

RECENT DIATOMS REPORTED *from the* CENTRAL UNITED STATES: REGISTER *of TAXA and* SYNONYMS

Report Number 77, State Biological Survey of Kansas
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Original printed version: 1997

Latest electronic version: 5 December 2008

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[Internet homepage for this diatom list.](#)

INTRODUCTION to the LIST of DIATOM TAXA

This list of diatom taxa summarizes information for over 1100 taxa and synonyms reported in published accounts of collections made in the central United States, principally within the states of Kansas, Nebraska, and Oklahoma, but also including adjacent areas in eastern Colorado and western Missouri. This summary expands an earlier annotated list of Kansas diatoms (Eberle 1982). My objective was to provide people working on diatom projects in this region with a base reference to help them assess the results of their research.

The literature on diatoms is scattered among many journals and government publications. Although a thorough effort was made to locate all relevant publications for this summary, some references possibly were missed. No records from Master's theses were incorporated into this list, and most were never published. References on fossil diatoms also were excluded, although a few have been published (e.g., Andrews 1970; Barbour 1896; Barbour 1910; Cragin 1891; Elmore 1898*a*, 1898*b*, 1914, 1917; Hanna 1932; Selva 1976, 1981).

I did not examine specimens, so taxa presented here are those reported in the literature or their possible synonyms. The synonyms were derived from publications listed in the Literature Cited file and the internet resources of the California Academy of Sciences Diatom Collection (<http://research.calacademy.org/research/diatoms/names/about.html>), the Checklist of Great Lakes Diatoms at the University of Michigan (<http://www.umich.edu/~phytolab/GreatLakesDiatomHomePage/glspeciesok2.html>), and the Integrated Taxonomic Information System (<http://www.itis.gov/index.html>), all accessed during the winter of 2008-2009.

Diatom systematics is an active field, with frequent reevaluations of taxa made every year. The uncertainties generated by the reevaluation of systematic relationships among diatom taxa and by the misapplication of scientific names in widely used diatom references

through the centuries probably have led researchers to misidentify many of the taxa listed here. Thus, to provide users of this list with the most complete information possible, all scientific names used in the publications cited in this summary are listed in this summary with the corresponding citations.

This list is subdivided into the groups of centric diatoms (Coscinodiscophyceae, pages 7-12) and pennate diatoms, with the latter group split into those pennate diatoms without a raphe (Fragilariophyceae, pages 13-20) and those with at least some raphe present (Bacillariophyceae, pages 21-76). Within these classes, the genera and species are listed alphabetically. Forms and varieties are listed alphabetically after the nominate variety. A question mark in front of the citation for a reference indicates that the author of the publication was not sure of his or her identification. In several of the references, authorities for scientific names were incorrect or missing, and some Latin names were spelled incorrectly; these were corrected in this summary. Researchers using this list should ultimately consult the original publications.

This index can be used in two ways. You can select the currently accepted name of a taxon to check for publications, organized by states, that included that name. Also listed are taxa that represent possible synonyms. In addition, you can start with the name of a taxon from one of the published references and find that name in the list. This will provide you with a recommended scientific name. Without checking voucher specimens, it is assumed that the author was referring to this taxon, but periodic updates to this list will be necessary. Taxa that presumably should be transferred to another genus or species, but for which I could locate no reference for the transfer, are followed by “comb. nov.?” (*combinatio novum* = new combination). The validity of these taxa remains to be ascertained, and this formal process is beyond the scope of this summary.

HISTORY of DIATOM RESEARCH in the CENTRAL UNITED STATES

Kansas

The earliest known account of a diatom taxon from Kansas is a note in the Bulletin of the Washburn College Laboratory of Natural History (Cragin 1886):

“Mr. J.D. McLaren, of Sumnerville, reports the diatom, *Meridiones radiales*, from Lawrence. It was found in spring water during recent biological studies at the State University.”

This is all of the information contained in the note, and the taxon this name refers to is unknown. Three years later, the same journal included a list of 23 taxa from Reno County identified by Wolle (1889). The diatoms were collected from sand in a brook fed by a perennial spring at Arlington, adjacent to the North Fork of the Ninescah River. The Reverend Wolle later included the “inland, salt marshes of Kansas” in the distribution of *Biddulphia laevis* Ehrenberg [= *Pleurosira laevis* (Ehrenberg) Compère] in his volume on the “Diatomaceae of North America” (Wolle 1894), as did Boyer (1901) in his summary of this group, although he listed it as a fossil.

Curtis (1901) made the first substantial contribution to the knowledge of the diatomaceous flora of Kansas. In 1899, he presented information on collections he made with Frank Patrick (father of Dr. Ruth Patrick) at Gage's Pond and Silver Lake in Shawnee County. He presented two papers in 1900 on diatomaceous material provided by S.G. Mead. The first was an account of taxa collected at Medora, Reno County. He did not indicate a collection locality, but Medora is adjacent to the Little Arkansas River. His second paper discussed the stomach contents, principally diatoms, taken from a "young perch" collected at Belvidere, Kiowa County. Again, he did not indicate the body of water from which the collection was made, but Belvidere is located adjacent to the Medicine Lodge River. His three accounts included a total of over 280 taxa.

In "The Diatoms (Bacillarioideae) of Nebraska", Elmore (1921) included 15 taxa from unspecified habitat(s) at Emporia, Lyon County. Six years later, Boyer (1927a, 1927b) published his "Synopsis of North American Diatomaceae," which included three taxa specifically from Kansas. Also within this period, McNaught (1918, 1920) listed 13 genera of diatoms in a survey of algae from 43 city reservoirs in Kansas. All but three of these lakes (Russell, Jewell City, and Medicine Lodge) are in the eastern one-third of the state. His second publication (McNaught 1920) included a key and line drawings designed to educate and aid sanitary engineers.

During the period between 1930 and 1960, there were no known published reports of non-fossil diatoms from Kansas. Jantzen (1960) reported genera of diatoms in a study of a small marsh in Stafford County. In nearby Barton County, McFarland et al. (1964) identified 13 taxa of diatoms in their algal survey of Cheyenne Bottoms Wildlife Refuge. The following year, Wujek (1965) published a list of what, at the time, were thought to be previously unreported diatoms from eastern Kansas; however, a number of these taxa apparently had been recorded in earlier publications (see Eberle 1982). Eleven taxa of diatoms were included in a publication by Branson (1966) from a limnological survey of the Spring River drainage in Crawford and Cherokee counties. Patrick and Reimer (1966, 1975) cited Kansas and the "Plains States" within the geographic distributions of several taxa in their monograph on "The Diatoms of the United States." Some of these records were based upon specimens used by Curtis (1901) and Elmore (1921) in their reports.

In a break from diatom publications that were simply lists of taxa, Youngsteadt (1972) studied the distribution of *Asterionella*, *Fragilaria*, and two other genera of algae with respect to parent soil materials in 22 lakes and ponds in southeastern Kansas.

The federal government conducted phycological research in Kansas during the 1960s and 1970s. Plankton samples were collected from the Arkansas, Kansas, and Missouri rivers in Kansas through the Water Pollution Surveillance System (WPSS 1961-1963, 1966; Williams and Scott 1962; Williams 1962, 1964, 1972). These efforts resulted in the compilation of a variety of data on biological and environmental parameters that were used, in part, to explore the use of the four most abundant species of diatoms to assess water quality. Powers (1969) also compiled a list of phytoplankton from the Kansas River. A decade later, reservoirs were the subject of a phytoplankton study conducted by the U.S. Environmental Protection Agency (Williams et al. 1979), which provided lists of taxa and

indices of species diversity, species abundance, trophic state, and organic pollution levels for 15 impoundments.

Reinke and others reported fieldwork conducted throughout Kansas by the Kansas Biological Survey in publications from 1979 through 1985 (Reinke 1979*a*, 1979*b*, 1981, 1982*a*, 1982*b*, 1984, 1985; Czarnecki and Reinke 1981, 1982; Wujek et al. 1980). The Kansas Biological Survey (Lawrence, Kansas) collection included algal specimens from all 105 counties in the state. Czarnecki and Reinke (1981) also summarized some changes in nomenclature for previously reported taxa. However, because that reference did not contain any additional collection localities, it was not cited with those taxa in this summary. Research on the diatoms of central Kansas was conducted at Fort Hays State University in Hays, Kansas (Wenke and Eberle 1985, 1986; Harris and Eberle 2001).

Oklahoma

Research on the diatoms of Oklahoma begins with “Mikrogeologie” by Christian Gottfried Ehrenberg (1856), in which he identifies taxa of diatoms and other microspecimens collected for him by surgeons at military outposts in what was then referred to as the Indian Territory. The samples were taken from the (False) Washita River near Fort Washita and Fort Arbuckle in south-central Oklahoma (north of Ardmore) and from the Neosho River near Fort Gibson (just upstream from its confluence with the Arkansas River). Despite this auspicious beginning, the next publication on recent diatoms of the state was not published for nearly 90 years.

During the 1940s, three papers were published on the diatoms of Oklahoma. The first, by Sister Maloney (1944), included taxa collected from ponds, a stock tank, a stream, and three aquaria. Unfortunately, collection sites were not referenced in the list of species, which includes an interesting assemblage of taxa. The taxa she reported were not included in this summary, because the aquaria probably included taxa not likely to occur in the waters of this region. In a publication that emphasized algae other than diatoms, Leake (1945) listed 11 species of diatoms among the 208 taxa she identified from Crystal Lake near Norman. During 1945 and 1946, Wallen (1949) studied the relative abundance of algae (genera only) in a pond drained, dredged, and covered by “18 five-ton truckloads of sludge from the local sewage disposal plant” in 1943.

Soil algae and sampling methods were the topics considered in a project conducted by Willson and Forest (1957) in McClain and Cleveland counties. They recorded three taxa of diatoms from prairie and cropland sites. Schlichting and Gearheart (1966) reported 17 genera of diatoms in a study of the effects of sewage effluent upon periphyton in an Oklahoma impoundment.

As in Kansas, diatoms were collected during the 1960s through the Water Pollution Surveillance System from the Arkansas, Verdigris, and Red rivers in Oklahoma (WPSS 1961-1963, 1966; Williams and Scott 1962; Williams 1962, 1964, 1972). Hern et al. (1979) also compiled information on the plankton and trophic status of 15 reservoirs for the U.S. Environmental Protection Agency.

Several studies on diatoms in Oklahoma were conducted in the 1970s and 1980s. Wilhm and others at Oklahoma State University (Cooper and Wilhm 1975; Seyfer and

Wilhm 1977; Wilhm et al. 1978; Wilhm et al. 1977) published research on stream periphyton in the Arkansas River drainage. These publications provided extensive lists of phytoplankton, as well as information on species diversity, biomass, and chlorophyll *a*.

Kennedy and Pfiester (1984) and Pfiester et al. (1979) added to our knowledge of the diatoms in the North Canadian and Neosho (Grand) river drainages, respectively. Pfiester and Terry (1978) reported 24 diatom taxa from ponds in Cleveland County. Koch and Risser (1974) examined the algae (including 113 diatom taxa) growing on leaf detritus in a spring-fed limestone stream in Pontotoc County. Koch (1975) reported 68 taxa of diatoms, including several “salt-water” taxa, from southwestern Oklahoma. Troeger (1978, 1983) and Troeger and Menzel (1986) provided information on the diatoms of ponds, including lists of over 100 diatom taxa derived from thousands of counted frustules (Troeger 1978, 1983).

Nebraska

As in Oklahoma, the first published record of diatoms in Nebraska was compiled by Ehrenberg (1856) from samples taken from the Platte River near Fort Kearney on the Oregon Trail. Later, Schofield (1892) and Webber (1889, 1890) noted a few diatom taxa, but much of the work on the diatoms of this state was a result of the efforts made by Clarence Elmore. Elmore and others primarily examined fossil deposits (Barbour 1896; Barbour 1910; Elmore 1898*a*, 1898*b*, 1917), but in 1921, Elmore published “The Diatoms (Bacillarioideae) of Nebraska,” which is still one of the few compilations of the diatoms from a large geographic area within the United States. It contains keys, line drawings, descriptions, and regional distributions for the taxa. Elmore also was credited with the identifications of diatoms in an algal survey of sandhill lakes in Cherry County published by Andersen and Walker (1920). Patrick and Reimer (1966, 1975) examined some of Elmore’s material for their monograph, in which they cited “Nebraska” and the “Plains States” with their distributions.

The diatoms of Nebraska also were included in the two early works on the diatoms of the United States. Wolle (1894), as he did with Kansas, included Nebraska within the range of *Pleurosira laevis*, and Boyer (1927*a*, 1927*b*) included that species in his “Synopsis of North American Diatomaceae.”

After the “Elmore era,” publications on the living diatoms of Nebraska were generally lacking during the period 1930-1960, as was the case in Kansas and Oklahoma. In 1953, Neel discussed chemical and biological aspects of the North Platte River in Wyoming and Nebraska, but his references to diatoms were not clearly associated with specific localities. In the early 1960s, samples were obtained through the Water Pollution Surveillance System from stream sites on the Missouri, North Platte, and Platte rivers (WPSS 1961-1963, 1966; Williams and Scott 1962; Williams 1962, 1964, 1972). DeNoyelles (1967) compared the phytoplankton in a double-cell sewage lagoon, in which one pond was organically enriched. He recorded only one diatom taxon, the genus *Navicula*, among the algae in the ponds.

Much of the recent research conducted on diatoms in Nebraska dealt with diatoms in lakes rather than streams. McCarraher et al. (1975) summarized selected aspects of the

limnology of a chain of shallow lakes created during the construction of Interstate Highway 80 across Nebraska. They reported 18 genera of diatoms. The distribution of phytoplankton and trophic status of nine lakes in Nebraska were summarized for the U.S. Environmental Protection Agency by F.A. Morris et al. (1979).

The most recent publications on the diatoms of Nebraska have considered community structure and the role of diatom mucilage in benthic ecosystems (Hoagland et al. 1982; Roemer et al. 1984; Rosowski et al. 1986). From 11 to 69 taxa of diatoms were reported from each collection site in these studies conducted at Pawnee, Yankee Hill, and McConaughy reservoirs and the headwaters of the Middle Fork of Maple Creek, Stanton County, Nebraska.

Eastern Colorado

Biologists who have conducted phycological research in Colorado concentrated on the mountainous region in the central part of the state rather than the arid eastern plains. The first report from the plains of Colorado was by Cockerell (1888). He credited Wolle with the identification of three diatom species from near Mace's Hole in Pueblo County. Other than this early report, only the U.S. government has published any records of diatom taxa from the eastern portion of the state. The Water Pollution Surveillance System had a collection site on the South Platte River at Julesburg, Colorado (WPSS 1961-1963; Williams 1964, 1972), and M.K. Morris et al. (1979*b*) published results from the U.S. Environmental Protection Agency survey of the distribution of phytoplankton and trophic status of 13 reservoirs. Three of these reservoirs were on the eastern plains: Cucharas Reservoir, Huerfano County; Holbrook Lake, Otero County; and Lake Meredith, Crowley County.

Western Missouri

As in eastern Colorado, few studies conducted in western Missouri have included diatoms. Ehrenberg (1856) identified diatoms from Missouri, but these were collected near St. Louis. The first accounts of diatoms from the western part of the state were published through the Water Pollution Surveillance System, which had collection stations at St. Joseph and Missouri City on the Missouri River (WPSS 1961-1963, 1966; Williams and Scott 1962; Williams 1962, 1964, 1972). Morris et al. (1979*a*) included Pomme de Terre Reservoir in Polk and Hickory counties; Stockton Reservoir in Dade, Polk, and Cedar counties; and Thomas Hill Reservoir in Macon and Randolph counties in their survey of phytoplankton distribution and trophic status of six lakes for the U.S. Environmental Protection Agency. Pamperl (1980) conducted a taxonomic survey of the diatoms of the Lake of the Ozarks. She identified 157 taxa from both the planktonic and benthic communities.

CENTRIC DIATOMS - Coscinodiscophyceae

Names in ***bold italic print*** are current names for taxa reported from the central United States. Names in *standard italic print* are synonyms for the currently accepted names listed after them. References that reported a taxon or its synonyms are listed under the currently accepted name. The names of the states are abbreviated with their postal codes: CO = eastern Colorado, KS = Kansas, MO = western Missouri, NE = Nebraska, OK = Oklahoma.

► ***Acanthoceras zachariasii* (Brun) Simons.**

Reported as:

Attheya zachariasii Brun

OK: Hern et al. (1979)

► ***Actinocyclus normanii* f. *subsalsus* (Juhl.-Dannf.) Hust.**

Reported as:

Coscinodiscus rothii var. *subsalsus* (Juhl.-Dannf.) Hust.

OK: Koch (1975)

► *Attheya zachariasii* Brun = *Acanthoceras zachariasii* (Brun) Simons.

► ***Aulacoseira ambigua* (Grun.) Simons.**

NE: Roemer et al. (1984)

Also reported as:

Melosira ambigua (Grun.) O. Müll.

KS: WPSS (1961-1963)

MO: WPSS (1961-1963)

NE: Hoagland et al. (1982), Williams (1962), WPSS (1961-1963, 1966)

OK: Hern et al. (1979), Pfister et al. (1979), Wilhm et al. (1977), Williams (1962), WPSS (1961-1963, 1966)

***Aulacoseira distans* (Ehr.) Simons.**

Reported as:

Gallionella distans Ehr.

NE: Ehrenberg (1856)

Gallionella laevis Ehr.

OK: Ehrenberg (1856)

Lysigonium distans (Ehr.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

Melosira distans (Ehr.) Kütz.

KS: Powers (1969), Williams et al. (1979)

MO: M.K. Morris et al. (1979a)

NE: F.A. Morris et al. (1979)

OK: Hern et al. (1979), Pfister et al. (1979), Wilhm et al. (1977), Wilhm et al. (1978)

***Aulacoseira distans* var. *alpigena* (Grun.) Simons.**

Reported as:

Melosira distans var. *alpigena* Grun.

KS: Powers (1969)

OK: Williams (1962), WPSS (1961-1963)

***Aulacoseira distans* f. *lacustris* (Grun.) Simons.**

Reported as:

Melosira distans var. *lirata* f. *lacustris* (Grun.) Bethage

MO: Pamperl (1980)

***Aulacoseira granulata* (Ehr.) Simons.**

Reported as:

Lysigonium granulatum (Ehr.) Kuntze

NE: Elmore (1921)

Melosira granulata (Ehr.) Ralfs

CO: WPSS (1961-1963)

KS: Branson (1966), Powers (1969), Reinke (1979a), Williams (1964, 1972), Williams et al. (1979), WPSS (1961-1963)

MO: M.K. Morris et al. (1979a), Pamperl (1980), Williams (1972), WPSS (1961-1963)

NE: Hoagland et al. (1982), F.A. Morris et al. (1979), Williams (1962, 1964, 1972), WPSS (1961-1963, 1966)

OK: Hern et al. (1979), Pfister and Terry (1978), Pfister et al. (1979), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962, 1964), WPSS (1961-1963, 1966)

***Aulacoseira granulata* var. *angustissima* (O. Müll.) Simons.**

Reported as:

Melosira granulata var. *angustissima* O. Müll.

KS: Powers (1969), Williams et al. (1979), Wujek et al. (1980)

MO: M.K. Morris et al. (1979a), Pamperl (1980)

NE: F.A. Morris et al. (1979)

OK: Hern et al. (1979), Troeger (1983)

***Aulacoseira granulata* f. *curvata* (Hust.) Simons.**

Reported as:

Melosira granulata var. *angustissima* f. *curvata* Grun.

MO: Pamperl (1980)

***Aulacoseira granulata* f. *spiralis* (Hust.) Czarn. & Reinke**

KS: Czarnecki and Reinke (1982)

Also reported as:

Melosira granulata var. *angustissima* f. *spiralis* Hust.

KS: Williams et al. (1979)

OK: Hern et al. (1979)

***Aulacoseira italica* (Ehr.) Simons.**

Reported as:

Melosira italica (Ehr.) Kütz.

KS: Williams (1962), Williams et al. (1979), WPSS (1966)

NE: F.A. Morris et al. (1979), WPSS (1961-1963)

OK: Hern et al. (1979), Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978)

***Aulacoseira italica* f. *crenulata* (Ehr.) Ross in Hartley**

Reported as:

Gallionella crenata Ehr.

OK: Ehrenberg (1856)

Lysigonium crenulatum (Ehr.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

Melosira crenulata (Ehr.) Kütz.

KS: Curtis (1901)

***Aulacoseira italica* var. *tenuissima* (Grun.) Simons.**

Reported as:

Melosira italica var. *tenuissima* (Grun.) O. Müll.

KS: Williams et al. (1979)

► *Biddulphia laevis* Ehr. = *Pleurosira laevis* (Ehr.) Compère

► ***Chaetoceros muelleri* Lemm.**

KS: Harris and Eberle (2001), Reinke (1984, 1985)

► *Coscinodiscus lacustris* Grun. = *Thalassiosira bramaputray* (Ehr.) Håk. & Locker

NE: Elmore (1921)

OK: Wilhm et al. (1977)

***Coscinodiscus rothii* (Ehr.) Grun.**

KS: Wujek et al. (1980)

OK: Williams (1962), WPSS (1961-1963, 1966)

Coscinodiscus rothii var. *subsalsa* (Juhl.-Dannf.) Hust. = *Actinocyclus normanii* f. *subsalsa* (Juhl.-Dannf.) Hust.

► ***Cyclostephanos dubius* (Fricke) Round**

Reported as:

Stephanodiscus dubius (Fricke) Hust.

CO: M.K. Morris et al. (1979b)

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), Roemer et al. (1984), WPSS (1961-1963)

***Cyclostephanos invisitatus* (Hohn & Hellerm.) Ther., Stoerm., & Håk.**

Reported as:

Stephanodiscus invisitatus (Fricke) Hust.

KS: Powers (1969), Williams et al. (1979)

NE: Roemer et al. (1984)

► ***Cyclotella antiqua* W. Sm.**

NE: Elmore (1921)

OK: Leake (1945)

***Cyclotella atomus* Hust.**

CO: WPSS (1961-1963)

KS: Powers (1969), WPSS (1961-1963)

MO: WPSS (1961-1963)

NE: Roemer et al. (1984)

OK: Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), WPSS (1961-1963, 1966)

***Cyclotella catenata* (Brun) Bachm.**

OK: Troeger and Menzel (1986)

***Cyclotella comta* (Ehr.) Kütz.**

KS: Curtis (1901), Wujek et al. (1980)

NE: Elmore (1921)

OK: Pfister et al. (1979)

***Cyclotella distinguenda* Hust.**

Reported as:

Cyclotella operculata (Ag.) Kütz.

OK: Pfister et al. (1979)

Cyclotella glomerata Bachm. = *Discotella glomerata* (Bachm.) Houk & Klee

***Cyclotella krammeri* Håk.** [see Håkansson (1990), Teubner (1995)]

Reported as:

Cyclotella kuetzingiana Thw.

KS: Powers (1969)

OK: WPSS (1961-1963)

Cyclotella kuetzingiana var. *planetophora* Fricke

OK: Troeger (1978)

Cyclotella kuetzingiana var. *radiosa* Fricke

MO: Pamperl (1980)

Cyclotella kuetzingiana Thw. = *Cyclotella krammeri* Håk.

Cyclotella kuetzingiana var. *planetophora* Fricke = *Cyclotella krammeri* Håk. [see Håkansson (1990), Teubner (1995)]

Cyclotella kuetzingiana var. *radiosa* Fricke = *Cyclotella krammeri* Håk. [see Håkansson (1990), Teubner (1995)]

Cyclotella meneghiniana Kütz. = *Stephanocyclus meneghiniana* (Kütz.) Skab.

Cyclotella meneghiniana var. *laevissima* (van Goor) Hust. = *Stephanocyclus laevissima* (van Goor) comb. nov.?

***Cyclotella michiganiana* Skv.**

KS: ?Williams et al. (1979)

Cyclotella nana Hust. = *Thalassiosira pseudonana* (Hust.) Hasle & Heimdal

Cyclotella operculata sensu (Ag.) Kütz. = *Cyclotella distinguenda* Hust. [see Håkansson (1989)]

Cyclotella pseudostelligera Hust. = *Discostella pseudostelligera* (Hust.) Houk & Klee

Cyclotella rotula Kütz. = *Stephanodiscus rotula* (Kütz.) Hendey

Cyclotella stelligera Cl. & Grun. = *Discostella stelligera* (Cl. & Grun.) Houk & Klee

Cyclotella stelligeroides Hust. = *Discostella stelligeroides* (Hust.) Houk & Klee

***Cyclotella striata* (Kütz.) Grun.**

KS: McFarland et al. (1964)

OK: Koch (1975), Pfister et al. (1979)

***Cyclotella striata* var. *bipunctata* Fricke**

MO: Pamperl (1980)

► ***Discostella glomerata* (Bachm.) Houk & Klee**

Reported as:

Cyclotella glomerata Bachm.

KS: Powers (1969)

***Discostella pseudostelligera* (Hust.) Houk & Klee**

Reported as:

Cyclotella pseudostelligera Hust.

KS: Powers (1969), WPSS (1961-1963)

MO: Pamperl (1980), WPSS (1961-1963)

NE: WPSS (1961-1963)

OK: WPSS (1961-1963)

***Discostella stelligera* (Cl. & Grun.) Houk & Klee**

Reported as:

Cyclotella stelligera Cl. & Grun.

KS: Williams et al. (1979), Wujek et al. (1980)

MO: M.K. Morris et al. (1979a), Pamperl (1980)

NE: F.A. Morris et al. (1979)

OK: Hern et al. (1979), Pfister and Terry (1978), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), WPSS (1961-1963)

***Discostella stelligeroides* (Hust.) Houk & Klee**

Reported as:

Cyclotella stelligeroides Hust.

KS: Powers (1969)

- *Gallionella crenata* Ehr. = *Aulacoseira italica* f. *crenulata* (Ehr.) Ross in Hartley

Gallionella distans Ehr. = *Aulacoseira distans* (Ehr.) Simons.

Gallionella laevis Ehr. = *Aulacoseira distans* (Ehr.) Simons.

- *Lysigonium crenulatum* (Ehr.) Kuntze = *Aulacoseira italica* f. *crenulata* (Ehr.) Ross in Hartley

Lysigonium distans (Ehr.) Kuntze = *Aulacoseira distans* (Ehr.) Simons.

Lysigonium granulatum (Ehr.) Kuntze = *Aulacoseira granulata* (Ehr.) Simons

Lysigonium varians (Ag.) DeT. = *Melosira varians* Ag.

- *Melosira ambigua* (Grun.) O. Müll. = *Aulacoseira ambigua* (Grun.) Simons.

Melosira binderana Kütz. = *Stephandiscus binderanus* (Kütz.) Krieger?

OK: WPSS (1961-1963) [probably misidentified; this species was introduced into Great Lakes region]

Melosira crenulata (Ehr.) Kütz. = *Aulacoseira italica* f. *crenulata* (Ehr.) Ross in Hartley

Melosira distans (Ehr.) Kütz. = *Aulacoseira distans* (Ehr.) Simons.

Melosira distans var. *alpigena* Grun. = *Aulacoseira distans* var. *alpigena* (Grun.) Simons.

Melosira distans var. *lirata* f. *lacustris* (Grun.) Bethage = *Aulacoseira distans* f. *lacustris* (Grun.) Simons.

Melosira granulata (Ehr.) Ralfs = *Aulacoseira granulata* (Ehr.) Simons.

Melosira granulata var. *angustissima* O. Müll. = *Aulacoseira granulata* var. *angustissima* (O. Müll.) Simons.

Melosira granulata var. *angustissima* f. *curvata* Grun. = *Aulacoseira granulata* f. *curvata* (Hust.) Simons.

Melosira granulata var. *angustissima* f. *spiralis* Hust. = *Aulacoseira granulata* f. *spiralis* (Hust.) Czarn. & Reinke

Melosira italica (Ehr.) Kütz. = *Aulacoseira italica* (Ehr.) Simons.

Melosira italica var. *tenuissima* (Grun.) O. Müll. = *Aulacoseira italica* var. *tenuissima* (Grun.) Simons.

***Melosira undulata* (Ehr.) Kütz.**

OK: Wilhm et al. (1977)

***Melosira varians* Ag.**

CO: Cockerell (1888)

KS: Curtis (1901), McFarland et al. (1964), Williams et al. (1979), Wujek et al. (1980)

MO: M.K. Morris et al. (1979a), Pamperl (1980)

NE: Andersen and Walker (1920), F.A. Morris et al. (1979), Webber (1889, 1890), Williams (1962), WPSS (1961-1963, 1966)

OK: Hern et al. (1979), Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Also reported as:

Lysigonium varians (Ag.) DeT.

NE: Andersen and Walker (1920), Elmore (1921)

- *Pleurosira laevis* (Ehr.) Compère

KS: Harris and Eberle (2001)

Also reported as:

Biddulphia laevis Ehr.

