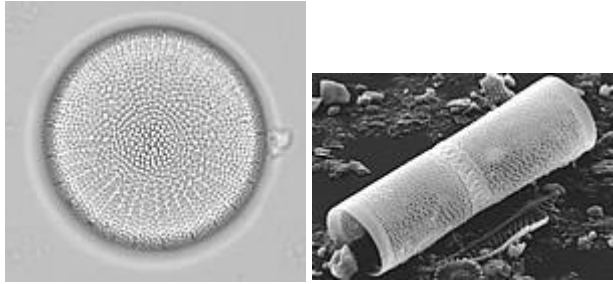


Diatom Morphology Matching Cards

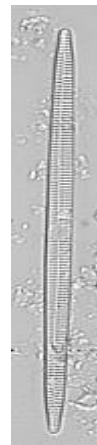
Centric

- 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.)



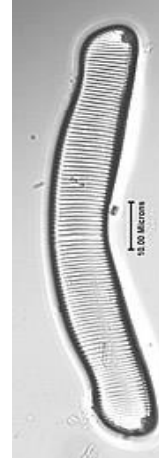
Araphid

- 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



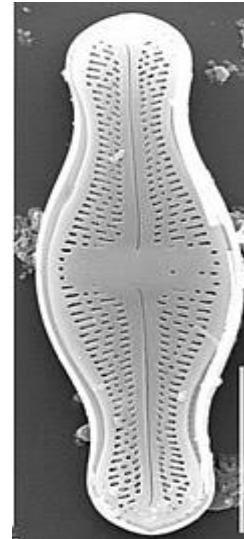
Eunotioid

- 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)



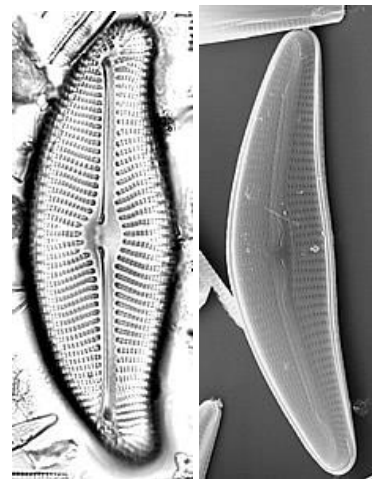
Naviculoid

- 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**



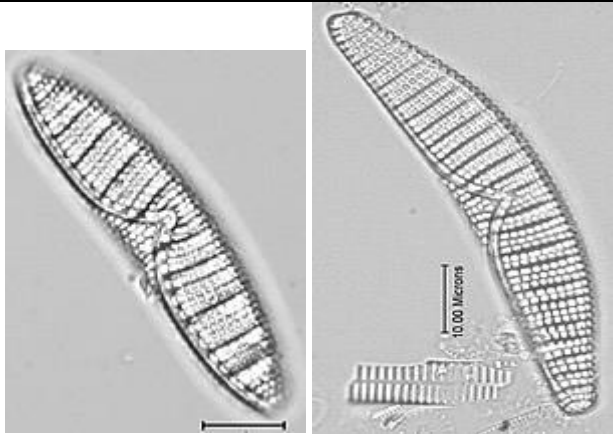
Cymbelloid

- 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



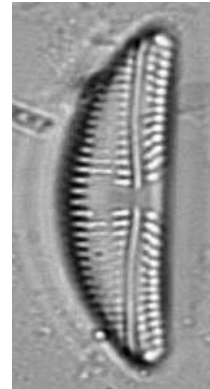
Epithemioid

- 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



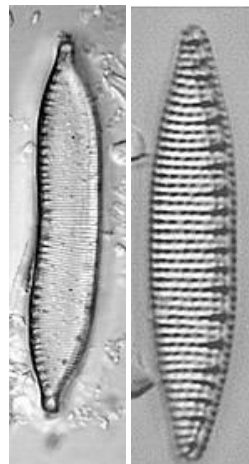
Amphoroid

- 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



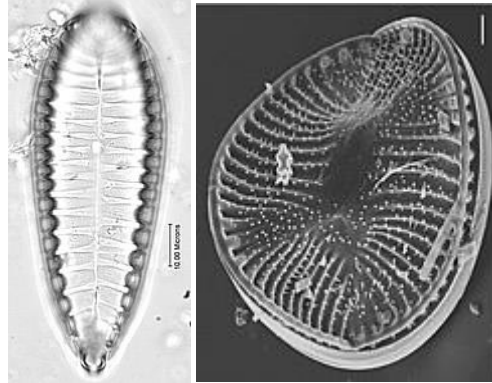
Nitzschoid

- 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



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



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

