

582.26+581.9+582.26:581.4

..

152742

**NAVICULA BORY S. STR. (BACILLARIOPHYTA)**

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( ,, , ),

33 Navicula Bory s. str.,

8

: Navicula,

( , , 2006;

, 2008)

( .) -

( .).

Navicula Bory s.l.

– Adlafia

Lange-Bert., *Aneumastus* Mann et Stickle, *Cavinula* Stickle, *Chamaepinnularia* Lange-Bert. et Krammer, *Cosmioneis* Mann et Stickle, *Craticula* Grun., *Decussata* (Patrick) Lange-Bert., *Diadesmis* Kütz., *Eolimna* Lange-Bert. et Schiller, *Fallacia* Stickle, *Fistulifera* Lange-Bert., *Geissleria* Lange-Bert. et Metzeltin, *Haslea* Simonsen, *Hippodonta* Lange-Bert., Metzeltin et Witkowski, *Kobayasiella* Lange-Bert., *Luticola* Mann, *Lyrella* Karajeva, *Mayamaea* Lange-Bert., *Neidiopsis* Lange-Bert. et Metzeltin, *Parlibellus* Cox, *Petroneis* Stickle et Mann, *Placoneis* Mereschkowsky, *Sellaphora* Mereschkowsky (K , 1978; ox, 1987, 1988; Mann, 1989; Round et al., 1990; Lange-Bertalot, Metzeltin, 1996; Lange-Bertalot, 1997, 2001; Schiller, Lange-Bertalot, 1997; Lange-Bertalot, Genkal, 1999).

Navicula

s.l.,

( , , 2005)

( , 2007.

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. 2009. . 19. 1 Algologia. 2009. V. 19. N 1

Navicula s. str.

1941; ( , 1925; ,  
 , 1947; , 1950; , 1950; , 1950;  
 - , 1954; , 1955; - , 1962;  
 1971; , , 1972; , , 1975; ' , 1976;  
 , 1981; , 1984; , 2003; ,  
 2005).

Navicula s. str.

2005 . 10 , 2002-  
 ( - ), ( - ),  
 ( - ), ( - ),  
 - ), , ( - ), ( - )  
 - ) -

(109)

(49)

(2,7-39,2 )

4,35 5,1, - -38  
 179,3 , 27,3 54 / , 17 27 .  
 - (93 . ) -

(1969)

( . . )

(H-300)

(JSM-25S)