CO: WPSS (1961-1963)

KS: Boyer (1927a), Powers (1969), Reinke (1979a, 1982b), Wenke and Eberle (1986), Williams (1962), Wolle (1894), WPSS (1961-1963, 1966)

NE: Elmore (1921), Webber (1890), Wolle (1894)

OK: Koch (1975), Pfister and Terry (1978), Wilhm et al. (1977)

- *Rhizosolenia* sp. = *Urosolenia* sp.? [*Rhizosolenia* (marine) is structurally distinct from *Urosolenia* (inland waters)]

***Rhizosolenia* (*Urosolenia*?) *minima* Lev.**

KS: Harris and Eberle (2001)

► ***Skeletonema potamos* (Weber) Hasle**

KS: Williams et al. (1979)

MO: M.K. Morris et al. (1979a)

OK: Hern et al. (1979)

► ***Stephanocyclus meneghiniana* (Kütz.)**

Reported as:

Cyclotella meneghiniana Kütz.

CO: M.K. Morris et al. (1979b), WPSS (1961-1963)

KS: Curtis (1901), Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Williams (1962, 1964), Williams et al. (1979), WPSS (1961-1963, 1966), Wujek et al. (1980)

MO: M.K. Morris et al. (1979a), Pamperl (1980), Williams (1962), WPSS (1961-1963, 1966)

NE: Andersen and Walker (1920), Elmore (1921), Hoagland et al. (1982), F.A. Morris et al. (1979), Roemer et al. (1984), Williams (1962, 1964), Williams and Scott (1962), WPSS (1961-1963, 1966)

OK: Cooper and Wilhm (1975), Hern et al. (1979), Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Troeger and Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962, 1964, 1972), Williams and Scott (1962), WPSS (1961-1963, 1966)

***Stephanocyclus laevis* (van Goor) comb. nov.?**

Reported as:

Cyclotella meneghiniana var. *laevis* (van Goor) Hust.

OK: Troeger (1978)

► ***Stephanodiscus alpinus* Hust.**

KS: Powers (1969)

Stephanodiscus astra

This species was reported from KS, MO, NE, and OK. However, taxonomic uncertainties in this group make it impossible to know which taxa actually were collected without reexamining the specimens. See Round (1981).

Stephanodiscus dubius (Fricke) Hust. = *Cyclostephanos dubius* (Fricke) Round

***Stephanodiscus hantzschii* Grun.**

KS: Powers (1969), Williams (1962, 1964), Williams and Scott (1962), Williams et al. (1979), WPSS (1961-1963, 1966), Wujek (1965)

MO: Williams (1962, 1964, 1972), Williams and Scott (1962), WPSS (1961-1963, 1966)

NE: Hoagland et al. (1982), Roemer et al. (1984), Williams (1962, 1964), Williams and Scott (1962), WPSS (1961-1963, 1966)

OK: Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), Williams and Scott (1962), WPSS (1961-1963, 1966)

***Stephanodiscus hantzschii* f. *tenuis* (Hust.) Håk. & Stoerm.**

Reported as:

Stephanodiscus tenuis Hust.

KS: Williams et al. (1979)

Stephanodiscus invisitatus Hohn & Hellerm. = *Cyclostephanos invisitatus* (Hohn & Hellerm.) Ther., Stoerm., & Håk.

***Stephanodiscus minutula* (Kütz.) Round**

NE: Roemer et al. (1984)

***Stephanodiscus niagarae* Ehr.**

KS: WPSS (1961-1963)

MO: M.K. Morris et al. (1979a), WPSS (1961-1963)

NE: Elmore (1921), F.A. Morris et al. (1979), Williams (1962), WPSS (1961-1963, 1966)

***Stephanodiscus rotula* (Kütz.) Hendey**

Reported as:

Cyclotella rotula Kütz.

KS: Curtis (1901)

***Stephanodiscus rotula* var. *minutula* (Kütz.) Ross & Sims**

NE: Hoagland et al. (1982)

Stephanodiscus tenuis Hust. = *Stephanodiscus hantzschii* f. *tenuis* (Hust.) Håk. & Stoerm.

► ***Stephanopyxis broschii* Grun.**

OK: Pfister and Terry (1978)

► ***Thalassiosira bramaputrae* (Ehr.) Håk. & Locker**

Reported as:

Coscinodiscus lacustris Grun.

NE: Elmore (1921)

OK: Wilhm et al. (1977)

Thalassiosira fluviatilis Hust. = *Thalassiosira weisflogii* (Grun.) Fryxell & Hasle

***Thalassiosira pseudonana* (Hust.) Hasle & Heimdal**

Reported as:

Cyclotella nana Hust.

KS: Powers (1969)

***Thalassiosira weisflogii* (Grun.) Fryxell & Hasle**

Reported as:

Thalassiosira fluviatilis Hust.

KS: Wujek et al. (1980)

OK: Koch (1975)

► ***Urosolenia* sp.** [now includes “freshwater” species; structurally distinct marine species retained in *Rhizosolenia*]

Reported as:

Rhizosolenia sp.

OK: Hern et al. (1979)

Also see *Rhizosolenia* (*Urosolenia*) *minima* Lev.

PENNATE DIATOMS (without raphes) - Fragilariophyceae

Names in ***bold italic print*** are current names for taxa reported from the central United States. Names in *standard italic print* are synonyms for the currently accepted names listed after them. References that reported a taxon or its synonyms are listed under the currently accepted name. The names of the states are abbreviated with their postal codes: CO = eastern Colorado, KS = Kansas, MO = western Missouri, NE = Nebraska, OK = Oklahoma.

► ***Asterionella formosa* Hass.**

KS: Powers (1969), Reinke (1979a), Williams et al. (1979), WPSS (1961-1963)
MO: M.K. Morris et al. (1979a), Pamperl (1980), Williams (1962), WPSS (1961-1963, 1966)
NE: Hoagland et al. (1982), F.A. Morris et al. (1979), Roemer et al. (1984), Williams (1962, 1964, 1972), WPSS (1961-1963, 1966)
OK: Hern et al. (1979), Pfister et al. (1979), Wilhm et al. (1977), Wilhm et al. (1978)
Plains States: Patrick and Reimer (1966)

***Asterionella formosa* var. *gracillima* (Hantz.) Grun.**

KS: Williams et al. (1979)

► ***Catacombas gaillonii* (Bory) Will. & Round**

Reported as:

Synedra gaillonii (Bory) Ehr.

KS: Czarnecki and Reinke (1981)

OK: Kennedy and Pfister (1984)

► ***Ceratoneis arcus* (Ehr.) Kütz. = *Hannaea arcus* (Ehr.) Patr.**

► ***Ctenophora pulchella* (Ralfs ex Kütz.) Will. & Round**

KS: Harris and Eberle (2001)

Also reported as:

Synedra pulchella Ralfs ex Kütz.

KS: Curtis (1901), Wenke and Eberle (1986)

NE: Elmore (1921), Hoagland et al. (1982)

Plains States: Patrick and Reimer (1966)

Synedra pulchella f. *major* Grun.

KS: Curtis (1901)

Synedra pulchella var. *smithii* (Ralfs) Grun.

NE: Webber (1890) [and parenthetically as *Synedra acicularis* W. Sm.]

***Ctenophora pulchella* var. *lacerata* (Hust.) Bukht.**

Reported as:

Synedra pulchella var. *lacerata* Hust.

NE: Hoagland et al. (1982), Patrick and Reimer (1966)

***Ctenophora pulchella* var. *lanceolata* (O'Meara) Bukht.**

Reported as:

Synedra pulchella var. *lanceolata* O'Meara

KS: Czarnecki and Reinke (1981) [see Eberle (1982:131)]

NE: Patrick and Reimer (1966)

► ***Diatoma elongatum* (Lyngb.) Ag. = *Diatoma tenue* var. *elongatum* Lyngb.**

***Diatoma hiemale* (Roth) Heib.**

KS: Reinke (1979a)

OK: Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

Also reported as:

Odontidium hiemale (Roth) Kütz.

NE: Elmore (1921)

***Diatoma tenue* Ag.**

KS: Curtis (1901), Patrick and Reimer (1966)

OK: Troeger (1983)

***Diatoma tenue* var. *elongatum* Lyngb.**

CO: M.K. Morris et al. (1979b)

Plains States: Patrick and Reimer (1966)

Also reported as:

Diatoma elongatum (Lyngb.) Ag.

NE: F.A. Morris et al. (1979), Williams (1962), WPSS (1961-1963, 1966)

***Diatoma vulgare* Bory**

CO: WPSS (1961-1963)

KS: Branson (1966), Harris and Eberle (2001), Powers (1969), Reinke (1979a, 1985), Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)

MO: Pamperl (1980), WPSS (1961-1963)

NE: Hoagland et al. (1982), F.A. Morris et al. (1979), Roemer et al. (1984), Williams (1962, 1964, 1972), Williams and Scott (1962), WPSS (1961-1963, 1966)

OK: Hern et al. (1979), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

Also reported as:

Odontidium vulgare (Bory) Elm.

NE: Elmore (1921)

Tetracyclus rupestris (Braun ex Rab.) Grun. [misidentification?]

NE: Elmore (1921)

***Diatoma vulgare* var. *breve* Grun.**

Plains States: Patrick and Reimer (1966)

► ***Fragilaria brevistriata* Grun. = *Pseudostaurosira brevistriata* (Grun.) Will. & Round**

Fragilaria brevistriata var. *inflata* (Pant.) Hust. = *Pseudostaurosira brevistriata* var. *inflata* (Pant.) Edlund

***Fragilaria capucina* Desm.**

KS: Williams (1962), WPSS (1961-1963, 1966), Wujek et al. (1980)

MO: Williams (1962), WPSS (1961-1963, 1966)

NE: Andersen and Walker (1920), Elmore (1921), F.A. Morris et al. (1979), Williams (1962), WPSS (1961-1963, 1966)

OK: Koch and Risser (1974), Pfister et al. (1979), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

Also reported as:

Fragilaria diophthalma (Ehr.) Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Fragilaria rhabdosoma Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

***Fragilaria capucina* var. *mesolepta* Rab.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Koch and Risser (1974), Troeger and Menzel (1986)

Plains States: Patrick and Reimer (1966)

Fragilaria construens (Ehr.) Grun. = *Staurosira construens* Ehr.

Fragilaria construens var. *binodis* (Ehr.) Grun. = *Staurosira construens* var. *binodis* (Ehr.) Ham.

Fragilaria construens var. *venter* (Ehr.) Grun. = *Staurosira construens* var. *venter* (Ehr.) Ham.

***Fragilaria crotonensis* Kitton**

CO: M.K. Morris et al. (1979b)

KS: Williams (1962), Williams et al. (1979), WPSS (1961-1963, 1966), Wujek et al. (1980)

MO: M.K. Morris et al. (1979a), Pamperl (1980), Williams (1962), WPSS (1961-1963, 1966)

NE: F.A. Morris et al. (1979), Williams (1962, 1964), WPSS (1961-1963, 1966)

OK: Cooper and Wilhm (1975), Hern et al. (1979), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

Also reported as:

Synedra crotonensis (Kitton) Cl. & Möll.

KS: Curtis (1901)

Fragilaria diophthalma (Ehr.) Ehr. = *Fragilaria capucina* Desm.

Fragilaria elliptica f. *minor* Grun. = *Staurosira elliptica* (Schum.) Will. & Round

Fragilaria harrisonii (W. Sm.) Grun. = *Staurosirella leptostauron* (Ehr.) Will. & Round

***Fragilaria intermedia* Grun.**

KS: Curtis (1901), Powers (1969), Williams et al. (1979)

NE: ?F.A. Morris et al. (1979)

Fragilaria lapponica Grun. = *Staurosirella lapponica* (Grun.) Will. & Round

Fragilaria leptostauron (Ehr.) Hust. = *Staurosirella leptostauron* (Ehr.) Will. & Round

Fragilaria mutabilis (W. Sm.) Grun. = *Staurosirella pinnata* (Ehr.) Will. & Round [misidentified *Punctastriata*?]

Fragilaria pinnata Ehr. = *Staurosirella pinnata* (Ehr.) Will. & Round [misidentified *Punctastriata*?]

Fragilaria pinnata var. *intercedens* (Grun.) Hust. = *Staurosirella pinnata* var. *intercedens* (Grun.) Ham.

***Fragilaria radians* (Kütz.) Will. & Round**

Reported as:

Synedra acus var. *radians* (Kütz.) Hust.

MO: Pamperl (1980)

Synedra radians Kütz.

MO: Pamperl (1980)

NE: Elmore (1921), Hoagland et al. (1982), Roemer et al. (1984)

OK: Pfister et al. (1979), Troeger (1978)

Plains States: Patrick and Reimer (1966)

Fragilaria rhabdosoma Ehr. = *Fragilaria capucina* Ehr.

Fragilaria rostrata Ehr. = ?

OK: ?Ehrenberg (1856)

Fragilaria turgens Ehr. = ?

KS: Curtis (1901)

***Fragilaria vaucheriae* (Kütz.) Peters.**

KS: Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), Roemer et al. (1984), Rosowski et al. (1986)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

Also reported as:

Synedra vaucheriae (Kütz.) Kütz.

OK: Williams (1962), WPSS (1961-1963, 1966)

***Fragilaria vaucheriae* var. *capitellata* (Grun.) Patr.**

Reported as:

Synedra vaucheriae var. *capitellata* (Grun.) Cl.

OK: Pfister and Terry (1978)

Fragilaria virescens Ralfs = *Fragilariforma virescens* (Ralfs) Will. & Round

Fragilaria virescens var. *mesolepta* (Rab.) Schönf. = *Fragilariforma virescens* var. *mesolepta* (Rab.) And., Stoerm., & Kreis

► ***Fragilariforma virescens* (Ralfs) Will. & Round**

Reported as:

Fragilaria virescens Ralfs

KS: Wujek (1965)

NE: Elmore (1921)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

***Fragilariforma virescens* var. *mesolepta* (Rab.) And., Stoerm., & Kreis**

Reported as:

Fragilaria virescens var. *mesolepta* (Rab.) Schönf.

KS: Wujek (1965)

► ***Hannaea arcus* (Ehr.) Patr.**

Plains States: Patrick and Reimer (1966)

Also reported as:

Ceratoneis arcus (Ehr.) Kütz.

KS: WPSS (1961-1963)

► ***Martyana martyi* (Herib.) Round = *Staurosirella martyi* (Hérib.) Morales**

► ***Meridion circulare* (Grev.) Ag.**

KS: Curtis (1901), Powers (1969), Wenke and Eberle (1986), Wolle (1889)

NE: Elmore (1921), Rosowski et al. (1986), Webber (1890)

OK: Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

***Meridion circulare* var. *constrictum* (Ralfs) V.H.**

OK: Pfister et al. (1979)

► ***Odontidium hiemale* (Roth) Kütz. = *Diatoma hiemale* (Roth) Heib.**

Odontidium vulgare (Bory) Elm. = *Diatoma vulgare* Bory

► ***Opephora martyi* Hérib. = *Staurosirella martyi* (Hérib.) Morales**

► ***Pseudostaurosira brevistriata* (Grun.) Will. & Round**

Reported as:

Fragilaria brevistriata Grun.

KS: Wenke and Eberle (1986), Wujek (1965)

Plains States: Patrick and Reimer (1966)

***Pseudostaurosira brevistriata* var. *inflata* (Pant.) Edlund**

Reported as:

Fragilaria brevistriata var. *inflata* (Pant.) Hust.

KS: Wenke and Eberle (1986), Wujek et al. (1980)

NE: Hoagland et al. (1982), Patrick and Reimer (1966)

► ***Sceptroneis pacifica* (Grun.) Elm. sensu Elmore (1921) = *Staurosirella martyi* (Hérib.) Morales**

Sceptroneis fibula (Bréb.) Elm. = *Peronia fibula* (Bréb. ex Kütz.) Ross

► ***Staurosira construens* Ehr.**

NE: Ehrenberg (1856)

Also reported as:

Fragilaria construens (Ehr.) Grun.

CO: WPSS (1961-1963)

KS: Williams (1962, 1964), Williams and Scott (1962), WPSS (1961-1963, 1966)

MO: Pamperl (1980), Williams (1962, 1964), Williams and Scott (1962), WPSS (1961-1963, 1966)

NE: Andersen and Walker (1920), Elmore (1921), ?F.A. Morris et al. (1979), Williams (1964, 1972), WPSS (1961-1963)

OK: Wilhm et al. (1977), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

***Staurosira construens* var. *binodis* (Ehr.) Ham.**

Reported as:

Fragilaria construens var. *binodis* (Ehr.) Grun.

KS: Wujek et al. (1980)

NE: Andersen and Walker (1920), Patrick and Reimer (1966)

***Staurosira construens* var. *venter* (Ehr.) Ham.**

KS: Harris and Eberle (2001)

Also reported as:

Fragilaria construens var. *venter* (Ehr.) Grun.

KS: Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

***Staurosira elliptica* (Schum.) Will. & Round**

Reported as:

Fragilaria elliptica f. *minor* Grun.

KS: Curtis (1901)

► ***Staurosirella dubia* (Grun.) Morales**

NE: Morales and Manoylov (2006)

***Staurosirella lapponica* (Grun.) Will. & Round**

Reported as:

Fragilaria lapponica Grun.

OK: Patrick and Reimer (1966)

***Staurosirella leptostauron* (Ehr.) Will. & Round**

NE: Morales and Manoylov (2006)

Also reported as:

Fragilaria harrisonii (W. Sm.) Grun.

NE: Elmore (1921), Webber (1889, 1890)

Fragilaria leptostauron (Ehr.) Hust.

NE: F.A. Morris et al. (1979)

OK: Koch and Risser (1974), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

***Staurosirella martyi* (Héríb.) Morales**

NE: Morales and Manoylov (2006)

Also reported as:

Martyana martyi (Herib.) Round

KS: Harris & Eberle (2001)

Opephora martyi Héríb.

KS: WPSS (1961-1963), Wujek et al. (1980)

MO: WPSS (1961-1963)

NE: WPSS (1961-1963)

OK: Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

Sceptroneis pacifica (Grun.) Elm.

NE: Andersen and Walker (1920), Elmore (1921)

***Staurosirella pinnata* (Ehr.) Will. & Round [misidentified *Punctastriata*?]**

Reported as:

Fragilaria mutabilis (W. Sm.) Grun.

KS: Curtis (1901)

NE: Andersen and Walker (1920), Elmore (1921)

Fragilaria pinnata Ehr.

KS: WPSS (1961-1963), Wujek (1965)

MO: Pamperl (1980), WPSS (1961-1963)

NE: Ehrenberg (1856), Roemer et al. (1984), WPSS (1961-1963)

OK: Ehrenberg (1856), Pfister et al. (1979), Wilhm et al. (1977), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

***Staurosirella pinnata* var. *intercedens* (Grun.) Ham.**

Reported as:

Fragilaria pinnata var. *intercedens* Grun.

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

***Staurosirella subcapitata* (Freng.) Morales**

NE: Morales and Manoylov (2006)

► *Striatella fenestrata* (Lyngb.) Kuntze = *Tabellaria fenestrata* (Lyngb.) Kütz.

Striatella flocculosa (Roth) Kuntze = *Tabellaria flocculosa* (Roth) Kütz.

► ***Synedra acus* Kütz.**

KS: Curtis (1901), Williams et al. (1979), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), F.A. Morris et al. (1979), Roemer et al. (1984), Webber (1890)

OK: Hern et al. (1979), Pfister et al. (1979), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

Also reported as:

Synedra tenuissima Kütz.

NE: Elmore (1921)

Synedra acus var. *angustissima* (Grun.) V.H. = *Synedra delicatissima* var. *angustissima* Grun.

Synedra acus var. *radians* (Kütz.) Hust. = *Fragilaria radians* (Kütz.) Will. & Round

***Synedra acuta* Ehr.**

OK: Ehrenberg (1856)

***Synedra amphicephala* Kütz.**

NE: Elmore (1921)

Plains States: Patrick and Reimer (1966)

***Synedra capitata* Ehr.**

KS: Czarnecki and Reinke (1981)

NE: Elmore (1921)

Plains States: Patrick and Reimer (1966)

Synedra crotonensis (Kitton) Cl. & Moll. = *Fragilaria crotonensis* Kitton

***Synedra cyclopum* Brutschy**

OK: Kennedy and Pfister (1984)

Synedra danica Kütz. = *Synedra ulna* var. *danica* (Kütz.) V.H.

***Synedra delicatissima* W. Sm.**

KS: ?Harris and Eberle (2001), Wujek et al. (1980)

MO: M.K. Morris et al. (1979a), Pamperl (1980)

OK: Hern et al. (1979)

***Synedra delicatissima* var. *angustissima* Grun.**

MO: M.K. Morris et al. (1979a), Pamperl (1980)
OK: Hern et al. (1979), Troeger and Menzel (1986)
Plains States: Patrick and Reimer (1966)

Also reported as:

Synedra acus var. *angustissima* (Grun.) V.H.
OK: Troeger (1978, 1983)

Synedra entomon Ehr. = *Nitzschia entomon* (Ehr.) Ralfs

Synedra familiaris Kütz. = *Synedra rumpens* var. *familiaris* (Kütz.) Hust.

Synedra fasciculata (Ag.) Kütz. = *Tabularia fasciculata* (Ag.) Will. & Round

Synedra fasciculata var. *truncata* (Grev.) Patr. = *Tabularia fasciculata* (Ag.) Will. & Round

***Synedra filiformis* var. *exilis* Cl.-Eul.**

NE: Roemer et al. (1984)
OK: Troeger (1983)

Synedra flexuosa = ?

OK: Ehrenberg (1856)

Synedra gaillonii (Bory) Ehrenb. = *Catacombas gaillonii* (Bory) Will. & Round

***Synedra goulardi* Bréb.**

KS: Wenke and Eberle (1985)
MO: Pamperl (1980)
OK: Pfister et al. (1979)

***Synedra incisa* Boyer**

NE: Patrick and Reimer (1966)

Synedra lanceolata Kütz. = *Synedra ulna* (Nitz.) Ehr.

***Synedra minuscula* Grun.** [= *Fragilaria minuscula* (Grun.) Will. & Round?]

KS: Williams et al. (1979)
MO: Pamperl (1980)
OK: Koch (1975), Pfister et al. (1979)

***Synedra nana* Meist.**

OK: WPSS (1961-1963)

***Synedra parasitica* (W. Sm.) Hust.**

KS: Wujek et al. (1980)
MO: Pamperl (1980)
OK: Koch and Risser (1974)
Plains States: Patrick and Reimer (1966)

***Synedra parasitica* var. *subconstricta* (Grun.) Hust.**

KS: Wujek et al. (1980)
OK: Koch and Risser (1974)

Synedra pulchella Ralfs ex Kütz. = *Ctenophora pulchella* (Ralfs ex Kütz.) Will. & Round

Synedra pulchella f. *major* Grun. = *Ctenophora pulchella* (Ralfs ex Kütz.) Will. & Round

Synedra pulchella var. *lacerata* Hust. = *Ctenophora pulchella* var. *lacerata* (Hust.) Bukht.

Synedra pulchella var. *lanceolata* O'Meara = *Ctenophora pulchella* var. *lanceolata* (O'Meara) Bukht.

Synedra pulchella var. *smithii* (Ralfs) Grun. = *Ctenophora pulchella* (Ralfs ex Kütz.) Will. & Round

Synedra radians Kütz. = *Fragilaria radians* (Kütz.) Will. & Round

***Synedra rumpens* Kütz.**

KS: Williams et al. (1979)
MO: Pamperl (1980)
NE: Andersen and Walker (1920), F.A. Morris et al. (1979)
OK: Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Wilhm et al. (1977), Wilhm et al. (1978)
Plains States: Patrick and Reimer (1966)

***Synedra rumpens* var. *familiaris* (Kütz.) Hust.**

KS: Wenke and Eberle (1985)
MO: Pamperl (1980)
OK: Troeger (1978)
Plains States: Patrick and Reimer (1966)

Also reported as:

Synedra familiaris Kütz.
KS: Curtis (1901)
NE: Elmore (1921)

***Synedra rumpens* var. *fragilarioides* Grun.**

MO: Pamperl (1980)
NE: Patrick and Reimer (1966)
OK: Troeger (1978)

***Synedra rumpens* var. *meneghiniana* Grun.**

OK: Troeger (1978)

Synedra spectabilis Ehr. = *Hantzschia spectabilis* (Ehr.) Hust.

Synedra splendens Kütz. = *Synedra ulna* (Nitz.) Ehr.

***Synedra superba* Kütz.**

KS: Curtis (1901)

Synedra tabulata (Ag.) Kütz. = *Tabularia tabulata* (Ag.) Snoeijs

***Synedra tenera* W. Sm.**

OK: Troeger (1978, 1983)

Synedra tenuissima Kütz. = *Synedra acus* Kütz.

***Synedra ulna* (Nitz.) Ehr.**

CO: Williams (1964), WPSS (1961-1963)

KS: Curtis (1901), Harris and Eberle (2001), McFarland et al. (1964), Powers (1969), Reinke (1985), Wenke and Eberle (1986), Williams (1962, 1964, 1972), Williams and Scott (1962), Williams et al. (1979), Wolle (1889), WPSS (1961-1963, 1966), Wujek et al. (1980)

MO: Pamperl (1980), Williams (1962), Williams (1964), WPSS (1961-1963), WPSS (1966)

NE: Andersen and Walker (1920), Elmore (1921), F.A. Morris et al. (1979), Roemer et al. (1984), Rosowski et al. (1986), Webber (1889, 1890), Williams (1964), WPSS (1961-1963)

OK: Cooper and Wilhm (1975), Ehrenberg (1856), Hern et al. (1979), Koch (1975), Koch and Risser (1974), Leake (1945), Pfiester et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Troeger and Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962, 1964, 1972), Willson and Forest (1957), WPSS (1961-1963, 1966)

Plains States: Patrick and Reimer (1966)

Also reported as:

Synedra lanceolata Kütz.

KS: Curtis (1901)

Synedra splendens Kütz.

KS: Branson (1966)

Synedra ulna var. *splendens* (Kütz.) V.H.

NE: Webber (1890)

***Synedra ulna* var. *aequalis* (Kütz.) Brun**

OK: Pfiester et al. (1979)

***Synedra ulna* var. *amphirhynchus* (Ehr.) Grun.**

OK: Pfiester et al. (1979)

Also reported as:

Synedra ulna var. *vitrea* (Bory ex Kütz.) V.H.

KS: Curtis (1901)

***Synedra ulna* var. *chaseana* Thomas**

OK: Pfiester et al. (1979)

***Synedra ulna* var. *contracta* Østr.**

OK: Pfiester et al. (1979)

***Synedra ulna* var. *danica* (Kütz.) V.H.**

KS: Harris and Eberle (2001), Wujek (1965)

Plains States: Patrick and Reimer (1966)

Also reported as:

Synedra danica Kütz.

KS: Curtis (1901)

***Synedra ulna* var. *longissima* (W. Sm.) Brun**

KS: Curtis (1901)

Plains States: Patrick and Reimer (1966)

***Synedra ulna* var. *ramesi* (Herib.) Hust.**

MO: Pamperl (1980)

Plains States: Patrick and Reimer (1966)

***Synedra ulna* var. *spathulifera* Hust.**

KS: Wujek et al. (1980)

Synedra ulna var. *splendens* (Kütz.) V.H. = *Synedra ulna* (Nitz.) Ehr.

***Synedra ulna* var. *subaequalis* (Grun.) V.H.**

Plains States: Patrick and Reimer (1966)

Synedra ulna var. *vitrea* (Bory ex Kütz.) V.H. = *Synedra ulna* var. *amphirhynchus* (Ehr.) Grun.

Synedra vaucheriae (Kütz.) Kütz. = *Fragilaria vaucheriae* (Kütz.) Peters.

Synedra vaucheriae var. *capitellata* (Grun.) Cl. = *Fragilaria vaucheriae* var. *capitellata* (Grun.) Patr.

► ***Tabellaria fenestrata* (Lyngb.) Kütz.**

KS: Reinke (1982a)

OK: Hern et al. (1979), WPSS (1961-1963)

Also reported as:

Striatella fenestrata (Lyngb.) Kuntze

NE: Elmore (1921)

***Tabellaria flocculosa* (Roth) Kütz.**

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

Also reported as:

Striatella flocculosa (Roth) Kuntze

NE: Elmore (1921)

► ***Tabularia fasciculata* (Ag.) Will. & Round**

KS: Harris and Eberle (2001)

Also reported as:

Synedra fasciculata (Ag.) Kütz.

KS: Wenke and Eberle (1986), Wujek et al. (1980)

OK: Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977)

Plains States: Patrick and Reimer (1966)

Synedra fasciculata var. *truncata* (Grev.) Patr.

KS: Wujek et al. (1980)

MO: Pamperl (1980)

***Tabularia tabulata* (Ag.) Snoeijjs**

KS: Harris and Eberle (2001)

Also reported as:

Synedra tabulata (Ag.) Kütz.

NE: Elmore (1921)

OK: Wilhm et al. (1977)

► ***Tetracyclus lacustris* Ralfs**

NE: Andersen and Walker (1920), Elmore (1921), Patrick and Reimer (1966)

Tetracyclus rupestris (Braun ex Rab.) Grun. = misidentified *Diatoma vulgare* Bory?

