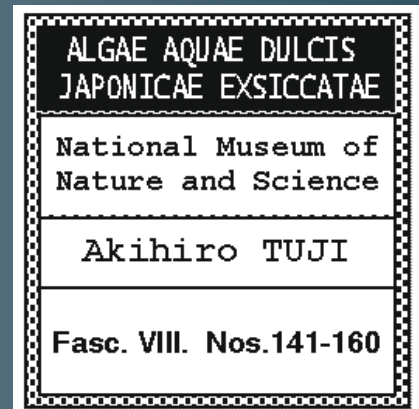


ALGAE AQUAE DULCIS JAPONICAE EXSICCATAE VIII

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15 October 2021

PREFACE

This exsiccata set was made from Japanese freshwater micro-algal specimens and is issued by the National Museum of Nature and Science. It is the 8th fascicle and comprises 20 slides.

The slides in this fascicle were made from culture strains. The culture strains were isolated by me from the various places using the pipette method, and d medium (Tuji 2000), which is a modified WC medium. It is difficult to maintain diatom culture strain for a long time and most of these strains have since died.

The study of culture strains is important for the understanding of morphological variation in diatom species, though many strains have abnormal forms at the end of the culture period. Molecular analyses of these strains have been undertaken and will be published in future papers.

Any problems experienced when using this exsiccatae set please contact me. I can send replacement slides. I am always pleased to receive comments and suggestions.

The exsiccatae sets including previous fascicles, have been sent to about 35 herbariorum. The catalogues (without specimens) have also been sent to several herbariorum and libraries including National diet library (Japan) and the library of National museum of nature and science. The PDF versions of the catalogue are published in the online environment, <http://www.kahaku.go.jp/research/db/botany/exsiccatae/index.html>.

CITATION

Tuji, A. 2021. Algae Aquae Dulcis Japonicae Exsiccatae. Fascile VIII. Nos. 141-160. 41pp. National Museum of Nature and Science, Tsukuba, Japan (ISSN 2424-0710).

No. 141

Funakiyama Waterfall, Haha-jima Island, Tokyo Pref., Japan.

[26°38.976' N, 142°10.193' E]

Electric conductivity (EC: $\mu\text{s}/\text{cm}$):460, pH: 7.3, Water temperature (WT: °C):

24.6, concentration of calcium ions: 86 ppm.

Date: 12/ix/2017.

Coll. A. Tuji (duplicate of TNS-AL-62917m in TNS).

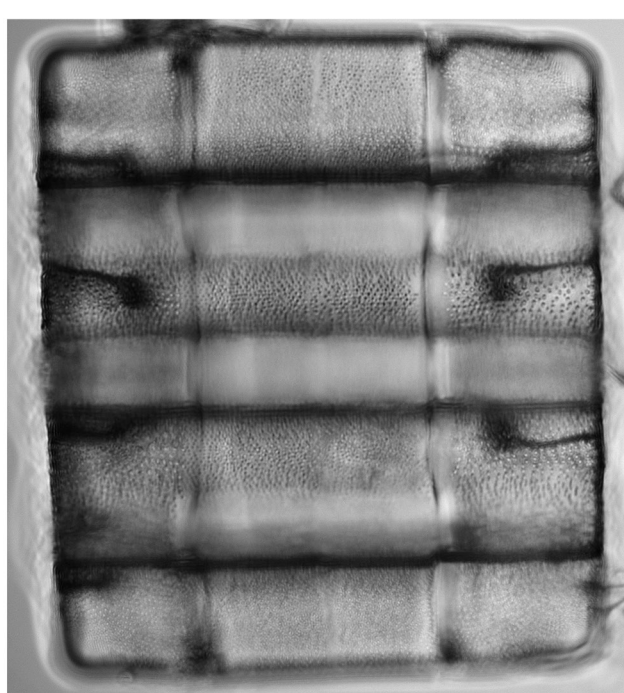
Terpsinoe muninensis Tuji, Mem. Natl. Mus. Nat. Sci., Tokyo, **52**: 6-10. *f.* 1-29. 2018.

These slides were prepared using isotype material for this taxon.

Reference: Tuji, A. 2018. A new freshwater diatom, *Terpsinoe muninensis* sp. nov.,
from the Ogasawara Islands, Japan. Mem. Natl. Mus. Nat. Sci., Tokyo, 52: 5-15.

(Figs 1-9)

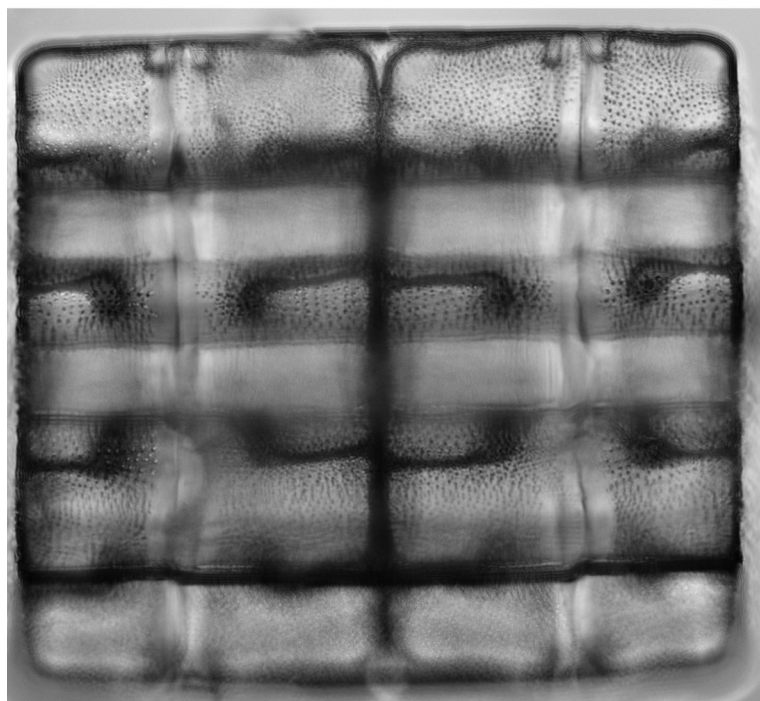
25μm



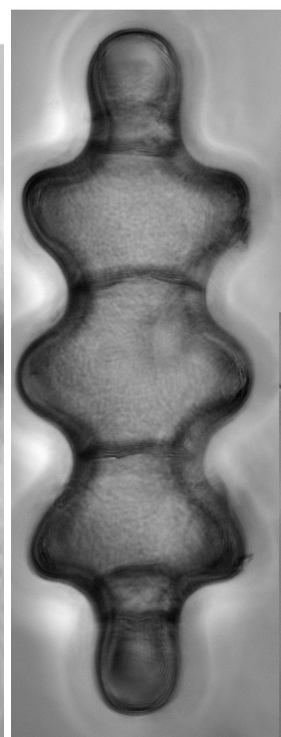
3



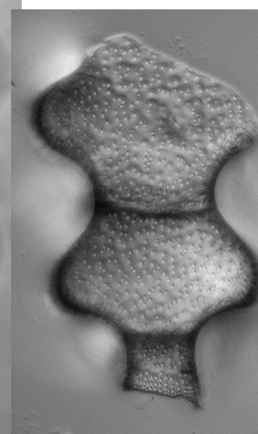
4



5

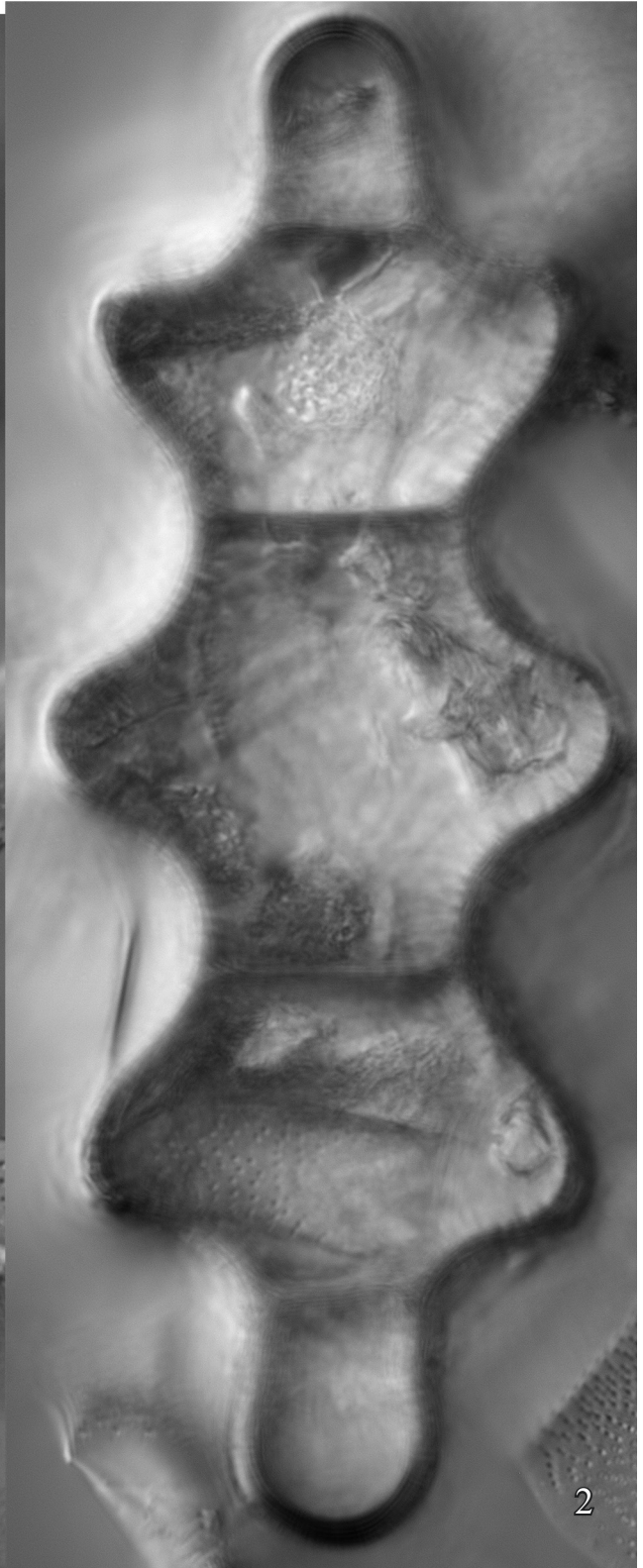
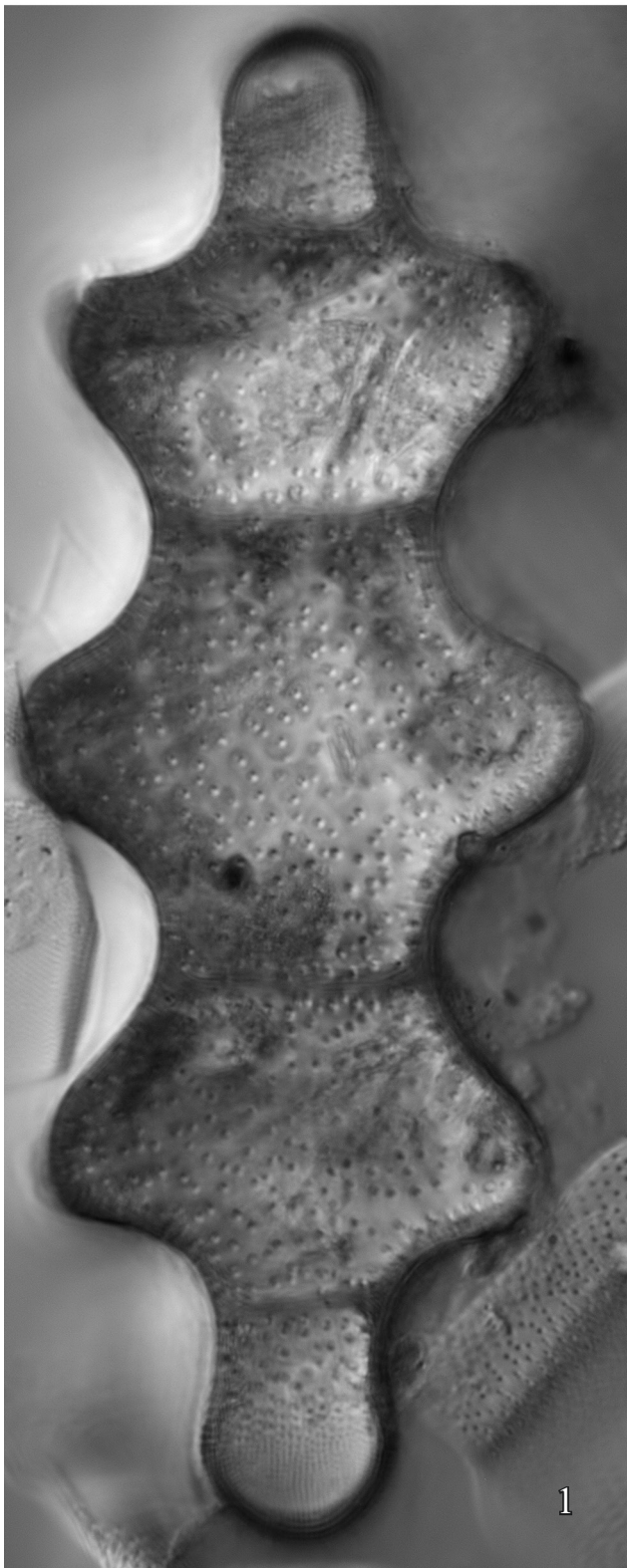


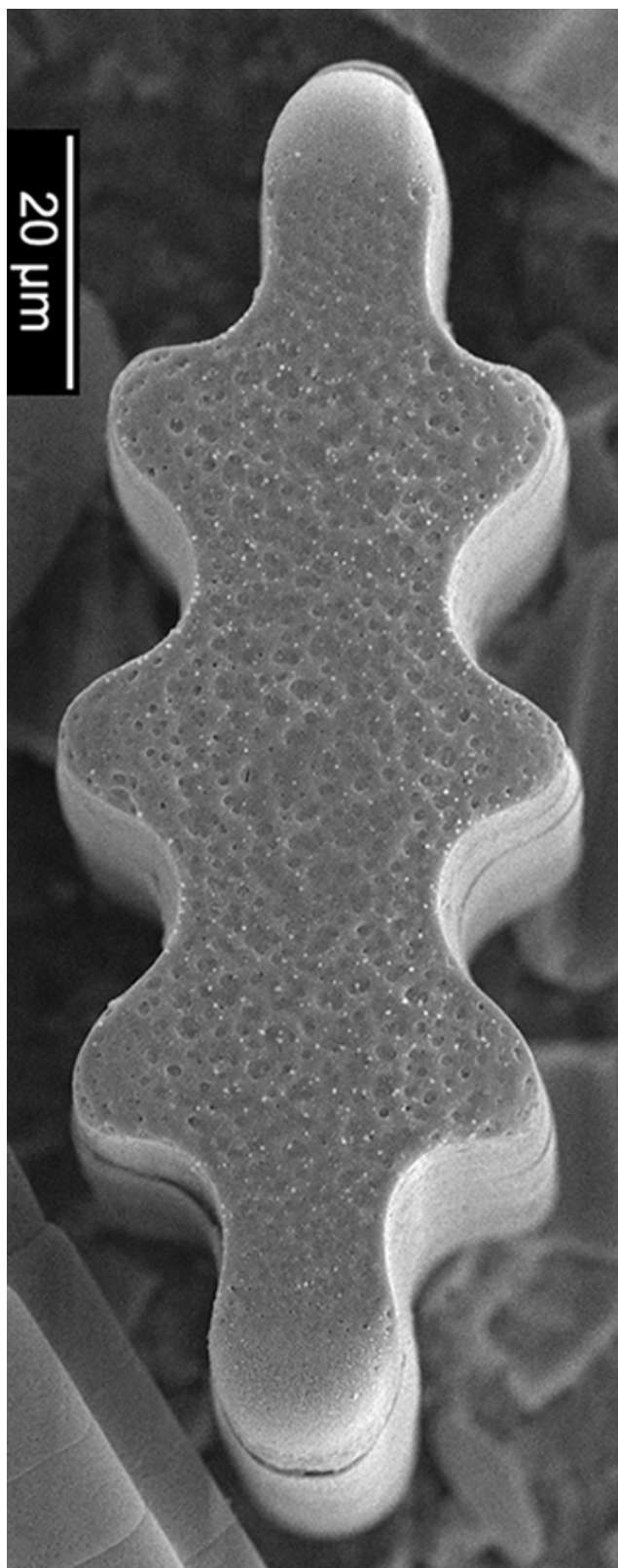
6



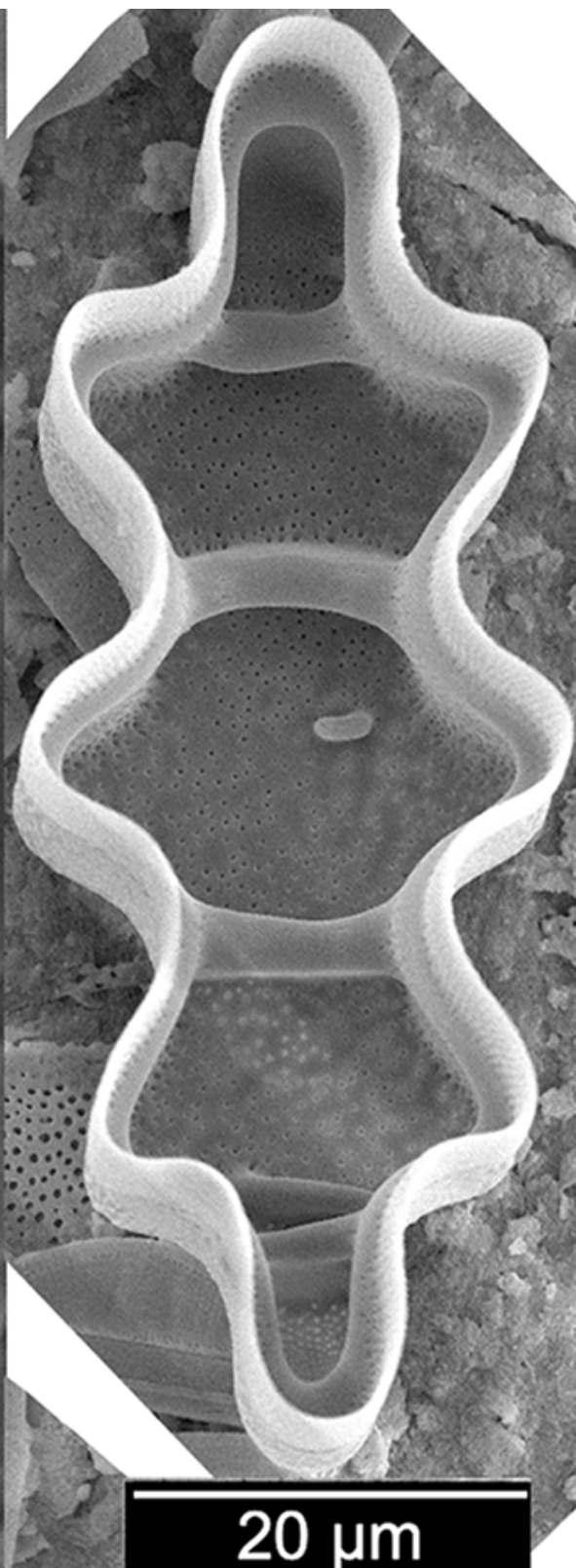
7

10μm





8



9

No. 142

Toyoko Waterfall, Chichi-jima Island, Tokyo Pref., Japan.

