SUPPLEMENTARY MATERIAL

SUPPLEMENTARY APPENDIX A. Taxonomic Remarks

The planktic foraminiferal taxonomy used in this paper is based on detailed morphological, morphostatistical and textural studies of specimens from the most continuous, complete and expanded sections worldwide (Arenillas and Arz, 2000, 2007, 2013*a,b*, 2017; Arenillas et al. 2007, 2012, 2016; Arz et al. 2010). Specimens illustrated in Supplementary Figures 2 and 3 come mainly from El Kef and Aïn Settara, but also from Ben Gurion (Israel), Bajada del Jagüel (Argentina) and DSDP Site 305 (North Pacific).

After the K/Pg boundary, two main evolutionary lineages emerged, one of tiny globigeriniform, trochospiral tests informally called parvularugoglobigerinids (*Palaeoglobigerina* Arenillas, Arz and Náñez, 2007, and *Parvularugoglobigerina* Hofker, 1978) with a smooth wall-texture, and the other of triserial tests (*Chiloguembelitria*) with a rugose wall-texture (Arenillas and Arz 2017; Arenillas et al. 2017). The benthic genus *Caucasina* Khalilov, 1951, seems to be the ancestor of parvularugoglobigerinids (Brinkhuis and Zachariasse 1988), with *Pseudocaucasina* Arenillas and Arz, 2017 encompassing the intermediate morphotypes (Arenillas and Arz 2017). On the basis of transitional specimens, Arenillas and Arz (2013*a*) suggested an evolution from smooth-walled *Palaeoglobigerina* to a spinose, cancellate lineage, first *Eoglobigerina* (initially with a pitted wall), and then *Parasubbotina* and *Subbotina*. Likewise, Arenillas and Arz (2013*b*) suggested an evolution from smooth-walled *Parvularugoglobigerina* to pitted *Globanomalina*, and then to non-spinose, cancellate *Praemurica* (wall-textures shown in Supplementary Fig. 1).

Guembelitria is the ancestor of *Chiloguembelitria* (Hofker 1978; Arenillas et al. 2017). This taxon played an important role in the evolution of early Danian guembelitriids, as it seems to be the most immediate ancestor of two lineages, one biserial and culminating in *Chiloguembelina* and another trochospiral and culminating in *Globoconusa* (Arenillas and

Arz 2000; Arenillas et al. 2010). For the latter, Arenillas et al. (2012, 2016) proposed *Trochoguembelitria* as an intermediate taxon; this shares its wall-texture with *Chiloguembelitria* and, like the latter, may be triserial in its juvenile stage (Supplementary Fig. 1). *Woodringina*, with a mixed triserial-biserial test, is the intermediate taxon between *Chiloguembelitria* and the wholly biserial *Chiloguembelina*. This biserial lineage is characterized by a finely pustulate wall-texture, which tends to be smoother in *Chiloguembelina* (Supplementary Fig. 1).

Supplementary APPENDIX A - References

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SUPPLEMENTARY APPENDIX B. Evolutionary model of planktic foraminifera across the K/Pg boundary

The evolutionary model proposed by Dean and McKinney (2001) includes four metrics: extinction rate (E_R), speciation rate (N_R), taxonomic flux (F) and volatility (V). These are calculated for consecutive stratigraphic intervals of approximately the same thickness and duration (Supplementary Fig. 4). The number, position and resolution of intervals are chosen by the researcher. In order to measure the metric turnovers in the greatest detail, we chose two series of overlapping intervals of 100 cm thickness (each interval between approximately 10 and 20Kyr in duration). The interval boundaries of the first series fall within the middle parts of the second series of intervals, and vice versa. The K/Pg boundary was made to coincide with the boundary between intervals 12 and 13 and with the middle part of interval 13' (Supplementary Fig. 4).

Four parameters were measured in each interval (Supplementary Tables 1 and 2): the number of identified species (G), of extinct species (E), of new species (N) and of stable species (S), all quantified from stratigraphic range data. A stable species in a particular interval is the one that persists across the entire interval. We used the K-Pg planktic foraminiferal biostratigraphic data from Arenillas et al. (2000) and subsequent modifications (see Arenillas and Arz 2017; Arenillas et al. 2017) and calculated the Dean and McKinney (2001) metrics for the pattern A hypothesis (Supplementary Table 1), with sixteen Cretaceous survivors (see Supplementary Fig. 4), and the pattern B hypothesis, with two Cretaceous survivors (*Guembelitria cretacea* and *G. blowi*) and the rest considered to be reworked specimens (Supplementary Table 2). The extinction (E_R) and speciation (N_R) rates in each interval were expressed as $E_R = E/G$ and $N_R = N/G$, respectively. The taxonomic flux was defined as $F = (G-E+N+S)/[S+G((E+S)/(N+S))]$ and log F was used to estimate the relative increase (positive value) or decline (negative value) in diversity in each interval. Finally, evolutionary variability was measured in terms of volatility, V = (G-S)/G, where low values indicate evolutionary stability and high values imply evolutionary turnovers.

Supplementary APPENDIX B - References

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SUPPLEMENTARY FIGURES AND TABLES

SUPPLEMENTARY FIGURE 1. Systematic scheme of early Danian planktic foraminifera (normal forms) with notes on test wall structure according to the taxonomy used here. The first evolutionary radiation occurred between approximately 5 and 26Kyr after the K/Pg boundary includes the appearance of species belonging to the genera *Pseudocaucasina*, *Palaeoglobigerina* *Parvularugoglobigerina*, *Chiloguembelitria,* *Woodringina* and *Chiloguembelina* appeared. The second evolutionary radiation occurred between approximately 46 and 110Kyr after the K/Pg boundary includes the appearance of species belonging to the genera *Trochoguembelitria*, *Eoglobigerina*, *Parasubbotina*, *Globanomalina* and *Praemurica*.

SUPPLEMENTARY FIGURE 2. Normal forms of early Danian species of the first evolutionary radiation (scale bar = 100 microns). 1. *Guembelitria cretacea*; 2. *Guembelitria blowi*; 3. *Guembelitria dammula*; 4. *Chiloguembelitria danica*; 5-6. *Chiloguembelitria irregularis*; 7. *Chiloguembelitria hofkeri*; 8. *Chiloguembelitria trilobata*; 9. *Chiloguembelitria biseriata*; 10. *Woodringina claytonensis*; 11. *Woodringina hornerstownensis*; 12. *Chiloguembelina taurica*; 13. *Chiloguembelina midwayensis*; 14. *Pseudocaucasina antecessor*; 15. *Palaeoglobigerina alticonusa*; 16. *Palaeoglobigerina fodina*; 17. *Palaeoglobigerina minutula*; 18. *Palaeoglobigerina luterbacheri*; 19. *Parvularugoglobigerina longiapertura*; 20. *Parvularugoglobigerina eugubina*; 21. *Parvularugoglobigerina perexigua*; 22. *Parvularugoglobigerina umbrica*; 23. *Parvularugoglobigerina sabina*. All specimens come from El Kef, except for some from Aïn Settara (10, 11, 19) and DSDP Site 305 (12).

