Nova Hedwigia **88** 3—4 347—422 Stuttgart, May 2009

Distribution, ecology and nuisance effects of the freshwater invasive diatom *Didymosphenia geminata* (Lyngbye) M. Schmidt: a literature review

by

Saúl Blanco[1]* and Luc Ector[2]

[1]Department of Biodiversity and Environmental Management, University of León, E-24071 León. Spain

[2]Department of Environment and Agro-Biotechnologies (EVA), Public Research Centre-Gabriel Lippmann, Rue du Brill, 41, L-4422 Belvaux, Grand-duchy of Luxembourg

With 5 figures

Blanco, S. & L. Ector (2009): Distribution, ecology and nuisance effects of the freshwater invasive diatom *Didymosphenia geminata* (Lyngbye) M. Schmidt: a literature review. - Nova Hedwigia 88: 347–422.

Abstract: The diatom *Didymosphenia geminata* (Lyngbye) M.Schmidt has been commonly considered a taxon restricted to pristine habitats in mountainous areas of circumboreal regions. Recent studies show that it has a broader distribution and ecological amplitude. This shift seems to have occurred recently, as it now forms large growths in rivers within its native geographical area (North America, Europe) but also mass developments have recently appeared in New Zealand, where it is considered an aggressive invasive species with dramatic ecological and economic impacts. This nuisance organism grows attached in streambeds and may impact freshwater fish and aquatic plants and insects, causing severe disturbance in food webs. This paper investigates the historic and current biogeographic range of this invasive species (and varieties) based on 1000 citations collected mainly from the scientific literature. The locations where this diatom has appeared, including both fossil and recent records, are presented in world distribution maps. Our results confirm that the native range of *D. geminata* is almost restricted to the Holarctic region, though its distribution area is broader than usually reported in the literature. The ecological profile of this alga, along with its nuisance effects, is also discussed. Excessive growths do not only appear in areas where this species is presumably exotic. Contrarily to general statement, reports of mass developments of *D. geminata* date back to the 19th century. World references to *D. geminata* have increased exponentially during the last decades; however; with respect to the whole diatom literature during the XIX and XX centuries, the relative frequency of citations has decreased progressively.

*Author for correspondence, e-mail: sblal@unileon.es

DOI: 10.1127/0029-5035/2009/0088-0347 0029-5035/09/0088-0347 $ 19.00

Introduction

Historically, the concept of invasive algae has been restricted to marine environments, where the ecological impacts of species such as *Caulerpa taxifolia* (Vahl) C.Agardh, *Codium fragile* (Suringar) Hariot or *Sargassum muticum* (Yendo) Fensholt are relatively well known. On the contrary, microalgae such as freshwater diatoms have been considered traditionally as cosmopolitan organisms (e.g. Finlay 2002); however, this paradigm has been questioned in several recent studies (Kociolek & Spaulding 2000, Hillebrand et al. 2001, Foissner 2006, Kilroy et al. 2007). The distribution and progression of selected taxa were investigated by Coste & Ector (2000) who revealed the presence of new diatom species for the European flora, some of them found in large populations in certain locations. Due to their fast proliferation in non-native habitats, often displacing indigenous taxa, most of them can be considered as invasives.

Nowadays there exists an increasing concern about the recent dispersal and negative environmental effects of the freshwater diatom alga *Didymosphenia geminata* (Lyngbye) M.Schmidt in A.Schmidt 1899, which is currently acknowledged as one of the most harmful invasive organisms in lotic systems worldwide (Sherbot & Bothwell 1993, Beltrami et al. 2008a, b, c, Pederson & Blakeslee 2008). *Didymosphenia geminata* is forming excessive growths in many streams and rivers of North America, New Zealand and Europe (Kilroy 2004a, b). In these areas this alga is expanding its geographical range and forming massive growths in streams and channels. *Didymosphenia* grows attached in streambeds and may impact freshwater fish and aquatic plants and insects, causing severe disturbance in food webs (Shelby 2006a, Marshall 2008). *Didymosphenia geminata* is native to northern-latitude lakes and streams, and, according to the literature, it is considered to be restricted to low-nutrient, low-temperature habitats with little anthropogenic impact. However, in recent years, its distribution has changed; this diatom not only appears to be expanding its geographic area to lower latitudes and altitudes, but it increasingly forms extensive masses covering stream benthos (Spaulding et al. 2005a, b, Cary et al. 2007a, Bothwell & Spaulding 2008, Edlund et al. 2008). The situation seems to be especially critical in New Zealand and north-western USA. On the South Island of New Zealand, *Didymosphenia geminata* is an exotic introduced species that has been growing massively in several rivers and declared an "unwanted organism" by Biosecurity New Zealand (Kilroy et al. 2005a, OECD 2007).

Only few diatom taxa are known to form conspicuous growths in streams, e.g. *Cymbella janischii* (A.Schmidt) De Toni, *Gomphoneis eriense* (Grunow) Skvortsov in Skvortsov & K.I.Meyer, *G. herculeana* (Ehrenberg) Cleve, *G. minuta* (Stone) Kociolek et Stoermer (Bahls 2007a). *Gomphoneis minuta* relatively recently became a nuisance in French streams, a habitat where it is considered nonindigenous (Le Cohu & Coste 1995, Coste & Ector 2000, Stoermer & Andresen 2006). However, *D. geminata* is the first non-toxic benthic diatom known to cause strong negative effects on aquatic environments, though many aspects of its biology are still poorly understood. The main aim of this study is to assess the historic and recent distribution area of this species based on bibliographic records. We identify the ecological aspects underlying

its massive proliferation in several limnosystems worldwide. Furthermore, the study of the spatial-temporal distribution of this diatom provides indications of the causes leading to the geographic expansion of invasive microalgae.

Material and methods

In order to account for existing records of *D. geminata* worldwide, a near exhaustive investigation was performed in the scientific literature, phycological inventories, technical reports and internet databases. Where possible, the date of citation, along with the most accurate geographical location available, and ecological particularities were recorded. Data were analyzed and geo-referenced using GIS software. It must be noted that this bibliographic approach is affected by a triple bias: i) despite the fact that the diagnosis of *D. geminata* is relatively easy, even in untreated samples (Sterrenburg et al. 2007), in most cases the lack of iconographic material associated to the records, prevents the detection of taxonomic misidentifications, which are very likely present in technical reports and ancient works; ii) since phycological research effort varies among different world regions, biogeographical maps may reflect the distribution of floristic surveys rather than the actual distribution of a certain species; and iii) due to similar reasons, the comparison of modern and ancient distribution maps is not reliable. Nevertheless, because it is presumably the only feasible methodology, we use it to obtain a general view on the spatio-temporal distribution patterns of this species.

Results

Fourtanier & Kociolek (2008) identify the following nomenclatural synonyms of *D. geminata*: *Echinella geminata* Lyngbye, *Gomphonema geminatum* (Lyngbye) C.Agardh, *Styllaria geminata* (Lyngbye) Bory, *Dendrella geminata* (Lyngbye) Bory and *Lyngbyea pulvinata* var. *geminata* (Lyngbye) Sommerfelt. Unless otherwise stated, the taxonomic scope of the literature survey is limited hereafter to *Didymosphenia geminata* (Lyngbye) M.Schmidt sensu stricto, including: i) the emended (broadened) description of this taxon in Antoine & Benson-Evans (1984), ii) the nomenclatural synonyms, and iii) their validly published varieties and forms of *D. geminata* and its former nomenclatural synonyms, identified as such in the text. There are 26 taxa currently under this status:

Didymosphenia geminata var. *baicalensis* Skvortsov et K.I.Meyer

D. geminata var. *baicalensis* f. *capitata* Skvortsov et K.I.Meyer

D. geminata var. *baicalensis* f. *curta* Skvortsov et K.I.Meyer

D. geminata var. *baicalensis* f. *curvata* Skvortsov et K.I.Meyer

D. geminata var. *baicalensis* f. *elongata* Skvortsov et K.I.Meyer

D. geminata var. *curvata* f. *curta* Skvortsov et K.I.Meyer

D. geminata var. *curvata* f. *elongata* Skvortsov et K.I.Meyer

D. geminata var. *dorogostaiskii* Skvortsov et K.I.Meyer

D. geminata var. *dorogostaiskii* f. *curta* Skvortsov et K.I.Meyer

D. geminata var. *genuina* A.Cleve

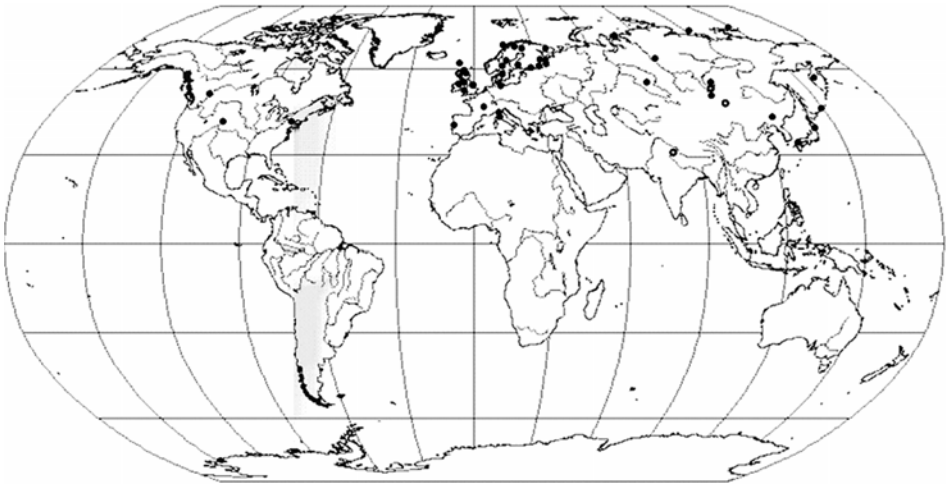

Fig. 1: World distribution of fossil or subfossil records of *Didymosphenia geminata*. Black dots: *D. geminata* var. *geminata*. White dots: *D. geminata* var. pl. "?": doubtful citation. Unspecified locations ommited.

D. geminata var. *genuina* f. *baicalensis* Skvortsov et K.I.Meyer

D. geminata var. *genuina* f. *curta* Skvortsov et K.I.Meyer

D. geminata var. *neocaledonica* Manguin

D. geminata var. *sibirica* f. *anomala* Skvortsov et K.I.Meyer

D. geminata var. *sibirica* f. *curta* Skvortsov et K.I.Meyer

D. geminata var. *sibirica* f. *curvata* Skvortsov

D. geminata var. *sibirica* f. *elongata* Skvortsov et K.I.Meyer

D. geminata var. *sibirica* f. *genuina* Skvortsov et K.I.Meyer

D. geminata var. *sibirica* f. *subcapitata* Skvortsov

D. geminata var. *stricta* M.Schmidt

D. geminata var. *stricta* f. *baicalensis* Skvortsov et K.I.Meyer

D. geminata var. *stricta* f. *capitata* Skvortsov et K.I.Meyer

D. geminata var. *stricta* f. *curvata* Skvortsov

Gomphonema geminatum var. *bipunctatum* Rattray

G. geminatum var. *curvatum* K.I.Meyer

G. geminatum var. *hybrida* Grunow

G. geminatum var. *norvegica* Holmboe

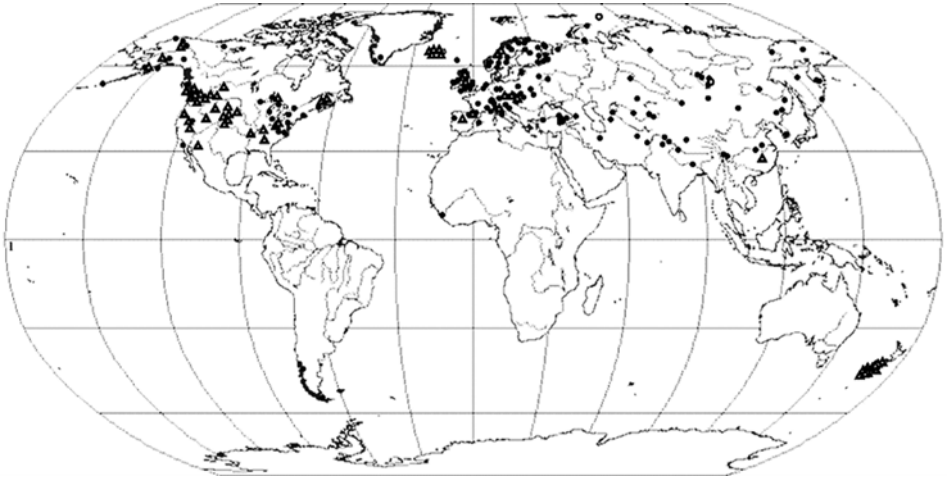

Fig. 2: World distribution of recent records of *Didymosphenia geminata*. Black dots: *D. geminata* var. *geminata*. White dots: *D. geminata* var. pl. Triangles: mass-forming *D. geminata* var. *geminata*. Unspecified locations ommited.

Up to 1000 references about *D. geminata* were found, from the description of this species, first discovered in the Faroe Islands by H.C.Lyngbye in 1817 (Lyngbye 1819), to 2008. Paleolimnological and recent records are presented arranged by countries and in chronological order. Also, records are plotted in biogeographical world maps (Figs 1 and 2). World references to *D. geminata* have increased exponentially during the last decades (Fig. 3); however, with respect to the whole diatom literature during the XIX and XX centuries (~145.000 references), the relative frequency of citations has decreased progressively (Fig. 4).

1. Fossil and subfossil records:

CANADA: Pierre Greys Lakes (Irish 1951), Lake O'Hara (H.Kling, pers. comm., 2007).

CHINA: Changbai and Hailong (Liu 1982), Fusong (Jiaying & Yuzao 1986).

FAROE ISLANDS: Skalafjord (Witon & Witkowski 2003).

FINLAND: Lapland (Hogg 1856), Kuolajärvi (Ramsay & Nyholm 1895), Outokumpu (Väyrynen 1939), Höytiäinen, Humaljoki, Ino, Maaninka, Niemenkönkään (Cleve-Euler 1955), Otanmäki (Pääkkönen 1956), Lake Päijänne (Aario 1965), Baltic Sea (Snoeijs & Balashova 1998), Pohjanmaa (Eriksson et al. 1999), Iso Lehmälampi (Sarmaja-Korjonen & Alhonen 1999). Unspecified locations: Kivioja (1963), Haapala & Ojanperii (1972).

FRANCE: Cantal (Cleve 1894, Héribaud 1902).

GERMANY: Mecklenburg (Geinitz 1880).

INDIA: Lake Karewa (De Terra & Paterson 1939 [*G. geminatum* var. *hybrida*]), Baltal (Gandhi & Mohan 1983 [*G. geminatum* var. *hybrida*]).

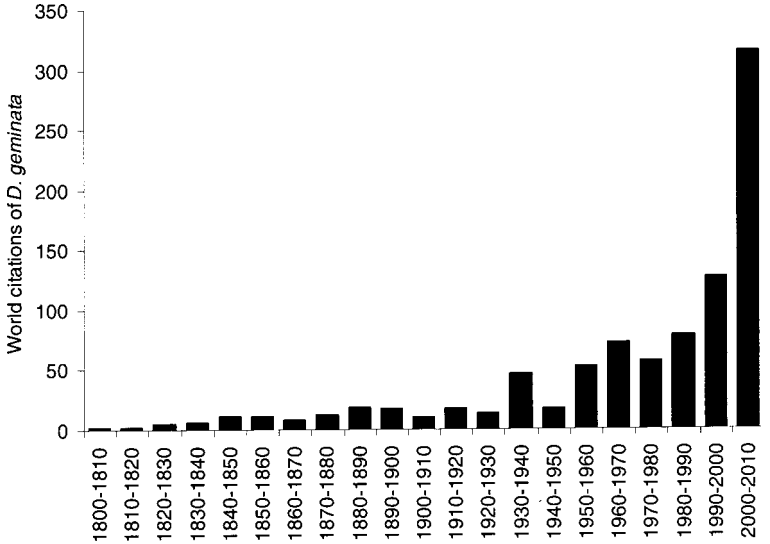

Fig. 3: World citations of *Didymosphenia geminata* in the scientific literature since 1800.

IRELAND: Lough Mourne (Ehrenberg 1842, Smith 1853).

ITALY: San Fiore, Tuscany (Mandl 1839, Pritchard 1842, Griffith & Henfrey 1883), Castelnovate, Lombardy (Corti 1893).

JAPAN: Onikoube Basin (Katayama 1955), Yatuka deposit (Tuji 2004).

MONGOLIA: Lake Hövsgöl (Dorofeyuk 1977), Lake Tsagan-Nur (Dorofeyuk 1984).

NORWAY: Stavanger (Héribaud 1902), Andøya (Foged 1978).

POLAND: Unspecified location: Marciniak & Przybyłowska-Lange (1977).

PORTUGAL: Central Portugal (Da Silva 1946).

RUSSIA: Lake Ladoga (Ailio 1915, Abramova et al. 1967, Davidova 1968), Pechenga (Väyrynen 1938), Yenisei River (Alyoshinskaya 1962, 1968, Skabichevskaya 1984), Lake Krasnoe (Vishnevskaya & Davidova 1963, Stanislavskaya 2007), Tighil River (Kozlova & Geptner 1965), Kamchatka River (Malaeva et al. 1965, Zaikina & Malayeva 1966, Zaikina & Lupikina 1968), Lake Baikal (Fedorova 1975 [incl. *D. geminata* var. *genuina*, *D. geminata* var. *genuina* f. *baicalensis*, *D. geminata* var. *genuina* f. *curta* and *D. geminata* var. *baicalensis*]), Edlund et al. 1995, Swann et al. 2006 [*D. geminata* var. *baicalensis* f. *curvata*], Laptev Sea (Cremer 1998, 1999), Lake Lama (Kienel 1999, Kienel & Melles 2000, Melles 2000, Kienel & Kumke 2002, Kienel et al. 2005), Kara Sea (Matthiessen et al. 1999, Polyakova & Stein 2004), Iturup Island (Razjigaeva et al. 2002), New Siberia Island (Olyunina 2004), Central Kola Peninsula (Olyunina 2005), Yakutia (Vasilyeva-Kralina et al. 2005), and Novosibirsk (Olyunina & Tumskoy 2006). Unspecified locations: Davidova (1985), Loseva (2000), Loseva et al. (2004).

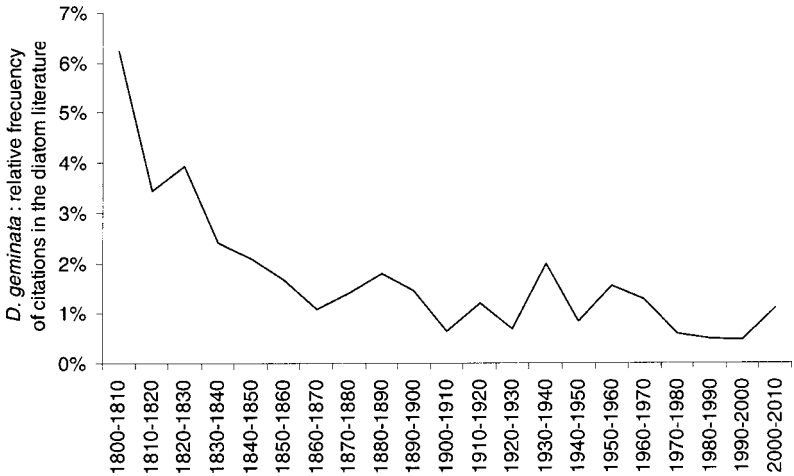

Fig. 4: Relative frequency (%) of citations of *Didymosphenia geminata* in the diatom literature since 1800.

SWEDEN: Ryssby (Holst 1888), Kalmar (Héribaud 1902), Lake Ancylus (Cleve-Euler 1911, 1944, 1955, Post 1915, Hustedt 1924, Hedenström & Risberg 1999), Abisko (Lundqvist 1939), Ådalen, Baltic Sea, Björnsjö, Erlången, Fågelvik, Galmeren, Gråssjön, Härnö, Hornborgasjön, Järnlunden, Kristienhamn, Lule River, Ragunda, Roxen, Skattmansö, Strömsbro, Täflången, Tanum (Cleve-Euler 1955), Ale (Fromm 1984), Södertörn Peninsula, Lake Svulten (Snoeijs & Balashova 1998). Unspecified locations in Norrland (Fegraeus 1890, Lundbohm 1899, Lundqvist 1936) and in Southern Sweden (Thunmark 1937).

UNITED KINGDOM: ENGLAND: Kentmere (Mitchell 1933), Lake Windermere (Jenkin et al. 1941, Pennington & Tutin 1943, Round 1957a, Sabater & Haworth 1995), Lakes Ennerdale, Derwentwater, Brother's Water, Bassenthwaite, Loweswater, Ullswater, Buttermere, Elterwater, Esthwaite Water, Grasmere (Round 1957a), Kentmere Valley (Round 1957b). SCOTLAND: Isle of Lewis (Rattray 1887 [*G. geminatum* var. *bipunctatum*]), Loch Leven (Haworth 1972), Loch Sionascaig (Pennington et al. 1972, Haworth 1976), and Loch Linton (Mannion 1978). WALES: Milford Haven (Okeden 1855). Unspecified locations: Paterson (1841), Queckett (1850), Johnston & Tate (1853).

UNITED STATES: Wildwood (Boyer 1895), Southern New Jersey (Woolman 1895), Long Island, New York (Lohman 1939), Amchitka Island (Gard 1980), Cache la Poudre River, Colorado (Oberholster 2005, Oberholster et al. 2005). Unspecified location in the Pacific Coast region (Mulryan 1939).

2. Distribution of recent records:

AFGHANISTAN: Panjshir (Foged 1959).

AUSTRIA: Enns River (Pfister 2002, Ács et al. 2003, Schiftner & Blatterer 2004), Steyr (Schiftner & Blatterer 2004), Lake in Kaernten, Carinthia (H.Ullrich, pers. comm., 2008). Unspecified locations: Rabenhorst (1864), Kann (1978).

BELARUS: Unspecified location: Mikheyeva (1999).

BELGIUM: Allain, Hainaut (Westendorp & Walleys 1844), Cortenberg (Conrad & Kufferath 1912). Unspecified location: Symoens (1950).

CANADA: Vancouver Island (Cleve 1894, Boyer 1927, Rieberger 1991, Sherbot & Bothwell 1993, Mundie & Crabtree 1997, Hansen 2003, Silvestri 2004), New Brunswick (Bailey 1910), Bay of Fundy (Bailey 1915), Island of Montreal (Miller 1915), Bathurst Inlet, St. John's Harbour (Bailey 1924), Sainte Annes (Lowe 1927), Lake Winnipeg (Bajkov 1934), Lake Kalamalka (Foerster 1936), Ontario (Duthie 1973), Yukon (Barraclough 1992, YZC 2005, H.Kling, pers. comm., 2008), British Columbia (EVSEC 2004), Beaver Creek (Westcott et al. 2004), Columbia River (CRIEMP 2005), Attycelley Creek (Crippen 2005), Quebec (Bellavance 2006, Côté 2007, MDDEP-MRNF 2007, Blais 2008), Red Deer and Bow Rivers, Alberta (Elwell 2006, Kirkwood et al. 2007), Tsi-it-toh-Choh Range caves, Yukon (Lauriol et al. 2006), Puntledge River, British Columbia (Silvestri 2006), Milk River (H.Kling, pers. comm., 2007). Whoriskey (2007) and Lavoie (2006, 2007a, b) cite several affected rivers in the province of Quebec: Bonaventure, Cascapédia, Petite Cascapédia, Nouvelle, Causapscal, Matapédia, Sainte-Anne, and Matane. Unspecified location: Macclement (1917).

CHILE: Lake Sarmiento and Cisnes River (Asprey et al. 1964, Rivera 1983).

CHINA: Khingan, North Manchuria (Skvortsov 1928), Lake Qinghai, Ganzhou (Skvortsov 1935), Chengtu, Szechwan (Skvortsov 1938), Jolmolungma (Jao 1964, Jao et al. 1973, Li et al. 2004), Huogerguos River and Ninxi Forest, Ninshaan County (Stoermer et al. 1986), Changbai Mountains (Bao et al. 1992), Sichuan (Anonymous 1998), Heilongjiang (Yawen et al. 1997, 1998, Li et al. 2004, F.Yawen, pers. comm., 2008), Zhanjiakou (Wen & Zhi-Hui 1999), Xizang Plateau (Huizhong & Jiayou 2000), Hengduan Mountains, Jilin and Xizang (Li et al. 2003, 2004), Lakes Lingza and Gurudongmar, Tibet (CISMHE 2006), Hubei (Wang et al. 2006). Unspecified locations: Ueno (1940), Yawen et al. (1997), Zhixin (2004), Hongjun & Yinxin (2006), Hu & Wei (2006).

CROATIA: Unspecified location (Vouk 1918).

CZECH REPUBLIC: Moravka River (Gágyorová & Marvan 2002, Hašler et al. 2007). Several specimens have also been found in the following rivers: Moravice, Čeladenka, Lučina, Odra, Bečva, Kněhyně, Juhyně, Labe, Borová, Adamovský, and Panský potok (P.Marvan, pers. comm., 2006). Unspecified location: Hindák (1978).

DENMARK: Unspecified location (Mandl 1839).

ESTONIA: Unspecified location (ENSVTA 1970).

FAROE ISLANDS: Agehospital, Skielling (Lyngbye 1819), Unspecified locations: Agardh (1824, 1831), Audouin (1824), Kützing (1833, 1844), De Toni (1891), Cleve (1894), Patrick & Reimer (1975).

FINLAND: Lapland (Wahlenberg 1812, Sommerfelt 1826, Cleve-Euler 1934, Krasske 1943, Kawecka & Olech 2004), Åbo and northern Savo (Cleve 1891), Kuolajärvi (Ramsay & Nyholm 1895), Pojo-Bucht (Mölder 1943, Cleve-Euler 1955), Enontekiö, Henriksnäs, Hötämäinen, Kuusamo, Lojosee, Muonio River, Muostionjoki, Suopohja, Tuohilampi, Vessillanlampi, Viando (Cleve-Euler 1955), Tvarminne (Round 1959), Kilpisjärvi, Tsaikkaljoki (Tynni 1978), Baltic Sea (Hällfors 2004, ICES 2005), Teno River (Komulaynen 2005), Tenojoki and Utsjoki Rivers (Miettinen 2006), Näätämöjoki River (Halmeenpää et al. 2007), Northern Ostrobothnia (Niemelä 2007). Unspecified locations: Cleve (1894), Cleve-Euler (1915), Rainio (1973), Eloranta & Kunnas (1979), Kawecka & Eloranta (1987), Tikkanen & Korhola (1993), Soininen & Niemelä (2002), Soininen et al. (2004, 2008).

FRANCE: Chamonix (Brun 1880), Rieu Majou River (Gourdon 1887), Lake Oô (Belloc 1890), Cantal (Héribaud 1893), Gave d'Ossau River (Hustedt 1938), Barjols (Cazaubon 1988), Durance River at Caumont-sur-Durance, and Verdon River at Vinon-sur-Verdon (ASCONIT 2007), Eastern English Channel (Jouenne et al. 2007). Unspecified locations: Bory (1824a), Desmazières (1825), AFAS (1877), Comère (1894).

GEORGIA: Racha (Kukhaleishvili 1985). Unspecified location: Kanchaveli et al. (1981).

GERMANY: Würzburg (Leiblein 1827, Mandl 1839), Erfurt, Thuringia (Kützing 1836), Berlin, Wismar (Mandl 1839), Weserbergland (Suhr 1905, Peter 1913), Isar River, Munich (H.Ullrich & A.Advocat, pers. comm., 2008). Unspecified locations: Oken (1841), Stenzel (1862), Fritsch & Müller (1870), Schenk (1881), Fischer (1903, 1908), Engler & Prantl (1909), Tischler (1934), Harder (1935), Dietrich & Dietrich (1955), Munda (1967), Lange-Bertalot (1996).

GREENLAND: Ivigut (Boyer 1927), Narssaq (Johansson 1980a). Unspecified locations: Jones (1875), Lund (1959).

HUNGARY: Danube River (Backhaus 1968, Literáthy et al. 2002, Ács et al. 2003, 2006, Szabó 2004), Szigetköz (Buczkó et al. 2001-2007, Buczkó 2008, Buczkó & Németh 2008), Lake Mérnökházi (Padisák et al. 2003), Tisza River (Nemes & Matavulj 2004, Szabó et al. 2004, 2005), Maros River (Z.Nagy-László & I.P.Holló, pers. comm., 2004) Several locations in the territory of the Environmental Inspectorate of the North Danubian Region are listed in Érces (2002). Unspecified locations: Maretiæ (1924), Donaszy (1959).

ICELAND: Widespread in rivers and lakes (Jónsson et al. 2000, Malmquist et al. 2001, Ólafsson et al. 2004, Jónsson et al. 2006a, b, Magnúsdóttir & Guðjónsson 2006, Jónsson 2007), Lake Thingvallavatn (Jónsson 1987), Háskóla Islands (Magnúsdóttir & Guðjónsson 2006). Unspecified locations: Belloc (1894), Warming & Rosensvinge (1912), Østrup (1920), Hallgrímsson (2007).

INDIA: Kishanganga River (Bhatt et al. 2005, 2008), Teesta River (CISMHE 2006, Bhatt et al. 2007), Ravi, Lachen Chhu and Lachung Chhu Rivers (Bhatt et al. 2008).

IRAN: Jajrood River (Jamallou et al. 2006, 2007).

IRELAND: Londonderry county (Colby & Larcom 1837, Kemp 2006), Carnlough (Hassall 1845), Cork County (Harvey 1845, Hassall 1845), Collin Hill (Schmidt

1899), Caragh (Heuff & Horkan 1984), Killarney (Metzeltin & Lange-Bertalot 1995), Dawros River (Clabby et al. 2004), Galway (Kilroy 2004a), Donegal, Mayo and Sligo (Kelly-Quinn et al. 2005), Burnfoot Ale (Kemp 2006). Unspecified locations: Kützing (1833, 1844), Harvey (1841), Hassall (1845), Fullarton (1846), Rabenhorst (1864), Ward (1864), De Toni (1891), Cleve (1894), Van Heurck (1896), Small (1950), Foged (1977), Chatháin et al. (2004).

ITALY: Courmayeur (Brun 1880), Lakes Como and Bracciano (De Toni & Levi 1886), Laino, Lombardy (Bonardi 1888), Lake Bertignano (Forti 1900), Lake Devero (Monti 1904), Piedmont (Giaj-Levra 1927, M.Battegazzore, pers.comm., 2008), Lake Maggiore (Forni 1925, Giaj-Levra 1927), Lazio (Giaj-Levra & Abate 1994), Trentino (Ciutti et al. 2005, Beltrami et al. 2007, 2008b, c), Natisono, Udine (Zorza et al. 2006), Po and Varaita Rivers (Spaulding 2006, Battegazzore et al. 2007, A. Bertoglio, pers. comm., 2006), Erro River (ARPA Piemonte 2007), Drava River (Beltrami et al. 2008a), Oglio River (E.Arnaud, pers. comm., 2003). Unspecified locations: Mandl (1839), Castracane (1879), Lanzi (1883), De Toni (1891).

JAPAN: Lake Biwa (Negoro 1960). Unspecified locations: Tsumura (1967, 1991), Asai (1995).

KAZAKHSTAN: Lake Bijlikul (Obuchova & Noskov 1966), Ili River (Metzeltin & Lange-Bertalot 1995).

KYRGYZSTAN: Lake Issyk-Kul (Kiselev 1932a, Mambetaliyeva 1963a, b, Kulumbaeva 1982, Metzeltin & Lange-Bertalot 1995), Yassi, Karakuldja, Djaukuchak, Koidjerti and Arabel Rivers, Lakes Sonkul and Chatirkul, Kara-Tyube (Muzafarov 1958).

MALAYSIA: Unspecified location (Shamsudin1990).

MEXICO: Valle de Bravo (García 2007).

MONGOLIA: Lake Hövsgöl (Dorogostaïsky 1904, Østrup 1908, Ulziikhutag & Tsetsegma 1980, Zagarenko & Prozorov 1980, Kozlov et al. 1989, Kozhova et al. 1994, Edlund et al. 2005, 2006, Genkal et al. 2006), Selenga River (Zagarenko 1983), Tuul River (Soninkhishig et al. 1999), Urd Tamir Gol, Arkhangai (HANNA Database 2007). Unspecified locations: Edlund et al. (2001), Dorofeyuk & Tsetsegmaa (2002).

NETHERLANDS: Unspecified location (ICES 2005).

NEW CALEDONIA: Manguin (1962) [*D. geminata* var. *neocaledonica*: this taxon could not be found in the re-examination of Manguin's original material by Kociolek & de Reviers (1996); the iconotype does not seem to conform with *Didymosphenia* characteristic features].

NEW ZEALAND: Widespread in Southland rivers (Mather 1928, Chapman et al. 1957, Collier & Winterbourn 1990, Kilroy 2004a, b, Campbell 2005, 2008, Duncan et al. 2005, Kilroy 2005, Kilroy & Blair 2005, Kilroy et al. 2005a, b, c, Branson 2006, Duncan 2006a, b, Duncan & Wilkins 2006, Kilroy et al. 2006, Larned et al. 2006, 2007, McNeill et al. 2006, Norton & Sorrell 2006, Thomas 2006, Vieglais & Kilroy 2006, Duncan 2007, Kilroy et al. 2007, 2008). Thomson & Birnie (2005) and Barret (2007) give the following list of affected locations: Buller, Hawea, Clutha, Oreti,

Upper Waiau, Von, Mararoa, Waitaki, Ahuriri, Takaka, Gowan, Pelorus and Speargrass Rivers, and Lakes Manapouri and Dunstan. A complete list of affected waterways is available in Biosecurity New Zealand (2007).

NORWAY: Widespread in Southeastern Norway (Skulberg 1972, 1974, 1982, Lindstrøm 2000), Spitsbergen (Lagerstedt 1873, Cleve 1894, Müller-Haeckel & Solem 1974, Picińska-Fałtynowicz 1988, Metzeltin & Witkowski 1996, Van de Vijver et al. 1999), Tana Elf, Finnmarken (Cleve & Möller 1879), Lake Mjösa (Holmboe 1899 [*G. geminatum* var. *norvegica*], Lindstrøm et al. 1973), Varanger Peninsula (Foged 1968), Glåma River (Skulberg 1972, 1982, Skulberg & Kotai 1978, Skulberg & Lillehammer 1984), Oslo (Brettum 1974), Lake Hammervatnet (Sivertsen 1975), Tanavassdraget (Traaen et al. 1990), Gaula River (Lindstrøm & Rorslett 1991), Barduelva and Troms Rivers (Aagaard et al. 2002), Oyeren (AWI 2003), Svartelva (NIVA 2003), Alta River (Ugedal et al. 2003, 2005, 2006, Koksvic & Reinersten 2008), Hotran Channel (Johansen & Romstad 2006), Gausa (NIVA 2007), Stjørdalselva River (Arnekleiv et al. 2007). Unspecified locations: Agardh (1831), Mandl (1839), Huitfeldt-Kaas (1906), Mölder (1951), Heggberget & Johnsen (1982), Lindstrøm (1991, 1992).

PAKISTAN: Bagah River (Skvortsov 1935), Lake Saiful Muluk (Metzeltin & Lange-Bertalot 1995), Lake Kaghan (Wazir 2002), Dandot (Khattak et al. 2005).

POLAND: Widespread in southern regions (Ligowski & Rakowska 2001, WIOŚK 2002, Mrozińska et al. 2006, Marciniewicz-Mykieta 2007), Litworowego Stawu (Gazdowa 1960), Danube River Basin and Tatra Mountains (Szklarczyk-Gazdowa 1960, Siemińska 1964, Kawecka 1969, 1993, Sanecki et al. 1998, Wołowski et al. 2000, Sanecki 2003), Białka River and Roztoka (Kawecka 1965), Rybi Potok (Kawecka 1965, 1974, 1977), Lake Moskie Oko (Kawecka 1966), Czorsztyn and Sromowce (Mrozińska-Broda & Czerwik-Marcinkowska 1996, 2004), San River (WIOŚ-Jasło 1996, Kawecka & Sanecki 2003), Postolów (Rakowska & Bie'n 2000), Vistula River (Kasza & Galas 2001), Orawska Basin (Noga 2003). Kawecka (1969) and Kawecka & Sanecki (2003) provide the following list of locations: Bialka, Bialy Dunajec, Danube River, Gorce Ranges, Łaczany, Lepietnica Stream, Myczkowce, Niepołomice, Pánsczckki, Pieniny Ranges, Raba River, Roztoka, Rybi Potok, Skawa River, Soła River, Solina, Sucha Woda, and Tarnobrzeg. Unspecified locations: Godlewski (1923), Brockmann (1954).

PORTUGAL: Ave River (Zimmermann 1909).

ROMANIA: Prut River (Şalari 1968), Bicaz water power reservoir (Cărăuş 1973), Bistrita River (Cărăuş 1983a), Lake Izvorul Muntelui (Cărăuş 1983b), Black Sea (Gomoiu & Skolka 1998), Salauta River (Creţu 1999), Tisa River (Hamar 1999), Somesul Cald catchment area (Karina et al. 2000), Somesul Cald River, Doda Pilii (Battes et al. 2000-2001), Florest, Somesul Mic River (Pochon 2002), Rebra, Somesul Mare and Tibles Rivers (Voicinco et al. 2005), Lotru and Sebes Rivers (I.Cărăuş, pers. comm., 2008). Unspecified location: Cărăuş (2002).

