

Achnantheidium

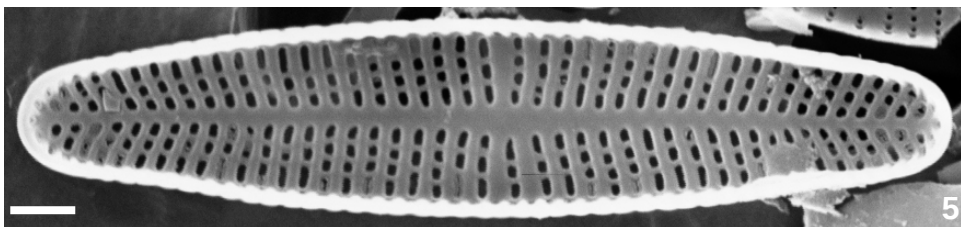
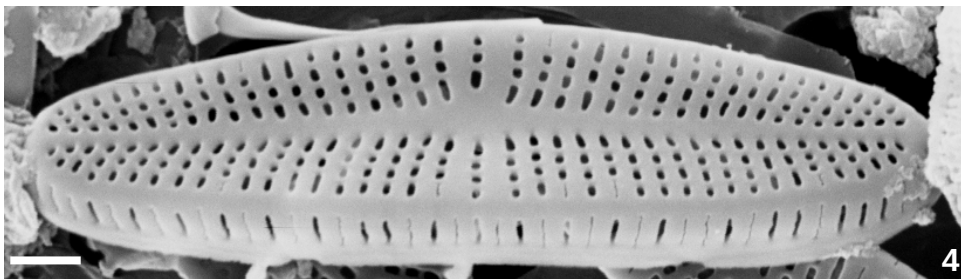
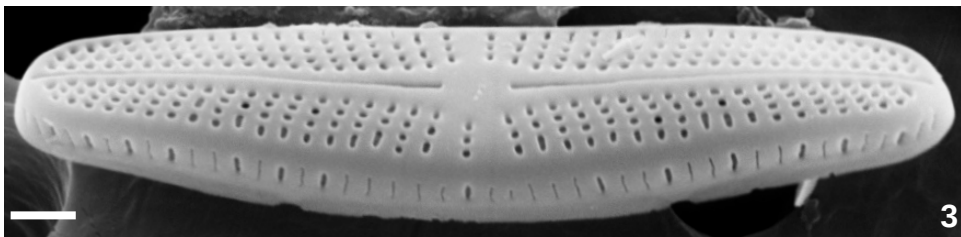
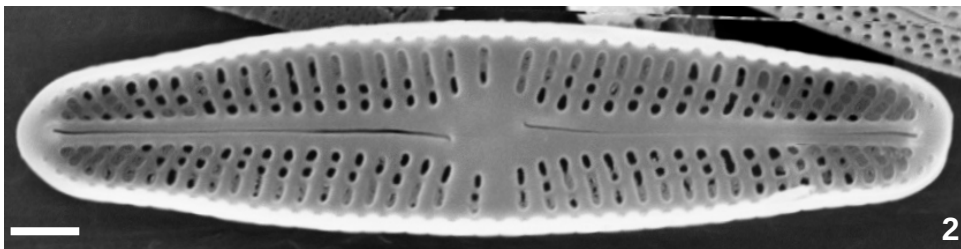
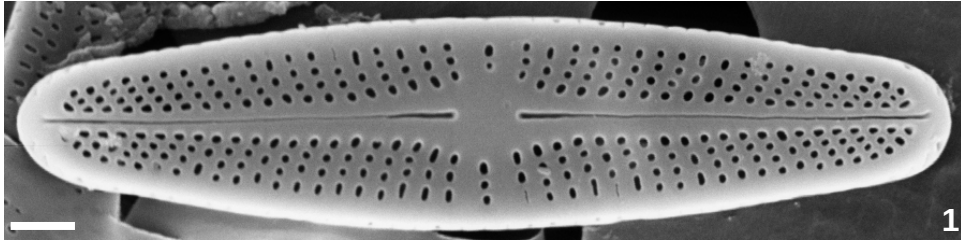


Plate 162

Figs 1-4: *Achnantheidium caravelense* Novais & Ector, p. 29

Scale bars = 1 μm

Figs 1-4: Torno River (Douro basin), 15-08-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

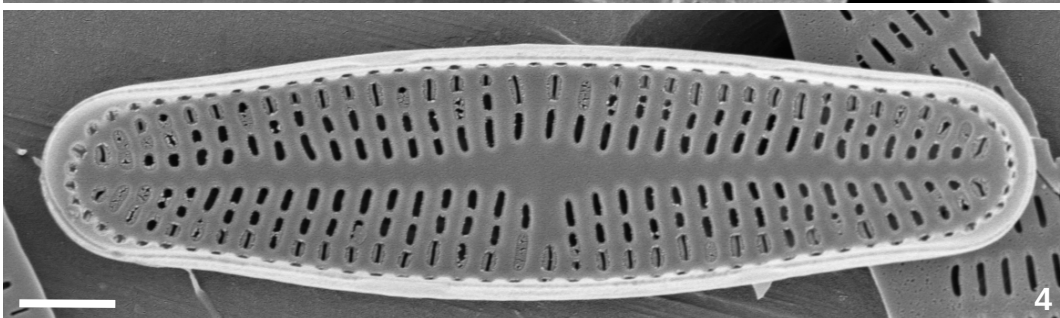
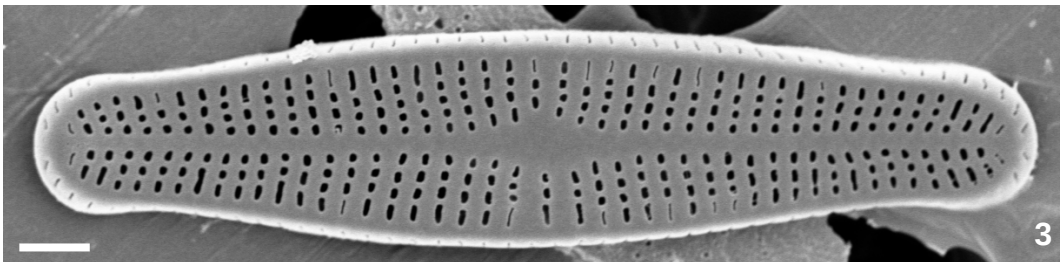
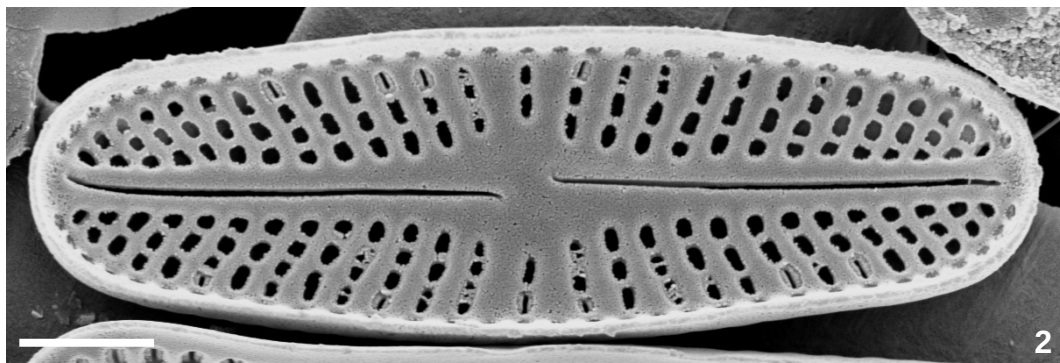
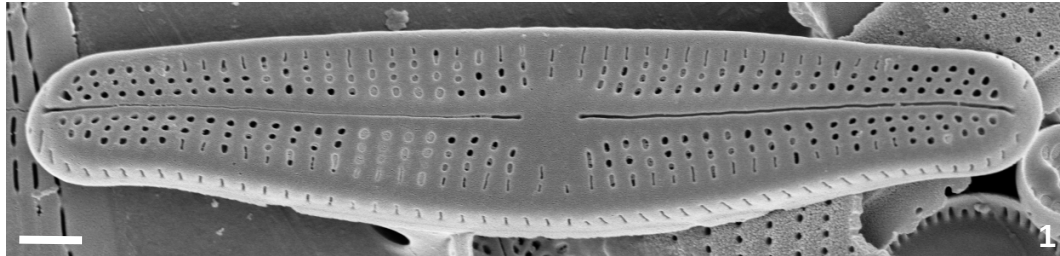


Plate 163

LM: x1500

Figs 1-79: *Achnanthidium* sp.3, p. 31

Figs 80-121: *Achnanthidium* sp.4, p. 31

Scale bar = 10 μm

Figs 1-43: Covas, Coura River (Minho basin), 21-09-2007.

Figs 44-79: Lamas de Mouro, Mouro River (Minho basin), 20-09-2007.

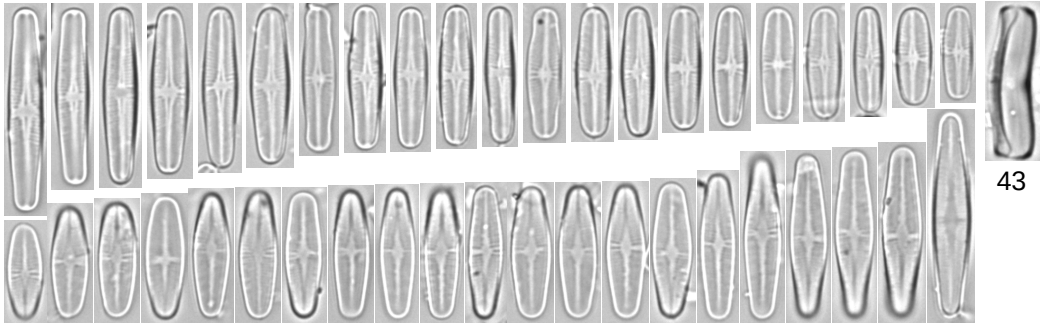
Figs 80-121: Portela do Homem, Homem River (Cávado basin), 26-09-2007.

Figs 1-21, 23-43, 44-76, 80-120: Valve view.

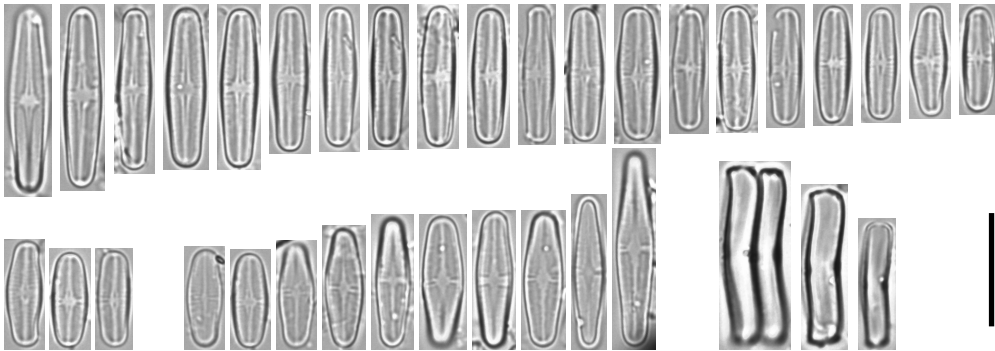
Figs 43, 77-79: Girdle view.

Fig. 121: Valve and girdle view.

