformed.

Descriptive statistics

Table 7: 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

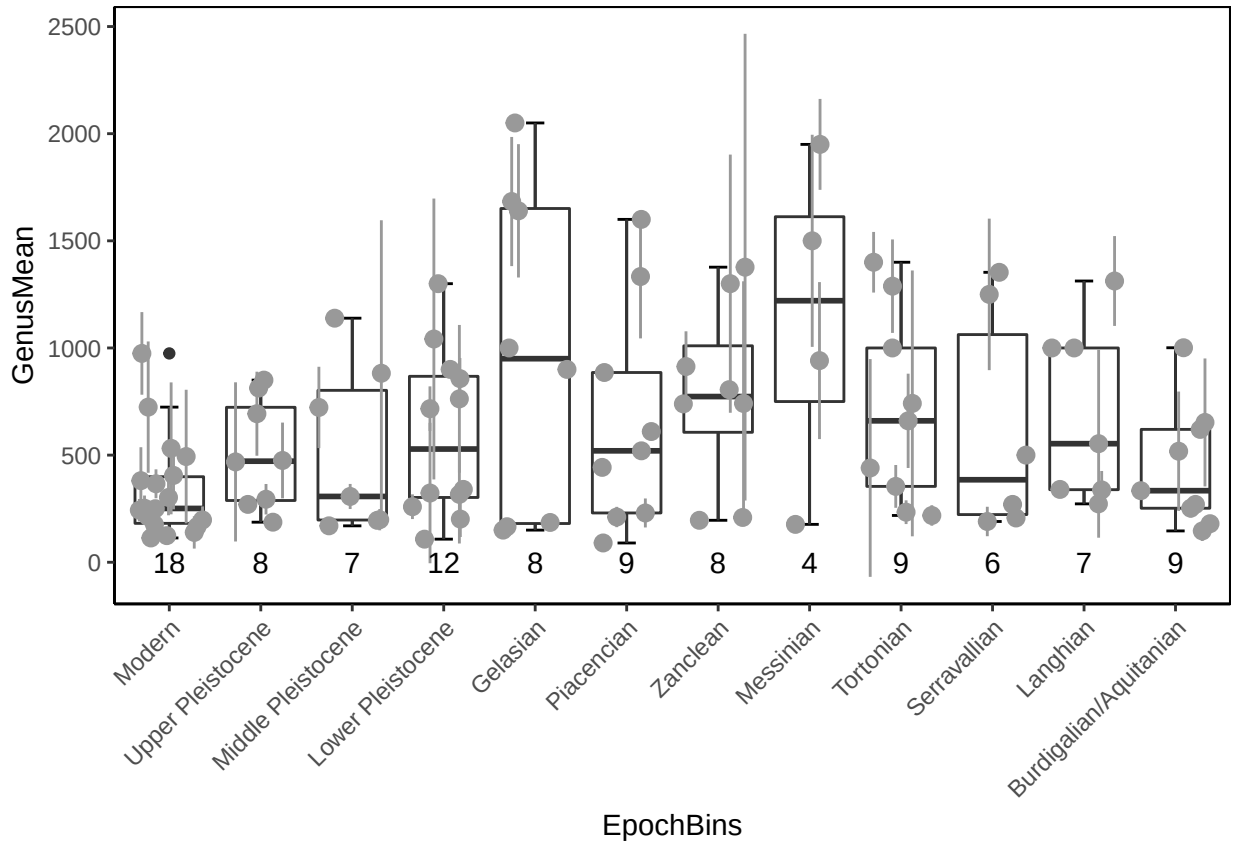


Figure 17: Boxplots of mean CL per time bin, including mean and sd CL for each genus (as pointrange).

```
## [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/Aquitanian             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/Aquitanian  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/Aquitanian 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/Aquitanian 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/Aquitanian         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/Aquitanian       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/Aquitanian         21.4652778     49.83880
## Messinian-Tortonian                     11.8888889     61.63534
## Messinian-Serravallian                  21.6666667     66.20697
## Messinian-Langhian                       9.9285714     64.28752
## Messinian-Burdigalian/Aquitanian        30.2777778     61.63534
## Tortonian-Serravallian                   9.7777778     54.05776
## Tortonian-Langhian                       1.9603175     51.68911
## Tortonian-Burdigalian/Aquitanian        18.3888889     48.35073
## Serravallian-Langhian                   11.7380952     57.06323
## Serravallian-Burdigalian/Aquitanian      8.6111111     54.05776
## Langhian-Burdigalian/Aquitanian         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/Aquitanian                    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/Aquitanian         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/Aquitanian        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/Aquitanian       FALSE
## Gelasian-Piacencian                            FALSE
## Gelasian-Zanclean                              FALSE
## Gelasian-Messinian                             FALSE
## Gelasian-Tortonian                             FALSE
## Gelasian-Serravallian                          FALSE
## Gelasian-Langhian                              FALSE
## Gelasian-Burdigalian/Aquitanian                FALSE
## Piacencian-Zanclean                            FALSE
## Piacencian-Messinian                           FALSE
## Piacencian-Tortonian                           FALSE
## Piacencian-Serravallian                        FALSE
## Piacencian-Langhian                            FALSE
## Piacencian-Burdigalian/Aquitanian              FALSE
## Zanclean-Messinian                             FALSE
## Zanclean-Tortonian                             FALSE
## Zanclean-Serravallian                          FALSE
## Zanclean-Langhian                              FALSE
## Zanclean-Burdigalian/Aquitanian                FALSE
## Messinian-Tortonian                            FALSE
## Messinian-Serravallian                         FALSE
## Messinian-Langhian                             FALSE
## Messinian-Burdigalian/Aquitanian               FALSE
## Tortonian-Serravallian                         FALSE
## Tortonian-Langhian                             FALSE
## Tortonian-Burdigalian/Aquitanian               FALSE
## Serravallian-Langhian                          FALSE
## Serravallian-Burdigalian/Aquitanian            FALSE
## Langhian-Burdigalian/Aquitanian                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/Aquitanian            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/Aquitanian           135.473077    160.59847
## Messinian-Tortonian                        75.383333    209.54137
## Messinian-Serravallian                    158.887037    221.87771
## Messinian-Langhian                         65.364286    248.16258
```

```
## Messinian-Burdigalian/Aquitanian           66.650000    218.85882
## Tortonian-Serravallian                      83.503704    145.90588
## Tortonian-Langhian                         140.747619    183.42158
## Tortonian-Burdigalian/Aquitanian             8.733333    141.27276
## Serravallian-Langhian                      224.251323    197.39708
## Serravallian-Burdigalian/Aquitanian         92.237037    158.99725
## Langhian-Burdigalian/Aquitanian            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/Aquitanian                  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/Aquitanian       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/Aquitanian       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/Aquitanian        FALSE
## Gelasian-Piacencian                             FALSE
## Gelasian-Zanclean                                TRUE
## Gelasian-Messinian                              FALSE
## Gelasian-Tortonian                              FALSE
## Gelasian-Serravallian                           FALSE
## Gelasian-Langhian                                TRUE
## Gelasian-Burdigalian/Aquitanian                 FALSE
## Piacencian-Zanclean                             FALSE
## Piacencian-Messinian                            FALSE
## Piacencian-Tortonian                            FALSE
## Piacencian-Serravallian                         FALSE
## Piacencian-Langhian                             FALSE
## Piacencian-Burdigalian/Aquitanian               FALSE
## Zanclean-Messinian                              FALSE
## Zanclean-Tortonian                              FALSE
## Zanclean-Serravallian                            TRUE
## Zanclean-Langhian                               FALSE
## Zanclean-Burdigalian/Aquitanian                 FALSE
## Messinian-Tortonian                             FALSE
## Messinian-Serravallian                          FALSE
```

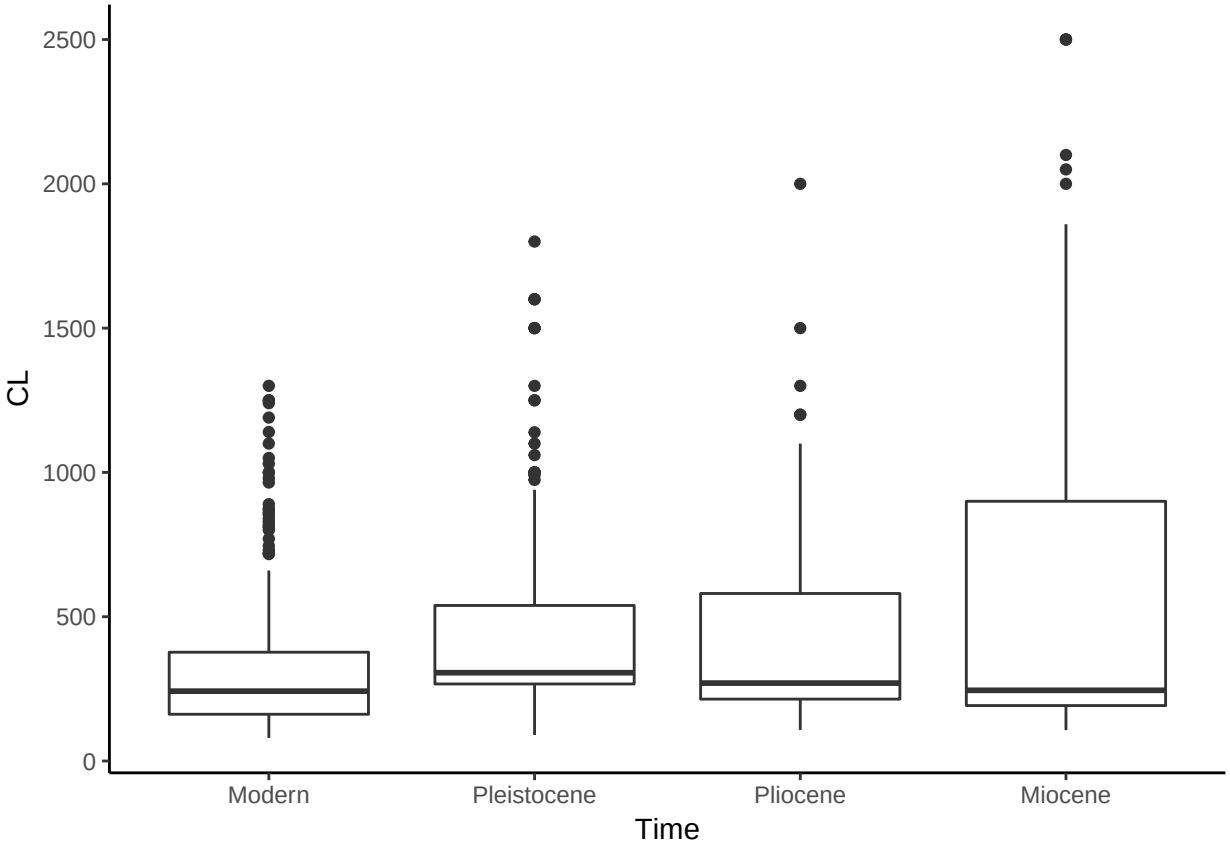
```
## Messinian-Langhian                              FALSE
## Messinian-Burdigalian/Aquitanian                FALSE
## Tortonian-Serravallian                          FALSE
## Tortonian-Langhian                              FALSE
## Tortonian-Burdigalian/Aquitanian                FALSE
## Serravallian-Langhian                            TRUE
## Serravallian-Burdigalian/Aquitanian             FALSE
## Langhian-Burdigalian/Aquitanian                 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
```