RUSSIA: Yekaterinburg (Mandl 1839), Lake Ladoga (Weisse 1865 [*D. geminata* var. *stricta*], Cleve 1891, Schmidt 1899 [*D. geminata* var. *stricta*], Cleve-Euler 1955,

Davidova 1961a, b, 1963, Davidova & Petrova 1968), Okhotsk, Khabarovsk Krai (Grunow 1878, Cleve 1894), Karelian Region (Cleve 1891, Poretzky 1927, 1939, Kiselev 1939, Zabelina 1939, Chernov 1946, 1949a, Lak 1954, 1959, Getsen & Barinova 1965, Komulaynen 1996, 2000a, b, 2001, 2004a, b, 2006a, Genkal & Komulaynen 2000, Komulainen et al. 2005, 2006a, b, Ratkova & Wassmann 2005, Ivanov & Brayzgalo 2007, A.Rusanov., pers. comm., 2006), Lake Onega (Cleve 1891, Wislouch & Kolbe 1927, Metzeltin & Lange-Bertalot 1995), Franz Josef Land and Okhotsk (Cleve 1894 [incl. *G. geminatum* var. *hybrida*], Tsimbalyuk 1955), Ob and Yenisei Rivers (Cleve 1894, Skvortsov 1935, Yakubova 1961, Levadnaya 1965, 1968a, 1986, Skvortsov 1969, Levadnaya & Kuz'mina 1974, Kharitonov 1989a, Shchur et al. 1998, Anufrieva et al. 2003, Gaevsky et al. 2006a, b, Sushchik et al. 2007, Kolmakov et al. 2008), Lakes Kronotskoe, Nerpichje and Nalochevskoe, and Kamtchatka Rivers (Elenkin 1914), Amur River (Skvortsov 1918, Ogly & Kachaeva 1999, Medvedeva & Sirotskiy 2002), Lake Baikal (Junk 1925, Skvortsov & Meyer 1928 [incl. *D. geminata* var. *baicalensis*, *D. geminata* var. *baicalensis* f. *capitata*, *D. geminata* var. *baicalensis* f. *curta*, *D. geminata* var. *baicalensis* f. *curvata*, *D. geminata* var. *baicalensis* f. *elongata*, *D. geminata* var. *curvata* f. *curta*, *D. geminata* var. *curvata* f. *elongata*, *D. geminata* var. *dorogostaiskii*, *D. geminata* var. *dorogostaiskii* f. *curta*, *D. geminata* var. *genuina*, *D. geminata* var. *genuina* f. *baicalensis*, *D. geminata* var. *genuina* f. *curta*, *D. geminata* var. *sibirica* f. *anomala*, *D. geminata* var. *sibirica* f. *elongata*, *D. geminata* var. *sibirica* f. *genuina* and *D. geminata* var. *stricta* f. *baicalensis*], Meyer 1929, 1930 [incl. *D. geminata* var. *genuina*, *D. geminata* var. *baicalensis*, *D. geminata* var. *dorogostaiskii* and *D. geminata* var. *stricta*], Poretzky 1934, Skvortsov 1935, Kiselev 1937a, Skvortsov 1937 [incl. *D. geminata* var. *sibirica* f. *curvata* Skvortsov, *D. geminata* var. *sibirica* f. *subcapitata* and *D. geminata* var. *stricta* f. *curvata*], Kamaruch River (Skvortsov 1927), Lena River (Skvortsov 1935, Kozhov 1953, Skabichevsky 1958, Patrikeeva 1959, Izhboldina 1964, 1970, 1990, Nikolayeva 1964, Cheremisinova 1966, Skabichevsky 1966, 1969, Kojov et al. 1969, Chernyaeva 1970, Dawson 1973a, b [incl. *D. geminata* var. *stricta*], Galazy & Votintsev 1978, Stoermer et al. 1986, Foged 1993 [incl. *D. geminata* var. *baicalensis* f. *curvata* and *D. geminata* var. *sibirica* f. *curvata*], Kiyashko et al. 1998, Kozhova et al. 1998, Kociolek et al. 2000, Popovskaya et al. 2002, Flower et al. 2004, Kravtsova et al. 2004, 2006a, b, Tahteev et al. 2005, Izhboldina 2007, Kravtsova 2007, Pomazkina et al. 2008), Kami River (Shlyapina 1927), Amur-Liman (Kiselev 1931, 1937b), Neva River (Poretzky 1931, Raskina 1968), Laptev Sea (Kiselev 1932b), Tuloma River (Schirschov 1933), Cheshskaya Bay (Virketis & Kiselev 1933), Bolschaya Elduga River (Khakhina 1934), Kola Peninsula (Poretzky et al. 1934, Vodorijin 1936, Cleve-Euler 1955, Komulaynen et al. 1998, Halmeenpää et al. 2007), Stodoly (Chernov 1935), Katun River (Vodorijin 1935, Muzafarov 1958, Yakubova 1961), Kovda (Meyer 1939), Ivan'kov reservoir (Neiswestnova-Shadina 1941, Butorin 1978), Bannaja and Savan Rivers, Kamchatka (Petersen 1946), Konchecero (Chernov 1949b), Neva Bay (Kiseleva 1949), Belaya River (Shtin 1950), Lake Teletskoye (Poretzky & Sheshukova 1953, Anisimova & Belyakova 1997), Lake Frolija (Skabichevsky 1953), Severny Donets River (Proschkina-Lavrenko 1954), Lake Vedlozero (Biske & Lak 1955), Medvejogorks (Sheshukova-Poretskaya 1955), Ojotsk Sea (Juze 1957), Gornyh (Muzafarov 1957),

Sazovo (Muzafarov 1958), Chemal, Kuba and Elikmanar Rivers (Vozjennikova 1958), Taymyr Peninsula (Juze 1959), Kuriles Islands (Kiselev 1959), Lake El'gygytgyn (Juze & Sechkina 1960, Kharitonov 1980, Haritonov 1993a), Kolima (Komarenko 1960), Northwestern Pacific Ocean (Belyaeva 1961a), Sea of Japan (Belyaeva 1961b), Yakimvarskogo Bay (Petrova 1961), Kaliningrad (Sheshukova-Poretskaya 1962), Oskol River (Il'chenko 1963), Angara River (Litninstev 1965, Chernyaeva 1970, Foged 1993, Metzeltin & Lange-Bertalot 1995, Shchur & Lopatin 2005a), Svirj River (Krasnoperova 1967), Jani River (Komarenko 1968), Novosibirsk (Levadnaya 1968b), Primorye Region (Moiseeva 1968, Barinova 1986, Kukharenko 1989, Medvedeva 1999b), Kezhma-Kezhemskom Gulf (Kojova & Zagonenko 1969), Surgutka and Tuba Rivers (Skvortsov 1969), Vitimskom (Endrijinski & Cheremisinova 1970), Pechori River (Getsen 1970), Ingodi River (Kachayeva 1970), Goraisky River (Kukharenko 1972), Kedrovaya and Barabaschevka Rivers (Zhurkina & Kukharenko 1974), Ural River (Poryadina & Ergashev 1975), Volga River (Anonymous 1978), Lake Mayorskoe (Kharitonov 1981), Serebryanka River, Sikhote-Alin reserve (Medvedeva 1981, 1986, 1987, 1994, 1999a, 2000, 2001, 2002a, 2006a, 2008, Barinova & Medvedeva 1996), Prienisey (Arhipov 1984), Berezovyi River (Kukharenko et al. 1984a), Partizanskaja, Malye Melniki and Postyschevka Rivers (Kukharenko et al. 1984b), Anadur River basin (Kharitonov 1986), Sosninsky and Sinuginsky Rivers (Kukharenko et al. 1986), Yamay River (Kuzymin 1986), Krasnoyarskoe Reservoir (Levadnaya 1986), Rudnaja River (Medvedeva et al. 1986), Kolyma Mountains and Yakutia Region (Vasilyeva-Kralina & Gabayshev 1986, Kharitonov 1989a, 2001, Egorova et al. 1991, Potapova 1996, Vasilyeva-Kralina et al. 2005, Haritonov 2006), Iturup Island (Barinova 1989), Anadyr River basin and Magadanskaya Oblast (Kharitonov 1989a), Lake of Jack London (Kharitonov 1989b), Frolovka River (Medvedeva & Nikulina 1989), Lazovka Reservoir (Dogadina & Kukharenko 1990, Gontcharov et al. 2002), Pechenga, Ura and Umba Rivers (Komulaynen 1990), Amgama River (Haritonov 1993b), Kedrovaya Stream (Medvedeva 1995), Ussuri River (Nikulina 1995), Razdolnaya River (Nikulina 1996), Bikin River (Medvedeva 1997, 1999c), Zeva River (Medvedeva 1997, 1999d), St. Petersburg and Murmansk District (Balashova & Zavarzin 1999, Kawecka & Sanecki 2003), Yugorsky-Shar Strait (Lange-Bertalot & Genkal 1999), Burea, Chegdomyn and Urgal Rivers (Medvedeva 1999e), Botchi River (Medvedeva 1999f), Ingoda River and Krasnokamenskoe reservoir (Ogly & Kachaeva 1999), Lake Konchezero (Genkal & Yeshko 2001), Zhelvata River (Kozlovskaya et al. 2002), Kedrovaya Pad Reserve (Medvedeva 2002b), Nefteperarabatyvayuschego River (Stenina & Zavarzina 2002), Big Cats (Pomazkina & Rodionova 2003), Cheremushnyi Creek (Gol'd et al. 2003), Lake Azabach'e (Lepskaya et al. 2003), Samarga River (Medvedeva & Semenchenko 2003, Medvedeva 2004, Semenchenko et al. 2004), Lake Khanka (Nikulina 2003), Anyui, Aksjanka, Chichimar, Lantar, Khivanda, Rybachja Pad, Tumnin, Uda, Uika and Uluikan Rivers (Medvedeva & Barinova 2004), Kuznetsk depression (Tulchinskaya 2004), Vuoksa Lake-River system (Trifonova et al. 2004), Vidlitsa River (Trifonova et al. 2004, Stanislavskaya & Gorchenko 2005), Chelyabinsk Oblast (Yarushina et al. 2004), Kievka River (Medvedeva 2005), Anna River (Nikulina 2005a), South Sakhalin Island (Nikulina 2005b), Razdolnaya River basin (Nikulina 2005c), Krasnoyarsk region (Shchur & Lopatin 2005a, b, Schchur 2006),

Lake Dalneye (Shkurina et al. 2005), Aldan, Anabar, Bilyi, Indigirka, Lena, Olekma and Yana Rivers (Vasilyeva-Kralina et al. 2005), Irtysh River (Bazhenova 2006), Lizhma River (Komulaynen 2006b, c), Barabaschevka and Kedrovaya Rivers (Medvedeva 2006b), Khendergye River (Nazin & Naumenko 2006), Kamtchatka (Shkurina & Belyakova 2006), Podkamennaya Tunguska River (Zadelenov et al. 2006), Novaya Zemlya and Vaygach Island (Genkal & Vehov 2007), Bureya and Tyrma Rivers (Medvedeva 2007, Nikulina 2007, Tiunova 2007), Basseyna River (Nazyn 2007). *Didymosphenia geminata* is currently widespread in East Fennoscandian rivers (Komulaynen 2004c, 2007) and in the Sakha Republic (Komarenko & Vasilyeva 1975, Danilova 2005). Unspecified locations: Georgi (1802), Proschkina-Lavrenko (1950), Zabelina et al. (1951), Getsen (1965), Gollerbakh & Krasavina (1971), Skabichevsky (1973), Glezer et al. (1974), Proschkina-Lavrenko et al. (1974), Skabichevsky (1983), Getsen (1985), Barinova & Medvedeva (1988, 2004), Barinova et al. (2000a, b), Komulaynen (2003), Glushchenko & Prokushkin (2005).

Serbia: Lake Veliko Ja•inačko at the north of Săra Mountain (Urošević 1994), Danube River (Obušković & Maslić 1997), Tisa River (Pujin et al. 1999, Martinović-Vitanović & Kalafatić 2001, Subakov-Simić & Cvijan 2004, Yulić et al. 2008), Sava River (Čađo et al. 2006, 2007a), Danube River (Čađo et al. 2007b).

Sierra Leone: Njala (Carter & Denny 1982).

Slovakia: Vysoké Tatry, High Tatras mountains and Lake Morskie Oko (Bílý 1941), Danube River (Kocinger 2002a, b), Slovak strech of the Danube River (Hindák & Hindáková 2004), Carpathian mountains (Mrozińska et al. 2006). Unspecified location: Hindák (1978).

Slovenia: Moravce (Mašková 2003), Lake Bled (ARSO 2005).

South Korea: Unespecified location (Lee et al. 1995).

Spain: Huesca (Dosset 1888, Cambra 1989), Aragón (Cleve 1894), Spring Font d'Escorca, Serra de Tramuntana, Mallorca Island (Margalef 1953, Cambra 1991a), Sant Nicolau River, Lake Llebreta, Lake Cavallers, National Park of Aigüestortes, Lérida Province (Margalef 1956, Vilaseca 1978), Ordesa Valley (Cambra 1987, 1991b), Ara River (URS 2006, Blanco & Ector 2008), Revinuesa and Órbigo Rivers (Blanco & Ector, unpub. data). Unspecified location: Álvarez-Cobelas & Estévez-García (1982).

Sweden: Lapland (Wahlenberg 1812, Krasske 1943), Västmanland (Agardh 1824, 1831), Östergötland (Agardh 1831), Kjugekull (Cleve 1873, Cleve-Euler 1955), Mälaren (Areschoug 1879, Cleve & Möller 1879, Cleve-Euler 1955), Södermanland (Areschoug 1879, Cleve & Möller 1879), Omberg (Nathorst 1890), Lule Lappmark (Cleve-Euler 1895, 1955), Snavvavagge, Säkokjokk (Hustedt 1924, Cleve-Euler 1955), Lake Vättern (Stålberg 1939, Cleve-Euler 1955, R.Bengtsson, pers. comm., 2007), Abiskojokk, Nissonjokk, Njulja (Hustedt 1942, Cleve-Euler 1955, Skuja 1964), Lake Vänern (Vallin 1951, Wiederholm 1983, Bengtsson 1991, 1992, 1993, 2000, 2001, E.Willén, pers. comm., 2007), Alelyckan, Åreskutan, Lake Åsunden, Ätran River, Deger-berga, Emån River, Göta Älv River, Kerkevare, Kvikkjokk, Lärjeholm, Moortümpel, Njunjes, Lake Öresjö, Lake Siljan, Skövde, Tarrajok, Lake Torneträsk and Värnern (Cleve-Euler 1955), Jämtland (Quennerstedt 1955, Johansson

& Kronborg 1975, Johansson 1979, 1980b, 1982a, b), Lule Alv River (Müller 1962), Tjulån River (Ulfstrand 1967, Carlsson et al. 1977), Kaltisjokk (Müller-Haeckel 1971), Sarekgebirge (AWI 2003), Padjelanta (Wilander 2003), Östersund (Gällerspång 2005), Blekinge, Lakes Åsnen, Helgasjön and Örken Småland, Mörrun and Mörrumsån Rivers, Skåne (R. Bengtsson, pers. comm., 2007). Quennerstedt (1955) reports this diatom in several of the main Swedish rivers. Sonesten et al. (2000) consider *D. geminata* a widespread taxon in southern Sweden, having been found in Värnern, Vättern, Våra rivers, Kållandsö, Åmålsviken and other localities. Unspecified locations: Mandl (1839), Cleve (1894), Foged (1952), Cleve-Euler (1955 [*D. geminata* var. *genuina*]).

SWITZERLAND: Zermatt, Lake Great Saint Bernard (Brun 1880, Hustedt 1930), Lake Geneva (Forel 1904, Hustedt 1930, Druart et al. 1983, Druart & Balvay 2007), Davos (Hustedt 1943), Lake Neuchâtel (Portner 1951), Macun Lakes Region (Robinson & Kawecka 2005), Rivers Aare, Emme (Canton of Berne), Inn (Grisons), Lake Bienne (Hürlimann & Niederhauser 2006), Rivers Rhine, Chur (H.Ullrich & A.Advocat, pers. comm., 2008), Linth, Necker, Thur, Mühlbach, Simmi and Werdenberger Binnenkanal (St. Gallen), Reuss, Altdorfer Giessen, Gangbach and Walenbrunnen (Uri), Rhone near Sierre, Valais (J.Hürlimann, H.R.Preisig & F.Straub, pers. comm.). Unspecified locations: Rabenhorst (1864), Forel (1885), De Toni (1891), Cleve (1894), Meister (1912).

TAJIKISTAN: Amu-Daryi River (Kiselev & Vozzhennikova 1950), Lake Zorkul (Taubayev & Ergashev 1969).

TURKEY: Karasu River (Altuner & Gürbüz 1989, 1990a), Lake Tercan Dam (Altuner & Gürbüz 1990b, Altuner & Gürbüz 1994, 1996), Karasu River (Altuner & Gürbüz 1991), Uzungöl (Şahin 1992, 1998a, Şahin & Gönülol 1999), Çoruh Nehri (Atı cı & Obalı 1997), Şana River (Kolaylı et al. 1997, 1998, Kolaylı & Şahin 1998), Lake Sera (Şahin 1997, 1999), Sera River (Şahin 1998b), Harşit Stream (Bayram & Şahin 2000), Palandöken Pond (Gürbüz 2000), Değirmendere River (Pabuççu 2000, Kara & Şahin 2001), Lakes Aygı r and Balı klı (Şahin 2000), Lake Dağbasi (Şahin 2001), Lake Çı ldı r (Akbulut & Yildiz 2002), Porsuk Pond (Gürbüz et al. 2002), Lake Yedigöller (Şahin 2002), Yanbolu River (Şahin 2003), Lake Çatal (Şahin 2004), Demirdöven Dam (Kı vrak & Gürbüz 2005), Lake Gölköy (Çelekli 2006), Erzurum (Kivrak et al. 2006), Lake Karagöl (Kolaylı & Şahin 2007). Unspecified locations: Güler & Çobanoğlu (1997), Koray (2001).

UKRAINE: Kharkovskaya, Seversky Donetz (Tonachebsykuŭ & Oksiyuk 1960, Bukhtiyarova 1999b), Maloe Polissya (Vodon'yan 1976, Bukhtiyarova 1999b), Prut River basin (Poluwyk & Garasebuch 1986, Bukhtiyarova 1999b), Tisa River, Rahiv (Bukhtiyarova 1999a, Hamar 1999, Érces 2002). Unspecified locations: Topachevsky & Frantsev (1968), Bazhan (1985), Bukhtiyarova (2000).

UNITED KINGDOM: ENGLAND (including Channel Islands): Guernsey (Salwey 1850), Wray (Smith 1853), Liverpool (Comber 1860), Ambleside (Eulenstein 1867, Bennet 1886), Coquet River, Northumberland (Smith 1874, Brodie & John 2004, Ellwood & Whitton 2007), Strensall Common (Barwell 1882), West Riding (West 1882), Norfolk (Kitton 1884, 1885), English Lake District (West 1892, Pearsall & Pennington 1947),

Devonshire (Schmidt 1899, Harris 1930), Yorkshire (West & West 1901), Tees River (Butcher 1932, Whitton & Dalpra 1968, Holmes & Whitton 1981), Lake Windermere (Godward 1937), Belle Grange Beck (Douglas 1958), Esthwaite Water (Round 1961), Pentwood Hills (Hoover 1976), Lune River (Holmes & Whitton 1977), Penzance and Omersby (Edgar 1978), Durley Beck and Haweswater (Antoine & Benson-Evans 1984), Pen-y-Ghent (Pentecost 1984), Waterfall Beck (Pentecost 1991a, 2005, Pentecost & Lund 2004), Wealden (Pentecost 1991b), Alwin River (Kelly 2003), Gordale Beck and Barbondale Beck (Pentecost & Lund 2004), Cowside Beck (Gilbert et al. 2005), Ribble Head (Kemp 2006), Pen-y-ghent Gill and Fairmile Beck (A.Pentecost, pers. comm., 2008). Unspecified locations: Berkeley (1833), Greville (1833), Johnston & Tate (1853), Kelly & Whitton (1995a), Sims (1996), Kelly (1998). SCOTLAND: Pentland Hills (Greville 1827, Smith 1853), Lumnsdean-dean River (Carr 1836), Dee and Don Rivers (Dickie 1850), Aberdeen-shire and Ben McDhui (Smith 1853), Gourock (Van Heurck 1884), Tay District (McCall 1933), Shelligan Burn (Egglishaw & Shackley 1971), Isle of Mull (Dawson 1973a), Roberts Linn (Sterrenburg 1973), Moffat Water and Spittal of Shea (Antoine & Benson-Evans 1984), Coquetdale and the Cheviots (Kelly & Whitton 1995b), Gala Water (O'Hare et al. 2005), Ben Lawess (Kemp 2006), Clyde, Annan and Spey Rivers (UKNBN-SEPA 2008), Ardle River (M.A.Tiffany, pers. comm., 2008). WALES: Cader Idris (Hassall 1845), Dolgellau (Hassall 1845, Ralfs 1850, Smith 1853), Black Mountain District (Erichsen Jones 1949), Wye River (Antoine & Benson-Evans 1983, 1984, 1985, 1986a, b), Afon Aran (Antoine & Benson-Evans 1984), Ely River (Antoine et al. 1984, Esho & Benson-Evans 1984). Unspecified locations: Turton (1807), Agardh (1831), Kützing (1833, 1844), Mandl (1839), Goldsmith (1840), Harvey (1841), Ralfs (1843), Hassall (1845), Queckett (1850), Carpenter (1856), Notcutt (1859), Anonymous (1862), Rabenhorst (1864), Knight (1867), Ward (1869), Lang (1873), Morehouse (1876), Anonymous (1884), De Toni (1891), Cleve (1894), Van Heurck (1896), Merlin (1910), Heron-Allen & Earland (1911), Taylor (1929), Zahar (1951), Fryer (1963), Lucas (1969), Macan (1970), Garnett (1973), Whitton (1975), Edgar (1978), Metzeltin & Lange-Bertalot (1995), AWI (2003).

UNITED STATES: Mackinaw Island (Bailey 1842), Niagara River (Kützing 1849, De Toni 1891), West Roxbury (Stodder 1859), Newcastle county (Tatnall 1860), Lake Michigan (Briggs 1872, Thomas & Chase 1887, Marsh 1895, Ward 1896, Chase 1902, Britton 1944), Buffalo (Day 1882), Connecticut (Terry 1907), Taunton River (Sedgwick et al. 1912), Philadelphia (Boyer 1916), Massachusetts (Weston & Turner 1917, Webber 1961), Delaware River and Chicago (Boyer 1927), Indiana (Palmer 1930, Lindsey et al. 1969), Cayuga Lake Basin (Burkholder 1931), New York State (Hohn 1951), Lake Superior (Fox et al. 1967, 1969, 1973, Nelson et al. 1973, Stoermer 1980, 1993, Stoermer et al. 1986, Moffat 1994, HANNA Database 2007, M.Edlund, pers. comm., 2007), Virginia State College farm pond (Woodson 1969), Provo River (Lawson & Rushforth 1975), Virginia (Patrick & Reimer 1975), Great Lakes (Stoermer 1975, Stoermer & Kreis 1978, Stoermer et al. 1999, Quinlan et al. 2007), Colorado (Aronson 1976, M.Edlund, pers. comm., 2007), Wyoming (USGS 1978), Colorado River (LeRoy Poff et al. 1990, Niyogi et al. 2002, Opsahl et al. 2003, Brown 2008), Montana (Bahls 1993, Sensibaugh 2002), Stanislaus River (Wilcox et al. 1994), Idaho (Pryfogle et al. 1997), West Saint Louis Creek (Rader &

Belish 1997), Chesapeake Bay (ICPRB 1998, Lacouture 2001, Marshall et al. 2005, Blankenship 2008), Alamo River (Lange & Tiffany 2002), Lake Beaver (Rhodes 2003), Rapid Creek, Black Hills (Erickson et al. 2004, Anonymous 2006, Erickson & Shearer 2006, Shearer & Erickson 2006, Simpson 2006, USDA Forest Service 2006, Backlund 2007, Larson 2007, Ranney et al. 2007), Kootenai River (Holderman & Hardy 2004, Glass 2005, Marshall 2008), White River, Arkansas (Anonymous 2005a, Shelby 2006a, b), Toboggan Creek (Remington & Lough 2005), Tennessee River (Schroeder 2005), Boulder Creek (Spaulding 2005, Murphy 2006), South Fork American River (Tarbell 2005), Blackfoot River (Weber 2005), Castle Creek (MICRA 2006), Lake Roseboud (PPL Montana 2006), Rocky Mountain National Park (Wanty et al. 2006), Middle Popo Agie River (WGFD 2006), Vermont (Allen 2007, Wacker 2007, A.Shambaugh pers. comm., 2007), Yellowstone (Anonymous 2007a), Glacier National Park (Bahls 2007b), Fish Creek (HANNA Database 2007), New England (Anonymous 2007b, Rathke 2007, Daley 2008), Watauga, South Holston, Norris Dams, Smith and Jackson Rivers (Rohde 2007), Cache la Poudre River (Sterrenburg et al. 2007, M.Edlund, pers. comm., 2007), Connecticut River (Waterbury 2007), Elk River (Preston 2008), Baltimore (Michael 2008, Pfeiffer 2008a, b), Middle Fork Flathead River (Wyatt et al. 2008), Mad River (Waterbury 2008), New Hampshire (A.Shambaugh, pers. comm., 2007). ALASKA: Lake Karluk (Juday et al. 1932, Stoermer et al. 1986), Utukak and Colville Rivers (Patrick & Freese 1961), Sagavanirktok, Umiat, Brooks Range and Anchorage (Foged 1981), Cook Inlet (Sheath et al. 1986), Hancock and Henderson counties (Grubaugh et al. 1988), Tanana River (LaPerriere et al. 1989), Adak Island (Hein 1990), Kuparuk River (Miller et al. 1992), Barrow, Lake Tangle and Salmon Creek (Nagumo 1993), Toolik (Sheath et al. 1996, M.Edlund, pers. comm., 2007), Ivishak River (Parker 1999), Chester Creek (Zheng 2002), Blueberry Creek (Edwardson et al. 2003), Kijik River (Brabets & Ourso 2006a), Crescent River (Brabets & Ourso 2006b), Anchorage (ANSP 2007), Coopers Landing and Denali National Park (M.Edlund, pers. comm., 2007). UNSPECIFIED LOCATIONS: Queen (1862), Wolle (1890), Palmer & Keeley (1900), Grainger (1952), Palmer (1959), Peabody & Burgess (1984), Dufford et al. (1987), Sheath & Cole (1992), Stevenson (1997), Reimer et al. (2001), Bahls (2004), Benke & Cushing (2005), Cardinale et al. (2006), Hambrook et al. (2007), Kumar et al. (2009). Elwell (2006) gathers ~200 confirmed records of mass-growths of *D. geminata* in the states of Alaska, Arizona, Arkansas, California, Colorado, Idaho, Missouri, Montana, Nevada, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia. Further locations are listed in Stoddard et al. (2005).

UZBEKISTAN: Samarkanda (Kiseleva 1939), Isfaramsai (Muzafarov 1958), Boz-Su and Jazarbaj Canals (Ergashev 1968). Unspecified location: Ergashev & Alimzhanova (1989).

Discussion

1. Distribution

The performed bibliometric study indicates that, despite references to *D. geminata* in the phycological literature have increased exponentially since early XIX century,

the relative frequency of publications concerning this species has not increased accordingly. This reflects the existing poor knowledge regarding the biology of *D. geminata*. This situation may start to reverse from the acknowledgement of its negative environmental impact.

The distribution of fossil or subfossil records of *D. geminata* (Fig. 1) may provide the primitive biogeographical area covered by this taxon. This seems to be a relatively recent species (Mackay et al. 2002) more closely related to cymbelloid-like diatoms than to gomphonemoid-like ones (Kociolek & Stoermer 1988, Moffat 1994, Papas 2008). The earliest record is a Pliocene diatom assemblage from the Fusong area, China (Jiaying & Yuzao 1986). According to Okuno (1964), this species is a Pleistocene relict (>11000 BP), being dated for the Pleistocene period in certain deposits on Long Island, USA (Lohman 1939). The first accurately dated records in Europe corresponded to the early Weichselian (~11000 BP) in Finland (Sarmaja-Korjonen & Alhonen 1999, Eriksson et al. 1999, Miettinen et al. 2002), and the late Devensian in Scotland, Loch Sionascaig (Pennington et al. 1972, Haworth 1976). The distribution of fossil records of *D. geminata* is apparently restricted to the Holarctic region, and corresponds essentially to its native geographical range, which covers the whole of the Northern Hemisphere above the 30°N parallel (Fig. 5). Currently, the Sierra Leone record (Carter & Denny 1982) is the southernmost one, but this observation in West Africa has to be checked. Kociolek & Spaulding (2000) state that such restricted distribution exemplifies the overall patterns of regional endemism in diatoms; however, the data presented in this study support the idea of a much broader global distribution.

Metzeltin & Lange-Bertalot (1995) and Kilroy et al. (2005b) summarized the current knowledge on the distribution of *D. geminata*, but our results point out that several references have been neglected to date, especially older studies, and those related to southern Eurasia. According to Elwell (2006), the first record of this diatom in North America corresponds to Cleve (1894), however several earlier reports exist, e.g. Bailey (1842), Kützing (1849), Briggs (1872), Day (1882), Thomas & Chase (1887). This species was not reported or not detected in the Southern Hemisphere until it was first discovered in New Zealand by Mather (1928), although massive *D. geminata* growths have been occurring only since 1990s. An older, very doubtful citation from 1880 exists also for Australia in Victoria (Day et al. 1995, Entwisle & Nairn 2007). In South America, only few citations with illustrations of *D. geminata* exist for Chile in Lake Sarmiento and Cisnes River (Asprey et al. 1964, Rivera 1983). In New Zealand, strong environmental policies have prevented *D. geminata* expansion to surrounding areas, and it now seems to be confined to Southland, where it is continuously expanding its geographic distribution. Nevertheless, a global distribution map based on ecological niche models (McNyset & Julius 2006) shows suitable ecosystems for this diatom in several regions of the Southern Hemisphere. South American rivers in Argentina, Chile and Peru (Spaulding & Elwell 2007, Kumar 2008) are especially vulnerable to *D. geminata* invasion and this is very likely to happen if biosecurity protocols are not implemented. In Europe, its distribution has been historically circumscribed to high latitudes (e.g. Brun 1880, Krammer & Lange-Bertalot 1986), but its presence has also been detected as a sporadic species in some inventories from the Mediterranean region, both in fossil and recent

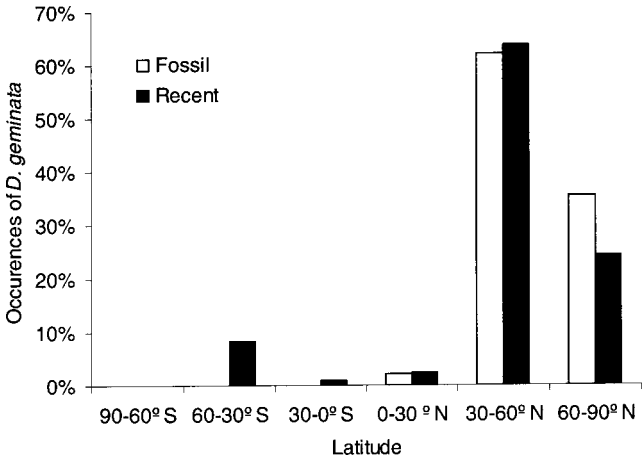

Fig. 5: Occurence (%) of *Didymosphenia geminata* in the different geographic latitudes.

records (Blanco & Ector 2008). Presently, it forms nuisance benthic growths with a large spatial coverage, and temporal persistence in South Poland (Kawecka & Sanecki 2003), and North Italy (Beltrami et al. 2008a, c), as well as massive mucilaginous mats, that have recently been detected in the Spanish Pyrenees (Ara River, Ebro River basin, URS 2006) and the Duero River basin (Blanco & Ector, unpub. data).

Reports of mass developments of *D. geminata* date back to the 19th century: northern and western rivers of the United Kingdom have been exposed to large masses of *D. geminata* for over 150 years (Elwell 2006). Greville (1827) found massive growths of this diatom in Scotland, filamentous mats were present in Ireland in 1836 (Fullarton 1846), high biomasses were reported from Norwegian streams (Skulberg & Lillehammer 1984), and massive growths were reported in China in 1935 (Skvortsov 1935). West (1904, 1916) mentions greyish felt-like masses of *D. geminata* attached to the rocks of mountain streams and cataracts. Also, clogging effects have been first described in 1951 in Sweden (Vallin 1951). Hence, excessive growths do not only appear in areas where this species is presumably exotic.

On the other hand, rapid expansion is not a worldwide biogeographic pattern for *D. geminata*. For instance, this species was once generally distributed in the Great Lakes (North America) but now it is restricted to Lake Superior (Stoermer 1993). In some Iceland streams the distribution and coverage of *D. geminata* decreased between 1996 and 1997 (Jónsson et al. 2000). Likewise, *D. geminata* seems to have disappeared from Japanese freshwaters where, apart from two unspecified locations (Tsumura 1991, Asai 1995), only fossil records have been found.

2. Ecology

Kilroy et al. (2005b, 2007) provides a comprehensive summary of the ecology of *D. geminata*. Like many gomphonemoid species, it inhabits periphytic communities,

thanks to its ability to produce attachment stalks. In fact, the negative impact of *D. geminata* is related, to a large extent, to the production of high amounts of extracellular polymers organized in stalks. The ability to secrete large quantities of highly organized extracellular polymer arrays differentiates this from other related benthic diatoms (Gretz et al. 2006a, b, 2007a, b). Specimens with stalks of several centimetres in length are typical. Mats of stalk material, which usually include trapped sediments, accumulate and cause unsightly masses. These growths create a microenvironment that can be colonized by diatoms and other organisms (Kilroy et al. 2005a, Kelly 2006). It is believed that this growth strategy allows *D. geminata* to compete with other algae for both nutrients and light (Hoagland et al. 1993). Despite being a predominantly benthic organism, *D. geminata* was also found in planktonic samples of the Danube River in Slovakia (Obušković & Maslić 1997, Hindák & Hindáková 2004); *D. geminata* may even become the dominant taxon in the phytoplankton and phytobenthos in Himalayan Kishanganga River (Bhatt et al. 2005).

Older diatom literature regards *D. geminata* as a good indicator of cold oligotrophic and xenosaprobic waters of low conductivity (e.g. Rabenhorst 1853, Rawson 1956, Sládeček 1973, Patrick & Reimer 1975, Wolf 1982, Krammer & Lange-Bertalot 1986). In the United States, this taxon indicates low nutrient concentrations (Potapova & Charles 2007). However, there is increasing evidence that the autecological profile of this species has changed in recent decades. According to Kawecka & Sanecki (2003), *D. geminata* has a wider ecological range than has been assumed to date. Its recent expansion in Eastern Europe, especially in Poland, points to a wider tolerance of nutrient conditions. The discovery of nuisance *D. geminata* populations in high nutrient waters was the first recognition that the species was appearing outside its acknowledged ecological range (Gunde-Cimerman et al. 2005, Kilroy et al. 2005a, Sterrenburg et al. 2007). In Poland and the United States, mass developments are appearing in eutrophic rivers (Kawecka & Sanecki 2003, Elwell 2006, Spaulding & Elwell 2007), and Miller et al. (1992) found a fast and positive response of this species to phosphorus fertilization. This change seems to affect also its temperature tolerance: growth of *D. geminata* is favoured by high temperatures (~20°C) in Wales (Wye River, Antoine & Benson-Evans 1986a), Canada (Vancouver Island streams, Rieberger 1991), and in Turkey (Değirmendere River, Kara & Şahin 2001), but the opposite trend has been observed in Southern Poland flowing waters by Noga (2003). Growth peaks of this species in Turkish rivers occur in spring between April and June (Kolaylı et al. 1998, Kara & Şahin 2001, Şahin 2003) whereas growth of *D. geminata* tends to be most prolific in summer in British (Kelly 2006) as well as in Canadian streams (Mundie & Crabtree 1997). Kilroy et al. (2005b) conclude that, although this diatom appears to be confined to cold areas, it reaches its highest biomass at higher water temperatures within these localities.

Didymosphenia geminata exhibits a strong dependence on hydrodynamic conditions (Sutherland et al. 2007) and substrate stability, being considered indicative of high water discharge conditions (Blinn & Herbst 2003). In fossil deposits its presence testifies to the flow-through regime of the water body (Olyunina 2005). However, in New Zealand this alga grows in a very broad range of river conditions, and it is not very selective regarding water depth or speed of the river flow (Anonymous

2005b). According to Kilroy et al. (2005b), low flows in summer and higher flows in winter appear to favour its growth, suggesting that flow conditions over the previous winter determine whether massive *D. geminata* growths will occur or not in the following winter. Several studies (Skulberg 1982, Kawecka & Sanecki 2003, Kelly 2006, Kirkwood et al. 2007, Spaulding 2007) state that *D. geminata* seems to be proliferating in streams subjected to flow regulation worldwide. Moreover, it can withstand much stronger floods than other algal species (Anonymous 2005b). High flows may detach the thicker mats, contributing to the dispersion of this alga (Hansen 2003, Holderman & Hardy 2004). Additionally, several studies confirm that *D. geminata* requires stable substrates in order to establish a population (Cox 1996, Kravtsova et al. 2004, Kilroy et al. 2005a, Kelly 2006). Sutherland et al. (2007) detected poor survival of *D. geminata* in spring-fed creeks; however, no single environmental variable could be identified as being responsible for this effect.

The ecological preferences of *D. geminata* regarding other abiotic factors are not well known. With reference to dissolved minerals, the European Water Framework Directive protocols consider this taxon as a reference species for calcareous running waters (Schaumburg et al. 2005), though it may also grow in rivers receiving drainage from both peaty soils and limestone (Kawecka & Sanecki 2003). Finally, Lindstrøm & Rorslett (1991) consider *D. geminata* as a highly metal-sensitive species; however, Oberholster et al. (2005) found this species as the dominant diatom in long-term coal tar-contaminated sediments.

3. Nuisance effects

Mass growths of *D. geminata* have a large spatial extent. Stalks formed by this diatom may cover almost all available benthic substrates, forming dense mucilaginous, gelatinous mats up to several centimetres thick, and up to 20 km in length (Spaulding et al. 2005a, Elwell 2006, Lagerstedt 2007). Mass developments can also form along the margins of lakes (Kilroy et al. 2005a). Mats may reach nearly 100% in coverage of the stream substrate in some locations (Shearer & Erickson 2006), and consist predominantly of polysaccharides (Stevenson et al. 1996). Periphyton containing a high percentage of polysaccharides may not be as palatable or nutritious as other forms of algae that have higher lipid and/or protein content (Holderman & Hardy 2004). Furthermore, dense mats prevent the growth of other macroalgae, which are an important source of food for aquatic invertebrates (Spaulding et al. 2005a). Hence there exists a correlation between the presence of large populations of *D. geminata*, the decrease in abundance of some aquatic invertebrate species, and the increase in chironomids (Brown 2008). This leads to a general decrease in species richness within zoobenthos (Mundie & Crabtree 1997). In New Zealand areas where this diatom has become established, macroinvertebrate populations have increased; however, they tend to be smaller species, with greater proportions of taxa that are generally associated with polluted waters, and considered poor quality food for fish (Anonymous 2005b). In streams severely affected by *D. geminata*, invertebrate populations decrease, macrophytes are eliminated, and fish are virtually absent (Jónsson et al. 2000). In the United States and Iceland, a decline in fishery industry has been concurrent with the expansion of *D. geminata* (Jónsson et al. 2000, Shearer

& Erickson 2006, Cook et al. 2008). Freshwater fish populations may also be negatively affected due to the lack of suitable conditions for spawning areas (Shelby 2006a, Boubée et al. 2008), and due to significant diurnal dissolved oxygen fluctuations associated with *D. geminata* mats (Kilroy et al. 2005a, Stohlgren et al. 2007).