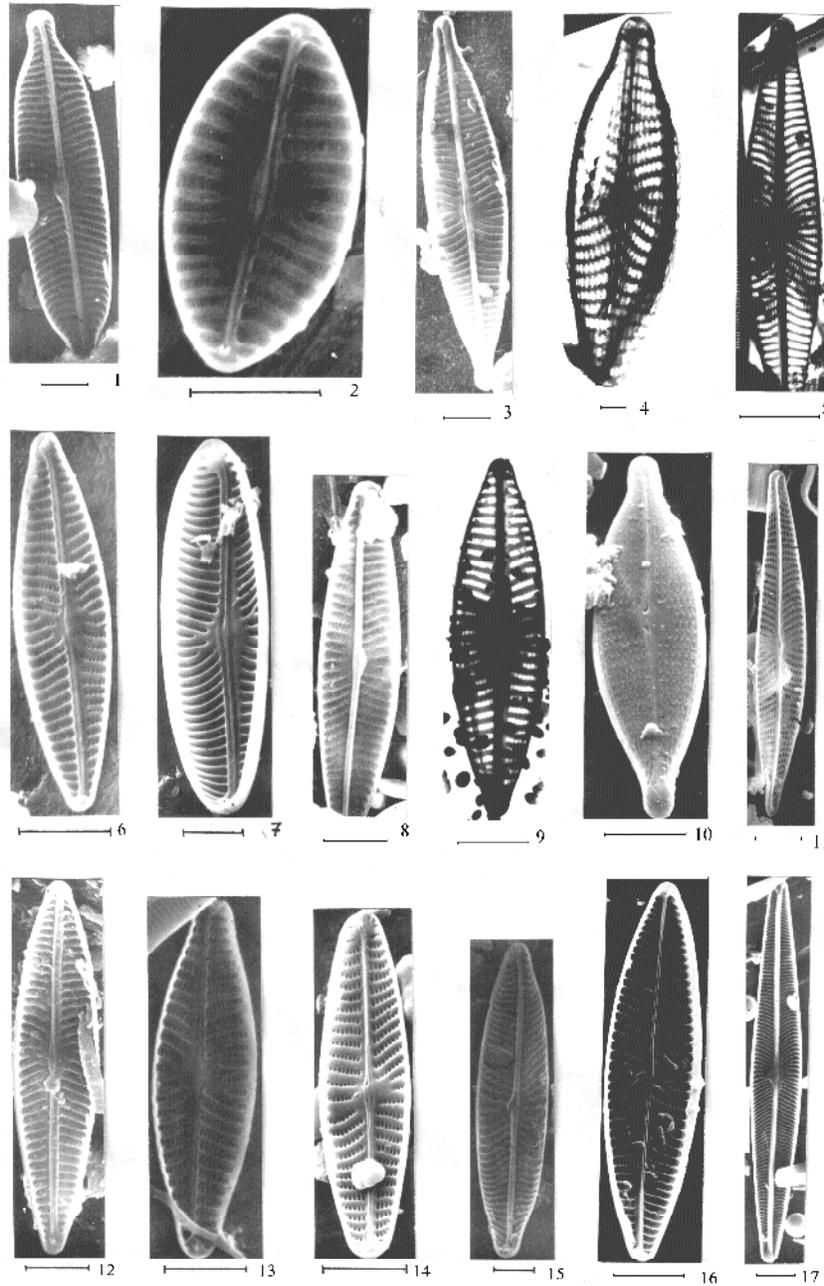
33

Navicula s. str. ( . . ).

*Navicula s. str.*

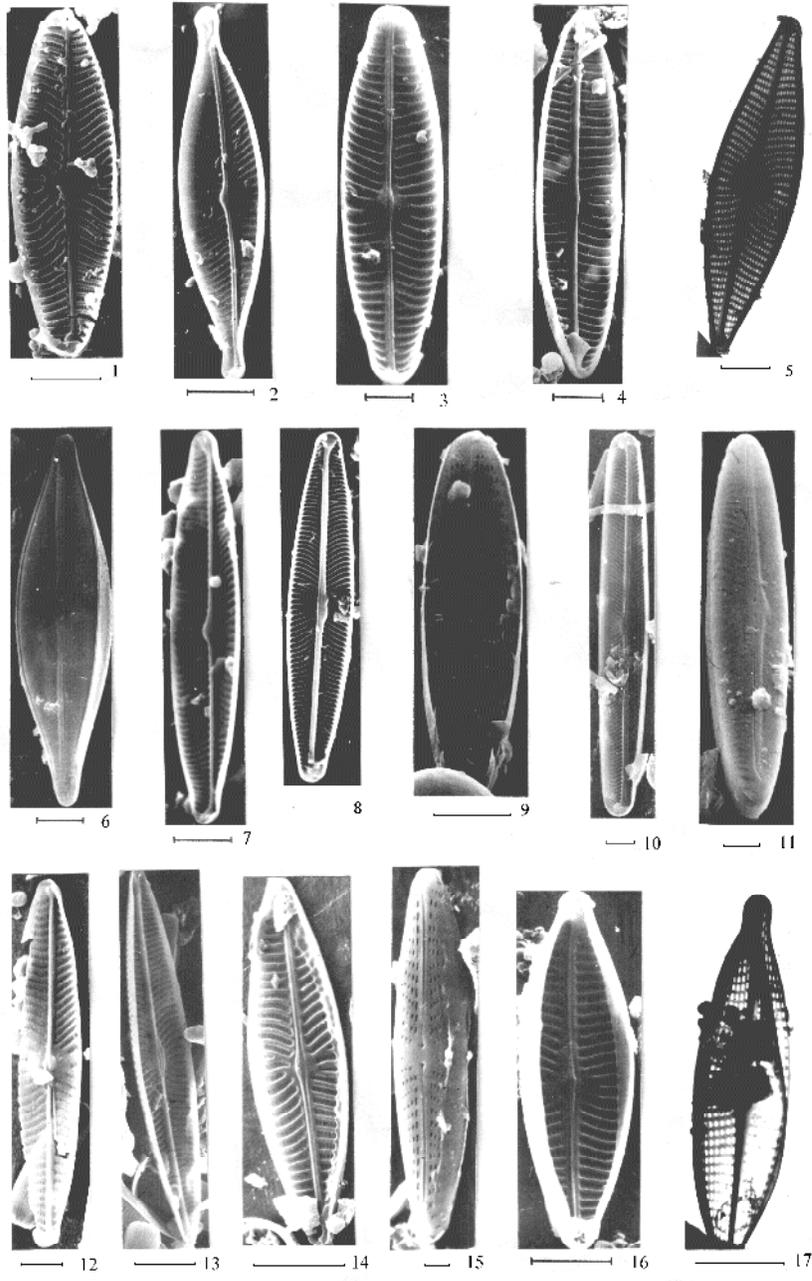
		3					
<i>Navicula amphiceropsis</i>			+				
<i>N. antonii</i>		+				+	
<i>N. capitatoradiata</i>						+	+
<i>N. caterva</i>						+	
<i>N. cryptocephala</i>						+	
<i>N. cryptotenella</i>				+		+	
<i>N. digitconvergens</i>				+			
<i>N. erifuga</i>					+		
<i>N. exilis</i>				+			
<i>N. gregaria</i>				+		+	
<i>N. heimansioides</i>							+
<i>N. hintzii</i>						+	
<i>N. moskalii</i>							+
<i>N. microcari</i>		+					
<i>N. cf. novaesiberica</i>	+					+	
<i>N. oppugnata</i>						+	+
<i>N. radiosa</i>				+		+	+
<i>N. reinhardtii</i>						+	+
<i>N. cf. rhynchotella</i>				+			
<i>N. slesvicensis</i>				+			
<i>N. tripunctata</i>						+	+
<i>N. trivialis</i>						+	
<i>N. viridula</i>		+					
<i>N. cf. vulpina</i>							+
<i>N. cf. weisneri</i>	+			+		+	
<i>Navicula</i> sp. 1						+	
<i>Navicula</i> sp. 2				+			
<i>Navicula</i> sp. 3					+		
<i>Navicula</i> sp. 4	+					+	
<i>Navicula</i> sp. 5							+
<i>Navicula</i> sp. 6						+	+
<i>Navicula</i> sp. 7				+			
<i>Navicula</i> sp. 8				+			