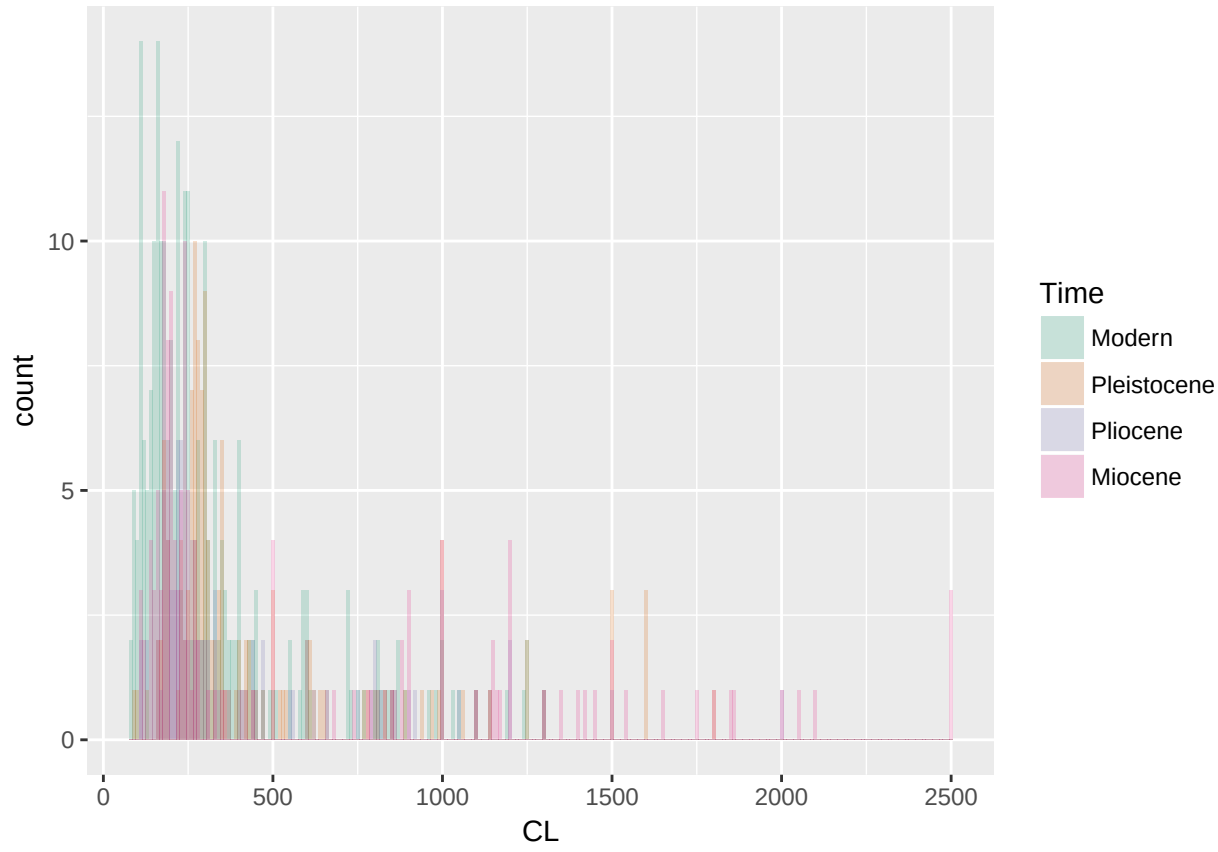
```
## W = 1643.5, p-value = 0.428
## alternative hypothesis: true location shift is not equal to 0
## [1] FALSE
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  LPle and G
## W = 1124, p-value = 0.01802
## alternative hypothesis: true location shift is greater than 0
## [1] TRUE
## 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
MPle and LPle	0.4279860	1.0000000
Z and Mess	0.8876030	1.0000000


2500
2000
1500
1000
500
0
CL
Modern
Pleistocene
Pliocene
Miocene
Time




```
##
##  Kruskal-Wallis rank sum test
##
## data:  list(Modern, Plei, Plio, Mio)
## Kruskal-Wallis chi-squared = 37.764, df = 3, p-value = 3.172e-08
```

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

```
## Multiple comparison test after Kruskal-Wallis
## p.value: 0.05
## Comparisons
##                          obs.dif critical.dif difference
## Modern-Pleistocene   110.904114     49.80480       TRUE
```

```
## Modern-Pliocene       67.623302     58.35513       TRUE
## Modern-Miocene        64.510137     49.57182       TRUE
## Pleistocene-Pliocene  43.280812     64.36704      FALSE
## Pleistocene-Miocene   46.393977     56.52575      FALSE
## Pliocene-Miocene       3.113165     64.18694      FALSE
```

continental vs. insular per time bin

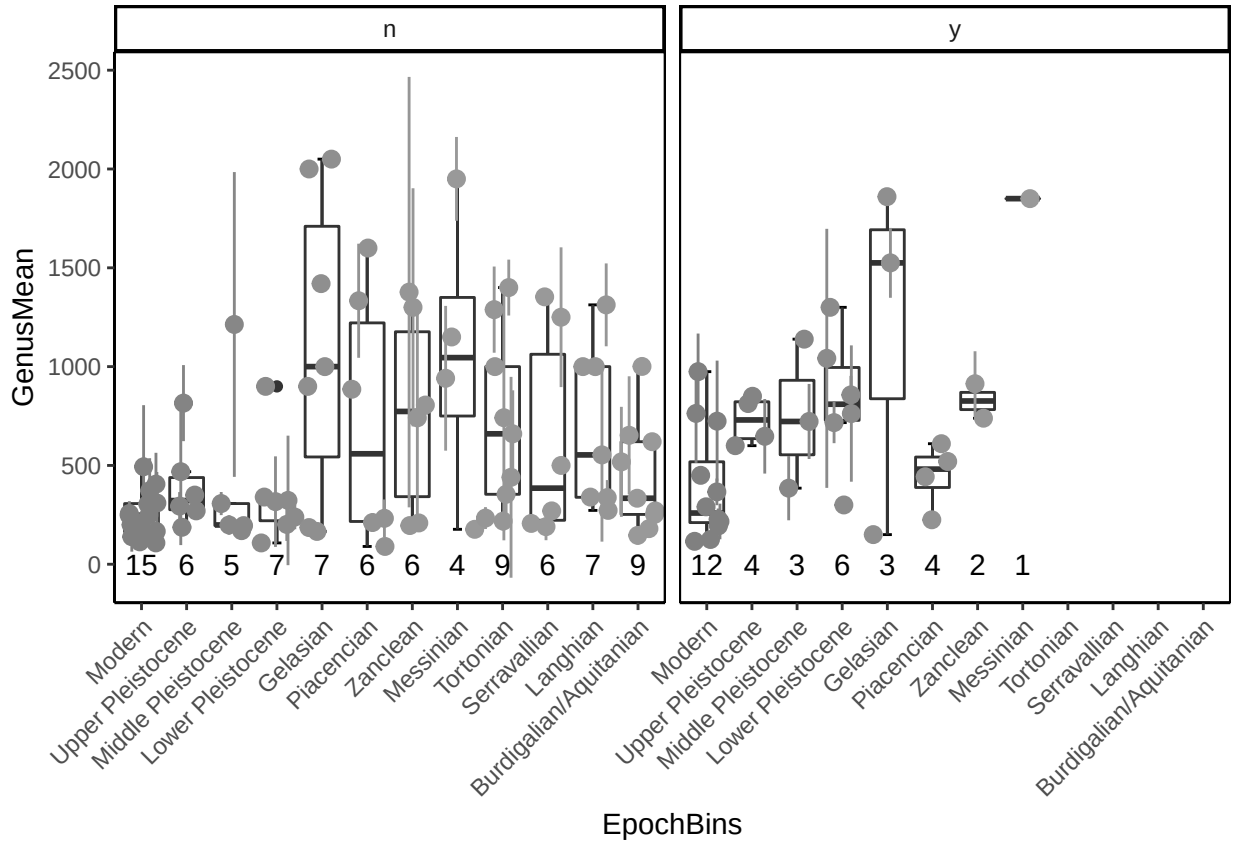


Figure 18: Boxplots of each genus per time bin, continental vs. insular species.

fossil vs. modern

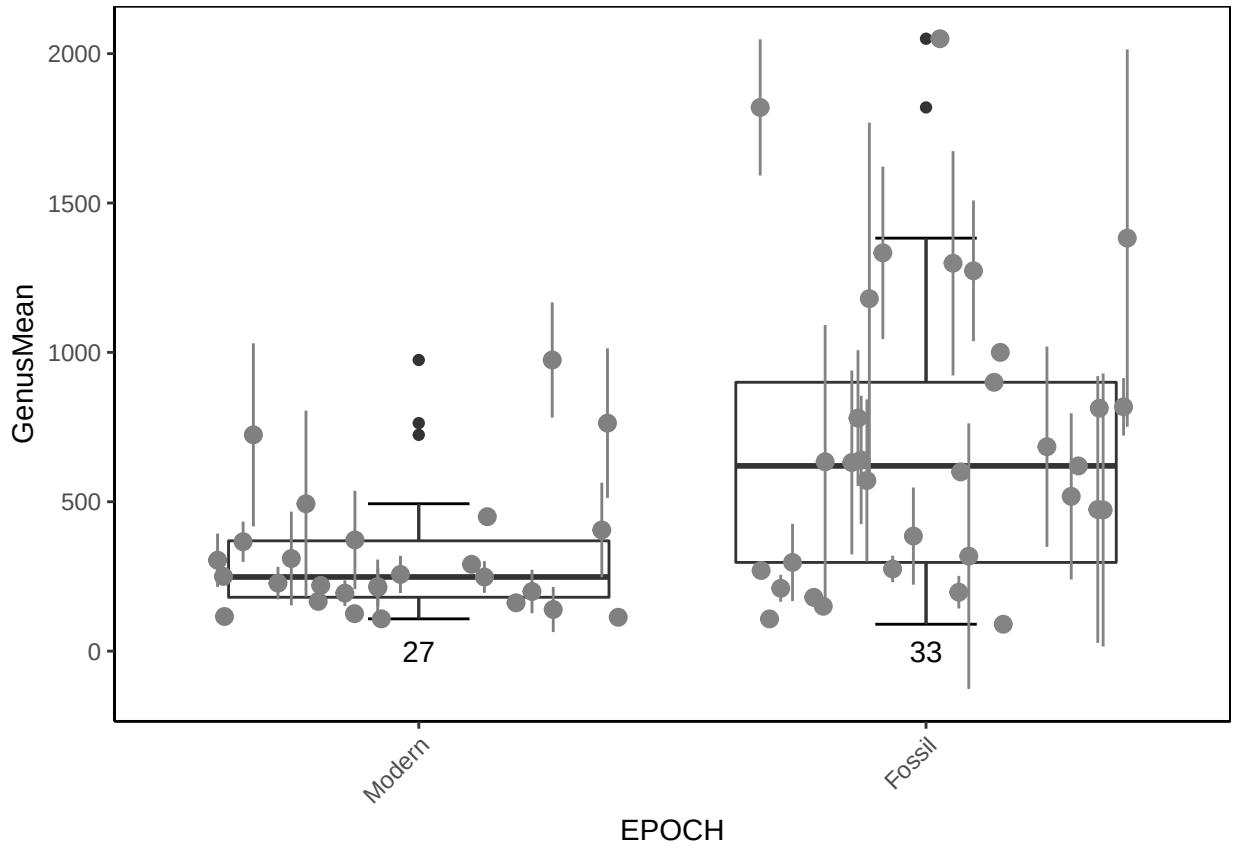
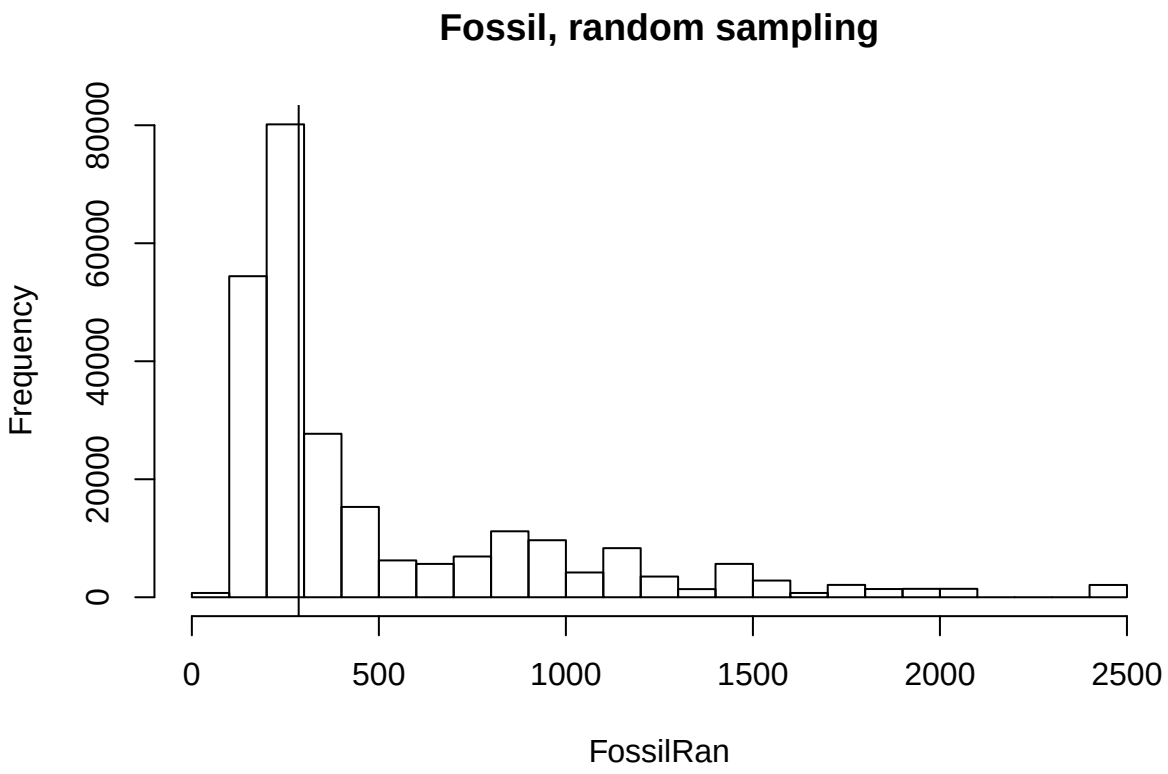


Figure 19: Boxplots fossil vs. modern.




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

