

Catalogue of Mesozoic radiolarian genera.

Part 1: Triassic

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ABSTRACT

The Catalogue of Mesozoic radiolarian genera is a revision of all described genera with re-illustration of their type species. This project was organized under the auspices of the International Association of Radiolarian Paleontologists (InterRad), and was carried out by the Mesozoic Working Group. This contribution (Part 1), deals with the Triassic period only. There are 381 known Triassic radiolarian genera. Most have been published since the 1970's following the introduction of scanning electron microscopy (SEM), which enabled good pictures for most type species. For this reason the Triassic period is characterized by a very low number of *nomina dubia* (only 14), contrary to the higher number in the Jurassic-Cretaceous interval. The Mesozoic Working Group has carefully reviewed and reexamined the taxonomy of all available genera, their family assignment and stratigraphic ranges. Following careful comparisons, 73 genera were declared synonyms. The review has also detected 11 cases of homonymy that were duly notified to their authors, and were corrected previous to the publication of this catalogue; unfortunately one homonym still remains. Two invalid nominal genera are also reported herein. The systematic revisions have validated 282 genera for the Triassic, and of these only 30 genera cross the Triassic-Jurassic boundary. At the end of the catalogue 15 additional photos are presented as support for those genera having a poor original illustration of the type species.

RÉSUMÉ

Catalogue des genres de radiolaires mésozoïques. Partie 1 : Trias.

Le catalogue des genres de radiolaires du Mésozoïque présente une révision de tous les genres décrits et une illustration de leur espèce type. Ce travail a été mené sous les auspices de l'association internationale des radiolaristes (InterRad), et effectuée par son Groupe de Travail Mésozoïque. Cet article représente la première de deux parties et concerne le Trias. Le nombre de genres pour le Trias atteint 381. La plupart ont été publiés depuis 1970, c'est-à-dire depuis l'utilisation routinière du microscope électronique à balayage qui a permis l'obtention de bonnes photographies pour la plupart des espèces-types. Pour cette raison le Trias est caractérisé par un très petit nombre de *nomina dubia* (seulement 14), contrairement au nombre élevé de l'intervalle Jurassique-Crétaçé. Le Groupe de Travail Mésozoïque a méticuleusement envisagé et réexaminé tous les genres disponibles, leur assignation familiale et leur répartition stratigraphique. Après des comparaisons soignées, 73 genres ont été déclarés synonymes. La révision a aussi détecté 11 cas d'homonymie qui ont été dûment signalés à leurs auteurs et ont été corrigés préalablement à la publication du présent catalogue, à l'exception d'un seul. Enfin deux noms de genre invalides ont aussi été mentionnés. La révision systématique a validé 282 genres pour le Trias, dont seulement 30 passent la limite Trias-Jurassique. À la fin du catalogue dévolu au Trias nous présentons 15 photographies additionnelles qui illustrent des genres dont la photographie originelle de l'espèce type est de mauvaise qualité.

MOTS CLÉS

Radiolaires,
révision taxonomique,
Trias,
systématische,
espèce type,
biostratigraphie.

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The re-illustrations of the type species published in previous works have been reproduced from the

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INDEX OF TRIASSIC GENERA SORTED BY FAMILIES

The number preceding the genus indicates the position on plates; when a support figure is available this is marked in italics. Homonyms (hom.), synonyms (syn.), invalid taxa (inv.) and *nomina dubia* (n.d.) are indicated in brackets. Families are provided with references to original publications.

ALBAILLELLARIA Deflandre, 1953

- ALBAILLELLIDAE Deflandre, 1952: 873
 1 *Albaillella*

FOLLICUCULLIDAE Ormiston & Babcock, 1979: 332

- 2 *Follucullus*

LATENTIFISTULARIA Caridroit, De Wever & Dumitrica, 1999

CAULETELLIDAE Caridroit, De Wever & Dumitrica, 1999: 604

- 3 *Deflandrella* (hom.)
 - 4 *Cauletella*
 - 5 *Kimagior* (syn.)
 - 6 *Ishigaum*
 - 7 *Oruatemana*
- LATENTIFISTULIDAE Nazarov & Ormiston, 1983: 371
 8 *Latentifistula*
- ORMISTONELLIDAE De Wever & Caridroit, 1984: 100
 9 *Nazarovella* (hom.)
- 10 *Quadrirremis*
- 11 *Raciditor* (syn.)
- PSEUDOLITHELIIDAE Kozur & Mostler, 1989: 185
 12 *Hegleria*

ENTACTINARIA Kozur & Mostler, 1982

PARENTACTINIIDAE Kozur & Mostler, 1981: 34

- 13 *Parentactinia*
- 14 *Glomeropyle*

PENTACTINOCARPIDAE Dumitrica, 1978b: 41

- 15 *Pentactinocapsa*
- 16 *Pentactinocarpus*
- 17 *Praedrappatraclysis* (syn.)
- 18 *Oerlisphaera* (syn.)
- 19 *Braginella*

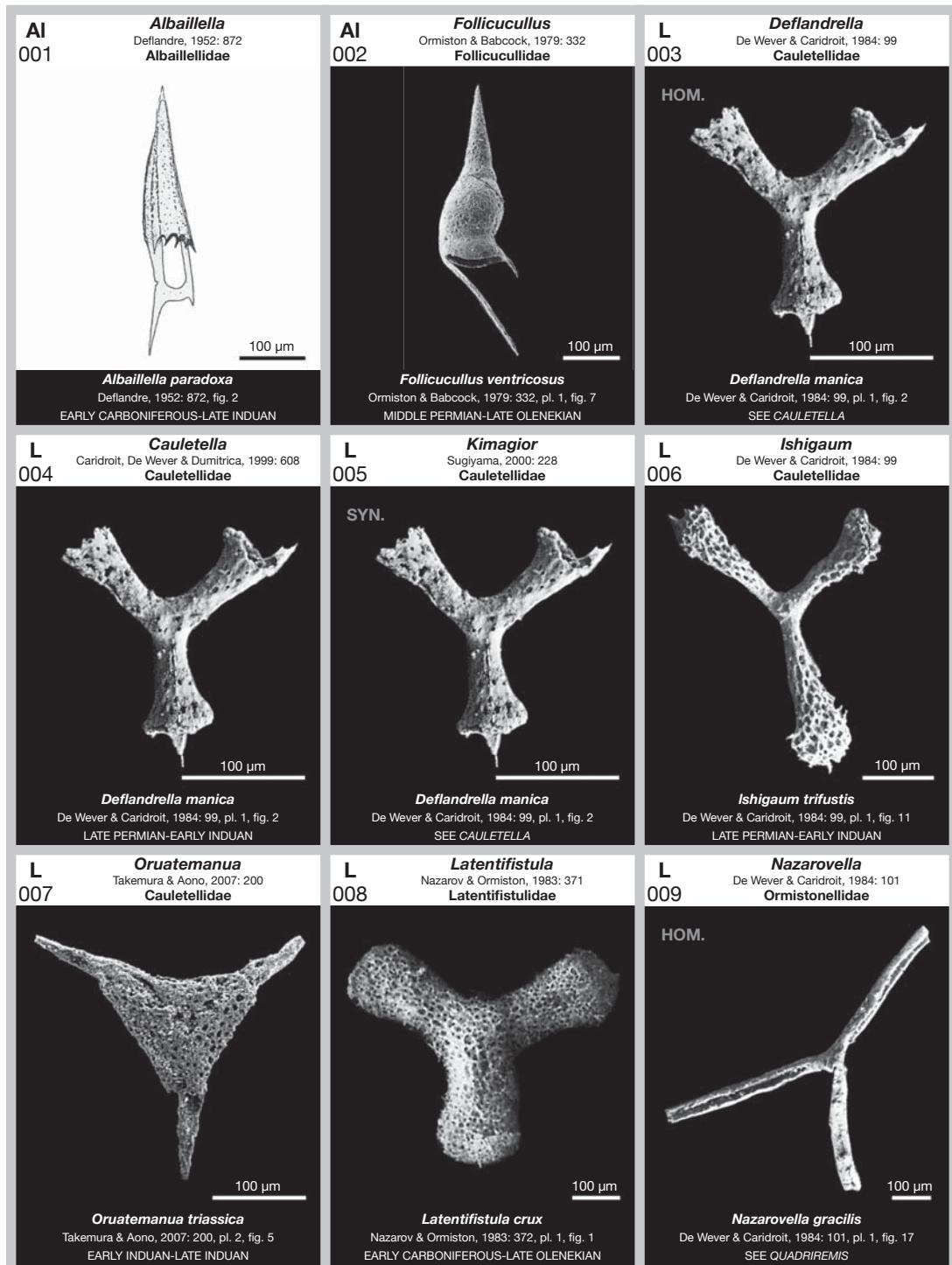
- 20 *Pentactinorbis*
 - 21 *Blomella* (syn., hom.)
 - 22 *Lobactinocapsa*
 - 23 *Setalella*
- THALASSOTHAMNIDAE Haecker, 1906: 885
 24, 388 *Palhindeolithus*
- 25 *Triassothamnus*
- 26 *Archaeothamnulus* (syn.)
- ENTACTINIIDAE Riedel, 1967: 148
 27 *Entactinia*
- 28 *Apophysisphaera* (syn.)
- 29 *Inaequalientactinia* (syn.)
- 30 *Palaeoxyphostylus* (syn.)
- 31 *Triaenosphera*
- KUNGALRIIDAE Dumitrica & Carter, 1999: 419
 32 *Kungalaria*
- 33 ? *Pentabelus*
- 34 ? *Tetrapropalus* (syn.)
- 35 ? *Monostylosphaera*
- EPTINGIIDAE Dumitrica, 1978a: 29
 36 *Spongostephanidium*
- 37 *Cryptostephanidium*
- 38 *Xenororum*
- 39 *Triassistephanidium*
- 40 *Eptingium*
- 41 *Pylostephanidium*
- 42 *Carterella* (syn.)
- 43 *Praedivatella* (syn.)
- 44 *Coronatubopyle*
- 45 *Nodotrisphaera*
- 46 *Spicularina* (syn.)
- 47 *Divatella*
- 48 *Tauridastrum*
- 49 *Ferresium*
- 50 *Harsa* (hom.)
- 51 *Ellisus*
- SPONGOSATURNALOIDIDAE Kozur & Mostler, 1983: 9
 52 *Spongosaturnalooides*
- 53 *Ploechingerella*
- MULTIARCUSSELLINAE Kozur & Mostler, 1979a: 83
 54 *Multiarcusella*
- 55 *Baloghisphaera*
- 56, 383 *Beturilla*
- AUSTRISATURNALINAE Kozur & Mostler, 1983: 6
 57 *Tibarella*
- 58 *Ornatissaturnalis*
- 59 *Hungarosaturnalis*
- 60 *Solisaturnalis* (syn.)
- 61, 391 *Praeheliostaurus*
- 62 *Austrisaturnalis*
- 63 *Quadrissaturnalis*
- HEPTACLADIDAE Dumitrica, Kozur & Mostler, 1980: 3
 64 *Heptacladus*
- 65 *Parentactinosphaera*
- 66 *Komoella* (syn.)
- 67 *Pseudoheptacladus* (syn.)

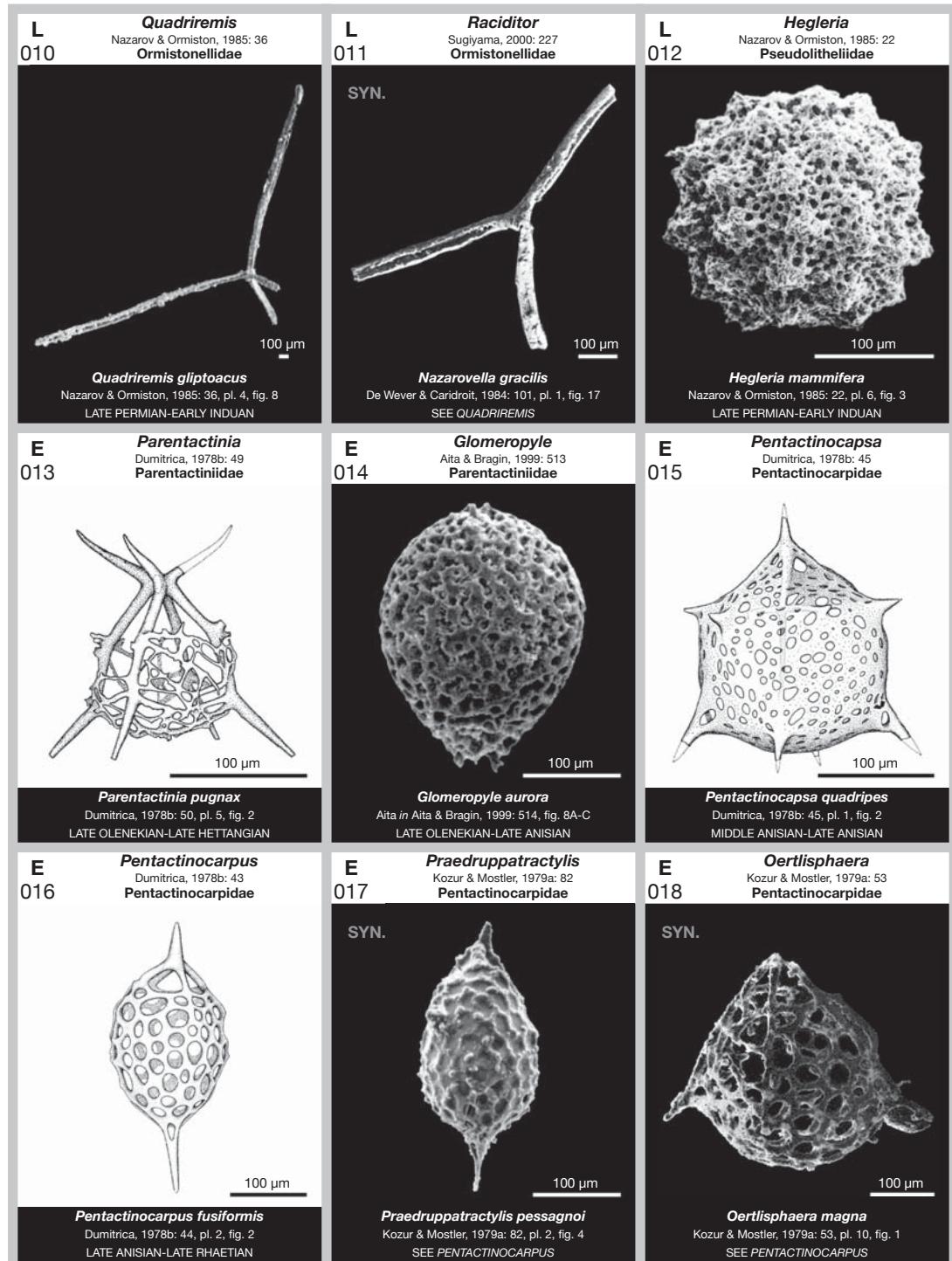
- 68 *Weverisphaera* (syn.)
 69 *Livinallongella* (syn.)
 70 *Stauropylissa*
 71 *Pseudosepsagon*
QUINQUECAPSULARIIDAE Dumitrica, 1995: 21
 72, 385 *Empirea*
 73 ? *Arcicubulus*
 74 ? *Carinaheliosoma*
CENTROCUBIDAE Hollande & Enjumet, 1960: 120
 75 *Welirella*
HINDEOSPHAERINAE Kozur & Mostler, 1981: 28
 76 *Pseudostylosphaera*
 77 *Parasepsagon*
 78 *Sepsagon*
 79 *Hindeosphaera*
MUELLERITORTIINAE Kozur, 1988a: 515
 80 *Tritortis*
 81 *Praesarla* (syn.)
 82 *Muelleritoris*
 83 *Ditortis* (syn.)
 84 *Pentatoris* (syn.)
NODOTETRASPHAERINAE Kozur & Mostler, 2006: 44
 85 *Nodotetrasphaera*
 86 *Nodopentasphaera* (syn.)
 87 *Tetraporobrachia*
 88 *Pentaporobrachia* (syn.)
 89 *Catoma*
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 90 *Busuanga* (hom.)
 91 *Ansubuga*
 92 *Radium*
 93 *Hexatortilisphaera*
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PANTANELLIINAE Pessagno, 1977b: 32
 94 *Pantanellium*
 95 *Xiphosphaera* (n.d.)
 96 *Ellipsoxiphus* (n.d.)
 97 *Dorylonchidium* (n.d.)
 98 *Gorgansium*
 99 *Betraccium*
 100 *Cantalum*
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 101 *Justium*
 102 *Capnodoce*
 103 *Loffa*
 104 *Renzium*
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 105 *Archaeocenosphaera*
 106 *Triassobullasphaera*
 107 *Amuria* (hom.)
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PATRULIIDAE Dumitrica, 1989: 229
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 118 ? *Pseudogodia*
HAGIASTRIDAE Riedel, 1971: 654
 119 *Triassocrucella*
 120 *Crucella*
 121, 386 *Hagiastrum*
CAPNUCHOSPHAERINAE De Wever in De Wever et al., 1979: 81
 122 ? *Tetracapnuchosphaera*
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 124 *Sulovella* (syn.)
 125 *Monocapnuchosphaera*
 126 *Nodocapnuchosphaera*
 127 *Kinyrosphaera* (syn.)
 128 *Dicapnuchosphaera*
TRIARCELLINAE Kozur & Mock in Kozur & Mostler, 1981: 26
 129 *Kahlerosphaera*
 130 *Triarcella*
 131 *Sarla*
 132 *Braginastrum* (syn.)
 133 *Fontinella*
HEXAPOROBRACHIIDAE Kozur & Mostler, 1979a: 77
 134 *Hexaporobrachia*
 135 *Nazarovella*
 136 ? *Icrioma*
 137 ? *Paricrioma* (syn.)
ANGULOBRACCHIIDAE Baumgartner, 1980: 310
 138 *Paronaella*
 139 *Risella* (hom.)
 140 *Serilla*
 141 *Loupanus*
PARATRIASSOASTRIDAE Kozur & Mostler, 1981: 63
 142 *Triassostrum*
 143 *Paratriassostrum*
 144 *Pseudohagiastrum*
INTERMEDIELLIDAE s.l. Lahm, 1984: 53
 145 *Tetrapaurinella*
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 147 *Angulopaurinella*
 148 *Spinopaurinella* (syn.)
 149 *Zhamojdasphaera*
 150 *Acanthotetrapaurinella*
 151 *Intermediella* (syn.)
 152 *Neopaurinella* (syn.)
 153 *Yichunella* (inv., syn.)
 154 *Kulacella*
 155 *Paraheptacladus*
 156 *Discokatorella* (syn.)

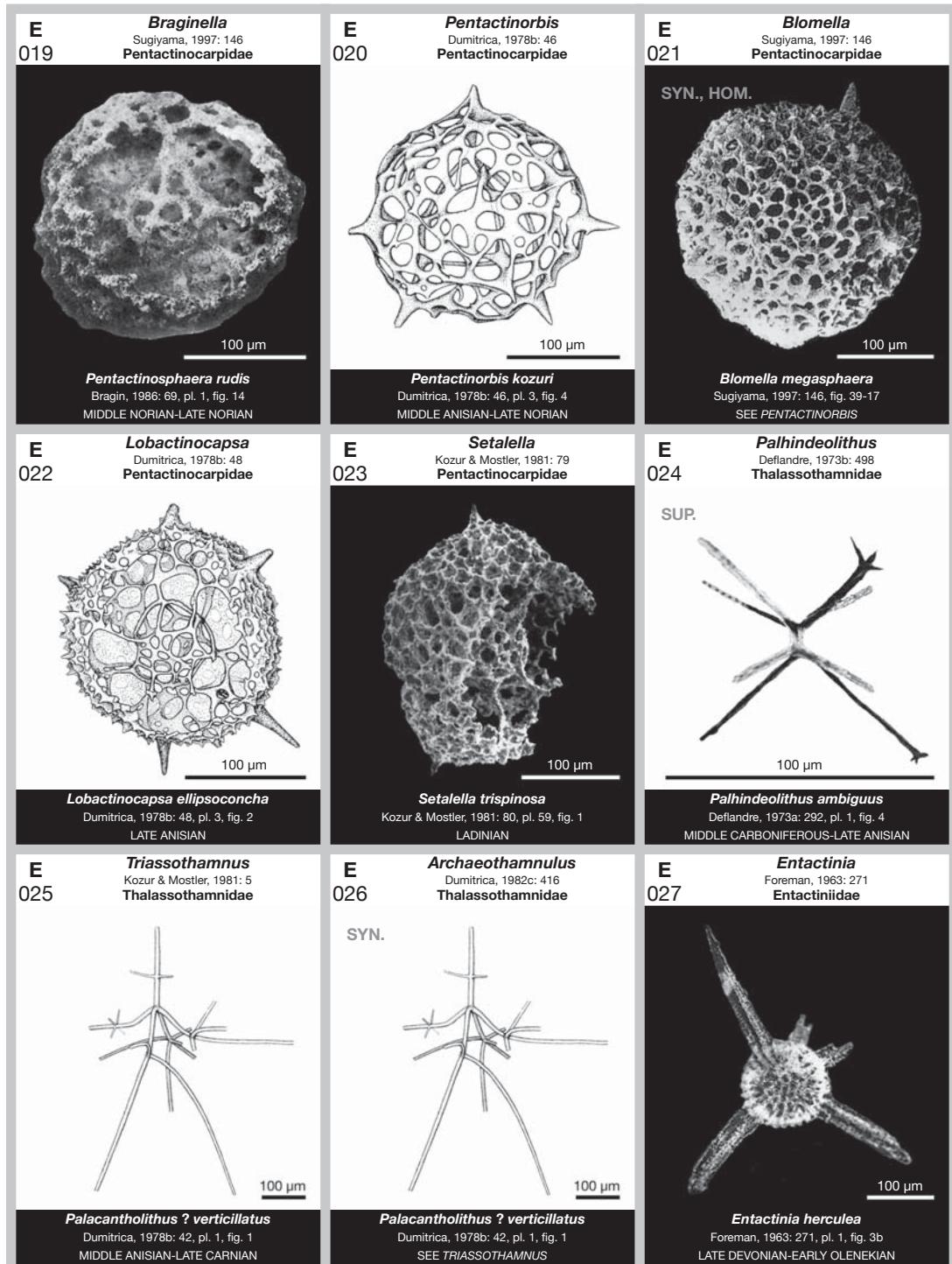
- 157 *Katorella*
 158 *Triassospongphaera*
 159 *Norisponges* (syn.)
 160 *Rikivatella*
 161 *Astrocentrus*
 162 *Plafkerium*
 163 *Paraplaflkerium* (syn.)
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 165, 389 *Pentaspongoidiscus*
 166 *Relindella*
 167 *Recoarella*
 168 *Hexacatoma*
 169 *Octostella*
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- ARCHAEOSPONGOPRUNIDAE Pessagno, 1973: 57
 172 *Archaeospongoprunum*
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- SPONGOTORTILISPINIDAE Kozur & Mostler in Moix et al., 2007: 295
 175 *Spongoxystris*
 176 *Dumitricaspshaera*
 177 *Berlabmium*
 178 *Spongotortilispinus*
- SPONGOPALLIIDAE Kozur, Krainer & Mostler, 1996: 229
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 180 *Tubospongopallium*
 181 *Ligulatubus*
 182, 396 *Weverella*
 183 *Spongopallium*
 184 *Dicapnodeo* (n.d.)
 185 *Bitubopyle*
 186 *Coronacylindrella* (syn.)
- GOMBERELLIDAE Kozur & Mostler, 1981: 50
 187 *Tamonella*
 188 *Praegomberellus*
 189 *Gomberellus*
 190 *Monospongella*
 191 *Karnospongella*
 192 ? *Discofulmen*
- OERTLISPONGIDAE Kozur & Mostler in Dumitrica et al., 1980: 4
 193 *Pararchaeospongoprnum*
 194 *Paroertlispongus*
 195 *Acaeniospongus* (syn.)
 196 *Paleoeucyrtis* (syn.)
 197 *Yangia* (syn.)
 198 *Pseudoertlispongus* (syn.)
 199 *Oerlispongus*
 200 *Baumgartneria*
 201 *Turospongus*
 202 *Bogdanella*
 203 *Falcispongus*
- 204 *Gibberospongus* (syn.)
 205 *Scutispongus*
 206 *Spongoserrula*
 207 *Steigerispongus*
 208 *Pterospongus*
 209 *Flexispongus*
 210 *Halidictyum* (n.d.)
- HELIOSATURNALINAE Kozur & Mostler, 1972: 27
 211 *Huglusphaera*
 212 *Blechschmidtia*
 213 *Mostlerisaturnalis* (syn.)
 214 *Archaeocanthocircus*
 215 *Tjerkium* (syn.)
 216 *Angulocircus*
 217 *Pseudohelioidiscus*
 218 *Saturnosphaera* (syn.)
 219 *Pessagnosaturnalis* (syn.)
 220 *Palaeosaturnalis*
 221 *Liassosaturnalis* (syn.)
 222 *Praehexasaturnalis* (syn.)
 223 *Heliosaturnalis*
 224 *Octosaturnalis*
- PARASATURNALINAE Kozur & Mostler, 1972: 42
 225 *Pseudocanthocircus*
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 226 *Annulosaturnalis*
 227 *Italosaturnalis* (syn.)
 228 ? *Sertasaturnalis*
- SATURNALINAE Deflandre, 1953: 419
 229 *Mesosaturnalis*
 230 *Deflandrastrum* (syn.)
 231 *Praemesosaturnalis*
- Spumellaria incertae sedis
 232 *Hexaspongus*
 233 *Renila*
 234 *Tipperella*
 235 *Thaisphaera*
 236 *Pessagnollum*
- Central capsules
 237 *Cenosphaerocapsula*
 238 *Cerebellocapsula*
 239 *Diplosphaerella* (hom.)
 240 *Dispshaerocapsula*
 241 *Gastrulocapsula*
 242 *Triadosphaera*
- NASSELLARIA Ehrenberg, 1875
- ARCHAEOSEMANITIDAE Kozur & Mostler, 1981: 18
 243 *Archaeosemantis*
 244 *Nandartia*
 245 *Tandarnia*
- ZALDACRIINAE Dumitrica, 2004: 199
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- XIMOLZASINAЕ Dumitrica, 1982c: 402 (nom. corr. herein)