PENNATE DIATOMS (with raphes) - Bacillariophyceae

Names in **bold italic print** are current names for taxa reported from the central United States. Names in *standard italic print* are synonyms for the currently accepted names listed after them. References that reported a taxon or its synonyms are listed under the currently accepted name. The names of the states are abbreviated with their postal codes: CO = eastern Colorado, KS = Kansas, MO = western Missouri, NE = Nebraska, OK = Oklahoma.

- *Achnanthes affinis* Grun. = *Achnanthidium affine* (Grun.) Czarn.
Achnanthes biasolettiana Grun. = *Achnanthidium biasolettianum* (Grun.) Round & Bukht.
Achnanthes breviceps var. *intermedia* (Kütz.) Cl. = *Achnanthidium breviceps* var. *intermedium* (Kütz.) Cl.
***Achnanthes chlidanos* Hohn & Hellerm.**
MO: Pamperl (1980)
Achnanthes clevei Grun. = *Achnanthidium clevei* (Grun.) Czarn. = *Karayevia clevei* (Grun.) Round & Bukht.
***Achnanthes coarctata* (Bréb.) Grun.**
OK: Pfister et al. (1979)
Achnanthes deflexa Reim. = *Achnanthidium deflexum* (Reim.) Kingst.
Achnanthes exigua Grun. = *Achnanthidium exiguum* (Grun.) Czarn.
Achnanthes exigua var. *constricta* (Grun.) Hust. = *Achnanthidium exiguum* var. *constrictum* (Grun.) And., Stoerm., & Kreis
Achnanthes exiqua var. *heterovalva* Krasske = *Achnanthidium exiguum* var. *heterovalvum* (Krasske) Czarn.
Achnanthes exilis Kütz. = *Achnanthidium exilis* (Kütz.) Round & Bukht.
Achnanthes gibberula Grun. = *Achnanthes thermalis* (Rab.) Schönf.
Achnanthes hauckiana Grun. = *Planothidium haukianum* (Grun.) Round & Bukht.
***Achnanthes hudsonis* Grun.**
KS: Curtis (1901)
Achnanthes hungarica (Grun.) Grun. = *Lemnicola hungarica* (Grun.) Round & Basson
***Achnanthes inflata* (Kütz.) Grun.**
OK: Pfister et al. (1979), Wilhm et al. (1977)
Achnanthes lanceolata Bréb. ex Kütz. = *Planothidium lanceolatum* (Bréb.) Round & Bukht.
Achnanthes lanceolata var. *dubia* Grun. = *Planothidium dubium* (Grun.) Round & Bukht.
Achnanthes lanceolata var. *haynaldii* (Schaarsch.) Cl. = *Planothidium haynaldii* (Schaarsch.) Lange-Bert.
Achnanthes lapponica var. *ninckei* (Guerm. & Mang.) Reim. = *Eucocconeis lapponica* var. *ninckei* (Guerm. & Mang.) Edlund
Achnanthes linearis (W. Sm.) Grun. = *Achnanthidium biasolettianum* (Grun.) Round & Bukht.
Achnanthes linearis f. *curta* H.L. Sm. = *Achnanthidium biasolettianum* (Grun.) Round & Bukht.
Achnanthes microcephala (Kütz.) Grun. = *Achnanthidium microcephalum* Kütz.
Achnanthes minutissima Kütz. = *Achnanthidium minutissimum* (Kütz.) Czarn.
Achnanthes minutissima f. *curta* Grun. = *Achnanthes minutissima* Kütz. = *Achnanthidium minutissimum* (Kütz.) Czarn.
***Achnanthes pinnata* Hust.**
OK: Koch and Risser (1974)
Achnanthes thermalis (Rab.) Schönf.
Reported as:
Achnanthes gibberula Grun.
OK: Pfister et al. (1979)
Achnanthes trinodis (W. Sm.) Grun. = *Achnanthidium trinodis* Arnott ex Ralfs
► ***Achnanthidium affine* (Grun.) Czarn.**
Reported as:
Achnanthes affinis Grun.
OK: Pfister et al. (1979)
Plains States: Patrick and Reimer (1966)

***Achnanthidium biasolettianum* (Grun.) Round & Bukht.**

Reported as:

Achnanthes biasolettiana Grun.

KS: Curtis (1901)

Achnanthes linearis (W. Sm.) Grun. = *Rossithidium linearis* (W. Sm.) Round & Bukht.?

MO: Pamperl (1980)

NE: Elmore (1921)

OK: Koch and Risser (1974), Pfiester et al. (1979), Troeger (1978, 1983), Troeger and Menzel (1986)

Achnanthes linearis f. *curta* H.L. Sm.

MO: Pamperl (1980)

OK: Troeger (1978)

***Achnanthidium breviceps* var. *intermedium* (Kütz.) Cl.**

Reported as:

Achnanthes breviceps var. *intermedia* (Kütz.) Cl.

KS: Czarnecki and Reinke (1981)

***Achnanthidium deflexum* (Reim.) Kingst.**

Reported as:

Achnanthes deflexa Reim.

KS: Wenke and Eberle (1985)

OK: Koch and Risser (1974), Patrick and Reimer (1966)

***Achnanthidium exiguum* (Grun.) Czarn.**

Reported as:

Achnanthes exigua Grun.

KS: Curtis (1901), Wujek (1965), Wujek et al. (1980)

MO: Pamperl (1980)

OK: Koch and Risser (1974), Pfiester et al. (1979), Troeger (1978, 1983)

Plains States: Patrick and Reimer (1966)

Stauroneis parvula Jan. *sensu* Elmore

NE: Elmore (1921)

***Achnanthidium exiguum* var. *constrictum* (Grun.) And., Stoerm., & Kreis**

Reported as:

Achnanthes exigua var. *constricta* (Grun.) Hust.

KS: Wujek et al. (1980)

***Achnanthidium exiguum* var. *heterovalvum* (Krasske) Czarn.**

Reported as:

Achnanthes exigua var. *heterovalva* Krasske

OK: Seyfer and Wilhm (1977)

Plains States: Patrick and Reimer (1966)

***Achnanthidium exilis* (Kütz.) Round & Bukht.**

Reported as:

Achnanthes exilis Kütz.

KS: Curtis (1901)

***Achnanthidium microcephalum* Kütz.**

Reported as:

Achnanthes microcephala (Kütz.) Grun.

KS: Elmore (1921)

MO: M.K. Morris et al. (1979a), Pamperl (1980)

NE: Elmore (1921), Patrick and Reimer (1966)

OK: Hern et al. (1979), Pfiester et al. (1979)

***Achnanthidium minutissimum* (Kütz.) Czarn.**

Reported as:

Achnanthes minutissima Kütz.

KS: Curtis (1901), Powers (1969), Williams (1962), WPSS (1961-1963, 1966), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), Roemer et al. (1984), Williams (1962), WPSS (1961-1963, 1966)

OK: Koch (1975), Koch and Risser (1974), Pfiester et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1977), Williams (1962), WPSS (1966)

Plains States: Patrick and Reimer (1966)

Achnanthes minutissima f. *curta* Grun.

KS: Curtis (1901)

***Achnanthidium trinodis* Arnott ex Ralfs**

Reported as

Achnanthes trinodis (W. Sm.) Grun.

KS: Curtis (1901)

- ***Amphicampa mirabilis* Ehr. ex Ralfs**
NE: Patrick and Reimer (1966)
- ***Amphipleura pellucida* (Kütz.) Kütz.**
KS: Curtis (1901), Wujek et al. (1980)
MO: Pamperl (1980)
NE: Hoagland et al. (1982)
OK: Koch and Risser (1974), Seyfer and Wilhm (1977), Troeger (1978), Troeger and Menzel (1986), Wilhm et al. (1978)
Plains States: Patrick and Reimer (1966)
- ***Amphiprora alata* (Ehr.) Kütz. = *Entomoneis alata* (Ehr.) Ehr.**
Amphiprora conspicua Grev. = *Entomoneis alata* (Ehr.) Ehr.
Amphiprora ornata Bail. = *Entomoneis ornata* (Bail.) Reim.
Amphiprora paludosa W. Sm. = *Entomoneis paludosa* (W. Sm.) Reim.
Amphiprora pulchra Bail. = *Entomoneis pulchra* (Bail.) Reim.
- ***Amphora acutiuscula* Kütz.**
KS: Czarnecki and Reinke (1981), Harris and Eberle (2001)
OK: Kennedy and Pfister (1984)
- Amphora coffeiformis* (Ag.) Kütz.**
KS: Czarnecki and Reinke (1981), Harris and Eberle (2001)
NE: Patrick and Reimer (1975)
OK: Kennedy and Pfister (1984)
Also reported as:
Amphora salina W. Sm.
NE: Elmore (1921), Schofield (1892), Webber (1890)
Amphora salinarum W. Sm.
OK: Koch (1975)
- Amphora commutata* Grun. in Olive**
KS: Harris and Eberle (2001)
- Amphora copulata* (Kütz.) Schoem. & Arch. = *Amphora ovalis* var. *affinis* (Kütz.) Schoem. & Arch.**
- Amphora cymbifera* Greg.**
KS: Curtis (1901)
- Amphora javanica* A.S.**
KS: Czarnecki and Reinke (1981)
- Amphora lineata* = *Amphora*?**
KS: Curtis (1901) [see Eberle (1981:18)]
- Amphora libyca* Ehr. = *Amphora ovalis* var. *affinis* (Kütz.) V.H. ex DeT.**
[Considered a valid species by Krammer (1980), but included as synonym of *A. copulata* (Kütz.) Schoem. & Arch. by Schoeman and Archibald (1986)]
- Amphora montana* Krasske**
KS: Powers (1969)
- Amphora normanii* Rab.**
OK: Pfister et al. (1979)
- Amphora ovalis* (Kütz.) Kütz.**
KS: Curtis (1901), Elmore (1921), Harris and Eberle (2001), Wolle (1889), Wujek et al. (1980)
NE: Andersen and Walker (1920), Elmore (1921), WPSS (1961-1963)
OK: Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978)
Plains States: Patrick and Reimer (1975)
- Amphora ovalis* var. *affinis* (Kütz.) V.H. ex DeT. [= *Amphora copulata* (Kütz.) Schoem. & Arch.]**
KS: Wenke and Eberle (1986), Wujek et al. (1980)
OK: Troeger and Menzel (1986)
Plains States: Patrick and Reimer (1975)
Also reported as:
Amphora copulata (Kütz.) Schoem. & Arch.
KS: Harris and Eberle (2001)
Amphora libyca Ehr.
KS: Curtis (1901) [see Eberle (1981:17)]
NE: Ehrenberg (1856)
OK: Ehrenberg (1856)

***Amphora ovalis* var. *pediculus* (Kütz.) V.H. ex DeT. sensu Patrick and Reimer (1975) [= *A. copulata* (Kütz.)**

Schoem. & Arch.]

KS: Czarnecki and Reinke (1981)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Koch and Risser (1974), Pfiester et al. (1979)

Plains States: Patrick and Reimer (1975)

***Amphora perpusilla* (Grun.) Grun. sensu Patrick and Reimer (1975)**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

Amphora salina W. Sm. = *Amphora coffeiformis* (Ag.) Kütz.

Amphora salinarum W. Sm. = *Amphora salina* W. Sm.? [= *Amphora coffeiformis* (Ag.) Kütz.]

***Amphora submontana* Hust. [= *Amphora montana* Krasske?]**

KS: Powers (1969)

Plains States: Patrick and Reimer (1975)

***Amphora veneta* Kütz.**

KS: Harris and Eberle (2001), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Pfiester et al. (1979), Troeger (1983)

Plains States: Patrick and Reimer (1975)

► ***Aneumastus tuscula* (Ehr.) D. Mann & Stickle**

Reported as:

Navicula tuscula Ehr.

KS: Curtis (1901)

Plains States: Patrick and Reimer (1966)

► ***Anomoeoneis costata* (Kütz.) Hust.**

KS: Harris and Eberle (2001)

Plains States: Patrick and Reimer (1966)

Anomoeoneis exilis (Kütz.) Cl. = *Brachysira exilis* (Kütz.) Round & Mann

***Anomoeoneis sphaerophora* (Ehr.) Pfitz.**

KS: Harris and Eberle (2001), Wenke and Eberle (1986), Wujek et al. (1980)

OK: Pfiester and Terry (1978), Pfiester et al. (1979)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula biceps Ehr.

KS: Curtis (1901)

Navicula sphaerophora Ehr.

KS: Curtis (1901), Wolle (1889)

NE: Andersen and Walker (1920), Elmore (1921), Webber (1890)

***Anomoeoneis sphaerophora* var. *sculpta* O. Müll.**

NE: Patrick and Reimer (1966)

Also reported as:

Navicula rostrata Ehr.

NE: Elmore (1921)

Navicula sculpta Ehr.

NE: Andersen and Walker (1920)

Anomoeoneis vitrea (Grun.) Ross = *Brachysira vitrea* (Grun.) Ross

► ***Bacillaria paradoxa* Gmel.**

KS: Harris and Eberle (2001), McFarland et al. (1964), Wenke and Eberle (1986)

MO: WPSS (1961-1963)

OK: Ehrenberg (1856), Koch (1975), Seyfer and Wilhm (1977), Troeger (1983)

Also reported as:

Homoeocladia paxillifer (O. Müll.) Elm.

KS: Elmore (1921)

NE: Elmore (1921)

Nitzschia paradoxa (Gmel.) Grun.

KS: Curtis (1901), Powers (1969)

OK: Wilhm et al. (1977)

► ***Brachysira exilis* (Kütz.) Round & Mann**

Reported as:

Anomoeoneis exilis (Kütz.) Cl.

OK: Williams (1962), WPSS (1961-1963)

***Brachysira serians* (Bréb. ex Kütz.) Round & Mann**

Reported as:

Navicula serians Bréb. ex Kütz.

NE: Elmore (1921), Webber (1890)

***Brachysira vitrea* (Grun.) Ross**

Reported as:

Anomoeoneis vitrea (Grun.) Ross

KS: Wujek et al. (1980)

► ***Brebissonia vulgaris* (Thw.) Kuntze = *Frustulia vulgaris* (Thw.) DeT.**

► ***Caloneis amphisbaena* (Bory) Cl.**

CO: Williams (1964), Williams (1972), WPSS (1961-1963)

KS: Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Williams (1962), WPSS (1961-1963, 1966), Wujek et al. (1980)

NE: WPSS (1961-1963)

OK: Koch (1975), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula amphisbaena Bory

NE: Ehreneweg (1856), Elmore (1921)

OK: Ehreneweg (1856)

***Caloneis amphisbaena* var. *subsalina* (Donk.) Cl.**

KS: Harris and Eberle (2001)

OK: Koch (1975)

***Caloneis bacillaris* var. *thermalis* (Grun.) A. Cl.**

NE: Patrick and Reimer (1966)

***Caloneis bacillum* (Grun.) Cl.**

KS: Powers (1969), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula fontinalis Grun.

KS: Curtis (1901)

***Caloneis hebes* (Ralfs) Patr.**

KS: Patrick and Reimer (1966:589)

Also reported as:

Navicula obtusata W. Sm.?

KS: Curtis (1901)

***Caloneis lewisii* Patr.**

KS: Harris and Eberle (2001), Wenke and Eberle (1986), Wujek et al. (1980)

NE: F.A. Morris et al. (1979)

OK: Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

Also reported as:

Caloneis trinodis Lewis

KS: Wujek (1965)

Navicula trinodis (Lewis) Boyer

KS: Curtis (1901), Elmore (1921)

NE: Elmore (1921)

***Caloneis lewisii* var. *inflata* (Schul.) Patr.**

OK: Pfister and Terry (1978)

***Caloneis limosa* (Kütz.) Patr.**

KS: Wenke and Eberle (1985, 1986)

OK: Pfister et al. (1979), Troeger (1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Caloneis schumanniana (Grun.) Cl.

OK: Koch (1975), Troeger (1978)

Navicula limosa Kütz.

NE: Andersen and Walker (1920)

Navicula schumanniana Grun.

KS: Curtis (1901)

***Caloneis linearis* (Grun.) Boyer**

Reported as:

Navicula linearis Grun.

KS: Curtis (1901)

***Caloneis molaris* (Grun.) Krammer**

Reported as:

Pinnularia molaris (Grun.) Cl.

OK: Pfister and Terry (1978)

Navicula macra Grun.

KS: Curtis (1901)

***Caloneis oregonica* (Ehr.) Patr.**

KS: Wujek et al. (1980)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula liburnica Grun.

NE: Elmore (1921)

***Caloneis permagna* (J.W. Bail.) Cl.**

KS: Czarnecki and Reinke (1981)

Caloneis schumanniana (Grun.) Cl. = *Caloneis limosa* (Kütz.) Patr.

Caloneis silicula var. *truncatula* (Grun.) Cl. = *Caloneis ventricosa* var. *truncatula* (Grun.) Meist.

Caloneis trinodis (Lewis) Boyer = *Caloneis lewisii* Patr.

***Caloneis ventricosa* (Ehr.) Meist.**

KS: Wujek et al. (1980)

OK: Koch (1975), Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula leptogongyla Ehr.

KS: Curtis (1901)

Navicula silicula Ehr.

NE: Ehrenberg (1856), Elmore (1921)

OK: Ehrenberg (1856)

Navicula ventricosa Ehr.

NE: Elmore (1921)

***Caloneis ventricosa* var. *alpina* (Cl.) Patr.**

OK: Troeger (1978)

***Caloneis ventricosa* var. *minuta* (Grun.) Patr.**

KS: Harris and Eberle (2001), Patrick and Reimer (1966)

Also reported as:

Navicula ventricosa f. *minuta* Grun.

KS: Curtis (1901)

***Caloneis ventricosa* var. *subundulata* (Grun.) Patr.**

KS: Wujek et al. (1980)

***Caloneis ventricosa* var. *truncatula* (Grun.) Meist.**

OK: Koch and Risser (1974), Troeger (1983)

Also reported as:

Caloneis silicula var. *truncatula* (Grun.) Cl.

OK: Pfister and Terry (1978)

► ***Campylodiscus clypeus* Ehr.**

KS: Czarnecki and Reinke (1981), Harris and Eberle (2001)

NE: Andersen and Walker (1920), Elmore (1921)

***Campylodiscus noricus* Ehr.**

OK: Koch and Risser (1974)

***Campylodiscus noricus* var. *hibernicus* (Ehr.) Grun.**

KS: Reinke (1979a)

► ***Cavinula cocconeiformis* (Greg. ex Grun.) D. Mann & Stickle**

Reported as:

Navicula cocconeiformis Greg. ex Grun.

NE: Elmore (1921), Patrick and Reimer (1966)

***Cavinula jaerenfeltii* (Hust.) D. Mann & Stickle**

Reported as:

Navicula jaerenfeltii Hust.

OK: Pfister et al. (1979)

***Cavinula lacustris* (Greg.) D. Mann & Stickle**

Reported as:

Navicula lacustris Krasske

OK: Wilhm et al. (1978)

***Cavinula variostrata* (Krasske) D. Mann**

Reported as:

Navicula variostrata Krasske

OK: Troeger (1983)

► ***Cocconeis diaphana* W. Sm. = ?**

KS: Wolle (1889) [see Eberle (1981:25)]

Cocconeis diminuta Pant. = *Cocconeis neodiminuta* Krasske

***Cocconeis disculus* (Schum.) Cl.**

NE: Elmore (1921)

***Cocconeis fluviatilis* Wall.**

OK: Kennedy and Pfister (1984)

Cocconeis lineata Ehr. = *Cocconeis placentula* var. *lineata* (Ehr.) V.H.

***Cocconeis mexicana* Ehr.**

OK: Ehrenberg (1856)

***Cocconeis neodiminuta* Krasske**

Reported as:

Cocconeis diminuta Pant.

NE: Hoagland et al. (1982)

OK: Wilhm et al. (1978)

***Cocconeis pediculus* Ehr.**

CO: Cockerell (1888)

KS: Curtis (1901), Wenke and Eberle (1986), ?Williams et al. (1979), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Elmore (1921), Webber (1889, 1890), WPSS (1961-1963)

OK: Pfister et al. (1979), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

***Cocconeis placentula* Ehr.**

KS: Wujek (1965)

NE: Andersen and Walker (1920), ?Ehrenberg (1856), Elmore (1921), Hoagland et al. (1982), F.A. Morris et al. (1979), Williams (1962), WPSS (1961-1963, 1966)

OK: Koch and Risser (1974), Leake (1945), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Troeger and Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

***Cocconeis placentula* var. *euglypta* (Ehr.) Cl.**

KS: Harris and Eberle (2001), Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Troeger (1978)

Plains States: Patrick and Reimer (1966)

***Cocconeis placentula* var. *lineata* (Ehr.) V.H.**

KS: Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Elmore (1921), Hoagland et al. (1982)

OK: Pfister and Terry (1978), Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

Also reported as:

Cocconeis lineata Ehr.

KS: ?Wolle (1889)

OK: Ehrenberg (1856)

***Cocconeis rugosa* Sov.**

OK: Pfister et al. (1979)

***Cocconeis striata* Ehr.**

OK: Ehrenberg (1856)

- ***Cocconema australicum* A.S. = *Cymbella australica* (A.S.) Cl.**
Cocconema cistula (Ehr.) Ehr. = *Cymbella cistula* (Ehr.) Kirchn.
Cocconema cornutum Ehr. = *Cymbella lanceolata* var. *cornuta* (Ehr.) Grun.
Cocconema cymbiforme (Ag.) Cl. = *Cymbella cymbiformis* Ag.
Cocconema fusidium Ehr. = *Cymbella affinis* Kütz.
Cocconema helveticum = *Cymbella*?
KS: Curtis (1901) [see Eberle (1981:37)]
Cocconema hungaricum = *Cymbella*?
KS: Curtis (1901) [see Eberle (1981:36-37)]
Cocconema lanceolatum (Ag.) Ehr. = *Cymbella lanceolata* (Ag.) Ag.
Cocconema lunula Ehr. = *Encyonema minutum* (Hilse ex Rab.) D. Mann
Cocconema mexicanum Ehr. = *Cymbella mexicana* (Ehr.) Cl.

► ***Craticula accomoda* (Hust.) D. Mann**

KS: Harris and Eberle (2001)

Also reported as:

Navicula accomoda Hust.

KS: Powers (1969), Wujek et al. (1980)
MO: Pamperl (1980)
OK: Pfister et al. (1979), Troeger (1978, 1983)
Plains States: Patrick and Reimer (1966)

***Craticula ambigua* (Ehr.) D. Mann**

Reported as:

Navicula ambigua Ehr.

KS: Curtis (1901)
NE: Andersen and Walker (1920), Elmore (1921)
Navicula cuspidata var. *ambigua* (Ehr.) Cl..
KS: McFarland et al. (1964), Powers (1969)

***Craticula cuspidata* (Kütz.) D. Mann**

KS: Harris and Eberle (2001)

Also reported as:

Navicula cuspidata (Kütz.) Kütz.

CO: M.K. Morris et al. (1979b)
KS: Curtis (1901), McFarland et al. (1964), Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)
MO: Pamperl (1980), Williams (1962), WPSS (1966)
NE: Andersen and Walker (1920)
OK: Hern et al. (1979), Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Troeger and Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978)
Plains States: Patrick and Reimer (1966)
Navicula cuspidata f. *craticula* (V.H.) Perag. & Hérrib.
NE: Andersen and Walker (1920)
Navicula fulva Ehr.
NE: Elmore (1921)
OK: Ehrenberg (1856)

***Craticula cuspidata* var. *major* (Meist.) Czarn.**

Reported as:

Navicula cuspidata var. *major* Meist.

KS: Wenke and Eberle (1985)
OK: Pfister et al. (1979), Troeger (1978), Troeger and Menzel (1986)

***Craticula guatemalensis* (Cl. & Grev.) Lange-Bert.**

Reported as:

Navicula guatemalensis Cl. & Grev.

NE: Elmore (1921), Patrick and Reimer (1966)

***Craticula halophila* (Grun.) D. Mann**

KS: Harris and Eberle (2001)

Also reported as:

Navicula halophila Grun.

KS: Wujek et al. (1980)
NE: Hoagland et al. (1982)
OK: Troeger (1978), Wilhm et al. (1978)

***Craticula halophila* f. *robusta* (Hust.) Czarn.**

Reported as:

Navicula halophila f. *robusta* Hust.

KS: Czarnecki and Reinke (1981)

***Craticula halophila* f. *tenuirostris* (Hust.) Czarn.**

Reported as:

Navicula halophila f. *tenuirostris* Hust.

KS: Wujek et al. (1980)

OK: Troeger (1978)

***Craticula molesta* (Krasske) Lange-Bert.**

Reported as:

Navicula molesta Krasske

MO: Pamperl (1980)

► ***Cylindrotheca gracilis* (Bréb. ex Kütz.) Grun.**

CO: ?M.K. Morris et al. (1979*b*)

KS: Czarnecki and Reinke (1981), Harris and Eberle (2001)

OK: Koch (1975)

► ***Cymatopleura apiculata* W. Sm. = *Cymatopleura solea* var. *apiculata* (W. Sm.) Ralfs. [= *C. librile* (Ehr.) Pant. ?]**

***Cymatopleura elliptica* (Bréb.) W. Sm.**

KS: Curtis (1901), Harris and Eberle (2001), Wenke and Eberle (1986), Wujek et al. (1980)

OK: Koch and Risser (1974), Seyfer and Wilhm (1977), Troeger (1978)

Also reported as:

Sphinctocystis elliptica (Bréb. ex Kütz.) Kuntze

KS: Elmore (1921)

NE: Elmore (1921)

***Cymatopleura elliptica* f. *spiralis* Boyer**

NE: F.A. Morris et al. (1979)

***Cymatopleura elliptica* var. *nobilis* (Hantzsch) Hust.**

OK: Troeger (1978)

***Cymatopleura librile* (Ehr.) Pant.**

Reported as:

Sphinctocystis librilis (Ehr.) Hass.

KS: Elmore (1921)

NE: Elmore (1921)

Schoeman and Archibald (1976-1980) submerged the taxa listed below in this species:

Cymatopleura apiculata W. Sm.

Cymatopleura solea (Bréb.) W. Sm.

Cymatopleura solea var. *regula* (Ehr.) Grun.

Surirella regula Ehr.

***Cymatopleura solea* (Bréb.) W. Sm. [= *Cymatopleura librile* (Ehr.) Pant. ?]**

KS: Curtis (1901), Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)

MO: M.K. Morris et al. (1979*a*)

NE: F.A. Morris et al. (1979), WPSS (1961-1963)

OK: Hern et al. (1979), Koch and Risser (1974), Pfister et al. (1979), Troeger (1978), Wilhm et al. (1977)

***Cymatopleura solea* var. *apiculata* (W. Sm.) Ralfs. [= *Cymatopleura librile* (Ehr.) Pant. ?]**

Reported as:

Cymatopleura apiculata (W. Sm.) Ralfs

KS: Curtis (1901)

***Cymatopleura solea* var. *regula* (Ehr.) Grun. [= *Cymatopleura librile* (Ehr.) Pant. ?]**

OK: Pfister et al. (1979)

Also reported as:

Surirella regula Ehr.

OK: Ehrenberg (1856)

► ***Cymbella aequalis* W. Sm.**

NE: Elmore (1921)

***Cymbella affinis* Kütz.**

KS: Curtis (1901), Wenke and Eberle (1986), Williams et al. (1979)

MO: Pamperl (1980)

NE: Elmore (1921), Hoagland et al. (1982), F.A. Morris et al. (1979), Roemer et al. (1984)

OK: Cooper and Wilhm (1975), Pfister et al. (1979)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cocconema fusidium Ehr.

OK: Ehrenberg (1856)

Cymbella parva W. Sm.

NE: Elmore (1921)

***Cymbella amphicephala* Naeg. ex Kütz.**

KS: Curtis (1901), Wenke and Eberle (1986)

NE: Andersen and Walker (1920), Elmore (1921)

Plains States: Patrick and Reimer (1975)

Cymbella anglica Lagerst. = *Cymbella naviculiformis* Auersw. ex Heib.

***Cymbella angustata* (W. Sm.) Cl.**

OK: Kennedy and Pfister (1984)

***Cymbella aspera* (Ehr.) H. Perag.**

KS: Wujek (1965), Wujek et al. (1980)

OK: Troeger (1978)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cymbella gastroides Kütz.

KS: Curtis (1901), Wolle (1889)

NE: Andersen and Walker (1920), Elmore (1921), Webber (1889, 1890)

***Cymbella australica* (A.S.) Cl.**

Reported as:

Cocconema australicum A.S.

KS: Curtis (1901)

Cymbella brehmii Hust. = *Encyonema brehmii* (Hust.) D. Mann

***Cymbella cistula* (Ehr.) Kirchn.**

NE: Andersen and Walker (1920), Elmore (1921), Roemer et al. (1984)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cocconema cistula (Ehr.) Ehr.

KS: Curtis (1901)

Cymbella cistula var. *maculata* (Kütz.) V.H.