[27°3.450' N, 142°12.358' E]

Electric conductivity (EC: $\mu\text{s}/\text{cm}$):440, pH: 7.84, concentration of calcium ions: 44 ppm.

Date: 15/ix/2017.

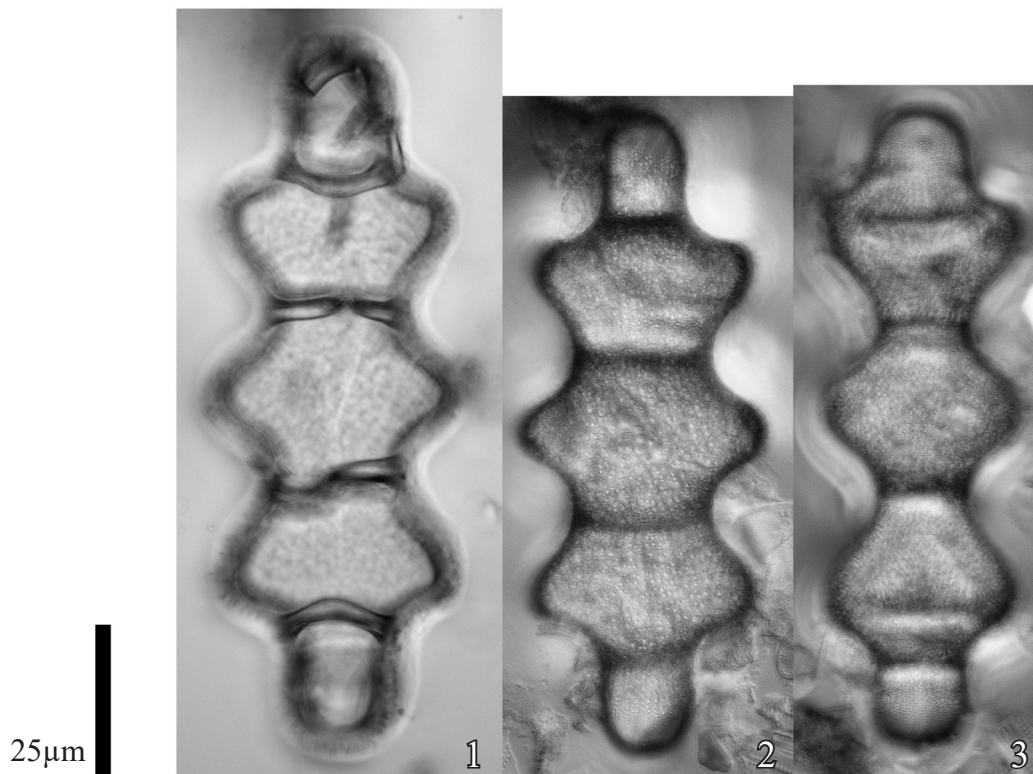
Coll. A. Tuji (duplicate of TNS-AL-62942m in TNS).

Terpsinoe muninensis Tuji, Mem. Natl. Mus. Nat. Sci., Tokyo, **52**: 6-10. f. 1-29. 2018.

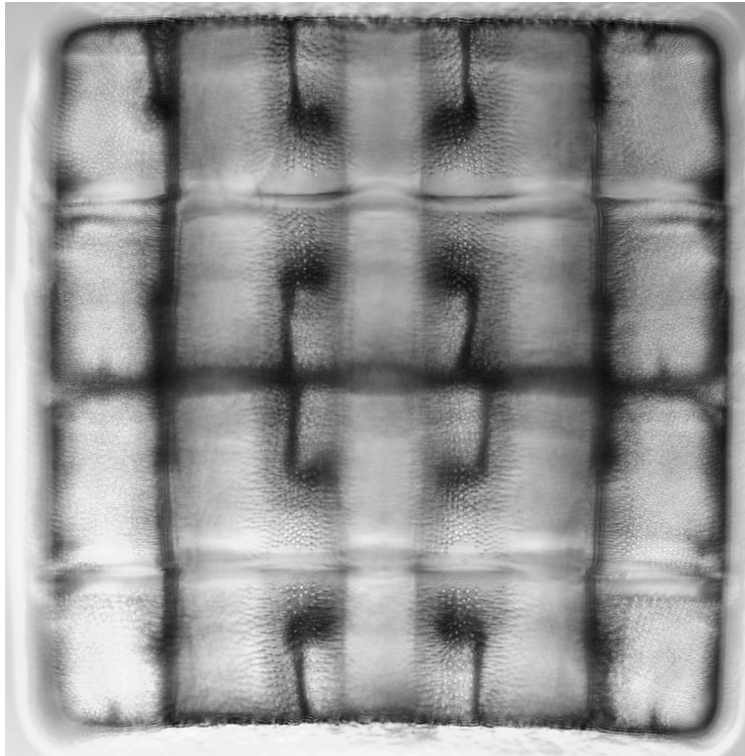
Funakiyama Waterfall (Haha-jima Island) and Toyoko Waterfall (Chichi-jima Island) are only examined localities for this taxon.

Reference: Tuji, A. 2018. A new freshwater diatom, *Terpsinoe muninensis* sp. nov., from the Ogasawara Islands, Japan. Mem. Natl. Mus. Nat. Sci., Tokyo, **52**: 5-15.

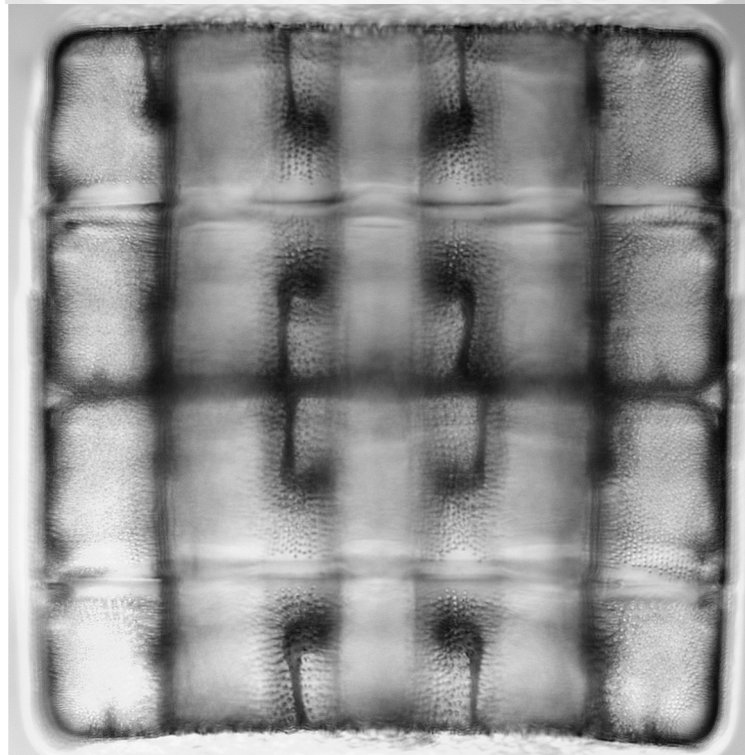
(Figs 1-6)



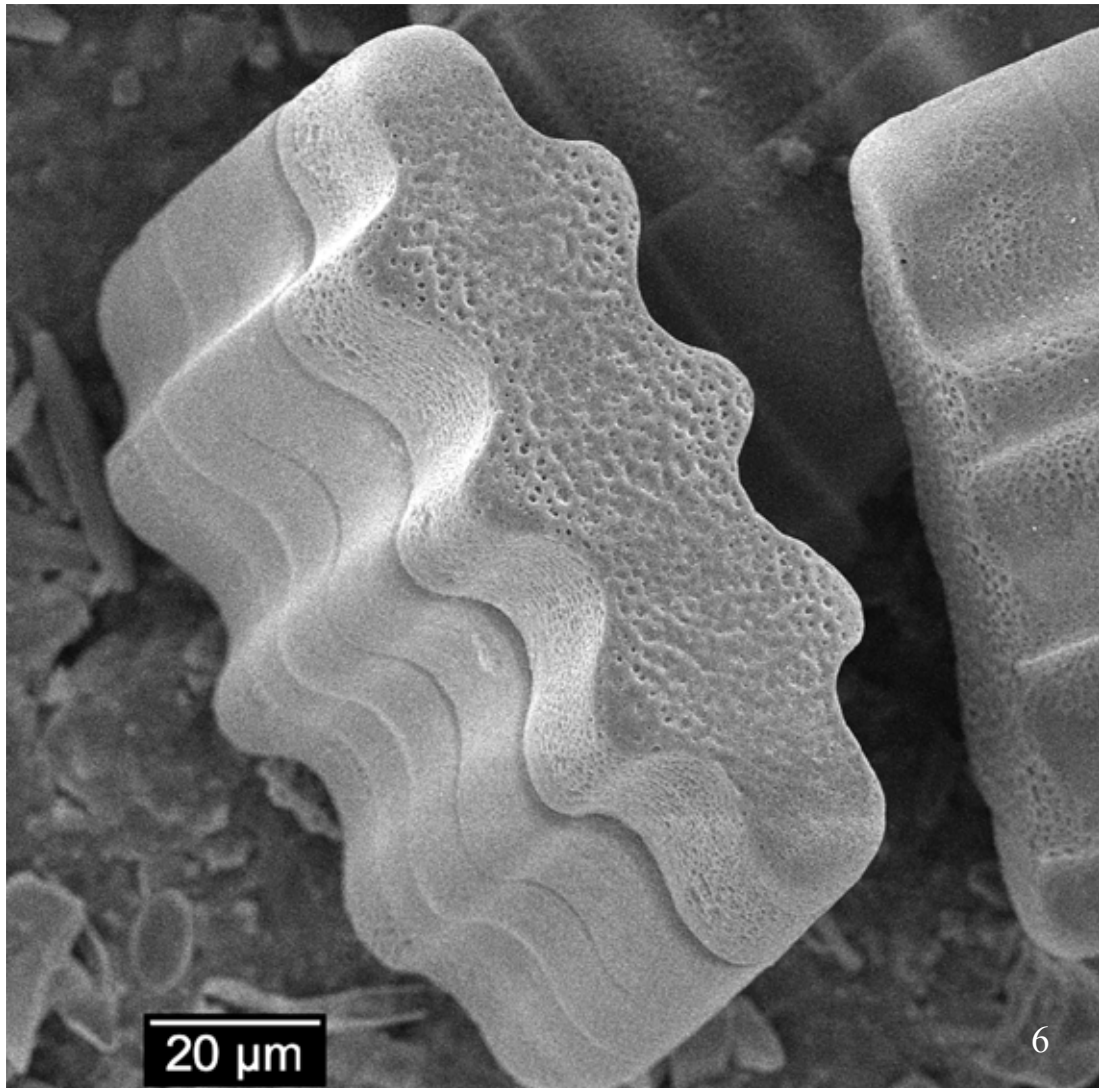
25μm



4



5



No. 143

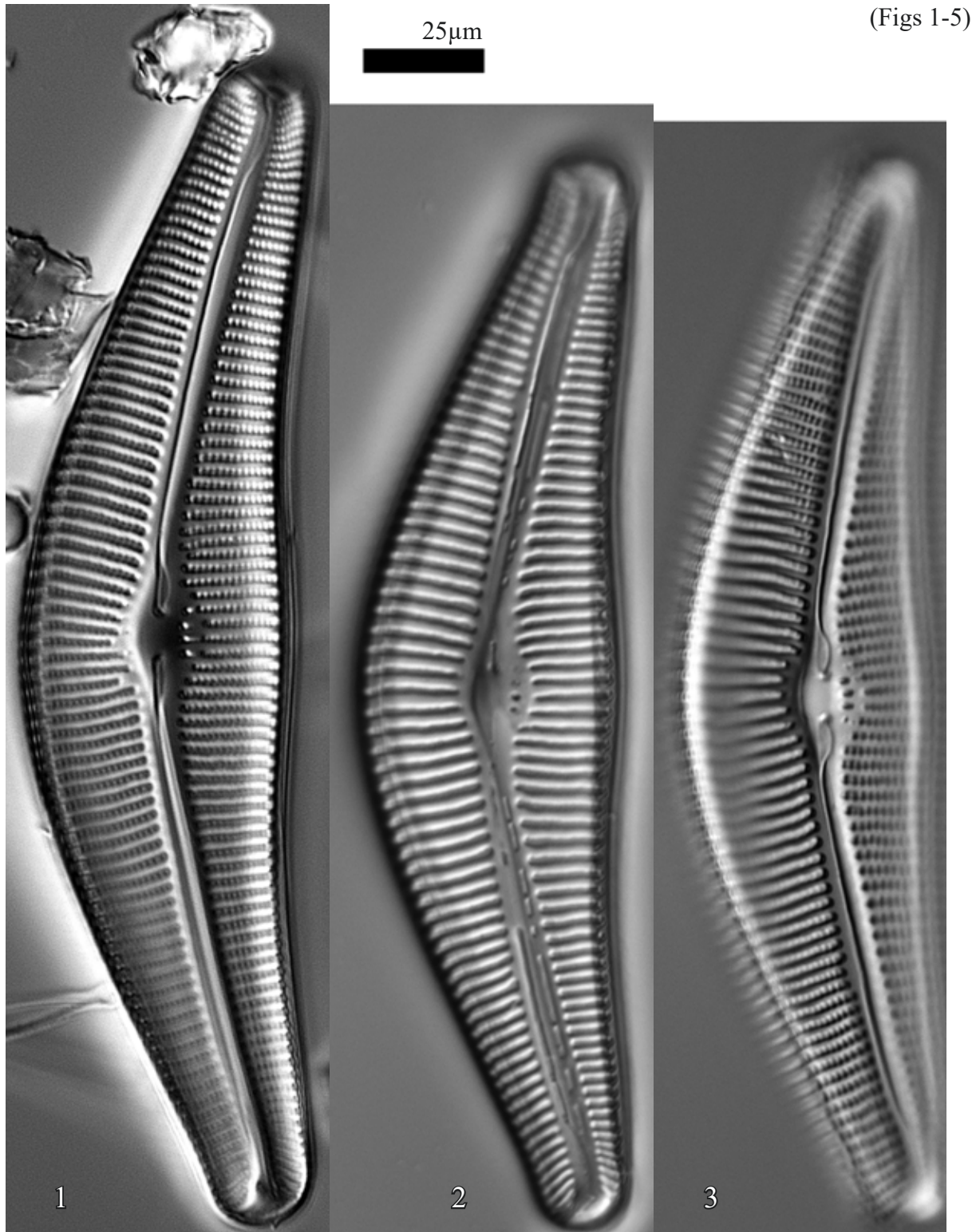
Horoman river, Samani Town, Samani Country, Hokkaido Pref., Japan.

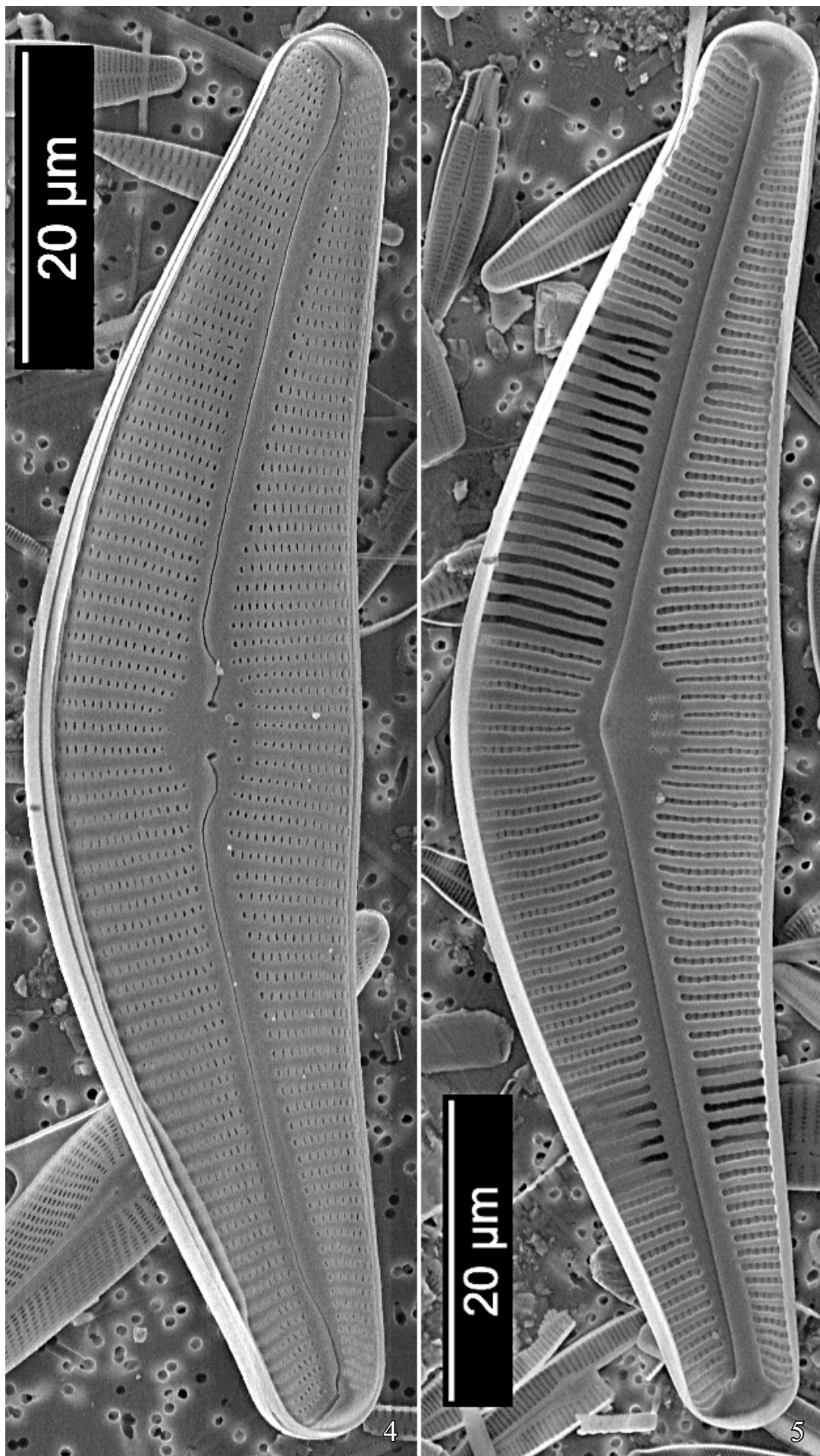
Date: 25/vii/2015.

Coll. A. Tuji (duplicate of TNS-AL-61505m in TNS).

Cymbella heterogibbosa H.Kobayasi & Mayama, Diatom **18**: 89. 2002.

Basionym: *Cymbella cistula* var. *gibbosa* Brun, Diatomisete vol. 2, pl. 14. f. 27. 1895.





No. 144

Tama river, Oume, Tokyo Pref., Japan.

[35.78621° N, 139.25438° E]

Electric conductivity (EC: $\mu\text{s}/\text{cm}$): 103, pH: 8.98.

Date: 23/iv/2019.