```
## [1] 503.4022
```

```
##
```

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

```
##
```

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

```
## W = 23395, p-value = 1.597e-07
```

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

Wilcoxon Rank Sum Test (unpaired data):

modern $<$ fossil ($\mathrm{P} = 1.5974709 \times 10^{-7}$)

fossil vs. modern, continental vs. insular

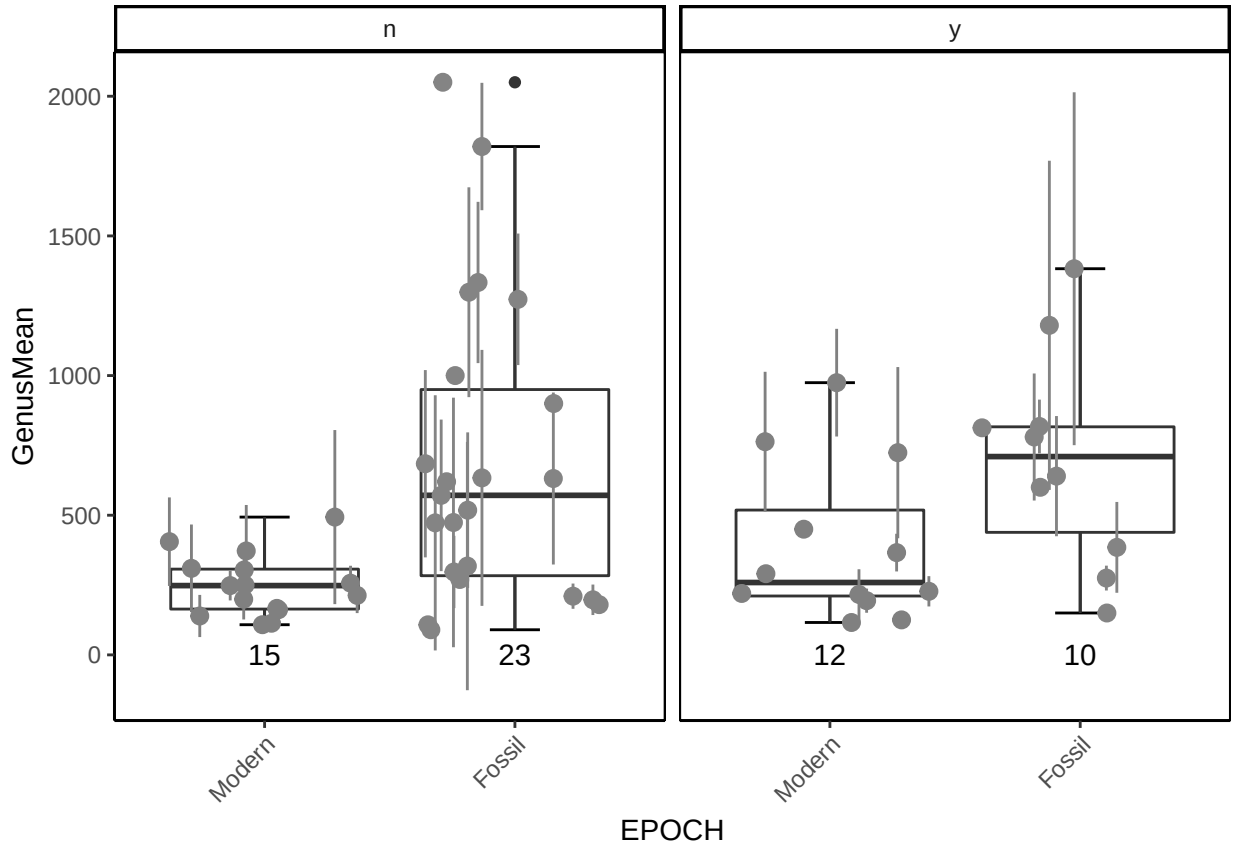
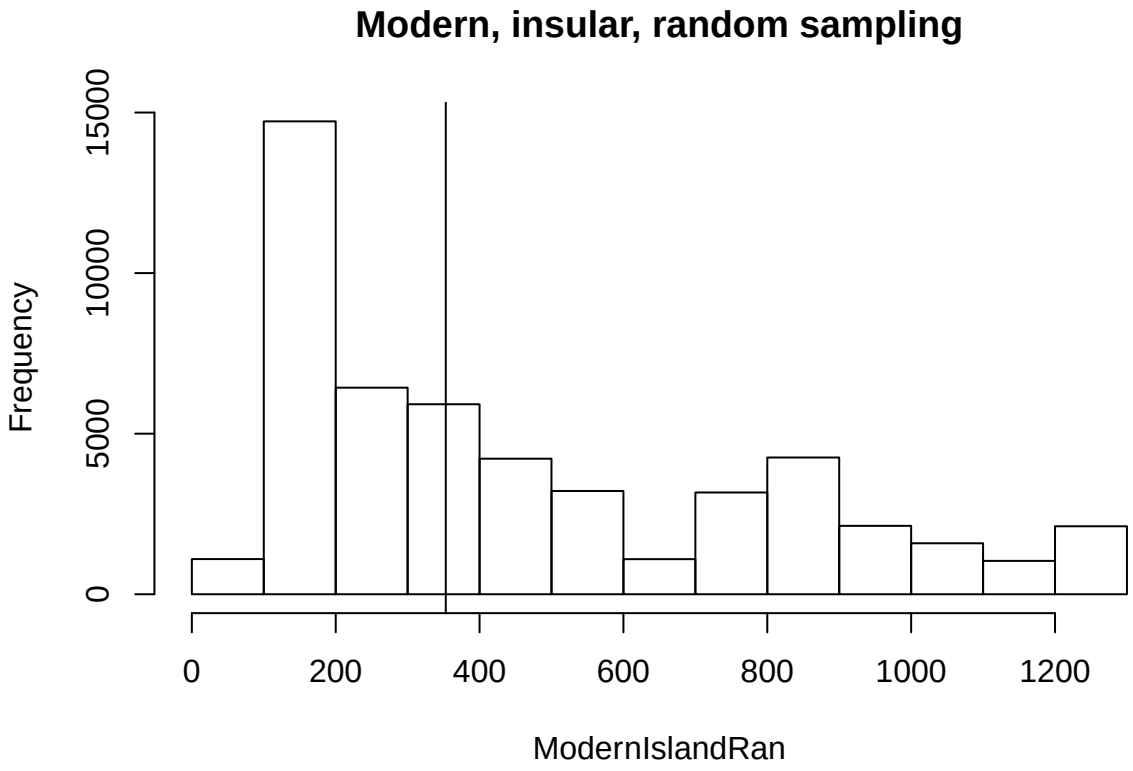


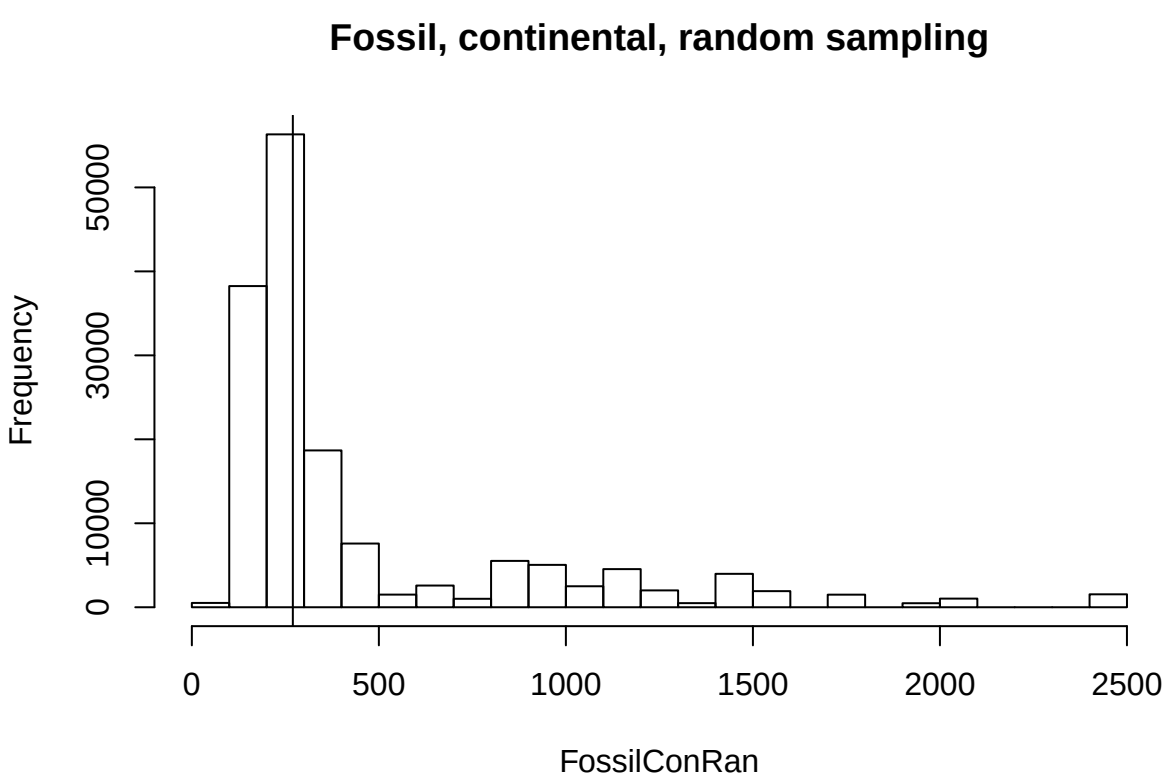
Figure 20: Boxplots fossil vs. modern, continental vs. insular species.