SUPPLEMENTARY FIGURE 3. Normal forms of early Danian species of the second evolutionary radiation (scale bar = 100 microns). 1. *Trochoguembelitria alabamensis*; 2.

Trochoguembelitria extensa; 3. *Trochoguembelitria liuae*; 4. *Trochoguembelitria olssoni*; 5. *Globoconusa daubjergensis*; 6. *Eoglobigerina simplicissima*; 7. *Eoglobigerina eobulloides*; 8. *Eoglobigerina microcellulosa*; 9. *Eoglobigerina* cf. *trivialis*; 10. *Eoglobigerina praeedita*; 11. *Eoglobigerina edita*; 12. *Eoglobigerina fringa*; 13. *Subbotina triloculinoides*; 14. *Parasubbotina moskvini*; 15. *Parasubbotina pseudobulloides*; 16. *Parasubbotina varianta*; 17-18. *Globanomalina archeocompressa*; 19. *Globanomalina imitata*; 20. *Globanomalina planocompressa*; 21. *Praemurica taurica*; 22. *Praemurica pseudoinconstans*; 23. *Praemurica inconstans*. All specimens come from El Kef, except for some from Bajada del Jagüel (5), Ben Gurion (9, 12, 14, 16), DSDP Site 305 (15, 21, 22, 23) and Aïn Settara (18).

SUPPLEMENTARY FIGURE 4. The planktic foraminifer species ranges across the K/Pg boundary at the El Kef section (modified from Arenillas et al. 2000*a*, 2002) and the two series of 1 m-thick intervals used to quantify the evolutionary model; solid line = certain range; thick dotted line = uncertain range, either because the range has not been corroborated at El Kef, because the range may be perhaps based on reworked specimens, or because the range indeed correspond to that of another morphologically similar species; thin dotted line = highly doubtful species range, based probably on reworked specimens. The pattern A hypothesis includes uncertain and highly doubtful ranges, whereas the pattern B hypothesis only takes into account ranges considered certain.

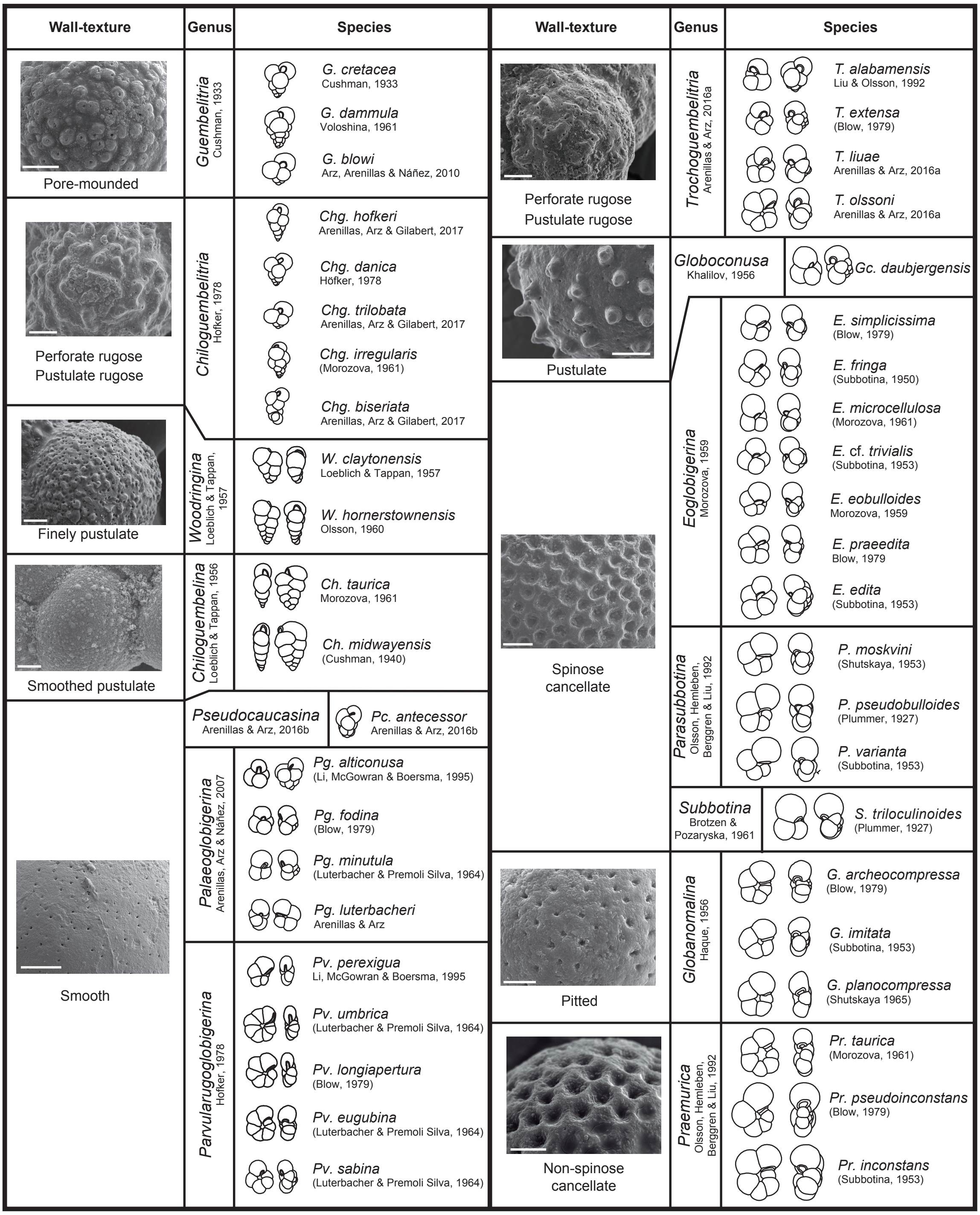
SUPPLEMENTARY FIGURE 5. Examples of aberrant planktic foraminiferal forms from acme-stage PFAS-1, and transition between acme-stages PFAS-1 and PFAS-2 (scale bar = 100 microns). 1. *Guembelitria* sp. (probably *G. cretacea*), lack of sculpture in the test due to aberrant ultimate chambers. 2. *Chiloguembelitria* sp. (probably *Chg. danica*), reduced last chamber (kummerform). 3. *Guembelitria* spp., multiple ultimate chambers (racemiguembeliform multiserial test). 4. *Guembelitria* sp. (probably *G. cretacea*), second chamber abnormally protruding beside the proloculus. 5. *Guembelitria* sp. (probably *G. cretacea*), two specimens with fused tests. 6. *Guembelitria* sp. (probably *G. cretacea*), attached twins (Siamese). 7. *W. claytonensis*, kinking with change in the coiling direction. 8. *W. hornerstownensis,* kinking with change in the coiling direction. 9-10. *W. hornerstownensis*, multiple ultimate chambers (planoglobuliniform multiserial test). 11. *Ch. midwayensis*, kinking with change in the coiling direction of 90º. 12. *Palaeoglobigerina* sp. (probably *Pg. alticonusa*), multiple ultimate chambers and apertures (multiserial test). 13. *Palaeoglobigerina* sp. (probably *Pg. fodina*), multiple ultimate chambers (multiserial test). 14. *Pv. longiapertura*, kinking with two axes of rotation. 15. *Parvularugoglobigerina* sp. (probably *Pv. umbrica*), lack sculpture of the test, with multiple bulla-like chambers. 16-17. *Pv. sabina*, overdeveloped or bulla-like ultimate chamber. 18. *Pv. longiapertura*, aberrant antepenultimate chamber. 19. *Pv. longiapertura*, twisting of entire test (extreme kinking) and overdeveloped chambers. 20. *Parvularugoglobigerina* sp. (probably *Pv. longiapertura*), double or twinned ultimate chambers. Most of the specimens come from El Kef, and the rest are from Aïn Settara (9, 14, 17), Caravaca (10, 19), Elles (11) and Agost (15, 16, 18, 20).