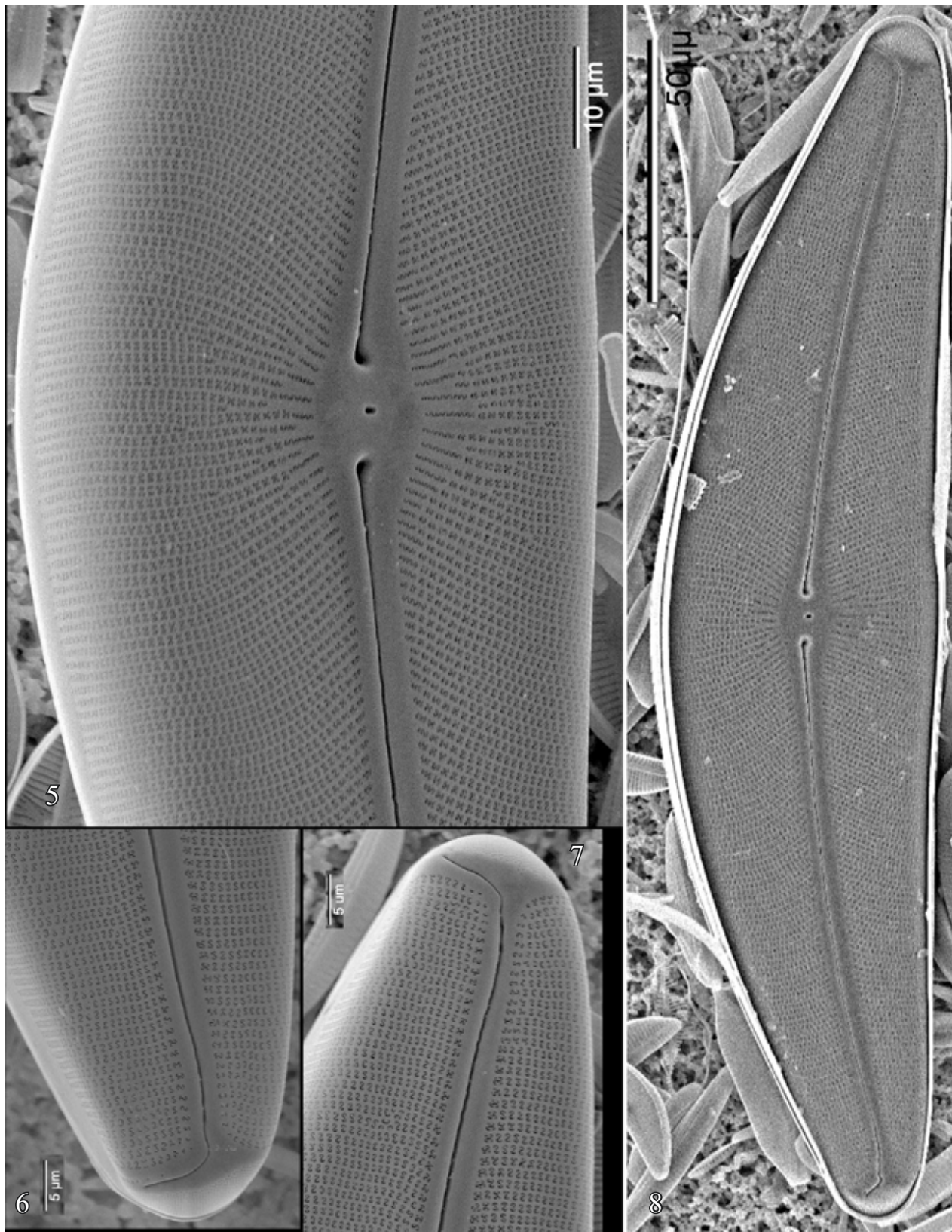
Coll. A. Tuji (duplicate of TNS-AL-63541m in TNS).

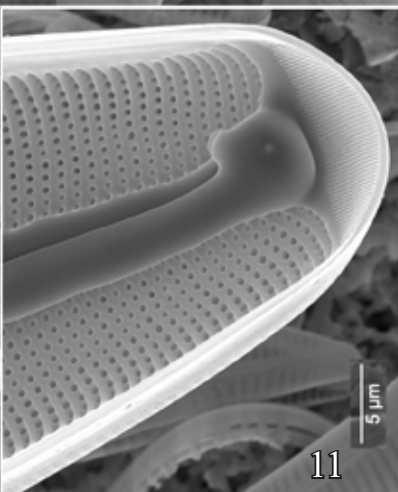
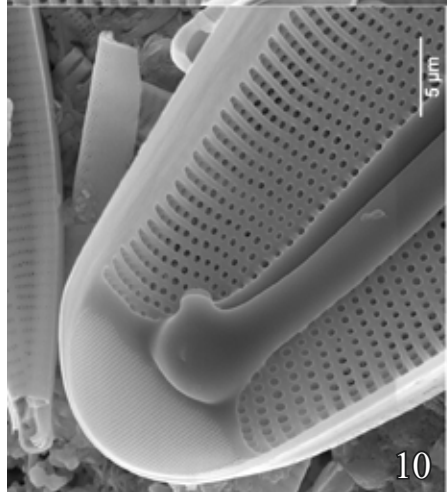
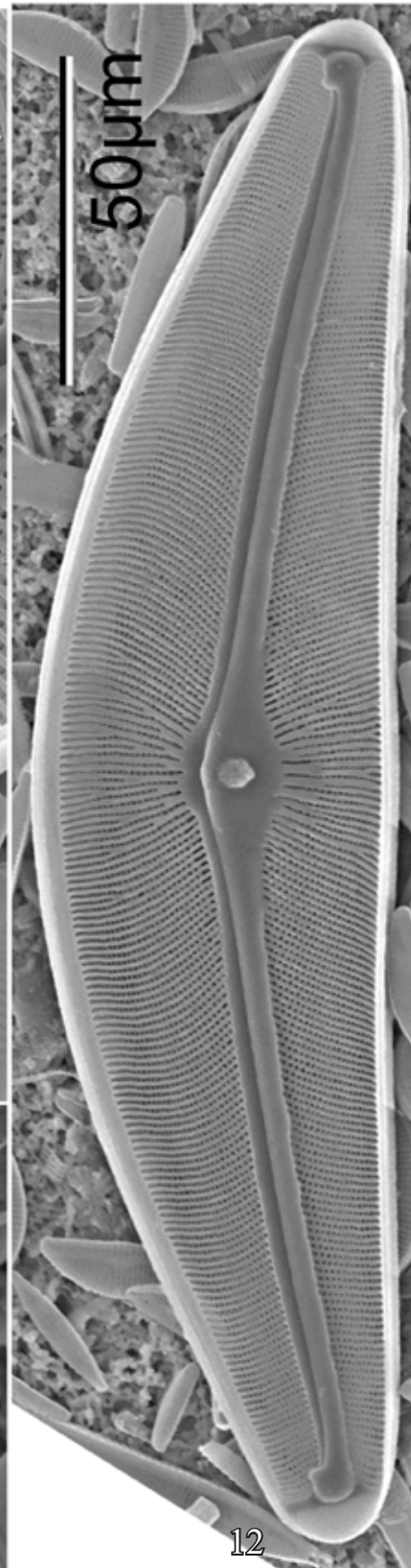
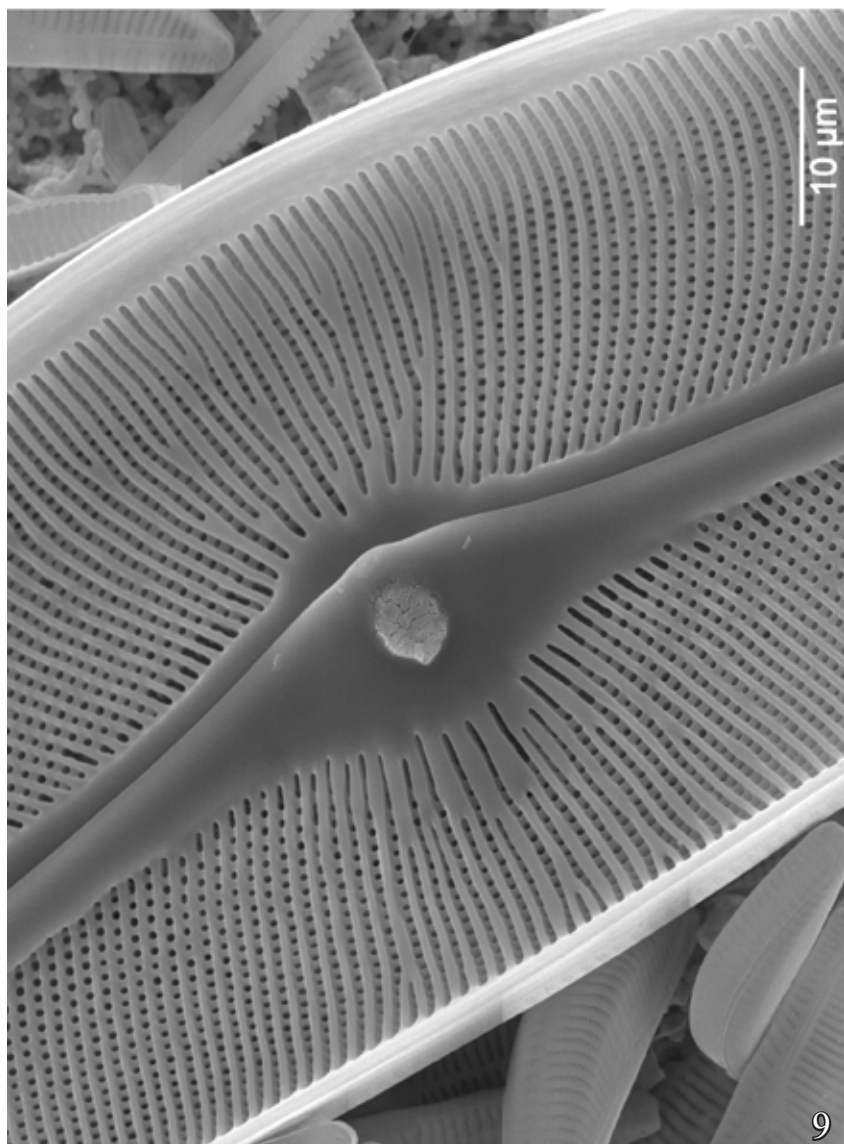
Cymbella janischii (A.W.F.Schmidt in Schmidt et al.) Cleve, K. Svenska Vet.-Akad.

Handl., ser. 4, **26(2)**: 177. 1894.

(Figs 1-12)







No. 145

Kesen river, Sumita, Iwate Pref., Japan.

[39.146431° N, 141.546287° E]

Electric conductivity (EC: $\mu\text{s}/\text{cm}$): 134, pH: 7.93, Water temperature (WT: $^{\circ}\text{C}$): 11.6.

Date: 19/x/2020.

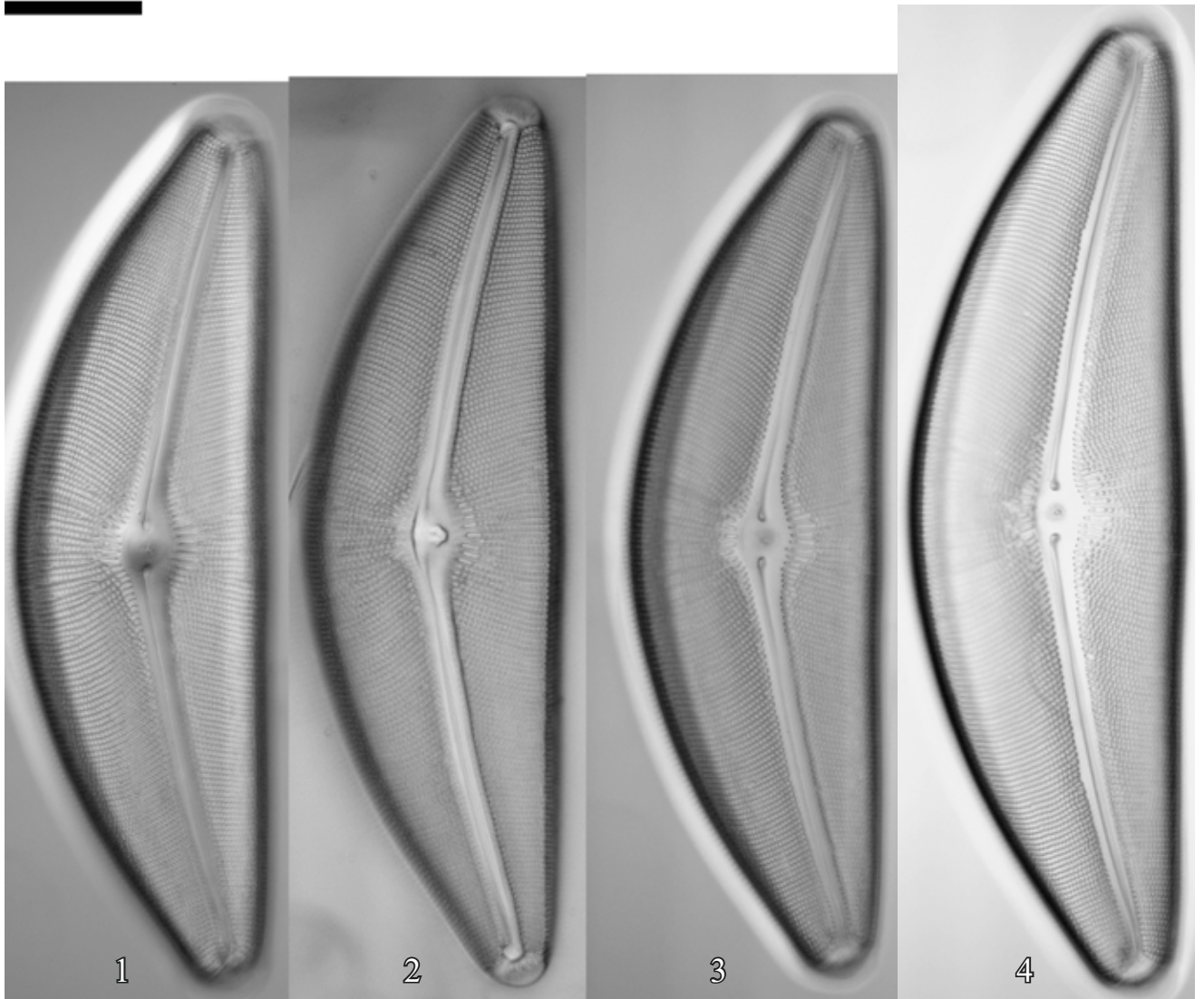
Coll. A. Tuji (duplicate of TNS-AL-58878m in TNS).

Cymbella janischii (A.W.F.Schmidt in Schmidt et al.) A.Cleve, K. Svenska Vet.-Akad.

Handl., ser. 4, **26(2)**: 177. 1894.

(Figs 1-4)

25 μm



No. 146

Chitose river, Chitose, Hokkaido Pref., Japan.

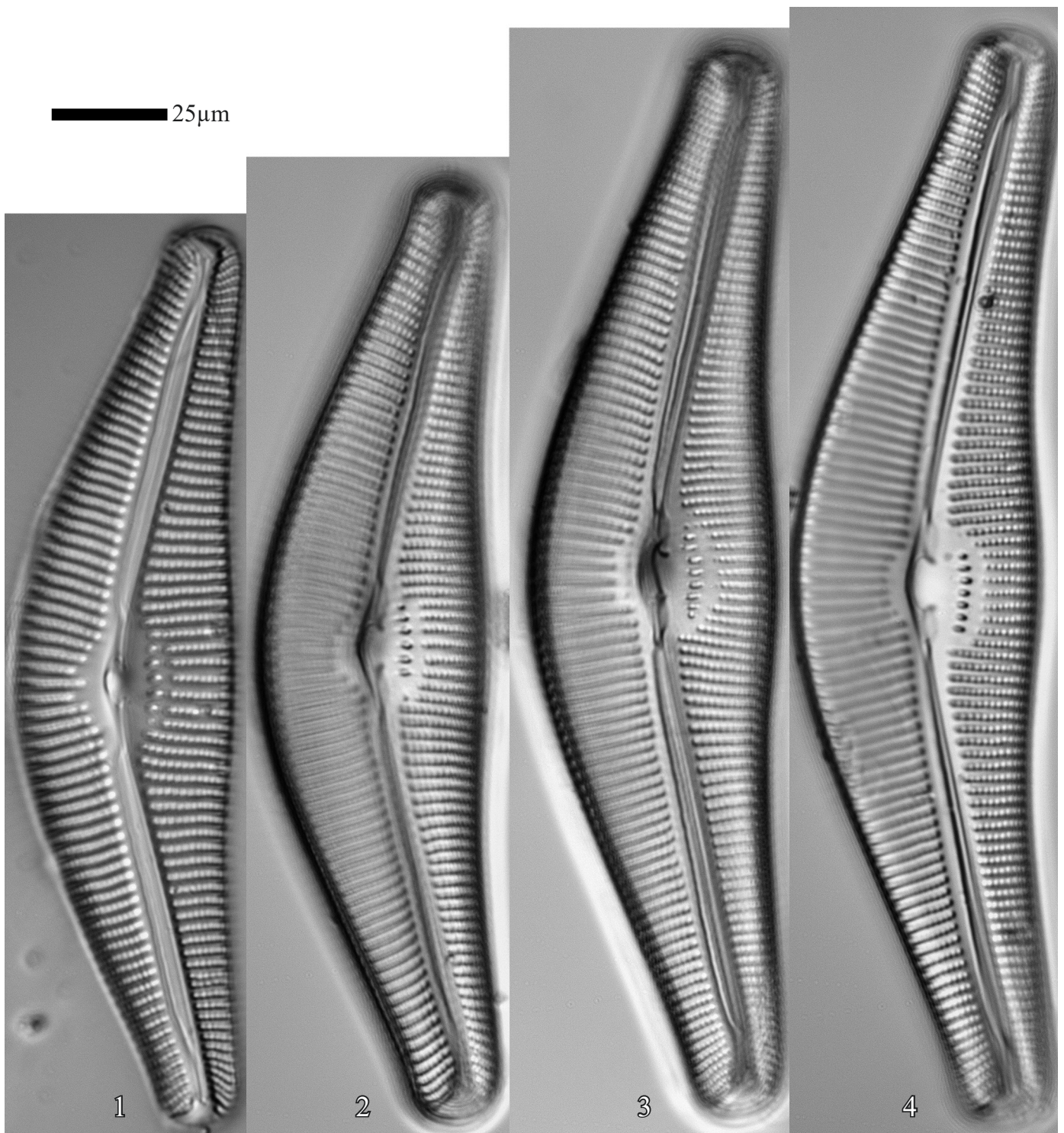
Date: 30/v/2013.

Coll. N. Matsuzawa (duplicate of TNS-AL-57396m in TNS).

Cymbella heterogibba H.Kobayasi et al., Diatom **18**: 89. 2002.

Basionym: *Cymbella cistula* var. *gibbosa* Brun, Diatomiste, 2. pl. 14. f. 27. 1895.

(Figs 1-4)



No. 147

Arakawa river, Minano, Saitama Pref., Japan.

[36.081902° N, 139.110465° E]

Electric conductivity (EC: $\mu\text{s}/\text{cm}$): 220, pH: 9.07, Water temperature (WT: $^{\circ}\text{C}$): 20.2.

Date: 23/iv/2019.

Coll. N. Matsuzawa (duplicate of TNS-AL-63545m in TNS).