OK: Koch and Risser (1974)

Cymbella cistula var. *maculata* (Kütz.) V.H. = *Cymbella cistula* (Ehr.) Kirchn.

***Cymbella cuspidata* Kütz.**

NE: Andersen and Walker (1920), Elmore (1921)

Plains States: Patrick and Reimer (1975)

***Cymbella cymbiformis* Ag.**

KS: Wujek et al. (1980)

NE: Andersen and Walker (1920), Elmore (1921), Webber (1890)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cocconema cymbiformis (Ag.) Cl.

KS: Curtis (1901)

***Cymbella cymbiformis* var. *nonpunctata* Font.**

KS: Wujek et al. (1980)

***Cymbella delicatula* Kütz.**

MO: Pamperl (1980)

OK: Patrick and Reimer (1975)

***Cymbella designata* Krasske**

Reported as:

Cymbella leptoceros (Ehr.) Kütz.

NE: Elmore (1921)

OK: Pfister et al. (1979)

Cymbella ehrenbergii Kütz. = *Cymbella inaequalis* (Ehr.) Rab.

Cymbella gastroides Kütz. = *Cymbella aspera* (Ehr.) H. Perag.

***Cymbella hauckii* V.H.**

KS: Wenke and Eberle (1986)

OK: Troeger (1978)

***Cymbella helvetica* Kütz.**

KS: Curtis (1901)

NE: Elmore (1921)

***Cymbella hustedtii* Krasske**

MO: Pamperl (1980)

***Cymbella inaequalis* (Ehr.) Rab.**

Plains States: Patrick and Reimer (1975)

Also reported as:

Cymbella ehrenbergii Kütz.

NE: Andersen and Walker (1920), Elmore (1921)

Pinnularia inaequalis Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Cymbella kamtschatica Grun. = *Cymbella mexicana* (Ehr.) Cl.

***Cymbella laevis* Naeg. ex Kütz.**

NE: Patrick and Reimer (1975), Roemer et al. (1984)

OK: Kennedy and Pfister (1984)

***Cymbella lanceolata* (Ag.) Ag.**

KS: Wujek et al. (1980)

NE: Andersen and Walker (1920), Elmore (1921)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cocconema lanceolatum (Ag.) Ehr.

KS: Curtis (1901)

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

***Cymbella lanceolata* var. *cornuta* (Ehr.) Grun.**

Reported as:

Cocconema cornutum Ehr.

OK: Ehrenberg (1856)

***Cymbella lata* Grun.**

NE: Roemer et al. (1984)

Cymbella leptoceros (Ehr.) Kütz. = *Cymbella designata* Krasske

Cymbella lunata W. Sm. = *Encyonema lunatum* (W. Sm.) V.H.

***Cymbella mexicana* (Ehr.) Cl.**

KS: Wujek et al. (1980)

OK: Koch and Risser (1974)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cocconema mexicanum Ehr.

KS: Curtis (1901)

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Cymbella kamtschatica Grun.

KS: Curtis (1901)

***Cymbella mexicana* var. *janischii* (A.S.) Reim.**

KS: Wujek et al. (1980)

OK: ?Patrick and Reimer (1975)

***Cymbella microcephala* Grun.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), Roemer et al. (1984)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cymbella minuscula Grun.

KS: Curtis (1901) [see Patrick and Reimer (1975:34)]

Cymbella minuscula Grun. = *Cymbella microcephala* Grun.

Cymbella minuta Hilse ex Rab. = *Encyonema minutum* (Hilse ex Rab.) D. Mann

Cymbella minuta f. *latens* (Krasske) Reim. = *Encyonema latens* (Krasske) D. Mann

Cymbella minuta var. *silesiaca* (Bleisch ex Rab.) Reim. = *Encyonema silesiacum* (Bleisch ex Rab.) D. Mann

Cymbella muelleri Hust. = *Encyonema muelleri* (Hust.) D. Mann

***Cymbella naviculiformis* Auersw. ex Heib.**

KS: Curtis (1901)

NE: Andersen and Walker (1920), Elmore (1921)

OK: Koch and Risser (1974)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cymbella anglica Lagerst.

KS: Curtis (1901)

Cymbella parva W. Sm. = *Cymbella affinis* Kütz.

Cymbella prostrata (Berk.) Cl. = *Encyonema prostratum* (Berk.) Kütz.

Cymbella prostrata var. *auerswaldii* (Rab.) Reim. = *Encyonema auerswaldii* Rab.

***Cymbella pusilla* Grun.**

KS: Curtis (1901), Harris and Eberle (2001)

NE: Elmore (1921), Hoagland et al. (1982)

OK: Troeger (1983)

Plains States: Patrick and Reimer (1975)

***Cymbella rupicola* Grun.**

OK: Pfister et al. (1979)

***Cymbella rutneri* Hust.**

NE: Roemer et al. (1984)

Cymbella sinuata Greg. = *Reimeria sinuata* (Greg.) Koc. & Stoerm.

Cymbella stomatophora Grun. = *Cymbella tumida* (Bréb. ex Kütz.) V.H.

***Cymbella subaequalis* Grun.**

NE: Andersen and Walker (1920), Patrick and Reimer (1975)

Cymbella triangulum (Ehr.) Cl. = *Encyonema triangulum* (Ehr.) Kütz.

***Cymbella tumida* (Bréb. ex Kütz.) V.H.**

KS: Harris and Eberle (2001), Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), F.A. Morris et al. (1979), Williams (1962), WPSS (1961-1963, 1966)

OK: Pfister and Terry (1978), Pfister et al. (1979), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cymbella stomatophora Grun.

KS: Curtis (1901)

***Cymbella tumidula* Grun. ex A.S.**

KS: Curtis (1901), Patrick and Reimer (1975)

MO: Pamperl (1980)

OK: Troeger (1978)

Cymbella turgida Greg. = *Encyonema turgidum* (Greg.) Grun. ex A.S.

***Cymbella turgidula* Grun.**

KS: Curtis (1901), Wenke and Eberle (1985)

MO: Pamperl (1980)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1975)

Cymbella ventricosa (Kütz.) Kütz. = *Encyonema minutum* (Hilse ex Rab.) D. Mann

► *Cystopleura argus* (Ehr.) Kuntze = *Epithemia argus* (Ehr.) Kütz.

Cystopleura gibba (Ehr.) DeT. = *Rhopalodia gibba* (Ehr.) O. Müll.

Cystopleura gibba var. *ventricosa* (Kütz.) DeT. = *Rhopalodia gibba* var. *ventricosa* (Kütz.) H. & M. Perag.

Cystopleura gibberula (Ehr.) Kuntze = *Rhopalodia gibberula* (Ehr.) O. Müll.

Cystopleura musculus (Kütz.) Kuntze = *Rhopalodia musculus* (Kütz.) O. Müll.

Cystopleura ocellata (Ehr.) Kuntze = *Epithemia ocellata* (Ehr.) Kütz.

Cystopleura sorex (Kütz.) Kuntze = *Epithemia sorex* Kütz.

Cystopleura turgida (Ehr.) Kuntze = *Epithemia turgida* (Ehr.) Kütz.

Cystopleura ventricosa (Kütz.) Elm. = *Rhopalodia gibba* var. *ventricosa* (Kütz.) H. & M. Perag.

Cystopleura zebra (Ehr.) Kuntze = *Epithemia adnata* (Kütz.) Bréb.

► ***Denticula elegans* Kütz.**

KS: Curtis (1901), Harris & Eberle (2001), Wujek et al. (1980)

NE: Andersen & Walker (1920), Elmore (1921), Roemer et al. (1984)

Plains States: Patrick & Reimer (1975)

***Denticula elegans* var. *kittoniana* (Grun.) DeT.**

NE: Patrick & Reimer (1975)

Denticula frigida Kütz. = *Denticula tenuis* var. *frigida* (Kütz.) Grun.

Denticula splendens = ?

KS: Curtis (1901) [see Eberle (1981:38)]

***Denticula tenuis* Kütz.**

KS: Curtis (1901), Patrick & Reimer (1975)

OK: Kennedy & Pfiester (1984)

***Denticula tenuis* var. *frigida* (Kütz.) Grun.**

Reported as:

Denticula frigida Kütz.

KS: Wujek (1965)

***Denticula thermalis* Kütz.**

KS: Curtis (1901), Patrick & Reimer (1975)

OK: Wilhm et al. (1977), Willson & Forest (1957)

► ***Diadesmis confervacea* Kütz.**

Reported as:

Navicula confervacea (Kütz.) Grun.

KS: Wujek et al. (1980)

***Diadesmis contenta* (Grun.) D. Mann**

Reported as:

Navicula contenta var. *biceps* (Arn.) V.H.

OK: Troeger (1983)

***Diadesmis peregrina* W. Sm.**

Reported as:

Navicula confervacea var. *hungarica* Grun.

KS: Curtis (1901)

Navicula confervacea var. *peregrina* (W. Sm.) Grun.

KS: Curtis (1901), Patrick and Reimer (1966)

MO: Pamperl (1980)

OK: Troeger (1978, 1983), Troeger and Menzel (1986)

► ***Diploneis*?**

Reported as:

Navicula elliptica var. *minuta* Grun.

KS: Curtis (1901) [see Eberle (1982:42)]

***Diploneis elliptica* (Kütz.) Cl.**

KS: Wujek et al. (1980)

NE: Elmore (1921)

OK: Koch & Risser (1974), Pfiester et al. (1979), Troeger (1983)

Plains States: Patrick & Reimer (1966)

Also reported as:

Navicula elliptica Kütz.

KS: Curtis (1901), Wolle (1889) [see Eberle (1982:41-42)]

NE: Andersen and Walker (1920)

***Diploneis fusca* var. *hyperborea* (Grun.) Hust.**

KS: Wujek et al. (1980)

***Diploneis interrupta* (Kütz.) Cl.**

KS: Harris & Eberle (2001)

Also reported as:

Navicula interrupta Kütz.

KS: Wolle (1889)

***Diploneis marginestriata* Hust.**

KS: Wujek et al. (1980)

OK: Koch & Risser (1974), Pfiester et al. (1979)

***Diploneis oblongella* (Naeg. ex Kütz.) Ross**

KS: Harris & Eberle (2001), Wenke & Eberle (1986)

NE: Roemer et al. (1984)

OK: Koch & Risser (1974)

Plains States: Patrick & Reimer (1966)

Also reported as:

Navicula elliptica var. *oblongella* (Naeg. ex Kütz.) Grun.

KS: Curtis (1901)

***Diploneis oculata* (Bréb.) Cl.**

MO: Pamperl (1980)

OK: Koch & Risser (1974), Troeger (1978)

Also reported as:

Navicula oculata Bréb.

KS: Curtis (1901)

***Diploneis pseudovalis* Hust.**

KS: Wenke & Eberle (1985, 1986)

NE: Hoagland et al. (1982), Patrick & Reimer (1966)

***Diploneis puella* (Schum.) Cl.**

KS: Czarnecki & Reinke (1981)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Koch & Risser (1974), Pfiester et al. (1979), Troeger (1978)

Plains States: Patrick & Reimer (1966)

***Diploneis smithii* (Bréb. ex W. Sm.) Cl.**

KS: WPSS (1961-1963)

OK: Hern et al. (1979), Koch (1975), Seyfer & Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962, 1964, 1972), Williams & Scott (1962), WPSS (1961-1963, 1966)

Plains States: Patrick & Reimer (1966)

Also reported as:

Navicula smithii Bréb. ex W. Sm.

KS: ?Curtis (1901)

***Diploneis smithii* f. *elliptica* ? = ?**

OK: Hern et al. (1979)

***Diploneis smithii* var. *pumila* (Grun.) Hust.**

KS: Williams et al. (1979)

► ***Encyonema*?**

Reported as:

Gloeonema gracile Ehr.

NE: Ehrenberg (1856)

***Encyonema auerswaldii* Rab.**

Reported as:

Cymbella prostrata var. *auerswaldii* (Rab.) Reim.

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

***Encyonema brehmii* (Hust.) D. Mann**

Reported as:

Cymbella brehmii Hust.

OK: Troeger (1978)

***Encyonema lunatum* (W. Sm.) V.H.**

Reported as:

Cymbella lunata W. Sm.

KS: Wujek et al. (1980)

MO: Pamperl (1980)

OK: Pfiester et al. (1979)

Encyonema lunula (Ehr.) Grun. = *Encyonema minutum* (Hilse ex Rab.) D. Mann

***Encyonema minutum* (Hilse ex Rab.) D. Mann**

Reported as:

Cocconema lunula Ehr.

OK: Ehrenberg (1856)

Cymbella minuta Hilse ex Rab.

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Pfiester et al. (1979), Seyfer and Wilhm (1977), Troeger (1983)

Cymbella ventricosa (Kütz.) Kütz.

KS: Powers (1969), WPSS (1961-1963)

NE: WPSS (1961-1963)

OK: Koch (1975), Koch and Risser (1974), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Encyonema lunula (Ehr) Grun.

KS: Curtis (1901)

Encyonema ventricosum (Kütz.) Grun.

KS: Curtis (1901)

NE: Elmore (1921)

***Encyonema latens* (Krasske) D. Mann.**

Reported as:

Cymbella minuta f. *latens* (Krasske) Reim.

MO: Pamperl (1980)

***Encyonema muelleri* (Hust.) D. Mann**

Reported as:

Cymbella muelleri Hust.

MO: Pamperl (1980)

OK: Pfister et al. (1979)

***Encyonema prostratum* (Berk.) Kütz.**

NE: Elmore (1921)

Also reported as:

Cymbella prostrata (Berk.) Cl.

MO: Pamperl (1980)

OK: Koch and Risser (1974), Pfister et al. (1979)

Plains States: Patrick and Reimer (1975)

Gloeonema paradoxum Ehr.

NE: Ehrenberg (1856)

OK: ?Ehrenberg (1856)

***Encyonema silesiacum* (Bleisch ex Rab.) D. Mann**

Reported as:

Cymbella minuta var. *silesiaca* (Bleisch ex Rab.) Reim.

KS: Wenke and Eberle (1985, 1986)

NE: Hoagland et al. (1982), Roemer et al. (1984)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1975)

***Encyonema triangulum* (Ehr.) Kütz.**

KS: Curtis (1901), Harris & Eberle (2001)

Also reported as:

Cymbella triangulum (Ehr.) Cl.

KS: Wenke and Eberle (1986), Wujek et al. (1980)

NE: Hoagland et al. (1982)

OK: Koch (1975), Pfister et al. (1979), Troeger (1983)

Plains States: Patrick and Reimer (1975)

***Encyonema turgidum* (Greg.) Grun. ex A.S.**

KS: Curtis (1901), Elmore (1921)

NE: Andersen & Walker (1920), Elmore (1921)

Also reported as:

Cymbella turgida Greg.

NE: F.A. Morris et al. (1979)

OK: Wilhm et al. (1977), Wilhm et al. (1978)

***Encyonema ventricosum* (Kütz.) Grun. = *Encyonema minutum* (Hilse ex Rab.) D. Mann**

► ***Entomoneis alata* (Ehr.) Ehr.**

CO: M.K. Morris et al. (1979b)

KS: Harris & Eberle (2001), Reinke (1985), Wenke & Eberle (1986), Williams et al. (1979)

Plains States: ?Patrick & Reimer (1975)

Also reported as:

Amphiprora alata (Ehr.) Kütz.

KS: McFarland et al. (1964), Powers (1969), Williams (1962), WPSS (1966)

NE: Elmore (1921)

OK: Koch (1975), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), WPSS (1966)

Amphiprora conspicua Grev.

KS: Curtis (1901) [see Patrick and Reimer (1975:6)]

Navicula alata Ehr.

OK: ?Ehreneberg (1856)

***Entomoneis ornata* (Bail.) Reim.**

Plains States: Patrick & Reimer (1975)

Also reported as:

Amphiprora ornata Bail.

KS: Powers (1969)

NE: Elmore (1921)

OK: Troeger (1978)

***Entomoneis paludosa* (W. Sm.) Reim.**

KS: Harris & Eberle (2001), Reinke (1985), Wenke & Eberle (1986), Wujek et al. (1980)

OK: Hern et al. (1979), Seyfer & Wilhm (1977)

Plains States: Patrick & Reimer (1975)

Also reported as:

Amphiprora paludosa W. Sm.

KS: Curtis (1901), Williams (1962, 1964), Williams and Scott (1962), WPSS (1961-1963, 1966)

OK: Cooper and Wilhm (1975), Wilhm et al. (1977), Williams (1962, 1964), Williams and Scott (1962), WPSS (1961-1963, 1966)

***Entomoneis paludosa* var. *duplex* (Donk.) Czarn. & Reinke**

KS: Czarnecki & Reinke (1981), Czarnecki & Reinke (1982a)

***Entomoneis pulchra* (Bail.) Reim.**

Reported as:

Amphiprora pulchra Bail.

NE: Webber (1890)

***Entomoneis robusta* (McCall) Reim.**

KS: Harris & Eberle (2001)

OK: Kennedy & Pfister (1984)

► ***Epithemia adnata* (Kütz.) Bréb.**

OK: Troeger (1983)

Plains States: Patrick & Reimer (1975)

Also reported as:

Cystopleura zebra (Ehr.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

Epithemia zebra (Ehr.) Kütz.

KS: Curtis (1901)

Eunotia zebra Ehr.

OK: Ehrenberg (1856)

***Epithemia adnata* var. *minor* (Perag. & Herib.) Patr.**

KS: Czarnecki & Reinke (1981)

***Epithemia adnata* var. *porcellus* (Kütz.) Patr.**

OK: Troeger & Menzel (1986)

Also reported as:

Epithemia zebra var. *porcellus* (Kütz.) Grun.

OK: Pfister & Terry (1978), Troeger (1978)

***Epithemia adnata* var. *proboscidea* (Kütz.) Patr.**

OK: Pfister et al. (1979)

***Epithemia adnata* var. *saxonica* (Kütz.) Patr.**

Plains States: Patrick & Reimer (1975)

***Epithemia argus* (Ehr.) Kütz.**

KS: Wolle (1889)

NE: ?Webber (1890)

Plains States: Patrick & Reimer (1975)

Also reported as:

Cystopleura argus (Ehr.) Kuntze

NE: Elmore (1921)

***Epithemia argus* var. *alpestris* Grun.**

KS: Czarnecki & Reinke (1981)

***Epithemia argus* var. *longicornis* (Ehr.) Grun.**

KS: Harris & Eberle (2001)

Epithemia gibba (Ehr.) Kütz. = *Rhopalodia gibba* (Ehr.) O. Müll.

Epithemia gibba var. *ventricosa* (Kütz.) Grun. = *Rhopalodia gibba* var. *ventricosa* (Kütz.) H. & M. Perag.

Epithemia gibberula (Ehr.) Kütz. = *Rhopalodia gibberula* (Ehr.) O. Müll.

***Epithemia ocellata* (Ehr.) Kütz.**

Plains States: Patrick & Reimer (1975)

Also reported as:

Cystopleura ocellata (Ehr.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

***Epithemia sorex* Kütz.**

KS: Curtis (1901), Wujek et al. (1980)

OK: Koch & Risser (1974), Troeger & Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick & Reimer (1975)

Also reported as:

Cystopleura sorex (Kütz.) Kuntze

NE: Elmore (1921)

***Epithemia turgida* (Ehr.) Kütz.**

KS: Harris & Eberle (2001), Wolle (1889), Wujek et al. (1980)

NE: Webber (1889, 1890)

Plains States: Patrick & Reimer (1975)

Also reported as:

Cystopleura turgida (Ehr.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

OK: Leake (1945)

Eunotia faba Ehr.

OK: Ehrenberg (1856)

Eunotia turgida (Ehr.) Ehr.

NE: Ehrenberg (1856)

***Epithemia turgida* var. *granulata* (Ehr.) Grun.**

Plains States: Patrick & Reimer (1975)

Also reported as:

Eunotia granulata Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Eunotia librile Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

***Epithemia turgida* var. *zebrina* (Ehr.) Rab.**

Reported as:

Eunotia zebrina Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Epithemia zebra (Ehr.) Kütz. = *Epithemia adnata* (Kütz.) Bréb.

Epithemia zebra var. *porcellus* (Kütz.) Grun. = *Epithemia adnata* var. *porcellus* (Kütz.) Patr.

► ***Eucoconois lapponica* var. *ninckei* (Guerm. & Mang.) Edlund**

Reported as:

Achnanthes lapponica var. *ninckei* (Guerm. & Mang.) Reim.

MO: Pamperl (1980)

OK: Pfiester et al. (1979)

► ***Eunotia amphioxys* Ehr. = *Hantzschia amphioxys* (Ehr.) Grun.**

***Eunotia arcus* Ehr.**

KS: Wujek et al. (1980)

NE: Elmore (1921)

Plains States: Patrick & Reimer (1966)

***Eunotia curvata* (Kütz.) Lagerst.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Rosowski et al. (1986)

OK: Koch & Risser (1974), Pfiester et al. (1979), Seyfer & Wilhm (1977), Troeger (1978, 1983)

Plains States: Patrick & Reimer (1966)

Also reported as:

Eunotia lunaris (Ehr.) Grun.

KS: Curtis (1901)

NE: Andersen & Walker (1920), Elmore (1921)

***Eunotia diodon* Ehr.**

NE: Andersen & Walker (1920), Elmore (1921)

Plains States: Patrick & Reimer (1966)

Eunotia faba Ehr. = *Epithemia turgida* (Ehr.) Kütz.? [see VanLandingham (1967-1979:1517-1518)]

***Eunotia fallax* A. Cl.**

OK: Troeger (1983)

***Eunotia formica* Ehr.**

NE: Elmore (1921)

OK: Troeger (1978)

Plains States: Patrick & Reimer (1966)

Eunotia gibba Ehr. = *Rhopalodia gibba* (Ehr.) O. Müll.

Eunotia gibberula Ehr. = *Rhopalodia gibberula* (Ehr.) O. Müll.

***Eunotia glacialis* Meist.**

Plains States: Patrick & Reimer (1966)

Also reported as:

Eunotia gracilis (Ehr.) Rab.

KS: Curtis (1901)

Eunotia gracilis (Ehr.) Rab. = *Eunotia glacialis* Meist.

Eunotia granulata Ehr. = *Epithemia turgida* var. *granulata* (Ehr.) Brun

***Eunotia incisa* W. Sm. ex Greg.**

OK: Troeger (1983)

Eunotia librile Ehr. = *Epithemia turgida* var. *granulata* (Ehr.) Brun

Eunotia lunaris (Ehr.) Grun. = *Eunotia curvata* (Kütz.) Lagerst.

Eunotia lunula Ehr. = *Epithemia lunula* (Ehr.) Ralfs? [see Patrick & Reimer (1966:221)]

KS: Curtis (1901)

***Eunotia maior* (W. Sm.) Rab. [also as *E. major*]**

NE: Andersen & Walker (1920), Elmore (1921)

OK: Pfister et al. (1979)

Plains States: Patrick & Reimer (1966)

***Eunotia monodon* Ehr.**

KS: Wujek et al. (1980)

***Eunotia naegeli* Migula**

OK: Pfister et al. (1979)

***Eunotia parallela* Ehr.**

KS: Wujek et al. (1980)

Eunotia paradoxa Ehr. = ?

NE: Ehrenberg (1856)

***Eunotia pectinalis* (O. Müll.) Rab.**

OK: Hern et al. (1979)

***Eunotia pectinalis* f. *impressa* (Ehr.) Hust.**

Reported as:

Eunotia pectinalis var. *minor* f. *impressa* Ehr.

OK: Troeger (1978, 1983)

Eunotia pectinalis var. *minor* f. *impressa* Ehr. = *Eunotia pectinalis* f. *impressa* (Ehr.) Hust.

***Eunotia pectinalis* var. *ventricosa* Grun.**

Plains States: Patrick & Reimer (1966)

***Eunotia perpusilla* Grun.**

OK: Pfister et al. (1979)

***Eunotia septentrionalis* Østr.**

OK: Pfister et al. (1979)

Eunotia sphaerula Ehr. = *Rhopalodia gibberula* var. *sphaerula* (Ehr.) O. Müll.

Eunotia turgida (Ehr.) Ehr. = *Epithemia turgida* (Ehr.) Kütz.

***Eunotia valida* Hust.**

OK: Troeger (1978)

Eunotia zebra Ehr. = *Epithemia adnata* (Kütz.) Bréb.

Eunotia zebrina Ehr. = *Epithemia turgida* var. *zebrina* (Ehr.) Rab.

► ***Fallacia insociabilis* (Krasske) D. Mann**

Reported as:

Navicula insociabilis Krasske

MO: Pamperl (1980)

***Fallacia pygmaea* (Kütz.) Stickle & D. Mann**

KS: Harris and Eberle (2001)

Also reported as:

Navicula pygmaea Kütz.

KS: Powers (1969), Wenke and Eberle (1986), Wujek et al. (1980)

NE: Elmore (1921)

OK: Hern et al. (1979), Koch (1975), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

***Fallacia subhamulata* (Grun.) D. Mann**

Reported as:

Navicula subhamulata Grun.

MO: Pamperl (1980)

***Fallacia tenera* (Hust.) D. Mann**

Reported as:

Navicula tenera Hust.

KS: Wujek et al. (1980)

NE: Hoagland et al. (1982)

OK: Seyfer and Wilhm (1977), Troeger (1978)

- ***Frustulia interposita* (Lewis) Cl.**
OK: Wilhm et al. (1977)
- Frustulia rhomboides* (Ehr.) DeT.**
KS: Branson (1966)
OK: Pfister et al. (1979)
- Frustulia rhomboides* var. *amphipleuroides* (Grun.) Cl.**
KS: Wenke and Eberle (1985)
- Frustulia rhomboides* var. *capitata* (A. Mayer) Patr.**
OK: Pfister et al. (1979)
- Frustulia rhomboides* var. *saxonica* (Rab.) DeT.**
Plains States: Patrick and Reimer (1966)
- Frustulia vulgaris* (Thw.) DeT.**
KS: Wenke and Eberle (1985, 1986)
OK: Cooper and Wilhm (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1983), Wilhm et al. (1977)
Plains States: Patrick and Reimer (1966)
- Also reported as:**
Brebissonia vulgaris (Thw.) Kuntze
NE: Andersen and Walker (1920), Elmore (1921)
Navicula rhomboides var. ? (*Colletonema vulgare* Thw.)
KS: Curtis (1901)
- ***Geissleria decussis* (Østrup) Lange-Bert. & Metz.**
Reported as:
Navicula decussis Østr.
KS: Wujek et al. (1980)
NE: Roemer et al. (1984)
OK: ?Koch (1975), Koch and Risser (1974), Pfister et al. (1979)
- Geissleria thingvallae* (Østrup) Metz. & Lange-Bert.**
Reported as:
Navicula latens Krasske
NE: ?F.A. Morris et al. (1979)
- Geissleria schoenfeldii* (Hust.) Lange-Bert. & Metz.**
Reported as:
Navicula schoenfeldii Hust.
OK: Troeger (1978)
- ***Gloeonema gracile* Ehr. = *Encyonema*?**
Gloeonema paradoxum Ehr. = *Encyonema prostratum* (Berk.) Kütz.
- ***Gomphoneis erienne* (Grun.) Skv. & Meyer**
NE: Hoagland et al. (1982)
Plains States: Patrick and Reimer (1975)
Also reported as:
Gomphonema erienne Grun.
NE: Elmore (1921)
- Gomphoneis exigua* (Kütz.) Medlin**
Reported as:
Gomphonema exiguum Kütz.
NE: Elmore (1921)
- Gomphoneis herculeana* (Ehr.) Cl.**
Plains States: Patrick and Reimer (1975)
Also reported as:
Gomphonema herculeanum Ehr.
NE: Andersen and Walker (1920), Ehrenberg (1856), Elmore (1921)
- Gomphoneis herculeana* var. *robusta* (Grun.) Cl.**
NE: Hoagland et al. (1982), Roemer et al. (1984)

***Gomphoneis olivacea* (Hornemann) Dawson ex Ross & Sims**

Reported as:

Gomphonema olivaceum (Lyngb.) Kütz.

KS: Curtis (1901), Elmore (1921), Harris and Eberle (2001), McFarland et al. (1964), Powers (1969), Wenke and Eberle (1986), Williams et al. (1979), WPSS (1961-1963), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Elmore (1921), Hoagland et al. (1982), F.A. Morris et al. (1979), Roemer et al. (1984), WPSS (1961-1963)

OK: Cooper and Wilhm (1975), Koch (1975), Leake (1945), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1983), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962, 1964), WPSS (1961-1963, 1966)

Plains States: Patrick and Reimer (1975)

***Gomphoneis olivacea* var. *calcarea* (Cleve) Poulin**

Reported as:

Gomphonema olivaceum var. *calcareum* (Cl.) Cl.

KS: Harris and Eberle (2001)

OK: Troeger (1978)

► ***Gomphonema abbreviatum* Ag.**

KS: Curtis (1901)

MO: Pamperl (1980)

OK: Pfister et al. (1979)

***Gomphonema acuminatum* Ehr.**

KS: Wujek et al. (1980)

NE: Andersen and Walker (1920), Elmore (1921)

OK: Pfister et al. (1979), Troeger (1983), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema acuminatum var. *coronatum* (Ehr.) Rab.