Supplementary Figure 6. Examples of aberrant planktic foraminiferal forms from PFAS-1 and PFAS-2 (scale bar = 100 microns). 1. *Pv. longiapertura*, abnormally compressed test and aberrant ultimate chambers. 2. *Pv. sabina*, bulla-like ultimate chamber. 3. *Parvularugoglobigerina* sp. (probably *Pv. longiapertura*), twisting of entire test (extreme kinking). 4. *Pv. longiapertura*, abnormally compressed test and aberrant ultimate chamber. 5. *Pv. eugubina*, aberrant chamber (second chamber of the last whorl). 6. *Pv. longiapertura*, protuberant additional chamber. 7. *Pv. longiapertura*, inflated additional chamber. 8. *Pv. longiapertura*, test with two additional chambers. 9. *Pv. eugubina*, protuberant aberrant chamber. 10. *Pv. longiapertura*, poor development of last whorl. 11. *Palaeoglobigerina* sp. (probably *Pg. fodina*), multiple ultimate chambers (multiserial test). 12-14. *Palaeoglobigerina* sp. (*Pg. alticonusa* or *Pg. fodina*), bulla-like ultimate chamber with additional apertures. 15. *Palaeoglobigerina* sp. (probably *Pg. fodina*), second chamber abnormally protruding beside the proloculus. 16. *Palaeoglobigerina* sp. (probably *Pg. fodina* or *Pg. luterbacheri*), attached twins (Siamese). 17. *Palaeoglobigerina* sp. (probably *Pg. fodina*), twisting of entire test (extreme kinking). 18. *Pv. eugubina*, overdeveloped last chamber with aperture in equatorial position, and test going from trochospiral to planispiral. All specimens come from El Kef, except for some from Elles (1, 9) and Agost (10).

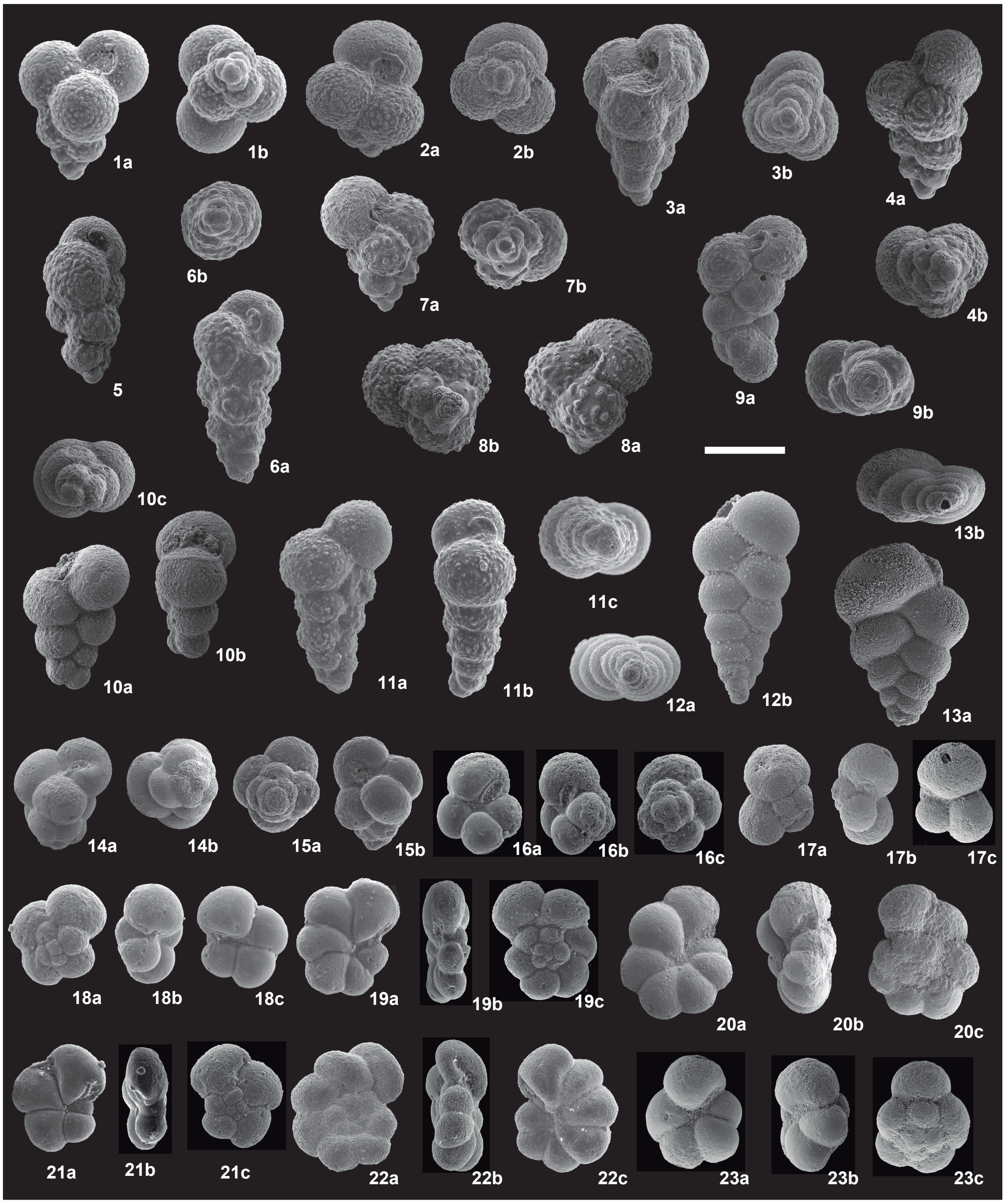
SUPPLEMENTARY FIGURE 7. Examples of aberrant planktic foraminiferal forms from PFAS-3, mainly from the *Chiloguembelitria* acme (scale bar = 100 microns). 1. *Pv. eugubina*, overdevelopment of the last whorl. 2. *W. claytonensis*, protuberant last chamber in anomalous position, with test going from biserial to triserial. 3. *W. claytonensis*, lack of sculpture in the test with both abnormal and protuberant chambers. 4. *W. hornerstownensis*, kinking with change in the coiling direction and reduced last chamber (kummerform). 5. *Woodringina* sp. (probably *W. claytonensis*), general monstrosity, probably attached twins (Siamese) or test with extreme kinking. 6. *Ch. taurica*, welded chambers. 7. *Ch. taurica*, multiple ultimate chambers (multiserial test). 8. *W. claytonensis*, overdeveloped ultimate chamber. 9. *Trochoguembelitria* sp. (probably *T. extensa*), general monstrosity (proliferation of generally kummerform chambers, kinking, chambers abnormally protruding beside the proloculus, multiple apertures, etc.). 10. *T. liuae*, bulla-like ultimate chambers. 11. *T. liuae*, double or twinned ultimate chambers. 12. *Praemurica* sp. (probably *Pr. pseudoinconstans*), lack of sculpture in the test, with bulla-like antepenultimate chamber and two kummerform last chambers. All specimens come from El Kef, except for some from Aïn Settara (5), Caravaca (6), and Agost (7).