Achnanthidium

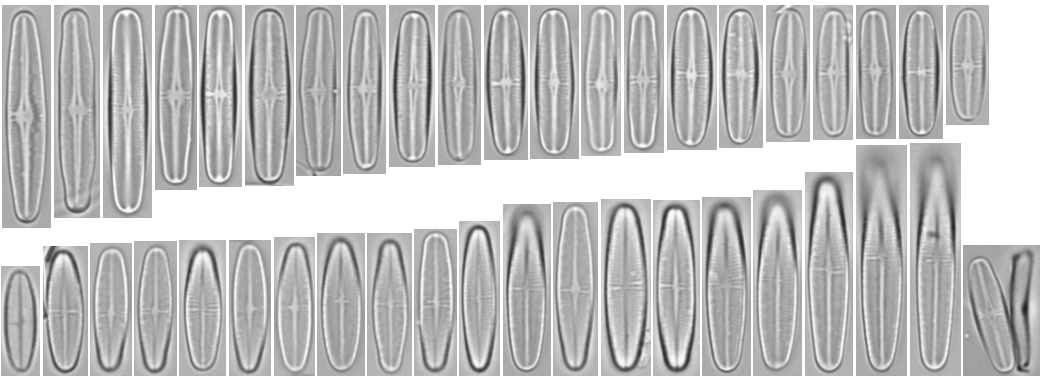


1 - 42



44 - 76

77 - 79



80 - 121

Plate 164

Figs 1-4: *Achnantheidium* sp.3, p. 31

Scale bars = 1 μm

Figs 1-4: Covas, Coura River (Minho basin), 21-09-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnanthidium

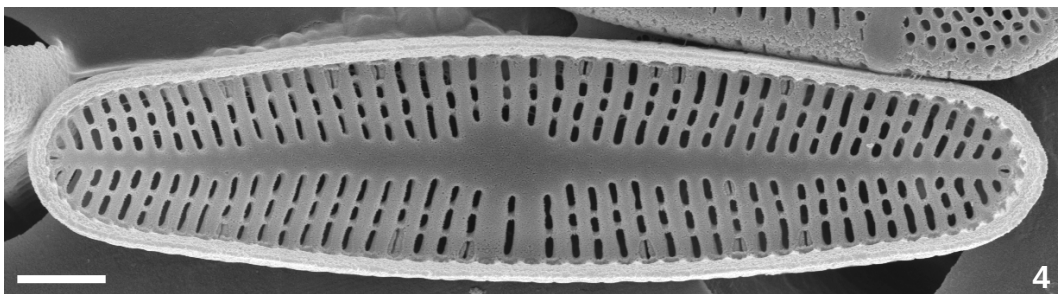
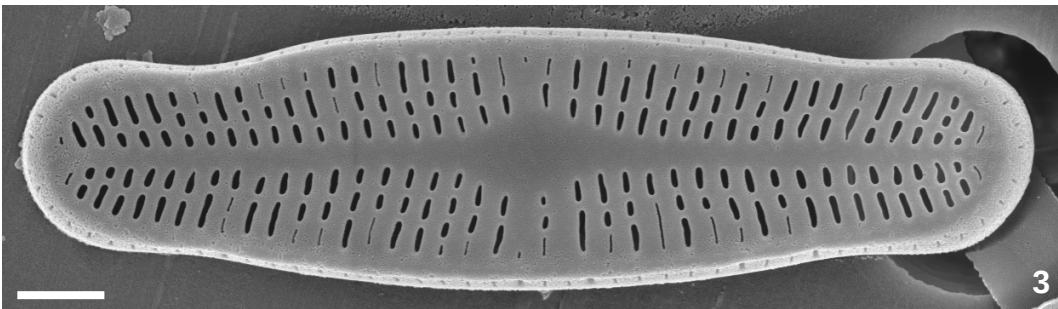
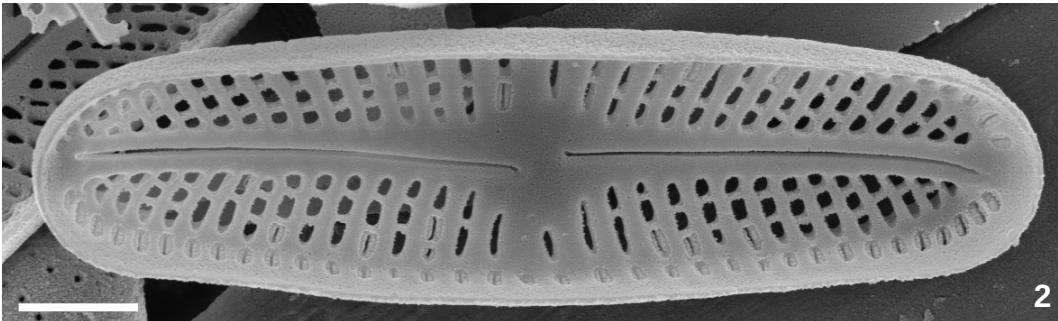
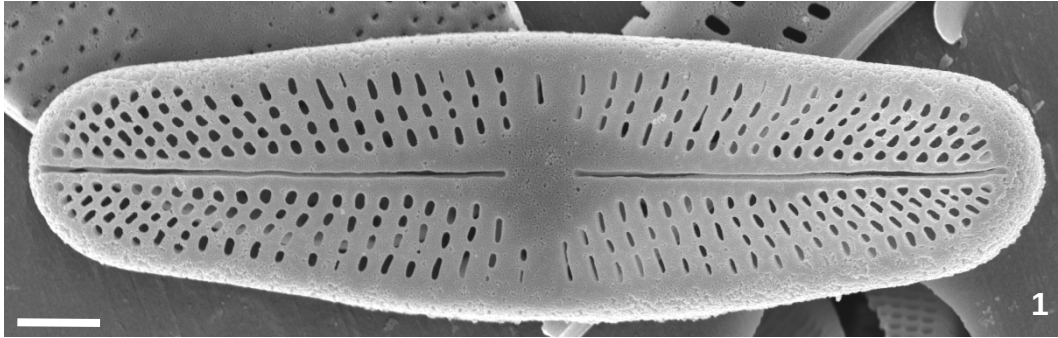


Plate 165

Figs 1-5: *Achnantheidium* sp.3, p. 31

Scale bars = 1 μm

Figs 1-5: Covas, Coura River (Minho basin), 21-09-2007.

Figs 1, 2: External valve view, details of the central area and of the pole.

Figs 3, 4: Internal valve view, details of the poles.

Fig. 5: Girdle view.

Achnantheidium

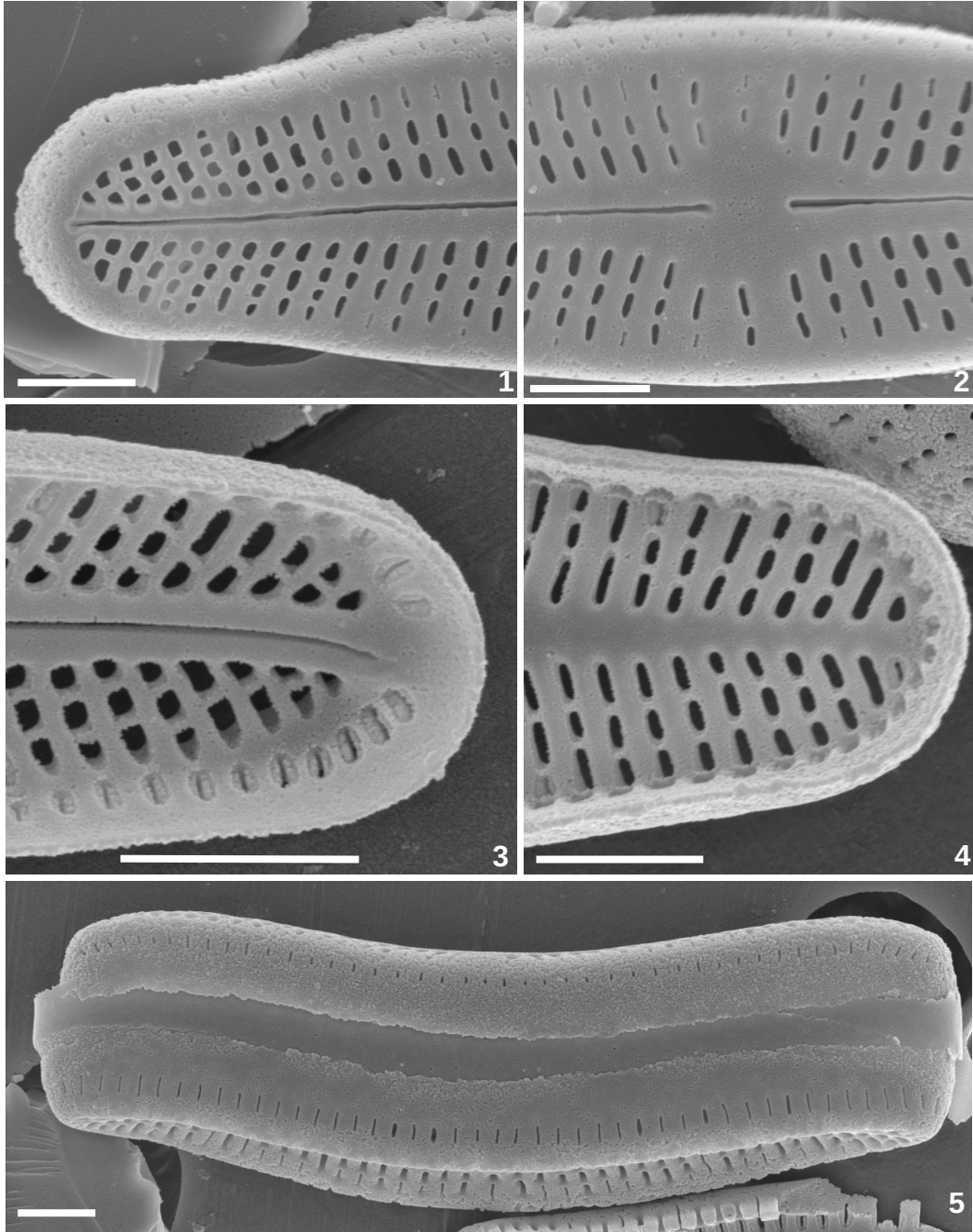


Plate 166

Figs 1-4: *Achnantheidium* sp.3, p. 31

Scale bars = 1 μm

Figs 1-4: Lamas de Mouro, Mouro River (Minho basin), 20-09-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnanthidium

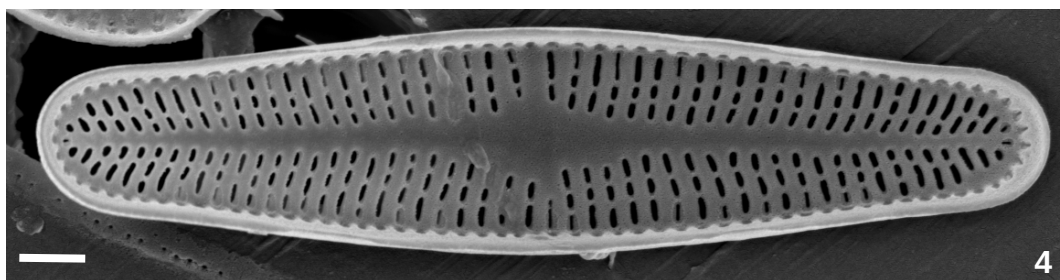
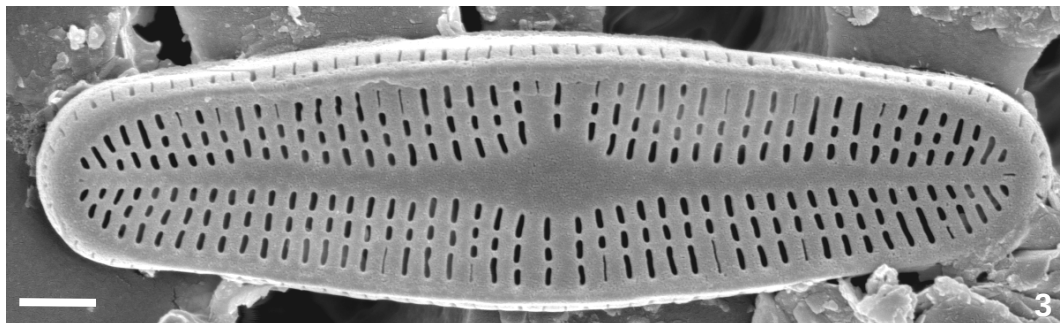
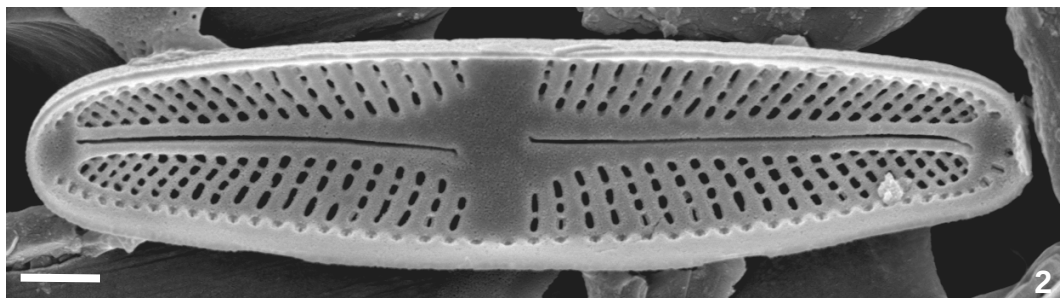
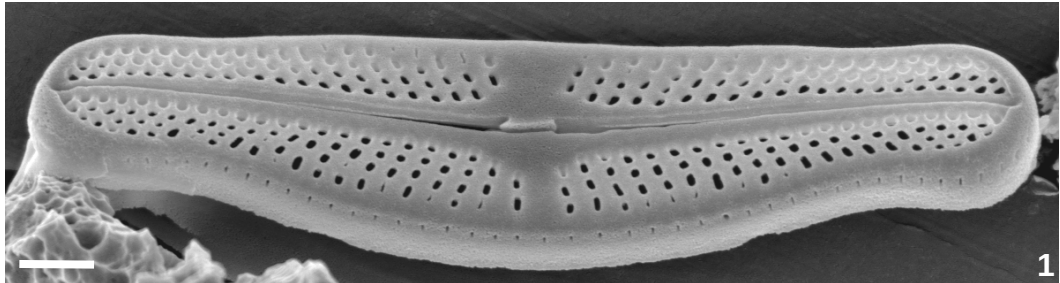


Plate 167

Figs 1-6: *Achnantheidium* sp.4, p. 31

Scale bars = 1 μm

Figs 1-6: Portela do Homem, Homem River (Cávado basin), 26-09-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Fig. 5: Detail of the raphe endings in external view.

