A Diatom Voucher Flora of Streams from the USGS Pacific Northwest Regional Survey (PNSQA) 2015.

Ian Bishop, Meredith Tyree, and Sarah Spaulding

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Preamble

This diatom voucher flora was produced as part of an analysis of streams in the western part of the Pacific Northwest United States, with its purpose being its purpose being to 1) promote taxonomic consistency within and among analysts and 2) provide a permanent record of species names and concepts used in the study (Bishop et al. 2017; Bishop et al., in prep.). The flora documents the taxa encountered during analysis and their taxonomic treatment. It is meant to serve a permanent record to support data analysis and resolve potential future inquiries about taxonomic treatment.

The project was funded as part of a cooperative agreement between the United States Geological Survey and the Center for Water, Earth Science and Technology (CWEST) and the Institute of Arctic and Alpine Research (INSTAAR) at the University of Colorado. In 2015, the U.S. Geological Survey (USGS) National Water-Quality Assessment (PNSQA) assessed stream quality in the pacific northwest United States. The goal of the Pacific Northwest Stream Quality Assessment (PNSQA) in 2015 was to characterize the effects of agricultural, urban, and hydrologic impairment on stream quality in 88 sites throughout Washington and Oregon.

This voucher flora includes five important aspects: 1) Each image is tied to a specimen that is publicly available. The .tif file versions (by genus) include the INSTAAR accession number which is associated with location information. 2) The flora was used by analysts working together on the project to coordinate consistent application of operational taxonomic unit (OUT) codes. 3) The flora allows verification of specimens across size and morphologic through images, so that taxonomic practice used in this survey is transparent. 4) The flora allows for reinterpretation of specimens and names at a later date. 5) Finally, the flora especially important for long-term ecological studies, in which taxonomic consistency is vital.

Operational taxonomic units (OTUs) are labeled as short codes, which correspond to the list of scientific names provided in the taxon list. Scientific names were assigned based on taxonomic literature, documented by citation, figures, and page numbers. Many species did not conform to described scientific taxa and remain as provisional names (*Sellaphora* sp. 32) so that they can be referred to consistently. Scientific names were validated using the USGS BioData database to ensure the names are considered current and scientifically valid.

Plates are arranged roughly according to genus. In instances were a scientific name is in need of transfer to another genus (e.g. many *Placoneis* species are still in need of transfer from *Navicula*), that species is assigned a provisional code that reflects its current scientific name (e.g. “NAV” short for *Navicula*), but appears on the plate with the genus it most likely belongs to.

Direct questions or requests to:

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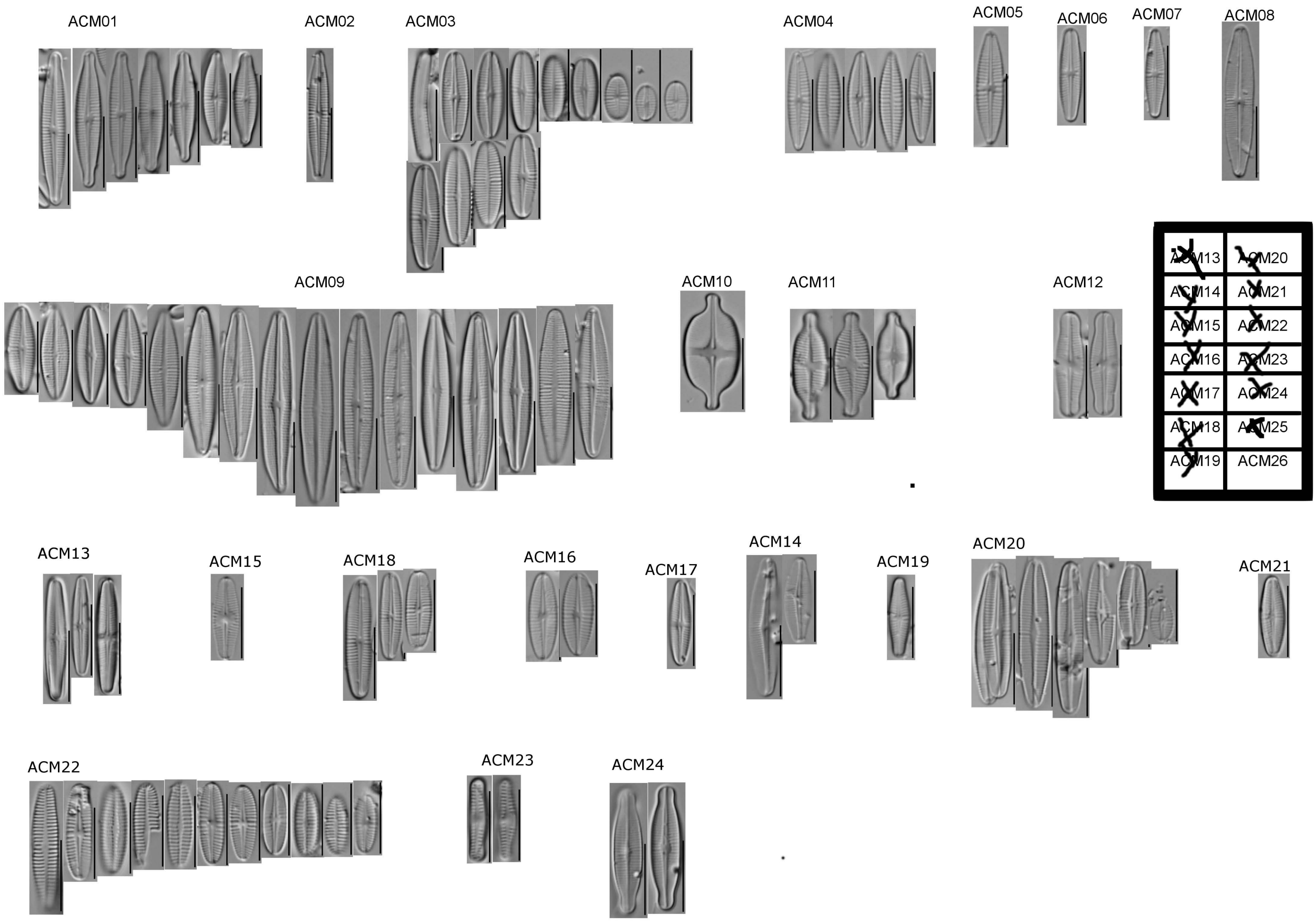
References

Bishop. I.W., Esposito, R.M, Tyree, M. and Spaulding, S.A. 2017. A diatom voucher flora from selected southeast rivers (USA). Phytotaxa 332: 101-140.

Bishop, I.W., Tyree, M., Hawkins, C.P, Mitchell, R. & Spaulding S.A. Reduction of taxonomic bias in diatom species data. (In prep).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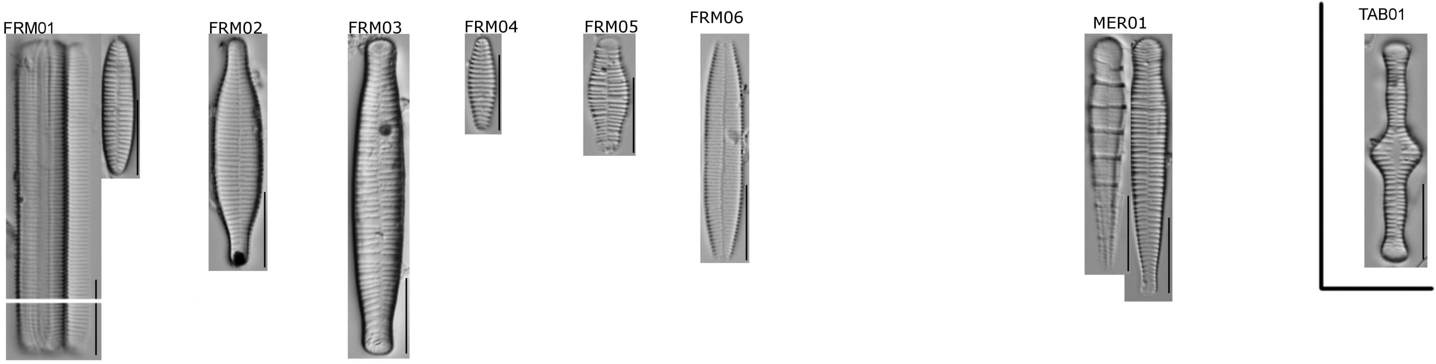