SUPPLEMENTARY TABLE 1. Values of parameters (G, E, N and S) and metrics (E_r, N_r, F and V) in each interval of the El Kef section for pattern A hypothesis (meaning of parameters and metrics in SUPPLEMENTARY APPENDIX A).

SUPPLEMENTARY TABLE 2. Values of parameters (G, E, N and S) and metrics (E_r, N_r, F and V) in each interval of the El Kef section for pattern B hypothesis (meaning of parameters and metrics in SUPPLEMENTARY APPENDIX A).



Wall-texture
Genus
Species
Pore-mounded
Guembelitria
Cushman, 1933
G. cretacea
Cushman, 1933
G. dammula
Voloshina, 1961
G. blowi
Arz, Arenillas & Náñez, 2010
Perforate rugose
Pustulate rugose
Chiloguembelitria
Hofker, 1978
Chg. hofkeri
Arenillas, Arz & Gilabert, 2017
Chg. danica
Höfker, 1978
Chg. trilobata
Arenillas, Arz & Gilabert, 2017
Chg. irregularis
(Morozova, 1961)
Chg. biseriata
Arenillas, Arz & Gilabert, 2017
Finely pustulate
Woodringina
Loeblich & Tappan, 1957
W. claytonensis
Loeblich & Tappan, 1957
W. hornerstownensis
Olsson, 1960
Smoothed pustulate
Chiloguembelina
Loeblich & Tappan, 1956
Ch. taurica
Morozova, 1961
Ch. midwayensis
