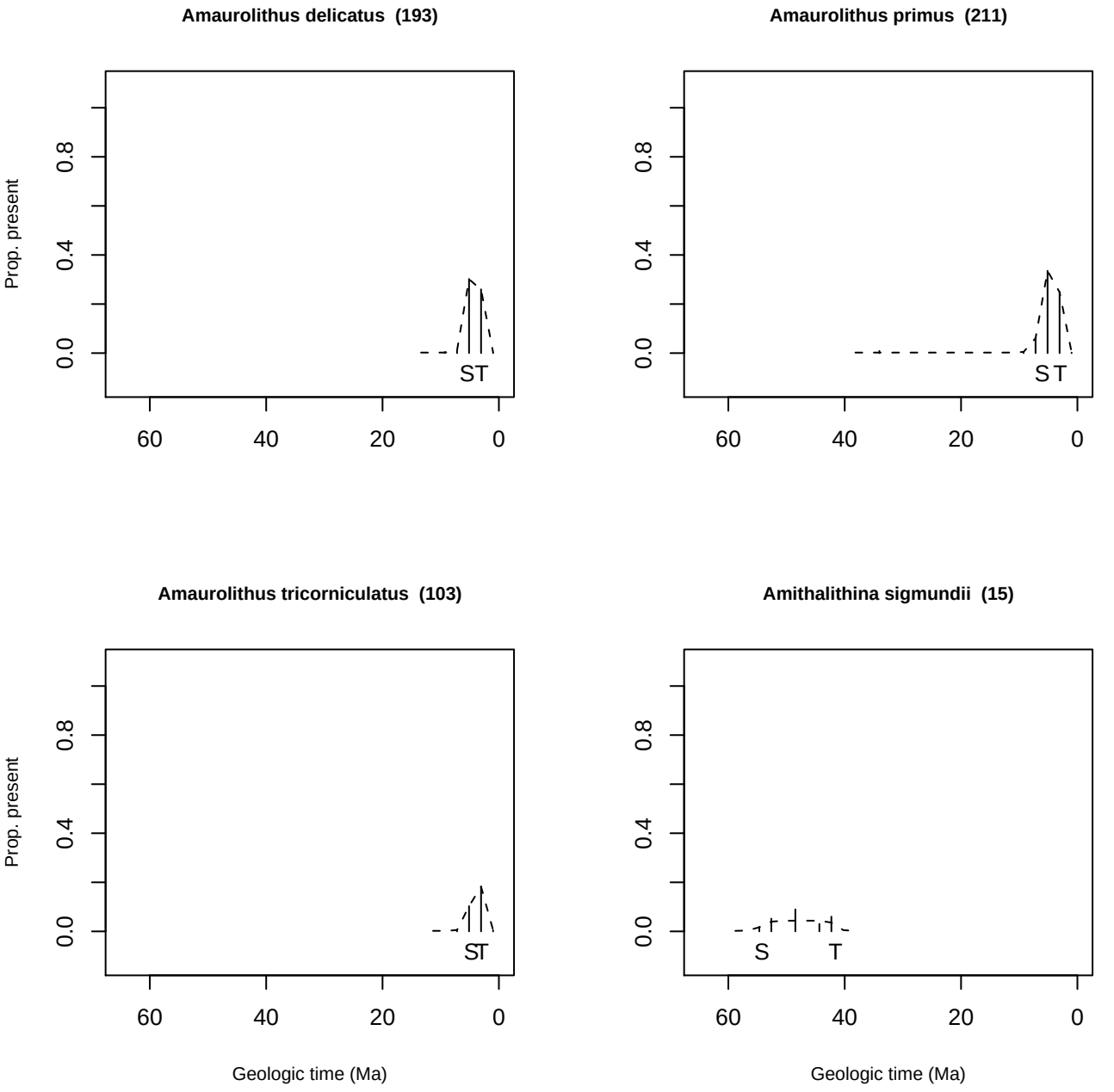
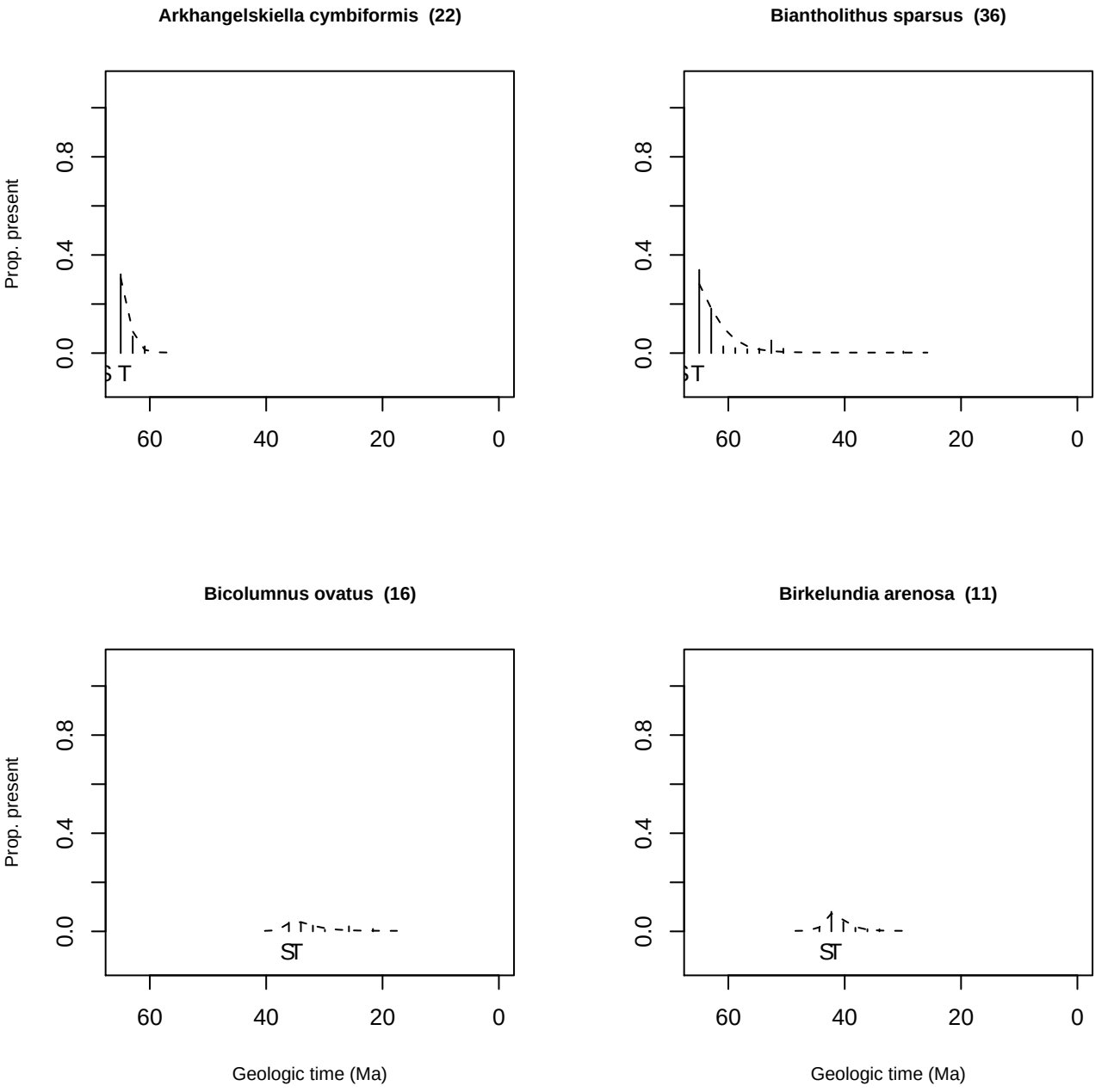
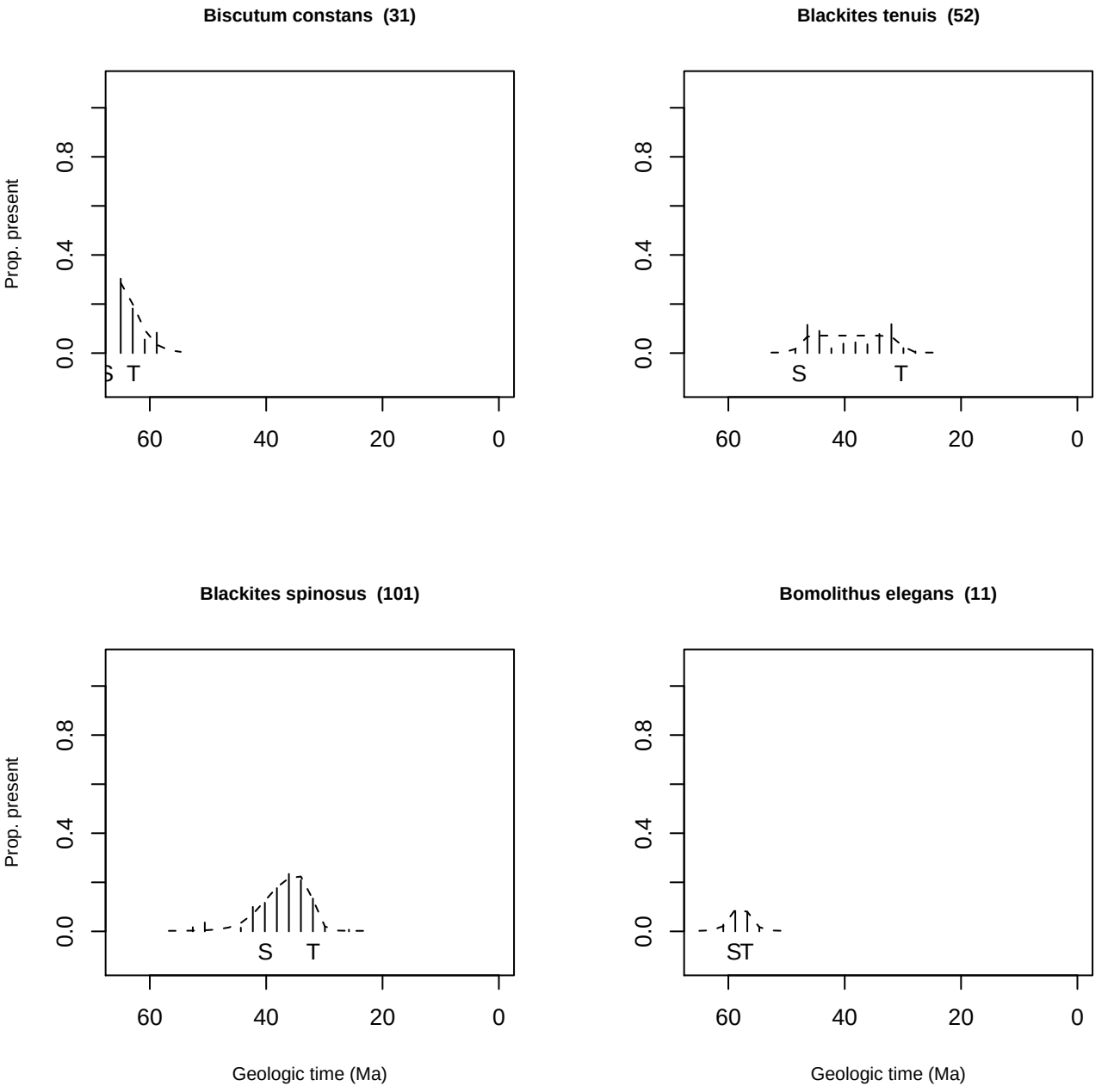
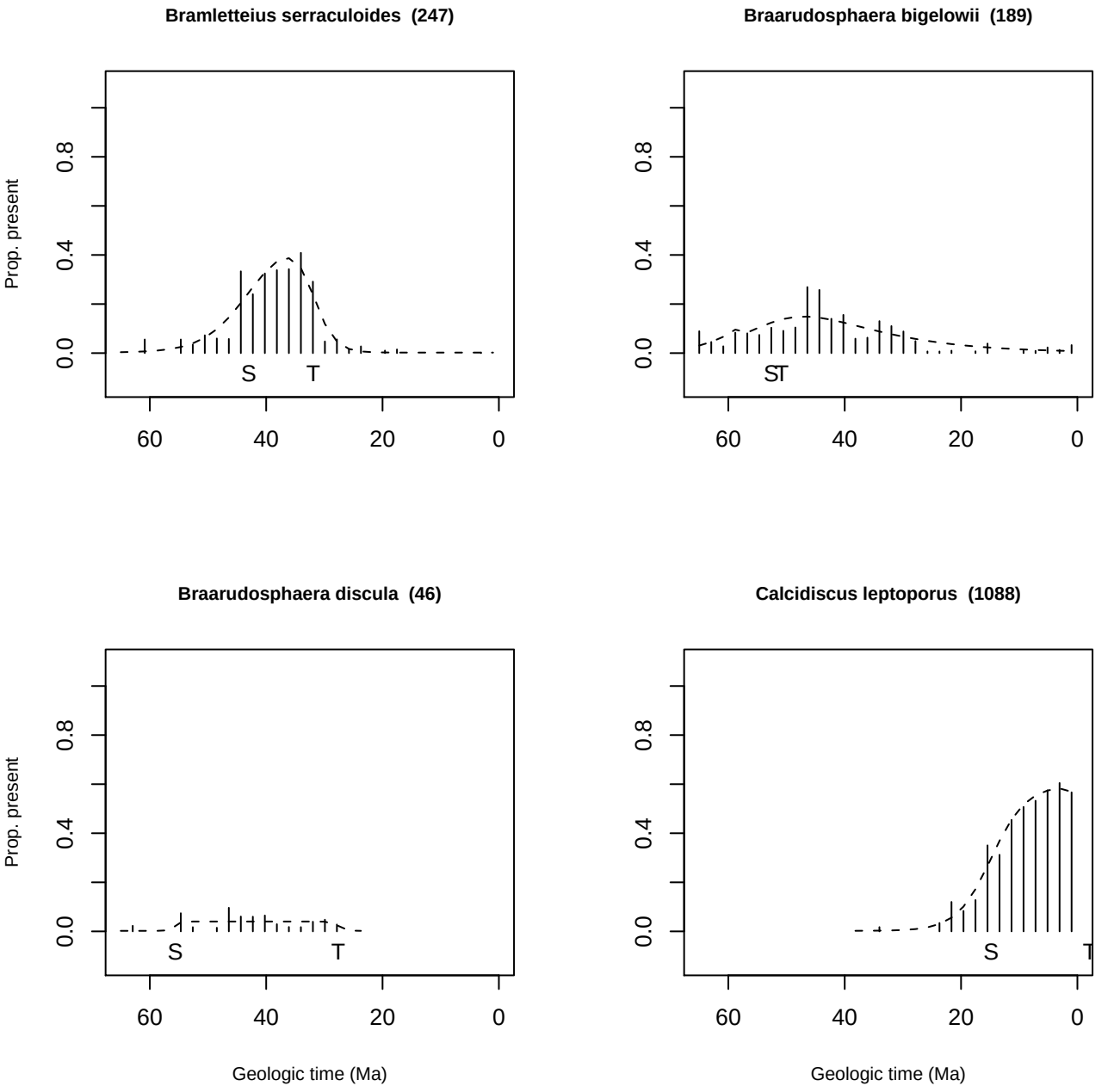
Supplementary Material: Nannoplankton

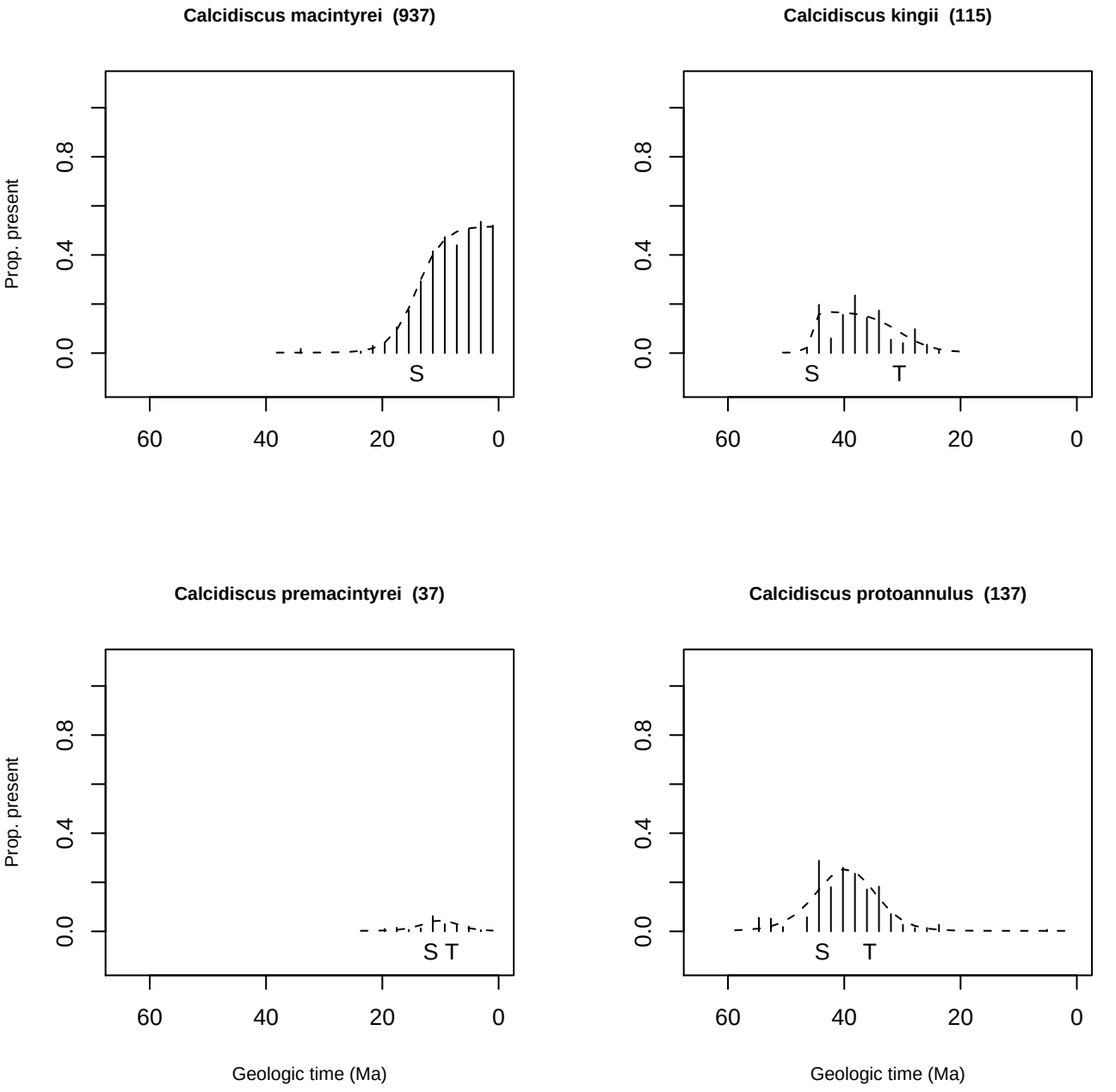
We first present plots of each of our model ("hat") fits to each nannoplankton species. Vertical bars show the observed proportion of sites occupied by the species in 2 Myr bins. Dotted curves are the fitted curves. The labels "S" and "T" on each plot show the inflection points for the rise and fall of species (see model under methods), respectively. Following the species "hat", we show plots of the time period over which samples are available for each species and the temporal distribution of preservation status (preservation codes G for "good," M for "moderate" and P for "poor" and gray closed circles for samples with no preservation state coded). The first set of plots does not overlap completely with the second set because we have no preservation information for a few species.

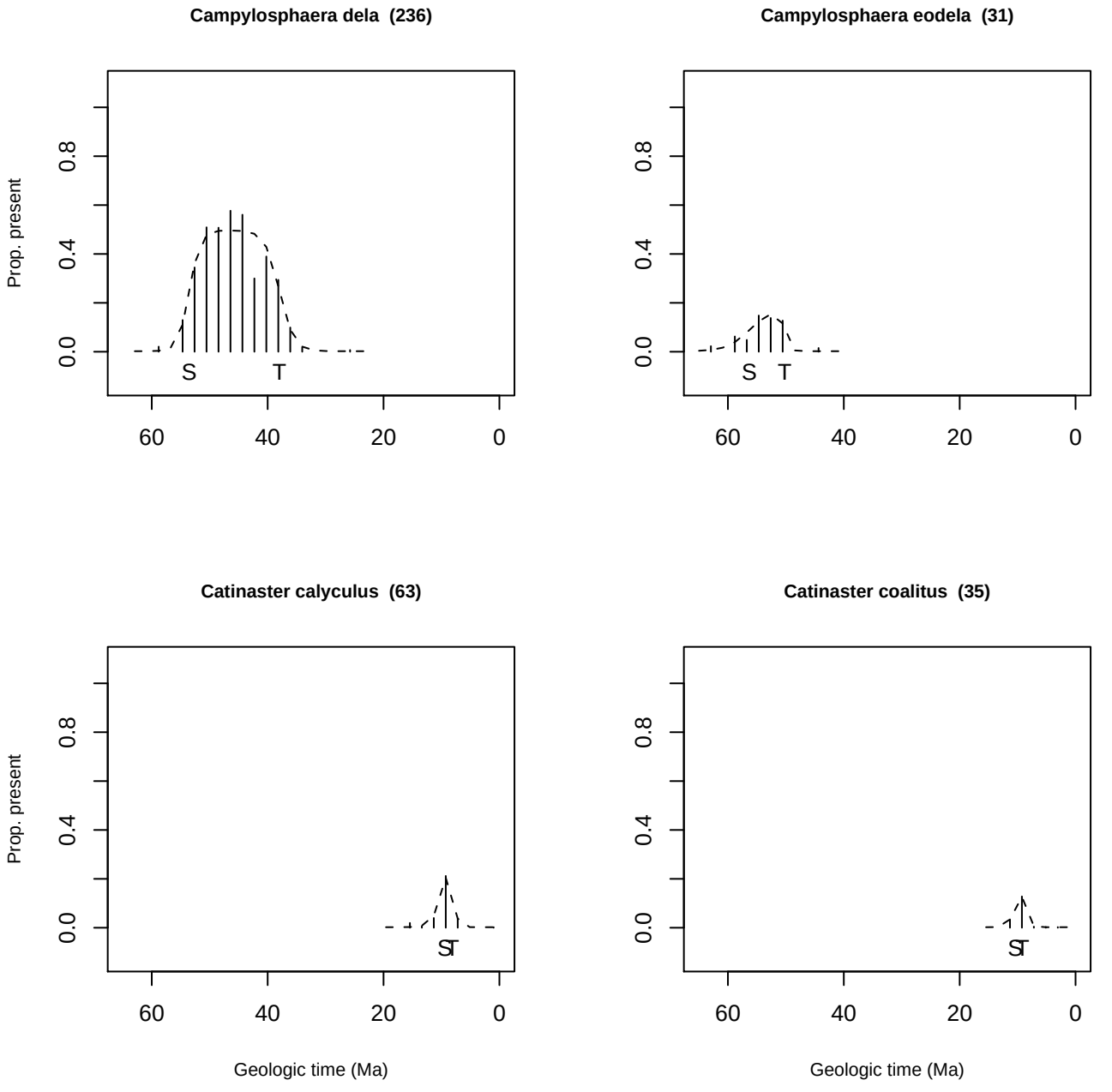

Amaurolithus delicatus (193)
Amaurolithus primus (211)
Amaurolithus tricorniculatus (103)
Amithalithina sigmundii (15)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

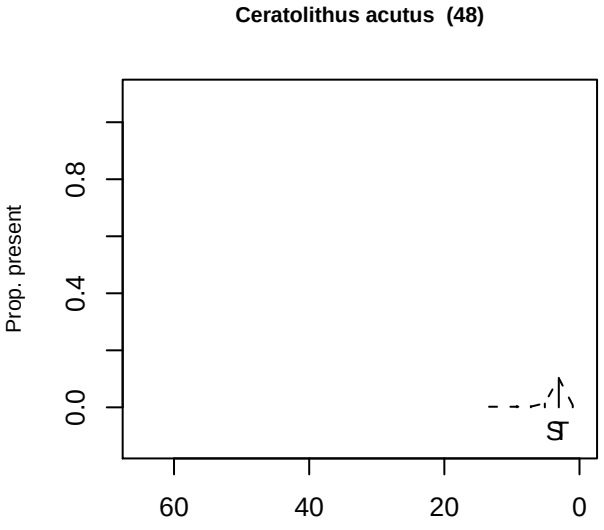

Arkhangelskiella cymbiformis (22)
Biantholithus sparsus (36)
Bicolumnus ovatus (16)
Birkelundia arenosa (11)
Prop. present
0.0
0.4
0.8
60
40
20
0
S T
ST
Geologic time (Ma)

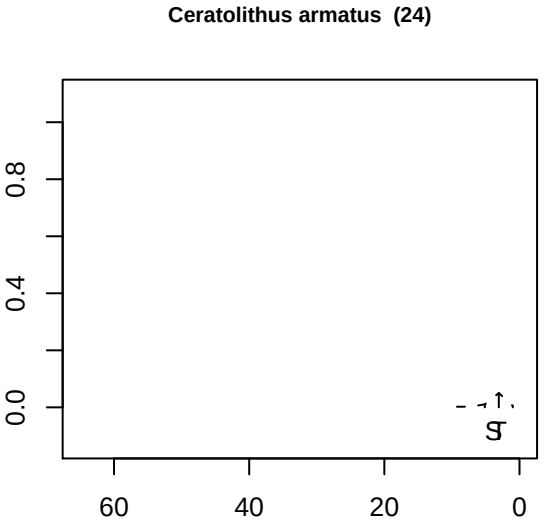

Biscutum constans (31)
Blackites tenuis (52)
Blackites spinosus (101)
Bomolithus elegans (11)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

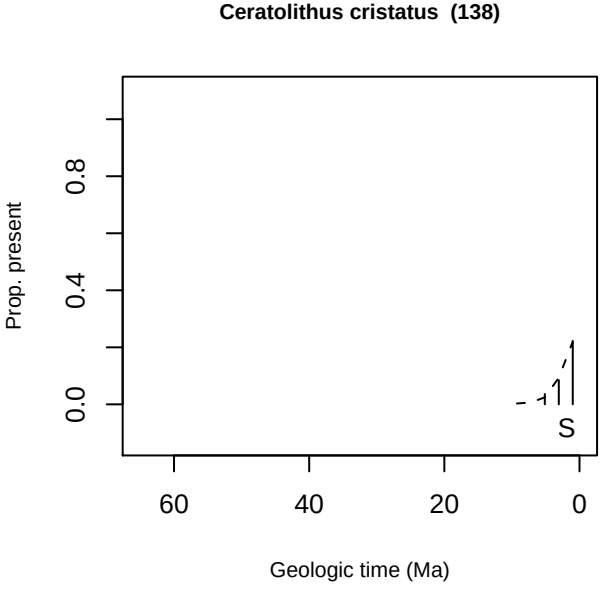

Bramletteius serraculoides (247)
Braarudosphaera bigelowii (189)
Braarudosphaera discula (46)
Calcidiscus leptoporus (1088)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

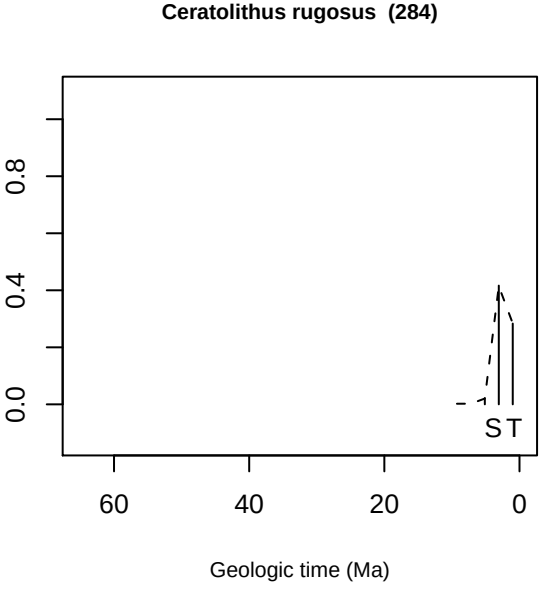

Calcidiscus macintyrei (937)
Calcidiscus kingii (115)
Calcidiscus premacintyrei (37)
Calcidiscus protoannulus (137)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

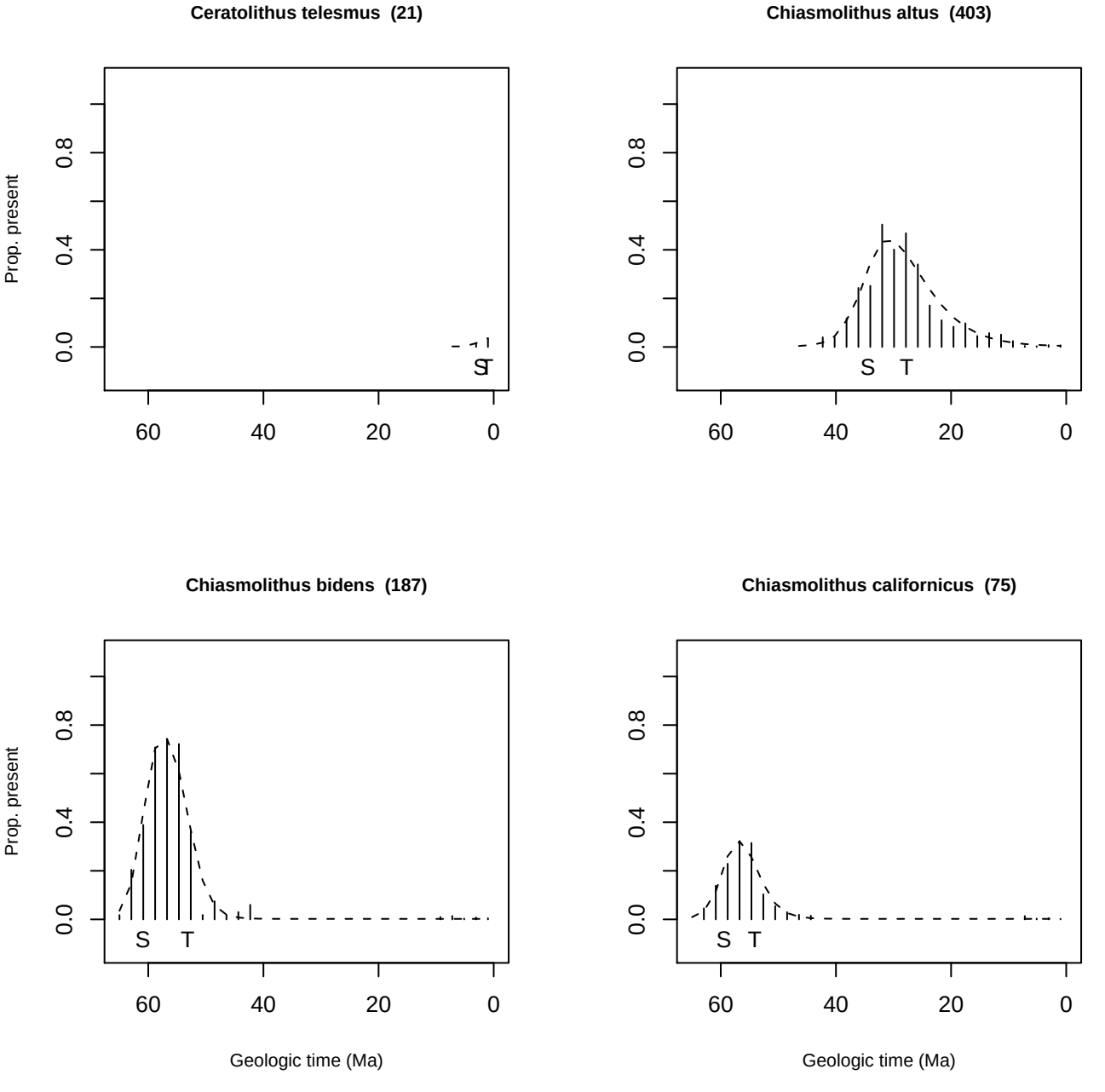

Campylosphaera dela (236)
Campylosphaera eodela (31)
Catinaster calyculus (63)
Catinaster coalitus (35)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

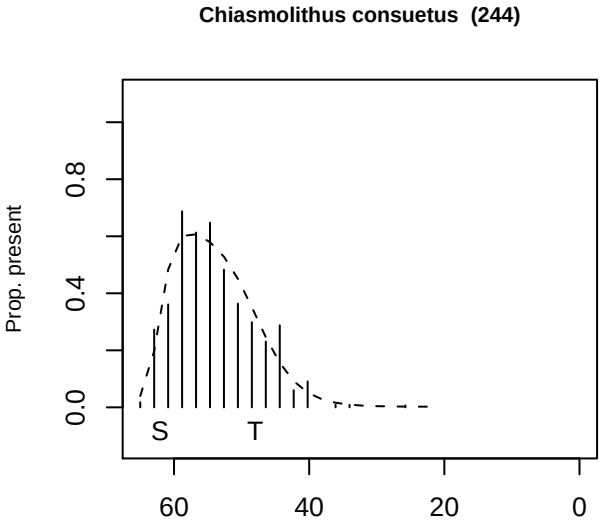

Ceratolithus acutus (48)
Prop. present
0.0
0.4
0.8
60
40
20
0
S

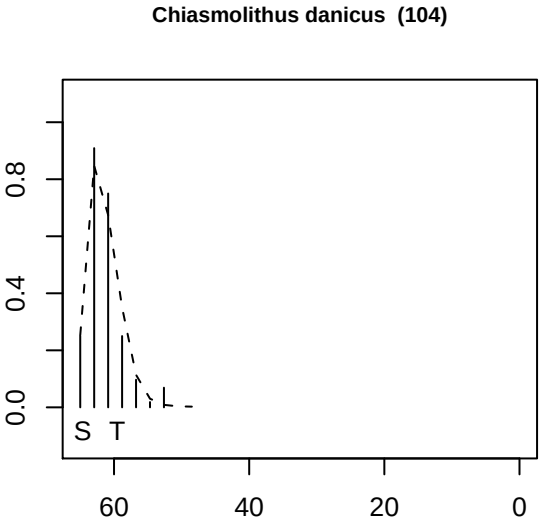

Ceratolithus armatus (24)
0.0
0.4
0.8
60
40
20
0
S

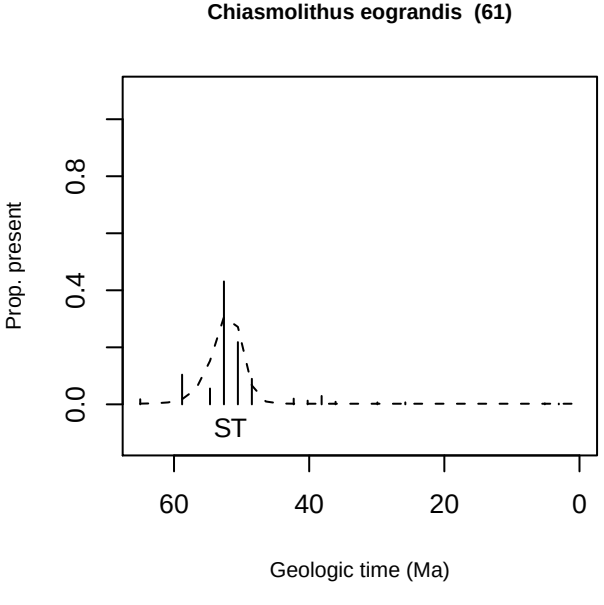

Ceratolithus cristatus (138)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
Geologic time (Ma)

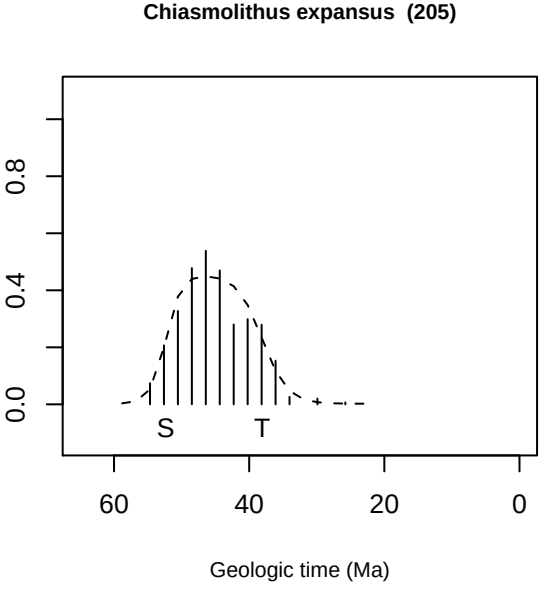

Ceratolithus rugosus (284)
0.0
0.4
0.8
60
40
20
0
S T
Geologic time (Ma)

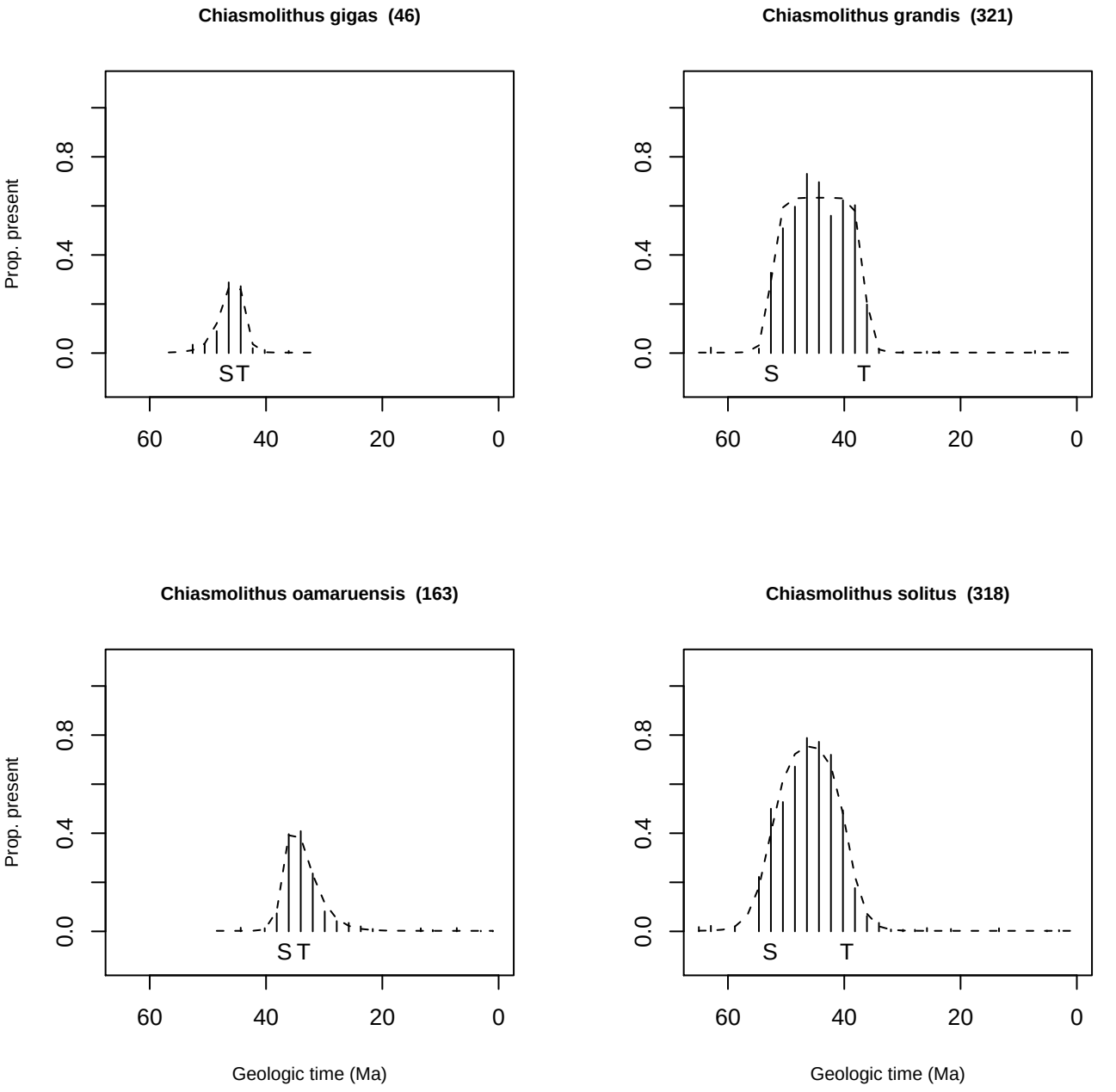

Ceratolithus telesmus (21)
Chiasmolithus altus (403)
Chiasmolithus bidens (187)
Chiasmolithus californicus (75)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

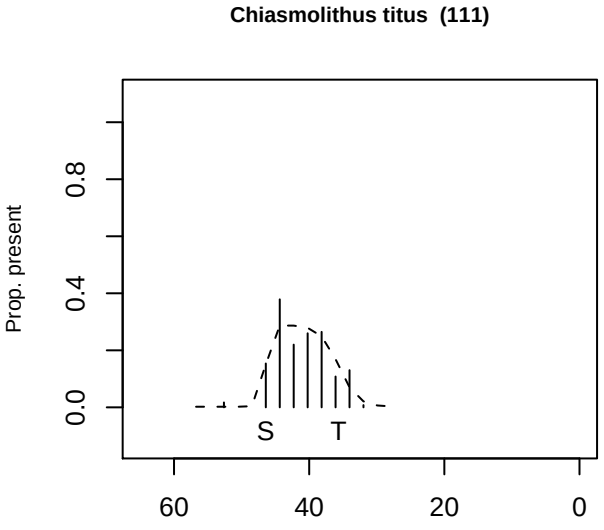

Chiasmolithus consuetus (244)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0

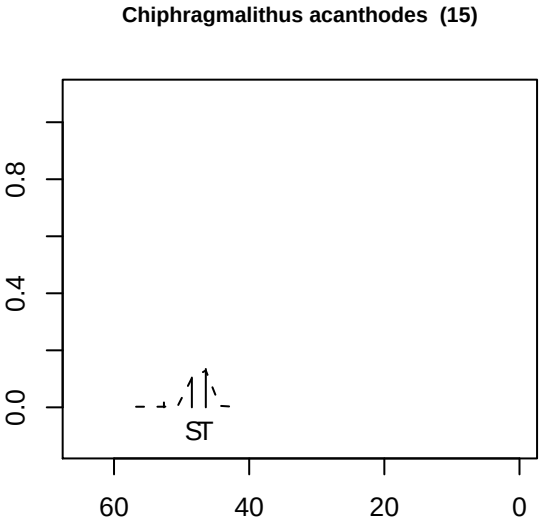

Chiasmolithus danicus (104)
0.0
0.4
0.8
S
T
60
40
20
0

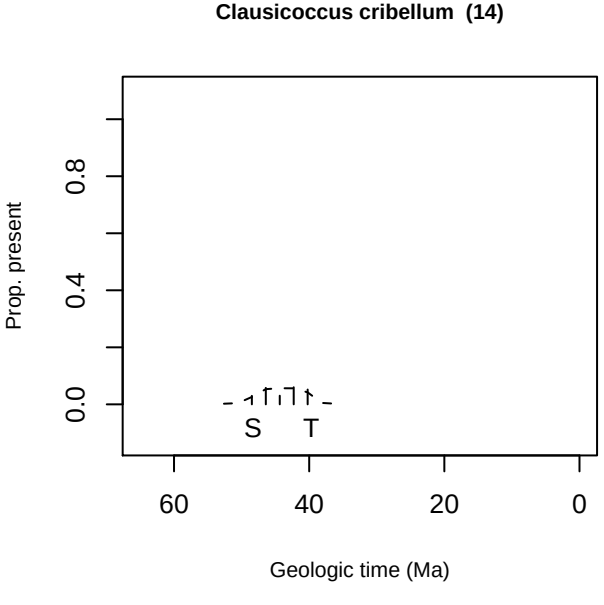

Chiasmolithus eograndis (61)
Prop. present
0.0
0.4
0.8
ST
60
40
20
0
Geologic time (Ma)

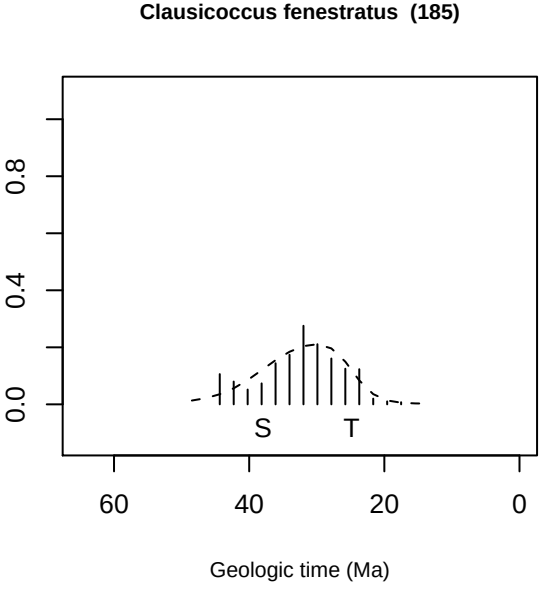

Chiasmolithus expansus (205)
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

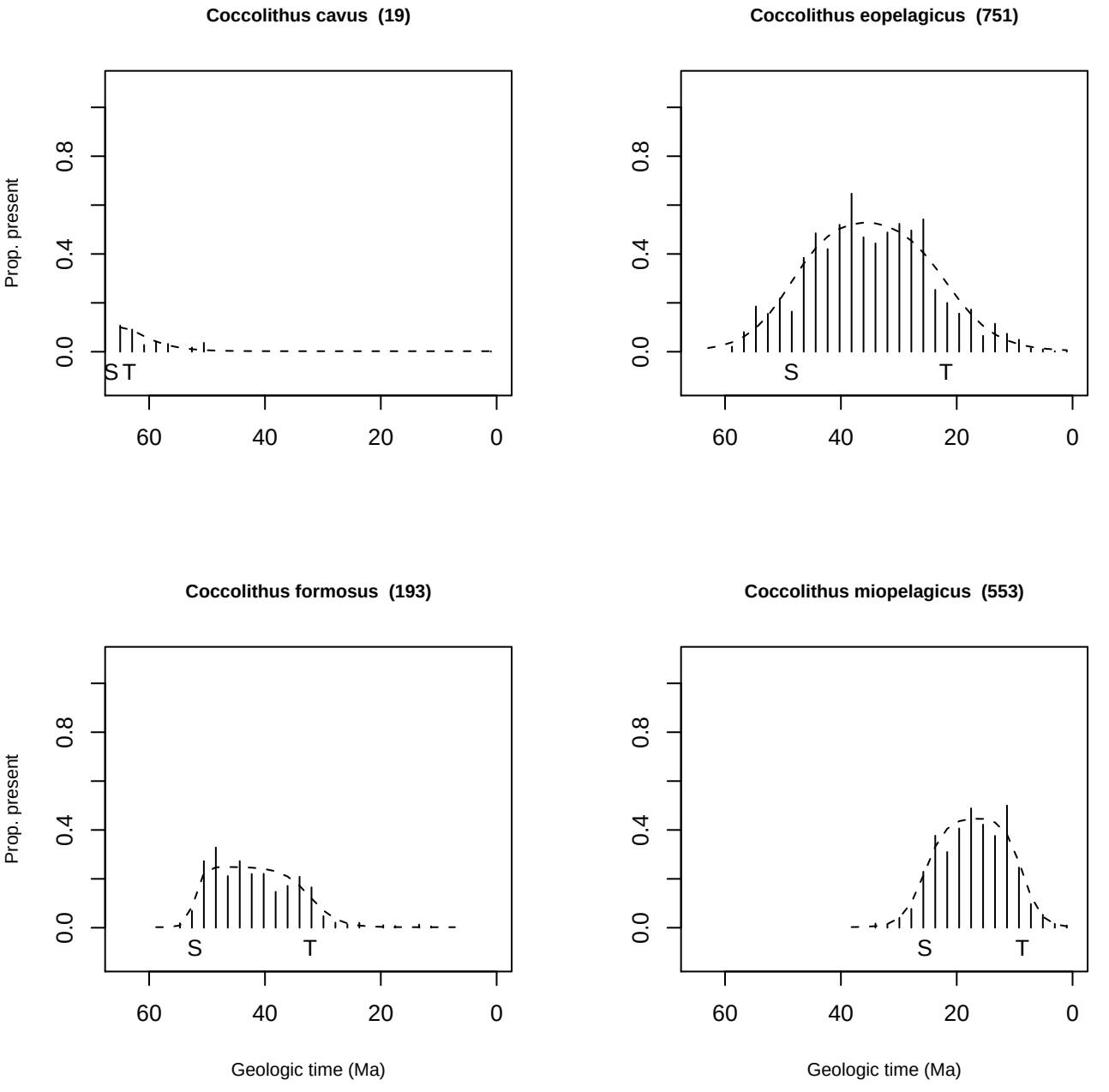

Chiasmolithus gigas (46)
Chiasmolithus grandis (321)
Chiasmolithus oamaruensis (163)
Chiasmolithus solitus (318)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

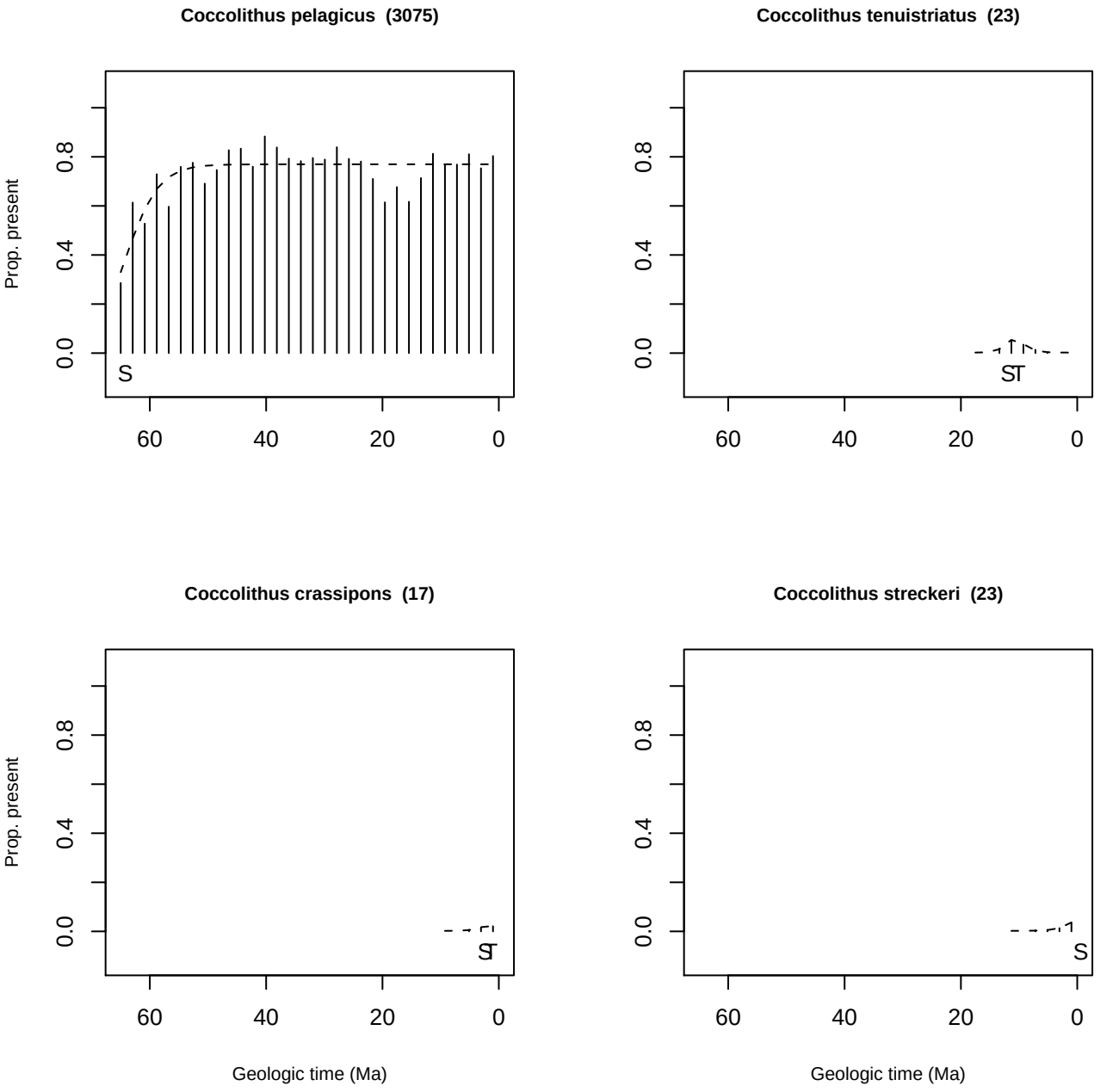

Chiasmolithus titus (111)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0

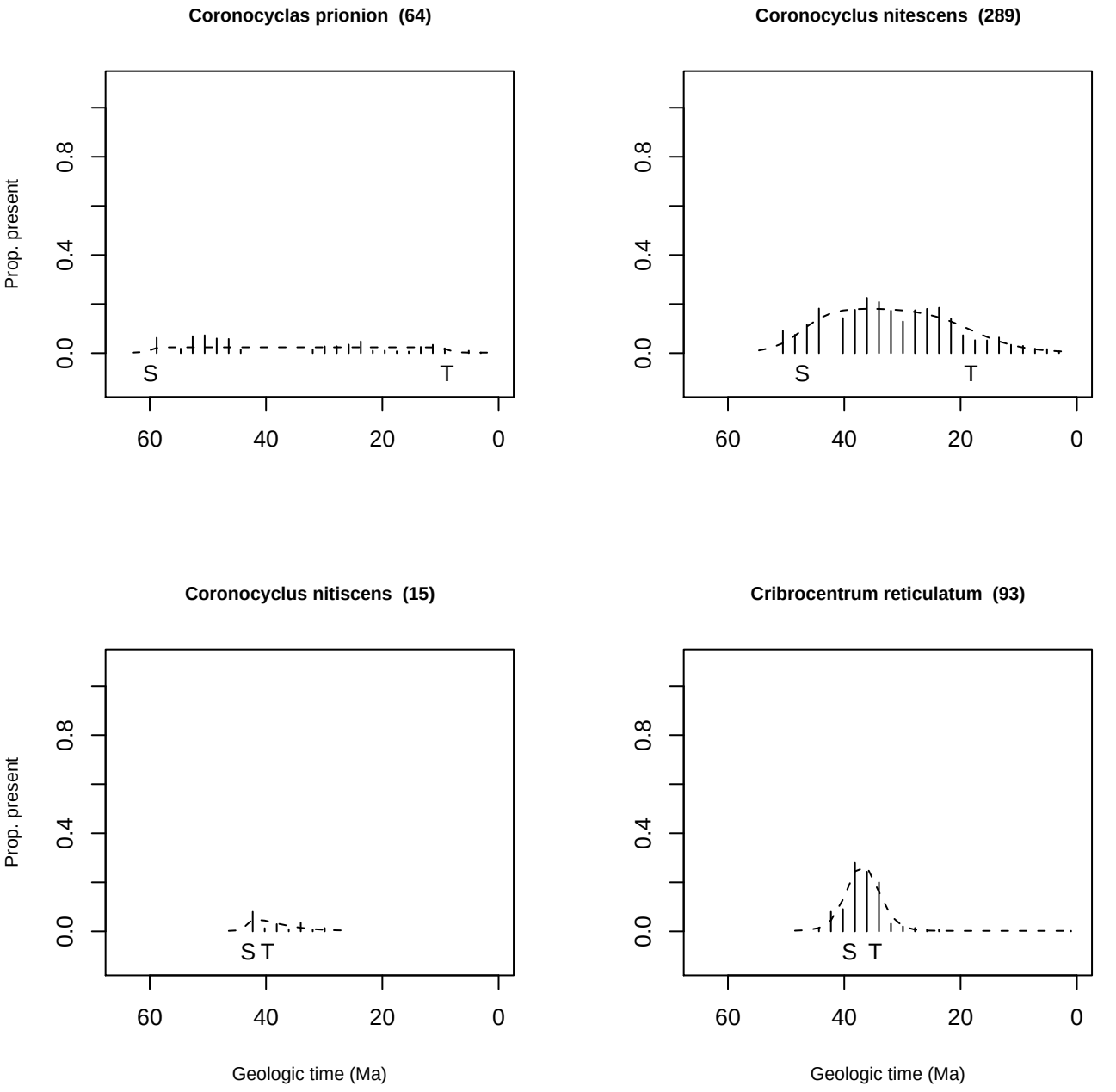

Chiphragmalithus acanthodes (15)
0.0
0.4
0.8
ST
60
40
20
0

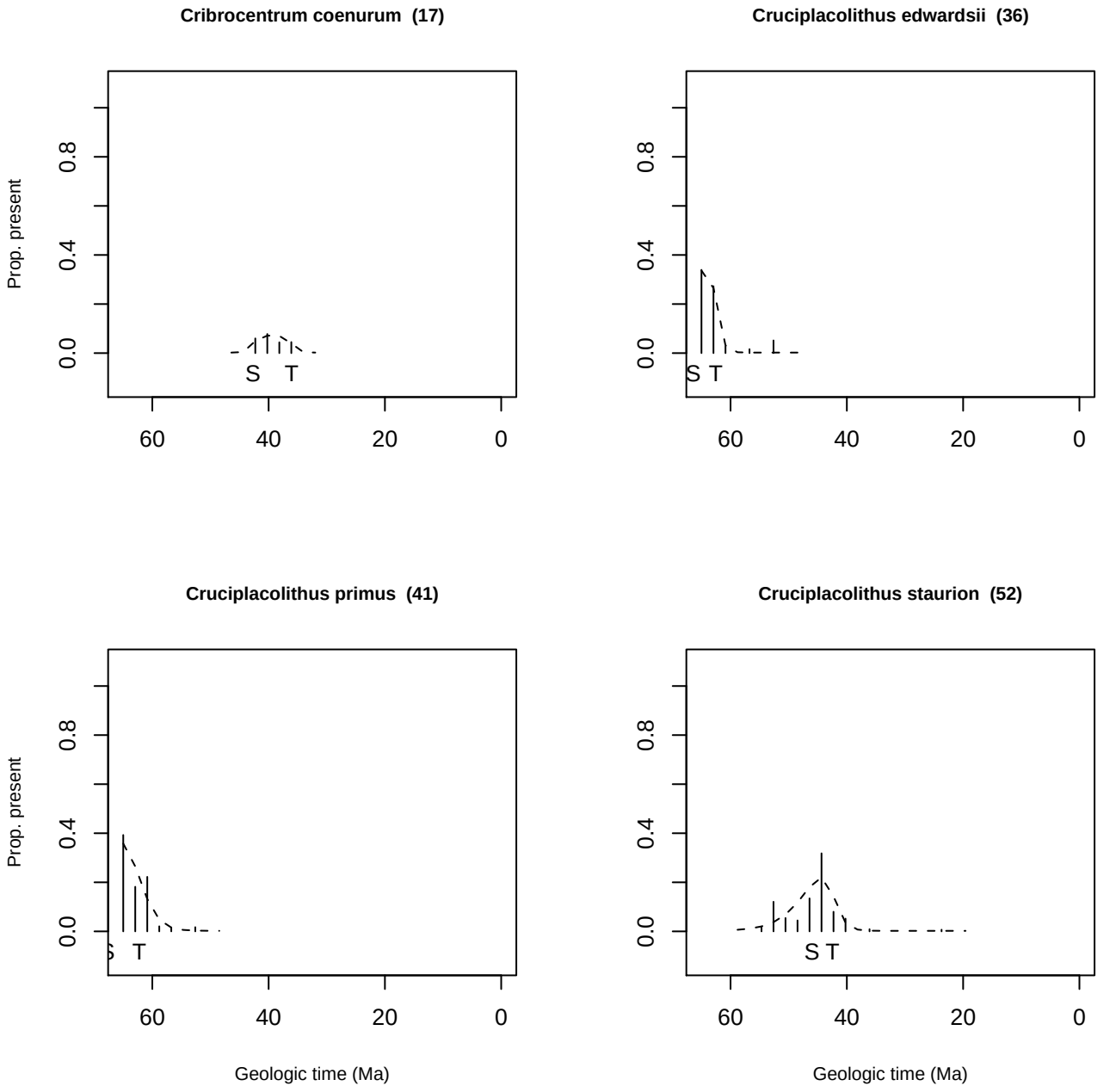

Clausicoccus cribellum (14)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

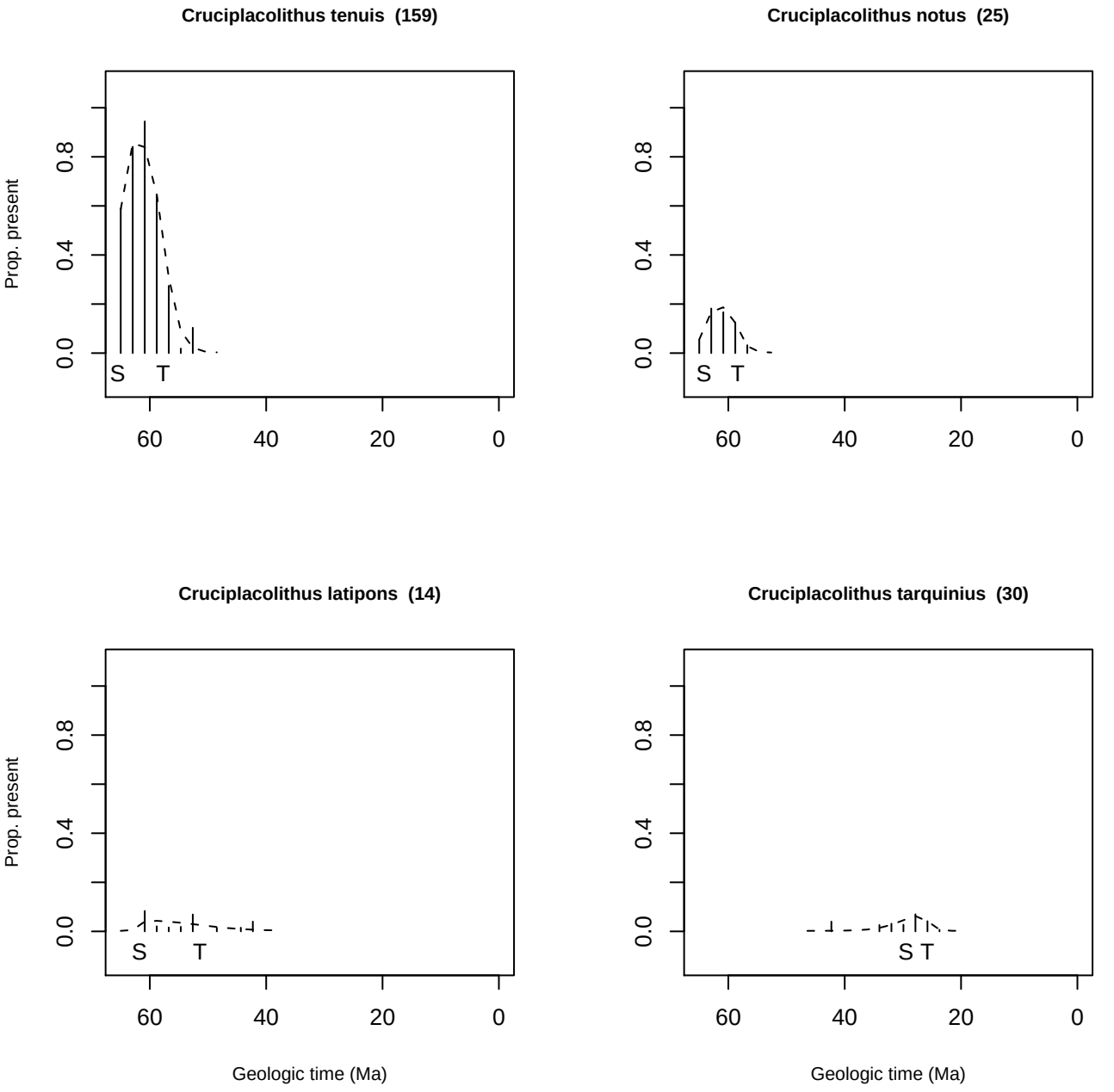

Clausicoccus fenestratus (185)
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

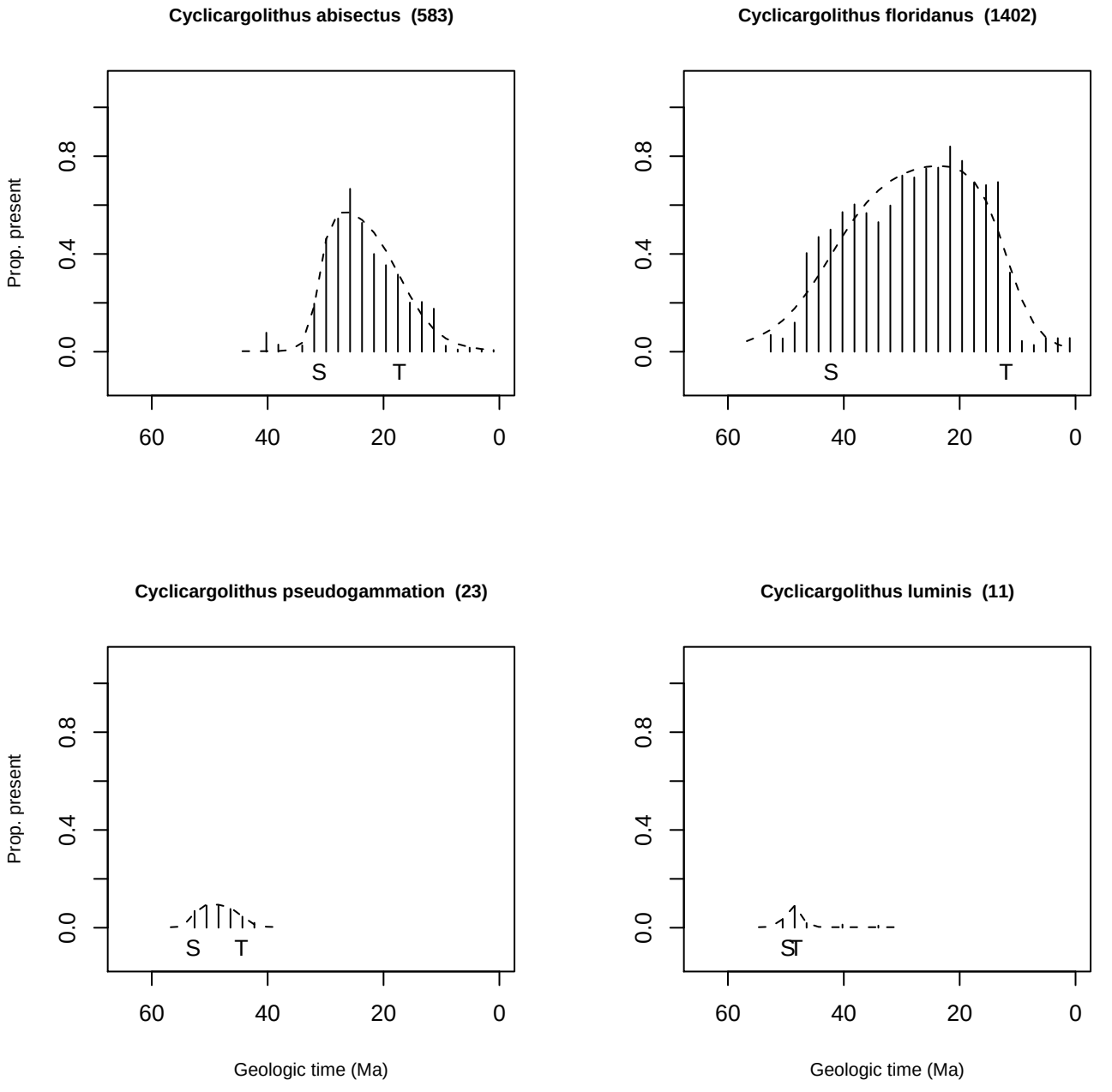

Coccolithus cavus (19)
Coccolithus eopelagicus (751)
Coccolithus formosus (193)
Coccolithus miopelagicus (553)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

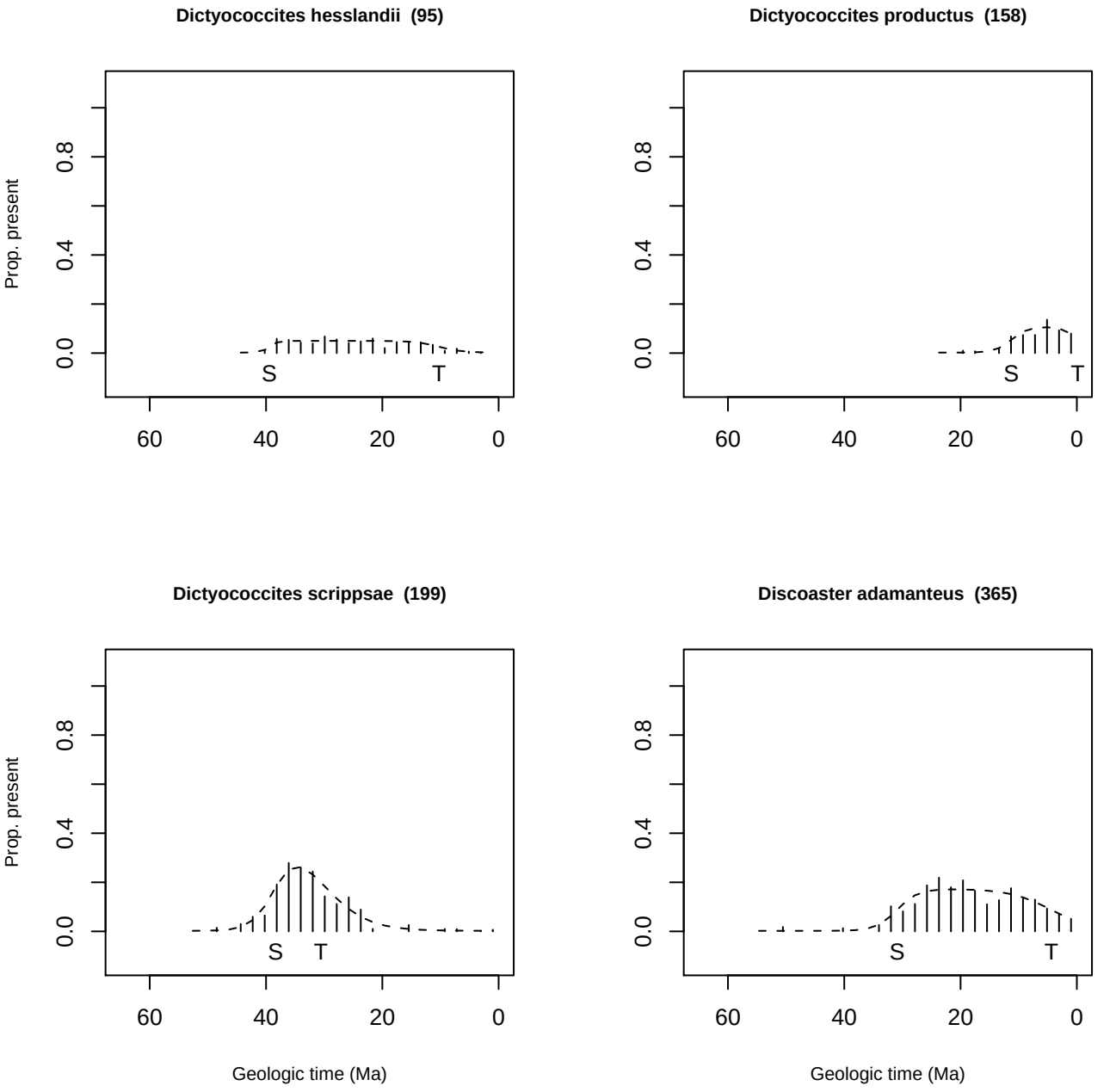

Coccolithus pelagicus (3075)
Coccolithus tenuistriatus (23)
Coccolithus crassipons (17)
Coccolithus streckeri (23)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
ST
LS
Geologic time (Ma)