```
## [1] 51
```

```
## [1] 51
```




```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  ModernIsland and FossilIsland
## W = 655.5, p-value = 8.015e-06
## alternative hypothesis: true location shift is less than 0
## [1] 157
## [1] 157
```




```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  ModernCon and FossilCon
## W = 8148, p-value = 1.042e-07
## alternative hypothesis: true location shift is less than 0
```

Wilcoxon Rank Sum Test (unpaired data):

modern continental < fossil continental ($P = 1.0421763 \times 10^{-7}$)

modern insular < fossil insular ($P = 8.0150642 \times 10^{-6}$)

continental vs. insular

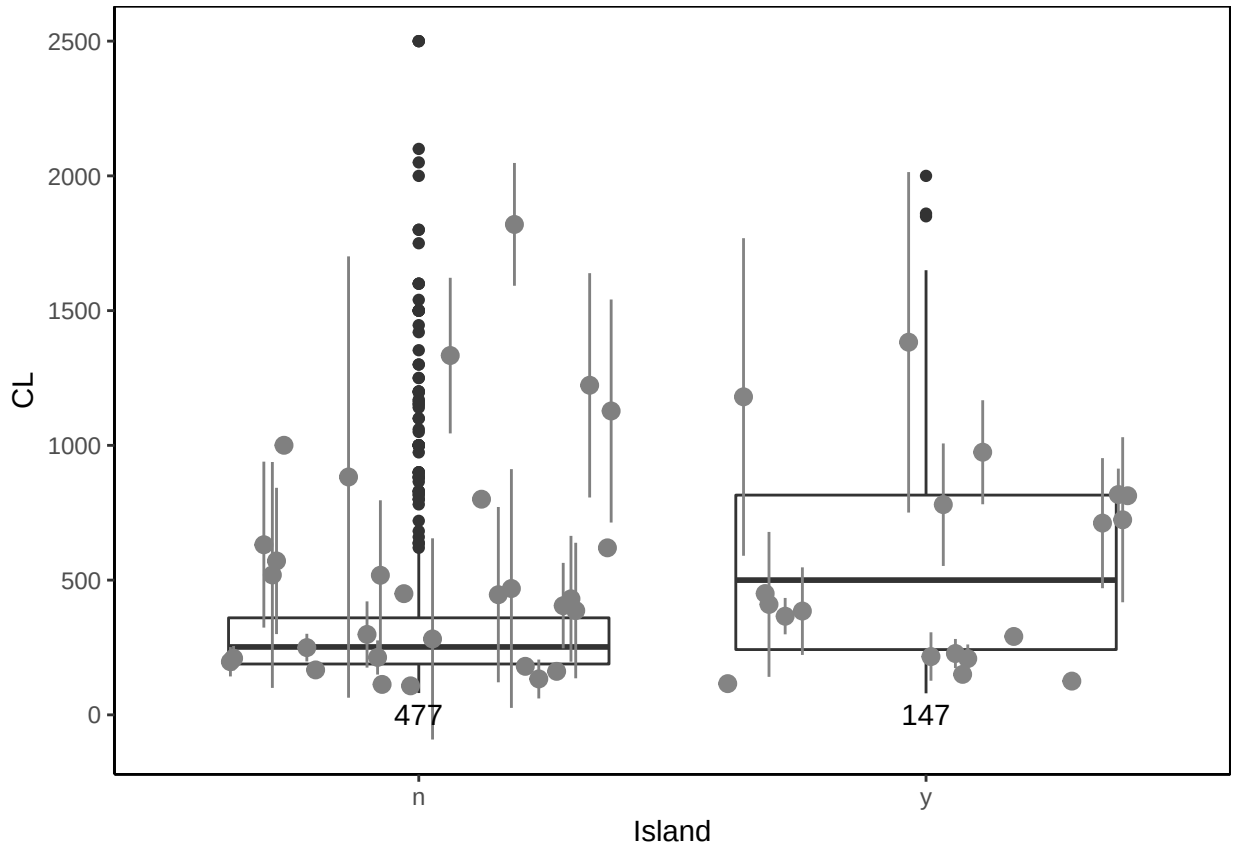
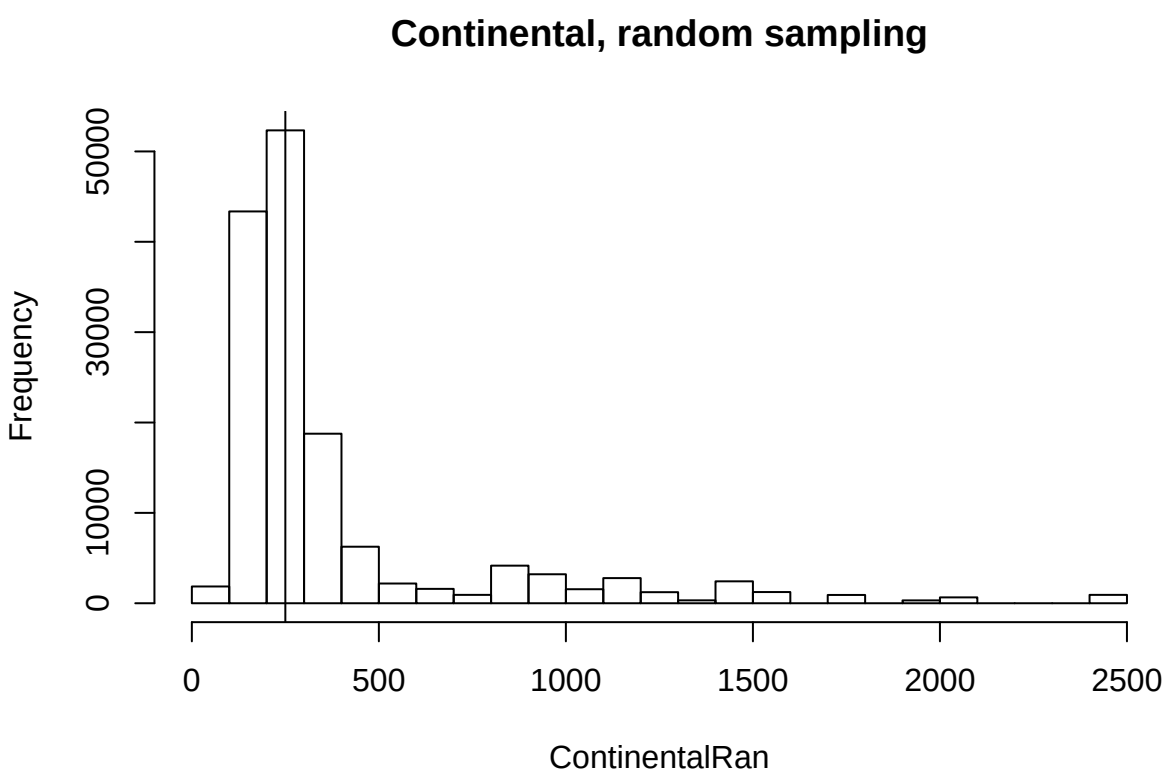


Figure 21: Boxplot continental vs. insular, genera summarised

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

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