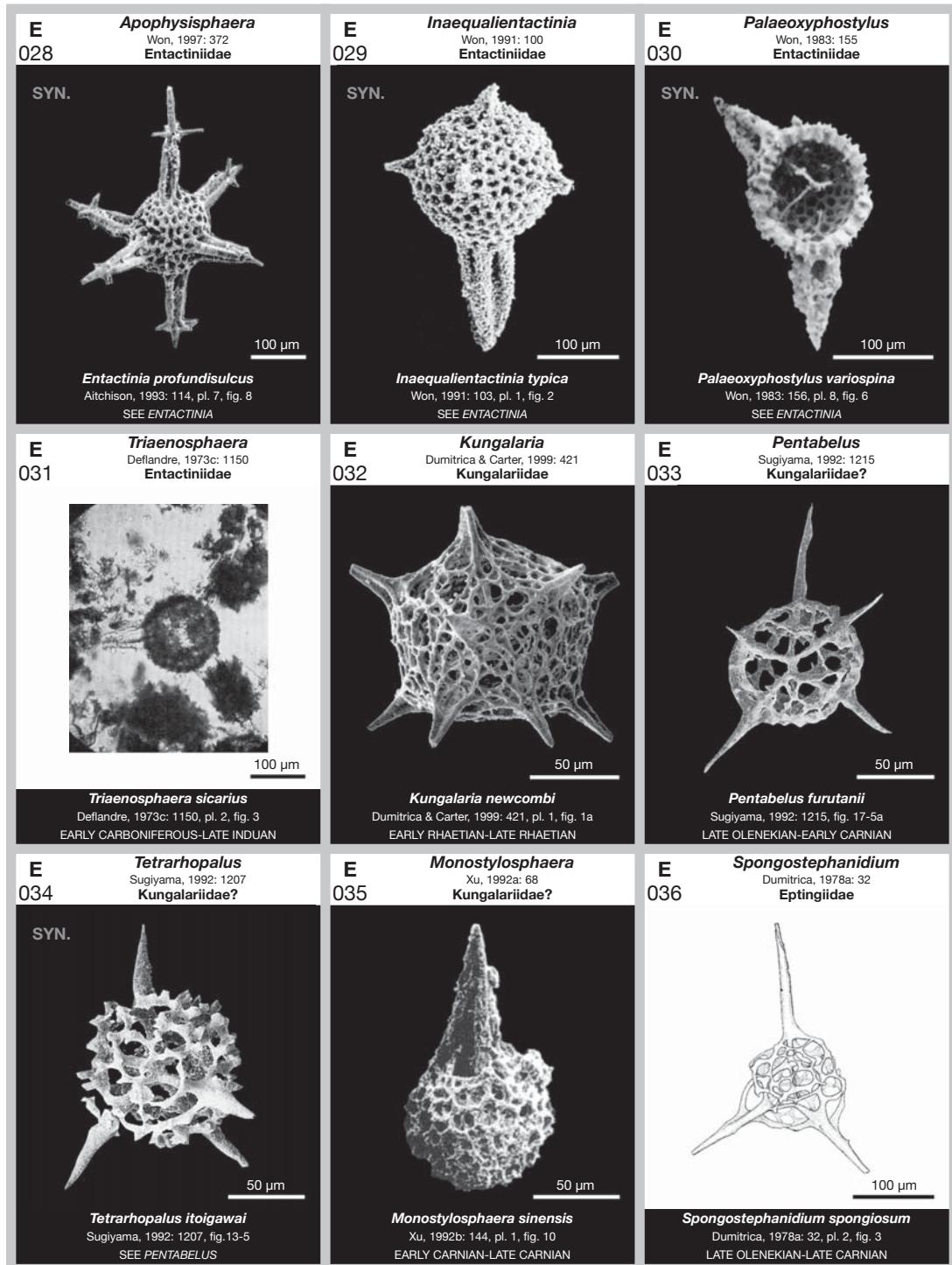
- 248 *Verticiplagia*
 249 *Tetrarchiplagia*
 250 *Molzaxis*
 251 *Zamolxis* (hom.)
 252 *Ximolzas*
- TRIPEDURNULIDAE Dumitrica, 1991: 264
 253 *Tripedocassis*
 254 *Tripedocorbus*
 255, 382 *Baratuna*
 256 *Tripedurnula*
- POULPIDAE De Wever, 1981: 8
 257, 390 *Poulpus*
 258 *Parapoulpus* (syn.)
 259 *Vegbia*
 260 *Triarcopoulpus* (syn.)
 261 *Annulopoulpus*
 262 *Spinopoulpus*
 263 *Hozmadia*
 264 *Annulohaeckelella*
 265 *Eonapora*
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- SANFILIPPOELLIDAE Kozur & Mostler, 1979a: 92
 268 *Sanfilippoella*
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 270 *Fueloepicyrtis*
 271 *Squinabolella* (hom.)
 272 *Nabolella*
- FOREMANELLINIDAE Dumitrica, 1982b: 76
 273 *Foremanellina*
 274 *Recaroella*
- ULTRANAPORIDAE Pessagno, 1977b: 38
 275 *Hinedorus*
 276 *Picapora* (syn.)
 277 *Falcicyrtis* (syn.)
 278 *Alatipicapora* (syn.)
 279 *Muellericyrtium*
 280 *Tirodella*
 281, 384 *Bipedis*
 282 *Parabipedis* (syn.)
 283 *Silicarmiger*
- SPONGOSILICARMIGERIDAE Dumitrica in De Wever et al., 2001: 249
 284 *Spongasilicarmiger*
 285 *Nofrema*
- DEFLANDRECYRTIIDAE Kozur & Mostler, 1979a: 93
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 287 *Dreyericyrtium*
 288 ? *Haeckelicyrtium*
 289 ? *Hetalum*
 290 ? *Tricornicyrtium*
- LIVARELLIDAE Kozur & Mostler, 1981: 114
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 292 *Livarella*
 293 *Praecitriduma*
- 294 *Citriduma*
 295 *Kozuria* (syn.)
- ACROPYRAMIDIDAE Haeckel, 1881: 428
 296 *Celluronta*
 297 *Cornutella*
- CUNICULIFORMIDAE De Wever, 1982: 198
 298 ? *Goestlingella*
- PSEUDOSATURNIFORMIDAE Kozur & Mostler, 1979a: 91
 299 *Pseudosaturniforma*
 300 *Torosaturnalis* (syn.)
 301 *Praeacanthocircus* (syn.)
- SPONGOLOPHOPHAENIDAE Kozur & Mostler, 1994: 124
 302 *Triassospóngocytis*
 303 *Spongolophophaena*
 304 *Conospongocytis*
- BULBOCYRTIIDAE Kozur & Mostler, 1981: 106
 305 *Bulbocyrtium*
 306 *Pessagnocyrtium* (syn.)
 307 *Quasipetasus* (syn.)
 308 *Annulobulbocyrtium*
- SPINOLOBOCYRTIIDAE Kozur & Mostler, 2006: 65
 309 *Spinolobocyrtium*
- MONICASTERICIDAE Kozur & Mostler, 1994: 86
 310 *Monicasterix*
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 312 ? *Papiliocampe*
 313 *Draculacampe*
- PLANISPINOCYRTIIDAE Kozur & Mostler, 1981: 111
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- ANISICYRTIIDAE Kozur & Mostler, 1981: 105
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 325 *Tetraspinocytis*
 326 *Enoplocampe* (syn.)
 327 *Trialatus*
- RUESTICYRTIIDAE Kozur & Mostler, 1979a: 100
 328 *Pararuesticyrtium*
 329 *Ruesticyrtium*
 330 *Veloruesticyrtium* (syn.)
 331 *Nevanellus*
 332 *Wuranella*
 333 *Paratriassocampe*
 334 *Triassocampe*
 335 *Shengia* (inv., syn., hom.)
 336 *Praeyeharaia* (syn.)
 337 *Yeharaia*

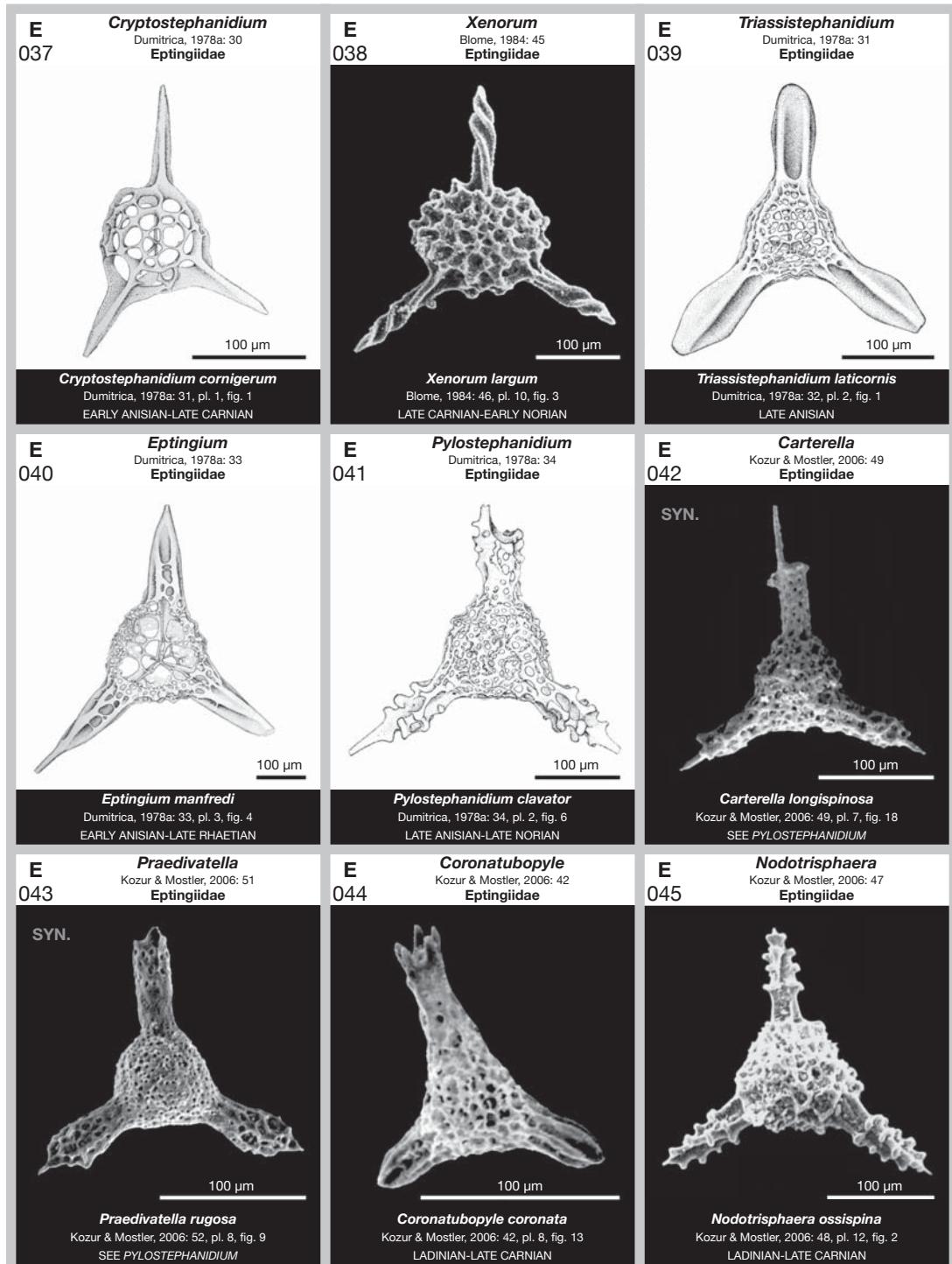
- 338 *Pseudotriassocampe*
 339 *Sriatotriassocampe*
 340 *Annulotriassocampe*
 341 *Zhamoidaicyrtium* (n.d.)
- XIPHOTHECAELLIIDAE Kozur & Mostler, 1981: 113
 342 *Elbistanium*
 343 *Xiphotheca* (hom.)
 344 *Xiphothecaella*
 345 *Senelella*
 346 *Hypoxiphothecaella* (syn.)
 347 *Mostlericyrtium*
- NAKASEKOELLIDAE Kozur, 1984a: 58
 348 *Xipha*
 349 *Nakasekoellus* (syn.)
- UNUMIDAE Kozur, 1984: 61
 350 *Praeprotunuma*
 351 *Spinoprotunuma* (syn.)
- CANOPTIDAE Pessagno in Pessagno et al., 1979: 180
 352 *Canoptum*
 353 *Laxtorum*
 354 *Globolaxtorum*
 355 *Neocanoptum*
 356 *Multimonilis*
- PARVICINGULIDAE Pessagno, 1977a: 82
 357 *Proparvicingula*
- PSEUDODICTYOMITRIDAE Pessagno, 1977b: 49
 358 *Corum*
 359 *Whalenella* (n.d.)
- 360 *Kozuricyrtium*
 361 *Pachus*
 362 *Triassocingula*
 363 *Castrum* (syn.)
 364 *Japonocampe*
 365 *Latium* (syn.)
- Unnamed pro EUCYRTIDIIDAE Ehrenberg, 1847: 53
 366, 392 *Pseudoeycyrtis*
- FAVOSYRINGIINAE Steiger, 1992: 70 (nom. corr. herein)
 367 *Canesium*
 368, 393 *Spinosicapsa*
 369 *Heitzeria* (syn.)
 370 *Podbursa* (n.d.)
 371 *Syringocapsa* (n.d.)
 372 *Urocyrtis* (n.d.)
 373 *Theosyringium* (syn.)
- Nassellaria incertae sedis
 374 *Triassomitra* (syn.)
 375 *Lysemelas*
 376 *Parvibrachiale*
 377 *Bosniacyrtis*
- Nomina dubia*
 378 *Abnormisphaera*
 379 *Nishimuraella*
 380 *Praetrigonocyclia*
 381 *Pseudopentalastrum*

