Gomphonema

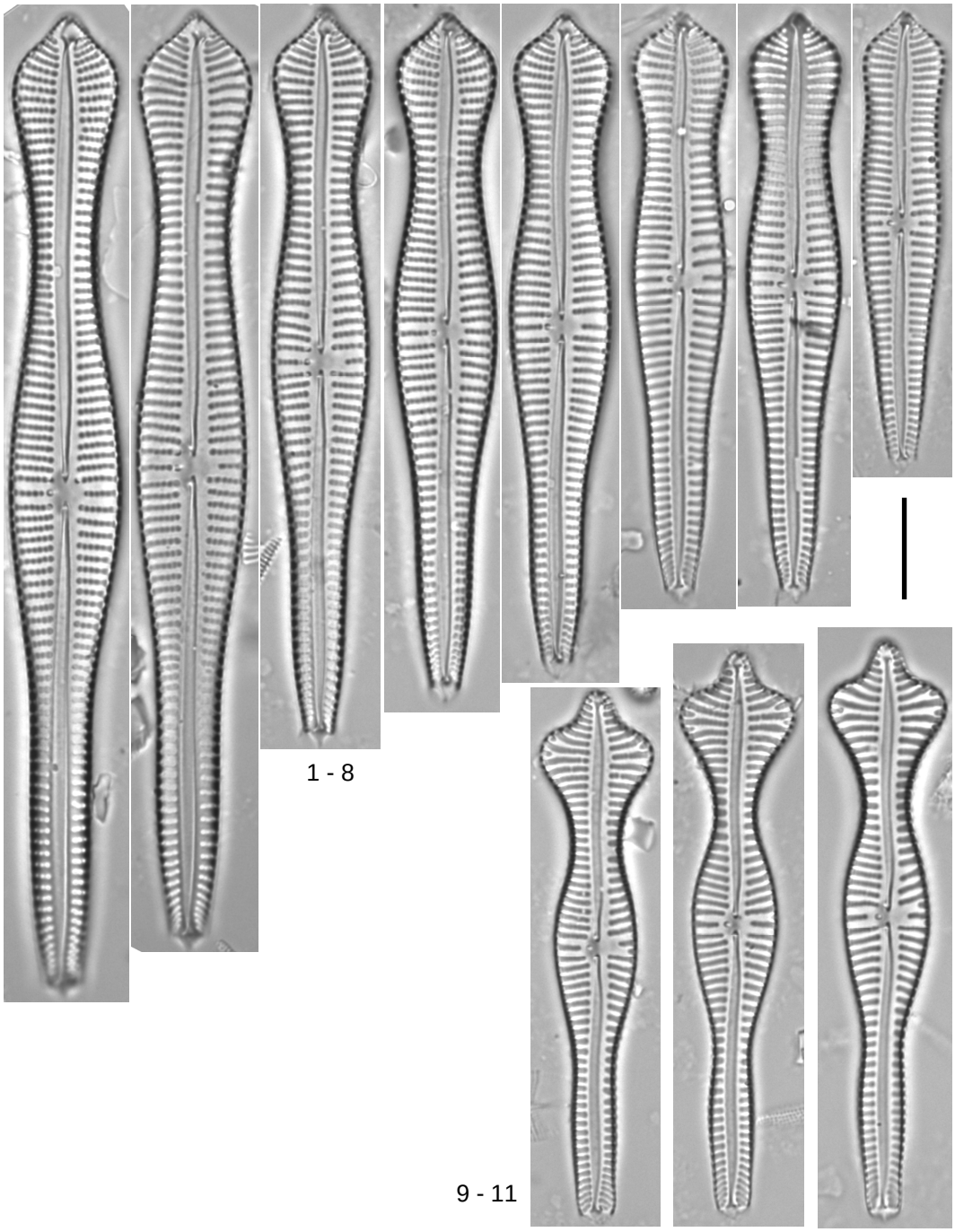


Plate 108

LM: x1500

Figs 1-40: *Gomphonema parvulum* (Kützing) Kützing, p. 25 [GPAR]

Figs 41-64: *Gomphonema lagenula* Kützing, p. 24 [GLGN]

Scale bar = 10 µm

Figs 1-14: Belmonte, Zêzere River (Tejo basin), 07-07-2006.

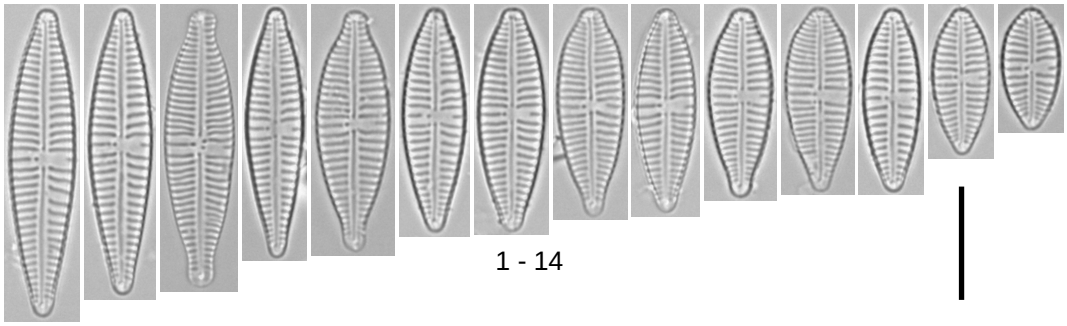
Figs 15-40: Boidobra, Corges Sream (Tejo basin), 07-07-2006.

Figs 41-64: Valmaior, Caima River (Vouga basin), 08-07-2007.

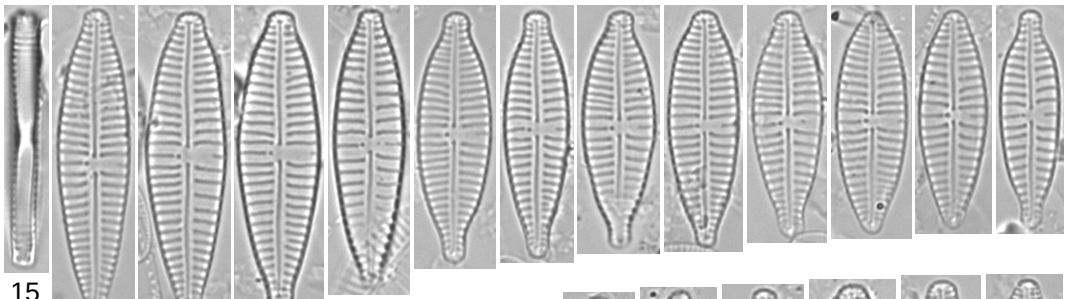
Figs 1-14, 16-64: Valve view.

Fig. 15: Girdle view.