Fig. 6: Detail of the raphe endings in internal view.

Achnantheidium

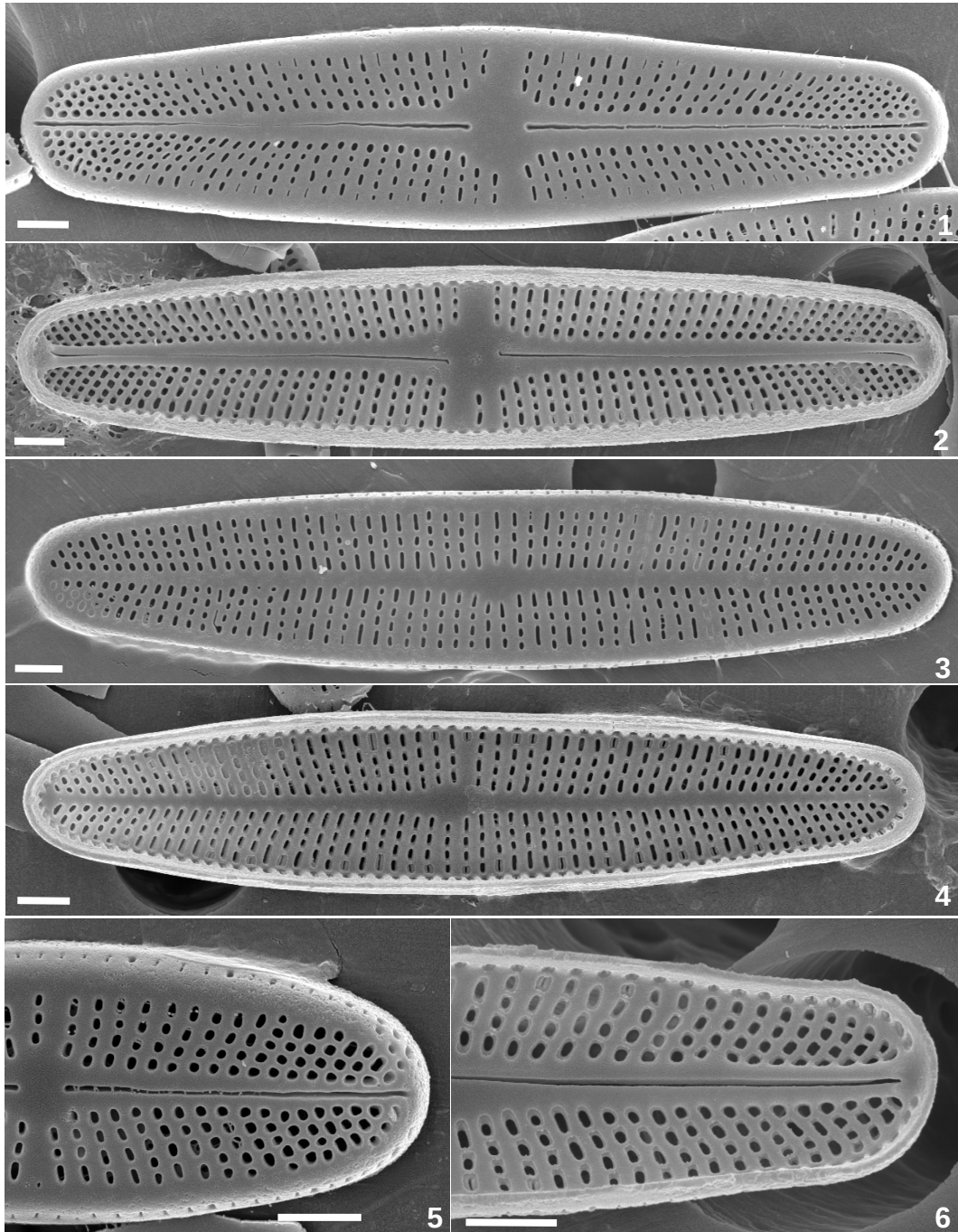


Plate 168

LM: x1500

Figs 1-42: *Achnanthidium* sp.5, p. 31

Figs 43-74: *Achnanthidium* sp.6, p. 31

Figs 75-128: *Achnanthidium catenatum* (J. Bílý & Marvan) Lange-Bertalot, p. 29

Scale bar = 10 μm

Figs 1-42: Boeiro, Sertã Stream (Tejo basin), 09-07-2006.

Figs 43-74: Boeiro, Sertã Stream (Tejo basin), 09-07-2006.

Figs 75-109: Coimbra, Mondego River (Mondego basin), 12-06-2007.

Figs 110-128: Santa Luzia Reservoir, Unhais River (Tejo basin), 23-02-2006.

Figs 1-21, 23-55, 58-109, 117-128: Valve view.

Figs 42, 56, 57, 110-116: Girdle view.

Achnantheidium

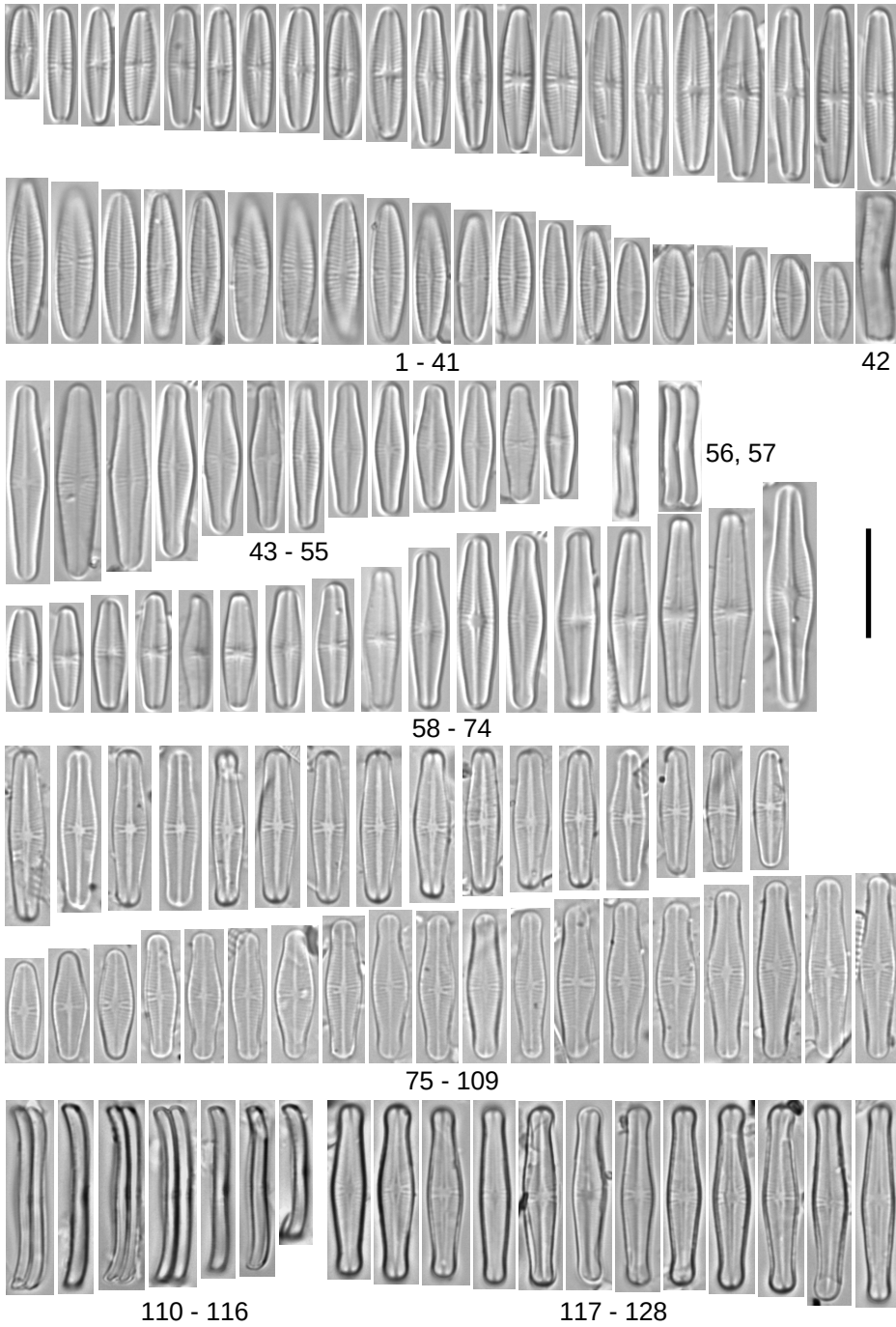


Plate 169

Figs 1-4: *Achnantheidium* sp.5, p. 31

Scale bars = 1 μm

Figs 1-4: Boeiro, Sertã Stream (Tejo basin), 09-07-2006.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

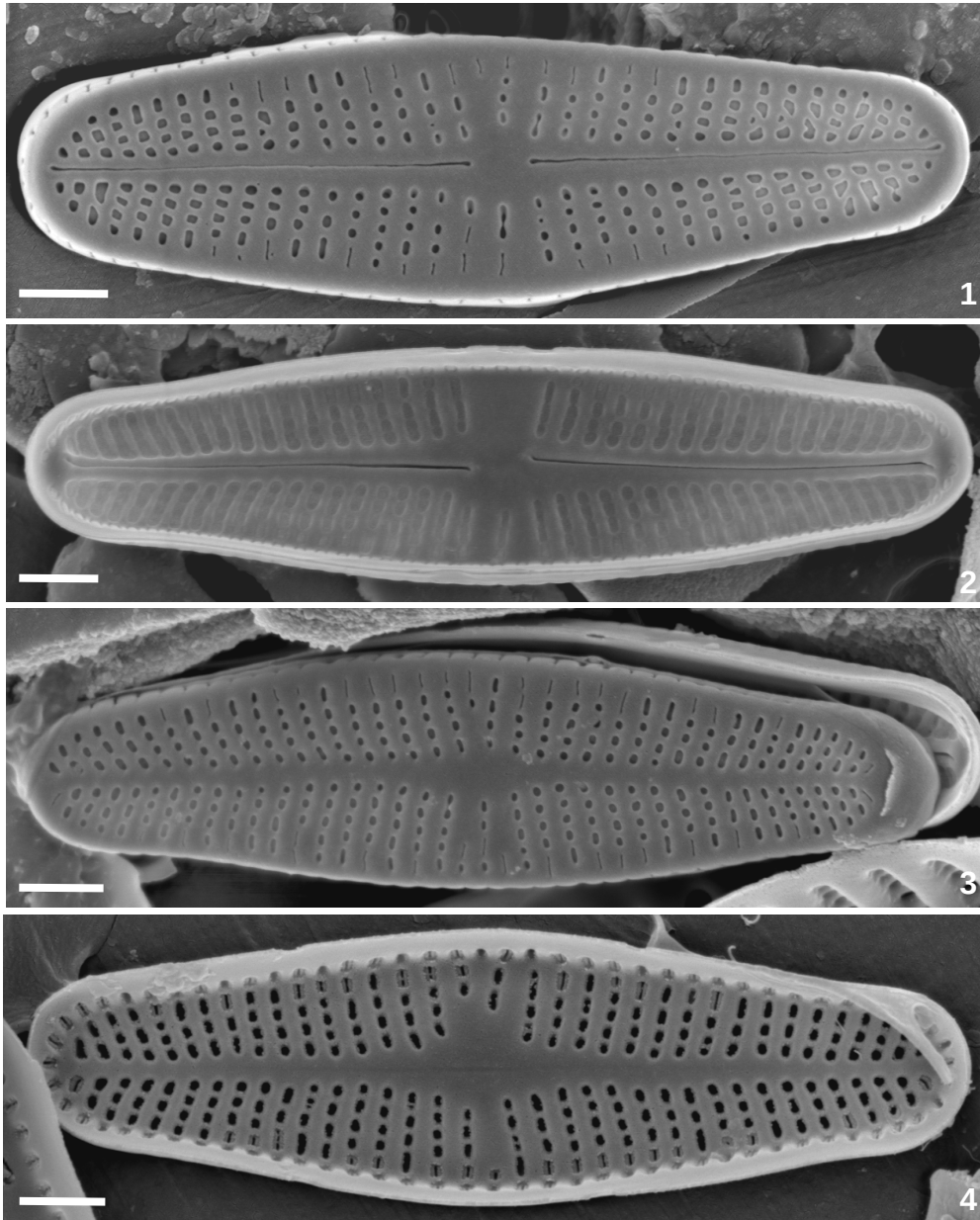


Plate 170

Figs 1-7: *Achnantheidium* sp.6, p. 31

Scale bars = 1 μm

Figs 1-7: Boeiro, Sertã Stream (Tejo basin), 09-07-2006.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Figs 2, 4: Internal valve view.

