

















































Overview of extant species of planktonic foraminifera (Appendix 1 to Brummer and Kucera, 2022)







Hastigerinidae <i>Thick spines, thin shell</i>	Inflated chambers: Hastigerina Clavate chambers: Hastigerinella Spine bases at chamber tips: Orcadia	 <div>P P M</div>	 <div><i>Hastigerina pelagica</i> <i>Hastigerinella digitata</i> <i>Orcadia riedeli</i></div>
Globigerinidae <i>Spines</i> <i>Visible pores</i>	Extraumbilical aperture: Globigerinella Near planispiral coiling & Spherical chambers Near planispiral coiling & Digitate chambers Near planispiral coiling & Radially elongated chambers Trochospiral coiling & Radially elongated chambers Umbilical aperture & Supplementary apertures & Cortex: Sphaeroidinella Cancellate wall: Trilobatus Symmetrical umbilical aperture: Globigerinoides Three chambers & pink Three chambers & white Three chambers & radially compressed Four chambers & radially compressed Four chambers & small Spherical terminal chamber: Orbulina Umbilical aperture & No supplementary apertures & Digitate chambers: Beella Ampullate last chamber: Turborotalita Six or more chambers Five chambers & small, compact outline Five chambers & apertural flap Cancellate wall, pigment: Globoturborotalita Pitted wall: Globigerina Apertural lip No apertural lip	 <div>MP M M M</div>  <div>M MS</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>MS</div>	 <div><i>Globigerinella siphonifera</i> <i>Globigerinella adamsi</i> <i>Globigerinella radians</i> <i>Globigerinella calida</i> <i>Sphaeroidinella dehiscens</i> <i>Trilobatus sacculifer</i> <i>Globigerinoides ruber ruber</i> <i>Globigerinoides ruber albus</i> <i>Globigerinoides elongatus</i> <i>Globigerinoides conglobatus</i> <i>Globigerinoides tenellus</i> <i>Orbulina universa</i> <i>Beella digitata</i> <i>Turborotalita humilis</i> <i>Turborotalita clarkei</i> <i>Turborotalita quinqueloba</i> <i>Globoturborotalita rubescens</i> <i>Globigerina falconensis</i> <i>Globigerina bulloides</i></div>
Globorotalidae <i>No spines</i> <i>Visible pores</i>	Round periphery & Laterally compressed chambers: Globorotaloides Straight sutures on spiral side Curved sutures on spiral side Quadrato to inflated chambers & Umbilical-extraumbilical aperture: Neogloboquadrina Five or more chambers Dominantly dextral Dominantly sinistral Umbilical aperture: Globoquadrina Cortex & Streptospiral final chamber: Pulleniatina Acute periphery: Globorotalia Keel & flat spiral side Keel & flat spiral side & deep umbilicus Keel & spirally convex shell Keel & thin, laterally compressed shell Keel & tear-drop lateral shell outline Keel & lateral shell outline thickest on last chamber No continuous keel, lobate outline No keel & thin, delicate shell No keel & flat spiral side No keel & cortex Sutural apertures: Candeina	 <div>M M</div>  <div>D</div>  <div>D</div>  <div>S</div>  <div>M</div>  <div>D</div>  <div>DS</div>  <div>S</div>  <div>DS</div>  <div>S</div>  <div>S</div>  <div>S</div>  <div>DS</div>  <div>D</div>  <div>DS</div>  <div>S</div>  <div>M</div>	 <div><i>Globorotaloides hexagonus</i> <i>Globorotaloides oveyi</i> <i>Neogloboquadrina dutertrei</i> <i>Neogloboquadrina incompta</i> <i>Neogloboquadrina pachyderma</i> <i>Globoquadrina conglomeraata</i> <i>Pulleniatina obliquiloculata</i> <i>Globorotalia truncatulinoides</i> <i>Globorotalia cavernula</i> <i>Globorotalia hirsuta</i> <i>Globorotalia cultrata</i> <i>Globorotalia tumida</i> <i>Globorotalia unguolata</i> <i>Globorotalia eastropacia</i> <i>Globorotalia scitula</i> <i>Globorotalia crassaformis</i> <i>Globorotalia inflata</i> <i>Candeina nitida</i></div>
Candeinidae <i>Pores not visible</i> <i>in stereomicroscope</i>	Umbilical aperture, often bulla: Globigerinita Low trochospire High trochospire, lobate shell outline High trochospire, compact shell outline Umbilical-extraumbilical aperture: Tenuitellita Four chambers Five chambers, radially elongated chambers Five or more chambers, curved sutures	 <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>  <div>M</div>	 <div><i>Globigerinita glutinata</i> <i>Globigerinita uvula</i> <i>Globigerinita minuta</i> <i>Tenuitellita iota</i> <i>Tenuitellita parkerae</i> <i>Tenuitellita fleisheri</i></div>
Incertae sedis & serial chambers	Kidney-shaped chambers: Dentigloborotalia Inflated chambers, radial ridges on umbilical side: Berggrenia Biserial chambers: Bolivina Triserial chambers: Neogallitellia	 <div>M</div>  <div>S</div>  <div>O</div>  <div>O</div>	 <div><i>Dentigloborotalia anfracta</i> <i>Berggrenia pumilio</i> <i>Bolivina variabilis</i> <i>Neogallitellia vivans</i></div>

Typical size of adults

Abundance

Coiling direction

Biogeography

 > 250 µm  > 150 µm  < 150 µm  abundant  common  rare

P – planispiral S – sinistral D – dextral
M – mixed
MS – mixed with bias to sinistral

 warm  temperate
 cold  polar