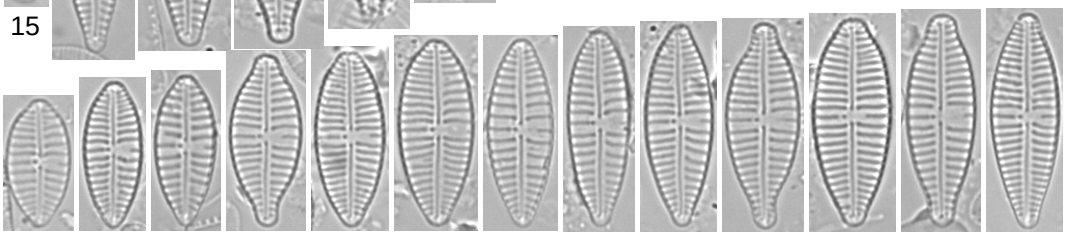
Gomphonema



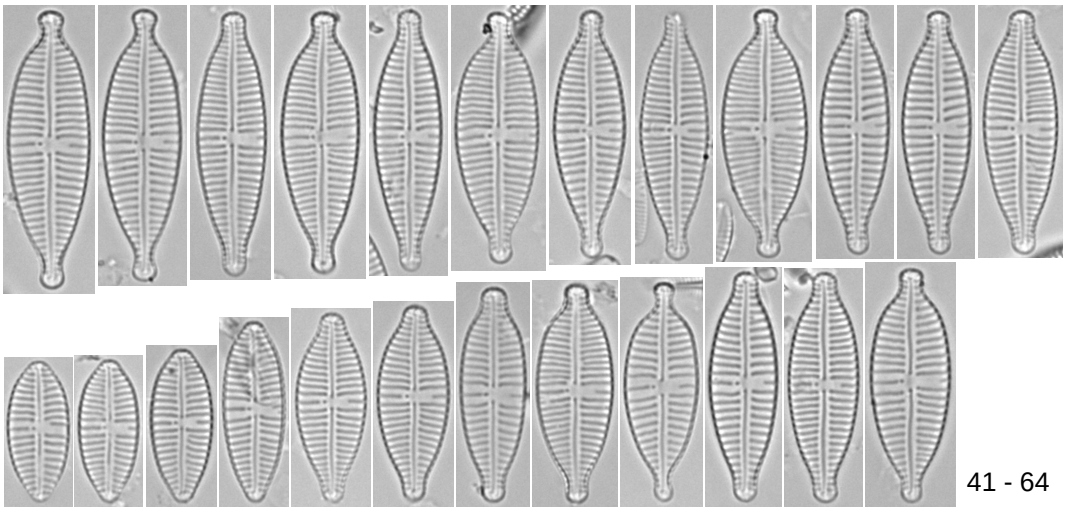
1 - 14



15



16 - 40



41 - 64

Plate 109

LM: x1500

Figs 1-11: *Gomphonema parvulum* var. *parvulum* f. *saprophilum* Lange-Bertalot & E. Reichardt, p.25 [GPAS]

Figs 12-50: *Gomphonema exilissimum* (Grunow) Lange-Bertalot & E. Reichardt sensu Krammer & Lange-Bertalot 2004, p. 24 [GEXL]

Scale bar = 10 µm

Figs 1-11: Aveiras Stream (Tejo basin), 01-07-2006.

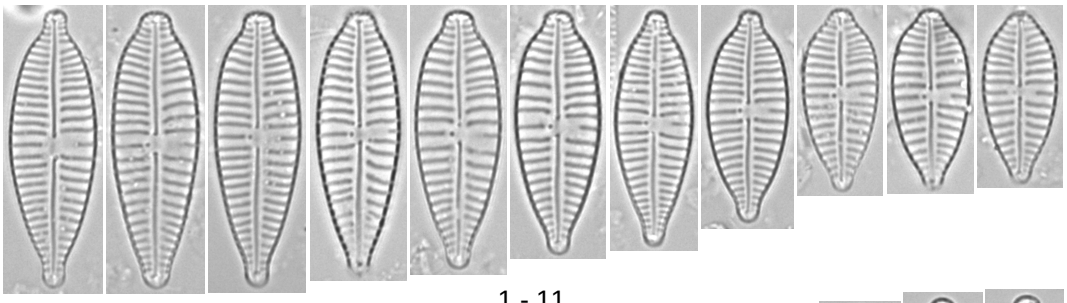
Figs 12-25: Redonda, Águeda River (Vouga basin), 13-05-2007.

Figs 26-38: Sabugueiro, Fervença Stream (Mondego basin), 07-07-2007.

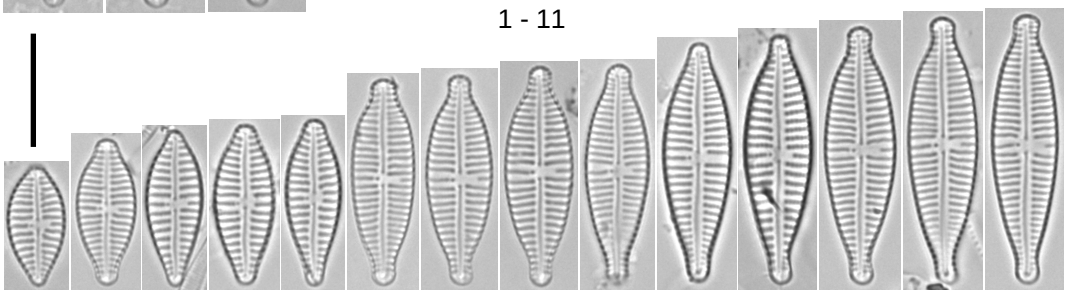
Figs 39-50: São João do Monte, Águeda River (Vouga basin), 13-05-2007.

Figs 1-50: Valve view.

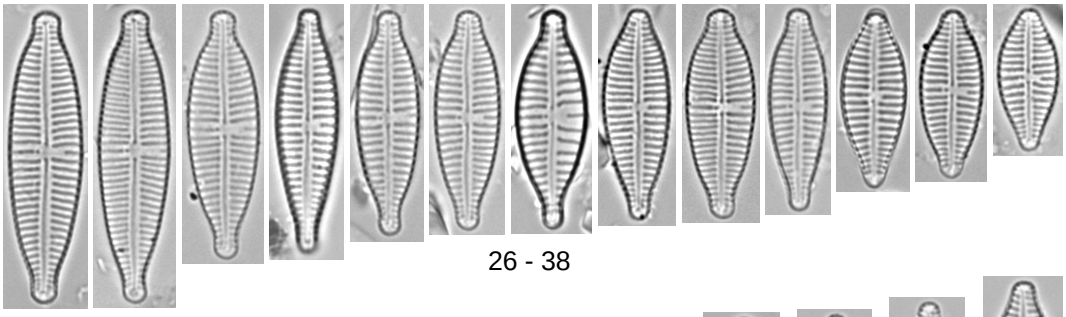
Gomphonema



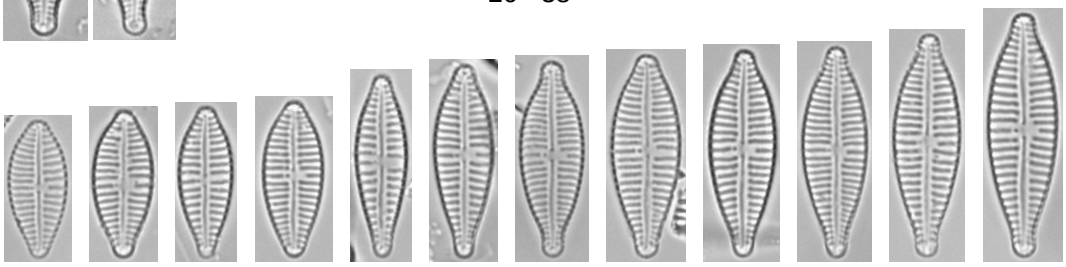
1 - 11



12 - 25



26 - 38



39 - 50

Plate 110

Figs 1, 2: *Gomphonema exilissimum* (Grunow) Lange-Bertalot & E. Reichardt sensu Krammer & Lange-Bertalot 2004, p. 24 [GEXL]

Scale bars = 5 µm

Figs 1, 2: Sabugueiro, Fervença Stream (Mondego basin), 07-07-2007.