Fig. 5: Detail of the central area in external view.

Fig. 6: Detail of the raphe ending in external view.

Fig. 7: Detail of the raphe ending in internal view.

Achnantheidium

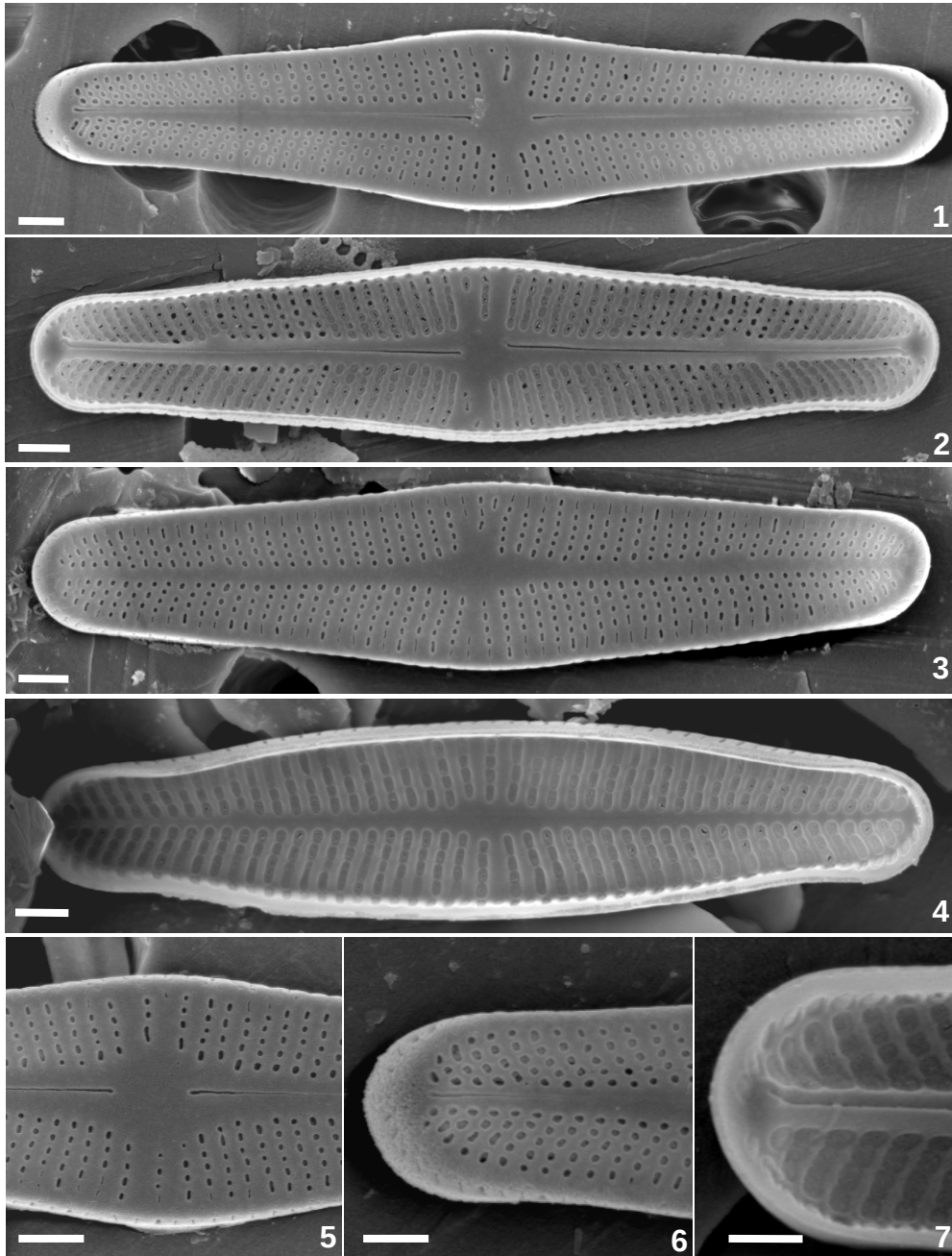


Plate 171

Figs 1-4: *Achnantheidium catenatum* (J. Bílý & Marvan) Lange-Bertalot, p. 29 [ADCT]

Scale bars = 1 μm

Figs 1-4: Coimbra, Mondego River (Mondego basin), 12-06-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

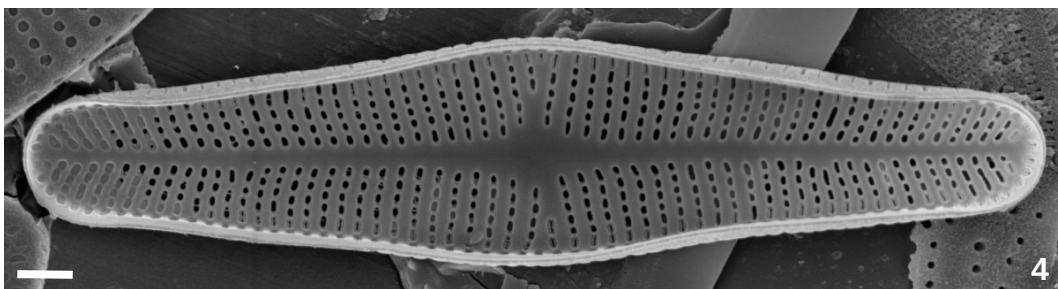
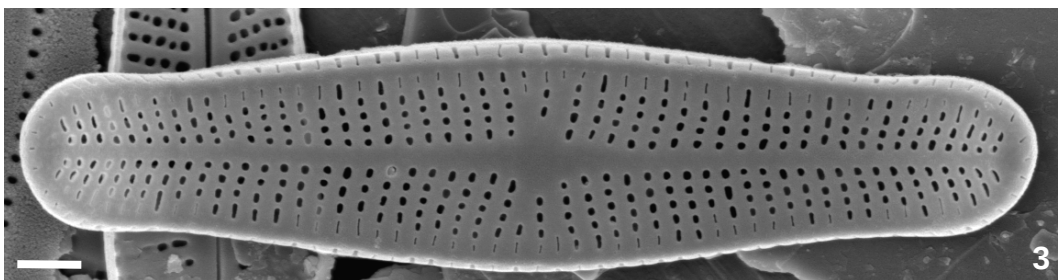
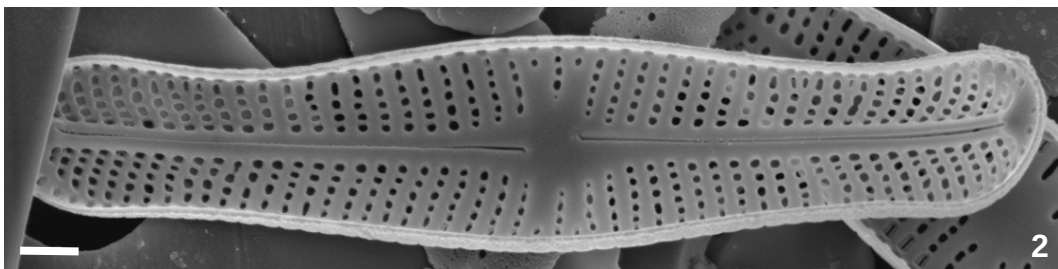
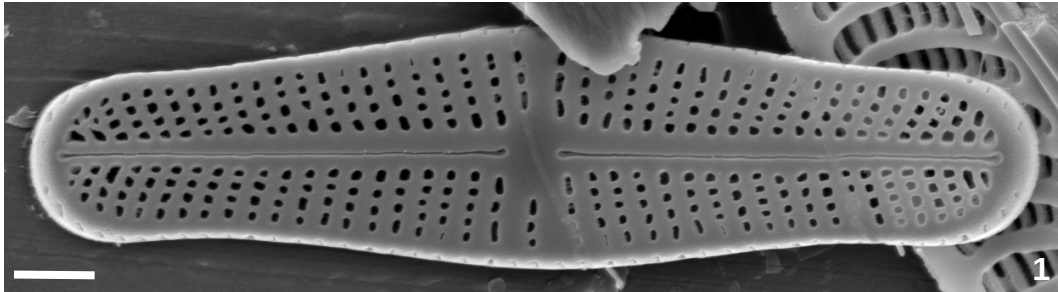


Plate 172

LM: x1500

Figs 1-171: *Achnantheidium* sp.7, p. 31

Scale bar = 10 μ m

Figs 1-50: Lousã, São João Stream (Mondego basin), 11-06-2007.

Figs 51-90: Côja, Alva River (Mondego basin), 11-06-2007.

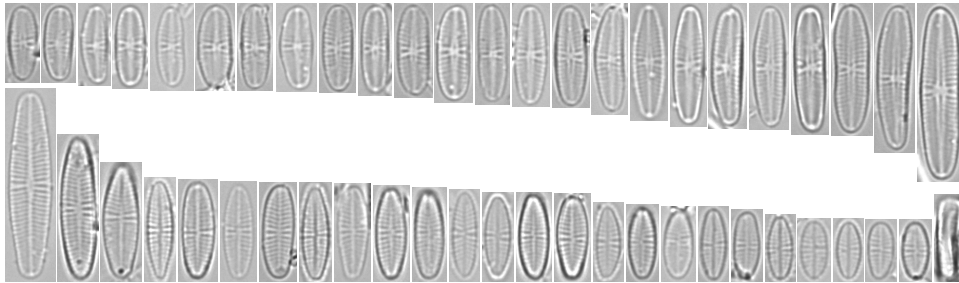
Figs 91-129: Alvoco das Várzeas, Alvoco Stream (Mondego basin), 11-06-2007.

Figs 130-171: Urtigosa, Urtigosa Stream (Douro basin), 15-09-2007.

Figs 1-49, 51-171: Valve view.

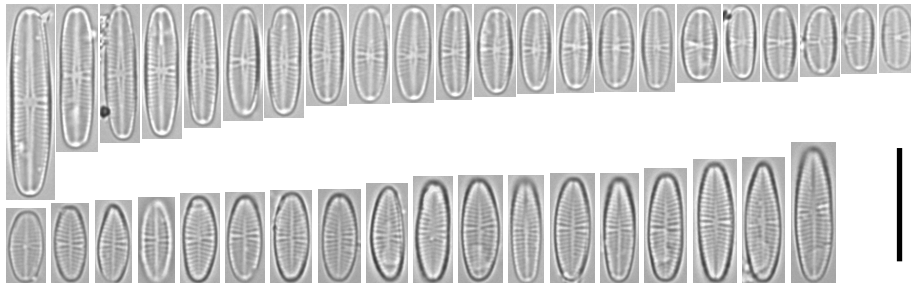
Fig. 50: Girdle view.