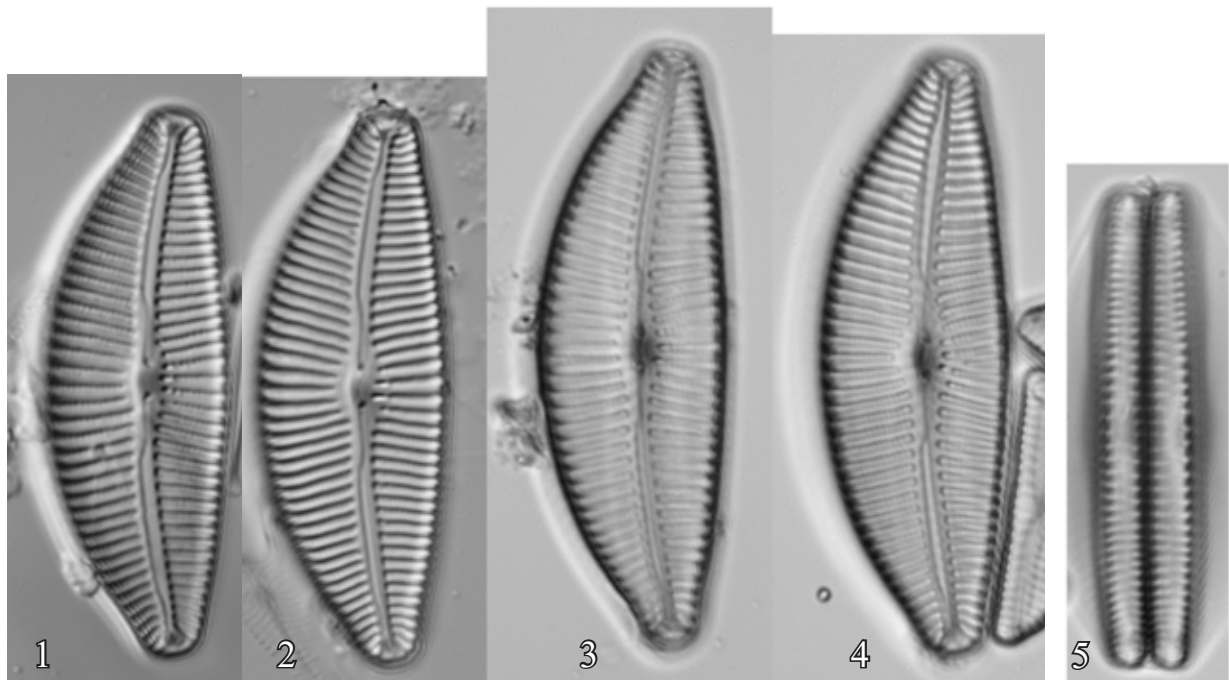
Cymbella turgidula Grunow in Schmidt, Atlas Diat. pl. 9. f 23-26. 1875.

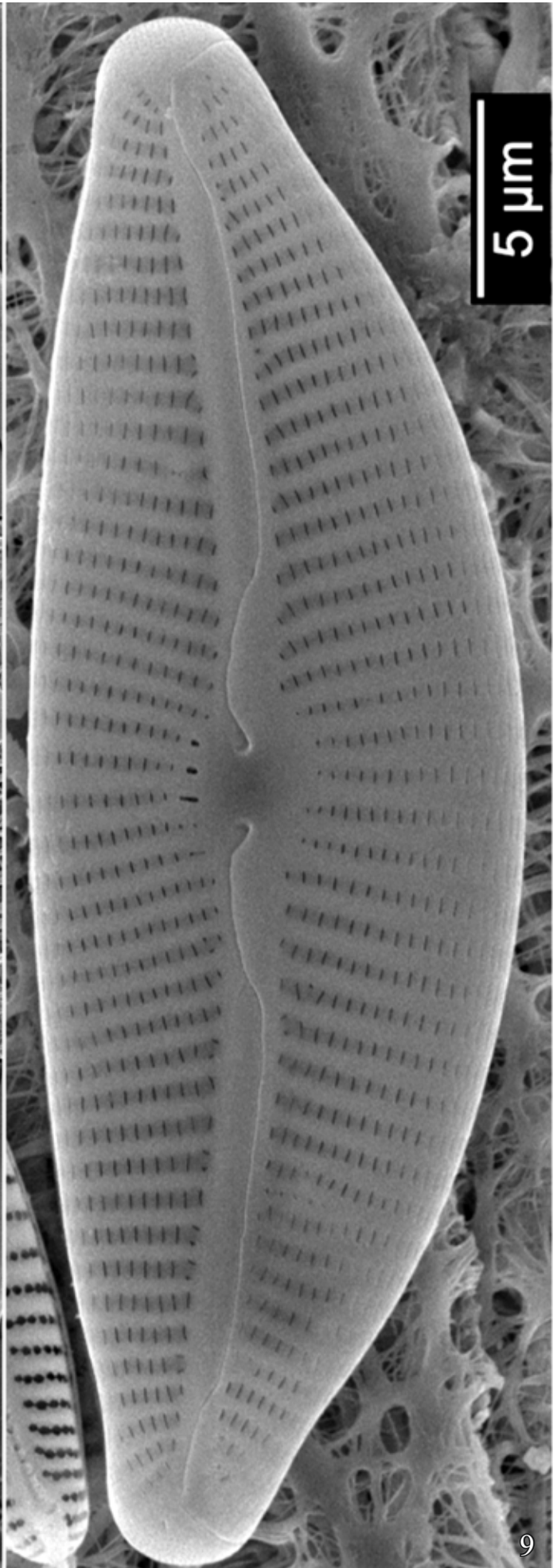
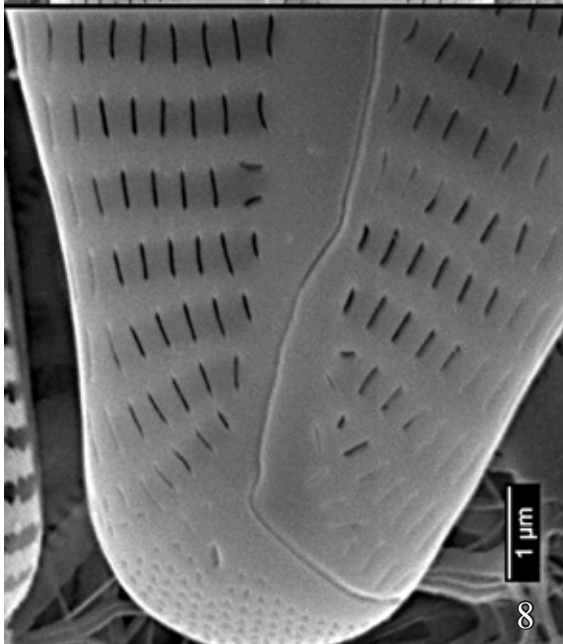
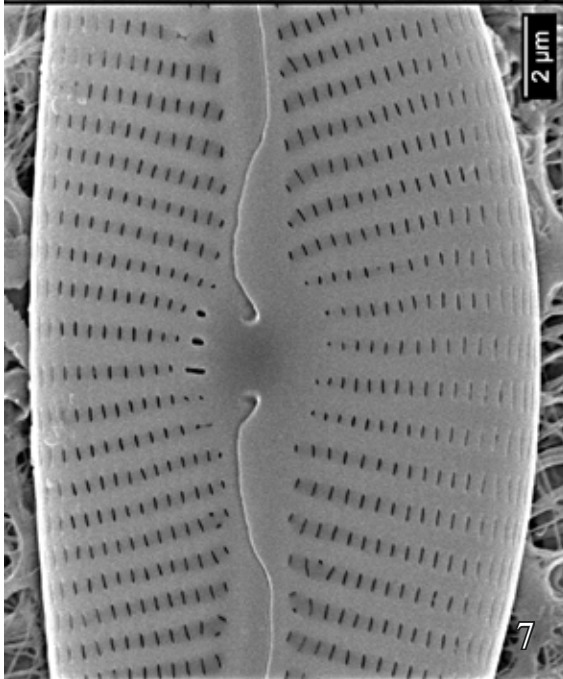
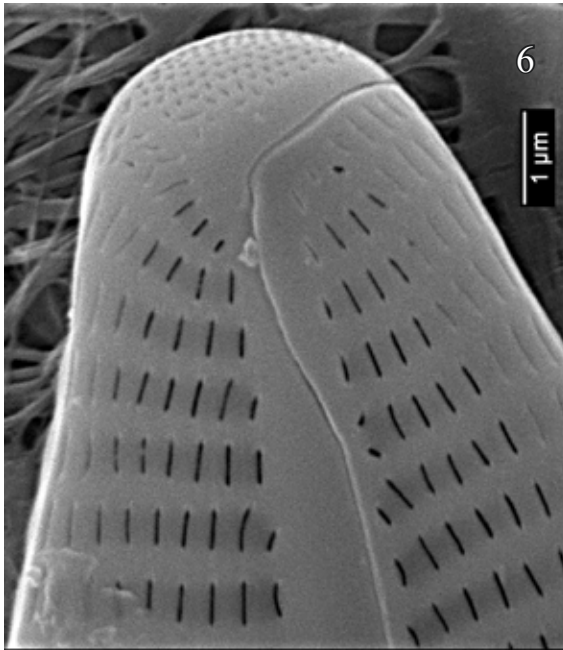
Lectotype (designated in Tuji, Diatom 23:50, 2007): Plate 9, Figure 23 in A.W. F. Schmidt, A. Schmidt's Atlas Diat. 1875.

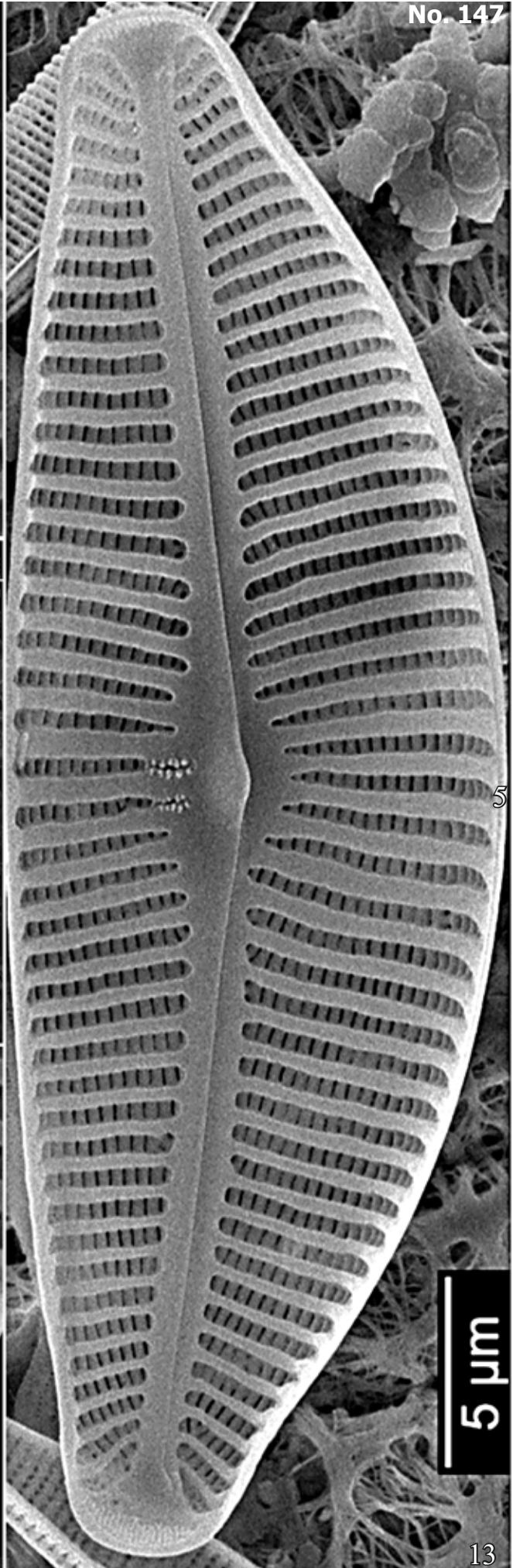
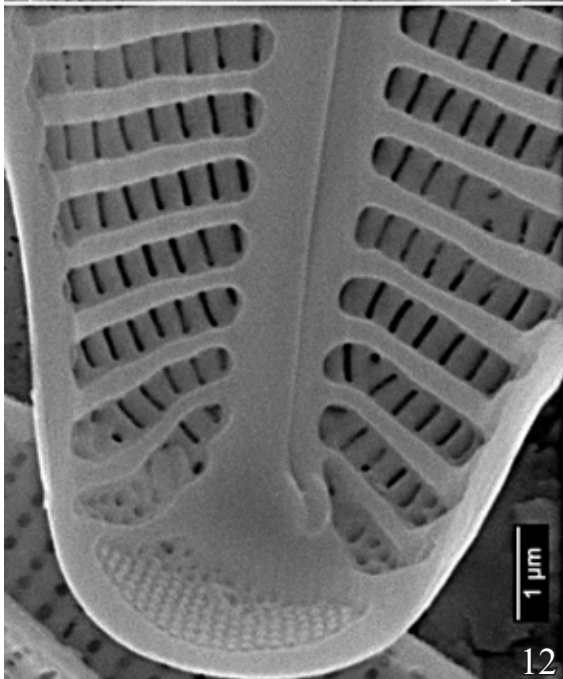
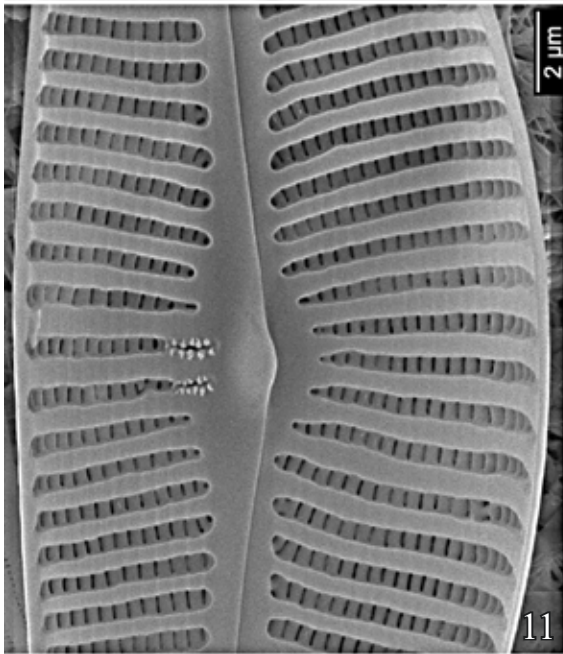
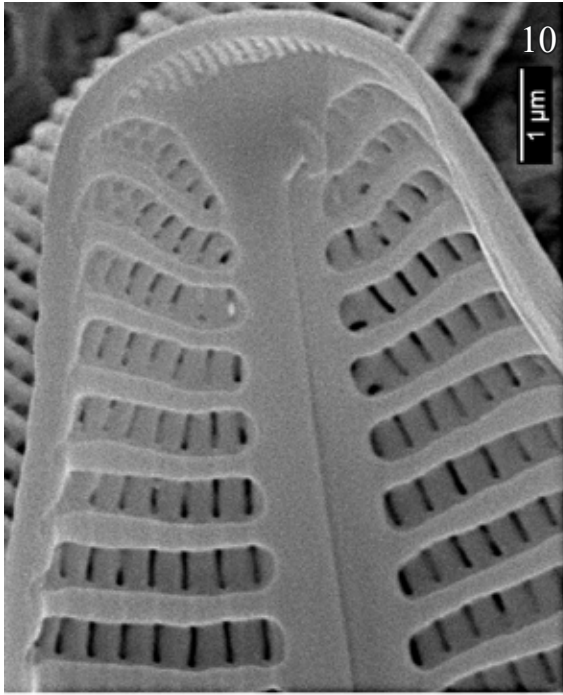
Epitype (designated in Tuji, Diatom 23:50, 2007): An individual in slide 1504 in Grunow collection in W. (Portorico with J. D. MOLLER's label).

(Figs 1-13)

10 μm







No. 148

Inokashira-pond, Mitaka, Tokyo Pref., Japan.

[35.699376° N, 139.578289° E]

Electric conductivity (EC: $\mu\text{s}/\text{cm}$): 240, pH: 8.36, Water temperature (WT: $^{\circ}\text{C}$): 14.9.

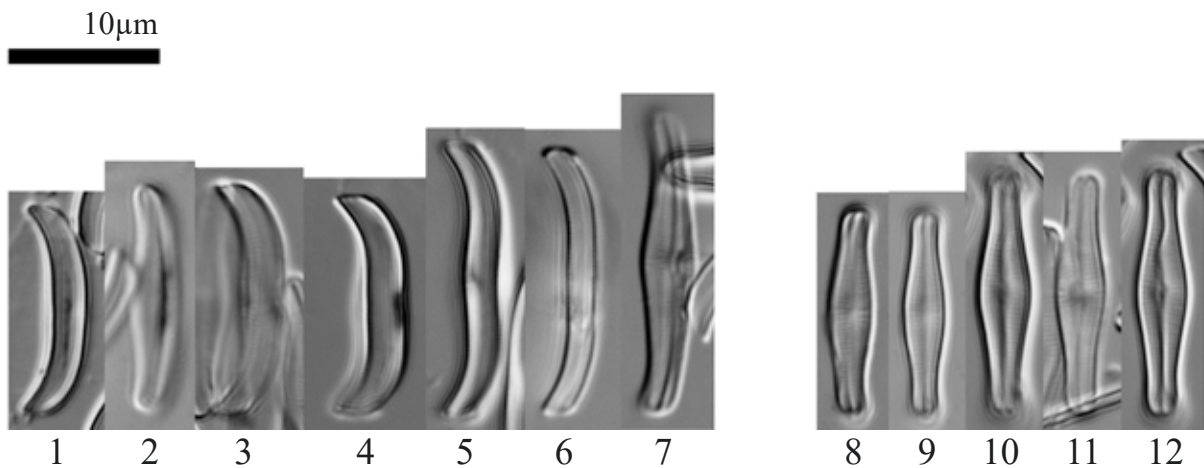
Date: 18/xi/2020.

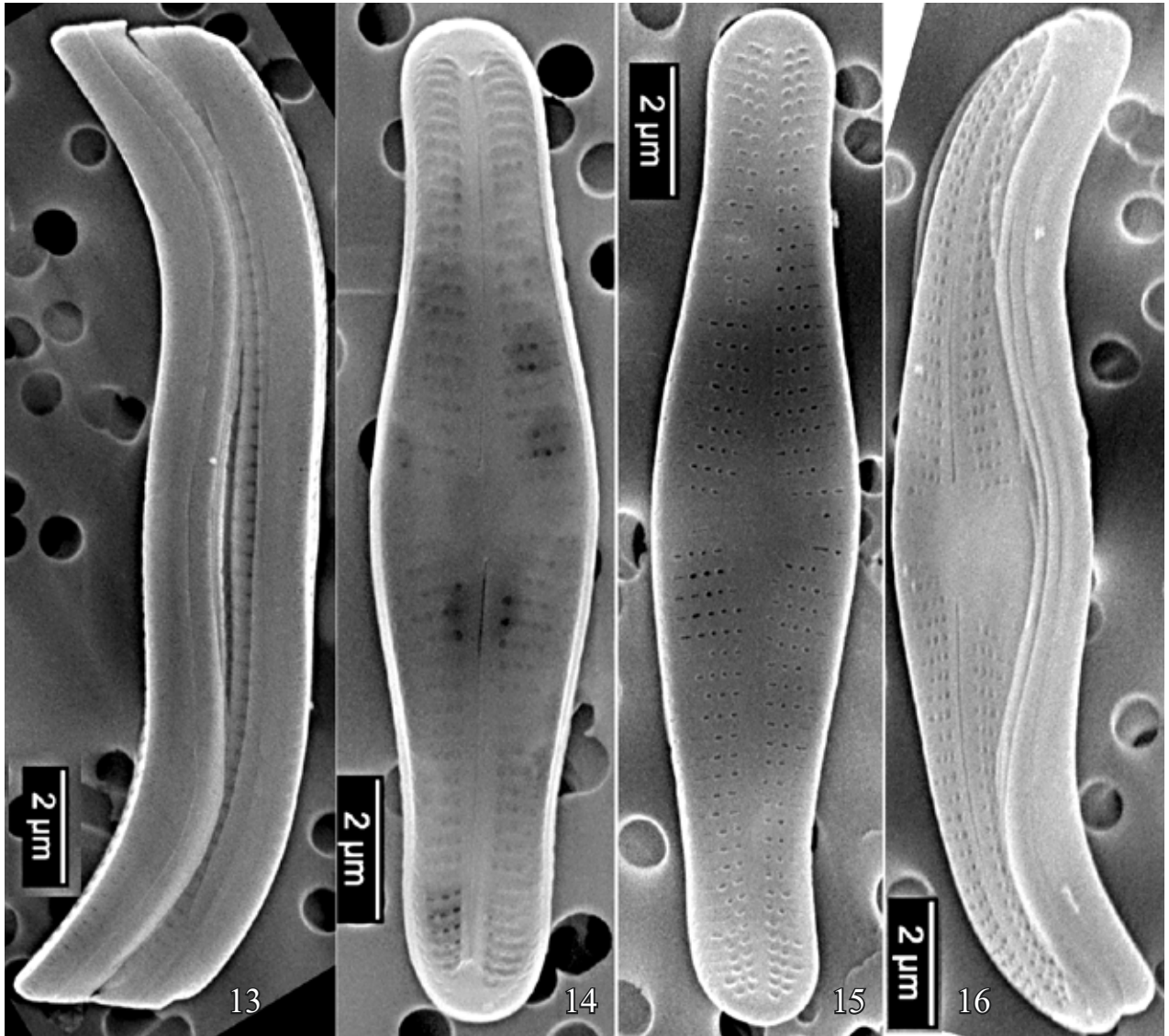
Coll. A. Tuji (duplicate of TNS-AL-52979c in TNS).

