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**BACILLARIOPHYTA**

**. I.**

*Bacillariophyta*,  
*Amicula* (A. Witkowski) A. Witkowski,  
*Astartiella* (Hust.) A. Witkowski, Lange-Bert., Metzeltin.

: *Bacillariophyta*,

*Bacillariophyta*

60- ( , 1960, 1961; ).  
301 76 , 41 , 22 ( ,  
, 2007).

30 . 0,2-0,5 , -

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*Bacillariophyta* *Navicula* sensu lato *Achnanthes* sensu lato.

***Amicula speculum*** (A. Witkowski) A. Witkowski in Witkowski et al., 2000: p. 127, Pl. 65, figs 1-11, 13, 14 ( . I, I).

B a s i o n y m : *Navicula speculum* Witkowski 1994: p. 159, Pl. XXXV, figs 5-12.

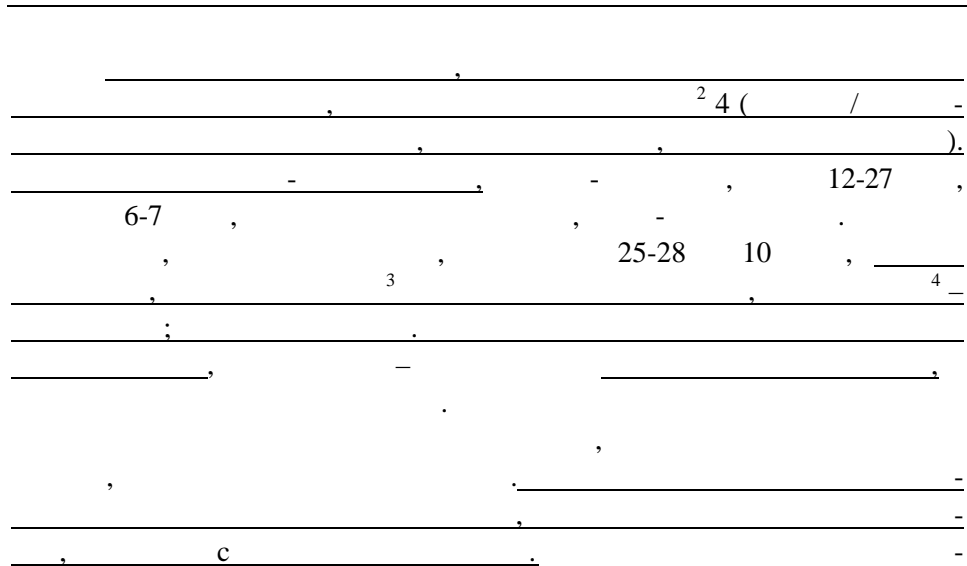
\_\_\_\_\_ 1.  
\_\_\_\_\_ , . 6-10 , . 4-6 , \_\_\_\_\_ .  
\_\_\_\_\_ , \_\_\_\_\_ , 1/3 , \_\_\_\_\_  
\_\_\_\_\_, 30 10 . \_\_\_\_\_  
\_\_\_\_\_ , \_\_\_\_\_ , 2/3 . \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ ( 1/4 ) \_\_\_\_\_  
\_\_\_\_\_  
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(Puck Bay) – \_\_\_\_\_ ; \_\_\_\_\_ ; \_\_\_\_\_ (Witkowski et al., 2000).

***Astartiella punctifera*** (Hust.) A. Witkowski, Lange-Bert., Metzeltin in Moser et al., 1998, p. 360 ( . , 2).

B a s i o n y m : *Achnanthes punctifera* Hust. 1955: p. 18, figs 5, 26-28. Simonsen, 1987: p. 407, figs 609, 8-15; Witkowski et al., 2000: p. 101, pl. 52, figs 11-19.