Achnantheidium

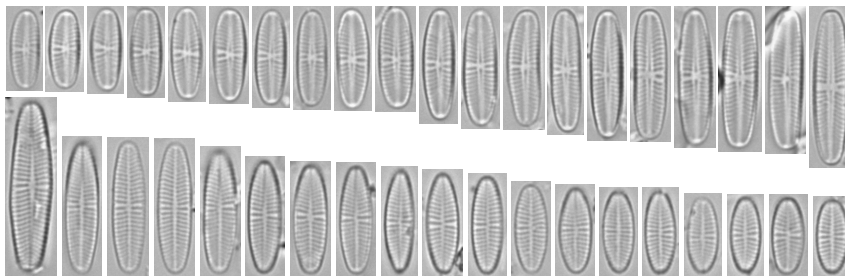


1 - 49

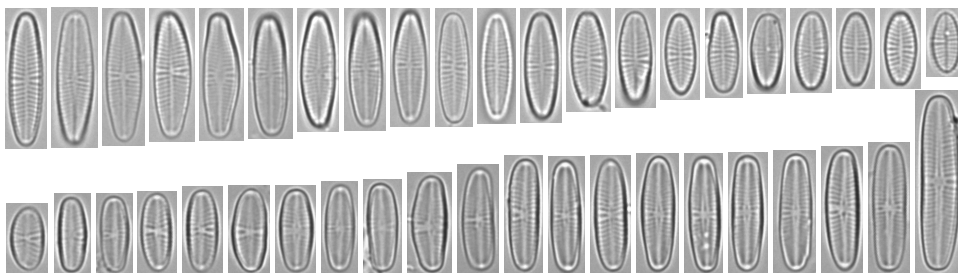
50



51 - 90



91 - 129



130 - 171

Plate 173

Figs 1-4: *Achnantheidium* sp.7, p. 31

Scale bars = 1 μm

Figs 1-4: Côja, Alva River (Mondego basin), 11-06-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

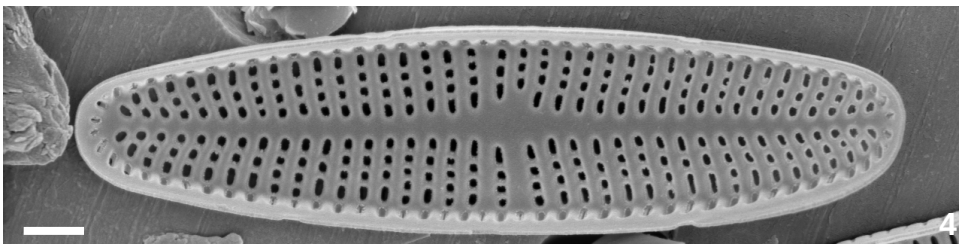
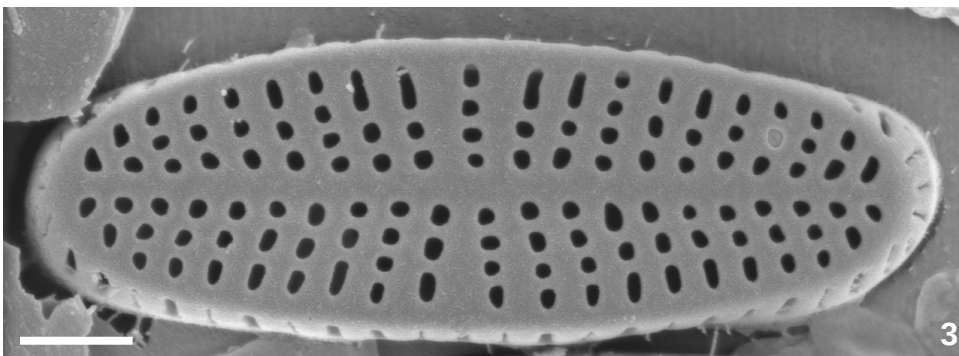
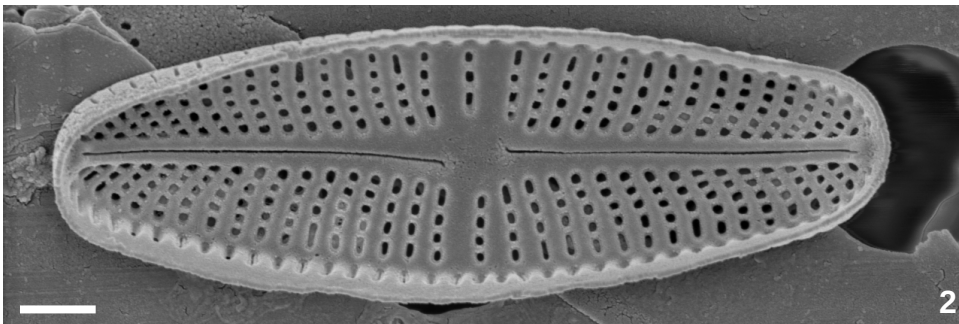
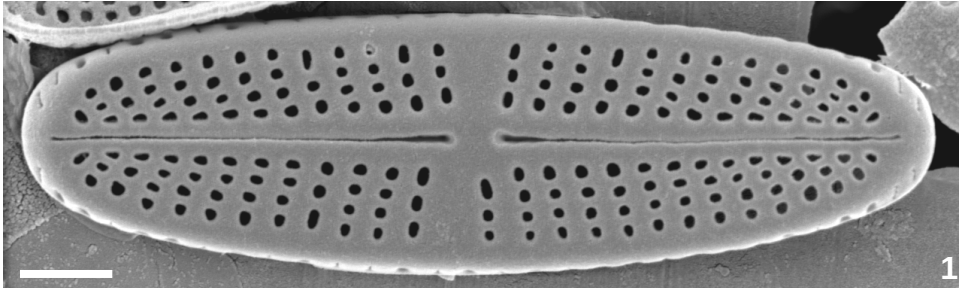


Plate 174

LM: x1500

Figs 1-45: *Achnanthidium* sp.8, p. 32

Figs 46-121: *Achnanthidium* sp.9, p. 32

Scale bar = 10 μ m

Figs 1-45: Adobispo, Torto River (Douro basin), 18-08-2007.

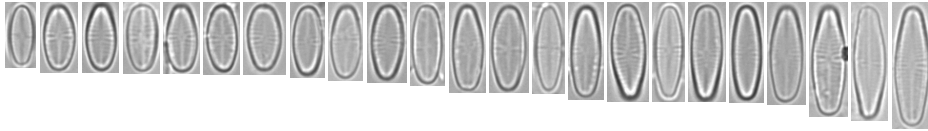
Figs 46-88: Carregal, Zêzere River (Tejo basin), 09-07-2006.

Figs 89-121: Janeiro de Baixo, Zêzere River (Tejo basin), 08-07-2006.

Figs 1-44, 46-65, 68-118: Valve view.

Figs 45, 66, 67, 118-121: Girdle view.

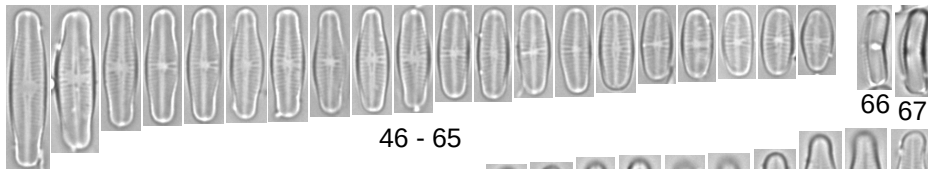
Achnanthidium



1 - 44

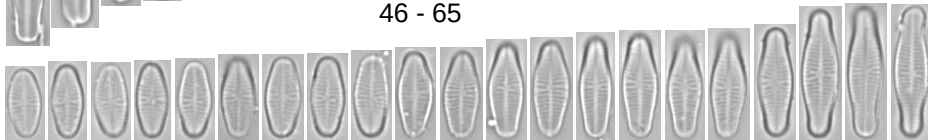


45

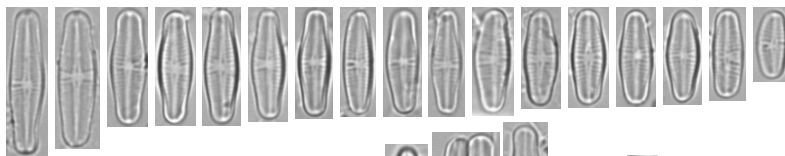


46 - 65

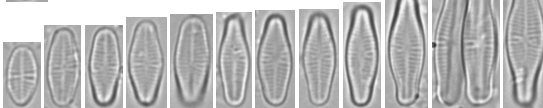
66 67



68 - 88



89 - 117



118 - 121



Plate 175

Figs 1-4: *Achnantheidium* sp.8, p. 32

Scale bars = 1 μm

Figs 1-4: Adobispo, Torto River (Douro basin), 18-08-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

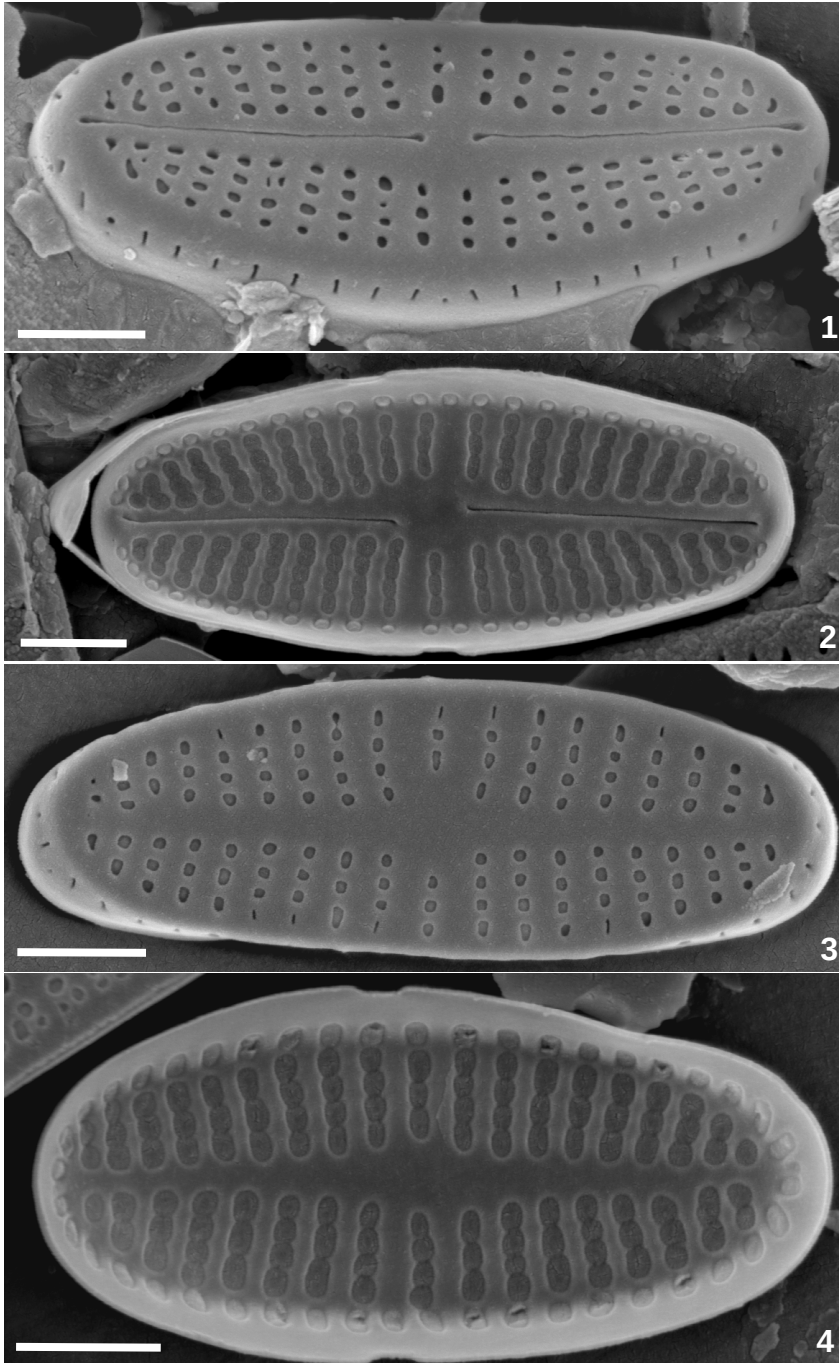


Plate 176

Figs 1-4: *Achnantheidium* sp.8, p. 32

Scale bars = 1 μm

Figs 1-4: Adobispo, Torto River (Douro basin), 18-08-2007.