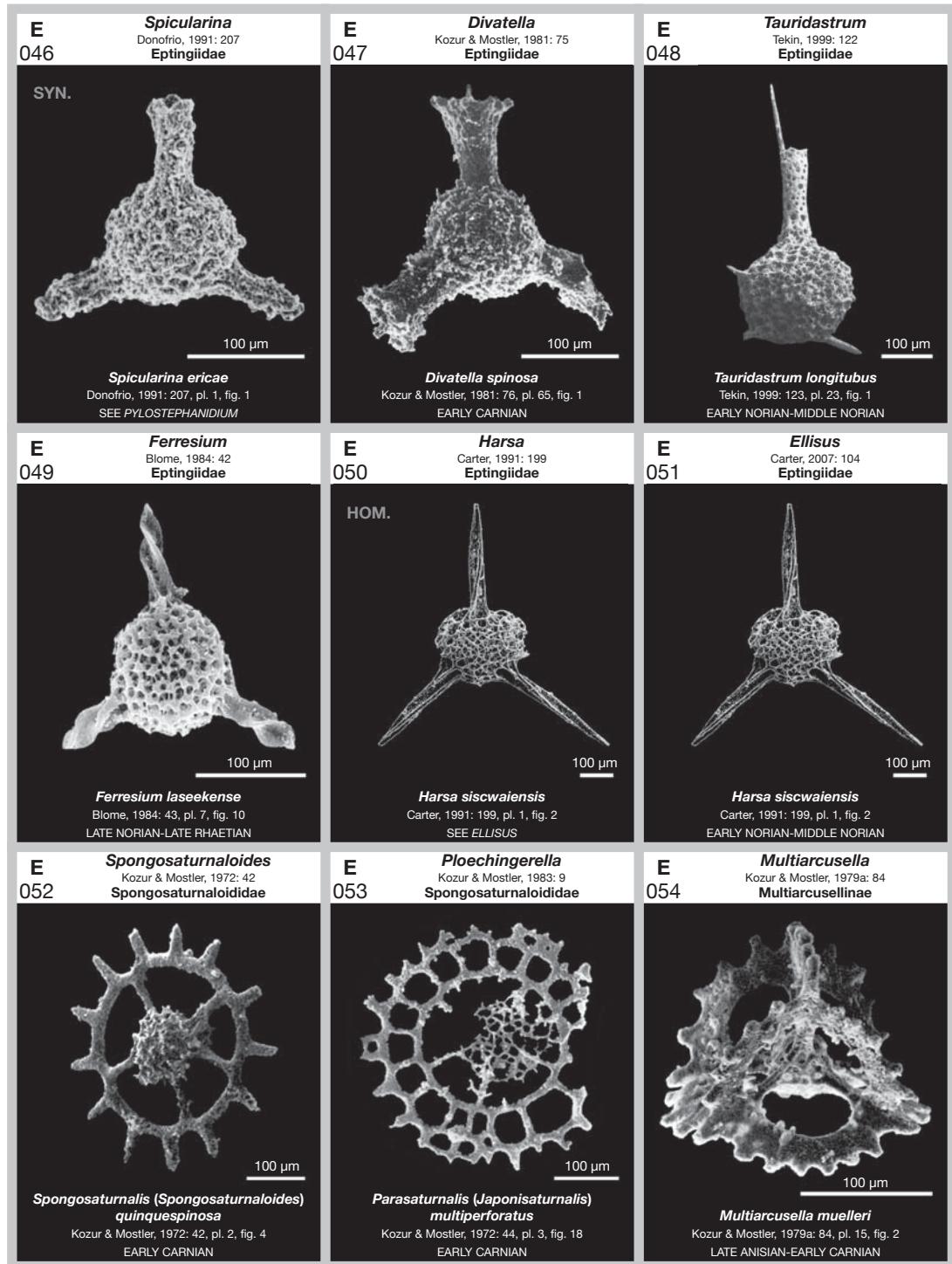


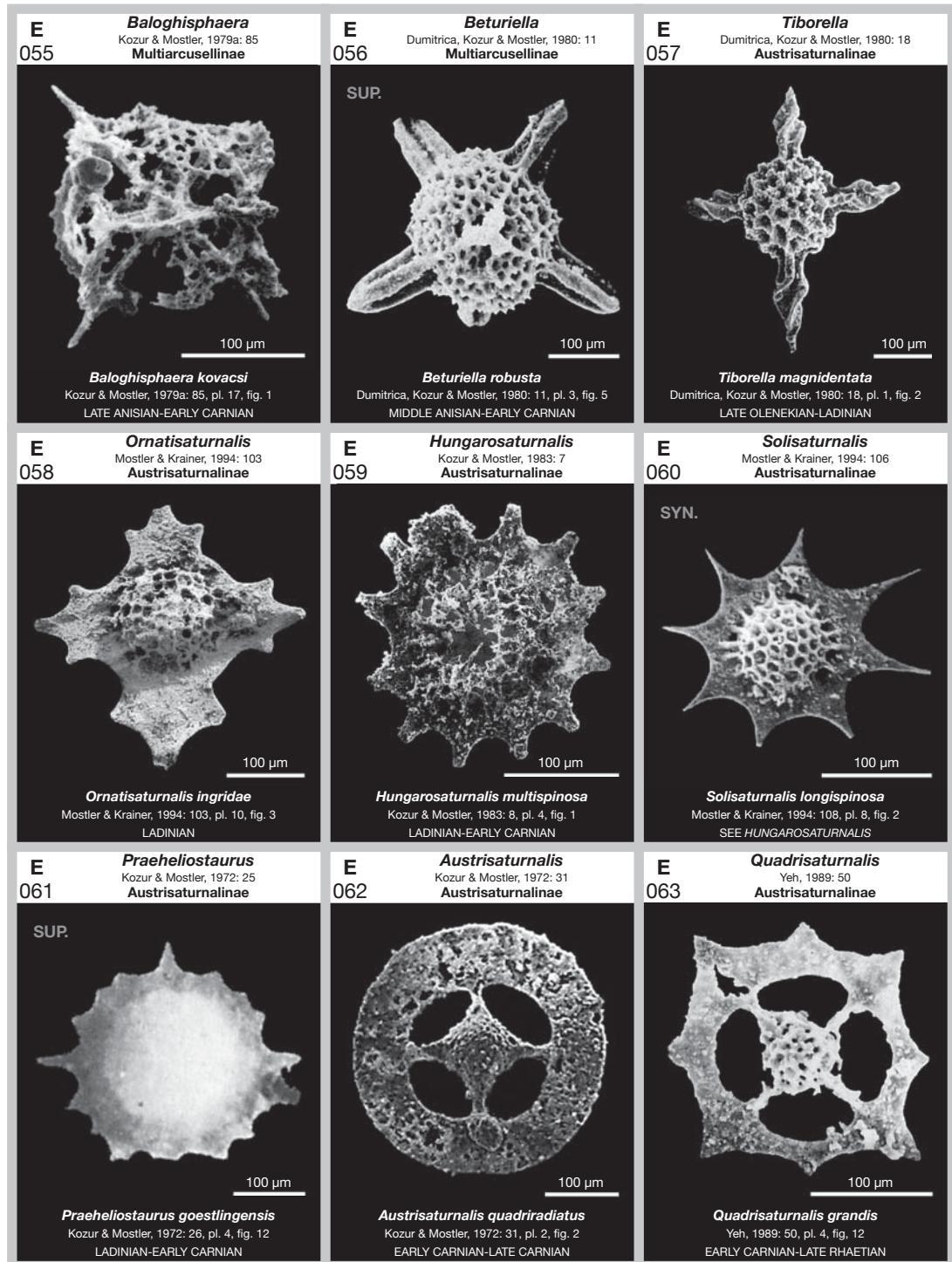


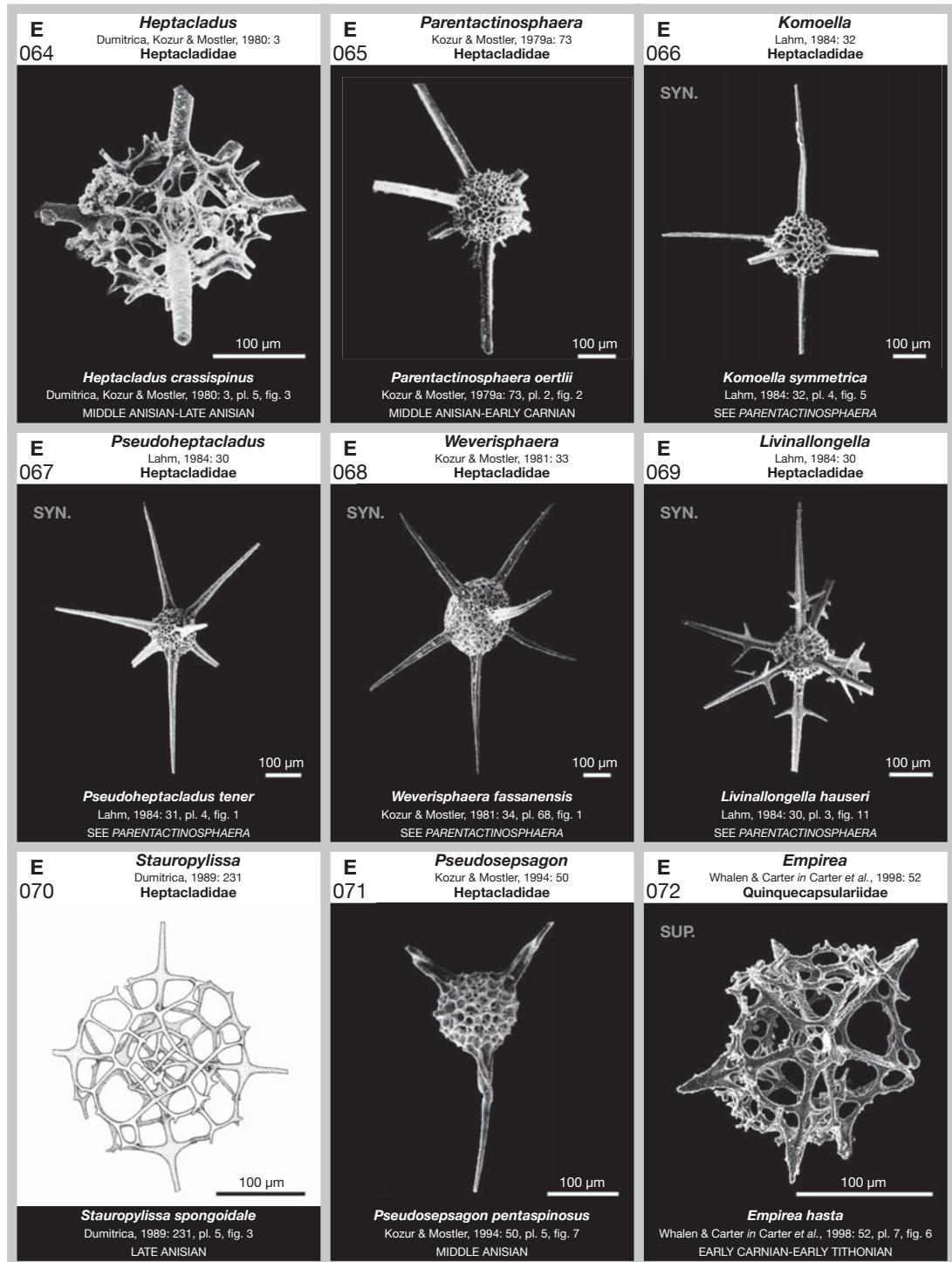


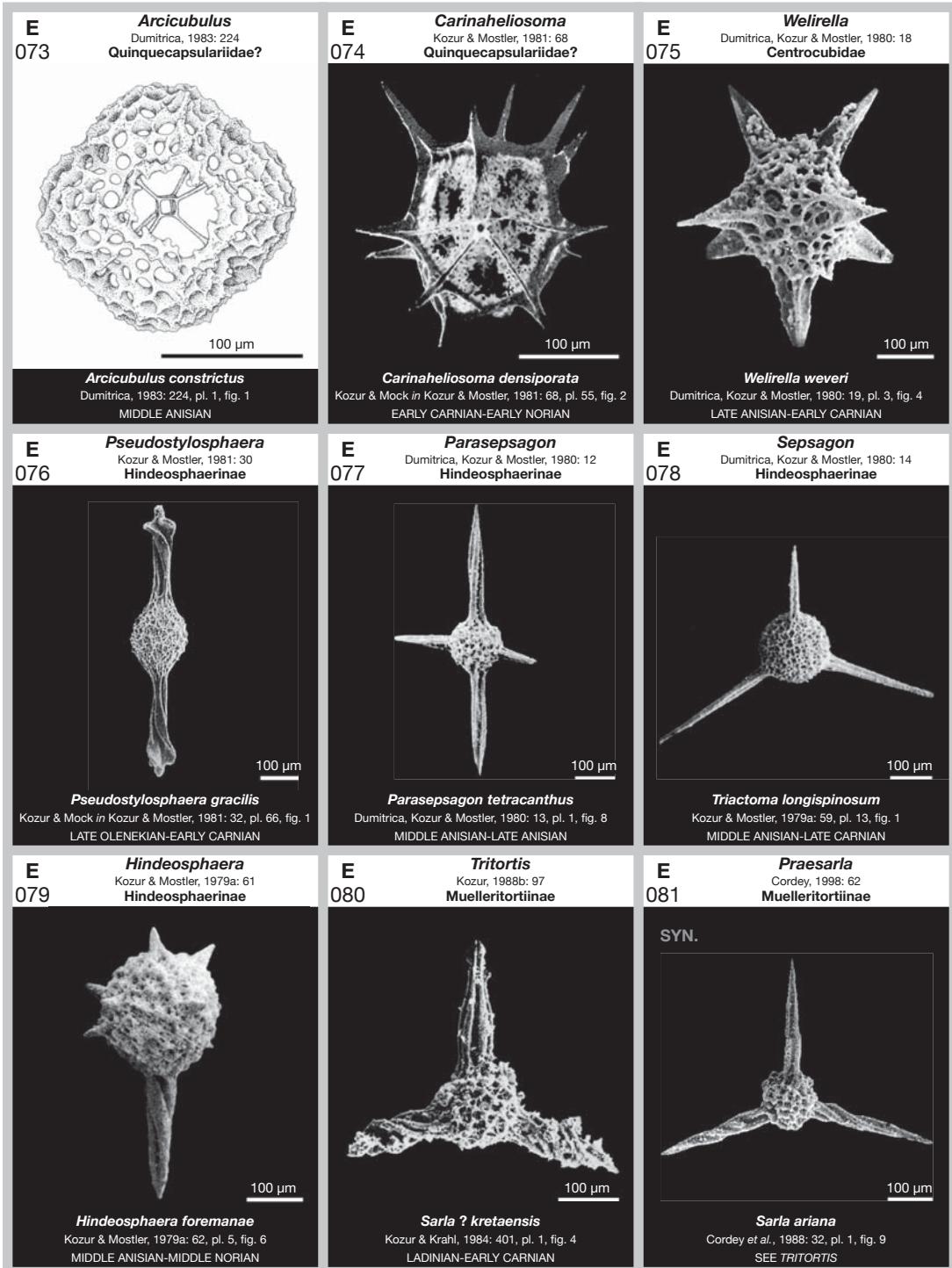


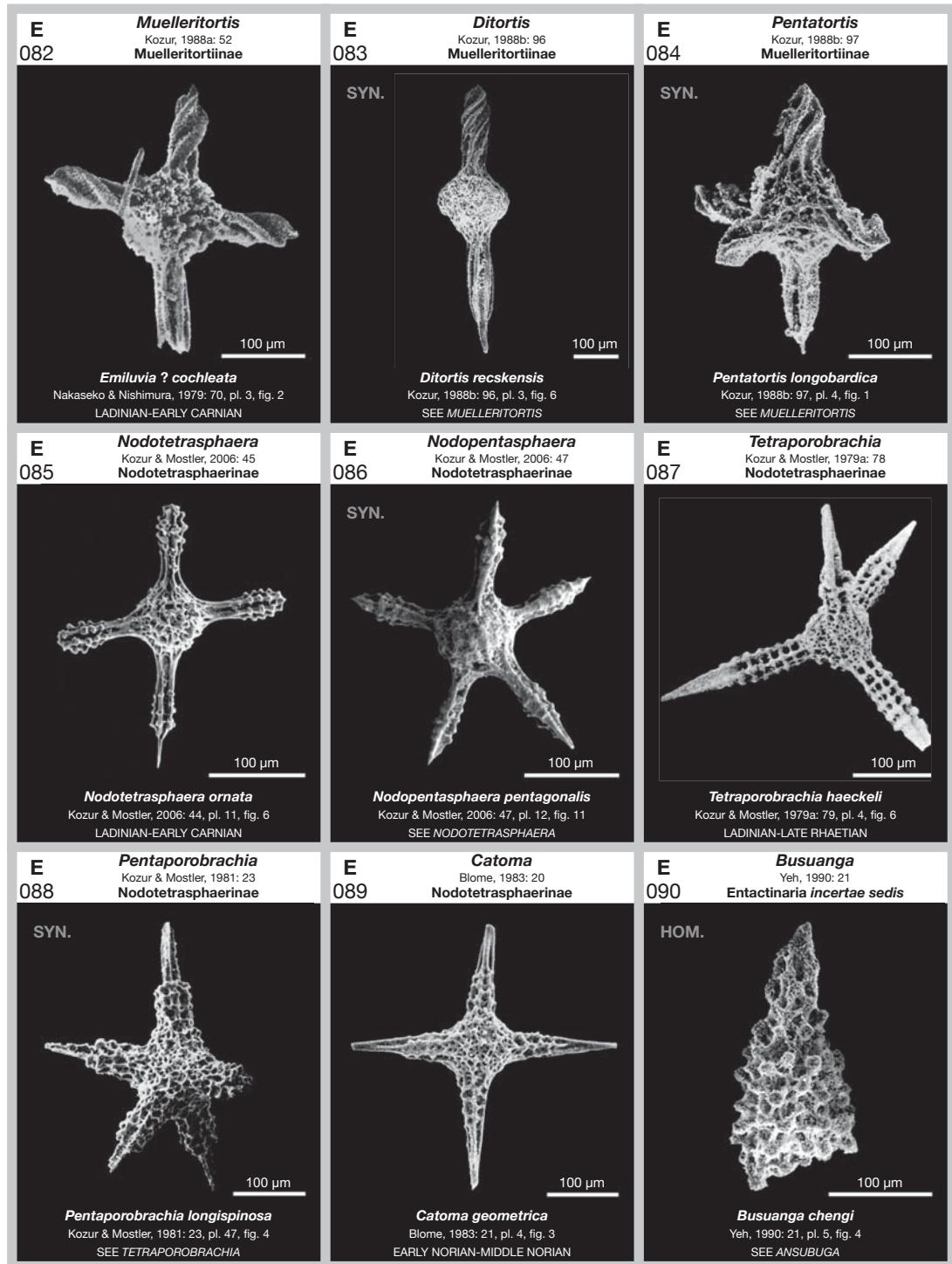


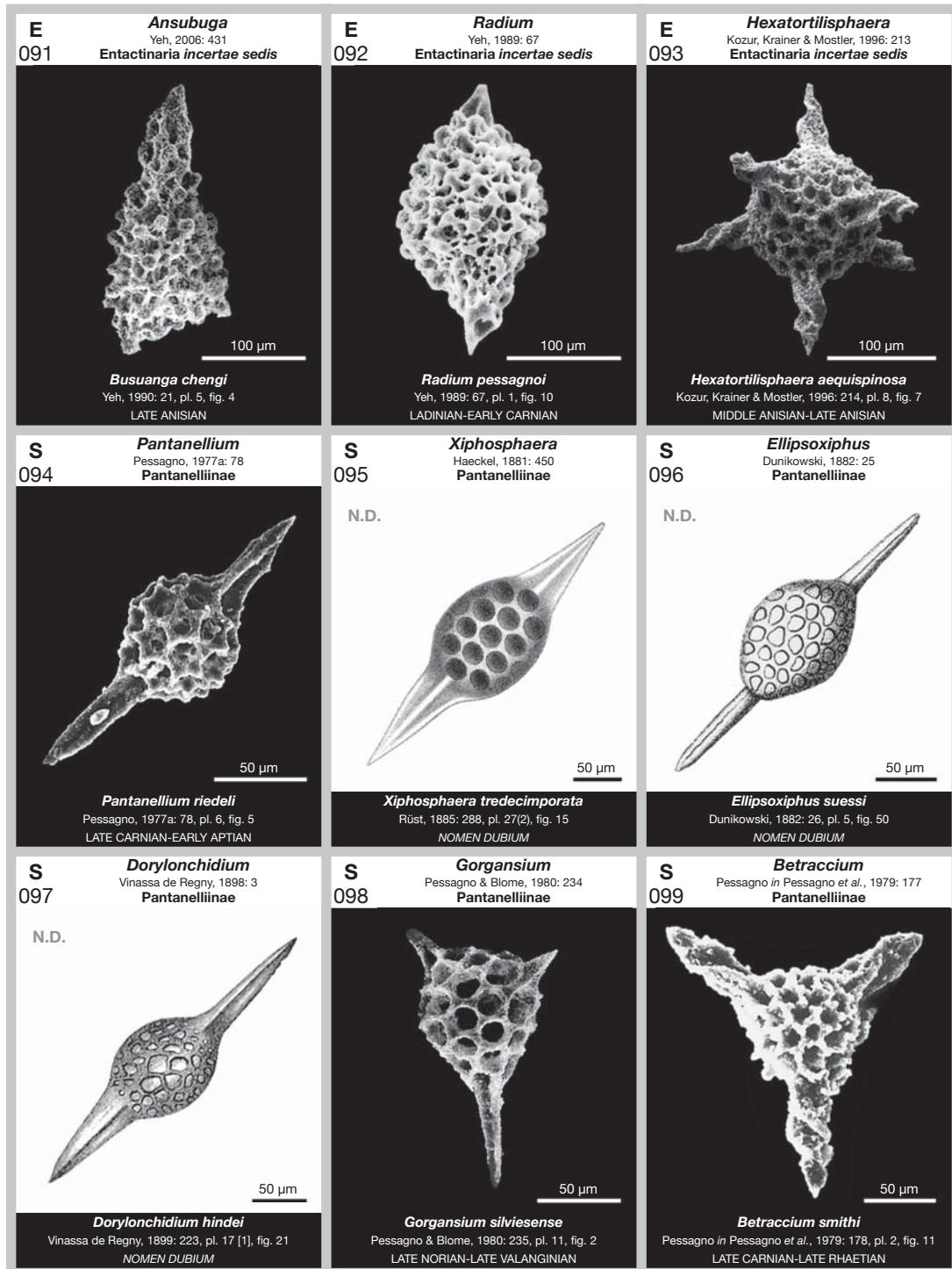


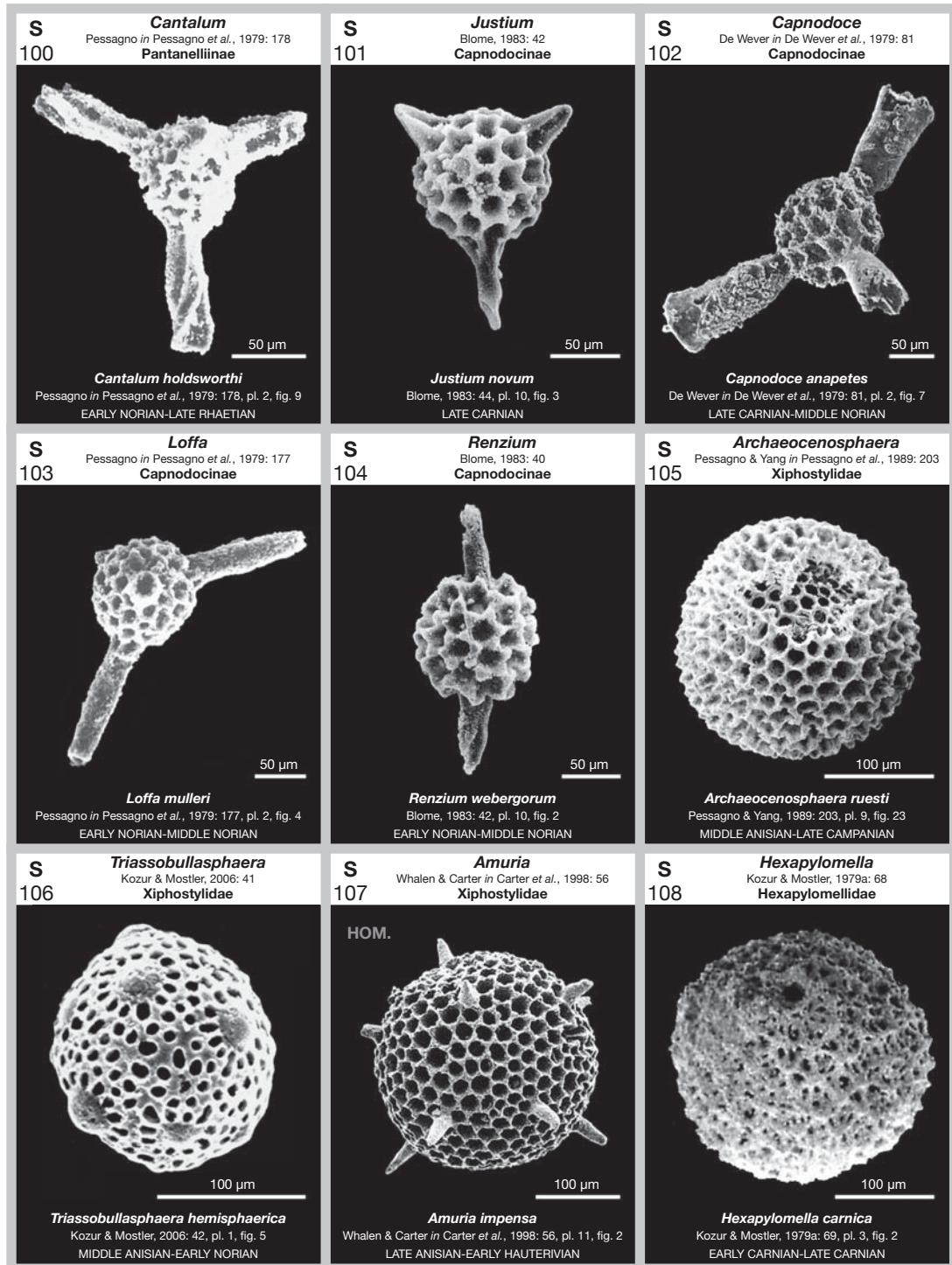