(Cushman, 1940)
Smooth
Pseudocaucasina
Arenillas & Arz, 2016b
Pc. antecessor
Arenillas & Arz, 2016b
Palaeoglobigerina
Arenillas, Arz & Náñez, 2007
Pg. alticonusa
(Li, McGowran & Boersma, 1995)
Pg. fodina
(Blow, 1979)
Pg. minutula
(Luterbacher & Premoli Silva, 1964)
Pg. luterbacheri
Arenillas & Arz
Parvularugoglobigerina
Hofker, 1978
Pv. perexigua
Li, McGowran & Boersma, 1995
Pv. umbrica
(Luterbacher & Premoli Silva, 1964)
Pv. longiapertura
(Blow, 1979)
Pv. eugubina
(Luterbacher & Premoli Silva, 1964)
Pv. sabina
(Luterbacher & Premoli Silva, 1964)
Wall-texture
Genus
Species
Perforate rugose
Pustulate rugose
Trochoguembelitria
Arenillas & Arz, 2016a
T. alabamensis
Liu & Olsson, 1992
T. extensa
(Blow, 1979)
T. liuae
Arenillas & Arz, 2016a
T. olssoni
Arenillas & Arz, 2016a
Pustulate
Globoconusa
Khalilov, 1956
Gc. daubjergensis
Spinose
cancellate
Eoglobigerina
Morozova, 1959
E. simplicissima
(Blow, 1979)
E. fringa
(Subbotina, 1950)
E. microcellulosa
(Morozova, 1961)
E. cf. trivialis
(Subbotina, 1953)
E. eobulloides
Morozova, 1959
E. praeedita
Blow, 1979
E. edita