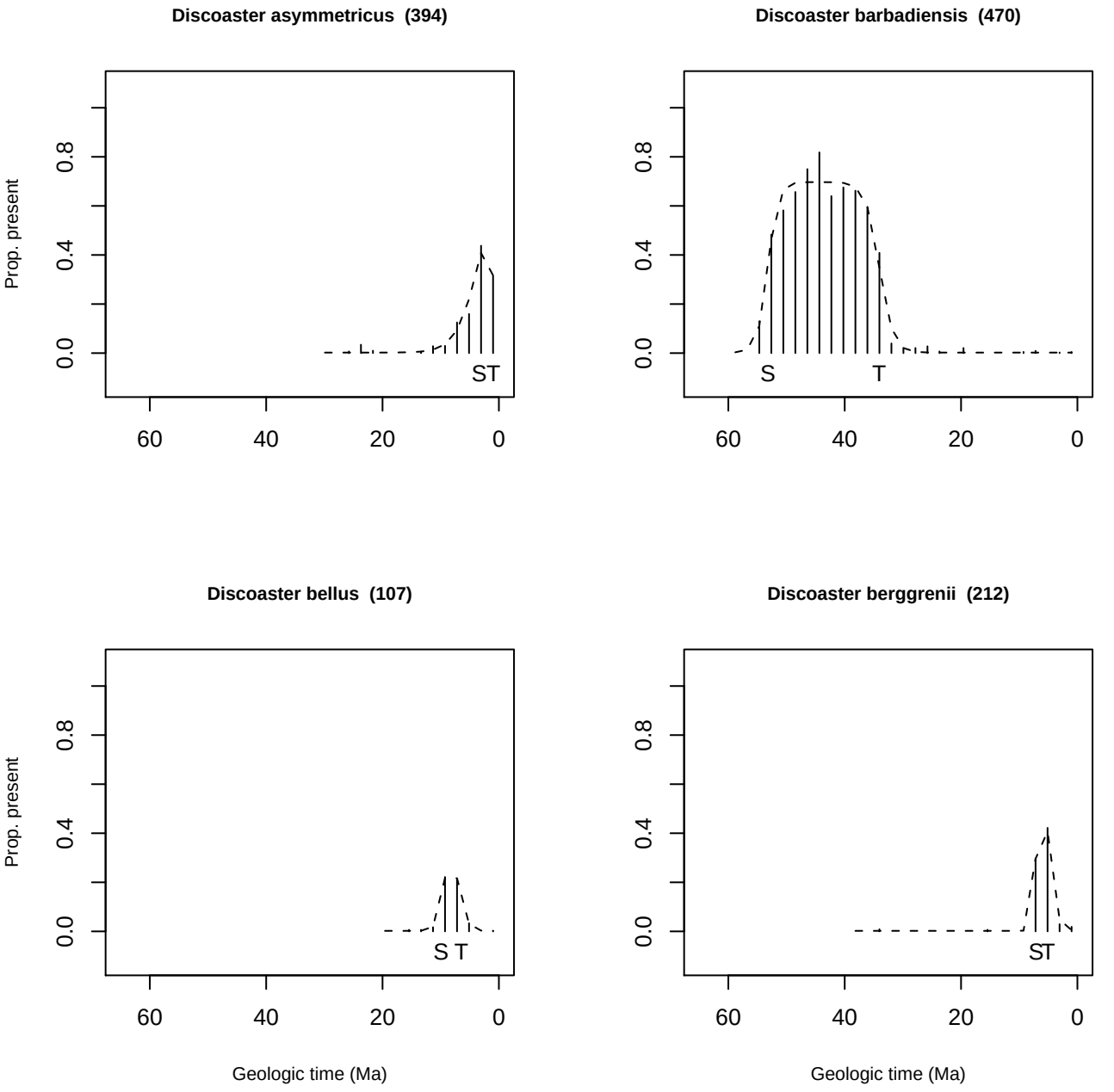

Coronocyclas prionion (64)
Coronocyclus nitescens (289)
Coronocyclus nitiscens (15)
Cribrocentrum reticulatum (93)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

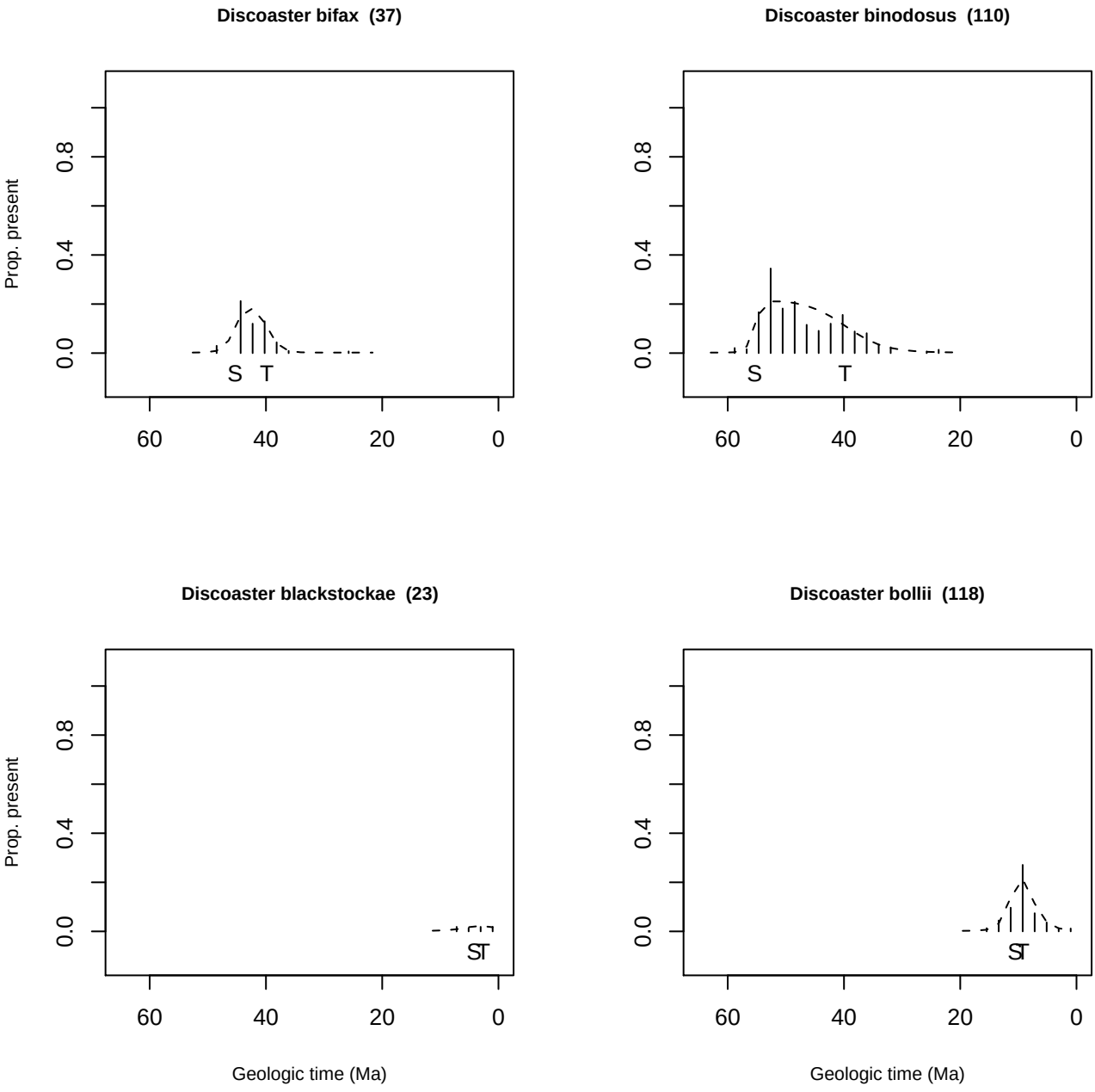

Cribrocentrum coenurum (17)
Cruciplacolithus edwardsii (36)
Cruciplacolithus primus (41)
Cruciplacolithus staurion (52)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

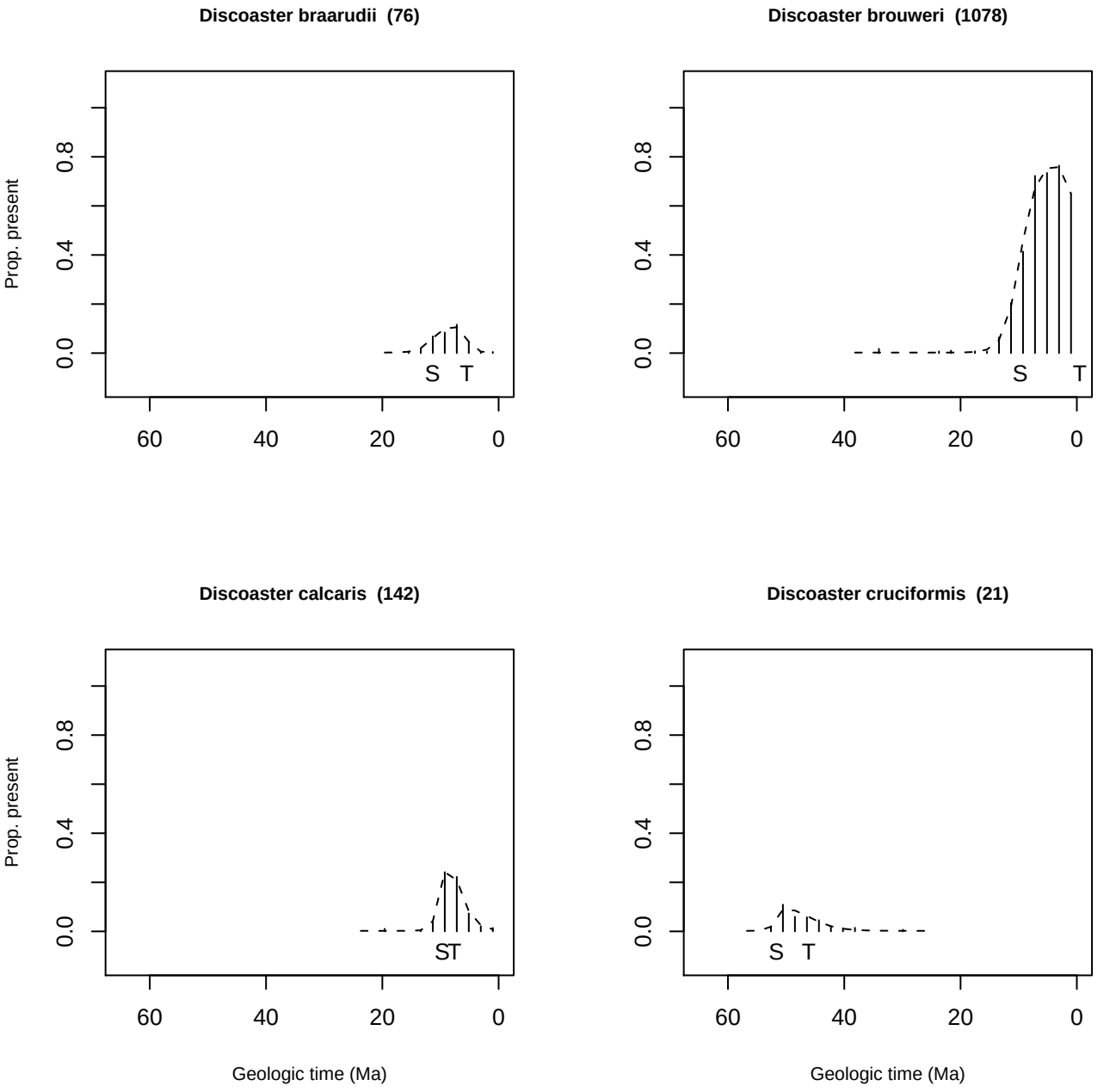

Cruciplacolithus tenuis (159)
Cruciplacolithus notus (25)
Cruciplacolithus latipons (14)
Cruciplacolithus tarquinius (30)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

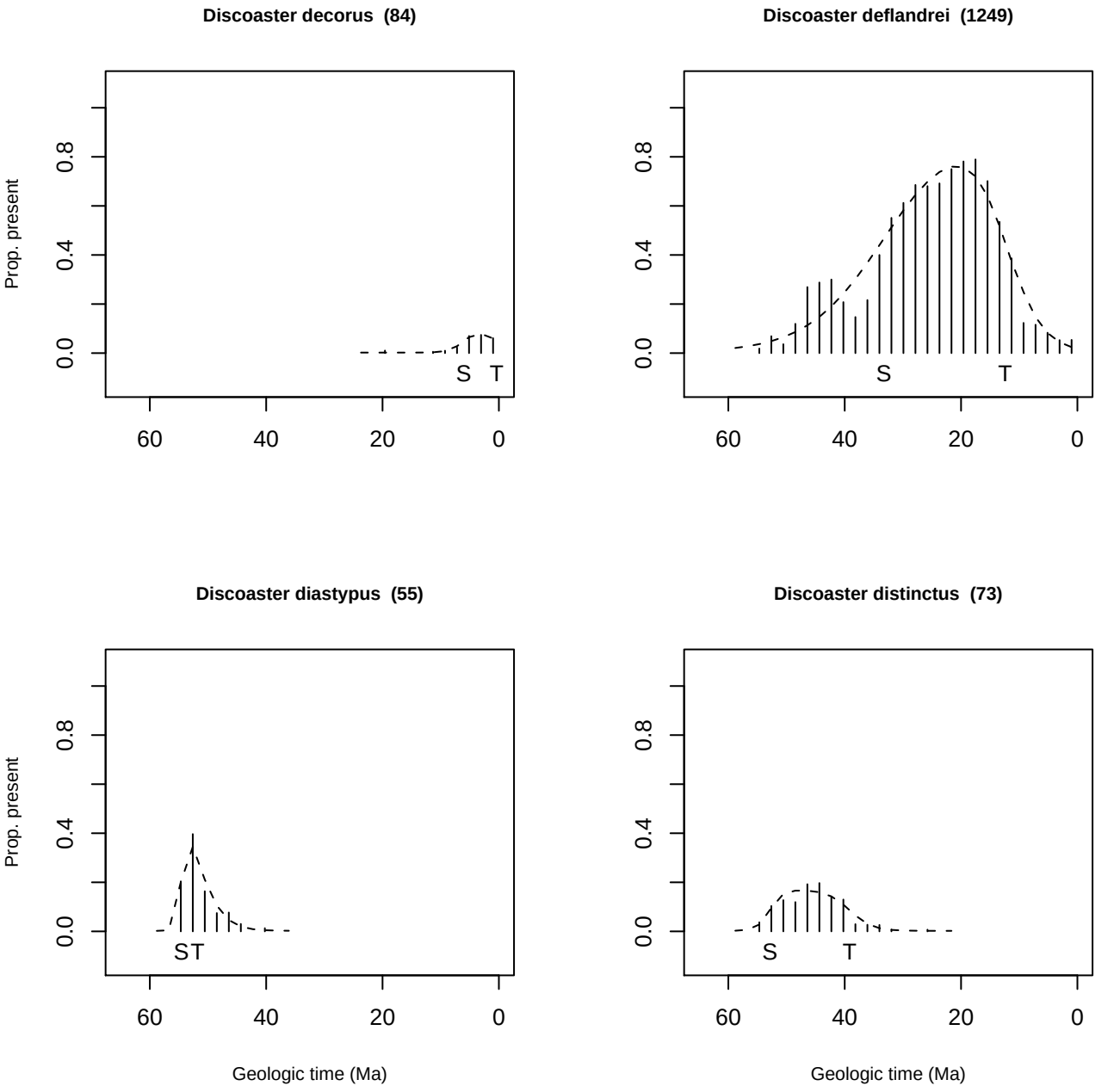

Cyclicargolithus abisectus (583)
Cyclicargolithus floridanus (1402)
Cyclicargolithus pseudogammation (23)
Cyclicargolithus luminis (11)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

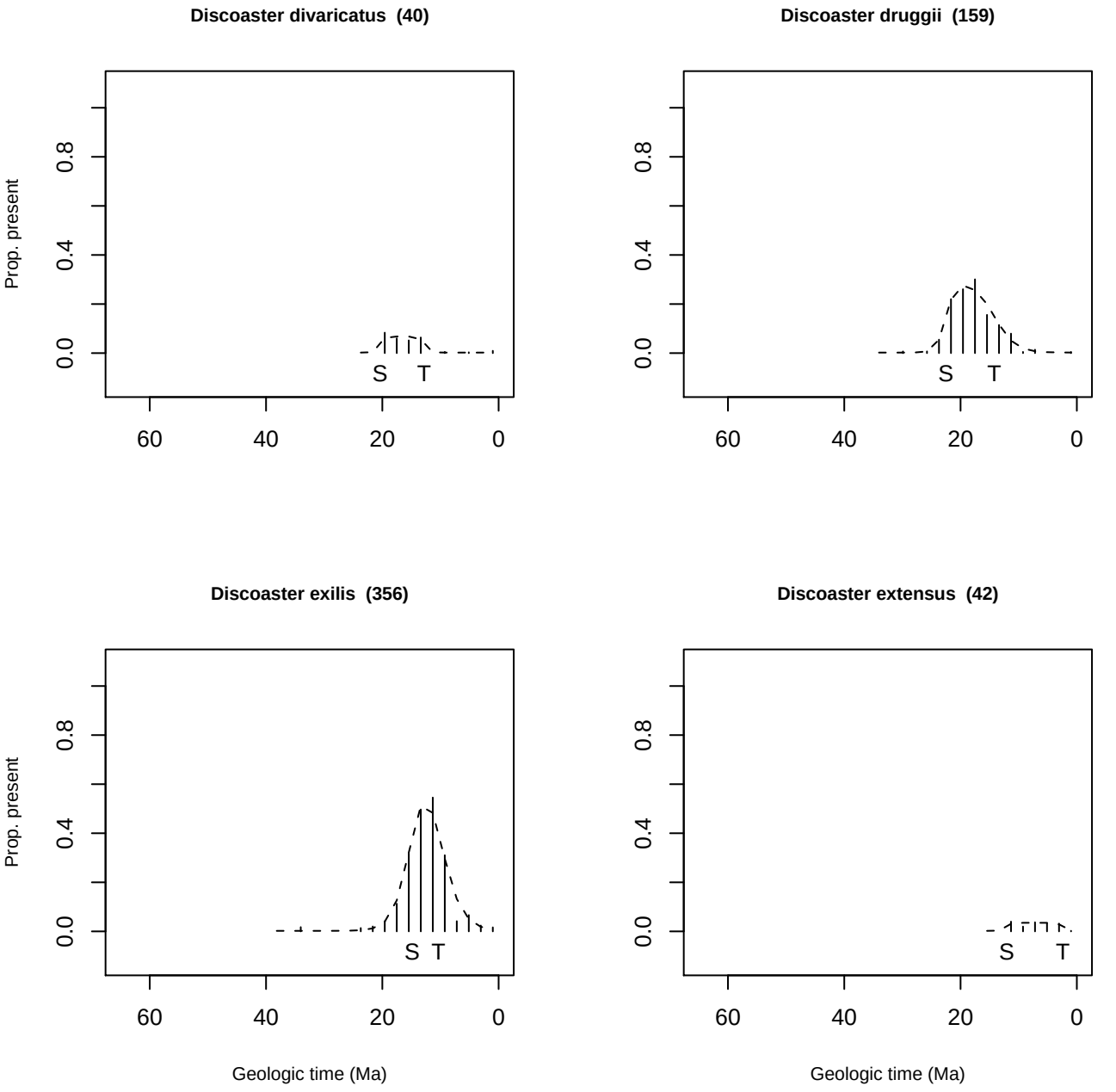

Dictyococcites hesslandii (95)
Dictyococcites productus (158)
Dictyococcites scrippsae (199)
Discoaster adamanteus (365)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

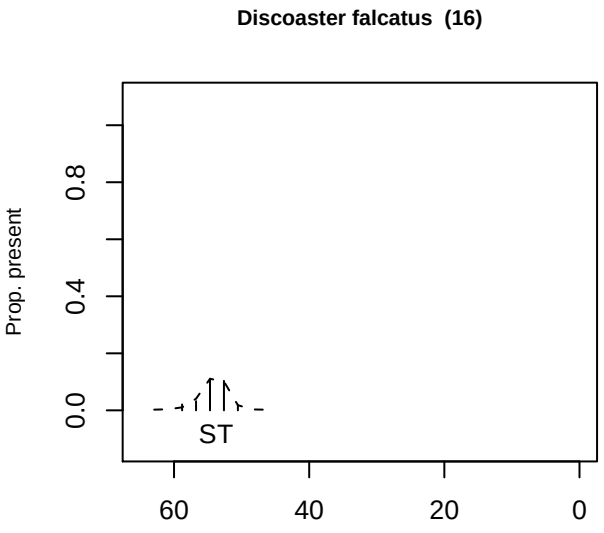

Discoaster asymmetricus (394)
Discoaster barbadiensis (470)
Discoaster bellus (107)
Discoaster berggrenii (212)
Prop. present
0.0
0.4
0.8
60
40
20
0
ST
S
T
S T
Geologic time (Ma)

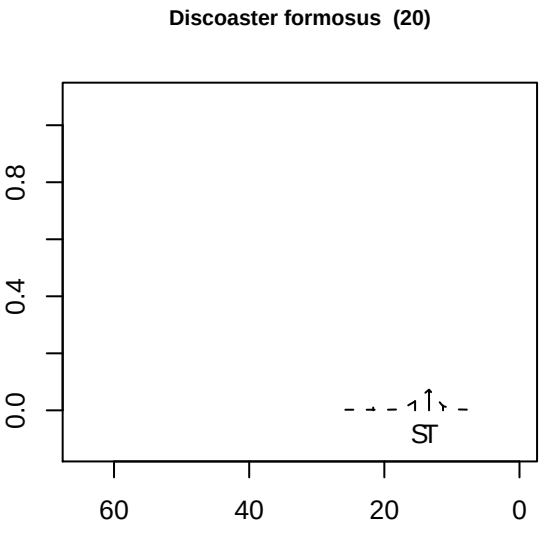

Discoaster bifax (37)
Discoaster binodosus (110)
Discoaster blackstockae (23)
Discoaster bollii (118)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

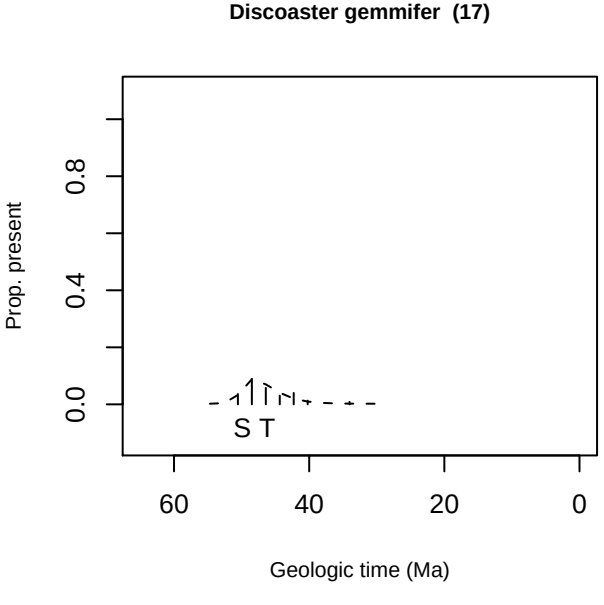

Discoaster braarudii (76)
Discoaster brouweri (1078)
Discoaster calcaris (142)
Discoaster cruciformis (21)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
ST
Geologic time (Ma)

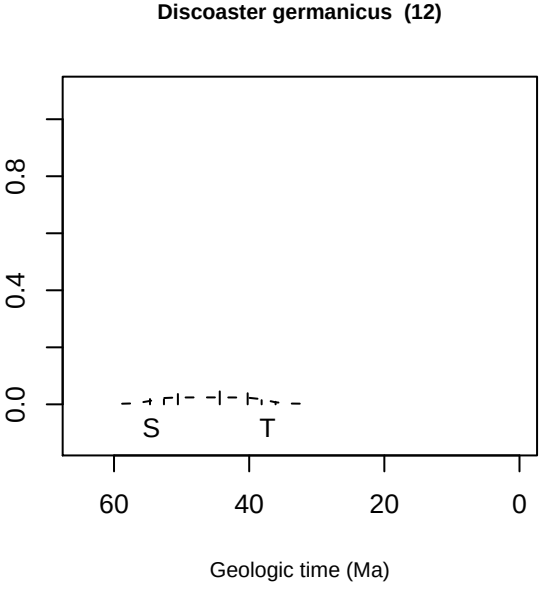

Discoaster decorus (84)
Discoaster deflandrei (1249)
Discoaster diastypus (55)
Discoaster distinctus (73)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
ST
Geologic time (Ma)

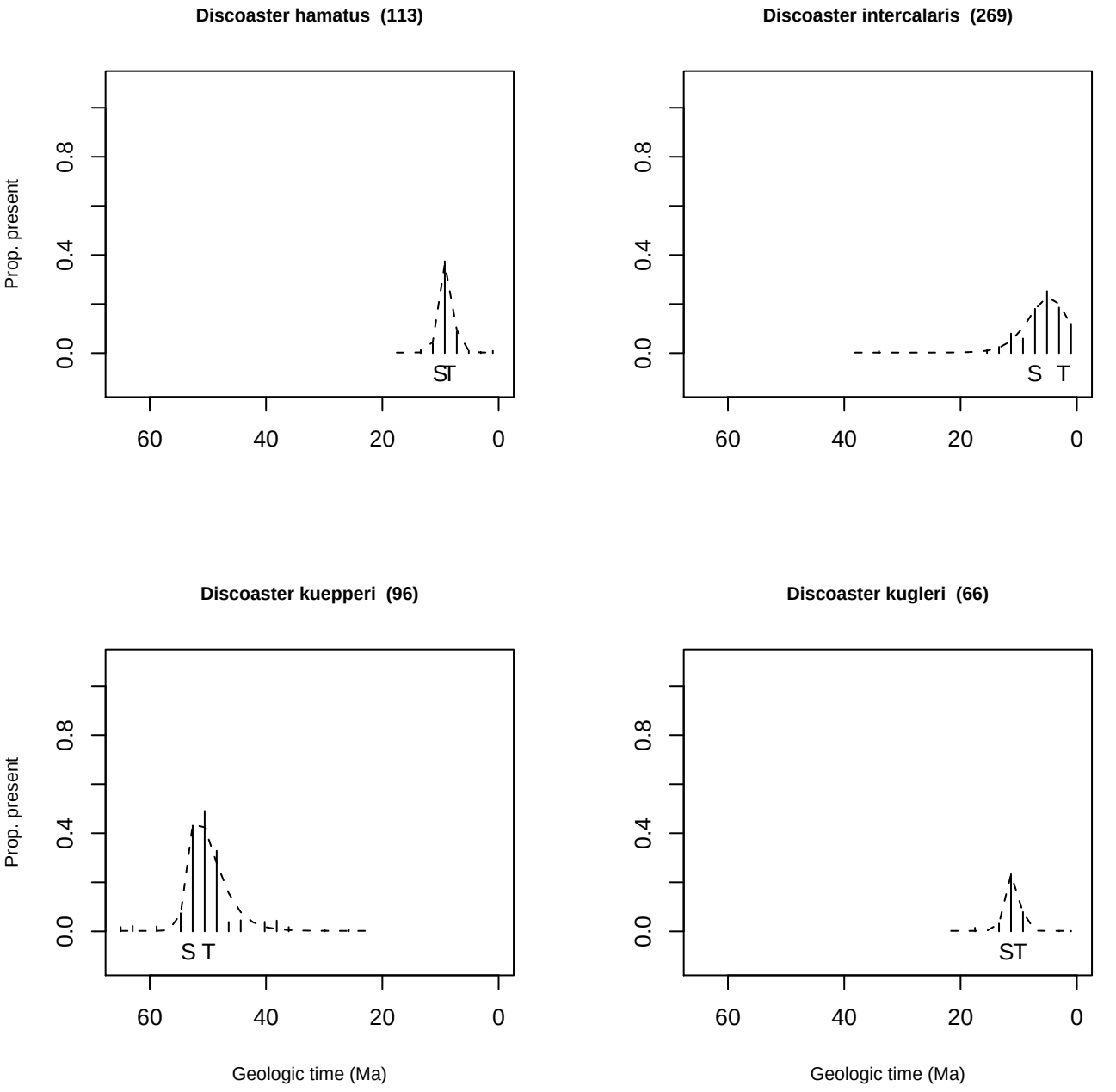

Discoaster divaricatus (40)
Discoaster druggii (159)
Discoaster exilis (356)
Discoaster extensus (42)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

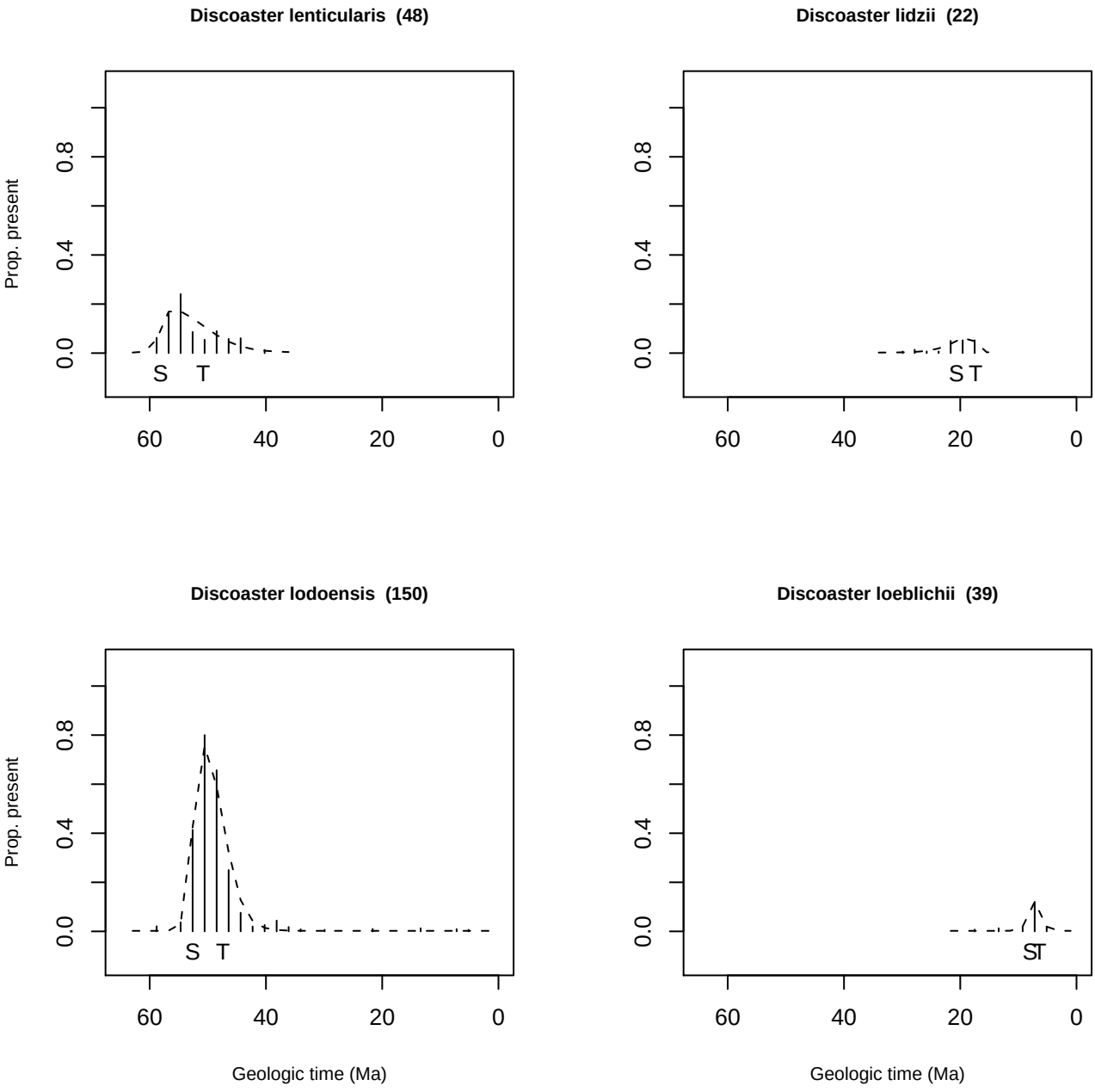

Discoaster falcatus (16)
Prop. present
0.0
0.4
0.8
ST
60
40
20
0

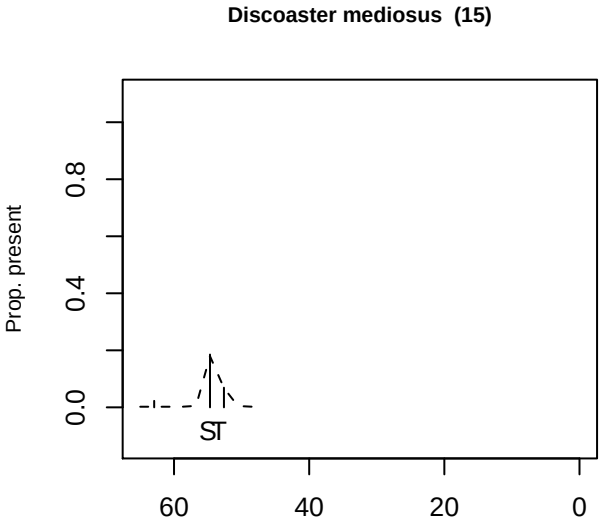

Discoaster formosus (20)
0.0
0.4
0.8
ST
60
40
20
0

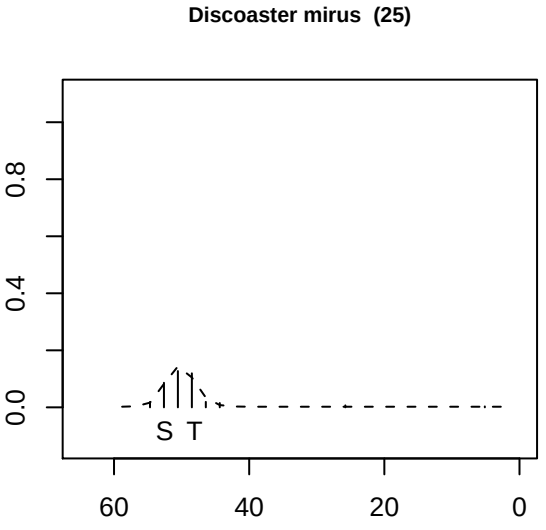

Discoaster gemmifer (17)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

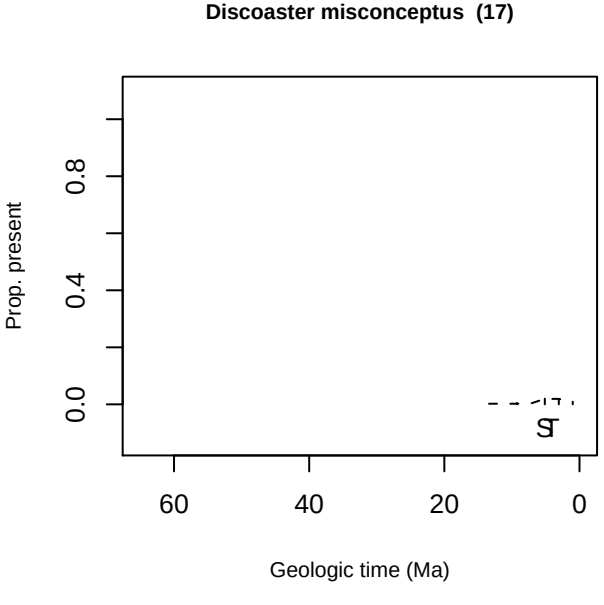

Discoaster germanicus (12)
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

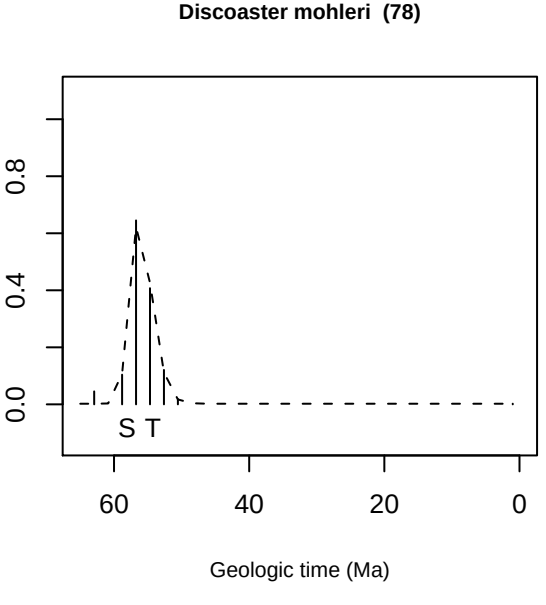

Discoaster hamatus (113)
Discoaster intercalaris (269)
Discoaster kuepperi (96)
Discoaster kugleri (66)
Prop. present
0.0
0.4
0.8
60
40
20
0
S T
Geologic time (Ma)

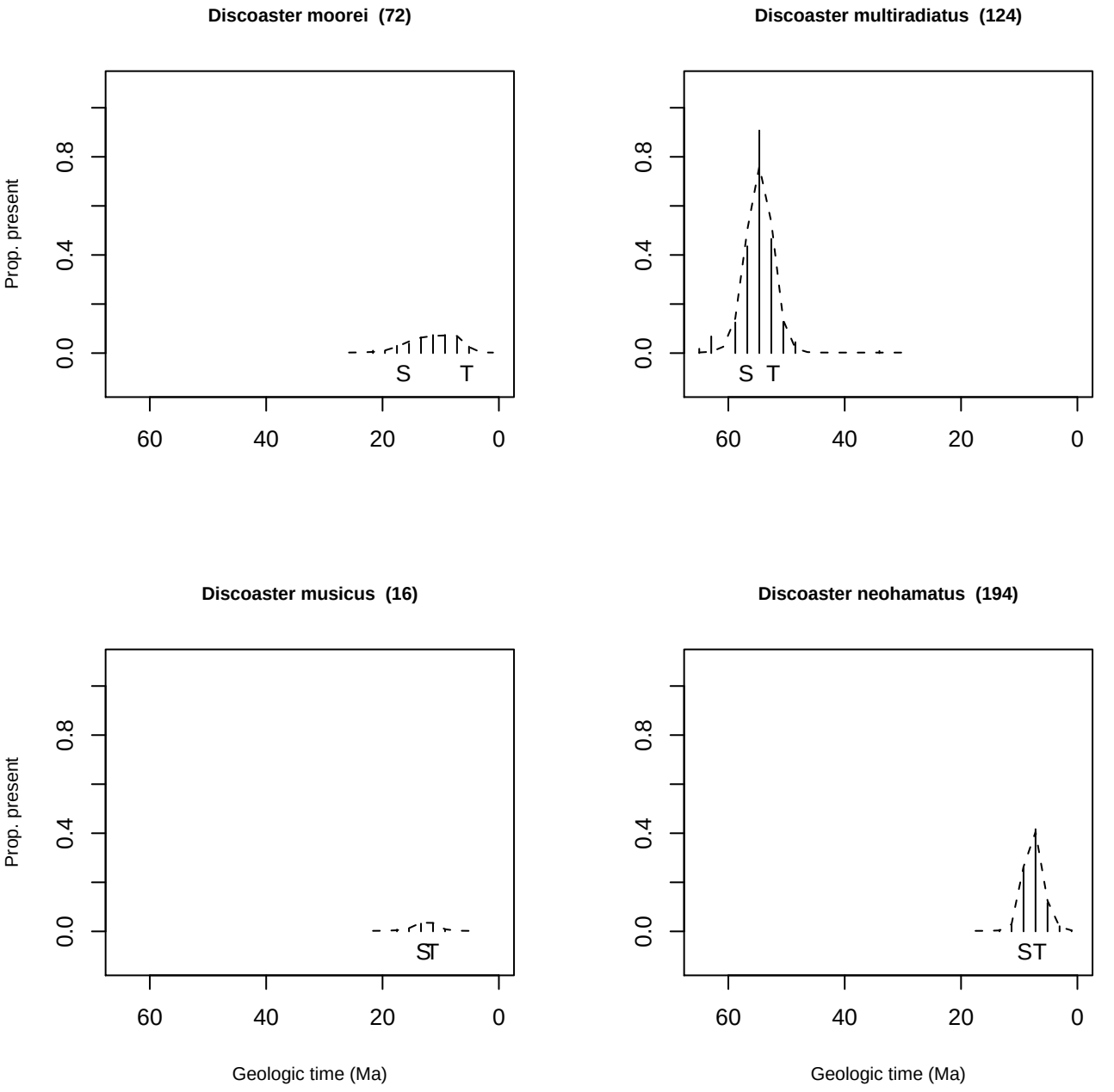

Discoaster lenticularis (48)
Discoaster lidzii (22)
Discoaster lodoensis (150)
Discoaster loeblichii (39)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

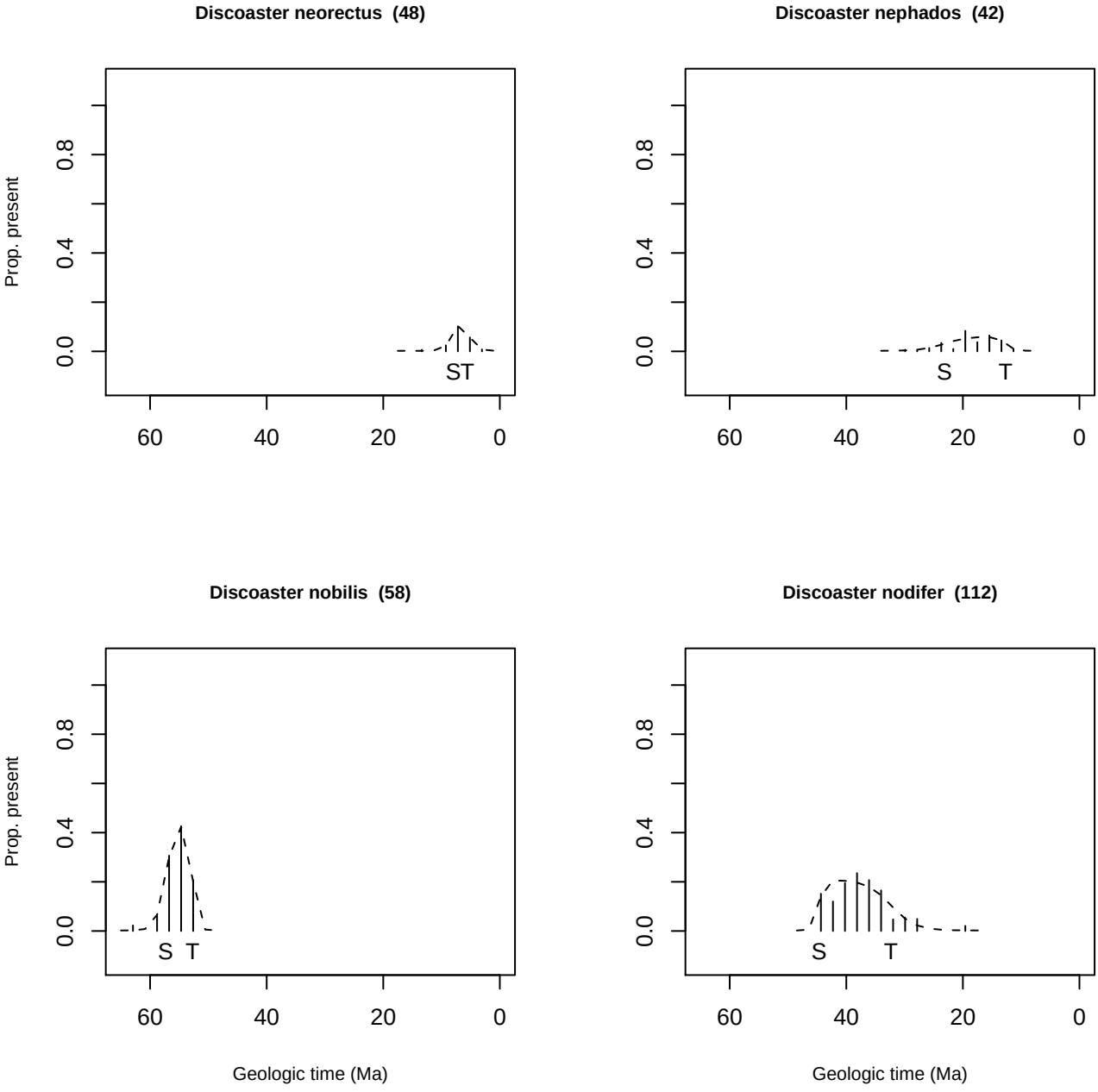

Discoaster mediosus (15)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0

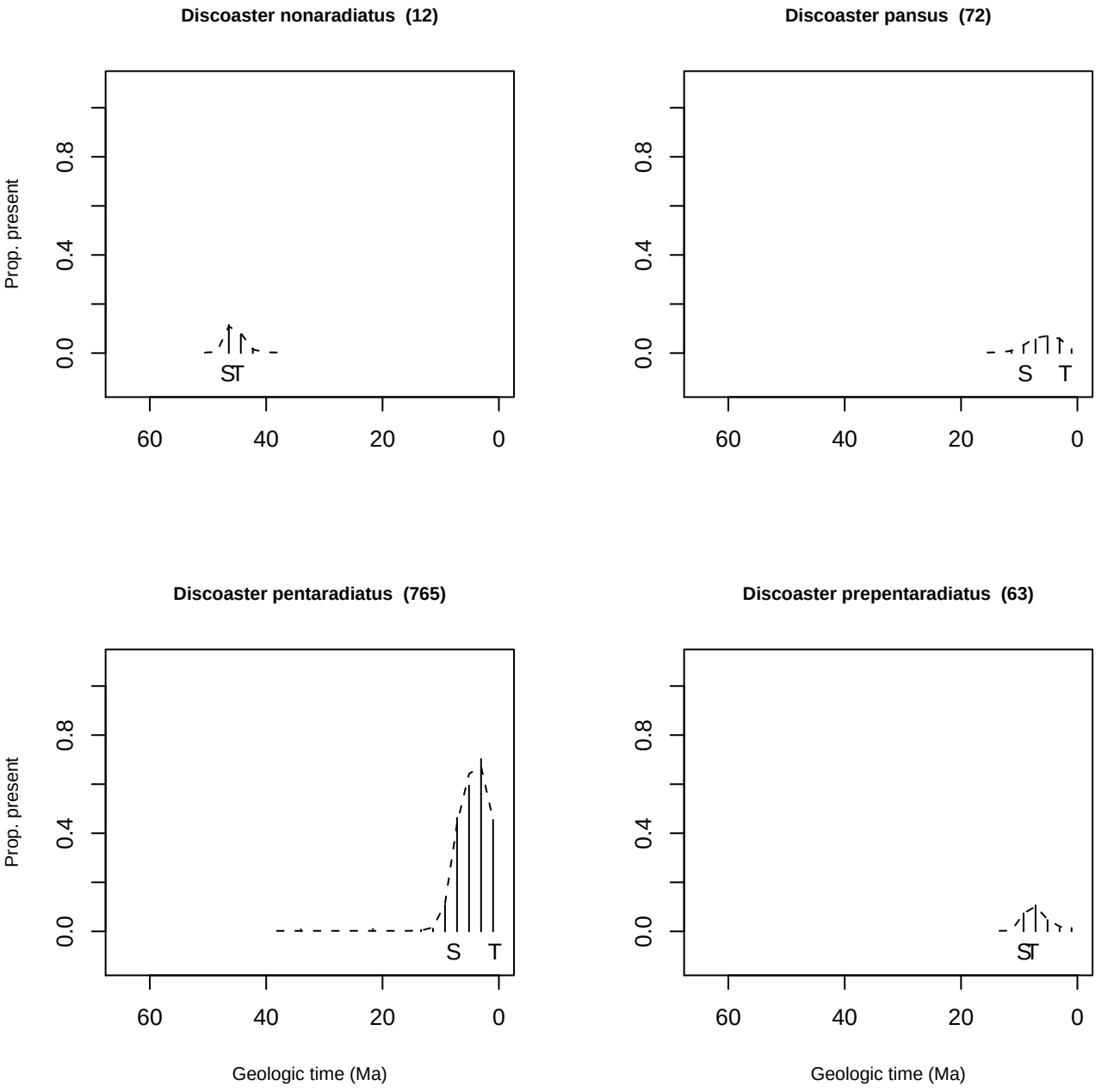

Discoaster mirus (25)
0.0
0.4
0.8
S T
60
40
20
0

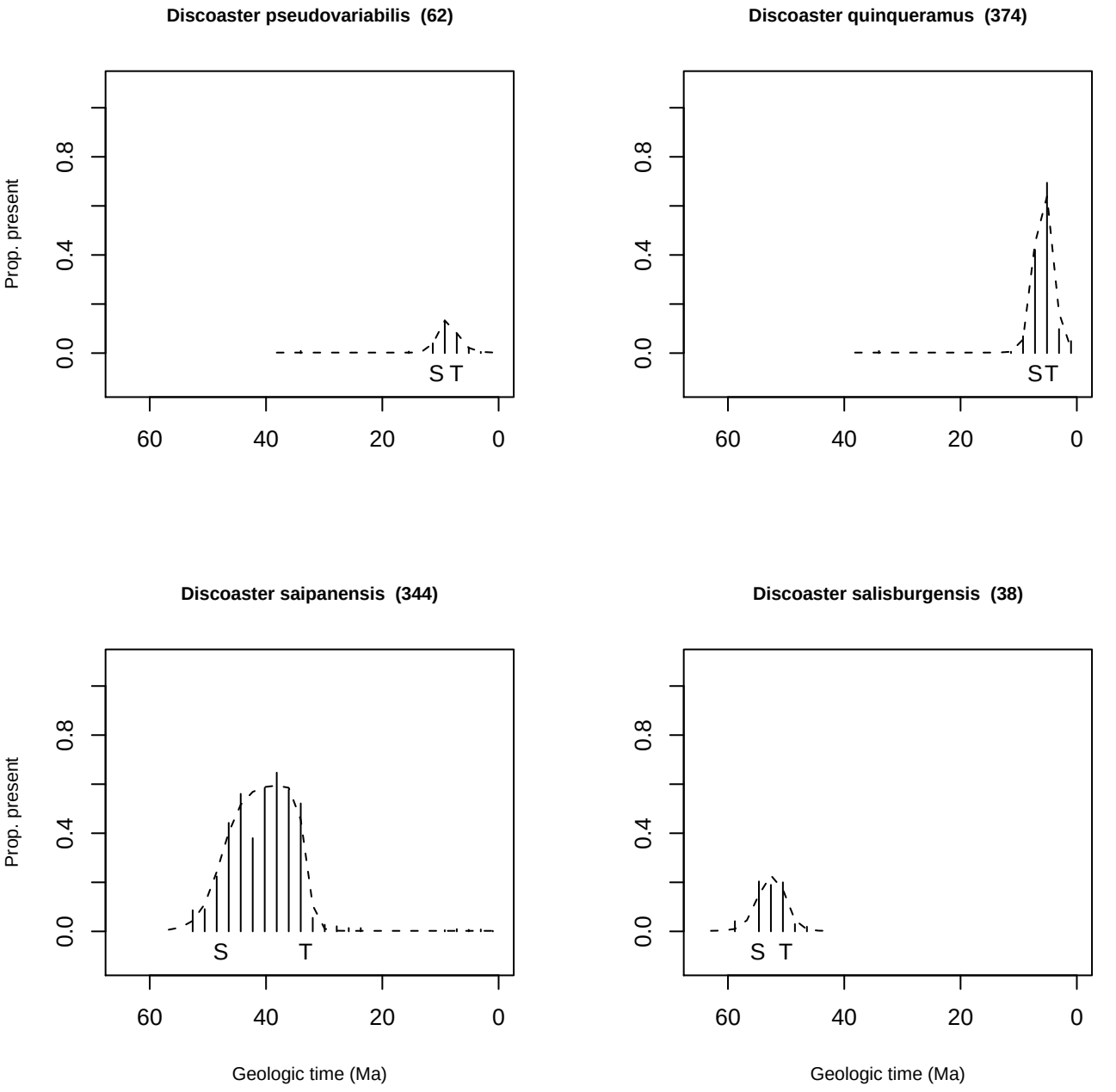

Discoaster misconceptus (17)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

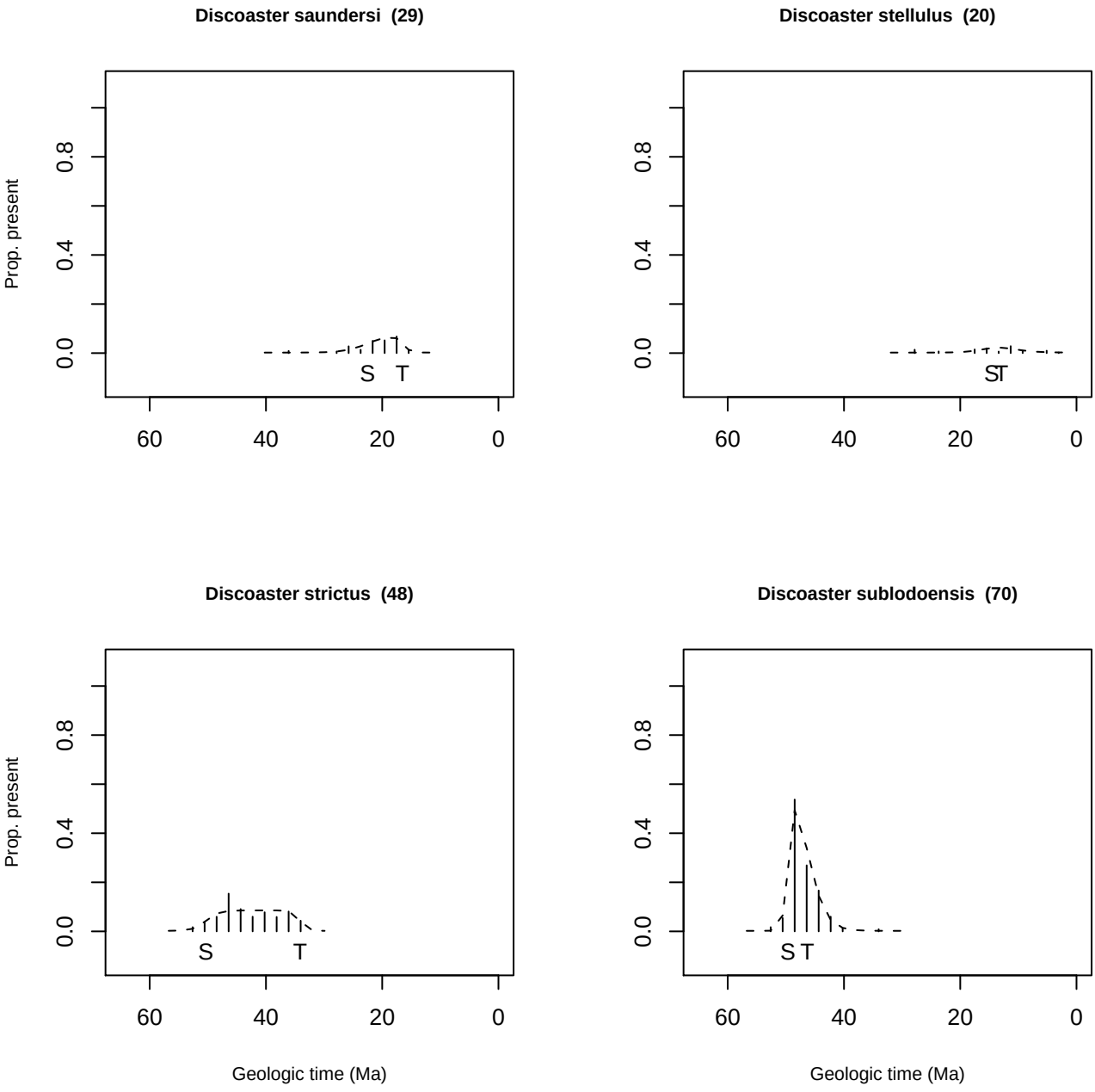

Discoaster mohleri (78)
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

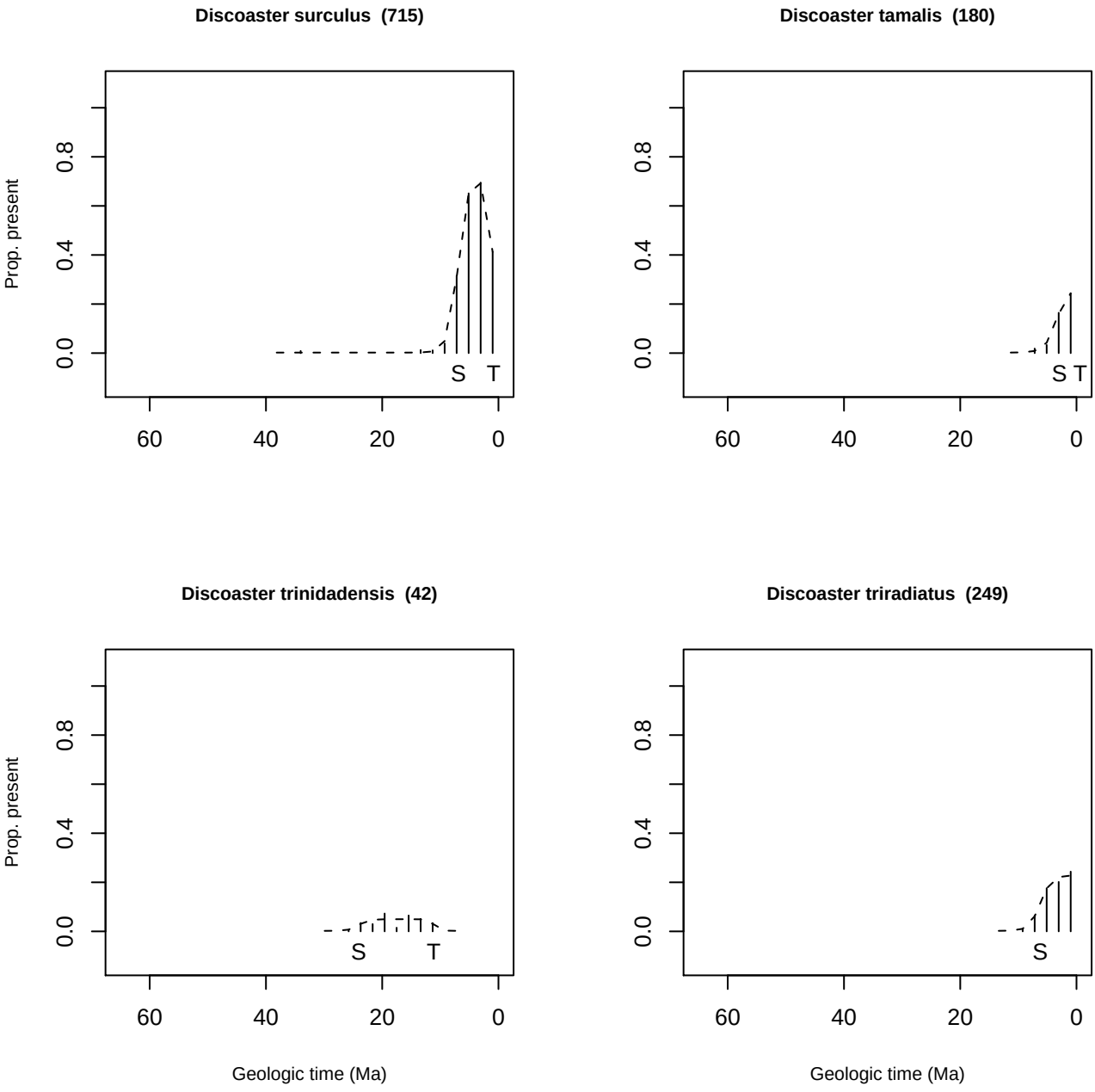

Discoaster moorei (72)
Discoaster multiradiatus (124)
Discoaster musicus (16)
Discoaster neohamatus (194)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
ST
Geologic time (Ma)

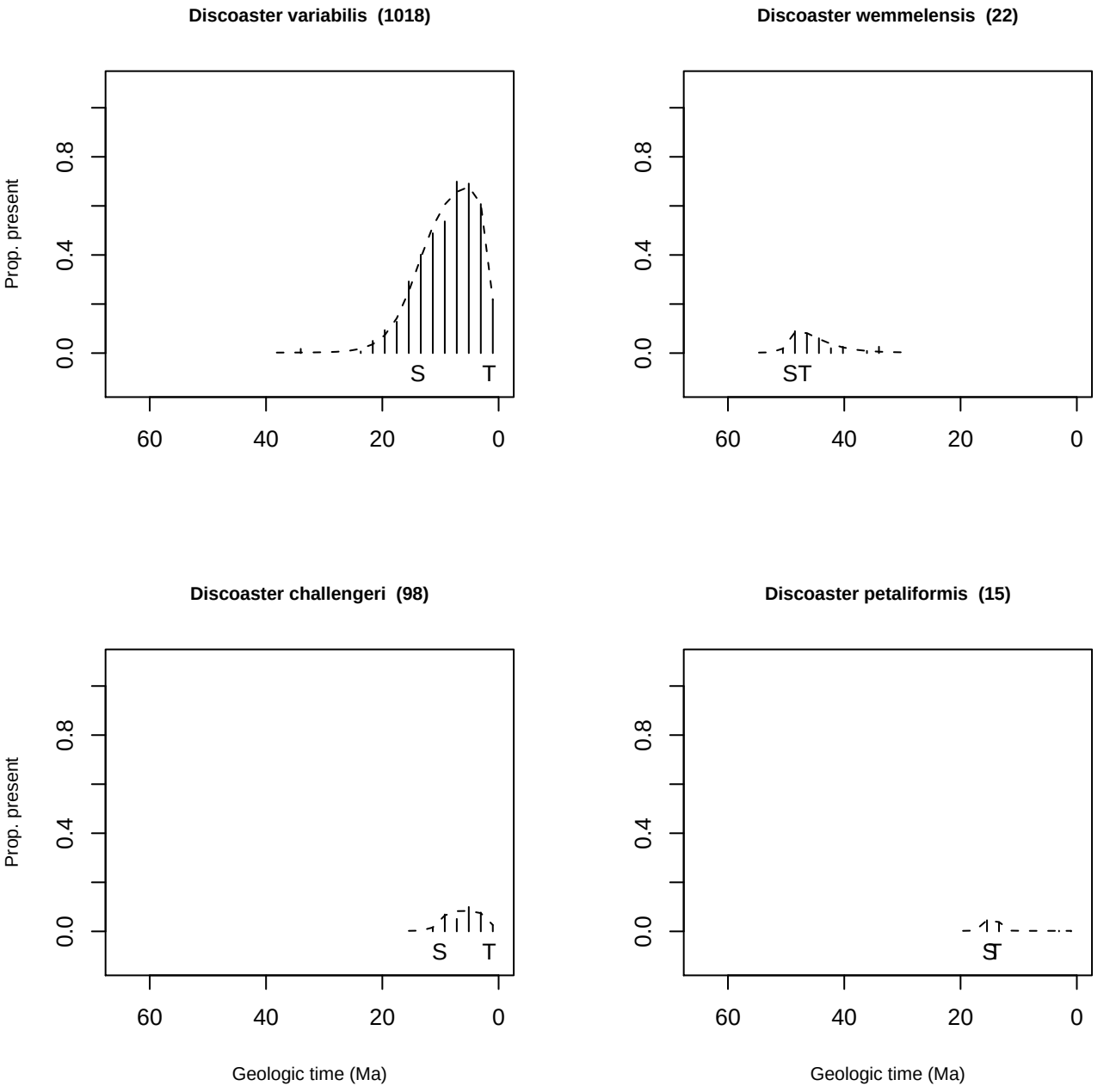

Discoaster neorectus (48)
Discoaster nephados (42)
Discoaster nobilis (58)
Discoaster nodifer (112)
Prop. present
0.0
0.4
0.8
60
40
20
0
ST
S
T
Geologic time (Ma)

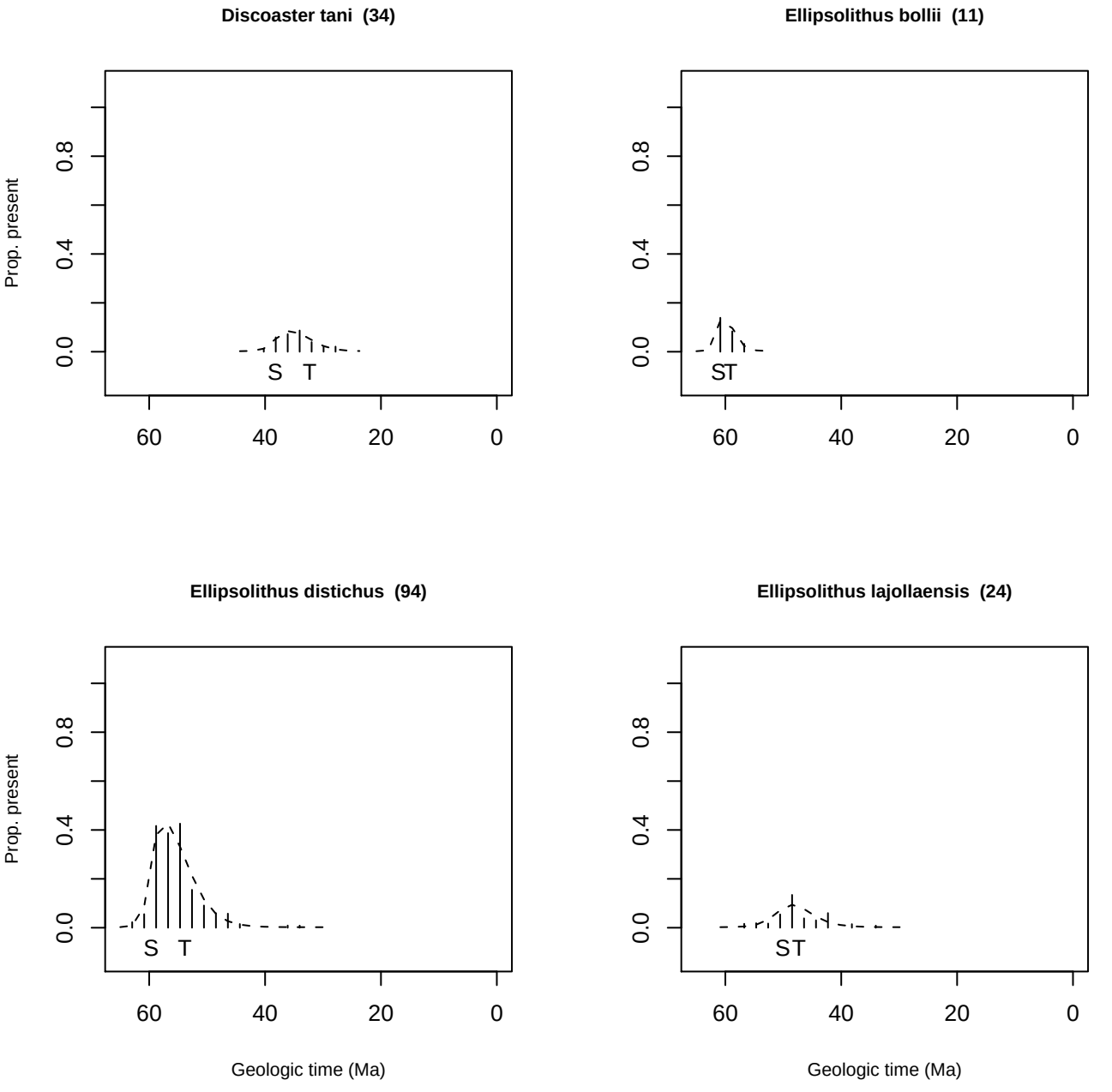

Discoaster nonaradiatus (12)
Discoaster pansus (72)
Discoaster pentaradiatus (765)
Discoaster prepentaradiatus (63)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

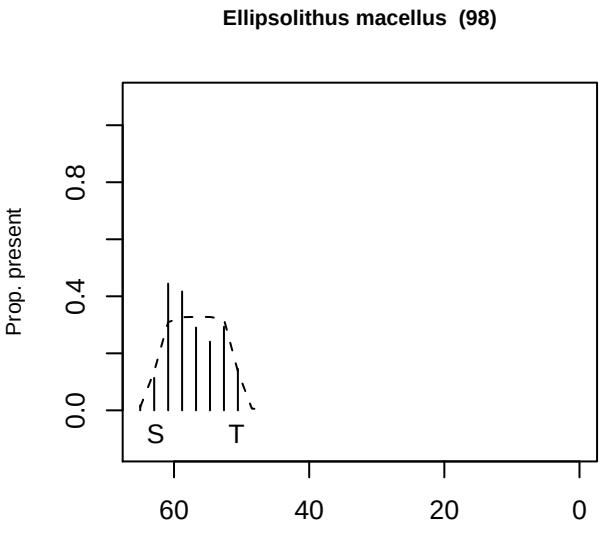

Discoaster pseudovariabilis (62)
Discoaster quinqueramus (374)
Discoaster saipanensis (344)
Discoaster salisburgensis (38)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

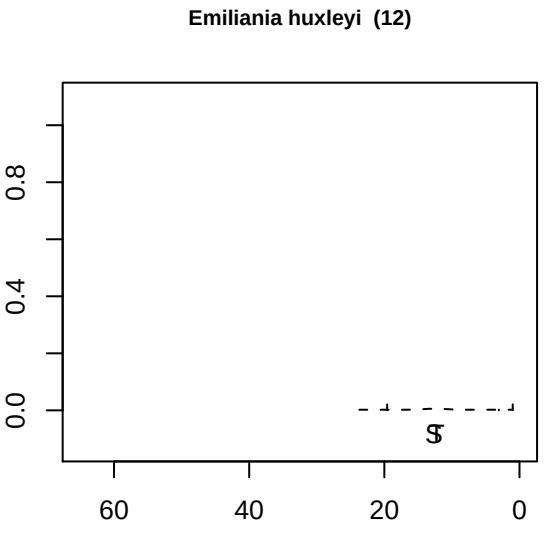

Discoaster saundersi (29)
Discoaster stellulus (20)
Discoaster strictus (48)
Discoaster sublodoensis (70)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
ST
Geologic time (Ma)

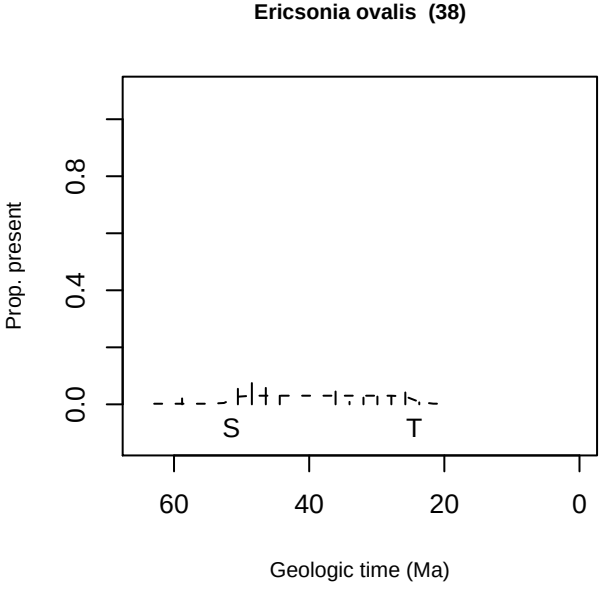

Discoaster surculus (715)
Discoaster tamalis (180)
Discoaster trinidadensis (42)
Discoaster triradiatus (249)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

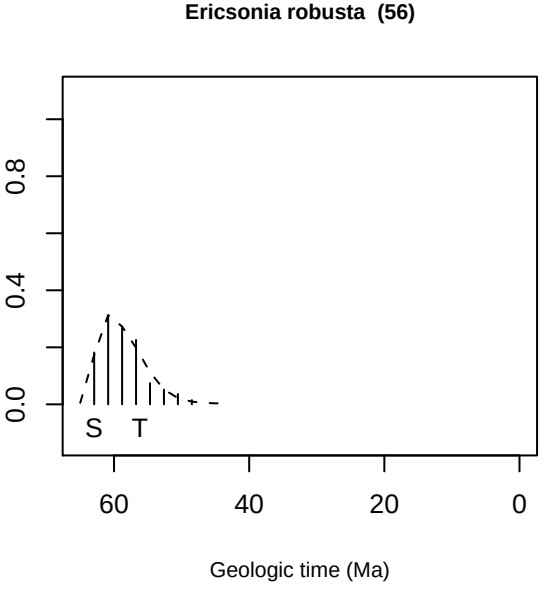

Discoaster variabilis (1018)
Discoaster wemmelensis (22)
Discoaster challengeri (98)
Discoaster petaliformis (15)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

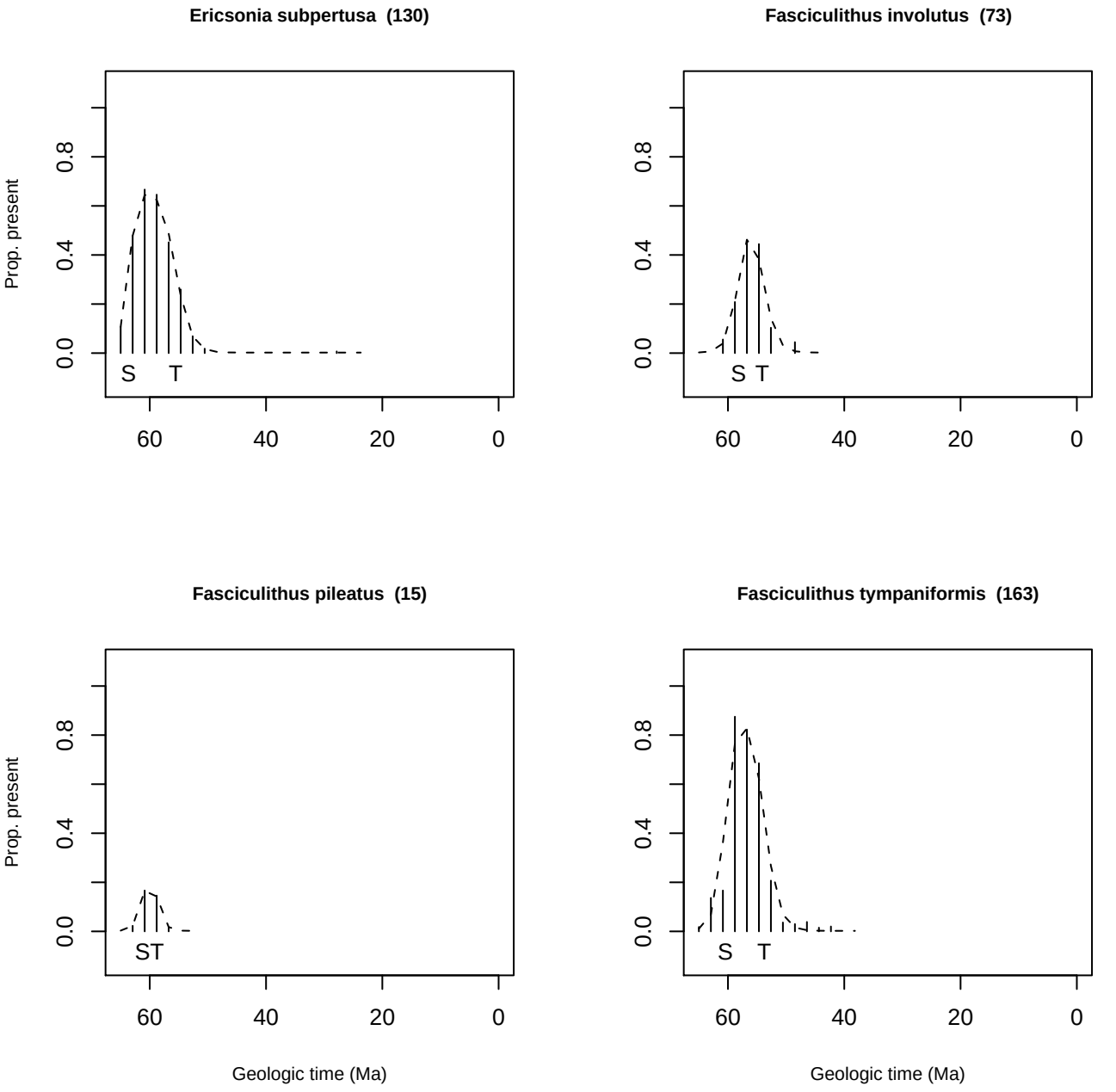

Discoaster tani (34)
Ellipsolithus bollii (11)
Ellipsolithus distichus (94)
Ellipsolithus lajollaensis (24)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