Fig. 1: External girdle view.

Fig. 2: Detail of the central area in external view.

Fig. 3: Detail of the raphe ending in external view.

Fig. 4: Detail of the rapheless valve apice.

Achnanthidium

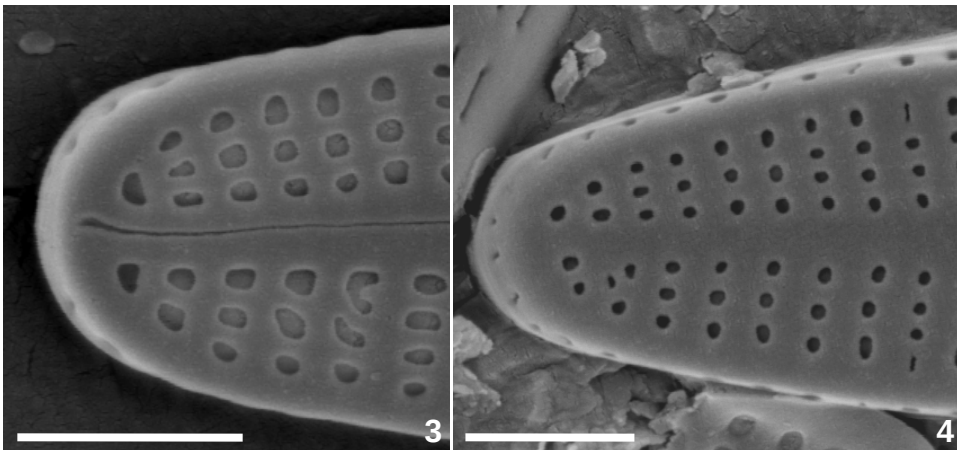
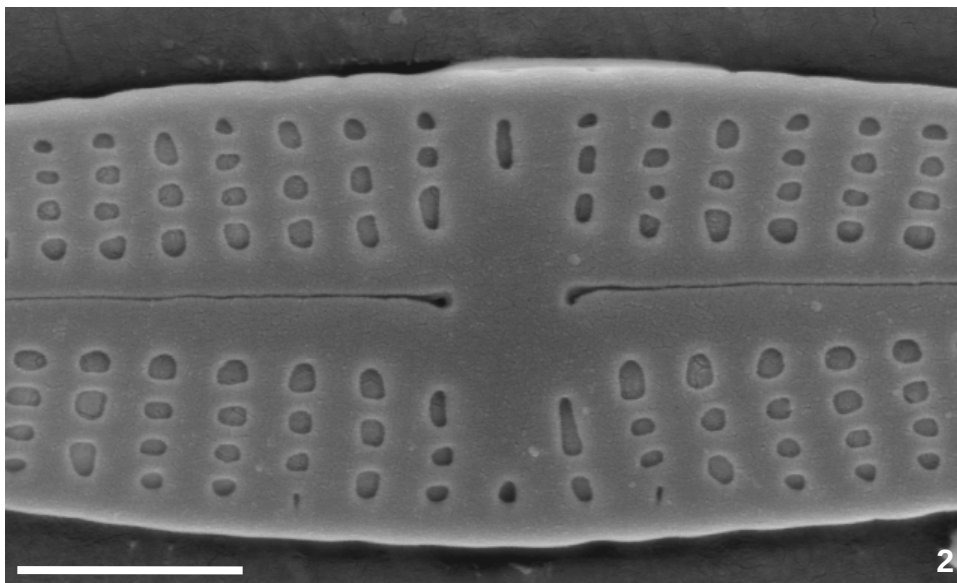
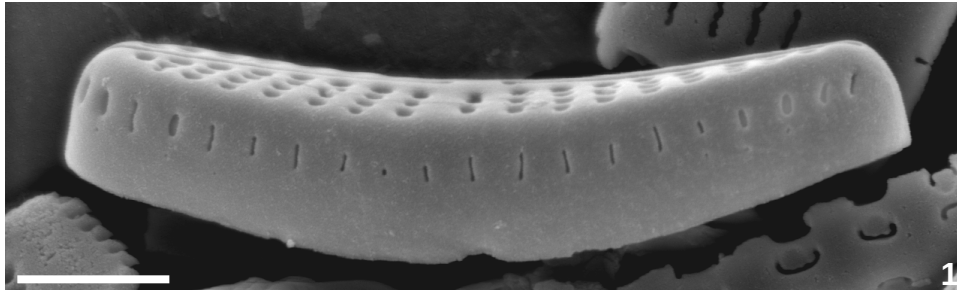


Plate 177

Figs 1-4: *Achnantheidium* sp. 9, p. 32

Scale bars = 1 μm

Figs 1-4: Carregal, Zêzere River (Tejo basin), 09-07-2006.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

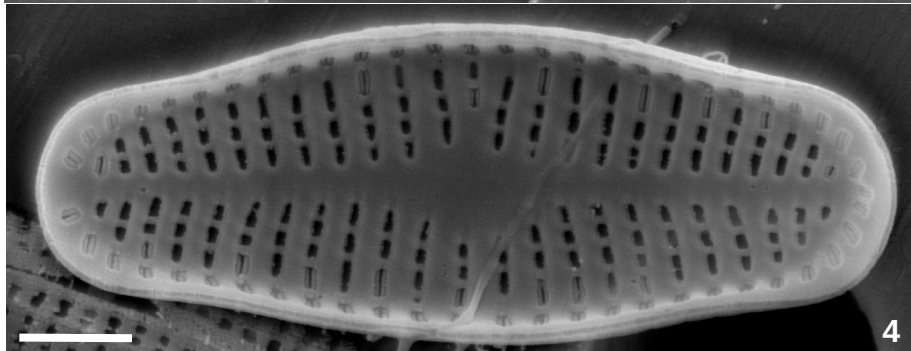
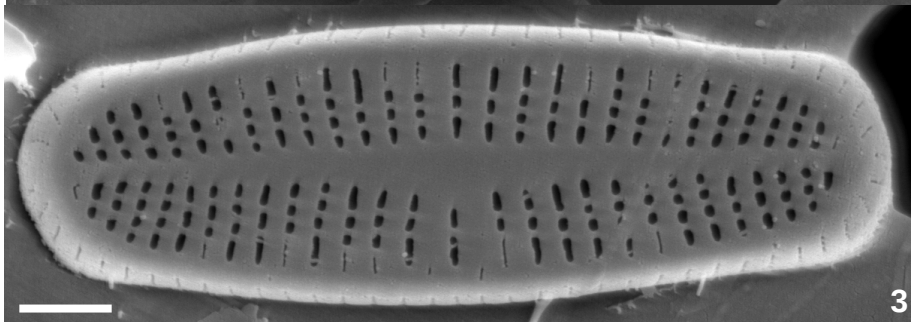
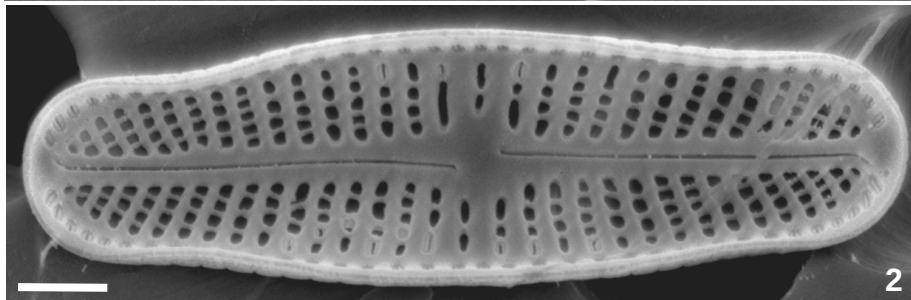
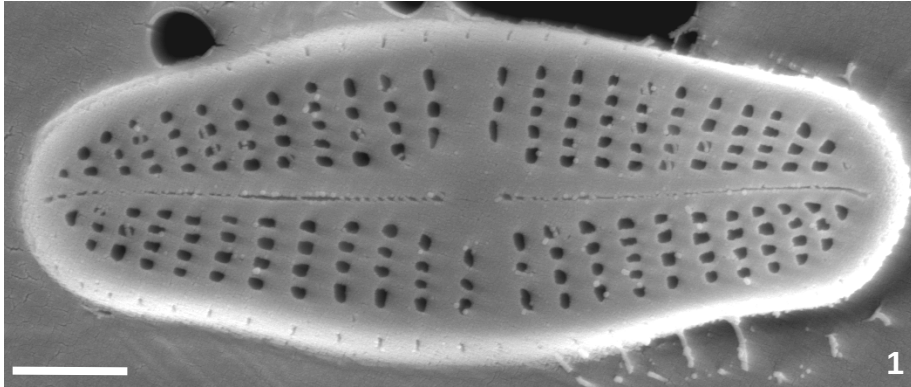


Plate 178

Figs 1-4: *Achnantheidium* sp. 9, p. 32

Scale bars = 1 μm

Figs 1-4: Janeiro de Baixo, Zêzere River (Tejo basin), 08-07-2006.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

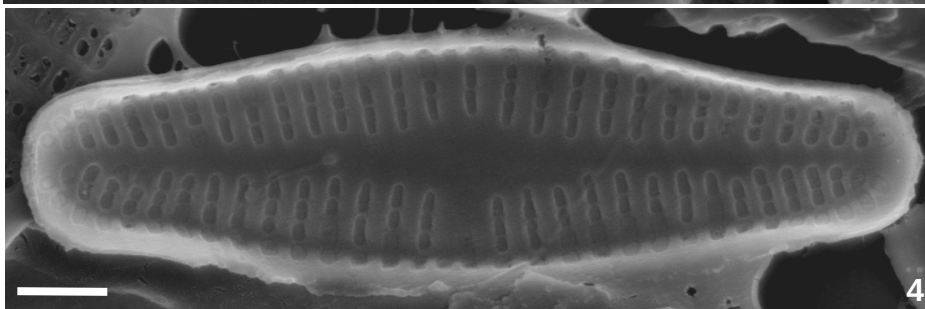
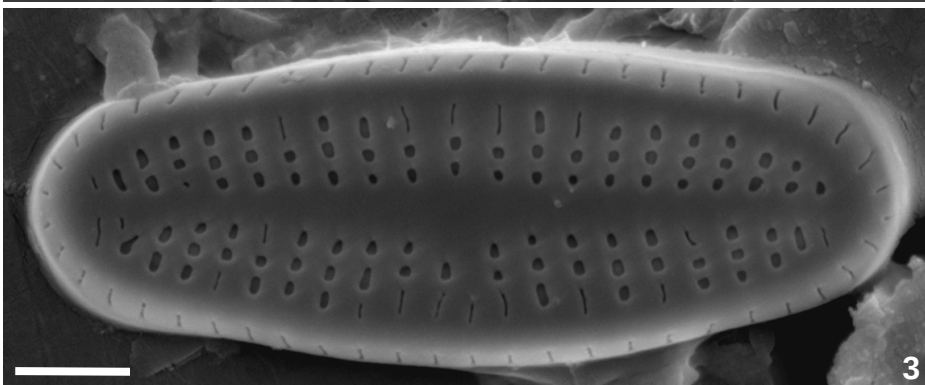
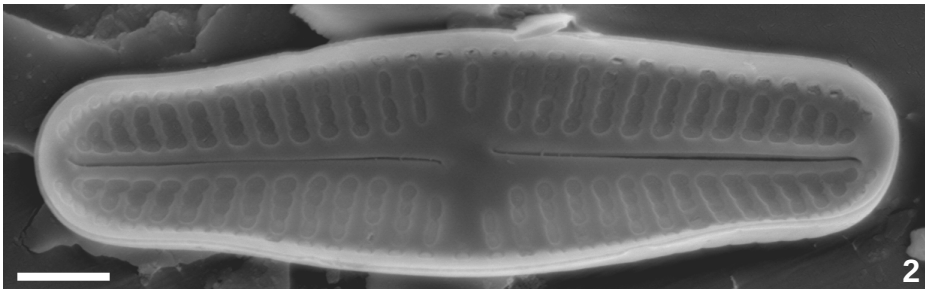
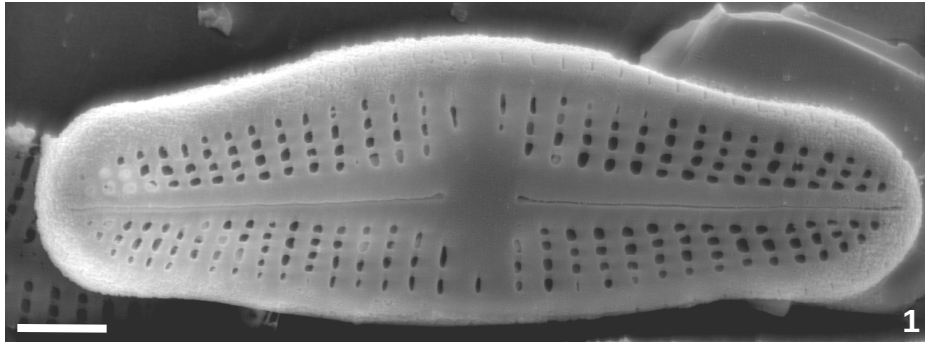


Plate 179

LM: x1500

Figs 1-61: *Achnanthidium rivulare* Potapova & Ponader, p. 30 [ADRI]

Figs 62-85: *Achnanthidium straubianum* (Lange-Bertalot) Lange-Bertalot, p. 31 [ADSB]

Figs 86-113: *Achnanthidium subhudsonis* (Hustedt) H. Kobayasi, p. 31 [ADSH]

Figs 114-138: *Achnanthidium exiguum* (Grunow) Czarnecki sensu lato, p. 29 [ADEG]

Scale bar = 10 µm

Figs 1-29: Caravelas Stream (Douro basin), 22-07-2007.