Achnantheidium catenatum (J.Bily & Marvan) Lange-Bert, Iconogr. Diat. **6**: 277. 1999.

Basionym: *Achnanthes catenata* J.Bily & Marvan, Preslia **31**: 34-35. *pl. 8. f. 1-4*. 1959.

(Figs 1-16)





No. 149

Inokashira-pond, Mitaka, Tokyo Pref., Japan.

[35.699376° N, 139.578289° E]

Electric conductivity (EC: $\mu\text{s}/\text{cm}$): 240, pH: 8.36, Water temperature (WT: $^{\circ}\text{C}$): 14.9.

Date: 18/xi/2020.

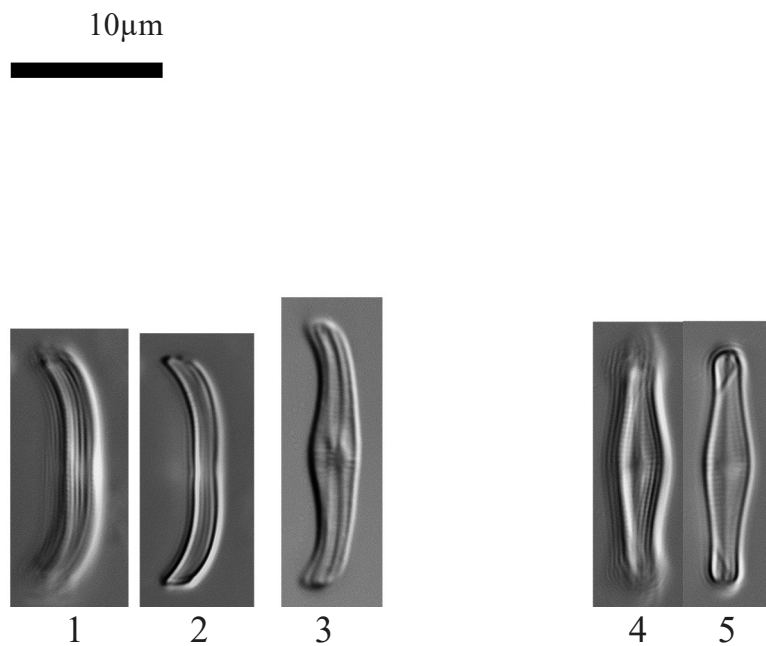
Coll. A. Tuji (duplicate of TNS-AL-52979 in TNS).

Achnantheidium catenatum (J.Bily & Marvan) Lange-Bert, Iconogr. Diat. **6**: 277. 1999.

Basionym: *Achnanthes catenata* J.Bily & Marvan, Preslia **31**: 34-35. *pl. 8. f. 1-4*. 1959.

This slide was prepared by the uncleaned material (same material of no. 148) for the observation of colony forming.

(Figs 1-5)



No. 150

Takahiku point, Lake Yamanaka, Yamanakako Vill., Yamanashi Pref., Japan.

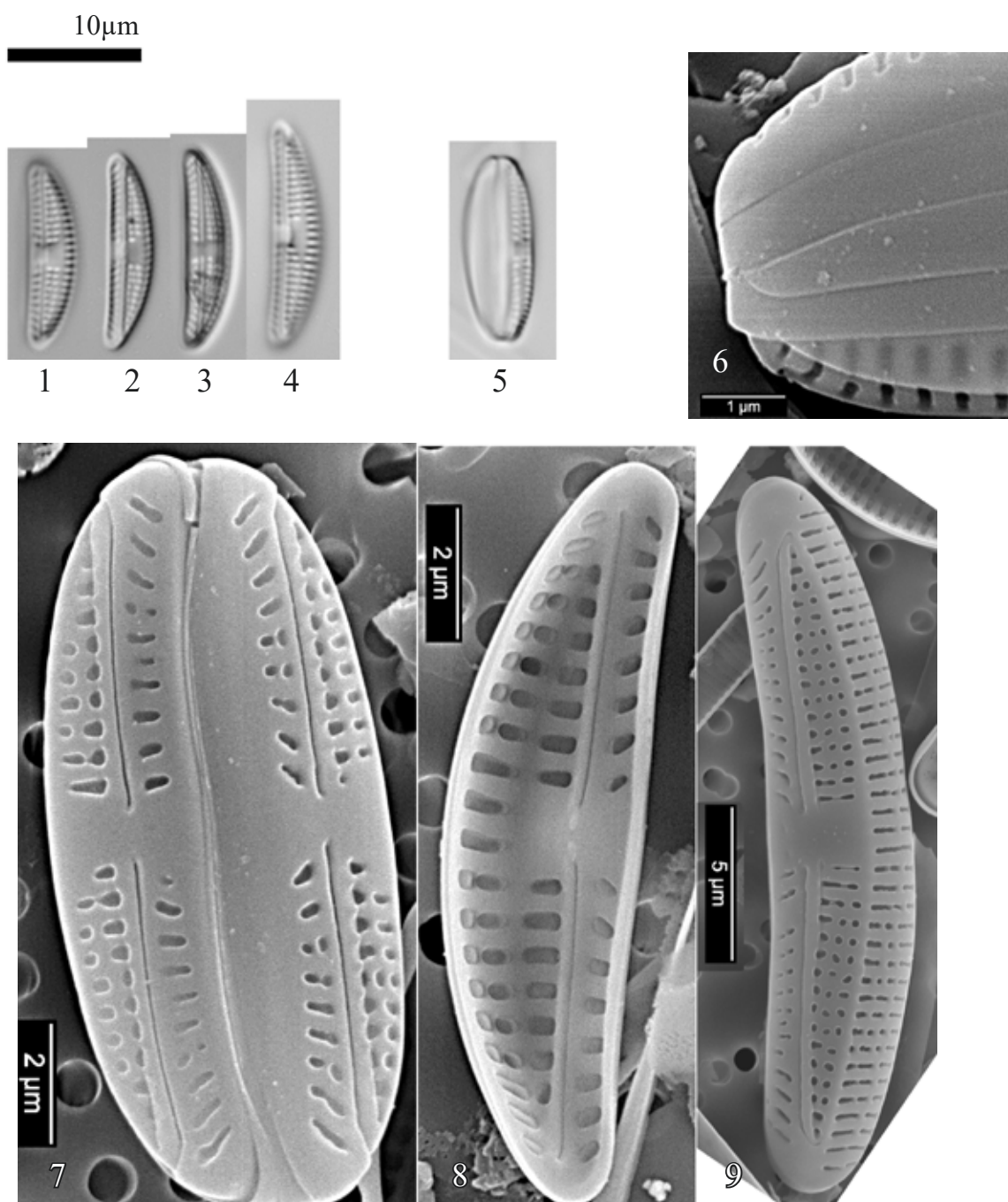
Date: 17/iii/2020.

Coll. A. Tuji (duplicate of TNS-AL-57899 in TNS).

Amphora pediculus (Kütz.) Grunow in Schmidt et al., Atlas Diat. pl. 26. f. 99. 1875.

Basionym: *Cymbella pediculus* Kütz., Kieselschaligen p. 80. pl. 5. f. 8. pl. 6. pl. 7. 1844.

(Figs 1-9)



No. 151

Tsuboke stream, Mt. Hayachine, Miyako, Iwate Pref., Japan.

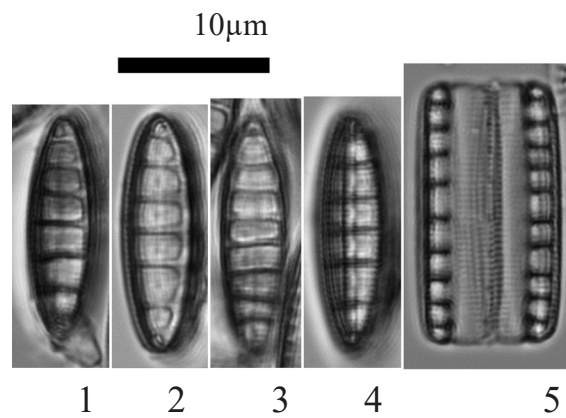
Date: 25/viii/2014.

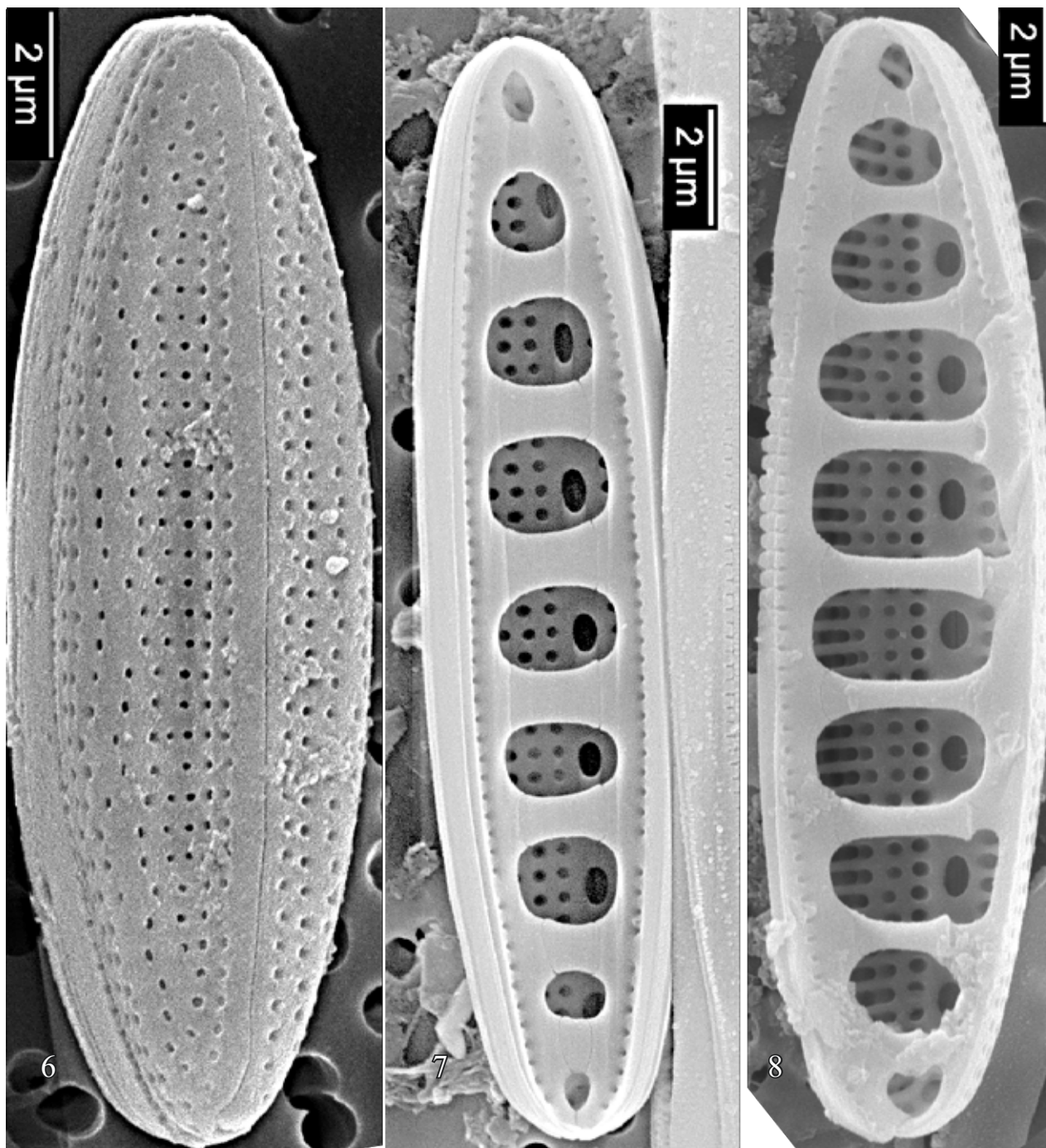
Coll. A. Tuji (duplicate of TNS-AL-58385 in TNS).

Denticula tenuis var. *crassula* (Naeg. ex Kütz.) West & G.S.West, Bot. Trans.
Yorkshire Naturalists Union **5(27)**: 204. 1901.

Basionym: *Denticula crassula* Naeg. ex Kütz., Species Algarum p. 889. 1849.

(Figs 1-8)





No. 152

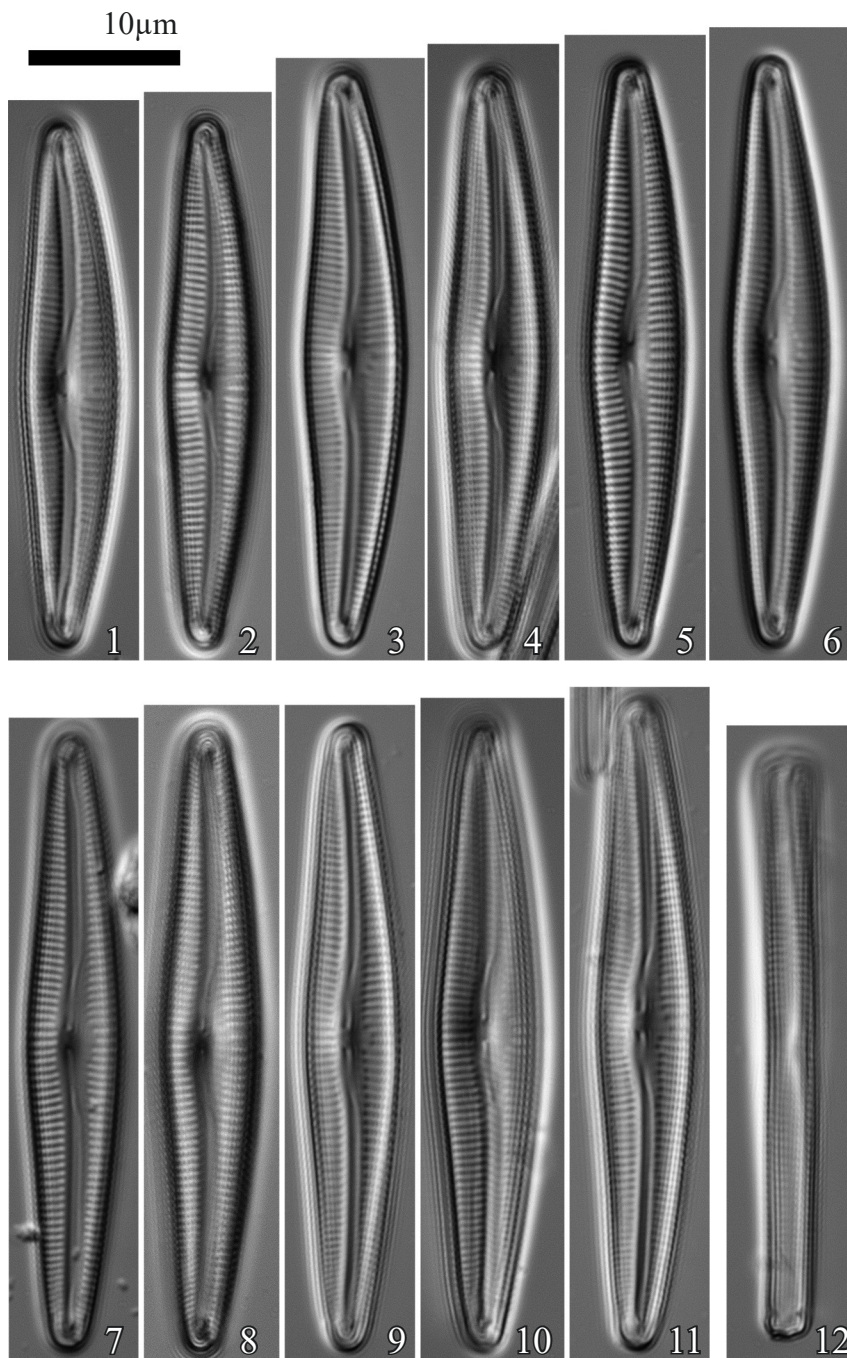
Lake Motosu, Kawaguchiko, Yamanashi Pref., Japan.