KS: Wujek (1965)

OK: Koch and Risser (1974)

Gomphonema acuminatum var. *coronatum* (Ehr.) Rab. = *Gomphonema acuminatum* Ehr.

***Gomphonema affine* Kütz.**

KS: Curtis (1901), Harris and Eberle (2001), Powers (1969), Wujek et al. (1980)

NE: Hoagland et al. (1982)

OK: Pfister et al. (1979), Troeger (1983), Troeger and Menzel (1986)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema affine f. *major* Grun.

KS: Curtis (1901)

Gomphonema affinis ?

KS: Curtis (1901) [*G. affine* and *G. affinis* were listed separately in the same list by Curtis (1901:69)]

Gomphonema affine f. *major* Grun. = *Gomphonema affine* Kütz.

***Gomphonema affine* var. *insigne* (Greg.) Andr.**

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema insigne Greg.

KS: Curtis (1901)

Gomphonema affinis? = *Gomphonema affine* Kütz.?

***Gomphonema angustatum* (Kütz.) Rab.**

KS: Curtis (1901), Harris and Eberle (2001), Powers (1969), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Elmore (1921)

OK: Koch and Risser (1974), Pfister et al. (1979), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1975)

***Gomphonema angustatum* var. *intermedia* Grun.**

KS: Curtis (1901), Powers (1969)

MO: Pamperl (1980)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema angustatum var. *obesa* Lauby

KS: Powers (1969)

Gomphonema angustatum var. *obesa* Lauby = *Gomphonema angustatum* var. *intermedia* Grun.

***Gomphonema angustatum* var. *obtusatum* (Kütz.) Grun.**

KS: Patrick and Reimer (1975)

Also reported as:

Gomphonema obtusatum (Kütz.) Grun.

KS: Curtis (1901)

***Gomphonema angustatum* var. *productum* Grun.**

KS: Curtis (1901)

OK: Troeger (1983)

Plains States: Patrick and Reimer (1975)

***Gomphonema angustatum* var. *sarcophagus* (Greg.) Grun.**

OK: Troeger (1983)

Also reported as:

Gomphonema sarcophagus Greg.

KS: Curtis (1901)

***Gomphonema apicatum* Ehr.**

OK: Troeger (1978)

***Gomphonema apuncta* Wall.**

MO: Pamperl (1980)

***Gomphonema augar* Ehr.**

NE: Elmore (1921)

OK: Pfister et al. (1979), Troeger (1978)

Plains States: Patrick and Reimer (1975)

Gomphonema auritum A. Braun = *Gomphonema gracile* Ehr. emend V.H.

***Gomphonema brasiliense* Grun.**

Plains States: Patrick and Reimer (1975)

Gomphonema capitatum Ehr. = *Gomphonema truncatum* var. *capitatum* (Ehr.) Patr.

Gomphonema clavatum Ehr. = *Gomphonema truncatum* var. *clavatum* (Ehr.) comb. nov.?

***Gomphonema clevei* Fricke**

KS: Powers (1969)

MO: Pamperl (1980)

NE: Patrick and Reimer (1975)

OK: Pfister et al. (1979)

Gomphonema commutatum Grun. = *Gomphonema subclavatum* var. *commutatum* (Grun.) A. Mayer

Gomphonema commutatum var. *subramosum* = *Gomphonema subclavatum* var.?

KS: Curtis (1901) [unverified (Patrick and Reimer 1975:151)]

***Gomphonema consector* Hohn & Hellerm.**

KS: Wujek et al. (1980)

OK: Pfister et al. (1979)

Gomphonema constrictum Ehr. = *Gomphonema truncatum* Ehr.

***Gomphonema dichotomum* Kütz.**

MO: Pamperl (1980)

NE: Webber (1890) [also as *Gomphonema gracile* var. *dichotomum*]

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema intricatum var. *pumila* Grun.

KS: Curtis (1901)

OK: Koch and Risser (1974)

Gomphonema eriense Grun. = *Gomphoneis eriense* (Grun.) Skv. & Meyer

Gomphonema exiguum Kütz. = *Gomphoneis exigua* (Kütz.) Medlin

***Gomphonema gracile* Ehr. emend V.H.**

KS: Curtis (1901), Williams et al. (1979), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Andersen and Walker (1920), Elmore (1921), Hoagland et al. (1982)

OK: Ehrenberg (1856), Pfister and Terry (1978), Pfister et al. (1979), Troeger (1978, 1983)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema auritum A. Braun

KS: Curtis (1901)

Gomphonema gracile f. *parva* Grun.

KS: Curtis (1901)

Gomphonema gracile var. *naviculoides* (W. Sm.) Grun.

KS: Powers (1969)

Gomphonema gracile f. *parva* Grun. = *Gomphonema gracile* Ehr. emend V.H.

Gomphonema gracile var. *lanceolata* (Kütz.) Cl. = *Gomphonema grunowii* Patr.

***Gomphonema gracile* var. *longicolle* Ehr.**

Reported as:

Gomphonema longicolle Ehr.

NE: Ehrenberg (1856)

Gomphonema gracile var. *naviculoides* (W. Sm.) Grun. = *Gomphonema gracile* Ehr. emend V.H.

***Gomphonema grunowii* Patr.**

KS: Wujek et al. (1980)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema gracile var. *lanceolata* (Kütz.) Cl.

OK: Koch and Risser (1974)

Gomphonema lanceolatum Ehr.

NE: Elmore (1921)

***Gomphonema helveticum* Brun**

OK: Troeger (1978, 1983)

Gomphonema herculeanum Ehr. = *Gomphoneis herculeana* (Ehr.) Cl.

Gomphonema insigne Greg. = *Gomphonema affine* var. *insigne* (Greg.) Andr.

***Gomphonema intricatum* Kütz.**

KS: Wujek (1965)

NE: Elmore (1921), Hoagland et al. (1982), Roemer et al. (1984), Rosowski et al. (1986)

Plains States: Patrick and Reimer (1975)

Gomphonema intricatum var. *pumila* Grun. = *Gomphonema dichotomum* Kütz.

***Gomphonema intricatum* var. *vibrio* (Ehr.) Cl.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

Plains States: Patrick and Reimer (1975)

Gomphonema lagenula Kütz. = *Gomphonema parvulum* (Kütz.) Kütz.

Gomphonema lanceolatum Ehr. = *Gomphonema grunowii* Patr.

Gomphonema longiceps var. *subclavatum* Grun. = *Gomphonema subclavatum* (Grun.) Grun.

Gomphonema longiceps var. *subclavatum* f. *gracilis* Hust. = *Gomphonema subclavatum* (Grun.) Grun.

Gomphonema longicolle Ehr. = *Gomphonema gracile* var. *longicolle* Ehr.

Gomphonema mexicanum Grun. = *Gomphonema subclavatum* var. *mexicanum* (Grun.) Patr.

***Gomphonema montanum* Schum.**

KS: Elmore (1921)

NE: Andersen and Walker (1920), Elmore (1921)

OK: Koch (1975)

Plains States: Patrick and Reimer (1975) [*G. montanum* sensu Elmore (from KS and NE) is not *G. montanum* Schum. (Patrick and Reimer 1975:122)]

Gomphonema montanum var. *subclavatum* Grun. = *Gomphonema subclavatum* (Grun.) Grun.

Gomphonema obtusatum (Kütz.) Grun. = *Gomphonema angustatum* var. *obtusatum* (Kütz.) Grun.

Gomphonema obtusum Ehr. = nom. nud.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Gomphonema olivaceum (Lyngb.) Kütz. = *Gomphoneis olivacea* (Hornemann) Dawson ex Ross & Sims

Gomphonema olivaceum var. *calcareum* (Cl.) Cl. = *Gomphoneis olivacea* var. *calcareum* (Cleve) Poulin

Gomphonema olivaceum var. *vulgaris* = *Gomphoneis*?

KS: Curtis (1901) [misidentified (Patrick and Reimer 1975:152)]

***Gomphonema parvulum* (Kütz.) Kütz.**

KS: Curtis (1901), Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Andersen and Walker (1920), Elmore (1921), Hoagland et al. (1982), Roemer et al. (1984), Rosowski et al. (1986)

OK: Hern et al. (1979), Koch (1975), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Troeger and Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema lagenula Kütz.

KS: Curtis (1901)

Gomphonema parvulum var. *microcephum* (Kütz.) Cl.?

OK: Koch and Risser (1974)

Gomphonema parvulum var. *subcapitata* Grun.

KS: Curtis (1901)

Gomphonema parvulum var. *microcephum* (Kütz.) Cl. = *Gomphonema parvulum* var. *micropus* Cl.? [latter name = *Gomphonema parvulum* (Kütz.) Kütz.]

Gomphonema parvulum var. *subcapitata* Grun. = *Gomphonema parvulum* (Kütz.) Kütz.

***Gomphonema pseudotenellum* Lange-Bert.**

Also reported as:

Gomphonema tenellum Kütz.

MO: Pamperl (1980)

OK: Pfister et al. (1979)

Gomphonema sarcophagus Greg. = *Gomphonema anugustatum* var. *sarcophagus* (Greg.) Grun.

***Gomphonema semiapterum* Grun.**

KS: Patrick and Reimer (1975) [only as fossil (Hanna 1932)]

***Gomphonema simus* Hohn & Heller.**

OK: Pfister et al. (1979)

***Gomphonema sphaerophorum* Ehr.**

KS: Wujek (1965)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1975)

***Gomphonema subclavatum* (Grun.) Grun.**

KS: Powers (1969), Wenke and Eberle (1986)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Pfister et al. (1979), Seyfer and Wilhm (1977)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema longiceps var. *subclavatum* Grun.

OK: Koch and Risser (1974), Troeger (1978)

Gomphonema longiceps var. *subclavatum* f. *gracilis* (Kütz.) Cl.

OK: Pfister and Terry (1978)

Gomphonema montanum var. *subclavatum* Grun.

KS: Curtis (1901)

OK: Koch and Risser (1974)

***Gomphonema subclavatum* var. *commutatum* (Grun.) A. Mayer**

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema commutatum Grun.

KS: Curtis (1901)

***Gomphonema subclavatum* var. *mexicanum* (Grun.) Patr.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema mexicanum Grun.

KS: Curtis (1901)

***Gomphonema subtile* Ehr.**

KS: Wujek (1965)

Gomphonema tenellum Kütz. = *Gomphonema pseudotenellum* Lange-Bert.

***Gomphonema tergestinum* (Grun.) Fricke**

OK: Pfister et al. (1979)

***Gomphonema truncatum* Ehr.**

KS: Wenke and Eberle (1986), Wujek et al. (1980)

OK: Seyfer and Wilhm (1977)

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema constrictum Ehr.

KS: Curtis (1901), Wolle (1889)

NE: Andersen and Walker (1920), Elmore (1921), Webber (1889, 1890)

OK: Koch and Risser (1974), Leake (1945)

***Gomphonema truncatum* var. *capitatum* (Ehr.) Patr.**

Plains States: Patrick and Reimer (1975)

Also reported as:

Gomphonema capitatum Ehr.

CO: Cockerell (1888)

KS: Curtis (1901)

NE: Webber (1890) [also as *Gomphonema constrictum* var. *capitatum*]

***Gomphonema truncatum* var. *clavatum* (Ehr.) comb. nov.?**

Reported as *Gomphonema clavatum* Ehr., Patrick and Reimer (1975:151) equated this taxon with *Gomphonema constrictum* var. *clavatum* (Ehr.) Patr., but assigned *G. constrictum* Ehr. emend Kütz. to *G. truncatum* Ehr. (Patrick and Reimer 1975:119), which suggests the name given here.

Reported as:

Gomphonema clavatum Ehr.

KS: Curtis (1901)

NE: Webber (1889, 1890)

OK: Ehrenberg (1856)

***Gomphonema validum* Cl.**

NE: Elmore (1921)

***Gomphonema ventricosum* Greg.**

KS: Curtis (1901)

► ***Gyrosigma acuminatum* (Kütz.) Rab.**

KS: Harris and Eberle (2001), Reinke (1979a), Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Elmore (1921), Hoagland et al. (1982)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

Also reported as:

Gyrosigma kuetzingii (Grun.) Cl.

CO: WPSS (1961-1963)

KS: WPSS (1961-1963)

NE: Elmore (1921)

OK: WPSS (1961-1963)

Gyrosigma spencerii (Quek.) Griff. & Henfr.

KS: Elmore (1921), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Elmore (1921), Hoagland et al. (1982)

OK: Koch and Risser (1974), Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

Pleurosigma gracilentum Rab.

KS: Curtis (1901)

Pleurosigma kuetzingii Grun.

KS: Curtis (1901)

Pleurosigma spencerii (Quek.) W. Sm.

KS: Curtis (1901)

***Gyrosigma attenuatum* (Kütz.) Rab.**

NE: Elmore (1921)

Plains States: Patrick and Reimer (1966)

***Gyrosigma attenuatum* var. *scalprum* (Gaillon) Ralfs**

Reported as:

Navicula scalprum Gaillon

OK: Ehrenberg (1856)

Gyrosigma delicatulum (W. Sm.) Elm. = *Pleurosigma delicatulum* W. Sm.

***Gyrosigma euhippus* Sterr. & Ross**

Reported as:

Pleurosigma hippocampus Ehr.

KS: ?Curtis (1901)

***Gyrosigma eximium* (Thw.) Boyer emend Sterr.**

KS: ?Patrick and Reimer (1966)

OK: Pfister et al. (1979)

Also reported as:

Pleurosigma eximium (Thw.) Cl. & Grun.

KS: Curtis (1901)

***Gyrosigma fasciola* (Ehr.) Griff. & Henfr.**

KS: Powers (1969)

OK: ?Hern et al. (1979)

Gyrosigma kuetzingii (Grun.) Cl. = *Gyrosigma acuminatum* (Kütz.) Rab.

***Gyrosigma macrum* (W. Sm.) Griff. & Henfr.**

CO: ?M.K. Morris et al. (1979b)

***Gyrosigma obscurum* (W. Sm.) Griff. & Henfr.**

KS: Wenke and Eberle (1985)

***Gyrosigma obtusatum* (Sulliv. & Wormley) Boyer**

Reported as:

Gyrosigma scalproides (Rab.) Cl.

KS: Powers (1969)

NE: Elmore (1921)

Plains States: Patrick and Reimer (1966)

Gyrosigma scalproides (Rab.) Cl. = *Gyrosigma obtusatum* (Sulliv. & Wormley) Boyer

***Gyrosigma sciotense* (Sulliv. & Wormley) Cl.**

Plains States: ?Patrick and Reimer (1966)

Also reported as:

Pleurosigma sciotense Sulliv. & Wormley

KS: Curtis (1901)

Gyrosigma spencerii (Quek.) Griff. & Henfr. = *Gyrosigma acuminatum* (Kütz.) Rab.

Gyrosigma spencerii var. *curvula* (Grun.) Reim.? [status needs to be reassessed (Sterrenburg 1995:476-477)]

KS: Czarnecki and Reinke (1981), Wenke and Eberle (1986)

OK: Koch (1975)

► ***Hantzschia amphioxys* (Ehr.) Grun.**

CO: WPSS (1961-1963)

KS: Harris and Eberle (2001), Wenke and Eberle (1986), Williams et al. (1979), WPSS (1961-1963)

MO: M.K. Morris et al. (1979a)

NE: WPSS (1961-1963)

OK: Koch and Risser (1974), Pfiester et al. (1979), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Also reported as:

Eunotia amphioxys Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Homoeocladia amphioxys (Ehr.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

Nitzschia amphioxys (Ehr.) W. Sm.

KS: Curtis (1901), Wolle (1889)

***Hantzschia amphioxys* var. *capitata* O. Müll.**

KS: Wenke and Eberle (1986), Wujek et al. (1980)

NE: F.A. Morris et al. (1979)

OK: Troeger (1983)

***Hantzschia amphioxys* f. *vivax* Grun.**

KS: Wenke and Eberle (1986)

NE: Webber (1890) [and parenthetically as *Nitzschia vivax* Hantzsch]

Also reported as:

Nitzschia amphioxys var. *vivax* (Grun.) ?

KS: Curtis (1901)

***Hantzschia spectabilis* (Ehr.) Hust.**

Reported as:

Synedra spectabilis Ehr.

NE: Ehrenberg (1856)

Homoeocladia spectabilis (Ehr.) Kuntze

NE: Elmore (1921)

Nitzschia spectabilis (Ehr.) Ralfs

KS: Curtis (1901) [see Eberle (1982:105)]

NE: Andersen and Walker (1920)

***Hantzschia virgata* (Roper) Grun.**

OK: Wilhm et al. (1977), Willson and Forest (1957)

Also reported as:

Homoeocladia virgata (Roper) Kuntze

NE: Elmore (1921)

► ***Hippodonta capitata* (Ehr.) Lange-Bert., Metz., & Witk.**

Reported as:

Navicula capitata Ehr.

NE: Hoagland et al. (1982)

OK: Koch and Risser (1974), Pfiester et al. (1979), Seyfer and Wilhm (1977), Troeger (1983), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

Pinnularia capitata Ehr.

OK: Ehrenberg (1856)

***Hippodonta hungarica* (Grun.) Lange-Bert., Metz., & Witk.**

Reported as:

- Navicula capitata* var. *hungarica* (Grun.) Ross
KS: Harris and Eberle (2001), Wujek et al. (1980)
MO: Pamperl (1980)
OK: Koch (1975)
Plains States: Patrick and Reimer (1966)
Navicula humilis Donk.
NE: Andersen and Walker (1920)
Navicula hungarica Grun.
KS: Powers (1969)
NE: Elmore (1921)

- *Homoeocladia acicularis* (Kütz.) Kuntze = *Nitzschia acicularis* (Kütz.) W. Sm.
Homoeocladia amphibia (Grun.) Kuntze = *Nitzschia amphibia* Grun.
Homoeocladia amphioxys (Ehr.) Kuntze = *Hantzschia amphioxys* (Ehr.) Grun.
Homoeocladia angustata (W. Sm.) Kuntze = *Tryblionella angustata* W. Sm.
Homoeocladia apiculata (Greg.) Kuntze = *Tryblionella apiculata* Greg.
Homoeocladia arcus (Buhln.) Kuntze = *Nitzschia obtusa* W. Sm.
Homoeocladia brebissonii (W. Sm.) Kuntze = *Nitzschia brebissonii* W. Sm.
Homoeocladia commutata (Grun.) Kuntze = *Nitzschia commutata* Grun.
Homoeocladia dissipata (Kütz.) Kuntze = *Nitzschia dissipata* (Kütz.) Grun.
Homoeocladia dubia (W. Sm.) Elm. = *Nitzschia dubia* W. Sm.
Homoeocladia fasciculata (Grun.) Kuntze = *Nitzschia fasciculata* (Grun.) Grun.
Homoeocladia filiformis W. Sm. = *Nitzschia filiformis* (W. Sm.) V.H.
Homoeocladia frustulum (Kütz.) Kuntze = *Nitzschia frustulum* (Kütz.) Grun.
Homoeocladia hungarica (Grun.) Kuntze = *Tryblionella hungarica* (Grun.) D. Mann
Homoeocladia intermedia (Hantz.) Kuntze = *Nitzschia intermedia* Hantz.
Homoeocladia lanceolata (W. Sm.) Kuntze = *Nitzschia lanceolata* W. Sm.
Homoeocladia linearis (W. Sm.) Kuntze = *Nitzschia linearis* W. Sm.
Homoeocladia obtusa (Lyngb.) Elm. = *Nitzschia denticula* Grun.
Homoeocladia palea (Kütz.) Kuntze = *Nitzschia palea* (Kütz.) W. Sm.
Homoeocladia paxillifer (O. Müll.) Elm. = *Bacillaria paradoxa* Gmelin
Homoeocladia punctata (W. Sm.) Kuntze = *Tryblionella punctata* W. Sm.
Homoeocladia sigma (Kütz.) Kuntze = *Nitzschia sigma* (Kütz.) W. Sm.
Homoeocladia sigmoidea (Nitz.) Elm. = *Nitzschia sigmoidea* (Nitz.) W. Sm.
Homoeocladia spectabilis (Ehr.) Kuntze = *Hantzschia spectabilis* (Ehr.) Hust.
Homoeocladia subtilis (Grun.) Kuntze = *Nitzschia subtilis* (?Kütz.) Grun.
Homoeocladia tryblionella (Hantz.) Kuntze = *Tryblionella gracilis* W. Sm.
Homoeocladia umbonata (Ehr.) Kuntze = *Nitzschia umbonata* (Ehr.) Lange-Bert.
Homoeocladia vermicularis (Kütz.) Kuntze = *Nitzschia vermicularis* (Kütz.) Hantz.
Homoeocladia virgata (Roper) Kuntze = *Hantzschia virgata* (Roper) Grun.
Homoeocladia vitrea (Norm.) Kuntze = *Nitzschia vitrea* Norm.

► ***Karayevia clevei* (Grun.) Round & Bukht.**

Reported as:

- Achnanthes clevei* Grun.
MO: Pamperl (1980)

► ***Kobayasia subtilissima* (Cl.) Lange-Bert.**

Reported as:

- Navicula subtilissima* Cl.
OK: Koch and Risser (1974), Pfiester et al. (1979)

► ***Lemnicola hungarica* (Grun.) Round & Basson**

Reported as:

- Achnanthes hungarica* (Grun.) Grun.
KS: Wenke and Eberle (1986), Wujek et al. (1980)
MO: Pamperl (1980)
NE: Elmore (1921)
Plains States: Patrick and Reimer (1966)

► ***Luticola cohnii* (Hilse) D. Mann**

Reported as:

Navicula mutica var. *cohnii* (Hilse) Grun.

KS: Powers (1969), Wujek et al. (1980)

NE: Hoagland et al. (1982)

OK: Pfiester et al. (1979), Troeger (1978)

***Luticola goeppertiana* (Bleisch ex Rab.) D. Mann**

Reported as:

Navicula mutica var. *goeppertiana* (Bleisch ex Rab.) Grun.

KS: Curtis (1901)

***Luticola mutica* (Kütz.) D. Mann**

Reported as:

Navicula mutica Kütz.

KS: Powers (1969)

NE: Elmore (1921)

OK: Koch and Risser (1974), Pfiester et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983)

Plains States: Patrick and Reimer (1966)

Stauroneis semen Ehr.

NE: ?Ehrenberg (1856)

***Luticola stigma* (Patr.) Johansen**

Reported as:

Navicula mutica var. *stigma* Patr.

OK: Pfiester et al. (1979)

***Luticola tropica* (Hust.) comb. nov.?**

Reported as:

Navicula mutica var. *tropica* Hust.

OK: Pfiester et al. (1979)

***Luticola undulata* (Hilse) D. Mann**

Reported as:

Navicula mutica var. *undulata* (Hilse) Grun.

OK: Pfiester et al. (1979), Troeger (1983)

***Luticola ventricosa* (Kütz.) D. Mann**

Reported as:

Navicula mutica var. *ventricosa* (Kütz.) Cl.

OK: Troeger (1978)

► ***Mastogloia braunii* Grun.**

KS: Harris and Eberle (2001)

***Mastogloia dansei* (Thw.) W. Sm.**

KS: Harris and Eberle (2001)

Also reported as:

Mastogloia elliptica var. *dansei* (Thw.) Cl.

KS: Czarnecki and Reinke (1981), Wenke and Eberle (1986)

***Mastogloia elliptica* (Ag.) Cl.**

NE: Elmore (1921)

OK: Kennedy and Pfiester (1984)

Mastogloia elliptica var. *dansei* (Thw.) Cl. = *Mastogloia dansei* Thw. [see Stoermer (1967)]

***Mastogloia grevillei* W. Sm.**

NE: Elmore (1921), Patrick and Reimer (1966)

OK: Kennedy and Pfiester (1984)

***Mastogloia pumila* (Grun.) Cl.**

KS: Harris and Eberle (2001), Wujek et al. (1980)

***Mastogloia smithii* Thw. ex W. Sm.**

KS: Czarnecki and Reinke (1981)

Plains States: Patrick and Reimer (1966)

***Mastogloia smithii* var. *amphicephala* Grun.**

KS: Patrick and Reimer (1966)

OK: Pfiester et al. (1979)

***Mastogloia smithii* var. *lacustris* Grun.**

KS: Curtis (1901), Czarnecki and Reinke (1981), Patrick and Reimer (1966)

► ***Mayamaea atomus* (Kütz.) Lange-Bertalot**

Reported as:

Navicula atomus (Kütz.) Grun.

NE: Elmore (1921)

KS: Wujek et al. (1980)

OK: Pfiester et al. (1979), Troeger (1978)

Navicula caduca Hust.

KS: Powers (1969)

► ***Navicula accomoda* Hust. = *Craticula accomoda* (Hust.) D. Mann**

Navicula acrospheria (Bréb.) Kütz. = *Pinnularia abaujensis* (Pant.) Ross

Navicula affinis Ehr. = *Neidium affine* (Ehr.) Pfitz.

***Navicula agma* Hohn & Hellerm.**

MO: Pamperl (1980)

***Navicula aikenensis* Patr.**

OK: Pfiester et al. (1979)

Navicula alata Ehr. = *Entomoneis alata* (Ehr.) Ehr.

Navicula alternans Schum. = *Scoliopleura alternans* (Schum.) DeT.?

Navicula ambigua Ehr. = *Craticula ambigua* (Ehrenb.) D. Mann

***Navicula ammophila* var. *flanatica* (Grun.) Cl.**

Reported as:

Navicula flanatica Grun.

KS: Curtis (1901)

***Navicula amphibola* Cl.**

NE: Elmore (1921), Patrick and Reimer (1966)

OK: Kennedy and Pfiester (1984)

Navicula ampiceros Kütz. = *Navicula rhynchotella* Lange-Bert.

Navicula amphigomphus Ehr. = *Neidium iridis* var. *amphigomphus* (Ehr.) A. Mayer

Navicula amphilepta Ehr. nom. nud. = *Neidium*?

Navicula amphirhynchus Ehr. = *Neidium affine* var. *amphirhynchus* (Ehr.) Cl.

Navicula amphisbaena Bory = *Caloneis amphisbaena* (Bory) Cl.

Navicula ampliutum Ehr. = *Neidium ampliutum* (Ehr.) Kramm.

***Navicula anglica* Ralfs**

NE: Andersen and Walker (1920), Elmore (1921)

OK: Pfiester et al. (1979)

***Navicula anglica* var. *subsalsa* (Grun.) Cl.**

KS: Wujek et al. (1980)

OK: Pfiester et al. (1979), Troeger (1983)

***Navicula angusta* Grun.**

OK: Seyfer and Wilhm (1977), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

Navicula appendiculata (Ag.) Kütz. = *Pinnularia appendiculata* (Ag.) Cl.

***Navicula arenaria* Donk.**

KS: Curtis (1901), Patrick and Reimer (1966)

***Navicula arvensis* Hust.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Kennedy and Pfiester (1984)

***Navicula asellus* Weigold ex Hust.**

KS: Powers (1969)

Navicula atomoides Grun. = *Navicula minima* Grun.

Navicula atomus (Kütz.) Grun. = *Mayamaea atomus* (Kütz.) Lange-Bertalot

Navicula bacillariformis Grun. = *Sellaphora laevisima* (Kütz.) D. Mann

Navicula bacillum Ehr. = *Sellaphora bacillum* (Ehr.) D. Mann

Navicula bacillum f. *minor* Grun. = *Sellaphora bacillum* (Ehr.) D. Mann

***Navicula bergenensis* Hohn**

OK: Troeger (1978)

Navicula bicapitata var. *hybrida* Grun. = *Pinnularia microstauron* (Ehr.) Cl.

***Navicula bicephala* Hust.**

OK: Koch and Risser (1974)

Navicula biceps Ehr. = *Anomoeoneis sphaerophora* (Ehr.) Pfitz.

Navicula bisulcata Lagerst. = *Neidium bisulcatum* (Lagerst.) Cl.

***Navicula biconica* Patr.**

KS: Wujek et al. (1980)

NE: Hoagland et al. (1982)

Navicula borealis (Ehr.) Kütz. = *Pinnularia borealis* Ehr.

Navicula braunii Grun. = *Pinnularia braunii* (Grun.) Cl.

Navicula brebissonii Kütz. = *Pinnularia brebissonii* (Kütz.) Rab.

Navicula caduca Hust. = *Mayamaea atomus* (Kütz.) Lange-Bertalot

***Navicula canalis* Patr.**

KS: Powers (1969)

OK: Wilhm et al. (1977), Williams (1962), WPSS (1966)

Plains States: Patrick and Reimer (1966)

***Navicula cancellata* var. *retusa* (Bréb.) Cl.**

Reported as:

Navicula retusa Bréb.

KS: Curtis (1901)

Navicula capitata Ehr. = *Hippodonta capitata* (Ehr.) Lange-Bert., Metz., & Witk.