Another generally reported negative impact is the clogging and fouling of water intakes, causing problems in hydro-power canals (Josselyn & Fiorillo 1993, Pryfogle et al. 1997, Willén 2001, Kilroy et al. 2005a, Anonymous 2005b, Packman et al. 2008) and even hampering the use of river water in supply systems (Kawecka & Sanecki 2003).

The causes that have led to such dramatic changes in the ecology and growth patterns of *D. geminata* are poorly understood. Sherbot & Bothwell (1993) suggested that high levels of ultraviolet radiation may promote growth; however, this hypothesis has been criticized by Elwell (2006). On Vancouver Island, waters of impacted catchments have lower buffering capacity than unaffected rivers (Sherbot & Bothwell 1993). In Lake Baikal the expansion of *D. geminata* has been related to the detrimental effect of industrial waste waters (Kozhova et al. 1998) and Ellwood & Whitton (2007) state that organic phosphate as a major P source is a key factor favouring the success of *Didymosphenia*. However, in Iceland the distribution and biomass of extensive mats appeared to be unrelated to water chemistry (Jónsson et al. 2000). According to some authors (Kilroy et al. 2005a, Ács et al. 2006), increasing occurrence of invasive *D. geminata* may be attributed to a genetic variant that has broader tolerances than the original species. Within diatoms, strong environmental changes can promote the evolution of locally adapted lines that eventually speciate (Shayler & Siver 2004). The presence of mass developments, dated from early 19th century in Europe, may point to an environmental or anthropogenic cause rather than a genetic process beneath this ecological change.

Current experimental control strategies for *D. geminata* that have been proposed (see Gee & Wells 2006 for a review) include treatments with Organic Interceptor®, certain enzymes (Jellyman et al. 2006), chelated copper (Jellyman et al. 2006, Clearwater et al. 2007, Wells et al. 2007), and sodium chloride (Matheson et al. 2007), although the efficacy of these methods has not been thoroughly determined. Experimental results (Lee et al. 2008) show that *D. geminata* blooms are resilient to scour. Kilroy (2005) and Kilroy et al. (2006) review the results of several decontaminating treatments both in situ and in laboratory experiments.

As in the case of *D. geminata*, the introduction of exotic diatom species has been confirmed in several occasions (e.g. Harper 1994, Kühn 1997), and the dispersion mechanisms of these microalgae are discussed in Coste & Ector (2000). According to Bhatt et al. (2008) for Indian Himalayan rivers, the introduction of exotic fish species (e.g. brown trout) might be also responsible for the dispersal of *D. geminata*. There is a general agreement that the introduction of *D. geminata* outside its native distribution area is caused by human vectors (Elwell 2006, Vanormelingen et al. 2008), therefore further worldwide spread of this species is probably inevitable (Kilroy et al. 2005a). Molecular techniques for the early detection of *D. geminata* cells are being currently developed (Cary & Hicks 2006, Cary et al. 2007b, Hicks et al. 2007).

National and international management strategies should promote public awareness programmes, along with strong environmental policies devoted to preventing the spread of this nuisance invasive organism. Further research is encouraged in order to assess the ecology and the dispersion patterns of this diatom, its influence on flora and fauna in rivers and lakes, and potential economic impact assessment.

Acknowledgements

Authors are grateful to É.Ács, A.Advocat, E.Arnaud, L.L.Bahls, S.Barinova, M.Battegazzore, M.E.Beltrami, R.Bengtsson, B.Beszteri, N.A.Bondarenko, M.Bothwell, K.Buczkó, S.Bulatov, C.Cejudo-Figueiras, F.Ciutti, M.BEdlund, E.Falasco, F.Ferrari, N.A.Gaevsky, S.I.Genkal, R.B.Genter, R.Gogorev, M.Gololobova, J.Gomà, D.Guillard, F.Hinz, I.P.Holló, J.Hürlimann, N.Karayeva, M.Kelly, V.Kharitonov, C.Kilroy, A.Kirkwood, K.T.Kiss, D.Klaveness, H.Kling, S.Komulaynen, A.Kryvenda, Z.Levkov, Y.Li, E.A.Lindstrøm, P.Marvan, Z.Nagy-László, T.Noga, J.Nolla, M.H.Novais, R.Ortíz, A.Pentecost, L.Pestryakova, A.O.Plotnikov, G.Pomazkina, M.Potapova, H.R.Preisig, P.Rivera, J.Rosebery, A.Rusanov, S.Sadogursky, S.E.Sala, L.A.Schure, A.Shambaugh, C.N.Solak, S.Spaulding, E.F.Stoermer, F.Straub, M.A.Tiffany, H.Ullrich, B.Van de Vijver, B.A.Whitton, C.E.Wetzel, E.Willén, L.Wilson, F.Yawen, and other colleagues who provided data about occurrences of *D. geminata.* S.Barinova, S.I.Genkal, S.B.Lanza, Z.Levkov, M.Potapova, I.Sarkisova, S.Spaulding, B.Van de Vijver, C.E.Wetzel and two anonymous reviewers are specially thanked for their valuable contribution to the manuscript. A.Oliveira kindly revised the English.

References

AAGAARD, K., T. BÆKKEN & B. JONSSON (2002): Biologisk mangfold i ferskvann. Regional vurdering av sjeldne dyr og planter. NINA Temahefte 21. - NIVA lnr 4590–2002, Trondheim.

AARIO, R. (1965): Development of ancient Lake Päijänne and the history of the surrounding forests. - Suomalaisen Tiedeakatemian Toimituksia, Helsinki.

ABRAMOVA, S.A., N.N. DAVIDOVA & D.D. KVASOV (1967): Istoriya Ladojskogo ozera v golotsene po dannim sporovo-pilbtsevogo i diatomovogo analizov. - In: KALESNIK, S.V. (ed.): The history of the lakes in the North-West. Papers read at the I Symp. on Paleolimnology of the North-West of the USSR (Leningrad, 17–20 Nov. 1965). Int. Symp. on Paleolimnology (Hungary, 1967). (Istoriya ozer severo-zapada), Leningrad.

ÁCS, É., K. SZABÓ, K.T. KISS & F. HINDÁK (2003): Benthic algal investigations in the Danube river and some of its main tributaries from Germany to Hungary. - Biologia (Bratislava) **58**: 545–554.

ÁCS, É., K. SZABO, A.K. KISS, B. TÓTH, G. ZARAY & K.T. KISS (2006): Investigation of epilithic algae on the River Danube from Germany to Hungary and the effect of a very dry year on the algae of the River Danube. - Arch. Hydrobiol. Suppl. Large Rivers **16**: 389–417.

AFAS (1877): Comptes Rendus de l'Association Française pour l'Avancement des Sciences. 6éme session. - Le Havre.

AGARDH, C.A. (1824): Systema Algarum. - Lundae Literis Berlingianis, Lund.

AGARDH, C.A. (1831): Conspectus Criticus Diatomacearum. Part III. - Lundae Literis Berlingianis, Lund.

AILIO, J. (1915): Die geographische Entwicklung des Ladogasees in postglazialer Zeit. - Bull. Commiss. Géol. Finlande **45**: 1–159.

AKBULUT, A. & K. YILDIZ (2002): The planktonic diatoms of Lake Çildir (Ardahan, Turkey). - Turk. J. Bot. **26**: 55–75.

ALLEN, D. (2007): ANR confirms first northeastern U.S. infestation of “Didymo”. - Vermont Agency of Natural Resources press release, Waterbury.

ALTUNER, Z. & H. GÜRBÜZ (1989): Karasu (Fýrat) Nehri fitoplankton topluluğu üzerinde bir araþtşrma. - Istanbul Üniv. Ürün. Derg. **3**: 151–176.

ALTUNER, Z. & H. GÜRBÜZ (1990a): Karasu (Fýrat) Nehri epifitik algleri üzerinde bir araştırma. - X. Ulusal Biyoloji Kongresi, 18–20 Temmuz, Erzurum, 193–203.

ALTUNER, Z. & H. GÜRBÜZ (1990b): Tercan Baraj Gölü fitoplankton topluluğu üzerinde bir araştırma. - X. Ulusal Biyoloji Kongresi, 18–20 Temmuz, Erzurum, 131–140.

ALTUNER, Z. & H. GÜRBÜZ (1991): Karasu (Fýrat) Nehri epipelik alg florasý üzerinde bir araştırma. - Doğa Türk. Bot. Derg. **15**: 253–267.

ALTUNER, Z. & H. GÜRBÜZ (1994): A study on the phytoplankton of the Tercan Dam Lake, Turkey. - Turk. J. Bot. **18**: 443–450.

ALTUNER, Z. & H. GÜRBÜZ (1996): Tercan Baraj Gölü bentik alg floraı üzerinde bir araştırma. - Turk. J. Bot. **20**: 41–51.

ÁLVAREZ-COBELAS, M. & A. ESTÉVEZ-GARCÍA (1982): Catálogo de las algas continentales españolas. I. Diatomophyceae Rabenhorst 1864. - Lazaroa **4**: 269–285.

ALYOSHINSKAYA, Z.V. (1962): Raspredelenie diatomovij v razlichnij fatsiyaj allyuviya, po dannim diatomovogo. Analiza otlojeni poimi izvestiya. - Vsesoyuzn. Geogr. Obshch. Noyabrb. Dekabrb. **94**: 501–506.

ALYOSHINSKAYA, Z.V. (1968): Diatomei v allyuvialbnij otlojeniyaj Eniseya. - Iskopaemie Diatomovie Vodorosli SSSR Akademiya Nauk SSSR, Sibirskoe Otdelenie Institut Geologii i Geossofiziki Izdatelbstvo “Nauka”, Moskva.

ANISIMOVA, O.V. & G.A. BELYAKOVA (1997): Alygoflora Teletskogo ozera i stoyachih vodoemov ego basseyna na territorii Altayskogo gosudarstvennogo zapovednika. - Trudy Tsentr. Chernozemn. Gosud. Zapov. **15**: 191–203.

ANONYMOUS (1862): Hunting for diatoms. - Intellectual Observ. **1**: 190–199.

ANONYMOUS (1884): On the collection and preparation of the diatomaceae. - J. Microscop. Nat. Soc. **2**: 229–236.

ANONYMOUS (1978): Volga i eyo jizl. - Institut Biologii Vnutrennij Vod, Leningrad.

ANONYMOUS (1998): Environmental assessment of the Hongye-2 hydroelectric power station and the county. - J. Sichuan Teacher’s Coll., Nat. Sci. Ed. **19**: 193–197.

ANONYMOUS (2005a): What is in the White River? - Arkansas Flyline **16**: 7.

ANONYMOUS (2005b): Rock snot is a tenacious beast. - National Centre for Aquatic Biodiversity & Biosecurity Update **14**: 1.

ANONYMOUS (2006): Troublesome diatom spreads in Black Hills streams. - Game, Fish and Parks news releases for July 14, 2006, Pierre, South Dakota.

ANONYMOUS (2007a): Yellowstone, *Didymo* & eco-toxicology. Can we win one? Fly fishing in Yellowstone National Park. A few brief notes about fly fishing in and around Yellowstone National Park. - http://flyfishyellowstone.blogspot.com/2007/02/yellowstone-didymo-eco-toxicology.html

ANONYMOUS (2007b): Strange alga alarms New England fishermen. - Mar. Pollut. Bull. **54**: 1565–1568.

ANSP (2007): Algae Image Database from the Phycology Section. - Patrick Center for Environmental Research, The Academy of Natural Sciences. http://diatom.acnatsci.org/AlgaeImage

ANTOINE, S.E. & K. BENSON-EVANS (1983): Polymorphism and size variation in *Didymosphenia geminata* from Great Britain. - Brit. Phycol. J. **18**: 199–200.

ANTOINE, S.E. & K. BENSON-EVANS (1984): Morphological variation in six populations of *Didymosphenia geminata* (Lyngbye) M. Schmidt of Great Britain. - Nova Hedwigia **40**: 141–149.

ANTOINE, S.E. & K. BENSON-EVANS (1985): Benthic algal flora of the River Wye system, Wales, U.K. - Nova Hedwigia **42**: 31–47.

ANTOINE, S.E. & K. BENSON-EVANS (1986a): Spatial and temporal distribution of some interesting diatom species in the River Wye system, Wales, U.K. - Limnologica **17**: 79–86.

ANTOINE, S.E. & K. BENSON-EVANS (1986b): Teratological variations in the River Wye diatom flora, Wales U.K. - In: RICARD, M. (ed.): Proceedings of the 8th International Diatom Symposium: 375–384. Koeltz Scientific Books, Koenigstein.

ANTOINE, S.E., R.T. ESHO & K. BENSON-EVANS (1984): Studies on the bottom sediments and epipelic algae of the River Ely, South Wales, U.K. - Limnologica **16**: 1–7.

ANUFRIEVA, T.N., T.B. GORBANEVA, N.A. GAEVSKY & N.E. KOVALENKO (2003): Phytoperiphyton of the river Yenisey in conditions of complex anthropogenous effect. - Vestn. Krasgu Ser. Nat. Sci. **5**: 114–125.

ARESCHOUG, J.E. (1879): Algae scandinavicae exsiccatae quas adjectis characeis. - Typis Academie, Leffler (2nd Edition), Uppsala.

ARHIPOV, S.A. (1984): Sredne-pozdnechetvertichnye diatomei Prieniseiskogo Severa. - Nauka, Moskva.

ARNEKLEIV, J.V., I KORSEN, L. RØNNING & P. FISKE (2007): Ferskvannsbiologiske undersøkelser I Stjørdalselva 1990–2006. Faglig oppsummering: kraftverksregulering, voksen, anadrom laksefisk og fangststatistikk. - LFI Rapport **130**: 1–144.

ARONSON, J.G. (1976): *Biddulphia laevis* Ehrenberg and *Didymosphenia geminata* (Lyngb.) M. Schmidt. Two interesting diatoms from Colorado. Unpub. paper.

ARPA Piemonte (2007): Didymo (*Didymosphenia geminata*) un'alga invasiva e fastidiosa presente nelle acque del Torrente Erro (AL). - ARPA Piemonte, Torino.

ARSO (2005): Poročilo o Kakovosti Jezer za Leto 2005. - Ministrstvo za Okolje in Prostor, Agencija Republike Slovenije za Okolje, Republika Slovenija, Ljubljana.

ASAI, K. (1995): Statistic classification of epilithic diatom species into three ecological groups relating to organic water pollution. (1) Method with coexistence index. - Diatom **10**: 11–32.

ASCONIT (2007): Étude du peuplement diatomique de stations du RNB, du RCB et de la DCE dans la Région Provence-Alpes-Côte d'azur. Campagne 2006. Rapport final - DIREN Alpes Provence Côte d'Azur, Le Tholonet.

ASPREY, J.F., K. BENSON-EVANS & J.E. FURET (1964): A contribution to the study of South American Freshwater Phytoplankton. - Gayana Bot. **10**: 1–18.

ATICI, T. & O. OBALI (1997): A study on diatoms in Upper part of Çoruh River, Turkey. - Gazi Üniv. Fen Bilim. Enst. Derg. **12**: 473–496.

AUDOUIN, J.V. (ed.) (1824): Dictionnaire classique d'histoire naturelle. - Rey et Gravier, Paris.

AWI (2003): Friedrich Hustedt Arbeitsplatz Database. - http://diatomwebserver.awi.de/fmi/iwp/cgi?-db=WebStart&-loadframes

BACKHAUS, D. (1968): Ökologische Untersuchungen an Aufwuchsalgen der obersten Donau und ihrer Quellflüsse, III. Die Algenverteilung und ihre Beziehung zur Milieuofferte. - Arch. Hydrobiol. **34**: 130–149.

BACKLUND, D. (2007): The American Dipper, *Cinclus mexicanus*, in the Black Hills of South Dakota: Past and Present. - http://www.sdgfp.info/Wildlife/Diversity/dipper

BAHLS, L.L. (1993): Periphyton Bioassessment Methods for Montana Streams. - Water Quality Bureau, Dept. of Health and Environmental Sciences, Helena.

BAHLS, L.L. (2004): Northwest diatoms: a photographic catalogue of species in the Montana Diatom Collection, with ecological optima, associates, and distribution records for the nine northwestern United States. - Helena.

BAHLS, L.L. (2007a): *Cymbella janischii* - Giant endemic diatom of the Pacific Northwest: morphology, ecology and distribution compared to *Cymbella mexicana*. - N. W. Sci. **81**: 284–292.

BAHLS, L.L. (2007b): Rock snot and glacier gold on the crown of the continent. - Hannaea, Helena.

BAILEY, J.W. (1842): A sketch of the infusoria, of the family Bacillaria, with some account of the most interesting species which have been found in a recent or fossil state in the United States. Part II. Naviculacea. - Amer. J. Sci. Arts **42**: 88–105.

BAILEY, L.W. (1910): Marine and estuarine diatoms of the New Brunswick coasts. - Bull. Nat. Hist. Soc. New Brunswick **6**: 219–236.

BAILEY, L.W. (1915): The plankton diatoms of the Bay of Fundy. - Contrib. Canad. Biol. (Suppl.): 11–23.

BAILEY, L.W. (1924): An annotated catalogue of the diatoms of Canada, showing their geographical distribution. - Contrib. Canadian Biol. N. S. **2**: 31–67.

BAJKOV, A. (1934): The plankton of Lake Winnipeg drainage system. - Int. Rev. Gesamten Hydrobiol. Hydrogr. **31**: 239–272.

BALASHOVA, N.B. & A.A. ZAVARZIN (eds) (1999): Biodiversity of the Leningrad Region. - St. Petersburg University Press, St.Petersburg.

BAO, W.M., Q.X. WANG & C.W. REIMER (1992): Diatoms from the Changbaishan Mountain area. - Bull. Bot. Res., Harbin **12**: 125–143.

BARINOVA, S.S. (1986): Na algoflora ot Artemovsk vodohranilishte (Primorskiy rayon). - In: VASIL'EVA, L.N., Z.M. AZBUKINA & L.N. EGOROVA (eds): Flora i sistematika ot spora rasteniy Dalynego Vostoka: 3–21. Nauka, Vladivostok.

BARINOVA, S.S. (1989): Presnovodnaye diatomovayh vodorosley v Kurile ostrova. - In: LEVANIDOVA, I.M. & E.A. MAKARCHENKO (eds): Sistematika i ekologiya rechnayh organizmov: 138–141. Nauka, Vladivostok.

BARINOVA, S.S. & L.A. MEDVEDEVA (1996): Atlas vodorosley-indikatorov saprobnosti (Rossiyskiy Dalyniy Vostok). - Dalynauka, Vladivostok.

BARINOVA, S.S. & L.A. MEDVEDEVA (1998): V metod Watanabe v otsenke organicheskogo zagryazneniya voday. - Algologia **8**: 428–448.

BARINOVA, S.S. & L.A. MEDVEDEVA (2004): Na metod kolichestvennayh dannayh microphytobenthos na Dalynem Vostoke - malayh rek. - Algologia **14**: 101–110.

BARINOVA, S.S., L.A. MEDVEDEVA & O.V. ANISIMOVA (2000a): Algal indicators in environmental assessment. - Moskow.

BARINOVA, S.S., L.A. MEDVEDEVA & O.V. ANISIMOVA (2000b): Raznoobrazii vodorosley pokazateley v ekologicheskoy otsenke. - Pilies Studio, Tel-Aviv.

BARRACLOUGH, C.L. (1992): Periphyton of the Yukon River Presence of *Didymosphenia geminata* (Lyngb.) M. Schm. - Water Resources Papers Consultant Report, Vancouver.

BARRET, J. (2007): *Didymo* continues to spread. - Ashburton Online. http://tinyurl.com/bzcha8

BARWELL, W. (1882): Algae of Strensall Common. - The Naturalist **8**: 77–88.

BATTEGAZZORE, M., M. MOGNA, A.M. GAGGINO & A. MORISI (2007): La diatomea *Didymosphenia geminata* (Lyngbye) Schmidt nel F. Po e nel T. Varaita. Invasione preocupante causata da disturbo antropico a mancanza di conoscenza? - Ann. Sci. Massicio del Monviso **3**: 87–107.

BATTES, K., M. CÎMPEAN, C. PAVELESCU, M. BOGATEAN, L. MOMEU & C. TUDORANCEA (2000–2001): Ecological aspects of benthic communities from the Somesul Cald catchment area. - Ann. West Univ. Timisoara Ser. Biol. **3-4**: 123–140.

BAYRAM, I. & B. ŞAHIN (2000): Epipelic and epilithic algal flora of Harşit Stream (Tirebolu-Giresun in Turkey). - Energy Educ. Sci. & Technol. **5**: 53–65.

BAZHAN, M.P. (1985): Ukrainskaia sovetskaia entsiklopediia. - Glav. red. USE, Kiev.

BAZHENOVA, O.P. (2006): Vidovoy sostav i ekologo-geograficheskaya harakteristika vodorosley srednego Irtaysha. - Vestnik Omskogo Gosudarstvennogo Pedagogicheskogo Universiteta Vaypusk, Omsk.

BELLAVANCE, M. (2006): *Didymo*, une nouvelle menace…? Ou pourquoi nos habitudes seront changées dès l'an prochain! - Bull. Liais. Assoc. Pêch. Sport. Saumon Riv. Rimouski **4**: 3–5.

BELLOC, É. (1890): Sondages faits au lac d'Oô. - Rev. Pyrénées **2**: 181–200.

BELLOC, É. (1894): La flore algologique d'eau douce de l'Islande. - Association Française pour l'avancement des sciences fusionnée avec l'Assoc. scient. de France, Caen.

BELTRAMI, M.E., C. CAPPELLETTI & F. CIUTTI (2007): A first characterization of diatom communities from Trentino streams (Northern Italy). - In: KUSBER, W.-H. & R. JAHN (eds): Proceedings of the 1st Central European Diatom Meeting 2007: 7–10. Botanic Garden and Botanical Museum Berlin-Dahlem, Freie Universität Berlin, Berlin.

BELTRAMI, M.E., C. CAPPELLETTI & F. CIUTTI (2008a): *Didymosphenia geminata* (Lyngbye) M. Schmidt (Bacillariophyta) in the Danube basin: New data from the Drava river (northern Italy). - Plant Biosyst. **142**: 126–129.

BELTRAMI, M.E., S. BLANCO, F. CIUTTI, C. CAPPELLETTI, C. MONAUNI, S. POZZI, F. RIMET & L. ECTOR (2008b): Distribution and ecology of *Didymosphenia geminata* (Lyngbye) M. Schmidt (Bacillariophyta) in Trentino watercourses (northern Italy). - Cryptog. Algol. **29**: 141–160

BELTRAMI, M.E., C. CAPPELLETTI, F. CIUTTI, L. HOFFMANN & L. ECTOR (2008c): The diatom *Didymosphenia geminata*: distribution and mass occurrence in the Province of Trento (Northern Italy). - Verh. Int. Vereinigung Limnol. **30**: 593–597.

BELYAEVA, T.V. (1961a): Diatomovie v poverjnostnom sloye osadkov severo-zapadnoi chastsi Tijogo Okeana. - Trudy Inst. Okeanol. **46**: 231–246.

BELYAEVA, T.V. (1961b): Diatomovie v olverjnostnom sloye osadkov Yaponskogo Morya. - Trudy Inst.Okeanol. **46**: 247–262.

BENGTSSON, R. (1991): Påväxtalger på 18 lokaler i Vänern, Skaraborgs län hösten 1990. - Rapport till länsstyrelsen, Stockholm.

BENGTSSON, R. (1992): Påväxtalger på 13 lokaler i Vänern, Skaraborgs län hösten 1991. - Rapport till länsstyrelsen, Stockholm.

BENGTSSON, R. (1993): Påväxtalger på 13 lokaler i Vänern, Skaraborgs län hösten 1992. - Rapport till länsstyrelsen, Stockholm.

BENGTSSON, R. (2000): Alger som fastnar på fisknät i Vänern, Mälaren och Hjälmaren. - Vänerns vattenvårdsförbund Rapport nr. 14, Stockholm.

BENGTSSON, R. (2001): Påväxtalger i Vättern hösten 2001. Rapport nr 71 från Vätternvårdsförbundet. - IVL Svenska Miljöinstitutet, Stockholm.

BENKE, A.C. & C.E. CUSHING (eds) (2005): Rivers of North America. - Elsevier Academic Press, New York.

BENNET, A.W. (1886): Fresh-water algae (including chlorophyllaceous Protophyta) of the English Lake District: with descriptions of twelve new species. - J. Roy. Microscop. Soc. **2**: 1–15.

BERKELEY, M.J. (1833): Cleanings of British algae; being an appendix to the supplement to English Botany. - C.E. Sowerby, London.

BHATT, J.P., A. BHASKAR & M.K. PANDIT (2005): Biotic communities of Kishanganga river: A pre-impoundment case study of a Himalayan river. - Aquatic Ecosyst. Health Managem. **8**: 259–265.

BHATT, J.P., A. BHASKAR & M.K. PANDIT (2008): Biology, distribution and ecology of *Didymosphenia geminata* (Lyngbye) Schmidt an abundant diatom from the Indian Himalayan rivers. - Aquatic Ecol. **42**: 347–353.

BÍLÝ, J. (1941): Príspevek ku poznání kveteny rozsivek Vysokých Tater. - Práce Mor. Prír. Společn. **13**: 1–12.

BIOSECURITY NEW ZEALAND (2007): *Didymo* - Where is it? -http://www.biosecurity.govt.nz/pests/didyno/whele-is-it

BISKE, G.S., & G.T. LAK (1955): Pozdnelednikovie morskie otlojeniya v Karelo-Finskoi SSR. - Trudy Karelo-Finskogo Filiala Akademii, Nauk.

BLAIS, S. (2008): Guide d'identification des fleurs d'eau de cyanobactéries. Comment les distinguer des végétaux observés dans nos lacs et nos rivières. - Direction du suivi de l'état de l'environnement, ministère du Développement durable, de l'Environnement et des Parcs, Montreal.

BLANCO, S. & L. ECTOR (2008): *Didymosphenia geminata* (Bacillariophyta, Gomphonemataceae), una amenaza para nuestros ríos. - Cuad. Biodivers. **26**: 3–6.

BLANKENSHIP, K. (2008): MD anglers asked to be on lookout for latest invasive algae. - Bay J. **18** (unpag.).

BLINN, D.W. & D.B. HERBST (2003): Use of diatoms and soft algae as indicators of stream abiotic determinants in the Lahontan Basin. - California State Water Resources Board, Sacramento.

BONARDI, E. (1888): Premières recherches sur les diatomées de Vall'intelvi. - J. Microgr. **12**: 303–382.

BORY, J.M.B. (1824a): Dictionnaire Classique d'Histoire Naturelle. Tome cinquième. Cra-D vol. 5. - Rey & Gravier, libraires-éditeurs; Baudouin Frères, libraires-éditeurs. Paris.

BOTHWELL, M.L., D. SHERBOT, A.C. ROBERGE & R.J. DALEY (1993): Influence of natural ultraviolet radiation on lotic periphytic diatom community growth, biomass accrual, and species composition: short-term versus long-term effects. - J. Phycol. **29**: 24–35.

BOTHWELL, M.L., J. DENISEGER, D. SHERBOT & C. WIGHTMAN (2007): Blooms of *Didymosphenia geminata* in rivers on Vancouver Island 1990 to present: A sign of environmental change or a new invasive species? - Free Public Lecture, Malaspina University-College, Faculty of Science and Technology, Nanaimo.

BOTHWELL, M.L. & S.A. SPAULDING (Eds) (2008): Proceedings of the 2007 International workshop on *Didymosphenia geminata*. - Canad. Tech. Rep. Fish. Aquatic Sci. **2795**: 1–96.

BOUBÉE, J., D. JELLYMAN & C. SINCLAIR (2008): Eel protection measures within the Manapouri hydro-electric power scheme, South Island, New Zealand. - Hydrobiologia **609**: 71–82.

BOYER, C.S. (1895): A diatomaceous deposit from an artesian well at Wildwood, N.J. - Bull. Torrey Bot. Club **22**: 260–266.

BOYER, C.S. (1916): The Diatomaceae of Philadelphia and Vicinity. - J.B. Lippincott Co., Philadelphia.

BOYER, C.S. (1927): Synopsis of North American Diatomaceae. Part II. Naviculatae, Surirellatae. - Proc. Acad. Nat. Sci. Philadelphia Suppl. **79**: 229–583.

BRABETS, T.P. & R. OURSO (2006a): Water quality, physical habitat, and biology of the Kijik River Basin, Lake Clark National Park and Preserve, Alaska, 2004–2005. - U.S. Geological Survey Scientific Investigations Report 2006-5123, Reston.

BRABETS, T.P. & R.T. OURSO (2006b): Water quality of the Crescent River Basin, Lake Clark National Park and Preserve, Alaska, 2003–2004. - U.S. Geological Survey Scientific Investigations Report 2006-5151, Reston.

BRANSON, J. (2006): *Didymosphenia geminata* economic impact assessment. Final report to Biosecurity New Zealand. - New Zealand Institute of Economic Research (NZIER), Wellington.

BRETTUM, P. (1974): The relation between the new colonization and drift of periphytic diatoms in a small stream in Oslo, Norway. - Norweg. J. Bot. **21**: 277–284.

BRIGGS, S.A. (1872): The diatomaceae of Lake Michigan. - The Lens **1**: 41–44.

BRITTON, M.E. (1944): A catalog of Illinois algae. - Northwestern Univ. Stud. Biol. Sci. Med. **2**: 1–177.

BROCKMANN, C. (1954): Die Diatomeen in den Ablangerungen der ostpreussischen Haffe. - Meyniana **3**: 1–95.

BRODIE, J. & D. JOHN (2004): Important Plant Areas: a draft list of important algal areas. - The Phycologist **66**: 3–8.

BROWN, C.A. (2008): Changes in the composition and growth of invertebrates in rocky mountain streams due to blooms of the nuisance diatom *Didymosphenia geminata*. - NABS 56th Annual Meeting (25–28 May, 2008), Salt Lake City.

BRUN, J. (1880): Diatomées des Alpes et du Jura et de la région suisse et française des environs de Genève. - Masson, Genève & Paris.

BUCZKÓ, K. (2008): Benthic diatoms. Phytobenthos. - http://www.szigetkozi-monitoring.hu/konferencia_2005/buczko_index_uk.htm

BUCZKÓ, K. & J. NÉMETH (2008): An illustrated diatom checklist of Szigetköz region. -In prep.

BUCZKÓ, K., B. PAPP & M. RAJCZY (2001-2007): Algae and moss monitoring in the Szigetköz. - Unpub. manuscripts.

BUKHTIYAROVA, L.N. (1999a): Classification of diatom algocoenoses as a useful tool in river biomonitoring. - In: PRYGIEL, J., B.A. WHITTON & J. BUKOWSKA (eds): Use of algae for monitoring rivers III: 114–121. Agence de l'Eau Artois-Picardie, Douai.

BUKHTIYAROVA, L.N. (1999b): Diatoms of Ukraine. Inland waters. - National Academy of Sciences of Ukraine, Kyiv.

BUKHTIYAROVA, L.N. (2000): Raznoobraziye vodorosley Ukrainy. Bacillariophyta. - Algologia **10**: 93–136.

BURKHOLDER, P.R. (1931): Studies in the phytoplankton of the Cayuga Lake Basin. - Bull. Buffalo Soc. Nat. Sci. **15**: 21–182.

BUTCHER, R.W. (1932): The microflora of rivers with special reference to the algae on the river bed. - Ann. Bot. **46**: 813–861.

BUTORIN, N.V. (1978): Ivan'kovskoe vodokhranilishche i ego zhizn. - Trudy Instituta Biologii Vnutrennikh Vod, Akademii Nauk SSSR, Leningrad.

ČAĐO, S., A. MILETIĆ, T. DOPUĐA-GLIŠIĆ & L. DENIĆ (2006): Physical-chemical characteristics and phytoplankton composition of the Sava River on its lower flow stretch through Serbia. - 36th Conference of the International Association for Danube Research-IAD, Vienna-Klosterneuburg.

ČAĐO, S., A. MILETIĆ & A. DJURKOVIC (2007a): The composition and biomass of phytoplankton of the Sava River. - Balwois, Ohrid, Republic of Macedonia.

ČAĐO, S., A. MILETIĆ & A. DJURKOVIC (2007b): Phytoplankton, physicochemical and saprobiological characteristics of the Danube river, on the stretch through Serbia. - Balwois, Ohrid, Republic of Macedonia.

CAMBRA, J. (1987): Flore et végétation algologiques des eaux épicontinentales de la Réserve Naturelle des vallées d'Ordesa (Pyrénées aragonaises). - Candollea **42**: 475–490.

CAMBRA, J. (1989): Contribución al estudio de las comunidades de algas de agua dulce del Moncayo. - Turiasco **9**: 497–508.

CAMBRA, J. (1991a): Diatom check-list from Catalonian Countries (Eastern Spain). - Butl. Soc. Catalana Hist. Nat. **8**: 5–39.

CAMBRA, J. (1991b): Contribució an coneixement de les algues epifitiques en estanys dels Pirineus. - Sci. Gerundensis **17**: 17–27.

CAMPBELL, M.L. (2005): Organism impact assessment (OIA) for potential impacts of *Didymosphenia geminata*. - All Oceans Ecology, Victoria.

CAMPBELL, M.L. (2008): Organism impact assessment: risk analysis for post-incursion management. - I.C.E.S. J. Mar. Sci. **65**: 795–804.

CĂRĂUŞ, I. (1973): Caracteristici ale dezvoltării fitoplanctonului în lacul de baraj Bicaz. (Rezumatul tezei de doctorat). - Univ. "Al.I.Cuza", Iasi.

CĂRĂUŞ, I. (1983a): Date asupra algoflorei din zonă. - In: Lacul de Acumulare Izvoru Muntelui-Bicaz: 83–86. Ed. Academiei, Bucarest.

CĂRĂUŞ, I. (1983b): Fitoplanctonul. - In: Lacul de Acumulare Izvoru Muntelui-Bicaz: 111–128. Ed. Academiei, Bucarest.

CĂRĂUŞ, I. (2002): The algae of Romania. - Stud. Cercet. Biol. **73**: 1–694.

CARDINALE, B.J., H. HILLEBRAND & D.F. CHARLES (2006): Geographic patterns of diversity in streams are predicted by a multivariate model of disturbance and productivity. - J. Ecol. **94**: 609–618.

CARLSSON, M., L.M. NILSSON, B.J. SVENSSON, S. ULFSTRAND & R.S. WOTTON (1977): Lacustrine seston and other factors influencing the blackflies (Diptera: Simuliidae) inhabiting lake outlets in Swedish lapland. - Oikos **29**: 229–238.

CARPENTER, W.B. (1856): The microscope and its revelations. - John Churchill, London.

CARR, A.A. (1836): A history of Coldingham Priory, containing a survey of the civil and ecclesiastical history of the eastern portion of Berwickshire, anciently termed Coldinghamshire. - Adam & Charles Black, Edinburgh.

CARTER, J.R. & P. DENNY (1982): Freshwater algae of Sierra Leone III. Bacillariophyceae: Part (i) Diatoms from the River Jong (Taia) at Njala. - Nova Hedwigia Beih. **73**: 281–331.

CARY, S.C. & B.J. HICKS (2006): *Didymo* detection study project brief. - Biosecurity New Zealand, Christchurch.

CARY, S.C., M. BOTHWELL & S. SPAULDING (2007a): The paradox of *Didymosphenia geminata*. - ASLO 2007 Aquatic Sciences Meeting, February 4–9, 2007, Santa Fe.

CARY, S.C., B.J. HICKS, K.J. COYNE, A. RUECKERT, C.E.C. GEMMILL & C.M.E. BARNETT (2007b): A sensitive genetic-based detection capability for *Didymosphenia geminata* (Lyngbye) M. Schmidt: Phases Two and Three. CBER Contract Report 62. Client report prepared for MAF Biosecurity New Zealand. - Centre for Biodiversity and Ecology Research, Department of Biological Sciences, School of Science and Engineering, The University of Waikato, Hamilton.

CASTRACANE, F. (1879): Distinziones delle diatomee marine flora litorale e flora pelagica. - Att. Accad. Pontif. Sci. Nuov. Lincei **32**: 36–45.

CAZAUBON, A. (1988): Etude des peuplements d'algues en dérive et benthiques (épiphytiques, épilithiques, épipsammiques et épipéliques) des rivières méditerranéennes (sud-est de la France: Provence et Corse). - Ph. D. Thesis, Faculté des Sciences de Saint-Jérome, Université de Droit, d'Economie et des Sciences d'Aix-Marseille III, Marseille.

ÇELEKLI, A. (2006): Net diatom (Bacillariophyceae) flora of Lake Gölköy (Bolu). - Turk. J. Bot. **30**: 359–374.

CHAPMAN, V.J., R.H. THOMPSON & E.C.M. SEGAR (1957): Check list of the fresh-water algae of New Zealand. - Trans. Roy. Soc. New Zealand **84**: 695–747.

CHASE, H.H. (1902): Flora of Michigan diatomaceae. - In: POLLOCK, J.B. (ed.): Fifth annual report of the Michigan Academy of Science: 166–183. Michigan Academy of Science, Alma.

CHATHÁIN, B.N., T.J. HARRINGTON, J. McCARTHY, M. KELLY-QUINN, C. BRADLEY & J.R. BAARS (2004): Preliminary results from the investigation of benthic diatoms from potential reference river sites in Ireland. - Oceanol. Hydrobiol. Stud. **33**: 3–15.

CHEREMISINOVA, E.A. (1966): K voprosv o vozrastse Ozera Baikal (rezul'tati diatomovogo analiza otlojeni tunkinskoi kotlovini). - Doklad. Akad. Nauk S.S.S.R. **171**: 948–951.

CHERNOV, V.K. (1935): Gidrobiologischeskoe obsledovanie Stodolyskogo pruda. - Mater. Gidrol. Gidrogr. Vodorosli Islam S.S.S.R. **29**: 267–282.