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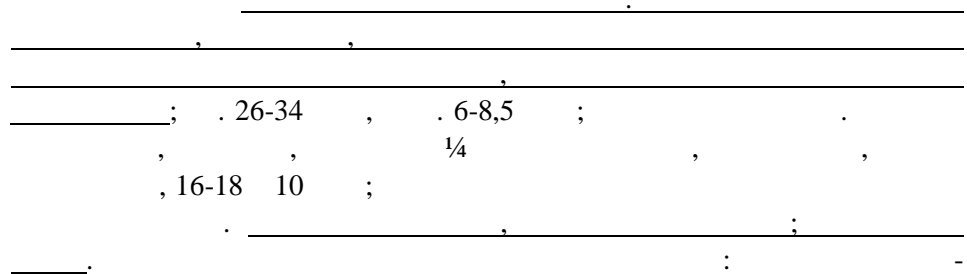
38 ° , - ;

( . Witkowski et al., 2000).

***Biremis circumtexta*** (F. Meister ex Hust.) A. Witkowski et Lange-Bert. in Witkowski et al., 2000: p. 158, Pl. 154, figs 1-8 ( . II, I).

B a s i o n y m : *Navicula circumtexta* F. Meister ex Hust. 1934: Pl. 394, figs 33-35.

Patrick, Reimer, 1966: p. 442, fig. 39: 3.



2 (Bukhtiyarova, 2006).

3 (Bukhtiyarova, 2006).

4 (Bukhtiyarova, 2006).

(Witkowski et al., 2000).

*Proschkinia bulnheimii* var. *casgica* (Karayeva) Karayeva in Karayeva, Bukhtiyarova, 2009: p. 71, fig. 9, 10 ( . , 3).

B a s i o n y m : *Navicula bulnheimii* var. *casgica* Karayeva in , 1975: . 125, . 1: 2.

10 , 30 , 26-27

10 , 20

*P. bulnheimii* var. *casgica*

20,4 ‰ ( , 1975).

(Ros et al., 2009).

*Proschkinia omplanatoides* (Hust.) Karayeva, 1978: 1749, . 1, 3, 4 ( . II, 2-7).

Basionim: *Navicula omplanatoides* Hust., 1962: 340-341, fig. 14-51.

Synonym: *Proschkinia omplanatoides* (Hust.) D.G. Mann in Round et al., 1990.

Simonsen, 1987: Pl. 734, figs 4-10.

Karayeva, Bukhtiyarova, 2009: p. 71, fig. 15-20.

5,5 , , 25-40 , . 3,5-

, 21-24 10 .

2-3

;

(Hustedt, 1962)

(Witkowski et al., 2000).

(Guslyakov, 1998),

: .57, 1-3 ( ., 1992); .2, 1-3 ( ., 1995),

: .2, 4-6 ( , , 2007).

*Diploneis* aff. *suborbicularis* (Greg.) Cleve, 1894: 81 ( . , 8).

Intercalibration .... Baltic Sea, Vol. 2, 1994: p. 42, figs 130: 1, 2.

, , , .20-35 , .12-20 ,

, , 7-10 10 .

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***Tryblionella victoriae*** Grunow 1862: 553, pl. 12, fig. 34 ( . . , 6, 7).

Synonym: *Nitzschia tryblionella* var. *victoriae* (Grunow) Grunow in Cleve et Grunow, 1880.