Navicula capitata var. *hungarica* (Grun.) Ross = *Hippodonta hungarica* (Grun.) Lange-Bert., Metz., & Witk.

***Navicula capitatoradiata* Germain ex Gasse**

Reported as:

Navicula salinarum var. *intermedia* (Grun.) Cl.

KS: Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)

NE: Hoagland et al. (1982), Roemer et al. (1984)

OK: Koch and Risser (1974), Troeger (1978)

Plains States: Patrick and Reimer (1966)

***Navicula cincta* (Ehr.) Ralfs**

KS: Boyer (1927b)

MO: Pamperl (1980)

NE: Elmore (1921)

Plains States: Patrick and Reimer (1966)

***Navicula circumtexta* Meist. ex Hust.**

KS: Czarnecki and Reinke (1981), Harris and Eberle (2001)

***Navicula citrus* Krasske**

OK: ?Hern et al. (1979)

Navicula cocconeiformis Greg. ex Grun. = *Cavinula cocconeiformis* (Greg. ex Grun.) D. Mann and Stickle

Navicula columnaris Ehr. = *Neidium affine* var. *amphirhynchus* (Ehr.) Cl.

Navicula commutata Grun. = *Pinnularia*?

Navicula confervacea (Kütz.) Grun. = *Diadesmis confervacea* Kütz.

Navicula confervacea var. *hungarica* Grun. = *Diadesmis peregrina* W. Sm.

Navicula confervacea var. *peregrina* (W. Sm.) Grun. = *Diadesmis peregrina* W. Sm.

Navicula conspicua A.S. = *Pinnularia conspicua* (A.S.) Cl.

Navicula contenta var. *biceps* (Arn.) V.H. = *Diadesmis contenta* (Grun.) D. Mann

***Navicula crucicula* (W. Sm.) Donk.**

KS: Wujek et al. (1980)

NE: Elmore (1921), Patrick and Reimer (1966)

***Navicula cryptocephala* Kütz. [= *Navicula cryptocephala* Lange-Bert. ?]**

CO: WPSS (1961-1963)

KS: Curtis (1901), Powers (1969), Wenke and Eberle (1986), Williams (1962), ?Williams et al. (1979), WPSS (1961-1963, 1966), Wujek et al. (1980)

MO: Pamperl (1980), Williams (1962), WPSS (1961-1963), WPSS (1966)

NE: Elmore (1921), Hoagland et al. (1982), Roemer et al. (1984), Webber (1890), WPSS (1961-1963)

OK: Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Wilhm et al. (1977),

Williams (1964), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

***Navicula cryptocephala* f. *minuta* Peters.**

OK: Troeger (1983), Troeger and Menzel (1986)

***Navicula cryptocephala* var. *exilis* (Kütz.) Grun.**

KS: Powers (1969)

Plains States: Patrick and Reimer (1966)

***Navicula cryptocephala* var. *veneta* (Kütz.) Rab.**

KS: Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Andersen and Walker (1920)

OK: Koch (1975), Koch and Risser (1974), Troeger (1978, 1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula pumila Grun.

KS: Curtis (1901)

Navicula veneta Kütz.

KS: Curtis (1901)

***Navicula cryptotenella* Lange-Bert.**

Reported as:

Navicula radiosa var. *tenella* (Bréb. ex Kütz.) Grun.

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), Roemer et al. (1984)

Plains States: Patrick and Reimer (1966)

Navicula tenella Bréb. ex Kütz.

KS: Curtis (1901)

Navicula cuspidata (Kütz.) Kütz. = *Craticula cuspidata* (Kütz.) D. Mann

Navicula cuspidata f. *craticula* (V.H.) Perag. & Héríb. = *Craticula cuspidata* (Kütz.) D. Mann?

Navicula cuspidata var. *ambigua* (Ehr.) Cl. = *Craticula ambigua* (Kütz.) D. Mann

Navicula cuspidata var. *major* Meist. = *Craticula cuspidata* var. *major* (Meist.) Czarn.

Navicula cymbula Donk. = *Navicula lanceolata* var. *cymbula* (Donk.) Cl.

Navicula decurrens (Ehr.) Kütz. = *Pinnularia decurrens* Ehr.

Navicula decussis Østr. = *Geissleria decussis* (Østrup) Lange-Bert. & Metz.

***Navicula demissa* Hust.**

MO: Pamperl (1980)

Navicula dicephala W. Sm = *Placoneis dicephala* (W. Sm.) Meresch.

Navicula dicephala f. *minor* Grun. = *Placoneis dicephala* f. *minor* (Grun.) Cox

***Navicula digitoradiata* (Greg.) Ralfs**

NE: Elmore (1921)

Navicula dilatata Ehr. = *Neidium dilatatum* (Ehr.) Cl.

Navicula dilatata Ehr. sensu A.S. = *Neidium iridis* var. *amphigomphus* (Ehr.) A Mayer

Navicula dirhynchus = ?

KS: Curtis (1901) [see Eberle (1982:88)]

Navicula divergens f. *minor* A.S. = *Pinnularia microstauron* (Ehr.) Cl.

Navicula dubia Ehr. = *Neidium dubium* (Ehr.) Cl.

Navicula elginensis (Greg.) Ralfs = *Placoneis elginensis* (Greg.) Cox

Navicula elginensis var. *neglecta* (Krasske) Patr. = *Placoneis elginensis* var. *neglecta* (Krasske) Kobayasi

Navicula elliptica Kütz. = *Diploneis elliptica* (Kütz.) Cl.

Navicula elliptica var. *minuta* Grun. = *Diploneis*?

Navicula elliptica var. *oblongella* (Naeg. ex Kütz.) Grun. = *Diploneis oblongella* (Naeg. ex Kütz.) Ross

***Navicula elmorei* Patr.**

NE: Patrick and Reimer (1966)

OK: Troeger (1983)

***Navicula excelsa* Krasske**

Reported as:

Navicula vaucheriae var. *densistriata* Lund

KS: Powers (1969)

Navicula exigua Greg. ex Grun. = *Placoneis exigua* (Greg. ex Grun.) Meresch.

Navicula exigua var. *capitata* Patr. = *Placoneis exigua* var. *capitata* (Patr.) comb. nov.?

***Navicula exilissima* Grun.**

MO: Pamperl (1980)

***Navicula falaisiensis* Grun.**

OK: Troeger (1983)

***Navicula festiva* Krasske**

MO: Pamperl (1980)

OK: Koch and Risser (1974), Troeger (1983)

Navicula firma Kütz. = *Neidium iridis* (Ehr.) Cl.

Navicula firma var. *subampliata* = *Neidium*?

Navicula flantica Grun. = *Navicula ammophila* var. *flantica* (Grun.) Cl.

Navicula fontinalis Grun. = *Caloneis bacillum* (Grun.) Cl.
Navicula fulva Ehr. = *Craticula cuspidata* (Kütz.) D. Mann
Navicula gastrum (Ehr.) Kütz. = *Placoneis gastrum* (Ehr.) Meresch.
Navicula gibba Ehr. = *Rhopalodia gibba* (Ehr.) O. Müll.
Navicula gibba var. *brevistriata* V.H. = *Pinnularia decurrens* Ehr.?
***Navicula gottlandica* Grun.**
 KS: Czarnecki and Reinke (1981)
 OK: Pfister et al. (1979)
Navicula gracilis Ehr. = *Navicula tripunctata* (O. Müll.) Bory
Navicula gracilis var. *schizonemoides* V.H. = *Navicula tripunctata* var. *schizonemoides* (V.H.) Patr.
***Navicula graciloides* A. Mayer**
 KS: Harris and Eberle (2001), Wujek et al. (1980)
 MO: Pamperl (1980)
 NE: Hoagland et al. (1982)
 OK: Pfister et al. (1979)
***Navicula gregaria* Donk.**
 KS: Curtis (1901), Harris and Eberle (2001)
 Plains States: Patrick and Reimer (1966)
***Navicula grimmei* Krasske**
 KS: Patrick and Reimer (1966)
Navicula guatemalensis Cl. & Grev. = *Craticula guatemalensis* (Cl. & Grev.) Lange-Bert.
***Navicula gysingensis* Foged**
 KS: Wujek et al. (1980)
 OK: Kennedy and Pfister (1984)
Navicula halophila (Grun.) Cl. = *Craticula halophila* (Grun.) D. Mann
Navicula halophila f. *robusta* Hust. = *Craticula halophila* f. *robusta* (Hust.) Czarn.
Navicula halophila f. *tenuirostris* Hust. = *Craticula halophila* f. *tenuirostris* (Hust.) Czarn.
***Navicula hambergii* Hust.**
 OK: Troeger (1983)
Navicula hemiptera Kütz. = *Pinnularia acuminata* W. Sm.?
***Navicula heufleri* Grun.**
 KS: Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)
 OK: Troeger (1978)
 Plains States: Patrick and Reimer (1966)
***Navicula heufleri* var. *leptocephala* (Bréb. ex Grun.) Perag.**
 NE: Patrick and Reimer (1966)
 OK: Troeger (1978)
Navicula hilseana (Jan.) Jan. = *Pinnularia subcapitata* Greg. [see Patrick and Reimer (1966:595-596)]
Navicula humilis Donk. = *Hippodonta hungarica* (Grun.) Lange-Bert., Metz., & Witk.
Navicula hungarica Grun. = *Hippodonta hungarica* (Grun.) Lange-Bert., Metz., & Witk.
***Navicula hustedtii* Krasske**
 OK: Troeger (1983)
***Navicula ilopangoensis* Hust.**
 OK: Koch (1975)
Navicula inflata = *Navicula*?
 KS: Curtis (1901) [see Eberle (1982:88)]
Navicula insociabilis Krasske = *Fallacia insociabilis* (Krasske) D. Mann
Navicula integra (W. Sm.) Ralfs = *Prestauroneis integra* (W. Sm.) Bruder
Navicula interrupta Kütz. = *Diploneis interrupta* (Kütz.) Cl.
Navicula interrupta (W. Sm.) A.S. = *Pinnularia biceps* Greg.
Navicula iridis Ehrenb. = *Neidium iridis* (Ehr.) Cl.
Navicula iridis var. *amphigomphus* Ehr. = *Neidium iridis* var. *amphigomphus* (Ehr.) A. Mayer
Navicula jaerenfeltii Hust. = *Cavinula jaerenfeltii* (Hust.) D. Mann & Stickle
Navicula lacustris Greg. = *Cavinula lacustris* (Greg.) D. Mann & Stickle
Navicula laevisissima Kütz. = *Sellaphora laevisissima* (Kütz.) D. Mann
***Navicula lanceolata* (Ag.) Kütz.** [*sensu* Hustedt (1930) = *Navicula pseudolanceolata* Lange-Bert.?
 KS: Curtis (1901), Elmore (1921), Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Wujek et al. (1980)
 NE: Andersen and Walker (1920), Elmore (1921), Hoagland et al. (1982), Rosowski et al. (1986), Webber (1890)
 OK: Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Troeger (1978), Troeger and Menzel (1986)
 Plains States: Patrick and Reimer (1966)

***Navicula lanceolata* var. *cymbula* (Donk.) Cl.**

Reported as:

Navicula cymbula Donk.

KS: Curtis (1901)

Navicula lata (Bréb.) Kütz. = *Pinnularia lata* (Bréb.) Rab.

Navicula latens Krasske = *Geissleria thingvallae* (Østrup) Metz. & Lange-Bert.

Navicula legumen Ehr. = *Pinnularia legumen* (Ehr.) Ehr.

Navicula leptogongyla Ehr. = *Caloneis ventricosa* (Ehr.) Meist.

Navicula liburnica Grun. = *Caloneis oregonica* (Ehr.) Patr.

Navicula limosa Kütz. = *Caloneis limosa* (Kütz.) Patr.

Navicula linearis Grun. = *Caloneis linearis* (Grun.) Boyer

***Navicula longa* (Greg.) Ralfs**

KS: Curtis (1901)

***Navicula longirostris* Hust.**

MO: Pamperl (1980)

OK: Troeger (1978)

***Navicula luzonensis* Hust.**

OK: Wilhm et al. (1977), Wilhm et al. (1978)

Navicula macra Grun. = *Caloneis molaris* (Grun.) Krammer

Navicula major (Kütz.) Kütz. = *Pinnularia maior* (Kütz.) Rab.

***Navicula menisculus* Schum.**

KS: Powers (1969), Wujek (1965)

NE: Elmore (1921)

OK: Pfister et al. (1979)

***Navicula menisculus* var. *obtusa* Hust.**

KS: Powers (1969)

***Navicula menisculus* var. *upsaliensis* (Grun.) Grun.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), Patrick and Reimer (1966), Roemer et al. (1984)

OK: Troeger (1983)

Navicula mesolepta Ehr. = *Pinnularia mesolepta* (Ehr.) W. Sm.

Navicula mesostyla Ehr. = *Pinnularia mesostyla* (Ehr.) W. Sm.

***Navicula minima* Grun.**

KS: Wenke and Eberle (1985)

MO: Pamperl (1980)

OK: Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula atomoides Grun.

NE: Elmore (1921)

***Navicula miniscula* Grun.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

OK: Pfister et al. (1979), Troeger (1983)

***Navicula minnewaukonensis* Elm.**

OK: Pfister et al. (1979), Troeger (1978)

Navicula molesta Krasske = *Craticula molesta* (Krasske) Lange-Bert.

Navicula mucronata Elm. = *Neidium dubium* f. *constrictum* Hust.

***Navicula muralis* Grun.**

OK: Pfister et al. (1979)

Navicula mutica Kütz. = *Luticola mutica* (Kütz.) D. Mann

Navicula mutica var. *cohnii* (Hilse) Grun. = *Luticola cohnii* (Hilse) D. Mann

Navicula mutica var. *goeppertiana* (Bleisch ex Rab.) Grun. = *Luticola goeppertiana* (Bleisch ex Rab.) D. Mann

Navicula mutica var. *stigma* Patr. = *Luticola stigma* (Patr.) Johansen

Navicula mutica var. *tropica* Hust. = *Luticola tropica* (Hust.) comb. nov.?

Navicula mutica var. *undulata* (Hilse) Grun. = *Luticola undulata* (Hilse) D. Mann

Navicula mutica var. *ventricosa* (Kütz.) Cl. = *Luticola ventricosa* (Kütz.) D. Mann

Navicula nobilis (Ehr.) Kütz. = *Pinnularia nobilis* (Ehr.) Ehr.

Navicula nodosa Ehr. = *Pinnularia nodosa* (Ehr.) W. Sm.

***Navicula notha* Wall.**

KS: Wujek et al. (1980)

OK: Koch (1975), Troeger (1983)

***Navicula oblonga* (Kütz.) Kütz.**

KS: Curtis (1901)

NE: Andersen and Walker (1920), Elmore (1921)

Plains States: Patrick and Reimer (1966)

Navicula obtusa Ehr. = *Pinnularia appendiculata* (Ag.) Cl.

Navicula obtusata W. Sm. = ?*Caloneis hebes* (Ralfs) Patr.

Navicula oculata Bréb. = *Diploneis oculata* (Bréb.) Cl.

***Navicula odiosa* Wall.**

OK: Pfister et al. (1979)

***Navicula palpebralis* Bréb. ex W. Sm.**

NE: Elmore (1921), Patrick and Reimer (1966)

Navicula parva (Ehr.) Elm. = *Pinnularia stauroptera* (Grun.) Rab.

***Navicula paucivittata* Patr.**

KS: Wujek et al. (1980)

OK: Troeger (1983)

***Navicula pelliculosa* (Bréb. ex Kütz.) Hilse**

KS: Powers (1969)

OK: Koch and Risser (1974), Seyfer and Wilhm (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

***Navicula peregrina* (Ehr.) Kütz.**

KS: Curtis (1901), Harris and Eberle (2001), Wenke and Eberle (1986), Wujek et al. (1980)

NE: Elmore (1921)

OK: Kennedy and Pfister (1984)

Plains States: Patrick and Reimer (1966)

Also reported as:

Pinnularia peregrina Ehr.

OK: Ehrenberg (1856)

Navicula phyllodes (Ehr.) Ehr. = *Stauroneis phyllodes* Ehr.

Navicula placentula (Ehr.) Kütz. = *Placoneis placentula* (Ehr.) Heinz.

Navicula placentula f. *rostrata* A. Mayer = *Placoneis placentula* var. *rostrata* (A. Mayer) And., Stoerm., & Kreis?

Navicula producta W. Sm. = *Neidium productum* (W. Sm.) Cl.

***Navicula protracta* Grun.**

KS: Czarnecki and Reinke (1981)

OK: Troeger (1983)

Navicula pseudobacillum Grun. = *Sellaphora bacillum* (Ehr.) D. Mann

***Navicula pseudoreinhardtii* Patr.**

OK: Pfister et al. (1979)

Navicula pumila Grun. = *Navicula cryptocephala* var. *veneta* (Kütz.) Rab.

Navicula pupula Kütz. = *Sellaphora pupula* (Kütz.) Meresch.

Navicula pupula f. *minutula* Chohn. = *Sellaphora pupula* f. *minutula* (Chohn.) comb. nov.?

Navicula pupula var. *capitata* Skv. & Meyer = *Sellaphora pupula* var. *capitata* (Skv. & Meyer) Poulin

Navicula pupula var. *elliptica* Hust. = *Sellaphora pupula* var. *elliptica* (Hust.) Poulin

Navicula pupula var. *mutata* (Krasske) Hust. = *Sellaphora mutata* (Krasske) Lange-Bert.

Navicula pupula var. *rectangularis* (Greg.) Grun. = *Sellaphora rectangularis* (Greg.) Lange-Bert. & Metz.

Navicula pygmaea Kütz. = *Fallacia pygmaea* (Kütz.) Stickle & D. Mann

Navicula radians = ?

KS: Curtis (1901) [see Eberle (1982:89)]

***Navicula radiosa* Kütz.**

KS: Curtis (1901), Elmore (1921), Wujek et al. (1980)

NE: Andersen and Walker (1920), Elmore (1921), Hoagland et al. (1982), F.A. Morris et al. (1979)

OK: Pfister et al. (1979), Troeger (1978, 1983), Troeger and Menzel (1986)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula radiosa var. *acuta* (W. Sm.) Grun.

KS: Curtis (1901)

Navicula radiosa var. *acuta* (W. Sm.) Grun. = *Navicula radiosa* Kütz.

Navicula radiosa var. *parva* Wall. = *Navicula radiosafallax* Lange-Bert.

Navicula radiosa var. *tenella* (Bréb. ex Kütz.) Grun. = *Navicula cryptotenella* Lange-Bert.

***Navicula radiosafallax* Lange-Bert.**

Reported as:

Navicula radiosa var. *parva* Wall.

NE: Hoagland et al. (1982)

Navicula rangoonensis (Grun.) Elm. = *Pinnularia abaujensis* var. *linearis* (Hust.) Patr.

***Navicula reinhardtii* (Grun.) Grun.**

NE: Elmore (1921)

Plains States: Patrick and Reimer (1966)

Navicula retusa Bréb. = *Navicula cancellata* var. *retusa* (Bréb.) Cl.

Navicula rhomboides var. ? (*Colletonema vulgare* Thw.) = *Frustulia vulgaris* (Thw.) DeT.

***Navicula rhyncocephala* Kütz.**

KS: Branson (1966), Curtis (1901), Wujek (1965)

MO: Pamperl (1980)

NE: Elmore (1921), Hoagland et al. (1982)

OK: Koch and Risser (1974), Pfister et al. (1979), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

Navicula rhyncocephala var. *amphiceros* (Kütz.) Grun. = *Navicula rhynchotella* Lange-Bert.

Navicula rhyncocephala var. *germainii* (Wall.) Patr. = *Navicula viridula* var. *germainii* (Wall.) Lange-Bert.

Navicula rhynchotella Lange-Bert.

Reported as:

Navicula rhyncocephala var. *amphiceros* (Kütz.) Grun.

KS: Patrick and Reimer (1966)

Navicula amphiceros Kütz.

KS: ?Curtis (1901)

Navicula rostellata Kütz. = *Navicula viridula* var. *rostellata* (?Kütz.) Cl.

Navicula rostrata Ehrenb. = *Anomoeoneis sphaerophora* var. *sculpta* O. Müll.

Navicula rupestris (Hantz.) A.S. = *Pinnularia rupestris* Hantz.

***Navicula sabiniana* Patr.**

OK: Pfister et al. (1979), Troeger (1978, 1983), Troeger and Menzel (1986)

***Navicula salinarum* Grun.**

KS: Czarnecki and Reinke (1981)

MO: M.K. Morris et al. (1979a)

NE: Elmore (1921)

OK: Koch (1975), Koch and Risser (1974), Seyfer and Wilhm (1977), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

Navicula salinarum var. *intermedia* (Grun.) Cl. = *Navicula capitatoradiata* Germain ex Gasse

***Navicula santaecrucis* Østr.**

OK: Koch (1975)

Navicula scalprum Gaillon = *Gyrosigma attenuatum* var. *scalprum* (Gaillon) Ralfs

Navicula schoenfeldii Hust. = *Geissleria schoenfeldii* (Hust.) Lange-Bert. & Metzlin

***Navicula schroeteri* var. *escambia* Patr.**

NE: Hoagland et al. (1982)

Navicula schumanniana Grun. = *Caloneis limosa* (Kütz.) Patr.

Navicula sculpta Ehr. = *Anomoeoneis sphaerophora* var. *sculpta* O. Müll.

***Navicula scutum* Schum.**

NE: Elmore (1921)

***Navicula secreta* Patr.**

OK: Wilhm et al. (1977)

***Navicula secreta* var. *apiculata* Patr.**

KS: ?Harris and Eberle (2001)

OK: Koch and Risser (1974)

***Navicula secreta* var. *secura* Patr.**

OK: Koch and Risser (1974)

***Navicula semen* Ehr. emend Donk.**

Plains States: Patrick and Reimer (1966)

Navicula seminulum Grun. = *Sellaphora seminulum* (Grun.) D. Mann

Navicula seminulum var. *hustedtii* Patr. = *Sellaphora seminulum* var. *hustedtii* (Patr.) comb. nov.?

Navicula serians Bréb. ex Kütz. = *Brachysira serians* (Bréb. ex Kütz.) Round & Mann

Navicula sigma Ehr. = ?

OK: Ehrenberg (1856)

Navicula silicula Ehr. = *Caloneis ventricosa* (Ehr.) Meist.

***Navicula simplex* Krasske**

NE: Hoagland et al. (1982)

Navicula smithii Bréb. ex W. Sm. = *Diploneis smithii* (Bréb. ex W. Sm.) Cl.

Navicula sphaerophora Ehr. = *Anomoeoneis sphaerophora* (Kütz.) Pfitz.

Navicula spicula (Hicke) Cl. = *Stauroneis spicula* (Hicke) Grun.

Navicula stauroneiformis Elm. = *Pinnularia aestuarii* Cl.

Navicula stauroparva Grun. = *Pinnularia parvula* (Ralfs) Cl.-Eul.
Navicula stauoptera Grun. = *Pinnularia stauoptera* (Grun.) Rab.
Navicula stauoptera var. *parva* Grun. = *Pinnularia parvula* (Ralfs) Cl.-Eul.
Navicula stomatophora Grun. = *Pinnularia stomatophora* (Grun.) Cl.
Navicula subcapitata (Greg.) Ralfs = *Pinnularia subcapitata* Greg.
Navicula subcapitata var. *stauroneiformis* V.H. = *Pinnularia subcapitata* Greg.
***Navicula subfasciata* Patr.** [also as *N. subfasciculata*]
 OK: Koch and Risser (1974), Troeger (1978, 1983)
Navicula subhamulata Grun. = *Fallacia subhamulata* (Grun.) D. Mann
***Navicula subinflata* Grun.**
 KS: Curtis (1901)
Navicula subtilissima Cl. = *Kobayasia subtilissima* (Cl.) Lange-Bert.
***Navicula symmetrica* Patr.**
 KS: Powers (1969)
 MO: Pamperl (1980)
 NE: Hoagland et al. (1982)
 OK: Koch (1975), Pfister et al. (1979)
 Plains States: Patrick and Reimer (1966)
Navicula tabellaria Grun. = *Pinnularia*?
***Navicula tantula* Hust.**
 KS: Powers (1969)
Navicula tenella Bréb. ex Kütz. = *Navicula cryptotenella* Lange-Bert.
Navicula tenera Hust. = *Fallacia tenera* (Hust.) D. Mann
***Navicula tenelloides* Hust.**
 Plains States: Patrick and Reimer (1966)
***Navicula texana* Patr.**
 OK: Koch and Risser (1974)
Navicula thermes (Ehr.) A.S. = *Pinnularia termes* Ehr.
***Navicula tridentula* Krasske**
 OK: Troeger (1978)
Navicula trinodis Lewis = *Caloneis lewisii* Patr.
***Navicula tripunctata* (O. Müll.) Bory**
 KS: Wujek et al. (1980)
 NE: Hoagland et al. (1982), Roemer et al. (1984), Williams (1962), WPSS (1966)
 OK: Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1977)
 Plains States: Patrick and Reimer (1966)
Also reported as:
Navicula gracilis Ehr.
 KS: Curtis (1901)
 NE: Elmore (1921)
 OK: Ehrenberg (1856), Leake (1945)
***Navicula tripunctata* var. *schizonemoides* (V.H.) Patr.**
 KS: Powers (1969)
 MO: Pamperl (1980)
 OK: Koch (1975)
 Plains States: Patrick and Reimer (1966)
Also reported as:
Navicula gracilis var. *schizonemoides* V.H.
 KS: Powers (1969)
Navicula tuscula Ehr. = *Aneumastus tuscula* (Ehr.) D. Mann & Stickle
Navicula undulata = ?
 KS: Curtis (1901) [see Eberle (1982:137)]
Navicula variostrata Krasske = *Cavinula variostrata* (Krasske) D. Mann
***Navicula vaucheriae* Peters.**
 KS: Powers (1969)
Navicula vaucheriae var. *densistriata* Lund = *Navicula excelsa* Krasske
Navicula veneta Kütz. = *Navicula cryptocephala* var. *veneta* (Kütz.) Rab.
Navicula ventricosa Ehr. = *Caloneis ventricosa* (Ehr.) Meist.
Navicula ventricosa f. *minuta* Grun. = *Caloneis ventricosa* var. *minuta* (Grun.) Patr.
Navicula viridis (Nitz.) Ehrenb. = *Pinnularia viridis* (Nitz.) Ehrenb.
Navicula viridis (Nitz.) Ehr. sensu A.S. = *Pinnularia viridis* var. *minor* Cl.

***Navicula viridula* (Kütz.) Kütz. emend V.H.**

CO: Williams (1964)

KS: Wujek (1965)

OK: Koch and Risser (1974), Pfister et al. (1979), Troeger (1983), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula viridula f. *minor*

KS: Curtis (1901) [see Eberle (1982:89)]

Navicula viridula f. *minor* = *Navicula viridula* (Kütz.) Kütz. emend V.H.?

***Navicula viridula* var. *argunensis* Skv.**

KS: Powers (1969)

***Navicula viridula* var. *avenacea* (Bréb. ex Grun.) V.H.**

KS: Czarnecki and Reinke (1981), Wenke and Eberle (1986)

NE: Patrick and Reimer (1966)

***Navicula viridula* var. *germainii* (Wall.) Lange-Bert.**

Reported as:

Navicula rhyncocephala var. *germainii* (Wall.) Patr.

NE: Hoagland et al. (1982)

OK: Troeger (1978)

***Navicula viridula* var. *linearis* Hust.**

KS: Powers (1969)

MO: Pamperl (1980)

OK: Pfister and Terry (1978)

Plains States: Patrick and Reimer (1966)

***Navicula viridula* var. *rostellata* (?Kütz.) Cl.**

KS: Wenke and Eberle (1985, 1986)

NE: Patrick and Reimer (1966)

OK: Troeger (1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula rostellata Kütz.

KS: Curtis (1901)

***Navicula viridula* var. *rostrata* Skv.**

KS: Powers (1969)

Navicula vitabunda Hust. = *Sellaphora vitabunda* (Hust.) D. Mann

***Navicula vulpina* Kütz.**

NE: Hoagland et al. (1982)

OK: Pfister et al. (1979)

► ***Neidium* ?**

Reported as:

Navicula amphilepta Ehr. nom. nud. = *Neidium*?

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Navicula firma var. *subampliata*

KS: Curtis (1901) [see Eberle (1982:93)]

***Neidium affine* (Ehr.) Pfütz.**

KS: Harris and Eberle (2001)

OK: Seyfer and Wilhm (1977)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula affinis Ehr.

KS: Curtis (1901)

NE: Ehrenberg (1856), Elmore (1921)

OK: Ehrenberg (1856)

Pleurosiphonia affinis Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

***Neidium affine* var. *amphirhynchus* (Ehr.) Cl.**

OK: Troeger (1978, 1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula amphirhynchus Ehr.

KS: Curtis (1901)

OK: Ehreneweg (1856)

Navicula columnaris Ehr.

KS: Curtis (1901)

***Neidium ampliatus* (Ehr.) Kramm.**

KS: Harris and Eberle (2001)

Also reported as:

Navicula ampliatus Ehr.