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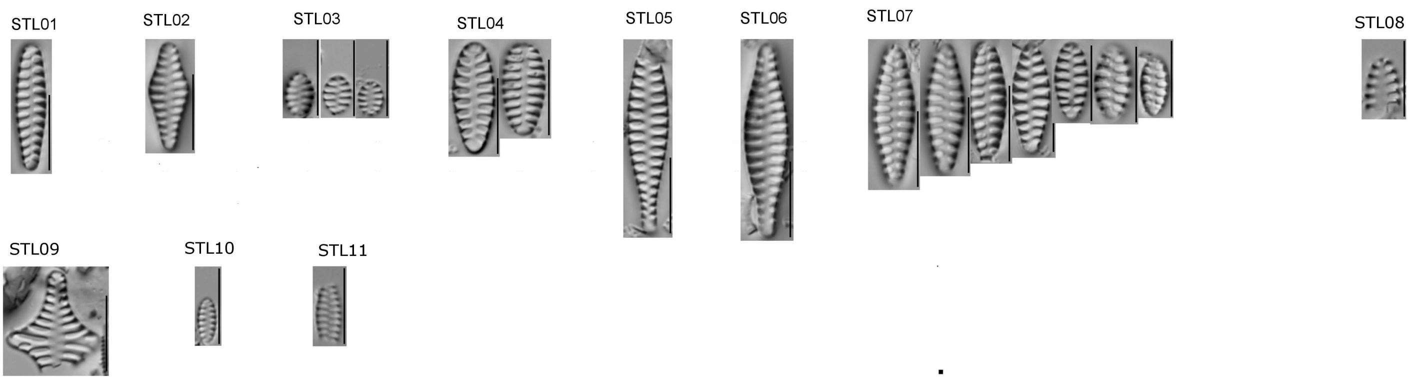

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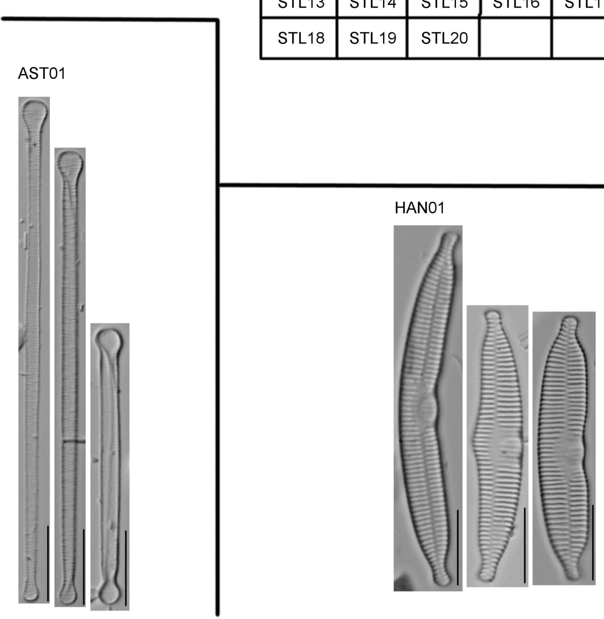

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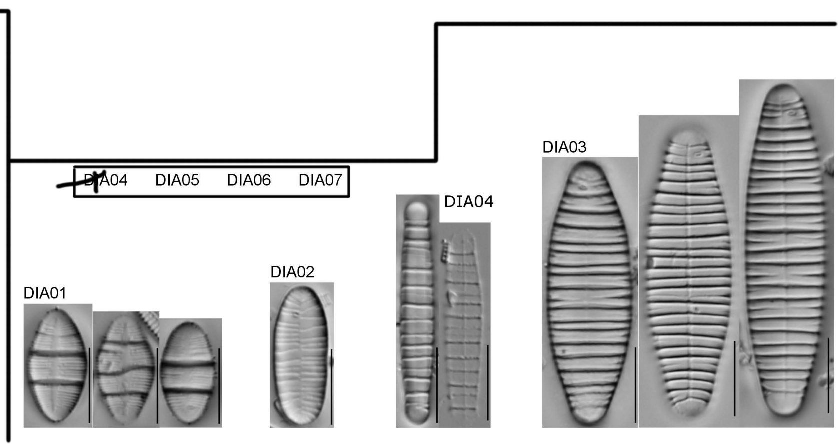