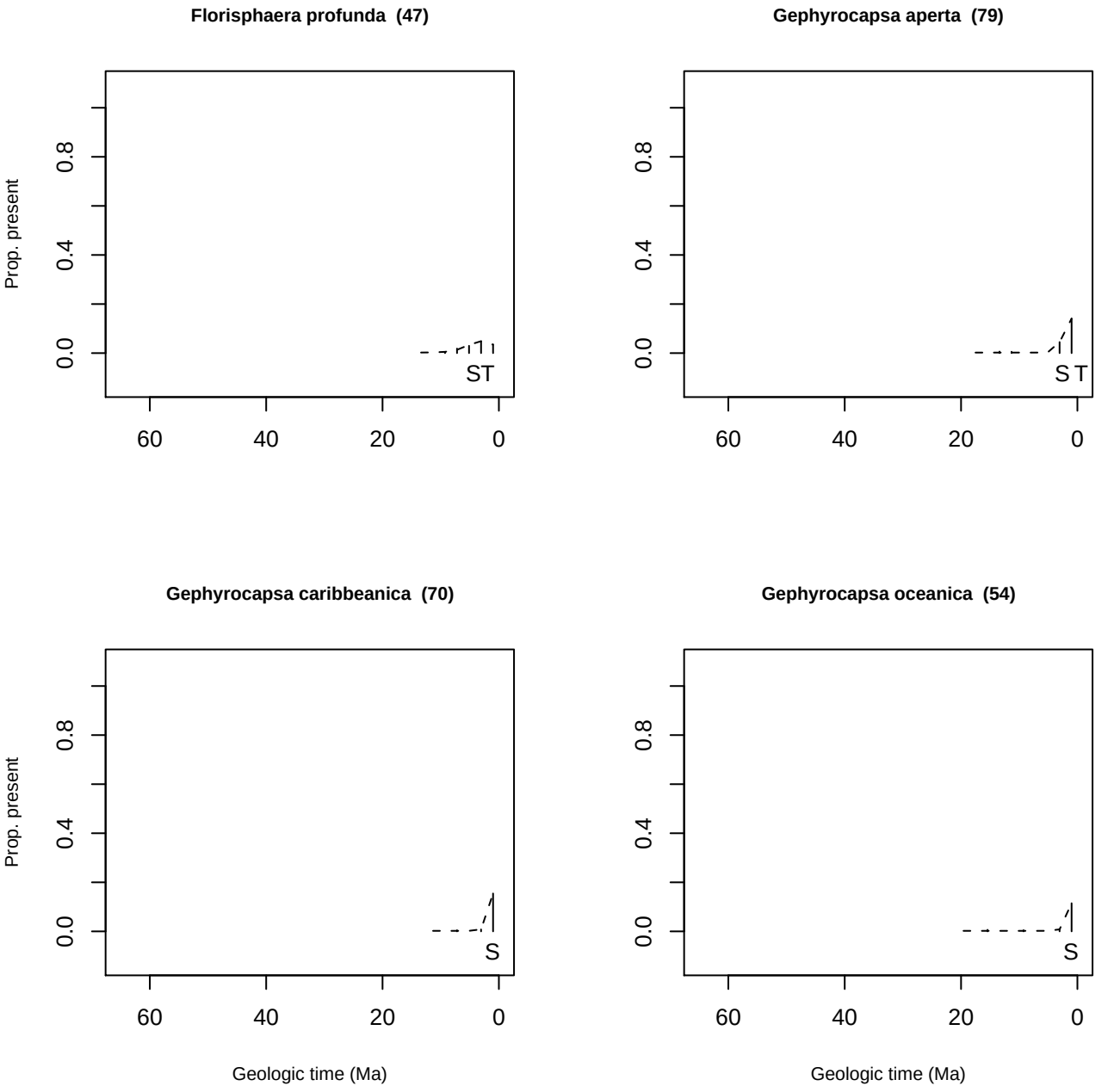

Ellipsolithus macellus (98)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0

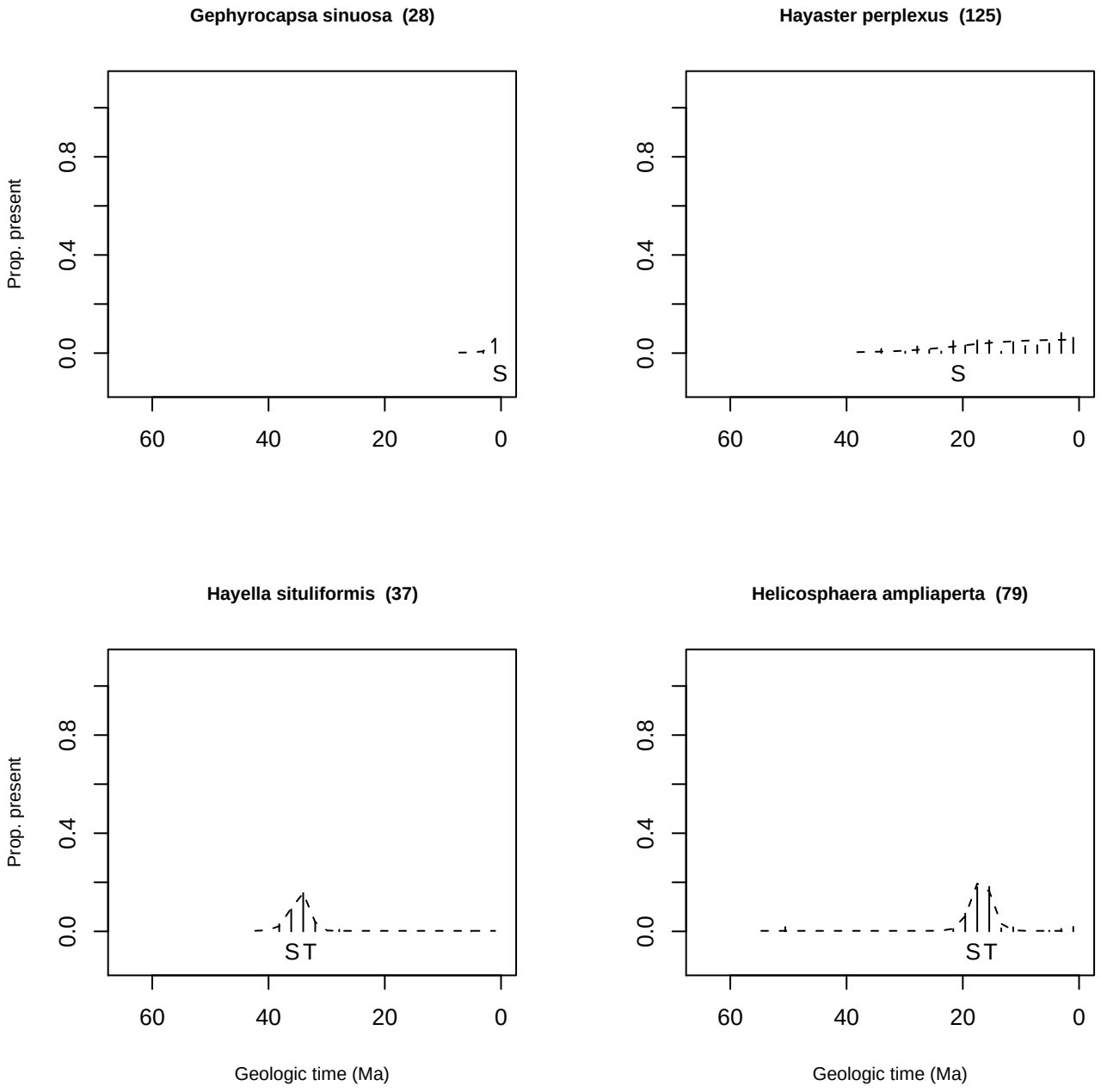

Emiliania huxleyi (12)
0.0
0.4
0.8
S
T
60
40
20
0

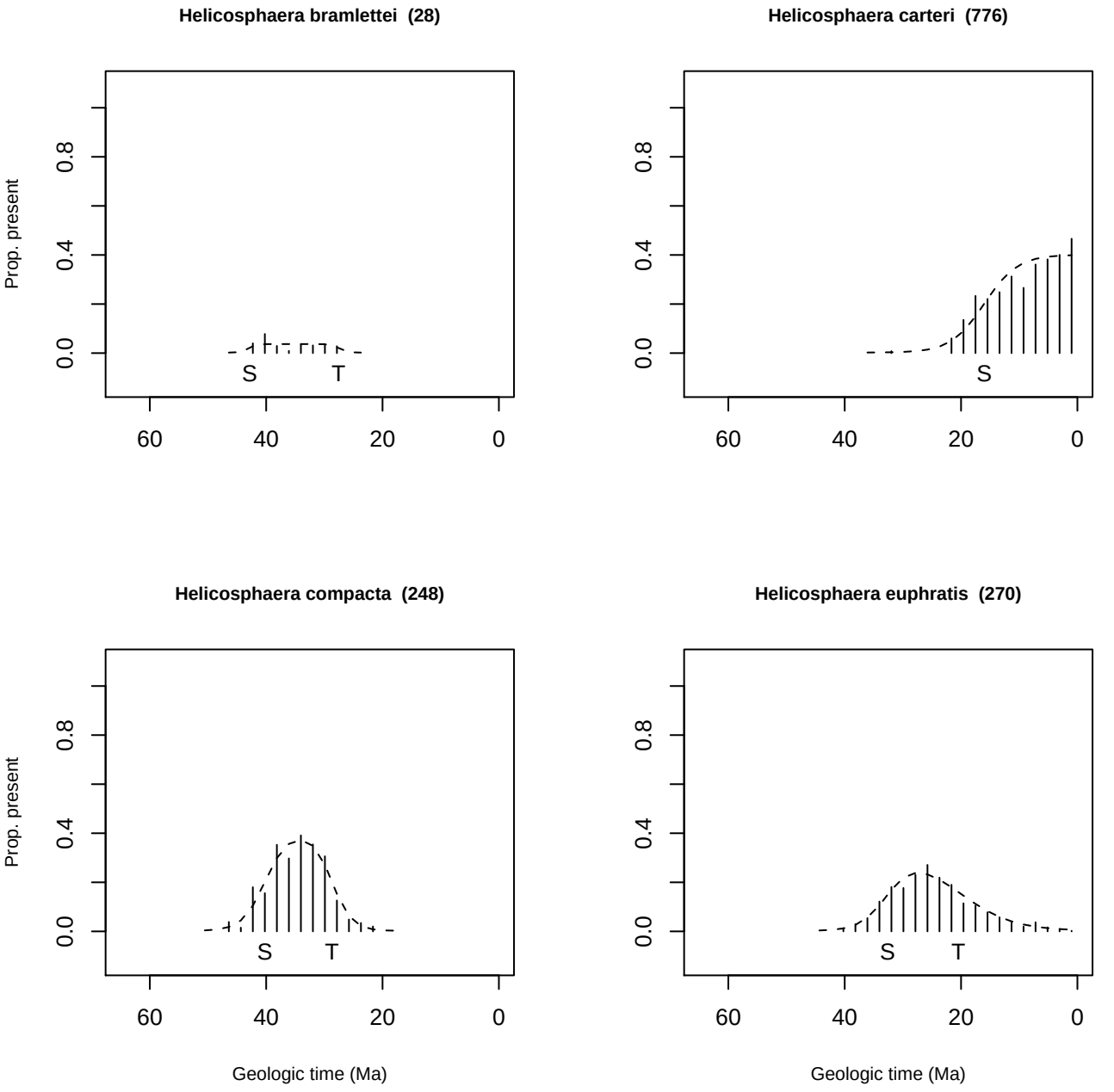

Ericsonia ovalis (38)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

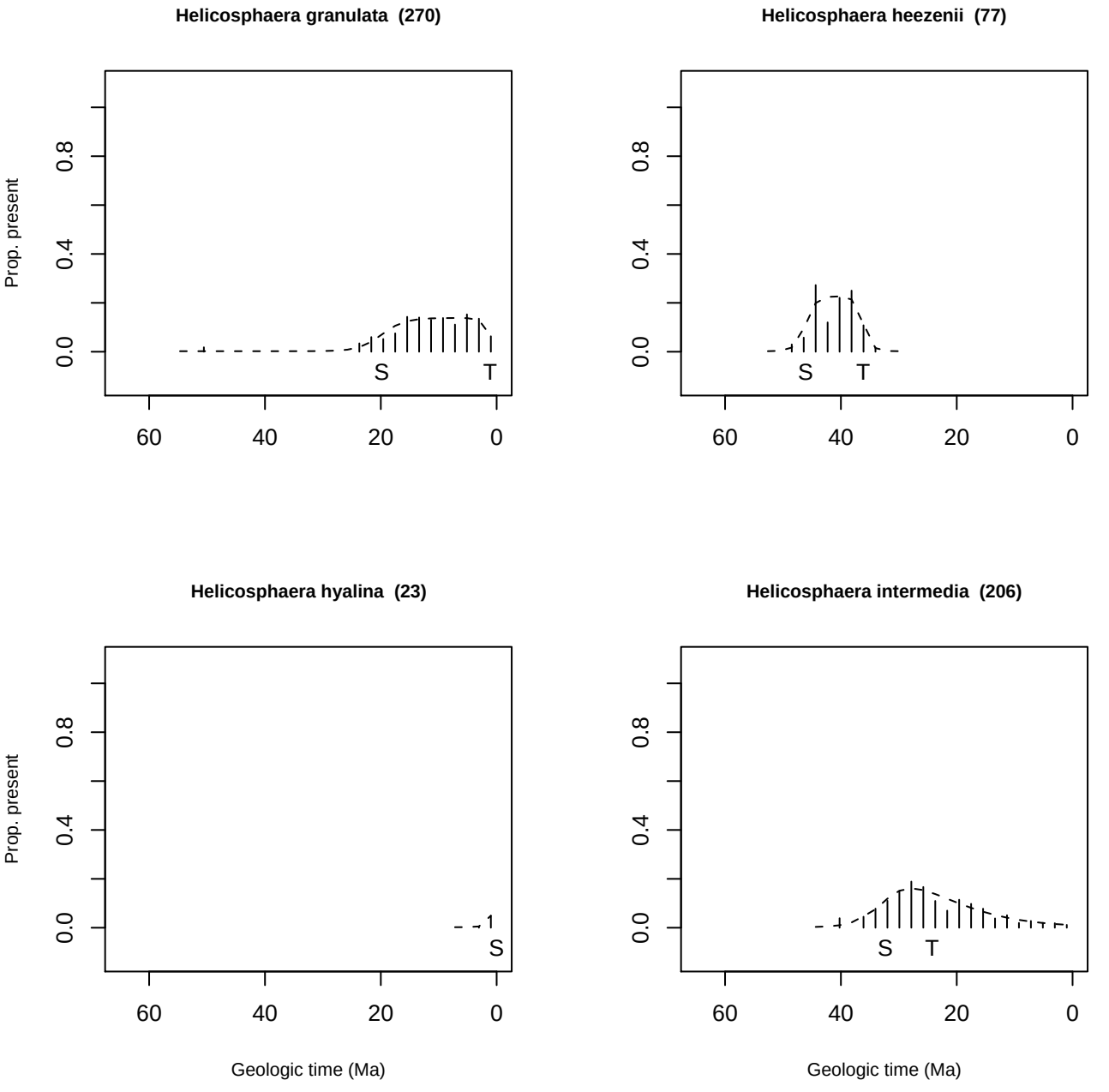

Ericsonia robusta (56)
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

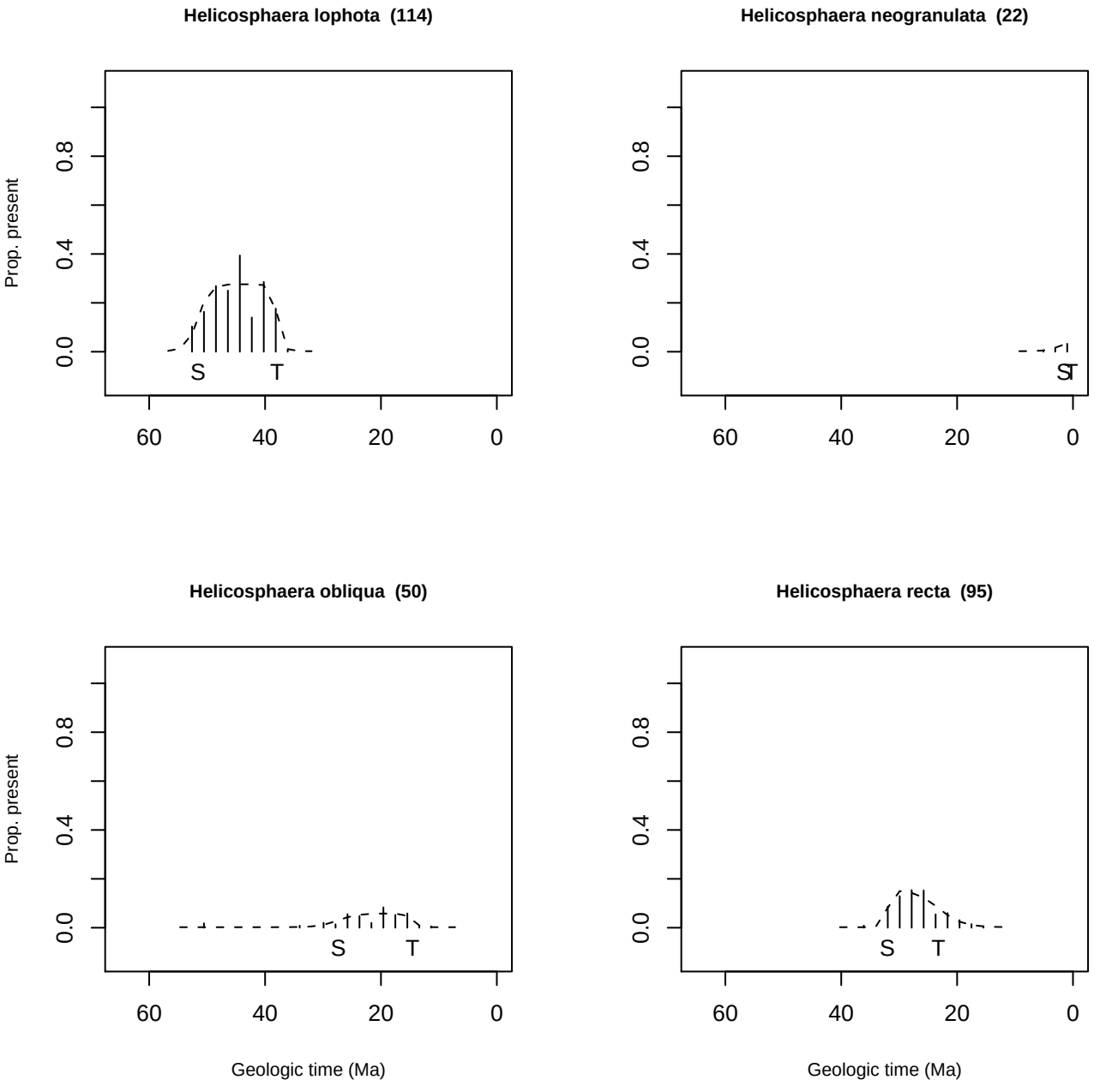

Ericsonia subpertusa (130)
Fasciculithus involutus (73)
Fasciculithus pileatus (15)
Fasciculithus tympaniformis (163)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

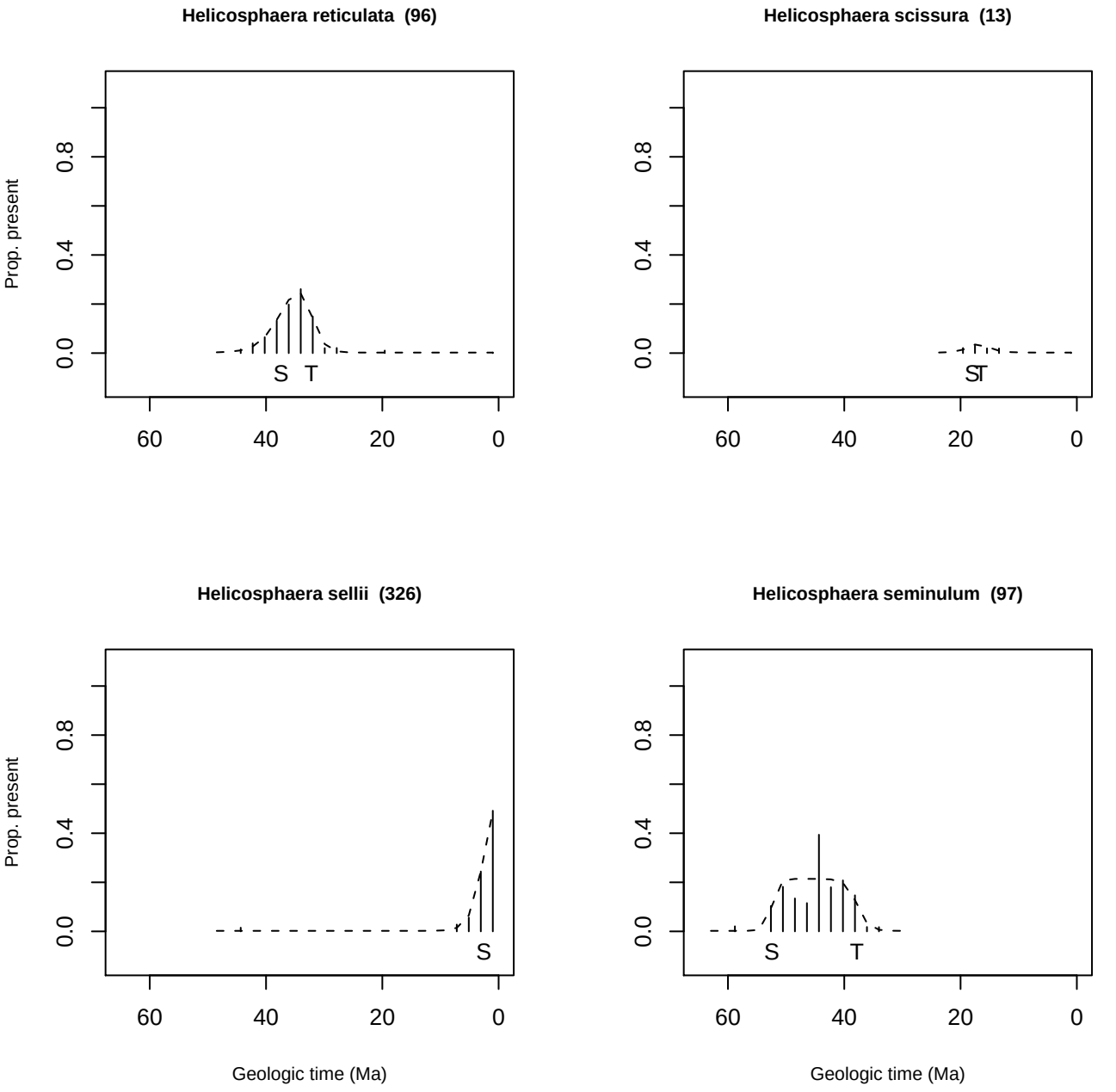

Florisphaera profunda (47)
Gephyrocapsa aperta (79)
Gephyrocapsa caribbeanica (70)
Gephyrocapsa oceanica (54)
Prop. present
0.0
0.4
0.8
60
40
20
0
ST
S T
S
S
Geologic time (Ma)
Geologic time (Ma)

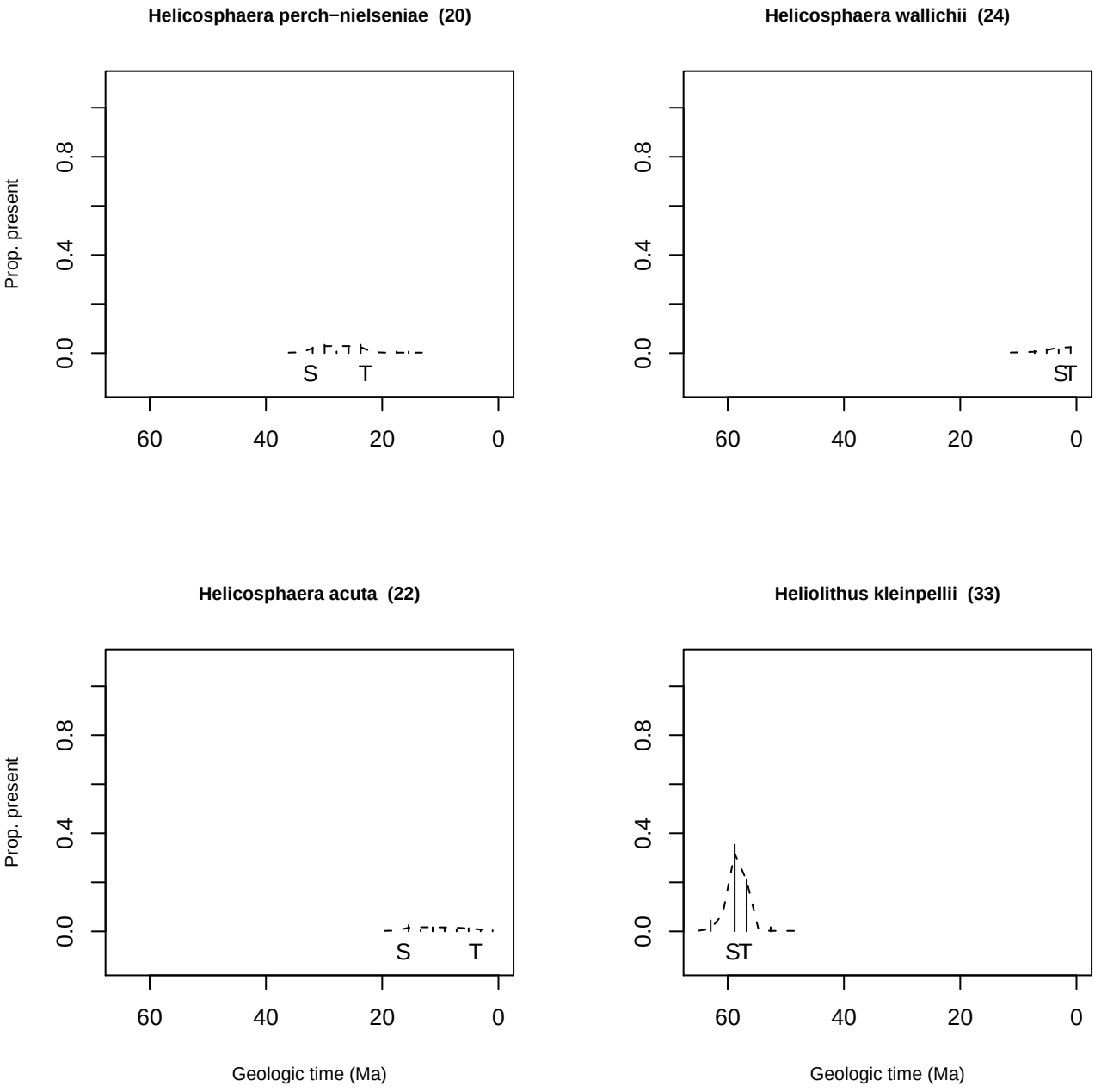

Gephyrocapsa sinuosa (28)
Hayaster perplexus (125)
Hayella situliformis (37)
Helicosphaera ampliaperta (79)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
ST
Geologic time (Ma)

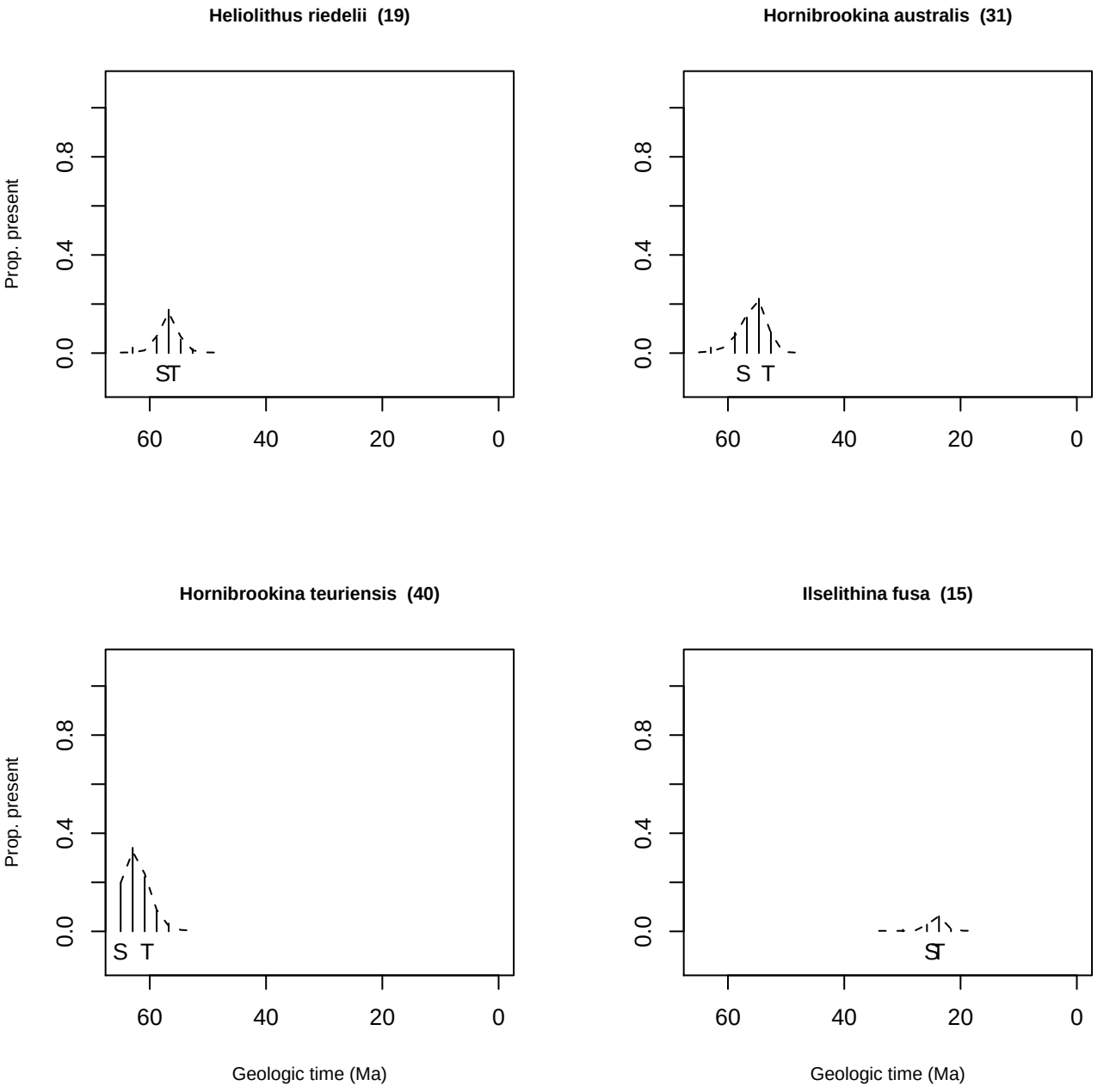

Helicosphaera bramlettei (28)
Helicosphaera carteri (776)
Helicosphaera compacta (248)
Helicosphaera euphratis (270)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

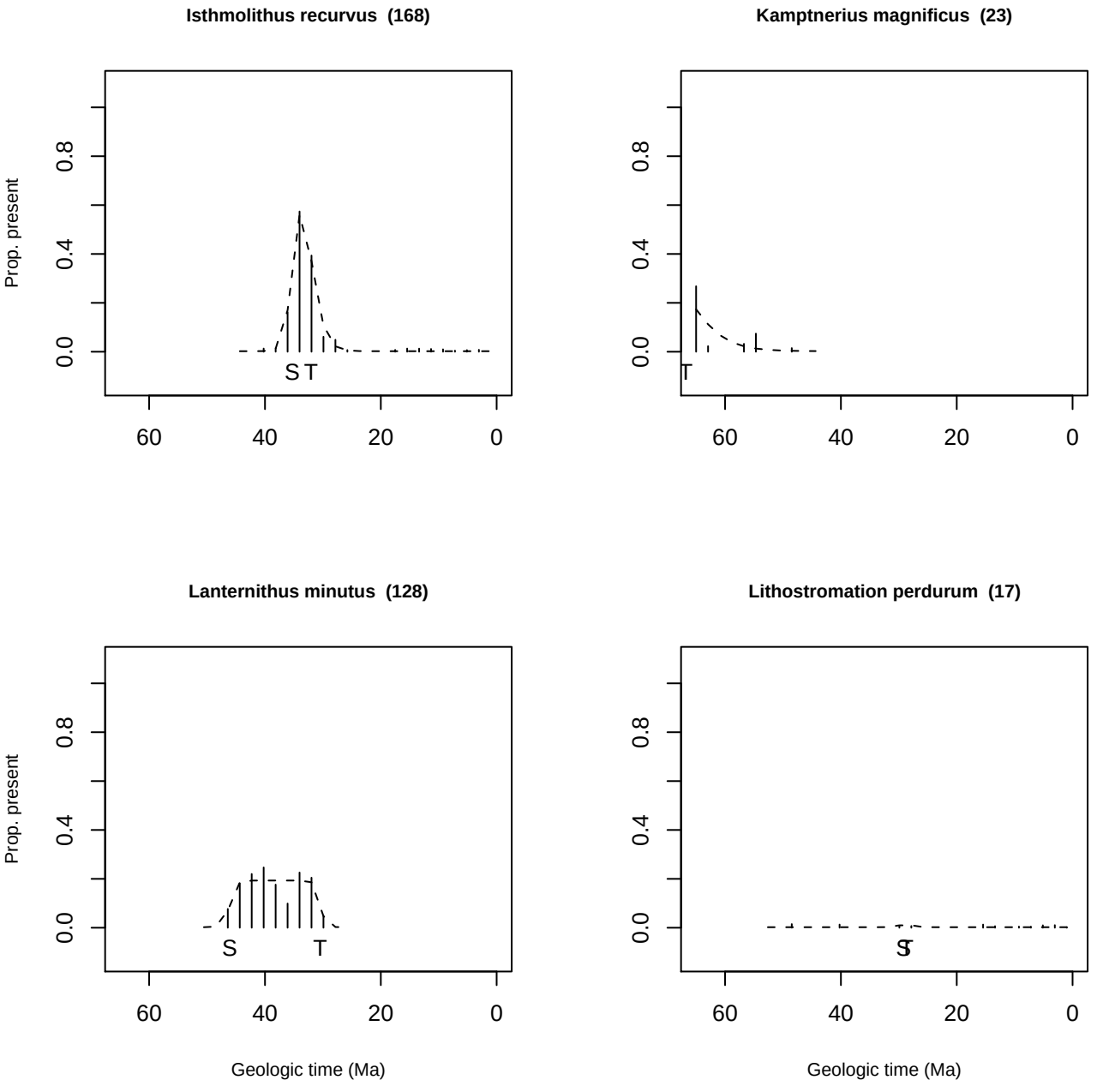

Helicosphaera granulata (270)
Helicosphaera heezenii (77)
Helicosphaera hyalina (23)
Helicosphaera intermedia (206)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
1
Geologic time (Ma)

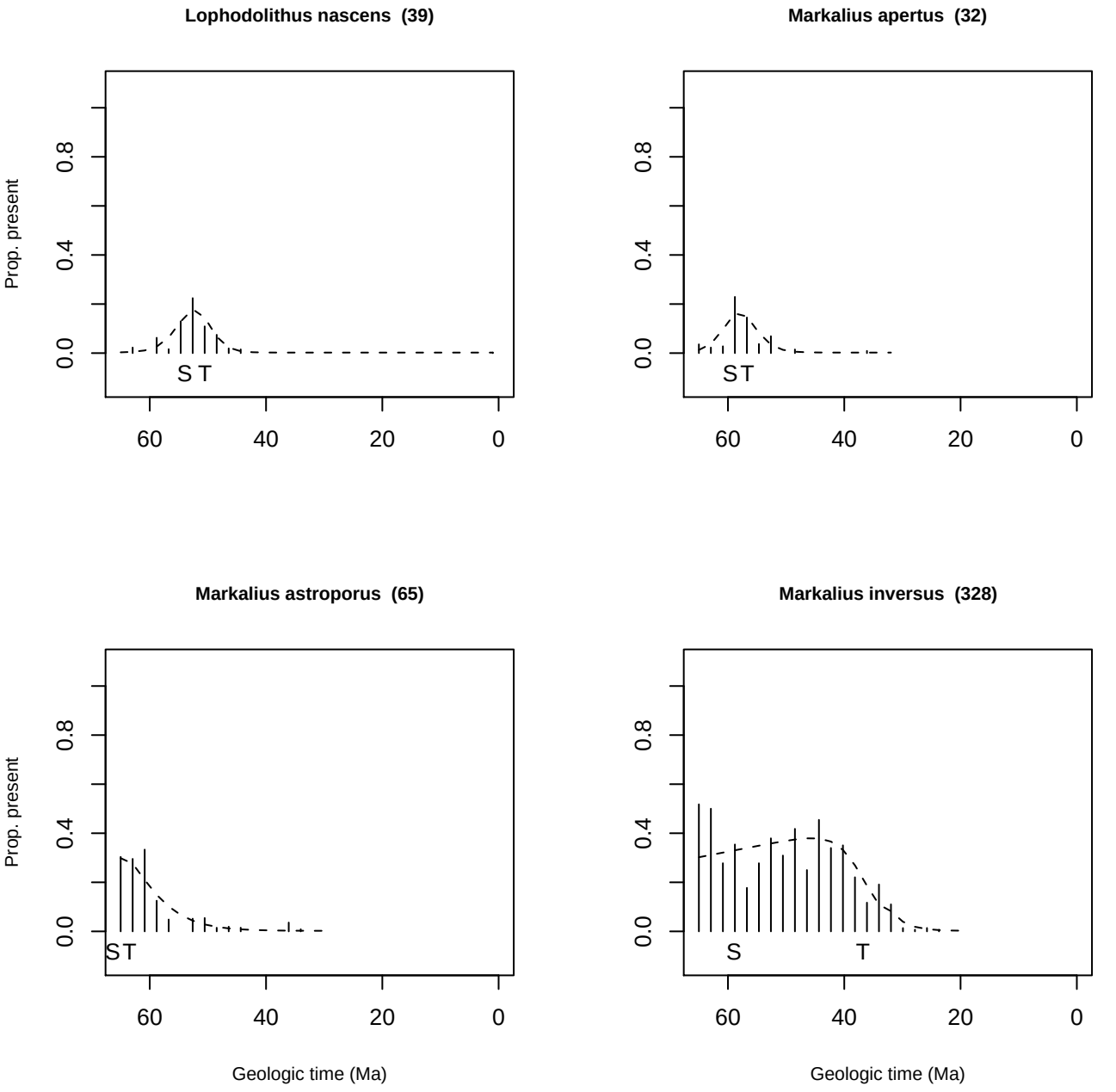

Helicosphaera lophota (114)
Helicosphaera neogranulata (22)
Helicosphaera obliqua (50)
Helicosphaera recta (95)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

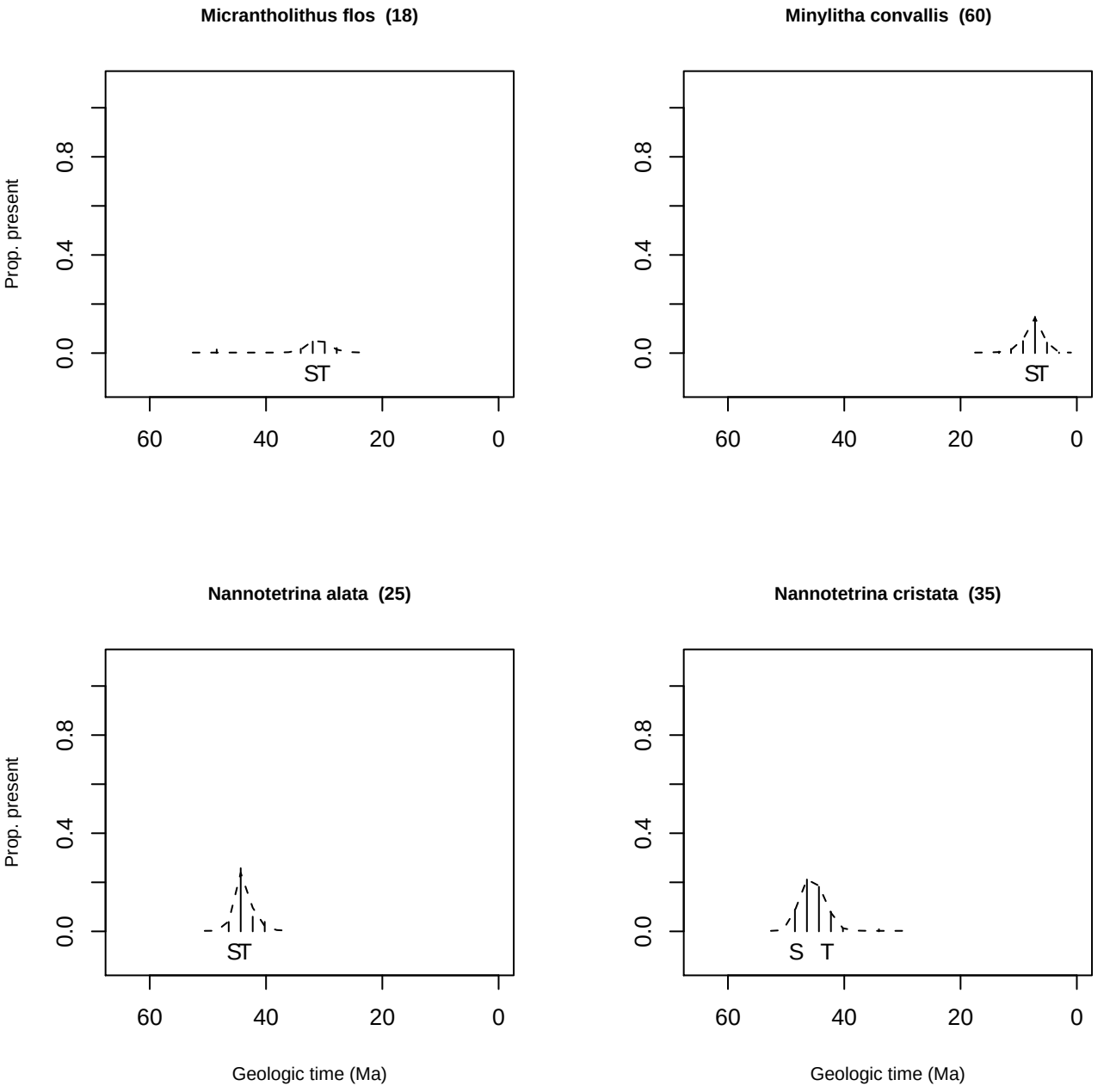

Helicosphaera reticulata (96)
Helicosphaera scissura (13)
Helicosphaera sellii (326)
Helicosphaera seminulum (97)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
ST
Geologic time (Ma)

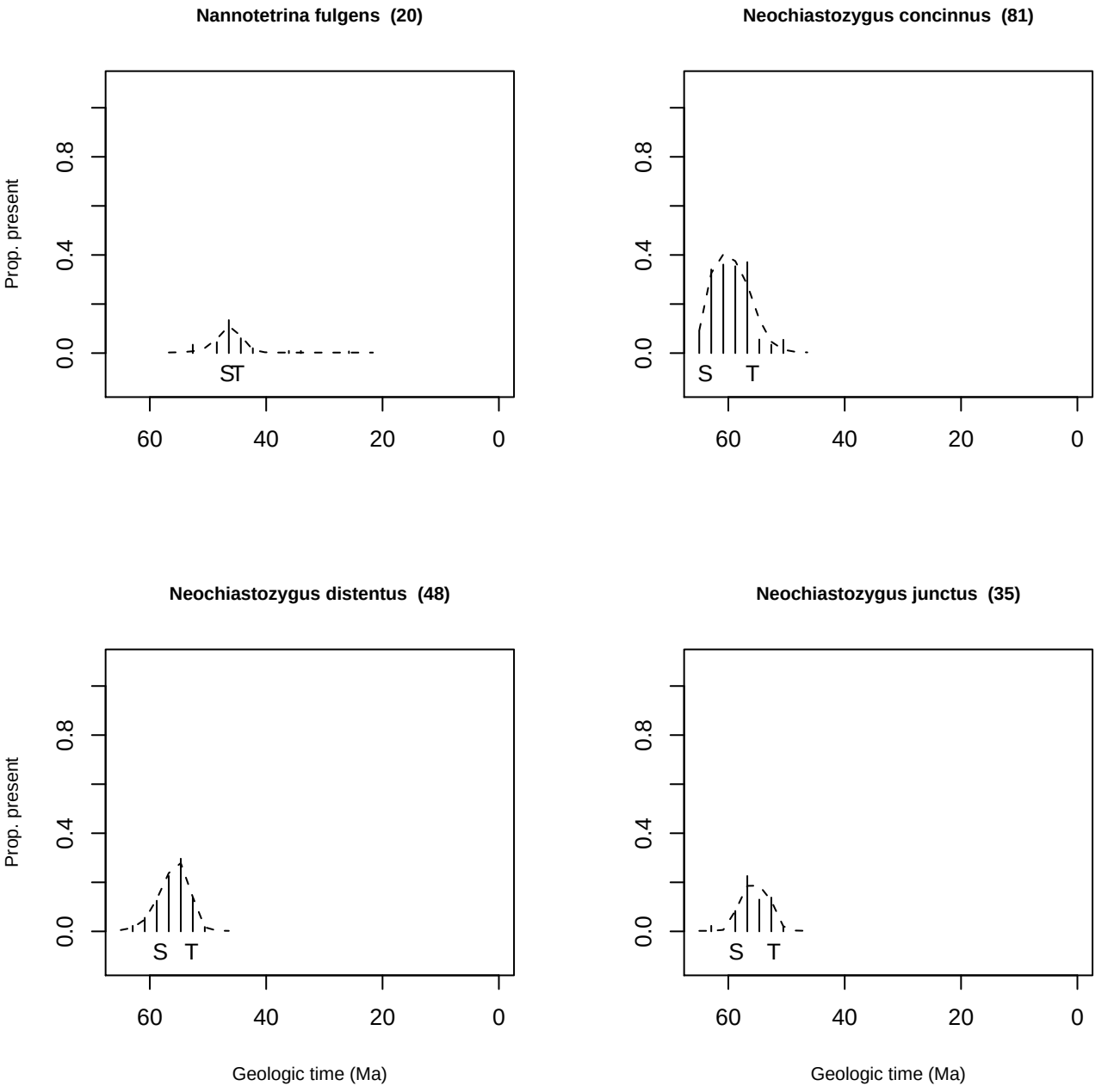

Helicosphaera perch−nielseniae (20)
Helicosphaera wallichii (24)
Helicosphaera acuta (22)
Heliolithus kleinpellii (33)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

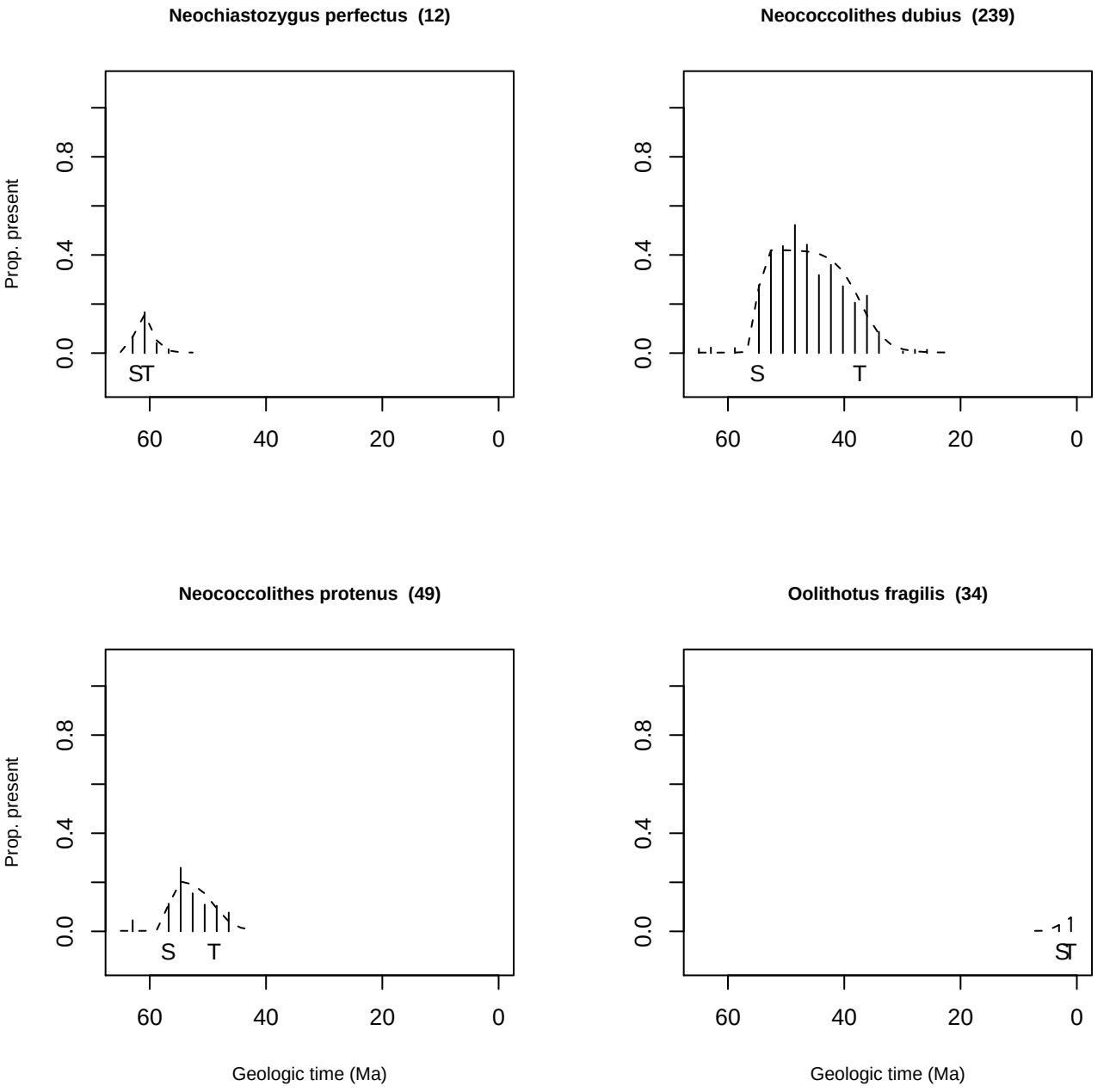

Heliolithus riedelii (19)
Hornibrookina australis (31)
Hornibrookina teuriensis (40)
Ilselithina fusa (15)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

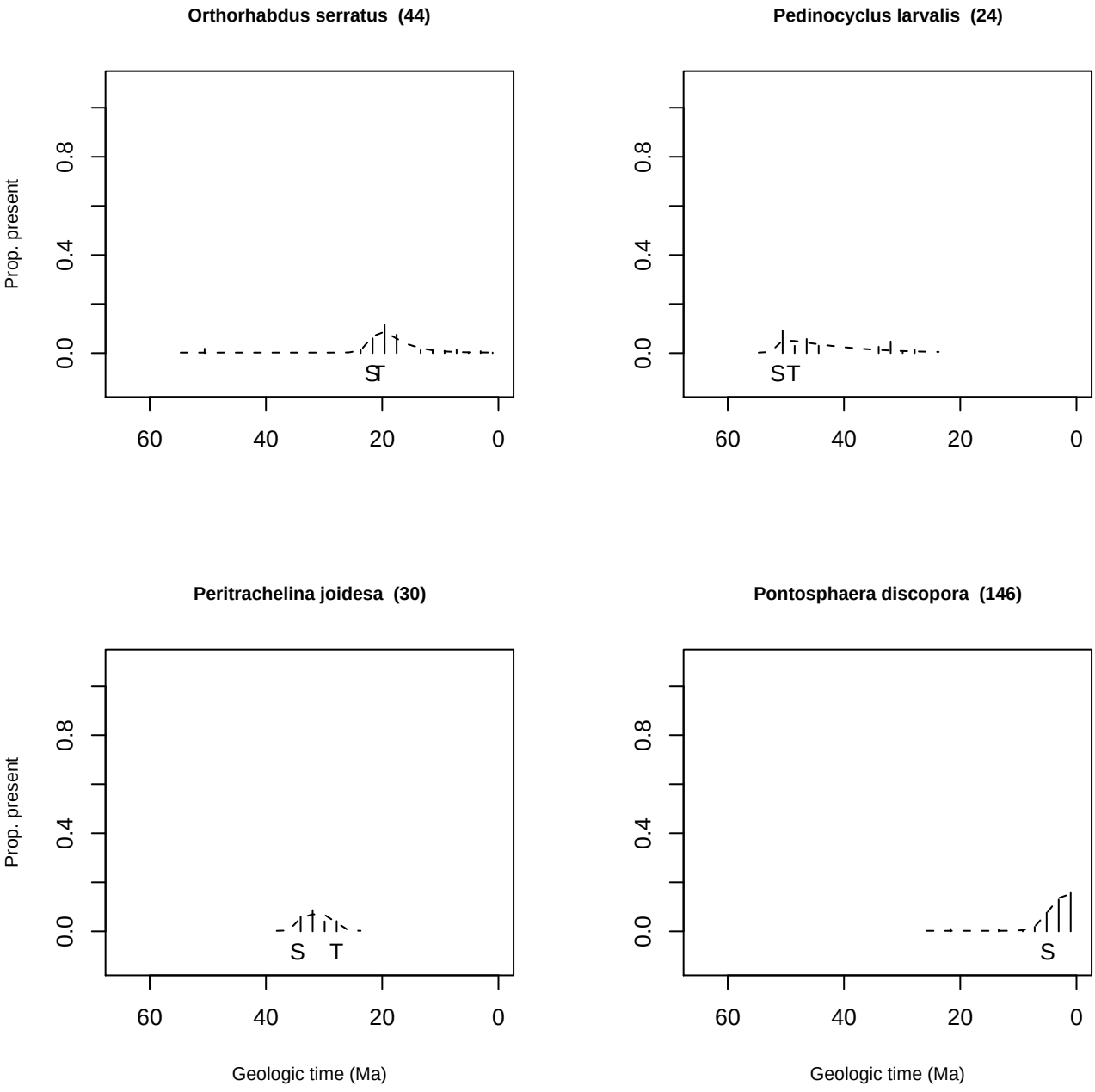

Isthmolithus recurvus (168)
Kamptnerius magnificus (23)
Lanternithus minutus (128)
Lithostromation perdurum (17)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

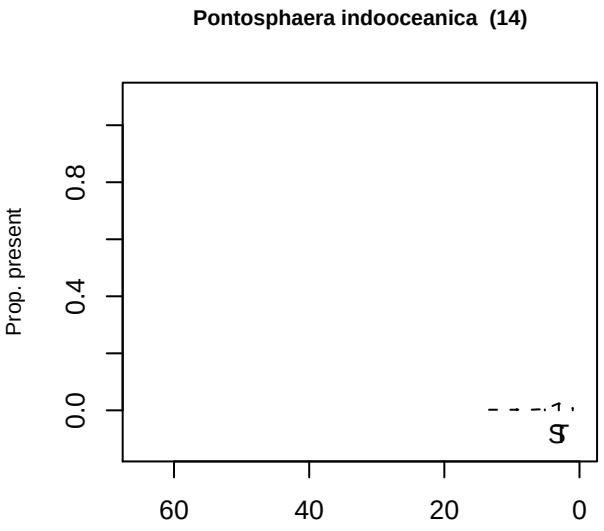

Lophodolithus nascens (39)
Markalius apertus (32)
Markalius astroporus (65)
Markalius inversus (328)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

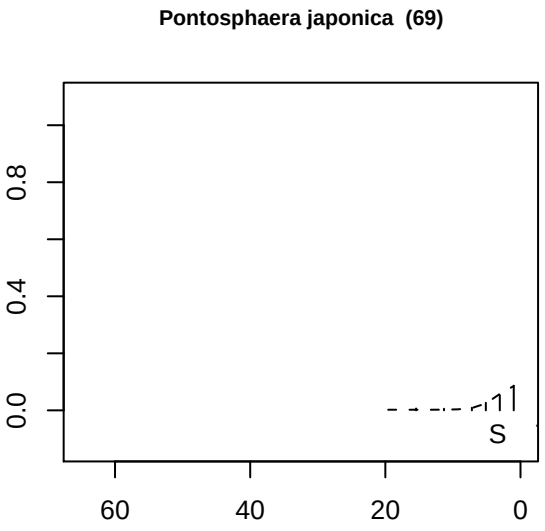

Micrantholithus flos (18)
Minylitha convallis (60)
Nannotetrina alata (25)
Nannotetrina cristata (35)
Prop. present
0.0
0.4
0.8
60
40
20
0
ST
S T
Geologic time (Ma)

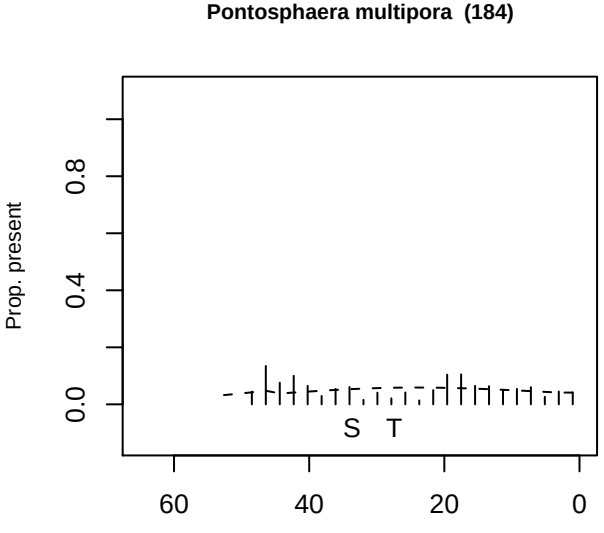

Nannotetrina fulgens (20)
Neochiastozygus concinnus (81)
Neochiastozygus distentus (48)
Neochiastozygus junctus (35)
Prop. present
0.0
0.4
0.8
ST
S
T
60
40
20
0
Geologic time (Ma)

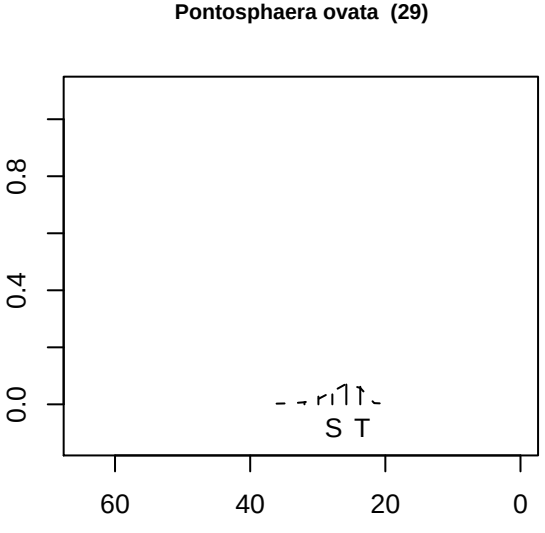

Neochiastozygus perfectus (12)
Neococcolithes dubius (239)
Neococcolithes protenus (49)
Oolithotus fragilis (34)
Prop. present
0.0
0.4
0.8
ST
S
T
60
40
20
0
Geologic time (Ma)

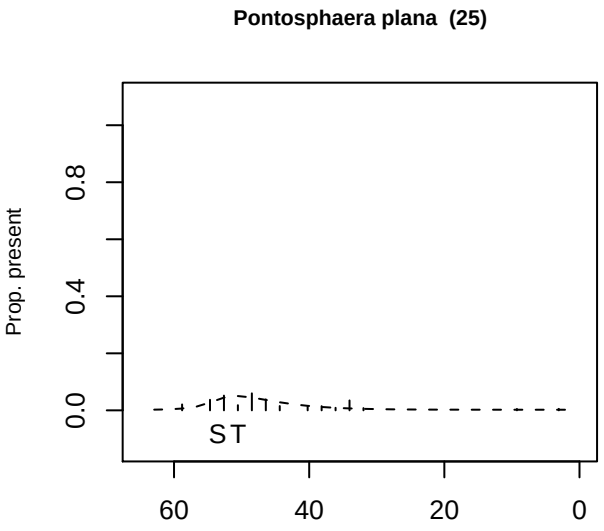

Orthorhabdus serratus (44)
Pedinocyclus larvalis (24)
Peritrachelina joidesa (30)
Pontosphaera discopora (146)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

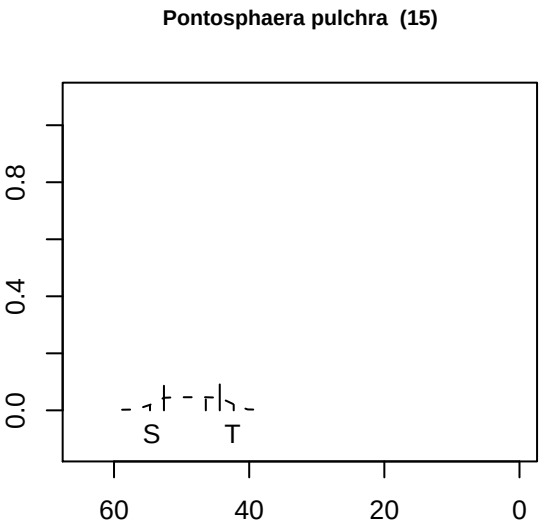

Pontosphaera indooceanica (14)
Prop. present
0.0
0.4
0.8
S
60
40
20
0

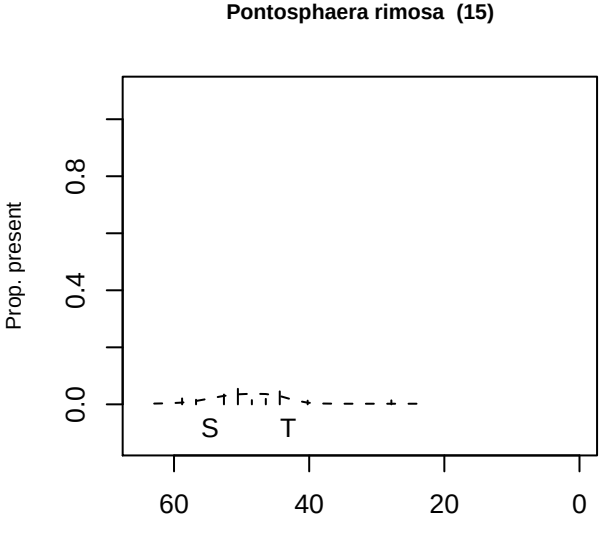

Pontosphaera japonica (69)
0.0
0.4
0.8
S
60
40
20
0

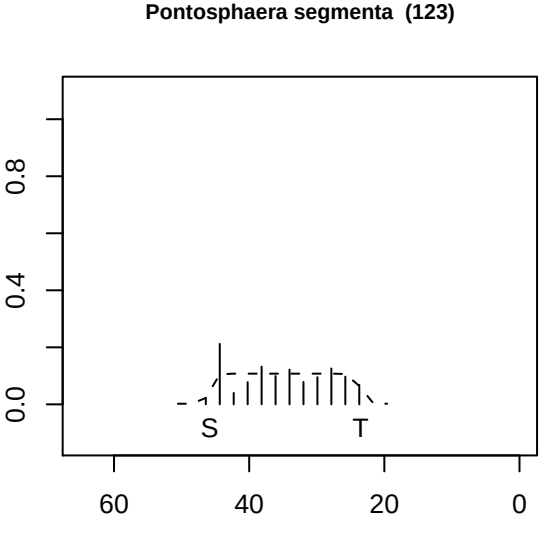

Pontosphaera multipora (184)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