CHERNOV, V.K. (1946): Amfibioticheskaya zona v Ozeraj (Kareliya) v oz Pertozero. - Nauchn. Byull. Leningradsk. Gosud. Ord. Leningradsk. Univ. **10**: 17–18.

CHERNOV, V.K. (1949a): O geograficheskom rasprostranenii vodorosley v presnayh vodoemah Karelo-Finskoy SSR i rayonirovanie Respubliki po vodoroslevoy rastitelynosti ee vodoemov. - Pridodnie resursi, istoriya i kulbtura Karelo-Finskoi Ssr vip. II. Sektsii Biologicheskij Jimicheskij i Fiziko-Matematicheskij Nauk Karelo-Finski Gosudarstveni Universitet Gosudarstvennoe Izdatelbstvo Karelo-Finskoi SSR, Petrozavodsk.

CHERNOV, V.K. (1949b): Botanicheski sanitarno-biologicheski analiz Uchastkov Ozer, prilegayushij k naselennim punktam. - Leningradsk. Obshch. Estestv. **69**: 164–176.

CHERNYAEVA, G.P. (1970): Diatomovie vodorosli donnij osadkov severnogo Baikala. - Donnie Otlojeniya Baikala, Sibirskoe Otdelenie Limnologicheski Institut, Akademiya Nauk SSSR, Mockba.

CISMHE (2006): Carrying capacity study of Teesta bassin in Sikkim. Volume VI Biological environment - terrestrial and aquatic ressources. - Center for Interdisciplinary Studies of Mountain & Hill Environment, University of Delhi, Delhi.

CIUTTI, F., C. CAPPELLETTI, M.E. BELTRAMI, C. MONAUNI, S. POZZI, F. RIMET & L. ECTOR (2005): Distribution, écologie et expansion de *Didymosphenia geminata* dans le nord de l'Italie (Trentino). - 24ème Colloque de l'Association des Diatomistes de Langue Française, Livre des résumés et programme, Bordeaux.

CLABBY, K.L., J. LUCEY & M.L McGARRIGLE (2004): Interim report on the biological survey of river quality: Results of the 2003 investigations. - Environmental Protection Agency, Wexford.

CLEARWATER, S.J., P.G. JELLYMAN, B.F.J. BIGGS, C.W. HICKEY, N. BLAIR & J.S. CLAYTON (2007): *Didymosphenia geminata* experimental control trials: Stage Two, Phase Two (testing the effectiveness of Gemex™, a chelated copper formulation). - NIWA Client Report HAM2006-174, NIWA, Hamilton.

CLEVE, P.T. (1873): On diatoms from the Arctic Sea Bihang till Kongliga. - Svensk. Vetenskapsakad. Handl. **13**: 1–28.

CLEVE, P.T. (1891): The diatoms of Finland. - Act. Soc. Fauna Fl. Fenn. **8**: 1–68.

CLEVE, P.T. (1894): Synopsis of the Naviculoid diatoms. Part I. - Bih. Kongl. Svenska Vetensk.-Akad. Handl. **26** (2): 1–194.

CLEVE, P.T. & J.D. MÖLLER (1879): Diatoms. Part V, No. 217–276. - Esatas Edquists Boktryckeri, Uppsala.

CLEVE-EULER, A. (1895): On recent freshwater Diatoms from Lule Lappmark in Sweden. - Bih. Kongl. Svenska Vetensk. - Akad. Handl. **21**(3): 1–40.

CLEVE-EULER, A. (1911): *Cyclotella bodanica* i Ancylussjön. - Geol. Fören. Förh. **33**: 439–462.

CLEVE-EULER, A. (1915): New contributions to the diatomaceous flora of Finland. - Ark. Bot. **14**: 1–81.

CLEVE-EULER, A. (1934): The diatoms of Finnish Lapland. - Commentat. Biol. **4** (14): 1–154.

CLEVE-EULER, A. (1944): Die Diatomeen als quartärgeologische Indikatoren. Eine kritische Übersicht. - Geol. Fören. Förh. **66**: 383–410.

CLEVE-EULER, A. (1955): Die Diatomeen von Schweden und Finnland. Teil IV. Biraphidae 2. - Kungl. Svenska Vetensk. Handl. **4**: 1–232.

COLBY, T. & T.A. LARCOM (1837): Ordenance survey of the County of Londonderry. - Pub. for H. M. Gov't, Hodges and Smith, Londonderry.

COLLIER, K. & M. WINTERBOURN (1990): Structure of epilithon in some acidic and circumneutral streams in South Westland, New Zealand. - New Zealand Nat. Sci. **17**: 1–11.

COMBER, T. (1860): On the diatomaceae of the neighbourhood of Liverpool. - J. Microscop. Sci. **8**: 111–122.

COMÈRE, J. (1894): Les diatomées des Pyrénées. - Bull. Soc. Ramond **1**(5): 16–75.

CONRAD, W. & H. KUFFERATH (1912): Addition à la flore algologique de Belgique. - Bull. Soc. Roy. Bot. Belgique **49**: 293–335.

COOK, E.J., G. ASHTON, M. CAMPBELL, A. COUTTS, S. GOLLASCH, C. HEWITT, H. LIU, D. MINCHIN, G. RUIZ & R. SHUCKSMITH (2008): Non-native aquaculture species releases: implications for aquatic ecosystems. - In: HOLMER, M., K. BLACK, C.M. DUARTE, N. MARBÀ & I. KARAKASSIS (eds): Aquaculture in the Ecosystem: 155–184. Springer, Heidelberg.

CORTI, B. (1893): Sul deposito villafranchiano di Castelnovate presso Somma Lombardo. - Rend. R. Ist. Lombardo Sci. Lett. **26**: 1–26.

COSTE, M. & L. ECTOR (2000): Diatomées invasives exotiques ou rares en France: principales observations effectuées au cours des dernières décennies. - Syst. & Geogr. Pl. **70**: 373–400.

CÔTÉ, C. (2007): La prolifération de l'algue *Didymo* au Québec, qu'en est-il ? - Bull. Féd. Québec. Gest. Zecs **9**: 14–15.

COX, E.J. (1996): Identification of freshwater diatoms from live material. - Chapman & Hall, London.

CREMER, H. (1998): The diatom flora of the Laptev Sea (Arctic Ocean). - Biblioth. Diatomol. **40**: 1–169.

CREMER, H. (1999): Diatoms from surface sediments of the Laptev Sea shelf (East Siberia). - In: MAYAMA, S., M. IDEI & I. KOIZUMI (eds): Proceedings of the 14th International Diatom Symposium: 437–456. Koeltz Scientific Books, Koenigstein.

CREȚU, A. (1999): Afinitatea floristică a comunităților algale din râul Sălăuța (Transilvania). - Stud. Cercet. Biol. Bistrița **5**: 69–76.

CRIEMP (2005): 2005 environmental status report: public update on the environmental health of the Columbia River from Hugh Keenleyside Dam to the border. - Columbia River Integrated Environmental Monitoring Program.

CRIPPEN, K. (2005): Northgate Minerals Corporation. Kemess Mine Expansion EIA. Appendix 11-B. Periphyton. - NMC, Vancouver.

DA SILVA, A.A. (1946): Diatomaceas fosseis de Portugal-jazigos de Rio Maior, Obidos e Alpiarça. - Bol. Soc. Geol. Portugal **6**: 5–166.

DALEY, B. (2008): A plea to wipe away rock snot. - The Boston Globe, 29/3/2008.

DANILOVA, N.S. (2005): Raznoobrazie Rastilelbnogo Mira Yakutii Otvetstvenni. - Izdatelbstvo Sibirskogo Otdeleñiya Rossiskoi Akademii Nauk, Novosibirsk.

DAVIDOVA, N.N. (1961a): Kjarakteristike diatomovij vodoroslei donnij otlojeni Ladojskogo ozera. - Bot. Zhurn. **46**: 722–726

DAVIDOVA, N.N. (1961b): Opit raionirovaniya poverjnostnij donnij osadkov Ladojskogo ozera po sostavu diatomovogo kompleksa. - Izv. Vsesoyun. Geogr. Obshch. **3**: 211–233.

DAVIDOVA, N.N. (1963): Sostav i usloviya formirovaniya diatomovij kompeskov v poverjnostnom sloye donnij otlojeni Ladojskogo Ozera. - Avtoreferat Dissertatsii na Soiskaniye Uchenoi Stepeni Kandidata Biologiceskij Nauk, Leningrad.

DAVIDOVA, N.N. (1968): Diatomovaya flora golotsenovij otlojeni ladojskogo ozera. - Iskopaemie Diatomovie Vodorosli SSSR Akademiya Nauk SSSR, Sibirskoe Otdelenie Institut Geologii i Geofiziki Izdatelbstvo "Nauka", Moskva.

DAVIDOVA, N.N. (1985): Diatomovayh v kachestve indikatorov sreday golotsena ozero. - Nauka, Leningrad.

DAVIDOVA, N.N. & N.A. PETROVA (1968): Ekologo-sistematicheskaya jarakteristika vodoroslei Ladojskgo ozera. - Rastitel'n. Res. Ladojskogo Ozera **21**: 175–195

DAWSON, P.A. (1973a): The morphology of the siliceous components of *Didymosphenia geminata* (Lyngb.) M. Schm. - Brit. Phycol. J. **8**: 65–78.

DAWSON, P.A. (1973b): Further observations on the genus *Didymosphenia* M. Schmidt - *D. sibirica* (Grun.) M. Schm. - Brit. Phycol. J. **8**: 197–201.

DAY, D. (1882): Plants of Buffalo and vicinity. - Bull. Buffalo Soc. Nat. Sci. **4**: 65–279.

DAY, S.A., R.P. WICKHAM, T.J. ENTWISLE & P.A. TYLER (1995): Bibliographic check-list of non-marine algae in Australia. - Flora Austr. Suppl. Ser. **4**: 1–276.

DESMAZIÈRES, J.B.H.T. (1825): Plantes cryptogames de la France. - Lille.

DE TERRA, H. & T.T. PATERSON (1939): Studies on the Ice Age in India and associated human cultures. - Carnegie Institute, Washington.

DE TONI, G.B. (1891): Sylloge algarum omnium hucusque cognitarum. Vol. II. Bacillarieae; sectio I. Raphideae. - Typis Seminarrii, Patavii.

DE TONI G.B. & D. LEVI (1886): Primi materiali per il censimento delle diatomacee italiane (Parte II). - Notarisia **4**: 1–19.

DICKIE, G. (1850): Notes of Diatomaceae found in the stomachs of certain Mollusca. - Trans. Bot. Soc. **3**: 43–46.

DIETRICH, F. & R. DIETRICH (eds) (1955): Bibliographie der Deutschen Zeitschriften-literatur v. 111. - Fr. Andra's Nachfolger, Leipzig.

DOGADINA, T.V. & L.A. KUKHARENKO (1990): Vodorosli. - In: AZBUKINA, Z.M. (ed.): Flora, myco i lichenobiota v Lazovskiy zapovednik (Primorskom krae): 10–34. FEB RAS, Vladivostok.

DONASZY, E. (1959): Das Leben des Szelider Sees. - Akademiai Kiado, Budapest.

DOROFEYUK, N.I. (1977): Characteristics of Diatomaceae from the Hovsgol Lake sediment. - Rastitel'n. Shivotn. Mongolii **7**: 193–204.

DOROFEYUK, N.I. (1984): Diatomovaye vodorosli donnayh otlozheniy ozera Terhiy-Tsagan-Nur (MHP). - Bot. Zhurn. **69**: 1243–1249.

DOROFEYUK, N.I. & D. TSETSEGMAA (2002): Konspekt flory vodoroslei Mongolii. Proceedings of the Joint Russian-Mongolian Complex Biological Expedition, Vol. 42. - Pensoft, Moscow.

DOROGOSTAÏSKY, V. (1904): Matériaux pour servir à l'algologie du lac Baïkal et de son bassin. - Bull. Soc. Imp. Naturalistes Moscou **18**: 229–265.

DOSSET, J.A. (1888): Sinopsis de las diatomáceas de Aragón y de Caldas de Bohí. - Imprenta de R. Miedes, Zaragoza.

DOUGLAS, B. (1958): The ecology of the attached diatoms and other algae in a small stony stream. - J. Ecol. **46**: 295–322.

DRUART, J.C., E. PONGRATZ & R. REVACLIER (1983): Les algues planctoniques du Léman: historique et inventaire. - Aquatic Sci. **45**: 430–457.

DRUART, J.C. & G. BALVAY (2007): Le Léman et sa vie microscopique. - Éditions Quae, Versailles.

DUFFORD, R.G., H.L. ZIMMERMANN, L.D. CLINE & J.V. WARD (1987): Responses of epilithic algae to regulation of Rocky Mountain streams. - In: CRAIG, J.F. & J.B. KEMPER (eds): Regulated streams: advances in ecology: 383–390. Plenum Press, New York.

DUNCAN, M. (2006a): A New Zealand-wide survey in August 2006 for the presence of the non-indigenous freshwater diatom *Didymosphenia geminata* in 108 high risk sites. - NIWA Client Report CHC2006-127, Christchurch.

DUNCAN, M. (2006b): A limited NZ-wide survey for the presence of non-indigenous freshwater diatom *D. geminata* in sites most likely for its introduction and establishment. - NIWA Client Report CHC2006-023, Christchurch.

DUNCAN, M. (2007): New Zealand-wide surveys in November 2006, February 2007 and May 2007 for the presence of the non-indigenous freshwater diatom *Didymosphenia geminata* in high risk sites. - NIWA Client Report CHC2006-053, Christchurch.

DUNCAN, M. & P. WILKINS (2006): A New Zealand-wide survey in May 2006 for the presence of non-indigenous freshwater diatom *Didymosphenia geminata* in sites most likely for its introduction and establishment. - NIWA Client Report CHC2006-071, Christchurch.

DUNCAN, M., C. KILROY, G. BURNIP, G. McBRIDGE & M. BULLIANS (2005): A New Zealand-wide survey in October 2005 for the presence of the non-indigenous freshwater diatom *Didymosphenia geminata* in sites most likely for its introduction and establishment. - NIWA Client Report CHC2006-041, Christchurch.

DUTHIE, H.C. (1973): A checklist of the freshwater algae of Ontario, exclusive of the Great Lakes. - Naturaliste Canad. (Quebec) **103**: 83–109.

EDGAR, R.K. (1978): The Jacob Bailey Whitman Bailey Diatom Collection at the Farlow Herbarium. - Farlow Herbarium, Cambridge.

EDLUND, M.B., E.F. STOERMER & C.H. PILSKALN (1995): Siliceous microfossil succession in the recent history of two basins in Lake Baikal, Siberia. - J. Paleolimnol. **14**: 165–184.

EDLUND, M.B., N. SONINKHISHIG, R.M. WILLIAMS & E.F. STOERMER (2001): Biodiversity of Mongolia: Checklist of diatoms, including new distributional reports of 31 taxa. - Nova Hedwigia **72**: 59–90.

EDLUND, M.B., E.F. STOERMER, T.S. JAMSRAN, N. SONINKHISHIG & R.M. WILLIAMS (2005): 2005 International Partnership for Research and Training in Mongolia - The diatom (Bacillariophyta) flora of ancient Lake Hovsgol. - Checklist of Mongolian Diatoms. http://www.umich.edu/~mongolia/checklist.html

EDLUND, M.B., N. SONINKHISHIG & E.F. STOERMER (2006): The diatom (Bacillariophyta) flora of Lake Hövsgöl National Park, Mongolia. - In: GOULDEN, C., T. SITNIKOVA, J. GELHAUS & B. BOLDGIV (eds): The Geology, Biodiversity and Ecology of Lake Hövsgöl (Mongolia): 145–177, Backhuys Publishers, Leiden.

EDLUND, M.B., S.A. SPAULDING & S. KUMAR (2008): The diatom *Didymosphenia geminata*, its spread, distribution, and formation of nuisance blooms. - 5th Annual International Lake of the Woods Water Quality Forum, March 12–13, 2008, Lake of the Woods Water Sustainability Foundation, Ontario.

EDWARDSON, K.J., W.B. BOWDEN, C. DAHM & J. MORRICE (2003): The hydraulic characteristics and geochemistry of hyporheic and parafluvial zones in Arctic tundra streams, north slope, Alaska. - Advances Water Res. **26**: 907–923.

EGGLISHAW, H.G. & P.E. SHACKLEY (1971): Suspended organic matter in fast-flowing streams in Scotland. - Freshwater Biol. **1**: 273–286.

EGOROVA, A.A., I.I. VASILYEVA, N.A. STEPANOVA & N.N. FESKO (1991): Flora tundrovoy zonay Yakutii. - YaNTs SO AN SSSR, Yakutsk.

EHRENBERG, C.G. (1842): Nachricht von zwei durch die Contess of Caledon in Irland beobachteten Lagern fossiler Infusorien Bericht über die zur Bekanntmachung geeigneten. - Verh. Königlich-Preuss. Akad. Wiss. Berlin **1**: 335–339.

ELENKIN, A.A. (1914): Presnovodnaye vodorosli Kamchatki. - In: ELENKIN, A.A. (ed.): Kamchatskaya ekspeditsiya, organizovannaya T.P. Riabuchinskiy. Departament Botanika. Gruzoperevozki II: 2–402. Moskva.

ELLWOOD, N.T.W. & B.A. WHITTON (2007): Importance of organic phosphate hydrolyzed in stalks of the lotic diatom *Didymosphenia geminata* and the possible impact of atmospheric and climatic changes. - Hydrobiologia **592**: 121–133.

ELORANTA, P. & S. KUNNAS (1979): The growth and species communities of attached algae in a river system in Central Finland. - Arch. Hydrobiol. **86**: 27–44.

ELWELL, L. (2006): Increase in nuisance blooms and geographic expansion of the freshwater diatom *Didymosphenia geminata*: Recommendations for response. - http://www.tinyurl.com/asxqok

ENDRIJINSKI, A.S. & E.A. CHEREMISINOVA (1970): O najojdenii miotsenovij otlojeni na vitimskom ploskogorye. - Dokl. Akad. Nauk S.S.S.R. **191**: 885–888.

ENGLER, A. & K. PRANTL (1909): Die Natürlichen Pflanzenfamilien nebst ihren Gattungen und wichtigeren Arten insbesondere den Nutzpflanzen. Gesamtregister zum I. Teil. - Abt. Verlag Wilhelm Engelmann, Leipzig.

ENSVTA (1970): Estonian Contributions to the International Biological Programme, vol. 1. - Rahvusvahelise Bioloogiaprogrammi Eesti Rahvuslik Komitee, Tartu.

ENTWISLE, T.J. & L. NAIRN (2007): Freshwater Algae. Census of Freshwater Algae in Australia. http://plantnet.rbgsyd.nsw.gov.au/PlantNet/fwalgae/index.htm

ÉRCES, K. (2002): Occurrence of the *Didymosphenia geminata* (Bacillariophyceae) in the territory of the Environmental Inspectorate North Danubian Region. - Proceedings and abstracts of the 13th Hungarian Algological Meeting, Noszvaj.

ERGASHEV, A.E. (1968): Materialy k flore vodorosley irrigatsionnyh system Uzbekistana. - Kanaly SSSR, Kiev.

ERGASHEV, A.E & K.H. ALIMZHANOVA (1989): Search for isolation and preservation of some algologically pure algae cultures. - Uzbekistansk. Biol. Zhur. **4**: 34–36.

ERICHSEN JONES, J.R. (1949): A further ecological study of calcareous streams in the 'Black Mountain' District of South Wales. - J. Anim. Ecol. **18**: 142–159.

ERICKSON, J.W. & J.S. SHEARER (2006): Appearance of *Didymosphenia geminata* in the Black Hills of South Dakota. - 2006 Western South Dakota Hydrology Conference, Program and Abstracts, Rushmore.

ERICKSON, J.W., R. KOTH & J.S. SHEARER (2004): Limiting factor analysis for the Pactola Basin. South Dakota Fischeries Progress Report No. 04–14. - South Dakota Department of Game, Fish and Parks, Pierre, South Dakota.

ERIKSSON, B., T. GRÖNLUND & A. UUTELA (1999): Biostratigraphy of Eemian sediments at Mertuanoja, Pohjanmaa (Ostrobothnia), western Finland. - Boreas **28**: 274–291.

ESHO, R.T. & K. BENSON-EVANS (1984): Algal studies of the River Ely, South Wales, U.K.: II. Epilithic algae. - Nova Hedwigia **40**: 387–421.

EULENSTEIN, T. (1867): Diatomacearum species typicae. - Stuttgart.

EVSEC (2004): Periphyton, 2004. - Western Canadian Coal, Data Report, Vancouver.

FEDOROVA, V.A. (1975): Diatom algae in bottom sediments. - Trans. Limnol. Inst. **21**: 83–87.

FEGRAEUS, T. (1890): Om de lösa jordaflagringarna i några af Norrlands elfdalar. - Förh. Geol. Fören. Stockholm **129**: 375–424.

FINLAY, B.J. (2002): Global dispersal of free-living microbial eukaryote species. - Science **296**: 1061–1063.

FISCHER, G. (ed.) (1903): Botanisches Zentralblatt vol. 93. - Jena, Dresden.

FISCHER, G. (ed.) (1908): Botanisches Zentralblatt vol. 108. - Jena, Berlin.

FLOWER, R.J., G. POMAZKINA, E. RODIONOVA & D.M. WILLIAMS (2004): Local and meso-scale diversity patterns of benthic diatoms in Lake Baikal. - In: POULIN, M. (ed.): Proceedings of 17th International Diatom Symposium: 69–92. Biopress Limited, Bristol.

FOERSTER, R.E. (1936): Artificial spawning methods for sockeye salmon. - Biol. Board Canada Bull. **50**: 1–13.

FOGED, N. (1952): Diatoms in trumpet-formed catching-nets of *Neureclipsis bimaculata* L. in Sweden. - Bot. Notiser **2**: 157–184.

FOGED, N. (1959): Diatoms from Afghanistan. - Biol. Skr. Kongel. Danske Vidensk. Selsk. **11**: 1–95.

FOGED, N. (1968): The freshwater diatom flora of the Varanger Peninsula, North Norway. - Acta Boreal. A **25**: 1–64.

FOGED, N. (1977): Freshwater diatoms in Ireland. - Biblioth. Phycol. **34**: 1–221.

FOGED, N. (1978): Diatoms from the Middle and Late Weichselian and the Early Flandrian period on Andøya, north Norway. - Boreas **7**: 41–47.

FOGED, N. (1981): Diatoms in Alaska. - Biblioth. Phycol. **53**: 1–317.

FOGED, N. (1993): Some diatoms from Siberia, especially from Lake Baikal. - Diatom Res. **2**: 231–279.

FOISSNER, W. (2006): Biogeography and dispersal of micro-organisms: A review emphasizing protists. - Acta Protozool. **45**: 111–136.

FOREL, F.A.C. (1885): La faune profonde des lacs suisses. - Neue Denkschr. Allg. Schweiz. Ges. Gesammten Naturwiss. **19**: 1–234.

FOREL, F.A.C. (1904): Le Léman. Monographie limnologique. Tome 3. - F. Rouge, Lausanne.

FORNI, B. (1925): Contributo alla Ficologia del Verbano. - Atti Ist. Bot. Univ. Pavia Ser. **3**(2): 361–376.

FORTI, A. (1900): Contribuzioni diatomologiche (VI). Diatomee bentoniche dei laghi intermorenici del canavese. - Atti Reale Ist. Veneto Sci. Lett. Arti **40**: 775–793.

FOURTANIER, E. & J.P. KOCIOLEK (2008) (comp.): Catalogue of diatom names, California Academy of Sciences, On-line Version [www.calacademy.org/research/diatoms/names/index.asp].

FOX, J.L., T.O. ODLAUG & T.A. OLSON (1969): The ecology of periphyton in western Lake Superior. Part 1. Taxonomy and distribution. - Water Resources Res. Center Bull. **14**: 1–127.

FOX, J.L., T.A. OLSON & T.O. ODLAUG (1967): The collection, identification, and quantitation of epilithic periphyton in Lake Superior. - Proc. 10th Conf. Great Lakes Res. **1**: 12–19.

FOX, J.L., T.A. OLSON & T.O. ODLAUG (1973): The collection, identification, and quantitation of epilithic periphyton in Lake Superior. - Proc. 10th Conf. Great Lakes Res. **10**: 12.

FRITSCH, G. & O. MÜLLER (1870): Die Sculptur und die feineren Structurverhältnisse der Diatomaceen mit vorzugsweiserBerücksichtigung der als Probeobjecte benutzten Species. Abthlg. I. Zwölf Tafeln mikrophotographischer Abbildungen. - O. Müller, Berlin.

FROMM, E. (1984): An interglacial peat at Ale near Luleå, Northern Sweden. – Sveriges Geol. Undersök. C **574**: 1–14.

FRYER, G. (1963): The functional morphology and feeding mechanism of the chydorid cladoceran *Eurycercus lamellatus* (O.F. Müller). - Trans. Roy. Soc. Edinburgh **65**: 335–381.

FULLARTON, A. (ed.) (1846): The parliamentary gazetteer of Ireland. Vol. 1. - Dublin, London & Edinburgh.

GAEVSKY, N.A., T.N. ANUFRIEVA & T.B. GORBANEVA (2006a): Izuchenie fitoperifitona Reki Enisey v zonah antropogennogo vozdeystviya. - In: ALIMOV, A.F. & G.S. ROSENBERG (eds): X Congress Gidrobiologicheskogo society RAS (g.Tolyatti, Russia, 18–22 September, 2006), abstracts reports, etc. I: 92. Academician of the Russian Academy of Sciences, Tolyatti.

GAEVSKY, N.A., T.N. ANUFRIEVA, E.A. IVANOVA & T.B. GORBANEVA (2006b): Alterations of structural and functional parameters of phytoperiphyton in Yenisey River with the various condition of the anthropogenous and ecological pressure. - Vestn. Krasgu Ser. Nat. Sci. **5**: 93–98.

GÁGYOROVÁ, K. & P. MARVAN (2002): *Didymosphenia geminata* a *Gomphonema ventricosum* (Bacillariophyceae) v Moravskoslezských Beskydech. - Czech Phycol. **2**: 61–68.

GALAZY, G.I. & K.K. VOTINTSEV (1978): Flora i rastitelynosty ozera Baykal. - Siba, Novosibirsk.

GÄLLERSPÅNG, A. (2005): Bevarandeplan för Natura 2000-område Fillstabäcken SE0720091. - Länsstyrelsen Jaämtlands lan, Östersund.

GANDHI, H.P. & D.J. MOHAN (1983): Fossil diatoms from Baltal, Kashmir. - Indian Soc. Prehist. Quatern. Stud. **7**: 154–156.

GARCÍA, S. (2007): Precauciones para esta temporada alerta. - http://foros.pesca.org.mx/cgi-bin/Blah.pl?b-mosca/m-1171661603

GARD, L.M. (1980): The Pleistocene geology of Amchitka Island, Aleutian Islands, Alaska. - U.S. Geol. Surv. Bull. **1478**: 1–38.

GARNETT, W.J. (1973): Freshwater Microscopy. - Constable, London.

GAZDOWA, C. (1960): Plankton roœlinny niektórych stawów tatrzañskich. - Acta Soc. Bot. Pol. **29**: 597–624.

GEE, M. & R. WELLS (2006): Bibliographic database on controlling benthic algae relevant to New Zealand. - NIWA Client Report CHC2006-019, Christchurch.

GEINITZ, F.E. (1880): Beitrag zur Geologie Mecklenburgs. - Neubrandenburg.

GENKAL, S.I. & S.F. KOMULAYNEN (2000): Materialay dlya floray Bacillariophyta v vodoemah Karelii. - Algologia **10**: 63–66.

GENKAL, S.I. & T.A. YESHKO (2001): Material on the flora of Bacillariophyta of the water bodies of Karelia (Russia). Konchezero Lake. Pennatophyceae. - Int. J. Algae **3**: 102–112.

GENKAL, S.I. & N.V. VEHOV (2007): Diatomovaye vodorosli vodoemov Russkoy Arktiki: Arhipelag Novaya Zemlya i ostrov Vaygach. - Nauka, Moskva.

GENKAL, S.I., G.I. POPOVSKAYA, O.I. BELYKH & A.D. FIRSOVA (2006): Diatomovye vodorosli, novye dlya planktona ozera Khubsugul: Pennatophyceae. - Biol. Vnutrenn. Vod. **3**: 3–12.

GEORGI, J.G. (1802): Geographisch-physikalische und naturhistorische Beschreibung des Russischen Reichs. - Friedrich Nicolovius, Königsberg.

GETSEN, M.V. (1965): Matseriali Po al'goflore sistemi Tundrovij Ozyor. - Vsesoyuznoye Gidrobiologicheskoye Obshestvo, Gidrobiologicheskoye Izucheniye i Ribojozyaistvennoye Osvoyeniye Ozyor Krainego Severa SSSR, Moskva.

GETSEN, M.V. (1970): Sostav i rasprostraneniye vodoroslei v basseine R. Pechori. - Botanicheski Institut im. V.L. Komarova, Avtoreferat na Soiskaniye Uchenoi Stepeni Kandidata Biologicheskij Nauk, Leningrad.

GETSEN, M.V. (1985): Vodorosli v ekosistemah Kraynego Severa (naprimer Bolshezemelskaya tundray). - Nauka, Leningrad.

GETSEN, M.V. & S.P. BARINOVA (1965): Vodorosli kamenistij obrastani v verjnem techenii vichegdi. - In: DOKLADOV, T. (ed.): Vos'maya sessiya uchenogo soveta po probleme "Biologocheskiye resursi Belogo Morya i vnitrennij vodoyomov yevropeiskogo severa": 53–55. Akademiya Nauk SSSR, Karel'ski filial ministerstvo ribnogo jozyaistva SSSR, Karel'skaya respublikanskaya gruppa pribaltiyskogo otdeleniya ijtiologicheskoi komissii, Petropavlosk.

GIAJ-LEVRA, P (1927): Le diatomee del Piemonte. - Nuovo Giorn. Bot. Ital. **34**: 886–957.

GIAJ-LEVRA, P. & O. ABATE (1994): Le diatomee d'acqua dolce in Italia. - ENEA, Serie Studi Ambientali, Roma.

GILBERT, O., H. GOLDIE, D. HODGSON, M. MARKER, A. PENTECOST, M. PROCTOR & D. RICHARDSON (2005): The ecology of Cowside Beck, a tributary of the River Skirfare in the Malham area of Yorkshire. - Field Studies Council, Malham Tarn Field Centre, Seattle.

GLASS, A. (2005): Pasty white algae. - The Valley Voice **14**: 5.

GLEZER, Z.I., A.P. JOUSE, I.V. MAKAROVAA, A.I. PROSCHKINA-LAVRENKO & V.S. SHESHUKOVA-PORETZKAYA (eds) (1974): The Diatoms of the USSR, Fossil and Recent. - Nauka, Leningrad.

GLUSHCHENKO, L.A. & A.S. PROKUSHKIN (2005): Ecologo-floristic characteristics and phytoplankton structure of different order watercourses in the area of continuous permafrost distribution (Central Siberia). - Vestnik Krasnojarskogo Gosudarstvennogo Universiteta (KrasGU) **5**: 169–176.

GODLEWSKI, E. (ed.) (1923): Acta Societatis Botanicorum Poloniae, vol. I - Polskiego Towarzystwa Botanicznego, Warszawa.

GODWARD, M. (1937): An ecological and taxonomic investigation of the littoral algal flora of Lake Windermere. - J. Ecol. **25**: 496–568.

GOL'D, Z.G., L.A. GLUSHCHENKO, I.I. MOROZOVA, S.P. SHULEPINA & I.A. SHADRIN (2003): Water quality assessment based on chemical and biological characteristics: an example of classification of characteristics for the Cheremushnyi Creek-Yenisey River Water System. - Water Resources **30**: 304–314.

GOLDSMITH, O. (1840): A history of the Earth and animated nature. - Blackie and Son, Glasgow.

GOLLERBAKH, M.M. & L.K. KRASAVINA (1971): Algae. Compiled Index to the Native Bibliographies on Algae for 1737–1960. (Vodorosli). - H. Cloth, Leningrad.

GOMOIU, M.-T. & M. SKOLKA (1998): Evaluation of marine and coastal biological diversity at the Romanian littoral - a workbook for the Black Sea ecological diversity. - Analele Univ. Ovidius Constanþa, Ser. Biol.-Ecol. **2** (Suppl.): 1–167.

GONTCHAROV, À.À., T.V. DOGADINA & L.A. KUKHARENKO (2002): Vodoroslie. - In: EGOROVA, L.N. (ed.): Flora, mycobiota i rastitelynosti v Lazovskiy rezerva: 31–48. Russian Island, Vladivostok.

GOURDON, M. (1887): Exploration pyrénéenne: la vallée du Rieu-Majou, le pic d'Ourdissetou. - Rev. Comminges (Pyrénées Centrales) **3**: 255–274.

GRAINGER, T.S. (1952): Bacteria. - The Blakiston Company, New York.

GRETZ, M.R., M.L. RICCIO, T.R. HUNGWE, H.M. BURGER, S.N. KIEMLE, M.D. APOYA & S.A. SPAULDING (2006a): Extracellular polymers of the stalked diatom *Didymosphenia geminata* (Abstract). - Region 8 Biomonitoring and Bioassessment Meeting, April 4–6, 2006. Utah State University, Logan.

GRETZ, M.R., M.L. RICCIO, T.R. HUNGWE, H.M. BURGER, S.N. KIEMLE, M.D. APOYA-HORTON, D.S. DOMOZYCH & S.A. SPAULDING (2006b): A fresh look at an invasive species, *Didymosphenia geminata*: chemical and structural analysis of the extracellular polymers. - 60th Annual Meeting of the Phycological Society of America, University of Alaska, Juneau.

GRETZ, M.R., M.L. RICCIO, S.N. KIEMLE, D.S. DOMOZYCH & S.A. SPAULDING (2007a): *Didymosphenia geminata* as a nuisance diatom: runaway stalk production results in mats with significant environmental impact. - PSA/ISOP annual meeting: US Environmental Protection Agency, Glen Thursby.

GRETZ, M.R., M.L. RICCIO, S.N. KIEMLE, D.S. DOMOZYCH & S.A. SPAULDING (2007b): *Didymosphenia geminata* as a nuisance diatom: runaway stalk production results in mats with significant environmental impact. - J. Phycol. **43** (Suppl.): 16.

GREVILLE, R.K. (1827): Scottish cryptogamic flora, or coloured figures and descriptions of cryptogamic plants, belonging chiefly to order Fungi. - Edinburgh and London.

GREVILLE, R.K. (1833): Diatomaceae. - In: HOOKER, W.J. (ed.): The English flora of Sir J.E. Smith: 401–415. Green and Longman, London.

GRIFFITH, J.W. & A. HENFREY (1883): The micrographic dictionary; a guide to the examination and investigation of the structure and nature of microscopic objects. - John Van Voorst, London.

GRUBAUGH, J.W., J.A. ENGMAN, L.M. OFLAHERTY & R.V. ANDERSON (1988): New algal records for Hancock and Henderson counties from Pool 19, Mississippi River. - Trans. Illinois Acad. Sci. **81**: 287–292.

GRUNOW, A. (1878): Algen und Diatomaceen aus dem Kaspischen Meere. - In: SCHNEIDER, O. (ed.): Naturwissenschaftliche Beiträge zur Kenntniss der Kaukasusländer, auf Grund seiner Sammelbeute: 98–132. Burdach, Dresden.

GÜLER, Ç. & Z. ÇOBANOĞLU (1997): Su Kalitesi. - Çevre Sağlı ğ ı Temel kaynak Dizisi **43**: 1–92.

GUNDE-CIMERMAN, N., A. OREN & A. PLEMENITAS (eds) (2005): Adaptation to life at high salt concentrations in Archaea, Bacteria, and Eukarya. - Kluwer Academic Publishers, Dordrecht.

GÜRBÜZ, H. (2000): Palandöken Göleti bentik alg florasi üzerinde kalitatif ve kantitatif bir araþtýrma. - Turk. J. Biol. **24**: 31–48.

GÜRBÜZ, H., E. KIVRAK & A. SÜLÜN (2002): Porsuk Göleti (Erzurum, Türkiye) bentik alg florasi üzerinde kalitatif ve kantitatif bir araştirma. - Ege Univ. J. Fish. Aquatic Sci. (Ege Üniv. Su Ürün. Derg.) **19**: 41–52.

HAAPALA, I. & P. OJANPERII (1972): Genthelvite-bearing greisens in southern Finland. - Geol. Surv. Finland Bull. **259**: 1–22.

HÄLLFORS, G. (2004): Checklist of Baltic Sea phytoplankton species. - Baltic Sea Environment Proceedings **95**: 1–208.

HALLGRÍMSSON, H. (2007): Þörungatal. Skrá yfir vatna- og landþörunga á Íslandi samkvæmt heimildum. - Fjölrit Náttúrufræðistofnunar **48**: 1–94.

HALMEENPÄÄ, H., P. NIEMELÄ, J. ALAHUHTA, N. DVORNIKOVA, H. ERKINARO, K. HEIKKINEN S. KOTOV, N. MASYK, K. MEISSNER, J. RIIHIMÄKI, K.M. VUORI & M. ZUEVA (2007): Ecological state of the Kola River, northwestern Russia. - Finnish Environm. **28**: 1–173.

HAMAR, J. (1999): Algological data on the upper reach of River Tisa. - In: HAMAR, J. & X. SÁRKÁNY-KISS (eds): The Upper Tisa valley (Preparatory proposal for Ramsar site designation and an ecological background Hungarian, Romanian, Slovakian and Ukrainian co-operation). Tiscia Monograph Series: 355–360, Szeged.

HAMBROOK, J., J.W. FREY, D.J. SULLIVAN, K.D. CARPENTER & J.A. MABE (2008): Role of algae in assessing aquatic ecological conditions of wadeable streams for USGS NAWQA surface water status and trends. - J. Phycol. **43** (Suppl.): 31–32.

HANNA Database (2007): California Academy of Sciences Diatom Collection. - http://www.calacademy.org/research/diatoms/index.html#collection

HANSEN, L. (2003): Ash river instream fertilization. - B.C. Ministry of Water, Land and Air Protection Fisheries Section, Nanaimo.

HARDER, R. (1935): Fortpflanzung der Gewächse. - Handwörterbuch Naturwiss. **4**: 315–331.

HARITONOV, V.G. (1993a): K flore diatomovyh vodorosley oz. Elygygytgyn. Priroda vpadinay oz. Elygygytgyn. - Magadan.