	<i>Navicula amphiceropsis</i> Lange-Bertalot & Rumrich ( . I, 1).		
38,9	., 8,9	., 11	10 .
	- -		(Lange-Bertalot, 2001).
	<i>N. antonii</i> Lange-Bertalot ( . I, 2).		
7,3	., 11-15	10	., 11,8-17,7 28-30 10
	-		(Lange-Bertalot, 2001).
	<i>N. capitatoradiata</i> Germain ( . I, 3).		
8,9	., 11-14	10	., 31,4-42,2 7,1-
	-		(Lange-Bertalot, 2001).
	<i>N. caterva</i> Hohn & Hellerman ( . I, 4).		
., 19	10		15,4 ., 4,6
	-		(Lange-Bertalot, 2001).
	<i>N. cryptocephala</i> Kützing ( . I, 5).		
	10		29 ., 6 ., 17
	- - -		(Lange-Bertalot, 2001).
	<i>N. cryptotenella</i> Lange-Bertalot ( . I, 6).		
5-5,5	., 14-17	10	17,3-20,5 .,
	-		(Lange-Bertalot, 2001).
	<i>N. digitoconvergens</i> Lange-Bertalot ( . I, 7).		
10	., 8-11	10	32-40 ., 8,6-
	-		(Lange-Bertalot, 2001).
	<i>N. erifuga</i> Lange-Bertalot ( . I, 8).		
	10		32 ., 7 ., 12
	-		(Lange-Bertalot, 2001).
	<i>N. exilis</i> Kützing ( . I, 9).		
10			24 ., 6,5 ., 14
	-		(Lange-Bertalot, 2001).
	<i>N. gregaria</i> Donkin ( . I, 10).		
., 17-20	10		21,4-26,4 ., 5,7-7,1



. I. *Navicula*: 1 – *Navicula amphiceropsis*; 2 – *N. antonii*; 3 – *N. capi-tatoradiata*; 4 – *N. caterva*; 5 – *N. cryptocephala*; 6 – *N. cryptotenella*; 7 – *N. digitoconvergens*; 8 – *N. erifuga*; 9 – *N. exilis*; 10 – *N. gregaria*; 11 – *N. heimansioides*; 12 – *N. hintzii*; 13 – *Navicula moskalii*; 14 – *N. microcari*; 15 – *Navicula* cf. *novaesiberica*; 16 – *N. oppugnata*; 17 – *N. radiosa*. 1-3, 6-8, 10-17 – ; 4, 5, 9 – . 1-3, 6-8, 11-17 – ; 10 – . : 1-3, 5-16 – 5 ; 4-1 ; 17-10