Figs 30-61: Veral, Tâmega River (Douro basin), 24-09-2007.

Figs 62-85: Fonte da Benémola, Fonte Menalva Stream (Ribeiras do Algarve basin), 03-03-2006.

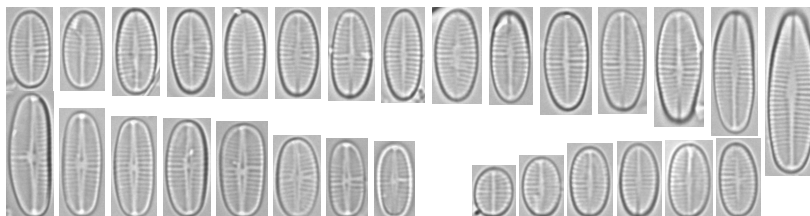
Figs 86-113: Aldeia das Freiras, Pêra Stream (Tejo basin), 09-07-2006.

Figs 114-138: Cegonhas, Aravil River (Tejo basin), 12-07-2006.

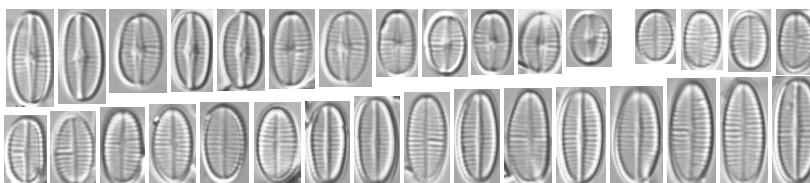
Figs 1-74, 77-138: Valve view.

Figs 75, 76: Girdle view.

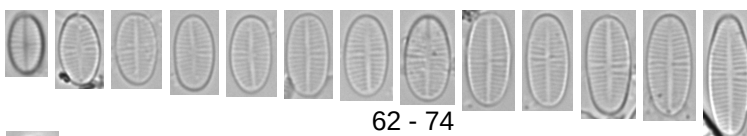
Achnantheidium



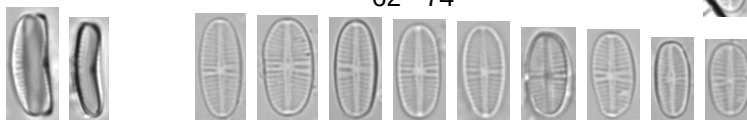
1 - 29



30 - 61

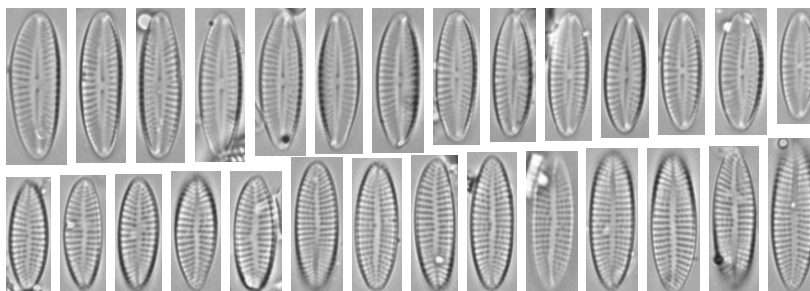


62 - 74

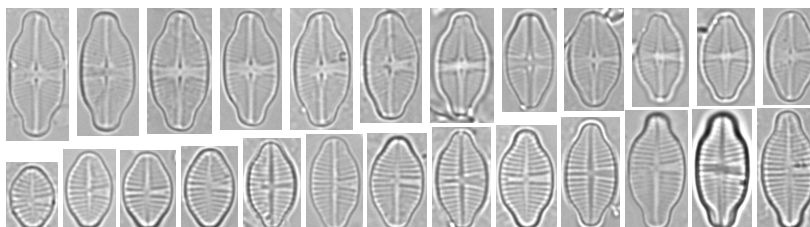


75 76

77 - 85



86 - 113



114 - 138

Plate 180

Figs 1-5: *Achnantheidium rivulare* Potapova & Ponader, p. 30 [ADRI]

Scale bars = 1 μm

Figs 1-5: Caravelas Stream (Douro basin), 22-07-2007.

Figs 1, 4: External valve view.

Figs 2, 3, 5: Internal valve view.

Fig. 5: Detail of central area.

Achnantheidium

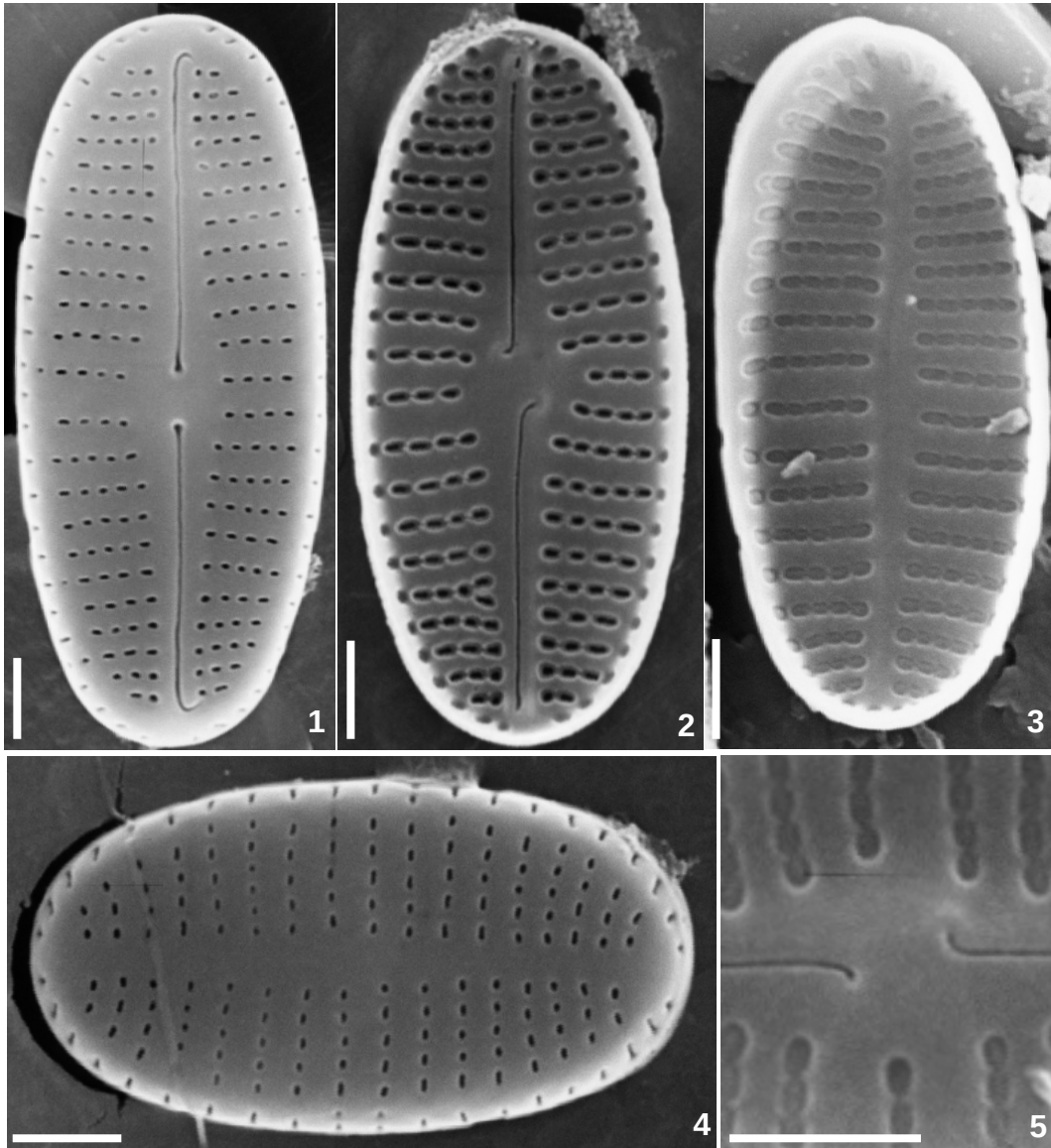


Plate 181

Figs 1-5: *Achnantheidium subhudsonis* (Hustedt) H. Kobayasi, p. 31 [ADSH]

Scale bars = 1 μm

Figs 1-5: Aldeia das Freiras, Pêra Stream (Tejo basin), 09-07-2006.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Fig. 5: External oblique view

Achnantheidium

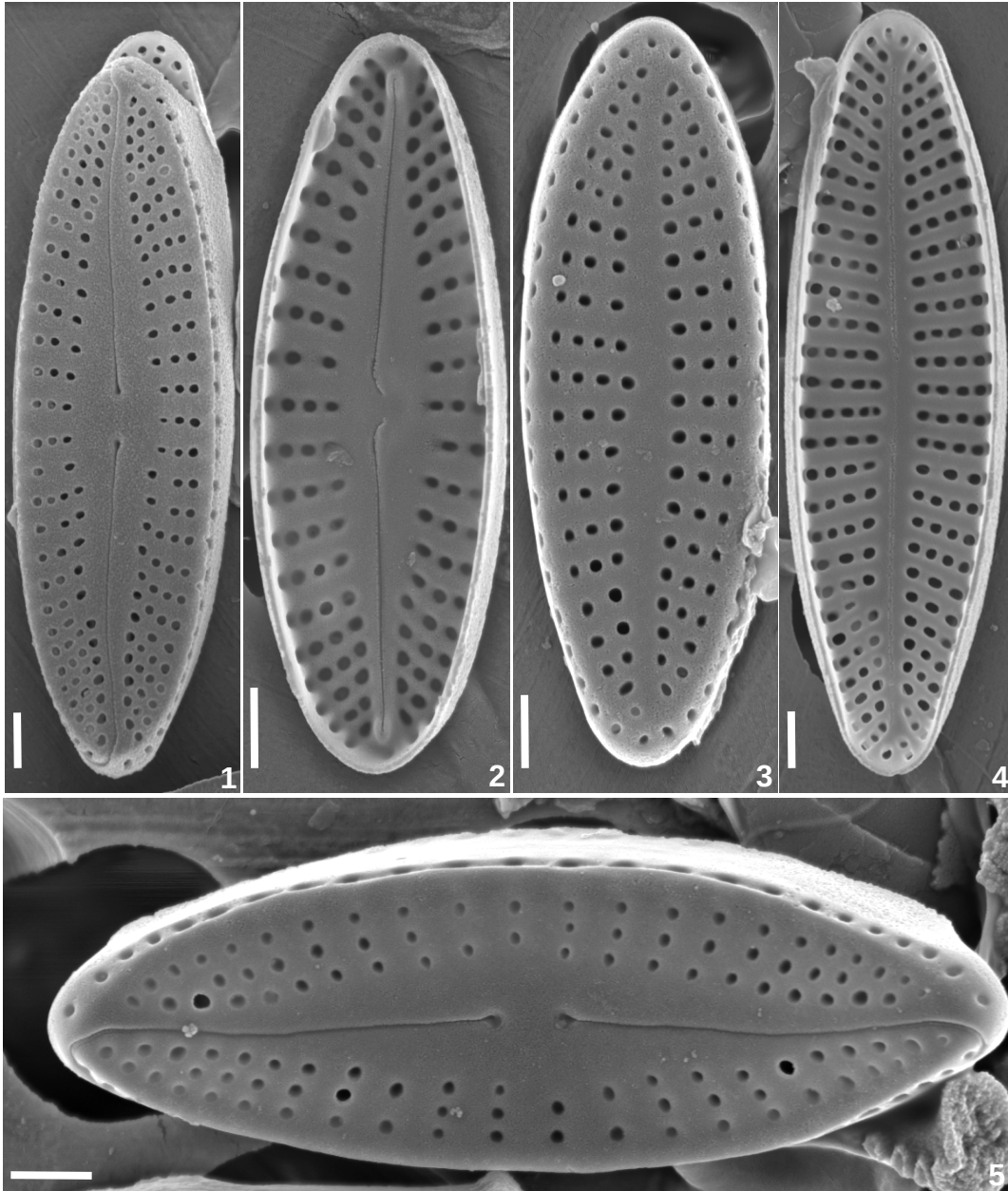


Plate 182

LM: x1500

Figs 1-28: *Achnanthes helvetica* var. *minor* Flower & Jones, p. 28 [AHMI]