HARITONOV, V.G. (1993b): Diatomovye vodorosli presnayh vodoemov. Ekologiya basseyna r. Amguema. - Dalynauka, Vladivostok.

HARITONOV, V.G. (2006): Diatomovye vodorosli oz. Dzh. Londona i vodoemov ego basseyna (Verhnyaya Kolayma). - Vestnik SVNTs DVO RAN.

HARPER, M.A. (1994): Did Europeans introduce *Asterionella formosa* Hassall into New Zealand? - Mem. California Acad. Sci. **17**: 479–484.

HARRIS, G.T. (1930): The freshwater bacillariales of Devonshire. - Trans. Devon Assoc. Adv. Sci. **62**: 285–310.

HARVEY, J.R. (1845): Contributions towards a fauna and flora of the County of Cork. - Van Voorst, London.

HARVEY, W.H. (1841): A manual of the British algae. - John van Voorst, London.

HAŠLER, P., F. HINDÁK & A. HINDÁKOVÁ (2007): Phytoplankton of the Morava and Dyje Rivers in spring and summer 2006. - Fottea, Olomouc **7**: 49–68.

HASSALL, A.H. (1845): A history of the British freshwater algae including descriptions of the Desmideae and Diatomaceae. - S. Highley and H. Bailiere, London.

HAWORTH, E.Y. (1972): The recent diatom history of Loch Leven, Kinross. - Freshwater Biol. **2**: 131–141.

HAWORTH, E.Y. (1976): Two late-glacial (late Devensian) diatom assemblage profiles from northern Scotland. - New Phytol. **77**: 227–256.

HEDENSTRÖM, A. & J. RISBERG (1999): Early Holocene shore-displacement in southern central Sweden as recorded in elevated isolated basins. - Boreas **28**: 490–504.

HEGGBERGET, T.G. & B.O. JOHNSEN (1982): Infestations by *Gyrodactylus* sp. of Atlantic salmon, *Salmo salar* L., in Norwegian rivers. - J. Fish Biol. **21**: 15–26.

HEIN, M.K. (1990): Flora of Adak Island, Alaska: Bacillariophyceae (Diatoms). - Biblioth. Diatomol. **21**: 1–133.

HÉRIBAUD, J. (1893): Les Diatomées d'Auvergne. - Libr. Sci. Nat. Paul Klincksieck, Paris.

HÉRIBAUD, J. (1902): Les Diatomées Fossiles d'Auvergne. - Libr. Sci. Nat. Paul Klincksieck, Paris.

HERON-ALLEN, E. & A. EARLAND (1911): On the recent and fossil foraminifera of the shore-sands of Selsey Bill, Sussex. 7. Supplement (addenda et corrigenda). - J. Roy. Microscop. Soc. **1911**: 298–343.

HEUFF, H. & K. HORKAN (1984): Caragh. - In: WHITTON, B.A. (ed.): Ecology of European rivers: 364–384. Blackwell Scientific Publications, Oxford & London.

HICKS, B.J., S.C. CARY & C.M.E. BARNETT (2007): Field guide for *didymo* DNA sample collection. - CBER Contract Report 65. Client report prepared for MAF Biosecurity New Zealand. Centre for Biodiversity and Ecology Research, Department of Biological Sciences, School of Science and Engineering, The University of Waikato, Hamilton.

HILLEBRAND, H., F. WATERMANN, R. KAREZ & U.G. BERNINGER (2001): Differences in species richness patterns between unicellular and multicellular organisms. - Oecologia **126**: 114–124.

HINDÁK, F. (ed.) (1978): Sladkovodné Riasy. - Slovenské Pedagogické Nakladatel'stvo, Bratislava.

HINDÁK, F. & A. HINDÁKOVÁ (2004): Diverzita fytoplanktónu rieky Moravy a Dunaja v Bratislave v r. 2003. - Bull. Slov. Bot. Společnost. **26**: 9–17.

HOAGLAND, K.D., J.R. ROSOWSKI, M.R. GRETZ & S.C. ROEMER (1993): Review - diatom extracellular polymeric substances: function, fine structure, chemistry, and physiology. - J. Phycol. **29**: 537–566.

HOGG, J. (1856): The microscope: its history, construction, and applications. - H. Ingram, London.

HOHN, M.H. (1951): A study of the distribution of diatoms in western New York State. - Mem. Cornell Agric. Exploit. Sta. **308**: 1–37.

HOLDERMAN, C.E. & R. HARDY (eds) (2004): Kootenai River Ecosystem Project: an ecosystem approach to evaluate and rehabilitate a degraded, large rivering ecosystem. 1994-049-00. - Bonneville Power, Portland, Oregon.

HOLMBOE, J. (1899): Undersøgelser over norske ferskvandsdiatoméer. I. Diatoméer fra indsjøer i det sydlige Norge. - Arch. Mathem. Naturvidensk. **22**: 1–72.

HOLMES, N.T.H. & B.A. WHITTON (1977): The macrophytic vegetation of the River Tees in 1975: observed and predicted changes. - Freshwater Biol. **7**: 43–60.

HOLMES, N.T.H. & B.A. WHITTON (1981): Phytobenthos of the River Tees and its tributaries. - Freshwater Biol. **11**: 139–163.

HOLST, N.O. (1888): Om ett fynd af uroxe i Råkneby, Ryssby socken, Kalmar län. - Förh. Geol. Fören. Stockholm **10**: 467–476.

HONGJUN, H. & W. YINXIN (2006): The freshwater algae of China. Systematics, taxonomy and ecology. - Science Press, Beijing.

HOOVER, R.B. (1976): Inventory of the original typical collection of the Reverend William Smith (1808–1857). - Koninklijke Maatschappij voor Dierkunde Antwerpen, Antwerpen.

HU, H. & Y. WEI (2006): The Freshwater Algae of China. Systematics, Taxonomy and Ecology. - Science Press, Beijing.

HUITFELDT-KAAS, H. (1906): Planktonundersøgelser i norske vande. - Nationaltrykkeriet, Christiania.

HUIZHONG, Z. & C. JIAYOU (2000): Bacillariophyta of the Xizang Plateau. - Science Press, Beijing.

HÜRLIMANN, J. & P. NIEDERHAUSER (2006): Méthodes d'analyse et d'appréciation des cours d'eau. Diatomées Niveau R (région). - Office fédéral de l'environnement OFEV, Berne.

HUSTEDT, F. (1924): Die Bacillariaceen-Vegetation des Sarekgebirges. - Naturwiss. Untersuchungen des Sarekgebirges in Schwedisch-Lappland, Botanik **6**: 525–627.

HUSTEDT, F. (1930): Bacillariophyta (Diatomeae). - In: PASCHER, A. (ed.): Die Süsswasser-Flora Mitteleuropas **10** (ed. 2): 1–466. Gustav Fischer, Jena.

HUSTEDT, F. (1938): Diatomeen aus den Pyrenäen. - Ber. Deutsch. Bot. Ges. **56**: 543–572.

HUSTEDT, F. (1942): Diatomeen aus der Umgebung von Abisko in Schwedisch-Lappland. - Arch. Hydrobiol. **39**: 87–174.

HUSTEDT, F. (1943): Die Diatomeenflora einiger Hochgebirgsseen der Landschaft Davos in den Schweizer Alpen. - Int. Rev. Gesamten Hydrobiol. Hydrogr. **43**: 124–197.

ICES (2005): Report of the Working Group on Phytoplankton Ecology (WGPE), 16–18 March 2005. - International Council for the Exploration of the Sea ICES CM 2005/C:01, Oldenburg.

ICPRB (1998): A comprehensive list of Chesapeake Bay Basin species. - Interstate Commission on the Potomac River Basin. United States Environmental Protection Agency (USEPA) Chesapeake Bay Program, Annapolis, Maryland.

IL'CHENKO, N.I. (1963): Matseriali k al'goflore poimennij ozyor Reki Oskol. - Bot. Raboti **37**: 65–71.

IRISH, E.J.W. (1951): Pierre Greys Lakes map-area, Alberta. - Geol. Surv. Canada Mem. **258**: 1–66.

IVANOV, V.V. & V.A. BRAYZGALO (2007): Gidrologogidrohimicheskiy rezhim vodosbora Belogo Morya. - In: FILATOV, N.N. & A.Y. TERZHEVIK (eds): Beloe More i ego vodosbor pod vliya niem klimaticheskih i antropogennayh faktorov: 52–117. Karelyskiy nauchnayy tsentr RAN, Petrozavodsk.

IZHBOLDINA, L.A. (1964): O bentosnoi makroflori otkritogo Baikala. - Sbornik Kratkij Soobsheni i Dokladov o Nauchnoi Rabotse po Biologii i Pochvovedniyu Priloseniye K Otchyotu o Nauchno-Issledovatsel'skoi Rabotse za 1962 God, Vostochno-Sibirskoye Knijnoye Izdatel'stvo, Ministerstvo Visshego i Srednego Spetsial'nogo Obrazovaniya RSFSR, Irkutski Gosudarstveni Universitet Imeni A.A. Jdanova, Irktusk.

IZHBOLDINA, L.A. (1970): Bentosnie makrofti otktitij vod yujnogo Baikala I: zadachi, material i metodika issledorani. - In: KDANOVA, A.A. (ed.): Izvestiya Biólogo-Geograficheskogo Nauchno-Issledovatelbskogo Instituta pri Irkutskom Gosudarstevennom Universitete, Tom XIII: 13–41. Ministerstvo Visshego Obrazovaniya SSSR, Irkutsk.

IZHBOLDINA, L.A. (1990). Meio- and macrophytobenthos of Lake Baikal. - Irkutskogo Gosudarstvennogo Universiteta, Irkutsk.

IZHBOLDINA, L.A. (2007): Guide and key to benthonic and periphyton algae of Lake Baikal (meio- and macrophytes) with short notes of their ecology. - Nauka-Center, Novosibirsk.

JAMALLOU, F., F. FALLAHIAN, T. NAJAD SATTARI & A. MAJD (2006): Study of diatoms flora in Jajrood river. - Sci. Techn. Environ. **26**: 98–112.

JAMALLOU, F., T. NAJAD SATTARI & F. FALLAHIAN (2007): Epilithon diatoms of Jajrood River. - Pajouhesh & Sazandegi **73**: 2–11.

JAO, Q.Z. (1964): Some freshwater algae from the Mt. Jolmolungma region in South Tibet. - Oceanol. Limnol. Sin. **6**: 169–192.

JAO, Q.Z., H.Z. ZHU & Y.Y. LI (1973): Notes on the freshwater algae of the Mt. Jolmolungma region in South Tibet. - Chin. Sci. Bull. **18**: 30–32.

JELLYMAN, P., S.J. CLEARWATER, B.F.J. BIGGS, N. BLAIR, D.C. BREMNER, J.S. CLAYTON, A. DAVEY, M.R. GRETZ, C. HICKEY & C. KILROY (2006): *Didymosphenia geminata* experimental control studies: Stage 1 (Screening of biocides and stalk disrupting agents) and Stage 2 Phase 1 (biocide product testing). - NIWA Client Report CHC2006-128, NIWA, Christchurch.

JENKIN, B.M., C.H. MORTIMER & W. PENNINGTON (1941): The study of lake deposits. - Nature **147**: 496–500.

JIAYING, L. & Q. YUZAO (1986): Neogene Diatom Assemblages in China. - In: RICARD, M. (ed.): Proceedings of the 10th International Diatom Symposium: 699–711. Koeltz Scientific Books, Koenigstein.

JOHANSEN, S.W. & R. ROMSTAD (2006): Overvåking av begroing i bekker i jordbruks-områder i forbindelse med JOVAPROGRAMMET 2005. Rapport LNR 5163-2006. - NIWA Norsk Institutt for Vannforskning, Oslo.

JOHANSSON, C. (1979): Biomass on the periphytic algal vegetation in some stony mountain streams in NW Jämtland, Sweden. A preliminary report. - Meddelanden från Växtbiologiska institutionen, Uppsala.

JOHANSSON, C. (1980a): Attached algae vegetation in some streams from the Narssaq area South Greenland. - Acta Phytogeogr. Suec. **68**: 89–96.

JOHANSSON, C. (1980b): Attached algal vegetation in two stony streams in NW Jämtland, Sweden. Ecology, volume and production. - Meddelanden från Växtbiologiska institutionen, Uppsala.

JOHANSSON, C. (1982a): The ecological characteristics of 314 algal taxa found in Jämtland Streams, Sweden. - Meddelanden från Växtbiologiska institutionen, Uppsala.

JOHANSSON, C. (1982b): Attached algal vegetation in running waters of Jämtland, Sweden. - Acta Phytogeogr. Suec. **71**: 1–80.

JOHANSSON, C. & L. KRONBORG (1975): Attached algae in running waters. - Meddelanden från Växtbiologiska Institutionen, Uppsala.

JOHNSTON, G. & G. TATE (1853): The botany of the eastern borders with the popular names and uses of the plants, and of the customs and beliefs which have been associated with them. - John Van Voorst, London.

JONES, R.T. (ed.) (1875): Manual of the natural history, geology, and physics of Greenland and the neighbouring regions; prepared for the use of the Arctic expedition of 1875, under the direction of the Arctic Committee of the Royal Society. Together with instructions suggested by the Arctic Committee of the Royal Society for the use of the Expedition. - London.

JÓNSSON, G.S. (1987): The depth-distribution and biomass of epilithic periphyton in Lake Thingvallavatn, Iceland. - Arch. Hydrobiol. **108**: 531–547.

JÓNSSON, G.S., I.R. JÓNSSON, M. BJÖRNSSON & S.M. EINARSSON (2000): Using regionalization in mapping the distribution of the diatom species *Didymosphenia geminata* (Lyngb.) M. Schmidt in Icelandic rivers. - Verh. Int. Vereinigung Theor. Limnol. **27**: 340–343.

JÓNSSON, I.R. (2007): Vatnaflóki (*Didymosphenia geminata*) samanburður á útbreiðslu 1997 og 2006. - Dagskrá Fræðaþings landbúnaðarins 2007, Ráðstefnusölum.

JÓNSSON, I.R., G.S. JÓNSSON & S.M. EINARSSON (2006a): Distribution of *Didymosphenia geminata* in Iceland. Current knowledge of *Didymosphenia geminata*: Developing a research and management response. - American Fisheries Society, Bozeman, Montana.

JÓNSSON, I.R., G.S. JÓNSSON, S.M. EINARSSON & J.S. ÓLAFSSON (2006b): Occurrence of *Didymosphenia geminata* in Iceland. Keeping it fresh. - New Zealand Freshwater Sciences Society Conference, Rotorua.

JOSSELYN, M. & A. FIORILLO (1993): Control of algal fouling in hydroelectric facilities: pilot testing results. Draft report for Pacific Gas & Electric, Korbin Creek Manager. - San Francisco State University, Tiburon.

JOUENNE, F., S. LEFEBVRE, B. VÉRON & Y. LAGADEUC (2007): Phytoplankton community structure and primary production in small intertidal estuarine-bay ecosystem (eastern English Channel, France). - Mar. Biol. **151**: 805–825.

JUDAY, C.W., H. RICH & A. MANN (1932): Limnological studies of Karluk Lake, Alaska, 1926–1930. - Bull. U.S. Bur. Fish. **47**: 407–436.

JUNK, W. (1925): Tabulae biologicae. - W. Junk, The Hague.

JUZE, A.P. (1957): Diatomovie v poderjnostnom sloe osadkov Ojotskogo Morya. - Trudy Inst. Okeanol. **12**: 164–200.

JUZE, A.P. (1959): Diatomovie vodorosli v chetvertichnij otlojeniyaj raiona najodki Taimirskogo Mamonta. - In: MARKOVA, K.K. & A.I. POPOVA (eds): Lednikovi period na teritorii evropeiskoi Chasti SSSR i Sibiri: 301-304. Geograficheski Fakul'tet i Muzei zemlevedeniya, moscovski gosudarstveni Universitet imeni M.V. Lomonosova, Moskva.

JUZE, A.P. & T.V. SECHKINA (1960): Diatomovie vodorosli v donnij otlojeniyaj Oz.Elbgitjin (Anadirskoe ploskogorbe). - Laboratoriya Ozerovedeniya Akademii, Nauk.

KACHAYEVA, M.I. (1970): Jarakteristika mikrofitobentosa gruntov rednego i nijnego techniya R. Ingodi. - Chitinski Gosudarstveni Pedagogicheski Institut im N.G. Chernishevskogo, Voprosi Gegrafii i Biologii Materiali XXI i XXII Nauchnij Konferentsi, Chita.

KANCHAVELI, Q., I. NAKHUTSRISHVILI & T. INASHVILI (1981): Saqartvelos sporovan mcenareta sarkvevi. - Mecniereba, Tbilisi.

KANN, E. (1978): Systematik und Ökologie der Algen österreichischer Bergbäche. - Arch. Hydrobiol. Suppl. **53**: 405–643.

KARA, H. & B. ŞAHIN (2001): Epipelic and epilithic algae of Değirmendere River (Trabzon-Turkey). - Turk. J. Bot. **25**: 177–186.

KARINA, B., M. CÎMPEAN, C.A. PAVELESCU, M. BOGATEAN, L. MOMEU & C. TUDO-RANCEA (2000): Ecological aspects of benthic communities from the Somesul Cald catchment area. - Ann. West Univ. Timişoara Ser. Biol. **3–4**: 123–140.

KASZA, H. & J. GALAS (2001): Upper Vistula River: Response of aquatic communities to pollution and impoundment. II. Chemical composition of water and sediment. - Polish J. Ecol. **50**: 123–135.

KATAYAMA, N. (1955): On fossil diatoms from the Onikoube Basin, Miyagi Prefecture. - Sci. Rep. Kanazawa Univ. **4**: 151–175.

KAWECKA, B. (1965): Communities of benthic algae in the River Bialka and its Tatra tributaries the Rybi Potok and Roztoka. - Komitet Zagosp. Ziem Górskich PAN **11**: 113–129.

KAWECKA, B. (1966): Glony osiadłe na *Potamogeton* sp. w Morskim Oku. - Acta Hydrobiol. **8**: 321–328.

KAWECKA, B. (1969): Zbiorowiska glonów w potokach tatrzańskich. Tatrzańska Sesja Naukowa. - Polsk. Tow. Hydrobiol. **1**: 1–19.

KAWECKA, B. (1974): Strefowe rozmieszczenie zbiorowisk glonów w potokach Polskich Tatr Wysokick. - Acta Hydrobiol. **13**: 393–414.

KAWECKA, B. (1977): Biocenoza potoku wysokogórskiego pozostającego pod wpływem turystyki. 3. Zbiorowiska glonów osiadłych w Rybim Potoku (Tatry Wyoskie, Polska) zanieczyszczonym ściekami bytowymi. - Acta Hydrobiol. **19**: 271–292.

KAWECKA, B. (1993): Green and other algae in the streams on the northern side of the high Tatras. - Polish Bot. Stud. Guidebook Series **10**: 17–32.

KAWECKA, B. & P. ELORANTA (1987): Communities of sessile algae in some small streams of Central Finland. Comparison of the algae of the high mountains of Europe and those of its nothern regions. - Acta Hydrobiol. **29**: 403–415.

KAWECKA, B. & M. OLECH (2004): Diatom diversity of streams in Finnish Lapland and maritime Antarctica. - In: POULIN, M. (ed.): Proceedings of the 17th International Diatom Symposium: 161–186. Biopress Limited, Bristol.

KAWECKA, B. & J. SANECKI (2003): *Didymosphenia geminata* in running waters of southern Poland - symptoms of change in water quality? - Hydrobiologia **495**: 193–201.

KELLY, M. (1998): Use of the Trophic Diatom Index to monitor eutrophication in rivers. - Water Res. **32**: 236–242.

KELLY, M.G. (2003): Short term dynamics of diatoms in an upland stream and implications for monitoring eutrophication. - Environm. Pollut. **125**: 117–122.

KELLY, M. (2006): The habitat template for *Didymosphenia geminata* (Lyngb.) Schmidt in Europe (Abstract). Region 8 Biomonitoring and Bioassessment Meeting, April 4–6, 2006. - Utah State University, Logan.

KELLY, M. & B.A. WHITTON (1995a): The trophic diatom index: A new index for monitoring eutrophication in rivers. - J. Appl. Phycol. **7**: 433–444.

KELLY, M. & B.A. WHITTON (1995b): Use of diatoms to monitor nutrients in rivers. Draft Final Report. - R&D Fellowship, NRA, Durham.

KELLY-QUINN, M., C. BRADLEY, I. DODKINS, T.J. HARRINGTON, B. NICHATHAIN, M. O'CONNOR, B. RIPPEY & D. TRIGG (2005): Water Framework Directive: Characterisation of reference conditions and testing of typology of rivers, Ireland. - Environmental Protection Agency, Dublin.

KEMP, K.D. (2006): Klaus Dieter Kemp's Diatom Database. - Little Imp Publications, London.

KHAKHINA, A.G. (1934): Vodorosli pravayh pritokov verhney potoki Suifun reki. Materialay o flore vodorosley Dalynevostochnogo okruga. - Nov. Dalynev. Fil. Sibirsk. Dept. Akad. Nauk SSSR **10**: 77–88.

KHARITONOV, V.G. (1980): Diatomovayh v Elgygytgyn ozera (Anadayry oblasty). - Bot. Zhurn. **65**: 1622–1628.

KHARITONOV, V.G. (1981): V diatomovayh iz Mayorskoe ozera (Anadayry rayon). - Bot. Zhurn. **66**: 542–549.

KHARITONOV, V.G. (1986): Analiz ekologicheskih pokazateley v diatomovayh floray v Anadur basseyne reki. - In: LEVANIDOVA, I.M. & V.V. BOGATOV (eds): Benticheskie organizmay s presnoy vodoy Dalynego Vostoka: 98–107. FEB RAS, Vladivostok.

KHARITONOV, V.G. (1989a): O flore diatomovayh vodorosley v severo-vostochnoy Azii (basseyn reki Anadayry). - Magadan.

KHARITONOV, V.G. (1989b): Diatomovayh vodorosley iz limnic vodohranilishtah Verhney Kolaymay basseyne reki. - Magadan.

KHARITONOV, V.G. (2001): Diatomovayh (Bacillariophyta) tehnogennogo vodotokov Kolaymay krug. - Bot. Zhurn. **86**: 34–41.

KHATTAK, T.M., N.Z. BHATTI & G. MURTAZA (2005): Evaluation of algae from the effluent of Dandot Cement Company, Dandot, Pakistan. - J. Appl. Sci. Environ. Managem. **9**: 147–149.

KIENEL, U. (1999): Late Weichselian to Holocene diatom succession in a sediment core from Lama Lake, Siberia and presumed ecological implications. - In: KASSENS, H., H.A. BAUCH,

I.A. DMITRENKO, H. EICKEN, H.W. HUBBERTEN, M. MELLES, J. THIEDE & L.A. TIMOKHOV (eds): Land-ocean systems in the Siberian Arctic: dynamics and history: 377–406. Springer, Berlin, Heidelberg.

KIENEL, U. & M. MELLES (2000): Relative abundance of diatom species in sediment core PG1111. - PANGAEA, unpublished dataset #57340.

KIENEL, U. & T. KUMKE (2002): Combining ordination techniques and geostatistics to determine the patterns of diatom distributions at Lake Lama, Central Siberia - J. Paleolimnol. **28**: 181–194.

KIENEL, U., T. KUMKE & M. MELLES (2005): Relative abundance of diatoms in surface sediments of Lake Lama. - PANGAEA, doi:10.1594/PANGAEA.56972.

KILROY, C. (2004a): A new alien diatom, *Didymosphenia geminata* (Lyngbye) Schmidt: its biology, distribution, effects and potential risks for New Zealand fresh waters. - NIWA Client Report CHC2004-128, Christchurch.

KILROY, C. (2004b): A survey to investigate the presence or absence of *Didymosphenia geminata* in selected Southland rivers. - NIWA Client Report CHC2004-133, Christchurch.

KILROY, C. (2005): Tests to determine the effectiveness of methods for decontaminating materials that have been in contact with *Didymosphenia geminata*. - NIWA Client Report CHC2005-004, Christchurch.

KILROY, C. & N. BLAIR (2005): *Didymosphenia geminata* in the Waiau Arm and Lake Manapouri: a survey to investigate current distribution, and recommendations for ongoing monitoring. - NIWA Client Report CHC2005-037, Christchurch.

KILROY, C., T. SNELDER & J. SYKES (2005a): Likely environments in which the nonindigenous freshwater diatom, *Didymosphenia geminata*, can survive, in New Zealand. - National Institute of Water & Atmospheric Research Ltd, Christchurch.

KILROY, C., P. LAMBERT, K. ROBINSON & N. BLAIR (2005b): Periphyton and invertebrate monitoring programme, lower Waiau River. Results of the 2005 survey and a commentary on the ecological effects of *Didymosphenia geminata*. - NIWA Client Report CHC2005-032, Christchurch.

KILROY, C., B. BIGGS, N. BLAIR, P. LAMBERT, B. JARVIE, K. DEY, K. ROBINSON & D. SMALE (2005c): Ecological studies on *Didymosphenia geminata*. - NIWA Client Report, Christchurch.

KILROY, C., A. LANGERTSTEDT, A. DAVEY & K. ROBINSON (2006): Studies on the survivability of the invasive diatom *Didymosphenia geminata* under a range of environmental and chemical conditions. - NIWA Client Report CHC2006-116, Christchurch.

KILROY, C., B.J.F. BIGGS & W. VYVERMAN (2007): Rules for macroorganisms applied to microorganisms: patterns of endemism in benthic freshwater diatoms. - Oikos **116**: 550–564.

KILROY, C., T.H. SNELDER, O. FLOERL, C.C. VIEGLAIS & K.L. DEY (2008): A rapid technique for assessing the suitability of areas for invasive species applied to New Zealand's rivers. - Diversity & Distrib. **14**: 262–272.

KIRKWOOD, A.E., T. SHEA, L.J. JACKSON & E. McCAULEY (2007): *Didymosphenia geminata* in two Alberta headwater rivers: an emerging invasive species that challenges conventional views on algal bloom development. - Canad. J. Fish. Aquatic Sci. **64**: 1703–1709.

KISELEV, I.A. (1931): Zhivotnovodstvo i raspredelenie fitoplanktona v Amur-Liman. - Explor. Mers USSR **14**: 31–116.

KISELEV, I.A. (1932a): Dannie o fitoplanktone ozera Issik-Kuly. - Mem. Inst. Hydrol. **7**: 65–89.

KISELEV, I.A. (1932b): Materiali po mikroflore Yugo-Vostochoi chasti Morya Laptevij. - Issl. Morei S.S.S.R. **15**: 67–94.

KISELEV, I.A. (1937a): Fitoplankton nekotorij gornik vodoyomov Baikalyskogo jrebta. - Trav. Stat. Limn. Baïcal **7**: 53–69.

KISELEV, I.A. (1937b): Novaya informatsiya o nalichii i raspredelenii fitoplanktona v Amurästuargebiet i v ego Nächstliegenden chastyah Yaponii i Ochotskischen morey. - Ann. Leningradsk. Stat. Univ. III **15**: 41–52.

KISELEV, I.A. (1939): Fitoplankton maloi piryu-gubi Belogo Morya kak pokazately opresnyayushego vliyaniya R. Umbi. - Trudy Gosud. Gidrol. Inst. **8** (18): 201–216.

KISELEV, I.A. (1959): Sostav fitoplanktona morskij vod yujnogo Sajalina i yunij Kurilbskij ostrovov. - Trudy Kurilo-Sajalinskoi Eksped. **2**: 162–172.

KISELEV, I.A. & T.F. VOZZHENNIKOVA (1950): Materialy k izucheniyu flory vodorosley vodoyemov basseina reki Amu-Daryi. - Trudy Zool. Inst. Akad. Nauk SSSR **9**: 281–343.

KISELEVA, E.I. (1939): Diatomovie vodorosli risovij polei okrestnostei gor. Samarkanda. - Bot. J. **24**: 108–116.

KISELEVA, E.I. (1949): Issledovanie fitoplanktona yugo - zapadnoi chasti Nevskoi Gubi. - Uchen. Zap. Leningradsk. Ser. Biol. Nauk. **126**: 142–177.

KITTON, F.G. (1884): Fauna and flora of Norfolk. Pt. VII. Diatomaceae. Being a list of the diatomaceae occuring at Norfolk. - Trans. Norfolk Norwich Nat. Soc. **3**: 754–770.

KITTON, F.G. (1885): Norfolk diatoms. - (manuscript).

KIVIOJA, L. (1963): Effect of topographic masses and their isostatic compensation on the mean free air gravity anomalies of 5 x 5 surface elements. - Ann. Acad. Sci. Fenn. Ser. A **77**: 87–101.

KIVRAK, E. & H. GÜRBÜZ (2005): The benthic algal flora of Demirdöven Dam Reservoir (Erzurum, Turkey). - Turk. J. Bot. **29**: 1–10.

KIVRAK, E., H. GÜRBÜZ, Z. ALTUNER & A. SÜLÜN (2006): Species diversity of benthic algae in major lentic water bodies of the northeastern region of Turkey (Erzurum vicinity). - Int. J. Algae **8**: 141–161.

KIYASHKO, S.I., P. RICHARD & T. CHANDLER (1998): Stable carbon isotope ratios differentiate autotrophs supporting animal diversity in Lake Baikal. - Compt. Rend. Acad. Sci. (Ser. III Sci. Vie) **321**: 509–516.

KNIGHT, C. (ed.) (1867): Natural History or second division of "the English Cyclopaedia" Volume IV. - Bradbury, Evans, & Co., London.

KOCINGER, D. (2002a): Národná ročná správa z monitorovania prírodného prostredia na Slovenskom území za rok 2001. - Bratislava.

KOCINGER, D. (2002b): Národná ročná správa z monitorovania prírodného prostredia na Slovenskom území za rok 2002. - Bratislava.

KOCIOLEK, J.P. & E.F. STOERMER (1988): A preliminary investigation of the phylogenetic relationships among the freshwater, apical pore field-bearing cymbelloid and gomphonemoid diatoms (Bacillariophyceae). - J. Phycol. **24**: 377–385.

KOCIOLEK, J.P. & B. DE REVIERS (1996): The diatom types of Emile Manguin. II. Validating descriptions and designation of types for the New Caledonia species. - Crypt. Algol. **17**: 193–215.

KOCIOLEK, J.P. & S.A. SPAULDING (2000): Freshwater diatom biogeography. - Nova Hedwigia **71**: 223–241.

KOCIOLEK, J.P., R. FLOWER & G. REID (2000): Valve ultrastructure of *Didymosphenia dentata* (Bacillariophyta): an endemic diatom species from Lake Baikal. - Nova Hedwigia **71**: 113–120.

KOJOV, M.M., L.A. IJBOLDINA, G.S. KAPLINA & G.L. OKUNEVA (1969): Bentos yugo-vostochnogo poberejya Ozera Baikal. - Biologicheskaya Produktsivnost' Vodoyomov Sibiri Dokladi Pervogo Sovershaniya po Biologicheskoi Produktsivnostsi Vodoyomov Sibiri, Sostoyavshegosya v Irkutske 6–9 Oktsyabrya 1966 G, Akademiya Nauk SSSR Sibirskoye Otdeleniye Limnologicheski Institut, Moskva.

KOJOVA, O.M. & G.F. ZAGONENKO (1969): Osobennosti formirovaniya soobshestv rastitel'nij obrastani v bratskom vodojranilishe. - Gidrobiol. Zhurn. **5**: 23–29.

KOKSVIC, J.I. & H. REINERSTEN (2008): Changes in macroalgae and bottom fauna in the winter period in the regulated Alta River in Northern Norway. - River Res. Applic. **24**: 720–731.

KOLAYLI, S. & B. ŞAHIN (1998): A study on the epipelic and epilithic algae of Sana river (Trabzon/Turkey). - Turk. J. Bot. **22**: 163–170.

KOLAYLI, S., A. BAYSAL & B. ŞAHIN (1997): Şana Deresi (Trabzon) epipelik ve epifitik algleri. - XIII Ulusal Biyoloji Kongresi, 17–20 Eylül 1996, Cilt V Hidrobiyoloji Seksiyonu, Istanbul: 277–288.

KOLAYLI, S., A. BAYSAL & B. ŞAHIN (1998): A study on the epipelic and epilithic algae of Sana River (Trabzon-Turkey). - Turk. J. Bot. **22**: 163–170.

KOLAYLI, S. & B. ŞAHIN (2007): A taxonomic study on the phytoplankton in the littoral zone of Karagöl Lake (Borçka-Artvin/Turkey). - Turk. J. Fish. Aquatic Sci. **7**: 171–175.

KOLMAKOV, V.I., O.V. ANISHCHENKO, E.A. IVANOVA, M.I. GLADYSHEV & N.N. SUSHCHIK (2008): Estimation of periphytic microalgae gross primary production with DCMU-fluorescence method in Yenisei River (Siberia, Russia). - J. Appl. Phycol. **20**: 289–297.

KOMARENKO, L.E. (1960): Diatomovie vodorosli R. Kolima. - Izvestiya Sibirskogo Otdeleniya Akademiya, Nauk.

KOMARENKO, L.E. (1968): Plankton basseina Reki Jani. - Yakutskij filial Sibirskogo otdeleniya Institut Biologii, Akademiya Nauk SSSR, Moskva.

KOMARENKO, L.E. & I.I. VASILYEVA (1975): Presnovodnie diatomovie i siñezelyonie vodorosli vodoyomov Yakutii. - Izdatelbstvo Nauka, Moskva.

KOMULAYNEN, S.F. (1990): Periphytic diatoms in small rivers in North-Western USSR. - In: SIMOLA, H. (ed.): Proceeding of the 10th International Diatom Symposium: 545–552. Koeltz Scientific Books, Koenigstein.

KOMULAYNEN, S.F. (1996): Perifiton rek Leningradskoy, Murmanskoy oblastey i Respubliki Kareliya. Operativno-informatsionnaye materialay. - Petrozavodsk.

KOMULAYNEN, S.F. (2000a): Features of periphyton in some rivers of north-western Russia. - Verh. Int. Vereinigung Limnol. **27**: 3159–3161.

KOMULAYNEN, S.F. (2000b): Perifiton. Inventarizatsiya i izuchenie biologicheskogo raznoobraziya na territorii tsentralnoy Karelii. - Petrozavodsk.

KOMULAYNEN, S.F. (2001): Perifiton. Inventarizatsiya i izuchenie biologicheskogo raznoobraziya na territorii tsentralnoy Karelii. - Petrozavodsk.

KOMULAYNEN, S.F. (2003): Periphyton in lake-river systems - an ecotone within an ecotone. - Verh. Int. Vereinigung Limnol. **28**: 1–3.

KOMULAYNEN, S.F. (2004a): Experience of using phytoperiphyton monitoring in urban watercourses. - Oceanol. Hydrobiol. Stud. **33**: 65–75.

KOMULAYNEN, S.F. (2004b): Fitoperifiton rek Respubliki Kareliya. - Bot. Zhurn. **89**: 18–35.

KOMULAYNEN, S.F. (2004c): Ekologiia fitoperifitona malykh rek Vostochnoi Fennoskandii. - Karel'skii nauchnyi tsentr RAN, Petrozavodsk.

KOMULAYNEN, S.F. (2005): Fitoperifiton reki teno i ee pritokov (Finskaya Laplandiya). - Lososevidnaye raybay Vostochnoy Fennoskandii, Petrozavodsk.

KOMULAYNEN, S.F. (2006a): Spatial and temporal variation of heavy metal levels in periphyton in small streams of north-western Russia. - In: ÁCS, É., K.T. KISS, J. PADISÁK & K.É. SZABÓ (eds): 6th International Symposium on Use of Algae for Monitoring Rivers. Hungary, Balatonfüred.

KOMULAYNEN, S.F. (2006b): Diets of periphytonic invertebrates in a small river. - Russ. J. Ecol. **37**: 337–343.

KOMULAYNEN, S.F. (2006c): Dinamika strukturay i pervichnaya produktsiya perifitona v nebolyshoy reke. Sostoyanie i problemay produktsionnoy gidrobiologii. - Sbornik nauchnayh ra bot po materialam dokladov na Mezhdunarodnoy konferentsii «Vodnaya ekologiya na zare XXI veka», posvyashtennoy stoletiyu so dnya rozhdeniya professora G.G. Vin berga. - M. Tovarishtestvo nauchnayh izdaniy KMK, Moskva.

KOMULAYNEN, S.F. (2007): Short- and long-term changes in phytoperiphyton structure and production in small streams of eastern Fennoscandia. - Oceanol. Hydrobiol. Stud. **36**: 1–10.

KOMULAYNEN, S.F., V.V. HRENNIKOV, V.A. SHIROKOV & E.A. KASHIN (1998): Struktura donnayh biotsenozov i drift bespozvonochnayh v nekotorayh rekah Vostochnoy chasti Kolyskogo poluostrova. Problemay lososevayh na Evropeyskom Severe. - Karelyskiy nauchnayy tsentr RAN, Petrozavodsk.

KOMULAINEN, S.F., A.N. KRUGLOVA & I.A. BARYSHEV (2005): Formirovanie bioraznoobraziya soobshtestv gidrobiontov nekotorayh pritokov karelyskogo poberezhyya Belogo Morya. - Proceedings of the 9th International Conference on the study, sustainable use and conservation of natural resources of the White Sea, October, 11–14, 2004, Petrozavodsk.

KOMULAYNEN, S.F., T.A. CHEKRYZHEWA & I.G. VISLYANSKAYA (2006a): Alygoflora ozer i rek Karelii. Taksonomicheskiy sostav i ekologiya. - Karelyskiy nauchnayy tsentr RAN, Petrozavodsk.

KOMULAYNEN, S.F., G.S. ANTIPINA, I.G. VISLYANSKAYA, T.A. IESHKO, G.C. LUCK, T.A. CHEKRYZHEVA, N.A. SHAROV & T.S. SHELEHOVA (2006b): Bibliography on the waters of North European Russia (Republic of Karelia, Murmansk Region). - Karelian Research Centre of the Russian Academy of Science, Petrozavodsk.

KORAY, T. (2001): Türkiye denizleri fitoplankton türleri kontrol listesi. - Ege Univ. J. Fish. Aquatic Sci. (Ege Üniv. Su Ürün. Derg.) **18**: 1–23.

KOZHOV, M. (1953): Lake Baikal and its life. - W. Junk, The Hague.

KOZHOVA, O.M., L.R. IZMEST'EVA & E.V. ERBAEVA (1994): A review of the hydrobiology of Lake Khubsugul (Mongolia). - Hydrobiologia **291**: 11–19.