```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  Insular and Continental
## W = 14283, p-value = 9.119e-07
## alternative hypothesis: true location shift is greater than 0
```

Wilcoxon Rank Sum Test (unpaired data):

continental $<$ insular ($\mathrm{P} = 9.119466 \times 10^{-7}$)

continental vs. insular per time bin

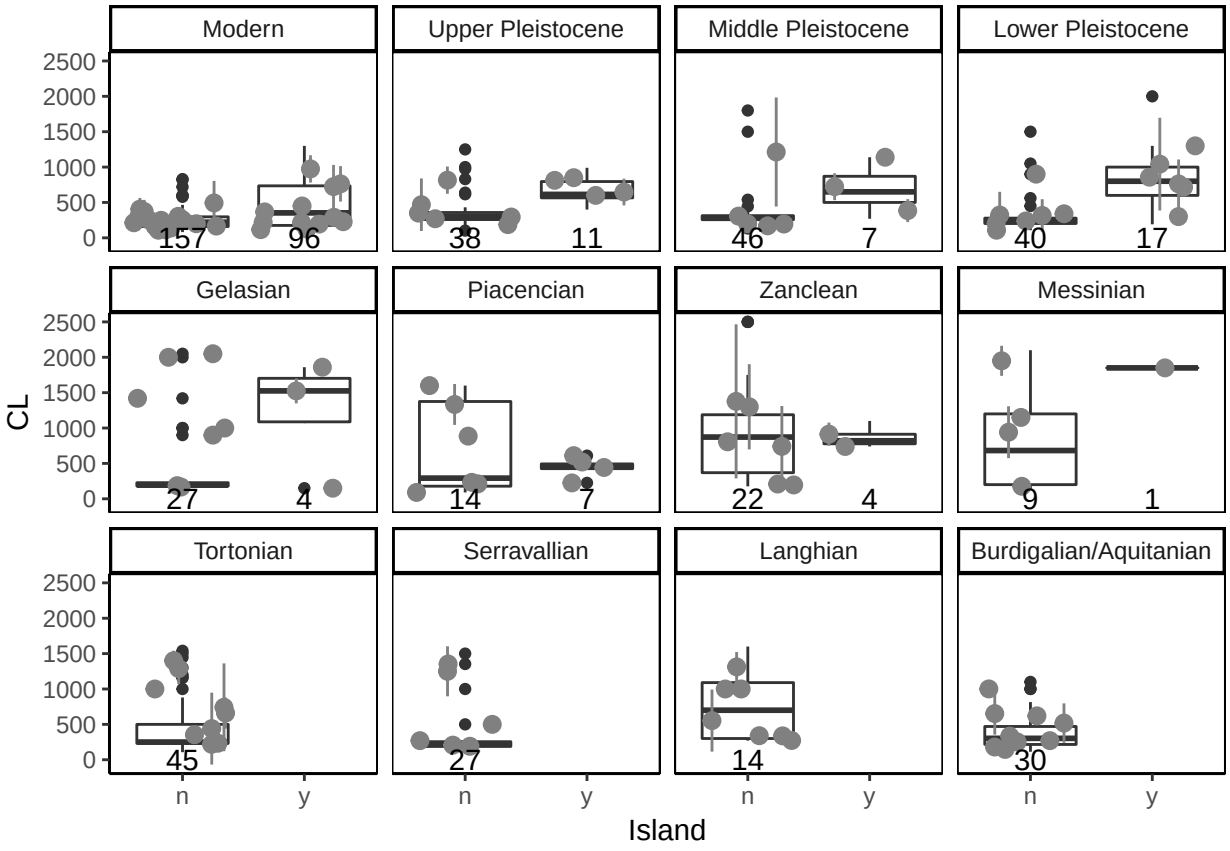


Figure 22: Boxplot continental vs. insular, genera summarised

Multiple comparison test after Kruskal-Wallis			0.05
	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

continents

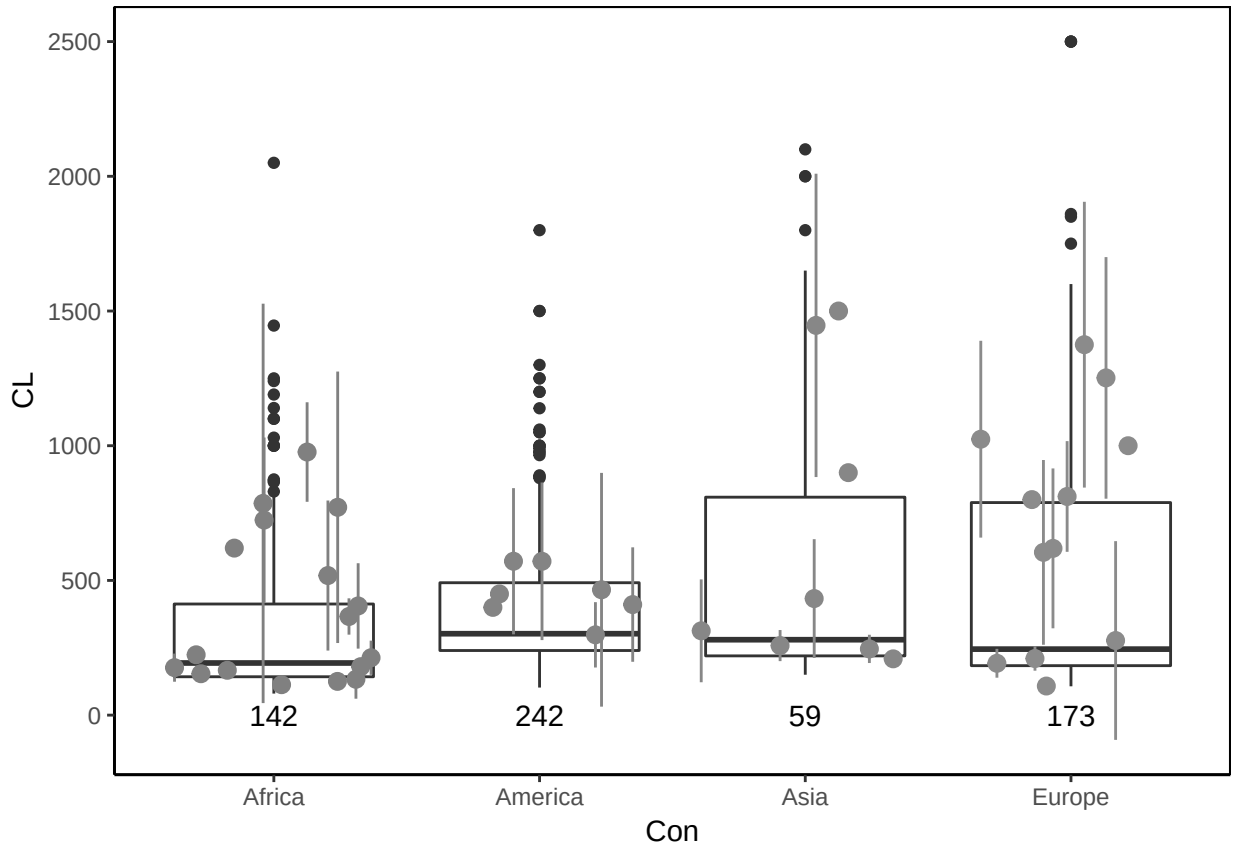


Figure 23: Boxplot: body size on different continents, genera summarised

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

```
## [1] 142
```

```
## [1] 347.6887
```

```
## [1] 142
```

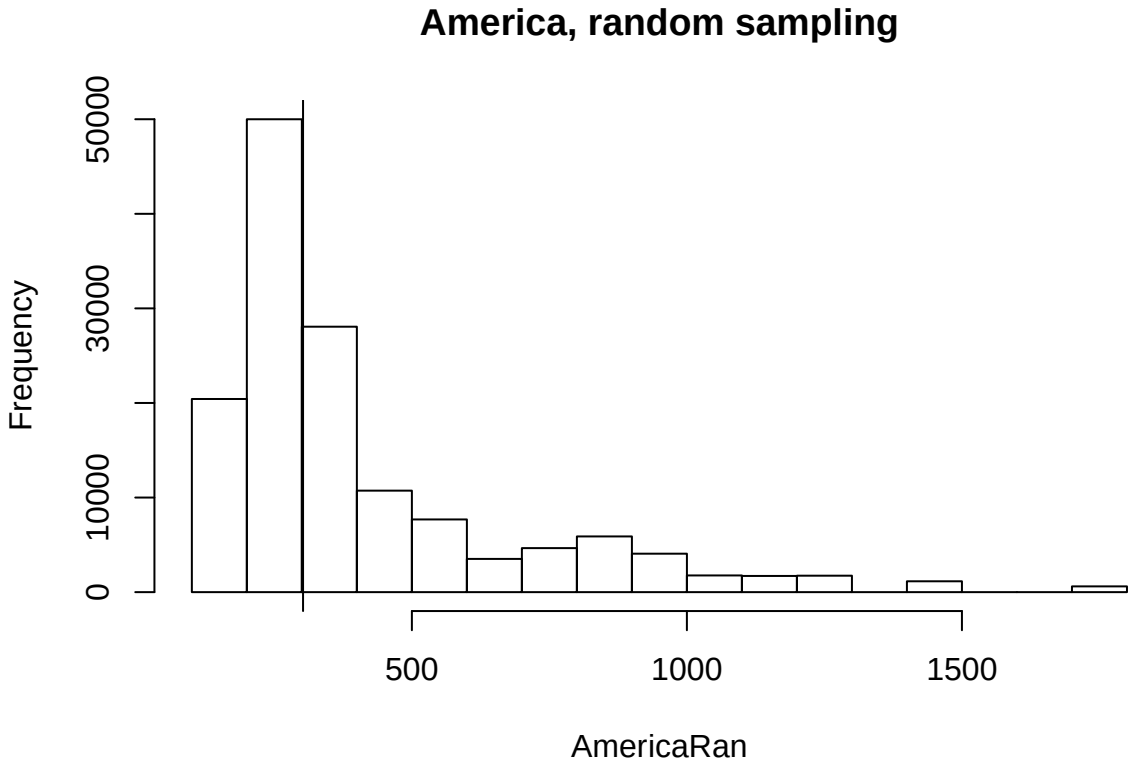
```
## [1] 410.6089
```

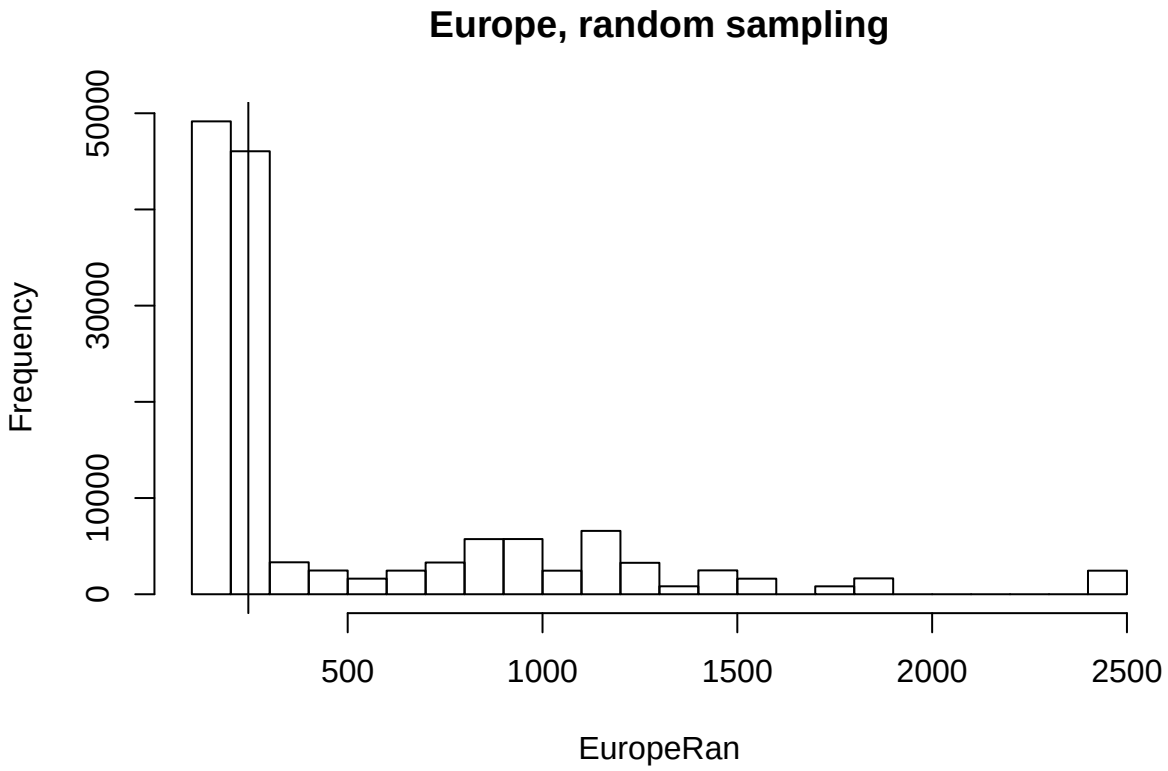
```
## [1] 59
```

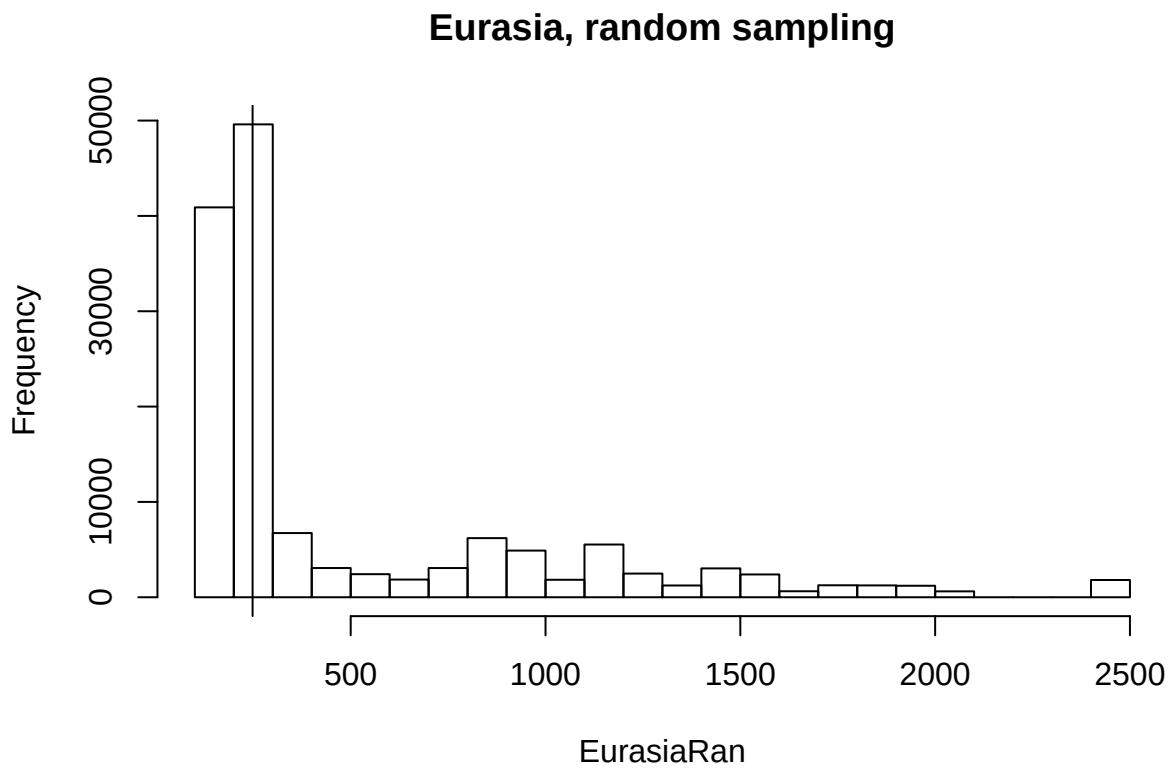
```
## [1] 173
```