(Subbotina, 1953)
Parasubbotina
Olsson, Hemleben, Berggren & Liu, 1992
P. moskvini
(Shutskaya, 1953)
P. pseudobulloides
(Plummer, 1927)
P. varianta
(Subbotina, 1953)
Subbotina
Brotzen & Pozaryska, 1961
S. triloculinoides
(Plummer, 1927)
Pitted
Globanomalina
Haque, 1956
G. archeocompressa
(Blow, 1979)
G. imitata
(Subbotina, 1953)
G. planocompressa
(Shutskaya 1965)
Non-spinose
cancellate
Praemurica
Olsson, Hemleben, Berggren & Liu, 1992
Pr. taurica
(Morozova, 1961)
Pr. pseudoinconstans
(Blow, 1979)
Pr. inconstans
(Subbotina, 1953)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1b
2a
2b
3a
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4a
4b
5
6a
6b
7a
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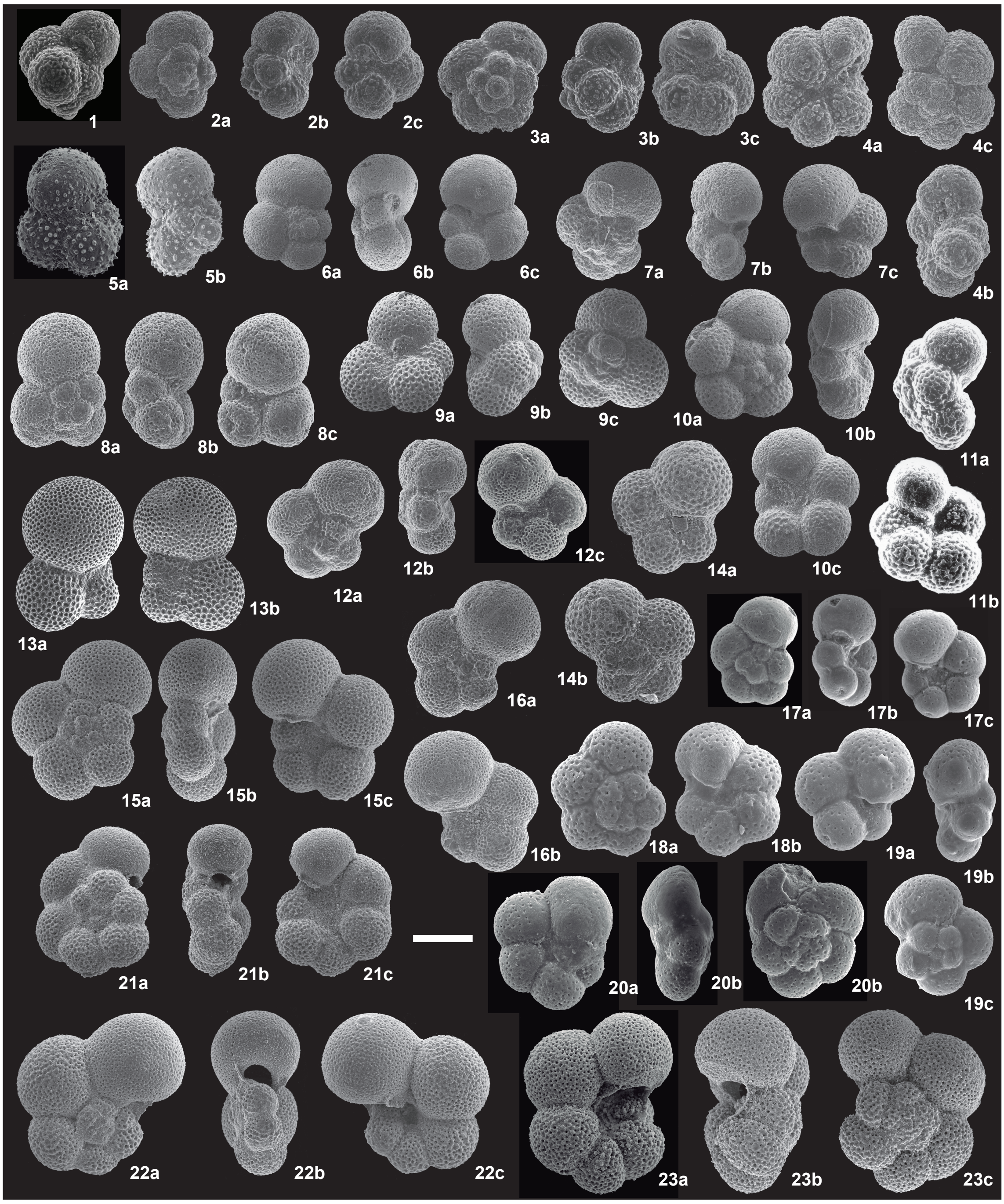
1
2a
2b
2c
3a
3b
3c
4a
4c
5a
5b
6a
6b
6c
7a
7b
7c
4b
8a
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8c
9a
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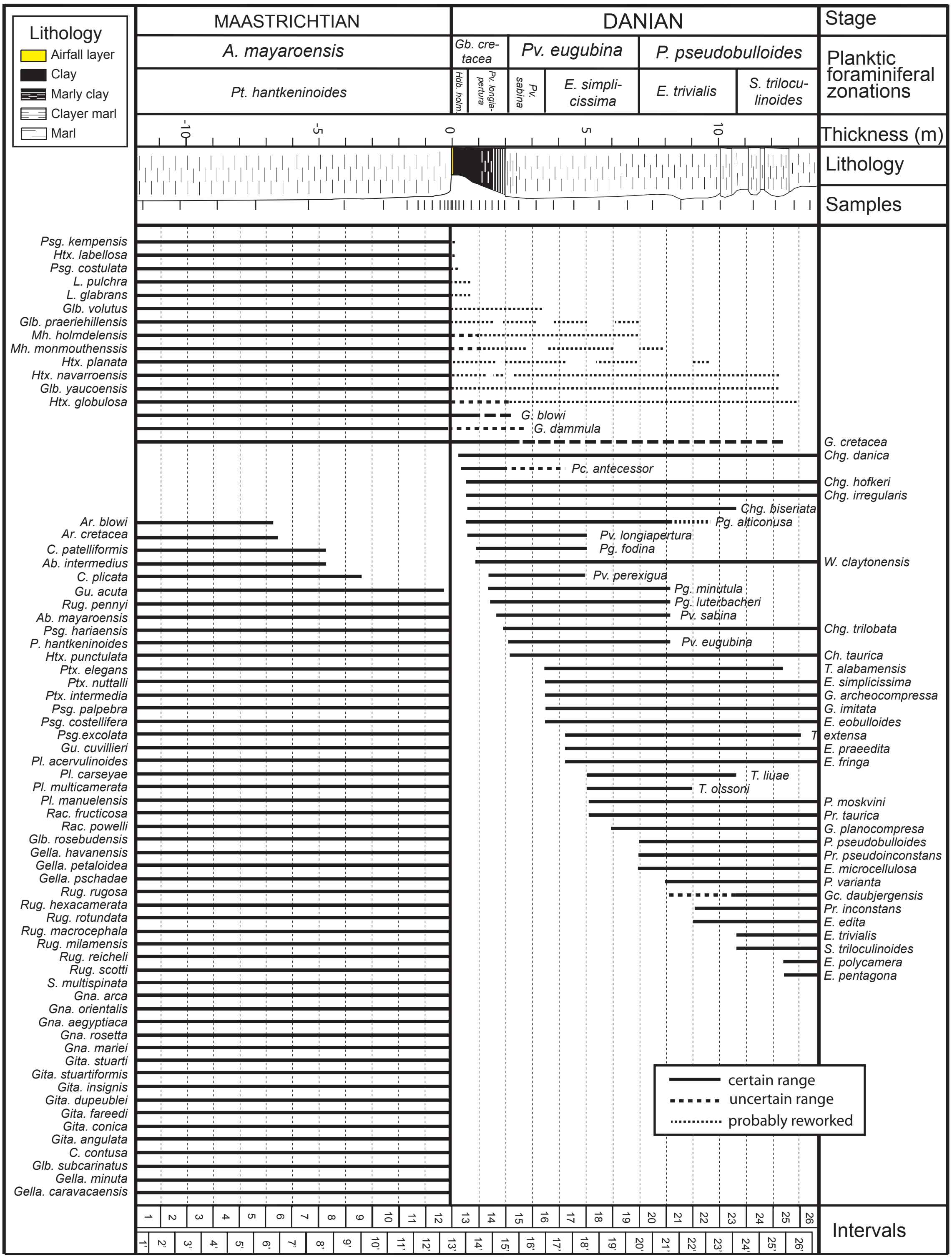
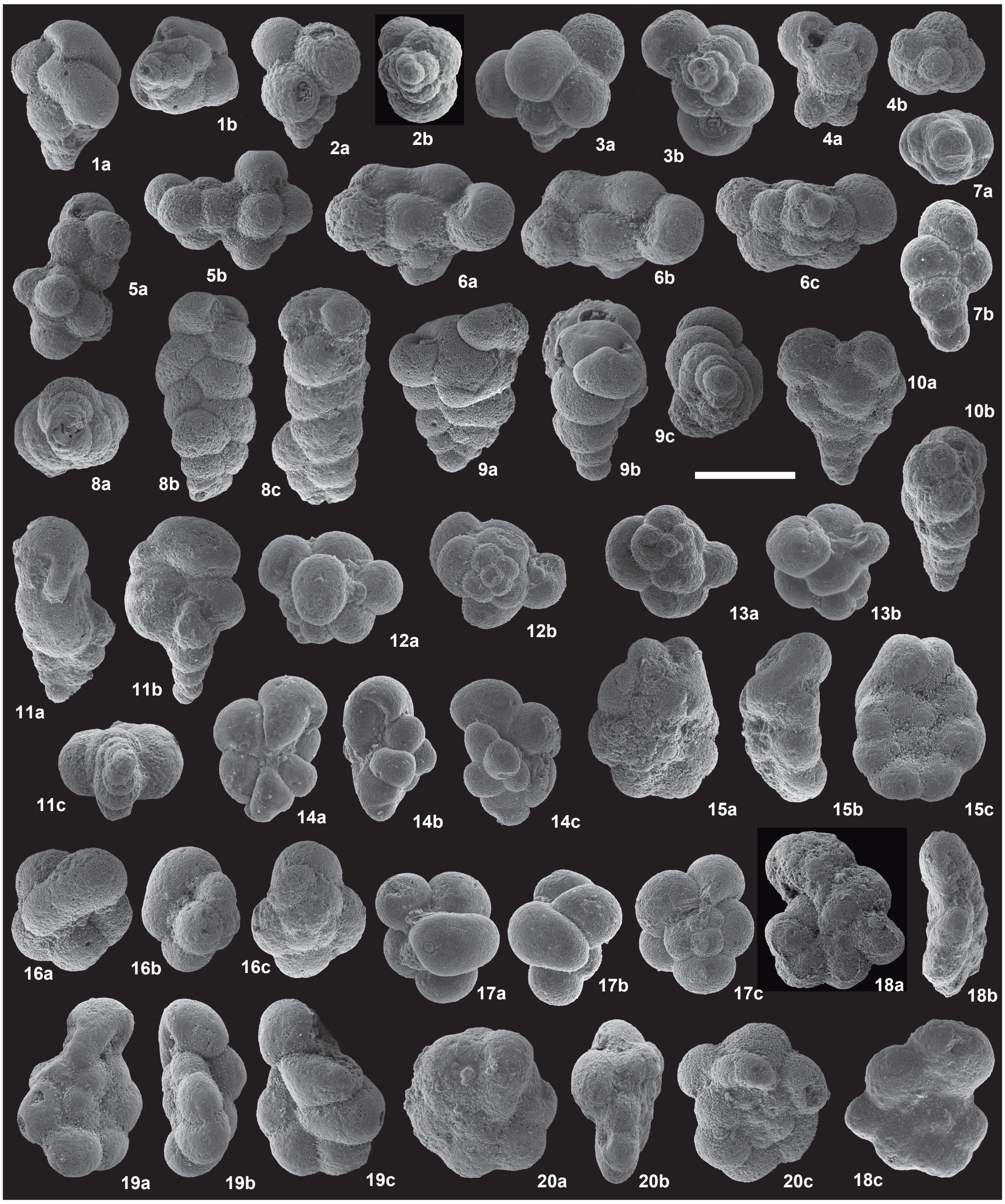
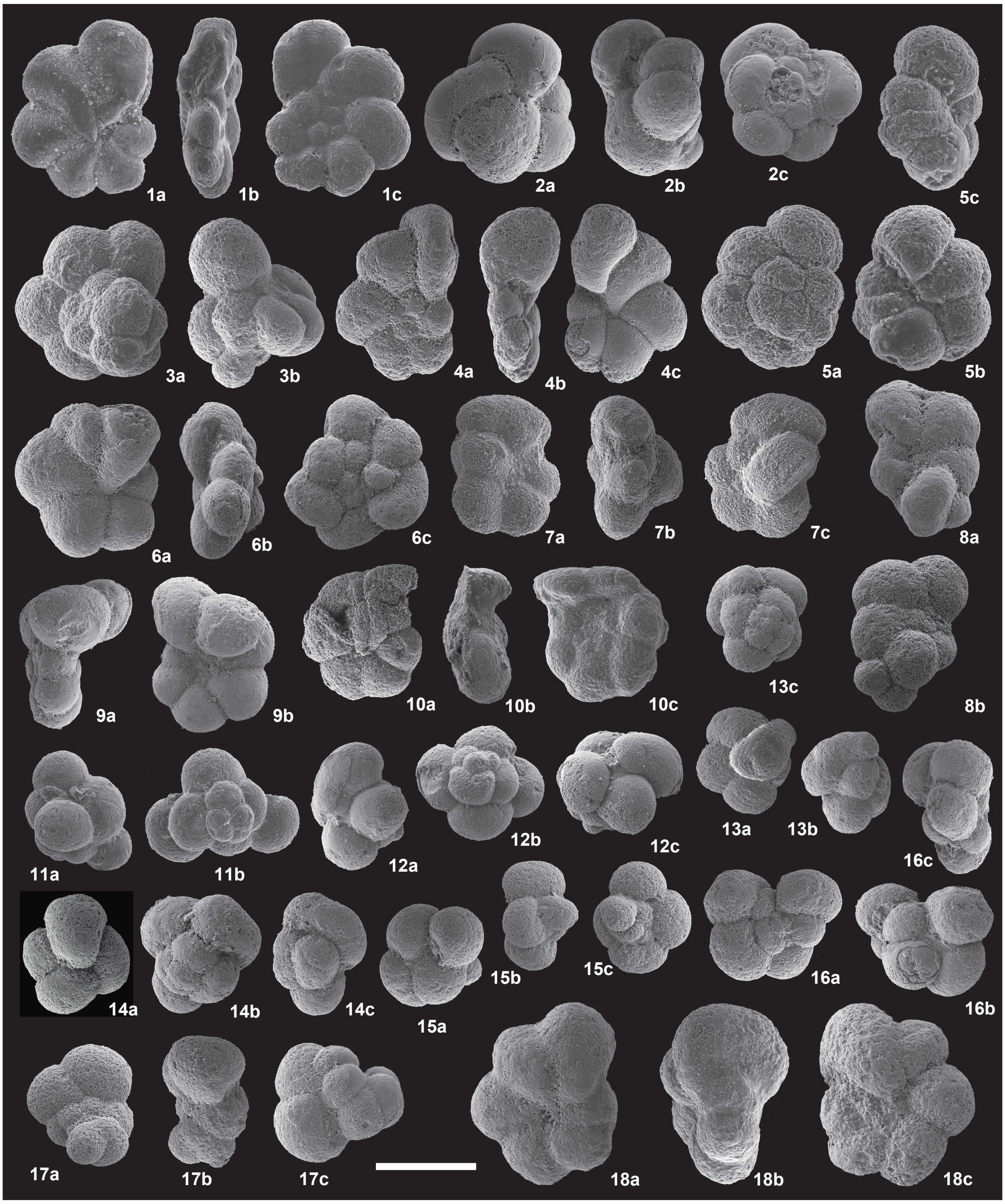
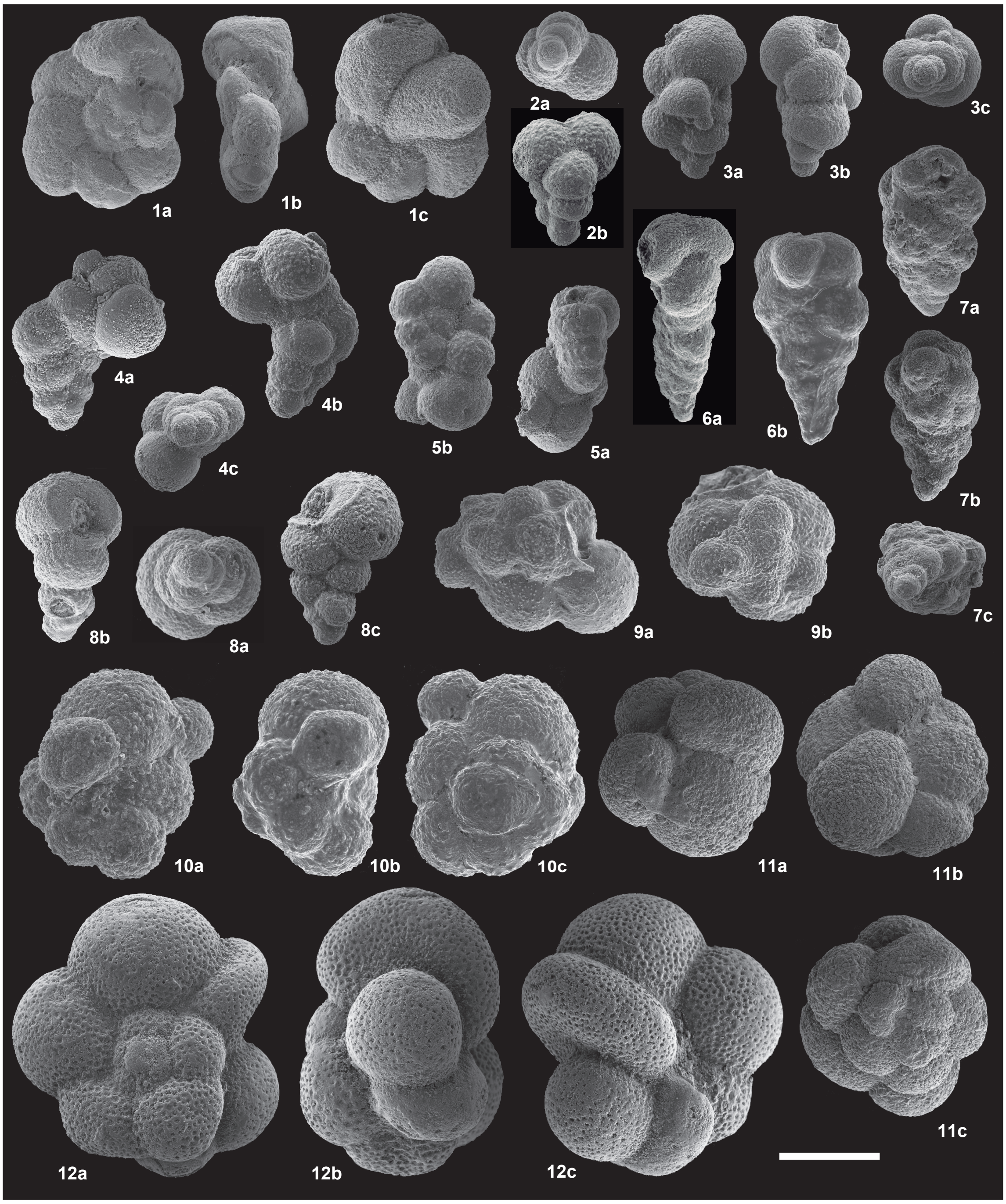