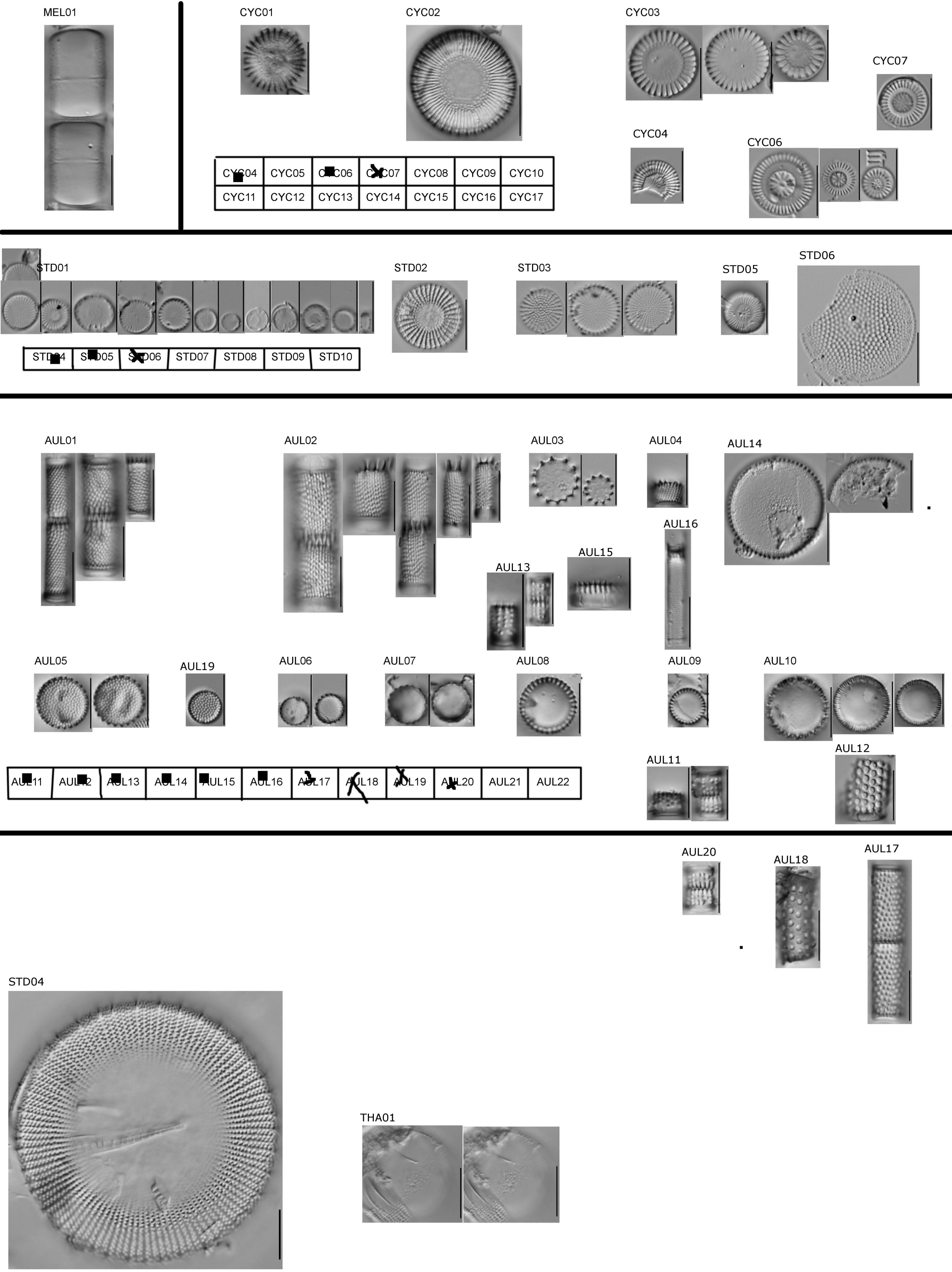
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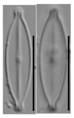

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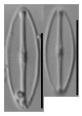

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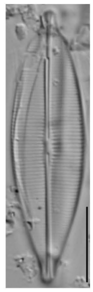