Fig. 1: External valve view.

Fig. 2: Internal valve view.

Gomphonema

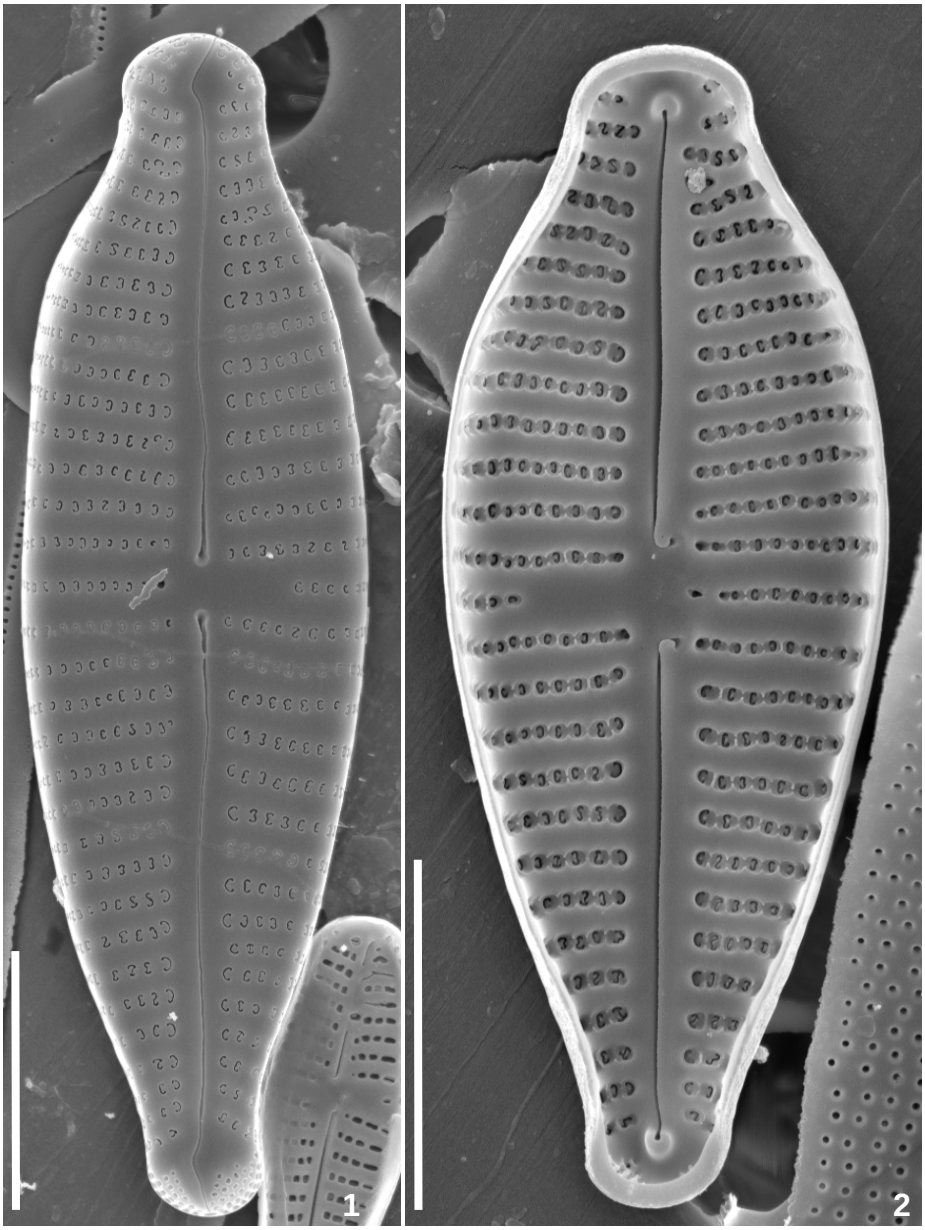


Plate 111

LM: x1500

Figs 1-9: *Gomphonema* sp.1, p. 26

Figs 10-34: *Gomphonema* cf. *gracile* Ehrenberg, p. 24

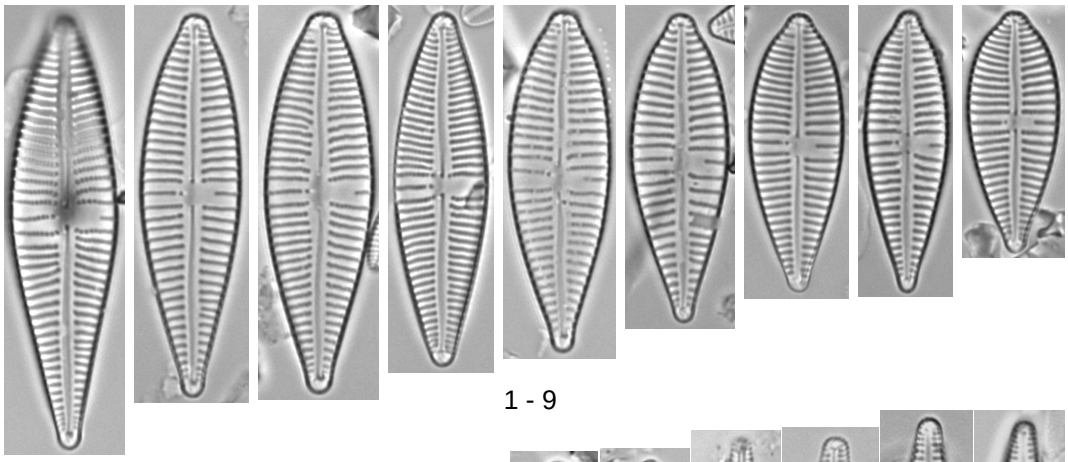
Scale bar = 10 µm

Figs 1-9: Coutada, Zêzere River (Tejo basin), 08-07-2006.

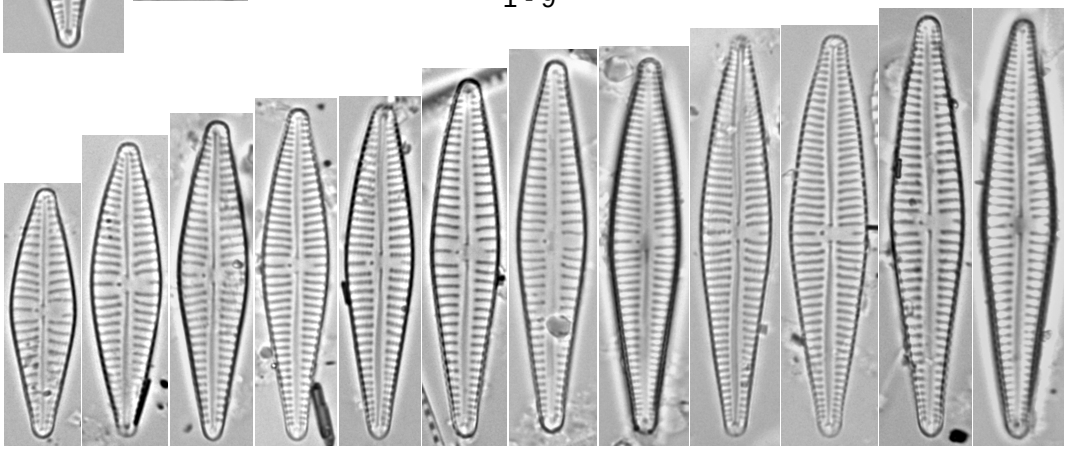
Figs 10-21: Bravura, Odeáxere Stream (Ribeiras do Algarve basin), 14-04-2006.