		(Lange-Bertalot, 2001).		
5,7	<i>N. heimansioides</i>	Lange-Bertalot ( . I, 11).	39,3	..
	.., 13	10		
		(Lange-Bertalot, 2001).		
	<i>N. hintzii</i>	Lange-Bertalot ( . I, 12).	30	.., 6,8
	10			.., 13
		(Lange-Bertalot, 2001).		
21,8	<i>N. moskalii</i>	Metzeltin, Witkowski & Lange-Bertalot ( . I, 13).		
	.., 6,4	.., 12	10	
		(Bear Island)		
		(Lange-Bertalot, 2001).		
	<i>N. microcari</i>	Lange-Bertalot ( . I, 14).	20,5	.., 5,5
	.., 14	10		
		(Lange-Bertalot, 2001).		
38,9	<i>N. cf. novaesiberica</i>	Lange-Bertalot ( . I, 15).	30,7-	
	.., 7,7-8,9	.., 8-9	10	30-36 10
		6		10
		(Lange-Bertalot, 2001).		
	<i>N. oppugnata</i>	Hustedt ( . I, 16).	46,7-48	.., 10,5-12,2
	.., 8	10	22 10	
		(Lange-Bertalot, 2001).		
	<i>N. radiosa</i>	Kützing ( . I, 17).	62,9-95	.., 10-15,5
	.., 7-10	10		
		(Lange-Bertalot, 2001).		
15,7-16,7	<i>N. reinhardtii</i>	(Grunow) Grunow ( . II, 1).	53,3-57,1	..
	.., 7	10		
		(Lange-Bertalot, 2001).		
12,9	<i>N. cf. rhynchotella</i>	Lange-Bertalot ( . II, 2).	55,7	..
	.., 7	10		
		(Lange-Bertalot, 2001).		



. II. *Navicula*: 1 – *Navicula reinhardtii*; 2 – *Navicula* cf. *rhynchotella*; 3 – *N. slesvicensis*; 4 – *N. tripunctata*; 5, 6 – *N. trivialis*; 7 – *N. viridula*; 8 – *N. vulpina*; 9 – *Navicula* cf. *weisneri*; 10 – *Navicula* sp. 1; 11 – *Navicula* sp. 2; 12 – *Navicula* sp. 3; 13 – *Navicula* sp. 4; 14 – *Navicula* sp. 5; 15 – *Navicula* sp. 6; 16 – *Navicula* sp. 7; 17 – *Navicula* sp. 8. 1-4, 6-16 – ; 5, 17 – . 1-4, 7, 8, 10, 12-14, 16 – ; 6, 9, 11, 15 – . : 1, 2, 7, 8, 10, 13-10 , 3-6, 9, 11-12, 14, 16, 17-5 , 15-1

11,1	<i>Navicula slesvicensis</i> Grunow ( . II, 3). ., 7-8 10 .	43,3	., 11-
			(Lange-Bertalot, 2001).
10	<i>N. tripunctata</i> (O. Müller) Bory ( . II, 4). ., 8-11 10 .	39,3-62,9	., 8,6-
			(Lange-Bertalot, 2001).
11,4	<i>N. trivialis</i> Lange-Bertalot ( . II, 5, 6). ., 9-11 10 .	39-50	., 11-
., 7	<i>N. viridula</i> (Kützing) Ehrenberg ( . II, 7). 10 .	65,7	., 12
			(Lange-Bertalot, 2001).
13,3	<i>Navicula cf. vulpina</i> Kützing ( . II, 8). ., 9-11 10 .	55,7-70	., 10-
			(Lange-Bertalot, 2001).
6,4	<i>Navicula cf. weisneri</i> Lange-Bertalot ( . II, 9). ., 11-13 10 , 36 10 .	22-31	., 5-
			(Lange-Bertalot, 2001).
4-5	<i>Navicula sp. 1</i> ( . II, 10). 10 .	150-158	., 21,1-22,7
10	<i>Navicula sp. 2</i> ( . II, 11). .	51,4	., 10 ., 11
10	<i>Navicula sp. 3</i> ( . II, 12). .	45,7	., 8,6 ., 7
8-10	<i>Navicula sp. 4</i> ( . II, 13). 10 .	64,4-67,1	., 10-10,9
	<i>Navicula sp. 5</i> ( . II, 14). 10 .	23,6	., 5,9 ., 16
14-16	<i>Navicula sp. 6</i> ( . II, 15). 10 .	19,5-20,9	., 3,6-4,1
	<i>Navicula sp. 7</i> ( . II, 16). 10 .	23,6	., 7,1 ., 14
10	<i>Navicula sp. 8</i> ( . II, 17). , 32 10 .	23	., 5,8 ., 18

33 *Navicula* s. str.,  
 8  
 11  
*Navicula radiosa*, *N. cf. weisneri*  
 (Lange-Bertalot, 2001).  
*Navicula*  
 (17), (11) (10).  
 3  
 2, – 1.  
 28  
 7 – *Navicula capitatoradiata*, *N. cryptocephala*,  
*N. cryptotenella*, *N. radiosa*, *N. rhynchocephala* Kützing, *N. veneta* Kützing, *N. viridula*.