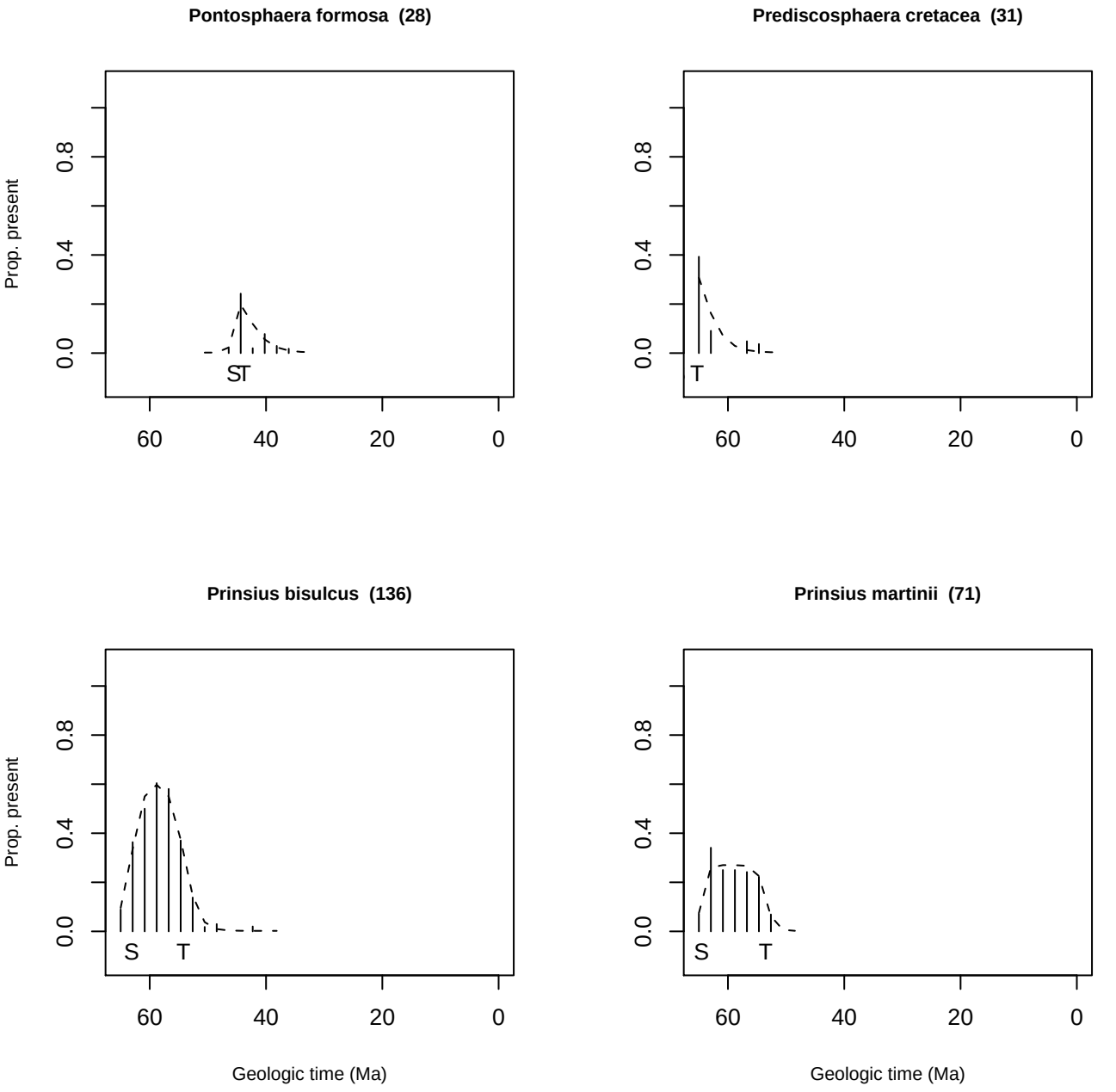

Pontosphaera ovata (29)
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

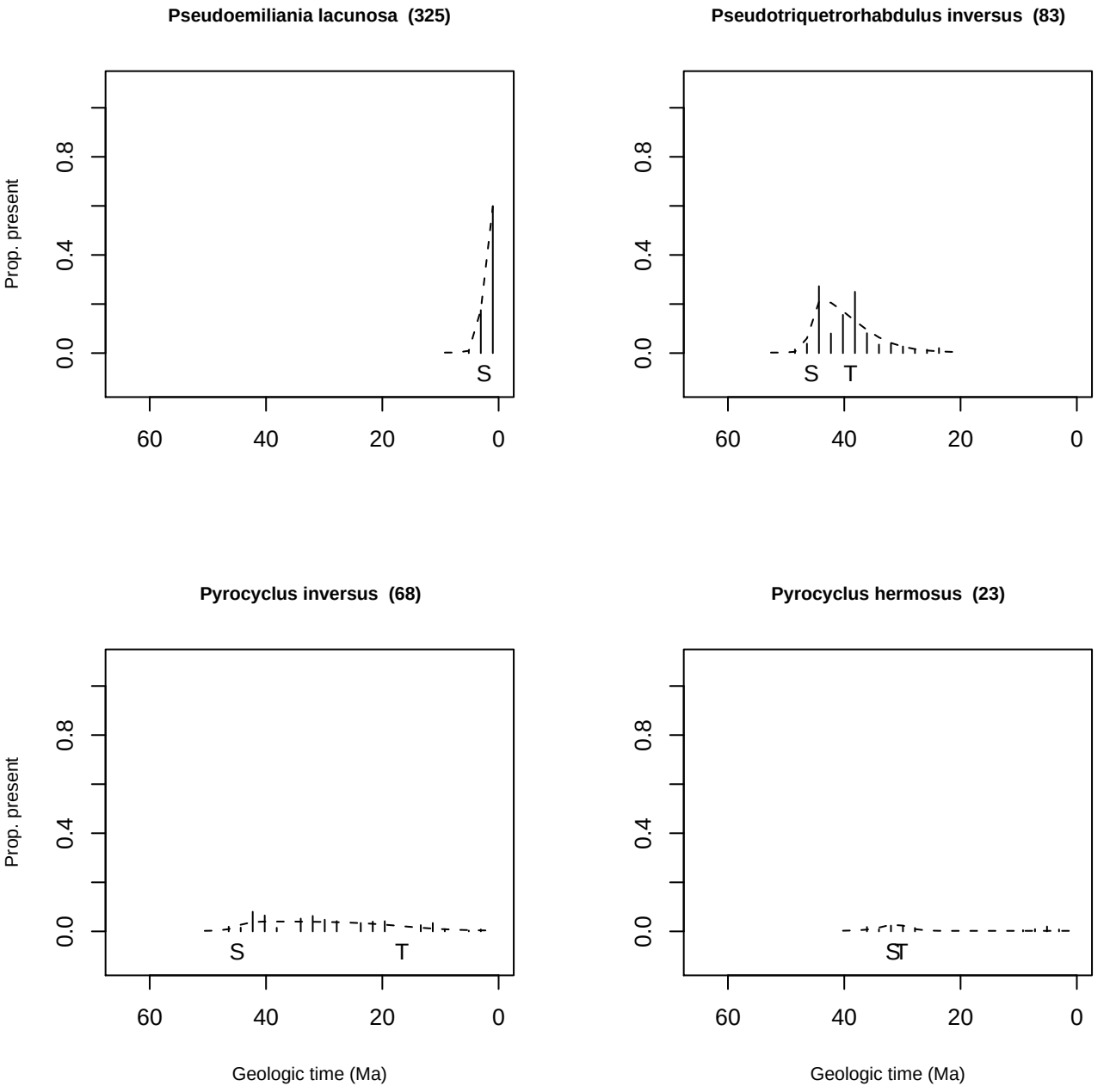

Pontosphaera plana (25)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0

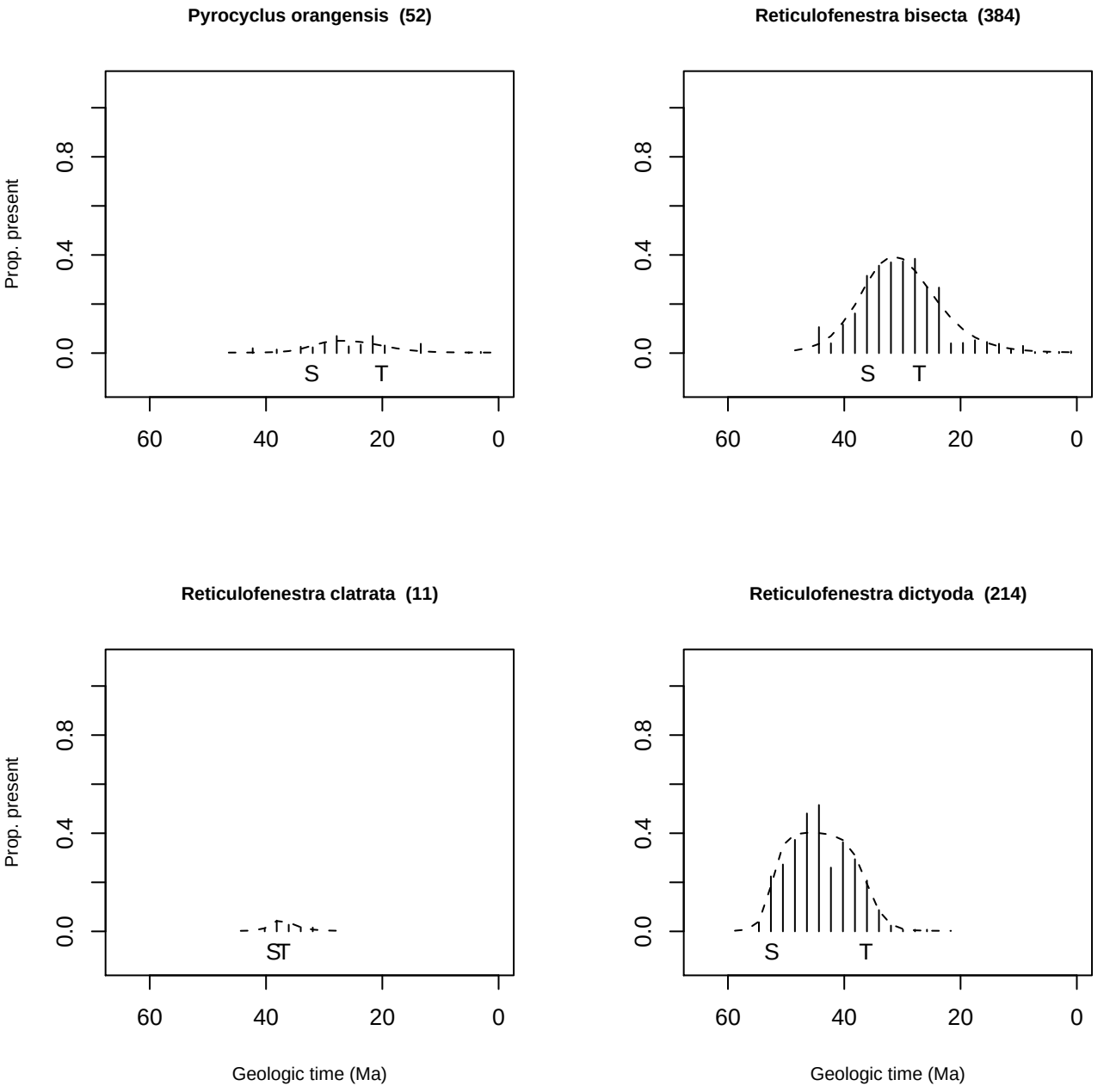

Pontosphaera pulchra (15)
0.0
0.4
0.8
S
T
60
40
20
0

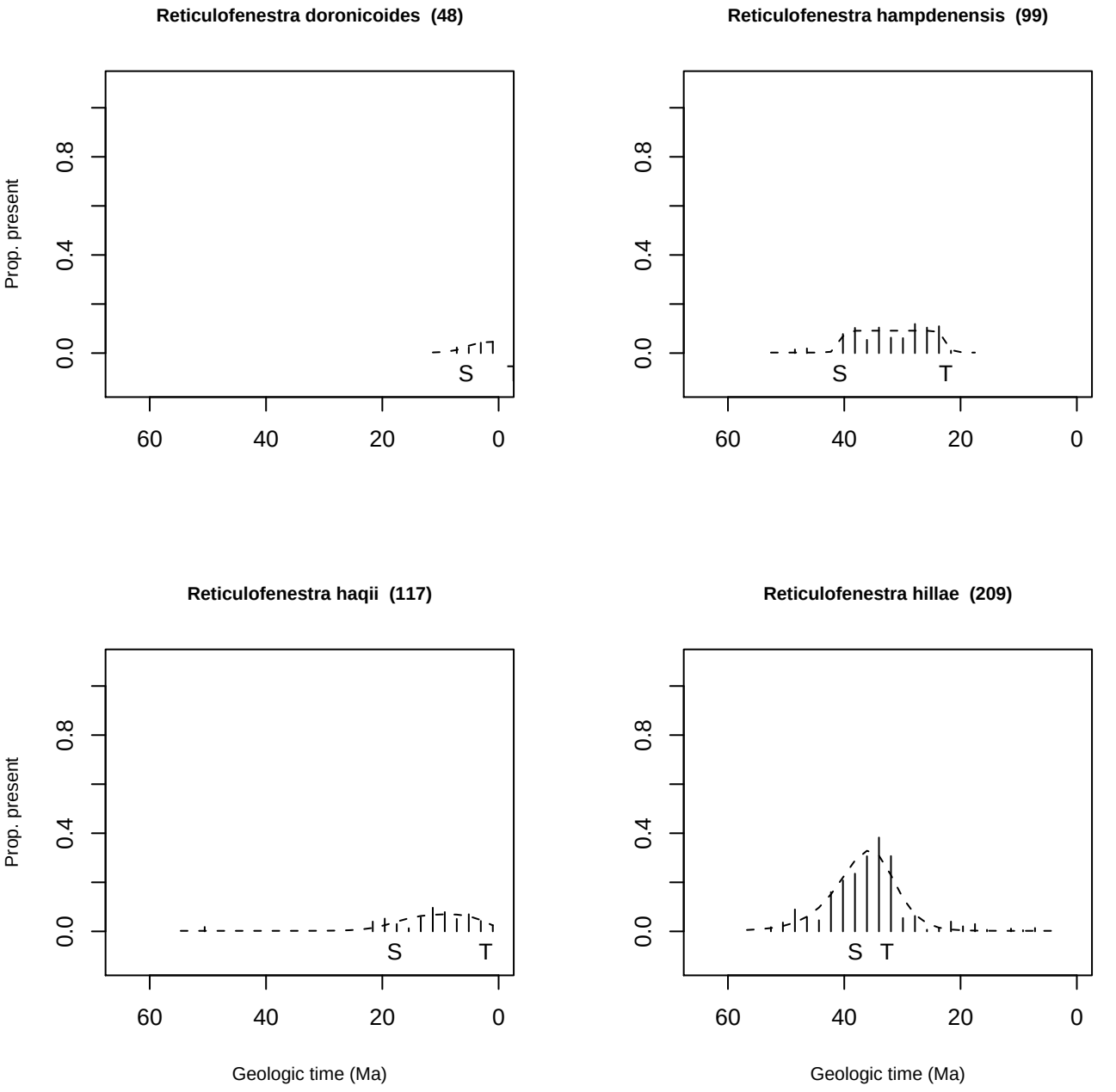

Pontosphaera rimosa (15)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

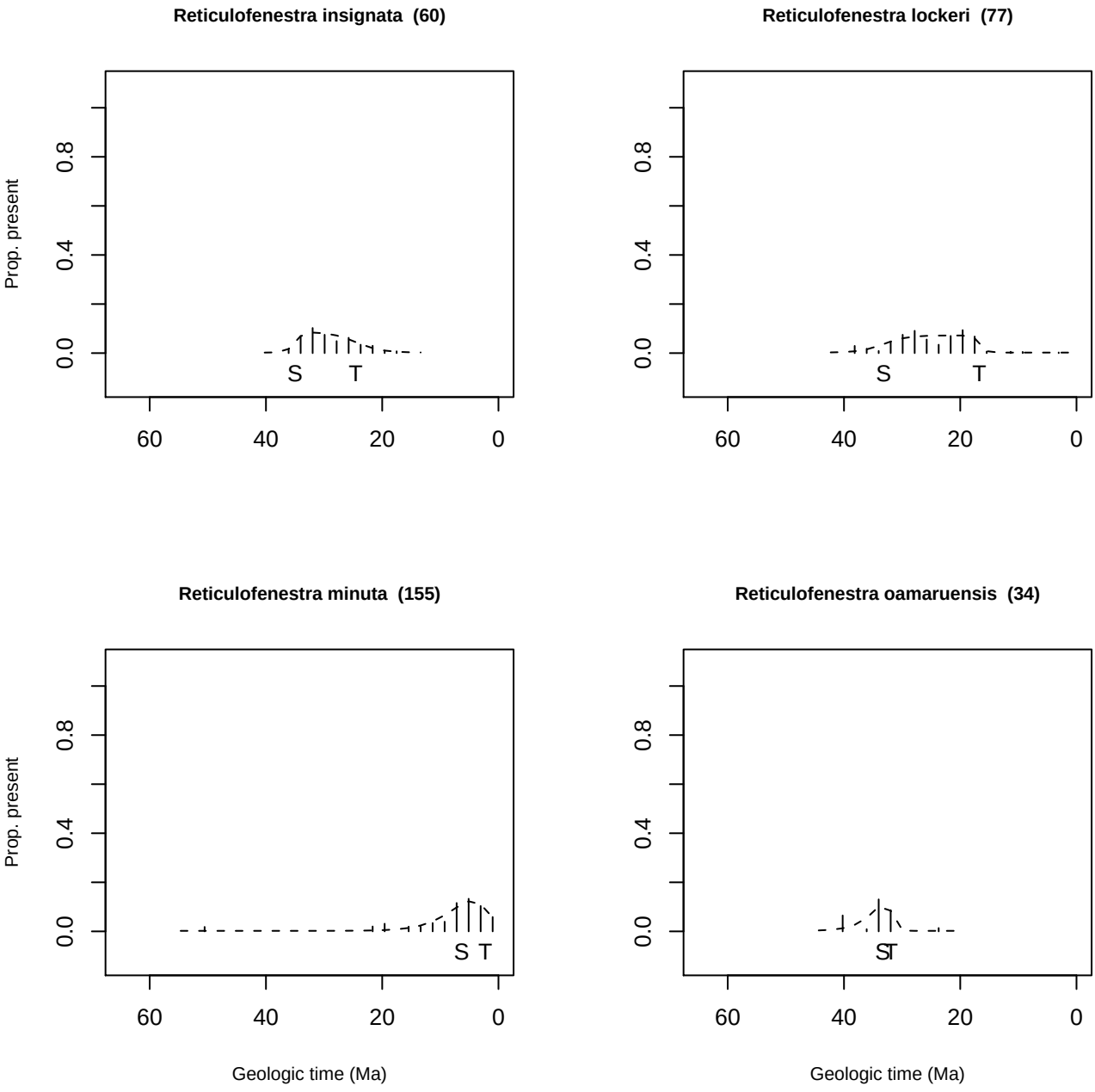

Pontosphaera segmenta (123)
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

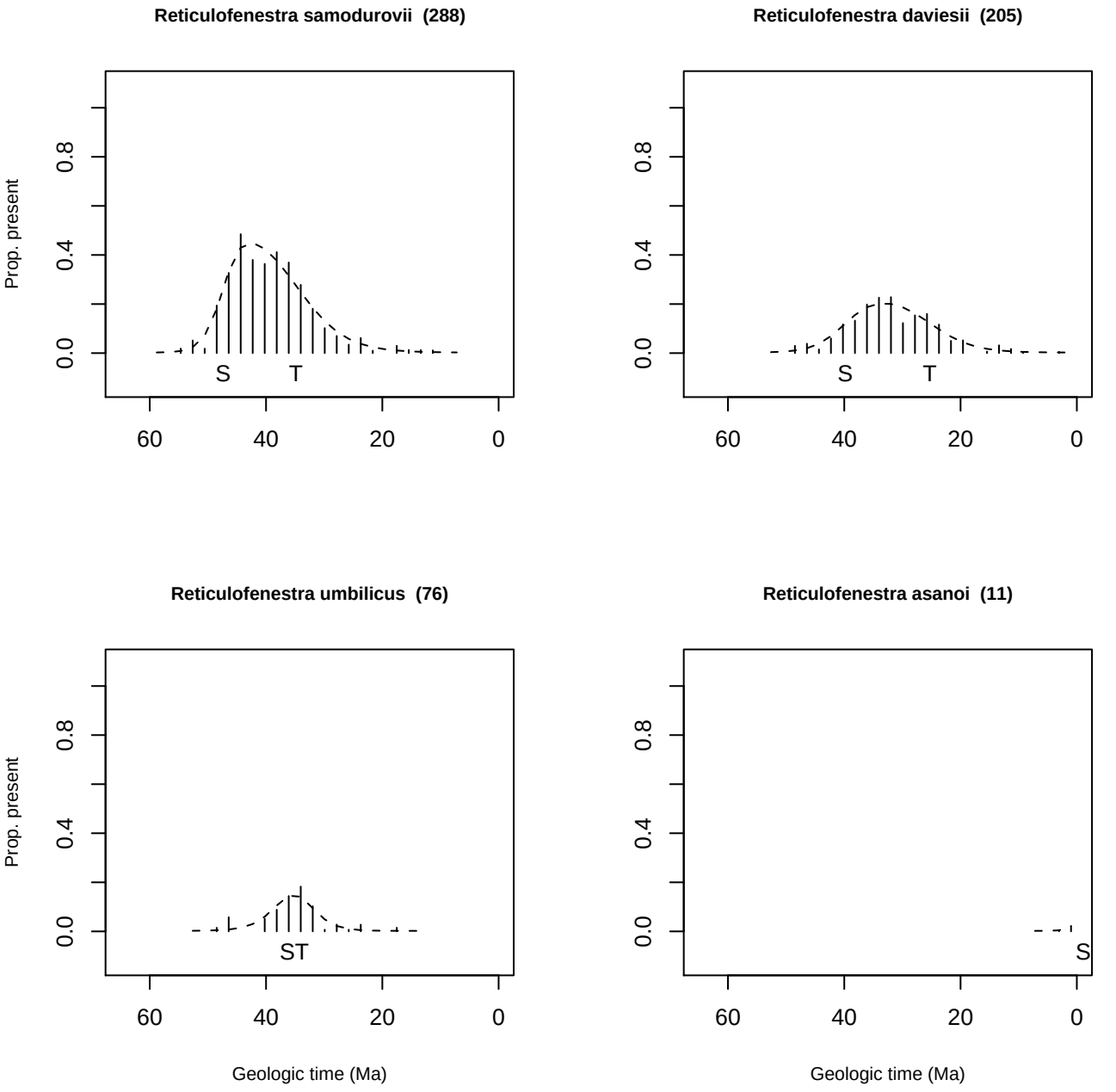

Pontosphaera formosa (28)
Prediscosphaera cretacea (31)
Prinsius bisulcus (136)
Prinsius martinii (71)
Prop. present
0.0
0.4
0.8
60
40
20
0
ST
T
S
T
S
T
Geologic time (Ma)
Geologic time (Ma)

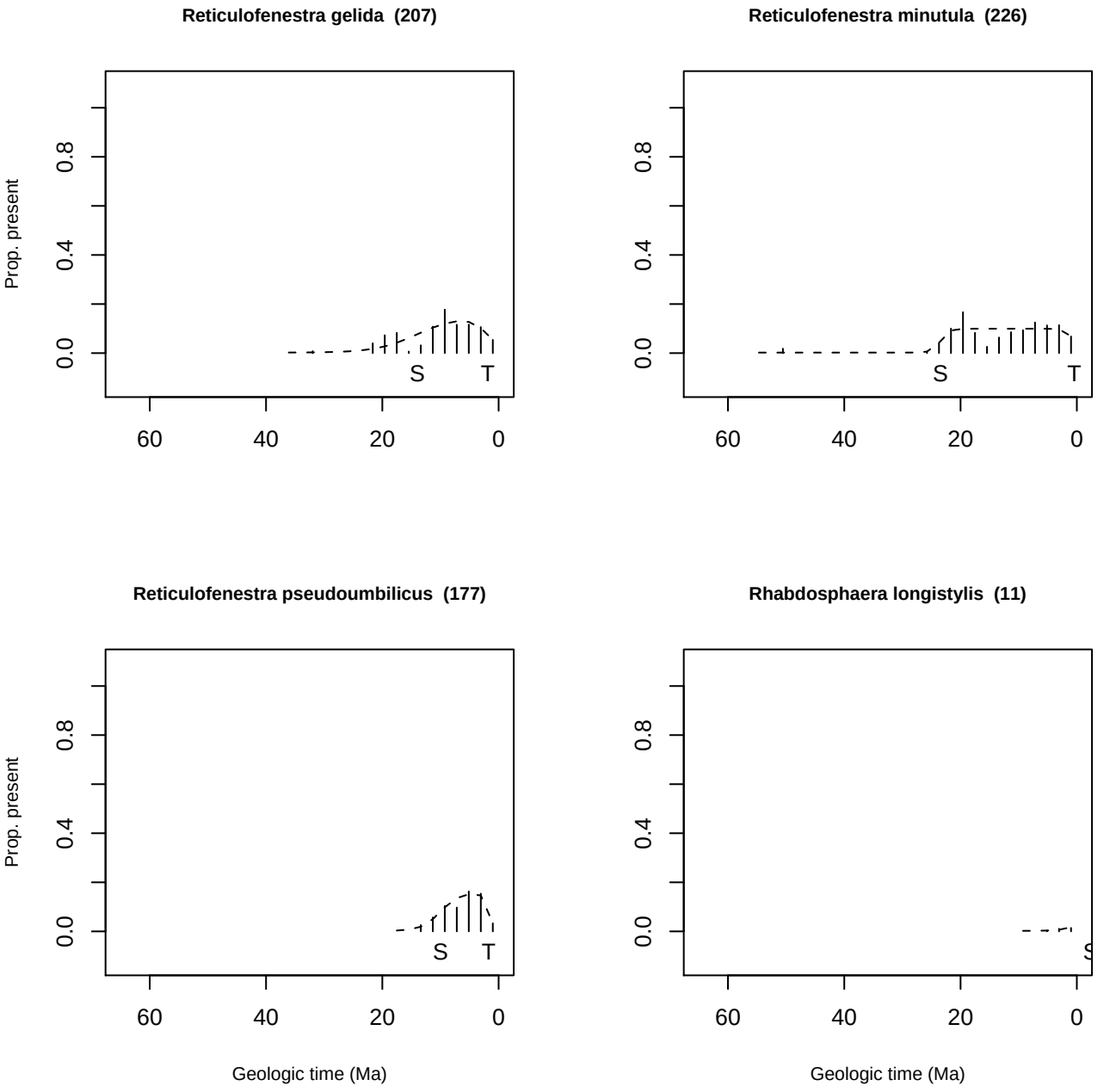

Pseudoemiliania lacunosa (325)
Pseudotriquetrorhabdulus inversus (83)
Pyrocyclus inversus (68)
Pyrocyclus hermosus (23)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

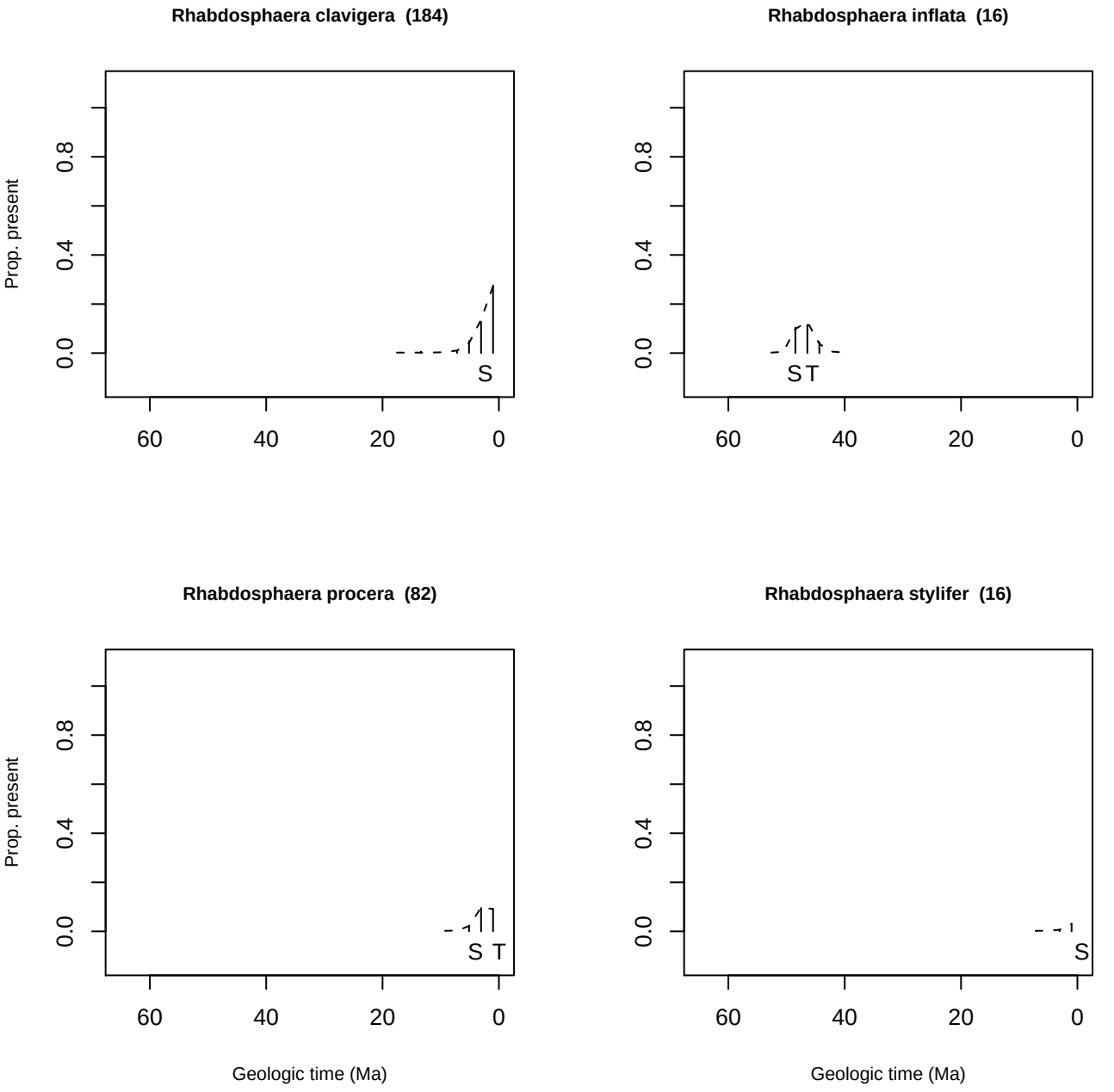

Pyrocyclus orangensis (52)
Reticulofenestra bisecta (384)
Reticulofenestra clatrata (11)
Reticulofenestra dictyoda (214)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

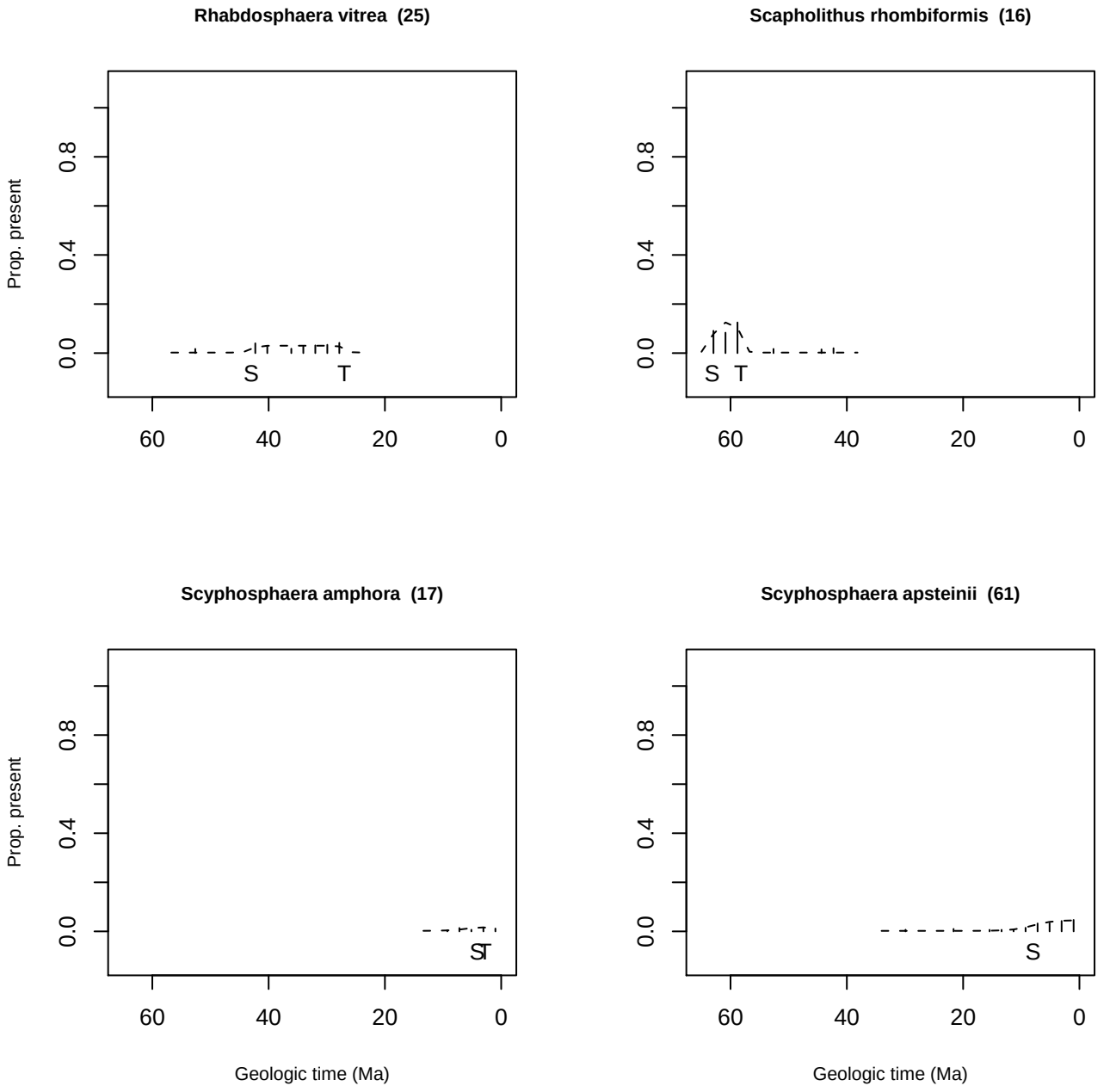

Reticulofenestra doronicoides (48)
Reticulofenestra hampdenensis (99)
Reticulofenestra haqii (117)
Reticulofenestra hillae (209)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

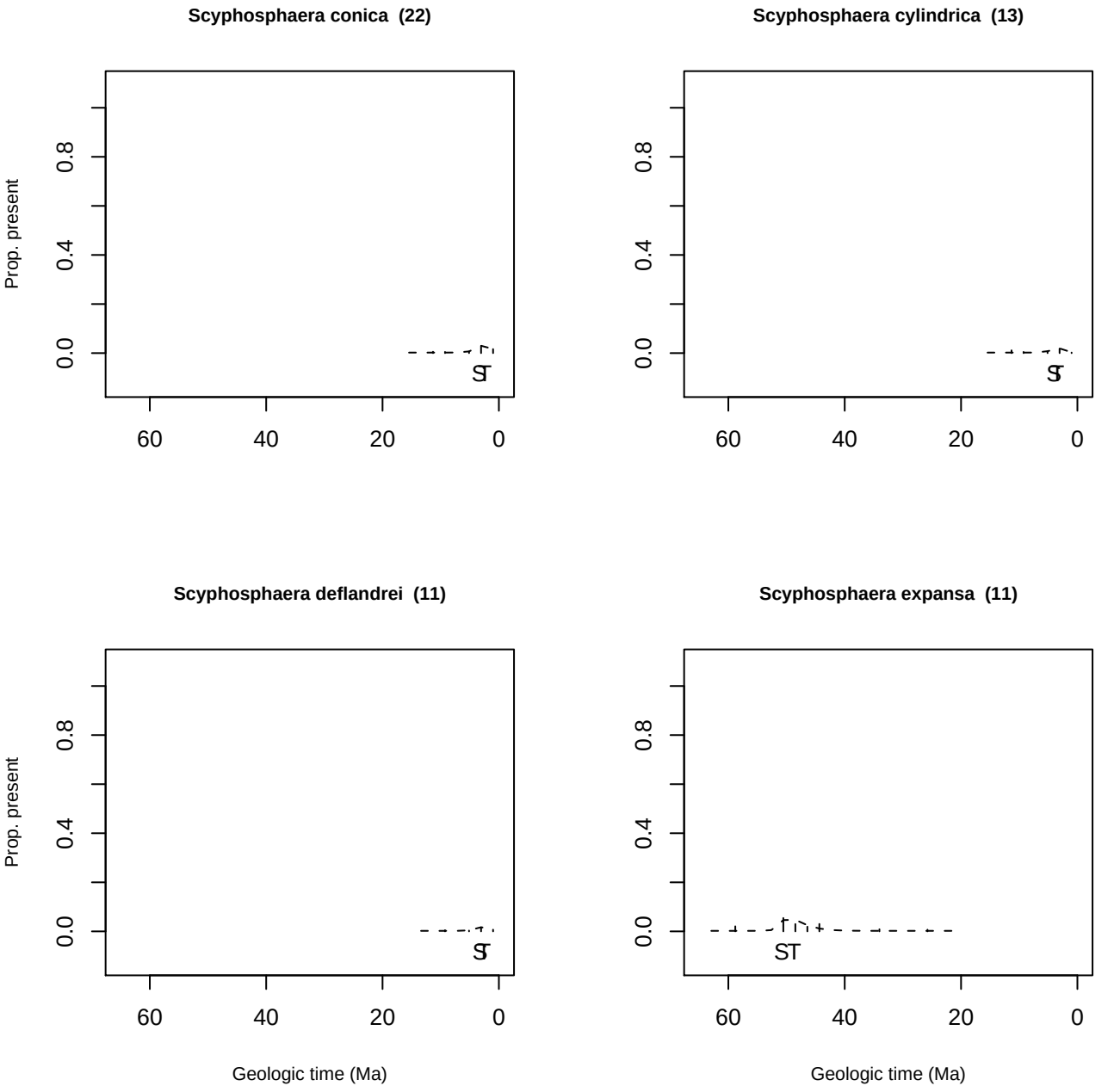

Reticulofenestra insignata (60)
Reticulofenestra lockeri (77)
Reticulofenestra minuta (155)
Reticulofenestra oamaruensis (34)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

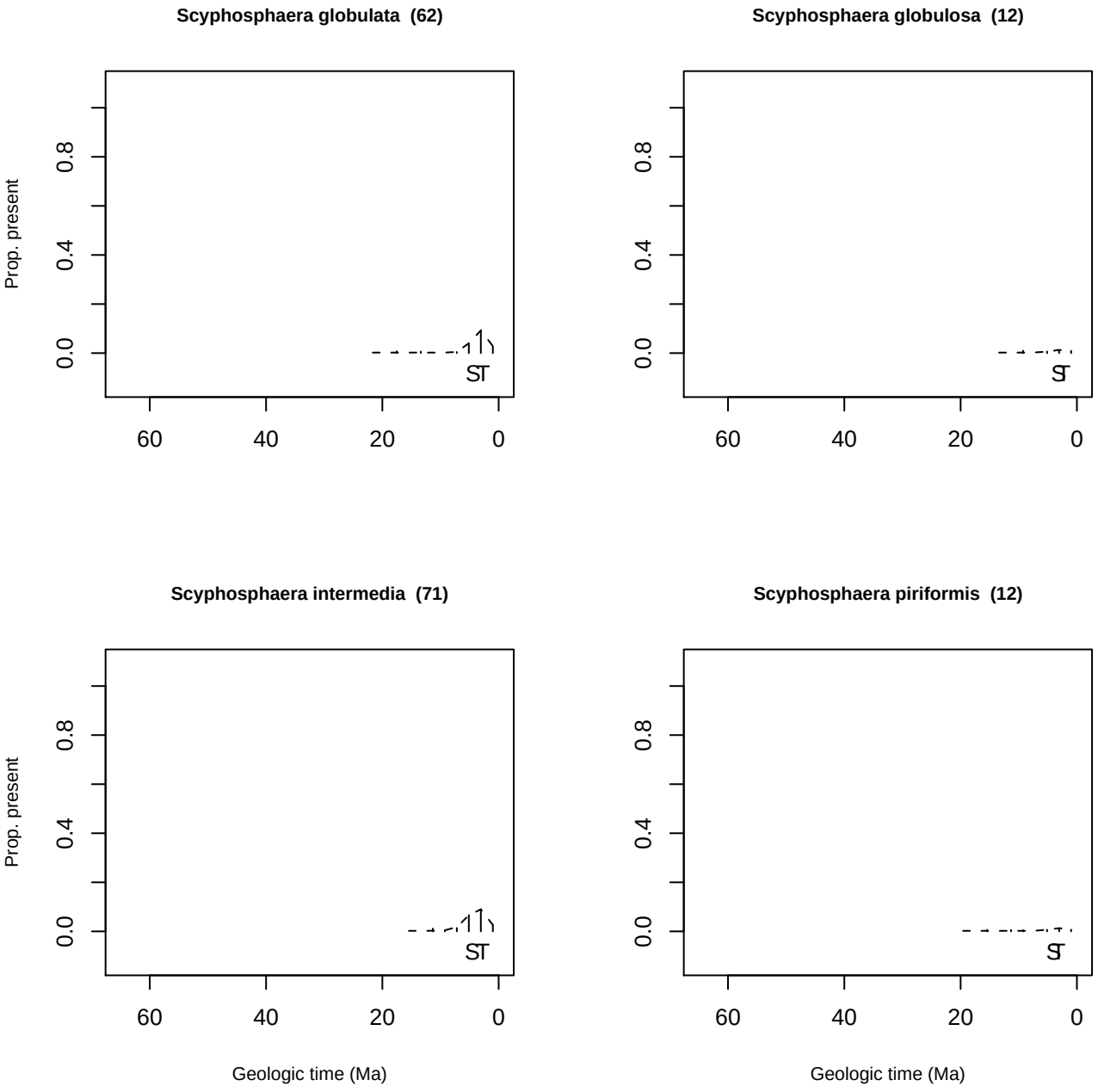

Reticulofenestra samodurovii (288)
Reticulofenestra daviesii (205)
Reticulofenestra umbilicus (76)
Reticulofenestra asanoi (11)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

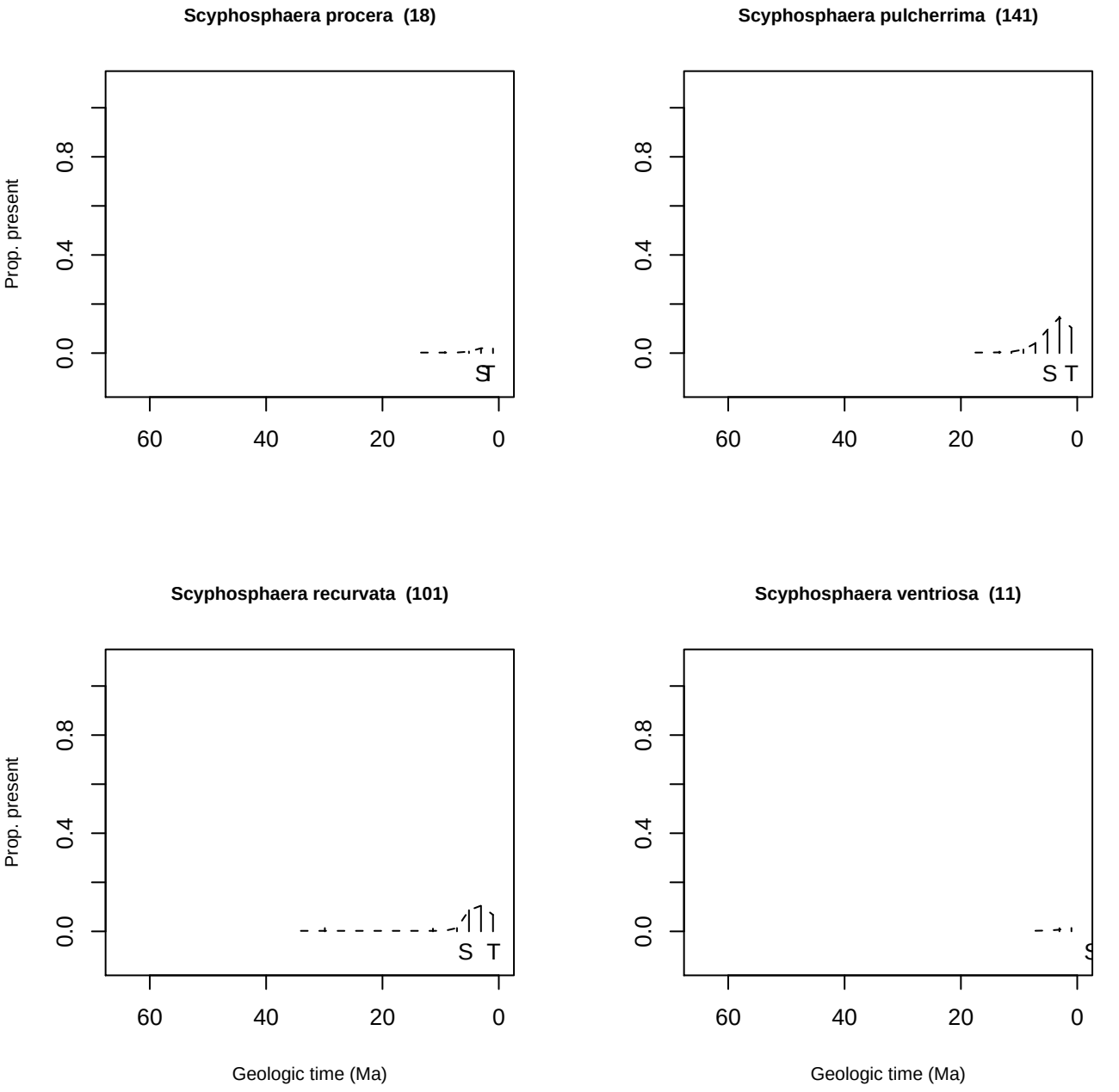

Reticulofenestra gelida (207)
Reticulofenestra minutula (226)
Reticulofenestra pseudoumbilicus (177)
Rhabdosphaera longistylis (11)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

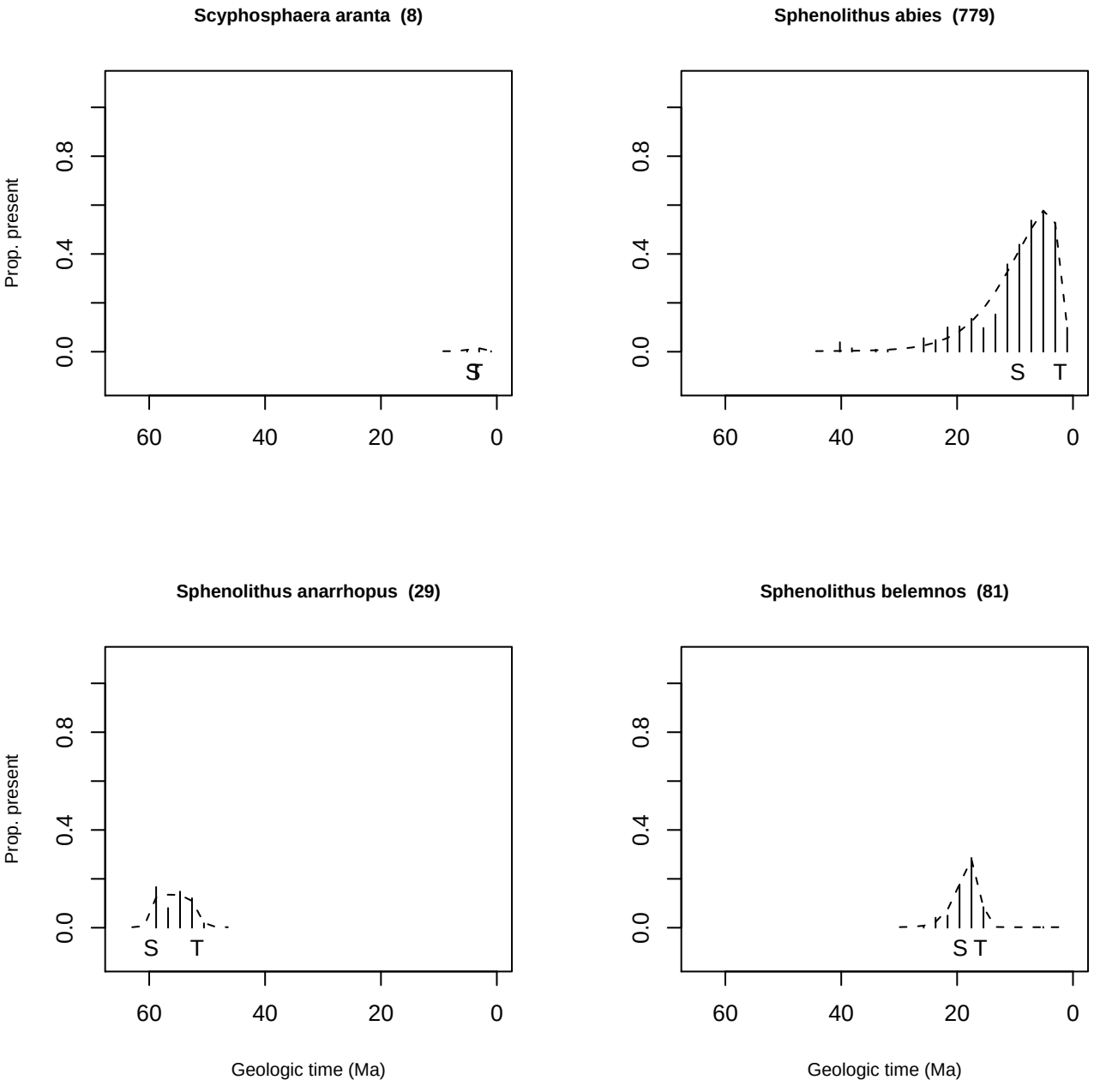

Rhabdosphaera clavigera (184)
Rhabdosphaera inflata (16)
Rhabdosphaera procera (82)
Rhabdosphaera stylifer (16)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

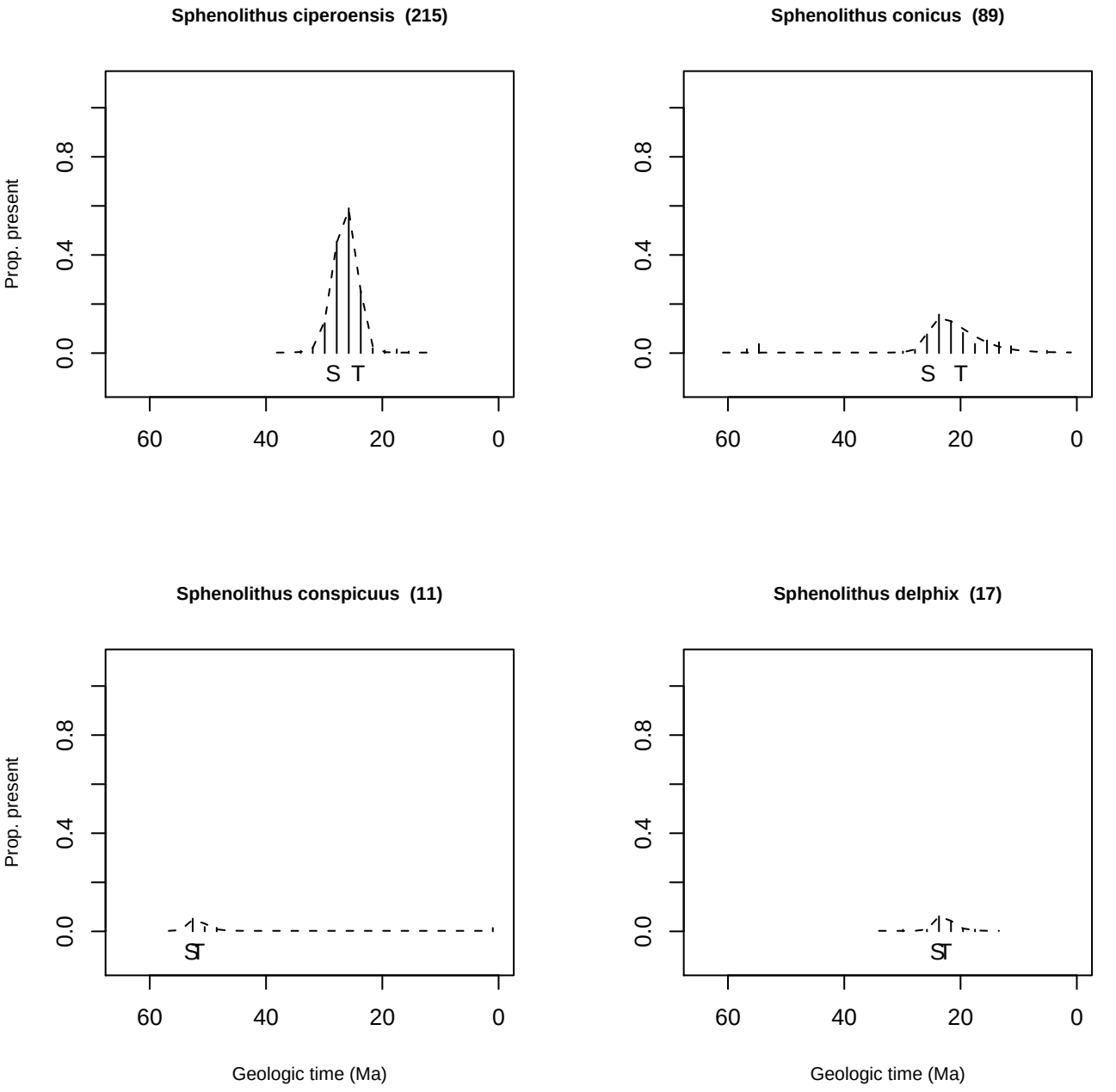

Rhabdosphaera vitrea (25)
Scapholithus rhombiformis (16)
Scyphosphaera amphora (17)
Scyphosphaera apsteinii (61)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

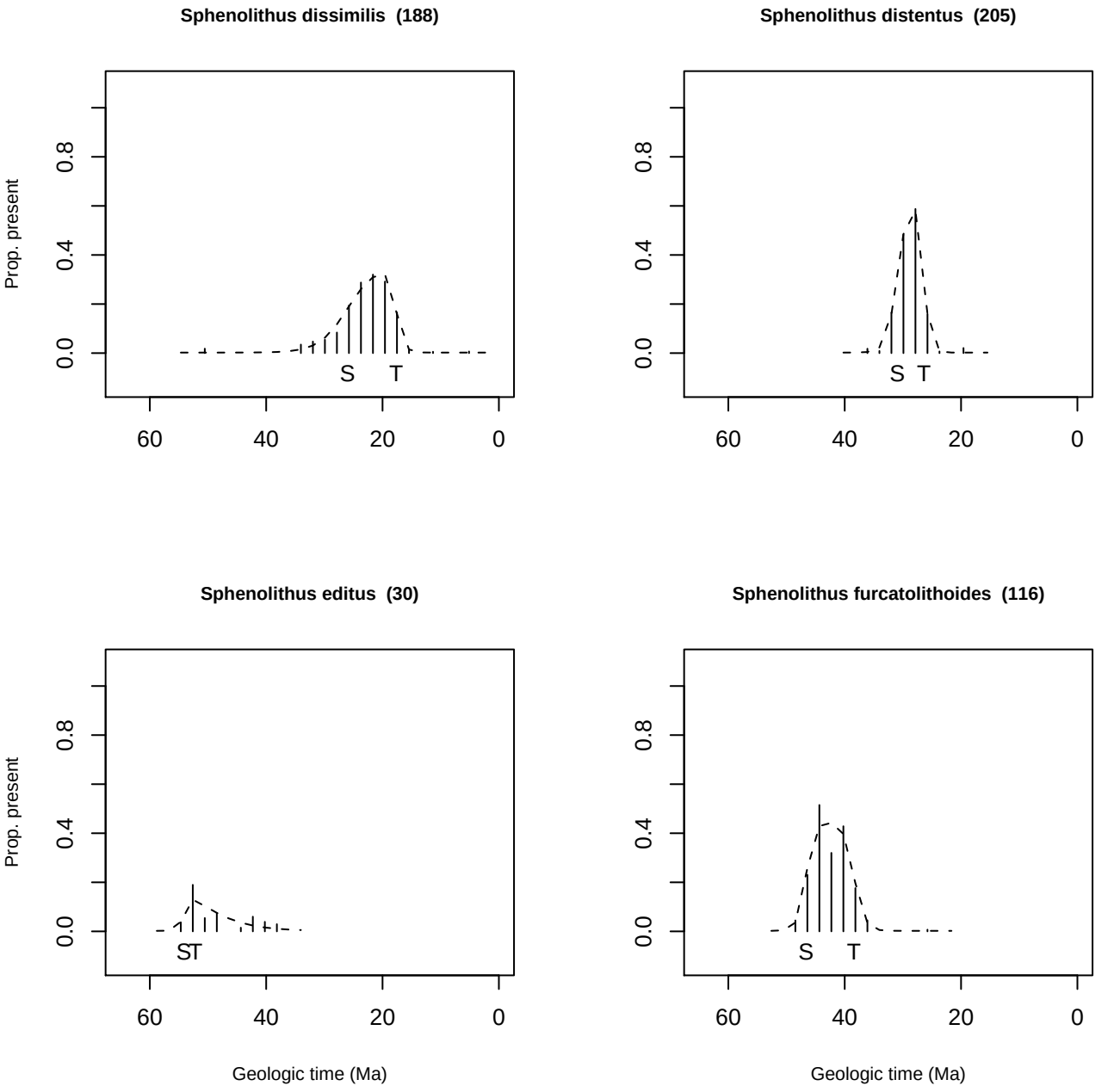

Scyphosphaera conica (22)
Scyphosphaera cylindrica (13)
Scyphosphaera deflandrei (11)
Scyphosphaera expansa (11)
Prop. present
0.0
0.4
0.8
60
40
20
0
LS
ST
Geologic time (Ma)

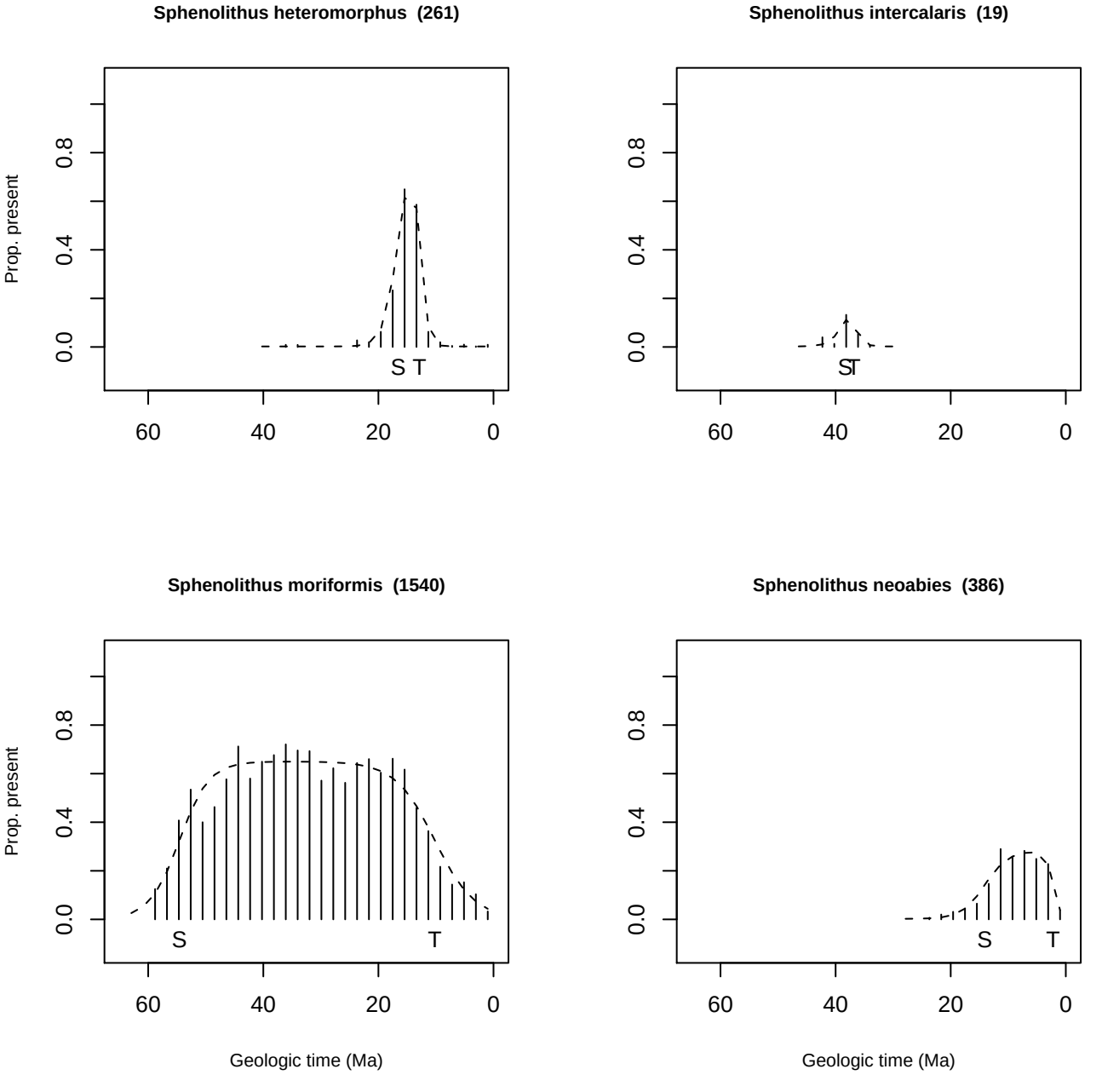

Scyphosphaera globulata (62)
Scyphosphaera globulosa (12)
Scyphosphaera intermedia (71)
Scyphosphaera piriformis (12)
Prop. present
0.0
0.4
0.8
60
40
20
0
Geologic time (Ma)

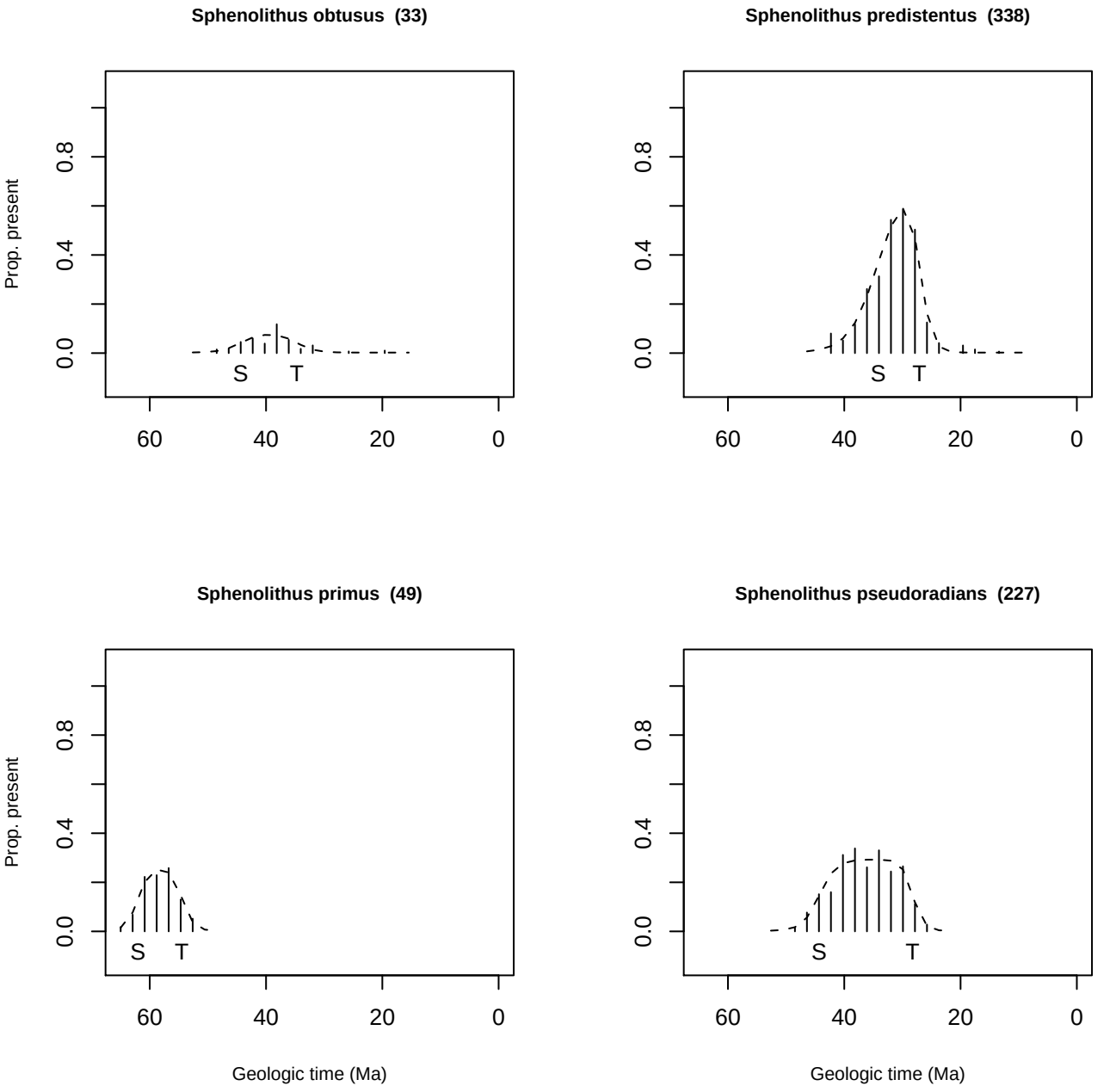

Scyphosphaera procera (18)
Scyphosphaera pulcherrima (141)
Scyphosphaera recurvata (101)
Scyphosphaera ventriosa (11)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

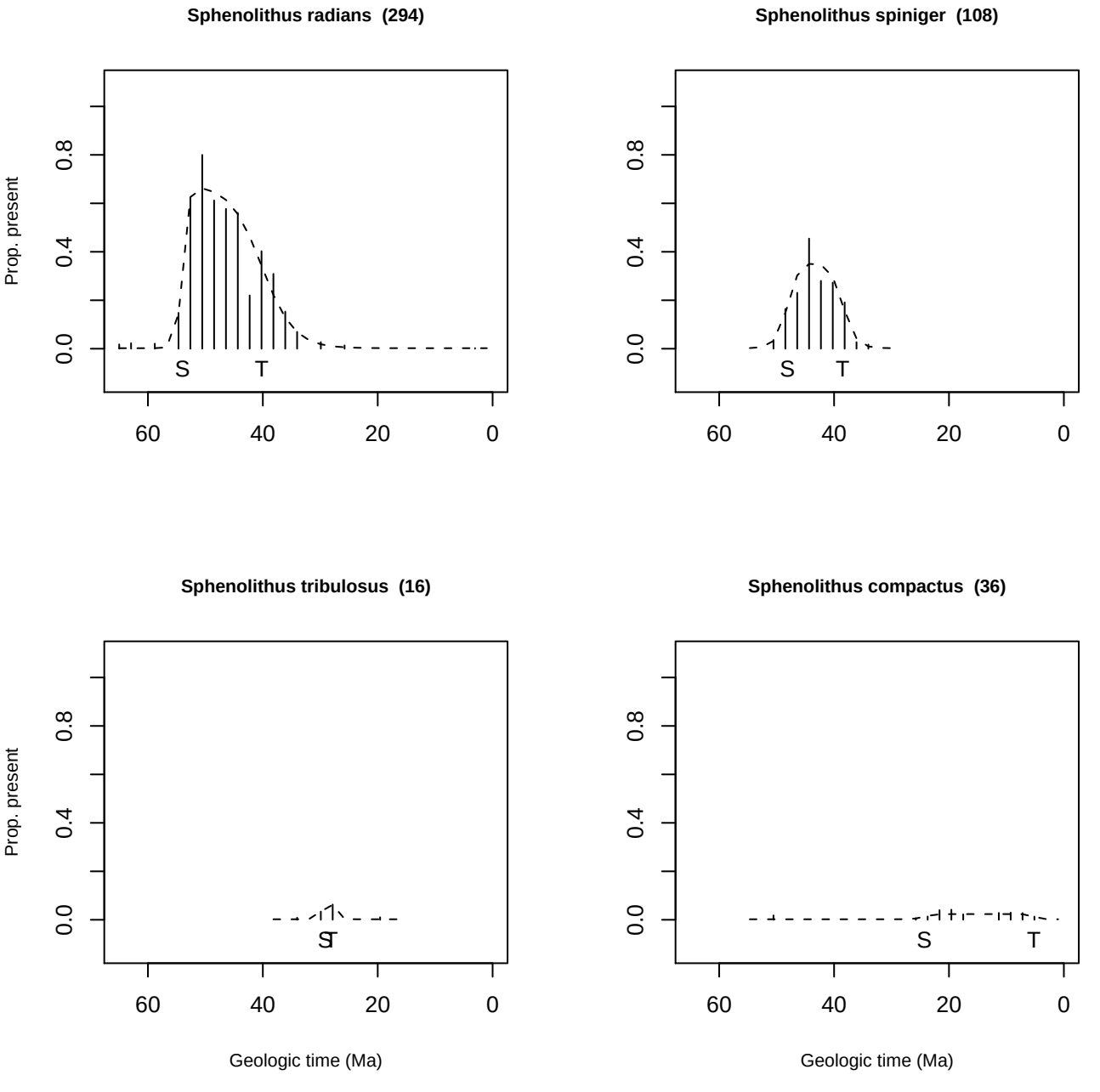

Scyphosphaera aranta (8)
Sphenolithus abies (779)
Sphenolithus anarrhopus (29)
Sphenolithus belemnos (81)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

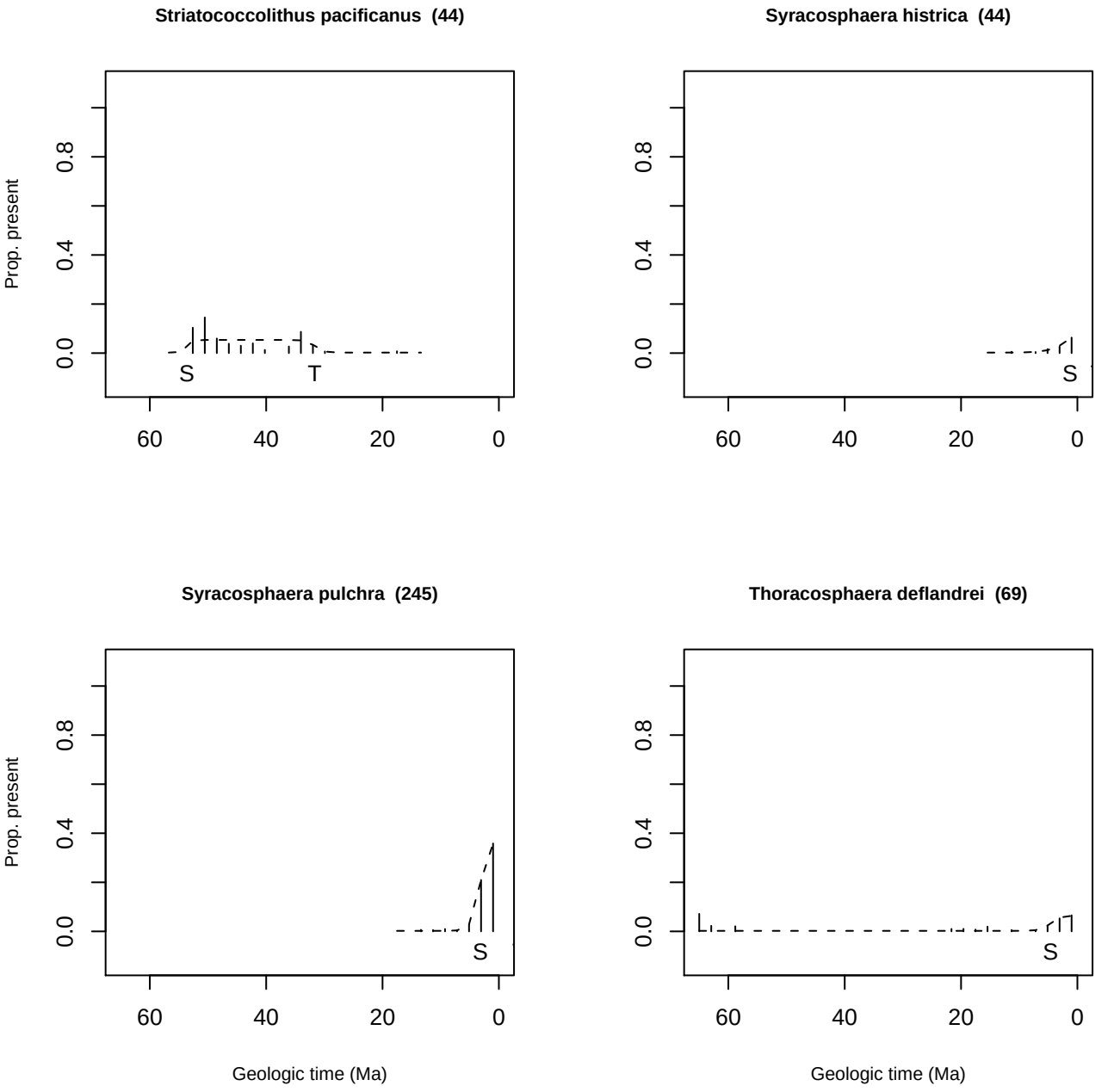

Sphenolithus ciperoensis (215)
Sphenolithus conicus (89)
Sphenolithus conspicuus (11)
Sphenolithus delphix (17)
Prop. present
0.0
0.4
0.8
S T
60
40
20
0
Geologic time (Ma)

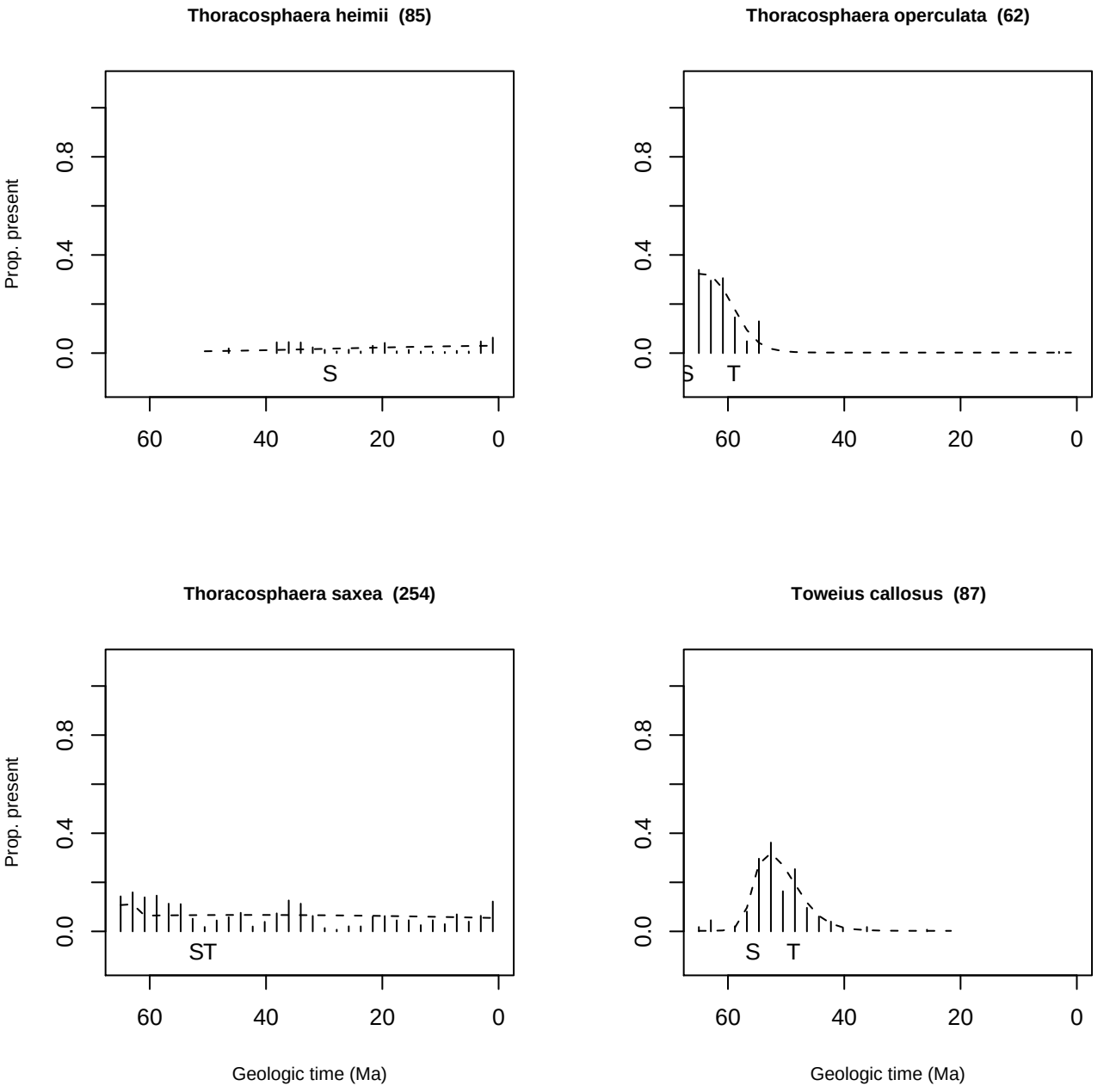

Sphenolithus dissimilis (188)
Sphenolithus distentus (205)
Sphenolithus editus (30)
Sphenolithus furcatolithoides (116)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
ST
Geologic time (Ma)

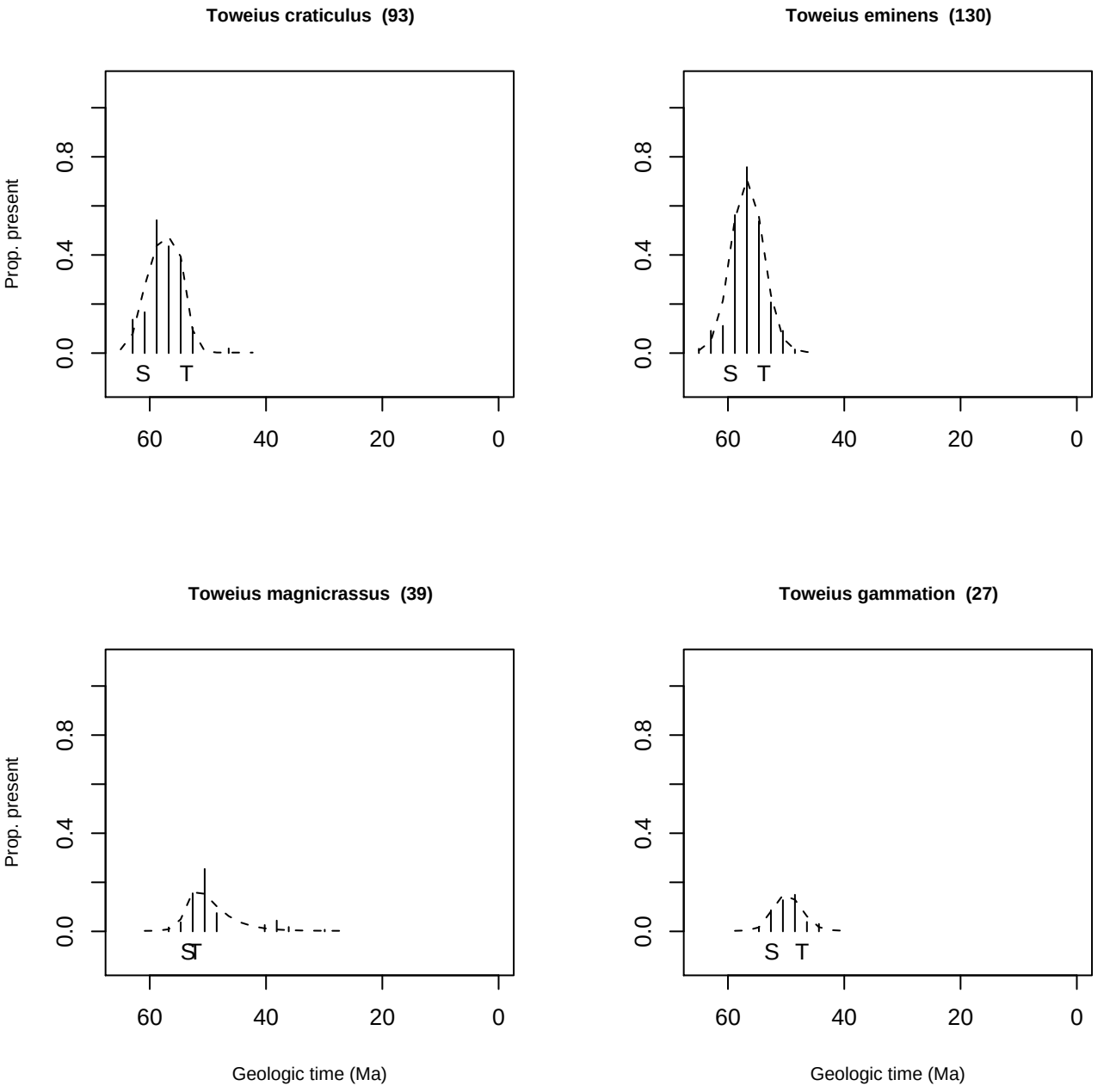

Sphenolithus heteromorphus (261)
Sphenolithus intercalaris (19)
Sphenolithus moriformis (1540)
Sphenolithus neoabies (386)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