Figs 22-34: Martinhenos Creek (Sado basin), 10-05-2006.

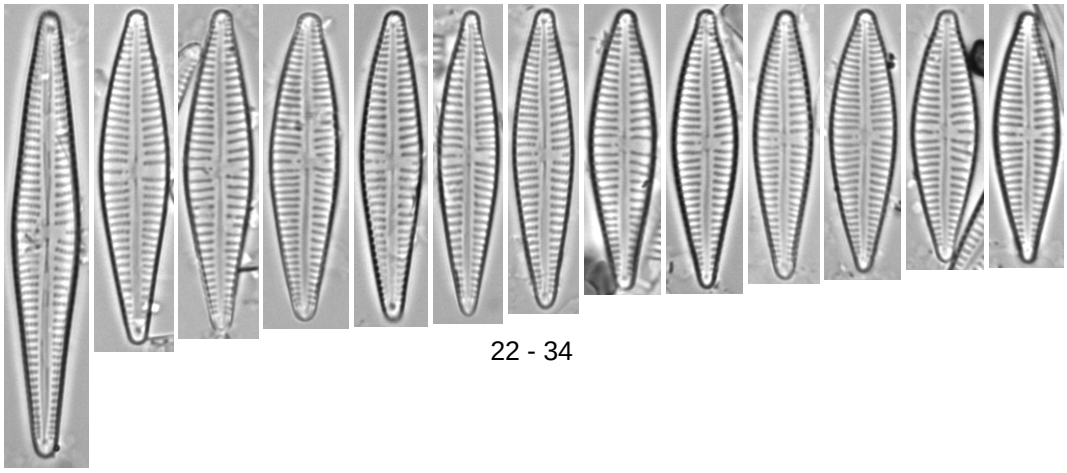
Figs 1-34: Valve view.



1 - 9



10 - 21



22 - 34

Plate 112

LM: x1500

Figs 1-17: *Gomphonema acidoclinatum* Lange-Bertalot & E. Reichardt in Werum & Lange-Bertalot 2004, p. 23 [GADC]

Figs 18-31: *Gomphonema pumilum* (Grunow) E. Reichardt & Lange-Bertalot, p. 25 [GPUM]

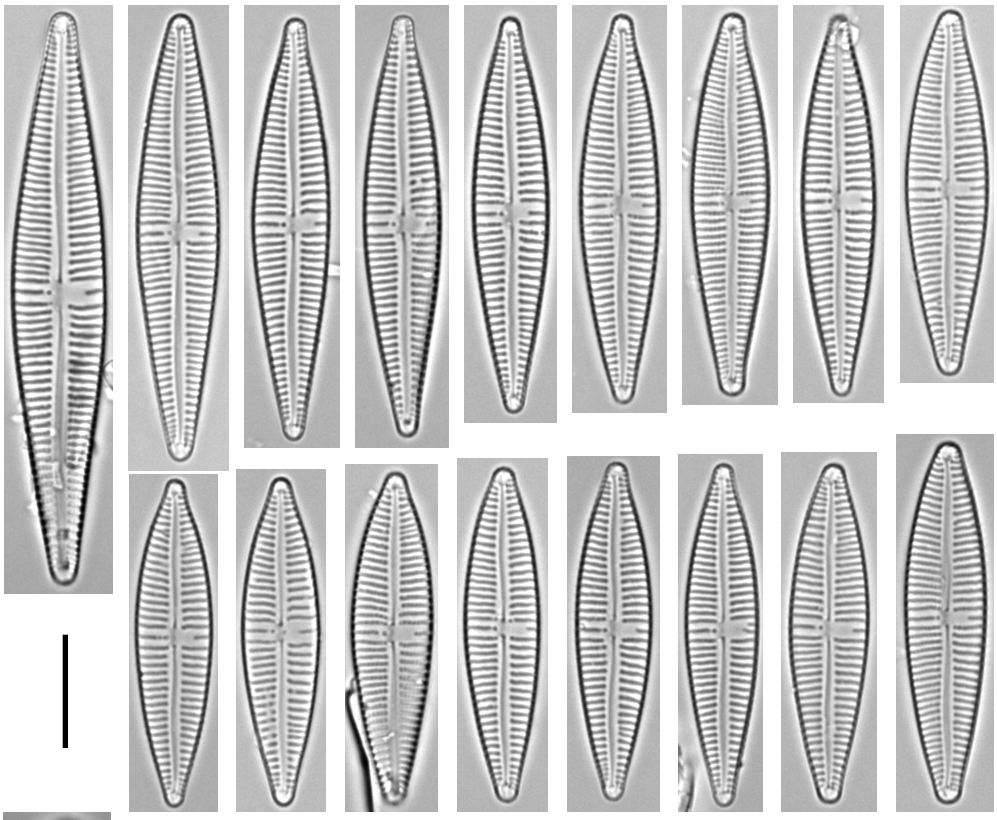
Scale bar = 10 µm

Figs 1-17: Portela do Homem, Homem River (Cávado basin), 26-09-2007.

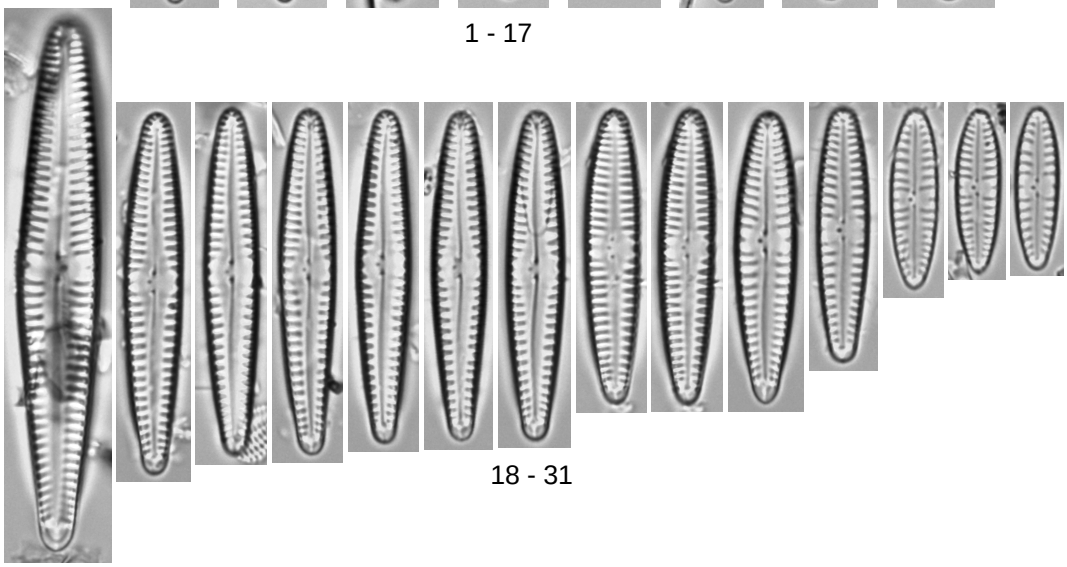
Figs 18-31: Cabroeira de Baixo, Xévora River (Guadiana basin), 24-05-2006.