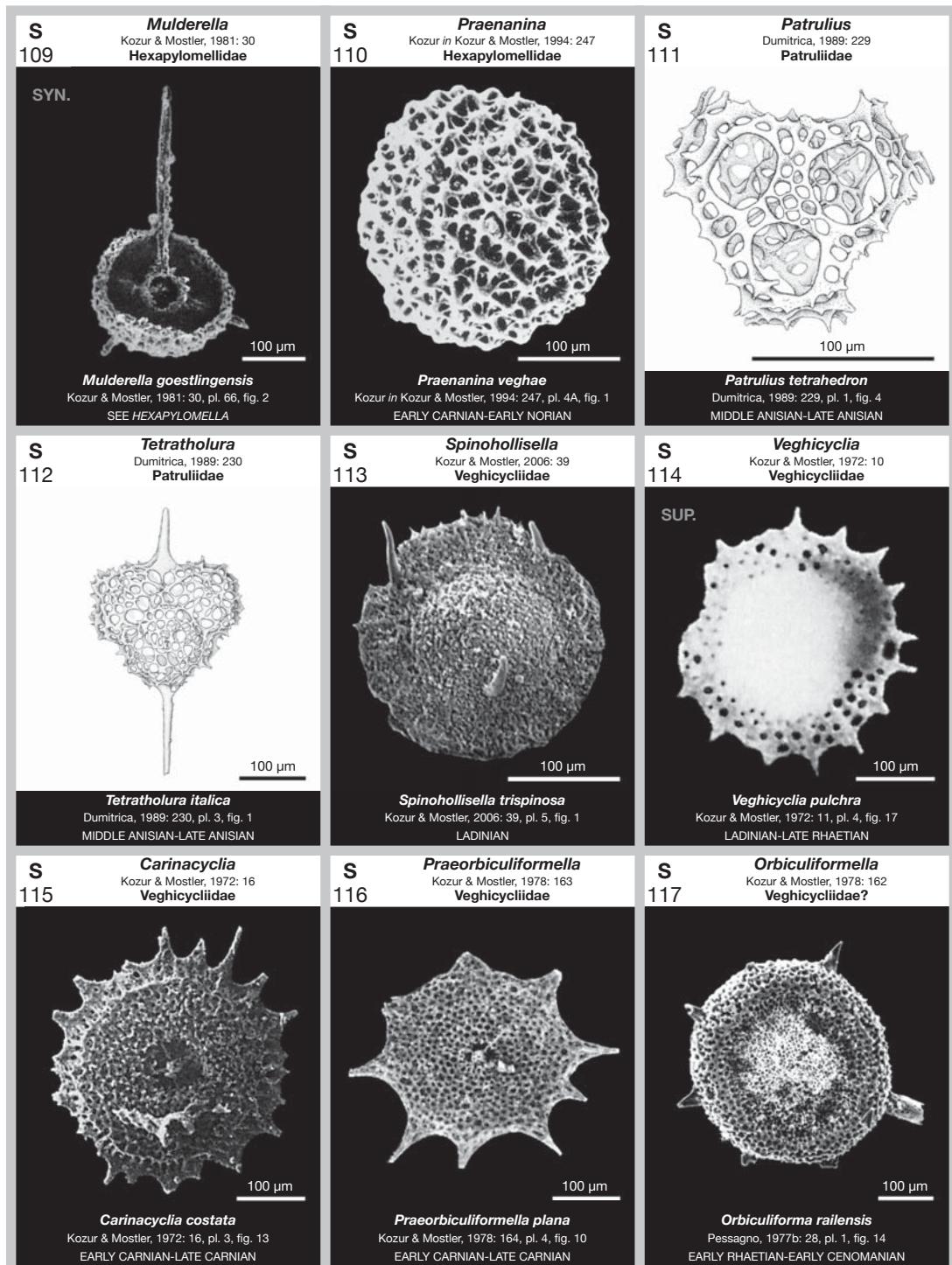


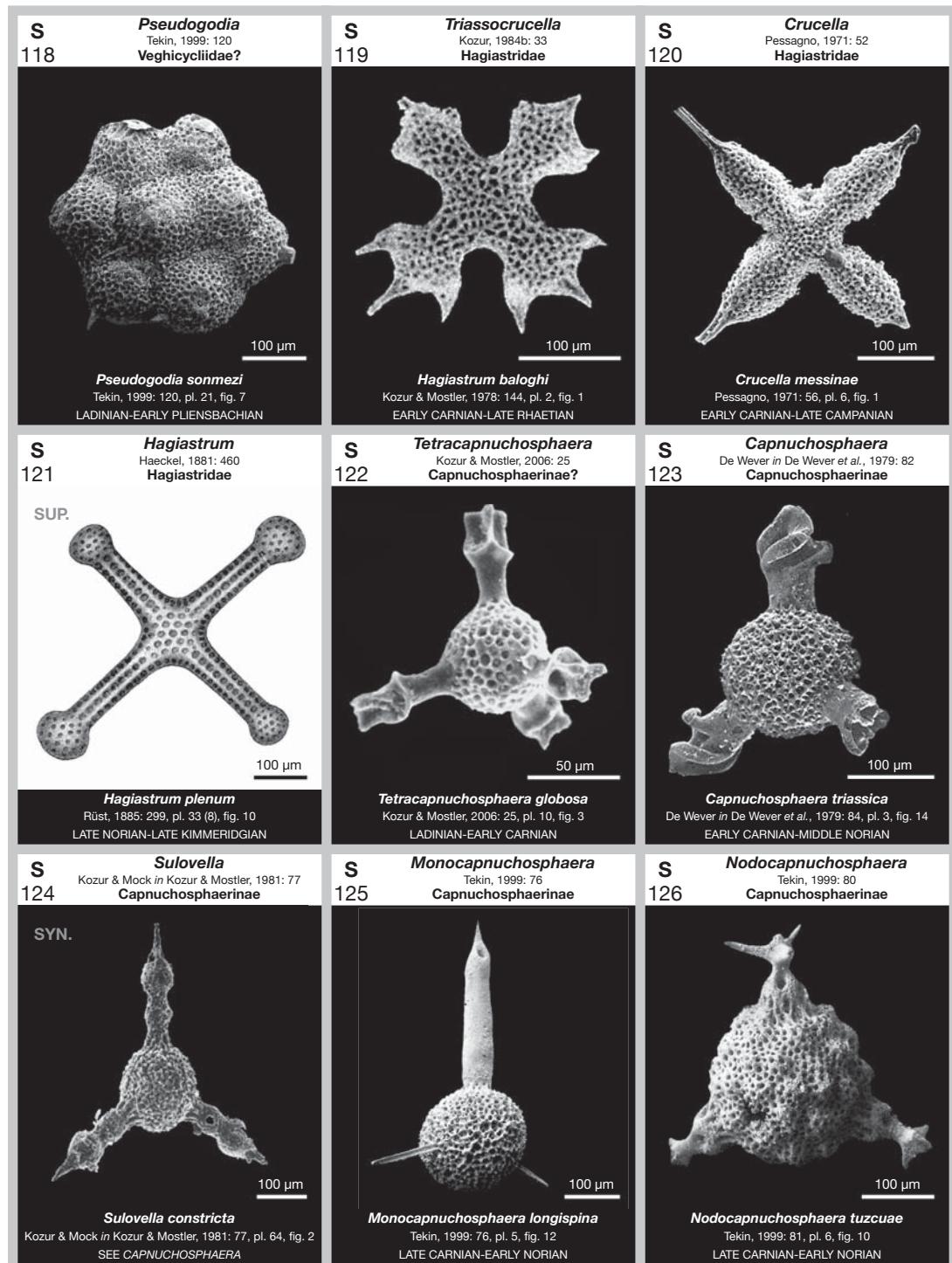


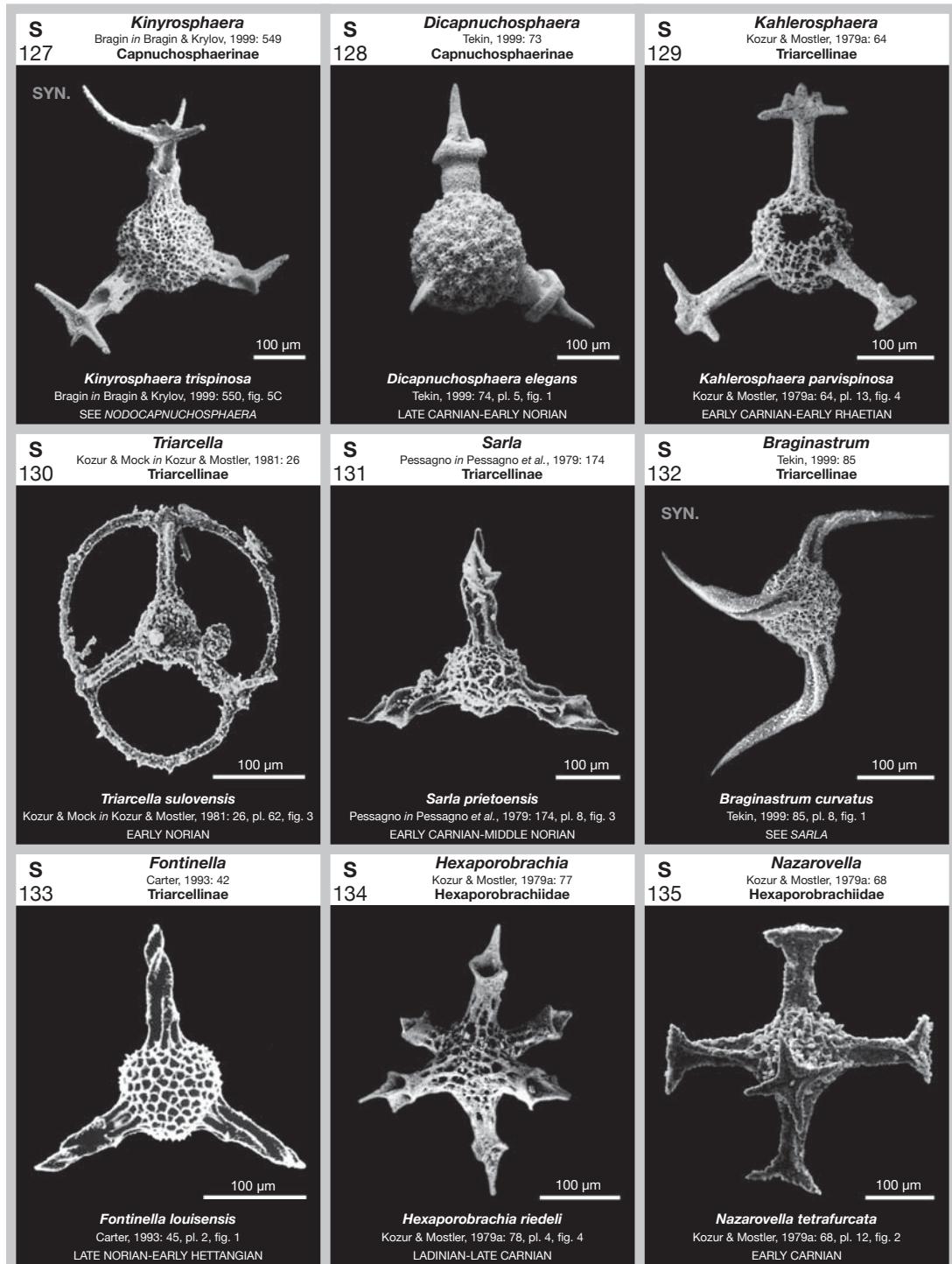


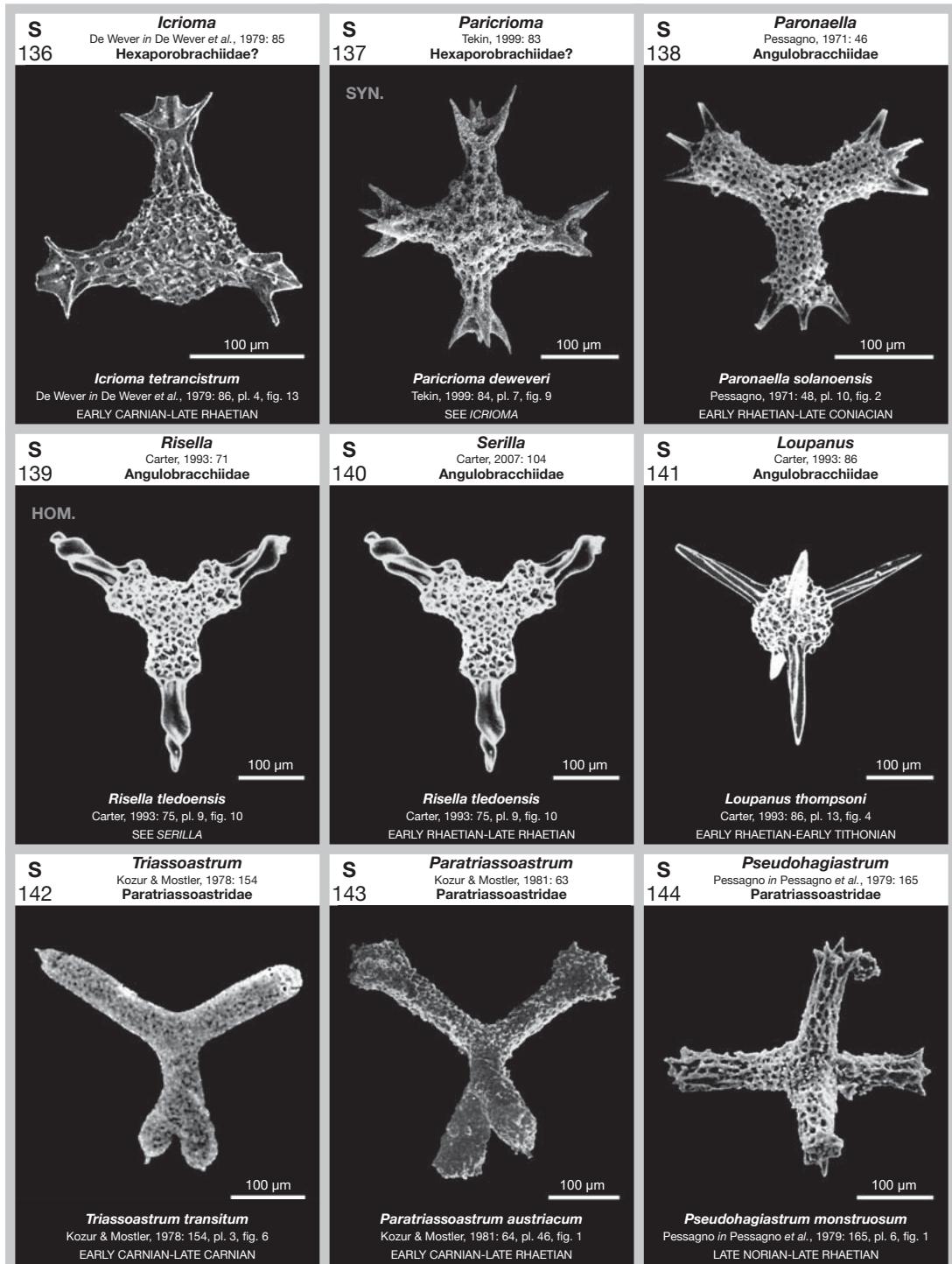


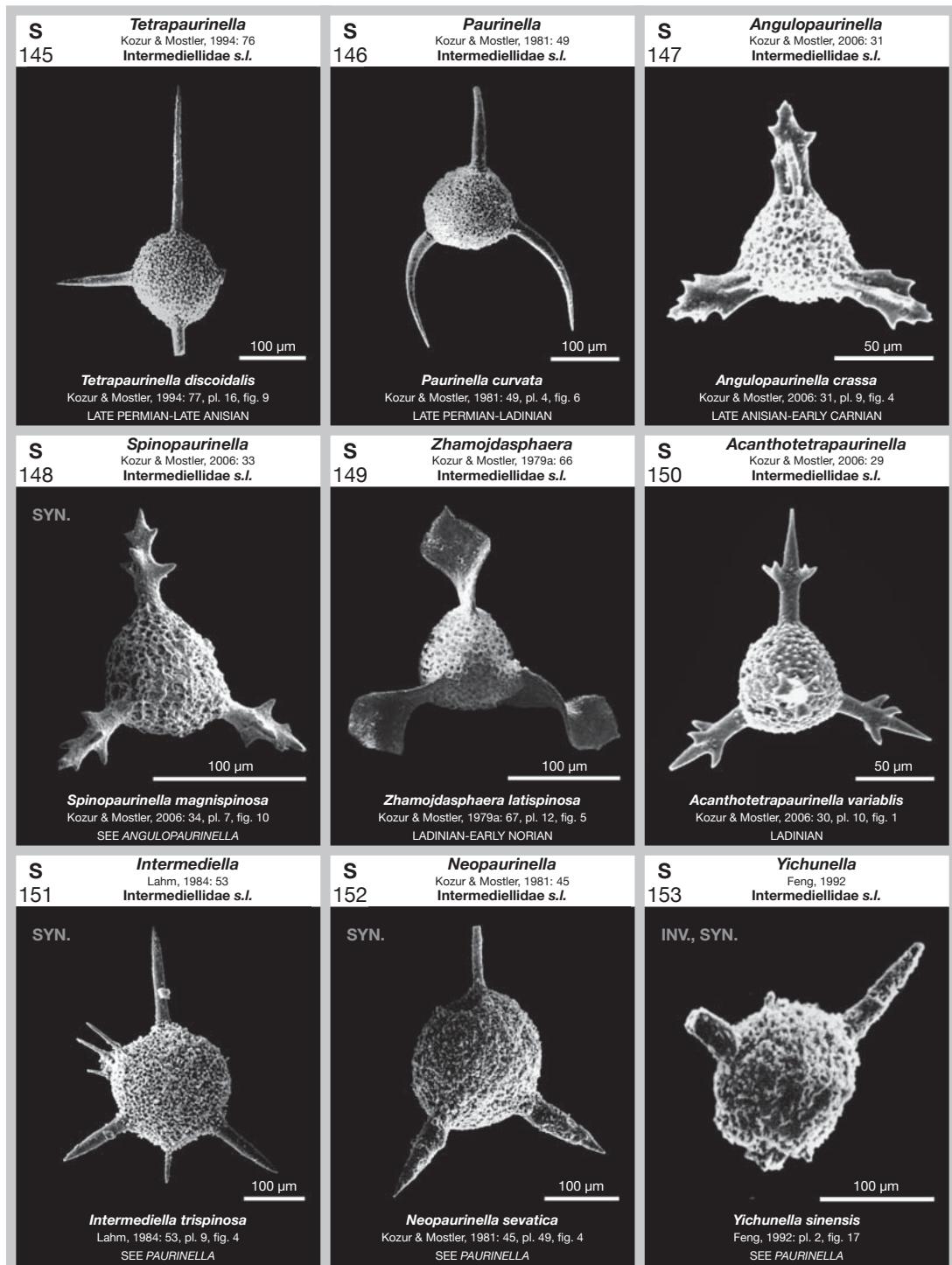


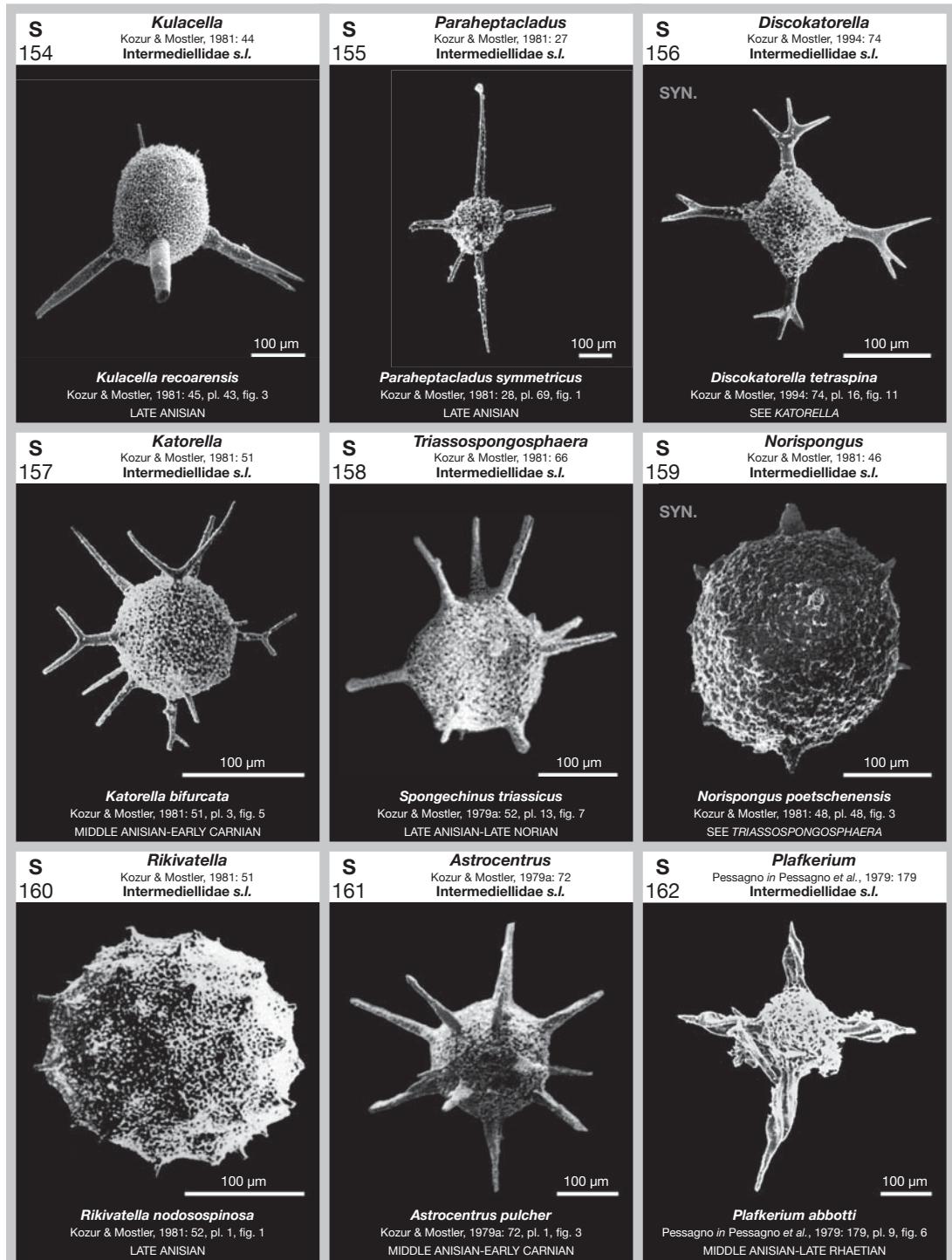