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 , 6-8 10 ;  
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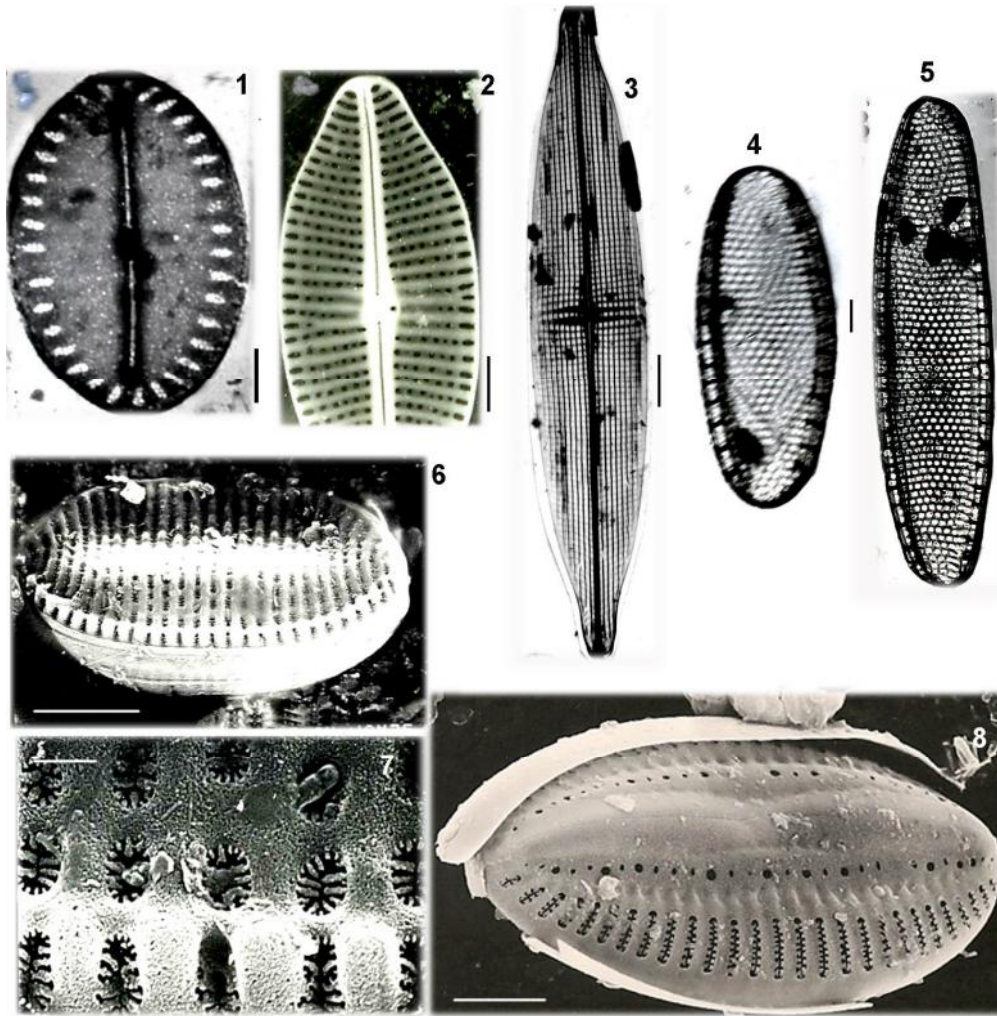
: (Hällfors, 2004); (Bukhtiyarova, 1999); : : ( , 2005), , ( , 2003); : , - (Stoermer et al., 1999), (Sherwood, 2004); : (Metzeltin, Garcia-Rodriguez, 2003).