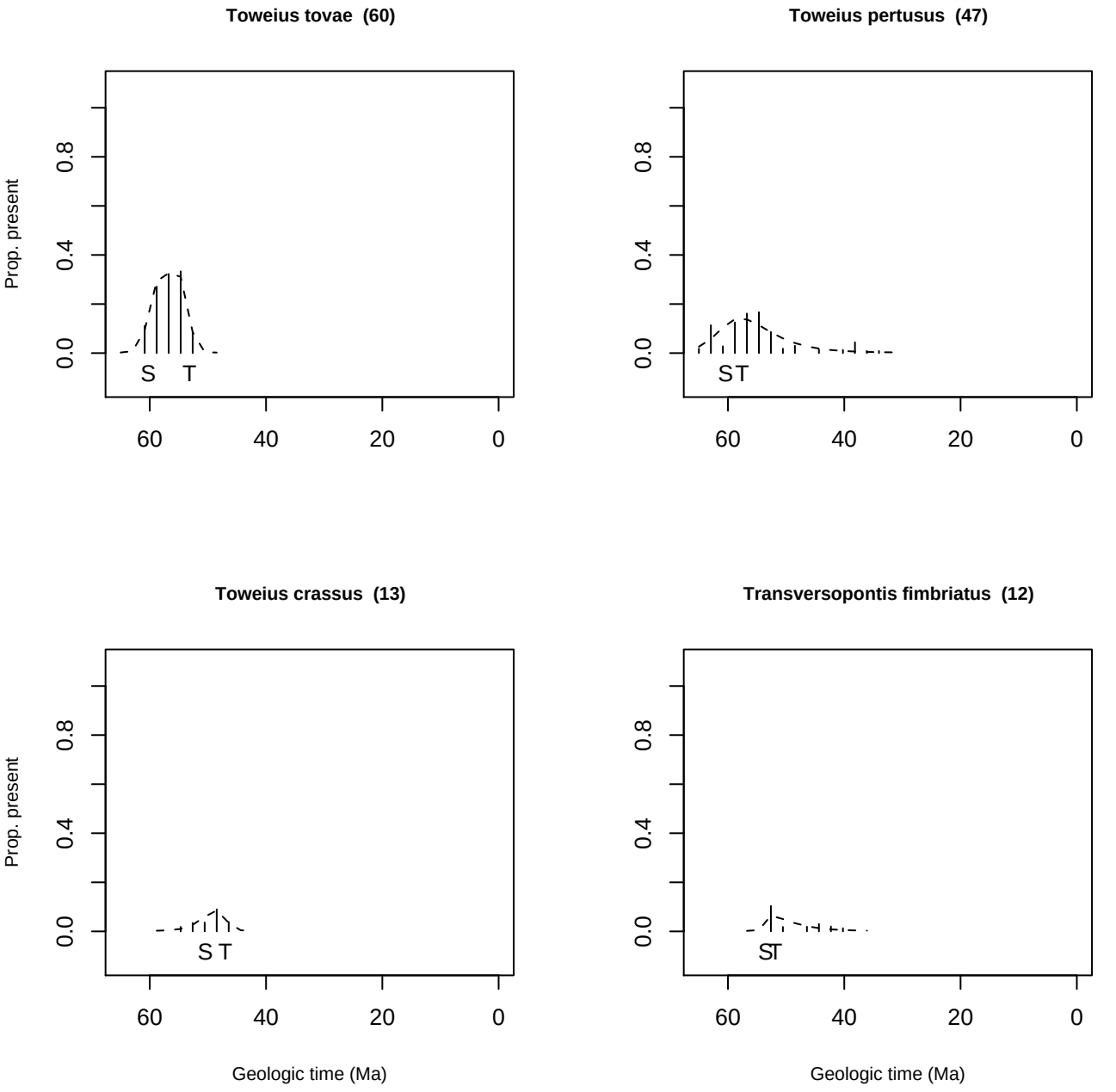

Sphenolithus obtusus (33)
Sphenolithus predistentus (338)
Sphenolithus primus (49)
Sphenolithus pseudoradians (227)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

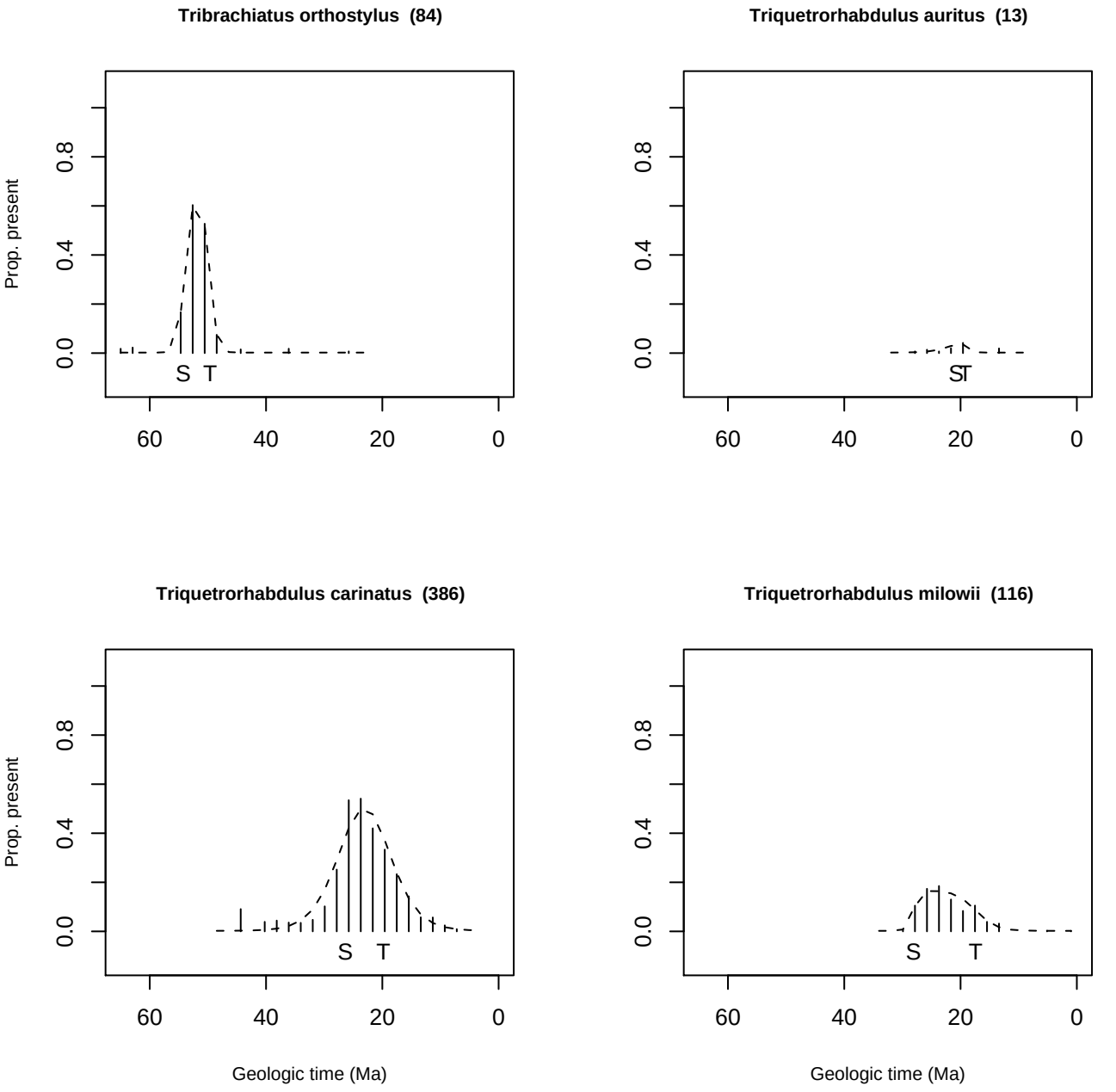

Sphenolithus radians (294)
Sphenolithus spiniger (108)
Sphenolithus tribulosus (16)
Sphenolithus compactus (36)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

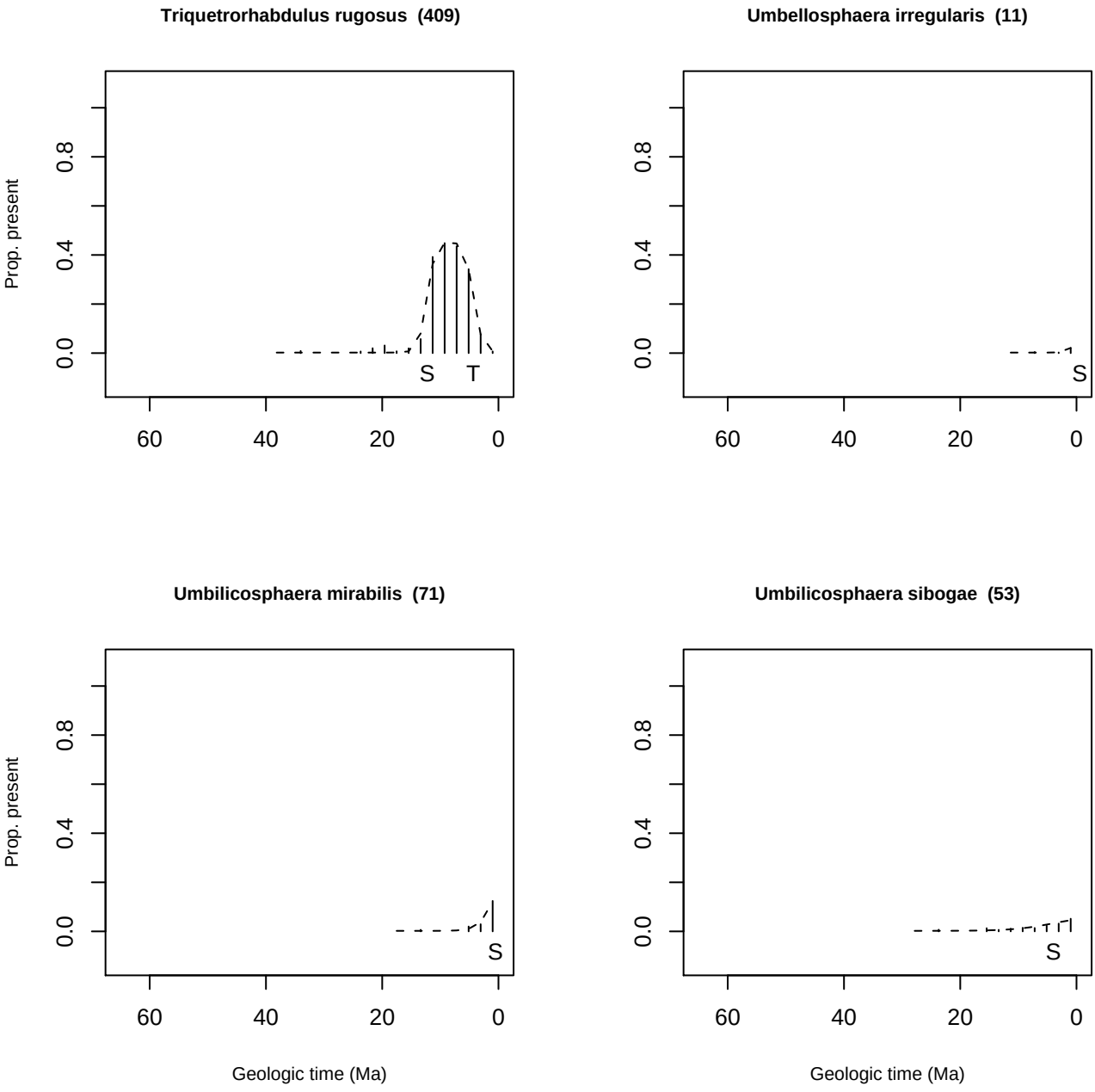

Striatococcolithus pacificanus (44)
Syracosphaera histrica (44)
Syracosphaera pulchra (245)
Thoracosphaera deflandrei (69)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

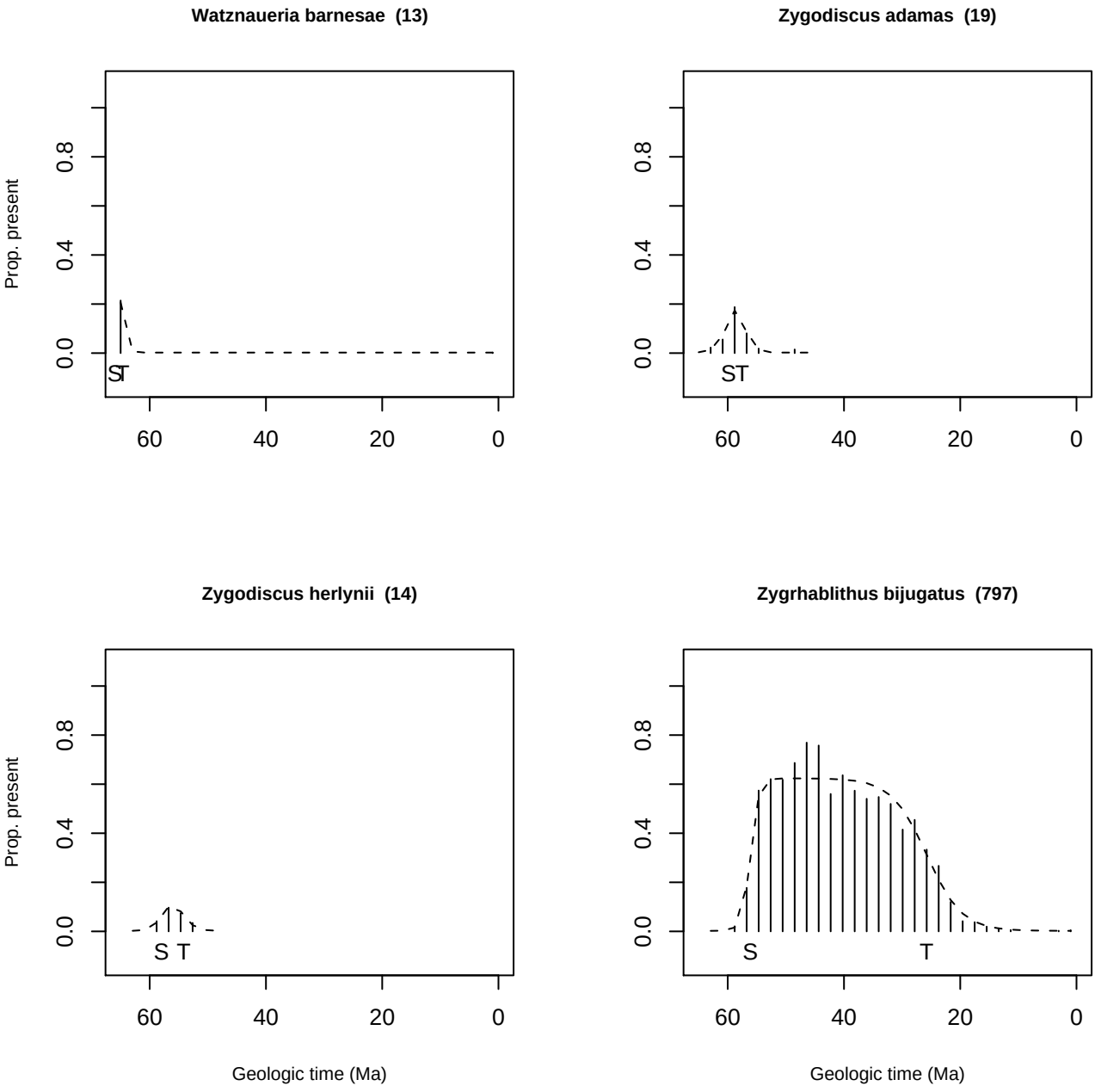

Thoracosphaera heimii (85)
Thoracosphaera operculata (62)
Thoracosphaera saxea (254)
Toweius callosus (87)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

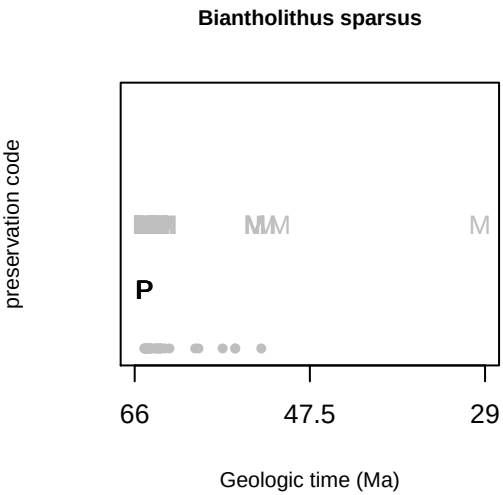

Toweius craticulus (93)
Toweius eminens (130)
Toweius magnicrassus (39)
Toweius gammation (27)
Prop. present
0.0
0.4
0.8
S
T
60
40
20
0
Geologic time (Ma)

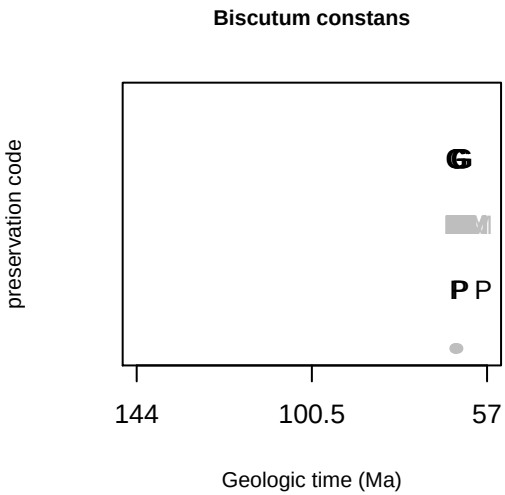

Toweius tovae (60)
Toweius pertusus (47)
Toweius crassus (13)
Transversopontis fimbriatus (12)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

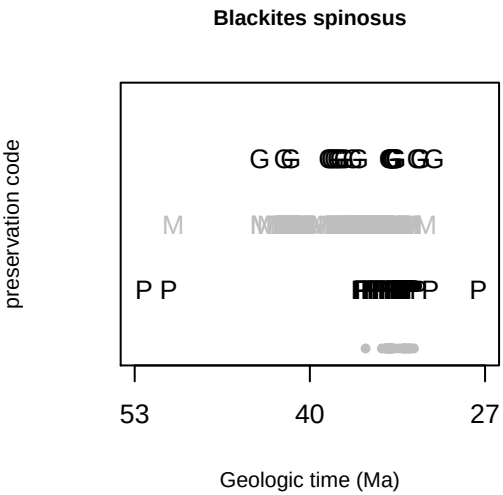

Tribrachiatus orthostylus (84)
Triquetrorhabdulus auritus (13)
Triquetrorhabdulus carinatus (386)
Triquetrorhabdulus milowii (116)
Prop. present
0.0
0.4
0.8
S
T
ST
60
40
20
0
Geologic time (Ma)

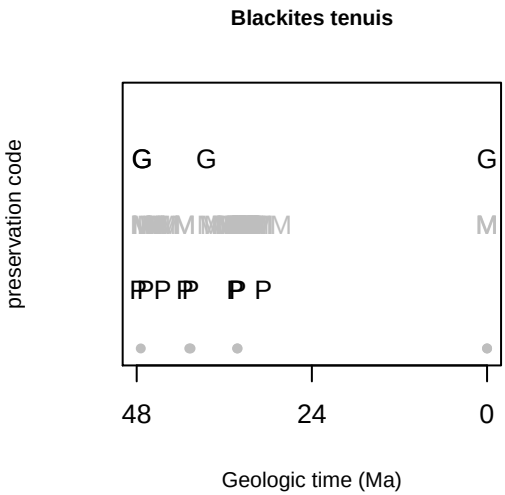

Triquetrorhabdulus rugosus (409)
Umbellosphaera irregularis (11)
Umbilicosphaera mirabilis (71)
Umbilicosphaera sibogae (53)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

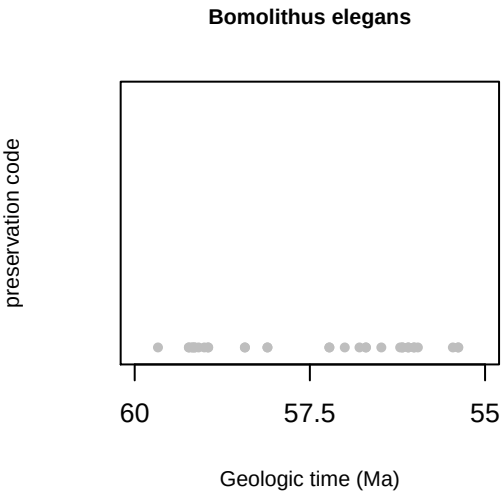

Watznaueria barnesae (13)
Zygodiscus adamas (19)
Zygodiscus herlynii (14)
Zygrhablithus bijugatus (797)
Prop. present
0.0
0.4
0.8
60
40
20
0
S
T
Geologic time (Ma)

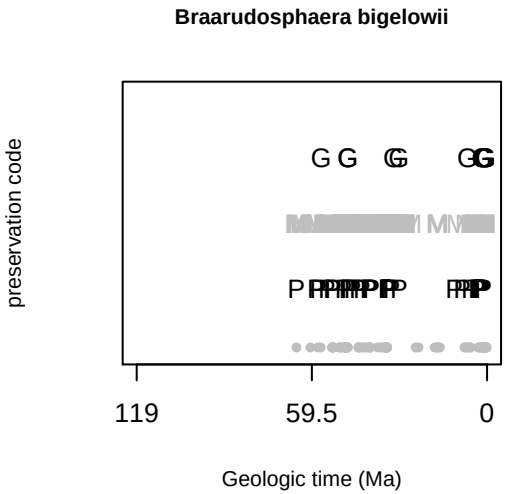

Biantholithus sparsus
preservation code
P
M
66
47.5
29
Geologic time (Ma)

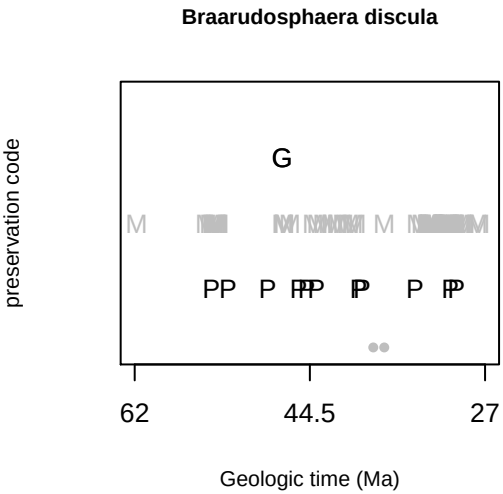

Biscutum constans
preservation code
G
M
P P
144
100.5
57
Geologic time (Ma)

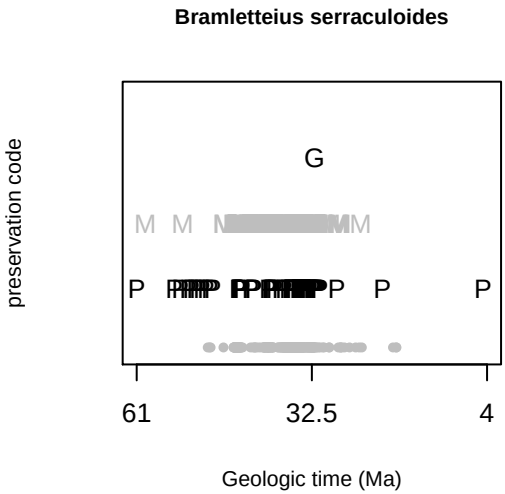

Blackites spinosus
preservation code
G
M
P P
P
53
40
27
Geologic time (Ma)

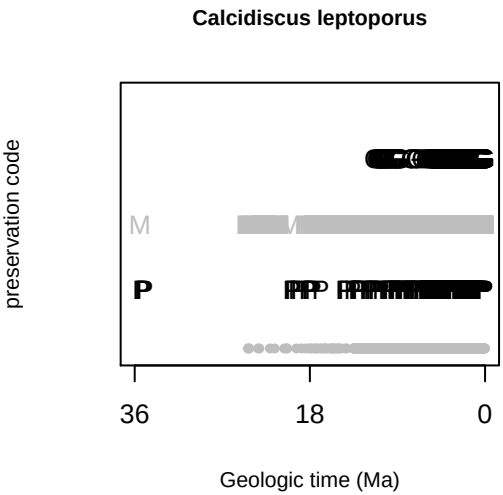

Blackites tenuis
preservation code
G G G
M
P P P
48
24
0
Geologic time (Ma)

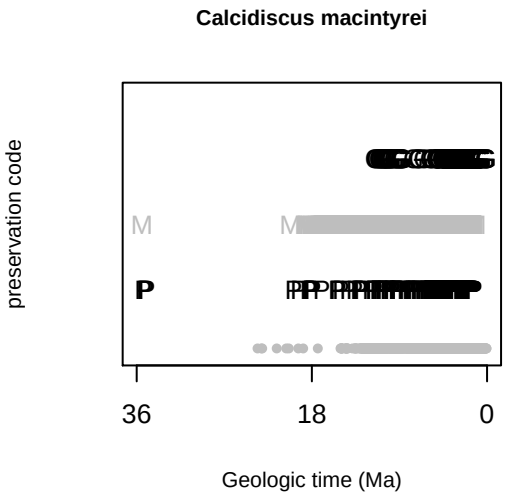

Bomolithus elegans
preservation code
60
57.5
55
Geologic time (Ma)

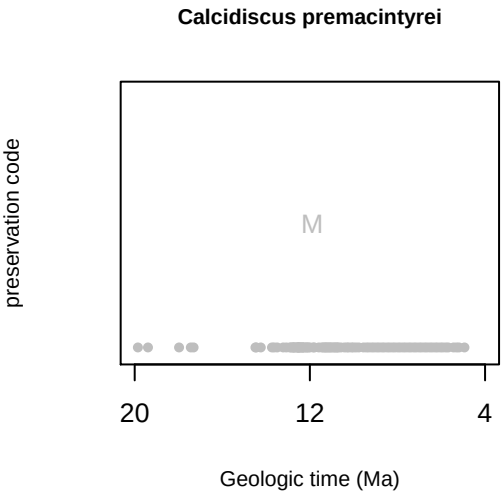

Braarudosphaera bigelowii
preservation code
119
59.5
0
Geologic time (Ma)

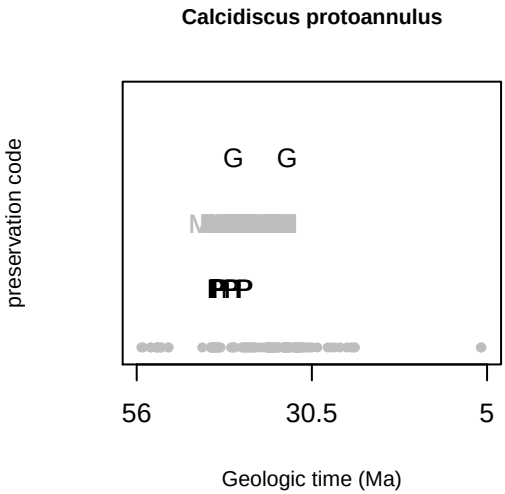

Braarudosphaera discula
preservation code
62
44.5
27
Geologic time (Ma)

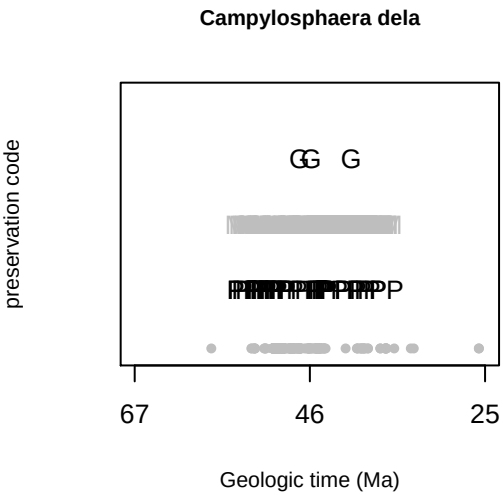

Bramletteius serraculoides
preservation code
61
32.5
4
Geologic time (Ma)

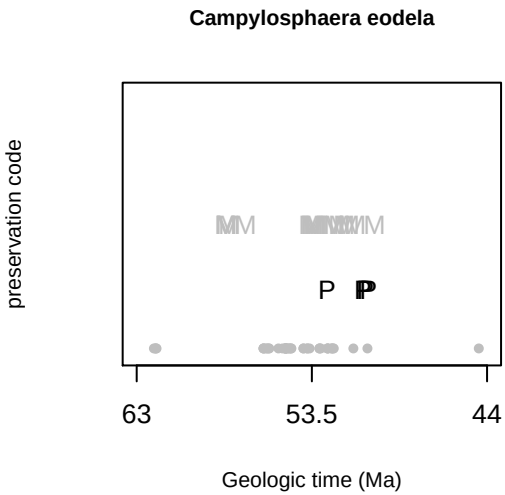

Calcidiscus leptoporus
preservation code
M
P
36
18
0
Geologic time (Ma)

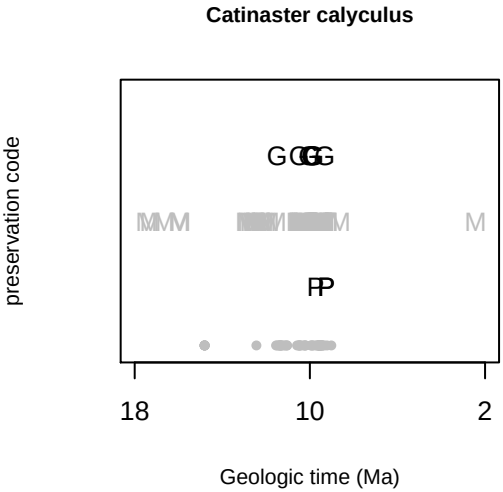

Calcidiscus macintyrei
preservation code
M
P
36
18
0
Geologic time (Ma)

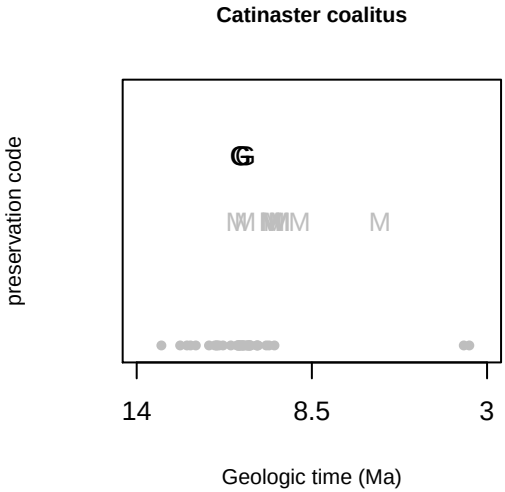

Calcidiscus premacintyrei
preservation code
M
20
12
4
Geologic time (Ma)

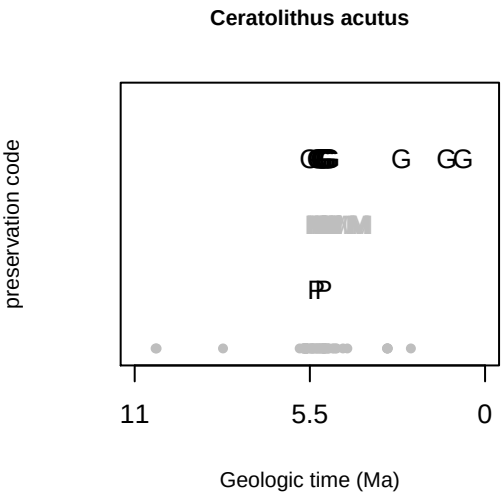

Calcidiscus protoannulus
preservation code
G
G
M
P
56
30.5
5
Geologic time (Ma)

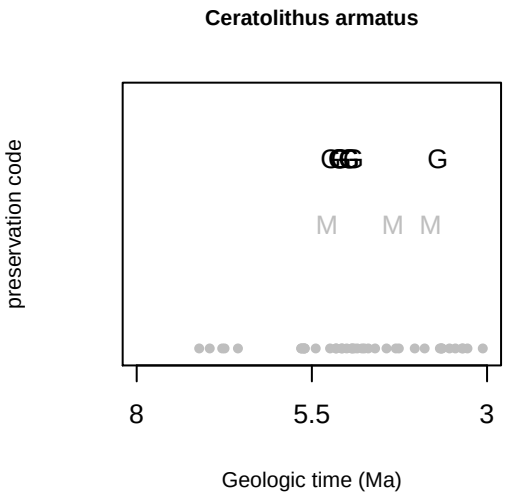

Campylosphaera dela
preservation code
67
46
25
Geologic time (Ma)

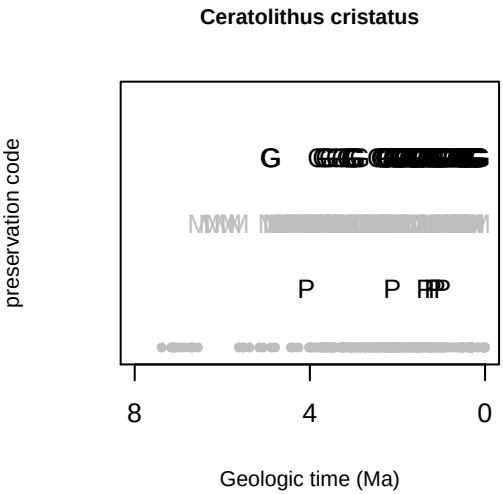

Campylosphaera eodela
preservation code
63
53.5
44
Geologic time (Ma)

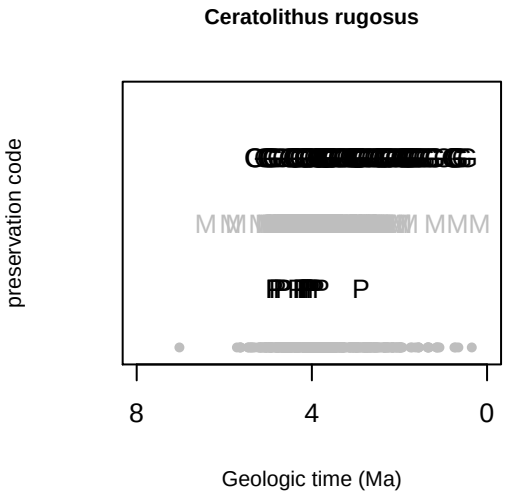

Catinaster calyculus
preservation code
18
10
2
Geologic time (Ma)

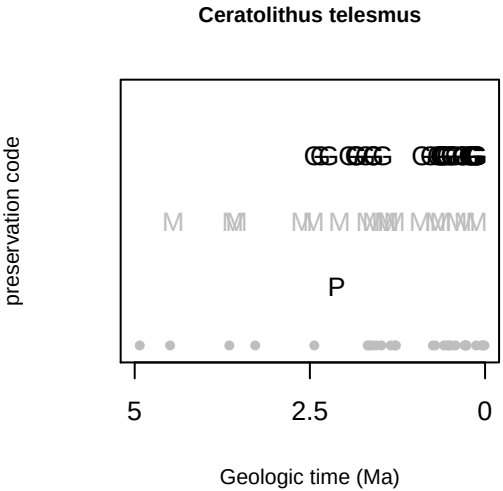

Catinaster coalitus
preservation code
14
8.5
3
Geologic time (Ma)

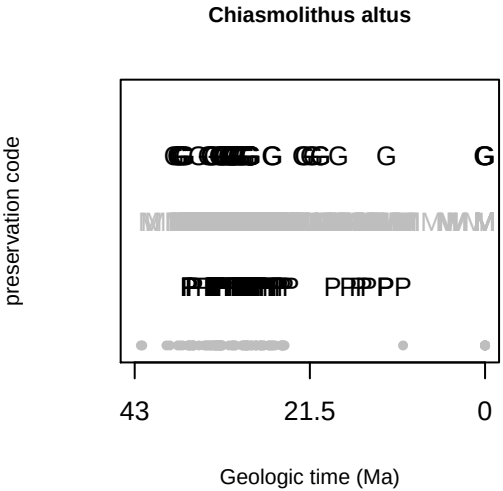

Ceratolithus acutus
preservation code
G
GG
M
P
11
5.5
0
Geologic time (Ma)

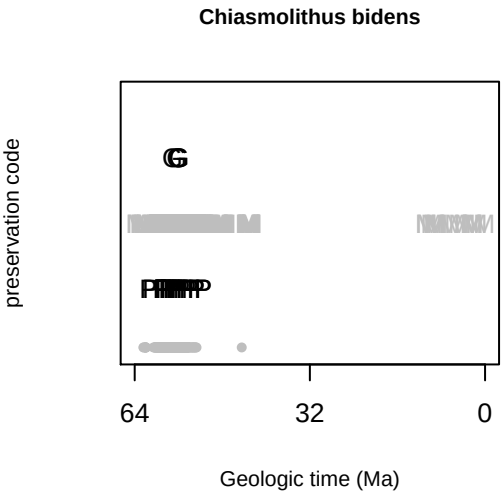

Ceratolithus armatus
preservation code
G
M
M
M
8
5.5
3
Geologic time (Ma)

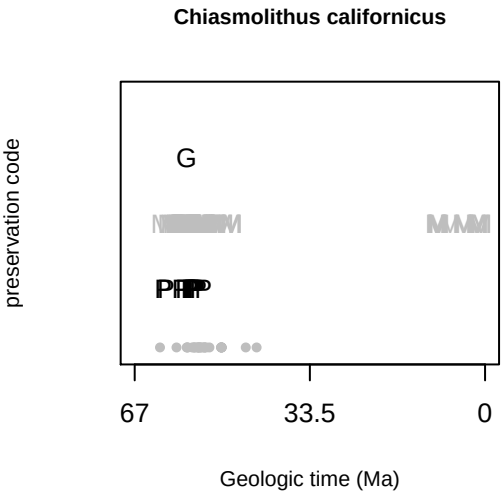

Ceratolithus cristatus
preservation code
G
M
P
P
8
4
0
Geologic time (Ma)

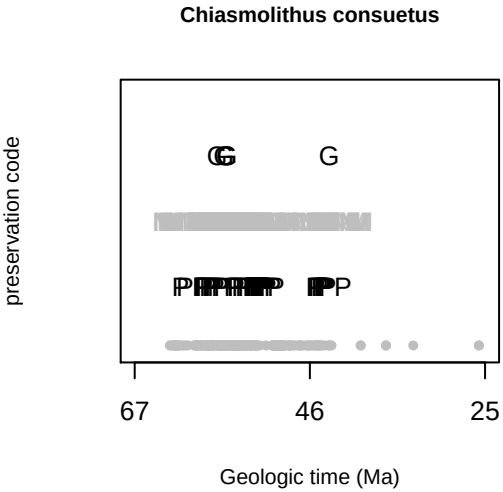

Ceratolithus rugosus
preservation code
M
M
M
M
P
8
4
0
Geologic time (Ma)

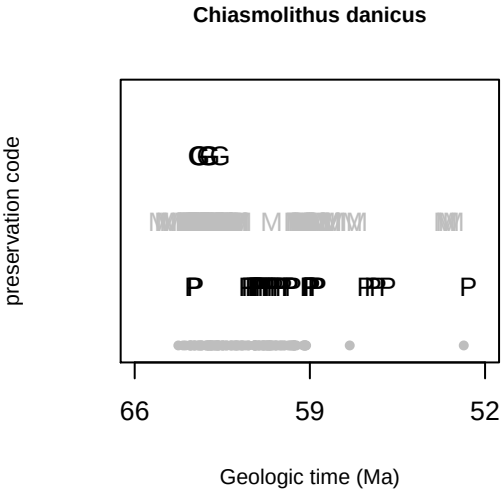

Ceratolithus telesmus
preservation code
5
2.5
0
Geologic time (Ma)

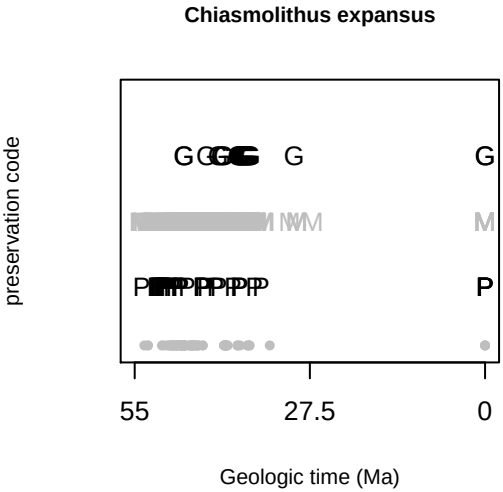

Chiasmolithus altus
preservation code
43
21.5
0
Geologic time (Ma)

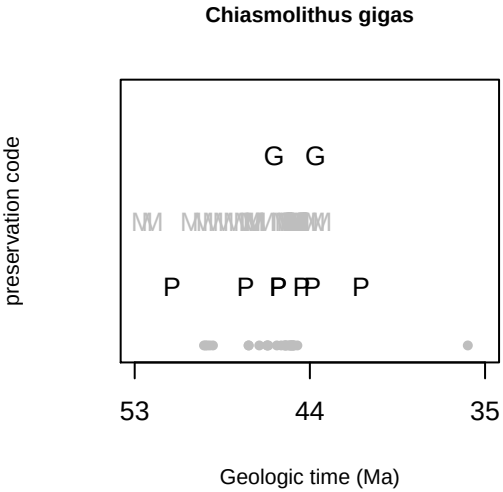

Chiasmolithus bidens
preservation code
64
32
0
Geologic time (Ma)

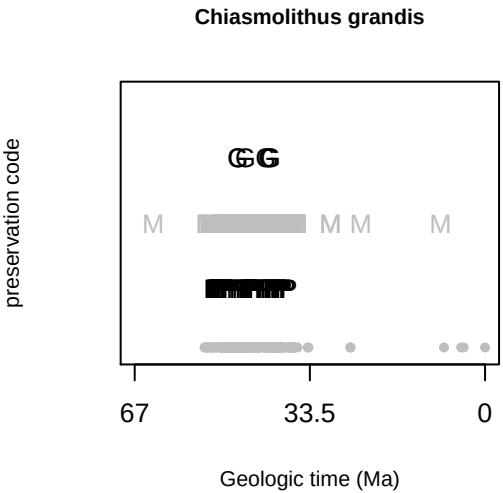

Chiasmolithus californicus
preservation code
67
33.5
0
Geologic time (Ma)

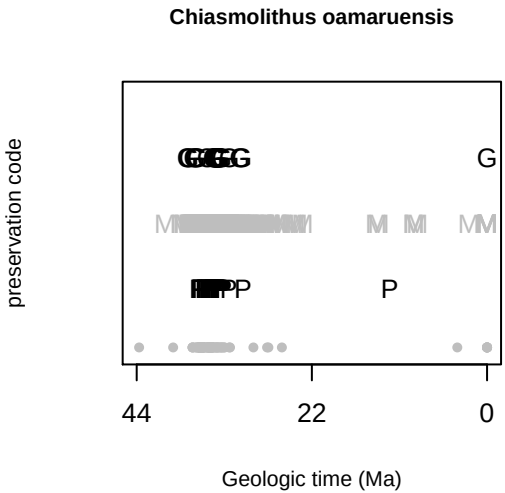

Chiasmolithus consuetus
preservation code
67
46
25
Geologic time (Ma)

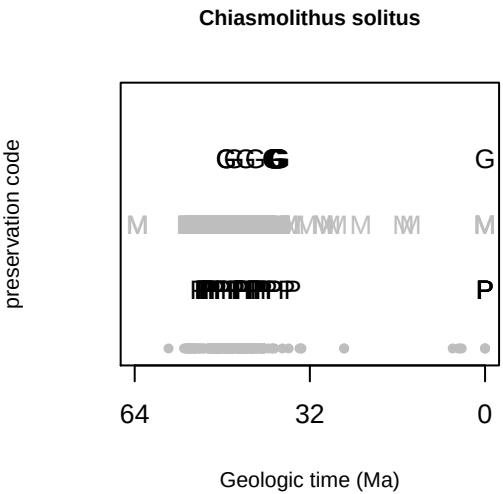

Chiasmolithus danicus
preservation code
66
59
52
Geologic time (Ma)

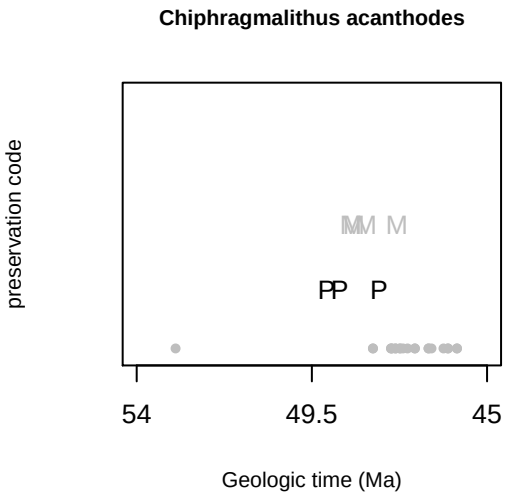

Chiasmolithus expansus
preservation code
55
27.5
0
Geologic time (Ma)

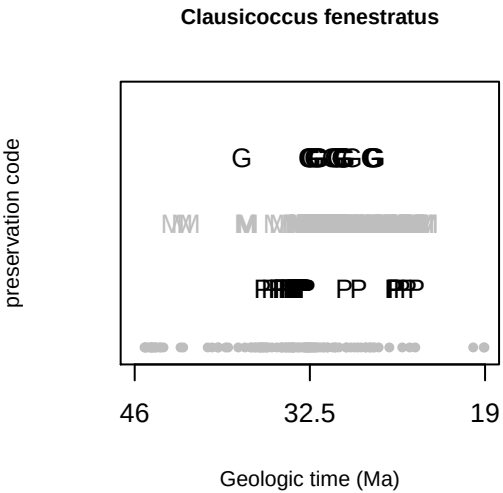

Chiasmolithus gigas
preservation code
53
44
35
Geologic time (Ma)

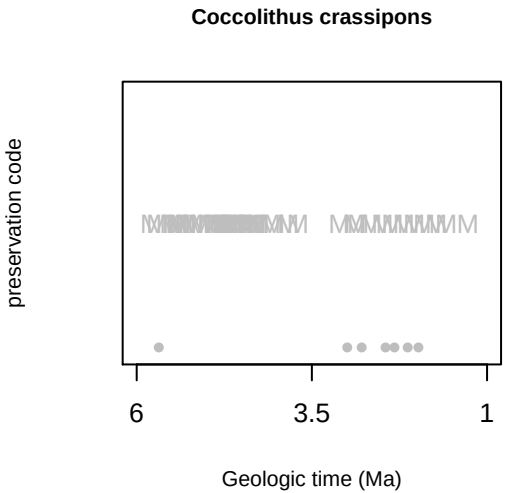

Chiasmolithus grandis
preservation code
G G
M
M M
M
67
33.5
0
Geologic time (Ma)

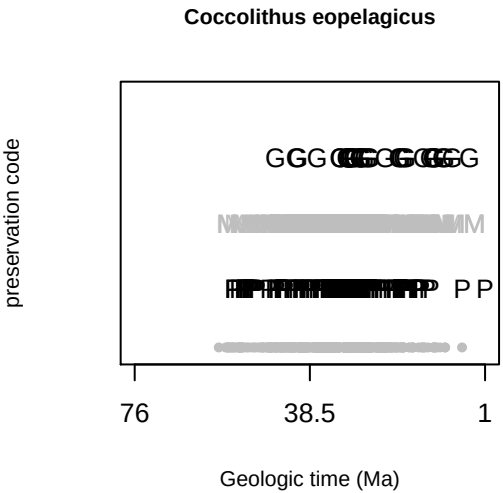

Chiasmolithus oamaruensis
preservation code
G
M
P
P
44
22
0
Geologic time (Ma)

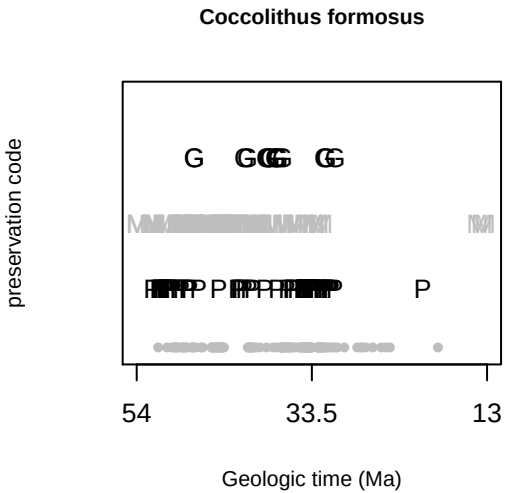

Chiasmolithus solitus
preservation code
G
M
M
P
64
32
0
Geologic time (Ma)

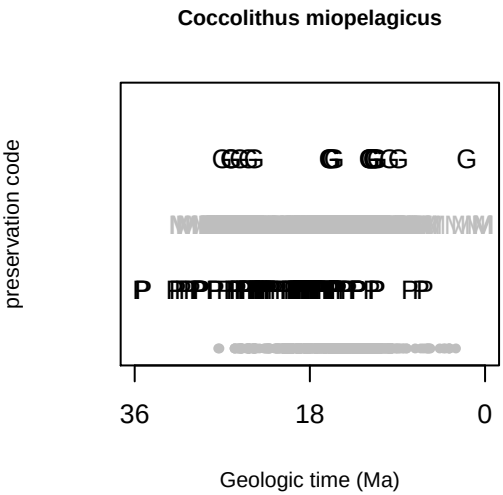

Chiphragmalithus acanthodes
preservation code
M M
P P
54
49.5
45
Geologic time (Ma)

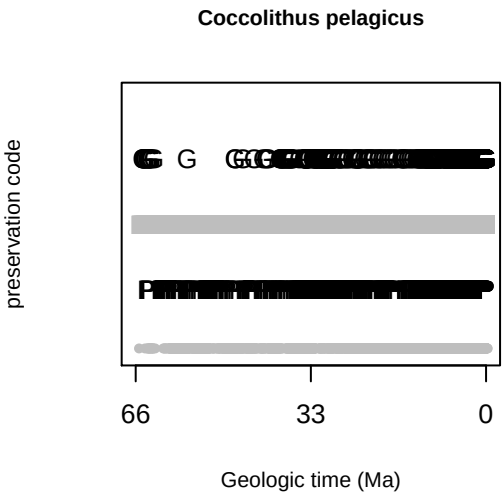

Clausicoccus fenestratus
preservation code
46
32.5
19
Geologic time (Ma)

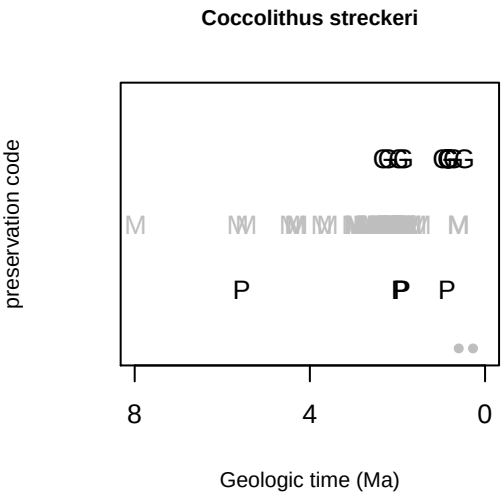

Coccolithus crassipons
preservation code
6
3.5
1
Geologic time (Ma)

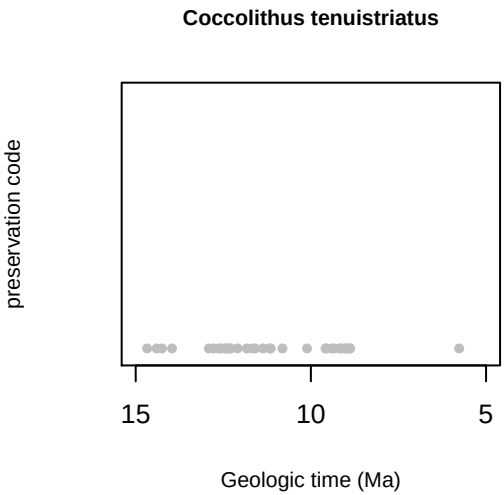

Coccolithus eopelagicus
preservation code
76
38.5
1
Geologic time (Ma)

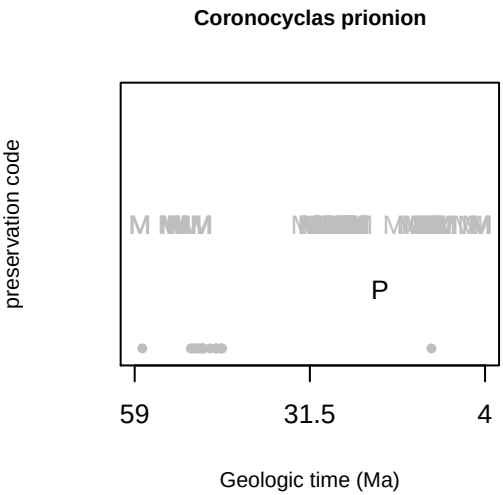

Coccolithus formosus
preservation code
54
33.5
13
Geologic time (Ma)

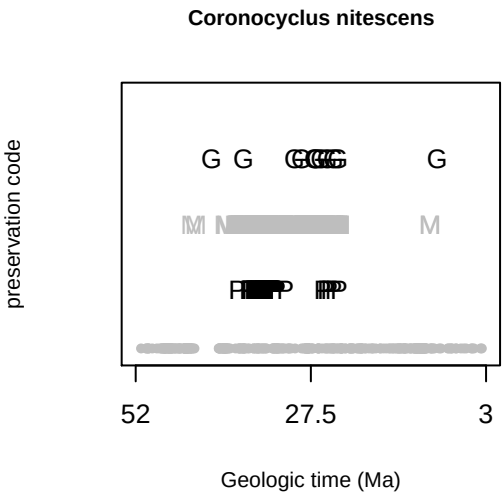

Coccolithus miopelagicus
preservation code
36
18
0
Geologic time (Ma)

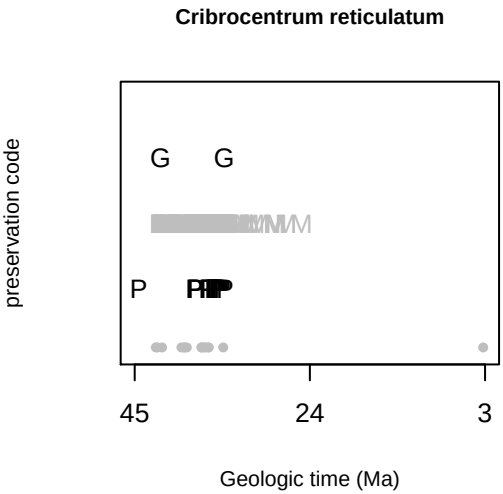

Coccolithus pelagicus
preservation code
66
33
0
Geologic time (Ma)

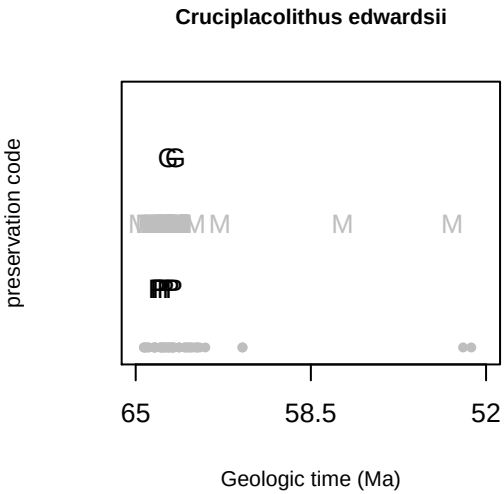

Coccolithus streckeri
preservation code
8
4
0
Geologic time (Ma)

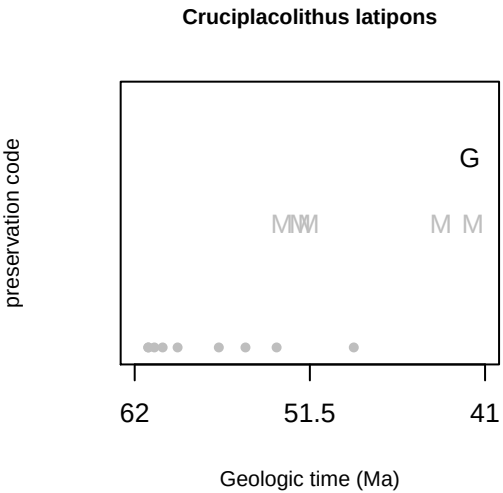

Coccolithus tenuistriatus
preservation code
15
10
5
Geologic time (Ma)

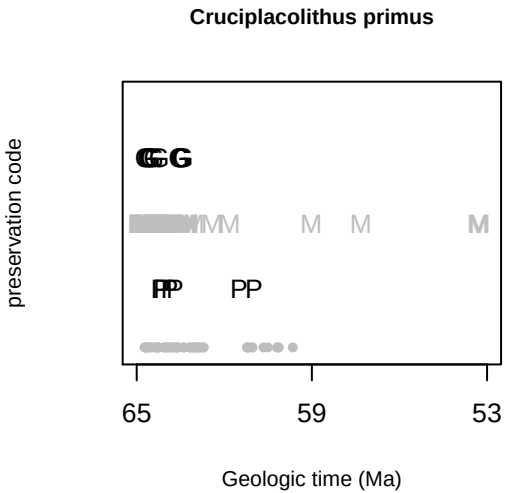

Coronocyclas prionion
preservation code
M
P
59
31.5
4
Geologic time (Ma)

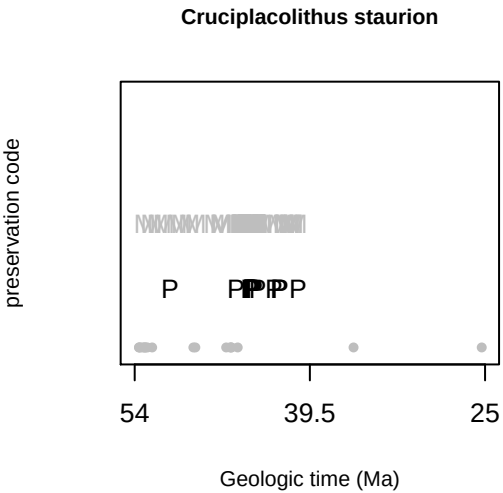

Coronocyclus nitescens
preservation code
G
M
P
52
27.5
3
Geologic time (Ma)

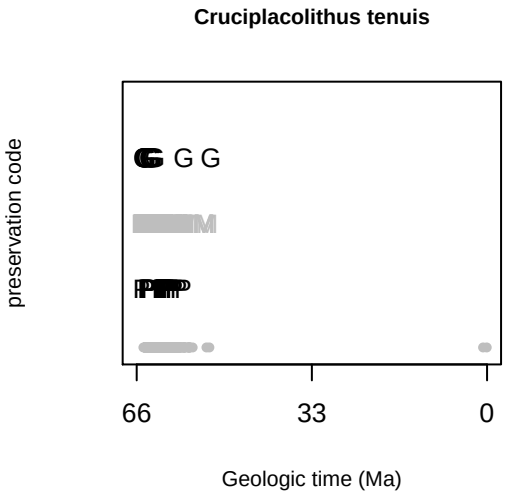

Cribrocentrum reticulatum
preservation code
G
M
P
45
24
3
Geologic time (Ma)

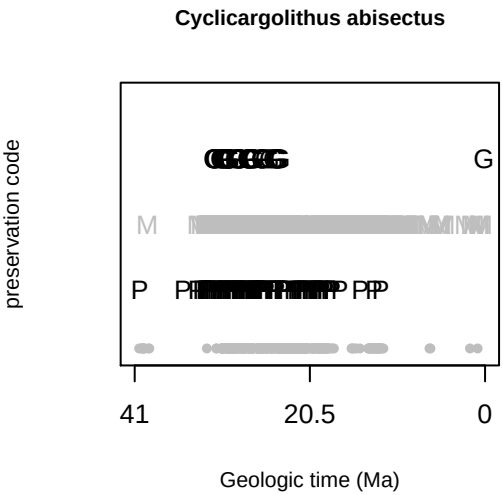

Cruciplacolithus edwardsii
preservation code
G
M
P
65
58.5
52
Geologic time (Ma)

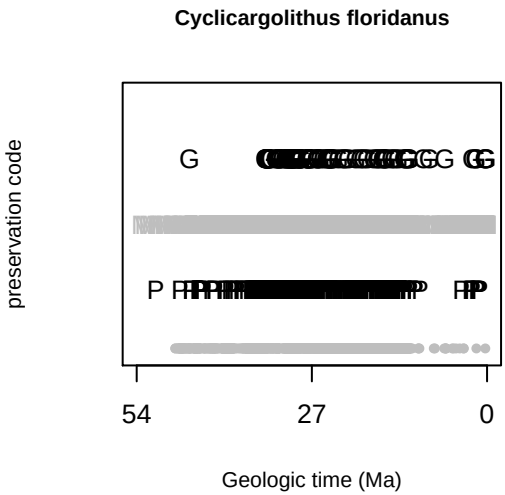

Cruciplacolithus latipons
preservation code
G
M M M
M M
62
51.5
41
Geologic time (Ma)

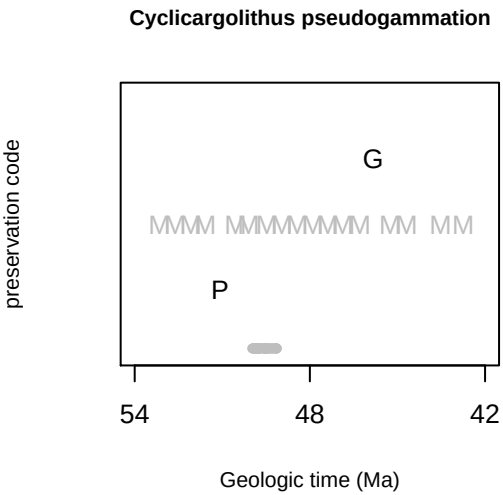

Cruciplacolithus primus
preservation code
G G
M M M
M
PP
65
59
53
Geologic time (Ma)

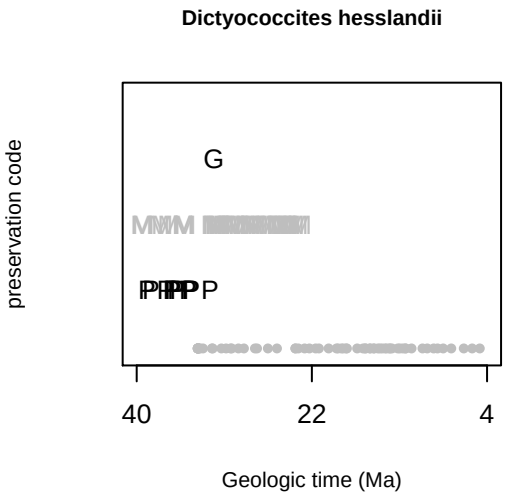

Cruciplacolithus staurion
preservation code
P
P P P P
54
39.5
25
Geologic time (Ma)

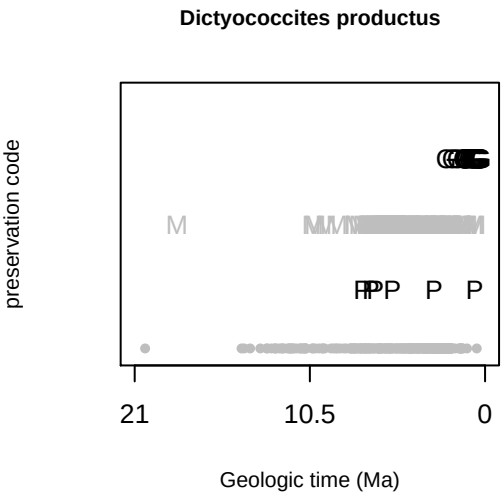

Cruciplacolithus tenuis
preservation code
G G G
M
66
33
0
Geologic time (Ma)

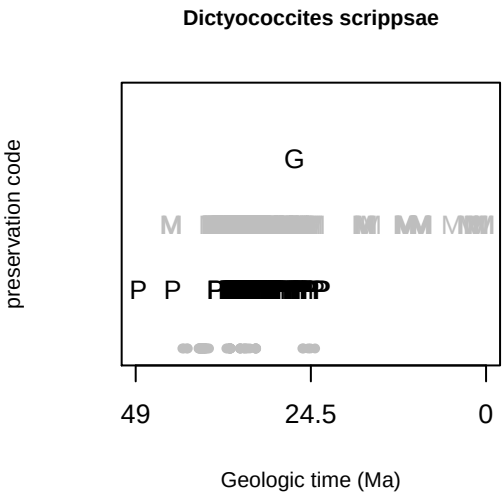

Cyclicargolithus abisectus
preservation code
G
M
P
41
20.5
0
Geologic time (Ma)

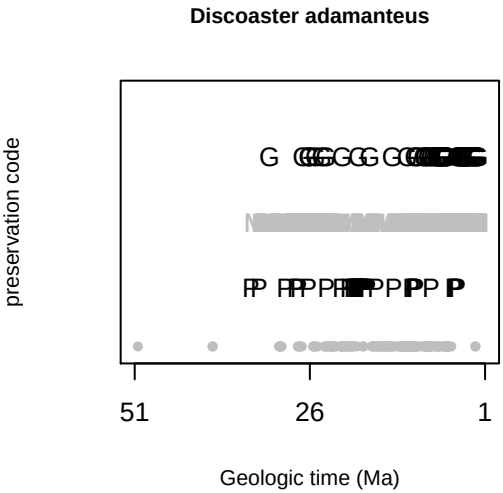

Cyclicargolithus floridanus
preservation code
G
P
54
27
0
Geologic time (Ma)

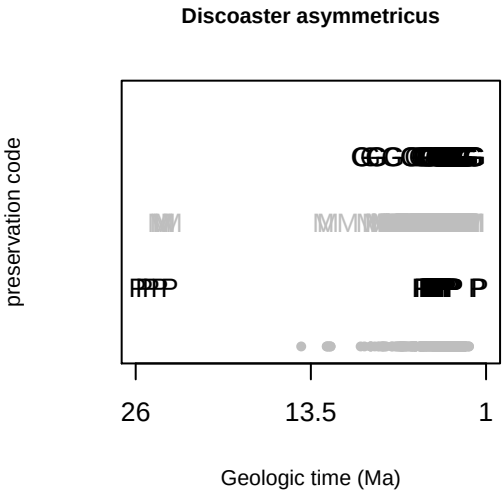

Cyclicargolithus pseudogammation
preservation code
G
M
P
54
48
42
Geologic time (Ma)

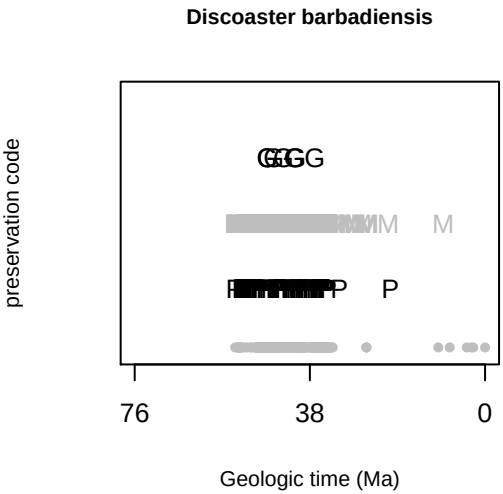

Dictyococcites hesslandii
preservation code
G
M
P
40
22
4
Geologic time (Ma)

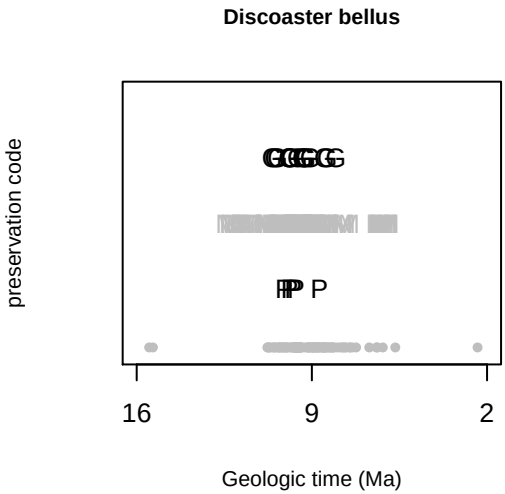

Dictyococcites productus
preservation code
21
10.5
0
Geologic time (Ma)

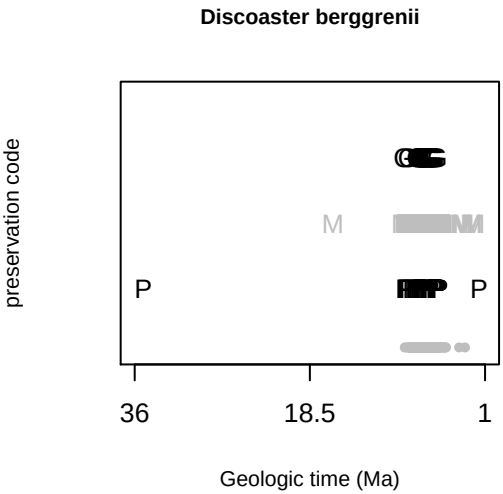

Dictyococcites scrippsae
preservation code
G
P P
49
24.5
0
Geologic time (Ma)

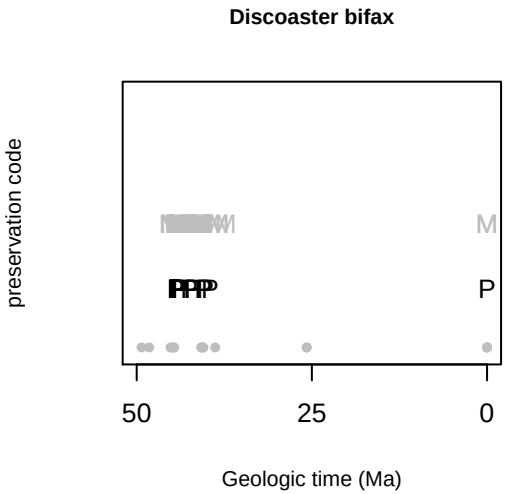

Discoaster adamanteus
preservation code
G
51
26
1
Geologic time (Ma)

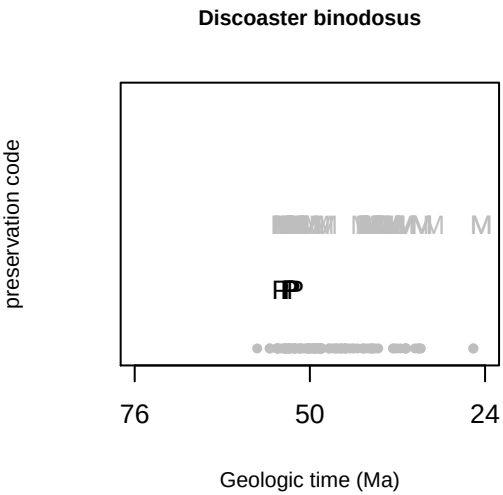

Discoaster asymmetricus
preservation code
26
13.5
1
Geologic time (Ma)

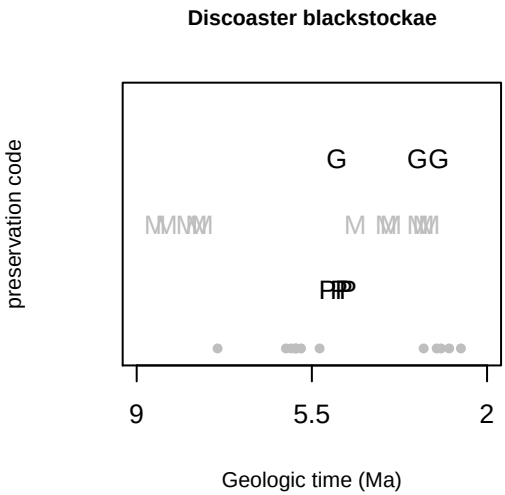

Discoaster barbadiensis
preservation code
G
M
P
76
38
0
Geologic time (Ma)

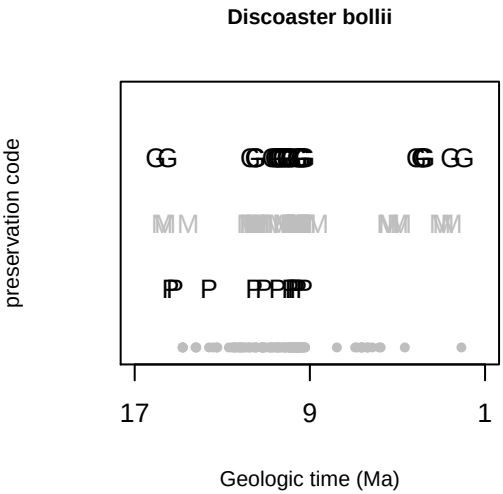

Discoaster bellus
preservation code
G
M
P
16
9
2
Geologic time (Ma)