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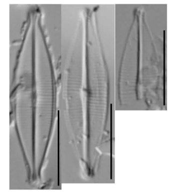

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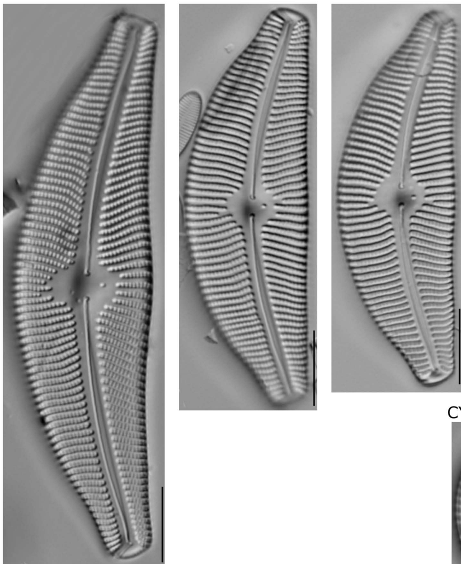

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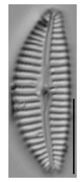

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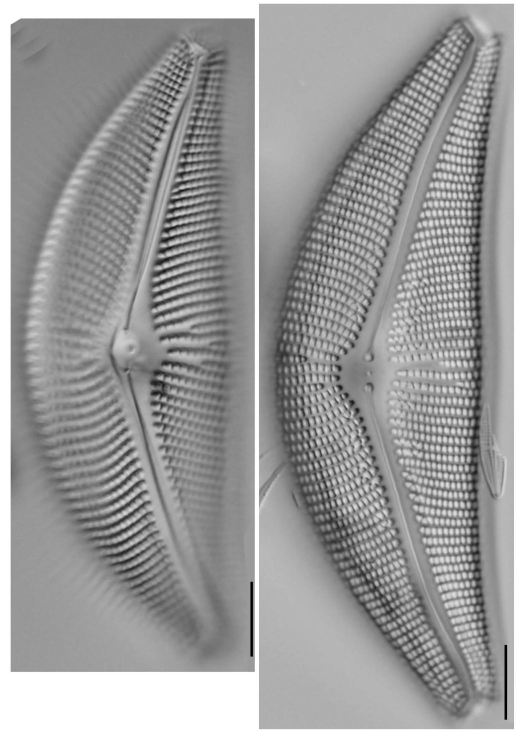

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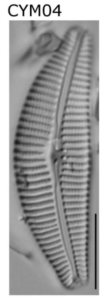

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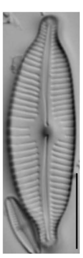

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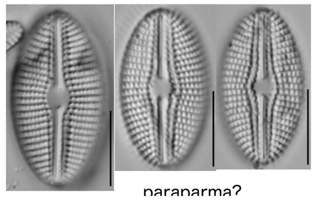

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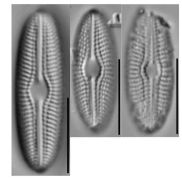

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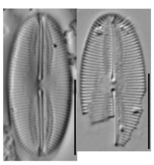

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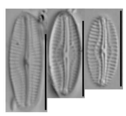

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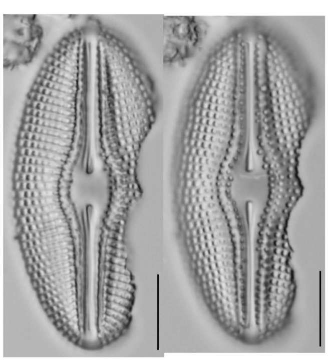

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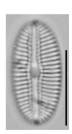

