| **Species** | **Habitat** | **pH** | **Additional information** | **References** |
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| *B. brebissonii* | freshwater | moderately acidic | Present in coastal lakes | Hamilton (2010) |
| *Encyo nema* | freshwater | 6.5 – 7.5 | Periphytic (attached to surfaces) and most common in stagnant or almost stagnant water but also in running creeks | Foged (1978); Gell (1999) |
| *Eunotia sp.* | freshwater | acidic | Principally epiphytic (i.e. growing on other plants), strongly dislike high concentrations of salts (Ca, Mg, Na, K) | Gell (1999) |
| *E. arcus* | freshwater | 4.5–6.5 (also 6.5- 7.5) | In rivers and creeks with running water, halophobous, acidophilous | Foged (1978) |
| *E. flexuosa* | freshwater | 4.5 – 6.5 | Most common in stagnant or almost stagnant water but also in ponds and pools, cosmopolitan, oligohalobous (indifferent), acidophilous | Foged (1978) |
| *E. musicola* | freshwater | Circumneutral to weakly acidic | In springs and swampy areas but not in peats or swamps/peats | Krammer and Lange-Bertalot (2000): |
| *E. pectinalis var undulata* | freshwater | 6.5 – 7.5 | Creeks and rivers with running water, cosmopolitan, acid most common in stagnant or almost stagnant water but also in ophilous, halophobous | Foged (1978): |
| *E. pirla* | freshwater | acidic |  | Carter (1988) |
| *E. subgibba* | freshwater | pH 7 (potentially circumneutral) | Oligohalobous | Foged (1978) |
| *F. rhomboides* | freshwater | 4.5 – 6.5 but also pH 6.5 – 7.5 (pH circumneutral) | Intolerant of saline habitats, cosmopolitan, high sulphate levels. Most common in stagnant or almost stagnant water but also in ponds and lakes, cosmopolitan, halophobous. Most typical in acid conditions with pH lower than 3, grows on the surface of sediments, clays, and silt (i.e., residing at the water/sediment interface). Widespread in acidic waters (can be abundant there), mostly found in epipelic and epilithic assemblages, water low in total phosphorous and conductivity, pH 1-2 | Foged (1978); Gell et al. (1999); Sonneman et al. (2000) |
| *Gomphonema* | freshwater to fresh brackish | 7 | Sensitive to pollution, nearly every habitat type within near neutral lakes and streams, establish late on new substrate – often as last genus of all diatoms in the specific habitat | Dam (1994) |
| *G. gracile* | freshwater | 6.5 – 7.5 but also pH 4.5 – 6.5 and 2-3 | Recorded to occur in more or less neutral water but has been found in acidic water in the NT, can be rel. abundant in weakly acidic water. Most common on rivers with running water but also in rivers and creeks with stagnant, near stagnant or slowly running water, oligohalobous (indifferent), alkaliphilous, cosmopolitan. Widespread but rarely abundant, mostly found attached to epiphytes but can be found in epilithic and epipelic assemblages, low total phosphorous and electrical conductivity | Foged (1978); Sonneman et al. (2000) |
| *Pinnularia sp.* | freshwater | slightly acidic | Grow on the surface of sediments, clays, and silt (i.e., residing at the water/sediment interface) | Dam (1994) |
| *P. gibba* | freshwater | pH 4.5 – 6.5, optimum above 6 | Tolerant to pH fluctuations and moderate oxygen deficiencies, can occur in very acid water (NT); most common on rivers with running water but also in rivers and creeks with stagnant or near stagnant water or in ponds; cosmopolitan and very adaptable to a range of habitats – stagnant to running water, variable conductivities | Foged (1978); Krammer and Lange-Bertalot (2000) |
| *P. major* | freshwater | pH indifferent to circumneutral | Widely distributed in water of fairly low mineral content, can be found in a wide range of habitats; very shallow water; oligohalobous (indifferent); optimum in waters with low electrical conductivity | Foged (1978); Krammer and Lange-Bertalot (2000); Prebble (2005) |
| *P. stomatophora* | freshwater | 4.5 – 6.5 but also pH 6.5 – 7.5 | Most common on rivers with running water but also in rivers and creeks with stagnant or near stagnant water or in ponds, halophobous; also observed on wet mosses | Foged (1978); Krammer and Lange-Bertalot (2000) |
| *P. viridiformis* | freshwater-brackish | pH circum neutral | Widespread but rarely abundant, in epipelic and epilithic assemblages, can be aerophilous, pH1-3, low total phosphorous | Sonneman et al. (2000) |
| *S. phoenicenteron* | freshwater | pH 4.5 – 6.5 but also pH 6.5 – 7.5, pH circumneutral | Oligohalobous (indifferent), most common on rivers with running water but also in rivers and creeks with stagnant or near stagnant water or in ponds; Stauroneis as genus often living on (or in) fine sediment, exclusively in freshwater | Foged (1978); Gell (1999) |
| *S. intermedia* | freshwater | pH 4.5 – 6.5 | Most common on rivers with running water but also in rivers and creeks with stagnant or near stagnant water, halophobous, acidophilous | Foged (1978) |