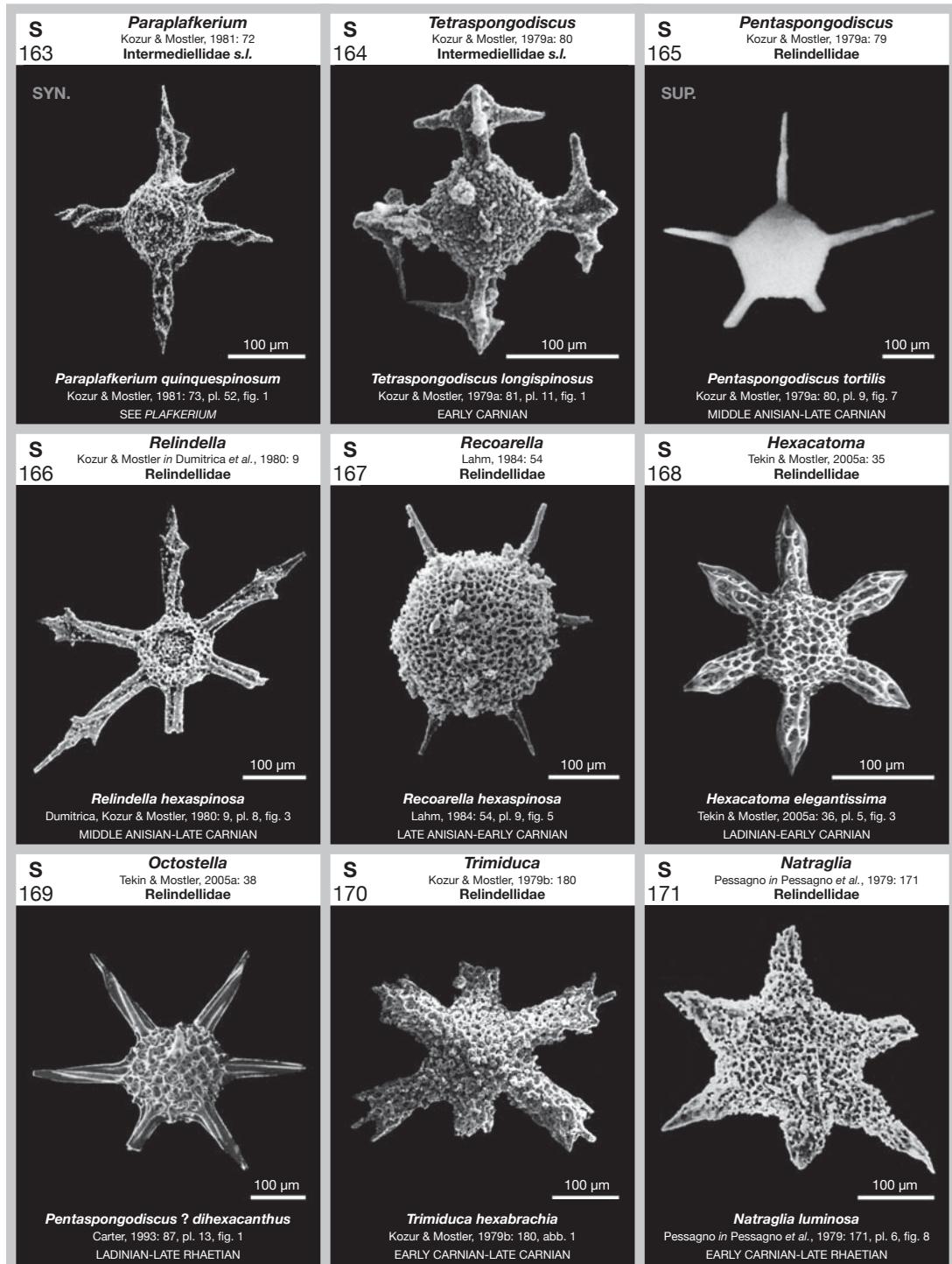


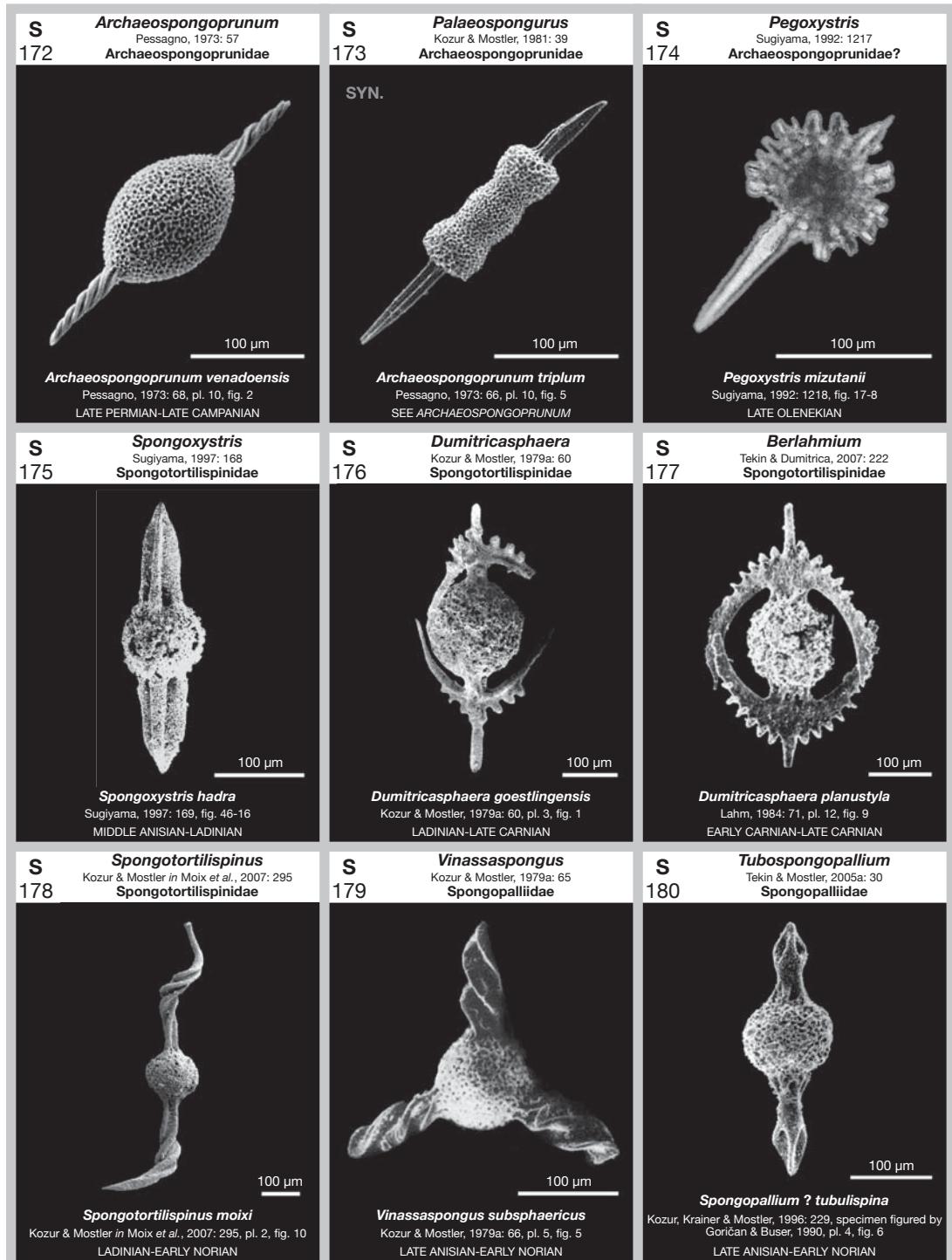


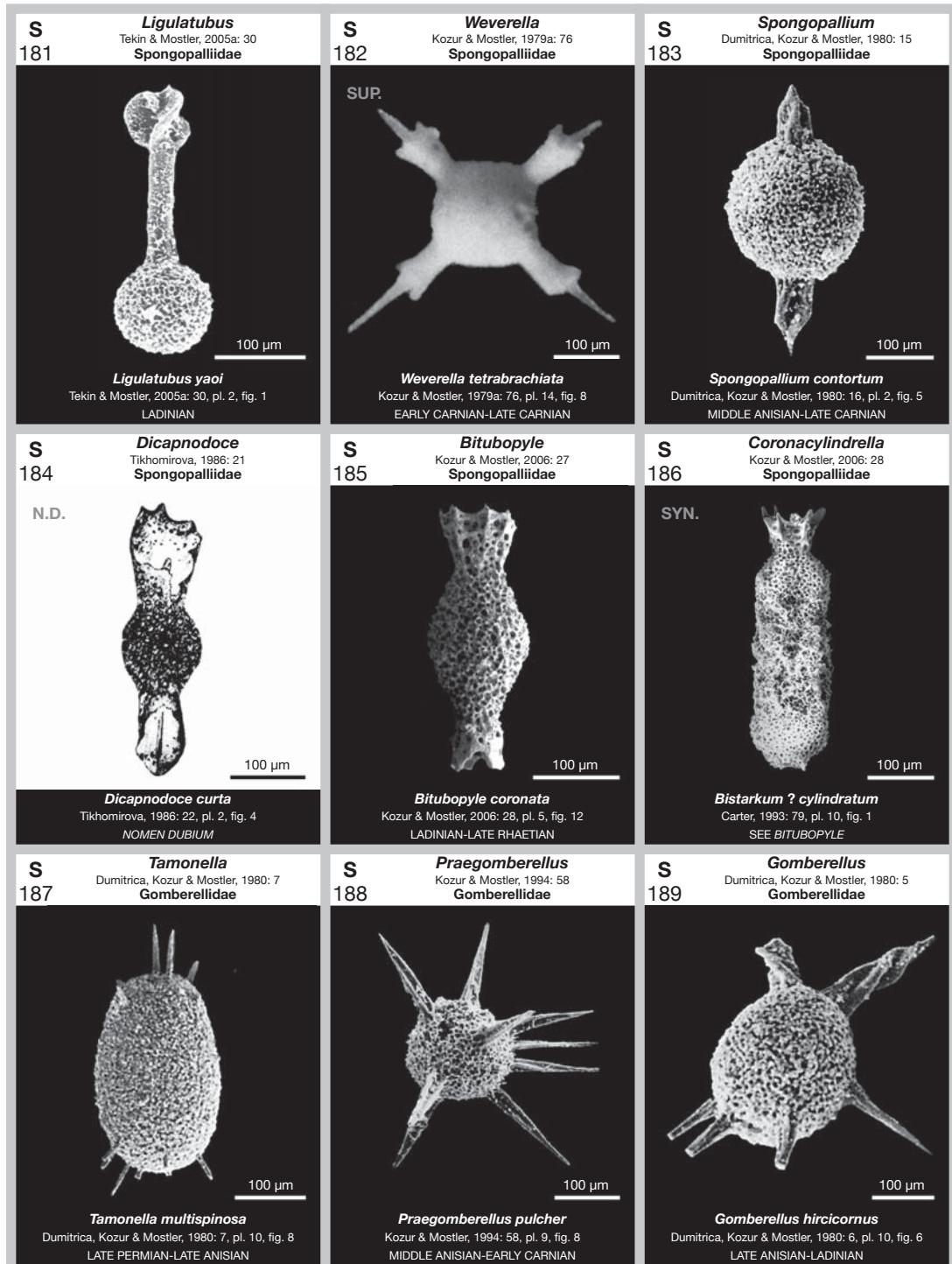


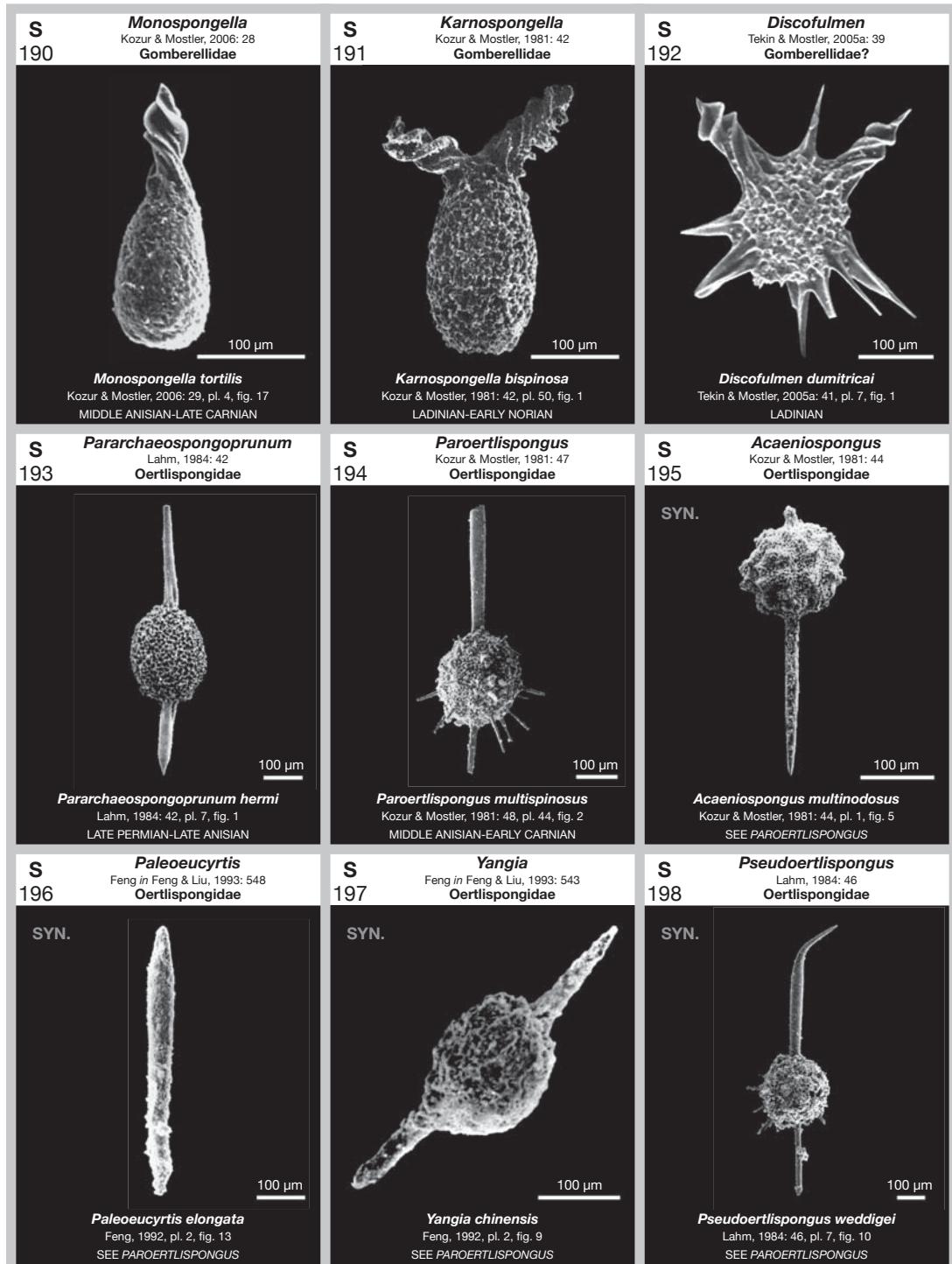


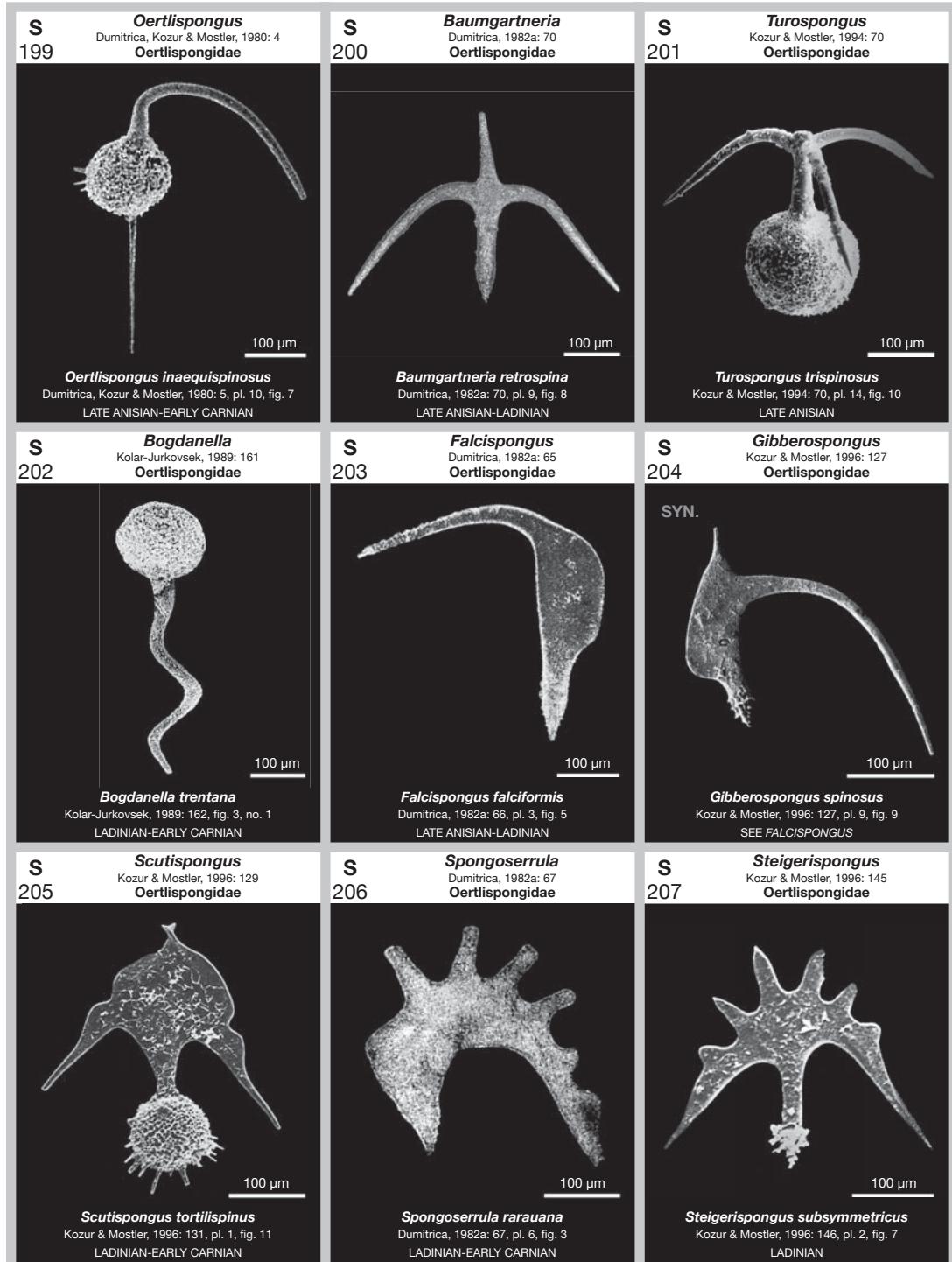


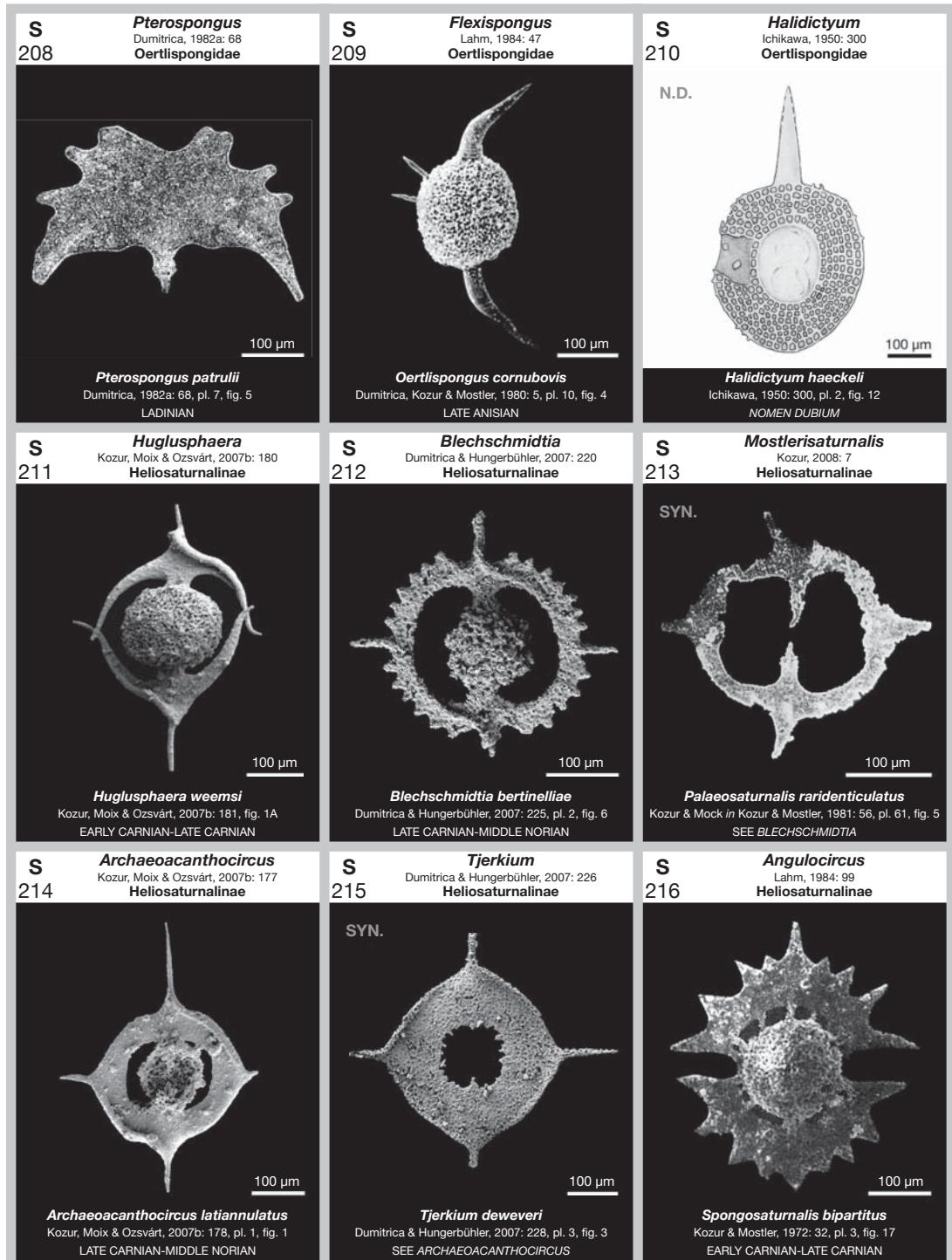


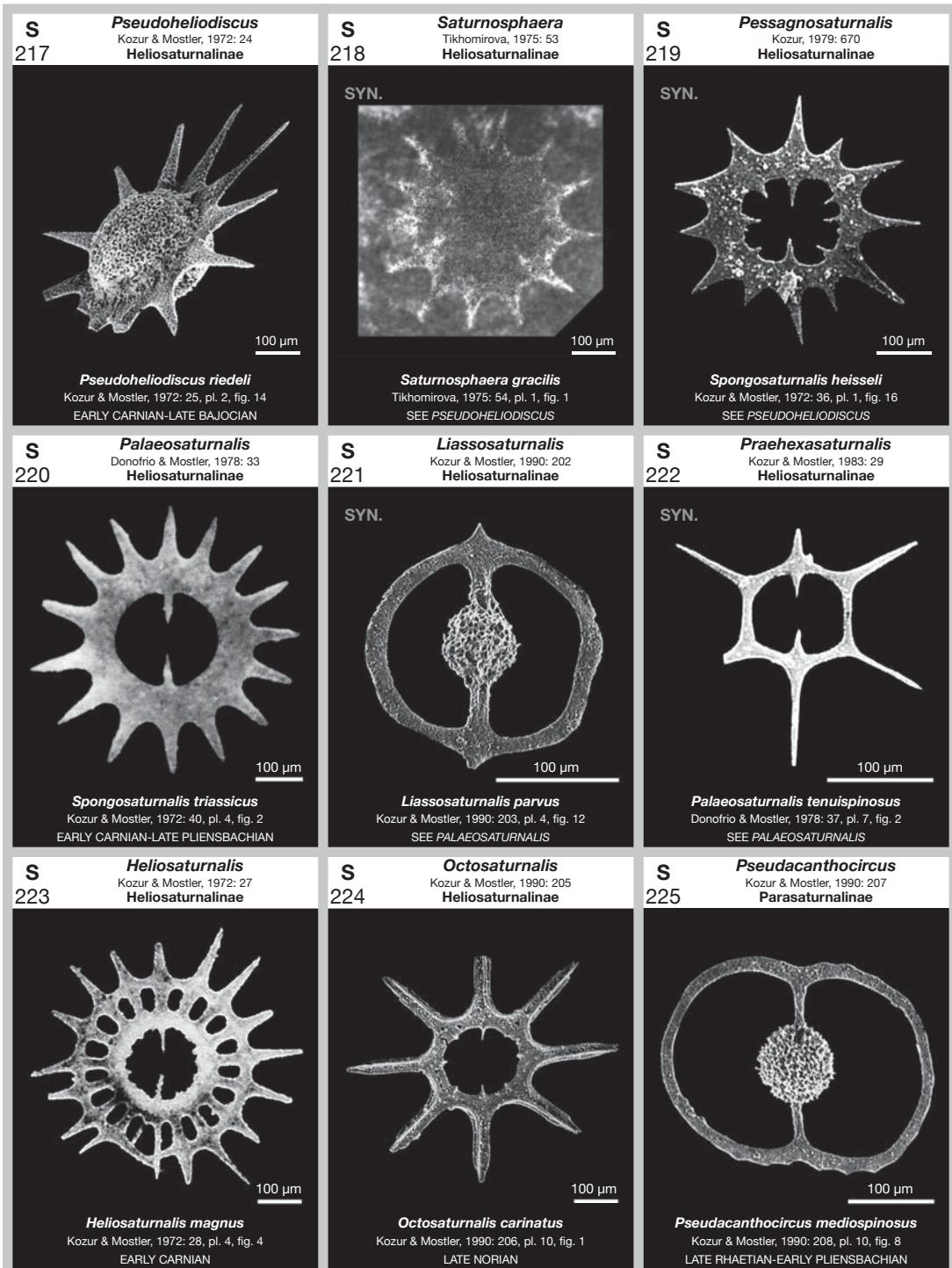