Figs 1-31: Valve view.

Gomphonema



1 - 17



18 - 31

Plate 113

LM: x1500

Figs 1-32: *Gomphonema pumilum* (Grunow) E. Reichardt & Lange-Bertalot, p. 25 [GPUM]

Figs 33-50: *Gomphonema pumilum* var. *elegans* E. Reichardt & Lange-Bertalot, p. 25 [GPEL]

Figs 51-65: *Gomphonema pumilum* var. *rigidum* E. Reichardt & Lange-Bertalot, p. 25 [GPRI]

Scale bar = 10 µm

Figs 1-32: Assamaça, Valmar Stream (Mondego basin), 10-06-2007.

Figs 33-50: Ameixial, Vascãozinho Stream (Guadiana basin), 24-04-2006.

Figs 51-65: Ficalho, Vidigão Stream (Guadiana basin), 27-04-2006.

Figs 1-26, 33-47, 55-65: Valve view.

Figs 27-32, 48-54: Girdle view.

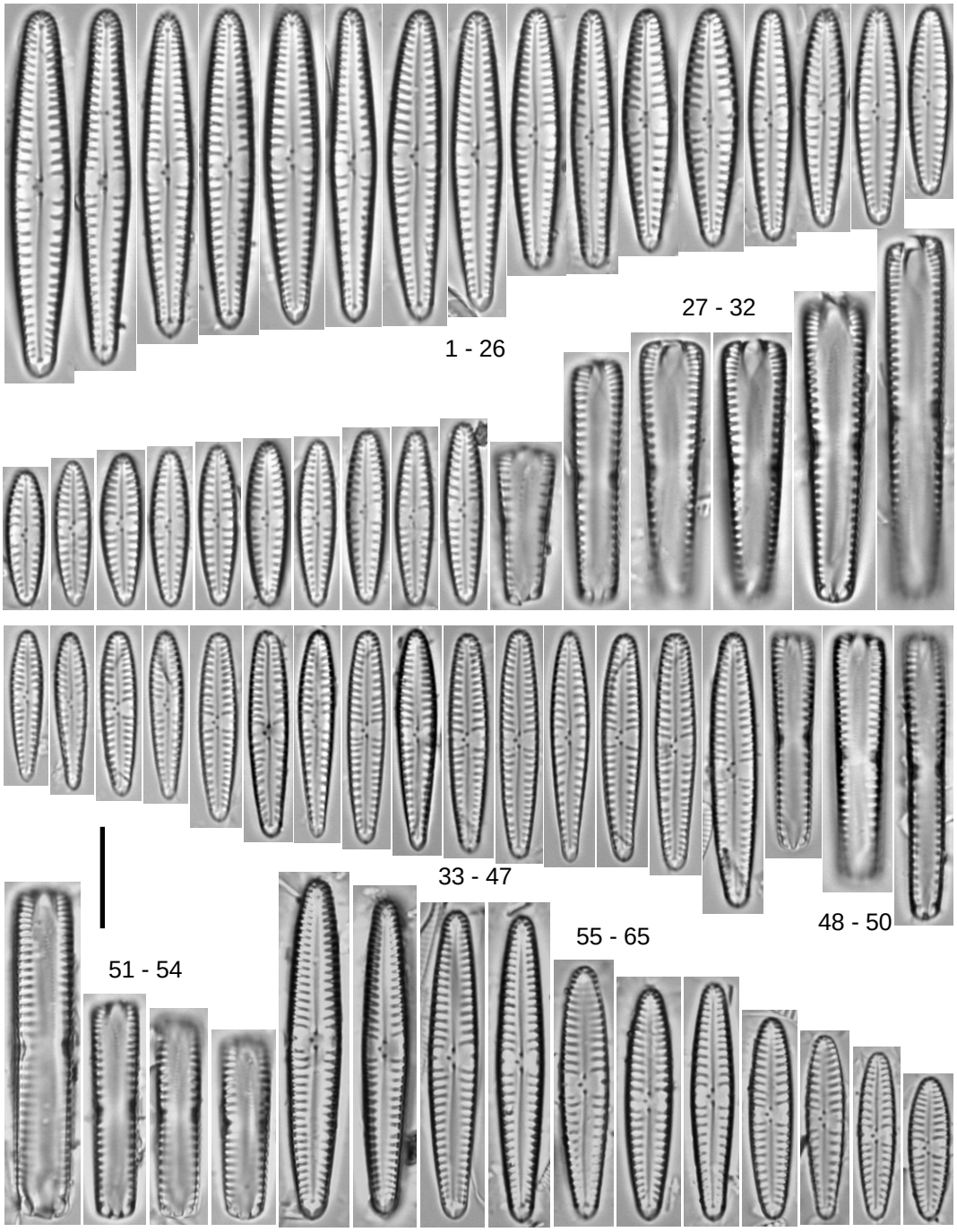

1 - 26
27 - 32
33 - 47
48 - 50
51 - 54
55 - 65

Plate 114

Figs 1-5: *Gomphonema pumilum* (Grunow) E. Reichardt & Lange-Bertalot, p. 25 [GPUM]

Scale bars (Figs 1, 2) = 5 µm Scale bars (Figs 3-5) = 5 µm

Figs 1-5: Assamaça, Valmar Stream (Mondego basin), 10-06-2007.

Fig. 1: External valve view.

Fig. 2: Internal valve view.

Fig. 3: Detail of the apical area in external valve view.

Fig. 4: Detail of the central area in external valve view.

Fig. 5: Detail of the central area in internal valve view.