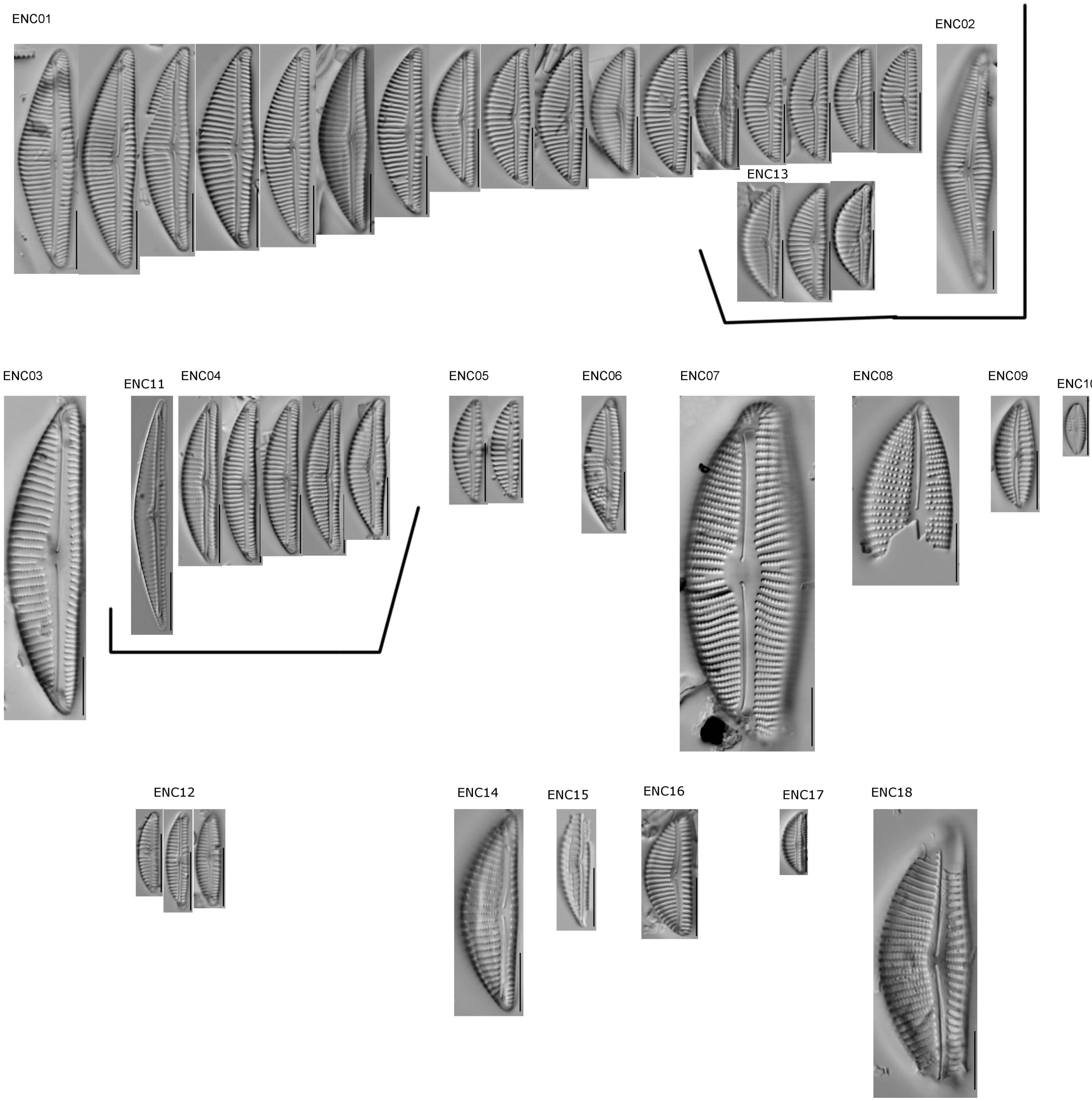

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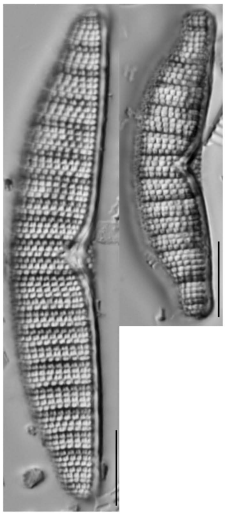