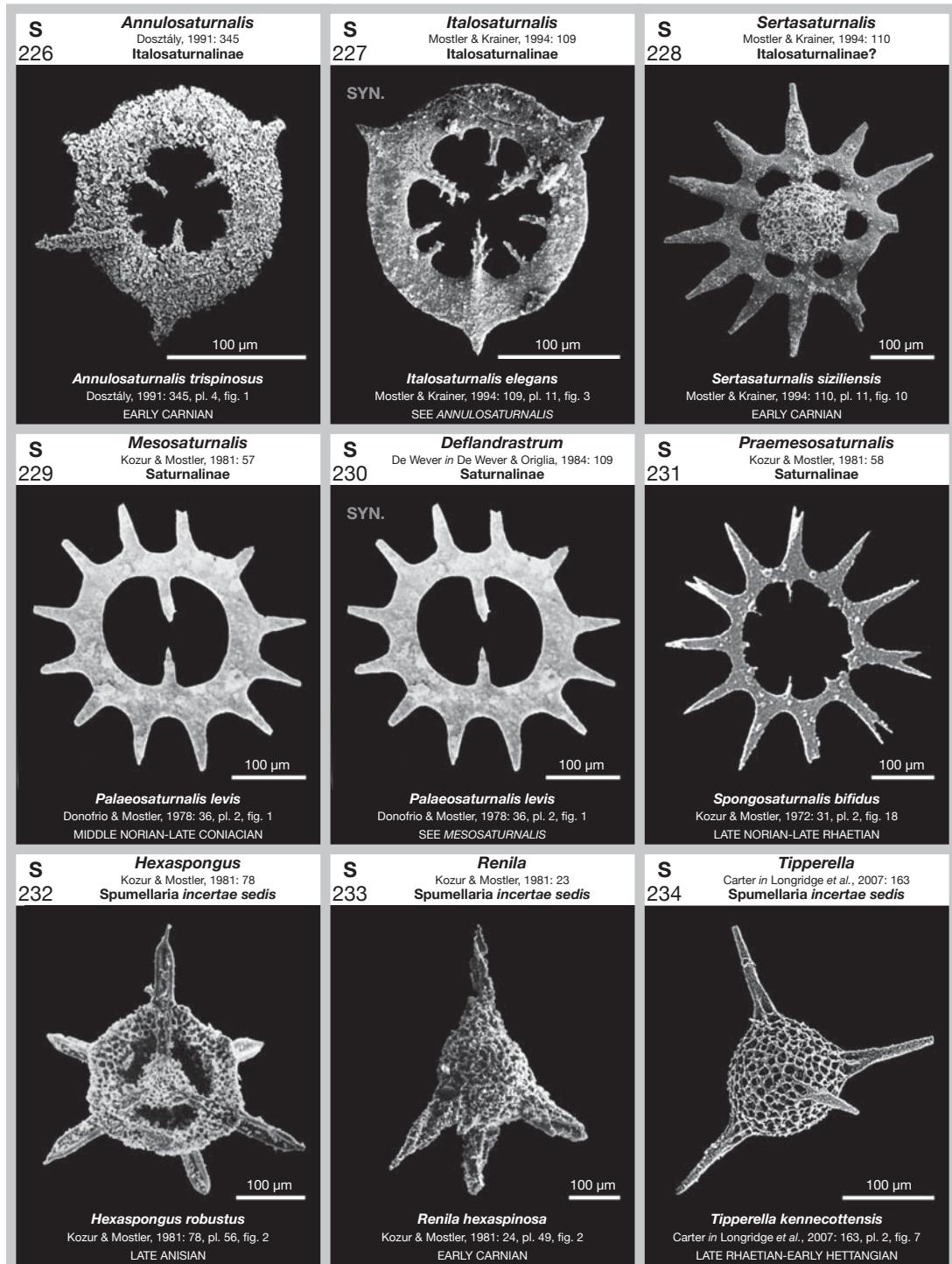


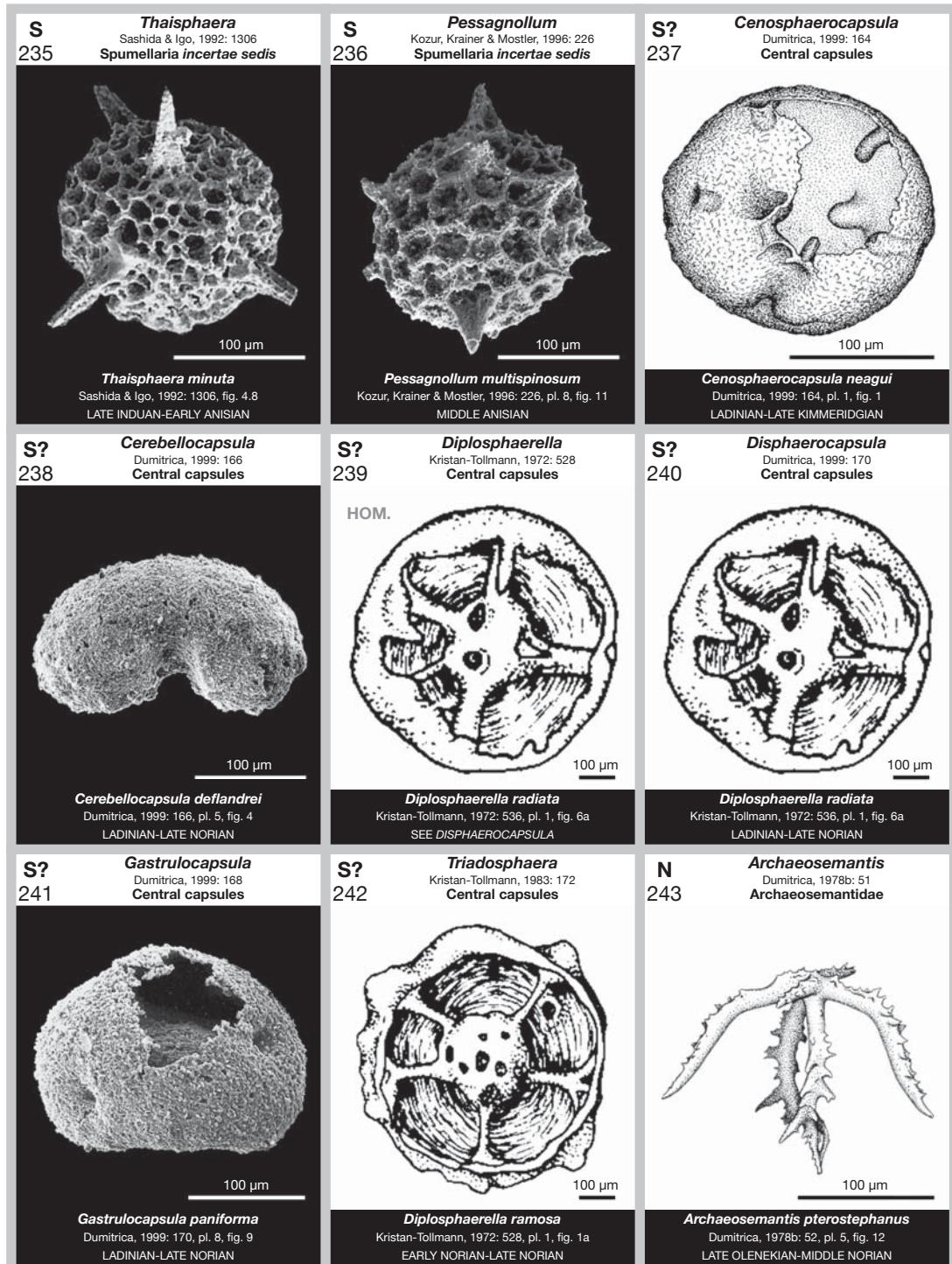


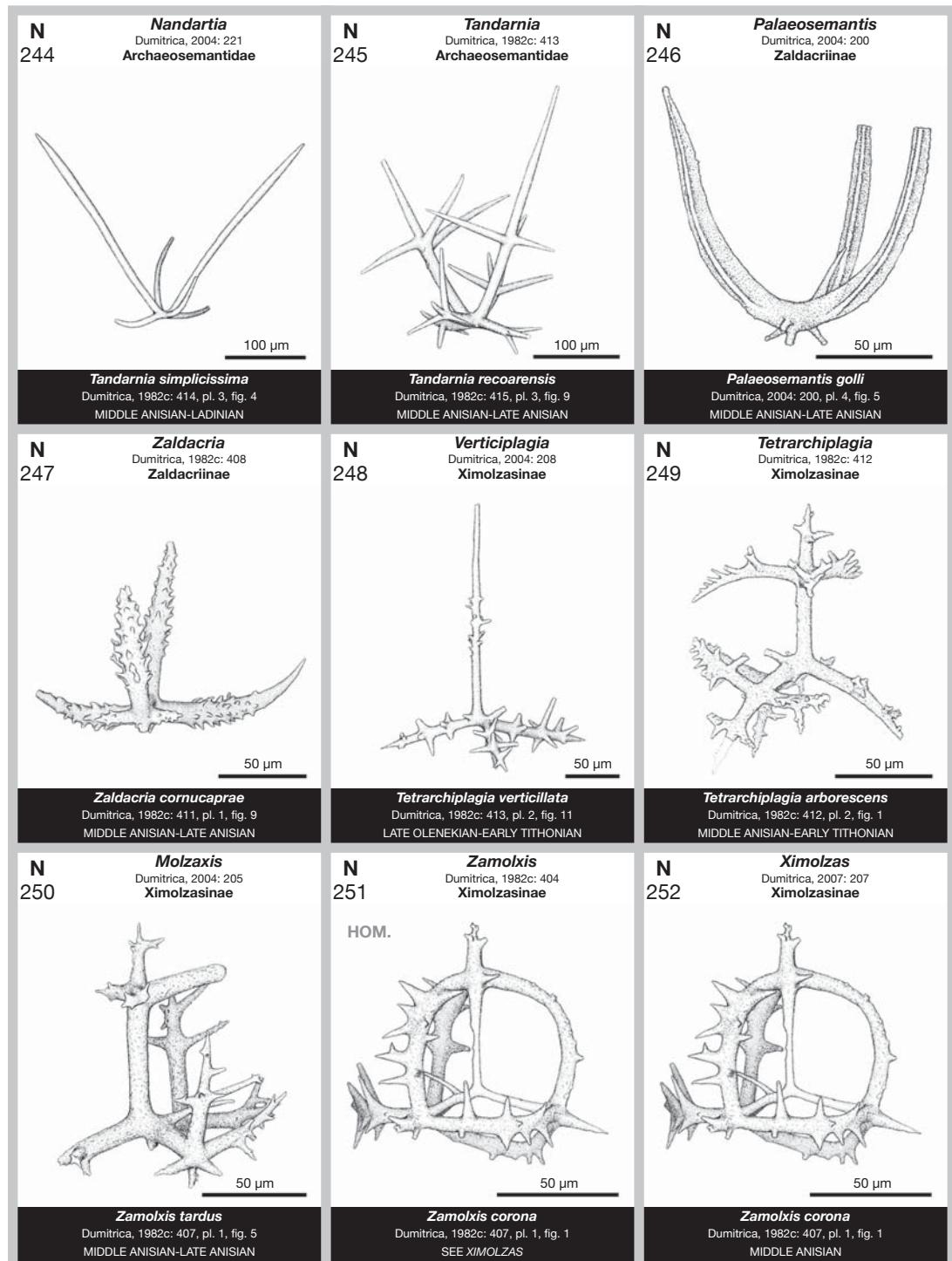


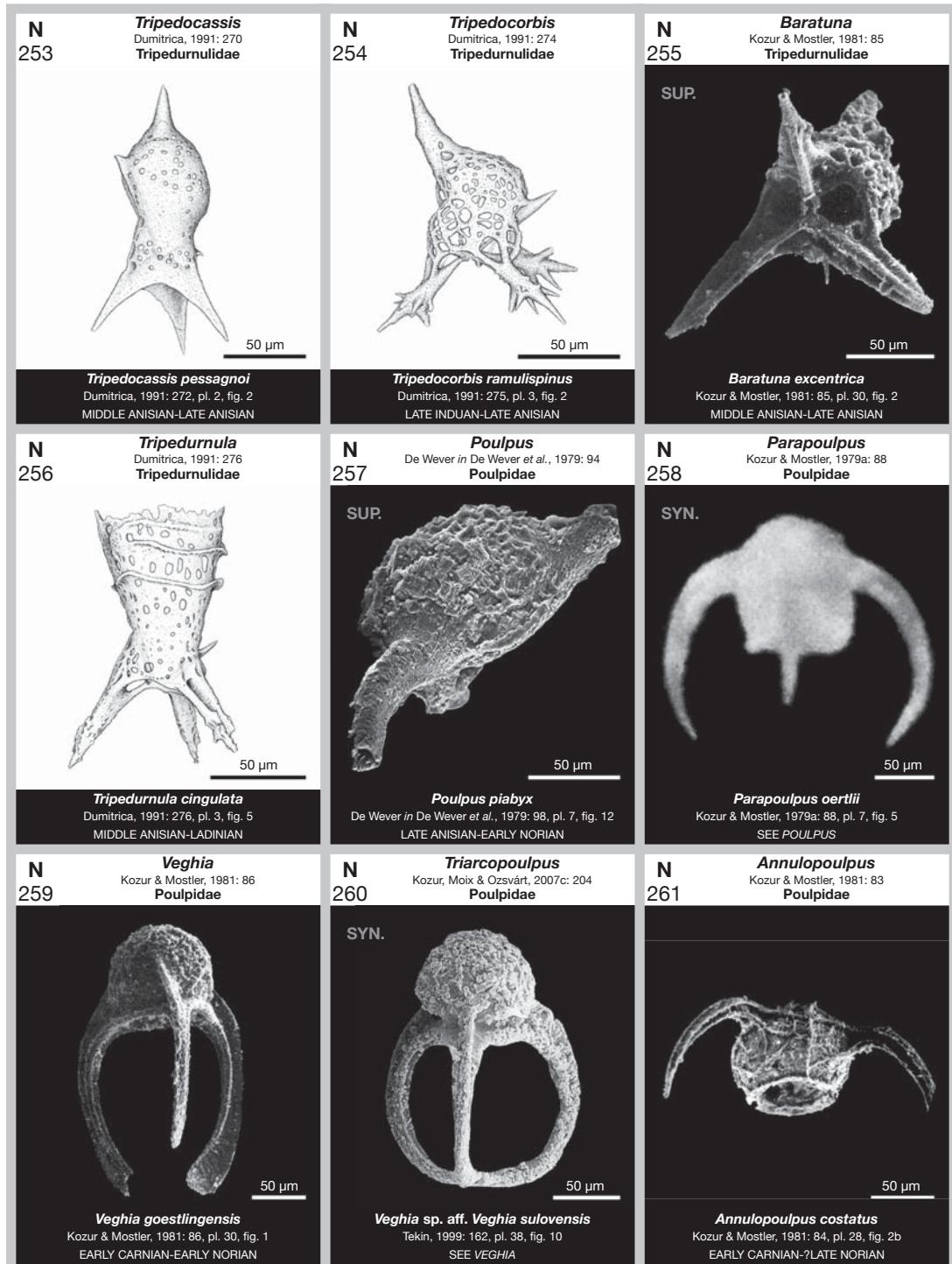


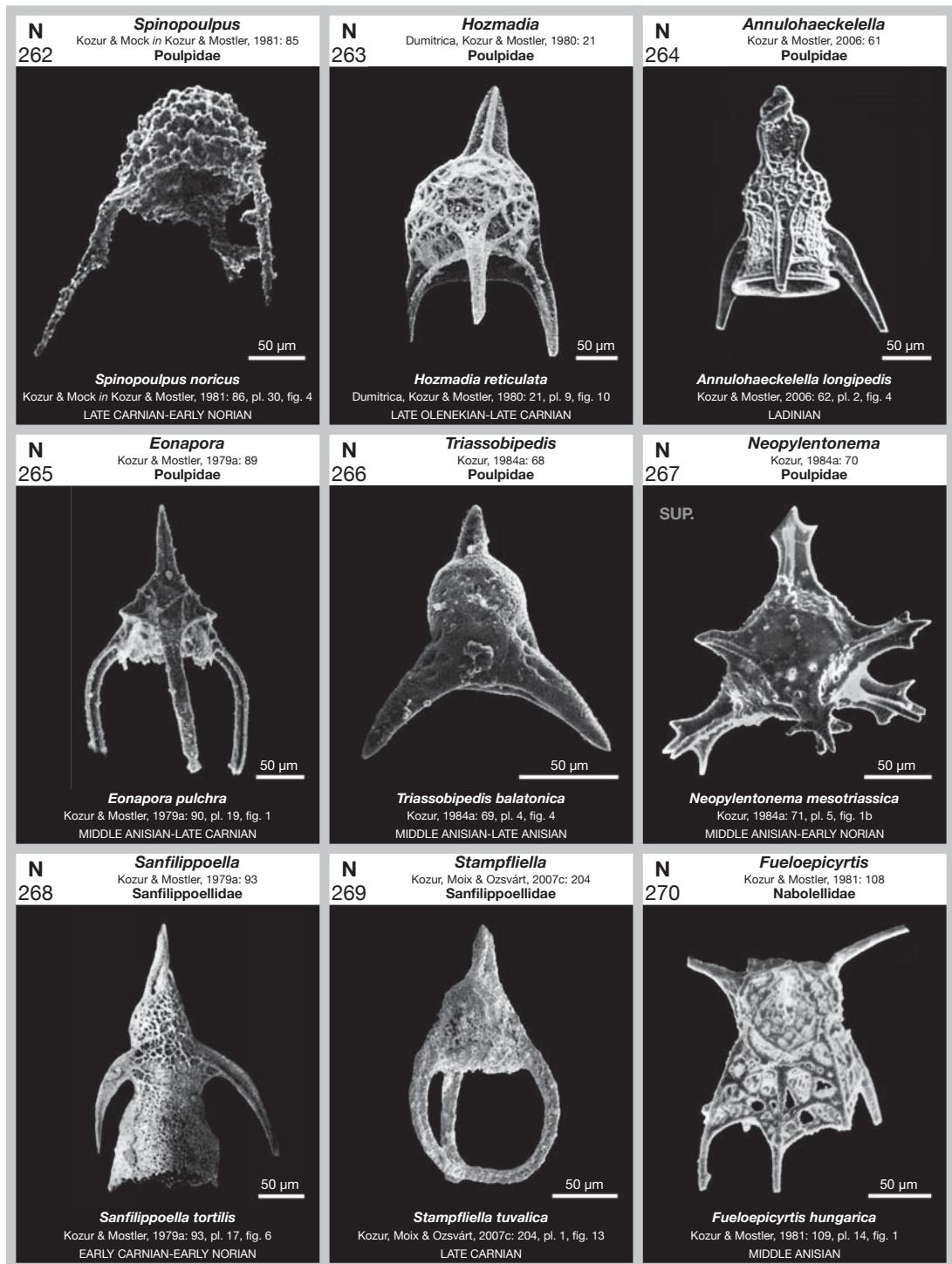


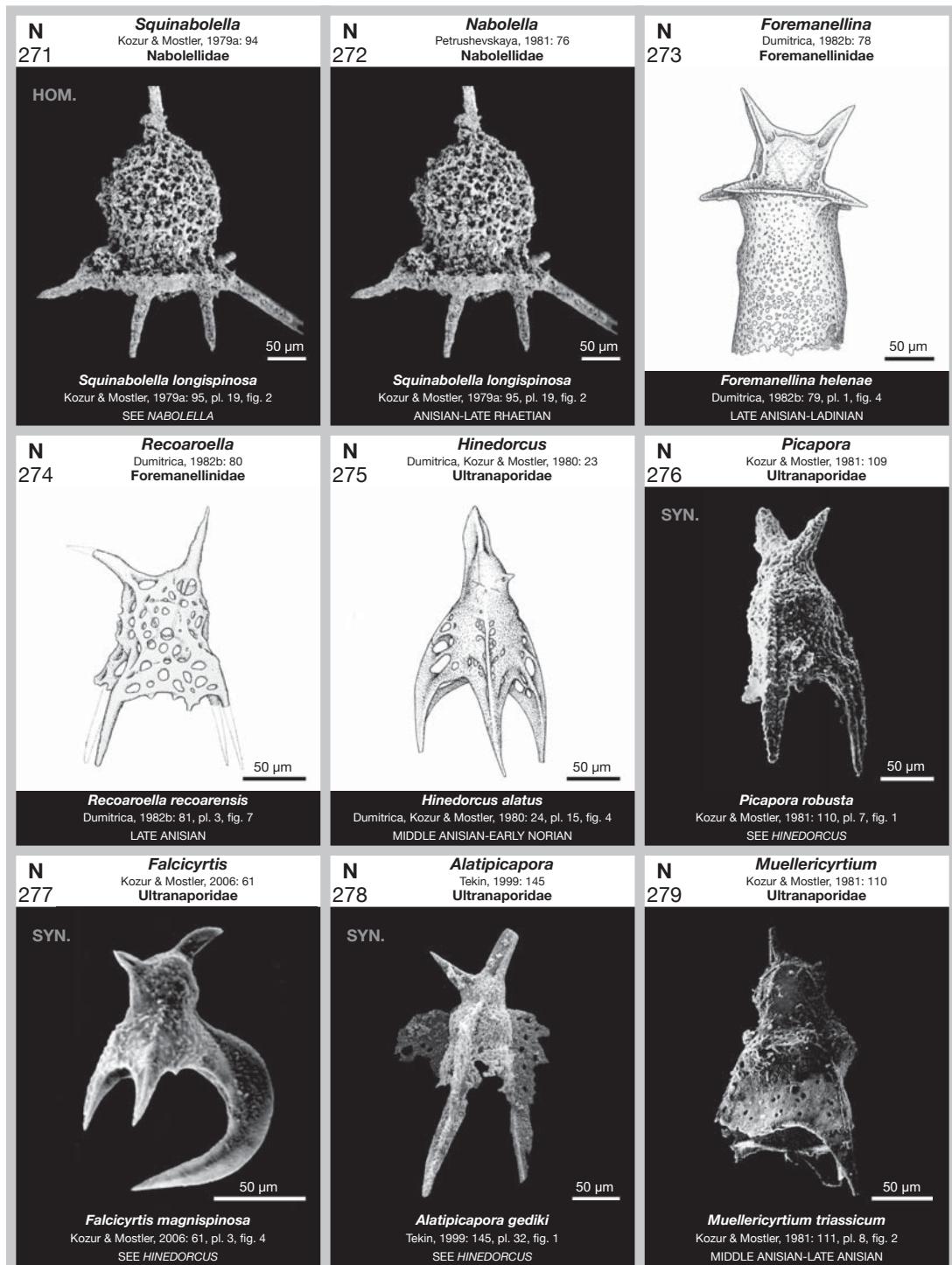


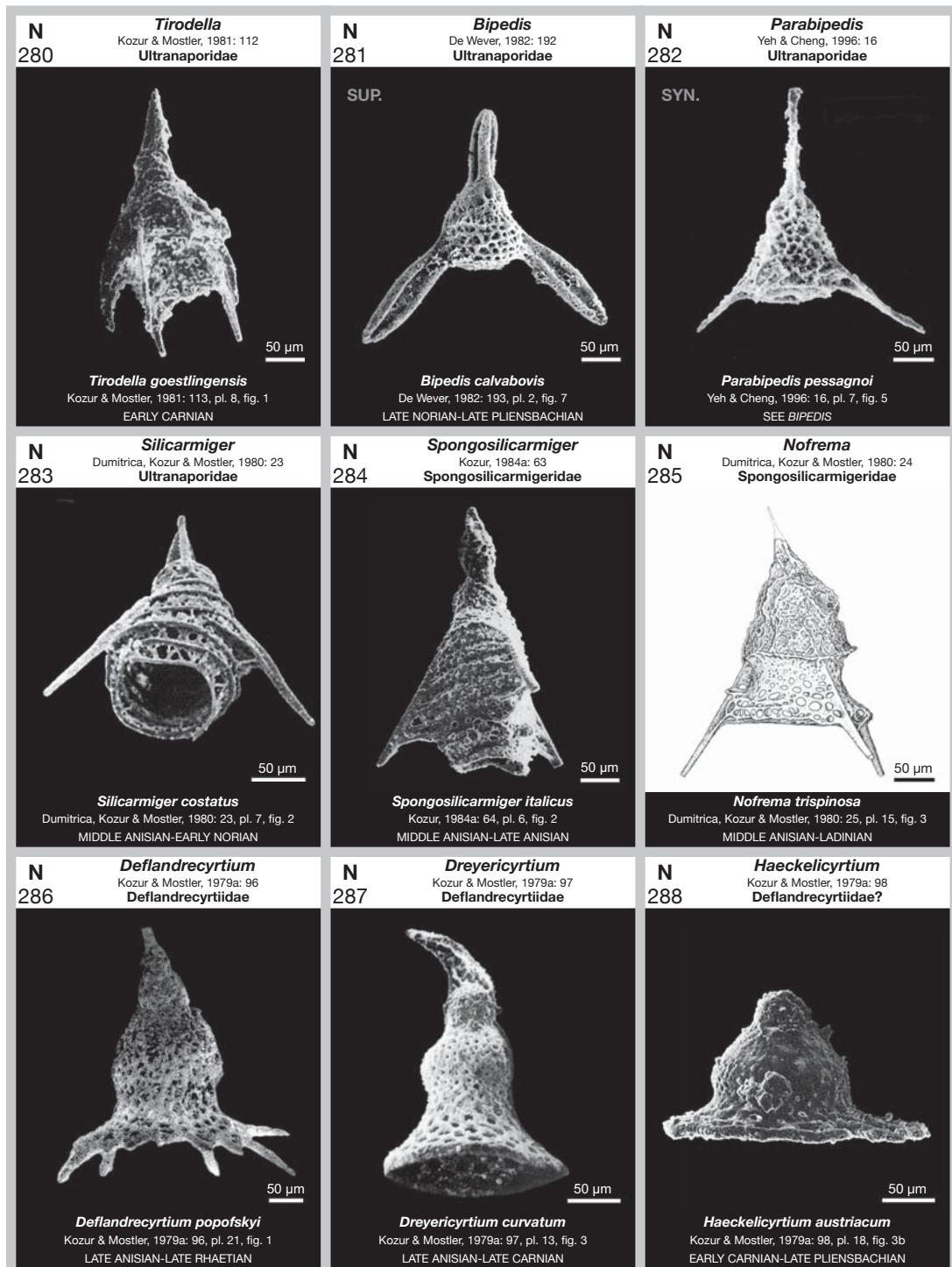