KS: Curtis (1901)

Neidium iridis var. *ampliatus* (Ehr.) Cl.

OK: Pfister et al. (1979)

***Neidium binode* (Ehr.) Hust.**

OK: Koch and Risser (1974)

***Neidium bisulcatum* (Lagerst.) Cl.**

NE: Patrick and Reimer (1966)

OK: Kennedy and Pfister (1984)

Also reported as:

Navicula bisulcata Lagerst.

NE: Elmore (1921)

***Neidium bisulcatum* var. *baicalense* (Skv. & Meyer) Reim.**

OK: Troeger (1983)

***Neidium dilatatum* (Ehr.) Cl.**

Reported as:

Navicula dilatata Ehr.

OK: ?Ehrenberg (1856)

***Neidium dubium* (Ehr.) Cl.**

OK: Pfister et al. (1979), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula dubia Ehr.

KS: Curtis (1901)

NE: Elmore (1921)

***Neidium dubium* f. *constrictum* Hust.**

Reported as:

Navicula mucronata Elm.

NE: Elmore (1921)

***Neidium hercynicum* f. *subrostratum* Wall.**

OK: Troeger (1983)

***Neidium iridis* (Ehr.) Cl.**

KS: Wujek et al. (1980)

OK: Pfister and Terry (1978), Pfister et al. (1979), Troeger (1978)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula firma Kütz.

KS: Curtis (1901)

Navicula iridis Ehr.

NE: Andersen and Walker (1920), Elmore (1921)

***Neidium iridis* f. *vernalis* Reichelt**

KS: Harris and Eberle (2001)

***Neidium iridis* var. *amphigomphus* (Ehr.) A. Mayer**

OK: Pfister and Terry (1978)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula amphigomphus Ehr.

KS: Wolle (1889)

NE: Elmore (1921)

Navicula dilatata Ehr. sensu A.S.

KS: Curtis (1901) [see Eberle (1982:92-93)]

Navicula iridis var. *amphigomphus* Ehr.

NE: Webber (1889, 1890)

Neidium iridis var. *ampliatum* (Ehr.) Cl. = *Neidium ampliatum* (Ehr.) Kramm.

***Neidium productum* (W. Sm.) Cl.**

OK: Pfister et al. (1979), Troeger (1978)

Also reported as:

Navicula producta W. Sm.

KS: Curtis (1901)

NE: Webber (1889)

► ***Nitzschia acicularis* (Kütz.) W. Sm.** [some records might be *Nitzschia reversa* W. Sm. (e.g., Elmore 1921:209, fig. 772)]

CO: WPSS (1961-1963)

KS: Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Williams (1962, 1972), Williams et al. (1979), WPSS (1961-1963, 1966), Wujek et al. (1980)

MO: Pamperl (1980), WPSS (1961-1963)

NE: Hoagland et al. (1982)

OK: Cooper and Wilhm (1975), Hern et al. (1979), Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), WPSS (1961-1963, 1966)

Also reported as:

Homoeocladia acicularis (Kütz.) Kuntze

KS: Elmore (1921)

NE: Elmore (1921)

Nitzschia actinastroides (Lemm.) van Goor = *Nitzschia holsatica* Hust.

Nitzschia acuta Cl. = *Tryblionella acuta* (Cl.) D. Mann

***Nitzschia adapta* Hust.**

KS: Harris and Eberle (2001)

***Nitzschia agnewii* Chohn.**

KS: Harris and Eberle (2001)

***Nitzschia amphibia* Grun.**

KS: Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), Roemer et al. (1984)

OK: Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Troeger and Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978)

Also reported as:

Homoeocladia amphibia (Grun.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

Nitzschia amphioxys (Ehr.) W. Sm. = *Hantzschia amphioxys* (Ehr.) Grun.

Nitzschia amphioxys var. *vivax* (Grun.) ? = *Hantzschia amphioxys* var. *vivax* Grun.

***Nitzschia angularis* W. Sm.**

OK: Kennedy and Pfister (1984)

Nitzschia angustata (W. Sm.) Grun. = *Tryblionella angustata* W. Sm.

Nitzschia apiculata (Greg.) Grun. = *Tryblionella apiculata* Greg.

***Nitzschia bacata* Hust.**

NE: Hoagland et al. (1982)

***Nitzschia brebissonii* W. Sm.**

NE: Andersen and Walker (1920)

Also reported as:

Homoeocladia brebissonii (W. Sm.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

***Nitzschia brevissima* Grun.**

Reported as:

Nitzschia parvula Lewis [non *Nitzschia parvula* W. Sm.]

OK: Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1983), Wilhm et al. (1977), Wilhm et al. (1978)

***Nitzschia caledonensis* Schoem.**

KS: Harris and Eberle (2001)

***Nitzschia capitellata* Hust.**

KS: Powers (1969)

OK: ?Koch (1975), Pfister et al. (1979), Troeger (1983)

***Nitzschia clausii* Hantz.**

KS: Powers (1969), Wujek et al. (1980)

OK: Koch (1975), Pfister et al. (1979)

***Nitzschia closterium* (Ehr.) W. Sm.**

KS: Powers (1969)

Also reported as:

Nitzschia longissima f. *parva* Grun. [misidentification?]

KS: Reinke (1979*a*, 1985)

Nitzschia longissima var. *reversa* (W. Sm.) V.H. [misidentification?]

CO: Morris et al. (1979*b*)

KS: Williams et al. (1979)

OK: Hern et al. (1979)

Nitzschia reversa W. Sm.

KS: Harris and Eberle (2001), McFarland et al. (1964)

***Nitzschia communis* Rab.**

KS: Curtis (1901), ?Harris and Eberle (2001)

NE: Roemer et al. (1984), Schofield (1892)

OK: Pfister et al. (1979)

***Nitzschia commutata* Grun. [*sensu* Hustedt (1930) = *Nitzschia commutatoides* Lange-Bert. (Krammer and Lange-Bertlot 1988:58)]**

KS: Wenke and Eberle (1986), Wujek et al. (1980)

OK: Pfister et al. (1979)

Reported as:

Homoeocladia commutata (Grun.) Kuntze

NE: Elmore (1921)

***Nitzschia confinis* Hust.**

KS: Harris and Eberle (2001)

***Nitzschia denticula* Grun.**

KS: Williams (1962), WPSS (1961-1963), Wujek et al. (1980)

OK: Koch (1975), Seyfer and Wilhm (1977)

Also reported as:

Homoeocladia obtusa (Grun.) Elm.

NE: Elmore (1921)

***Nitzschia dissipata* (Kütz.) Grun.**

KS: Curtis (1901), ?Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), Roemer et al. (1984)

OK: Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), WPSS (1966)

Also reported as:

Homoeocladia dissipata (Kütz.) Kuntze

NE: Elmore (1921)

***Nitzschia dubia* W. Sm.**

OK: Koch (1975)

Also reported as:

Homoeocladia dubia (W. Sm.) Elm.

NE: Elmore (1921)

***Nitzschia elegans* Hust.**

NE: Hoagland et al. (1982)

***Nitzschia elliptica* Hust.**

OK: Wilhm et al. (1977), Wilhm et al. (1978)

***Nitzschia entomon* (Ehr.) Ralfs**

Reported as:

Synedra entomon Ehr.

OK: Ehrenberg (1856)

***Nitzschia epiphytica* O. Müll.**

OK: Koch and Risser (1974)

***Nitzschia fasciculata* Grun.**

KS: Powers (1969)

OK: Pfister et al. (1979)

Also reported as:

Homoeocladia fasciculata (Grun.) Kuntze

NE: Elmore (1921)

***Nitzschia filiformis* (W. Sm.) V.H.**

KS: Harris and Eberle (2001), Powers (1969), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982), F.A. Morris et al. (1979)

OK: Hern et al. (1979), Pfiester et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978)

Also reported as:

Homoeocladia filiformis W. Sm.

NE: Elmore (1921)

***Nitzschia flexa* Schum.**

KS: Wujek et al. (1980)

***Nitzschia fonticola* Grun.**

KS: Harris and Eberle (2001)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Koch (1975), Koch and Risser (1974), Pfiester et al. (1979), Troeger (1978, 1983)

***Nitzschia frustulum* (Kütz.) Grun.**

KS: Curtis (1901), Harris and Eberle (2001), Powers (1969)

MO: Pamperl (1980)

NE: Roemer et al. (1984)

OK: Koch (1975), Koch and Risser (1974), Pfiester et al. (1979), Troeger (1978), Troeger (1983)

Also reported as:

Homoeocladia frustulum (Kütz.) Kuntze

NE: Elmore (1921)

***Nitzschia frustulum* var. *perminuta* Grun.**

MO: Pamperl (1980)

***Nitzschia frustulum* var. *perpusilla* (Rab.) Grun.**

KS: Wujek et al. (1980)

***Nitzschia gandersheimiensis* Krasske**

KS: Harris and Eberle (2001)

***Nitzschia geitleri* Hust.**

KS: ?Harris and Eberle (2001)

***Nitzschia gracilis* Hantz.**

KS: Harris and Eberle (2001), Powers (1969)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Koch and Risser (1974), Pfiester et al. (1979), Troeger (1978, 1983)

***Nitzschia hantzschiana* Rab.**

OK: Hern et al. (1979), Troeger (1978), Troeger (1983)

***Nitzschia heufleriana* Grun.**

KS: Curtis (1901)

***Nitzschia holsatica* Hust.**

KS: Powers (1969), Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)

OK: Hern et al. (1979), Wilhm et al. (1977)

Also reported as:

Nitzschia actinastroides (Lemm.) van Goor

KS: Wenke and Eberle (1986) [as both names]

***Nitzschia hamburghensis* L.-Bert.**

Reported as:

Nitzschia thermalis (Ehr.) Auersw. (see note with that species in this list)

Nitzschia thermalis var. *minor* Hilse

MO: Pamperl (1980)

OK: Pfiester et al. (1979)

Nitzschia hungarica Grun. = *Tryblionella hungarica* (Grun.) D. Mann

***Nitzschia ignorata* Krasske**

MO: Pamperl (1980)

OK: Pfiester et al. (1979)

***Nitzschia incurva* var. *lorenziana* Ross**

Reported as:

Nitzschia lorenziana Grun.

OK: Pfiester et al. (1979), Wilhm et al. (1978)

***Nitzschia incurva* var. *subtilis* (Grun.) Ross**

Reported as:

Nitzschia lorenziana var. *subtilis* Grun.

OK: Troeger (1983)

***Nitzschia intermedia* Hantz.**

Reported as:

Homoeocladia intermedia (Hantz.) Kuntze

NE: Elmore (1921)

***Nitzschia invicta* f. *lanceolata* Hust.**

KS: Powers (1969)

***Nitzschia kuetzingiana* Hilse [sensu Hustedt (1930) = *N. paleacea* (Grun.) Grun. (Krammer and Lange-Bertlot 1988:114)**

KS: Wujek et al. (1980)

OK: ?Koch (1975)

Also reported as:

Nitzschia palea var. *kuetzingiana* (Hilse) Grun.

KS: Powers (1969)

***Nitzschia lanceolata* W. Sm.**

KS: Curtis (1901)

OK: Williams (1964)

Also reported as:

Homoeocladia lanceolata (W. Sm.) Kuntze

KS: Elmore (1921)

NE: Elmore (1921)

***Nitzschia linearis* W. Sm.**

KS: Powers (1969), Wenke and Eberle (1986), Williams (1962, 1964), WPSS (1966), Wujek (1965)

MO: Williams (1962, 1964), Williams and Scott (1962), WPSS (1966)

NE: Hoagland et al. (1982), Rosowski et al. (1986), Williams (1962, 1964), WPSS (1966)

OK: Koch and Risser (1974), Seyfer and Wilhm (1977), Troeger (1983), Troeger and Menzel (1986), Wilhm et al. (1977), Williams (1962), WPSS (1966)

Also reported as:

Homoeocladia linearis (W. Sm.) Kuntze

NE: Elmore (1921)

***Nitzschia linearis* var. *tenuis* (W. Sm.) Grun.**

KS: Wenke and Eberle (1985, 1986)

Nitzschia longissima f. *parva* Grun. = *Nitzschia closterium* (Ehr.) W. Sm.

Nitzschia longissima var. *reversa* (W. Sm.) V.H. = *Nitzschia closterium* (Ehr.) W. Sm.

Nitzschia lorenziana Grun. = *Nitzschia incurva* var. *lorenziana* Ross

Nitzschia lorenziana var. *subtilis* Grun. = *Nitzschia incurva* var. *subtilis* (Grun.) Ross

***Nitzschia microcephala* Grun.**

KS: Harris and Eberle (2001), Wujek et al. (1980)

MO: Pamperl (1980)

OK: Koch and Risser (1974)

***Nitzschia obtusa* W. Sm.**

KS: Czarnecki and Reinke (1981)

MO: Pamperl (1980)

OK: Pfister et al. (1979)

Also reported as:

Homoeocladia arcus (Buhl.) Kuntze

NE: Elmore (1921)

***Nitzschia obtusa* var. *scapelliformis* Grun.**

KS: Czarnecki and Reinke (1981)

OK: Koch (1975), Seyfer and Wilhm (1977)

***Nitzschia palea* (Kütz.) W. Sm.**

KS: Curtis (1901), Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Williams (1962), Williams and Scott (1962), Wujek et al. (1980)

MO: Pamperl (1980), Williams (1962)

NE: Hoagland et al. (1982), F.A. Morris et al. (1979), Roemer et al. (1984), Williams (1962)

OK: Cooper and Wilhm (1975), Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1983), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), Williams and Scott (1962)

Also reported as:

Homoeocladia palea (Kütz.) Kuntze

NE: Andersen and Walker (1920), Elmore (1921)

***Nitzschia palea* var. *debilis* (Kütz.) Grun.**

NE: Hoagland et al. (1982)

Nitzschia palea var. *kuetzingiana* (Hilse) Grun. = *Nitzschia kuetzingiana* Hilse

***Nitzschia paleacea* (Grun.) Grun.**

KS: Harris and Eberle (2001)

OK: Koch and Risser (1974)

Nitzschia paradoxa (Gmelin) Grun. = *Bacillaria paradoxa* Gmelin

Nitzschia parvula Lewis (non *Nitzschia parvula* W. Sm.) = *Nitzschia brevissima* Grun.

***Nitzschia pseudoamphioxys* Hust.**

KS: Powers (1969)

***Nitzschia rautenbachiae* Chohn.**

KS: Harris and Eberle (2001)

***Nitzschia recta* Hantz. ex Rab.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

Nitzschia reversa W. Sm. = *Nitzschia closterium* (Ehr.) W. Sm.

***Nitzschia romana* Grun.**

KS: Powers (1969)

MO: Pamperl (1980)

OK: Pfister et al. (1979), Troeger (1978)

***Nitzschia sigma* (Kütz.) W. Sm.**

KS: Curtis (1901), Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Wujek et al. (1980)

OK: Koch (1975), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978)

Also reported as:

Homoeocladia sigma (Kütz.) Kuntze

NE: Elmore (1921)

OK: Leake (1945)

***Nitzschia sigmoidea* (Nitzsch) W. Sm.**

KS: Curtis (1901), ?Harris and Eberle (2001), Williams et al. (1979), Wujek et al. (1980)

NE: F.A. Morris et al. (1979), Webber (1890)

OK: Koch and Risser (1974), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978)

Also reported as:

Homoeocladia sigmoidea (Kütz.) Kuntze

KS: Curtis (1901)

NE: Elmore (1921)

***Nitzschia sinuata* var. *tabellaria* (Grun.) Grun.**

KS: Wujek (1965), Wujek et al. (1980)

MO: Pamperl (1980)

Nitzschia spectabilis (Ehr.) Ralfs = *Hantzschia spectabilis* (Ehr.) Hust.

***Nitzschia spiculoides* Hust.**

KS: Harris and Eberle (2001)

***Nitzschia stagnorum* (Rab.) Grun.**

KS: Curtis (1901), Powers (1969)

OK: Pfister and Terry (1978), Pfister et al. (1979)

***Nitzschia subcapitellata* Hust.**

KS: Powers (1969)

NE: Rosowski et al. (1986)

***Nitzschia sublinearis* Hust.**

KS: Wenke and Eberle (1985)

MO: Pamperl (1980)

OK: Koch and Risser (1974), Troeger (1978, 1983)

***Nitzschia subrostrata* Hust.**

MO: Pamperl (1980)

***Nitzschia subtilis* Grun.**

KS: Reinke (1982a)

OK: Kennedy and Pfister (1984)

Also reported as:

Homoeocladia subtilis (Grun.) Kuntze

NE: Elmore (1921)

***Nitzschia subtilioides* Hust.**

NE: Hoagland et al. (1982)

***Nitzschia subvitrea* Hust.**

KS: Harris and Eberle (2001)

***Nitzschia suchlandti* Hust.**

NE: ?Hoagland et al. (1982)

***Nitzschia tarda* Hust.**

KS: Powers (1969)

***Nitzschia thermalis* (Ehr.) Auersw.** [= *N. umbonata* (Ehr.) Lange-Bert. or *N. hamburgiensis* Lange-Bert. (Krammer and Lange-Bertlot 1988:64-65)]

KS: Wujek et al. (1980)

OK: Pfister et al. (1979)

Nitzschia thermalis var. *minor* Hilse = *Nitzschia hamburgiensis* Lange-Bert.

***Nitzschia tropica* Hust.**

NE: Hoagland et al. (1982), Roemer et al. (1984)

Nitzschia tryblionella Hantz. = *Tryblionella gracilis* W. Sm.

Nitzschia tryblionella f. *densus striatae* ? = *Tryblionella gracilis* W. Sm.?

Nitzschia tryblionella f. *minor* ? = *Tryblionella gracilis* W. Sm.?

Nitzschia tryblionella var. *debilis* (Arn.) A. Mayer = *Tryblionella debilis* Arn.

Nitzschia tryblionella var. *levidensis* (W. Sm.) Grun. = *Tryblionella levidensis* W. Sm.

Nitzschia tryblionella var. *victoriae* (Grun.) Grun. = *Tryblionella victoriae* Grun.

Nitzschia umblicata Hust. = *Tryblionella umblicata* (Hust.) D. Mann

***Nitzschia umbonata* (Ehr.) Lange-Bert.**

Reported as:

Homoeocladia umbonata (Ehr.) Kuntze

NE: Elmore (1921)

Nitzschia thermalis (Ehr.) Auersw. (see note with that species in this list)

***Nitzschia valdestriata* Aleem & Hust.**

KS: Powers (1969)

***Nitzschia vermicularis* (Kütz.) Hantz.**

KS: Harris and Eberle (2001), Wenke and Eberle (1986), Williams et al. (1979)

OK: Hern et al. (1979), Kennedy and Pfister (1984)

Also reported as:

Homoeocladia vermicularis (Kütz.) Kuntze

KS: Elmore (1921)

NE: Elmore (1921)

***Nitzschia vitrea* Norm.**

Reported as:

Homoeocladia vitrea (Norm.) Kuntze

NE: Elmore (1921)

***Nitzschia vitrea* var. *salinarum* Grun.**

KS: Czarnecki and Reinke (1981), Harris and Eberle (2001)

***Nitzschia vitrea* var. *scaphiformis* Wisl. & Poretz.**

KS: ?Harris and Eberle (2001)

► ***Peronia fibula* (Bréb. ex Kütz.) Ross**

NE: Patrick and Reimer (1966)

Also reported as:

Sceptroneis fibula (Bréb.) Elm. (listed with Fragilariophyceae)

NE: Andersen and Walker (1920), Elmore (1921)

► ***Pinnularia* ?**

Reported as:

Navicula commutata Grun.

KS: Curtis (1901) [see Patrick and Reimer (1966:612)]

Navicula tabellaria Grun.

KS: Curtis (1901) [see Eberle (1982:116) and Patrick and Reimer (1966:613 and 626)]

***Pinnularia abaujensis* (Pant.) Ross**

OK: Pfister et al. (1979), Troeger (1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula acrospheria (Bréb.) Kütz.

KS: Curtis (1901)

NE: Elmore (1921)

***Pinnularia abaujensis* var. *linearis* (Hust.) Patr.**

NE: Patrick and Reimer (1966)

Also reported as:

Navicula rangoonensis (Grun.) Elm.

NE: Elmore (1921)

***Pinnularia abaujensis* var. *rostrata* (Patr.) Patr.**

OK: Pfister et al. (1979)

***Pinnularia abaujensis* var. *subundulata* (A. Mayer ex Hust.) Patr.**

OK: Troeger (1983)

***Pinnularia acrosphaeria* W. Sm.**

KS: Wujek et al. (1980)

MO: Pamperl (1980)

OK: Pfiester et al. (1979), Troeger (1983)

Plains States: Patrick and Reimer (1966)

***Pinnularia acuminata* W. Sm.**

KS: ?Patrick and Reimer (1966)

OK: Pfiester et al. (1979)

Also reported as:

Navicula hemiptera Kütz. ?

KS: Curtis (1901) [see Eberle (1982:114) and Patrick and Reimer (1966:621)]

***Pinnularia aestuarii* Cl.**

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula stauroneiformis Elm.

KS: Curtis (1901)

NE: Elmore (1921)

***Pinnularia amphioxys* Ehr.**

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

***Pinnularia appendiculata* (Ag.) Cl.**

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula appendiculata (Ag.) Kütz.

NE: Andersen and Walker (1920), Elmore (1921)

Navicula obtusa Ehr.

OK: Ehrenberg (1856)

***Pinnularia biceps* Greg.**

KS: Wujek et al. (1980)

OK: Pfiester et al. (1979), Troeger (1978, 1983)

Also reported as:

Navicula interrupta (W. Sm.) A.S.

KS: Curtis (1901) [see Eberle (1982:106)]

***Pinnularia biceps* f. *petersenii* Ross**

OK: Pfiester et al. (1979)

***Pinnularia borealis* Ehr.**

OK: Ehrenberg (1856), Pfiester and Terry (1978), Pfiester et al. (1979), Troeger (1978, 1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula borealis (Ehr.) Kütz.

KS: Curtis (1901)

NE: Elmore (1921)

***Pinnularia boyeri* Patr.**

Plains States: Patrick and Reimer (1966)

***Pinnularia braunii* (Grun.) Cl.**

KS: Powers (1969)

NE: Patrick and Reimer (1966)

OK: Seyfer and Wilhm (1977), Wilhm et al. (1978)

Also reported as:

Navicula braunii Grun.

NE: Elmore (1921)

***Pinnularia braunii* var. *amphicephala* (A. Mayer) Hust.**

KS: Wujek et al. (1980)

OK: Troeger (1978, 1983)

***Pinnularia brebissonii* (Kütz.) Rab.**

KS: Harris and Eberle (2001)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula brebissonii Kütz.

KS: Curtis (1901)

NE: Andersen and Walker (1920), Elmore (1921), Webber (1890)

Pinnularia microstauron var. *brebissonii* (Kütz.) Hust.

OK: Pfiester and Terry (1978)

***Pinnularia brebissonii* var. *diminuta* (Grun.) Cl.**

KS: Harris and Eberle (2001)

***Pinnularia brevicostata* Cl.**

OK: Troeger (1983)

Pinnularia capitata Ehr. = *Hippodonta capitata* (Ehr.) Lange-Bert., Metz., & Witk.

***Pinnularia conspicua* (A.S.) Cl.**

Reported as:

Navicula conspicua A.S.

KS: Curtis (1901)

***Pinnularia decurrens* Ehr.**

NE: Ehrenberg (1856)

Also reported as:

Navicula decurrens (Ehr.) Kütz.

KS: Curtis (1901)

NE: Elmore (1921)

Navicula gibba var. *brevistriata* V.H.?

NE: Andersen and Walker (1920) [Elmore (1921) equated this species with *P. decurrens* Ehr. and *P. gibba* Ehr.]

***Pinnularia divergens* W. Sm.**

Plains States: Patrick and Reimer (1966)

***Pinnularia formica* (Ehr.) Patr.**

OK: Pfister et al. (1979)

***Pinnularia gibba* var. *brevistriata* (V.H.) A. Mayer**

OK: Pfister and Terry (1978)

Pinnularia gibba var. *mesogongyla* (Ehr.) Hust. = *Pinnularia mesogongyla* Ehr.

Pinnularia hilseana Jan. = *Pinnularia subcapitata* Greg. [see Patrick and Reimer 1966:595-596]

Pinnularia inaequalis Ehr. = *Cymbella inaequalis* (Ehr.) Rab.

***Pinnularia isostauron* (Ehr.) Cl.**

Reported as:

Stauroptera isostauron Ehr.

OK: Ehrenberg (1856)

***Pinnularia lata* (Bréb.) Rab.**

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula lata (Bréb.) Kütz.

NE: Elmore (1921)

***Pinnularia latevittata* var. *domingensis* Cl.**

OK: Troeger (1978)

***Pinnularia legumen* (Ehr.) Ehr.**

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula legumen Ehr.

NE: Elmore (1921)

***Pinnularia macilenta* (Ehr.) Ehr.**

OK: Ehrenberg (1856)

***Pinnularia maior* (Kütz.) Rab. [also as *P. major*]**

KS: Wujek (1965)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula maior (Kütz.) Kütz.

KS: Curtis (1901), Wolle (1889)

NE: Andersen and Walker (1920), Elmore (1921), Webber (1889, 1890)

***Pinnularia maior* var. *transversa* (A.S.) Cl.**

OK: Troeger (1978)

***Pinnularia mesogongyla* Ehr.**

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

Also reported as:

Pinnularia gibba var. *mesogongyla* (Ehr.) Hust.

OK: Pfister et al. (1979), Troeger (1978)

***Pinnularia mesolepta* (Ehr.) W. Sm.**

OK: Troeger (1978)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula mesolepta Ehr.

KS: Curtis (1901) [see Eberle (1982:115)]

NE: Andersen and Walker (1920), Elmore (1921)

***Pinnularia mesostyla* (Ehr.) W. Sm.**

Reported as:

Navicula mesostyla Ehr.

KS: Curtis (1901)

***Pinnularia microstauron* (Ehr.) Cl.**

KS: Powers (1969)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula bicapitata var. *hybrida* Grun.

KS: Curtis (1901)

Navicula divergens f. *minor* A.S.

KS: Curtis (1901)

Stauroptera microstauron Ehr.

NE: Ehrenberg (1856)

***Pinnularia microstauron* f. *biundulata* (O. Müll.) Hust.**

OK: Pfister and Terry (1978)

Pinnularia microstauron var. *brebissonii* (Kütz.) Hust. = *Pinnularia brebissonii* (Kütz.) Rab.

Pinnularia molaris (Grun.) Cl. = *Caloneis molaris* (Grun.) Krammer

***Pinnularia mormonorum* (Grun.) Patr.**

OK: Pfister et al. (1979)

***Pinnularia nobilis* (Ehr.) Ehr.**

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula nobilis Ehr.

NE: Elmore (1921)

***Pinnularia nodosa* (Ehr.) W. Sm.**

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula nodosa Ehr.

NE: Elmore (1921)

***Pinnularia obscura* Krasske**

OK: Pfister et al. (1979), Troeger (1978, 1983)

Plains States: Patrick and Reimer (1966)

***Pinnularia parvula* (Ralfs) Cl.-Euler**

Reported as:

Navicula gibba var. *brevistriata* V.H.

NE: Andersen and Walker (1920)

Navicula stauroparva Grun.

KS: Curtis (1901)

Navicula stauoptera var. *parva* Grun.

KS: Curtis (1901)

Pinnularia peregrina Ehr. = *Navicula peregrina* (Ehr.) Kütz.

***Pinnularia rupestris* Hantz.**

KS: ?Patrick and Reimer (1966)

Also reported as:

Navicula rupestris (Hantz.) A.S.

KS: Curtis (1901)

Pinnularia sirokiana Ehr. = ? [invalid]

OK: Ehrenberg (1856)

***Pinnularia socialis* (T.C. Palm.) Hust.**

KS: Wujek et al. (1980)

***Pinnularia stauoptera* (Grun.) Rab.**

Reported as:

Navicula parva (Ehr.) Elm.

NE: Elmore (1921)

Navicula stauoptera Grun.

KS: Curtis (1901)

NE: Andersen and Walker (1920)

***Pinnularia stomatophora* (Grun.) Cl.**

KS: Wujek et al. (1980)

Plains States: ?Patrick and Reimer (1966)

Also reported as:

Navicula stomatophora Grun.

KS: Curtis (1901)

***Pinnularia subcapitata* Greg.**

OK: Troeger (1978)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula hilseana (Jan.) Jan.

NE: Andersen and Walker (1920) [see Patrick and Reimer (1966:595-596)]

Navicula subcapitata (Greg.) Ralfs

NE: Andersen and Walker (1920), Elmore (1921)

Navicula subcapitata var. *stauroneiformis* V.H.

KS: Curtis (1901)

Pinnularia hilseana Jan.