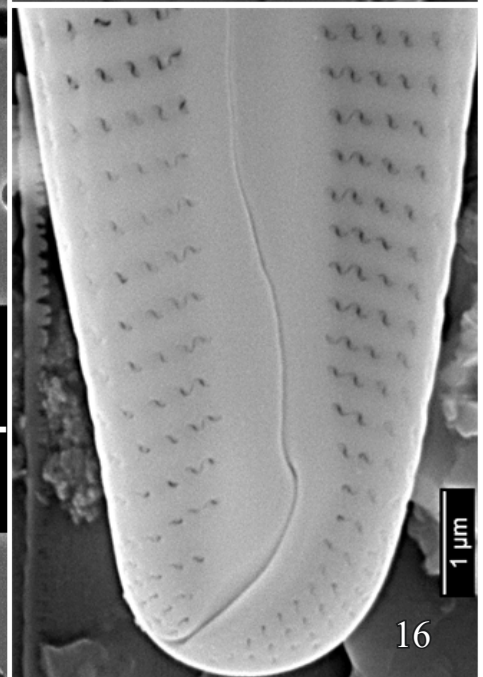
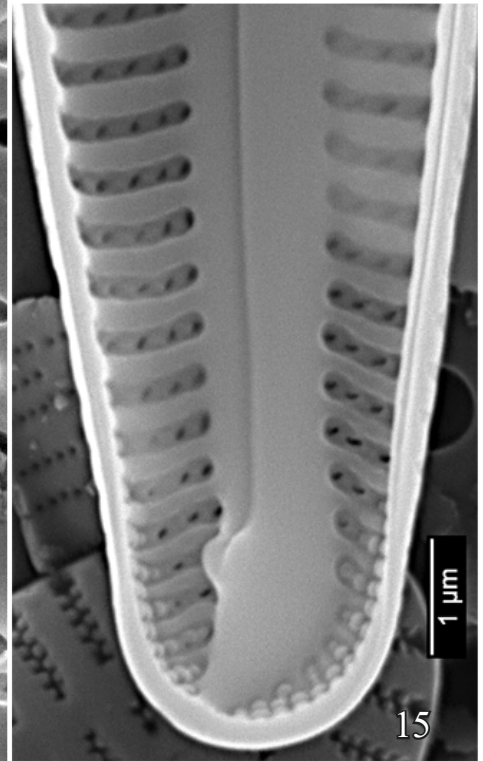
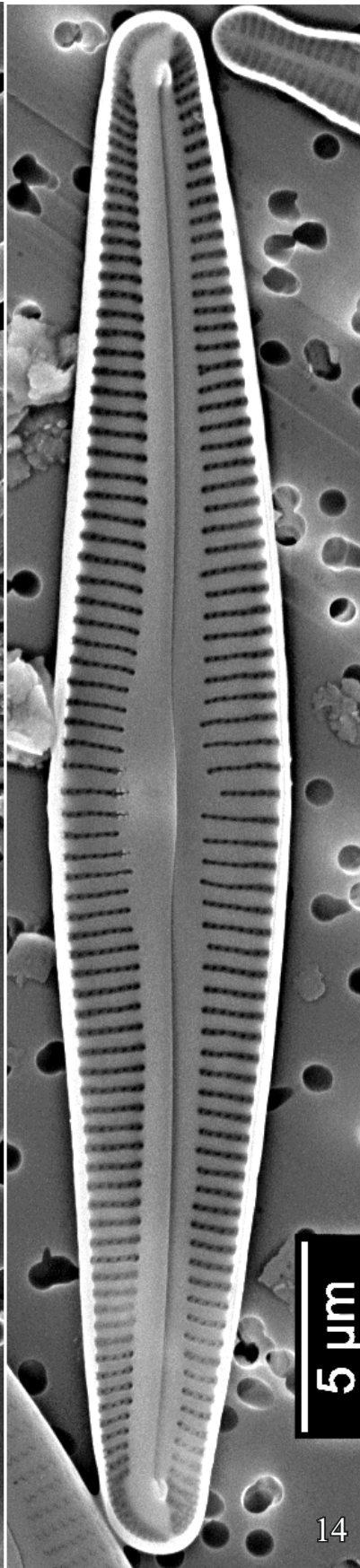
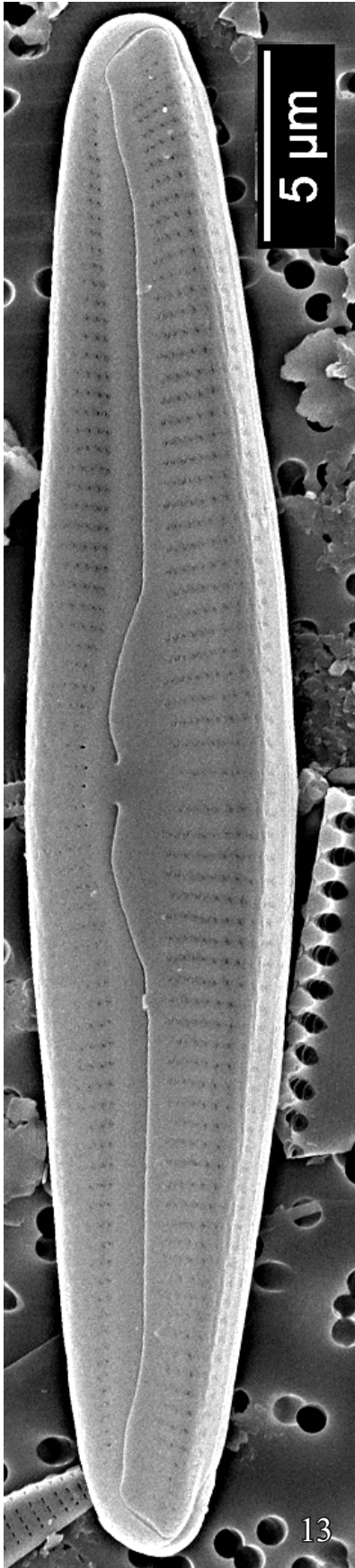
Date: 15/iii/2020.

Coll. A. Tuji (duplicate of TNS-AL-57882 in TNS).

Delicata montana L.L.Bahls, Diatoms West. North America 1: 19. f. 85-90, 109- 124. 2017.

(Figs 1-16)





No. 153

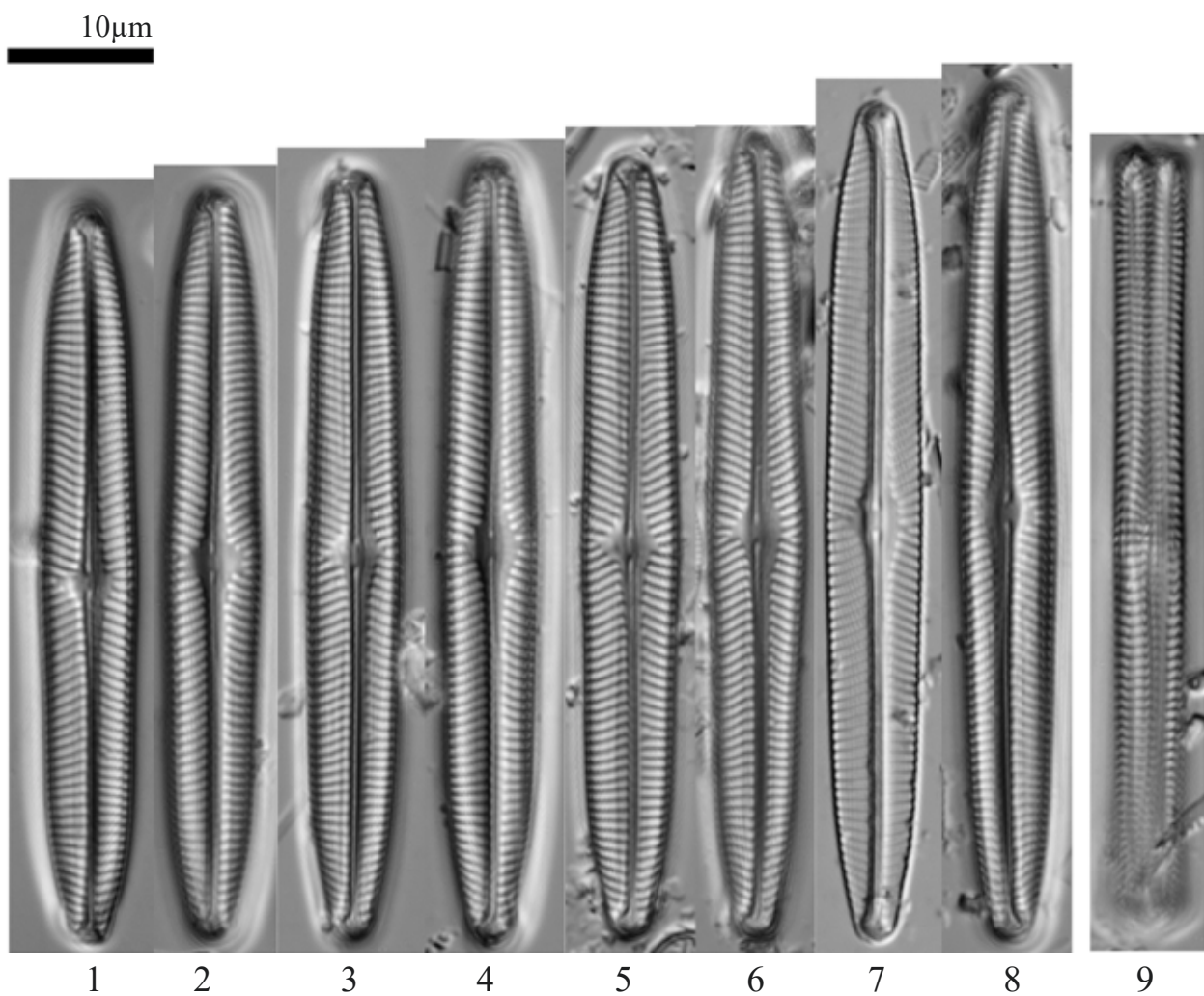
Lake Motosu, Kawaguchiko, Yamanashi Pref., Japan.

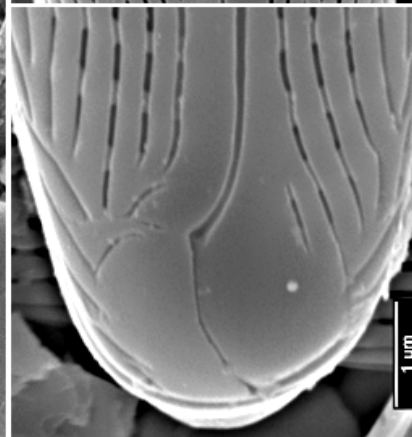
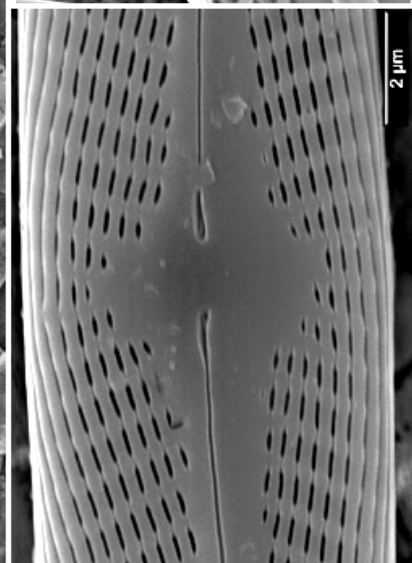
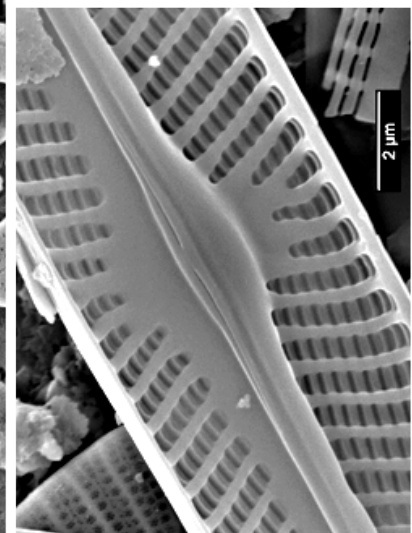
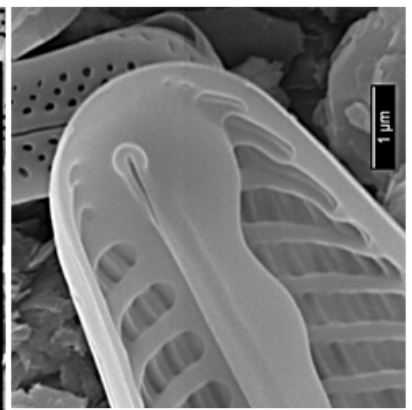
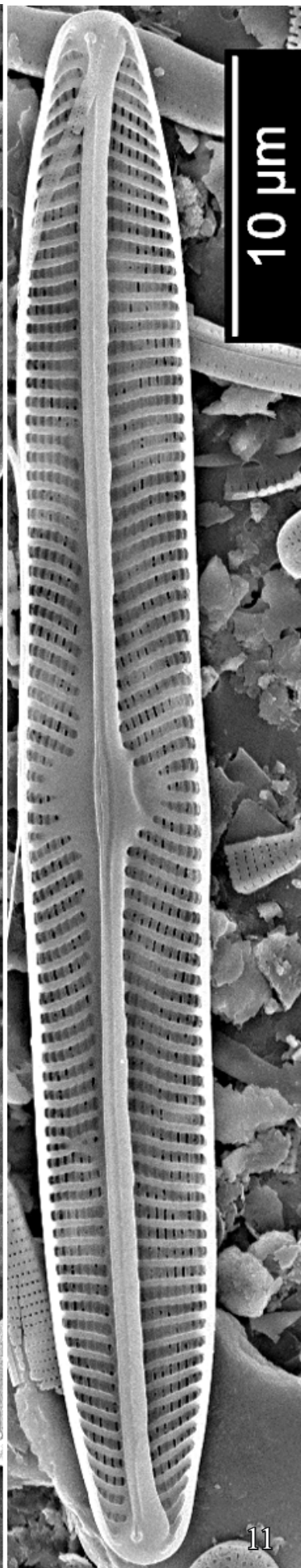
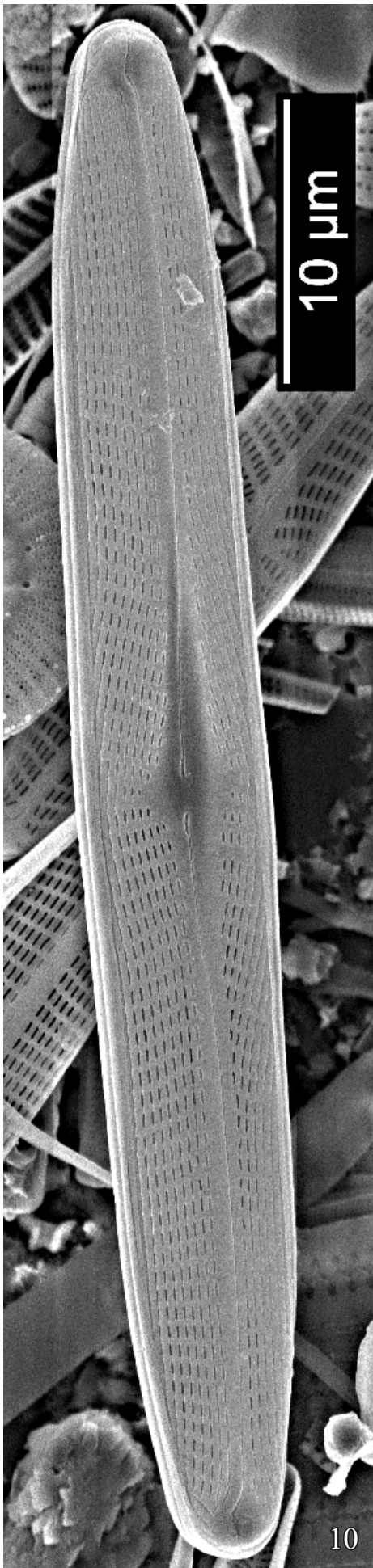
Date: 15/iii/2020.

Coll. A. Tuji (duplicate of TNS-AL-57876 in TNS).

Navicula angusta Grunow, , Verh. K. K. Zool.-Bot. Ges. Wien **10**: 528. *pl. 3, f. 19.* 1860.

(Figs 1-15)





No. 154

Lake Yamanaka, Yamanakako, Yamanashi Pref., Japan.

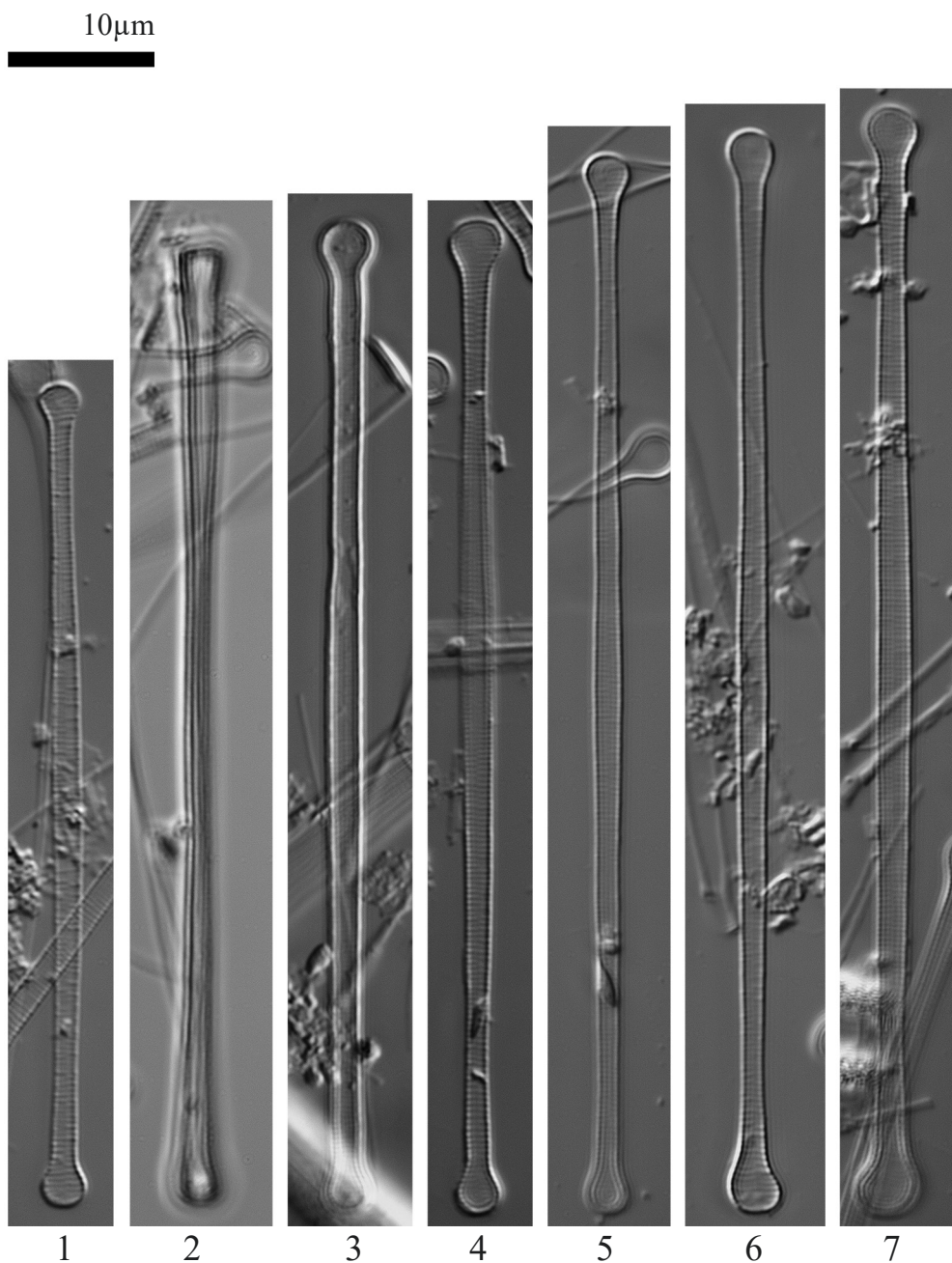
Date: 16/iii/2020.