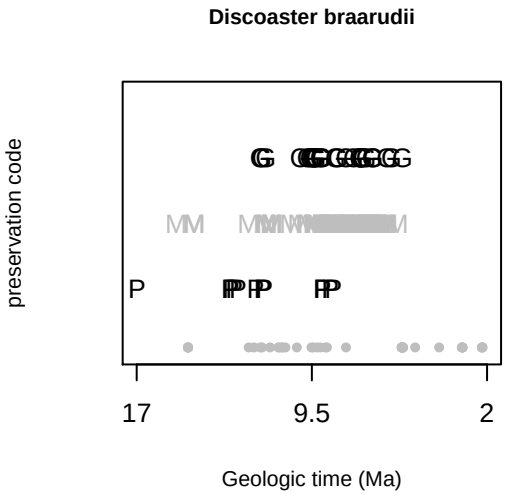

Discoaster berggrenii
preservation code
G
M
P
36
18.5
1
Geologic time (Ma)

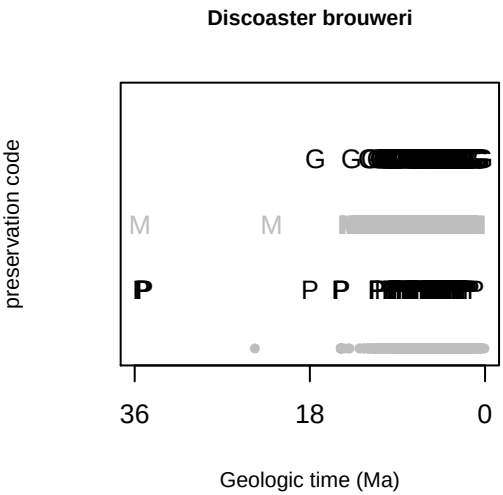

Discoaster bifax
preservation code
M
P
50
25
0
Geologic time (Ma)

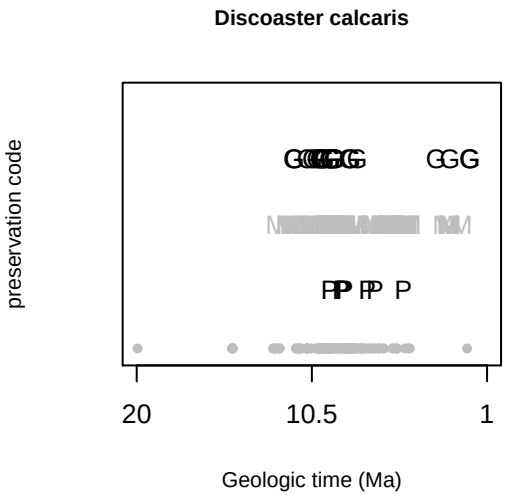

Discoaster binodosus
preservation code
76
50
24
Geologic time (Ma)

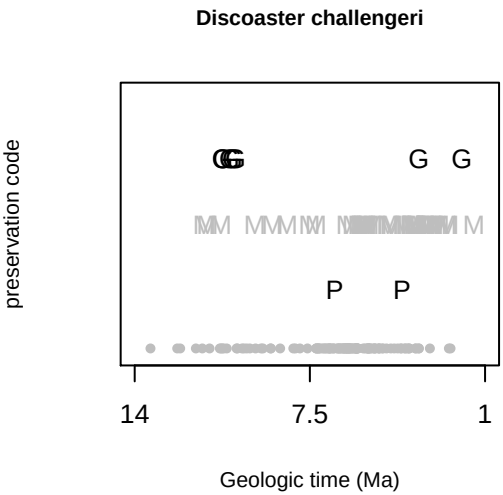

Discoaster blackstockae
preservation code
9
5.5
2
Geologic time (Ma)

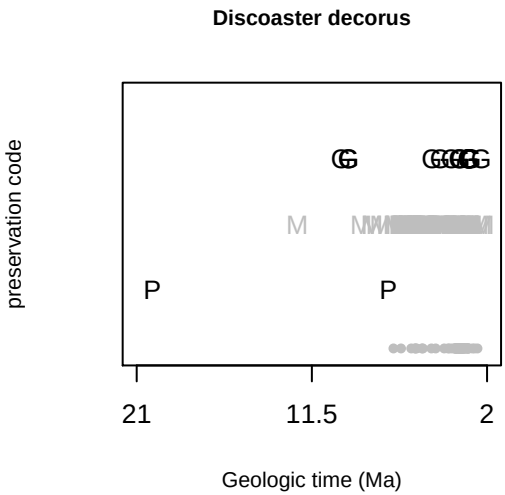

Discoaster bollii
preservation code
17
9
1
Geologic time (Ma)

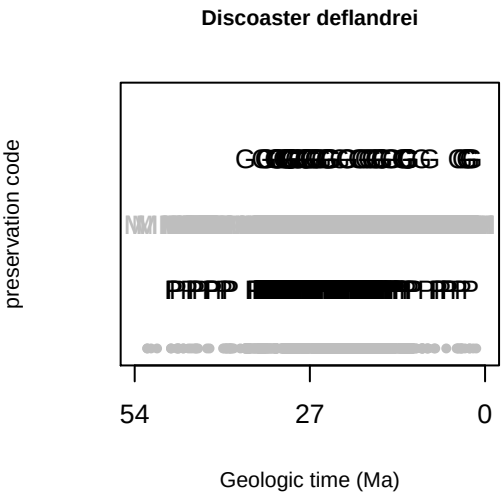

Discoaster braarudii
preservation code
17
9.5
2
Geologic time (Ma)

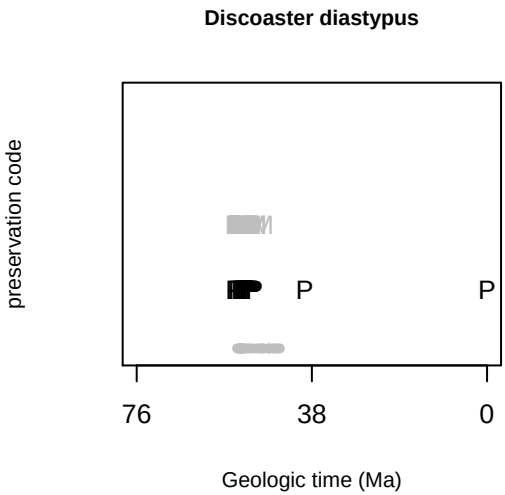

Discoaster brouweri
preservation code
Geologic time (Ma)
36
18
0

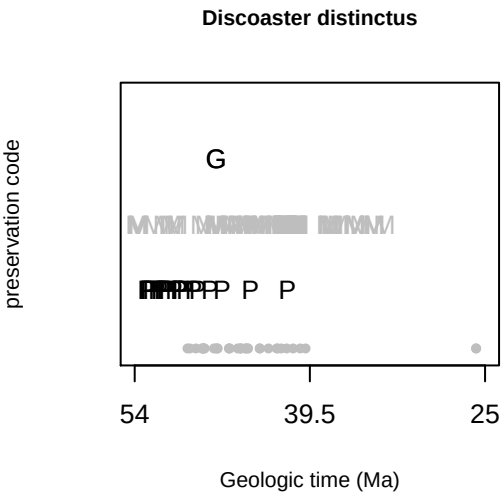

Discoaster calcaris
preservation code
Geologic time (Ma)
20
10.5
1

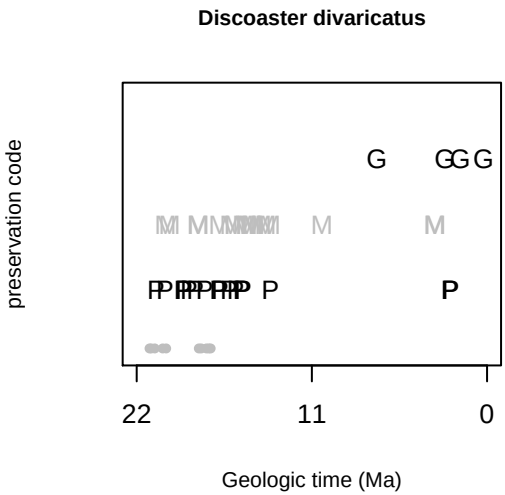

Discoaster challengeri
preservation code
Geologic time (Ma)
14
7.5
1

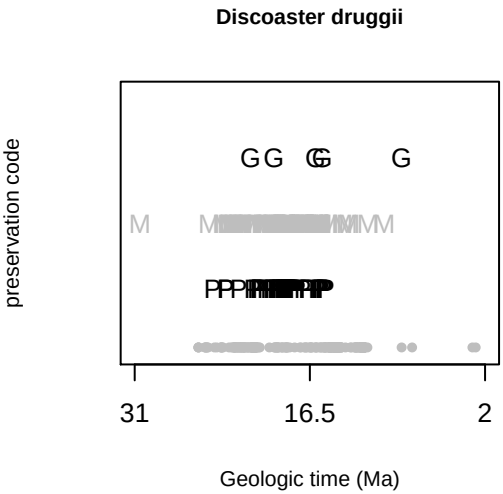

Discoaster decorus
preservation code
Geologic time (Ma)
21
11.5
2

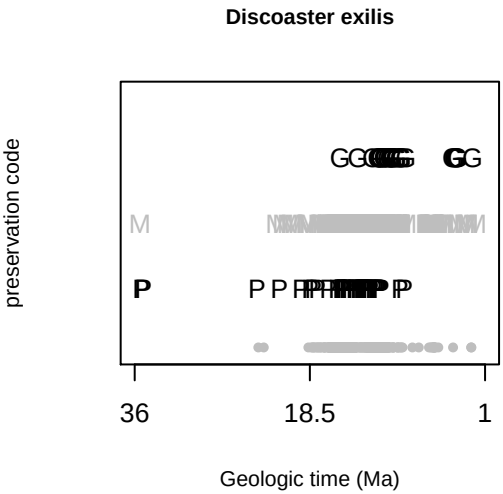

Discoaster deflandrei
preservation code
54
27
0
Geologic time (Ma)

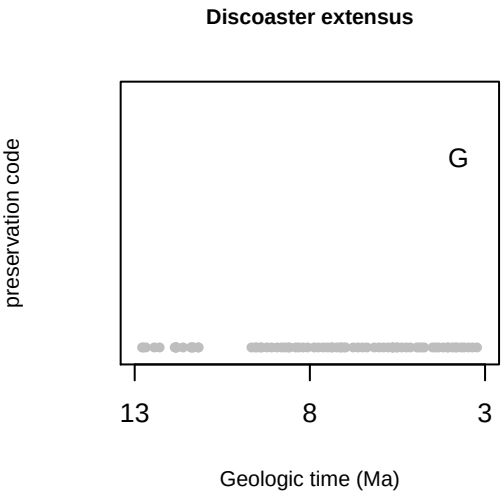

Discoaster diastypus
preservation code
P
P
76
38
0
Geologic time (Ma)

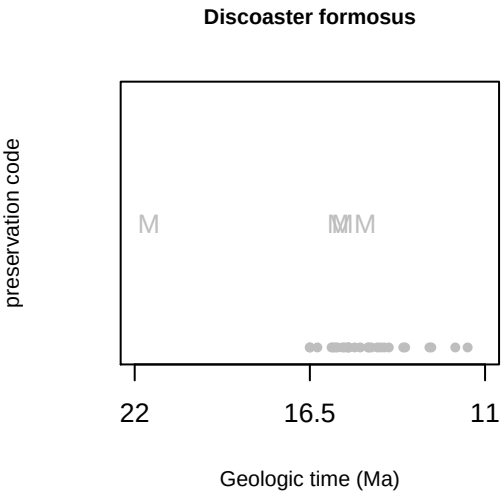

Discoaster distinctus
preservation code
G
P
P
54
39.5
25
Geologic time (Ma)

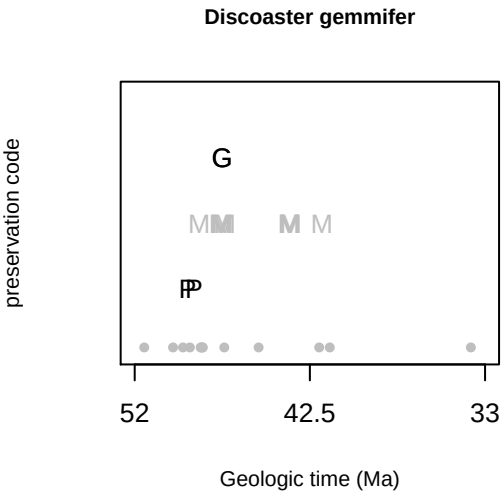

Discoaster divaricatus
preservation code
G
GGG
M
M
P
P
22
11
0
Geologic time (Ma)

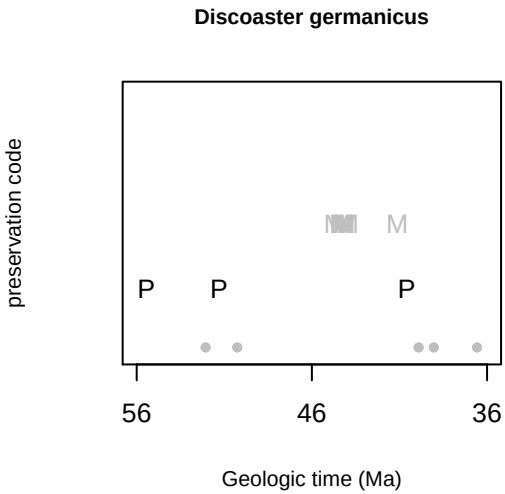

Discoaster druggii
preservation code
Geologic time (Ma)
31
16.5
2

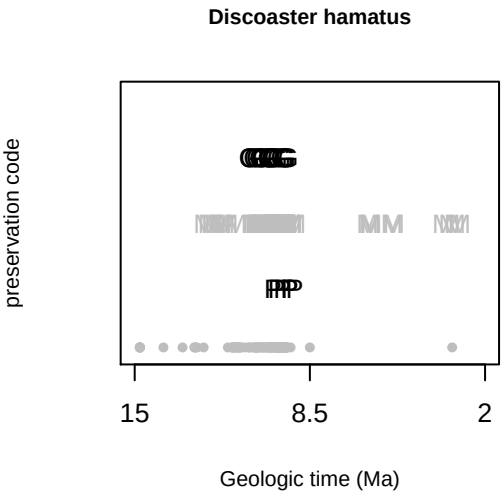

Discoaster exilis
preservation code
Geologic time (Ma)
36
18.5
1

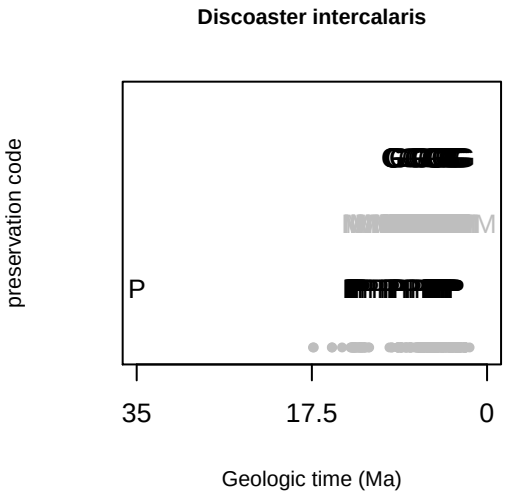

Discoaster extensus
preservation code
Geologic time (Ma)
13
8
3

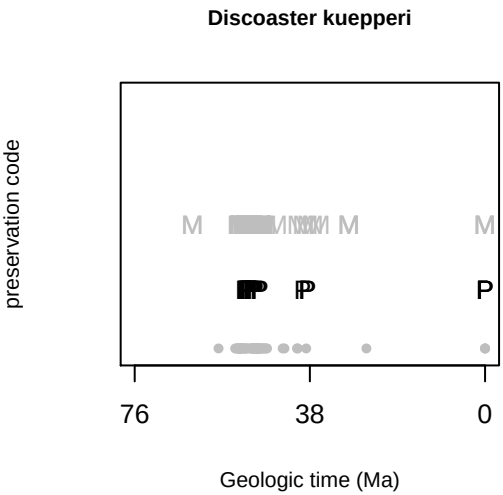

Discoaster formosus
preservation code
Geologic time (Ma)
22
16.5
11

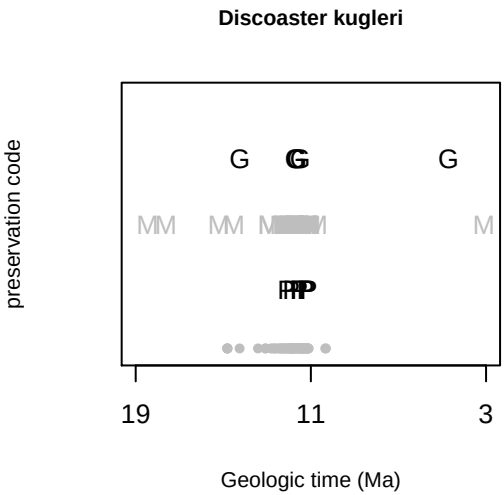

Discoaster gemmifer
preservation code
G
M
M
M
M
P
P
52
42.5
33
Geologic time (Ma)

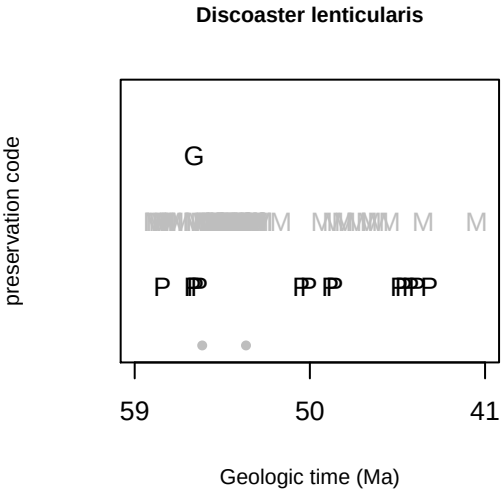

Discoaster germanicus
preservation code
M
P
P
P
56
46
36
Geologic time (Ma)

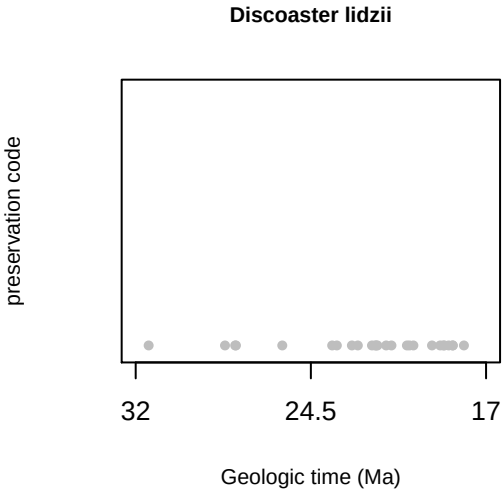

Discoaster hamatus
preservation code
M
M
P
15
8.5
2
Geologic time (Ma)

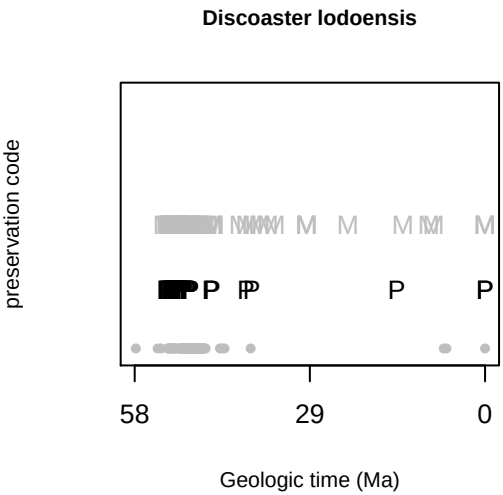

Discoaster intercalaris
preservation code
M
P
35
17.5
0
Geologic time (Ma)

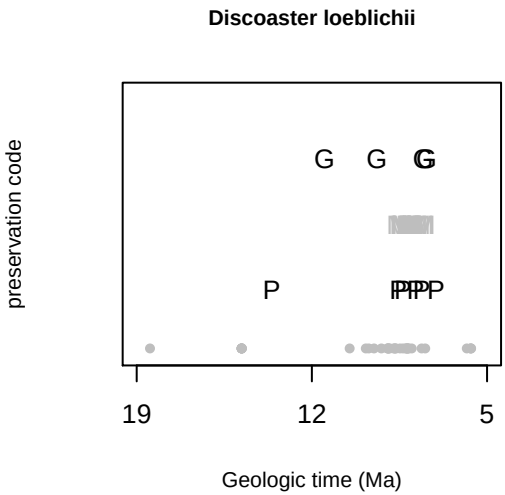

Discoaster kuepperi
preservation code
M
P
76
38
0
Geologic time (Ma)

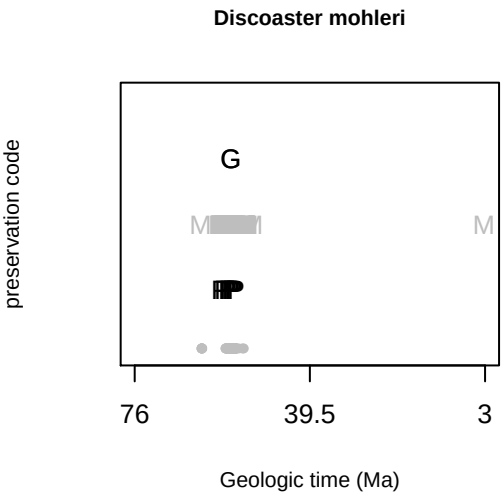

Discoaster kugleri
preservation code
G
M
P
19
11
3
Geologic time (Ma)

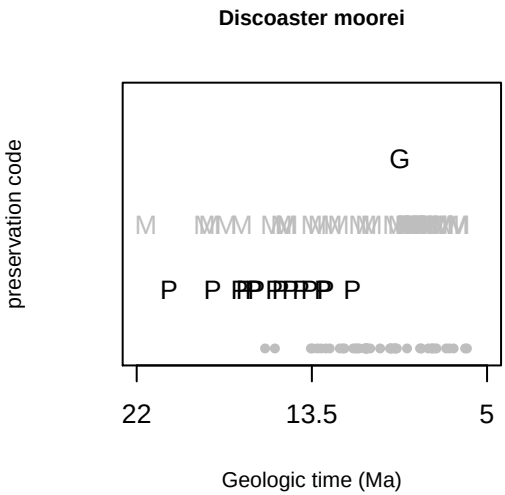

Discoaster lenticularis
preservation code
G
M
P
59
50
41
Geologic time (Ma)

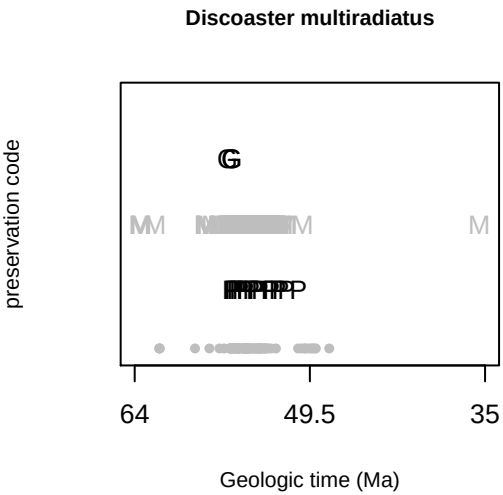

Discoaster lidzii
preservation code
32
24.5
17
Geologic time (Ma)

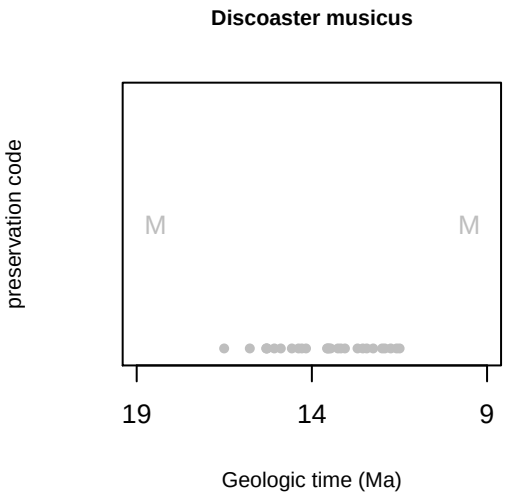

Discoaster lodoensis
preservation code
58
29
0
Geologic time (Ma)

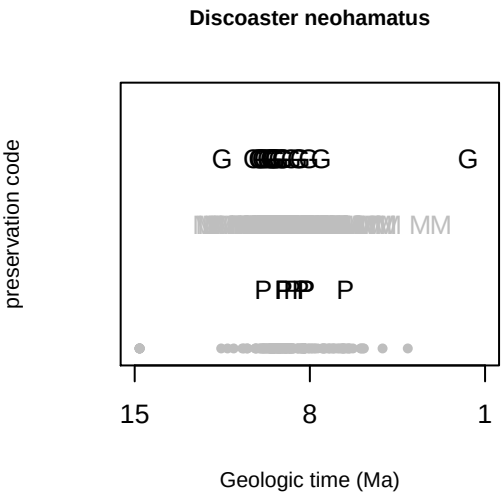

Discoaster loeblichii
preservation code
19
12
5
Geologic time (Ma)

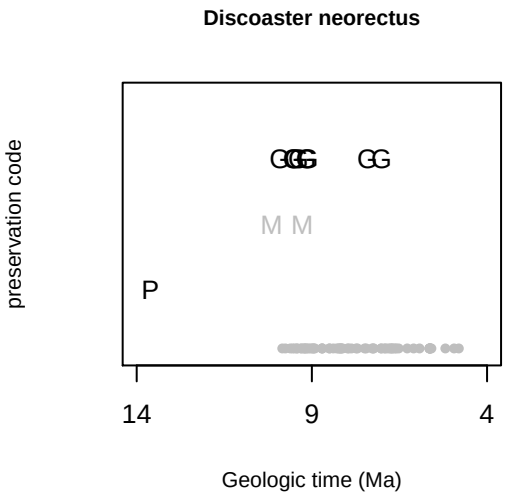

Discoaster mohleri
preservation code
76
39.5
3
Geologic time (Ma)

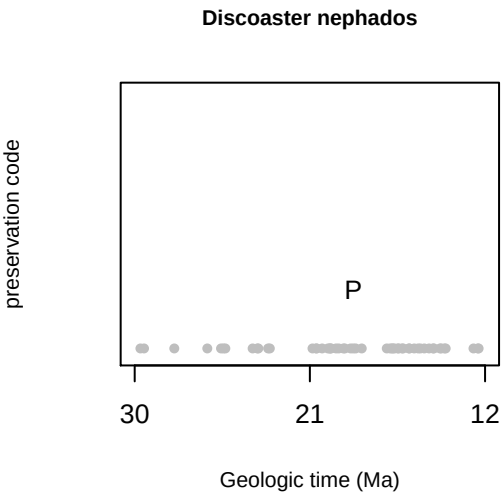

Discoaster moorei
preservation code
22
13.5
5
Geologic time (Ma)

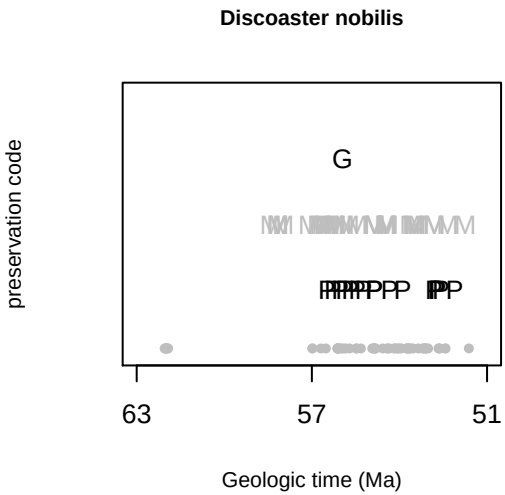

Discoaster multiradiatus
preservation code
64
49.5
35
Geologic time (Ma)

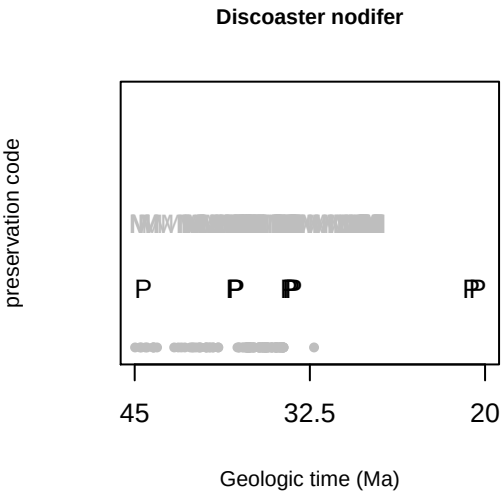

Discoaster musicus
preservation code
19
14
9
Geologic time (Ma)

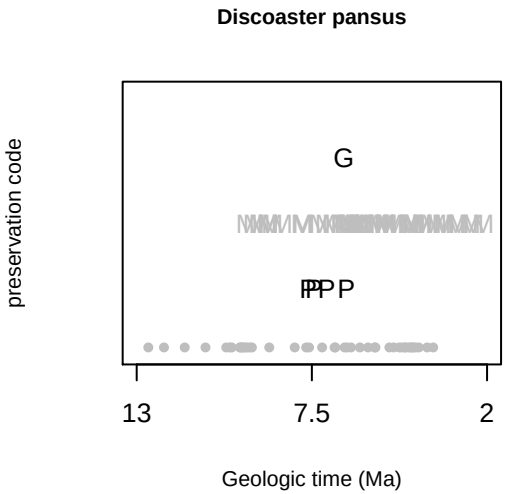

Discoaster neohamatus
preservation code
15
8
1
Geologic time (Ma)

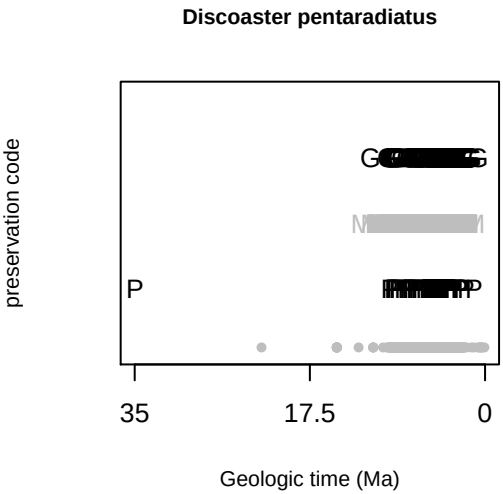

Discoaster neorectus
preservation code
14
9
4
Geologic time (Ma)

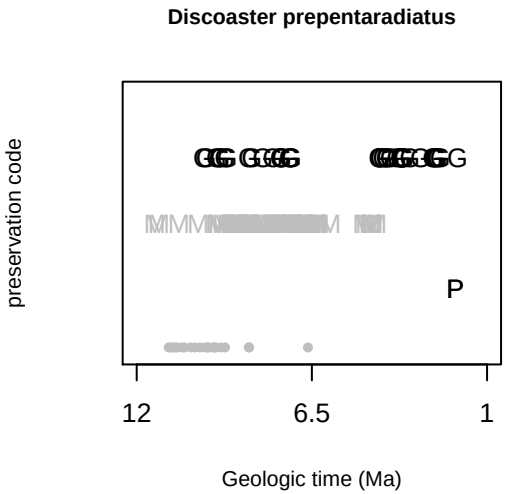

Discoaster nephados
preservation code
P
30
21
12
Geologic time (Ma)

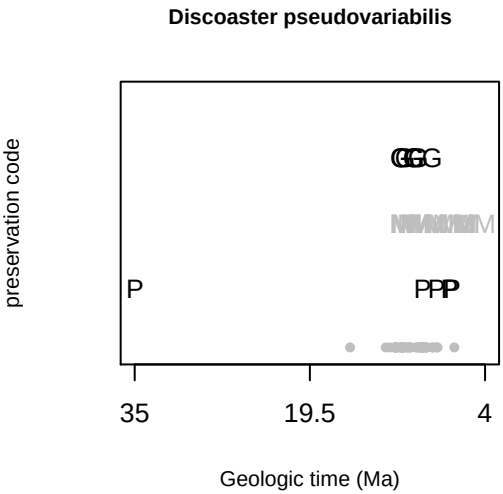

Discoaster nobilis
preservation code
G
63
57
51
Geologic time (Ma)

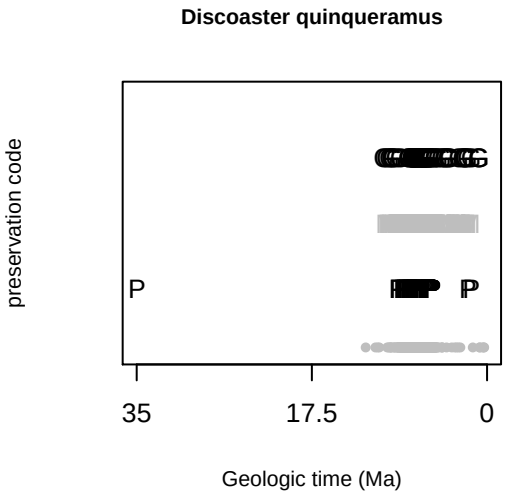

Discoaster nodifer
preservation code
P
45
32.5
20
Geologic time (Ma)

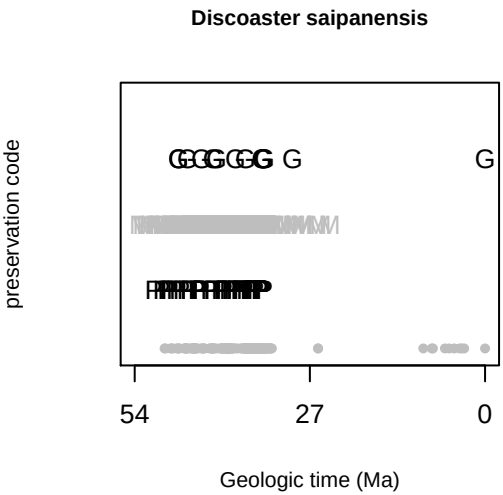

Discoaster pansus
preservation code
G
13
7.5
2
Geologic time (Ma)

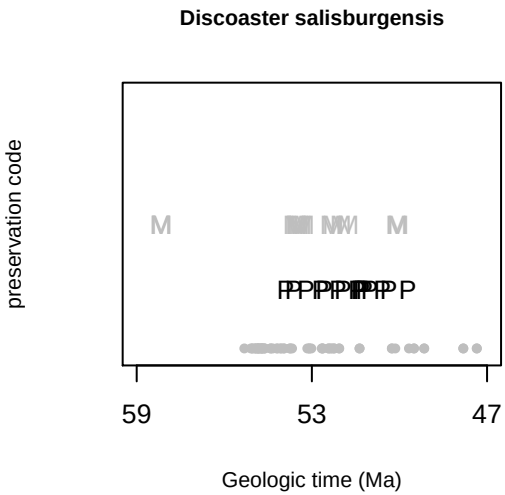

Discoaster pentaradiatus
preservation code
P
35
17.5
0
Geologic time (Ma)

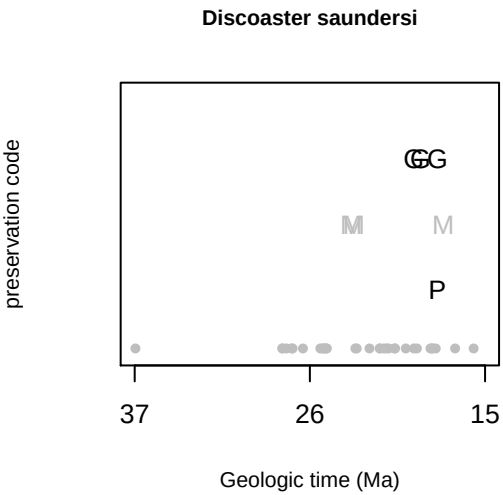

Discoaster prepentaradiatus
preservation code
P
12
6.5
1
Geologic time (Ma)

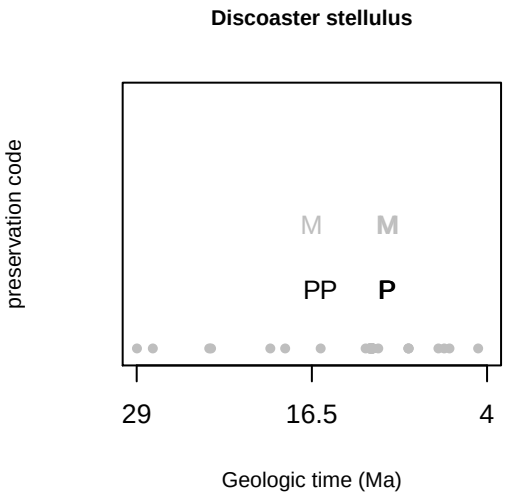

Discoaster pseudovariabilis
preservation code
P
35
19.5
4
Geologic time (Ma)

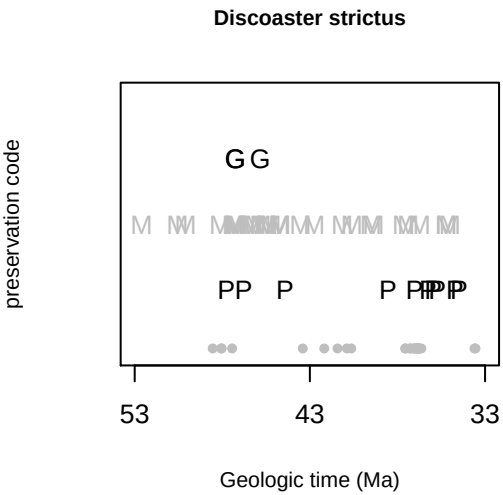

Discoaster quinqueramus
preservation code
P
35
17.5
0
Geologic time (Ma)

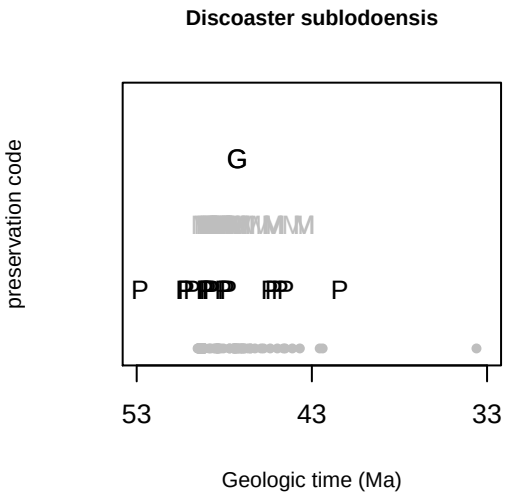

Discoaster saipanensis
preservation code
Geologic time (Ma)
54
27
0

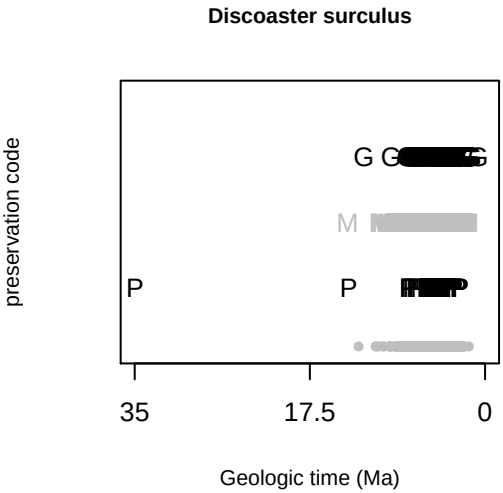

Discoaster salisburgensis
preservation code
Geologic time (Ma)
59
53
47

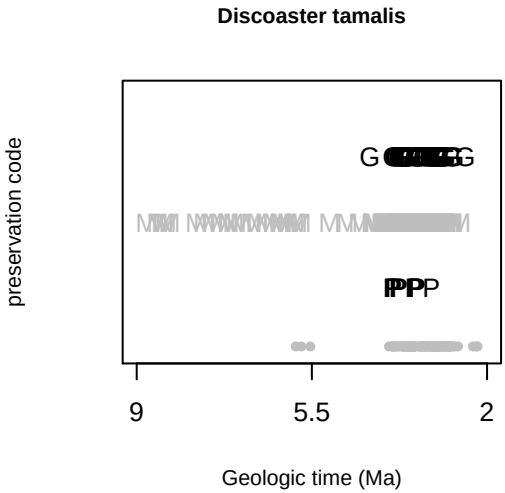

Discoaster saundersi
preservation code
Geologic time (Ma)
37
26
15

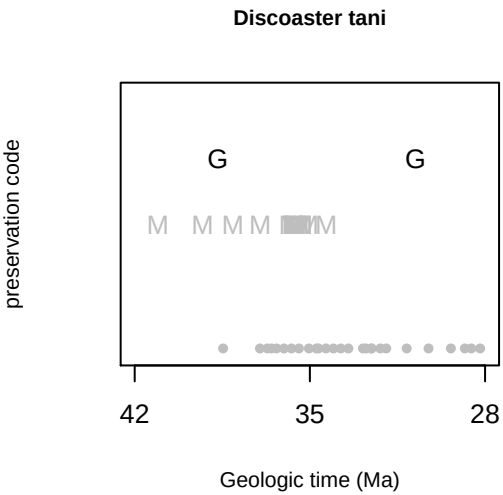

Discoaster stellulus
preservation code
Geologic time (Ma)
29
16.5
4

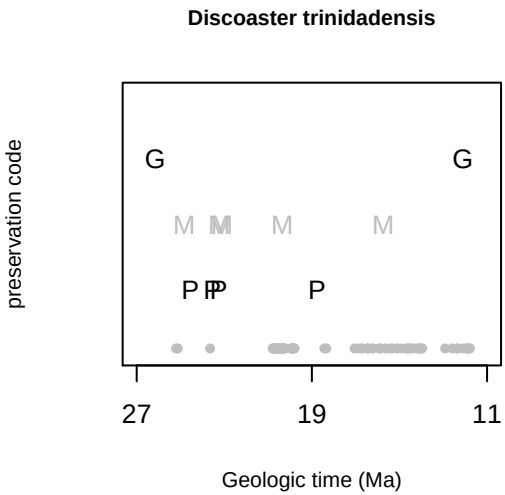

Discoaster strictus
preservation code
G G
M
PP P
P
53
43
33
Geologic time (Ma)

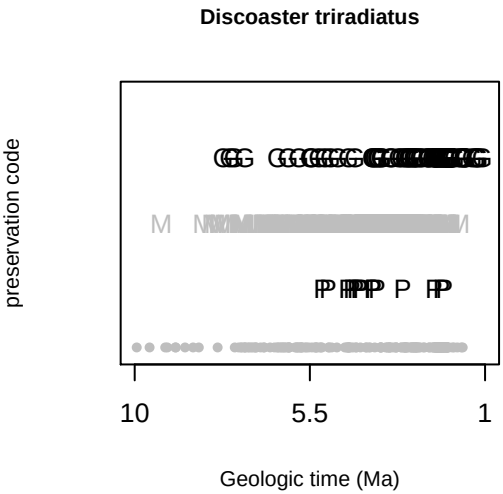

Discoaster sublodoensis
preservation code
G
P
P
53
43
33
Geologic time (Ma)

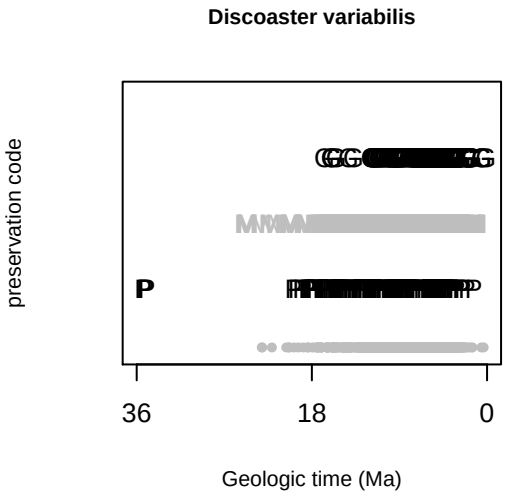

Discoaster surculus
preservation code
G G
M
P
P
35
17.5
0
Geologic time (Ma)

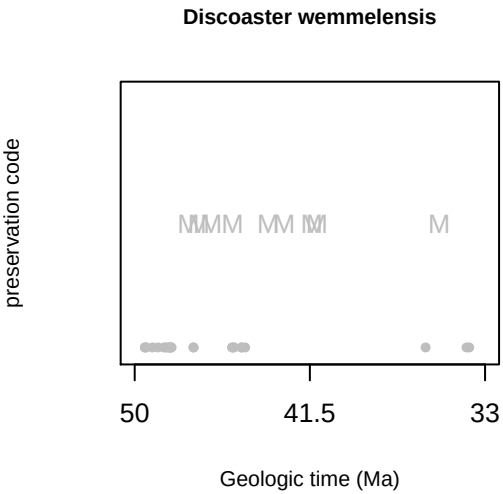

Discoaster tamalis
preservation code
G
M
P
9
5.5
2
Geologic time (Ma)

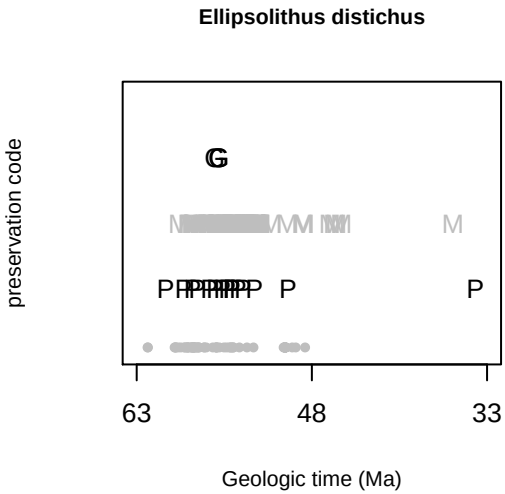

Discoaster tani
preservation code
G
G
M
M
M
M
M
42
35
28
Geologic time (Ma)

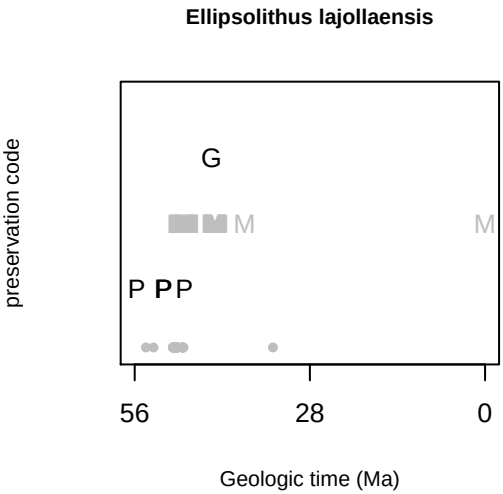

Discoaster trinidadensis
preservation code
G
G
M
M
M
M
P
P
P
27
19
11
Geologic time (Ma)

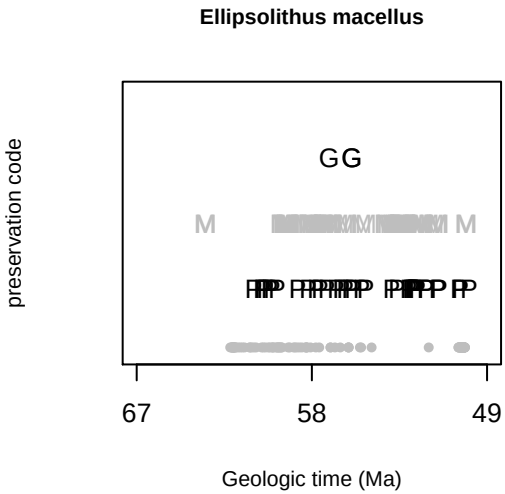

Discoaster triradiatus
preservation code
M
P
P
P
10
5.5
1
Geologic time (Ma)

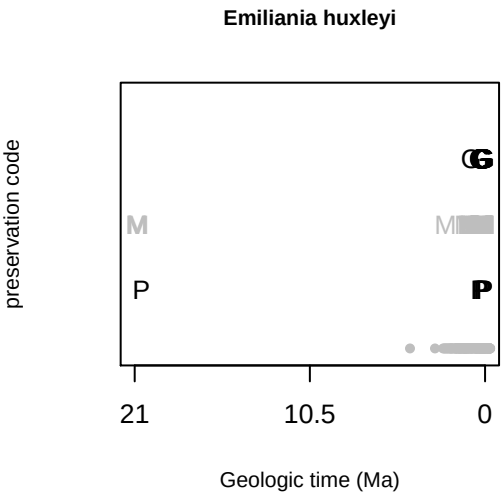

Discoaster variabilis
preservation code
P
36
18
0
Geologic time (Ma)

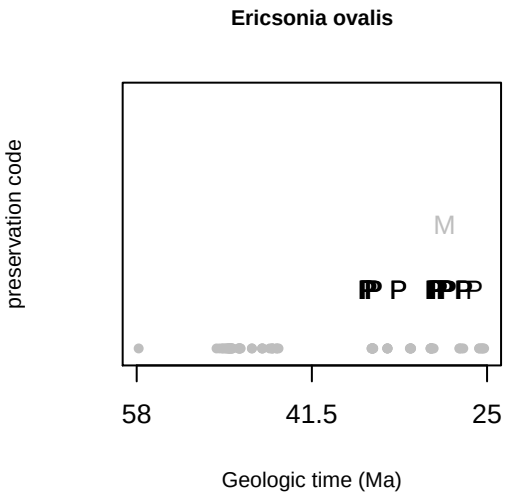

Discoaster wemmelensis
preservation code
50
41.5
33
Geologic time (Ma)

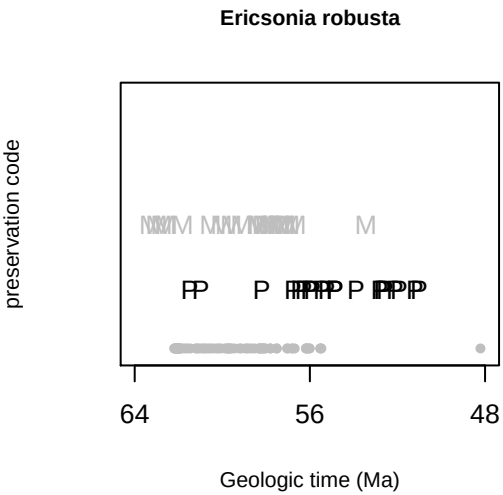

Ellipsolithus distichus
preservation code
63
48
33
Geologic time (Ma)

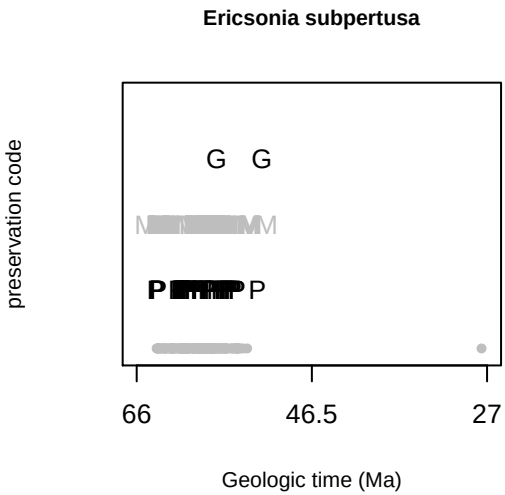

Ellipsolithus lajollaensis
preservation code
56
28
0
Geologic time (Ma)

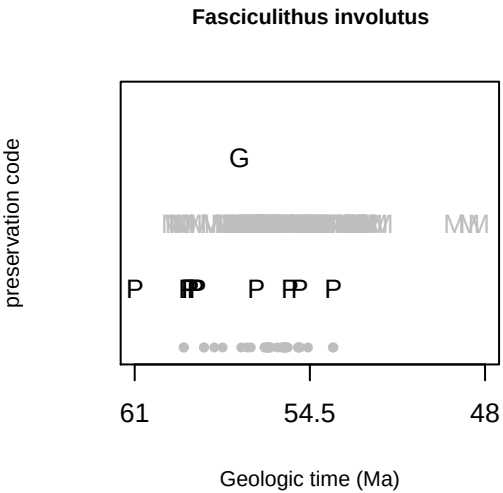

Ellipsolithus macellus
preservation code
67
58
49
Geologic time (Ma)

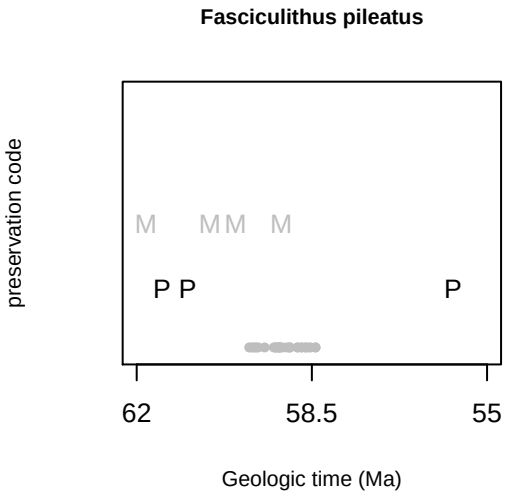

Emiliania huxleyi
preservation code
M
P
G
21
10.5
0
Geologic time (Ma)

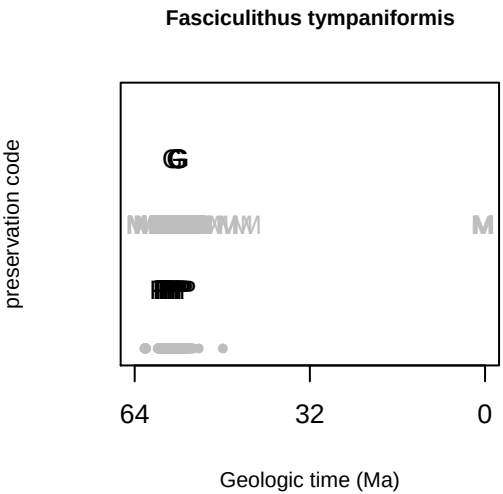

Ericsonia ovalis
preservation code
M
P
58
41.5
25
Geologic time (Ma)

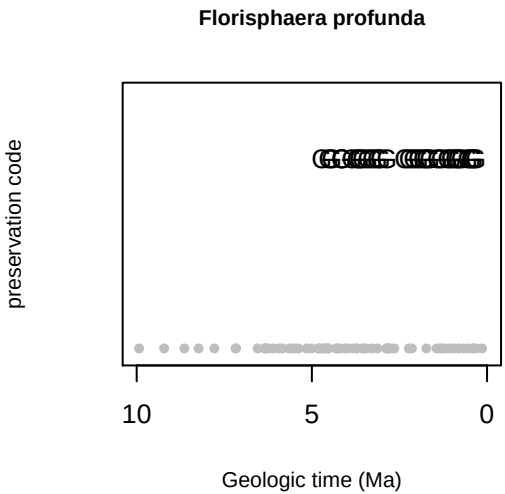

Ericsonia robusta
preservation code
M
P
64
56
48
Geologic time (Ma)

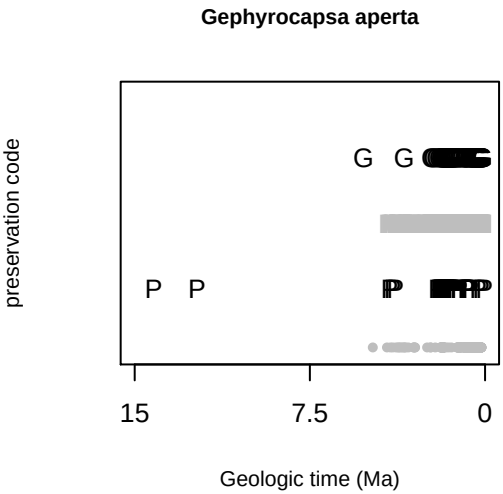

Ericsonia subpertusa
preservation code
G
M
P
66
46.5
27
Geologic time (Ma)

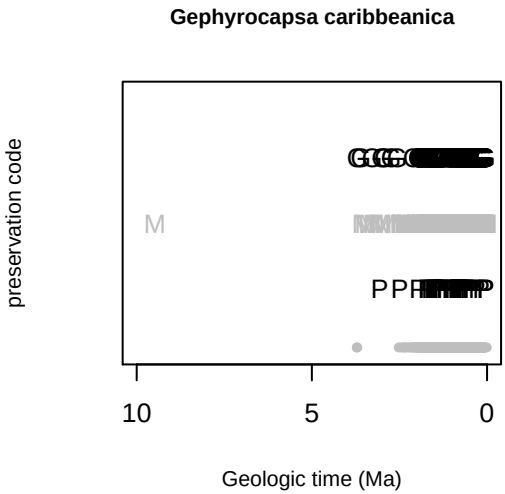

Fasciculithus involutus
preservation code
G
P
P
P
P
P
61
54.5
48
Geologic time (Ma)

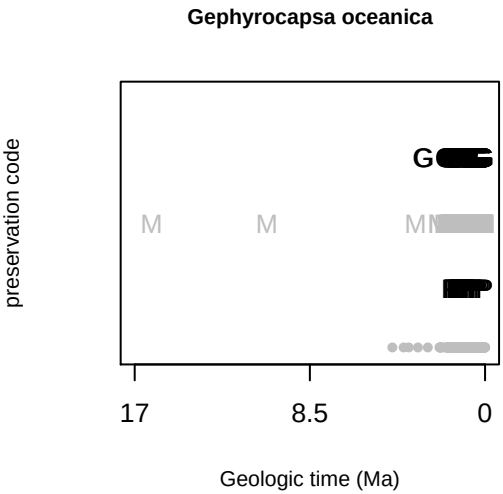

Fasciculithus pileatus
preservation code
M
M M
M
P P
P
62
58.5
55
Geologic time (Ma)

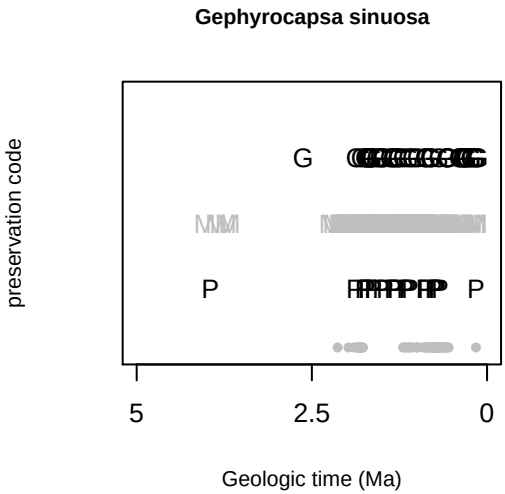

Fasciculithus tympaniformis
preservation code
G
M
64
32
0
Geologic time (Ma)

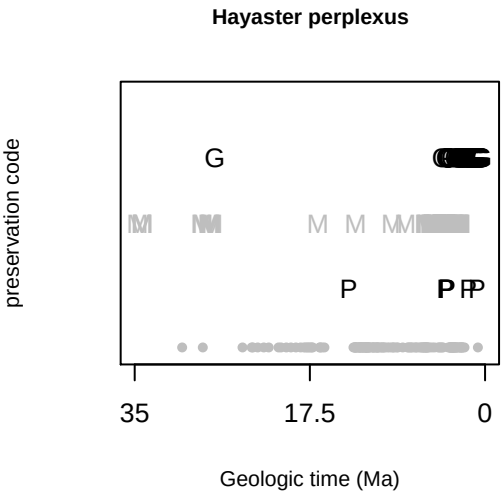

Florisphaera profunda
preservation code
10
5
0
Geologic time (Ma)

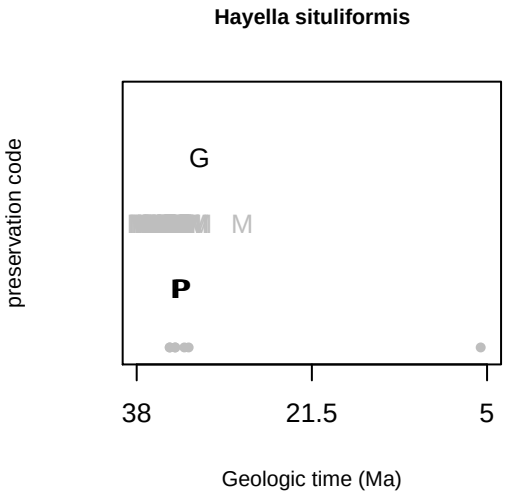

Gephyrocapsa aperta
preservation code
G G
P P
15
7.5
0
Geologic time (Ma)

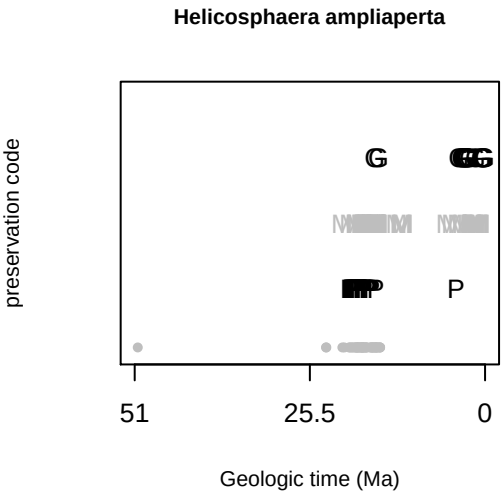

Gephyrocapsa caribbeanica
preservation code
M
P P
10
5
0
Geologic time (Ma)

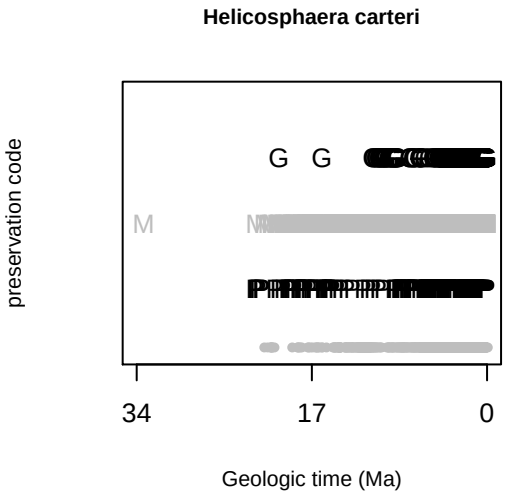

Gephyrocapsa oceanica
preservation code
G
M M M
17
8.5
0
Geologic time (Ma)

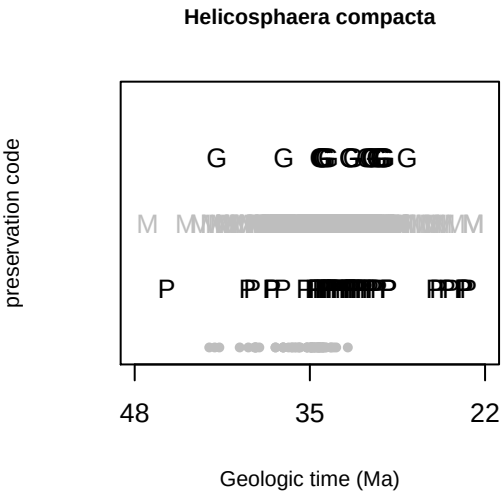

Gephyrocapsa sinuosa
preservation code
G
M
P P
5
2.5
0
Geologic time (Ma)

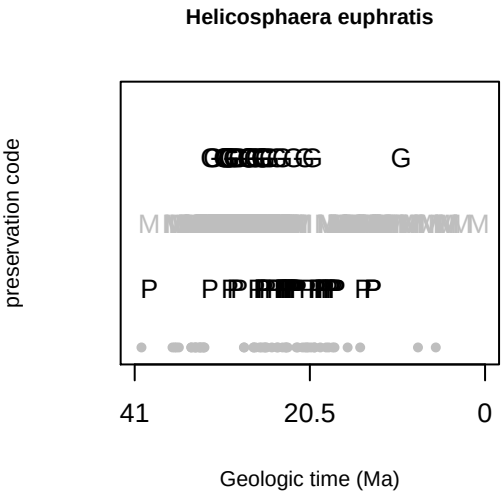

Hayaster perplexus
preservation code
G
M
P
35
17.5
0
Geologic time (Ma)

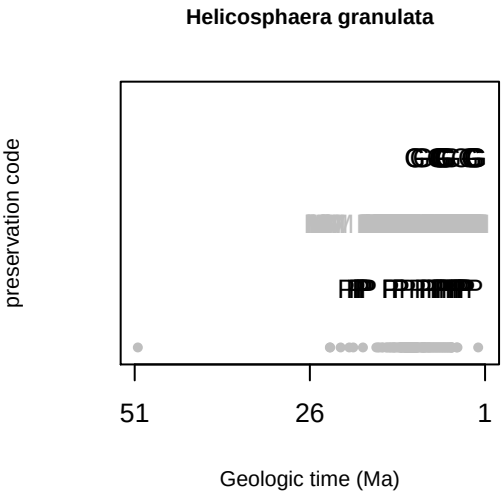

Hayella situliformis
preservation code
G
M
P
38
21.5
5
Geologic time (Ma)

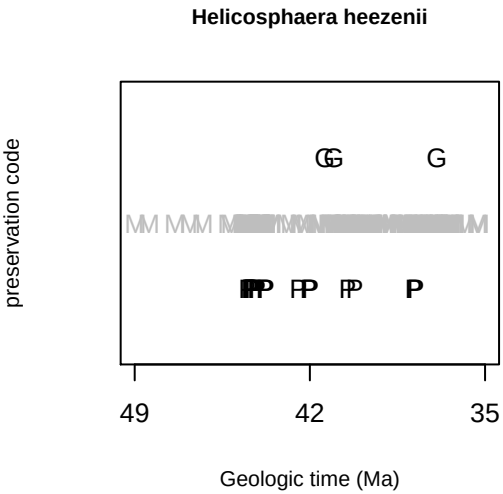

Helicosphaera ampliaperta
preservation code
G
M
P
51
25.5
0
Geologic time (Ma)

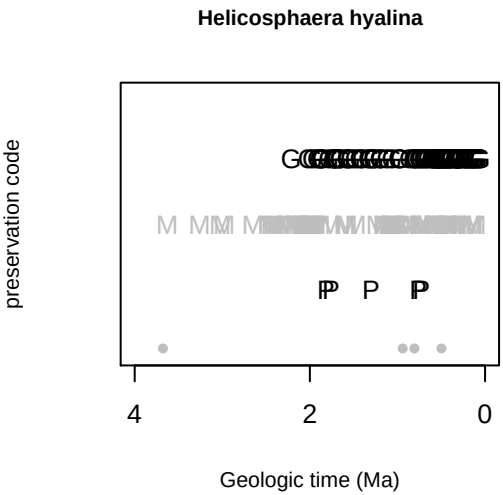

Helicosphaera carteri
preservation code
G
M
P
34
17
0
Geologic time (Ma)

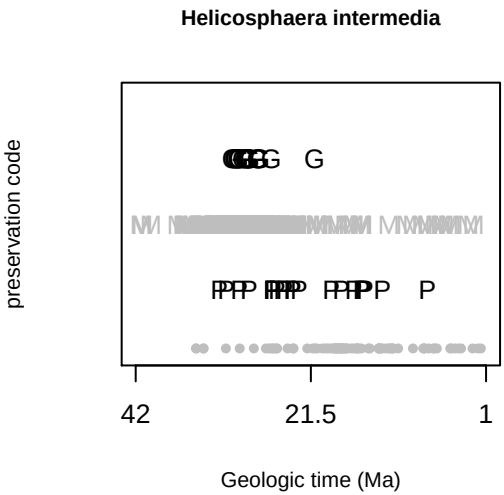

Helicosphaera compacta
preservation code
G
M
P
48
35
22
Geologic time (Ma)

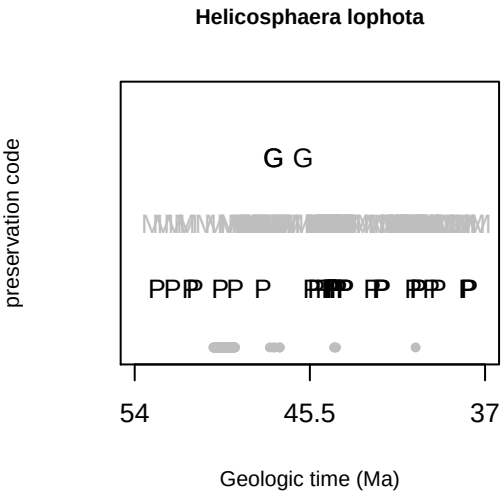

Helicosphaera euphratis
preservation code
G
M
P
41
20.5
0
Geologic time (Ma)

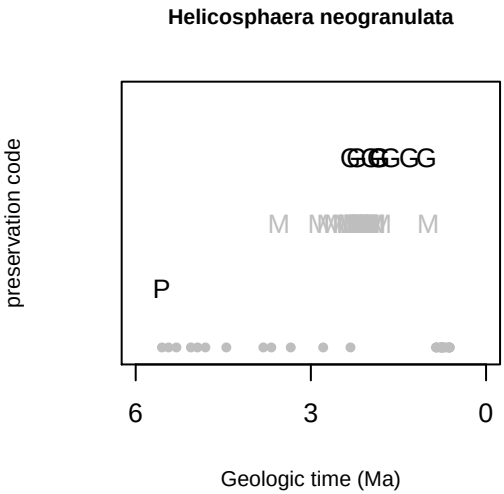

Helicosphaera granulata
preservation code
G
M
P
51
26
1
Geologic time (Ma)

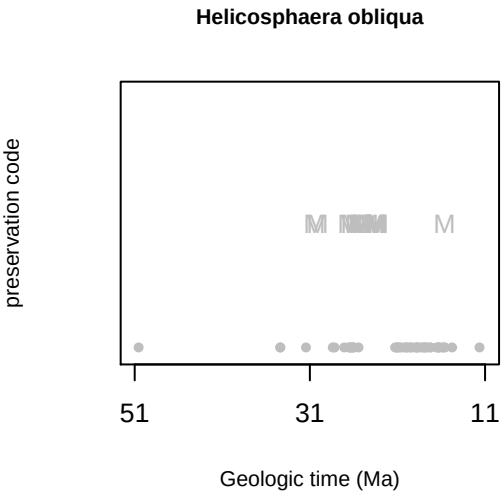

Helicosphaera heezenii
preservation code
G
M
P
49
42
35
Geologic time (Ma)

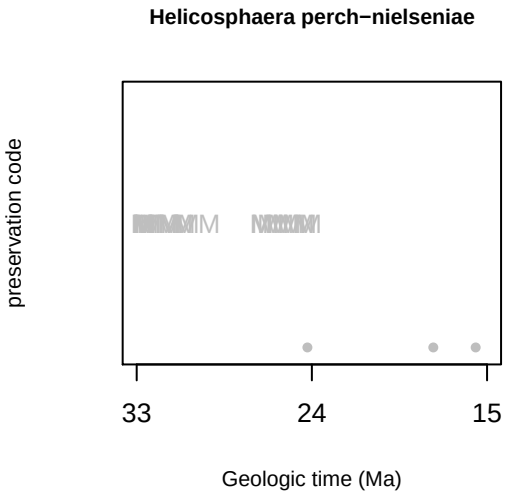

Helicosphaera hyalina
preservation code
4
2
0
Geologic time (Ma)

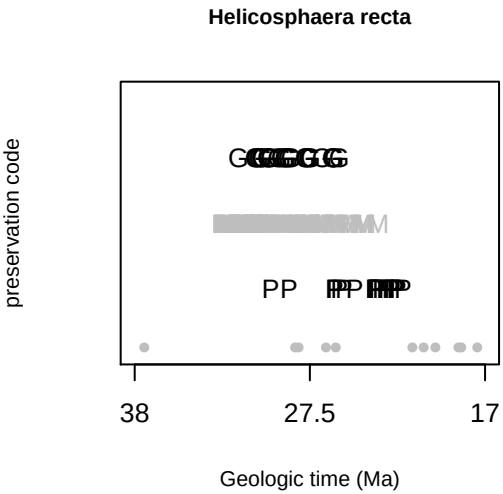

Helicosphaera intermedia
preservation code
42
21.5
1
Geologic time (Ma)

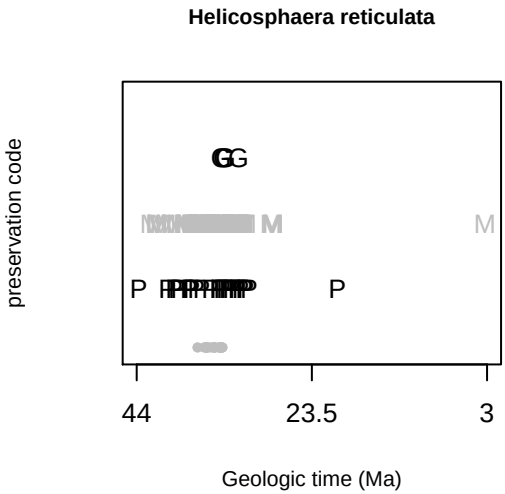

Helicosphaera lophota
preservation code
54
45.5
37
Geologic time (Ma)

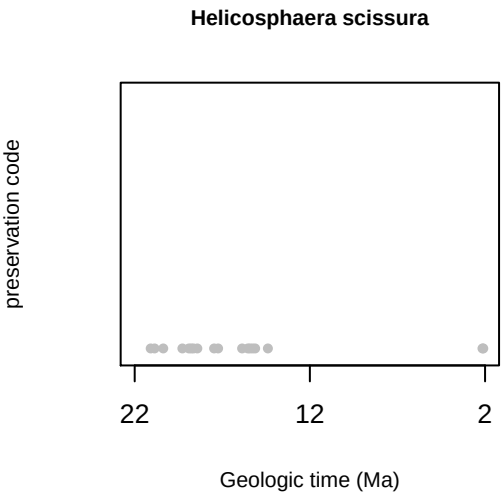

Helicosphaera neogranulata
preservation code
6
3
0
Geologic time (Ma)

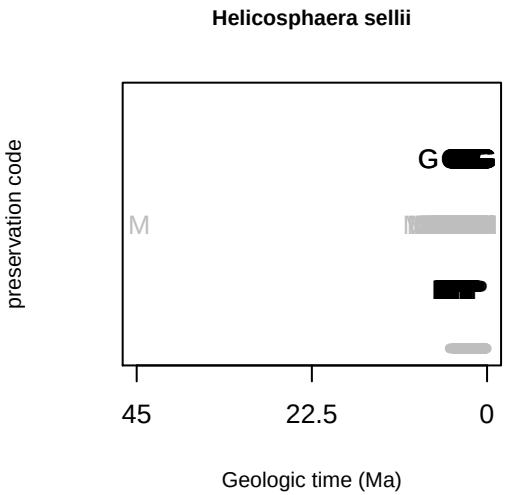

Helicosphaera obliqua
preservation code
M
M
51
31
11
Geologic time (Ma)