« ».

M.S. Kulikovskiy

I.D. Papanin Institute of Biology of Inland Waters, Russian Academy of Sciences,  
 152742 Settle of Borok, Nekouzsky District, Yaroslavl Region, Russia

SPECIES OF THE GENUS *NAVICULA* BORY S.STR. (*BACILLARIOPHYTA*) FROM  
 SPHAGNUM BOGS OF PRIVOLZHSKAYA HILLS AND THE POLISTOVO -LOVATSKY  
 TRACT (RUSSIA)

The first study of samples from bogs (Privolzhskaya hills, Penza region) and Polistovo-Lovatsky sphagnum tract within Rdeisk State National reserve has revealed 33 *Navicula* s. str. species. All studied species in this paper are illustrated with original photomicrographs.

*Key words*: *Navicula* s. str., species composition, morphology, sphagnum bogs.

( ) //  
 – 2005. – 4. – . 142-153.  
 ( )  
 , 1969. – 186 .  
 i // . – 1976. – 23,  
 5. – . 485-489.

... // ... 2. - 1950. -  
.6. - .66-87.  
... // ...  
... - 1925. - 4. - .78-150.  
... ( )// ... -2006. - 91, 10. - .1485-1499.  
... // ...  
... -1971. - 21, .4. - .48-56.  
...  
// ... 2. - .,2003. - .5-13.  
... // ... -1950. - 36, 6. - .612-  
629.  
... Naviculaceae West. // ... -1978. - 63, 12. - .1593-1596.  
... ;  
... ..,2007. - 24 .  
... Pinnularia Ehrenberg (Bacillariophyta)  
... ( )// ... -2008. - 18, 4. -  
.432-448.  
... ( ) // , , ,  
: . IX  
... ,2005. - .43-44.  
... // ... 2.-  
: ,1972. - .71-77.  
... // ... -1984. - 3. - .39-42.  
i ... i i i i // ... -1941. - 22. - .19-39.  
... // ... -  
... -1950. - 13. - .159-195.  
... i i i  
i // ... -1975. - 32, 6. - .741-746.  
... // ... 2.-1954. - .9. - .105-190.  
... i i i // ... -1947. -  
4, 1/2. - .128-134.  
I. ... // ...  
... -1955. - 24. - .155-185.  
... ( )  
... )// ... -1962. - 49, 313. - .137-169.  
...  
... ,1981. - 269 .

- 
- Cox E.J. *Placoneis* Mereschkowsky: the re-evaluation of a diatom genus originally characterized by its chloroplast type // *Diatom Res.* – 1987. – **2**, N 2. – P. 145-157.
- Cox E.J. Taxonomic studies on the diatom genus *Navicula*. V. The establishment of *Parlibellus* gen. nov. for some members of *Navicula* sect. *Microstigmaticae* // *Ibid.* – 1988. – **3**, N 1. – P. 9-38.
- Lange-Bertalot H. *Frankophila*, *Mayamaea* und *Fistulifera*: drei neue Gattungen der Klasse *Bacillariophyceae* // *Arch. Protistenk.* – 1997. – **148**, N 1/2. – S. 65-76.
- Lange-Bertalot H. *Navicula* sensu stricto. 10 genera separated from *Navicula* sensu lato, *Frustulia* // *Diatoms of Europe.* – 2001. – Vol. 2. – 526 p.
- Lange-Bertalot H., Genkal S.I. Diatoms from Siberia I. Islands in the Arctic Ocean (Yugorsky -Shar Strait). – Königstein: Iconograph. Diatom., 1999. – Vol. 6. – 292 s.
- Lange-Bertalot H., Metzeltin D. Indicators of oligotrophy. – Königstein: Iconograph. Diatom., 1996. – Vol. 2. – 390 p.
- Mann D.G. The diatom genus *Sellaphora*: separation from *Navicula* // *Brit. Phycol. J.* – 1989. – **24**, N 1. – P. 1-20.
- Round F.E., Crawford R.M., Mann D.G. *The Diatoms. Biology and morphology of the genera.* – Cambridge: Cambridge Univ. Press, 1990. – 747 p.
- Schiller W., Lange-Bertalot H. *Eolimna martini* n. gen., n. sp. (*Bacillariophyceae*) aus dem Unter-Oligozän von Sieblos/Rhön im Vergleich mit ähnlichen rezenten Taxa // *Paläontol. Z.* – 1997. – **71**, N 3/4. – S. 163-172.

27.08.07