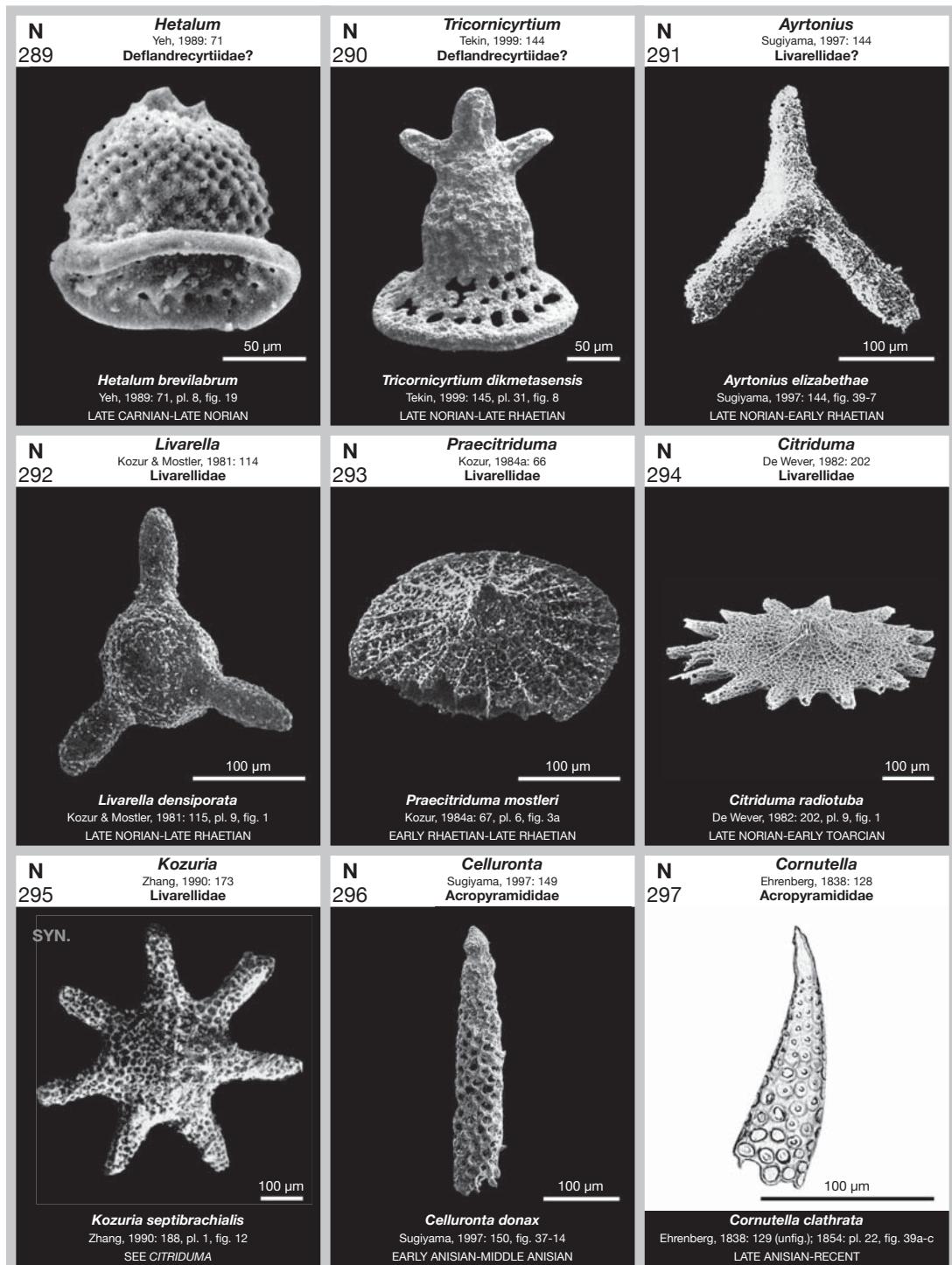


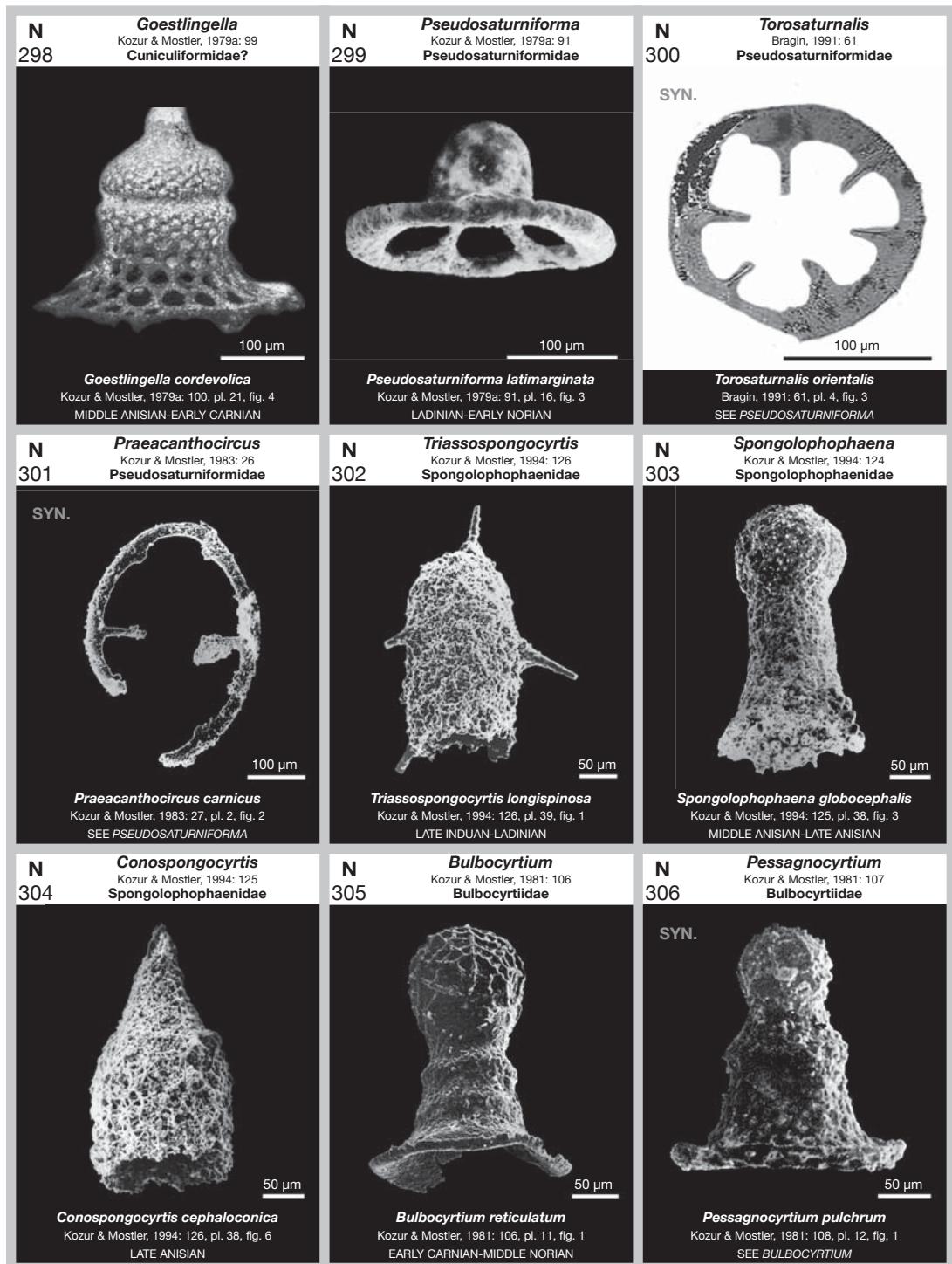


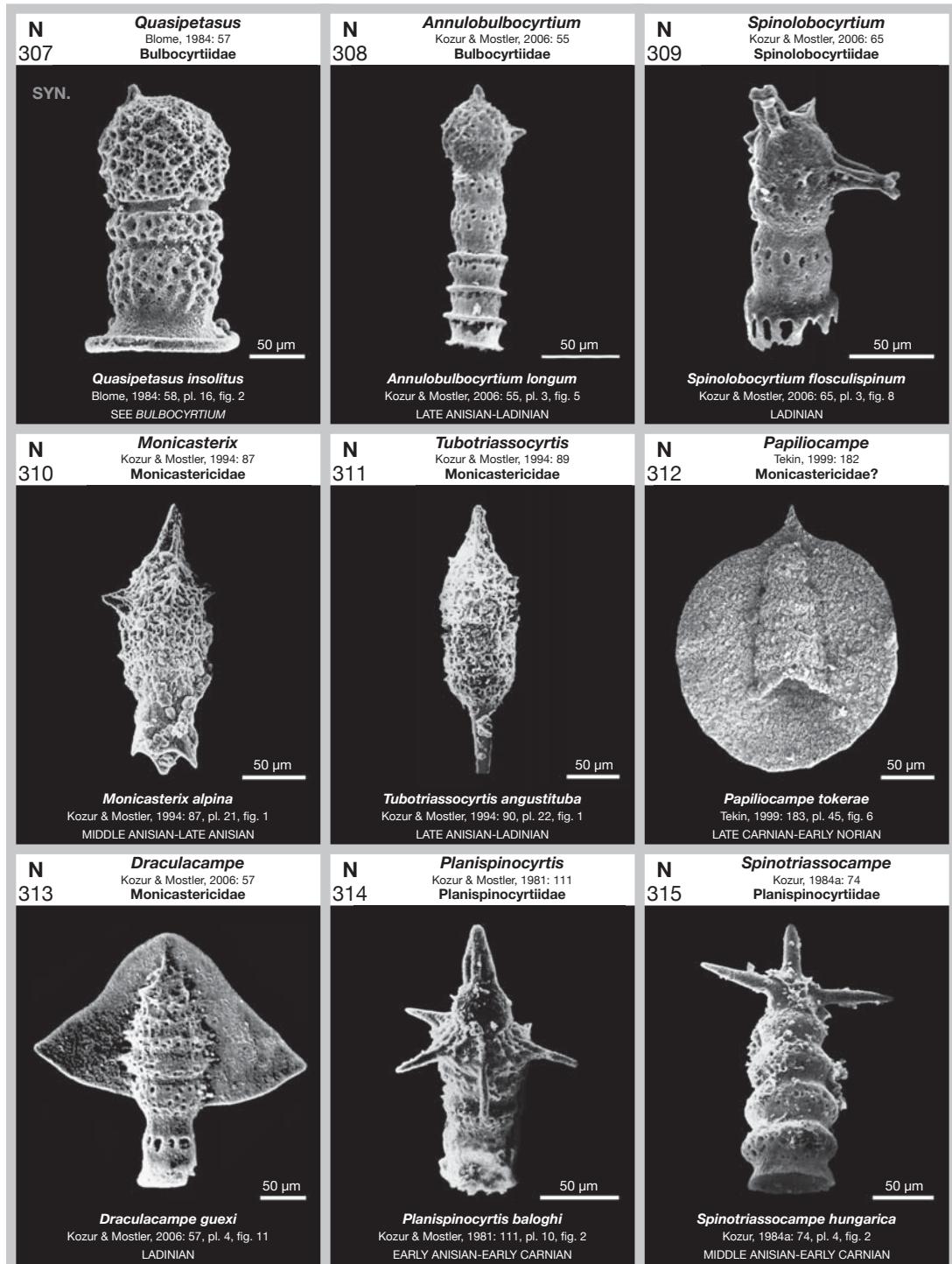


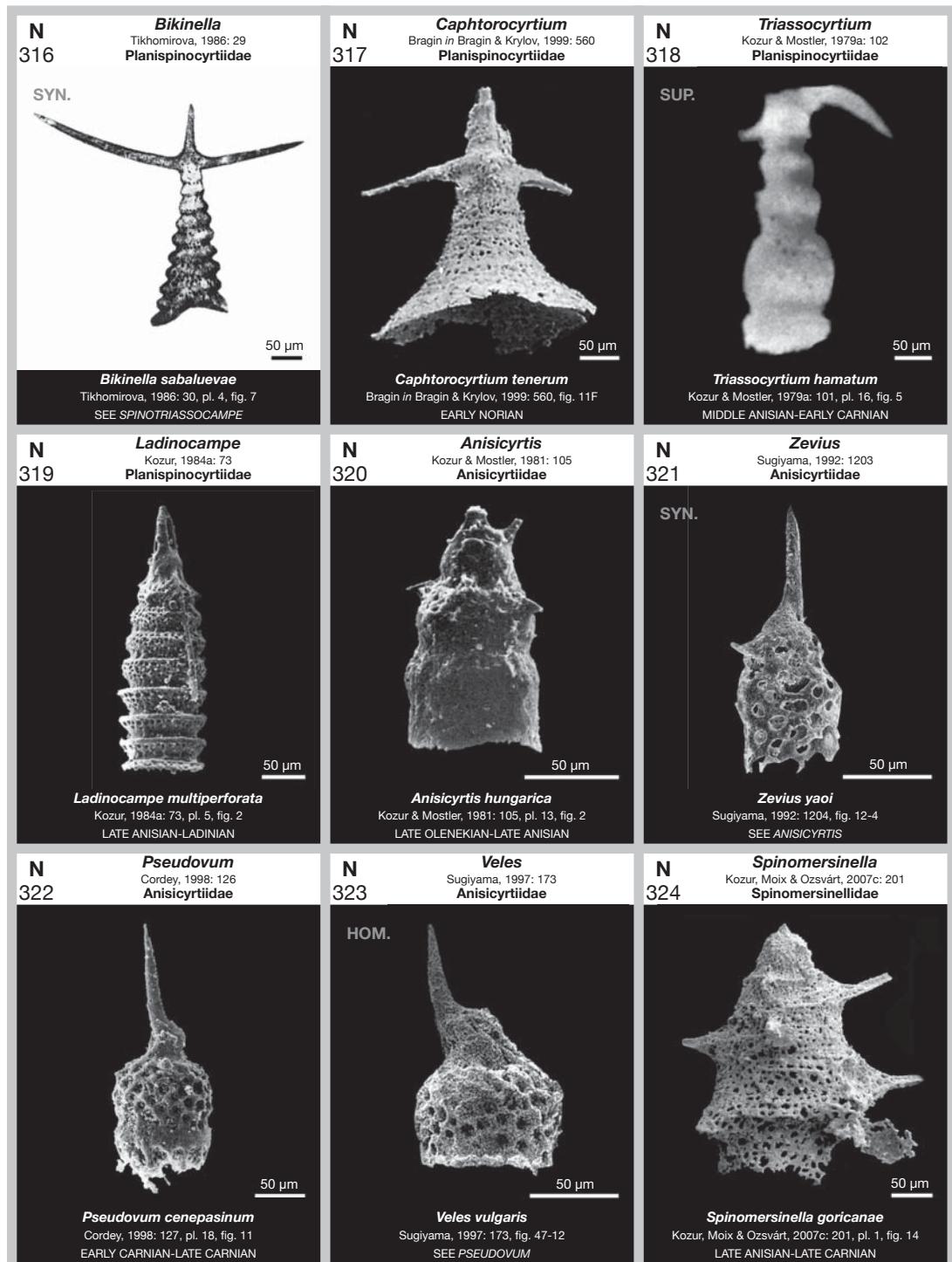


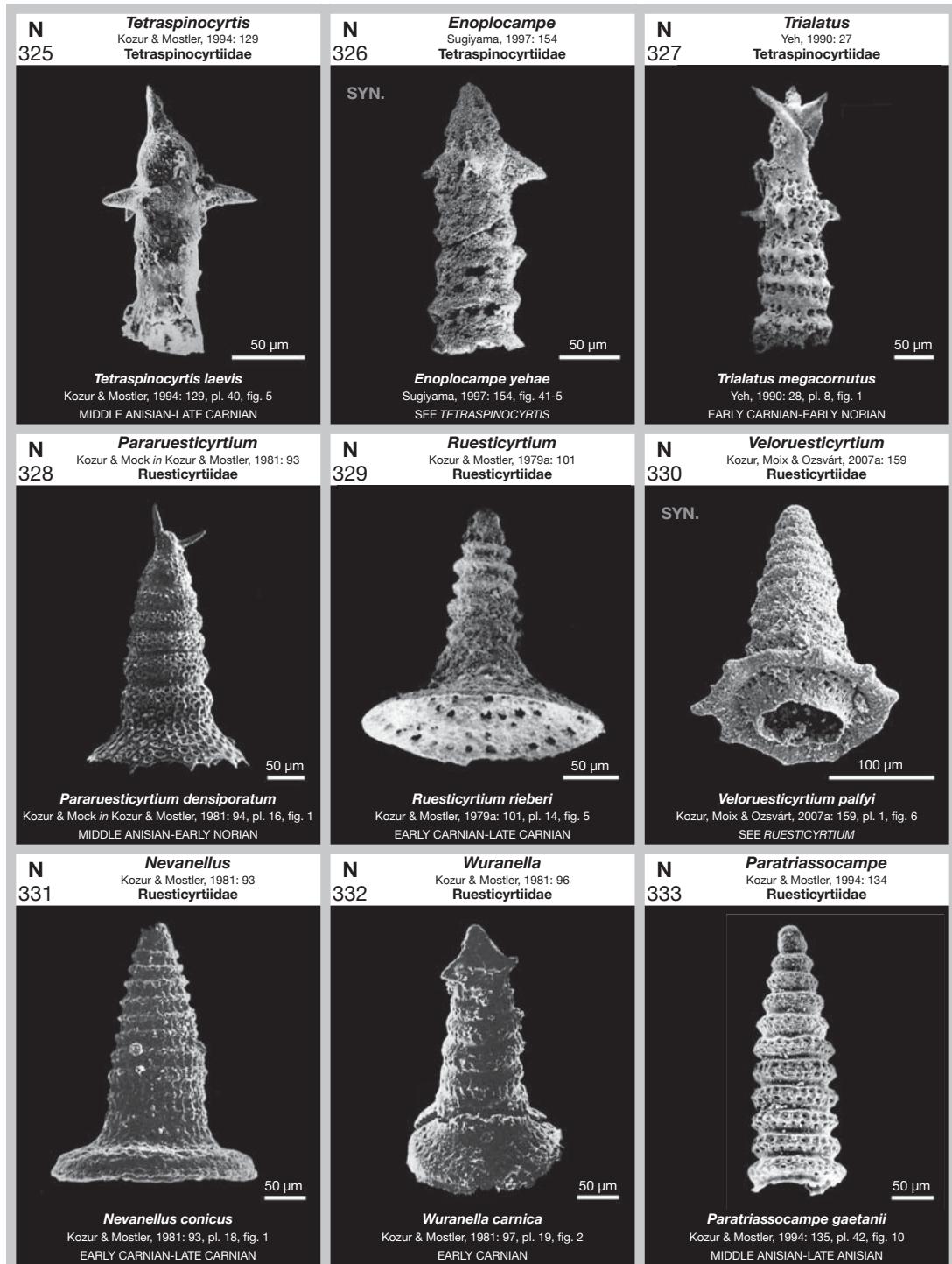


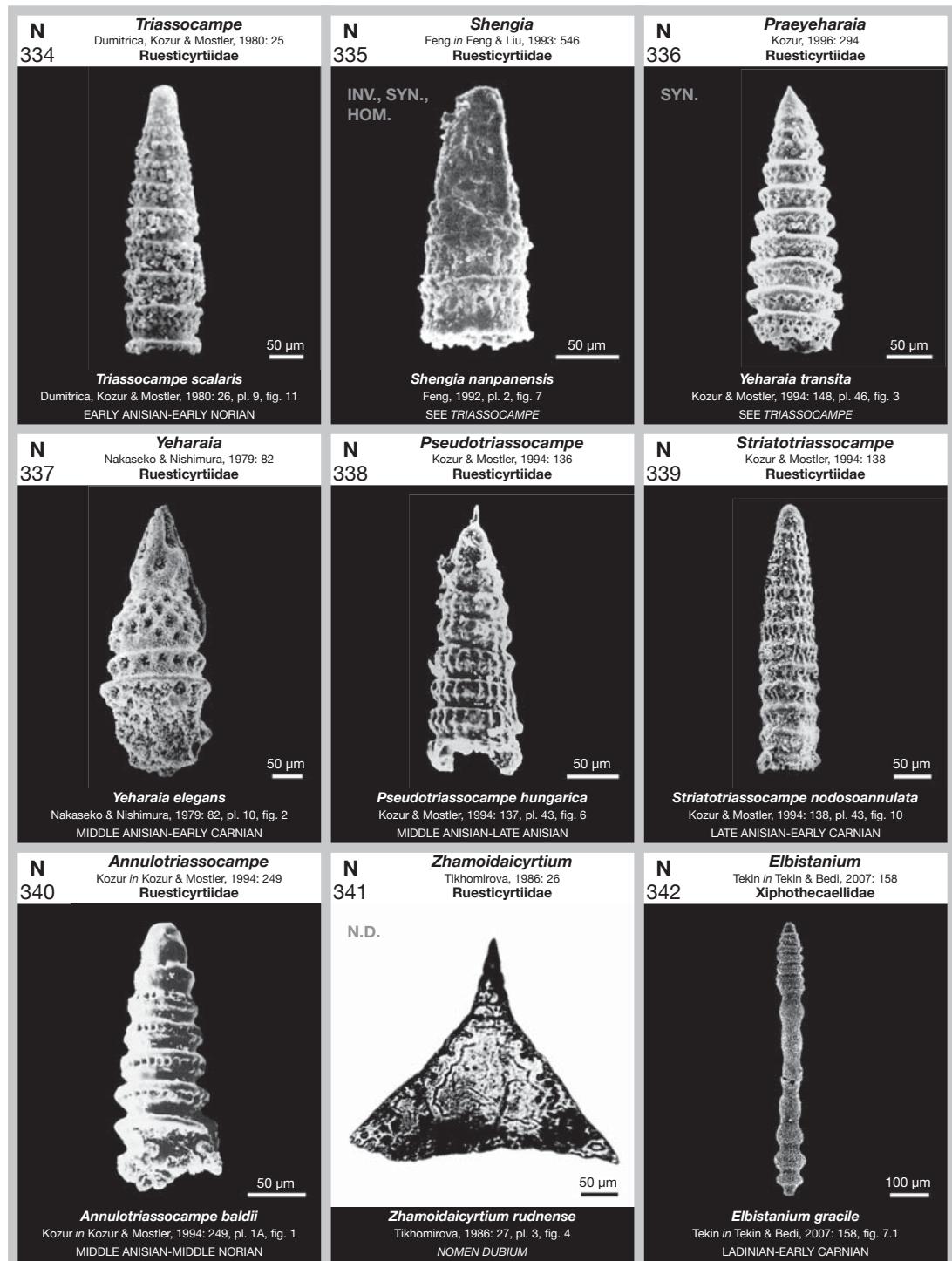


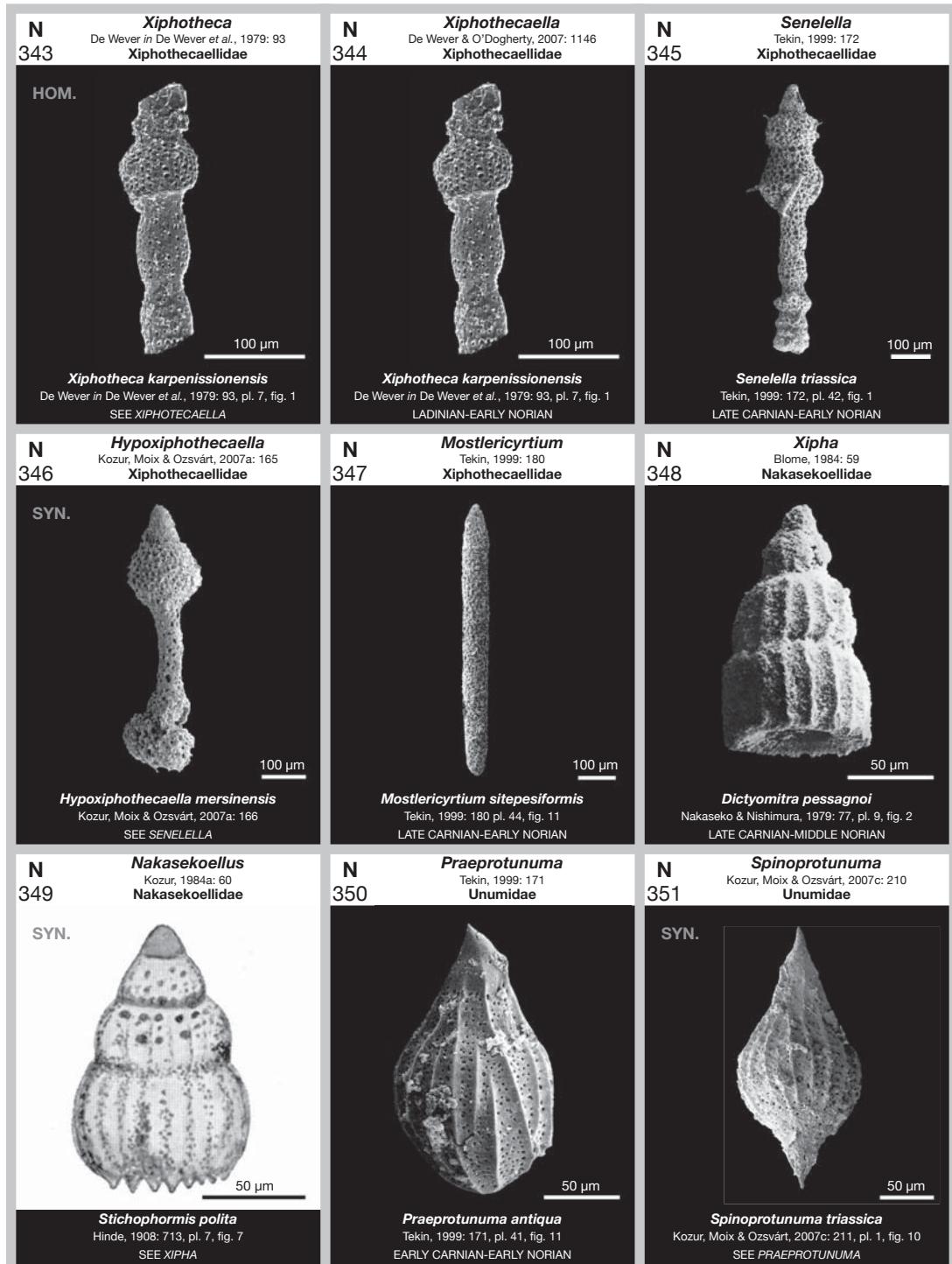