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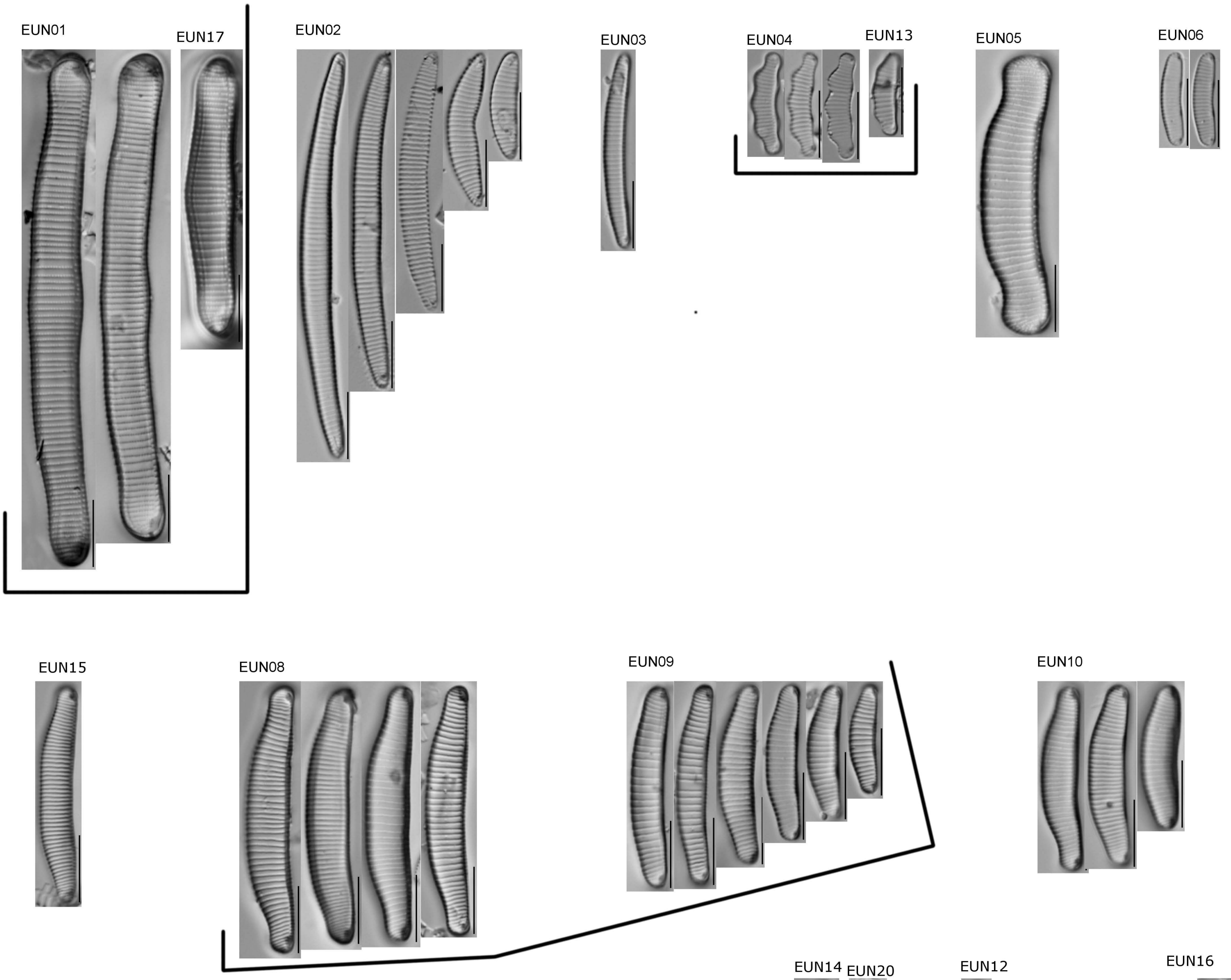

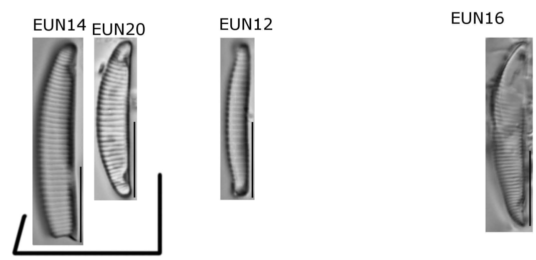

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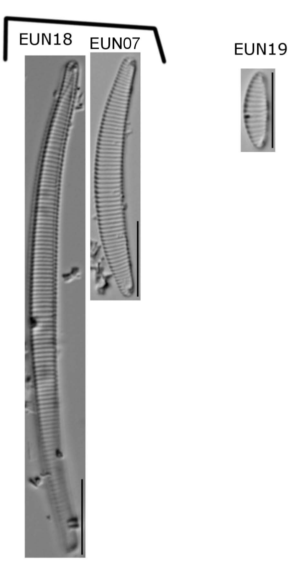