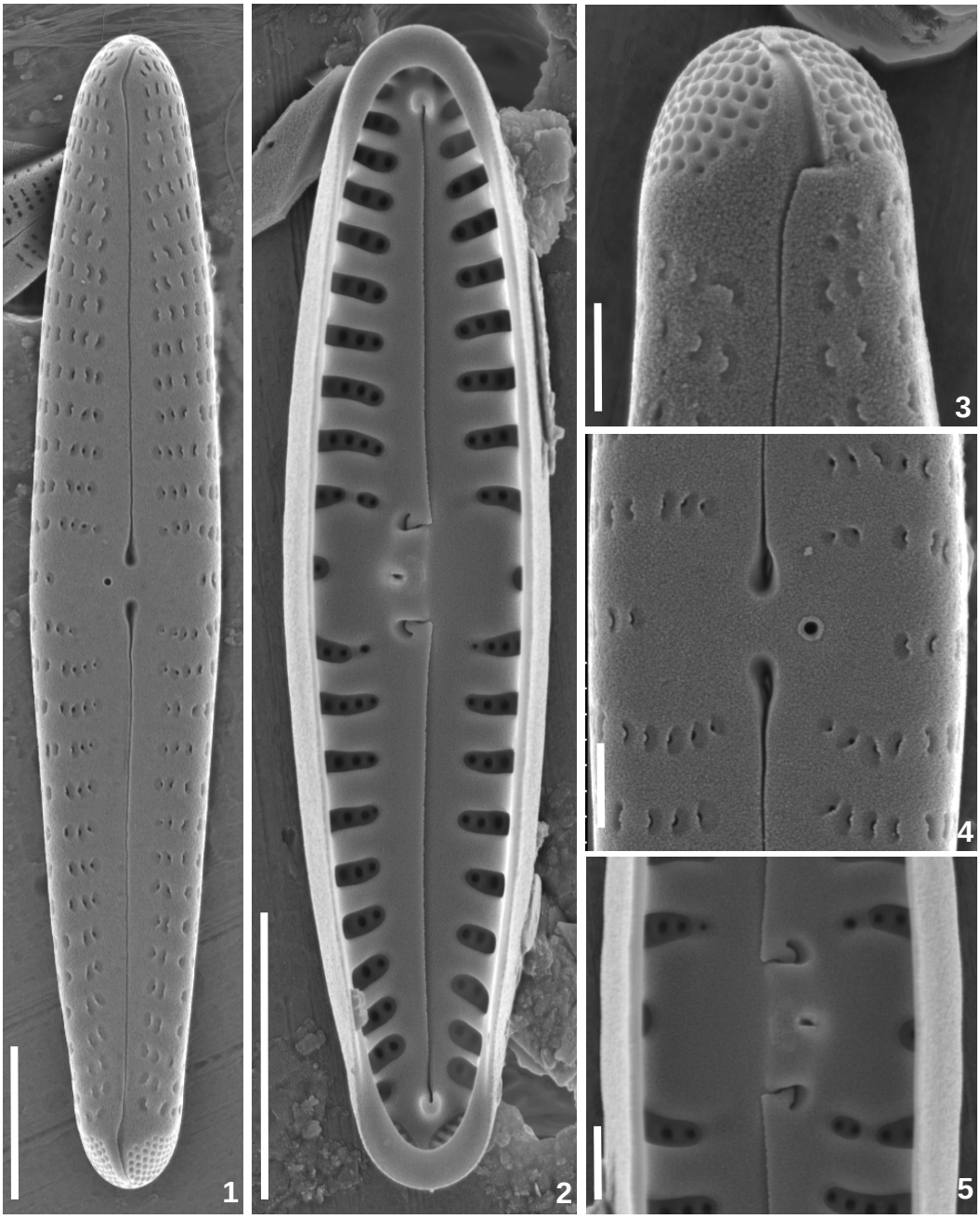

1
2
3
4
5

Plate 115

Figs 1, 2: *Gomphonema pumilum* var. *elegans* E. Reichardt & Lange-Bertalot, p. 25 [GPEL]

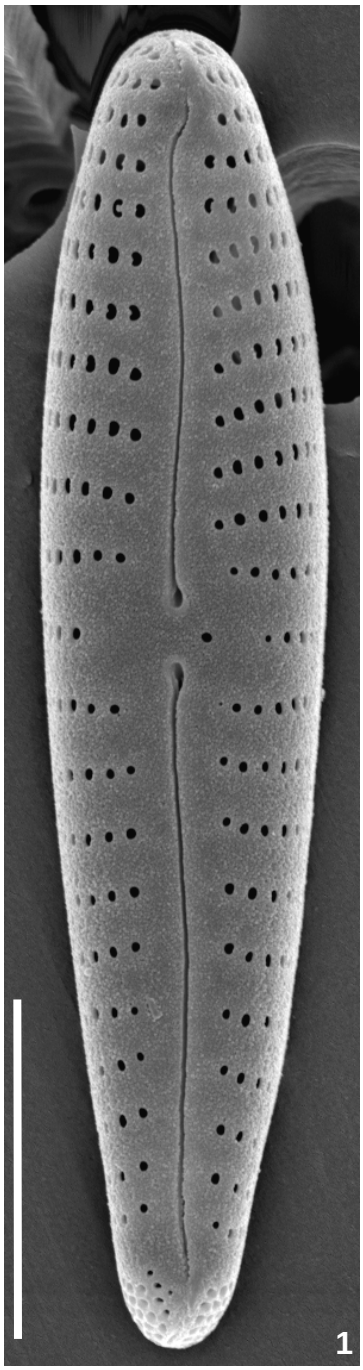
Scale bars = 5 µm

Figs 1, 2: Ameixial, Vascãozinho Stream (Guadiana basin), 24-04-2006.

Fig. 1: External valve view.

Fig. 2: Internal valve view.

Gomphonema



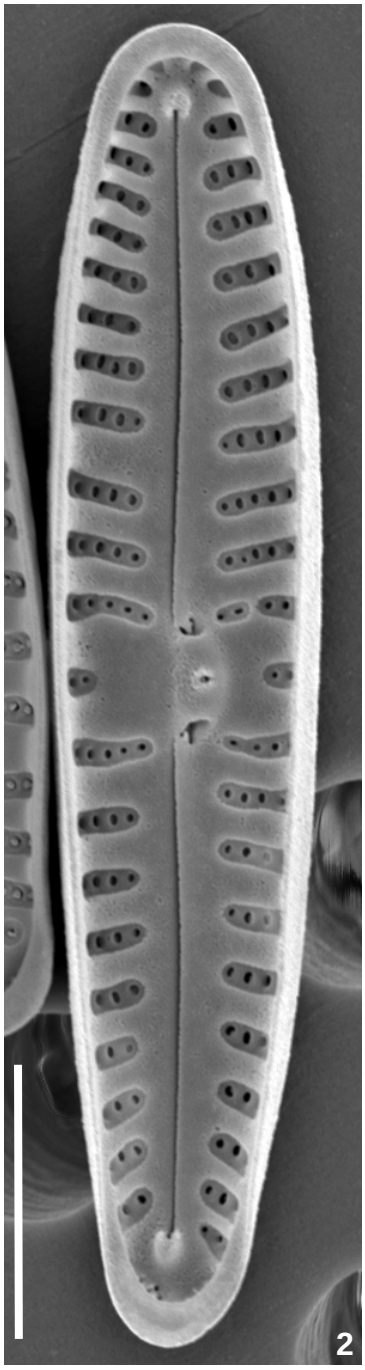


Plate 116

LM: x1500

Figs 1-39: *Gomphonema pumilum* var. *rigidum* E. Reichardt & Lange-Bertalot , p. 25 [GPRI]

Figs 40-67: *Gomphonema bourbonense* E. Reichardt & Lange-Bertalot, p. 23 [GBOB]

Scale bar = 10 µm

Figs 1-27: Torgal Stream (Mira basin), 09-05-2006.