Figs 29-54: *Achnanthidium lauenburgianum* (Hustedt) Monnier Lange-Bertalot & Ector, p. 29 [ADLB]

Figs 55-85: *Achnanthidium subatomoides* (Hustedt) Monnier, Lange-Bertalot & Ector, p. 31 [ADSO]

Scale bar = 10 μ m

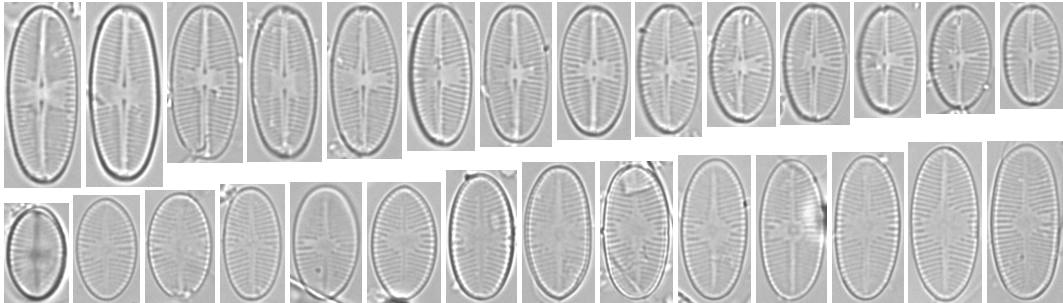
Figs 1-28: Outeiro das Cabras, Âncora River (Lima basin), 21-09-2007.

Figs 29-54: Amieira, Tejo River (Tejo basin), 06-07-2006.

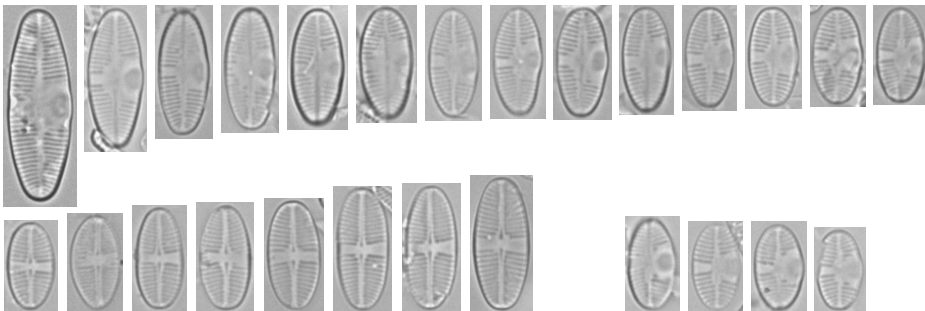
Figs 55-85: Barcelos, Cávado River (Cávado basin), 22-09-2007.

Figs 1-85: Valve view.

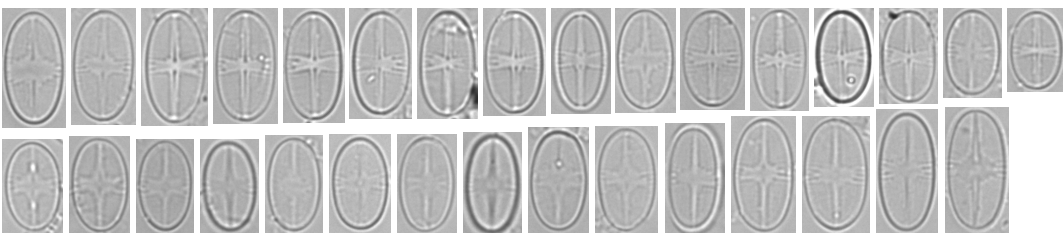
Achnanthes
Achnanthidium



1 - 28



29 - 54



55 - 85

Plate 183

Figs 1-4: *Achnanthes helvetica* var. *minor* Flower & Jones, p. 28 [AHMI]

Scale bars = 1 μm

Figs 1-4: Outeiro das Cabras, Âncora River (Lima basin), 21-09-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

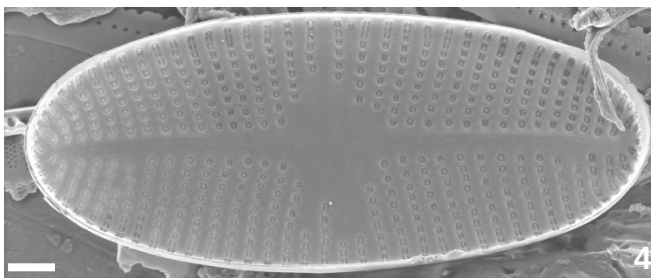
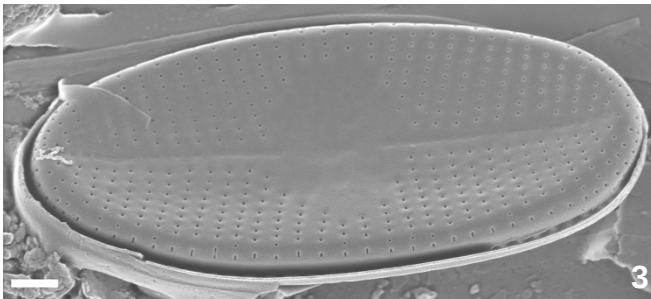
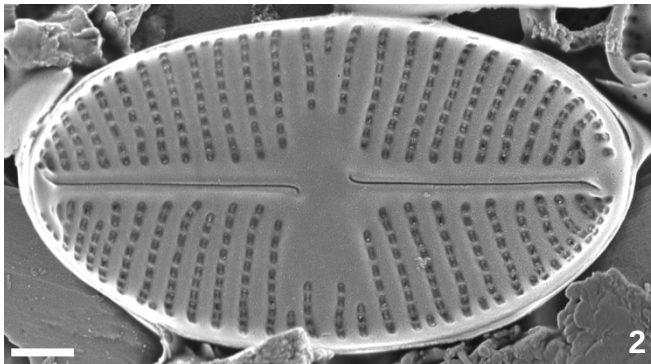
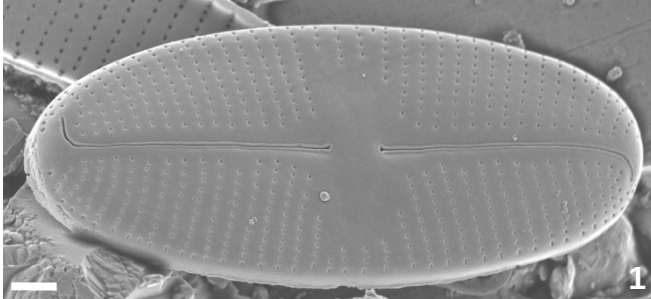


Plate 184

Figs 1-4: *Achnanthidium subatomoides* (Hustedt) Monnier, Lange-Bertalot & Ector, p. 31 [ADSO]

Scale bars = 1 μm

Figs 1-4: Barcelos, Cávado River (Cávado basin), 22-09-2007.

Figs 1, 3: External valve view.

Figs 2, 4: Internal valve view.

Achnantheidium

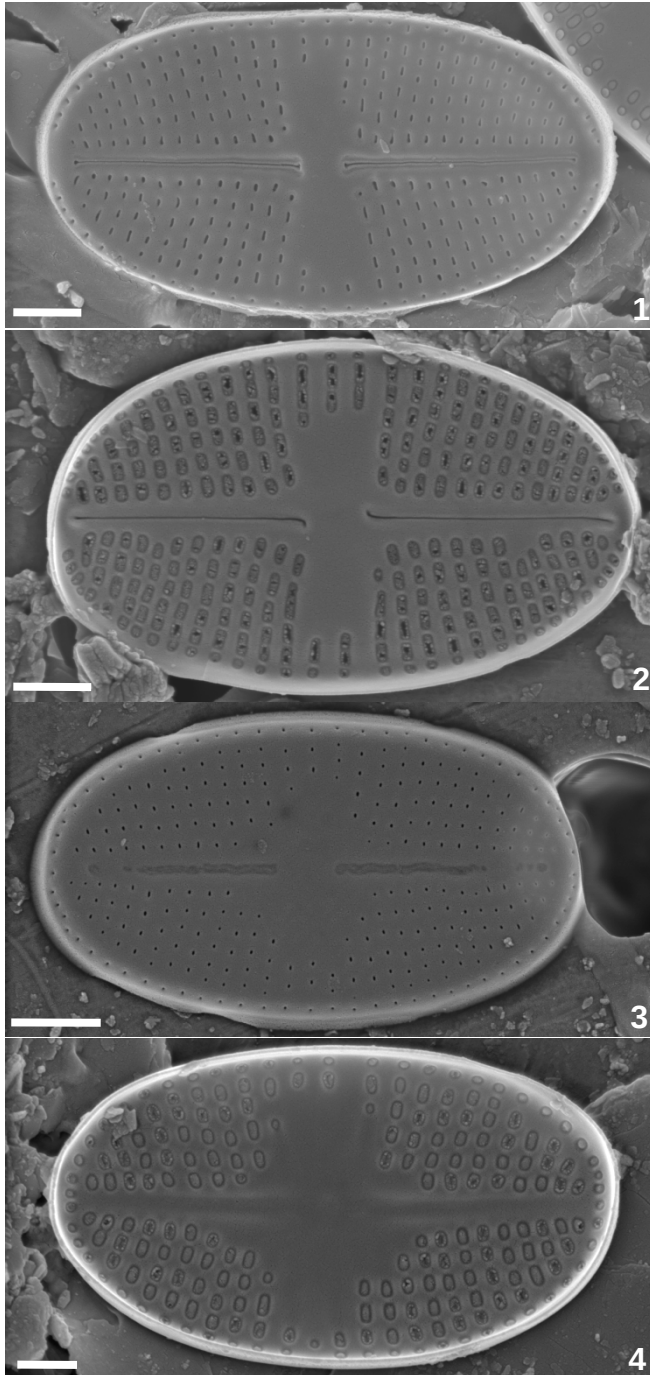


Plate 185

LM: x1500

Figs 1-30: *Planothidium frequentissimum* (Lange-Bertalot) Lange-Bertalot, p. 33
[PLFR]

Figs 31-56: *Planothidium lanceolatum* (Brébisson ex Kützing) Lange-Bertalot, p. 33
[PTLA]

Figs 57-83: *Planothidium engelbrechtii* (Cholnoky) Round & Bukhtiyarova, p. 33
[PLEN]

Scale bar = 10 µm

Figs 1-30: Amieira, Tejo River (Tejo basin), 06-07-2006.

Figs 31-42: Torto River (Mira basin), 25-04-2006.

Figs 43-56: Passil, Aljezur Stream (Ribeiras do Algarve basin), 15-04-2006.

Figs 57-71: Abela, Martinhenos Creek (Sado basin), 10-05-2006.

Figs 72-83: Peramanca Stream (Sado basin), 05-04-2006.

Figs 1-42, 45-70, 72-83: Valve view.

Figs 43, 44, 71: Girdle view.