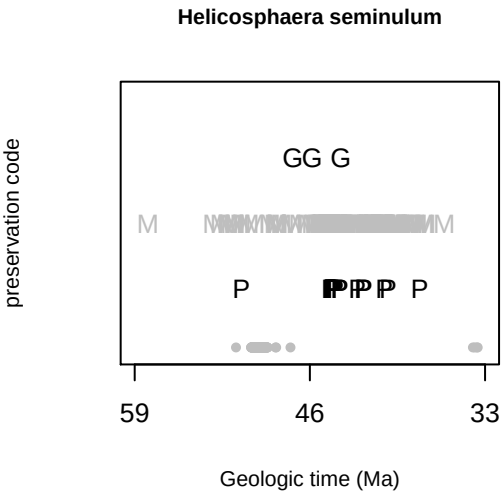

Helicosphaera perch−nielseniae
preservation code
M
33
24
15
Geologic time (Ma)

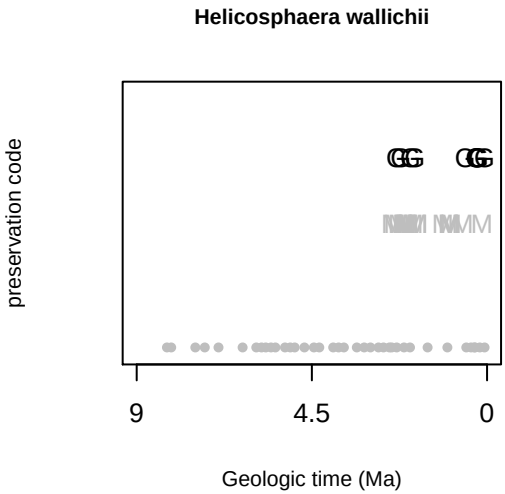

Helicosphaera recta
preservation code
G
M
PP
38
27.5
17
Geologic time (Ma)

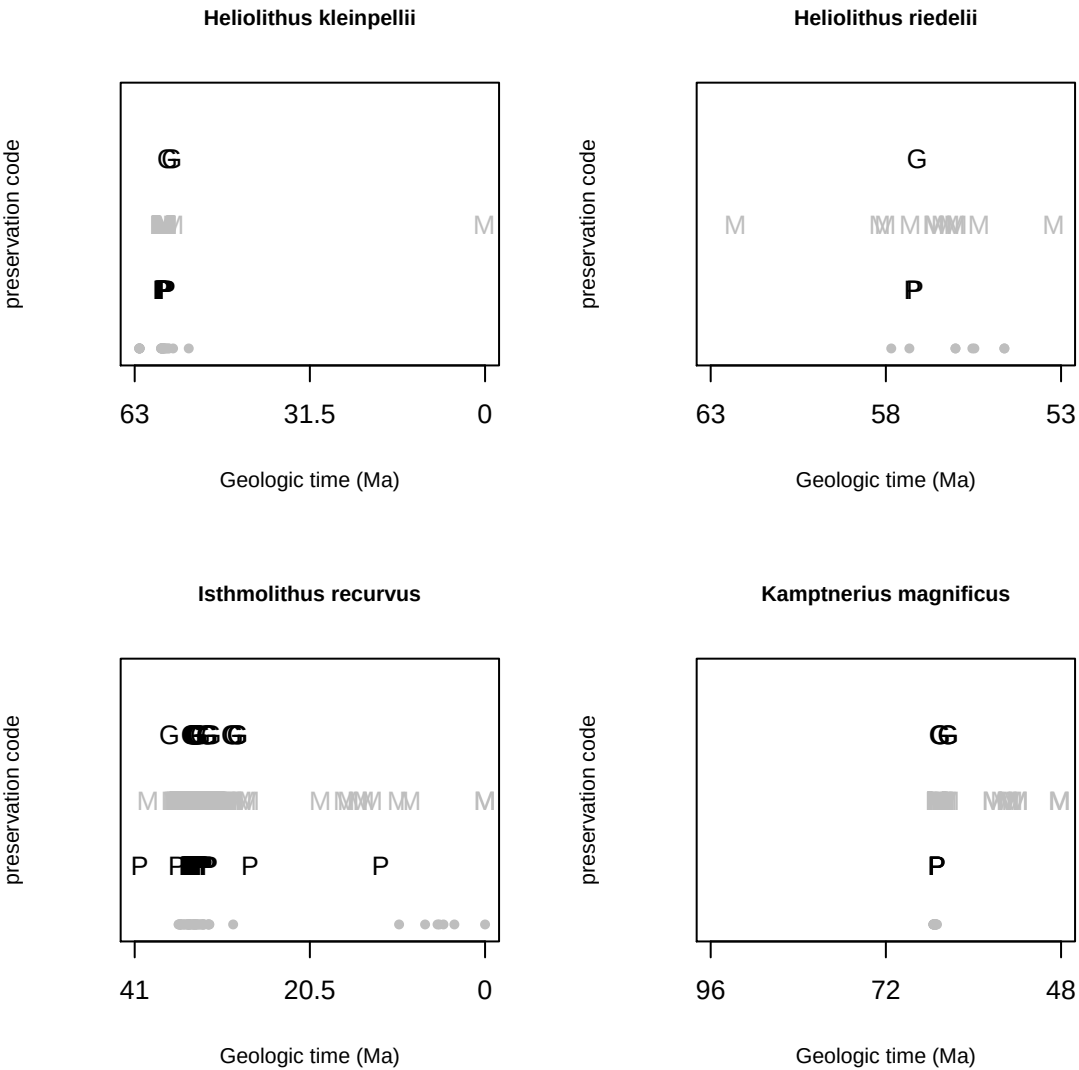

Helicosphaera reticulata
preservation code
G
M
M
P
P
44
23.5
3
Geologic time (Ma)

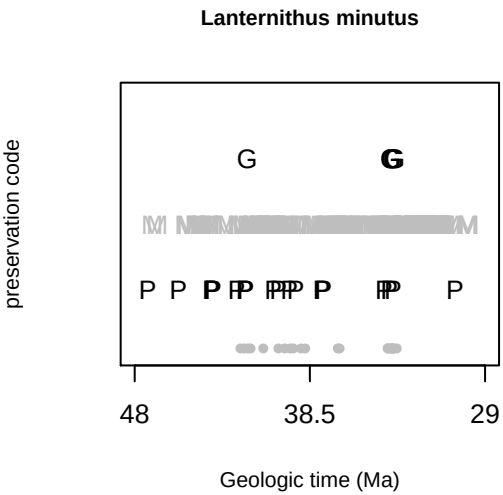

Helicosphaera scissura
preservation code
22
12
2
Geologic time (Ma)

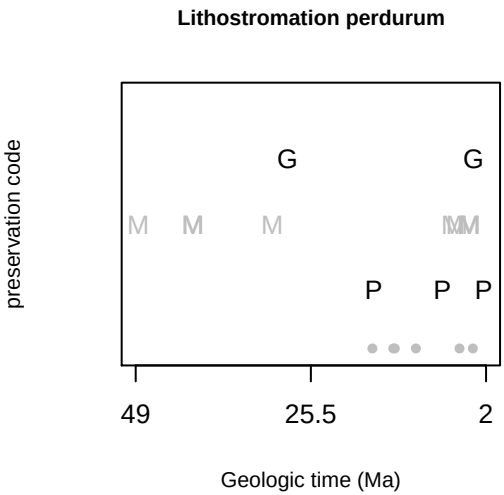

Helicosphaera sellii
preservation code
G
M
45
22.5
0
Geologic time (Ma)

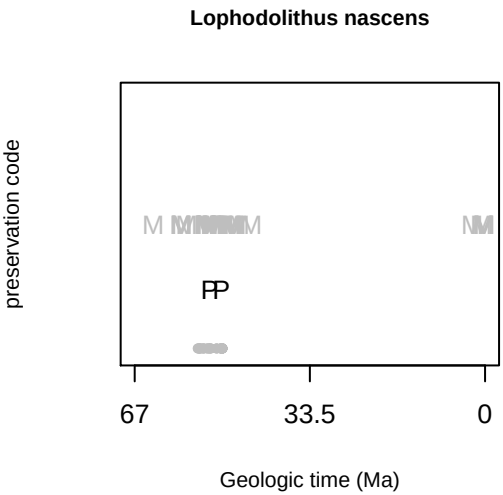

Helicosphaera seminulum
preservation code
GG G
M
P
59
46
33
Geologic time (Ma)

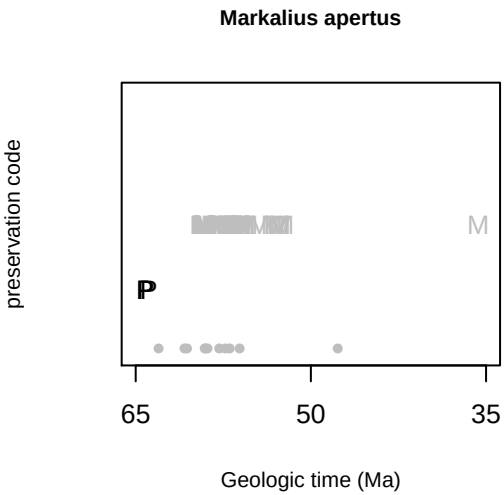

Helicosphaera wallichii
preservation code
9
4.5
0
Geologic time (Ma)

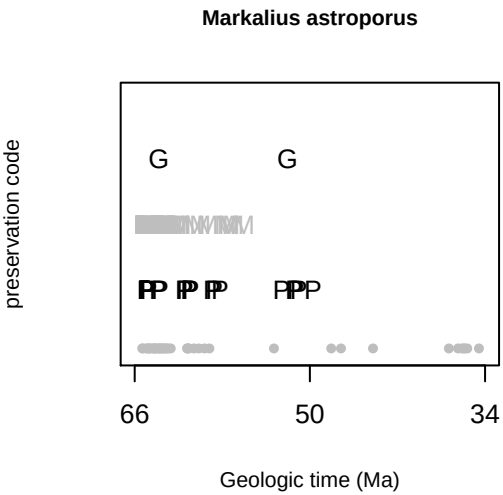

Heliolithus kleinpellii
preservation code
63
31.5
0
Geologic time (Ma)
Heliolithus riedelii
preservation code
63
58
53
Geologic time (Ma)
Isthmolithus recurvus
preservation code
41
20.5
0
Geologic time (Ma)
Kamptnerius magnificus
preservation code
96
72
48
Geologic time (Ma)

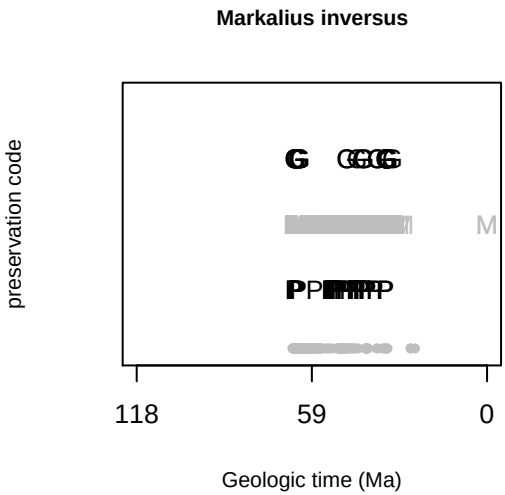

Lanternithus minutus
preservation code
G
G
M
P
P
P
P
P
P
P
48
38.5
29
Geologic time (Ma)

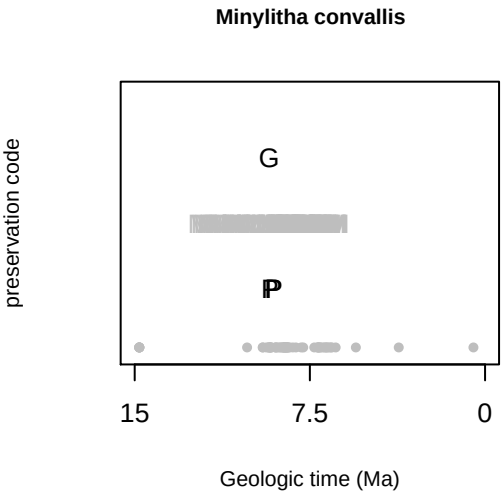

Lithostromation perdurum
preservation code
G
G
M
M
M
M
P
P
P
49
25.5
2
Geologic time (Ma)

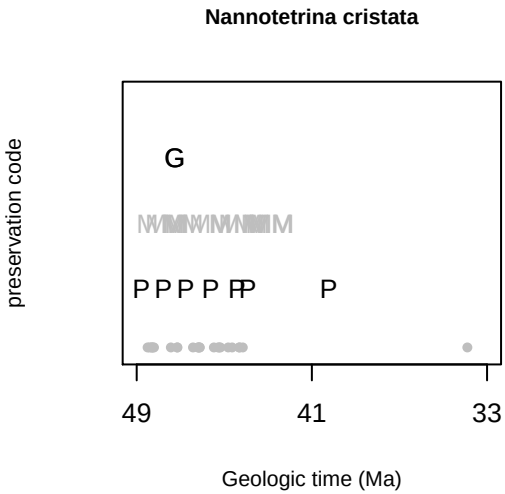

Lophodolithus nascens
preservation code
M
M
P
67
33.5
0
Geologic time (Ma)

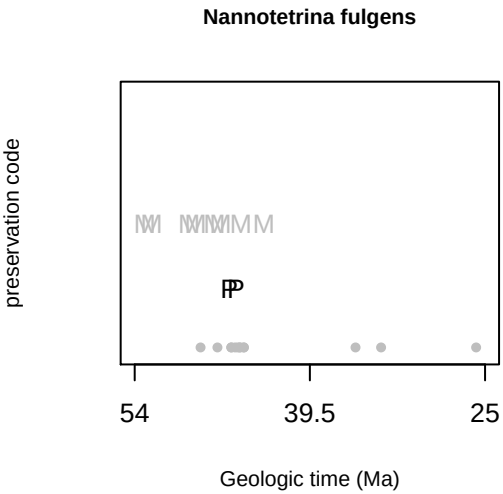

Markalius apertus
preservation code
M
P
65
50
35
Geologic time (Ma)

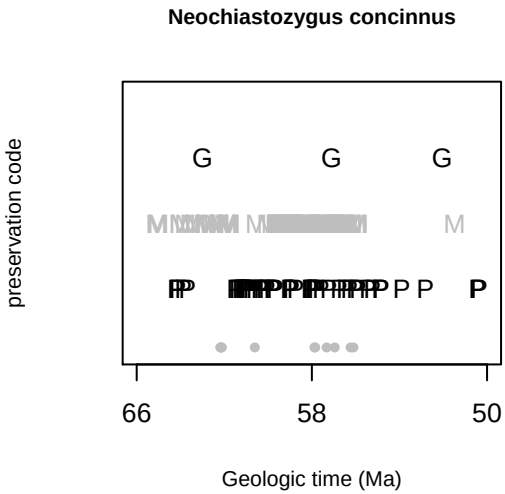

Markalius astroporus
preservation code
G
G
66
50
34
Geologic time (Ma)

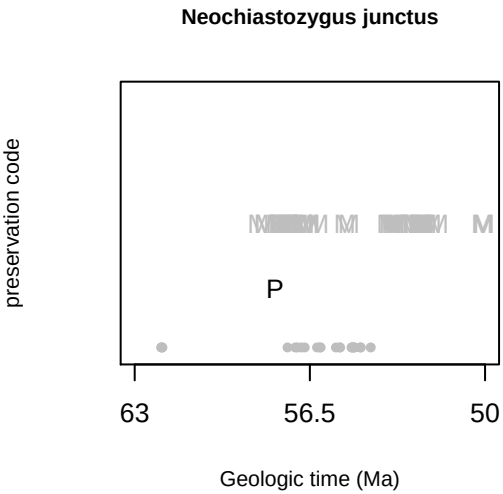

Markalius inversus
preservation code
118
59
0
Geologic time (Ma)

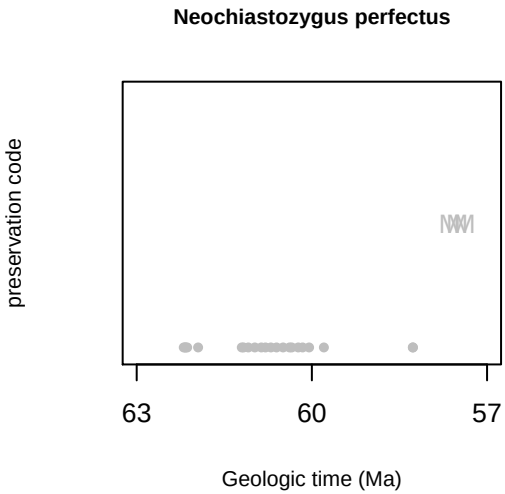

Minylitha convallis
preservation code
G
15
7.5
0
Geologic time (Ma)

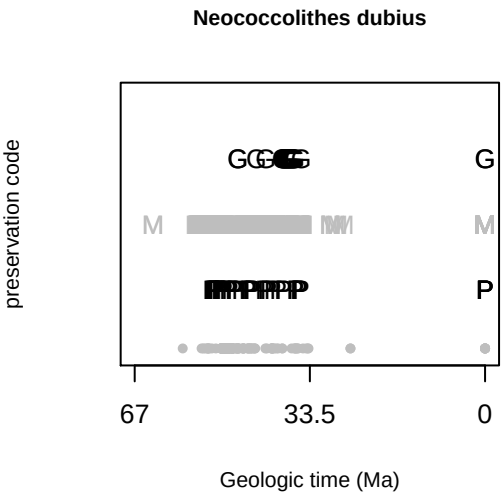

Nannotetrina cristata
preservation code
G
P P P P P P
P
49
41
33
Geologic time (Ma)

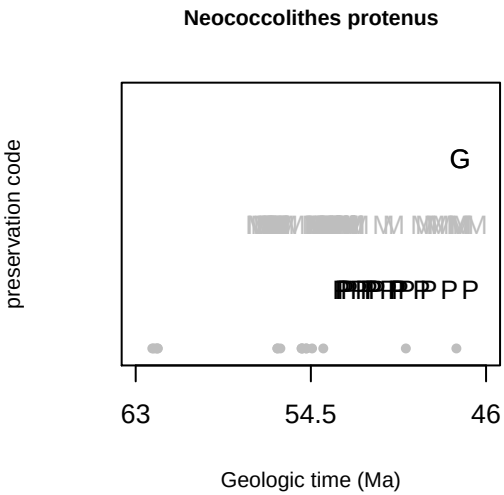

Nannotetrina fulgens
preservation code
54
39.5
25
Geologic time (Ma)

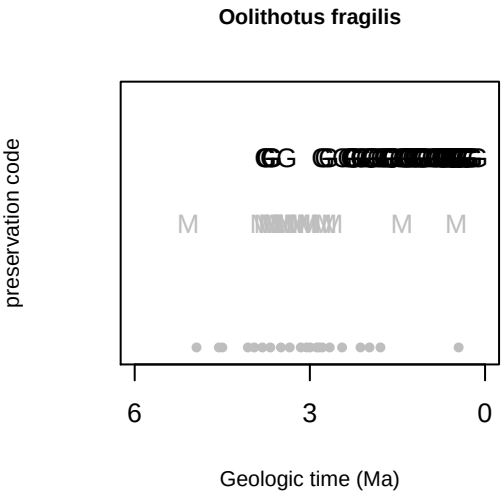

Neochiastozygus concinnus
preservation code
G
G
G
66
58
50
Geologic time (Ma)

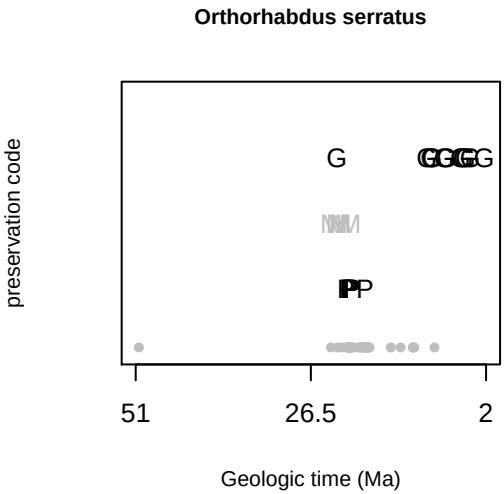

Neochiastozygus junctus
preservation code
P
63
56.5
50
Geologic time (Ma)

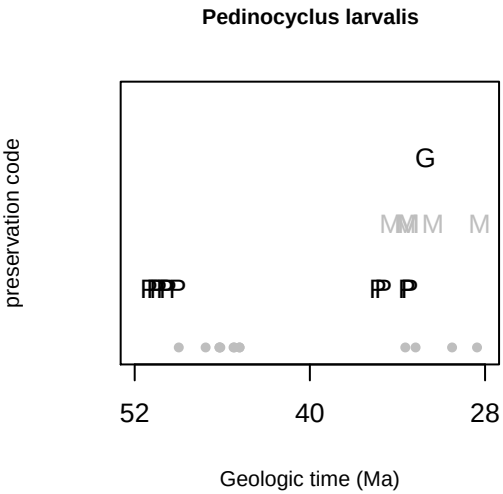

Neochiastozygus perfectus
preservation code
63
60
57
Geologic time (Ma)

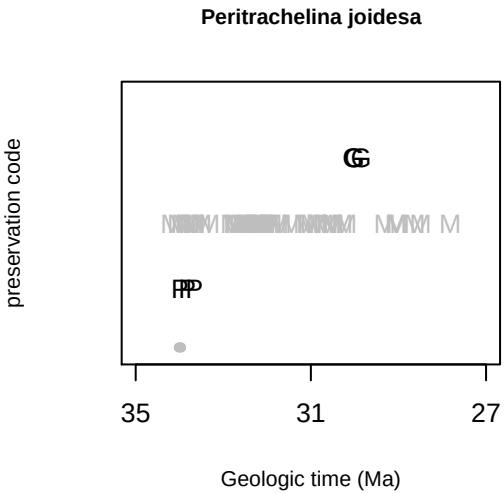

Neococcolithes dubius
preservation code
G
M
P
67
33.5
0
Geologic time (Ma)

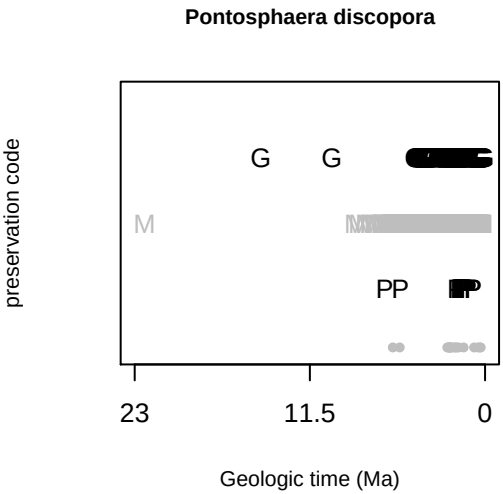

Neococcolithes protenus
preservation code
G
P
63
54.5
46
Geologic time (Ma)

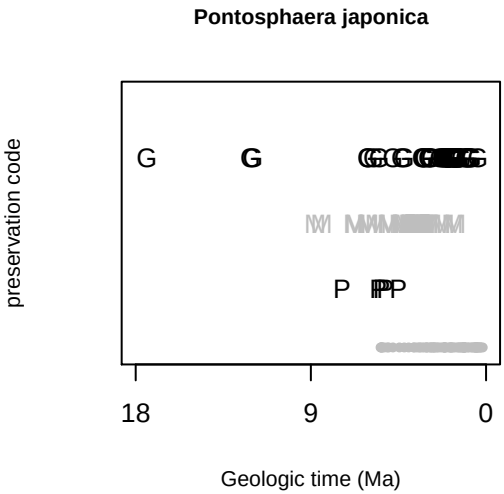

Oolithotus fragilis
preservation code
G
M
6
3
0
Geologic time (Ma)

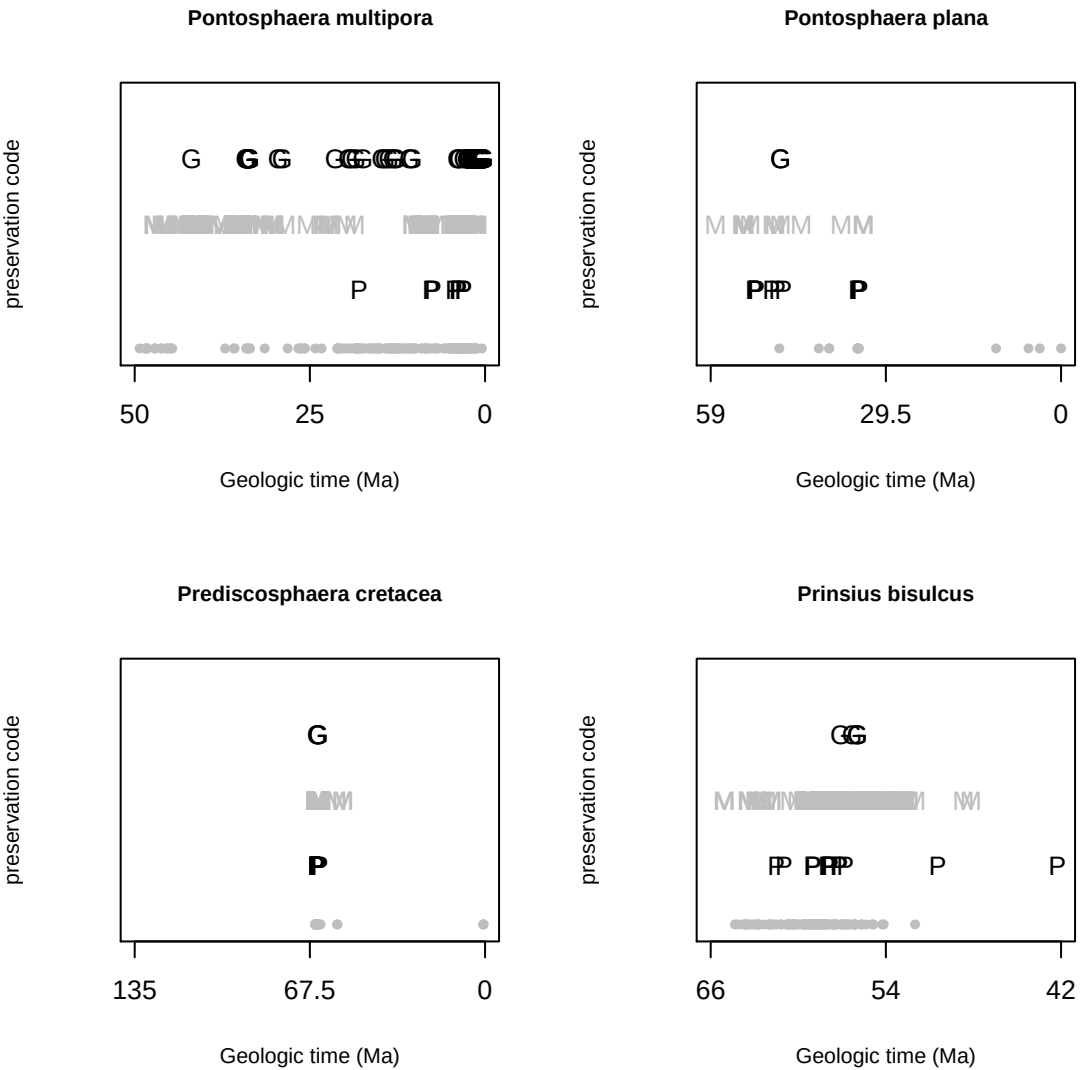

Orthorhabdus serratus
preservation code
G
P
51
26.5
2
Geologic time (Ma)

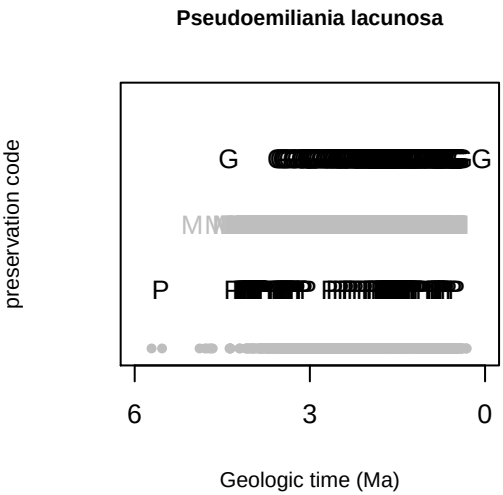

Pedinocyclus larvalis
preservation code
G
M
P
52
40
28
Geologic time (Ma)

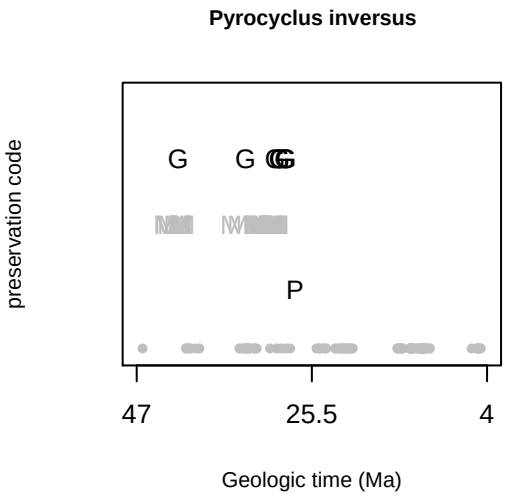

Peritrachelina joidesa
preservation code
G
M
P
35
31
27
Geologic time (Ma)

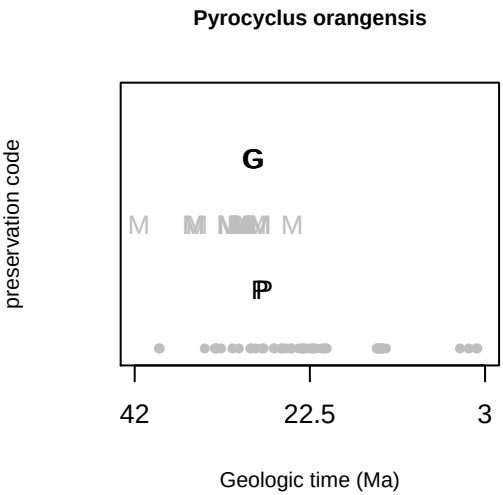

Pontosphaera discopora
preservation code
G
M
P
23
11.5
0
Geologic time (Ma)

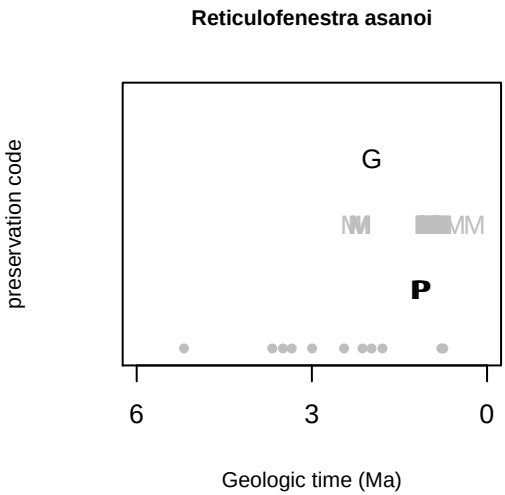

Pontosphaera japonica
preservation code
G
M
P
18
9
0
Geologic time (Ma)

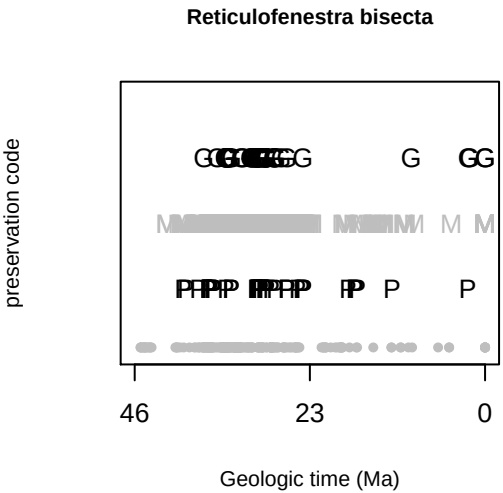

Pontosphaera multipora
preservation code
50
25
0
Geologic time (Ma)
Pontosphaera plana
preservation code
59
29.5
0
Geologic time (Ma)
Prediscosphaera cretacea
preservation code
135
67.5
0
Geologic time (Ma)
Prinsius bisulcus
preservation code
66
54
42
Geologic time (Ma)

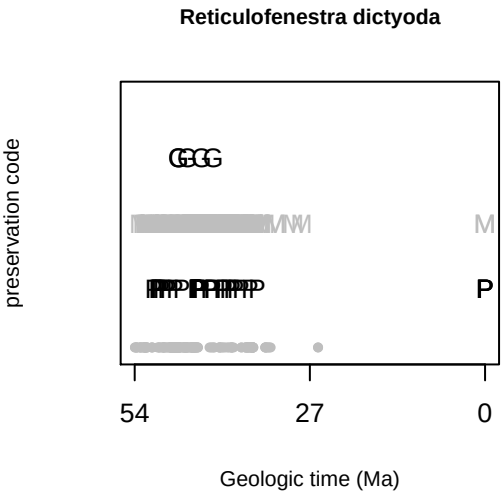

Pseudoemiliania lacunosa
preservation code
G
G
M
N
P
P
6
3
0
Geologic time (Ma)

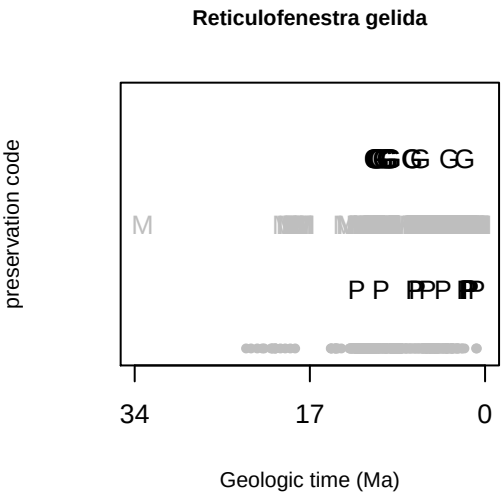

Pyrocyclus inversus
preservation code
G
G
G
G
N
N
P
47
25.5
4
Geologic time (Ma)

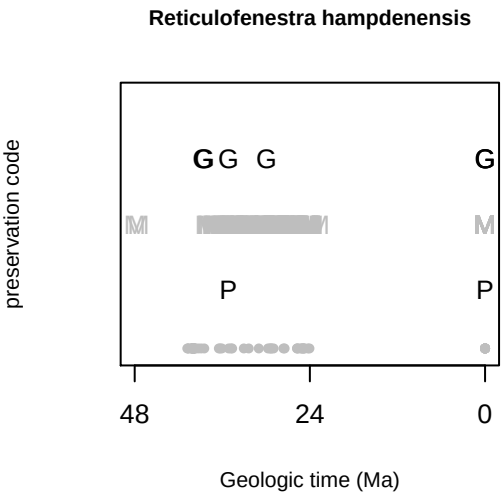

Pyrocyclus orangensis
preservation code
G
M
M
N
M
M
P
42
22.5
3
Geologic time (Ma)

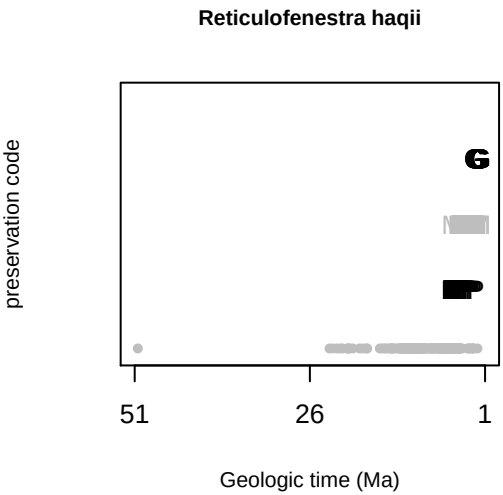

Reticulofenestra asanoi
preservation code
G
N
M
M
M
P
6
3
0
Geologic time (Ma)

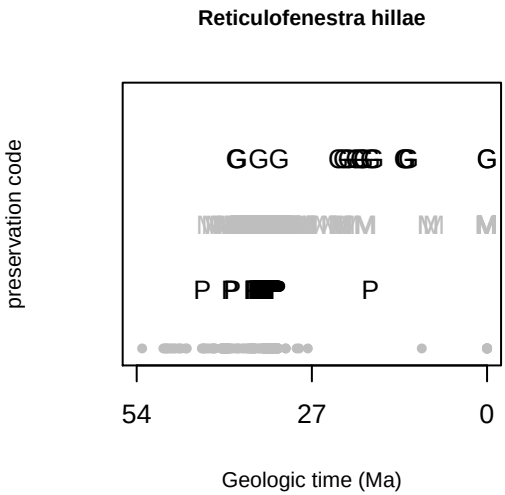

Reticulofenestra bisecta
preservation code
46
23
0
Geologic time (Ma)

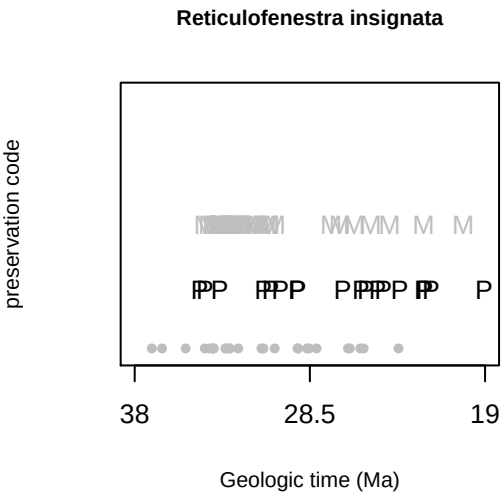

Reticulofenestra dictyoda
preservation code
54
27
0
Geologic time (Ma)

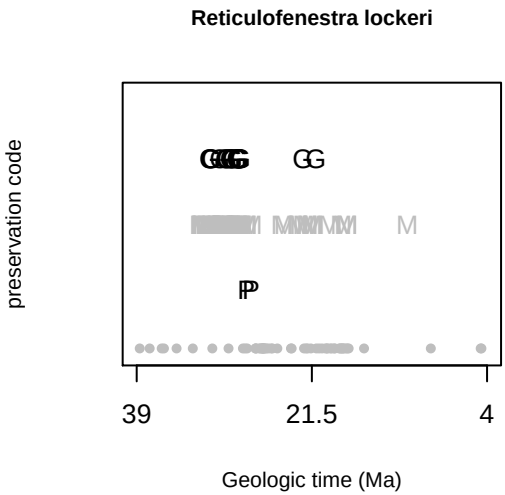

Reticulofenestra gelida
preservation code
34
17
0
Geologic time (Ma)

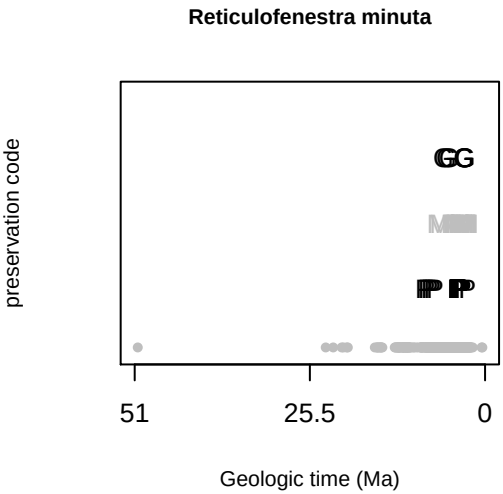

Reticulofenestra hampdenensis
preservation code
48
24
0
Geologic time (Ma)

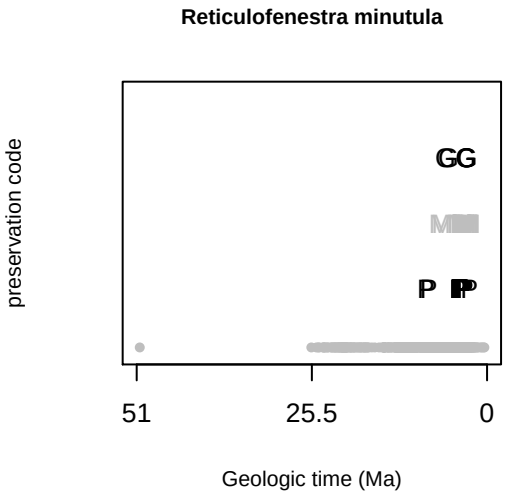

Reticulofenestra haqii
preservation code
51
26
1
Geologic time (Ma)

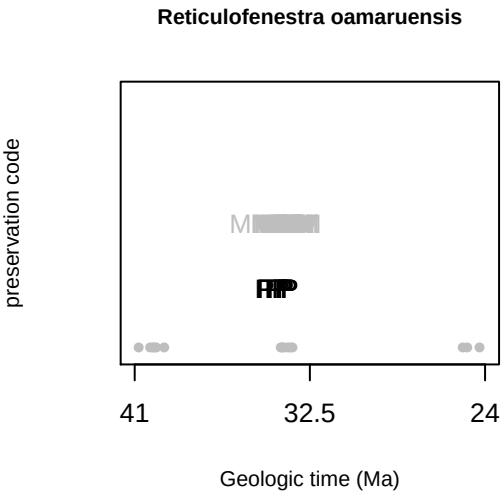

Reticulofenestra hillae
preservation code
54
27
0
Geologic time (Ma)

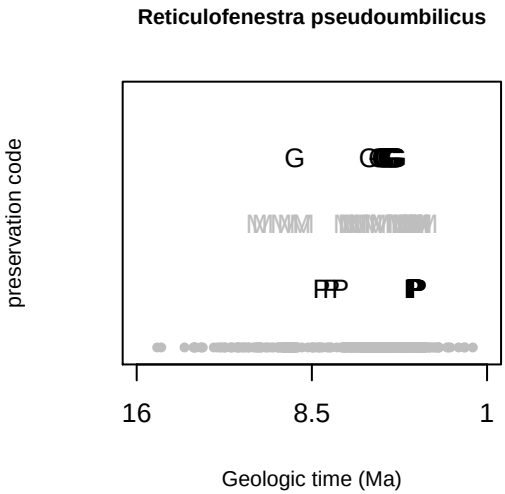

Reticulofenestra insignata
preservation code
38
28.5
19
Geologic time (Ma)

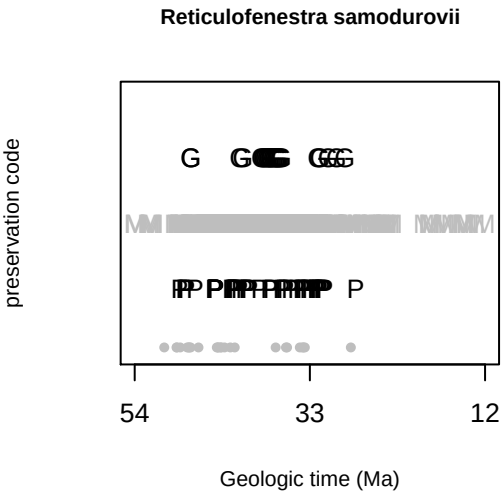

Reticulofenestra lockeri
preservation code
39
21.5
4
Geologic time (Ma)

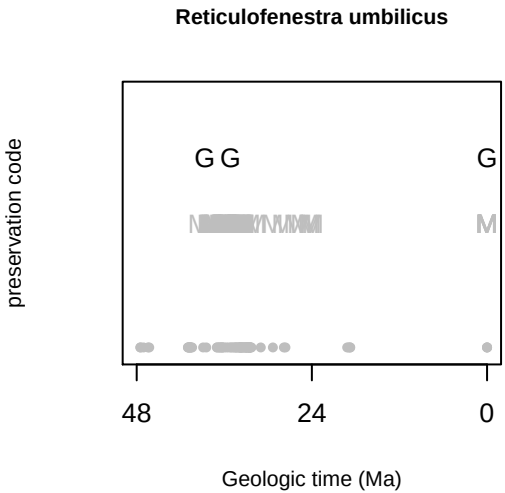

Reticulofenestra minuta
preservation code
51
25.5
0
Geologic time (Ma)

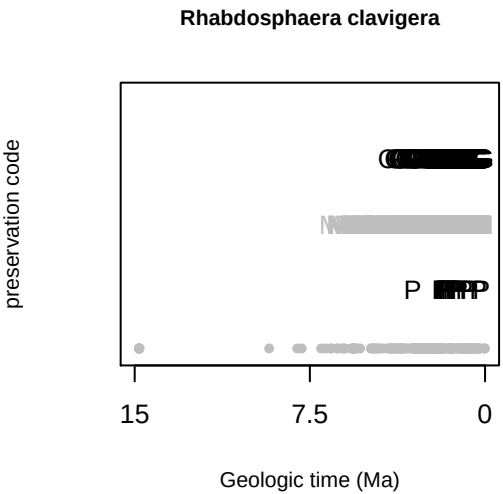

Reticulofenestra minutula
preservation code
51
25.5
0
Geologic time (Ma)

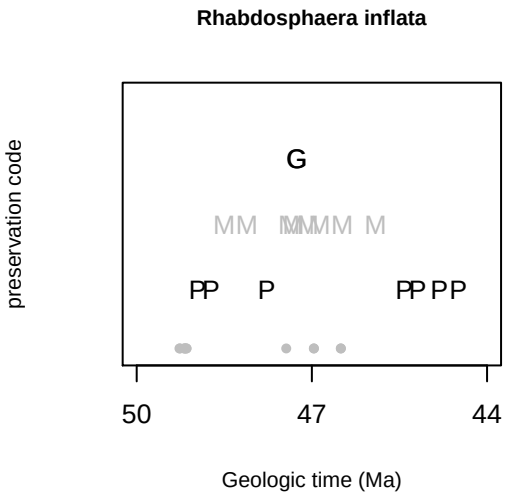

Reticulofenestra oamaruensis
preservation code
41
32.5
24
Geologic time (Ma)

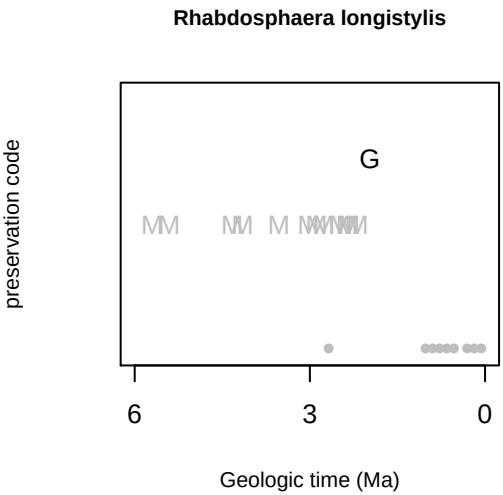

Reticulofenestra pseudoumbilicus
preservation code
16
8.5
1
Geologic time (Ma)

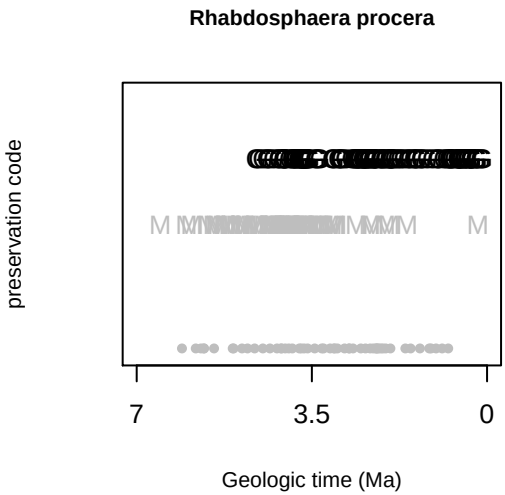

Reticulofenestra samodurovii
preservation code
G
M
P
54
33
12
Geologic time (Ma)

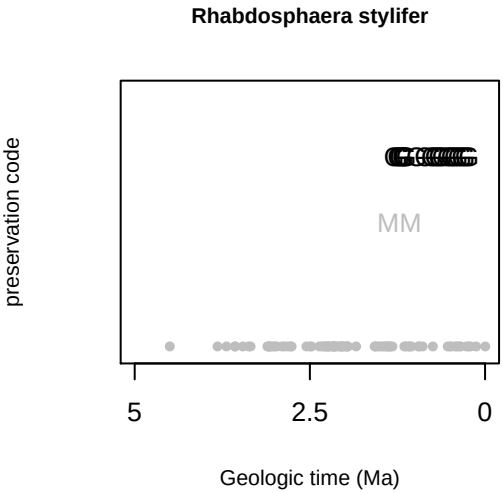

Reticulofenestra umbilicus
preservation code
G G
G
M
48
24
0
Geologic time (Ma)

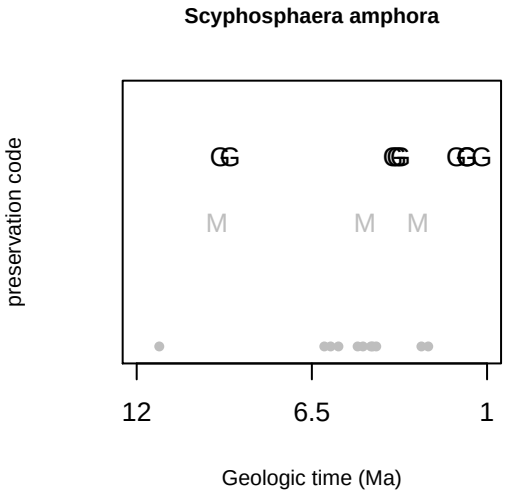

Rhabdosphaera clavigera
preservation code
P
15
7.5
0
Geologic time (Ma)

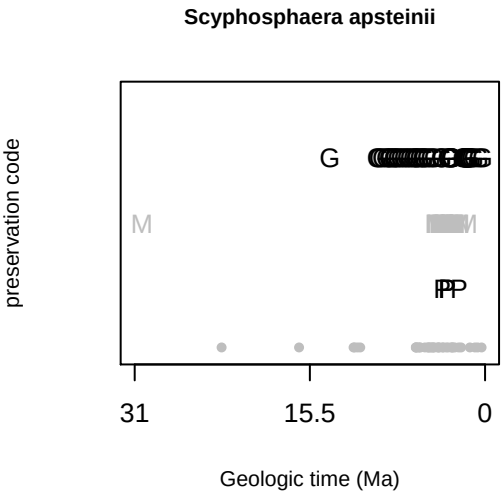

Rhabdosphaera inflata
preservation code
G
MM M M
PP P PP P
50
47
44
Geologic time (Ma)

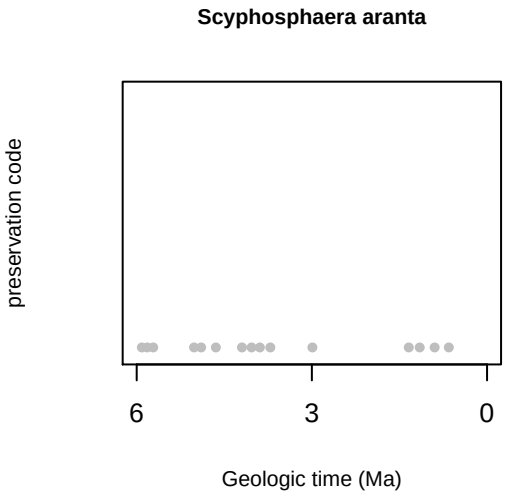

Rhabdosphaera longistylis
preservation code
G
MM
M
6
3
0
Geologic time (Ma)

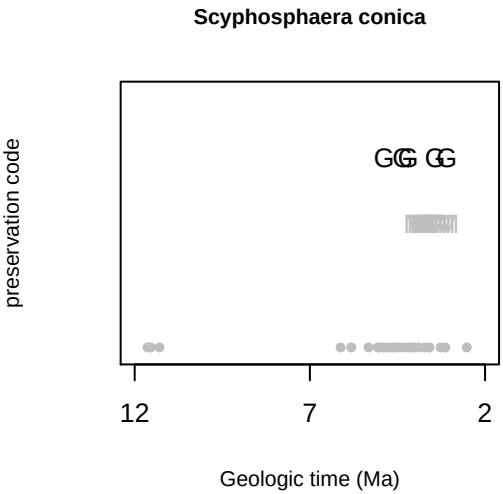

Rhabdosphaera procera
preservation code
M
M
7
3.5
0
Geologic time (Ma)

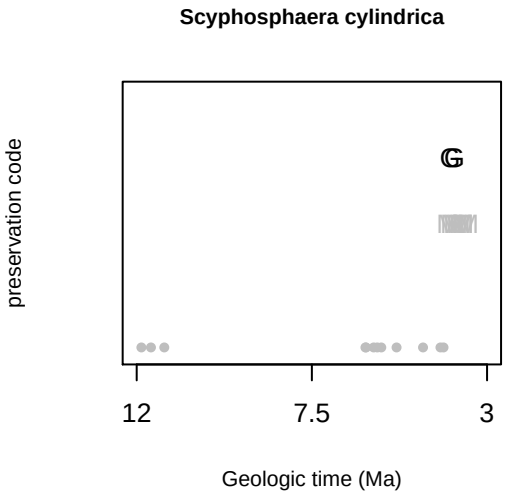

Rhabdosphaera stylifer
preservation code
MM
5
2.5
0
Geologic time (Ma)

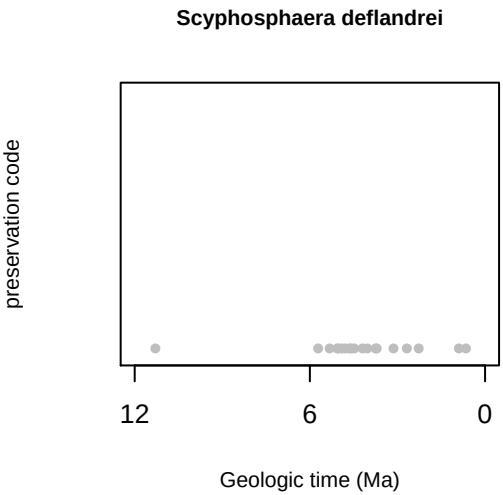

Scyphosphaera amphora
preservation code
GG
G
GGG
M
M
M
12
6.5
1
Geologic time (Ma)

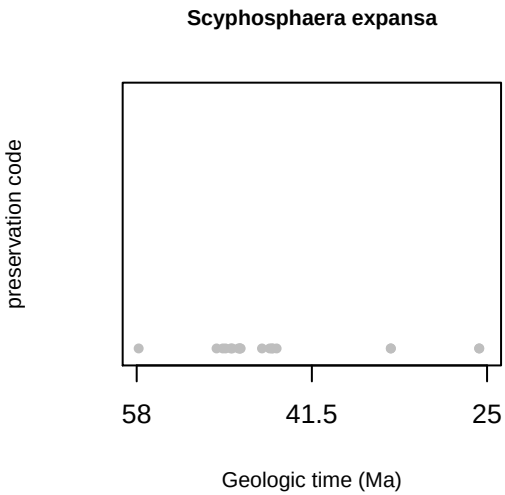

Scyphosphaera apsteinii
preservation code
G
M
P
31
15.5
0
Geologic time (Ma)

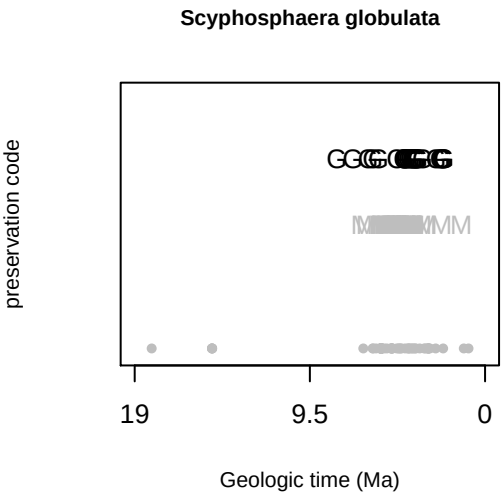

Scyphosphaera aranta
preservation code
6
3
0
Geologic time (Ma)

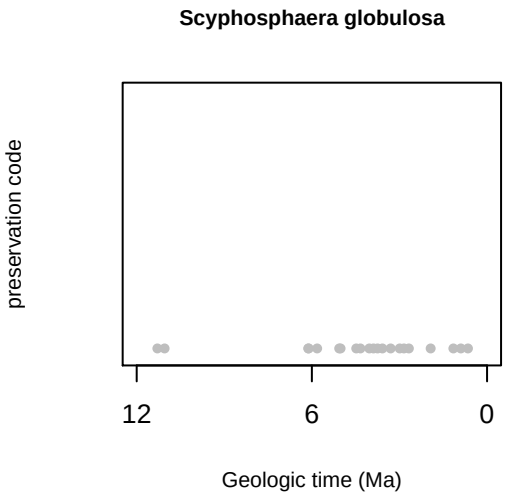

Scyphosphaera conica
preservation code
G
12
7
2
Geologic time (Ma)

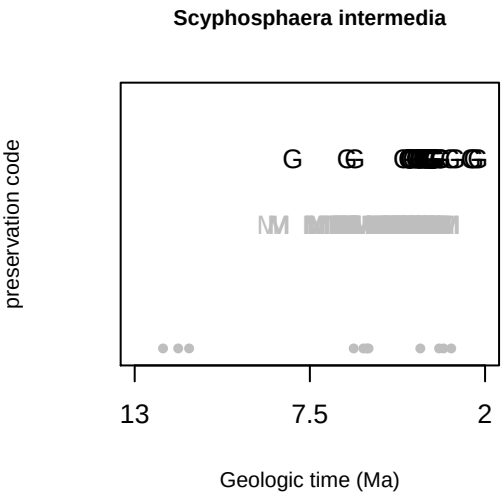

Scyphosphaera cylindrica
preservation code
G
12
7.5
3
Geologic time (Ma)

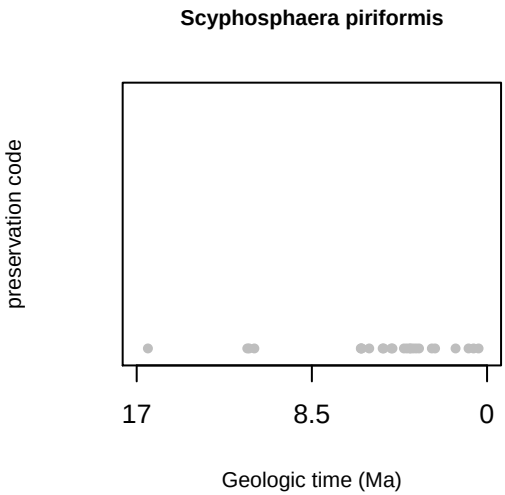

Scyphosphaera deflandrei
preservation code
12
6
0
Geologic time (Ma)

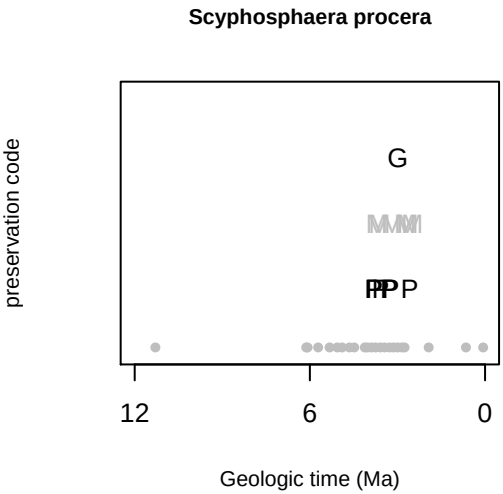

Scyphosphaera expansa
preservation code
58
41.5
25
Geologic time (Ma)

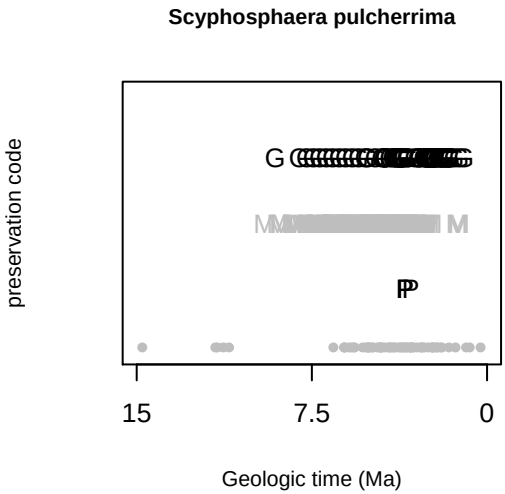

Scyphosphaera globulata
preservation code
19
9.5
0
Geologic time (Ma)

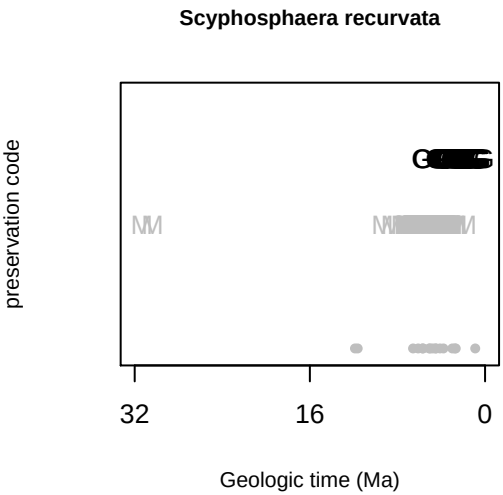

Scyphosphaera globulosa
preservation code
12
6
0
Geologic time (Ma)

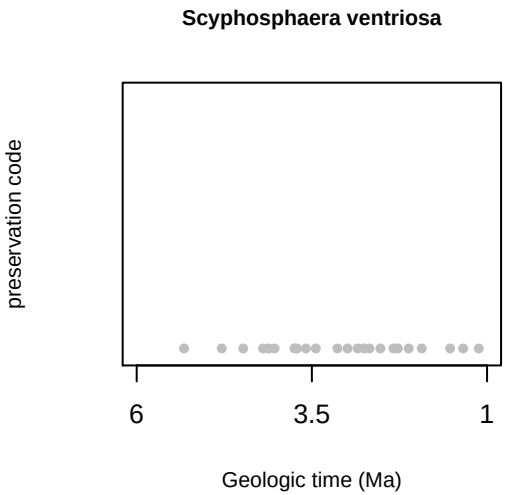

Scyphosphaera intermedia
preservation code
G
M
13
7.5
2
Geologic time (Ma)

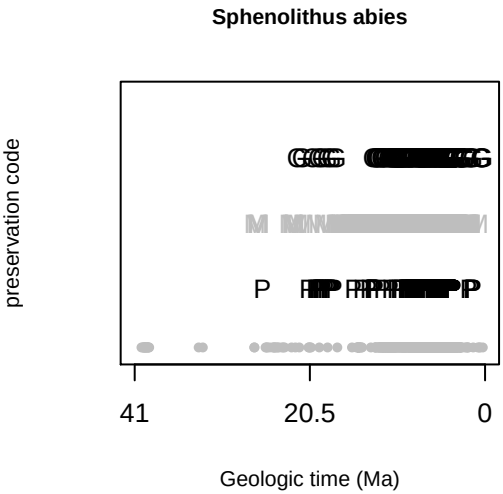

Scyphosphaera piriformis
preservation code
17
8.5
0
Geologic time (Ma)

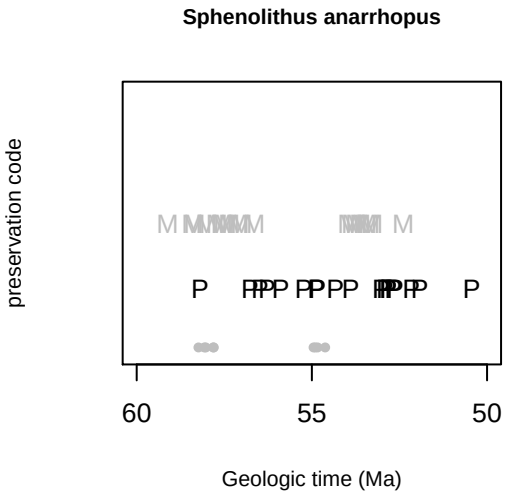

Scyphosphaera procera
preservation code
G
M
P
12
6
0
Geologic time (Ma)

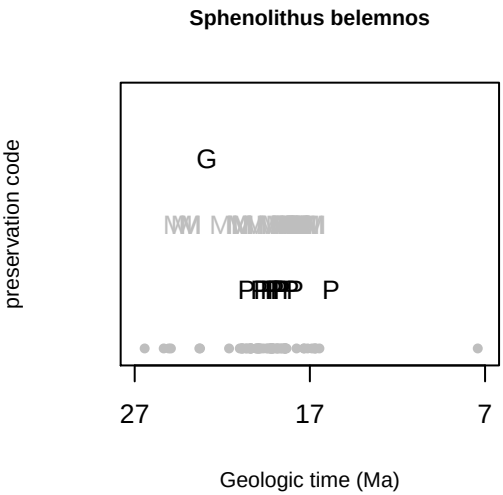

Scyphosphaera pulcherrima
preservation code
G
M
P
15
7.5
0
Geologic time (Ma)

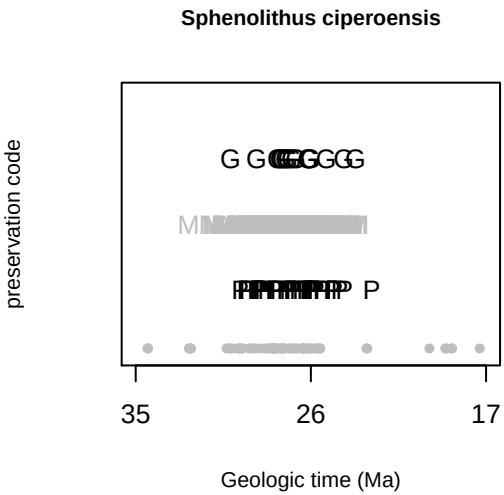

Scyphosphaera recurvata
preservation code
32
16
0
Geologic time (Ma)

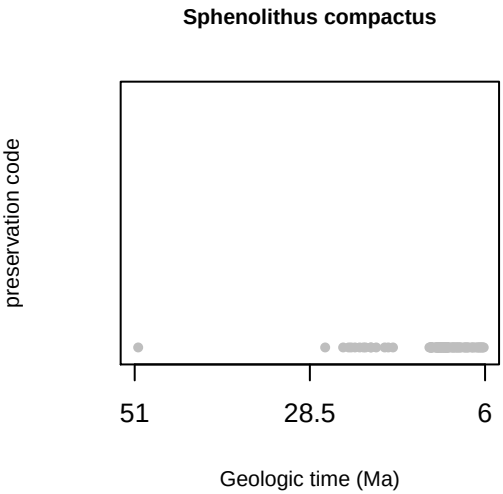

Scyphosphaera ventriosa
preservation code
6
3.5
1
Geologic time (Ma)

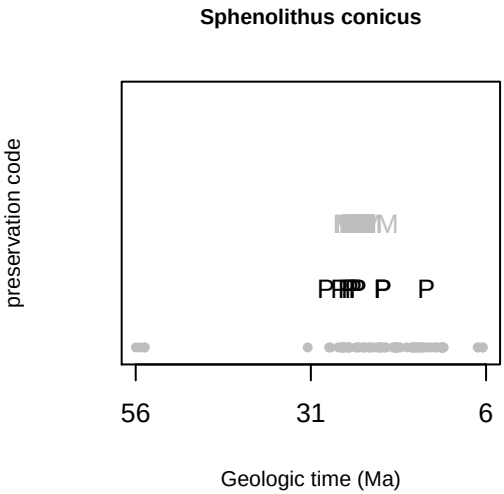

Sphenolithus abies
preservation code
41
20.5
0
Geologic time (Ma)

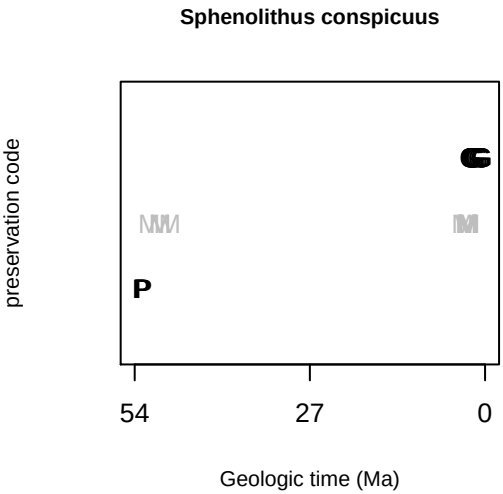

Sphenolithus anarrhopus
preservation code
60
55
50
Geologic time (Ma)

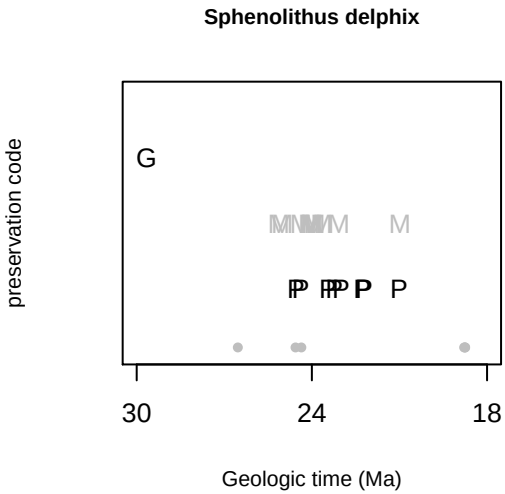

Sphenolithus belemnos
preservation code
G
M
P
27
17
7
Geologic time (Ma)

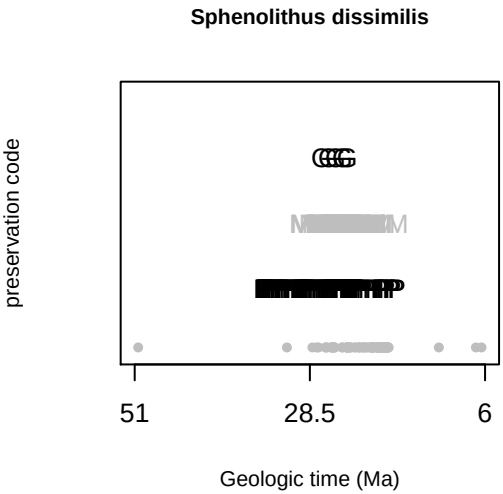

Sphenolithus ciperoensis
preservation code
G
M
P
35
26
17
Geologic time (Ma)

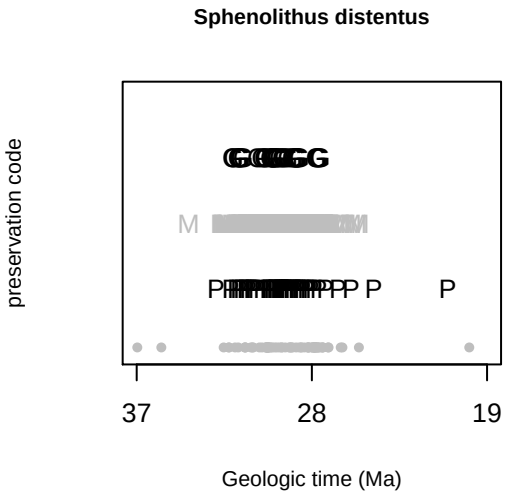

Sphenolithus compactus
preservation code
51
28.5
6
Geologic time (Ma)

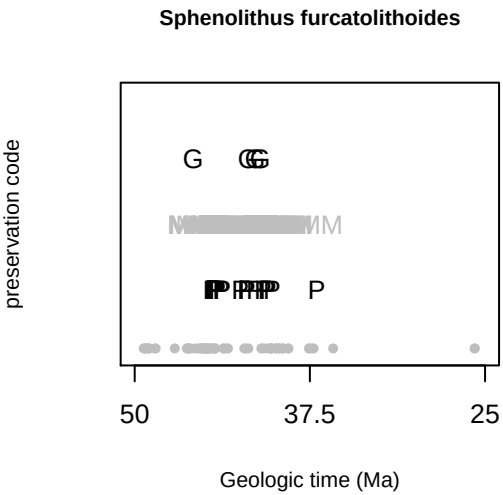

Sphenolithus conicus
preservation code
M
P
56
31
6
Geologic time (Ma)

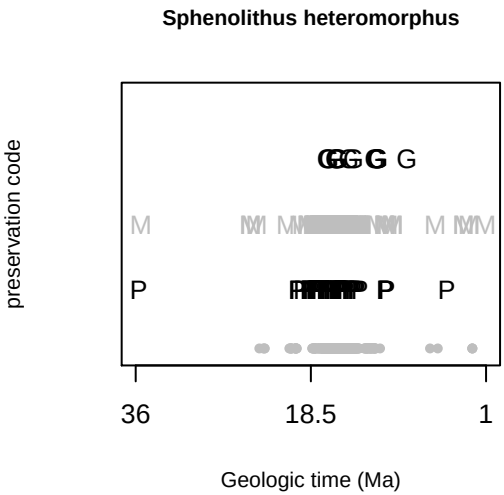

Sphenolithus conspicuus
preservation code
54
27
0
Geologic time (Ma)

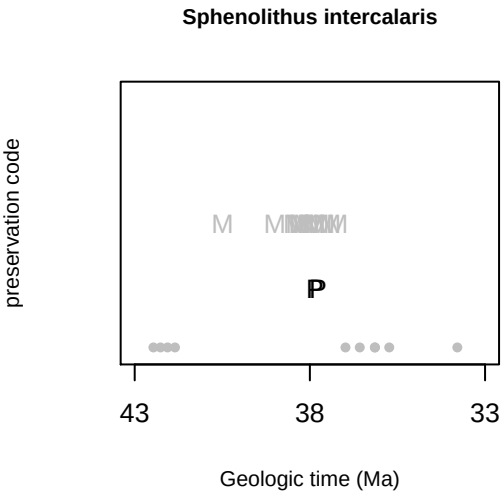

Sphenolithus delphix
preservation code
G
M
P
30
24
18
Geologic time (Ma)