***Nitzschia aurariae*** Cholnoky, 1966: figs 80: 16-21 ( . . , 4, 5).

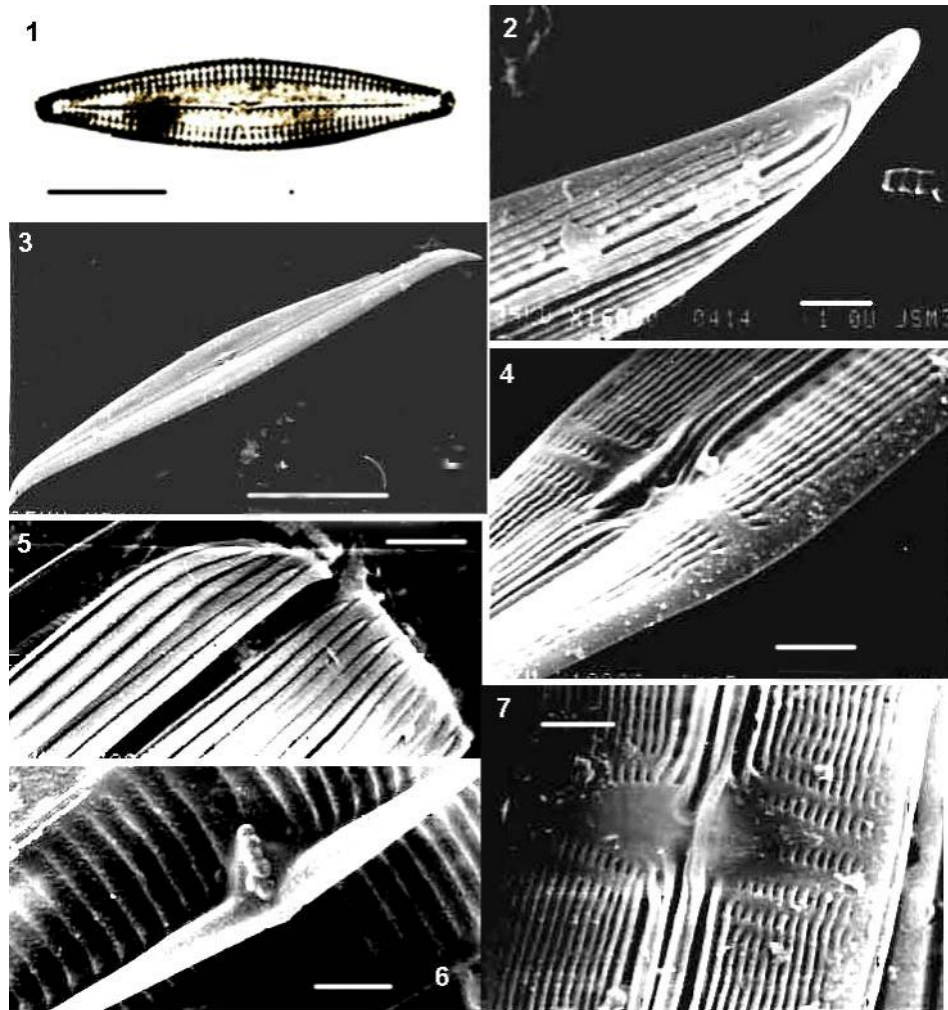
Synonyms: *Nitzschia elliptica* var. *alexandrina* Cholnoky, *N. alexandrina* (Cholnoky) Lange-Bert. et Simonsen.

Krammer, Lange-Bertalot, 1988: p. 113, figs 80: 16-21.

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 . 3-3,5 , ,  
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. . Bacillariophyta . . 1 – *Amicula specululum* (A. Witkowski) A. Witkowski; 2 – *Astartiella punctifera* (Hust.) A. Witkowski, Lange-Bert., Metzeltin; 3 – *Proschkinia bunheimii* var. *caspica* (Karayeva) Karayeva; 4, 5 – *Nitzschia aurariae* Cholnoky; 6, 7 – *Tryblionella victoriae* Grunow; 8 – *Diploneis* aff. *suborbicularis* (Greg.) Cleve: 1, 3-5 – ; 2 – , ; 6-8 – . : 1, 5, 7-1 ; 2, 3-2 ; 6-10 ; 8-3



. II. Bacillariophyta . 1 – *Biremis circumtexta* (F. Meister ex Hust.)  
 A. Witkowski et Lange-Bert.; 2-7 – *Proschkinia omplanatoides* (Hust.) Karayeva. 1 – TEM;  
 2-7 – : 1-7 ; 2, 4-7-1 ; 3-5



15-18 10 .  
 (Witkowski et al., 2000)  
 (Lange-Bertalot, Simonsen, 1978) (Witkowski et al., 2000).

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AN ADDITION TO THE *BACILLARIOPHYTA* FLORA OF THE CASPIAN SEA. I.

Some new and rare for the Caspian Sea taxa of *Bacillariophyta* are investigated, among them the representatives of the genera *Amicula* (Witkowski) Witkowski, *Astartiella* (Hustedt) Witkowski et al. Nomenclature references, illustrations, morphological description, data on distribution in the Caspian Sea and general distribution are provided for each taxon.

*Key words*: *Bacillariophyta*, rare taxa, frustul morphology, benthos, Caspian Sea.

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