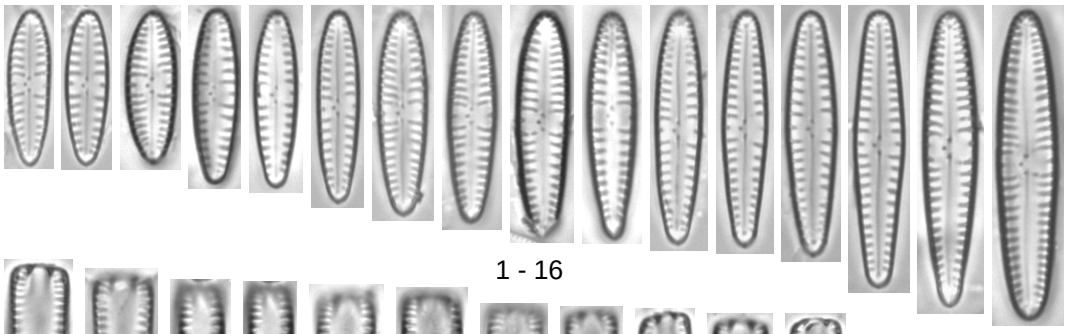
Figs 28-39: Vale da Arca, Vale da Ursa Stream (Sado basin), 05-04-2006.

Figs 40-67: Marmelar Stream (Guadiana basin), 05-04-2006.

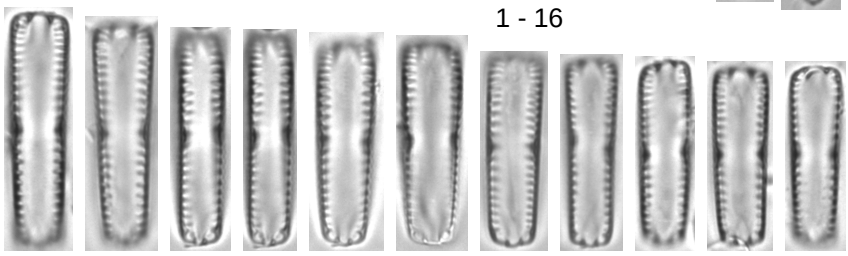
Figs 1-16, 28-36, 40-55: Valve view.

Figs 17-27, 37-39, 56-67: Girdle view.

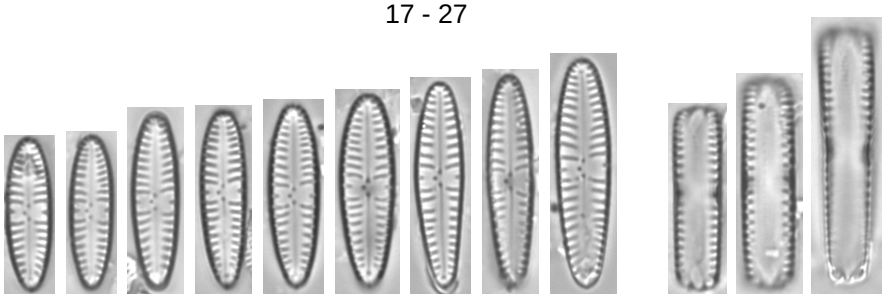
Gomphonema



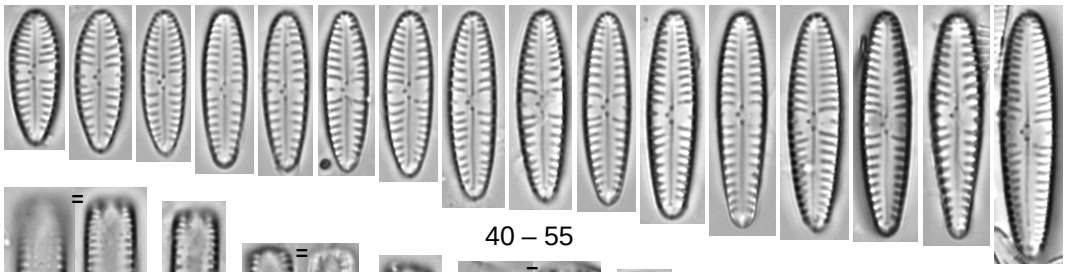
1 - 16



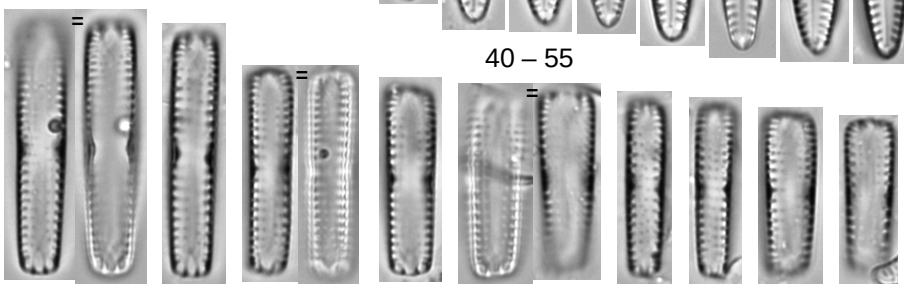
17 - 27



28 – 36 37 - 39



40 – 55



56 – 67

Plate 117

LM: x1500

Figs 1-73: *Gomphonema* cf. *pygmaeum* Kociolek & Stoermer, p. 26

Figs 74-90: *Gomphonema minusculum* Krasske, p. 24 [GMIS]

Scale bar = 10 µm

Figs 1-43: Malhadais, Mosteiró River (Douro basin), 19-08-2007.

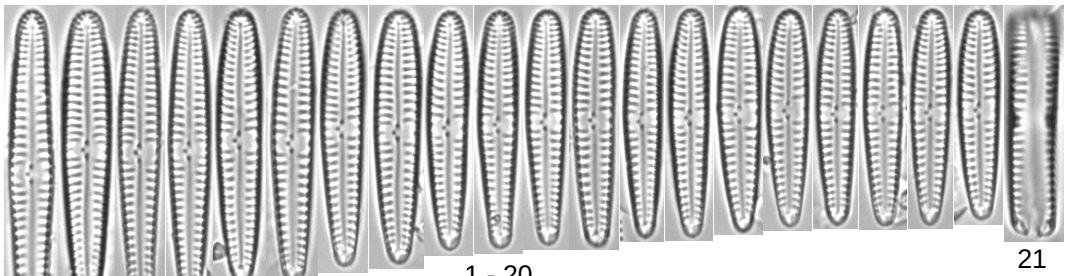
Figs 44-73: Junqueira, Maçãs River (Douro basin), 12-08-2007.

Figs 74-90: Odeleite Reservoir, Odeleite Stream (Ribeiras do Algarve basin), 27-07-2006.

Figs 1-20, 22-89: Valve view.

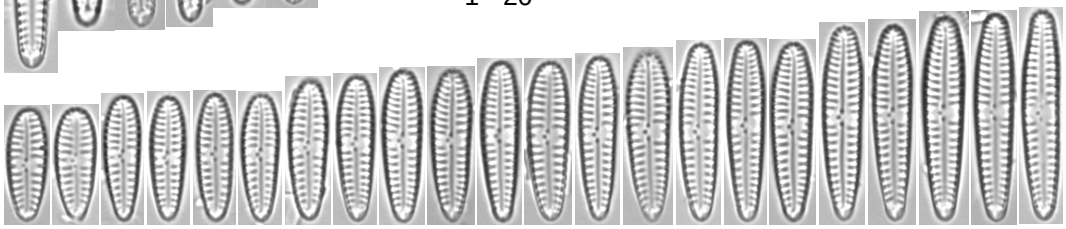
Figs 21, 90: Girdle view.