```
## [1] 142
```

```
## [1] 541.4387
```




Europe, random sampling
Frequency
0
10000
30000
50000
500
1000
1500
2000
2500
EuropeRan




```
##
##  Kruskal-Wallis rank sum test
##
## data:  list(Africa, America, Eurasia, Europe)
## Kruskal-Wallis chi-squared = 30.872, df = 3, p-value = 9.043e-07
```

Kruskal-Wallis-Test:

Continent means differ ($P = 9.0433335 \times 10^{-7}$) (still have to look into the details...)

continents, continental vs. insular

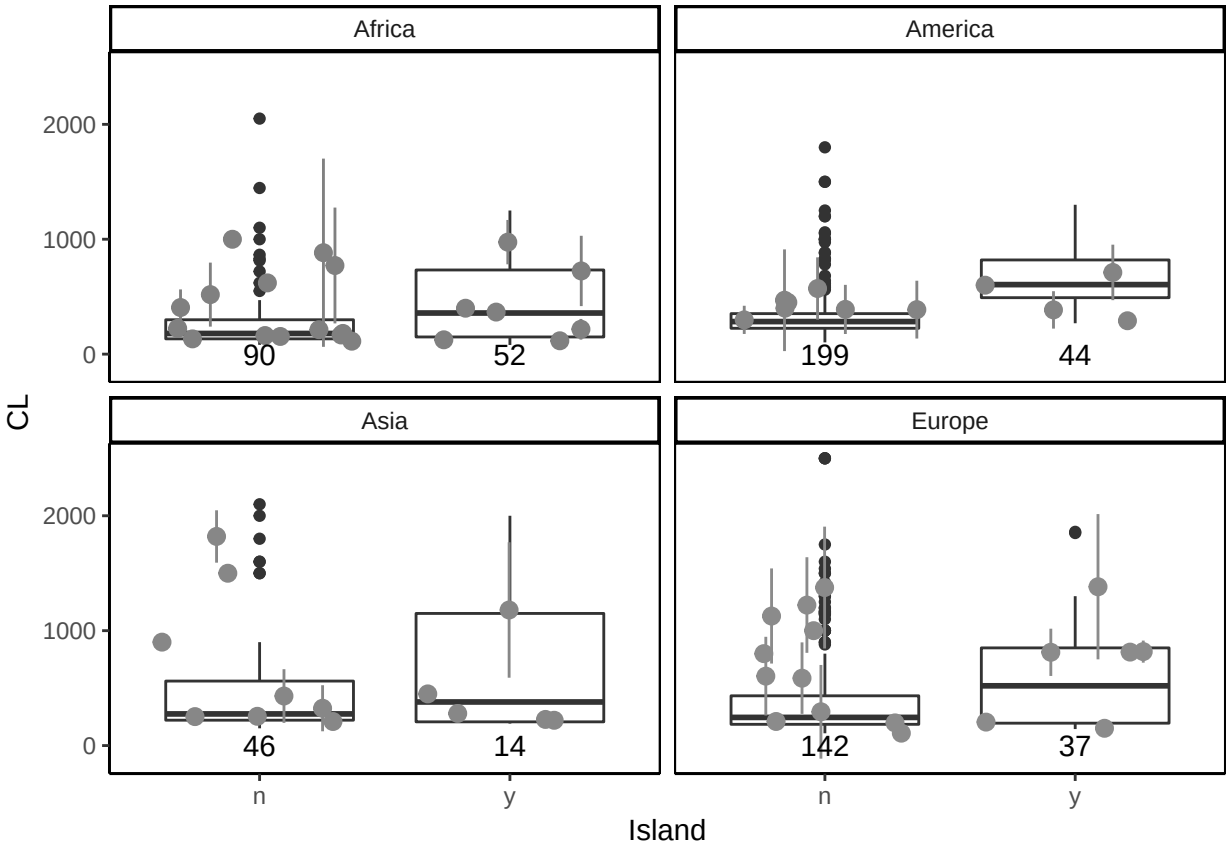


Figure 24: Boxplot: body size on different continents, genera summarised

paleoTS analysis

all (continental and insular)

genera (all)

Table 9: 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 10: 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

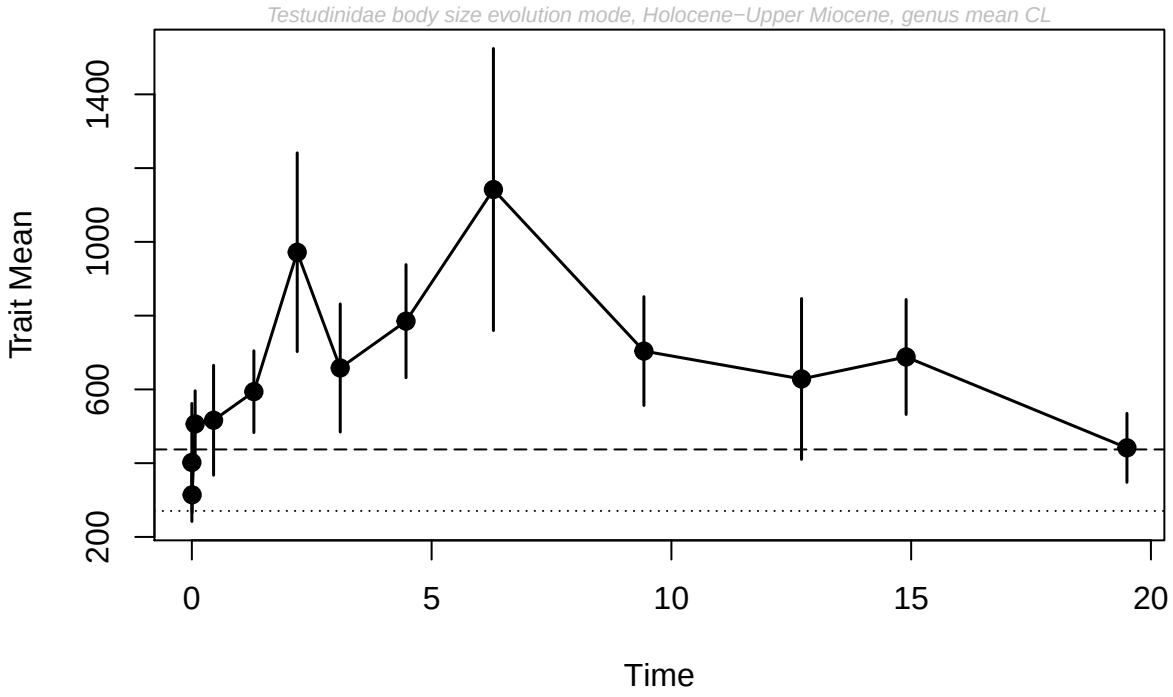


Figure 25: paleoTS plot with genus mean, all

continental (excluding insular species)

genera (continental)

Table 11: 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 12: 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

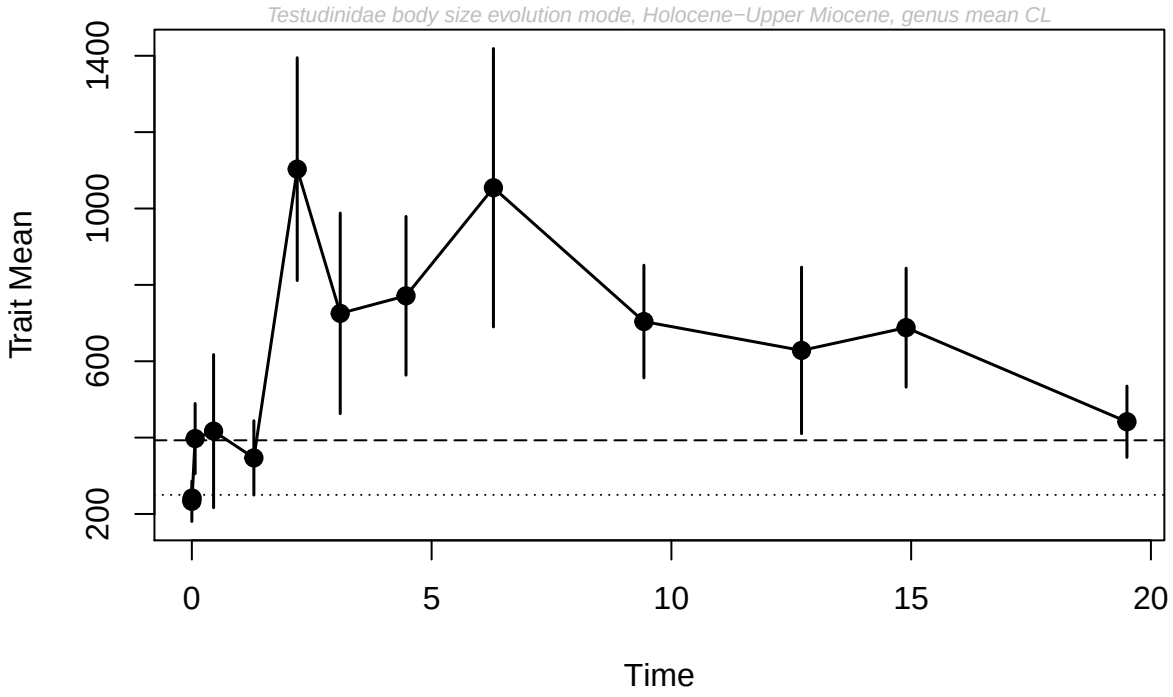


Figure 26: paleoTS plot with genus mean, continental

insular (excluding continental)

genera (insular)

Table 13: 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 14: 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

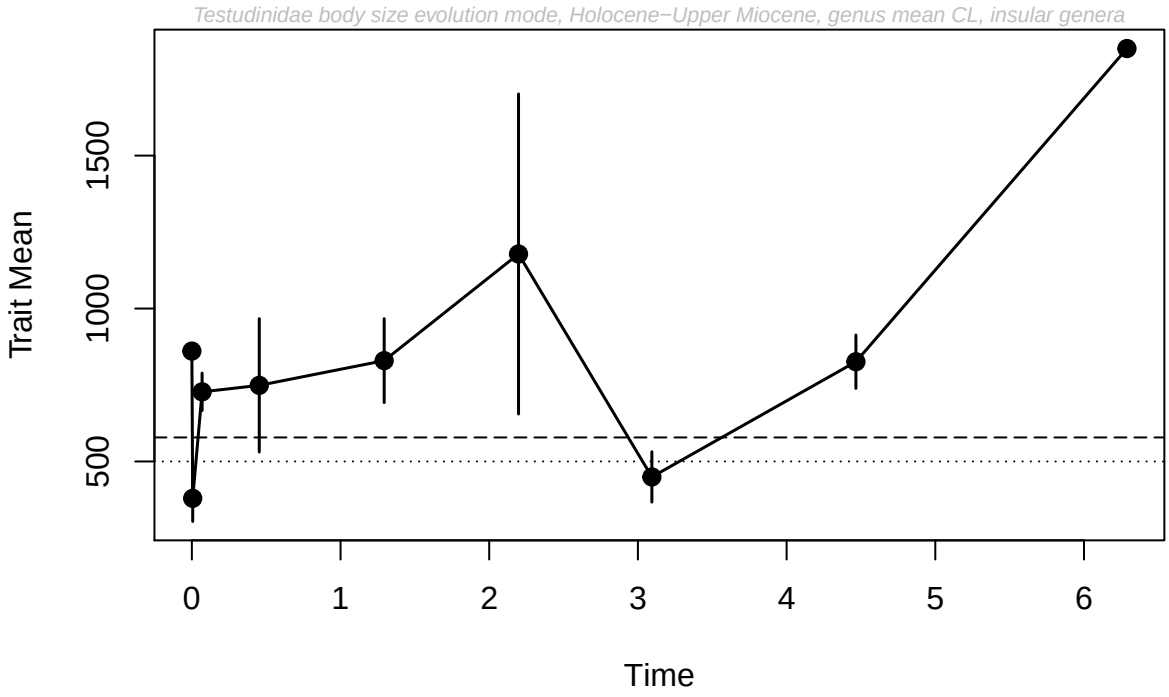


Figure 27: paleoTS plot with genus mean, insular

per continent

Europe, genera

Table 15: 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 16: 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

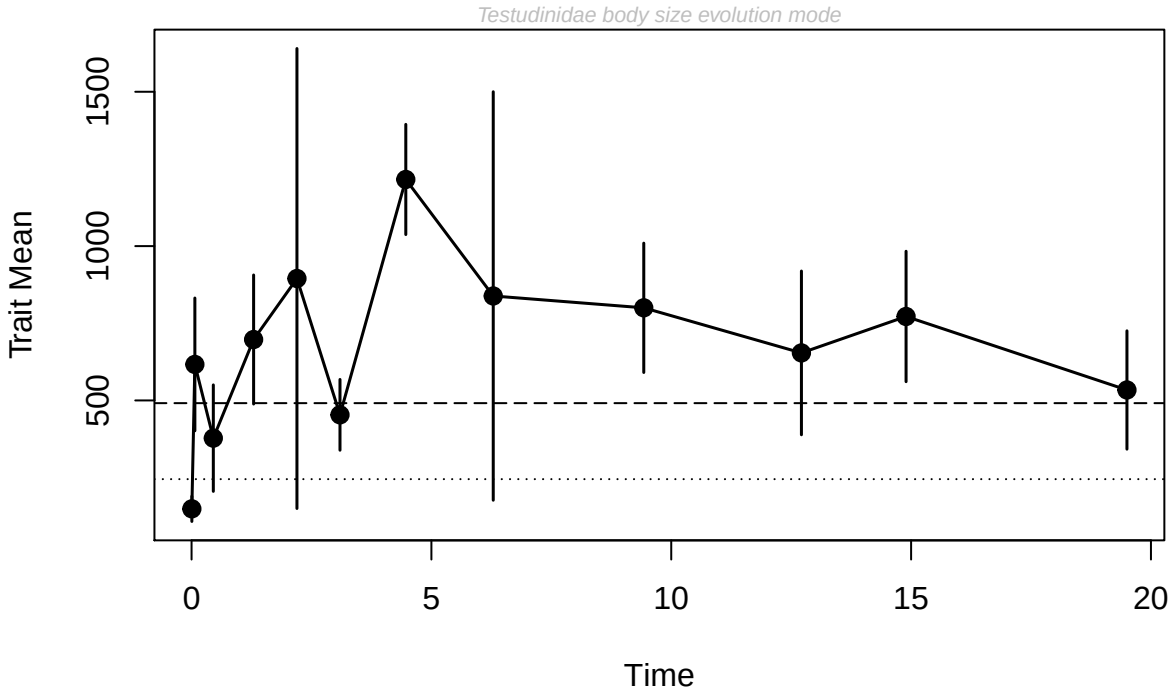


Figure 28: Genera, Europe

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

Table 17: 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 18: 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

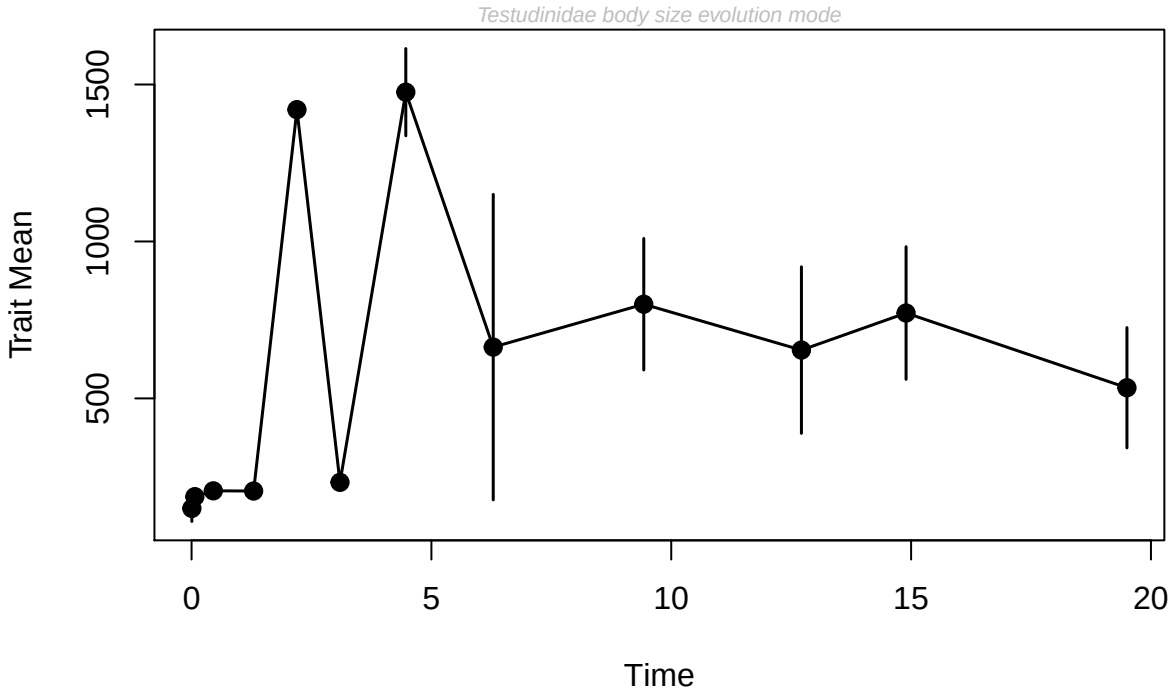


Figure 29: paleoTS, genera, Europe, continental

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

Table 19: 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

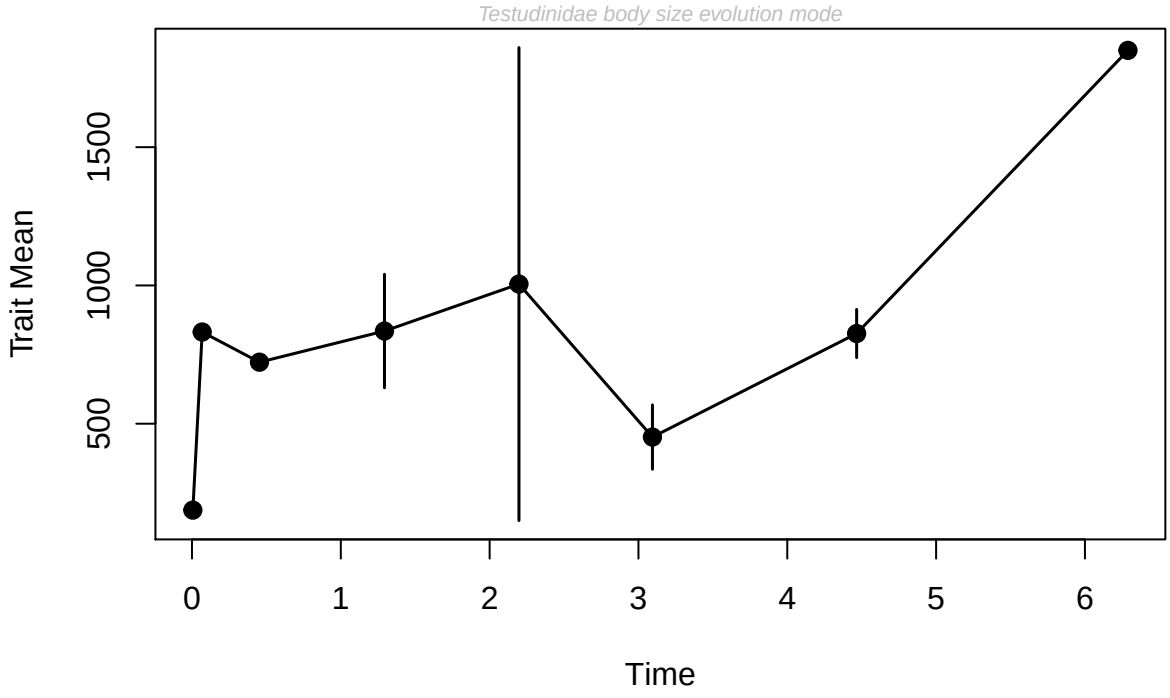


Figure 30: paleoTS, genera, Europe, insular

Table 20: 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 21: 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 22: 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