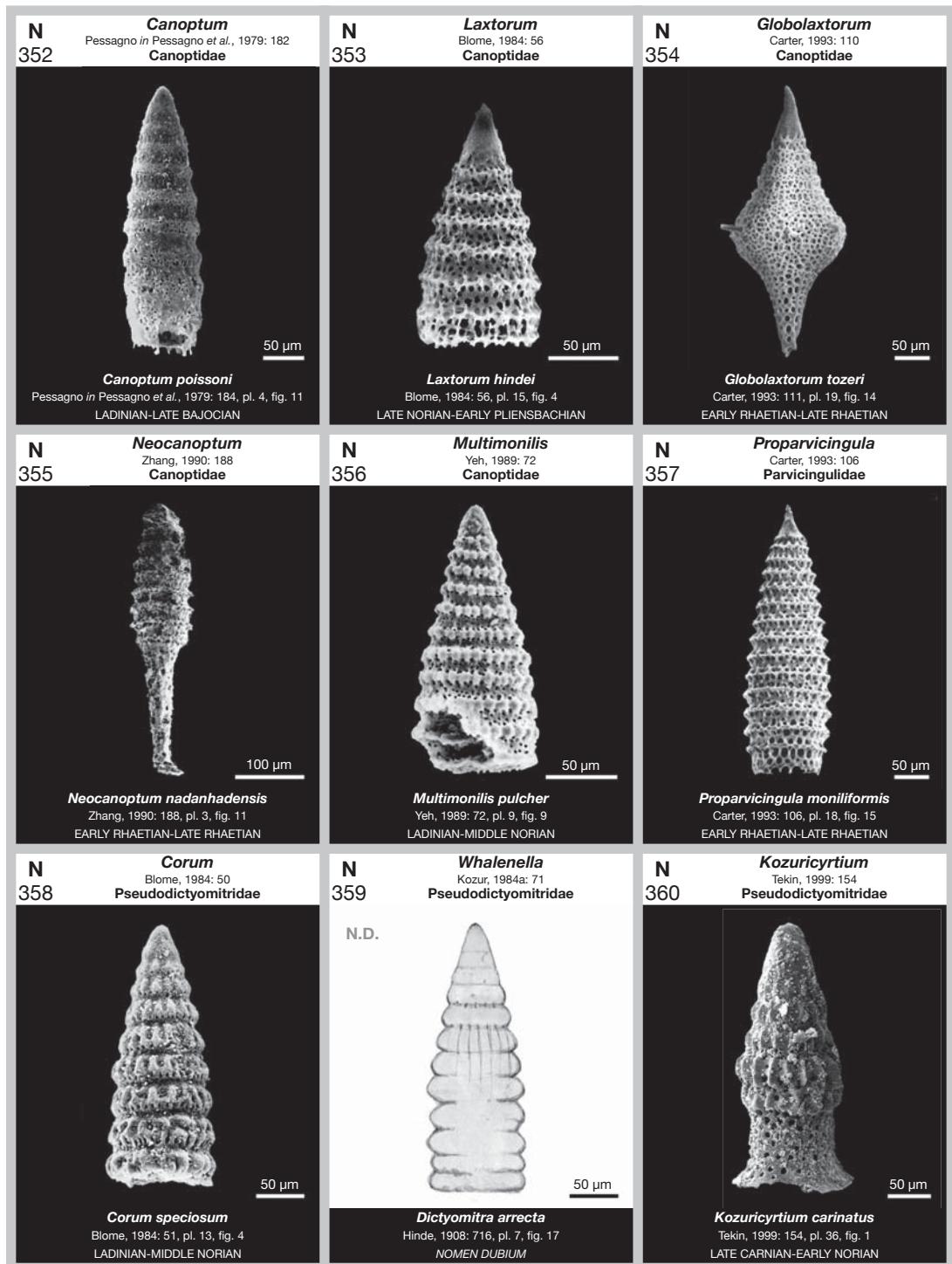


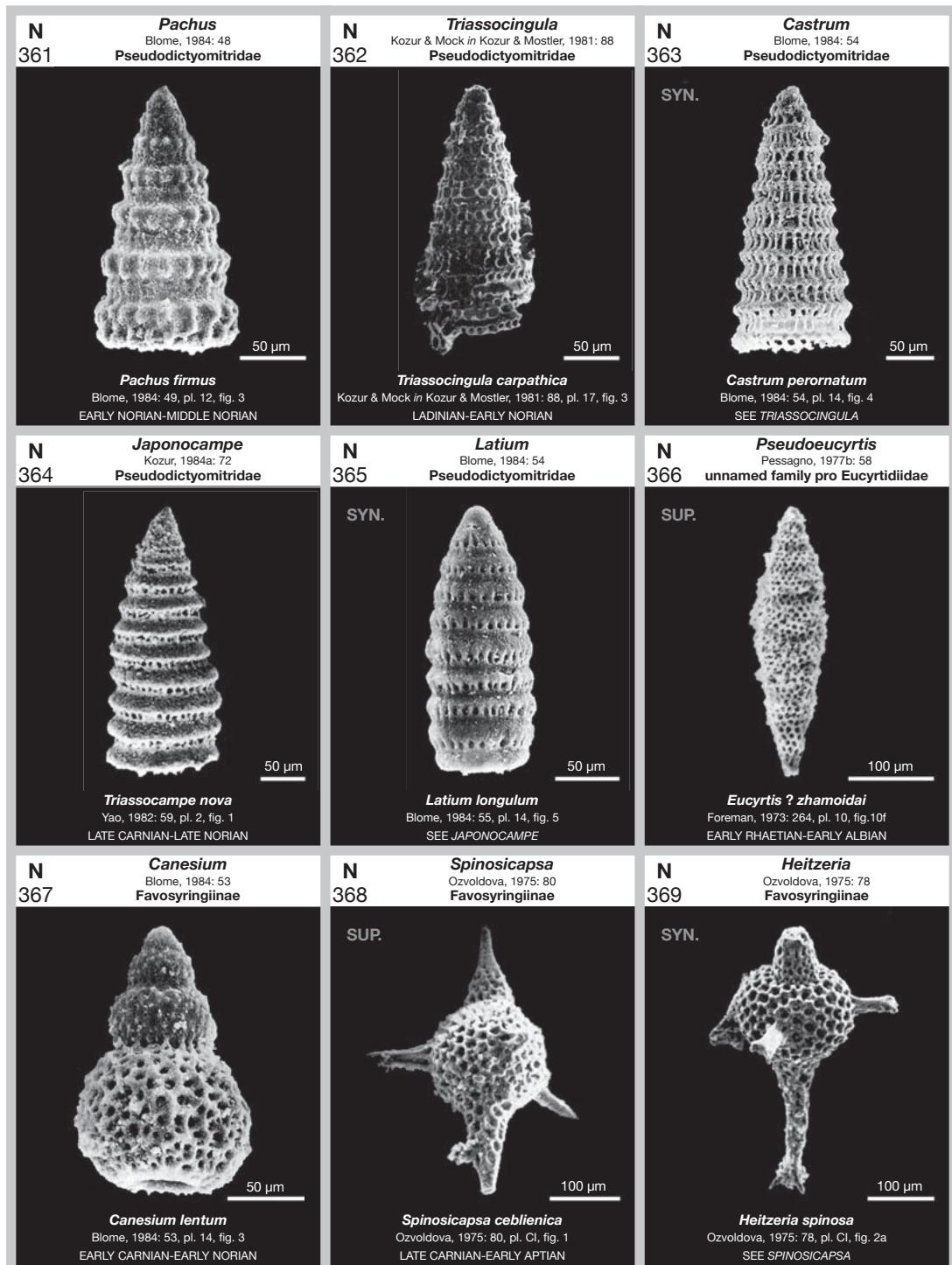


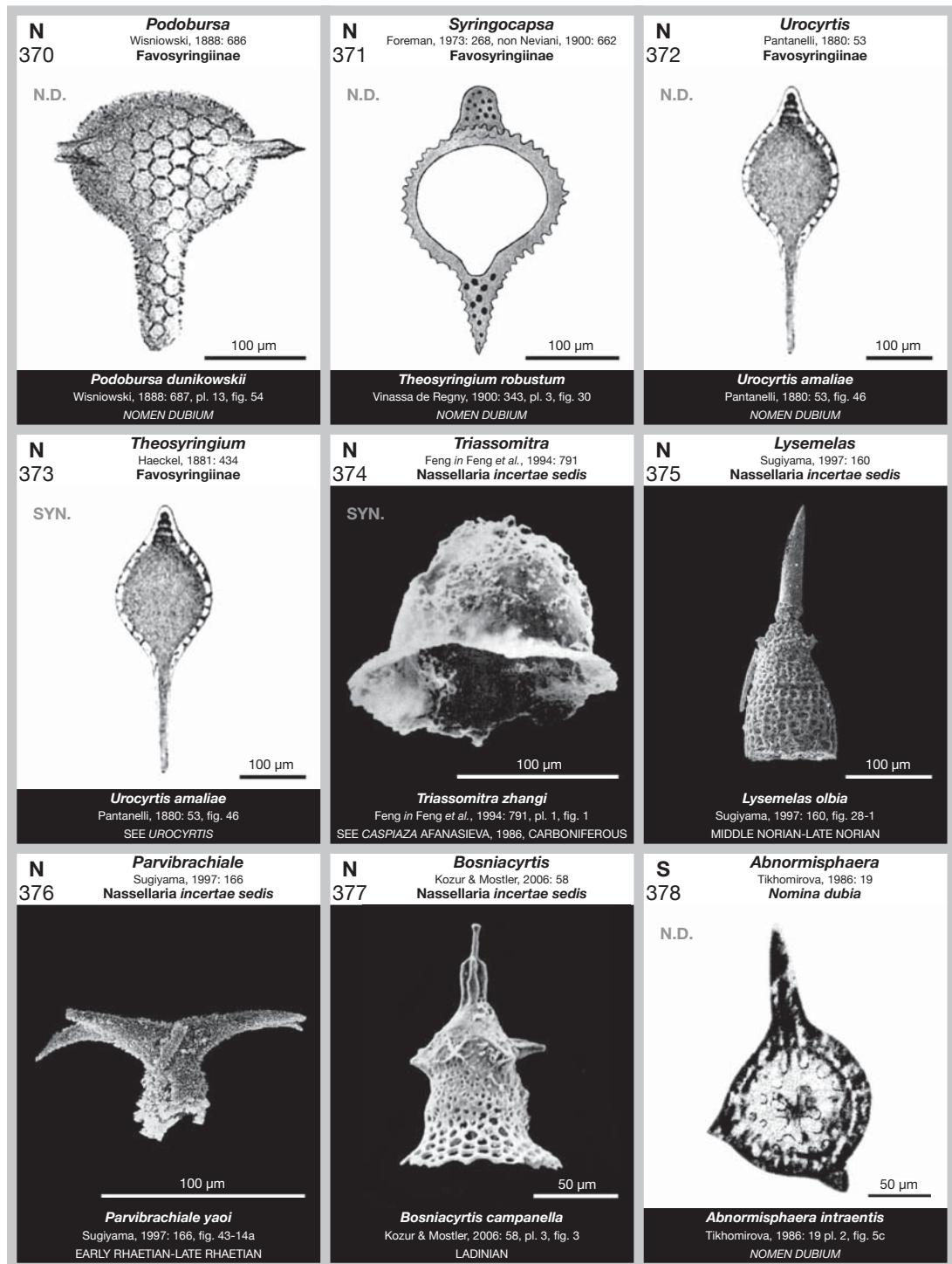


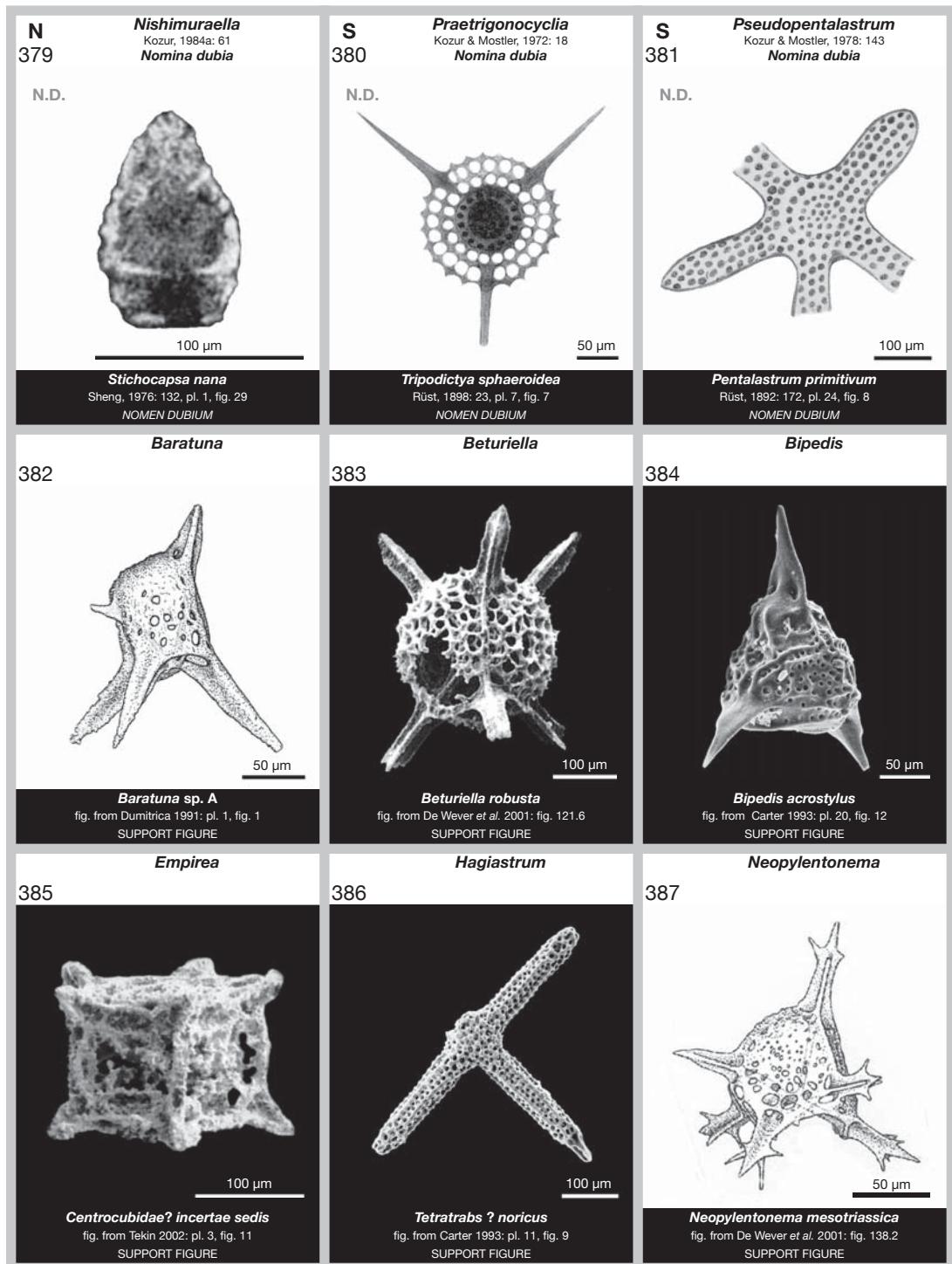


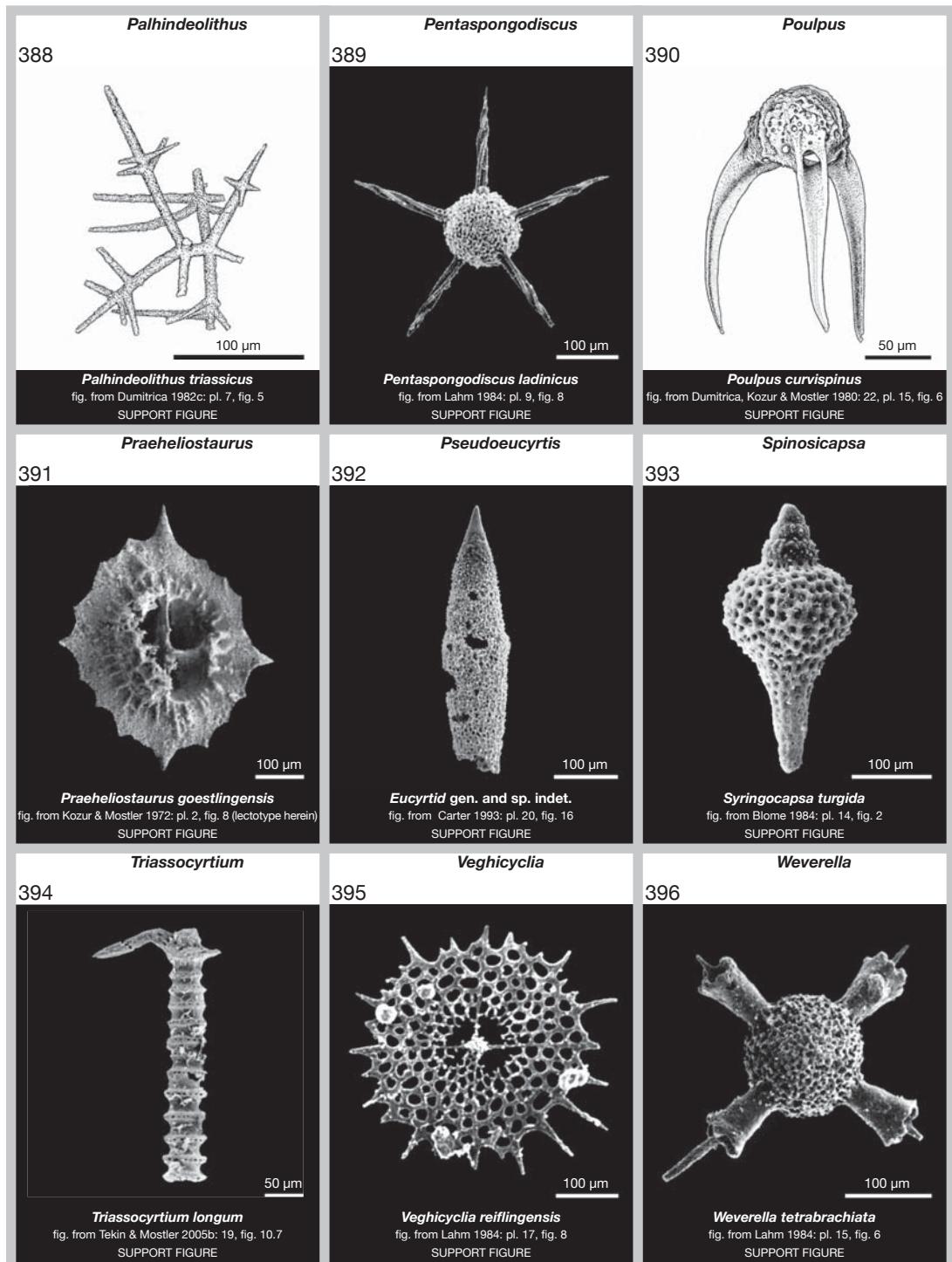












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