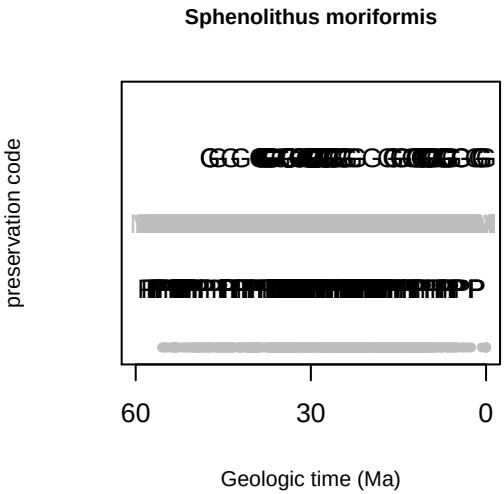

Sphenolithus dissimilis
preservation code
G
M
P
51
28.5
6
Geologic time (Ma)

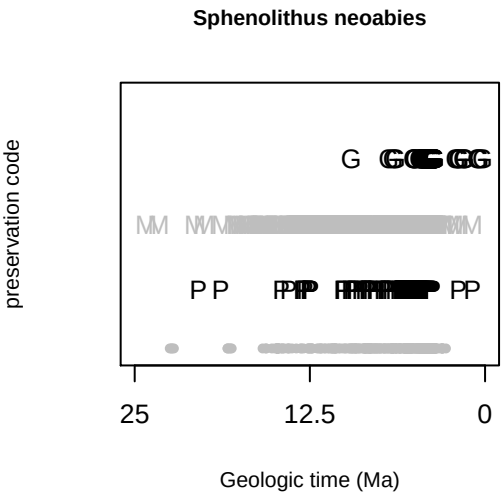

Sphenolithus distentus
preservation code
G
M
P
37
28
19
Geologic time (Ma)

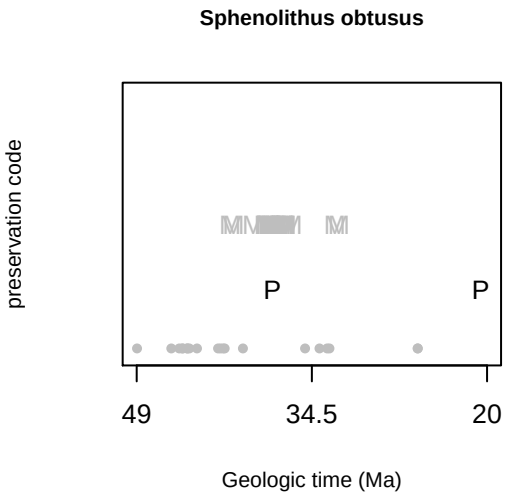

Sphenolithus furcatolithoides
preservation code
G
M
P
50
37.5
25
Geologic time (Ma)

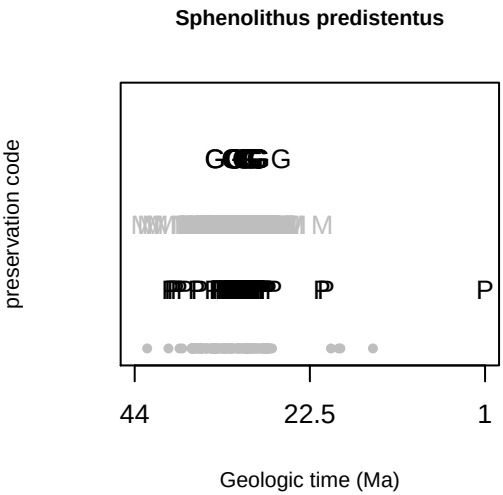

Sphenolithus heteromorphus
preservation code
G
M
P
36
18.5
1
Geologic time (Ma)

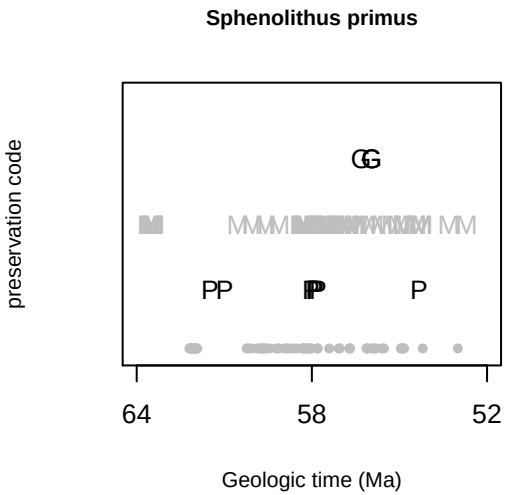

Sphenolithus intercalaris
preservation code
M
P
43
38
33
Geologic time (Ma)

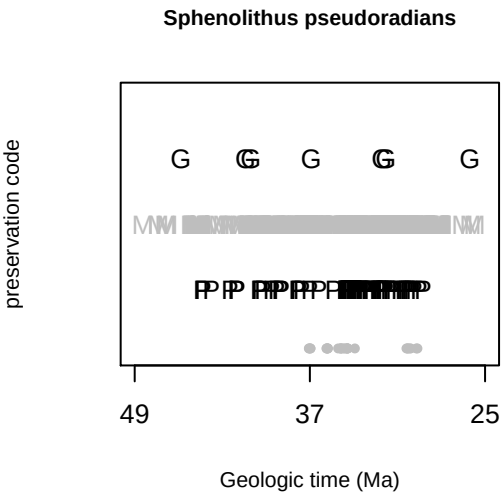

Sphenolithus moriformis
preservation code
G
M
P
60
30
0
Geologic time (Ma)

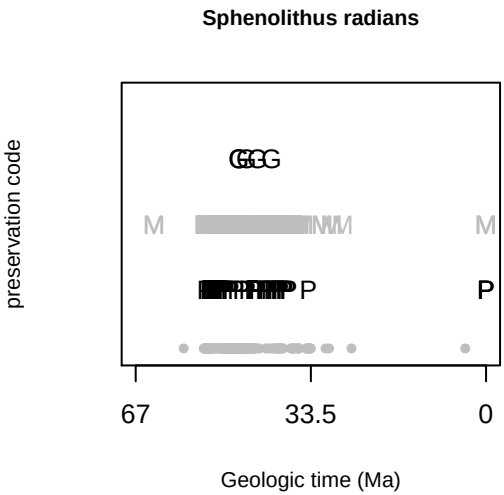

Sphenolithus neoabies
preservation code
25
12.5
0
Geologic time (Ma)

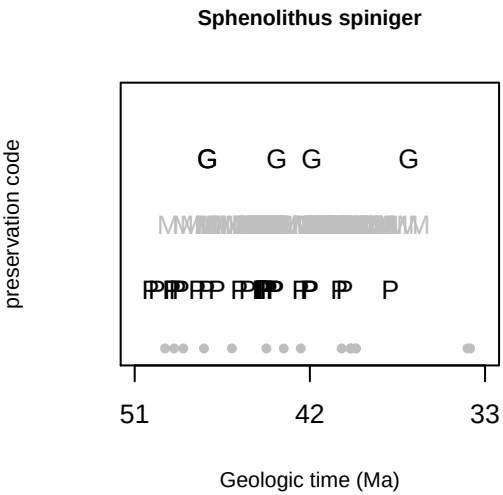

Sphenolithus obtusus
preservation code
49
34.5
20
Geologic time (Ma)

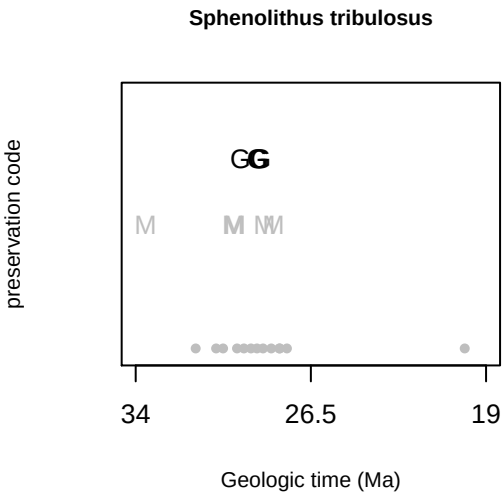

Sphenolithus predistentus
preservation code
44
22.5
1
Geologic time (Ma)

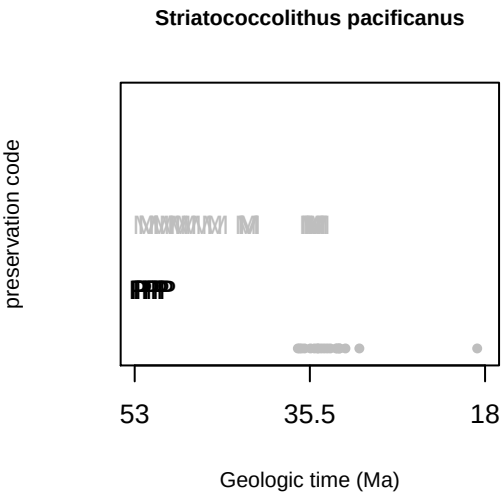

Sphenolithus primus
preservation code
64
58
52
Geologic time (Ma)

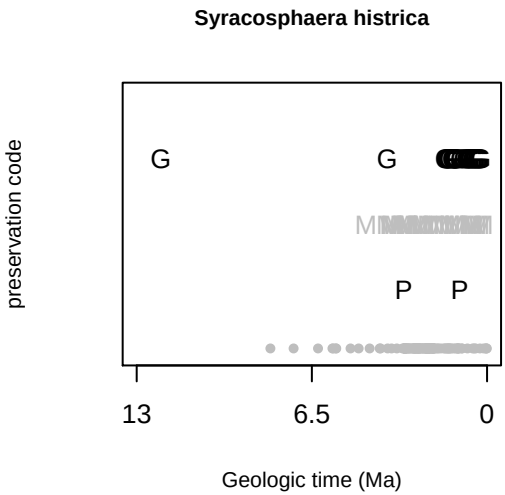

Sphenolithus pseudoradians
preservation code
G
M
P
49
37
25
Geologic time (Ma)

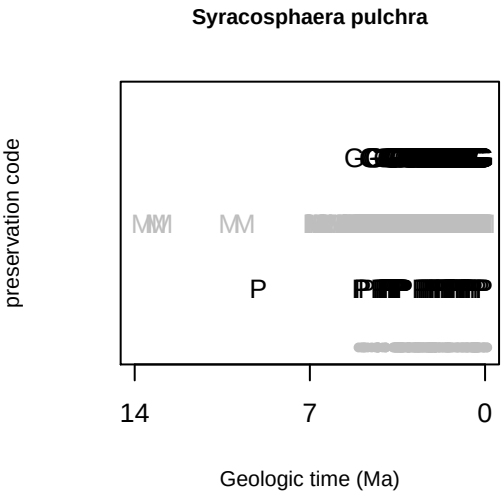

Sphenolithus radians
preservation code
G
M
P
67
33.5
0
Geologic time (Ma)

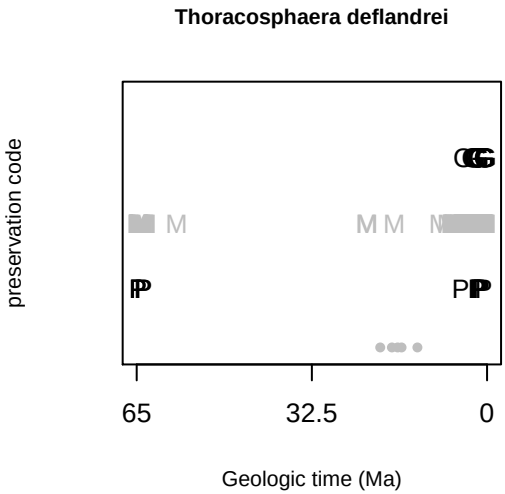

Sphenolithus spiniger
preservation code
G
M
P
51
42
33
Geologic time (Ma)

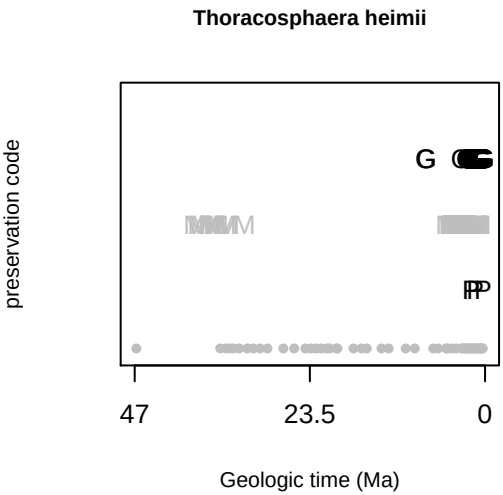

Sphenolithus tribulosus
preservation code
G
M
34
26.5
19
Geologic time (Ma)

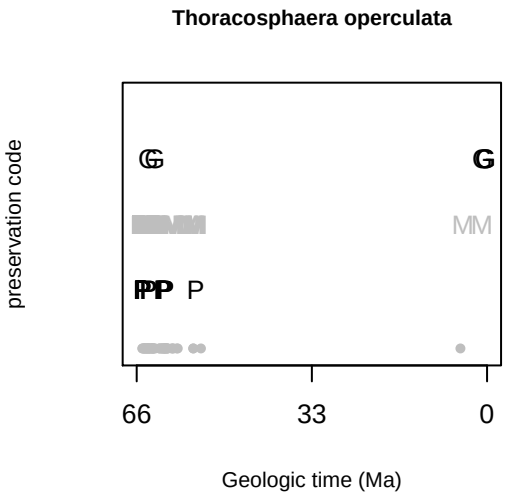

Striatococcolithus pacificanus
preservation code
53
35.5
18
Geologic time (Ma)

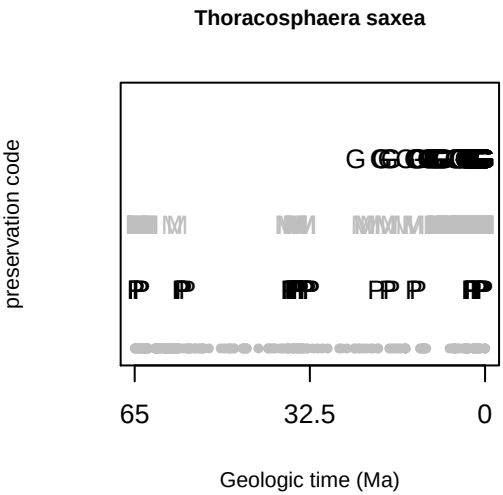

Syracosphaera histrica
preservation code
G
G
M
P
P
13
6.5
0
Geologic time (Ma)

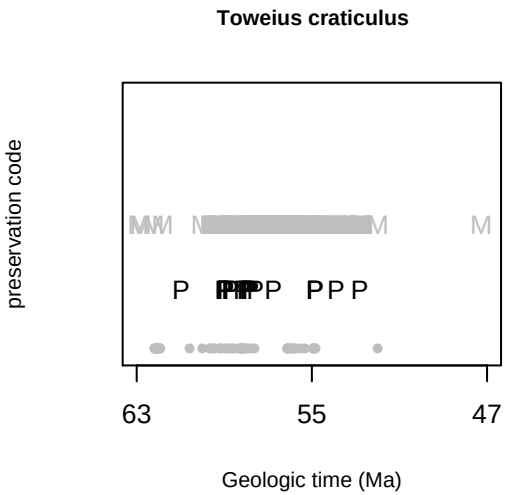

Syracosphaera pulchra
preservation code
G
M
M
P
14
7
0
Geologic time (Ma)

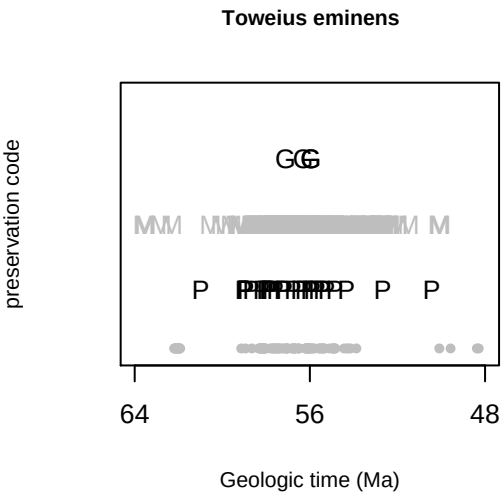

Thoracosphaera deflandrei
preservation code
M
M
M
P
P
65
32.5
0
Geologic time (Ma)

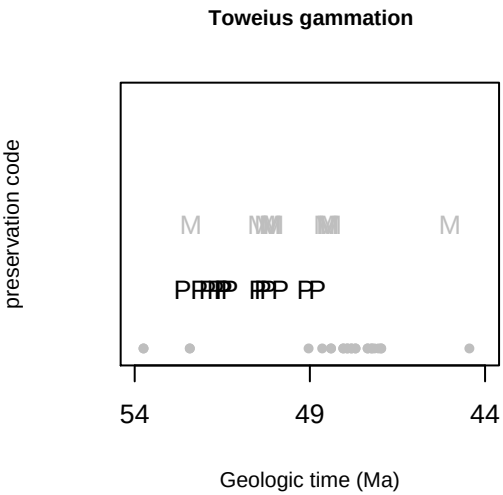

Thoracosphaera heimii
preservation code
47
23.5
0
Geologic time (Ma)

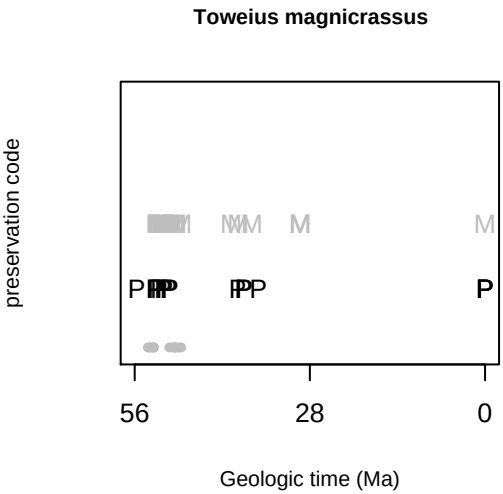

Thoracosphaera operculata
preservation code
66
33
0
Geologic time (Ma)

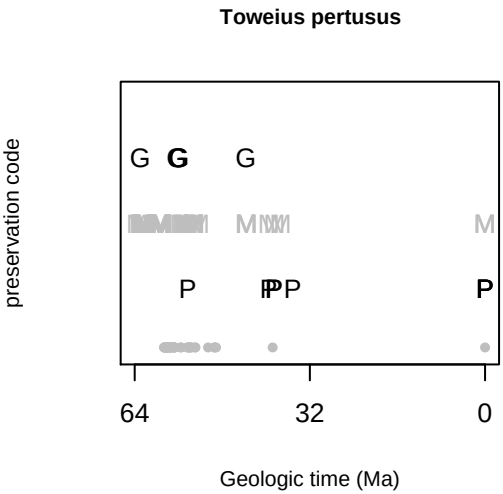

Thoracosphaera saxea
preservation code
65
32.5
0
Geologic time (Ma)

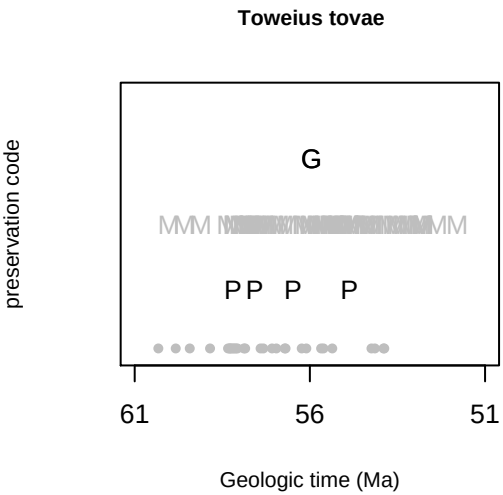

Toweius craticulus
preservation code
63
55
47
Geologic time (Ma)

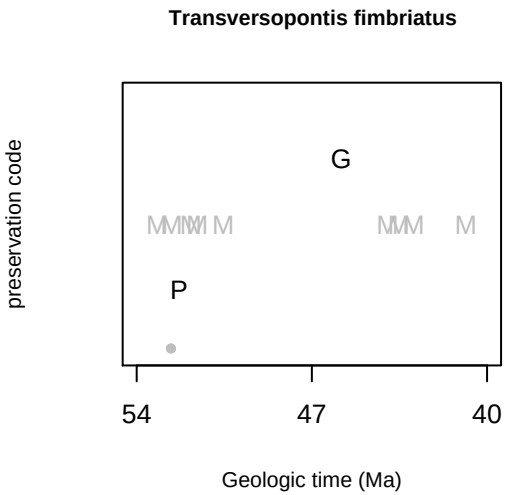

Toweius eminens
preservation code
Geologic time (Ma)
64
56
48

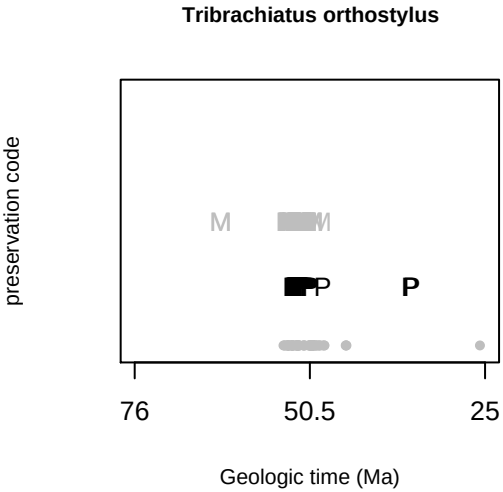

Toweius gammation
preservation code
Geologic time (Ma)
54
49
44

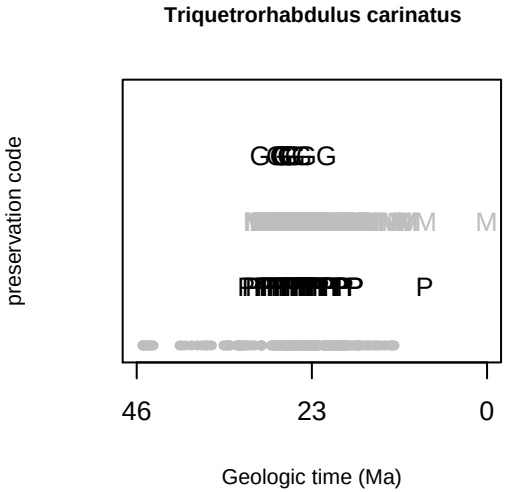

Toweius magnicrassus
preservation code
Geologic time (Ma)
56
28
0

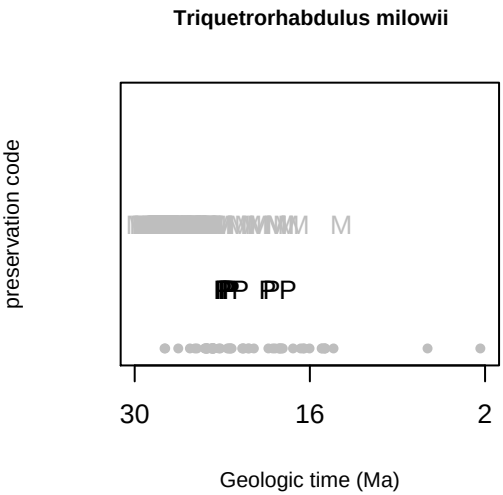

Toweius pertusus
preservation code
Geologic time (Ma)
64
32
0

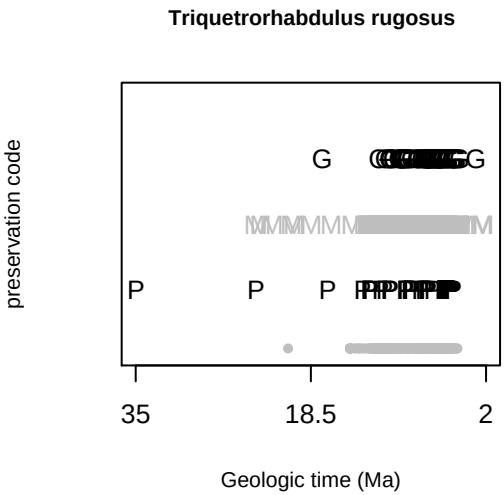

Toweius tovae
preservation code
G
M M M M M M
P P P P
61
56
51
Geologic time (Ma)

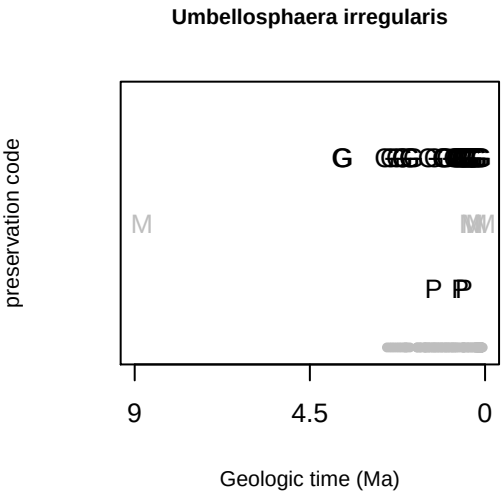

Transversopontis fimbriatus
preservation code
G
M M M M M M M M
P
54
47
40
Geologic time (Ma)

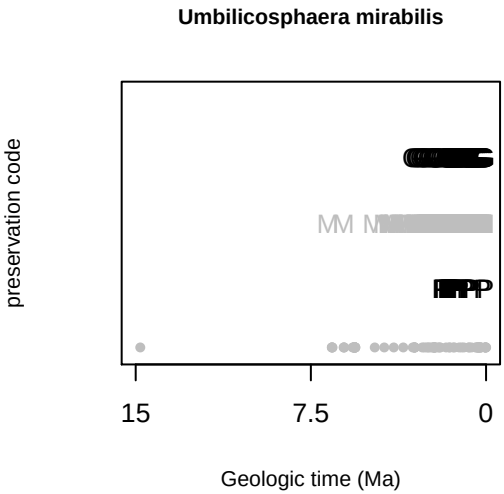

Tribrachiatus orthostylus
preservation code
M M
P P
76
50.5
25
Geologic time (Ma)

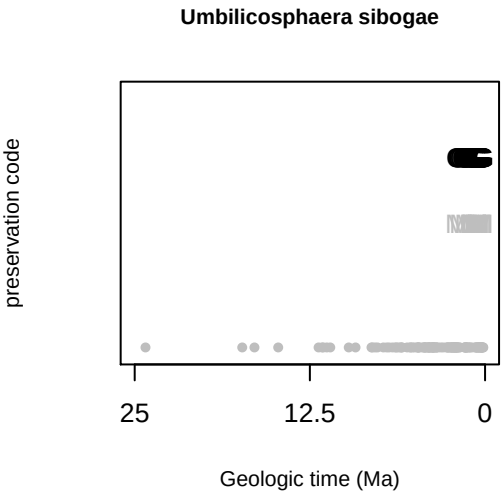

Triquetrorhabdulus carinatus
preservation code
G G
M M
P P
46
23
0
Geologic time (Ma)

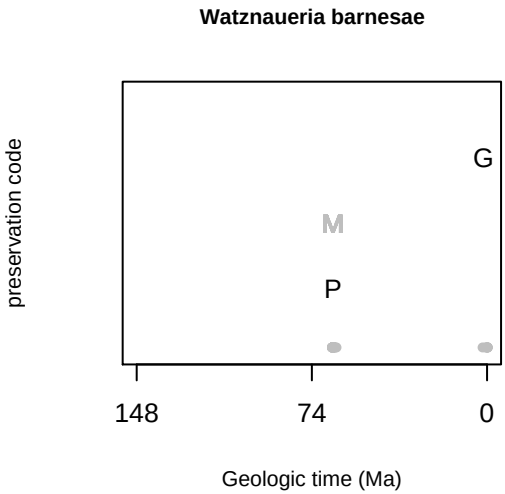

Triquetrorhabdulus milowii
preservation code
30
16
2
Geologic time (Ma)

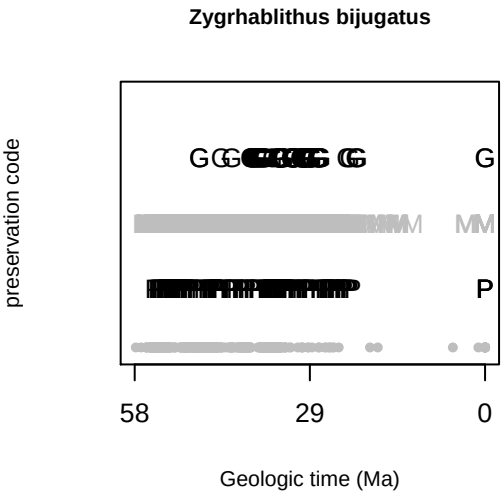

Triquetrorhabdulus rugosus
preservation code
G
M
P
35
18.5
2
Geologic time (Ma)

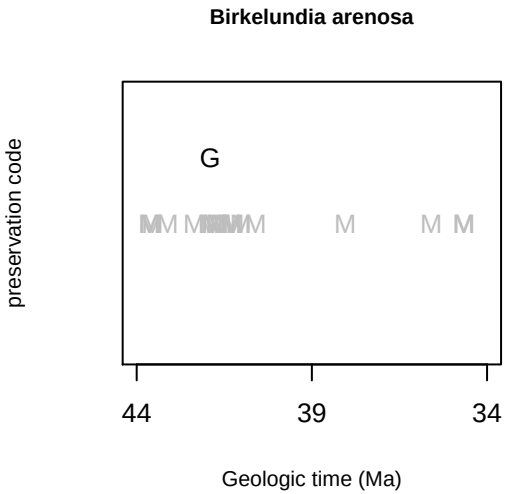

Umbellosphaera irregularis
preservation code
G
M
P
9
4.5
0
Geologic time (Ma)

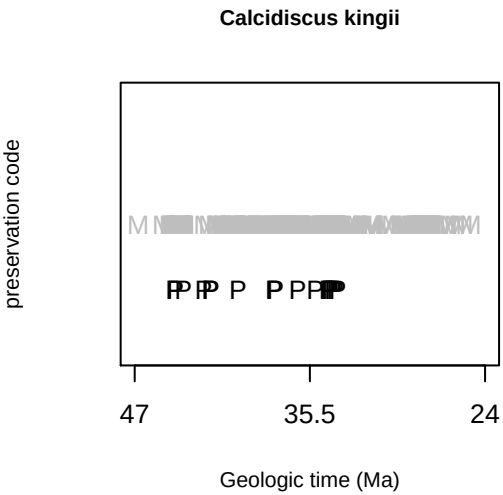

Umbilicosphaera mirabilis
preservation code
M
P
15
7.5
0
Geologic time (Ma)

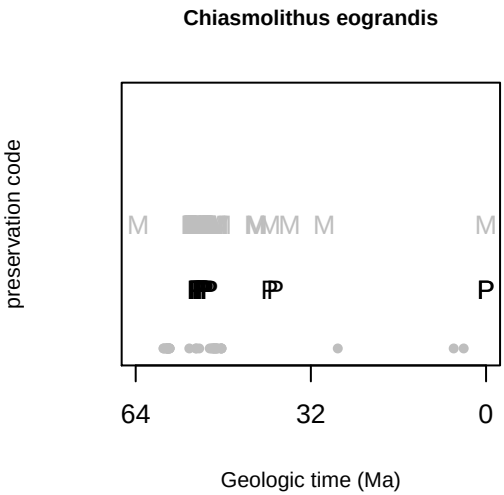

Umbilicosphaera sibogae
preservation code
25
12.5
0
Geologic time (Ma)

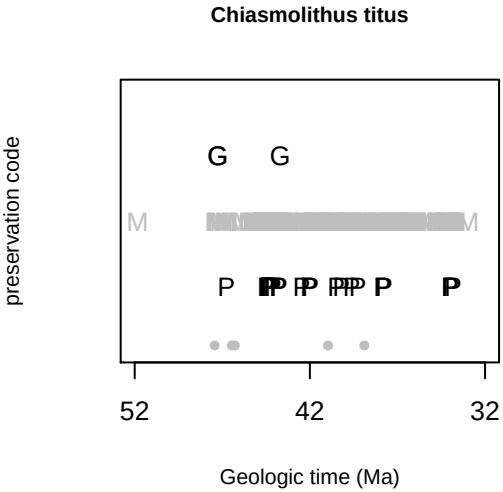

Watznaueria barnesae
preservation code
G
M
P
148
74
0
Geologic time (Ma)

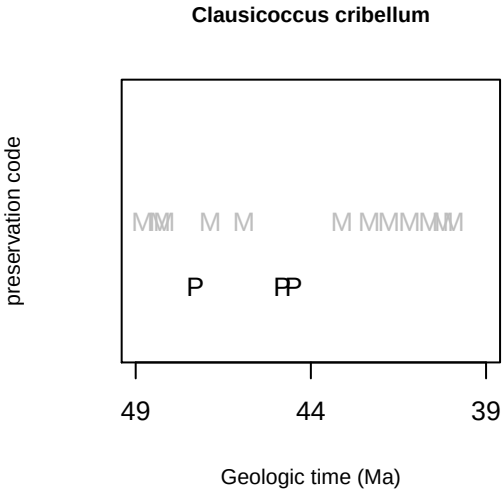

Zygrhablithus bijugatus
preservation code
G
M
P
58
29
0
Geologic time (Ma)

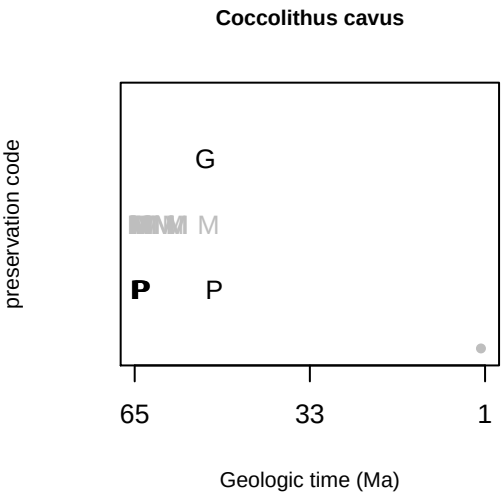

Birkelundia arenosa
preservation code
G
M
44
39
34
Geologic time (Ma)

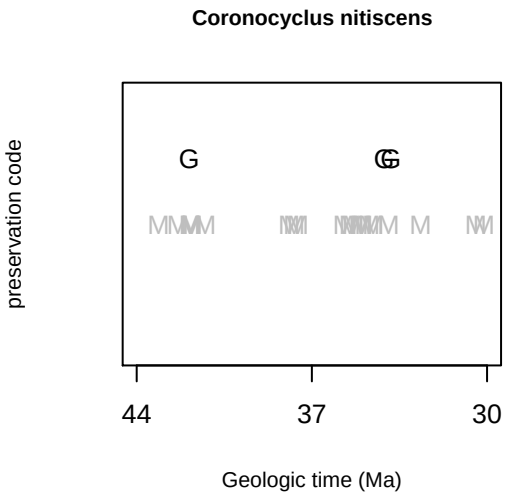

Calcidiscus kingii
preservation code
47
35.5
24
Geologic time (Ma)

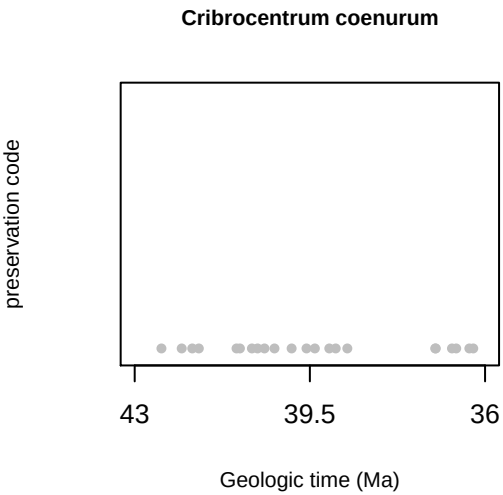

Chiasmolithus eograndis
preservation code
64
32
0
Geologic time (Ma)

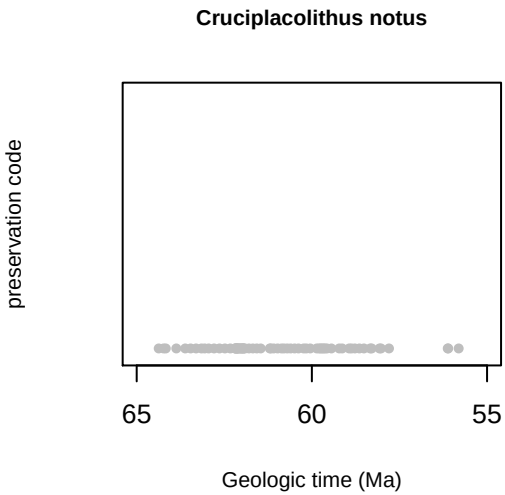

Chiasmolithus titus
preservation code
52
42
32
Geologic time (Ma)

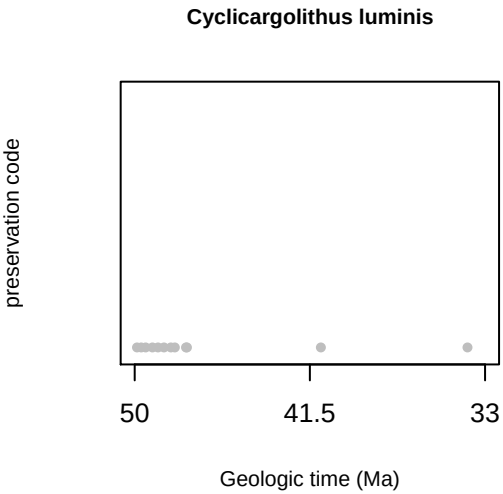

Clausicoccus cribellum
preservation code
49
44
39
Geologic time (Ma)

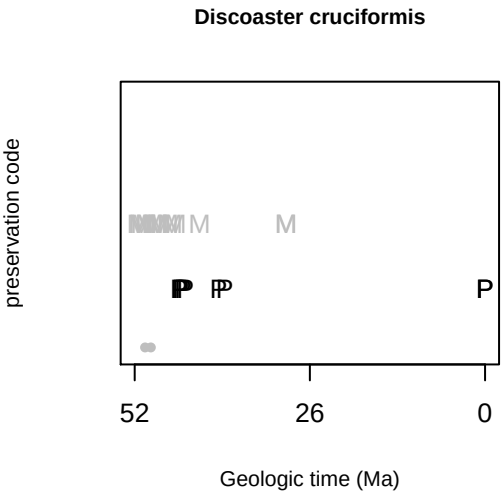

Coccolithus cavus
preservation code
G
M
P
P
65
33
1
Geologic time (Ma)

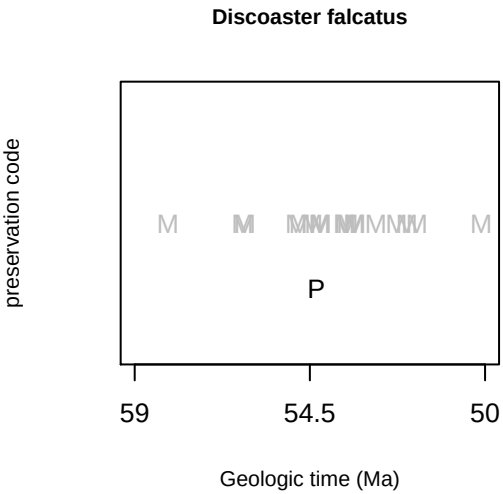

Coronocyclus nitiscens
preservation code
G
G
M
M
M
M
M
44
37
30
Geologic time (Ma)

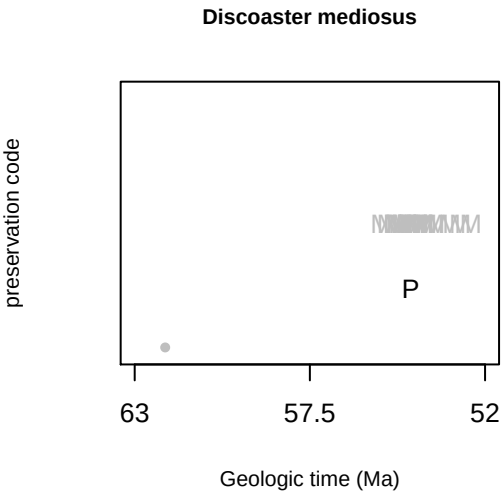

Cribrocentrum coenurum
preservation code
43
39.5
36
Geologic time (Ma)

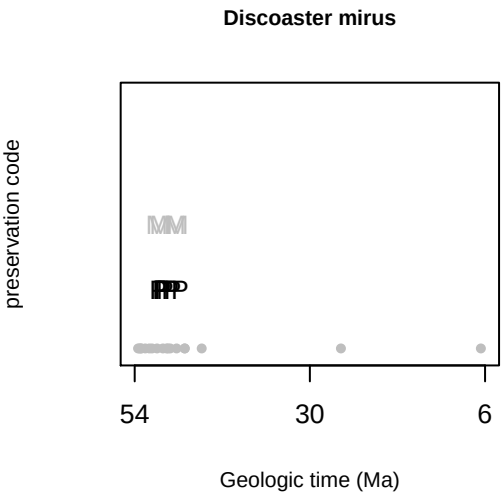

Cruciplacolithus notus
preservation code
65
60
55
Geologic time (Ma)

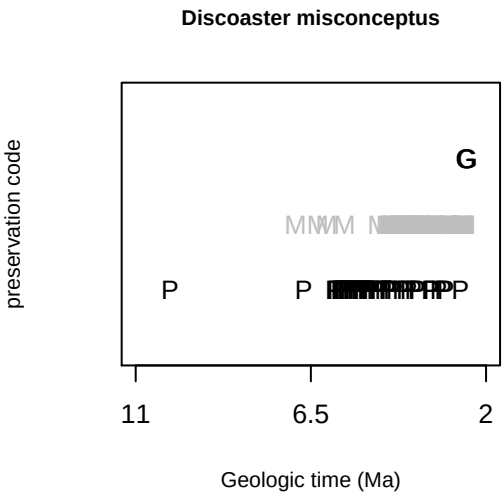

Cyclicargolithus luminis
preservation code
50
41.5
33
Geologic time (Ma)

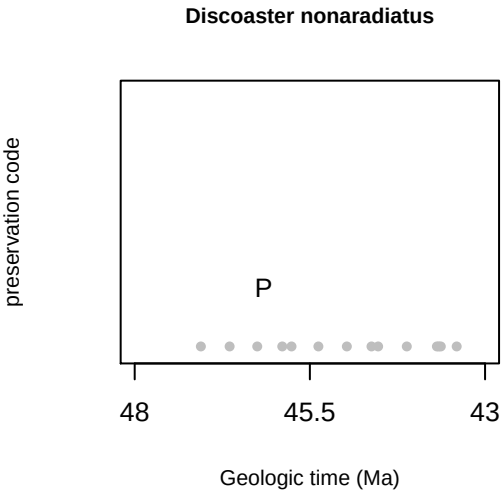

Discoaster cruciformis
preservation code
M
M
P
P
P
52
26
0
Geologic time (Ma)

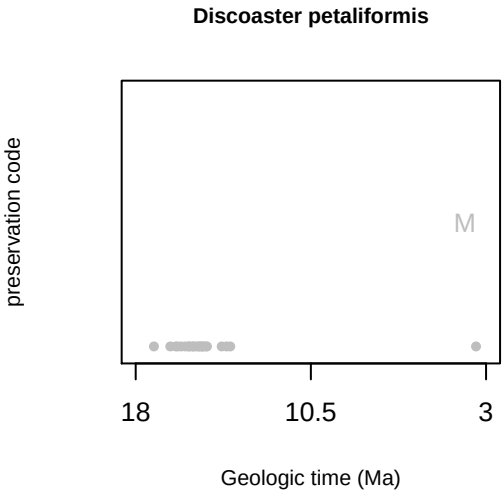

Discoaster falcatus
preservation code
M
M
M
P
59
54.5
50
Geologic time (Ma)

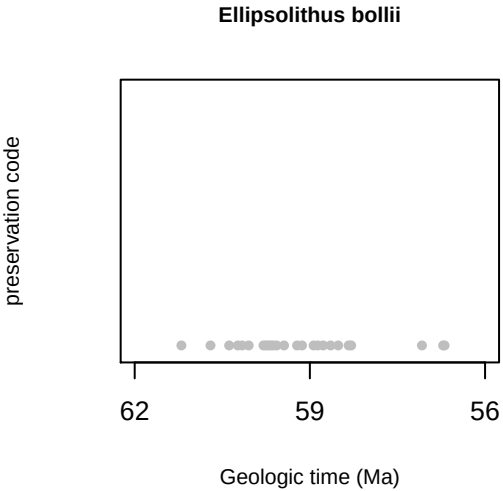

Discoaster mediosus
preservation code
M
P
63
57.5
52
Geologic time (Ma)

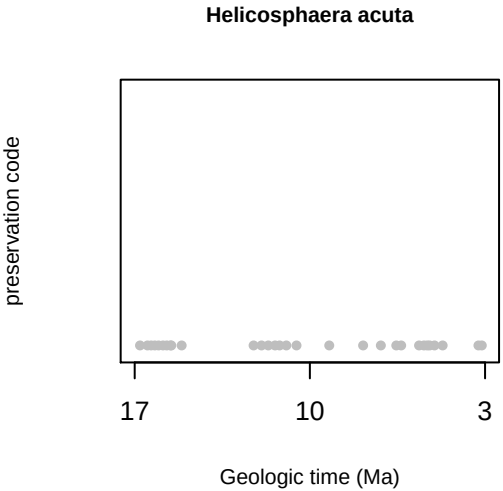

Discoaster mirus
preservation code
54
30
6
Geologic time (Ma)

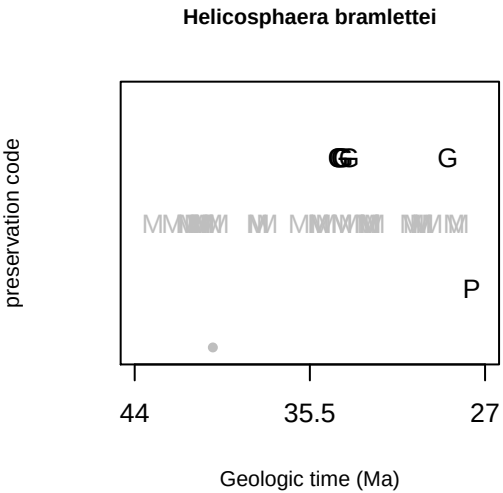

Discoaster misconceptus
preservation code
G
P
P
11
6.5
2
Geologic time (Ma)

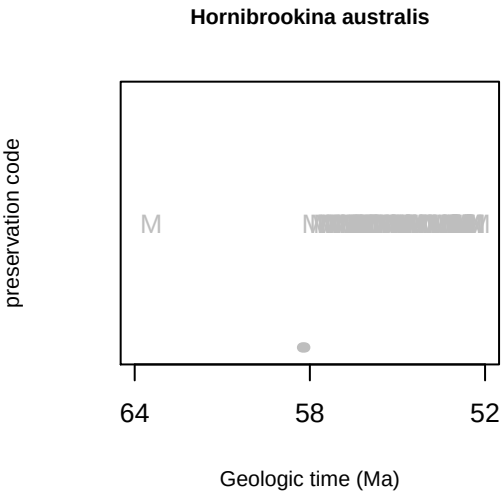

Discoaster nonaradiatus
preservation code
P
48
45.5
43
Geologic time (Ma)

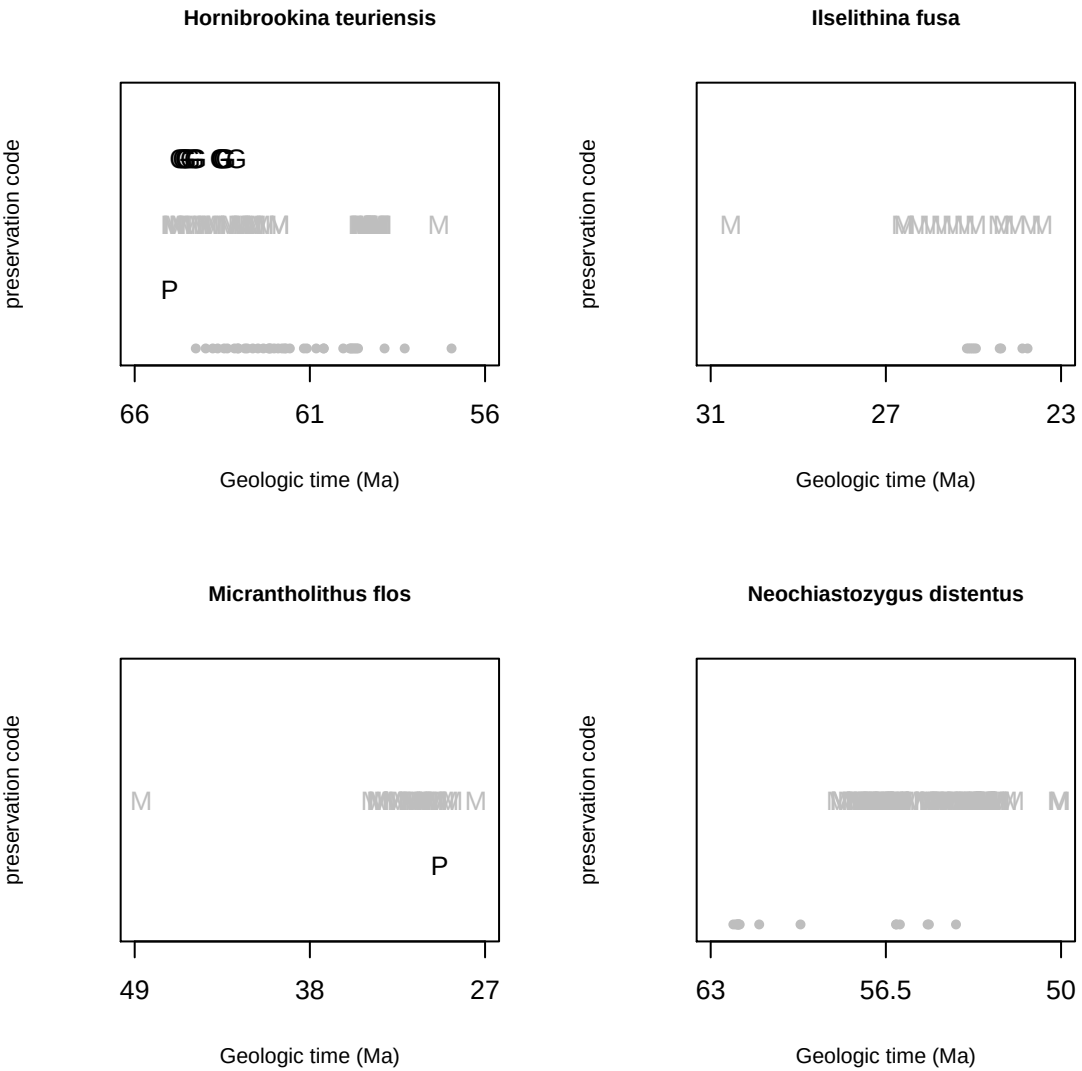

Discoaster petaliformis
preservation code
M
18
10.5
3
Geologic time (Ma)

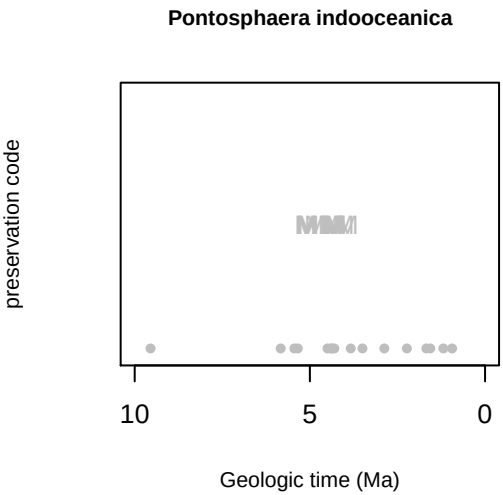

Ellipsolithus bollii
preservation code
62
59
56
Geologic time (Ma)

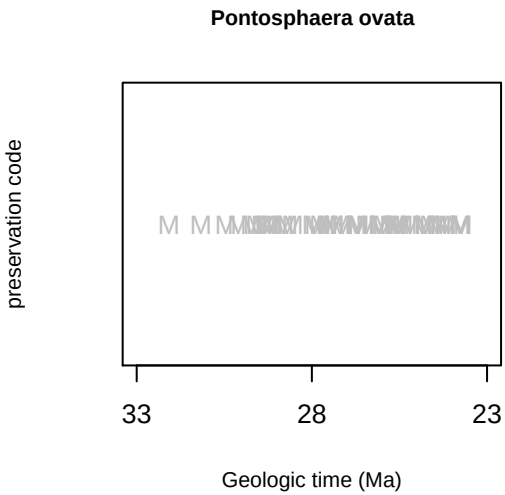

Helicosphaera acuta
preservation code
17
10
3
Geologic time (Ma)

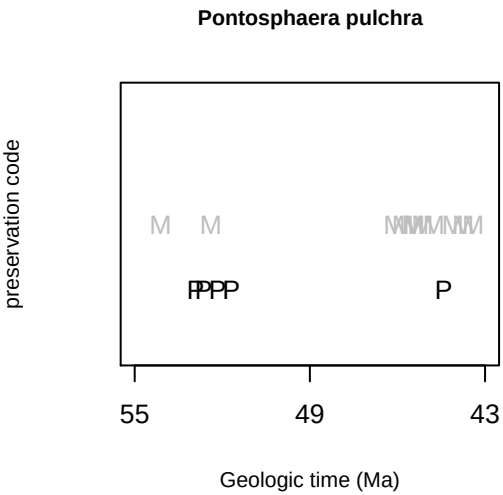

Helicosphaera bramlettei
preservation code
G
G
P
44
35.5
27
Geologic time (Ma)

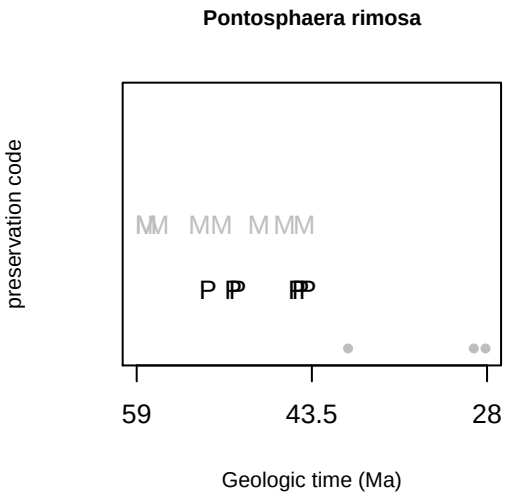

Hornibrookina australis
preservation code
M
64
58
52
Geologic time (Ma)

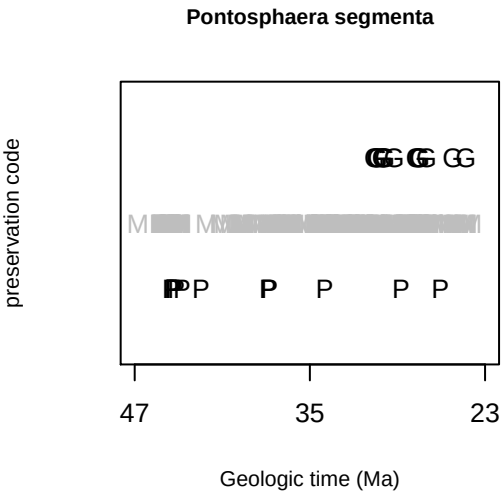

Hornibrookina teuriensis
preservation code
G
M
P
66
61
56
Geologic time (Ma)
Ilselithina fusa
preservation code
M
31
27
23
Geologic time (Ma)
Micrantholithus flos
preservation code
M
P
49
38
27
Geologic time (Ma)
Neochiastozygus distentus
preservation code
M
63
56.5
50
Geologic time (Ma)

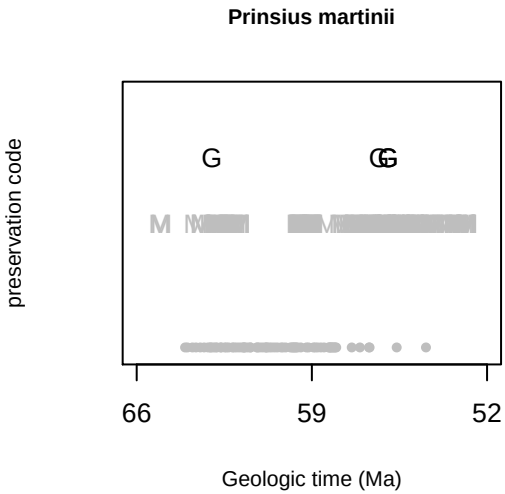

Pontosphaera indooceanica
preservation code
10
5
0
Geologic time (Ma)

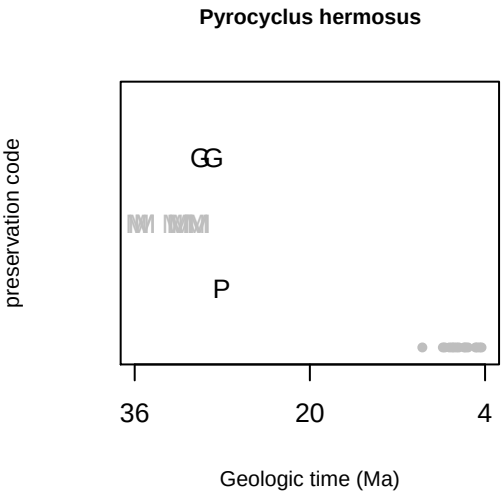

Pontosphaera ovata
preservation code
33
28
23
Geologic time (Ma)

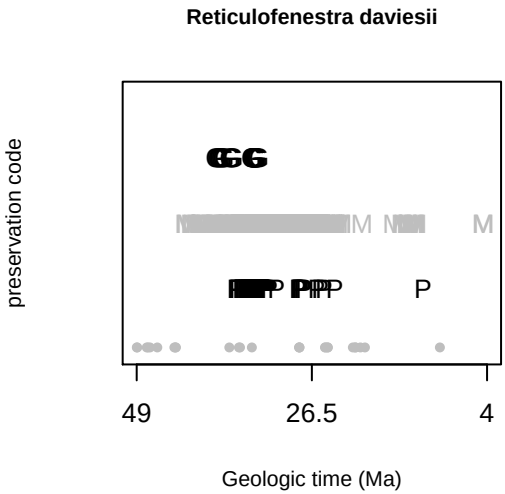

Pontosphaera pulchra
preservation code
55
49
43
Geologic time (Ma)

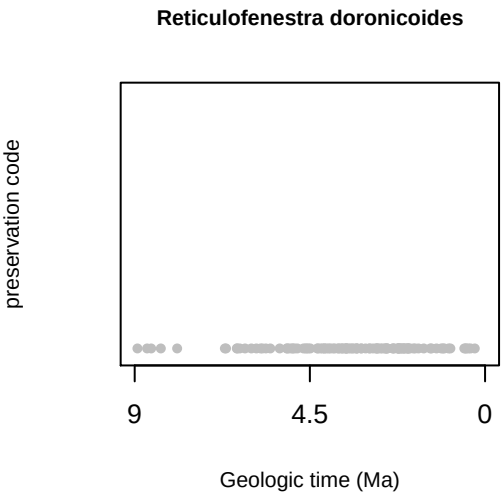

Pontosphaera rimosa
preservation code
59
43.5
28
Geologic time (Ma)

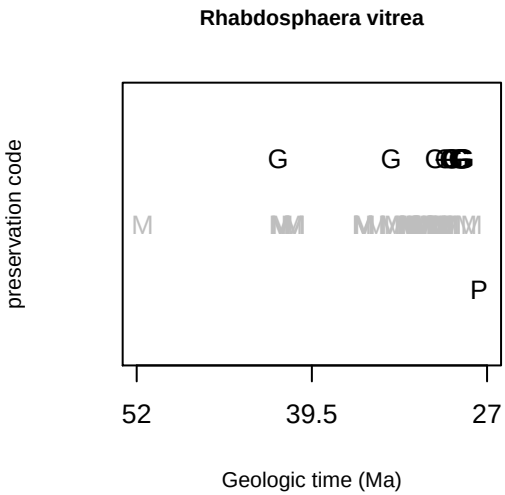

Pontosphaera segmenta
preservation code
47
35
23
Geologic time (Ma)

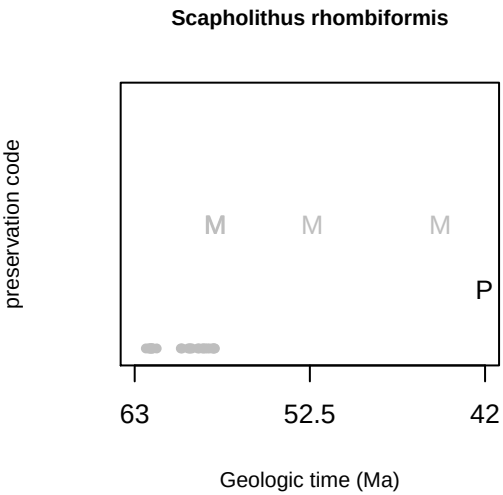

Prinsius martinii
preservation code
66
59
52
Geologic time (Ma)

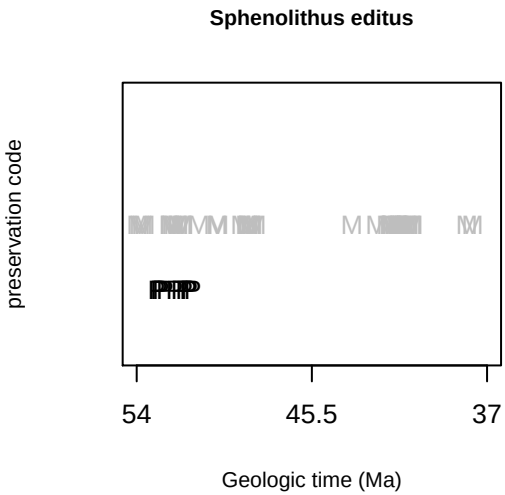

Pyrocyclus hermosus
preservation code
36
20
4
Geologic time (Ma)

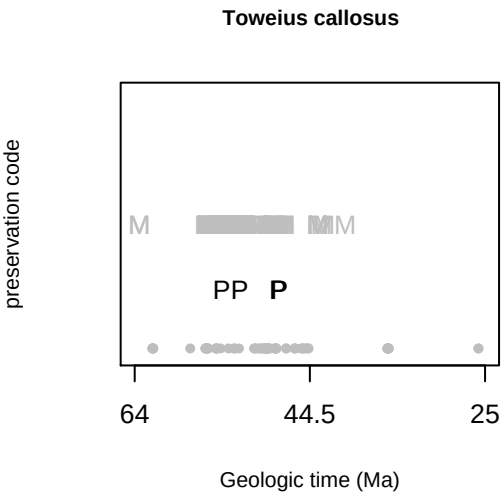

Reticulofenestra daviesii
preservation code
49
26.5
4
Geologic time (Ma)

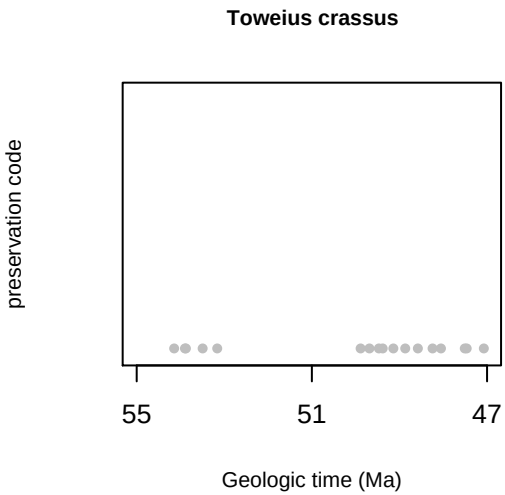

Reticulofenestra doronicoides
preservation code
9
4.5
0
Geologic time (Ma)

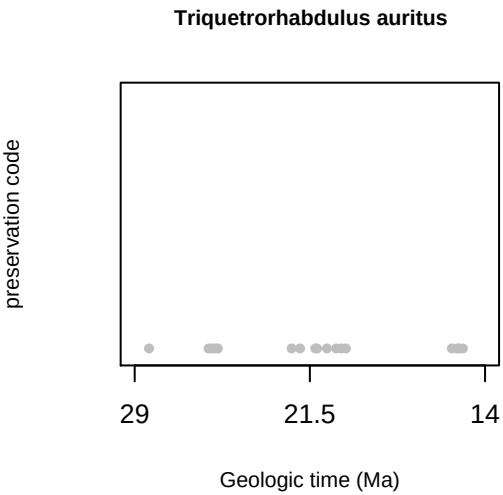

Rhabdosphaera vitrea
preservation code
G
G
M
P
52
39.5
27
Geologic time (Ma)

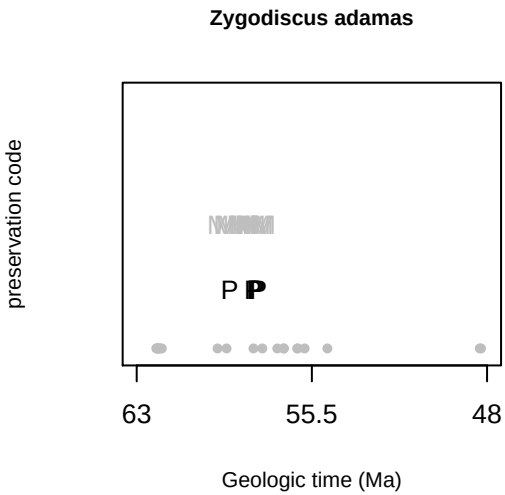

Scapholithus rhombiformis
preservation code
M
M
M
P
63
52.5
42
Geologic time (Ma)

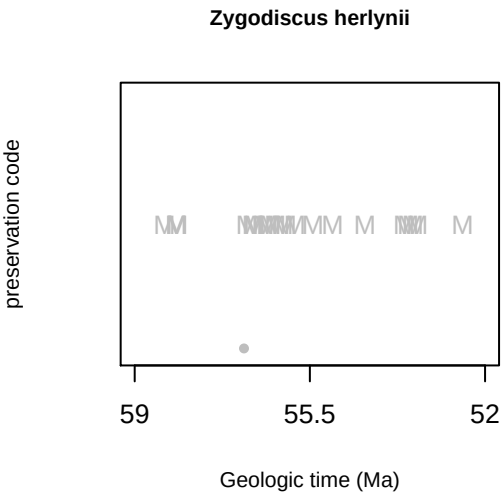

Sphenolithus editus
preservation code
54
45.5
37
Geologic time (Ma)

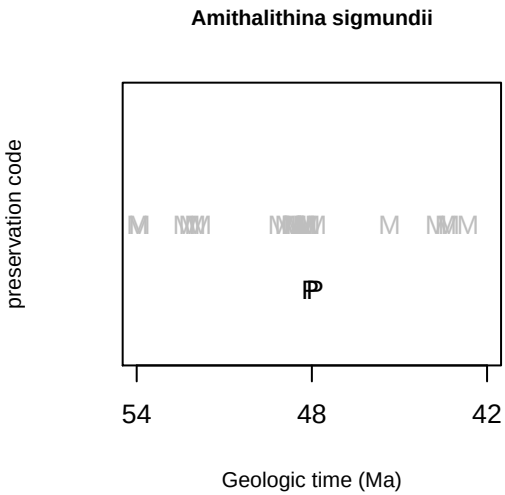

Toweius callosus
preservation code
M
MM
PP
P
64
44.5
25
Geologic time (Ma)

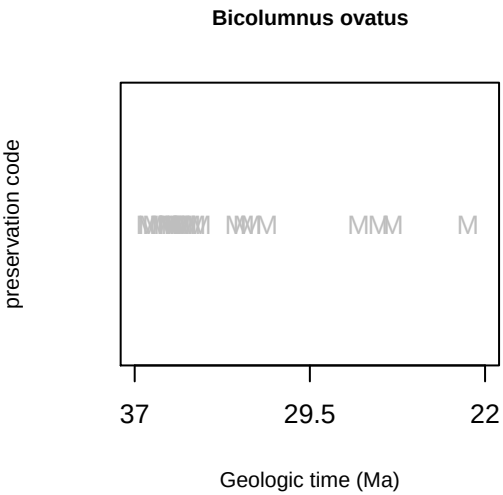

Toweius crassus
preservation code
55
51
47
Geologic time (Ma)

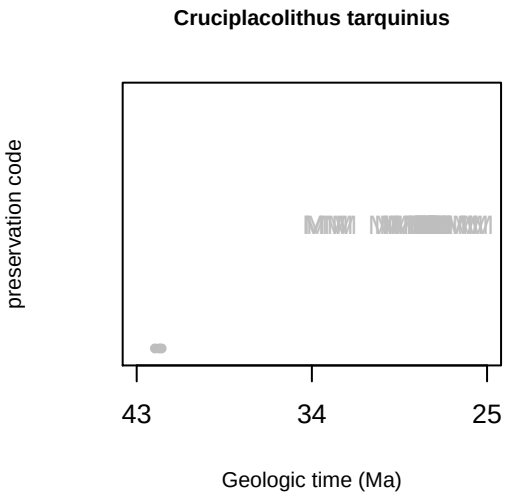

Triquetrorhabdulus auritus
preservation code
29
21.5
14
Geologic time (Ma)

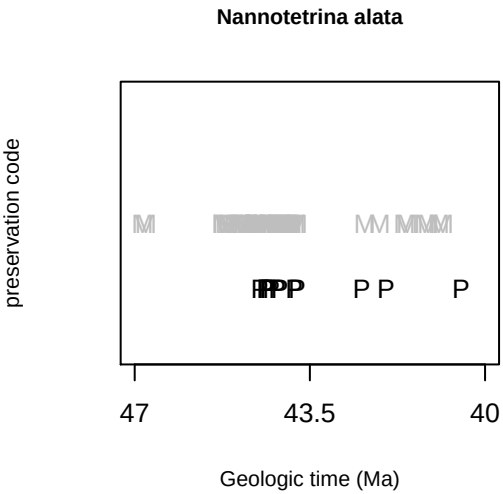

Zygodiscus adamas
preservation code
P
P
63
55.5
48
Geologic time (Ma)

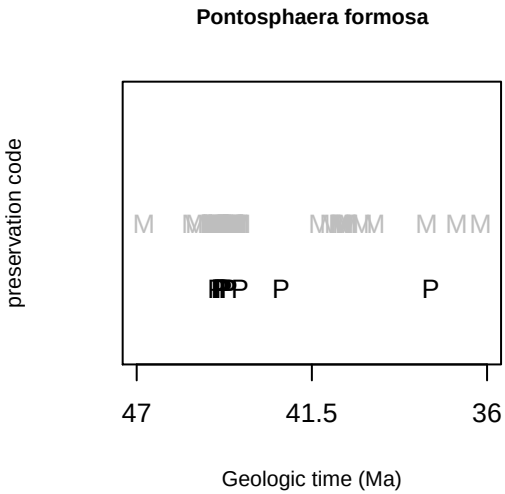

Zygodiscus herlynii
preservation code
59
55.5
52
Geologic time (Ma)

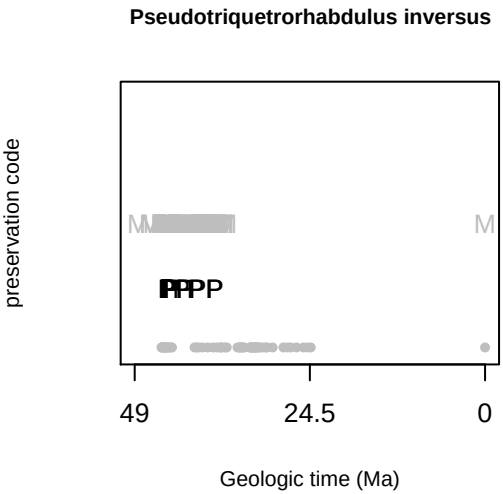

Amithalithina sigmundii
preservation code
54
48
42
Geologic time (Ma)

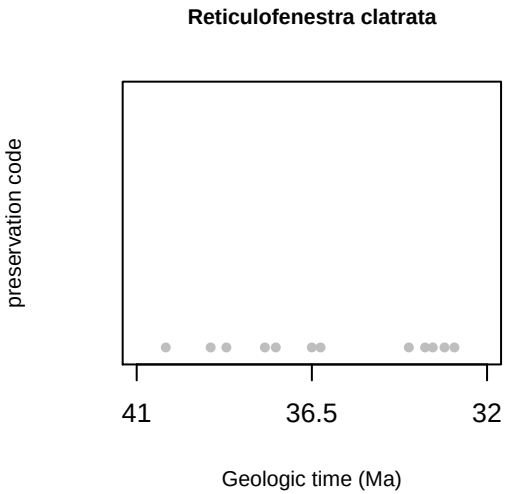

Bicolumnus ovatus
preservation code
37
29.5
22
Geologic time (Ma)


Cruciplacolithus tarquinius
preservation code
43
34
25
Geologic time (Ma)


Nannotetrina alata
preservation code
47
43.5
40
Geologic time (Ma)


Pontosphaera formosa
preservation code
47
41.5
36
Geologic time (Ma)


Pseudotriquetrorhabdulus inversus
preservation code
49
24.5
0
Geologic time (Ma)


Reticulofenestra clatrata
preservation code
41
36.5
32
Geologic time (Ma)