Lithology
Airfall layer
Clay
Marly clay
Clayer marl
Marl
MAASTRICHTIAN
DANIAN
Stage
A. mayaroensis
Gb. cretacea
Pv. eugubina
P. pseudobulloides
Planktic foraminiferal zonations
Pt. hantkeninoides
Hdb. holm
Pv. longiapertura
Pv. sabina
E. simplicissima
E. trivialis
S. triloculinoides
Thickness (m)
Lithology
Samples
Psg. kempensis
Htx. labellosa
Psg. costulata
L. pulchra
L. glabrans
Glb. volutus
Glb. praeriehillensis
Mh. holmdelensis
Mh. monmouthenssis
Htx. planata
Htx. navarroensis
Glb. yaucoensis
Htx. globulosa
G. blowi
G. dammula
G. cretacea
Chg. danica
Pc. antecessor
Chg. hofkeri
Chg. irregularis
Chg. biseriata
Pg. alticonusa
Ar. blowi
Ar. cretacea
Pv. longiapertura
C. patelliformis
Pg. fodina
Ab. intermedius
W. claytonensis
C. plicata
Pv. perexigua
Gu. acuta
Pg. minutula
Rug. pennyi
Pg. luterbacheri
Ab. mayaroensis
Pv. sabina
Psg. hariaensis
Chg. trilobata
P. hantkeninoides
Pv. eugubina
Htx. punctulata
Ch. taurica
Ptx. elegans
T. alabamensis
Ptx. nuttalli
E. simplicissima
Ptx. intermedia
G. archeocompressa
Psg. palpebra
G. imitata
Psg. costellifera
E. eobulloides
Psg.excolata
T. extensa
Gu. cuvillieri
E. praeedita
Pl. acervulinoides
E. fringa
Pl. carseyae
T. liuae
Pl. multicamerata
T. olssoni
Pl. manuelensis
P. moskvini
Rac. fructicosa
Pr. taurica
Rac. powelli
G. planocompresa
Glb. rosebudensis
P. pseudobulloides
Gella. havanensis
Pr. pseudoinconstans
Gella. petaloidea
E. microcellulosa
Gella. pschadae
P. varianta
Rug. rugosa
Gc. daubjergensis
Rug. hexacamerata
Pr. inconstans
Rug. rotundata
E. edita
Rug. macrocephala
E. trivialis
Rug. milamensis
S. triloculinoides
Rug. reicheli
E. polycamera
Rug. scotti
E. pentagona
S. multispinata
Gna. arca
Gna. orientalis
Gna. aegyptiaca
Gna. rosetta
Gna. mariei
Gita. stuarti
Gita. stuartiformis
Gita. insignis
Gita. dupeublei
Gita. fareedi
Gita. conica
Gita. angulata
C. contusa
Glb. subcarinatus
Gella. minuta
Gella. caravacaensis
certain range
uncertain range
probably reworked
Intervals