KOZHOVA, O.M., L.A. IZHBOLDINA & I.K. BOKOVA (1998): Ecology of *Didymosphenia geminata* (Lyngb.) M. Schmidt (Bacillariophyta) in Lake Baikal. - Algologia **8**: 132–139.

KOZLOV, U.P., V.V. VOROBIEB, D. BATSYR, O.M. KOZHOVA, O. SHAGDARSYREN, A. DASHDORZH, N. SODNOM, B.A. BOGOYAVLENSKII, V.P. MARTINOV & B. BATCHARGAL (1989): Atlas of Lake Hövsgöl. - Soviet Branch of the Akademia Nauk, Irkutsk University and The Mongolian National University, Irkutsk.

KOZLOVA, O.G. & A.R. GEPTNER (1965): Novye dannye o flore diatomovyh vodorosley iz chetvertichnyh otlozheniy Zapadnoy Kamchatki (dolina reki Tighil). - Dokl. Akad. Nauk. S.S.S.R. **161**: 417–420.

KOZLOVSKAYA, O.I., M.I. VASILYEVA, A.I. BAKANOV, A.V. KRAYLOV & G.I. FROLOVA (2002): Sostoyanie ekosistemay R. Zhelvata spisok ispolniteley. - Volga Centre consulting, Yaroslavl.

KRAMMER, K. & H. LANGE-BERTALOT (1986): Bacillariophyceae. 1. Teil: Naviculaceae. - In: ETTL, H., J. GERLOFF, H. HEYNIG & D. MOLLENHAUER (eds): Süsswasserflora von Mitteleuropa, Band **2/1**: 1–876. Gustav Fischer Verlag, Stuttgart, New York.

KRASNOPEROVA, L.A. (1967): Algae systematis Fluminis Svirj. - Novosti Syst. Nizsh. Rast. **1967**: 100–103.

KRASSKE, G. (1943): Zur Diatomeenflora Lapplands. - Ber. Deutsch. Bot. Ges. **61**: 81–88.

KRAVTSOVA, L.S. (2007): Chironomid communities in the littoral zone on the western coast of the southern Baikal basin (structure, distribution, seasonal dynamics). - Chironomus **20**: 24–29.

KRAVTSOVA, L.S., R.M. KAMALTYNOV, E.B. KARABANOV, I.V. MEKHANIKOVA, T.Y. SITNIKOVA, N.A. ROZHKOVA, Z.V. SLUGINA, L.A. IZHBOLDINA, I.V. WEINBERG, T.V. AKINSHINA & D.Y. SHERBAKOV (2004): Macrozoobenthic communities of underwater landscapes in the shallow-water zone of southern Lake Baikal. - Hydrobiologia **522**: 193–205.

KRAVTSOVA, L.S., T.G. POTEMKINA, I.V. MEKHANIKOVA, L.A. IZHBOLDINA, T.A. AKINSHINA & K.V. VARYKHANOVA (2006a): Distribution of benthic communities of invertebrates in the southern basin of Lake Baikal. - Invert. Zool. **3**: 65–76.

KRAVTSOVA, L.S., I.V. WEINBERG, I.V. KHANAEV, D.Y. SHERBAKOV, S.V. SEMOVSKY, F.V. ADOV, N.A. ROZHKOVA, G.V. POMAZKINA, N.G. SHEVELYOVA & I.A. KAYGORODOVA (2006b): The formation of a fouling community on artificial substrate in Lake Baikal. - Hydrobiologia **568**: 51–55.

KÜHN, S.F. (1997): *Victoriniella multiformis*, gen. et spec. nov. (incerta sedis), a polymorphic parasitoid protist infecting the marine diatom *Coscinodiscus wailesii* Gran & Angst (North Sea, German Bight). - Arch. Protistenk. **148**: 115–123.

KUKHALEISHVILI, L.K. (1985): New species for Georgian algoflora from Upper Racha, USSR. - Soobshch. Akad. Nauk Gruzinsk. SSR **119**: 377–380.

KUKHARENKO, L.A. (1972): Vodorosli v rezerve "Kedrovaya Pad". - In: GOROVOI, P.G. (ed.): Flora i rastitelynosty zapovednika "Kedrovaya Pad": 99–104. Vladivostok.

KUKHARENKO, L.A. (1989): Vodorosli presnovodnayh vodoemov v Primorye region. - FEB RAS, Vladivostok.

KUKHARENKO, L.A., L.A. MEDVEDEVA & S.S. BARINOVA (1984a): Vodorosli. - In: AZBUKINA, Z.M. & S.S. KHARKEVICH (eds): Flora iz Verkhneussurijsky stantsii (Yuzhnayy Sikhote - Alin): 5–22. FEB AS USSR, Vladivostok.

KUKHARENKO, L.A., L.A. MEDVEDEVA, S.S. BARINOVA, R.I. MENJASCHIKINA, L.G. KURGANSKAJA & V.P. GONCHAR (1984b): Santehnika biologicheskih osobennostey nekotorayh vodoemov v Primorskom rayone. - In: CHERDANTSEVA, V.J., Z.M. AZBUKINA & L.N. EGOROVA (eds): Sistematicheskie i floristicheskih issledovaniy spora rasteniy Dalynego Vostoka: 117–137. FEB AS USSR, Vladivostok.

KUKHARENKO, L.A., L.A. MEDVEDEVA, S.S. BARINOVA & I.N. BATENOK (1986): Vodorosli. - In: AZBUKINA, Z.M. & S.S. KHARKEVICH (eds): Flora i rastitelynosty v Bolshekhekhtsirsky rezerva (Khabarovsky region): 13–29. FEB AS USSR, Vladivostok.

KULUMBAEVA, A.A. (1982): Phytoplankton of Lake Issyk-Kul. - Ilim, Frunze.

KUMAR, S. (2008): Modeling potential habitat distribution for freshwater diatom *Didymosphenia geminata* in the continental United States. - 93rd ESA Annual Meeting, Comm. no. COS 27-5, Milwaukee.

KUMAR, S., S.A. SPAULDING, T.J. STOHLGREN, K.A. HERMANN, T.S. SCHMIDT & L.L. BAHLS (2009): Potential habitat distribution for the freshwater diatom *Didymosphenia geminata* in the continental US. - Frontiers Ecol. Environm. **7**, doi: 10.1890/080054.

KÜTZING, F.T. (1833): Synopsis Diatomacearum oder Versuch einer systematischen Zusammenstellung der Diatomeen. - Linnaea **8** (5): 529–620.

KÜTZING, F.T. (1836): Algarum aquae dulcis germanicarum, Decade XIII. - Halle.

KÜTZING, F.T. (1844): Die kieselschaligen. Bacillarien oder Diatomeen. - W. Köhne, Nordhausen.

KÜTZING, F.T. (1849): Species Algarum. - Brockhaus, Leipzig.

KUZYMIN, G.V. (1986): K flore vodorosley nizovyya r. Yamay (Magadanskaya Obl.). - Bot. Zhurn. **71**: 513–521.

LACOUTURE, R.V. (2001): Quality assurance documentation plan for the phytoplankton component of the Chesapeake Bay water quality monitoring program. - The Academy of Natural Sciences, Estuarine Research Center, St. Leonard, Maryland.

LAGERSTEDT, M.A. (2007): *Didymosphenia geminata*; an example of a biosecurity leak in New Zealand. - Thesis of Master of Science in Environmental Sciences, University of Canterbury, Christchurch.

LAGERSTEDT, N.G.W. (1873): Sötvattens-Diatomaceer från Spetsbergen och Beeren Eiland. - Bih. Kongl. Svenska Vetensk. - Akad. Handl. **1**: 1–52.

LAK, G.T.S. (1954): Diatomovie chetvertichnij otlojeni zapadnoi Karelii. - Izdatelbstvo Akademii Nauk SSSR, Moskva, Leningrad.

LAK, G.T.S. (1959): Diatomovie chetvertichnij otlojeni Karelii. - Trudy Karel'sk. Fil. Akad. Nauk S.S.S.R. **9**: 141–175.

LANG, C. (1873): Diatomaceae. - Trans. Roy. Microscop. Soc. **10**: 282.

LANGE, C.B. & M.A. TIFFANY (2002): The diatom flora of the Salton Sea, California. - Hydrobiologia **473**: 179–201.

LANGE-BERTALOT, H. (1996): Rote Liste der limnischen Kieselalgen (Bacillariophyceae) Deutschlands. - Schriftenreihe Vegetationsk. **28**: 633–678.

LANGE-BERTALOT, H. & S.I. GENKAL (1999): Diatoms from Siberia. I. Islands in the Arctic Ocean (Yugorsky-Shar Strait). - Iconogr. Diatomol. **6**: 1–303.

LANZI, M. (1883): Le Diatomee rinvenute nel Lago Trajano, nello Stagno di Maccarese e loro adiacenze. - Atti Soc. Crittog. Ital. **3**: 121–129.

LaPERRIERE, J.D., E.E. VAN NIEUWENHUYSE & P.R. ANDERSON (1989): Benthic algal biomass and productivity in high subarctic streams, Alaska. - Hydrobiologia **172**: 63–75.

LARNED, S., B. BIGGS, N. BLAIR, C. BURNS, B. JARVIE, D. JELLYMAN, P. JELLYMAN, C. KILROY, J. LEATHWICK, K. LISTER, J. NAGELS, M. SCHALLENBERG, S. SUTHERLAND, J. SYKES, W. THOMPSON, K. VOPEL & B. WILCOCK (2006): Ecology of *Didymosphenia geminata* in New Zealand: habitat and ecosystem effects. Phase 2. - NIWA Client Report CHC2006-086, NIWA Project MAF06507, Christchurch.

LARNED, S., D. ARSCOTT, N. BLAIR, B. JARVIE, D. JELLYMAN, K. LISTER, M. SCHALLENBERG, S. SUTHERLAND, K. VOPEL, B. WILCOCK (2007): Ecological studies of *Didymosphenia geminata* in New Zealand, 2006–2007. - NIWA Client Report CHC2007-070, NIWA Project MAF07507, Christchurch.

LARSON, A.M. (2007): Relationships between nuisance blooms of *Didymosphenia geminata* and measures of aquatic community composition in Rapid Creek, South Dakota. - Water Resources Assistance Program, Division of Financial and Technical Assistance, South Dakota Department of Environment and Natural Resources, Pierre, South Dakota.

LAURIOL, B., C. PRÉVOST & D. LACELLE (2006): The distribution of diatom flora in ice caves of the northern Yukon Territory, Canada: relationship to air circulation and freezing. - Int. J. Speleol. **35**: 83–92.

LAVOIE, D. (2006): Une algue envahissante dans la rivière Matapédia. - Le blogue de l'avant-poste l'hebdo de la Matapédia depuis 1841. http://hebdosblogue.canoe.ca/lavantposte/2006/11/20/une_algue_envahissante_dans_la_riviere_m

LAVOIE, D. (2007a): Algue *didymo*: la Causapscal exclue. - Le blogue de l'avant-poste l'hebdo de la Matapédia depuis 1841. http://hebdosblogue.canoe.ca/lavantposte/2007/02/03/algue_didymo_la_causapscal_exclue

LAVOIE, D. (2007b): Attention aux algues envahissantes. - Le blogue de l'avant-poste l'hebdo de la Matapédia depuis 1841. http://hebdosblogue.canoe.ca/lavantposte/2007/06/01/attention_aux_algues_envahissantes

LAWSON, L.L. & S.R. RUSHFORTH (1975): The diatom flora of the Provo River, Utah, U.S.A. - Biblioth. Phycol. **17**: 1–149.

LE COHU, R. & M. COSTE (1995): Le genre *Gomphoneis* (Bacillariophyta): un nouveau modèle d'organisation du cingulum. - Canad. J. Bot. **73**: 112–120.

LEE, K., J.K. CHOI & J.H. LEE (1995): Taxonomic studies on diatom in Korea. II. Check-list. - Korean J. Phycol. **10**: 13–89.

LEE, P.H., M. MEGAN, C. BROWN, B.W. TAYLOR & T.A. WELLNITZ (2008): How scour disturbance affects *Didymosphenia geminata* abundance and the associated epiphytic diatom community. - 93rd ESA Annual Meeting, 2008. Comm. no. PS 35-13, Milwaukee, Wisconsin.

LEIBLEIN, V. (1827): Verzeichniss der Wasseralgen, welche sich in der Gegend um Würzburg vorfinden. - Flora **10**: 257–281.

LEPSKAYA, E.V., E.G. LUPIKINA, A.V. MASLOV, T.K. UKOLOVA & V.D. SVIRIDENKO (2003): Kharakteristike al'goflory pelagiali nekotorykh ozer Kamchatki. - In: MAKARCHENKO, E.A. (ed.): Vladimir Ya. Levanidov's Biennial Memorial Meetings (Chteniya Pamyati Vladimira Yakovlevicha Levanidova) **2**: 272–286. Dalnauka, Vladivostok.

LeROY POFF, N., N.J. VOELZ, J.V. WARD & R.E. LEE (1990): Algal colonization under four experimentally-controlled current regimes in high mountain stream. - J. N. Amer. Benthol. Soc. **9**: 303–318.

LEVADNAYA, G.D. (1965): K poznaniyu produktivnosti probrejnij gruntov verjnego techeniya R. Obi (mikrofitobentos). - Trudy Tsentr. Sibirsk. Bot. Sada **10**: 5–15.

LEVADNAYA, G.D. (1968a): Mikrofitobentos verjnei Obi i Ovosibirskogo vodojranilisha. - Avtoreferat Dissertatsii na Soiskaniye Uchenoi Stepeni Kandidata Biologicheskij Nauk, Akademiya Nauk SSSR Sibirskoye Otdeleniye Obyedinenni Uchyoni Sovet po Biologicheskim Naukam, Novosibirsk.

LEVADNAYA, G.D. (1968b): Vodorosli gruntov i obrastani Novosibirskogo vodojranilisha. - Trudy Biol. Inst. **7**: 41–50.

LEVADNAYA, G.D. (1986): Mikrofitobentos reki Enisei. - Ed. O.M. Kozhova, Novosibirsk.

LEVADNAYA, G.D. & A.E. KUZ'MINA (1974): Effect of hydraulic engineering construction on phytobenthos of the Ob and Yenisei rivers. - Gidrobiol. Zhurn. **10**: 95–98.

LI, Y., P. XIE, Z. GONG & Z. SHI (2003): Cymbellaceae and Gomphonemataceae (Bacillariophyta) from the Hengduan Mountains region (southwestern China). - Nova Hedwigia **76**: 507–536.

LI, Y., P. XIE & Z. GONG (2004): A survey of the gomphonemaceae and cymbellaceae (Bacillariophyta) from the Jolmolungma Mountain (Everest) region of China. - J. Freshwater Ecol. **19**: 189–194.

LIGOWSKI, R. & B. RAKOWSKA (2001): *Didymosphenia geminata* (Lyngb.) W. Schmidt in Poland. - In: WITKOWSKI, A. & W. KOWALSKI (eds): Treffen Deutschsprachiger Diatomologen, zu Ehren von Prof. Dr. Dr.h.c. Horst Lange-Bertalot: 121–122. Lukecin (Lüchentin), Poland.

LINDSEY, A.A., D.V. SCHMELZ & S.A. NICHOLS (1969): Natural areas in Indiana and their preservation. - The Indiana Academy of Science, Indianapolis.

LINDSTRØM, E.A. (1991): Use of periphyton for monitoring rivers in Norway. Application of previously obtained data to evaluate impacts of acid precipitation. - In: WHITTON, B.A. & E. ROTT (eds): Use of algae for monitoring rivers II: 139–144. Innsbruck.

LINDSTRØM, E.A. (1992): Tålegrenser for overflatevann. Fastsittende alger. Fagrapport nr. 27. - Norsk Institutt for Vannforskning (NIVA), O-90137/E-90440, Oslo.

LINDSTRØM, E.A. (2000): Virkninger av forurensning på biologisk mangfold: Vann og vassdrag i by - og tettstednære områder. Fastsittende alger i rennende vann - en kunnskapsstatus. - Norsk Institutt for Vannforskning (NIVA), Rapport 4303-2000, Oslo.

LINDSTRØM, E.A. & B. RORSLETT (1991): The effects of heavy metal pollution on periphyton in a norwegian soft-water river. - Verh. Int. Vereinigung Theor. Limnol. **24**: 2215–2219.

LINDSTRØM, E.A., R. SKULBERG & O.M. SKULBERG (1973): Observations on planktonic diatoms in the Lake-River System Lake Mjösa - Lake Öyeren - River Glåma, Norway. - Norweg. J. Bot. **20**: 183–195.

LITERÁTHY, P., V. KOLLER-KREIMEL & I. LISKA (eds) (2002): Joint Danube Survey. Technical Report of the International Commission for the Protection of the Danube River. - International Commission for the Protection of the Danube River (ICPDR), Vienna.

LITNINSTEV, A.N. (1965): Vliyaniye stochnij vod gidroliznogo zavoda na bentos R. Oki (Pritok Angari). - Gidrobiol. Zhurn. **4**: 78–84.

LIU, X.X. (1982): Diatom fossils from diatomaceous earth from Changbai, Hailong and Fusong, Jilin Province, China. - J. Nanjing Univ. China (Algae) **10**: 170–174.

LOHMAN, K.E. (1939): Pleistocene diatoms from Long Island, New York. - U.S. Geol. Surv. Profess. Pap. **189**: 229–235.

LOSEVA, E.I. (2000): Atlas presnovodnykh pleistotsenovykh diatomei Evropeiskogo Severo-Vostoka. - Nauka, St. Petersburg.

LOSEVA, E.I., A.S. STENINA & T.I. MARCHENKO-VAGAPOVA (2004): Cadastre of the fossil and recent diatoms from northeastern europe. - Russian Academy of Sciences, Ural Division, Komi Science Center, Institute of Geology, Geoprint, Syktyvkar.

LOWE, C.W. (1927): Some freshwater algae of Southern Quebec. - Trans. Roy. Soc. Canada Ser. III **21**: 291–318.

LUCAS, C.E. (1969): Directorate of fisheries research report for 1968. - Marine Laboratory, Aberdeen.

LUND, S. (1959): The marine algae of East Greenland, I. Taxonomical part. - Meddel. Grønland. **156**: 1–247.

LUNDBOHM, H. (1899): Praktiskt geologiska undersökningar inom Vesternorrlands län. II Berggrunden. Medtvå kartor i skalorna 1:500000 respektive 1:100000. - Sveriges Geol. Undersök. **177**: 61–120.

LUNDQVIST, G. (1936): Sjösediment från mellersta Norrland. Indalsälvens, Ångermanälvens och Umeälvens vattenområden. - Stockholm.

LUNDQVIST, G. (1939): Sjösediment från området Abisko-Kebnekaise. - Sveriges Geol. Undersök. **423**: 1–127.

LYNGBYE, H.C. (1819): Tentamen Hydrophytologiae Danicae Continens omnia Hydrophyta Cryptogama Daniae, Holsatiae, Faeroae, Islandiae, Groenlandiae hucusque cognita, Systematice Disposita, Descripta et iconibus illustrata, Adjectis Simul Speciebus Norvegicis. - Hafniae, Copenhagen.

MACAN, T.T. (1970): Biological studies of the English lakes. - Longman, London.

MACCLEMENT, W.T. (1917): Diatoms and Lobster Rearing. - Contr. Canad. Biol. **38**: 11–20.

MACKAY, A.W., R.J. FLOWER & L.Z. GRANINA (2002): Lake Baikal. - In: SHAHGEDANOVA, M. & A. GOUDIE (eds): The physical geography of Northern Eurasia: Russia and neighbouring states: 403–421. Oxford University Press, Oxford.

MAGNÚSDÓTTIR, R.Þ. & S. GUÐJÓNSSON (2006): Veiðimálastofnun Yfirlit um starfsemi 2006. - Institute of Freswater Fisheries, Reykjavík.

MALAEVA, E.M., Z.V. ALESHINSKAYA & O.M. PETROV (1965): Chetvertichniye otlojeniya Zaliva Korfa (Kamchatka) i vremya ij nakopleniya. - Nauchni J. Ser. V Geogr. **3**: 81–86.

MALMQUIST, H.J., E.E. JÓHANNSDÓTTIR & F. INGIMARSSON (2001): Dýralíf og efnafræði í Hamarkostlæk og Ástjörn. - Náttúrufræðistofa Kópavogs. Unnið fyrir Hafnarfjarðarbæ, Reykjavík.

MAMBETALIYEVA, S. (1963a): Spisok vodoroslei severnogo pribrejya Ozera Issik-Kul'. - Sborn. Rabot Mikol. Algol. **1**: 93–128.

MAMBETALIYEVA, S. (1963b): Flora vodoroslei severnogo pribrejya Ozera Issik-Kul' iyeyo znacheniye v pitanii rib. - Avtoreferat Dissertatsii na Soiskaniye Uchyonoi Stepeni Kandidata Biologicheskij Nauk, Izdatel'stvo Akademii Nauk Uzbeskoi SSR, Tashkent.

MANDL, L. (1839): Traité pratique du microscope et de son emploi dans l'étude des corps organisés, suivi de recherches sur l'organisation des animaux infusoires par D.C.G. Ehrenberg. - J.-B. Baillière, Paris.

MANGUIN, E. (1962): Contribution à la connaissance de la flore diatomique de la Nouvelle-Calédonie. - Mém. Mus. Nac. Hist. Nat. Ser. Bot. **1**: 1–40.

MANNION, A.M. (1978): Late Quaternary deposits from Southeast Scotland. II. The diatom assemblage of a marl core. - J. Biogeogr. **5**: 301–318.

MARCINIAK, B. & W. PRZYBYŁOWSKA-LANGE (1977): Flora okrzemek plejstocenu i holocenu. - In: CZERMIŃSKI, J. & S. CIEŚLIŃSKI (eds): Budowa geologiczna Polski Vol. II, Katalog skamieniałości, part 3b, Kenozoik, czwartorzed: 123–146. Instytut Geologiczny, Wydawnictwa geologiczne, Warszawa.

MARCINIEWICZ-MYKIETA, M. (2007): Specyfikacja istotnych warunkow zamowienia. - Główny Inspektor Ochrony Środowiska, Warszawa.

MARETIÆ, T. (1924): Znanstvena djela za opæu naobrazbu. - JAZU, Zagreb.

MARGALEF, R. (1953): Materiales para la hidrobiología de la Isla de Mallorca. - Publ. Inst. Biol. Apl. **11**: 5–111.

MARGALEF, R. (1956): Estudios hidrobiológicos en los valles de Bohí. - Actas II Congr. Inst. Estud. Piren. **3**: 87–109.

MARSH, C.D. (1895): On the Cyclopidae and Calanidae of Lake St. Clair, Lake Michigan, and certain of the inland lakes of Michigan. - Bull. Michigan Fish Comm. **5**: 1–24.

MARSHALL, B.D. (2008): Relationships among biofilm density and macroinertebrates communities in a system influenced by *Didymosphenia geminata* blooms. - NABS 56th Annual Meeting (25–28 May, 2008), Salt Lake City.

MARSHALL, H.G., L. BURCHARDT & R.V. LACOUTURE (2005): A review of phytoplankton composition within Chesapeake Bay and its tidal estuaries. - J. Plankt. Res. **27**: 1083–1102.

MARTINOVIĆ-VITANOVIĆ, V. & V. KALAFATIĆ (2001): Limnological investigations of the Tisa River in Yugoslavia. Joint Tisa survey in Yugoslavia YU-JTS. - In: TRIPCOVIĆ, D., M. GAVRIĆ, J. INGJATOVIĆ, M. MITROVIĆ, B. BO•ANIĆ & M. MILOVANOVIĆ (coords): On the joint investigation of the Tisa River on the territory of the fr. Yugoslavia within the international JDS-ITR program: 30-52. Ministry for Protection of Natural Resources and Environment, Beograd.

MAŠKOVÁ, E. (2003): Rozsivky v fiece Morávce. - Kapka **4**: 5.

MATHER, W.M. (1928): Freshwater algae of the Hutt Valley. - M.Sc. Thesis, Victoria University, Wellington.

MATHESON, F.E., A.M. DUGDALE, R.D.S. WELLS, A. TAUMOEPEAU & J.P. SMITH (2007): Efficacy of saltwater solutions to kill introduced freshwater species and sterilise freshwater fishing nets. - DOC Research & Development Series **261**: 1–24.

MATTHIESSEN, J., O.V. STEPANETS, R. STEIN, D.K. FÜTTERER & E.M. GALIMOV (eds) (1999): The Kara Sea expedition of RV "Akademik Boris Petrov" 1997: First results of a joint Russian-German pilot Study. - Ber. Polarforsch. **300**: 1–247.

McCALL, D. (1933): Diatoms (recent and fossil) of the Tay district. - J. Linn. Soc. Bot. **49**: 219–308.

McNEILL, M.R., C.B. PHILLIPS, N.I. BELL & J.R. PROFFITT (2006): Potential spread of pests in New Zealand through commercial transport of nursery plants. - New Zealand Plant Prot. **59**: 75–79.

McNYSET, K.M. & M.L. JULIUS (2006): Potential geographic distribution of *Didymosphenia geminata* (Lyngbye) M. Schmidt in North America based on ecological niche models. Abstract. Region 8 Biomonitoring and Bioassessment Meeting - April 4–6, 2006 - Utah State University, Logan.

MDDEP-MRNF (2007): Scientific Advisory Committee on *Didymosphenia geminata*, 2007. What is *Didymo* and how can we prevent it from spreading in our rivers? - Ministère du Développement durable, de l'Environnement et des Parcs et Ministère des Ressources naturelles et de la Faune, Québec.

MEDVEDEVA, L.A. (1981): Materials to the flora of freshwater algae of Sikhote-Alin state reserve. - In: EGOROVA, L.N. (ed.): Systematics, ecology and geography of spore plants in Far East: 10–20. Far Eastern Branch of the Academy of Science USSR, Vladivostok.

MEDVEDEVA, L.A. (1986): Algal flora of the Serebryanka River basin (Primorye Region). - Bot. Zhurn. **71**: 634–637.

MEDVEDEVA, L.A. (1987): Algal flora of Solontsovskie Lakes of Sikhote-Alin reserve. - In: PETROPAVLOSKY, B.S. (ed.): Sikhote-Alin biosphere region: background state of natural components: 49–70. Far Eastern Branch of the Academy of Science USSR, Vladivostok.

MEDVEDEVA, L.A. (1994): Diatom algae of Serebryanka River basin (Sikhote-Alin reserve). - Bot. Zhurn. **79**: 46–56.

MEDVEDEVA, L.A. (1995): Sessile algae of the Kedrovaya Stream and its tributaries (Primoryem Far East). - In: TANAKA, S. (ed.): Studies on the structure and function of river ecosystems of the Far East 2: 13–19. Japan Society for the Promotion of Science, Tokyo.

MEDVEDEVA, L.A. (1997): Vodorosli v basseyne reki Bikin. - In: ZOLOTUKHIN, S.F., A.Y. SEMENCHENKO & V.A. TURAEV (eds): Ekosistemay basseyna reki Bikin. Okruzhayushtey sreday. Cheloveka. Upravleniya: 90–104. Dalnauka, Vladivostok.

MEDVEDEVA, L.A. (1999a): Ekologicheskiy obzor algoflora iz Sikhote - Alin biosperic rezerva (Primorskom rayone). - Bot. Zhurn. **84**: 71–79.

MEDVEDEVA, L.A. (1999b): Obzor vodorosley rassledovaniy v Primorye Region rezervov. - Bot. Zhurn. **84**: 136–144.

MEDVEDEVA, L.A. (1999c): Spisok vodorosley iz basseyna reki Bikin. - In: IVASHOV, P.V. (ed.): Geohimicheskie i biogeohimicheskie protsessay v ekosistemah Dalynego Vostoka IX: 161–177. Dalnauka, Vladivostok.

MEDVEDEVA, L.A. (1999d): Peculiarities of algoflora in the Zeva river. Biology of Inland Waters. - Unpub. manuscript.

MEDVEDEVA, L.A. (1999e): Pervaye dannaye k algoflora ot Bureinsky rezerva. - Proc. Stat. Nat. Res. Bureinsky **1**: 87–101.

MEDVEDEVA, L.A. (1999f): V algoflora ot Botchinsky rezerva. IV Dalynevostochnayy konferentsiya po problemam sohraneniya priroday. - Vladivostok.

MEDVEDEVA, L.A. (2000): Taxonomic structure of the algoflora of Sikhote-Alin biosphere reserve (Primorsky region, Russia). - Int. J. Algae **2**: 71–89.

MEDVEDEVA, L.A. (2001): Biodiversity of aquatic algal communities in the Sikhote-Alin biosphere reserve (Russia). - Crypt. Algol. **22**: 65–100.

MEDVEDEVA, L.A. (2002a): Diversity of diatoms in Sikhote-Alin biosphere reserve, Far East Russia. - In: JOHN, J. (ed.): Proceedings of the 15th International Diatom Symposium: 193–200. Gantner Verlag, Ruggell, Liechtenstein.

MEDVEDEVA, L.A. (2002b): Presnovodnaye vodorosli. - In: KORKISCHKO, R.I. (ed.): Kadastr rasteniy i gribov iz rezerva "Kedrovaya Pad". Proverka spiskov vidov: 6–20. Dalnauka, Vladivostok.

MEDVEDEVA, L.A. (2004): Samarga reki - odna iz samayh chistayh rek v Primorye regiona. – Proceedings International Conference "Natural Heritage of Russia: Study, Monitoring, Protection", Tolyatti.

MEDVEDEVA, L.A. (2005): Dannaye o flore presnovodnayh vodorosley iz Kievka reki. - Otchet Lasov Gosud. Prir. Zapov. Imeni L.G. Kaplanov **3**: 11–26.

MEDVEDEVA, L.A. (2006a): Presnovodnaye vodorosli. - In: ASTAF'EV, A.A. (ed.): Rastitelynosti i faunay Sikhote - Alin biosfernayy zapovednik: 37–50. Primpoligrafkombinat, Vladivostok.

MEDVEDEVA, L.A. (2006b): Perifyton vodorosli nekotorayh rek Yuzhnoy Primorye. - In: MAKARCHENKO, E.A. (ed.): Flora i fauna Kedrovaya Pad Priroda rezerva: 32–45. Dalnauka, Vladivostok.

MEDVEDEVA, L.A. (2007): Algological investigations of the middle part in the Bureya River Basin. - In: TIUNOVA, T.M. (ed.): Hydro-ecological monitoring in Bureyskaya Hydro-Electric Power Station zone influences: 64–80, Khabarovsk.

MEDVEDEVA, L.A. (2008): Annotated bibliography of fresh water algae research in the nature reserves of the Russian Far East (1914–2005). - Unpublished manuscript.

MEDVEDEVA, L.A. & T.V. NIKULINA (1989): Prodolynoe raspredelenie vodorosli Frolovka reki. - In: LEVANIDOVA, I.M. & E.A. MAKARCHENKO (eds): Sistematika i ekologiya rechnayh organizmov: 142–158. FEB RAS, Vladivostok.

MEDVEDEVA, L.A. & S.E. SIROTSKIY (2002): Annotirovannayy spisok vodorosley r. Amur I vodoemov ego pridatochnoy sistemay. - Biogeokhim. Geoekol. Issl. Nazem. Presnovodn. Ekosistem **12**: 130–218.

MEDVEDEVA, L.A. & K.A. SEMENCHENKO (2003): Rezulytatay algological issledovaniya Samarga reki (Primorye territorii). - In: MAKARCHENKO, E.A. (ed.): Vladimir Ya. Levanidov's Biennial Memorial Meetings (Chteniya Pamyati Vladimira Yakovlevicha Levanidova) **2**: 242–253. Dalnauka, Vladivostok.

MEDVEDEVA, L.A. & S.S. BARINOVA (2004): Presnovodnaye vodorosli nekotorayh vodoemov Habarovskogo kraya. - Bot. Zhurn. **89**: 1768–1782.

MEDVEDEVA, L.A., S.S. BARINOVA & L.A. KUKHARENKO (1986): Vodorosli v Rudnaja basseyne reki (Primorskiy rayon). - In: VASIL'EVA, L.N., Z.M. AZBUKINA & L.N. EGOROVA (eds): Flora i sistematika ot spora rasteniy Dalynego Vostoka: 36–48. FEB AS USSR, Vladivostok.

MEISTER, F. (1912): Die Kieselalgen der Schweiz. - Beiträge zur Kryptogamenflora der Schweiz **4** (1): 1–254. Wyss, Bern.

MELLES, M. (2000): Plankton analysis from 10 m water depth of Lama Lake. - PANGAEA, unpublished dataset #56989, Bremerhaven

MERLIN, A.A.C.E. (1910): On some new diatomic structure discovered with a new Zeiss apochromat. - J. Quekett Microscop. Club **11**: 199–202.

METZELTIN, D. & H. LANGE-BERTALOT (1995): Kritische Wertung der Taxa in *Didymosphenia* (Bacillariophyceae). - Nova Hedwigia **60**: 381–405.

METZELTIN, D. & A. WITKOWSKI (1996): Diatomeen der Bären-Insel. - Iconogr. Diatomol. **4**: 3–247.

MEYER, K.I. (1929): Über die Auxosporenbildung bei *Gomphonema geminatum*. Arch. Protistenk. **66**: 421–435.

MEYER, K.I. (1930): Vvdenie vo floru vodoroslei ozera Baikala. - Bull. Soc. Nat. Moscow Sect. Biol. **39**: 179–399.

MEYER, K.I. (1939): Materiali po flore vodoroslei Belogo Morya. - Trans. Inst. Mar. Fisher. Oceanogr. USSR **7**: 5–28.

MICHAEL, S. (2008): State regulators warn against spread of 'rock snot' algae. - The Examiner, 30/5/2008. Baltimore, Maryland

MICRA (2006): *Didymo*: No Laughing Matter. - River Crossings **15**: 4–5. Mississippi Interstate Cooperative Resource Association (MICRA), Bettendorf, Iowa.

MIETTINEN, J. (2006): River Tenojoki: Periphyton survey 2003. - In: SIVONEN, S. (ed.): Ecological state of the River Tenojoki - Periphyton, macrozoobenthos and fish communities. Regional Environmental Publications **417**: 1–125. Lapland Regional Environment Centre, University of Lapland Printing Centre, Rovaniemi.

MIETTINEN, A., K. RINNE, H. HAILA, H. HYVARINEN, M. ERONEN, I. DELUSINA, E. KADASTIK, V. KALM & P. GIBBARD (2002): The marine Eemian of the Baltic: new pollen and diatom data from Peski, Russia and Pohja-Uhtja, Estonia. - J. Quatern. Sci. **17**: 445–458.

MIKHEYEVA, T.M. (1999): Vodorosley floray Belarusi. Taksonomicheskiy katalog. - BSU, Minsk.

MILLER, C.R. (1915): Fresh-water algae occurring in the vicinity of the island of Montreal. - Canad. Rec. Sci. **9**: 391–425.

MILLER, M.C., P. DE OLIVEIRA & G.G. GIBEAU (1992): Epilithic diatom community response to years of PO_4 fertilization: Kuparuk River, Alaska (68°N Lat.). - Hydrobiologia **240**: 103–119.

MITCHELL, G.H. (1933): The diatomaceous earth deposit of Kentmere, Westmorland. - Proc. Liverpool Geol. Soc. **16**: 142–149.

MOFFAT, M.C. (1994): An ultrastructural study of *Didymosphenia geminata* (Bacillariophyceae). - Trans. Amer. Microscop. Soc. **113**: 59–71.

MOISEEVA, A.I. (1968): Neogenovaya kontinentalynaya flora diatomei Primorskogo kraya. - Iskopaemie diatomovie vodorosli SSSR, Akademiya Nauk SSSR, Sibirskoe Otdelenie Institut Geologii i Geofiziki Izdatelbstvo Nauka, Moskva.

MÖLDER, K. (1943): Studien über die Ökologie und Geologie der Bodendiatomeen in der Pojo-Bucht. Suomenkielinen selostus: Tutkimuksia pohjalla elävien piilevien ekologiasta ja geologiasta Pohjanpitäjänlahdessa. - Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" **18** (2):1–204.

MÖLDER, K. (1951): Die Diatomeenflora einiger Eisrandstandorte in Norwegen und Island. - Arch. Soc. Zool.-Bot. Fenn. "Vanamo" **5** (2): 126–137.

MONTI, R. (1904): Limnologische Untersuchungenuber einige italienischer Alpenseen. - Forschungsber. Biol. Stat. Plön **11**: 252–275.

MOREHOUSE, G.W. (1876): Silica films and the structure of diatoms. - Monthly Microscop. J. **15**: 38–39.

MROZIŃSKA, T., J. CZERWIK-MARCINKOWSKA & M. GRADZIŃSKI (2006): A new species of *Didymosphenia* (Bacillariophyceae) from the Western Carpathian Mountains of Poland and Slovakia. - Nova Hedwigia **83**: 499–510.

MROZIŃSKA-BRODA, T. & J. CZERWIK-MARCINKOWSKA (1996): Glony na terenach przyszłych zbionikiów wodnych w doline Dunajca (Czorsztyn-Niedzica I Sromowce Wyżne). - XV Sympozjum Fykologiczne. Polskie Towarzystwo Botaniczne, Lublin.

MROZIŃSKA-BRODA, T. & J. CZERWIK-MARCINKOWSKA (2004): Eucaryotic algae and cyanobacteria in the Dunajec River upstream and downstream from the new dam reservoirs in Czorsztyn and Sromowce (Poland) and their use for monitoring. - Oceanol. Hydrobiol. Stud. **33**: 83–97.

MÜLLER, K. (1962): Limnologisch-Fischereibiologische Untersuchungen in regulierten Gewässern Schwedisch-Lapplands. - Oikos **13**: 125–154.

MÜLLER-HAECKEL, A. (1971): Tages- und Jahresperiodizität von *Ceratoneis arcus* Kütz. (Diatomeae). - Oikos **18**: 351–356.

MÜLLER-HAECKEL, A. & J.O. SOLEM (1974): Tagesperiodik von Kieselalgen und Grünalgen in einem Gewässer Spitsbergens. - Norsk. Polarinst. Årbok **1**: 175–181.

MULRYAN, H. (1939): Fresh-water diatomite in the Pacific Coast region. - Amer. Inst. Mining Metallurg. Petrol. Engin. Techn. Publ. **3**: 1–8.