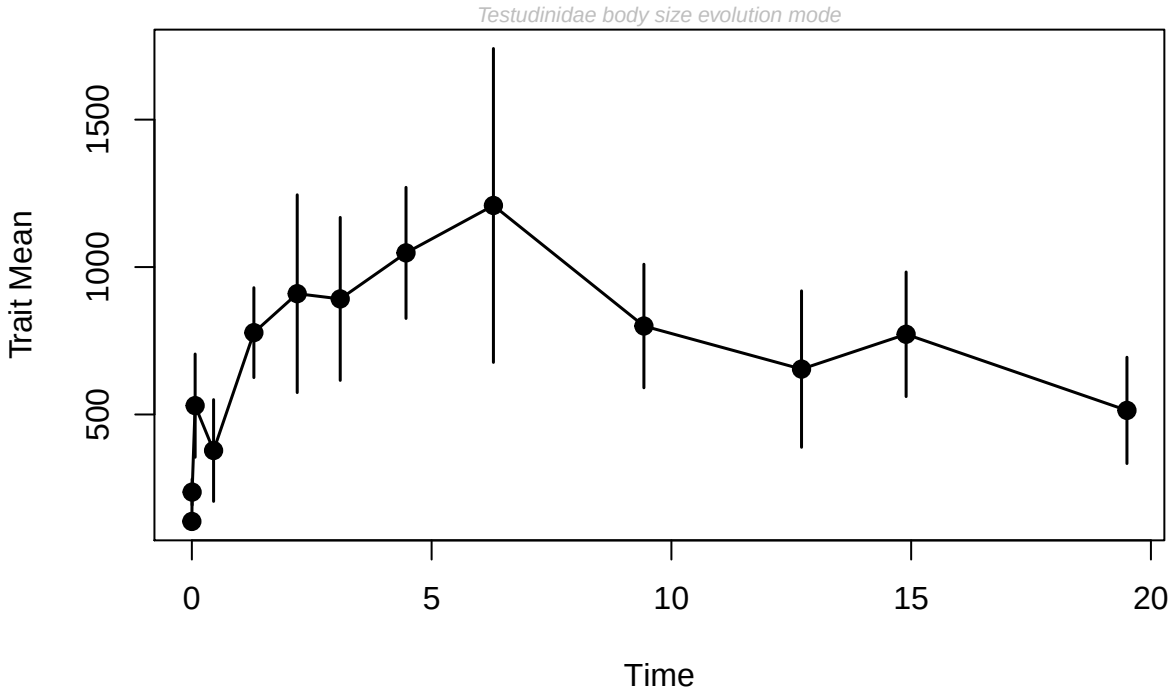


Figure 31: paleoTS, genera, Eurasia

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

Table 23: 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 24: 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

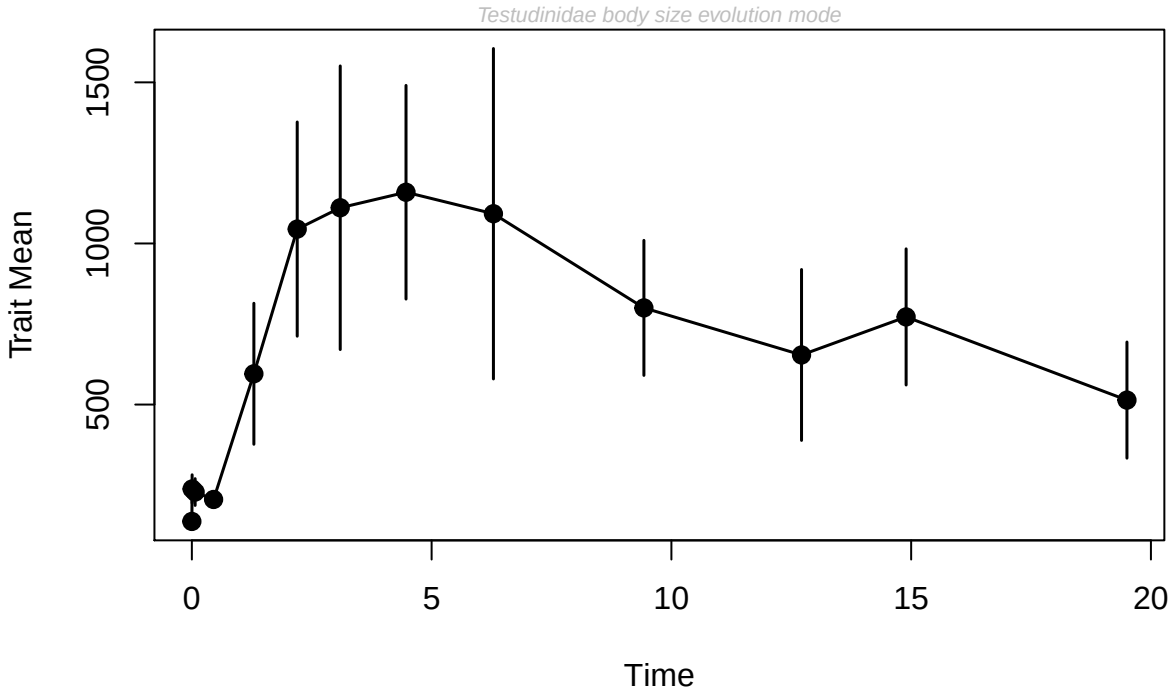


Figure 32: paleoTS, genera, Eurasia, continental

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

Table 25: 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 26: 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 27: 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/Aquitanian	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/Aquitanian	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/Aquitanian	18.000000	n	A
Namibchersus	Namibchersus namaquensis	254.00	m	Burdigalian/Aquitanian	18.000000	n	A
Namibchersus	Namibchersus aff. namaquensis	440.00	mo	Burdigalian/Aquitanian	17.250000	n	A
Mesocherus	Mesocherus orangeus	200.00	mo	Burdigalian/Aquitanian	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 changshanesis	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 donlaloi	580.00	mo	Modern	0.000175	n	A
Chelonoidis	Chelonoidis sombrerensis	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/Aquitanian	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/Aquitanian	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/Aquitanian	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/Aquitanian	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/Aquitanian	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/Aquitanian	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/Aquitanian	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/Aquitanian	17.300000	n	E

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

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 equicomes	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 ducateli	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/Aquitanian	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/Aquitanian	18.500000	n	A
Caudochelys	Caudochelys williamsi	334.00	m	Burdigalian/Aquitanian	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
```