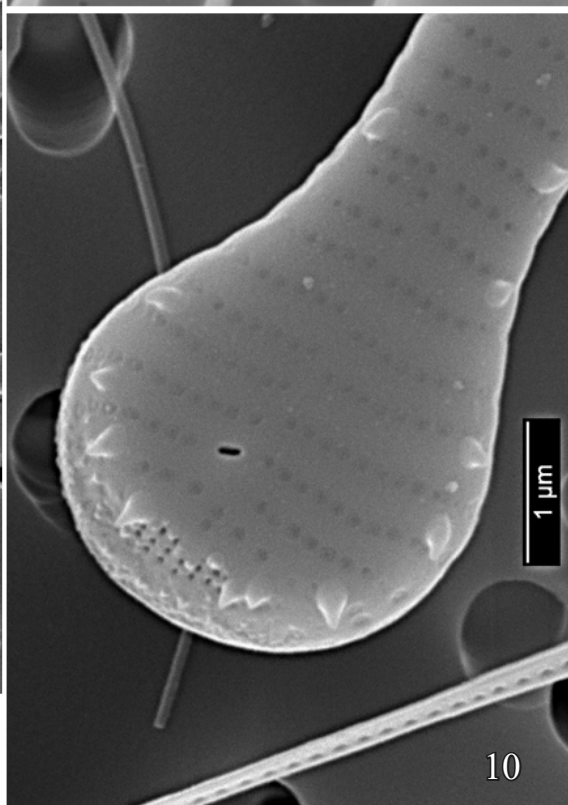
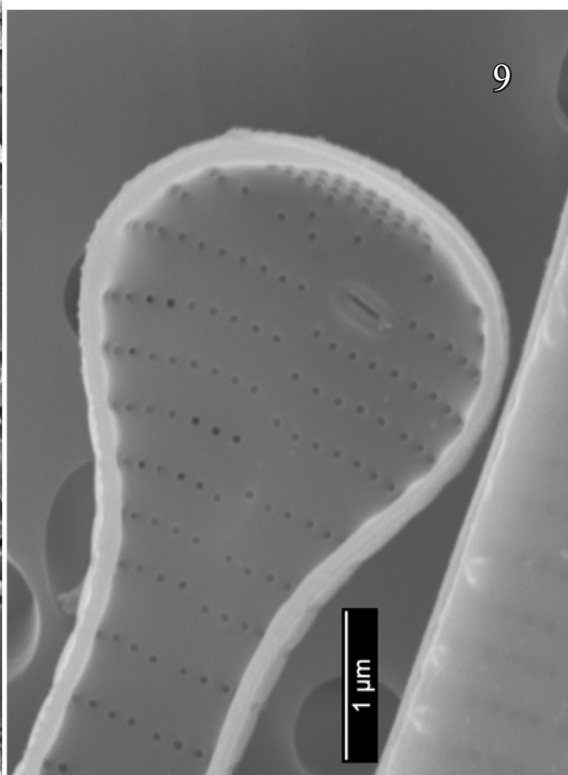
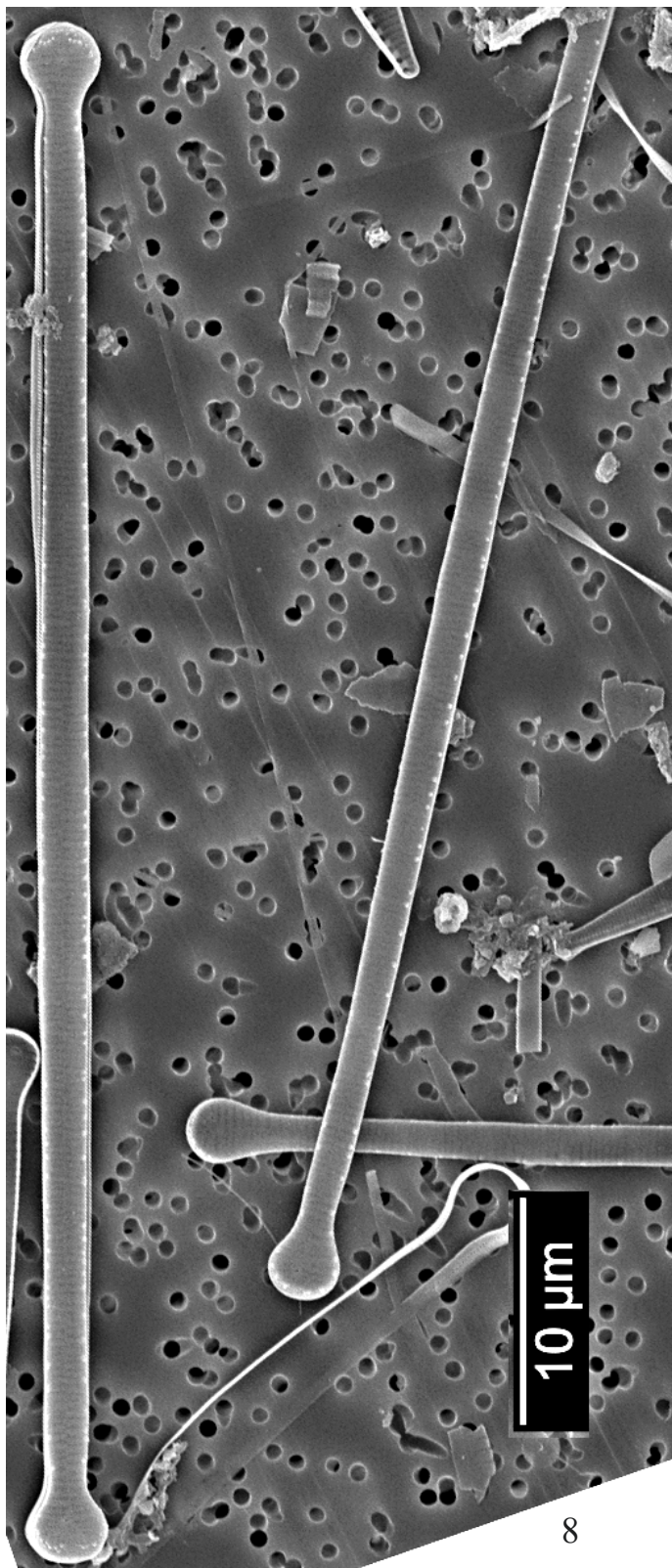
Coll. A. Tuji (duplicate of TNS-AL-57888 in TNS).

Asterionella gracillima Heiberg, Consp. Diat. Dan. p. 68. 1863.

Basionym: *Diatoma gracillima* Hantzsch in Rabenh., Alg. Eur, Dec 111/112 no. 1104b. 1861.
nom. illeg.

(Figs 1-10)





No. 155

River Otomo, Toono, Iwate Pref., Japan.

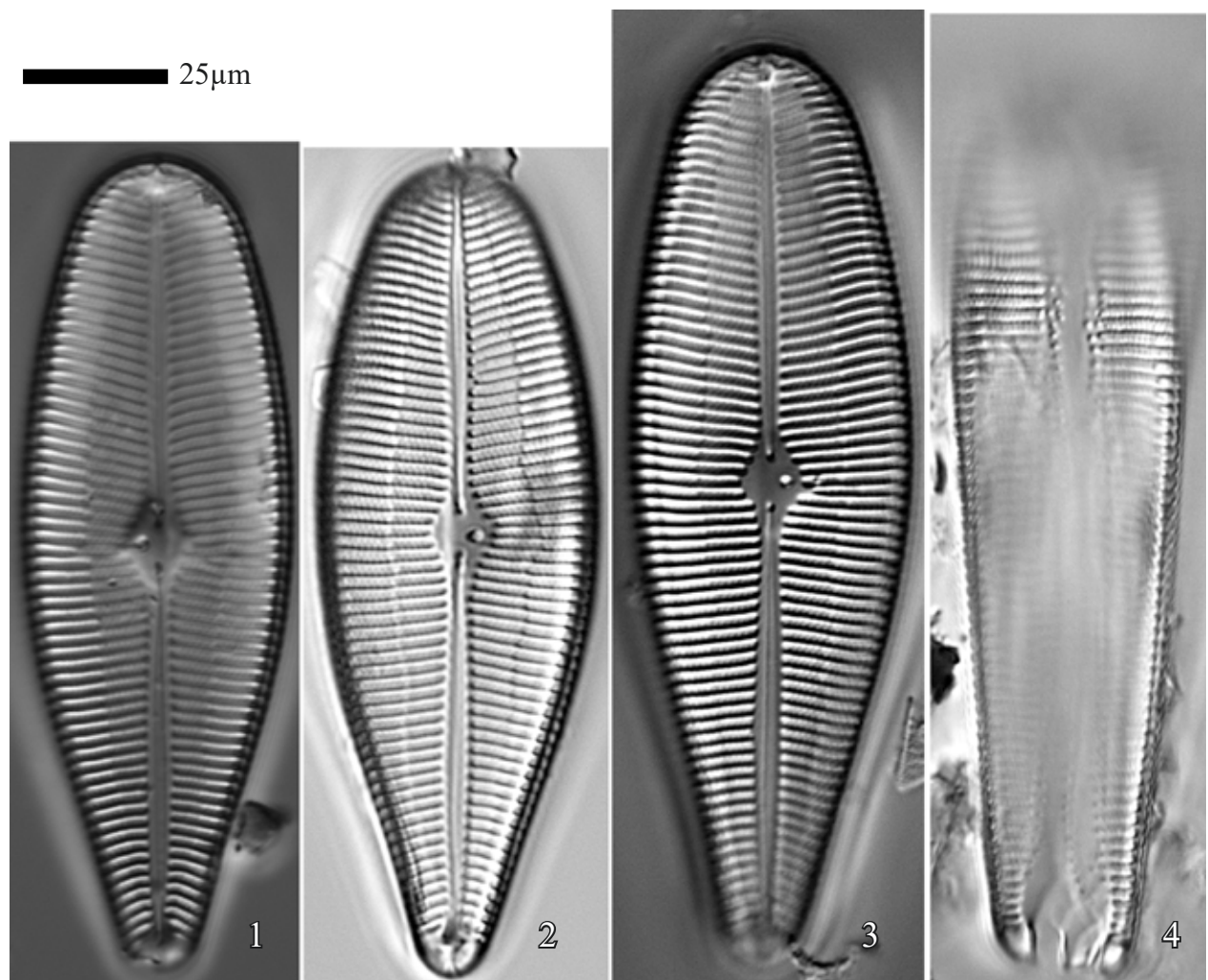
Date: 20/x/2020.

Coll. A. Tuji & N. Suzuki (duplicate of TNS-AL-57891 in TNS).

Gomphoneis minuta (Stone) Kociolek & Stoermer, Pro. Acad. of Nat. Sci. Philadelphia
14(2): 56. f. 102–129. 1988.

Basionym: *Gomphoneis herculeana* var. *minuta* Stone in McLaughlin & Stone,
Nova Hedw. 82: 52. pl. 6. f. 90, 91. 1986.

(Figs 1-4)



No. 156

River Iruma, Hanno, Saitama Pref., Japan.

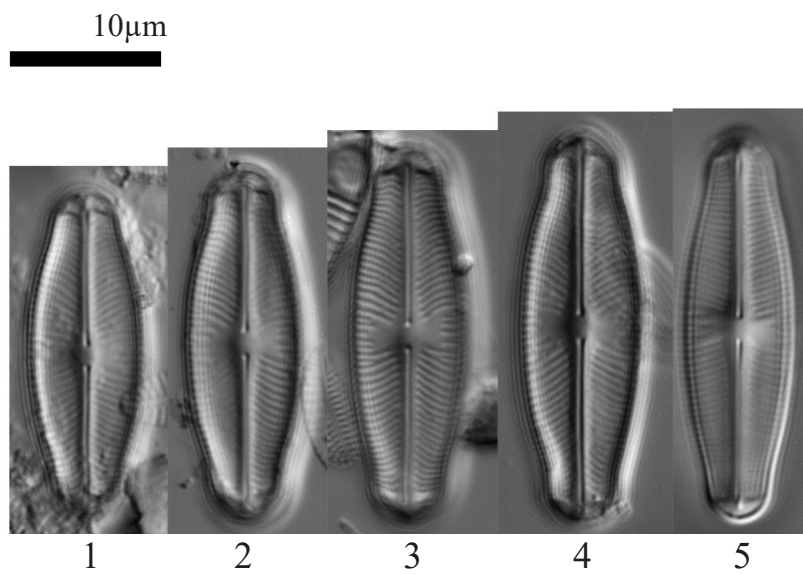
Date: 23/iv/2019.

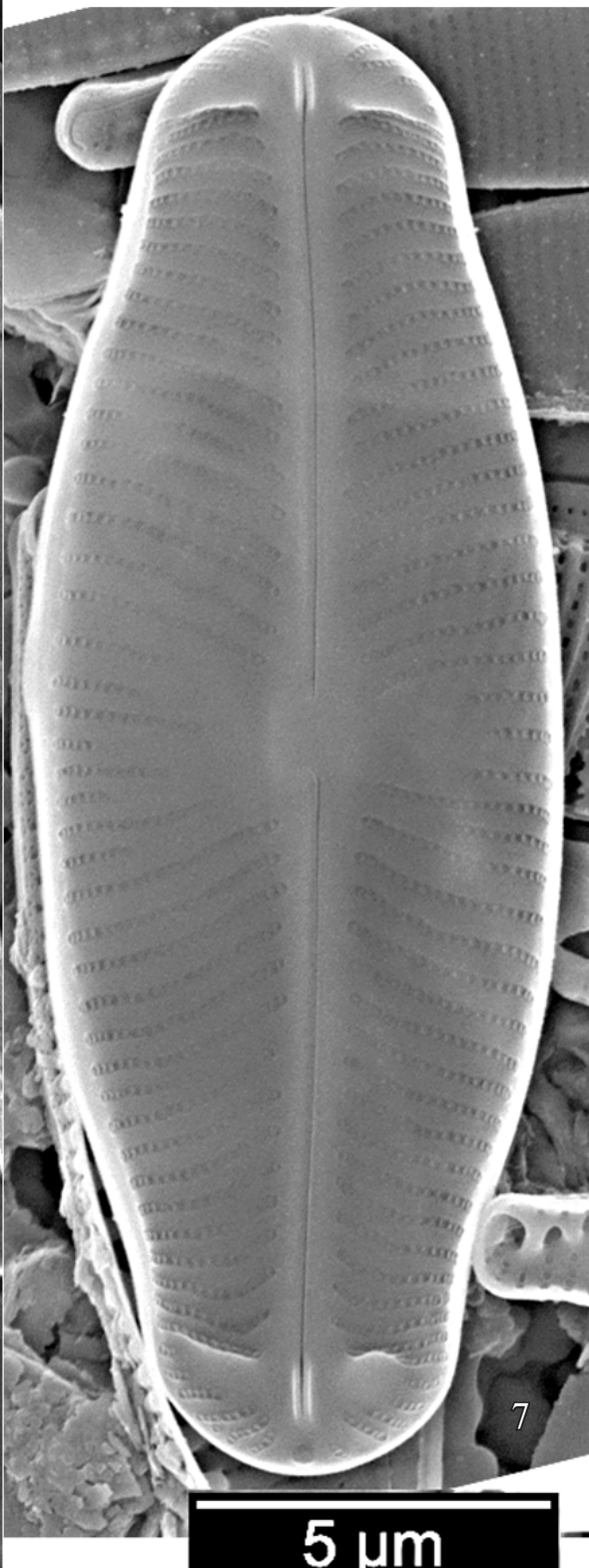
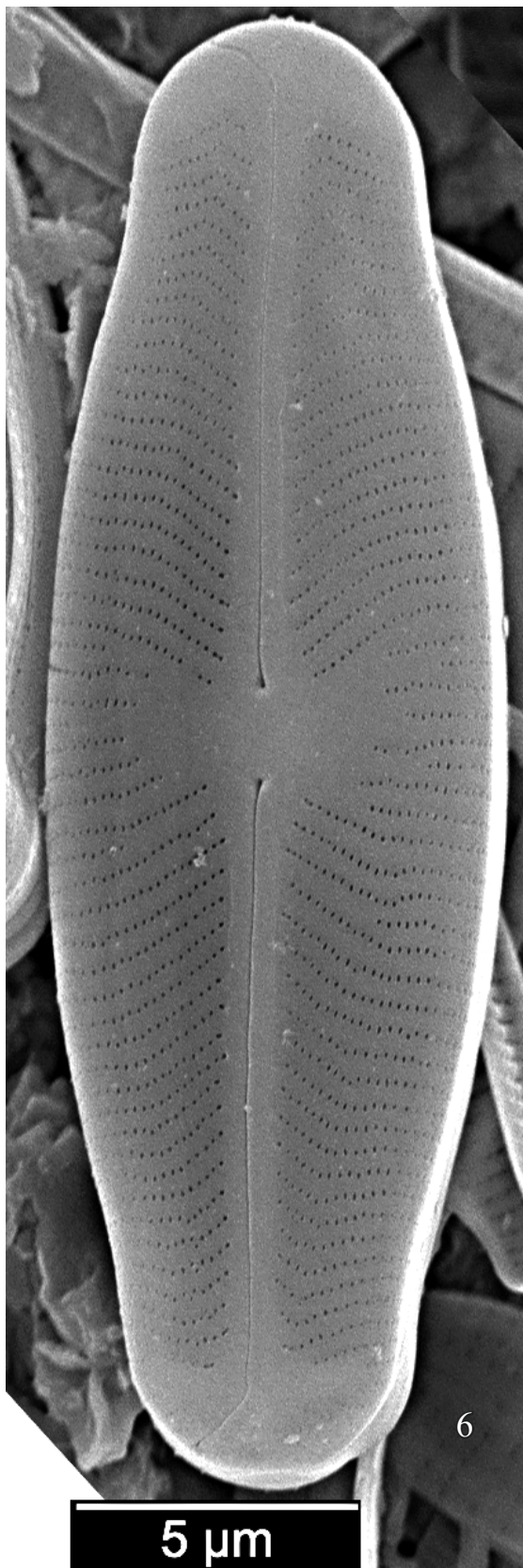
Coll. A. Tuji (duplicate of TNS-AL-63542 in TNS).

Sellaphora lanceolata D.G.Mann & S.Droop in Mann et al., *Phycologia* **43**: 479.

f. 4*p-r*, 22, 48-52. 2004.

(Figs 1-7)





No. 157

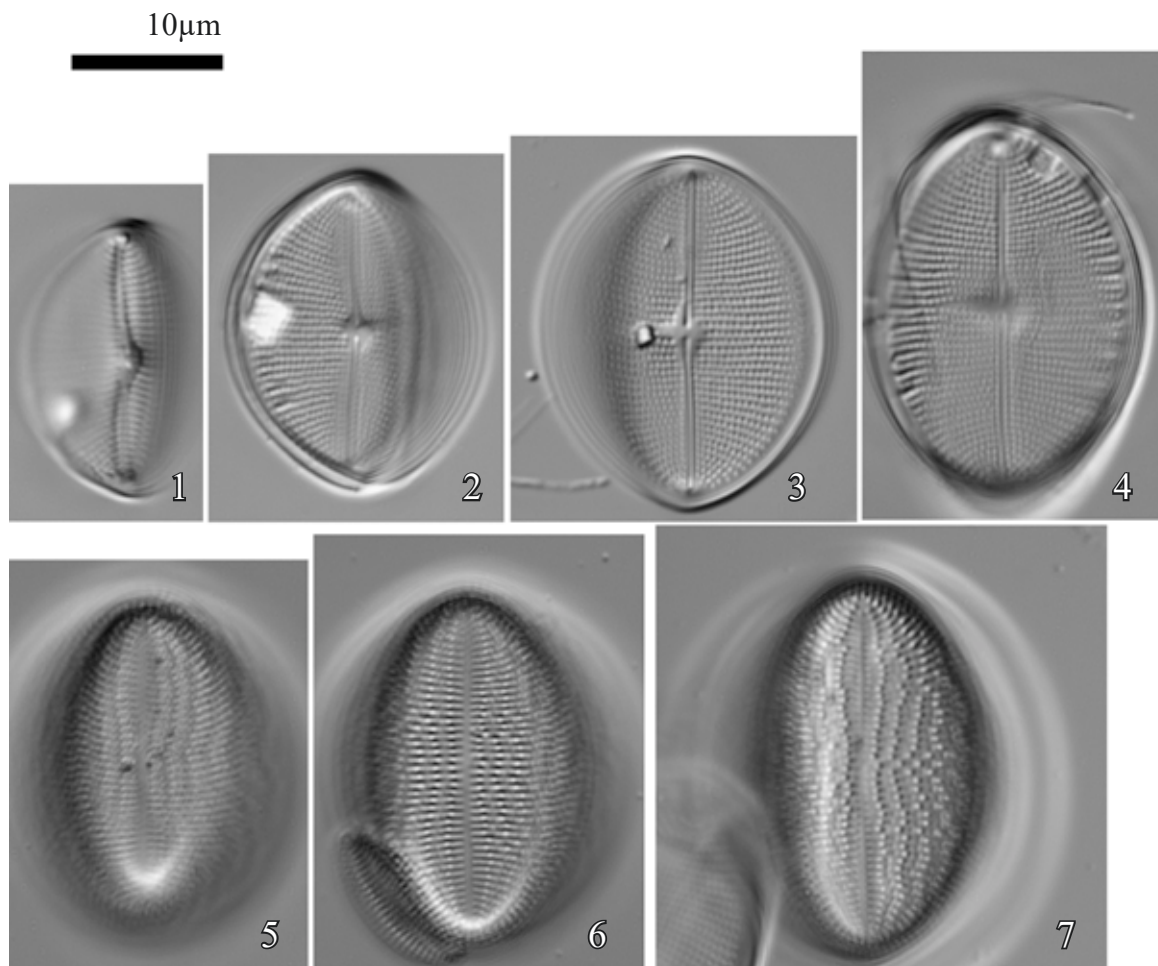
River Korai, Hanno, Saitama Pref., Japan.

