Diatom Morphology Matching Cards

|  |  |
| --- | --- |
| **Centric**   * Valve is organized around a point (radial symmetry) * Lack significant motility (ability to move around) * Oogamous sexual reproduction (the female gamete is large & non-motile and the male gamete is small & motile.) | http://huey.colorado.edu/diatoms/images_morphology/01_centric1.jpg http://huey.colorado.edu/diatoms/images_morphology/01_centric2.jpg |
| **Araphid**   * Valve is organized around a line (bilateral symmetry) * Lack a raphe (movement) system, and therefore lack motility * Rimoportulae (labiate process or opening) may be present | http://huey.colorado.edu/diatoms/images_morphology/02_araphid1.jpg |
| **Eunotioid**   * Valve is organized around a line (bilateral symmetry) * Valves often asymmetrical to the apical axis * Raphe (movement) system is weak, with raphe located on valve mantle and face * Only raphid group with 2 or more rimoportulae (labiate processes or openings) | http://huey.colorado.edu/diatoms/images_morphology/04_eunotiod1.jpg |
| **Naviculoid**   * Valve is organized around a line (bilateral symmetry) * Valves symmetrical to both apical and transapical axis * Raphid (movement) system well developed, raphe on each valve makes cells highly motile * **This group has the greatest diversity among the freshwater diatoms** | http://huey.colorado.edu/diatoms/images_morphology/05_naviculoid1.jpg |
| **Cymbelloid**   * Valve is organized around a line (bilateral symmetry) * Valves symmetrical to transapical axis, asymmetrical to apical axis * Raphid (movement) system well developed * Valves with apical porefields that secrete mucilaginous (thick, gluey substance) stalks or tubes | http://huey.colorado.edu/diatoms/images_morphology/06_cymbelloid1a.jpg http://huey.colorado.edu/diatoms/images_morphology/06_cymbelloid2.jpg |
| **Epithemioid**   * Valve is organized around a line (bilateral symmetry) * Valves symmetrical to transapical axis, asymmetrical to apical axis * Raphid (movement) system well developed, and enclosed within a canal | http://huey.colorado.edu/diatoms/images_morphology/07_epithemioid1.jpg http://huey.colorado.edu/diatoms/images_morphology/07_epithemioid2.jpg |
| **Amphoroid**   * Valve is organized around a line (bilateral symmetry) * Valves symmetrical to transapical axis, asymmetrical to apical axis * Raphid (movement) system positioned eccentrically (irregularly), near the valve margin * Primarily a marine genus, with a few freshwater representatives | http://huey.colorado.edu/diatoms/images_morphology/08_amphora1.jpg |
| **Nitzschioid**   * Valve is organized around a line (bilateral symmetry) * Valves usually symmetrical to both apical and transapical axes * Raphid (movement) system well developed, and positioned near the valve margin * Raphe is enclosed within a canal and raised onto a keel | http://huey.colorado.edu/diatoms/images_morphology/09_nitzschioid2.jpg http://huey.colorado.edu/diatoms/images_morphology/09_nitzschioid1.jpg |
| **Surirelloid**   * Valve is organized around a line (bilateral symmetry) * Raphid (movement) system extremely well developed, and positioned around the entire valve margin * Raphe is enclosed within a canal and raised onto a keel | http://huey.colorado.edu/diatoms/images_morphology/10_surielloid1.jpg http://huey.colorado.edu/diatoms/images_morphology/10_surirelloid2.jpg |
| **Monoraphid**   * Valve is organized around a line (bilateral symmetry) * Raphe (movement) system present on one valve * Heterovalvar: one valve with a raphe (movement) system and one without | http://huey.colorado.edu/diatoms/images_morphology/03_monoraphid.jpg |