MUNDA, I. (1967): Der Einfluss der Salinität auf die chemische Zusammensetzung, das Wachstum und die Fruktifikation einiger Fucaceen. - Nova Hedwigia **13**: 471–508.

MUNDIE, J.H. & D.G. CRABTREE (1997): Effects on sediments and biota of cleaning a salmonid spawning channel. - Fish. Managem. Ecol. **4**: 111–126.

MURPHY, S.F. (2006): State of the watershed: water quality of Boulder Creek, Colorado. - U.S. Geological Survey Circular 1284. Reston, Virginia.

MUZAFAROV, A.M. (1957): O poyasnom raspredelenii i sezonnij izmeneniyaj flori vodoroslei Gornij vodotokov srednei Azii. - Delegatski Syezd Vsesoyuznogo Botanicheskogo Obshestva Tezisi Dokladov Vipusk v Sporovie Rasteniya. - Akademiya Nauk SSSR Vsesoyuznoe Botanicheskoe Obshestvo, Moskva.

MUZAFAROV, A.M. (1958): Flora vodoroslei gornij vodoemov srednei Azii. - AN UzSSR Publ., Tashkent.

NAGUMO, T. (1993): Diatoms (Bacillariophyceae) from Alaska. - Bull. Nippon Dental Univ. **22**: 119–144.

NATHORST, A.G. (1890): Några reffelobservationer i trakten af Omberg. - Geol. Fören. Förh. **12**: 141–144.

NAZYN, C.D. (2007): Alygoflora basseyna R. Elegest (Respublika Tayva). - Ph. D. Thesis. SB RAS, Novosibirsk.

NAZYN, C.D. & Y.V. NAUMENKO (2006): First findings on algae from the Khendergye River (Òyva, Russia). - Vest. Ekol. Lesoved. Landshaft. **7** (unpag.).

NEGORO, K. (1960): Studies on the diatom vegetation of Lake Biwa-Ko (first report). - Jap. J. Limnol. **21**: 200–220.

NEISWESTNOVA-SHADINA, K.S. (1941): Das Plankton des Staubeckens Ivankowo Während der Jahre 1937–1938. - Trav. Inst. Zool. Acad. Sci. URSS **8**: 170–192.

NELSON, R.R., T.O. ODLAUG, B.O. KROGSTAD, O.R. RUSCHMEYER & T.A. OLSON (1973): The effects of enrichment on Lake Superior periphyton. - Water Resources Research Centre Bull. **59**: 1–182.

NEMES, K. & M. MATAVULJ (2004): The occurrence of some rare species of diatoms in the rivers Tisza, Zlatica and Begej in Vojvodina (Serbia and Montenegro). - Proceedings and Abstracts of the 14th Hungarian Algological Meeting, Göd.

NIEMELÄ, P. (2007): Pohjoisten virtavesien erityispiirteiden vaikutus epiliittisiin piileväyhteisöihin. - Pohjois-Pohjanmaan ympäristökeskus Raportteja 4, Oulu, Finland.

NIKOLAYEVA, E.P. (1964): Matseriali po pitaliyu pelagicheskogo Baikal'skogo bokoplava. - Sbornik Kratkij Soobsheni i Dokladov o Nauchnoi Rabotse po Biologii i Pochvovedniyu Priloseniye K Otchyotu o Nauchno-Issledovatsel'skoi Rabotse za 1962 God, Vostochno-Sibirskoye Knijnoye Izdatel'stvo, Ministerstvo Visshego i Srednego Spetsial'nogo Obrazovaniya RSFSR, Irkutski Gosudarstveni Universitet Imeni A.A. Jdanova, Irktusk.

NIKULINA, T.V. (1995): Algal flora of the Ussuri River, Primorye (A preliminary report). - Stud. Struct. Funct. River Ecosyst. Far East **3**: 20–23.

NIKULINA, T.V. (1996): Dopolnenie k flore diatomovayh iz Razdolnaya reki. - In: IVASHOV, P.V. (ed.): Biogeohimicheskie i ekologicheskie issledovaniya na Dalynem Vostoke: 97–104. Dalnauka, Vladivostok.

NIKULINA, T.V. (2003): Algae of "Khankaisky" State Reserve (Primorsky region). - In: MAKARCHENKO, E.A. (ed.): Vladimir Ya. Levanidov's Biennial Memorial Meetings (Chteniya Pamyati Vladimira Yakovlevicha Levanidova) **2**: 263–271. Dalnauka, Vladivostok.

NIKULINA, T.V. (2005a): Diatom algae (Bacillariophyta) from the south part of Sakhalin Island. - In: STOROZHENKO, S.Y. (ed.): Flora and fauna of Sakhalin Island (Materials of International Sakhalin Island Project). Part **2**: 8–20. Dalnauka, Vladivostok.

NIKULINA, T.V. (2005b): Diatomovayh vodorosley presnoy voday iz yuzhnoy chasti Sahalina. Morfologiya, sistematiki, ontogeneza, ekologii i biogeography diatomovayh vodorosley. - IX Shkola Diatomologists Rossii i SNG: 50–51. Borok.

NIKULINA, T.V. (2005c): Taksonomicheskaya struktura i ekologiya - geograficheskoy harakteristikoy Razdolnaya basseyne reki (Primorye). - In: MAKARCHENKO, E.A. (ed.): Vladimir Ya. Levanidov's Biennial Memorial Meetings (Chteniya Pamyati Vladimira Yakovlevicha Levanidova) **3**: 223–236. Dalnauka, Vladivostok.

NIKULINA, T.V. (2007): Vidovoy sostav na algoflora i otsenki kachestva voday v Tyrma reki (pritok Bureya reki). - In: TIUNOVA, T.M. (ed.): Gidro-ekologicheskogo monitoringa v Bureyskaya Gidro-elektroenergii stantsii zona vliyaniya: 80–94. Khabarovsk.

NIVA (2003): Forurensningssituasjonen i Mjøsa med tilløpselver 2003. Utgitt av Vassdragsforbund for Mjøsa med tilløpselver. - NIVA Norsk Institutt for Vannforskning, Østlandsavdelingen, Oslo.

NIVA (2007): Forurensningssituasjonen i Mjøsa med tilløpselver 2006. Vassdragsforbundet for Mjøsa med tilløpselver. - NIVA Norsk Institutt for Vannforskning, Oslo.

NIYOGI, D.K., W.M. LEWIS & D.M. MCKNIGHT (2002): Effects of stress from mine drainage on diversity, biomass, and function of primary producers in mountain streams. - Ecosystems **5**: 554–567.

NOGA, T. (2003): Dispersion of *Didymosphaenia geminata* in the flowing waters of southern Poland. New sites of species occurrence in the Orawska watershed and the Orawska Basin. - Oceanol. Hydrobiol. Stud. **32**: 159–170.

NORTON, N. & B. SORRELL (2006): North Bank Tunnel Concept - Water Consents: Aquatic Ecosystems: Periphyton and Macrophytes. NIWA Client Report: CHC2006-096. - National Institute of Water & Atmospheric Research Ltd, Christchurch.

NOTCUTT, W.L. (1859): A handbook of the microscope and microscopic objects. - Edward Lumley, London.

OBERHOLSTER, P.J. (2005): Monitoring toxicity in raw water of the Cache la Poudre River and Sheldon Lake, Colorado, USA using biomarkers and molecular marker technology. - Ph. D. Thesis, University of Pretoria, Pretoria.

OBERHOLSTER, P.J., A.M. BOTHA & T.E. CLOETE (2005): Using a battery of bioassays, benthic phytoplankton and the AUSRIVAS method to monitor long-term coal tar contaminated sediment in the Cache la Poudre River, Colorado. - Water Res. **39**: 4913–4924.

OBUCHOVA, V.M. & A.A. NOSKOV (1966): Diatomeae Lacus Bijlikul. - Bot. Mater. Gerb. Inst. Bot. Akad. Nauk. Kazakhsk. **4**: 66–83.

OBUŠKOVIĆ, L.J. & M. MASLIĆ (1997): Studies of phytoplankton and some chemical parameters of the river Danube waters at river section km 1162–1115. - Arch. Biol. Sci. **49**: 37–42.

OECD (2007): Environmental Performance Reviews New Zealand. Environment & Sustainable Development. - OECD Publishing, Paris.

OGLY, Z.P. & M.I. KACHAEVA (1999): Bioraznoobraziya vodnayh ekosistem Zabaikal. Katalog na vodorosli v basseyne Verhnego Amura. - Novosibirsk.

O'HARE, M., P. SCARLETT, I. GUNN, J. O'HARE & P. SOVIC (2005): The Ranunculion fluitantis and Callitricho-Batrachion (CB) vegetation of the Gala Water. - Center for Ecology and Hydrobiology, Dorset.

OKEDEN, F. (1855): On the deep diatomaceous deposits of the mud of Milford Haven and other localities. - Quart. J. Microscop. Sci. **3**: 25–30.

OKEN, L. (1841): Allgemeine Naturgeschichte für alle Stände III. - Hoffmann, Stuttgart.

OKUNO, H. (1964): Part V: Fossil diatoms. - In: HELMKE, J.G., W. KRIEGER & J. GERLOFF (eds): Diatomeenschalen im elektronmikroskopischen Bild. J. Cramer, Vaduz.

ÓLAFSSON, J.S., Á. EINARSSON, G.M. GÍSLASON & Y. KOLBEINSSON (2004): Samhengi botngerðar og botndýra í Laxá í S. Þingeyjarsýslu. - Líffræðistofnun Háskólans Fjölrit **72**: 1–35.

OLYUNINA, O.S. (2004): Paleoekopogicheskaya harakteristika Chetvertichnayh otlozheniy ostrova Novaya Sibiry po diatomovogo anapiza. - XI Students' International Conference, Moscow.

OLYUNINA, O.S. (2005): Reconstruction of the paleohydrological conditions in the central Kola Peninsula in Holocene on the basis of diatom analysis of lacustrine and boggy deposits. - Water Resources **32**: 93–100.

OLYUNINA, O.S. & V.E. TUMSKOY (2006): Genezis i vozrast chetvertichnayh otlozheniy Novosibirskih ostrovov po dannaym diatomovogo analiza. - XI Landscape Conference. Landscape study - theory, methods, regional studies, practice. August 22–25, 2006. Lomonosov State University, Moscow.

OPSAHL, R.W., T. WELLNITZ & N.L. POFF (2003): Current velocity and invertebrate grazing regulate stream algae: results of an in situ electrical exclusion. - Hydrobiologia **499**: 135–145.

ØSTRUP, E. (1908): Beiträge zur Kenntnis der Diatomeenflora des Kossogolbeckens in der nordwestlichen Mongolei. - Hedwigia **48**: 74–100.

ØSTRUP, E. (1920): The botany of Iceland. Vol. II part 1. Fresh-water diatoms from Iceland. - J. Wheldon, London.

PÄÄKKÖNEN, V. (1956): Otanmäki, the ilmenite-magnetite ore field in Finland. - Bull. Commiss. Géol. Finlande **171**: 1–71.

PABUÇÇU, K. (2000): Değirmendere (Trabzon) bentik alg florasý XV. - Ulusal Biyoloji Kongresi, Ankara Üniversitesi, Ankara.

PACKMAN, A.I., S. LARNED, D. PLEW & K. VOPEL (2008): Modification of river hydraulics by the invasive diatom *Didymosphenia geminata*. - World Environmental and Water Resources Congress, Ahupua'a. ASCE (American Society of Civil Engineers), May 12–16, 2008, Honolulu, Hawaii.

PADISÁK, J., G. BORICS, G. FEHÉR, I. GRIGORSZKY, I. OLDAL, A. SCHMIDT, Z. ZÁMBÓNÉ-DOMA (2003): Dominant species, functional assemblages and frequency of equilibrium phases in late summer phytoplankton assemblages in Hungarian small shallow lakes. - Hydrobiologia **502**: 157–168.

PALMER, C.M. (1930): Algae of Indiana - additions to the 1875–1928 check list. - Proc. Indiana Acad. Sci. **40**: 107–109.

PALMER, C.M. (1959): Algae in water supplies. An illustrated manual on the identification, significance and control of algae in water supplies. Public Health Service Publication No. 657. - U.S. Department of Health, Education and Welfare. Washington.

PALMER, T.C. & F.J. KEELEY (1900): The structure of the diatom girdle. - Proc. Acad. Nat. Sci. Philadelphia **52**: 464–479.

PAPAS, J.L. (2008): More on theoretical morphospace and its relation to freshwater gomphonemoid-cymbelloid diatom (Bacillariophyta) lineages. - J. Biol. Systems **16**: 119–137.

PARKER, S.M. (1999): Effects of natural disturbance on Arctic stream communities. - Ph. D. Thesis, University of Maine, Orono.

PATERSON, R. (1841): Description of *Pothocites Grantonii*, a new fossil vegetable from the coal formation. - Trans. Bot. Soc. Edinburgh **1**: 45–52.

PATRICK, R. & L.R. FREESE (1961): Diatoms (Bacillariophyceae) from Northern Alaska. - Proc. Acad. Nat. Sci. Philadelphia **112**: 129–293.

PATRICK, R. & C.W. REIMER (1975): The diatoms of the United States, exclusive of Alaska and Hawaii, Volume 2, Part 1. Entomoneidaceae, Cymbellaceae, Gomphonemaceae, Epithemaceae. - Monogr. Acad. Nat. Sci. Philadelphia **13**: 1–213.

PATRIKEEVA, G.I. (1959): Donnie otlojeniya malogo morya. - Trudy Baikal Limnol. Stat. **17**: 205–254.

PEABODY, A.J. & R.M. BURGESS (1984): Diatoms in the diagnosis of death by drowning. - In: MANN, D.G. (ed.): Proceeding of the Seventh International Diatom Symposium: 537–541. Koeltz, Koenigstein.

PEARSALL, W.H. & W. PENNINGTON (1947): Ecological history of the English Lake District. - J. Ecol. **34**: 137–148.

PEDERSON, J.A. & A.M.H. BLAKESLEE (2008): Fifth international conference on marine bioinvasions: Introduction. - I.C.E.S. J. Mar. Sci. **65**: 713–715.

PENNINGTON, W.H. & T.G. TUTIN (1943): Lake sediments: the bottom deposits of the North Basin of Windermere, with special reference to the diatom succession. - New Phytol. **42**: 1–27.

PENNINGTON, W.H., T.G. TUTIN, E.Y. HAWORTH, A.P. BONNY & J.P. LISHMAN (1972): Lake sediments in northern Scotland. - Phil. Trans., Ser. B **264**: 191–294.

PENTECOST, A. (1984): Introduction to freshwater algae. - Richmond Publishing Co. Ltd., Surrey.

PENTECOST, A. (1991a): Algal and bryophyte flora of a Yorkshire (U.K.) hill stream: a comparative approach using biovolume estimations. - Arch. Hydrobiol. **121**: 181–201.

PENTECOST, A. (1991b): The weathering rates of some Wealden sandstone cliffs, Central Weald, England. - Earth Surface Processes and Landforms **16**: 83–91.

PENTECOST, A. (2005): Travertine. - Springer-Verlag, Berlin.

PENTECOST, A. & LUND, J.W.G. (2004): The freshwater algae and free-living protozoa from Malham Tarn, United Kingdom. - King's College, London.

PETER, A. (1913): Der Diatomaceen-Bestand in Südhannover mit Einschluss des Harzes und seine Verteilung auf die Gewässer des Gebietes. - Nachr. Akad. Wiss. Göttingen Math.-Phys. Kl. **1**: 1–84.

PETERSEN, J.B. (1946): Algae collected by Eric Hultén on the Swedish Kamtchatka expedition 1920–1922, especially from hot springs. - Kongel. Danske Vidensk. Selsk. Biol. Meddel. **10**: 1–122.

PETROVA, N.A. (1961): Sostav i dinamika fitoplanktona Yakimbarskogo Zaliva Ladojskogo Ozera. - Avtoreferat Dissertatsii na Soiskaniye Uchyonoi Stepeni Kandidata Biologicheskij Nauk, Leningrad.

PFEIFFER, C.B. (2008a): Destructive invasive algae threatens Gunpowder trout. - The Examiner, 9/5/2008. Baltimore, Maryland

PFEIFFER, C.B. (2008b): Diamond Jim off to a sparkling start. - The Examiner, 3/6/2008. Baltimore, Maryland

PFISTER, P. (2002): Exkursionsprogramm. - Treffen Deutschsprachiger Diatomologen, 15–17 März 2002, Innsbruck.

PICIŃSKA-FAŁTYNOWICZ, J. (1988): Freshwater benthic diatoms from the south-western part of the Hornsund area, SW Spitsbergen. - Polar Res. **6**: 19–34.

POCHON, Y. (2002): Étude comparative de méthodes d'évaluation hydrobiologique. Rivière Somesul mic, Roumanie. - M.Sc. Thesis, University François Rabelais, Tours.

POLUWYK, B.B. & B.B. GARASEBUCH (1986): Biogeograficheske aspektay izucheniya vodoemov basseyna Dunaya v predelah CCCP. - Nauka, Kiev.

POLYAKOVA, Y.I. & R. STEIN (2004): Holocene paleoenvironmental implications of diatom and organic carbon records from the southeastern Kara Sea (Siberian Margin). - Quatern. Res. **62**: 256–266.

POMAZKINA, G.V. & Ye.V. RODIONOVA (2003): Benthic Bacillariophyta in Southern Baikal. - Int. J. Algae **5**: 29–40.

POMAZKINA G.V., Ye.V. RODIONOVA & O.M. MUSHNIKOVA (2008). Microphytobenthos of Southern Baikal (Russia). - Int. J. Algae **10**: 117–130.

POPOVSKAYA, G.I., S.I. GENKAL & E.V. LIKHOSHWAY (2002): Diatomovye vodorosli planktona ozera Bajkal: atlas-opredelitel'. - Nauka, Novosibirsk.

PORETZKY, V.S. (1927): Studies of the attached algae in the waters of Karelia. I. Attached algae in the flowing waters. - Proc. Borodinskaya Freshwater Biol. Stat. Karelia **5**: 1–30.

PORETZKY, V.S. (1931): Nablyudeniya nad diatomovimi planktona r.b. Nevki V 1923–1926 G.G. - Acta Hort. Bot. Acad. Sci. Ante Petrop. **44**: 245–343.

PORETZKY, V.S. (1939): Diatoms of drifting ice in the Petchora Sea. - Izv. Gosud. Geogr. Obshch. **71**: 1536–1552.

PORETZKY, V.S. (1934): O raspredelenii donnoi rastitelynosti v gubaj Ayaya, Frolija i Lakanda na Baikale. - Bull. Inst. Sci. Biol. Geogr. Univ. Irkoutsk **6**: 103–114.

PORETZKY, V.S., A.P. JUZE & V.S. SHESHUKOVA (1934): Diatomovie kolyskogo poluostrova v svyazi s mikroskopicheskim sostavom kolyskij diatomitov. - Trudy Geomorfol. Inst. **8**: 95–210.

PORETZKY, V.S. & V.S. SHESHUKOVA (1953): Diatomovie Teletskogo ozera n svayazannij S Nim Rek. - Leningradski Gosudarstveni Ordena Lenina Universitet Himen a.a. Jdanova biólogo-pochvenni Fakulbtet, Leningrad.

PORTNER, C. (1951): La formation du sédiment calcaire du lac de Neuchâtel. - Schweiz. Z. Hydrol. **13**: 199–290.

PORYADINA, S.N. & A.E. ERGASHEV (1975): Ekologo-floristicheskiy analiz vodorosley reki Ural i ee Pritokov. Vodorosli i griyay Sredney Aeii, Vaypusk 2. - Iizdatlystvo "Fan" Uzbeksoy SSR, Tashkent.

POST, L. (1915): En bestämning af Ancylusgränsen i norra Västmanland. - Geol. Fören. Förh. **37**: 341–343.

POTAPOVA, M. (1996): Epilithic algal communities in rivers of the Kolyma Mountains, NE Siberia, Russia. - Nova Hedwigia **63**: 309–334.

POTAPOVA, M. & D.F. CHARLES (2007): Diatom metrics for monitoring eutrophication in rivers of the United States. - Ecol. Indicators **7**: 48–70.

PPL MONTANA (2006): Mystic Lake hydroelectric project. Vol. 1A. Public final license application. - APEA Exhibit, Butte, Montana.

PRESTON, B. (2008): Invasive algae confirmed in Elk River. - http://www.wv.gov/news/natural-resources/Pages/InvasiveAlgaeConfirmedinElkRiver.aspx

PRITCHARD, A. (1842): A history of infusoria, living and fossil: Arranged according to "Die Infusionthierchen" of C.G. Ehrenberg. - Whittaker & Co., London.

PROSCHKINA-LAVRENKO, A.I. (1950): Diatomovyi Analiz, Kniga 3. Opredelitel' iskopaemykh i sovremennykh diatomyk vodoroslei Poriadok Pennales. - Gosudarstvennoe Izdatelystvo Geologicheskoi Literarat. Botan. Instit. im. V.L. Komarova Akademii Nauk S.S.S.R., Moskva.

PROSCHKINA-LAVRENKO, A.I. (1954): Ekologicheski ocherk vodoroslei vodoyomov levoberejnij terras dolini Reki Severni donets vvedeniye. - Trudy Bot. Inst. V.L. Komarova **9**: 105–190.

PROSCHKINA-LAVRENKO, A.I., S.I. GLESER, A.P. JOUSE, I.V. MAKAROVA & V.S. SHESUKOVA-PORETZKAYA (eds) (1974): Diatomovye vodorosli SSSR. Iskopaemye I sovremennye. Tom 1. - Izdatel, Nauka, Leningrad.

PRYFOGLE, P.A., B.N. RINEHART & E.G. GHIO (1997): Aquatic plant control research. - Idaho National Engineering Laboratory, Idaho Falls.

PUJIN, V., S. STOJKOVIĆ, N. DUKUĆ, B. MILJANOVIĆ, S. MALETIN, A. SEKULIĆ & I. TODOROVIĆ (1999): Hidrobionti - pokazatelji kvaliteta vode reke Tise. - 28. Konferencija o aktuelnim problemima zaštite voda "Zaštita voda '99": 230–242. Soko Banja.

QUECKETT, J. (1850): Descriptive and illustrated catalogue of the histological series contained in the Museum of the Royal College of Surgeons. Prepared for the microscope. Vol. I. - R. and J.E. Taylor, London.

QUEEN, J.W. (1862): Priced and illustrated catalogue of optical instruments. - Unpub., Philadelphia.

QUENNERSTEDT, N. (1955): Diatoméerna i Långans sjövegetation. - Acta Phytogeogr. Suec. **36**: 1–208.

QUINLAN, H., M. DRYER, G. CZYPINSKI, J. PYATSKOWIT & J. KRAJNIAK (2007): Strategic approach to problem identification and monitoring of aquatic invasive species within the Great Lakes inventory and monitoring network park units. - U.S. Fish and Wildlife Service, Ashland Fishery Resources Office, Great Lakes Network Report GLKN/2007/08, Ashland, Wisconsin.

RABENHORST, L. (1853): Die Süsswasser-Diatomaceen (Bacillarien) für Freunde der Mikroskopie. - Edward Kummer, Leipzig.

RABENHORST, L. (1864): Flora Europaea Algarum aquae dulcis et submarinae. Sectio I. Algas diatomaceas complectens, cum figuris generum omnium xylographice impressis. - Apud Eduardum Kummerum, Lipsiae (Leipzig).

RADER, R. & T. BELISH (1997): Effects of ambient and enhanced UV-B radiation on periphyton in a mountain stream. - J. Freshwater Ecol. **12**: 615–628.

RAINIO, H. (1973): Suomen geologinen kartta. Maaperäkartta 1:100 000. Lehti 3212 Jyväskylä. - Geologinen tutkimuslaitos, Helsinki.

RAKOWSKA, B. & M. BIE'N (2000): Okrzemki bentosowe rzeki San na stanowisku w Postolowie kolo Sanoka, ze szczególnym uwzgl¸ednieniem okrzemki *Didymosphenia geminata* (Lyngbye) M. Schmidt. - Uniwersytet Lodzki, Katedra Botaniki (manuscript).

RALFS, J. (1843): On the British species of *Meridion* and *Gomphonema*. - Ann. Nat. Hist. **12**: 457–467.

RALFS, J. (1850): British algae, dried specimens of marine and freshwater algae, including the desmidieae and diatomaceae. Volume I, numbers 1–40. - Paddy, Penzance.

RAMSAY, W. & E.T. NYHOLM (1895): Cancrinitsyenit und einige verwandte Gesteine aus Kuolajärvi. - Bull. Commiss. Géol. Finlande **1**: 1–12.

RANNEY, S.H., B. SPINDLER, S. CHIPPS & J. SHEARER (2007): Macroinvertebrate communities in Rapid Creek, South Dakota: comparisons between areas with and without the invasive *Didymosphenia geminata*. - Dakota Chapter American Fisheries Society Abstracts, Brookings, South Dakota.

RASKINA, E.E. (1968): Fitoplankton i obrastaniya reki Nevi i Eyo Pritokov. - Trudy Zool. Inst. **45**: 168–192.

RATHKE, L. (2007): Icky algae alarms New England fishermen. - The Washington Post, August 26, 2007.

RATKOVA, T. & P. WASSMANN (2005): Sea ice algae in the White and Barents Sea: composition and origin. - Polar Res. **24**: 95–110.

RATTRAY, J. (1887): A diatomaceous deposit from North Tolstoa, Lewis. - Trans. Roy. Soc. Edinburgh **33**: 419–441.

RAWSON, D.S. (1956): Algal indicators of trophic lake types. - Limnol. Oceanogr. **1**: 18–25.

RAZJIGAEVA, N.G., A.M. KOROTKY, T.A. GREBENNIKOVA, L.A. GANZEY, L.M. MOKHOVA, V.B. BAZAROVA, L.D. SULERZHITSKY & K.A. LUTAENKO (2002): Holocene climatic changes and environmental history of Iturup Island, Kurile Islands, northwestern Pacific. - Holocene **12**: 469–480.

REIMER, C.W., M.V. HENDERSON & R. PATRICK (2001): Bibliography, addenda, and corrigenda for The Diatoms of the United States, Volume 1 and Volume 2, Part 1. - Proc. Acad. Nat. Sci. Philadelphia **151**: 129–155.

REMINGTON, D. & J. LOUGH (2005): Water quality assessment and objectives for Toboggan Creek and tributaries: Technical Report. - BC Water Land and Air Protection, Smithers, British Columbia.

RHODES, R.G. (2003): Tailrace of Beaver Lake: Site of massive *Didymosphenia geminata* growths. -http://biology.missouristate.edu/phycology/trout/Tailrace_algae_in_northwest_arkansas.htm

RIEBERGER, K. (1991): The distribution of the diatom *Gomphonema geminata* in Vancouver Island streams, province of British Columbia. - Ministry of Environment, Vancouver.

RIVERA, P. (1983): A guide for references and distribution for the Class Bacillariophyceae in Chile between 18°28'S and 58°S. - Biblioth. Diatomol. **3**: 1–386.

ROBINSON, C.T. & B. KAWECKA (2005): Benthic diatoms of an Alpine stream/lake network in Switzerland. - Aquatic Sci. **67**: 492–506.

ROHDE, B. (2007): Invasive algae found in Tennessee and Virginia rivers. - The Fly Paper **5**: 3–4.

ROUND, F.E. (1957a): The distribution of Bacillariophyceae on some littoral sediments of the English Lake District. - Oikos **8**: 16–37.

ROUND, F.E. (1957b): The late-glacial and post-glacial diatom succession in the Kentmere Valley deposit. Part I. Introduction, methods and flora. - New Phytol. **56**: 98–126.

ROUND, F.E. (1959): The composition of some algal communities living in rock pools on skerries near the Zoological Station at Tvärminne, S. Finland. - Commentat. Biol. **21** (1): 1–13.

ROUND, F.E. (1961): The diatoms of a core from Esthwaite Water. - New Phytol. **60**: 43–59.

SABATER, S. & E.Y. HAWORTH (1995): An assessment of recent trophic changes in Windermere South Basin (England) based on diatom remains and fossil pigments. - J. Paleolimnol. **14**: 151–163.

ŞAHIN, B. (1992): Trabzon yöresi tatlısu diyatome florası üzerinde bir araştırma. Doğa. - Turk. J. Bot. **16**: 104–116.

ŞAHIN, B. (1997): Benthic algae of Sera Lake. - Ot Sistematik Botanik Dergisi (Herb Journal of Systematic Botany) **4**: 77–86.

ŞAHIN, B. (1998a): A study on the benthic algae of Uzungöl (Trabzon). - Turk. J. Bot. **22**: 171–189.

ŞAHIN, B. (1998b): Sera Deresi'nin (Trabzon) bentik alg florası. - XIV Ulusal Biyoloji Kongresi, 7–10 Eylül 1998, Cilt II: 272–281.

ŞAHIN, B. (1999): Sera Gölü'nün (Trabzon) fitoplanktonu üzerinde taksonomik bir araştirma. - Istanbul Üniv. Ürün. Derg. **1**: 81–88.

ŞAHIN, B. (2000): Algal flora of Lakes Aygır and Balıklı (Trabzon, Turkey). - Turk. J. Bot. **24**: 35–45.

ŞAHIN, B. (2001): Epipelic and epilithic algae of Dağbasi Lake (Rize-Turkey). - Turk. J. Bot. **25**: 187–194.

ŞAHIN, B. (2002): Epipelic and epilithic algae of the Yedigöller Lakes (Erzurum-Turkey). - Turk. J. Biol. **26**: 221–228.

ŞAHIN, B. (2003): Epipelic and epilithic algae of lower parts of Yanbolu River (Trabzon, Turkey). - Turk. J. Biol. **27**: 107–115.

ŞAHIN, B. (2004): Species composition and diversity of epipelic algae in Çatal Lake (Fiebinkarahisar-Giresun, Turkey) - Turk. J. Bot. **28**: 103–109.

ŞAHIN, B. & A. GÖNÜLOL (1999): Uzungöl'ün littoral bölge fitoplanktonu üzerinde taksonomik bir arastirma. - XIII Ulusal Biyoloji Kongresi, 17–20 Eylül 1996, Cilt V Hidrobiyoloji Seksiyonu, Istanbul.

ŞALARI, V.M. (1968): Sostav i raspredelenie fitoplanktona v reke Prut. - Limnol. Ber. X. Jubiläum Donauforsch. Sofia **1**: 339–350.

SALWEY, T. (1850): Stirpes cryptogama sarnienses; or contributions towards the cryptogamic flora of Guernsey. - Trans. Proc. Bot. Soc. Edinburgh **3**: 71–78.

SANECKI, J. (2003): 5th International Symposium Use of Algae for Monitoring Rivers. Post-Symposium Excursion - Dunajec River. Guidebook. - Kraków.

SANECKI, J., E. DUMNICKA & J. STARMACH (1998): Charakterystyka podstawowych elementów biocenoz Dunajca i jego dopływów w rejonie nowopowstałych zbiorników zaporowych. - Pieniny-Przyroda i Człowiek **6**: 89–99.

SARMAJA-KORJONEN, K. & P. ALHONEN (1999): Cladoceran and diatom evidence of lake-level fluctuations from a Finnish lake and the effect of aquatic-moss layers on microfossil assemblages. - J. Paleolimnol. **22**: 277–290.

SCHAUMBURG, J., U. SCHMEDTJE, CH. SCHRANZ, B. KOPF, S. SCHNEIDER, P. MEILINGER, G. HOFMANN, A. GUTOWSKI & J. FOERSTER (2005): Instruction protocol for the ecological assessment of running waters for the implementation of the EU Water Framework Directive: macrophytes and phytobenthos. - Federal Ministry of Education and Research (FKZ 0330033), Lander Working Group Water (O 11.03), Bavarian Water Management Agency, Munchen.

SCHENK, A. (1881): Handbuch der Botanik Bd. 2. - Trewendt, Breslau.

SCHIFTNER, U. & H. BLATTERER (2004): Ungewöhnliche Algenblüte in der Steyr - *Didymosphenia geminata* (Lyngbye) M. Schmidt 1899. - Gewässerschutz 2002/2003 Stand und Perspektiven. Hrsg.: Amt der Oö. Landesregierung Abteilung Wasserwirtschaft, Aufgabengruppe Gewässerschutz, Linz: 97–99.

SCHIRSCHOV, P.P. (1933): Vergleichende Übersicht der Coenose der Rheophilalgen im Flusse Tuloma und verschiedenen anderen Wasserbecken. - Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 2. Sporov. Rast. **1**: 65–92.

SCHMIDT, A. (1899): Atlas der Diatomaceen-Kunde. Series V, Heft 54 - O.R. Reisland, Leipzig.

SCHROEDER, O. (2005): Invasive algae '*Didymo*' found in Tennessee River. - Tennessee Wildlife Resources Agency, Jackson, Tennessee.

SEDGWICK, W.T., G.R. TAYLOR & J.S. McNUTT (1912): Is typhoid fever a "rural" disease? - J. Infect. Dis. **9**: 141–192.

SEMENCHENKO, A.Y., E.I. BARABANSCHIKOV & L.A. MEDVEDEVA (2004): Ecological prognostication on condition of Samarga River ecosystem after amplitudinous timber. - Samarskaya Luka **15**: 44–58.

SENSIBAUGH, J. (2002): 21.3.1 Montana Diatom Taxa List. - http://www.deq.mt.gov/wqinfo/monitoring/SOP/pdf/21-3-1.pdf

SHAMSUDIN, L. (1990): Diatom marin di perairan Malaysia. - Dewan Bahasa dan Pustaka, Kementerian Pendidikan, Kuala Lumpur.

SHAYLER, H.A. & P.A. SIVER (2004): Description of a new species of the diatom genus *Brachysira* (Bacillariophyta), *Brachysira gravida* sp. nov. from the Ocala National Forest, Florida, USA. - Nova Hedwigia **78**: 399–409.

SHCHUR, L.A. (2006): Sovremennoe sostoyanie fitoplanktona i mikrofitobentosa severnayh vodoemov Krasnoyarskogo kraya. - Izv. Samara Sci. Center Russ. Acad. Sci. **8**: 163–175.

SHCHUR, L.A. & V.N. LOPATIN (2005a): Assessment of the modern sanitary and ecological conditions of water in the lower reaches of the Angara River (Krasnoyarsk region). - Int. J. Algae **7**: 71–87.

SHCHUR, L.A. & V.N. LOPATIN (2005b): Otsenka sovremennogo sanitarno-ekologicheskogo sostoyaniya voday nizhney chasti r. Angaray (Krasnoyarskiy kray) po fitoplanktonu i mikrofitoperifitonu. - Algologia **15**: 286–301.

SHCHUR, L.A., A.D. APONASENKO, V.N. LOPATIN, V.S. FILIMONOV & N.V. SHEPELEVICH (1998): Sanitarno-ekologicheskoe sostoyanie sredney chasti reki Enisey i ee pritokov. - Gidrobiol. Zhurn. (Kiev) **34**: 46–54.

SHEARER, J. & J. ERICKSON (2006): *Didymosphenia geminata* and the Rapid Creek brown trout fishery, South Dakota (Abstract). - Region 8 Biomonitoring and Bioassessment Meeting, April 4–6, 2006, Utah State University, Logan.

SHEATH, R.G. & K.M. COLE (1992): Biogeography of stream macroalgae in North America. - J. Phycol. **28**: 448–460.

SHEATH, R.G., M.O. MORISON, J.E. KORCH, D. KACZMARCZYK & K.M. COLE (1986): Distribution of stream macroalgae in south-central Alaska. - Hydrobiologia **135**: 259–269.

SHEATH, R.G., M.L. VIS, J.A. HAMBROOK & K.M. COLE (1996): Tundra stream macroalgae of North America: composition, distribution and physiological adaptations. - Hydrobiologia **336**: 67–82.

SHELBY, E.L. (2006a): An assessment and analysis of benthic macroinvertebrate communities associated with the appearance of *Didymosphenia geminata* in the White River below Bull Shoals Dam. - Arkansas Department of Environmental Quality, Little Rock.

SHELBY, E. (2006b): *Didymosphenia geminata* (Didymo) nuisance algae in Arkansas. - Arkansas Department of Environmental Quality, Little Rock.

SHERBOT, D.M.J. & M.L. BOTHWELL (1993): *Didymosphenia geminata* (Gomphonemaceae). A review of the ecology of *D. geminata* and the physicochemical characteristics of endemic catchments on Vancouver Island. NHRI Contribution No. 93005. - National Hydrology Research Institute, Environment Canada, Saskatoon.

SHESHUKOVA-PORETSKAYA, V.S. (1955): Diatomovie vodorosli morskij mejmorennij otlojeni evropeiskoi chasti SSSR. - Uchen. Zap. Leningradsk. Gosud. Univ., Ser. Biol. Nauk **191**: 163–197.

SHESHUKOVA-PORETSKAYA, V.S. (1962): Diatomovaya flora nekotorij torfyanikov poberejya Baltiki (Estosnkaya SSR i Kaliningradskaya oblasty). - Uchen. Zap. Leningradsk. Gosud. Univ., Ser. Biol. Nauk **313**: 137–170.

SHKURINA, N.A. & G.A. BELYAKOVA (2006): Vodorosli sem. Gomphonemataceae in Oz. Dalnee (Kamchatka). - In: LOMONOSOV, M.V. (ed.): Mushrooms and algae in biocoenoses. - Proceedings of the 75th International Conference on Biology, Moscow.

SHKURINA, N.A., E.V. LEPSKAYA & G.A. BELYAKOVA (2005): Diatomovayh v ozere Dalneye (Kamchatka). - In: MAKARCHENKO, E.A. (ed.): Vladimir Ya. Levanidov's Biennial Memorial Meetings (Chteniya Pamyati Vladimira Yakovlevicha Levanidova) **3**: 214–222. Dalnauka, Vladivostok.

SHLYAPINA, E.V. (1927): O fitoplanktone R. Kami. - Arbeiten Biol. Wolga Stat. **9**: 131–160.

SHTIN, E.A. (1950): Fitoplankton reki kami na uchastke Galevo - R. Belaya. - In: GORBKOGO, A.M. (ed.): Izvestiya Estestvenno - Nauchnogo Instituta pri Molotovskom Gosudarstvennom Universitete Himen Tom XII: 481–497.

SIEMIŃSKA, J. (1964): Chrysophyta 2, Bacillariophyceae - Okrzemki. - In: STARMACH, K. (ed.): Flora Słodkowodna Polski **6**: 1–519. Państwowe Wydawnictwo Naukowe, Warszawa.

SILVESTRI, S. (2004): Snorkel observations of winter steelhead trout escapement to the Englishman River. - Ministry of Water, Land and Air Protection, Vancouver Island Region, Nanaimo.