Gomphonema

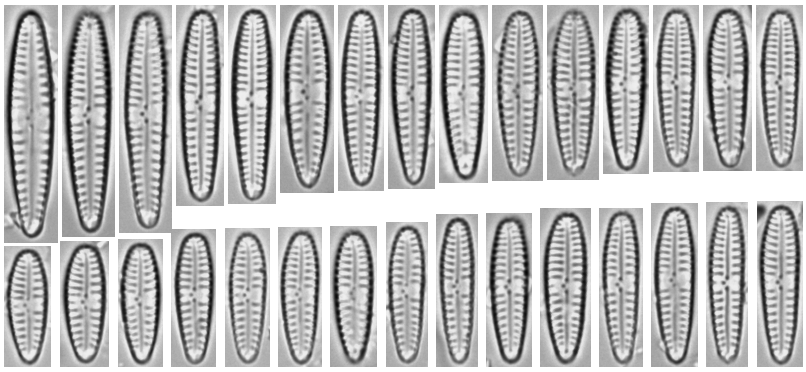


1 - 20

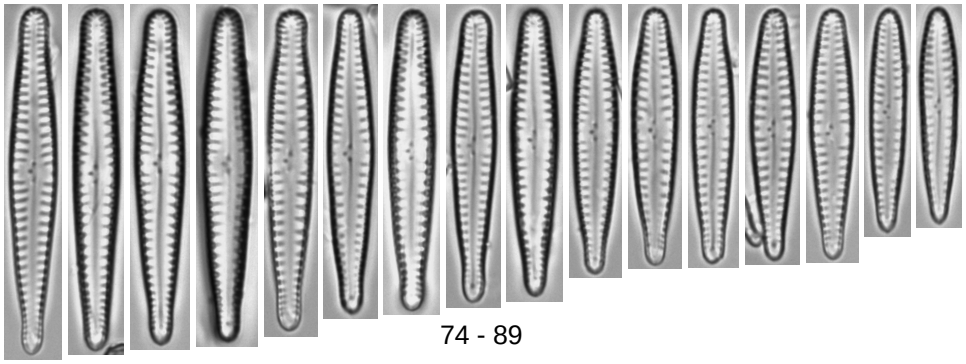
21



22 - 43



44 - 73



74 - 89

90

Plate 118

Figs 1-4: *Gomphonema* cf. *pygmaeum* Kociolek & Stoermer, p. 24

Scale bars (Figs 1, 2) = 5 µm Scale bars (Figs 3, 4) = 1 µm

Figs 1-4: Malhadais, Mosteiró River (Douro basin), 19-08-2007.

Fig. 1: External valve view.

Fig. 2: Internal valve view.

Fig. 3: Detail of valve apical area in external view.

Fig. 4: Detail of valve central area in internal view.

Gomphonema

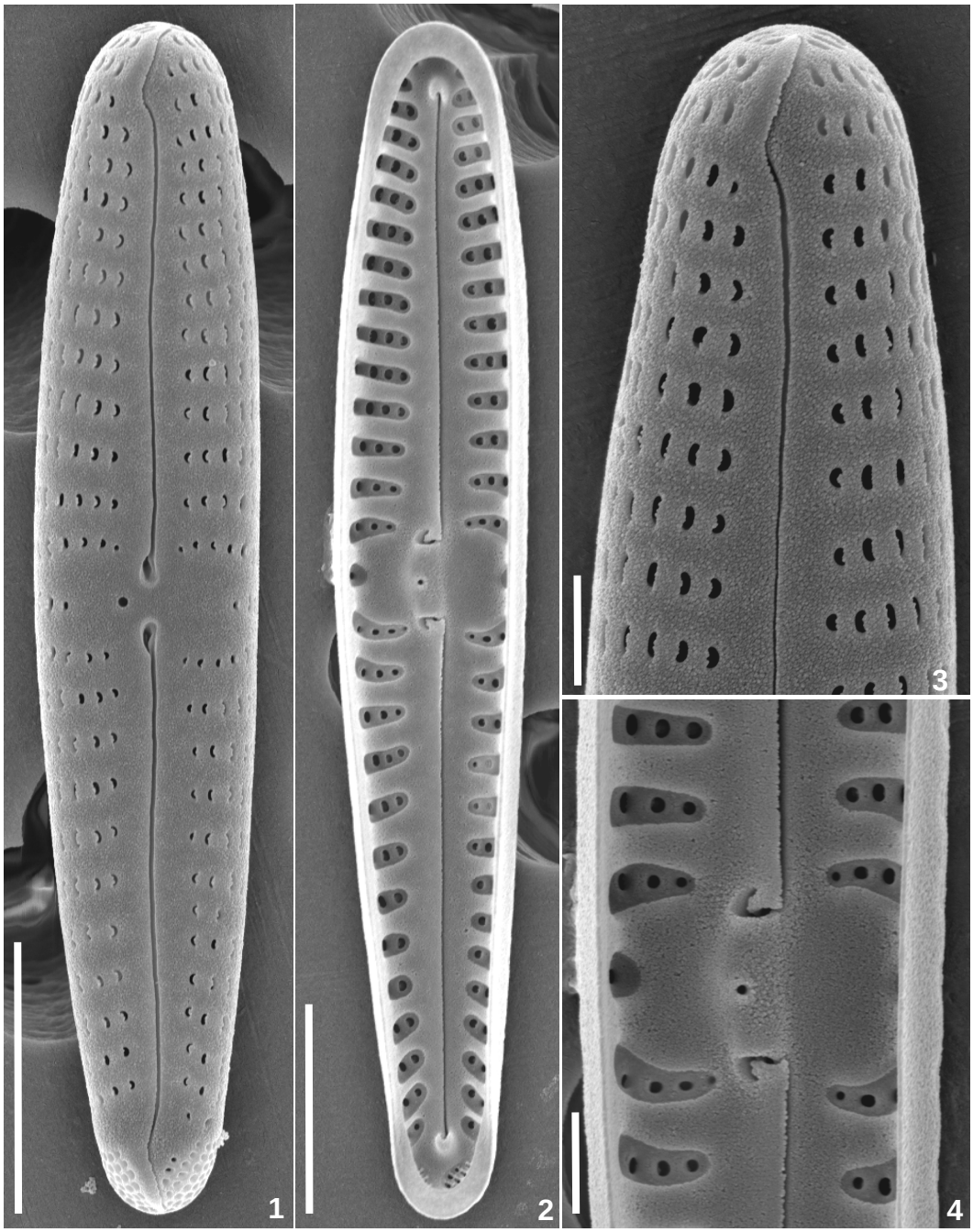


Plate 119

Figs 1-5: *Gomphonema minusculum* Krasske, p. 24 [GMIS]

Scale bars = 1 µm

Figs 1-5: Odeleite Reservoir, Odeleite Stream (Ribeiras do Algarve basin), 27-07-2006.

Fig. 1: External valve view.

Fig. 2: Internal valve view.

Fig. 3: Detail of valve apical area in external view.

Fig. 4: Detail of valve central area in external view.

Fig. 5: Detail of valve central area in internal view.