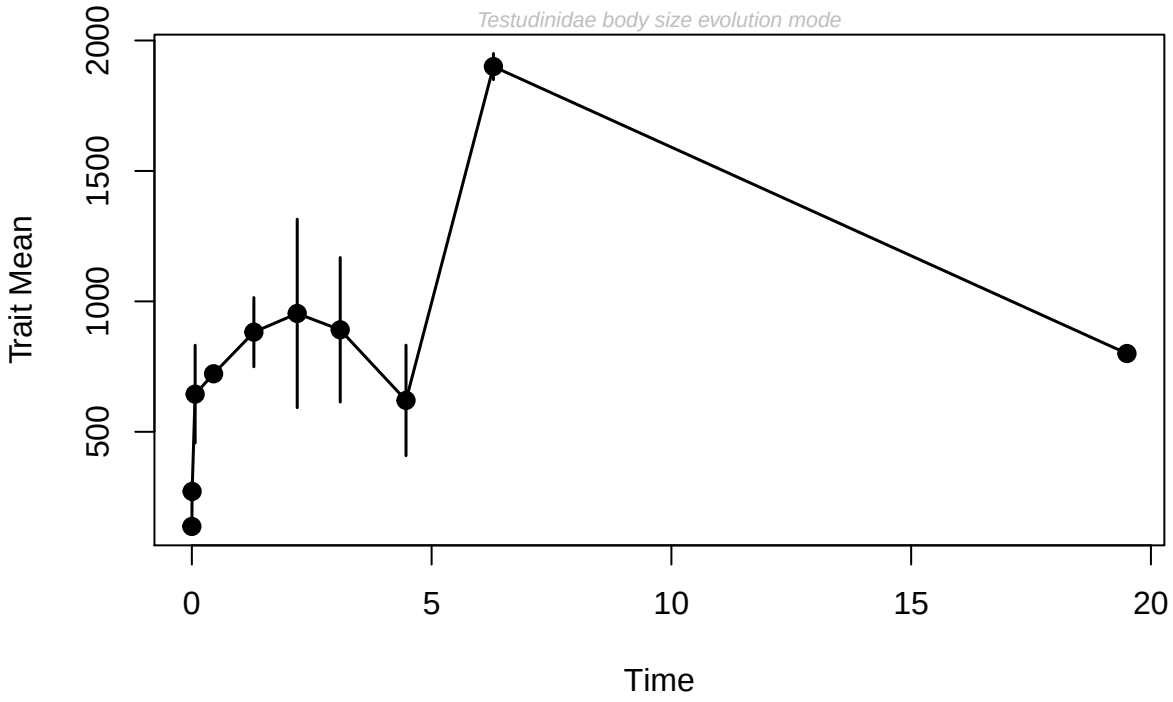


Figure 33: paleoTS, genera, Eurasia, insular

```
FossilOcMiocene <- FossilOccurrences %>%
  mutate(Age=(MA.min+Ma.max)/2) %>%
  filter(Age < 23.000)


length(unique(FossilOcMiocene$Locality))
```

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

```
length(unique(FossilOcMiocene$Locality[which(FossilOccurrences$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 occurred54

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 estimared 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 from 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 29: 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