SILVESTRI, S. (2006): Puntledge River (Reach C) spawning gravel placements for fish habitat restoration, 2005. - British Columbia Conservation Foundation, Greater Georgia Basin Steelhead Recovery Plan, Vancouver.

SIMPSON,G. (2006): Movement of catchable rainbow trout after stocking in Rapid Creek. - South Dakota Department of Game, Fish and Parks, Pierre, South Dakota.

SIMS, P. (1996): An atlas of British diatoms arranged by B. Hartley based on illustrations by H.G. Barber and J.R. Carter. - Biopress Ltd., Bristol.

SIVERTSEN, I. (1975): The biomass and species composition of phytoplankton in Lake Hammervatnet, Central Norway. - Norweg. J. Bot. **27**: 37–53.

SKABICHEVSKAYA, N.A. (1984): Blizhniy kontse chetvertichnogo diatomovayh na severe Eniseyu. Sdelka. V. 544. - Nauka, Moskva.

SKABICHEVSKY, A.P. (1953): O fitoplanktone i kremnezemkaj ozera Frolija (Zabaikalbe). - In: JDANOVA, A.A. (ed.): Trudy Irkutskogo Gosudarstvennogo Universiteta: 145–152. Ministerstvo Kulbturi SSSR, Irkutski Gosudarstvenni Universitet, Irkutsk.

SKABICHEVSKY, A.P. (1958): Vodorosli nekotorij vodoyomov okrestnostei Irkutska. - Issl. Mikroflora. Zooplanktona Baikala **22**: 48–62.

SKABICHEVSKY, A.P. (1966): On the distribution of benthal vegetation in the Baikal Lake in the vicinity of Bolshiye Koty. - Byull. Moskovsk. Obshch. Isp. Prir. Otd. Biol. **71**: 108–119.

SKABICHEVSKY, A.P. (1969): Osnovnie cherti raspredeleniya donnij vodoroslei Baikala. - Vtoroe Soveshanie Po Voprosam Krugovorota Veshestva i Energii v Ozyornij Vodoyomaj, Sibirskoe Otdelenie Limnologicheski Institut, Akademiya Nauk SSSR, Listvenichnoe.

SKABICHEVSKY, A.P. (1973): Novosti geografii i sistematiki rastenii Sibiri. - Nauka, Moskva.

SKABICHEVSKY, A.P. (1983): A new species of *Didymosphenia lineata* (Bacillariophyta) and its variability. - Bot. Zhurn. **68**: 1254–1260.

SKUJA, H. (1964): Grundzüge der Algenflora und Algenvegetation der Fjeldgegenden um Abisko in Schwedisch-Lappland. - Nova Act. Regiae Soc. Sci. Upsal. **18** (3): 1–65.

SKULBERG, O.M. (1972): Undersøkelse av begroing i regulerte og oregulerte vassdrag. - Norsk Institutt for Vannforsknings B-13/69, O-113/65, Oslo.

SKULBERG, O.M. (1974): Begroing i norske vassdrag, virkninger av regulering. - Norsk Institutt for Vannforsknings årbok, Oslo.

SKULBERG, O.M. (1982): Effects of stream regulation on algal vegetation. - In: LILLEHAMMER, A. & S.J. SALTVEIT (eds): Regulated rivers: 107–124. Columbia University Press, New York.

SKULBERG, O.M. & J. KOTAI (1978): Miljø faktorer og algeutvikling I strømmende vann. Noen observasjoner av innvirkningene av vassdragsreguleringer på begroings-forhold I Glåma i Østerdalen. - NIVA årbok. Bls. 63–73, Oslo.

SKULBERG, O.M. & A. LILLEHAMMER (1984): The physiographic conditions, chemical and biological quality of water, and plant and animal life are analyzed for the Glåma River of Norway. - In: WHITTON, B.A. (ed.): Ecology of European rivers: 499–525, Blackwell Scientific Publications, Oxford.

SKVORTSOV, B.V. (1918): Pervaye dannaye o fitoplanktona v Amur reki. Materialay o floray vodorosley aziatskoy chasti Rossii VII. - Zhurn. Russk. Bot. Obshch. Akad. Nauk **3**: 1–9.

SKVORTSOV, B.V. (1927): Diatoms from Tientsin, North China. - J. Bot. **65**: 102–109.

SKVORTSOV, B.V. (1928): Diatoms from Khingan, North Manchuria, China. - Philipp. J. Sci. **35**: 39–51.

SKVORTSOV, B.V. (1935): Diatomées récoltées par le Père E. Licent au cours de ses voyages, dans le Nord de la Chine, au bas Tibet, en Mongolie et en Mandjourie. - Publ. Mus. Hoangho Paiho Tientsin **36**: 1–43.

SKVORTSOV, B.V. (1937): Bottom diatoms from Olhon Gate of Baikal Lake, Siberia. - Philipp. J. Sci. **62**: 293–377.

SKVORTSOV, B.V. (1938): Diatoms from Chengtu, Szechwan, Western China. - Philipp. J. Sci. **66**: 479–496.

SKVORTSOV, B.V. (1969): Diatoms from Yenisei River and its tributaries, middle part of Siberia, Western Asia. - Philipp. J. Sci. **98**: 57–113.

SKVORTSOV, B.V. & K.I. MEYER (1928): A contribution to the diatoms of Baikal Lake. - Trudy Sungar. Rechn. Biol. Stantsii (Proceedings of the Sungari River Biological Station) **1** (5): 1–55.

SLÁDEČEK, V. (1973): System of water quality from the biological point of view. - Arch. Hydrobiol. Beih. **7**: 1–218.

SMALL, J. (1950): Revision of numerical data for diatom durations and numbers. - Proc. Roy. Irish Acad. Sect. B **53**: 241–263.

SMITH, H.L. (1874): Species diatomacearum typicae studiis. - Geneva, New York.

SMITH, W. (1853): Synopsis of British Diatomaceae. - John Van Voorst, London.

SNOEIJS, P. & N. BALASHOVA (1998): Intercalibration and distribution of diatom species in the Baltic Sea. Volume 5. - The Baltic Marine Biologists Publication **16e**: 1–144. Opulus Press, Uppsala.

SOININEN, J. & P. NIEMELÄ (2002): Inferring the phosphorus levels of rivers from benthic diatoms using weighted averaging. - Arch. Hydrobiol. **154**: 1–18.

SOININEN, J., R. PAAVOLA & T. MUOTKA (2004): Benthic diatom communities in boreal streams: community structure in relation to environmental and spatial gradients. - Ecography **27**: 330–342.

SOININEN, J., R. PAAVOLA, J. KWANDRANS & T. MUOTKA (2009): Diatoms: unicellular surrogates for macroalgal community structure in streams? - Biodivers. & Conservation **18**: 79-89

SOMMERFELT, S.C. (1826): Supplementum florae lapponicae qvam editit Dr. Georgius Wahlenberg. Cum tabulis coloratis III. - Christianiae (Oslo).

SONESTEN, L., L. ERIKSSON, E. HERLITZ, G. PERSSON, G. WEYHENMEYER, A.M. WIEDERHOLM & M. WALLIN (2000): Vänern och dess tillflöden 1999. - Vänern - tema mångfald. Årsskrift 2000, Vänerns vattenvårdsförbund, Mariestad, Sweden.

SONINKHISHIG, N., T. JAMSRAN & M.B. EDLUND (1999): Diatoms (Bacillariophyceae) of the Tuul River and their use as water quality indicators. - Proc. Mongolian State Univ. Biol. **146**: 296–313.

SPAULDING, S.A. (2005): Connections between water and life: a tale of a microscopic diatom. - Boulder Creek Watershed Newslett. **5**: 3.

SPAULDING, S.A. (2006): Special session on *Didymosphenia geminata*. - Western Division American Fisheries Society Meeting. May 15–16, 2006, Bozeman, Montana. Revised Post meeting update. - http://www.epa.gov/region8/water/didymosphenia/Montana%20Summary.pdf

SPAULDING, S.A. (2007): Report on algae in streams in North America: diatoms are behaving badly. - Institute of Arctic and Alpine Research (INSTAAR), Boulder, Colorado.

SPAULDING, S.A. & L. ELWELL (2007): Increase in nuisance blooms and geographic expansion of the freshwater diatom *Didymosphenia geminata*. - Open-file report 2007-1425. U.S. Geological Survey, Denver, Colorado.

SPAULDING, S.A., K. HERMANN, G. STEUVEN & J.W. ERICKSON (2005a): A nuisance diatom species: *Didymosphenia geminata* in western streams. - EPA 2005 Science Forum Archives. http://tinyurl.com/ccjtfl

SPAULDING, S.A., M.R. GRETZ, D. BEESON & K. HERMANN (2005b): Expansion in ecological and geographical range of *Didymosphenia geminata*. - 18th North American Diatomist Symposium, Mobile, Alabama.

STÅLBERG, N. (1939): Lake Vättern. Outlines of its natural history, especially its vegetation. - Acta Phytogeogr. Suec. **11**: 1–52.

STANISLAVSKAYA, E.V. (2007): Inter-annual and seasonal dynamics of periphytic diatoms in Lake Krasnoje (Karelian Isthmus, Russia). - Proceedings of X Diatom Conference of CIS Countries. Minsk.

STANISLAVSKAYA, E.V. & A.S. GORCHENKO (2005): Diversity of periphyton in tributaries of Lake Ladoga. - In: ANDREEV, M.P. (ed.): News in systematic of nonvascular plants: 79–98. St. Petersburg State University, St. Petersburg.

STENINA, A. & M. ZAVARZINA (2002): Vidovoy sostav diatomovayh vodorosley v epilitone ruchyya na territorii neftepererabatayvayushtego zavoda. - Inst. Biol. Bull. **58** (unpaginated).

STENZEL, R. (1862): Über die Verbreitung der Algen, insbesondere in den Meeren Europas. - Jahresber. Schles. Ges. Vaterl. Cult. **1861**: 84–91.

STERRENBURG, F.A.S. (1973): Extreme malformation and the notion of species. -Microscopy **32**: 314–318.

STERRENBURG, F.A.S., R. GORDON, M.A. TIFFANY & S.S. NAGY (2007): Diatoms: Living in a constructal environment - In: SECKBACH, J. (ed.): Algae and cyanobacteria in extreme envinonments: 141–172. Springer, New York.

STEVENSON, R.J. (1997): Scale-dependent determinants and consequences of benthic algal heterogeneity. - J. N. Amer. Benthol. Soc. **16**: 248–262.

STEVENSON, R.J., M.L. BOTHWELL & R.L. LOWE (1996): Algal Ecology. - Academic Press, San Diego.

STODDARD, J.L., D.V. PECK, A.R. OLSEN, S.G. PAULSEN, J. VAN SICKLE, A.T. HERLIHY, P.R. KAUFMANN, R.M. HUGHES, T.R. WHITTIER, G. LOMNICKY, D.P. LARSEN, S.A. PETERSON & P.L. RINGOLD (2005): Ecological assessment of western streams and rivers. - US Environmental Protection Agency, Corvallis, Oregon.

STODDER, C. (1859): Note on small stream in West Roxbury. - Proc. Boston Soc. Nat. Hist. **7**: 26–28.

STOERMER, E.F. (1975): Comparison of benthic diatom communities in Lake Michigan and Lake Superior. - Verh. Int. Vereinigung Limnol. **19**: 932–938.

STOERMER, E.F. (1980): Characteristics of benthic algal communities in the upper Great Lakes. U.S. Environmental Protection Agency, Ecological Research Series EPA 600/3-80-073. - Environmental Research Laboratory, Duluth, Minnesota.

STOERMER, E.F. (1993): Evaluating diatom succession: some pecularities of the Great Lakes case. - J. Paleolimnol. **8**: 71–83.

STOERMER, E.F. & R.G. KREIS (1978): Preliminary checklist of diatoms (Bacillariophyta) from the Laurentian Great Lakes. - J. Great Lakes Res. **4**: 149–169.

STOERMER, E.F. & N.A. ANDRESEN (2006): Atypical *Tabularia* in coastal Lake Erie. - In: OGNJANOVA-RUMENOVA, N. & K. MANOYLOV (eds): Fossil and Recent Phycological Studies: 9-16. Pensoft Publishers, Sofia, Moscow.

STOERMER, E.F., Y.Z. QI & T.B. LADEWSKI (1986): A quantitative investigation of shape variation in *Didymosphenia geminata* (Lyngbye) M. Schmidt (Bacillariophyta). - Phycologia **25**: 494–502.

STOERMER, E.F., R.G. KREIS & N.A. ANDRESEN (1999): Checklist of diatoms from the Laurentian Great Lakes II. - J. Great Lakes Res. **25**: 515–566.

STOHLGREN, T., C. JARNEVICH & S. KUMAR (2007): Forest legacies, climate change, altered disturbance regimes, invasive species and water. - Unasylva **229**: 44–49.

SUBAKOV-SIMIÆ, G. & M. CVIJAN (2004): *Didymosphenia geminata* (Lyngb.) Schmidt (Bacillariophyta) from the Tisa River (Serbia) - its distribution and specific morphological and ecological characteristics. - Arch. Hydrobiol. Suppl. **154** (Algol. Stud. **114**): 53–66.

SUHR, J. (1905): Die Algen des östlichen Weserberglandes. - C. Heinrich, Dresden.

SUSHCHIK N.N., M.I. GLADYSHEV, E.S. KRAVCHUK, E.A. IVANOVA, A.V. AGEEV & G.S. KALACHOVA (2007): Seasonal dynamics of long-chain polyunsaturated fatty acids in littoral benthos in the upper Yenisei river. - Aquatic Ecol. **41**: 349–365.

SUTHERLAND, S., M. RODWAY, C. KILROY, W. JARVIE & G. HUGHES (2007): The survival of *Didymosphenia geminata* in three rivers and associated spring-fed tributaries in the South Island of New Zealand. - MAF Biosecurity New Zealand, Christchurch.

SWANN, G., A. MACKAY, M. LENG & F. DEMORY (2006): Diatom concentration for Continent Ridge core CON01-603-5. - Scientific Drilling Database. doi: 10.1594/GFZ.SDDB.1052.

SYMOENS, J.J. (1950): Quelques acquisitions récentes en limnologie, I. Quelques données sur la biologie des lacs. - Imprimerie Médicale et Scientifique, Bruxelles.

SZABÓ, K. (2004): Comparative analysis of the benthic diatoms of some Hungarian waters. Floristical investigations and water quality assessments. - Ph. D. Thesis, Szent István University, Gödöllö, Hungary.

SZABÓ, K., É. ÁCS & K.T. KISS (2004): Invasive, red list and new species for the Hungarian diatom flora. - Proceedings and abstracts of the 14th Hungarian Algological Meeting, Göd, Hungary.

SZABÓ, K., K.T. KISS, G. TABA & É. ÁCS (2005): Epiphytic diatoms of the Tisza River, Kisköre Reservoir and some oxbows of the Tisza River after the cyanide and heavy metal pollution in 2000. - Acta Bot. Croat. **64**: 1–46.

SZKLARCZYK-GAZDOWA, C. (1960): Plankton roślinny niektórych stawów tatrzańskich. - Acta Soc. Bot. Polon. **29**: 597–624.

TAHTEEV, V.V., A.V. ARBUZOV, E.V. AMBROSOVA, S.I. SHAMANOVA, I.N. EGOROVA & E.A. SUDAKOVA (2005): Prirodnaye osobennosti i sovremennoe sostoyanie gidrotermalynayh ekosistem Vostochnogo Pribaykalyya. - In: IRKUTSKOGO POLITEHNICHESKOGO UNIVER-

SITETA (ed.): Prirodnaya i antropogennaya dinamika nazemnayh ekosistem, posvyashtennaya pamyati vaydayushtegosya issledovatelya lesov Sibiri Anatoliya Sergeevicha Rozhkova (1925–2005 gg.): 98–101. Rossiyskaya Akademiya Nauk Sibirskoe Otdelenie Sibirskiy Institut Fiziologii i Biohimii Rasteniy, Irkutsk.

TARBELL, D. (2005): Flow and fluctuation in the reach downstream of Chili Bar. - Technical Report, Sacramento, California.

TATNALL, E. (1860): Catalogue of the phaenogamous and filicoid plants of Newcastle County, Delaware. - Wilmington Institute, Wilmington, Delaware.

TAUBAYEV, T.T. & A.E. ERGASHEV (1969): O flore visokogornogo Ozera Zorkul' na Pamire. - Flora Vodoroslei Vodoyomov Uzmekistana, Izdatsel'stvo, fan Uzbekskoi SSR, Akademiya Nauk Uzbekskoi SSR, Institut Botaniki, Tashkent.

TAYLOR, F.B. (1929): Notes on diatoms. An introduction to the study of the Diatomaceae. - Guardian Press, Bournemouth.

TERRY, W.A. (1907): A partial list of Connecticut diatoms with some account of their distribution in certain parts of the state. - Rhodora **104**: 125–140.

THOMAS, B.W. & H.H. CHASE (1887): Diatomaceae of Lake Michigan as collected during the last 16 years from the water supply of the city of Chicago. - Notarisia **2**: 328–330.

THOMAS, L. (2006): Aquatic nasties in the water near you. - Alpha **128**: 1–8.

THOMSON, P. & D. BIRNIE (2005): Revised *Didymosphenia* interim response strategy. - Biosecurity New Zealand, Christchurch.

THUNMARK, S. (1937): Über die regionale Limnologie von Südschweden. - Sveriges Geol. Undersök. **410**: 1–160.

TIKKANEN, M. & A. KORHOLA (1993): Divergent successions in two adjacent rocky basins in southern Finland: a physiographic and palaeoecological evaluation. - Ann. Acad. Sci. Fenn. Ser. A **157**: 1–26.

TISCHLER, G. (1934): Allgemeine Pflanzenkaryologie. - Gebrüder Borntraeger, Berlin.

TIUNOVA, T.M. (ed.) (2007): Hydro-ecological monitoring in Bureyskaya Hydro-Electric Power Station zone influences. - Russian Academy of Sciences, Khabarovsk.

TONACHEBSYKUŬ, O.V. & O.P. OKSIYUK (1960): Diatomovi vodorosli. - Vizn. Prisn. Vodorosli Ukrains'k. **11**: 1–411.

TOPACHEVSKY, A.V. & A.V. FRANTSEV (eds) (1968): Kanaly SSSR. Gidrokhimiia i gidrobiologiia. - Nauk, Kiev.

TRAAEN, T.S., E.A. LINDSTRØM & H. HURU (1990): Overvåking av Tanavassdraget. Fremdriftsrapport for 1988-1989. - NIVA-rapport 2515, Vadsø.

TRIFONOVA, I.S., O.A. PAVLOVA, E.V. STANISLAVSKAIA & A.L. AFANASIEVA (2004): Taksonomicheskiy sostav i ekologicheskie, harakternaye dlya Vuoksi rechnayh vodorosley floray. Sostoyanie biocoenoses ot ozera Vuoksa - reka sistemay. - SPb: IGV sotrudnichestva / OOO Sankt-Peterburg gosudarstvennogo universiteta, Sankt-Peterburg.

TSIMBALYUK, V.A. (1955): Formirovanie fitobentosa dneprovskogo vodojranilisha polse ego vosstanovleniya. - Vestnik Dnepropetrovskogo Nauchno-Issledovat. Instituta Gidrobiologii, T.XI.

TSUMURA, K. (1967): Additional confirmation of some rare or curious diatoms, Japanese and foreign. - J. Yokohama City Univ. Ser. C-51 **168**: 1–24.

TSUMURA, K. (1991): The collection of diatom slides preserved in the National Science Museum of Japan. - Diatom **6**: 45–56.

TUJI, A. (2004): The diatom type materials of Haruo Okuno five diatom species described by Okuno (1943, 1944) from the Yatuka Deposit. - Bull. Natl. Sci. Mus. Ser. Bot. **30**: 79–88.

TULCHINSKAYA, I. (2004): Addition to the algae flora of the Kuznetsk depression. - Turczaninowia **7**: 69–78.

TURTON, W. (1807): British fauna, containing a compendium of the zoology of the British Islands. Vol 1. - J. Evans, Swansea.

TYNNI, R. (1978): Über Finnlands rezente und subfossile Diatomeen X. - Bull. Geol. Surv. Finland **296**: 1–55.

UENO, M. (1940): A catalogue of freshwater diatoms of Manchoukuo. - In: KAWAMURA, T. (ed.): Report of the limno-biological survey of Kwantung and Manchoukuo: 504–521. Dalian (Dairen), China.

UGEDAL, O., L. SAKSGÅRD, H. REINERTSEN, J.I. KOKSVIK, A.J. JENSEN, E.B. THORSTAD, T.F. NÆSJE, R. SAKSGÅRD & H.H. BLOM (2003): Biologiske undersøkelser i Altaelva 2002. - NINA Oppdragsmelding **791**: 1–63.

UGEDAL, O., E.B. THORSTAD, T.F. NÆSJE, H.R. REINERTSEN, J.A. KOKSVIK, L. SAKSGÅRD, N.A. HVIDSTEN, H.H. BLOM, P. FISKE & A.J. JENSEN (2005): Biologiske undersøkelser i Altaelva 2004. - NINA Rapport **43**: 1–98.

UGEDAL, O., E.B. THORSTAD, T.F. NÆSJE, L.M. SAKSGÅRD, H.R. REINERTSEN, P. FISKE, N.A. HVIDSTEN & H.H. BLOM (2006): Biologiske undersøkelser i Altaelva 2005. - NINA Rapport **177**: 1–52.

UKNBN-SEPA (2008): UK National Biodiversity Network, Scottish Environment Protection Agency. River macroinvertebrate and diatom data (1990–2004) from sites classified in 2004 (accessed through GBIF data portal, http://data.gbif.org/datasets/resource/916, 2008-04-10)

ULFSTRAND, S. (1967): Microdistribution of benthic species (Ephemeroptera, Plecoptera, Trichoptera, Diptera: Simuliidae) in Lapland streams. - Oikos **18**: 293–310.

ULZIIKHUTAG, N. & D. TSETSEGMA (1980): Summary on algae in Mongolia. - Booklet Res. Center Bot. **6**: 145–161.

UROŠEVIĆ, V. (1994): Alge visokoplaninskih jezera Sirinićke strane Šar-planine. - Univerzitet u Prištini, Prištini.

URS (2006): Investigación del origen de depósitos sobre sustratos sumergidos, en el río Ara (cuenca del Cinca). - Confederación Hidrográfica del Ebro, Barcelona.

USDA FOREST SERVICE (2006): Black Hills National Forest. FY2005 monitoring and evaluation report. - United States Department of Agriculture, Washington.

USGS (1978): Water resources data for Wyoming, water year 1976; Volume 2. Green River basin, Bear River basin, Snake River basin. - U.S. Geological Survey Water-Data Report WY-76-2, Denver, Colorado.

VALLIN, S. (1951): The role played by *Didymosphenia geminata* (Lyngbye) in clogging gill nets. - Report **32**: 149–153. Institute of Freshwater Research, Drottningholm.

VAN DE VIJVER, B., P. LEDEGANCK, G. POTTERS & L. BEYENS (1999): Diatom communities from alkaline environments of the Brøgger peninsula, north-west Spitsbergen. - Nova Hedwigia **68**: 93–115.

VAN HEURCK, H. (1884): Types du synopsis des diatomées de Belgique. Series I–XXII. - Anvers.

VAN HEURCK, H. (1896): A Treatise on the Diatomaceae. - William Wesley & Son, London.

VANORMELINGEN, P., E. VERLEYEN & W. VYVERMAN (2008): The diversity and distribution of diatoms: from cosmopolitanism to narrow endemism. - Biodivers. & Conservation **17**: 393–405.

VASILYEVA-KRALINA, I.I. & V.A. GABAYSHEV (1986): K izucheniyu Bacillariophyta gornayh vodoemov Verhoyanyya. - Algologiya **6**: 394–400.

VASILYEVA-KRALINA, I.I., P.À. REMIGAJLO, V.À., GABYSHEV, L.I. KOPYRINA, Å.V. PSHENNIKOVA, À.P. IVANOVA & L.A. PESTRYAKOVA (2005): Algae. Biodiversity of vegetable kingdom of Yakutia. - Publ. House SB RAS, Novosibirsk.

VÄYRYNEN, H. (1938): Petrologie des Nickelerzfeldes Kaulatunturi-Kammikivitunturi in Petsamo. - Bull. Commiss. Géol. Finlande **116**: 1–198.

VÄYRYNEN, H. (1939): On the geology and tectonics of the Outokumpu Ore field and region. - Bull. Commiss. Géol. Finlande **124**: 1–91.

VIEGLAIS, C. & C. KILROY (2006): A national incursion response to the invasive diatom *Didymosphenia geminata* in New Zealand freshwaters. - NIWA & Biosecurity New Zealand, Christchurch.

VILASECA, J.M. (1978): Fitoplancton de los lagos pirenaicos. M.Sc. Thesis. - Universidad de Barcelona, Barcelona.

VIRKETIS, M.A. & I.A. KISELEV (1933): O planktone Cheshskoi Gubi. - Explor. Mers U.R.S.S. **18**: 115–138.

VISHNEVSKAYA, E.M. & N.N. DAVIDOVA (1963): Istoriya Ozera Krasnogo (Karelbski Peresheek) po dannim diatomovogo analiza. - In: KALESNIK, S.V. (ed.): The history of the lakes in the North-West: 161–185. Papers read at the I Symp. on Paleolimnology of the North-West of the USSR (Leningrad, 17–20 Nov. 1965). Int. Symp. on Paleolimnology (Hungary, 1967) (Istoriya ozer severo-zapada), Leningrad.

VODON'YAN, H.C. (1976): Flora diatomovih vodorostey vodoym Malogo Polissya. - Tam. Zhe. **33**: 485–489.

VODORIJIN, N.N. (1935): Fitoplankton ozer Katunskij alyp. - Issl. Ozera S.S.S.R. **8**: 242–252.

VODORIJIN, N.N. (1936): Vodorosli, sobrannie v okrestnostyaj gornoi Stantsii Akademii Nauk v jibinaj. - Trudy Bot. Inst. Akad. Nauk S.S.S.R. **2**: 395–399.

VOICINCO, N., L.Ş. PÉTERFI & L. MOMEU (2005): Preliminary studies on the benthic diatom communities from the Someşul Mare River and its tributaries (Tibleş, Rebra, Meleş) between Ilva Mică and Beclean (Bistriţa-Năsăud County). - Contrib. Bot. Cluj-Napoca **40**: 131–144.

VOUK, V. (1918): Nauka o •ivotu bilja. - Zagreb.

VOZJENNIKOVA, T.F. (1958): Vodorosli r katuny i eyo pritokov v raione kurorta Chemal. - Izv. Sibirsk. Otd. Akad. Nauk SSSR **8**: 114–125.

WACKER, T. (2007): On the riverfront, warnings of an aggressive algae. - The New York Times, August 5, 2007.

WAHLENBERG, G. (1812): Flora lapponica exhibens plantas geographice et botanice consideratas, in lapponis svecicis scilicet umensi, pitensi, lulensi, tornensi, et kemensi nec non lapponiis norvegicis scilicet norlandia et finmarkia utraque indigenas, it itineribus annorum 1800, 1802, 1807 et 1810 denuo investigatas. - Taberna Libraria Scholae Realis, Berlin.

WANG, J.P., C.G. CAO, H. JIN, C.F. WANG & F.H. LIU (2006): Effects of rice-duck farming on aquatic community in rice fields. - Sci. Agric. Sin. **39**: 2001–2008.

WANTY, R.B., P.L. VERPLANCK, S.E. CHURCH, D.L. FEY, T. SCHMIDT, M. ADAMS, S. SPAULDING & C.A. SAN JUAN (2006): Regional geochemical investigations in Rocky Mountain National Park by the U.S. Geological Survey, Mineral Resources Program. - Rocky Mountain National Park Research Conference, Estes Park, Colorado.

WARD, F.M. (1869): The microscope or descriptions of various objects of especial interest and beauty adapted for microscopic observation. - Groombridge and Sons, London.

WARD, H.B. (1896): A biological examination of Lake Michigan in the Traverse Bay Region. - Bull. Michigan Fish. Commiss. **6**: 1–100.

WARD, M. (1864): Microscope teachings. Descriptions of various objects of especial interest and beauty adapted for microscopic observation. - Groombridge & Sons, London.

WARMING, E. & K. ROSENSVINGE (eds) (1912): The botany of Iceland. - J. Frimodt, Copenhagen.

WATERBURY, V. (2007): ANR confirms first northeastern U.S. infestation of '*Didymo*' aquatic nuisance discovered in northern Connecticut River. - Northeast Fish Rapper **23** (2): 16–17.

WATERBURY, V. (2008): Invasive algae known as *Didymo* found in Mad River. - The Boston Globe, 7-10-2008.

WAZIR, M.S. (2002): Diatoms of Saif-Ul-Malook Lake, Kaghan Valley-Pakistan. - J. Res. Sci. **13**: 45–51.

WEBBER, E.E. (1961): A list of algae from selected areas in Massachusetts. - Rhodora **163**: 275–281.

WEBER, E.E. (2005): Blackfoot watershed water quality status and trends periphyton monitoring 2004. - PhycoLogic, East Helena, Montana.

WEISSE, J.F. (1865): Fernere Untersuchungen von Grundproben aus dem Ladoga-See auf Diatomaceen. - Mélanges Biol. Bull. Acad. Imp. Sci. St. Petersbourg **8**: 369–371.

WELLS, R., M. DUNCAN & S.J. CLEARWATER (2007): Takaka river *didymo* elimination feasibility study. - NIWA Client Report HAM2007-08, NIWA, Hamilton, New Zealand.

WEN, Z. & H. ZHI-HUI (1999): Biological and ecological features of inland saline waters in North Hebei, China. - Int. J. Salt Lake Res. **8**: 267–285.

WEST, G.S. (1904): A treatise on the British freshwater Algae. - Cambridge University Press, Cambridge.

WEST, G.S. (1916): Algae. Volume I. - Cambridge Botanical Handbooks, Cambridge.

WEST, W. (1882): Algae, additions to West Riding. - The Naturalist **8**: 27–122.

WEST, W. (1892): Algae of the English Lake District. - J. Roy. Microscop. Soc. **8**: 713–784.

WEST, W. & G.S. WEST (1901): The alga-flora of Yorkshire: a complete account of the known freshwater Algaeæ of the county, with many notes on their affinities and distribution. - Taylor Bros, York.

WESTCOTT, F., S. MASSE & J. BEATTY (2004): Beaver Creek environmental impact assessment. - Ministry of Water, Land and Air Protection. Environmental Protection, Nelson, New Zealand.

WESTENDORP, J.D. & A.C. WALLEYS (1844): Herbier cryptogamique de Belgique. - Pachtere, Bruges.

WESTON, R.S. & C.E. TURNER (1917): Studies on the digestion of a sewage-filter effluent by a small and otherwise unpolluted stream. - Massachusetts Inst. Tech. Sanit. Res. Lab. Sewage Exp. Sta. **10**: 1–97.

WGFD (2006): "*Didymo*". A new "invasive" recently found. - Lander Region Angler News **6**: 1–2.

WHITTON, B.A. (ed.) (1975): River Ecology. - Blackwell, Oxford.

WHITTON, B.A. & M. DALPRA (1968): Floristic changes in the River Tees. - Hydrobiologia **32**: 545–550.

WHORISKEY, F. (2007): *Didymosphenia geminata*, a.k.a. "Didymo" or "rock snot". - Atlantic Salmon Federation, St. Andrews.

WIEDERHOLM, T. (1983): Angående utbredningen av vass och andra förhållanden rörande vattenkvaliteten i Vänern. - Stencilerat PM från Laboratoriet för miljökontroll, Statens naturvårdsverk, Stockholm.

WILANDER, A. (2003): Skyddad natur. En undersökning av två sjöar och deras utloppsbäckar i Padjelanta 2002. - Institutionen för Miljöanalys, Uppsala.

WILCOX, S.D., J.R. MARTINI & E.J. KOFROD (1994): Periphyton growth in the North Fork Stanislaus River Basin. - Northern Californian Power Agency, Roseville.

WILLÉN, E. (2001): Phytoplankton and water quality characterization: experiences from the Swedish large Lakes Mälaren, Hjälmaren, Vättern and Vänern. - Ambio **30**: 529–537.

WIOŚ-JASŁO (1996): Raport o stanie Środowiska w Województwie Podkarpackim. - Report, Subcarpathian Voivodeship, Rzeszów.

WIOŚK (2002): Raport o Stanie Środowiska w Województwie Małopolskim w 2001 Roku. - BMŚ, Kraków.

WISLOUCH, S.M. & R.W. KOLBE (1927). Materiaux sur la flore des diatomées du lac d'Onega. Travaux de l'expédition scientifique d'Olonetz. Partie V. Botanique. Livraison 1. - Institut Hydrologique de Russie, Léningrad.

WITON, E. & A. WITKOWSKI (2003): Diatom (Bacillariophyceae) flora of early Holocene freshwater sediments from Skalafjord, Faeroe Islands. - J. Micropaleontol. **22**: 183–208.

WOLF, H. (1982): Method of coding of ecological data from diatoms for computer utilization. - Meded. Rijks Geol. Dienst **36**: 95–110.

WOLLE, F. (1890): Diatomaceae of North America. Illustrated with twenty-three hundred figures from the Author's drawings on one hundred and twelve plates. - Comenius Press, Bethlehem.

WOŁOWSKI, K., J. CABAŁA & A. WOJTAL (2000): Glony. - In: STASZKIEWICZ, J. (ed.): Przyroda Popradzkiego Parku Krajobrazowego: 179–187. Stary Sącz, Popradzki Park, Narodowy.

WOODSON, B.R. (1969): Algae of a Fresh Water Virginia Pond. - Castanea **34**: 352–374.

WOOLMAN, L. (1895): A report on the artesian wells in southern New Jersey. - Annual report of the state geologists, New Jersey Geological Survey, Trenton.

WYATT, K.H., F.R. HAUER & G.F. PESSONEY (2008): Benthic algal response to hyporheic-surface water exchange in an alluvial river. - Hydrobiologia **607**: 151–161.

YAKUBOVA, A.I. (1961): Osnovnie cherti vodoroslevoi rastitelbnosti reki Obi v Eyo verjnem techenii. - Sibirsk. Otd. Trudy Biol. Inst. **7**: 65–79.

YARUSHINA, M.I., G.V. TANAEVA & T.V. ERYOMKINA (2004): Flora vodoroslei vodoyomov Chelyabinskoi Oblasti. - Rossiskaya Akademiya Nauk Uralbskoe Otdeleñie Institut Ekologii Rasteñi i Jivotnij, Ekaterinburg.

YAWEN, F., B. WENMEI & W.QUANXI (1997): Preliminary taxonomic studies on eight taxa of Gomphonemataceae from Northeastern China. - Bull. Bot. Res. **17**: 361–376.

YAWEN, F., B. WENMEI & W.QUANXI (1998): Investigation on Gomphonemaceae from the Heilongjiang Province in China. - Bull. Bot. Res. **18**: 243–253.

YULIĆ, D., M. DAMJANOVIĆ & V. OBRADOVIĆ (2008): Analiza uticaja uspora izazvanog izgradnjom brane kod novog bečeja na kvalitet vode reke Tise. - http://www.jcerni.co.yu/srpski/projekti/mon7.pdf

YZC (2005): Wolverine Project Environmental Assessment Report. Section 7: Environmental assessment findings. 7.7 Benthos and periphyton. - Yukon Zinc Corporation, Vancouver.

ZABELINA, M.M. (1939): Diatomovie vodorosli gruntov Belogo Morya v Rayoñe. - Trudy Gosud. Gidrol. Inst. **17**: 183–200.

ZABELINA, M.M., I.A. KISELEV, A.I PROSHKINA-LAVRENKO & V.S. SHESHUKOVA (1951): Opredelitel' presnovodnykh vodoroslei SSSR. - Moscow.

ZADELENOV, V.A., I.G. ENIKEEVA, E.N. SHADRIN & L.A. SHCHUR (2006): Otsenka vodnayh biologicheskih resursov basseyna reki Podkamennoy Tunguski. - Sibirsk. Ekol. Zhurn. **4**: 495–502.

ZAGARENKO, G.F. (1983): Reka selenga raybay Mongolyskoy narodnoy respublikki: usloviya obitaniya, sistematika, morfologiya, zoogeografiya. Unpubl. manuscript.

ZAGARENKO, G.F. & B.A. PROZOROV (1980): O poyasnom raspredelenii makrofitov v ozere Hubsugl. Prirodnaye usloviya i resursay nekotorayh ayonov MHP. - Tezisy Dokl. Ulan-Bator **1**: 149–151.

ZAHAR, A.R. (1951): The ecology and distribution of black-flies (Simuliidae) in South-East Scotland. - J. Anim. Ecol. **20**: 33–62.

ZAIKINA, N.G. & E.G. LUPIKINA (1968): Diatoms from the Holocene deposits of the Kamchatka River. - Nauchni J. Ser. V Geogr. **4**: 124–127.

ZAIKINA, N.G. & E.M. MALAYEVA (1966): Diatomovie vodorosli v sovremennij otlojeniyaj severnoi Kamchatki. - Nauchni J. Ser. V Geogr. **6**: 96–98.

ZHENG, L. (2002): Chester Creek Diatom Images. - http://aquatic.uaa.alaska.edu/pdfs/ChesterCreekDiatoms_images.pdf

ZHIXIN, S. (2004): Flora Algarum Sinicarum Aquae Dulcis. Tomus XII: Bacillariophyta, Gomphonemaceae. - Science Press, Beijing.

ZHURKINA, V.V. & L.A. KUKHARENKO (1974): Pityevaya voda iz diatomovayh Hasan okruga v Primorye. - In: VASIL'EVA, L.N. (ed.): Kryptogamic rasteniy sovetskogo Dalynego Vostoka: 17–28. FEB AS USSR, Vladivostok.

ZIMMERMANN, C. (1909): Catalogo das Diatomaceas portuguesas, II e III centuria. - Brotéria Ser. Bot. **9**: 95–102.

ZORZA, R., G. ORIOLO, G. HONSELL, P. BONFANTI & M. SIGURA (2006): Analisi multidisciplinare e multiscalare di un corso d'acqua: l'ambito fluviale del Natisone (Provincia di Udine). - Atti del XV Congresso Nazionale della Società Italiana di Ecologia (Torino, 12–14 settembre 2005): 1–6. Torino.

Received 21 April 2008, accepted in revised form 13 October 2008.