NE: ?Patrick and Reimer (1966)

OK: Pfister et al. (1979)

***Pinnularia subcapitata* var. *paucistriata* (Grun.) Cl.**

OK: Troeger (1983)

***Pinnularia substomatophora* Hust.**

OK: Pfister et al. (1979)

***Pinnularia termes* Ehr.**

OK: Ehrenberg (1856)

Also reported as:

Navicula termes (Ehr.) A.S.

NE: Elmore (1921)

***Pinnularia termitina* (Ehr.) Patr.**

OK: Troeger (1983)

***Pinnularia viridis* (Nitz.) Ehr.**

KS: Harris and Eberle (2001), McFarland et al. (1964)

NE: Ehrenberg (1856)

OK: Ehrenberg (1856), Troeger (1978, 1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Navicula viridis (Nitz.) Ehr.

KS: Wolle (1889)

NE: Andersen and Walker (1920), Elmore (1921), Webber (1890)

***Pinnularia viridis* var. *commutata* (Grun.) Cl.**

Plains States: Patrick and Reimer (1966)

***Pinnularia viridis* var. *minor* Cl.**

KS: Wenke and Eberle (1985)

Also reported as:

Navicula viridis (Nitz.) Ehr. sensu A.S.

KS: Curtis (1901) [see Eberle (1982:112-113)]

► ***Placoneis dicephala* (W. Sm.) Meresch.**

Reported as:

Navicula dicephala W. Sm.

KS: Curtis (1901), Wujek (1965)

NE: Andersen and Walker (1920), Elmore (1921)

***Placoneis dicephala* f. *minor* (Grun.) Cox**

Reported as:

Navicula dicephala f. *minor* Grun.

KS: Curtis (1901)

***Placoneis elginensis* (Greg.) Cox**

KS: Harris and Eberle (2001)

Also reported as:

Navicula elginensis (Greg.) Ralfs

KS: Wujek et al. (1980)

OK: Koch and Risser (1974), Troeger (1978, 1983), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

***Placoneis elginensis* var. *neglecta* (Krasske) Kobayasi**

Reported as:

Navicula elginensis var. *neglecta* Krasske

OK: Pfister et al. (1979)

***Placoneis exigua* (Greg. ex Grun.) Meresch.**

Reported as:

Navicula exigua Greg. ex Grun.

OK: Koch and Risser (1974), Wilhm et al. (1977), Wilhm et al. (1978)

***Placoneis exigua* var. *capitata* (Patr.) comb. nov.?**

Reported as:

Navicula exigua var. *capitata* Patr.

KS: Wujek et al. (1980)

MO: Pamperl (1980)

Plains States: Patrick and Reimer (1966)

***Placoneis gastrum* (Ehr.) Meresch.**

Reported as:

Navicula gastrum (Ehr.) Kütz.

NE: Andersen and Walker (1920), Elmore (1921)

Plains States: Patrick and Reimer (1966)

***Placoneis placentula* (Ehr.) Heinz.**

Reported as:

Navicula placentula (Ehr.) Kütz.

NE: Elmore (1921)

OK: Pfister et al. (1979)

Plains States: Patrick and Reimer (1966)

***Placoneis placentula* var. *rostrata* (A. Mayer) And., Stoerm., & Kreis**

Reported as:

Navicula placentula f. *rostrata* A. Mayer?

OK: Koch and Risser (1974)

► ***Plagiotropis arizonica* Czarn. & Blinn**

KS: Czarnecki and Reinke (1981), Harris and Eberle (2001)

***Plagiotropis lepidoptera* (Greg.) Reim.**

Reported as:

Tropidoneis lepidoptera (Greg.) Cl.

OK: Koch (1975)

***Plagiotropis lepidoptera* var. *proboscidea* (Cl.) Reim.**

KS: Harris and Eberle (2001), Wenke and Eberle (1986)

Also reported as:

Tropidoneis lepidoptera (Greg.) Cl.

KS: Reinke (1979a) [Reinke (1979b) placed the taxon he identified with this variety rather than the nominate variety.]

► ***Planothidium dubium* (Grun.) Round & Burkht.**

Reported as:

Achnanthes lanceolata var. *dubium* Grun.

KS: Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Pfister et al. (1979), Troeger (1983)

Plains States: Patrick and Reimer (1966)

***Planothidium haukianum* (Grun.) Round & Burkht.**

Reported as:

Achnanthes haukiana Grun.

KS: Czarnecki and Reinke (1981)

MO: Pamperl (1980)

OK: Koch (1975), Pfister et al. (1979), Seyfer and Wilhm (1977)

***Planothidium haynaldii* (Schaarsch.) Lange-Bert.**

Reported as:

Achnanthes lanceolata var. *haynaldii* (Istv.-Schaarsch) Cl.

KS: Patrick and Reimer (1966)

***Planothidium lanceolatum* (Bréb.) Round & Burkht.**

Reported as:

Achnanthes lanceolata Grun.

CO: WPSS (1961-1963)

KS: Curtis (1901), Powers (1969), Wenke and Eberle (1986), Wujek et al. (1980)

MO: Pamperl (1980)

NE: Andersen and Walker (1920), Elmore (1921), Rosowski et al. (1986)

OK: Hern et al. (1979), Koch and Risser (1974), Seyfer and Wilhm (1977), Troeger (1978, 1983), Troeger and Menzel (1986), Wilhm et al. (1977)

Plains States: Patrick and Reimer (1966)

► ***Pleurosigma delicatulum* W. Sm.**

CO: WPSS (1961-1963)

KS: Curtis (1901), McFarland et al. (1964), Reinke (1985), Wenke and Eberle (1986), Williams (1962, 1964), WPSS (1961-1963, 1966), Wujek et al. (1980)

NE: Williams (1962), WPSS (1961-1963, 1966)

OK: Cooper and Wilhm (1975), Hern et al. (1979), Koch (1975), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

Also reported as:

Gyrosigma delicatulum (W. Sm.) Elm.

NE: Elmore (1921)

***Pleurosigma elongatum* W. Sm.**

KS: Czarnecki and Reinke (1981), Wenke and Eberle (1986)

Pleurosigma eximium (Thw.) Cl. & Grun. = *Gyrosigma eximium* (Thw.) Boyer emend Sterr.

Pleurosigma gracilentum Rab. = *Gyrosigma acuminatum* (Kütz.) Rab.

Pleurosigma hippocampus Ehr. = *Gyrosigma euhippus* Sterr. & Ross

***Pleurosigma intermedium* W. Sm.**

NE: Webber (1889, 1890)

Pleurosigma kuetzingii Grun. = *Gyrosigma acuminatum* (Kütz.) Rab.

Pleurosigma sciotensis Sulliv. & Wormley = *Gyrosigma sciotense* (Sulliv. & Wormley) Cl.

Pleurosigma spencerii (Quek.) W. Sm. = *Gyrosigma acuminatum* (Kütz.) Rab.

***Pleurosigma strigosum* W. Sm.**

OK: Kennedy and Pfister (1984)

► ***Pleurosiphonia affinis* Ehr. = *Neidium affine* (Ehr.) Pfitz.**

► ***Prestaurosira integra* (W. Sm.) Bruder**

Reported as:

Navicula integra (W. Sm.) Ralfs

KS: Harris and Eberle (2001), Wujek et al. (1980)

NE: Elmore (1921), Patrick and Reimer (1966)

OK: Kennedy and Pfister (1984)

► ***Reimeria sinuata* (Greg.) Koc. & Stoerm.**

Reported as:

Cymbella sinuata Greg.

KS: Wenke and Eberle (1986), Wujek et al. (1980)

OK: Kennedy and Pfister (1984)

Plains States: Patrick and Reimer (1975)

► ***Rhaphoneis rostrata* Ehr. = ? [invalid name]**

OK: ?Ehrenberg (1856)

► ***Rhoicosphenia curvata* (Kütz.) Grun. ex Rab.**

KS: Reinke (1979a), Wenke and Eberle (1986), Wujek et al. (1980)

NE: Andersen and Walker (1920), Elmore (1921), Hoagland et al. (1982)

OK: Hern et al. (1979), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1978), WPSS (1961-1963)

Plains States: Patrick and Reimer (1966)

► ***Rhopalodia gibba* (Ehr.) O. Müll.**

KS: Harris and Eberle (2001), Reinke (1979a, 1981, 1985), Williams (1962), WPSS (1961-1963, 1966), Wujek (1965), Wujek et al. (1980)

MO: Pamperl (1980), Williams (1962), WPSS (1961-1963, 1966)

NE: Hoagland et al. (1982), F.A. Morris et al. (1979), WPSS (1961-1963)

OK: Pfister and Terry (1978), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Troeger and Menzel (1986), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cystopleura gibba (Ehr.) DeT.

NE: Andersen and Walker (1920), Elmore (1921)

OK: Leake (1945)

Epithemia gibba (Ehr.) Kütz.

KS: Curtis (1901), Wolle (1889)

NE: Webber (1889, 1890)

Eunotia gibba Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Navicula gibba Ehr.

KS: Curtis (1901), Wolle (1889)

***Rhopalodia gibba* var. *ventricosa* (Kütz.) H. & M. Perag. [= *R. gibba* var. *gibba* (Ehr.) O. Müll. (Krammer and Lange-Bertalot 1988:159)]**

KS: Wenke and Eberle (1986)

OK: Troeger (1983)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cystopleura gibba var. *ventricosa* (Kütz.) DeT.

NE: Andersen and Walker (1920)

Cystopleura ventricosa (Kütz.) Elm.

NE: Elmore (1921)

OK: Leake (1945)

Epithemia gibba var. *ventricosa* (Kütz.) Grun.

KS: Curtis (1901)

***Rhopalodia gibberula* (Ehr.) O. Müll.**

KS: Harris and Eberle (2001), Wenke and Eberle (1985)

OK: Koch (1975), Koch and Risser (1974), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1975)

Also reported as:

Cystopleura gibberula (Ehr.) Kuntze

NE: Elmore (1921)

Epithemia gibberula (Ehr.) Kütz.

KS: Curtis (1901)

Eunotia gibberula Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

***Rhopalodia gibberula* var. *sphaerula* (Ehr.) O. Müll.**

Reported as:

Eunotia sphaerula Ehr.

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

***Rhopalodia gibberula* var. *vanheurckii* O. Müll.**

KS: Czarnecki and Reinke (1981)

OK: Pfister et al. (1979)

***Rhopalodia musculus* (Kütz.) O. Müll.**

KS: Harris and Eberle (2001), Wenke and Eberle (1986)

NE: Patrick and Reimer (1975)

Also reported as:

Cystopleura musculus (Kütz.) Kuntze

NE: Elmore (1921)

***Rhopalodia parallela* (Grun.) O. Müll. [= *R. gibba* var. *parallela* (Grun.) H. & M. Perag. (Krammer and Lange-Bertalot 1988:159)]**

KS: Czarnecki and Reinke (1981)

NE: Patrick and Reimer (1975)

OK: Kennedy and Pfister (1984)

► ***Scoliopleura alternans* (Schum.) DeT.?**

Reported as:

Navicula alternans Schum.

KS: Curtis (1901) [see Patrick and Reimer (1966:644)]

***Scoliopleura peisonis* Grun.**

KS: Harris and Eberle (2001)

► ***Sellaphora bacillum* (Ehr.) D. Mann**

Reported as:

Navicula bacillum Ehr.

KS: Curtis (1901)

Plains States: Patrick and Reimer (1966)

Navicula bacillum f. *minor* Grun.

KS: Curtis (1901)

Navicula pseudobacillum Grun.

KS: Curtis (1901)

***Sellaphora laevisissima* (Kütz.) D. Mann**

Reported as:

Navicula bacilliformis Grun.

KS: Curtis (1901)

NE: Andersen and Walker (1920), Elmore (1921)

Navicula laevisissima Kütz.

KS: Wujek et al. (1980)

OK: Seyfer and Wilhm (1977)

Plains States: Patrick and Reimer (1966)

***Sellaphora mutata* (Krasske) Lange-Bert.**

Reported as:

Navicula pupula var. *mutata* (Krasske) Hust.

MO: Pamperl (1980)

***Sellaphora pupula* (Kütz.) Meresch.**

KS: Harris and Eberle (2001)

Also reported as:

Navicula pupula Kütz.

KS: Boyer (1927b), ?Curtis (1901), Powers (1969)

MO: Pamperl (1980)

NE: Andersen and Walker (1920), Elmore (1921), Hoagland et al. (1982), Roemer et al. (1984)

OK: Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Troeger and Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

***Sellaphora pupula* f. *minutula* (Choln.) comb. nov.?**

Reported as:

Navicula pupula f. *minutula* Choln.

KS: Powers (1969)

***Sellaphora pupula* var. *capitata* (Skv. & Meyer) Poulin**

Reported as:

Navicula pupula var. *capitata* Skv. & Meyer

KS: Wenke and Eberle (1986), Wujek et al. (1980)

OK: Koch and Risser (1974), Troeger (1983)

Plains States: Patrick and Reimer (1966)

***Sellaphora pupula* var. *elliptica* (Hust.) Poulin**

Reported as:

Navicula pupula var. *elliptica* Hust.

MO: Pamperl (1980)

NE: Patrick and Reimer (1966)

OK: Troeger (1978)

***Sellaphora rectangularis* (Greg.) Lange-Bert. & Metz.**

KS: Harris and Eberle (2001)

Also reported as:

Navicula pupula var. *rectangularis* (Greg.) Grun.

KS: Wujek et al. (1980)

MO: Pamperl (1980)

NE: Patrick and Reimer (1966)

OK: Koch and Risser (1974), Troeger (1978)

***Sellaphora seminulum* (Grun.) D. Mann**

Reported as:

Navicula seminulum Grun.

OK: Wilhm et al. (1978)

***Sellaphora seminulum* var. *hustedtii* (Patr.) comb. nov.?**

Reported as:

Navicula seminulum var. *hustedtii* Patr.

OK: Pfister et al. (1979), Troeger (1978)

***Sellaphora vitabunda* (Hust.) D. Mann**

Reported as:

Navicula vitabunda Hust.

OK: Troeger (1978)

► *Sphinctocystis elliptica* (Bréb. ex Kütz.) Kuntze = *Cymatopleura elliptica* (Bréb.) W. Sm.

Sphinctocystis librilis (Ehr.) Hass. = *Cymatopleura solea* (Bréb.) W. Sm.

► ***Stauroneis acuta* W. Sm.**

KS: Branson (1966)

NE: Andersen and Walker (1920), Elmore (1921)

Plains States: Patrick and Reimer (1966)

***Stauroneis anceps* Ehr.**

KS: Curtis (1901), Wolle (1889), Wujek et al. (1980)

NE: Andersen and Walker (1920), Elmore (1921), Webber (1890)

OK: Pfister et al. (1979), Troeger (1978, 1983), Wilhm et al. (1978)

Plains States: Patrick and Reimer (1966)

Also reported as:

Stauroneis anceps var. *amphicephala* (Kütz.) V.H.

NE: Andersen and Walker (1920)

***Stauroneis anceps* f. *gracilis* Rab.**

OK: Troeger (1978)

Plains States: Patrick and Reimer (1966)

***Stauroneis anceps* f. *linearis* (Ehr.) Hust.**

Plains States: Patrick and Reimer (1966)

Stauroneis anceps var. *amphicephala* (Kütz.) V.H. = *Stauroneis anceps* Ehr.

***Stauroneis anceps* var. *americana* Reim.**

KS: Wujek et al. (1980)

***Stauroneis ignorata* Hust.**

NE: Patrick and Reimer (1966)

OK: Troeger (1983)

***Stauroneis kriegeri* Patr.**

OK: Troeger (1983)

***Stauroneis legumen* (Ehr.) Kütz.**

NE: Elmore (1921)

Stauroneis linearis Ehr. = *Stauroneis smithii* Grun.

***Stauroneis nana* Hust.**

OK: Troeger (1983)

***Stauroneis nobilis* Schum.**

OK: Pfister et al. (1979)

***Stauroneis nobilis* var. *baconiana* (Stodd.) Reim.**

OK: Pfister et al. (1979), Troeger (1978)

***Stauroneis palustris* Hust.**

NE: Hoagland et al. (1982)

Stauroneis parvula Jan. sensu Elmore = *Achnanthidium exiguum* (Grun.) Czarn. [see Patrick and Reimer (1966:257)]

***Stauroneis phoenicenteron* (Nitz.) Ehr.**

KS: Curtis (1901), Wenke and Eberle (1986), Wolle (1889), Wujek (1965)

NE: Andersen and Walker (1920), Elmore (1921)

OK: Koch and Risser (1974), Troeger (1978)

Plains States: Patrick and Reimer (1966)

***Stauroneis phoenicenteron* f. *gracilis* (Ehr.) Hust.**

KS: Czarnecki and Reinke (1981)

OK: Troeger (1978)

***Stauroneis phyllodes* Ehr.**

Reported as:

Navicula phyllodes (Ehr.) Ehr.

OK: Ehrenberg (1856)

***Stauroneis producta* Grun.**

KS: Wolle (1889)

Stauroneis semen Ehr. = *Luticola mutica* (Kütz.) D. Mann

***Stauroneis smithii* Grun.**

KS: Wujek (1965)

NE: Andersen and Walker (1920)

OK: Koch and Risser (1974), Troeger (1983)

Plains States: Patrick and Reimer (1966)

Also reported as:

Stauroneis linearis Ehr. [*sensu* W. Sm.; *Stauroneis linearis* Ehr. = *Stauroneis anceps* f. *linearis* (Ehr.) Hust.]

NE: Elmore (1921)

***Stauroneis spicula* (Hicke) Grun.**

KS: Czarnecki and Reinke (1981), Wenke and Eberle (1986)

Also reported as:

Navicula spicula (Hicke) Cl.

KS: Czarnecki and Reinke (1981) [as both names], Wenke and Eberle (1986) [as both names]

OK: Koch (1975)

Stauroneis tenuissima [non Hustedt 1937] = ?

NE: Andersen and Walker (1920)

Stauroneis wislouchii Poret. & Anis. = *Staurophora wislouchii* (Poret. & Anis.) D. Mann

► ***Staurophora wislouchii* (Poret. & Anis.) D. Mann**

Reported as:

Stauroneis wislouchii Poret. & Anis.

KS: Czarnecki and Reinke (1981)

► ***Stauroptera isostauron* Ehr. = *Pinnularia isostauron* (Ehr.) Cl.**

Stauroptera microstauron Ehr. = *Pinnularia microstauron* (Ehr.) Cl.

► ***Stenopterobia curvula* (W. Sm.) Kramm.**

Reported as:

Surirella intermedia Lewis

KS: Curtis (1901)

► ***Surirella amphioxys* W. Sm.**

Reported as:

Surirella moelleriana Grun. ex Möll.

KS: Curtis (1901)

***Surirella angusta* Kütz. [also as *S. angustata*]**

KS: Harris and Eberle (2001), Powers (1969), Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)

MO: M.K. Morris et al. (1979a), Pamperl (1980)

NE: F.A. Morris et al. (1979)

OK: Cooper and Wilhm (1975), Hern et al. (1979), Seyfer and Wilhm (1977), Troeger (1983), Wilhm et al. (1977), Wilhm et al. (1978)

***Surirella apiculata* W. Sm.**

KS: Curtis (1901)

***Surirella bifrons* Ehr.**

NE: ?Ehrenberg (1856)

OK: Ehrenberg (1856)

***Surirella biseriata* Bréb.**

NE: Elmore (1921)

***Surirella brebissonii* Kramm. & Lange-Bert.**

Reported as:

Surirella ovalis var. *ovata* (Kütz.) V.H.

NE: Andersen and Walker (1920), Webber (1890)

Surirella ovata Kütz.

CO: WPSS (1961-1963)

KS: Curtis (1901), Wenke and Eberle (1986), Williams (1962), Williams et al. (1979), WPSS (1961-1963, 1966), Wujek et al. (1980)

MO: Pamperl (1980), Williams (1962), WPSS (1961-1963), WPSS (1966)

NE: F.A. Morris et al. (1979), Hoagland et al. (1982), Roemer et al. (1984), Williams (1962), WPSS (1961-1963, 1966)

OK: Cooper and Wilhm (1975), Hern et al. (1979), Koch (1975), Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983), Troeger and Menzel (1986), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), WPSS (1961-1963, 1966)

***Surirella brightwellii* W. Sm.**

CO: WPSS (1961-1963)

KS: Wenke and Eberle (1986), Williams (1962), WPSS (1961-1963, 1966), Wujek et al. (1980)

NE: WPSS (1961-1963)

OK: Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962, 1964), WPSS (1961-1963, 1966)

Surirella craticula Ehr. = ?

NE: Ehrenberg (1856)

***Surirella crumena* Bréb.**

KS: Harris and Eberle (2001)

Also reported as:

Surirella ovata var. *crumena* (Bréb.) Hust.

KS: Wujek et al. (1980)

***Surirella delicatissima* Lewis**

KS: Curtis (1901)

***Surirella didyma* Kütz.**

OK: Pfister et al. (1979)

***Surirella elegans* Ehr.**

NE: Elmore (1921)

OK: Troeger (1978)

***Surirella gracilis* Grun.**

OK: Troeger (1978)

Surirella intermedia Lewis = *Stenopterobia curvula* (W. Sm.) Kramm.

***Surirella linearis* W. Sm.**

KS: Wujek (1965), Wujek et al. (1980)

NE: Elmore (1921)

OK: Koch and Risser (1974), Pfister et al. (1979)

***Surirella linearis* var. *helvetica* (Brun) Meist.**

KS: ?Williams et al. (1979)

***Surirella minuta* Bréb.**

Surirella ovata var. *salina* (W. Sm.) Rab.

KS: Powers (1969)

Surirella moelleriana Grun. ex Möll. sensu Schmidt et al. (1874-1959) = *Surirella amphioxys* W. Sm. [*Surirella moelleriana* Grun. ex Möll. sensu Hustedt (1930) = *Surirella gracilis* Grun. (Krammer and Lange-Bertalot 1988:188-190)]

***Surirella myodon* Ehr.**

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

Surirella nobilis W. Sm. = *Surirella robusta* Ehr.

***Surirella ovalis* Bréb.**

KS: ?Harris and Eberle (2001), McFarland et al. (1964), Wenke and Eberle (1986), Wujek (1965)

NE: Elmore (1921)

OK: Koch and Risser (1974), Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978)

Surirella ovalis var. *ovata* (Kütz.) V.H. = *Surirella brebissonii* Kramm. & L.-Bert.

Surirella ovalis var. *pinnata* (W. Sm.) V.H. = *Surirella ovata* var. *pinnata* (W. Sm.) Brun

Surirella ovata Kütz. = *Surirella brebissonii* Kramm. & L.-Bert.

Surirella ovata var. *crumena* (Bréb.) Hust. = *Surirella crumena* Bréb.

***Surirella ovata* var. *pinnata* (W. Sm.) Brun**

KS: Wenke and Eberle (1986), Wujek et al. (1980)

NE: Andersen and Walker (1920), Hoagland et al. (1982)

Also reported as:

Surirella ovalis var. *pinnata* (W. Sm.) V.H.

NE: Andersen and Walker (1920)

Surirella ovata var. *salina* (W. Sm.) Rab. = *Surirella minuta* Bréb.

Surirella palmerii Boyer = *Surirella tenera* var. *palmerii* (Boyer) Hust.

***Surirella panduriformis* Kütz.**

KS: Curtis (1901)

Surirella regula Ehr. = *Cymatopleura solea* var. *regula* (Ehr.) Grun.

***Surirella robusta* Ehr.**

KS: Curtis (1901), Wujek (1965)

NE: Andersen and Walker (1920), Elmore (1921)

OK: Pfister et al. (1979), Troeger (1978)

Also reported as:

Surirella nobilis W. Sm. [= *Surirella robusta* var. *nobilis* (W. Sm.) Cl.-Eul.]

KS: Curtis (1901)

***Surirella robusta* var. *splendida* (Ehr.) V.H.**

KS: McFarland et al. (1964)

OK: Pfiester et al. (1979), Seyfer and Wilhm (1977), Troeger (1978, 1983)

Also reported as:

Surirella splendida (Ehr.) Kütz.

KS: Curtis (1901), Wolle (1889)

***Surirella saxonica* Auersw. ex Rab.**

NE: Elmore (1921)

***Surirella sigmoidea* Ehr.**

OK: Ehrenberg (1856)

***Surirella spiralis* Kütz.**

KS: Wolle (1889)

NE: Andersen and Walker (1920), Elmore (1921)

***Surirella striatula* Turp.**

KS: ?Harris and Eberle (2001), Wenke and Eberle (1986), Williams (1962, 1964), WPSS (1961-1963, 1966)

OK: Ehrenberg (1856), Koch (1975), Pfiester et al. (1979), WPSS (1961-1963)

***Surirella suevica* Zeller ex Grun.**

KS: Curtis (1901)

***Surirella tenera* Greg.**

KS: Curtis (1901)

***Surirella tenera* var. *nervosa* A.S.**

KS: Curtis (1901), Wenke and Eberle (1985)

***Surirella tenera* var. *palmerii* (Boyer) Hust.**

Reported as:

Surirella palmerii Boyer

KS: Powers (1969)

***Surirella tenera* var. *splendidula* A.S.**

KS: Curtis (1901)

***Surirella undulata* Ehr.**

NE: Ehrenberg (1856)

OK: Ehrenberg (1856)

► *Tropidoneis lepidoptera* (Greg.) Cl. = *Plagiotropis lepidoptera* (Greg.) Reim. or *P. l.* var. *proboscidea* (Cl.) Reim.

► ***Tryblionella acuta* (Cl.) D. Mann?**

Reported as:

Nitzschia acuta Cl.

NE: Hoagland et al. (1982), Roemer et al. (1984)

OK: Pfiester et al. (1979)

***Tryblionella angustata* W. Sm.**

Reported as:

Homoeocladia angustata (W. Sm.) Kuntze

NE: Elmore (1921)

Nitzschia angustata (W. Sm.) Grun.

KS: Curtis (1901), Wujek et al. (1980)

OK: Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1978)

***Tryblionella apiculata* Greg.**

Reported as:

Homoeocladia apiculata (Greg.) Kuntze

NE: Elmore (1921)

Nitzschia apiculata (Greg.) Grun.

KS: Curtis (1901), Powers (1969), Wenke and Eberle (1986), Williams (1962), ?Williams et al. (1979), WPSS (1966), Wujek et al. (1980)

NE: Roemer et al. (1984)

OK: Hern et al. (1979), Koch (1975), Koch and Risser (1974), Pfiester et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), WPSS (1966)

***Tryblionella calida* (Grun. in Cl. & Grun.) D.G. Mann**

KS: Harris and Eberle (2001)

***Tryblionella debilis* Arn.**

Reported as:

Nitzschia tryblionella var. *debilis* (Arn.) A. Mayer

KS: ?Williams et al. (1979), Wujek et al. (1980)

MO: M.K. Morris et al. (1979a), Pamperl (1980)

NE: Hoagland et al. (1982)

OK: Hern et al. (1979), Koch (1975)

***Tryblionella gracilis* W. Sm.**

Reported as:

Homoeocladia tryblionella (Hantz.) Kuntze

NE: Elmore (1921)

OK: Leake (1945)

Nitzschia tryblionella Hantz.

KS: Curtis (1901), Powers (1969), Williams et al. (1979), Wujek et al. (1980)

NE: Andersen and Walker (1920), Williams (1962), WPSS (1961-1963, 1966)

OK: Koch (1975), Pfister et al. (1979), Seyfer and Wilhm (1977), Wilhm et al. (1977), Wilhm et al. (1978), WPSS (1961-1963)

Nitzschia tryblionella f. *densus striatae* ?

KS: Curtis (1901)

Nitzschia tryblionella f. *minor* ?

KS: Curtis (1901)

Tryblionella tryblionella (Hantz.) Proch.

KS: Harris and Eberle (2001)

***Tryblionella hungarica* (Grun.) D. Mann**

KS: Harris and Eberle (2001)

Also reported as:

Homoeocladia hungarica (Grun.) Kuntze

NE: Elmore (1921)

Nitzschia hungarica Grun.

KS: Curtis (1901), Powers (1969), Wenke and Eberle (1986), Williams et al. (1979), Wujek et al. (1980)

NE: Hoagland et al. (1982), Rosowski et al. (1986)

OK: Cooper and Wilhm (1975), Koch (1975), Pfister et al. (1979), Seyfer and Wilhm (1977), Troeger (1978), Wilhm et al. (1977), Wilhm et al. (1978), Williams (1962), WPSS (1966)

***Tryblionella levidensis* W. Sm.**

KS: Harris and Eberle (2001)

Also reported as:

Nitzschia tryblionella var. *levidensis* (W. Sm.) Grun.

OK: Pfister and Terry (1978), Troeger (1983)

***Tryblionella punctata* W. Sm.**

Reported as:

Homoeocladia punctata (W. Sm.) Kuntze

NE: Elmore (1921)

***Tryblionella umblicata* (Hust.) D. Mann**

Reported as:

Nitzschia umblicata Hust.

KS: Powers (1969)

***Tryblionella victoriae* Grun.**

Reported as:

Nitzschia tryblionella var. *victoriae* (Grun.) Grun.

KS: Curtis (1901)

NE: Hoagland et al. (1982)

OK: Koch and Risser (1974)

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