1a
1b
2a
2b
3a
3b
4a
4b
7a
5a
5b
6a
6b
6c
7b
8a
8b
8c
9a
9b
9c
10a
10b
11a
11b
12a
12b
13a
13b
11c
14a
14b
14c
15a
15b
15c
16a
16b
16c
17a
17b
17c
18a
18b
19a
19b
19c
20a
20b
20c
18c



1a
1b
1c
2a
2b
2c
5c
3a
3b
4a
4b
4c
5a
5b
6a
6b
6c
7a
7b
7c
8a
9a
9b
10a
10b
10c
13c
8b
11a
11b
12a
12b
12c
13a
13b
16c
14a
14b
14c
15a
15b
15c
16a
16b
17a
17b
17c
18a
18b
18c


1a
1b
1c
2a
2b
3a
3b
3c
4a
4b
4c
5a
5b
6a
6b
7a
7b
7c
8a
8b
8c
9a
9b
10a
10b
10c
11a
11b
11c
12a
12b
12c

EL KEF - HYPOTHESIS OF PATTERN A									
Interval	**G**	**E**	**N**	**S**	**E_R**	**N_R**	**V**	**F**	**log F**
1'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
1	68	0	0	68	0.00	0.00	0.00	1.00	0.00
2'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
2	68	0	0	68	0.00	0.00	0.00	1.00	0.00
3'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
3	68	0	0	68	0.00	0.00	0.00	1.00	0.00
4'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
4	68	0	0	68	0.00	0.00	0.00	1.00	0.00
5'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
5	68	0	0	68	0.00	0.00	0.00	1.00	0.00
6'	68	2	0	66	0.03	0.00	0.03	0.97	-0.01
6	68	2	0	66	0.03	0.00	0.03	0.97	-0.01
7'	66	0	0	66	0.00	0.00	0.00	1.00	0.00
7	66	0	0	66	0.00	0.00	0.00	1.00	0.00
8'	66	2	0	64	0.03	0.00	0.03	0.97	-0.01
8	66	2	0	64	0.03	0.00	0.03	0.97	-0.01
9'	64	0	0	64	0.00	0.00	0.00	1.00	0.00
9	64	1	0	63	0.02	0.00	0.02	0.98	-0.01
10'	64	1	0	63	0.02	0.00	0.02	0.98	-0.01
10	63	0	0	63	0.00	0.00	0.00	1.00	0.00
11'	63	0	0	63	0.00	0.00	0.00	1.00	0.00
11	63	0	0	63	0.00	0.00	0.00	1.00	0.00
12'	63	0	0	63	0.00	0.00	0.00	1.00	0.00
12	63	1	0	62	0.02	0.00	0.02	0.98	-0.01
13'	65	50	2	13	0.77	0.03	0.80	0.10	-0.98
13	71	51	9	11	0.72	0.13	0.85	0.17	-0.76
14'	25	2	10	13	0.08	0.40	0.48	1.57	0.20
14	25	0	5	20	0.00	0.20	0.20	1.25	0.10
15'	27	1	7	19	0.04	0.26	0.30	1.31	0.12
15	27	2	2	24	0.07	0.07	0.11	1.00	0.00
16'	26	1	0	25	0.04	0.00	0.04	0.96	-0.02
16	30	1	5	24	0.03	0.17	0.20	1.16	0.07
17'	32	1	8	23	0.03	0.25	0.28	1.30	0.11
17	32	4	3	25	0.13	0.09	0.22	0.96	-0.02
18'	35	3	4	28	0.09	0.11	0.20	1.03	0.01
18	31	0	4	26	0.00	0.13	0.16	1.15	0.06
19'	33	0	1	32	0.00	0.03	0.03	1.03	0.01
19	33	2	1	30	0.06	0.03	0.09	0.97	-0.01
20'	36	2	3	31	0.06	0.08	0.14	1.03	0.01
20	34	0	3	31	0.00	0.09	0.09	1.10	0.04
21'	36	5	2	29	0.14	0.06	0.19	0.91	-0.04
21	35	6	2	27	0.17	0.06	0.23	0.87	-0.06
22'	33	0	2	31	0.00	0.06	0.06	1.06	0.03
22	32	2	2	28	0.06	0.06	0.13	1.00	0.00
23'	32	3	0	29	0.09	0.00	0.09	0.90	-0.04
23	32	2	2	28	0.06	0.06	0.13	1.00	0.00
24'	30	0	2	28	0.00	0.07	0.07	1.07	0.03
24	30	0	0	30	0.00	0.00	0.00	1.00	0.00
25'	30	4	0	26	0.13	0.00	0.13	0.86	-0.07
25	32	6	2	24	0.19	0.06	0.25	0.85	-0.07
26'	28	2	2	24	0.07	0.07	0.14	1.00	0.00
26	26	0	0	26	0.00	0.00	0.00	1.00	0.00

AÏN SETTARA - HYPOTHESIS OF PATTERN B									
Interval	**G**	**E**	**N**	**S**	**E_R**	**N_R**	**V**	**F**	**log F**
1'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
1	68	0	0	68	0.00	0.00	0.00	1.00	0.00
2'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
2	68	0	0	68	0.00	0.00	0.00	1.00	0.00
3'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
3	68	0	0	68	0.00	0.00	0.00	1.00	0.00
4'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
4	68	0	0	68	0.00	0.00	0.00	1.00	0.00
5'	68	0	0	68	0.00	0.00	0.00	1.00	0.00
5	68	0	0	68	0.00	0.00	0.00	1.00	0.00
6'	68	2	0	66	0.03	0.00	0.03	0.97	-0.01
6	68	2	0	66	0.03	0.00	0.03	0.97	-0.01
7'	66	0	0	66	0.00	0.00	0.00	1.00	0.00
7	66	0	0	66	0.00	0.00	0.00	1.00	0.00
8'	66	2	0	64	0.03	0.00	0.03	0.97	-0.01
8	66	2	0	64	0.03	0.00	0.03	0.97	-0.01
9'	64	0	0	64	0.00	0.00	0.00	1.00	0.00
9	64	1	0	63	0.02	0.00	0.02	0.98	-0.01
10'	64	1	0	63	0.02	0.00	0.02	0.98	-0.01
10	63	0	0	63	0.00	0.00	0.00	1.00	0.00
11'	63	0	0	63	0.00	0.00	0.00	1.00	0.00
11	63	0	0	63	0.00	0.00	0.00	1.00	0.00
12'	63	0	0	63	0.00	0.00	0.00	1.00	0.00
12	63	1	0	62	0.02	0.00	0.02	0.98	-0.01
13'	65	61	2	2	0.94	0.03	0.97	0.01	-2.11
13	71	62	9	0	0.87	0.13	1.00	0.04	-1.43
14'	14	1	10	3	0.07	0.71	0.79	3.56	0.55
14	15	1	5	9	0.07	0.33	0.40	1.42	0.15
15'	17	2	4	11	0.12	0.24	0.35	1.17	0.07
15	16	1	2	13	0.06	0.13	0.19	1.07	0.03
16'	15	0	0	15	0.00	0.00	0.00	1.00	0.00
16	20	0	5	15	0.00	0.25	0.25	1.33	0.12
17'	23	0	8	15	0.00	0.35	0.35	1.53	0.19
17	23	3	3	17	0.13	0.13	0.26	1.00	0.00
18'	27	3	4	20	0.11	0.15	0.26	1.05	0.02
18	24	0	4	20	0.00	0.17	0.17	1.20	0.08
19'	25	0	1	24	0.00	0.04	0.04	1.04	0.02
19	25	0	1	24	0.00	0.04	0.04	1.04	0.02
20'	28	0	3	25	0.00	0.11	0.11	1.12	0.05
20	28	0	3	25	0.00	0.11	0.11	1.12	0.05
21'	29	5	1	23	0.17	0.03	0.21	0.84	-0.07
21	28	6	1	21	0.21	0.04	0.25	0.79	-0.10
22'	26	1	2	23	0.04	0.08	0.12	1.04	0.02
22	25	0	2	23	0.00	0.08	0.08	1.09	0.04
23'	25	2	0	23	0.08	0.00	0.08	0.92	-0.04
23	28	2	3	23	0.07	0.11	0.18	1.04	0.02
24'	26	0	3	23	0.00	0.12	0.12	1.13	0.05
24	26	0	0	26	0.00	0.00	0.00	1.00	0.00
25'	26	1	0	25	0.04	0.00	0.04	0.96	-0.02
25	28	2	2	24	0.07	0.07	0.14	1.00	0.00
26'	27	1	2	24	0.04	0.07	0.11	1.04	0.02
26	26	0	0	26	0.00	0.00	0.00	1.00	0.00