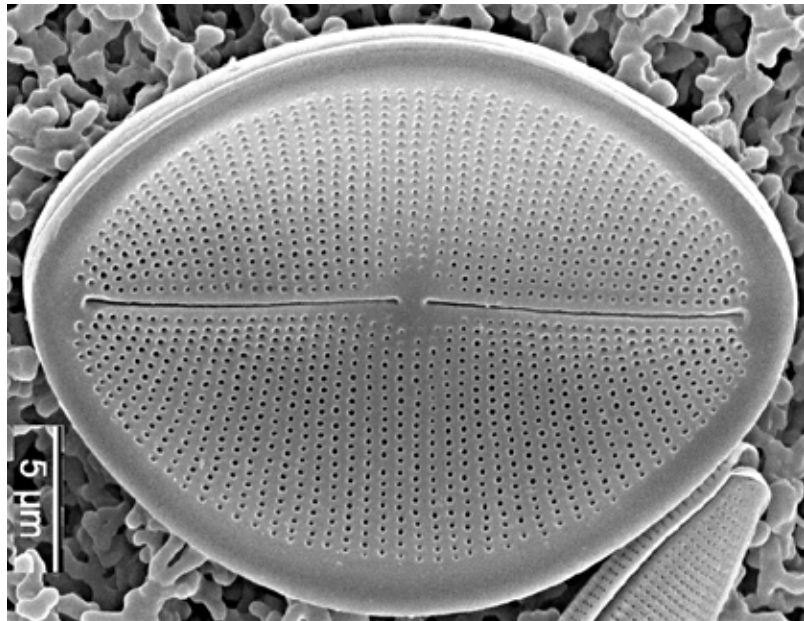
Date: 23/iv/2019.

Coll. A. Tuji (duplicate of TNS-AL-63543 in TNS).

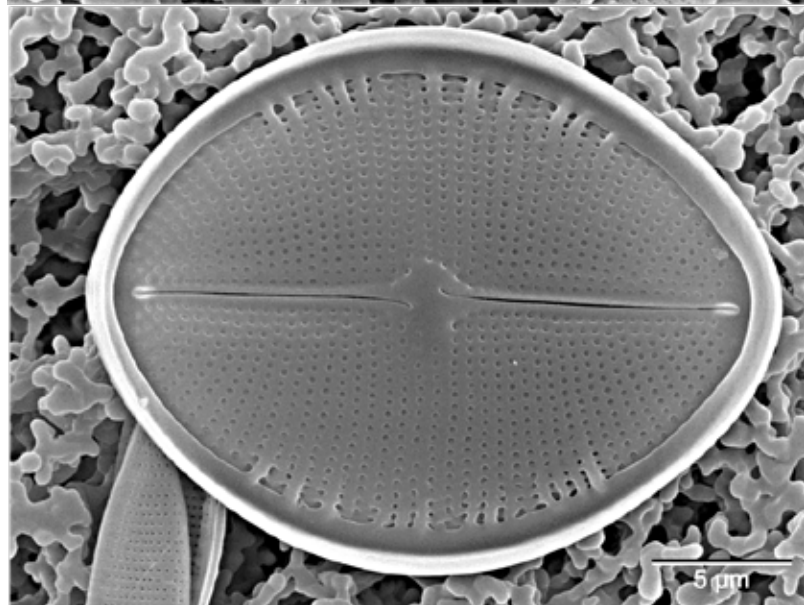
Cocconeis pediculus Ehrenb., Infusionsthierchen p. 194. *pl. 21, f. 11.* 1838.

(Figs 1-10)

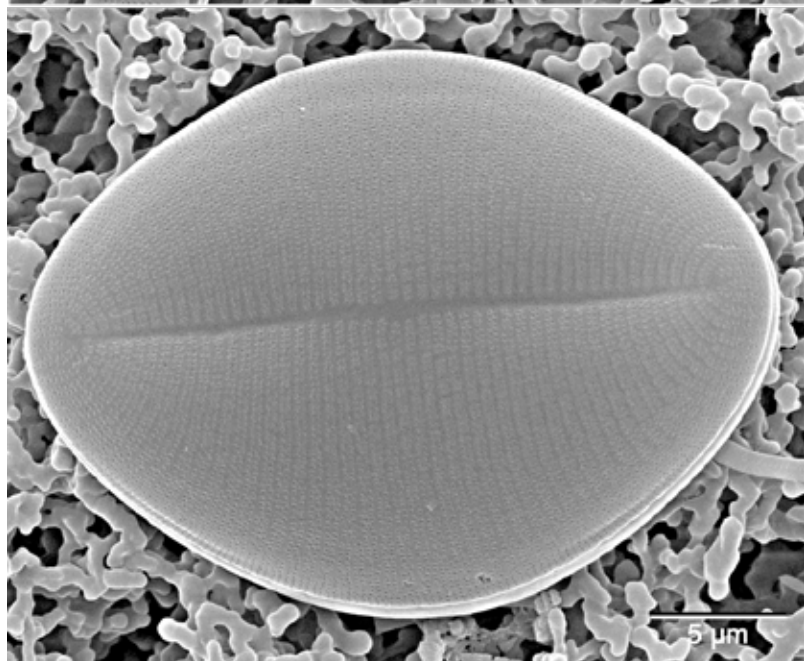




8



9



10

No. 158

Lake Motosu, Kawaguchiko, Yamanashi Pref., Japan.

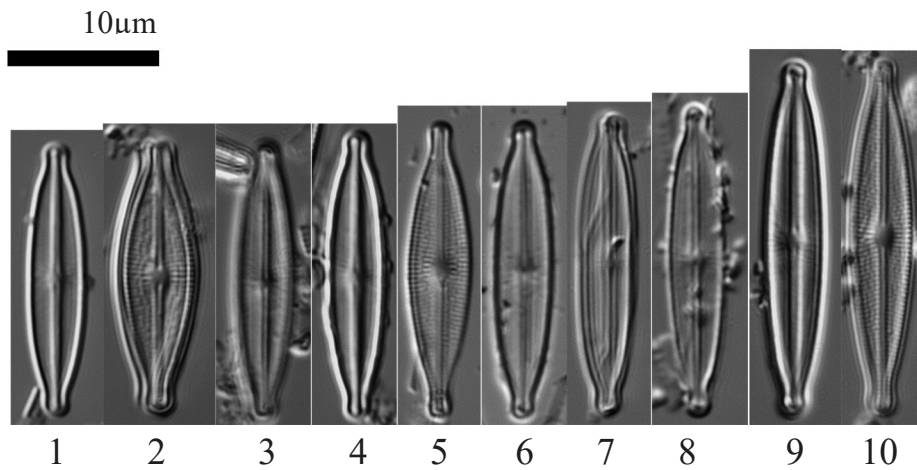
Date: 15/iii/2020.

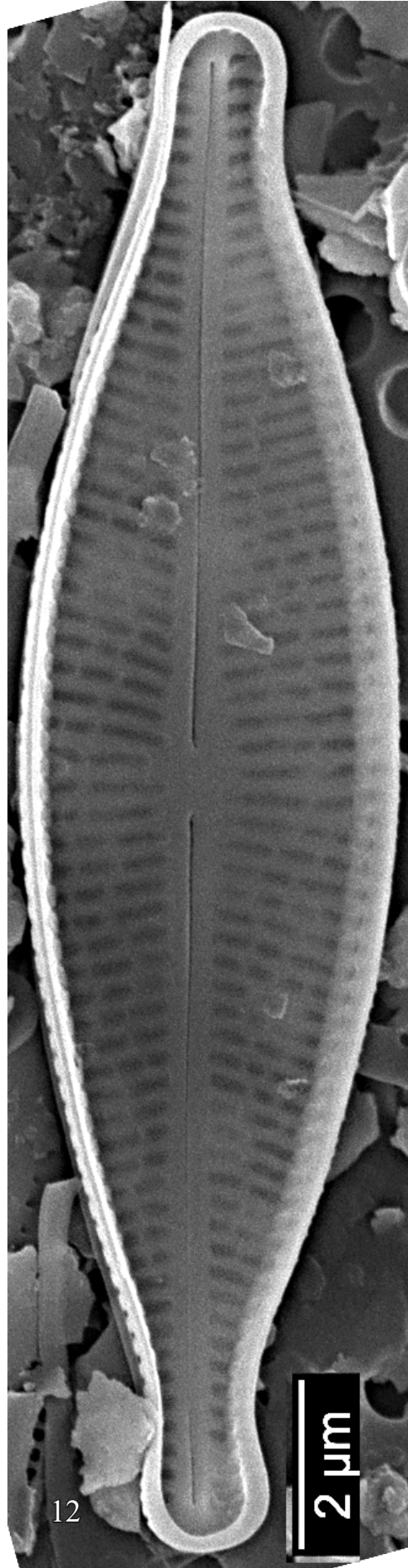
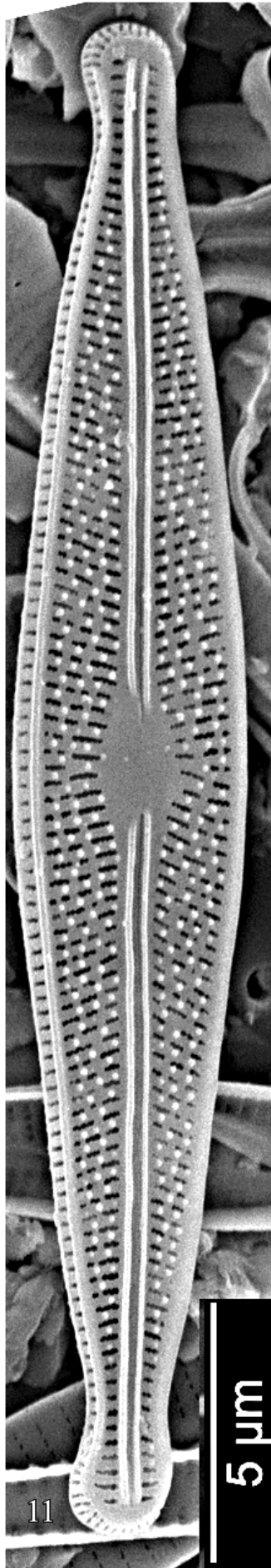
Coll. A. Tuji (duplicate of TNS-AL-57878 in TNS).

Brachysira microcephala (Grunow) Compère, Bull. Jard. Bot. Nat. Belg. **56**: 26, 28. 1986.

Basionym: *Navicula microcephala* Grunow Reise österreich. Freg. Nov. Erde p. 19. 1868.

(Figs 1-12)





No. 159

River horoman, Samani, Hokkaido Pref., Japan.

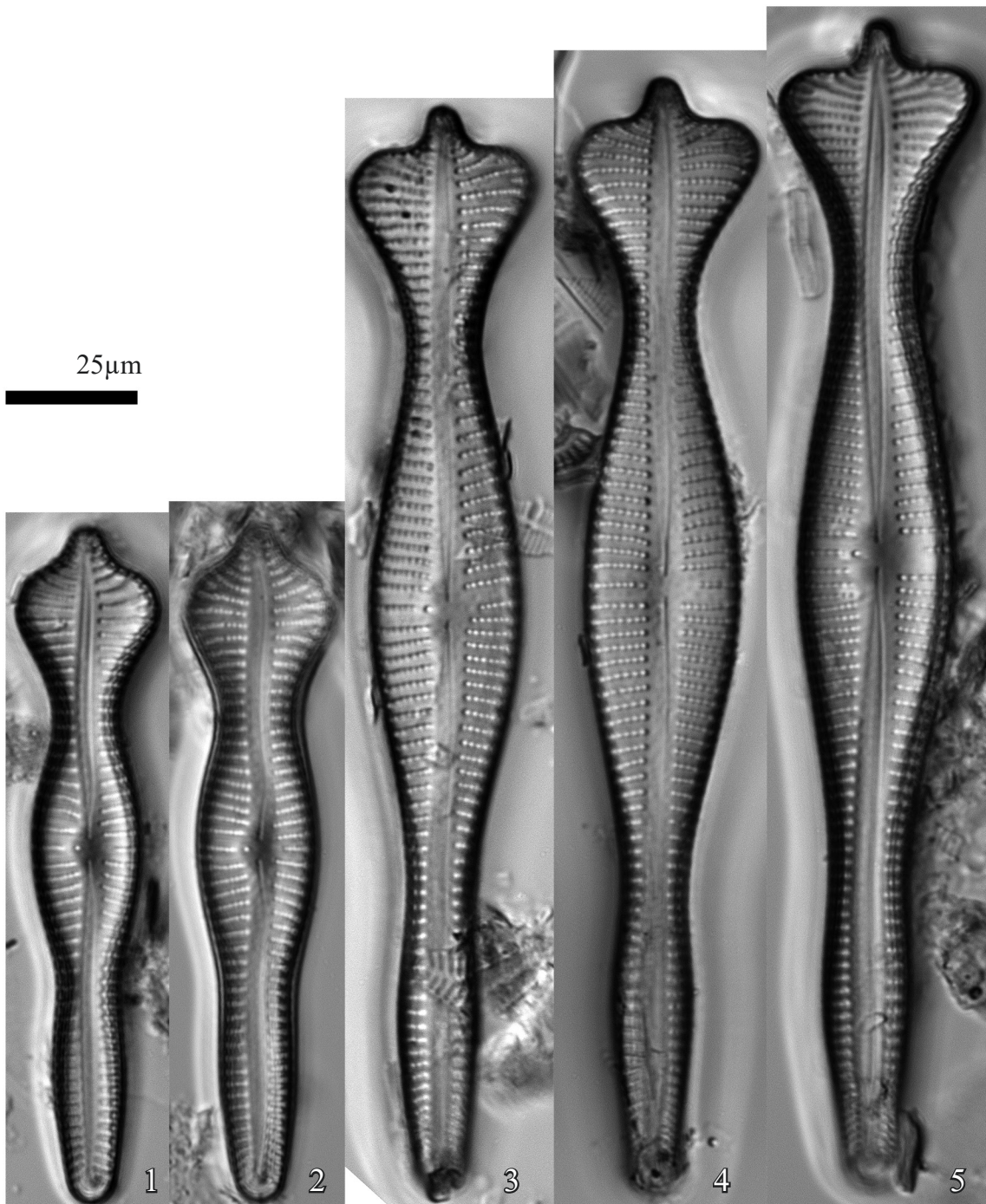
Date: 25/vii/2015.

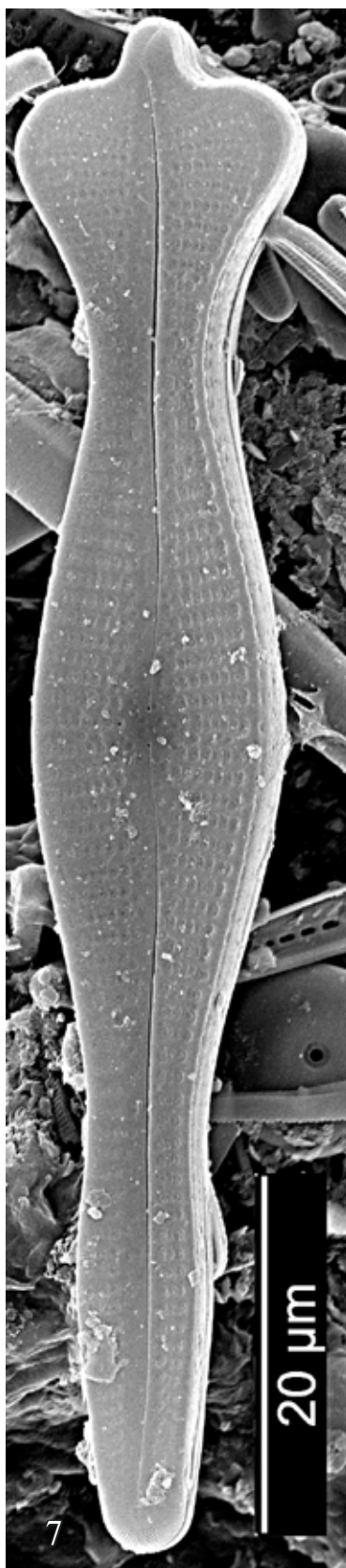
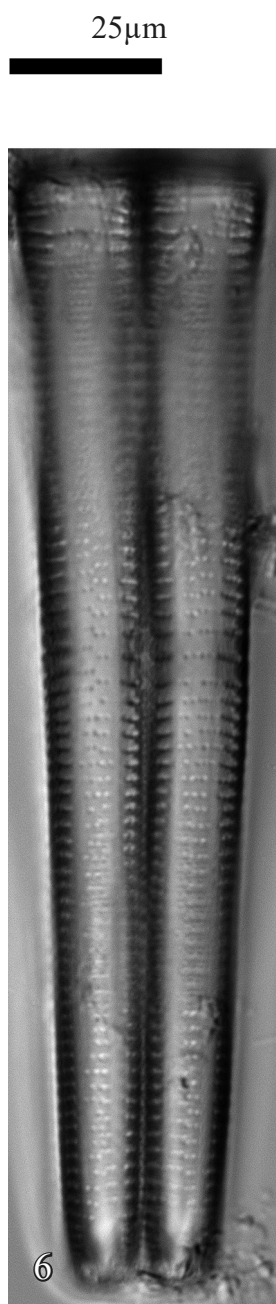
Coll. A. Tuji (duplicate of TNS-AL-61502 in TNS).

Gomphonema coronatum Ehrenb. Ber. Bek. Verh. Königl. Preuss. Akad. Wiss.

Berlin 1840: 211. 1841

(Figs 1-7)





No. 160

River horoman, Samani, Hokkaido Pref., Japan.

Date: 25/vii/2015.

Coll. A. Tuji (duplicate of TNS-AL-61503 in TNS).

Denticula tenuis var. *crassula* (Naeg. ex Kütz.) West & G.S.West, Bot. Trans.

Yorkshire Naturalists Union **5(27)**: 204. 1901.

Basionym: *Denticula crassula* Naeg. ex Kütz., Species Algarum p. 889. 1849.

(Figs 1-13)