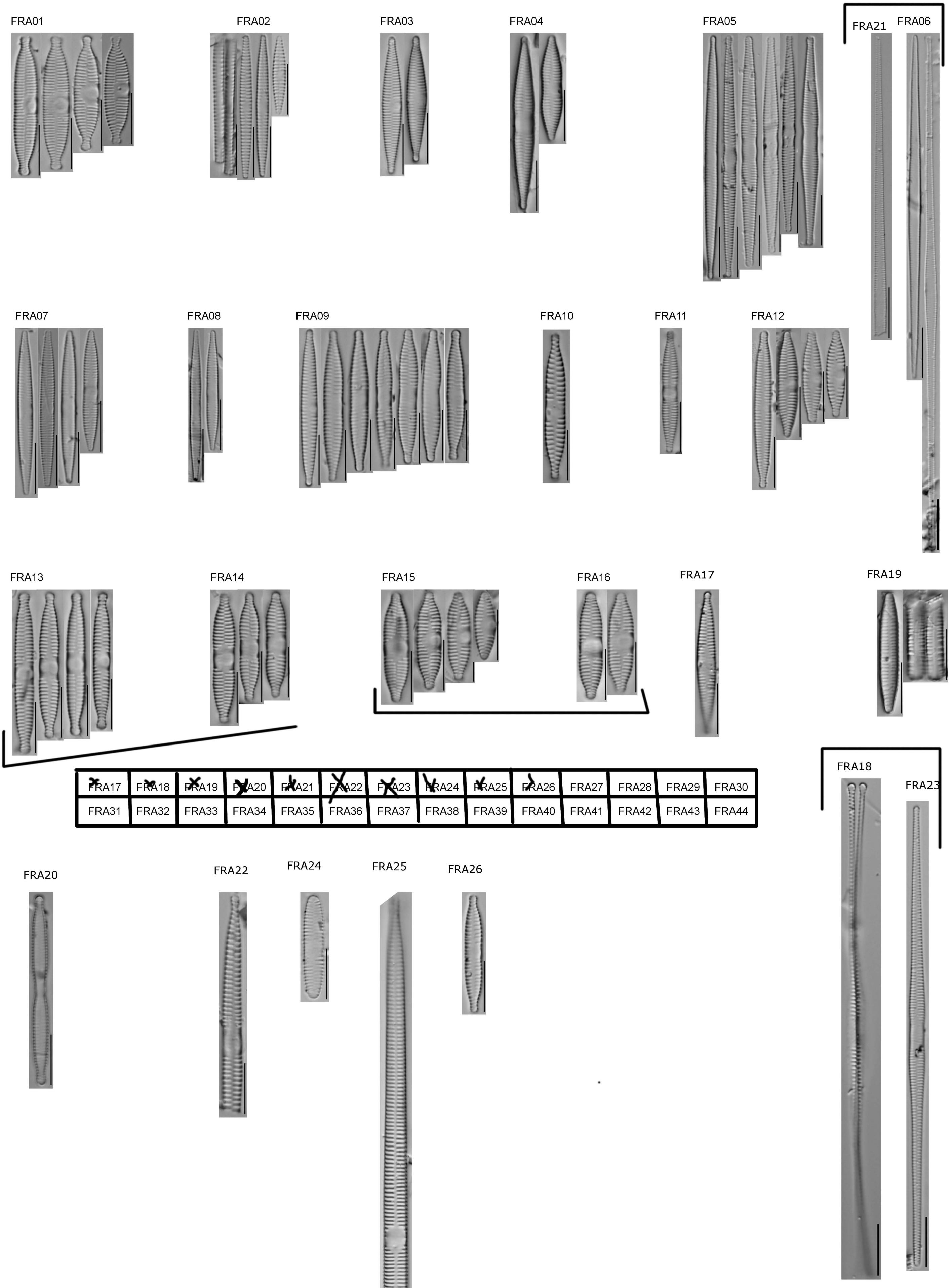

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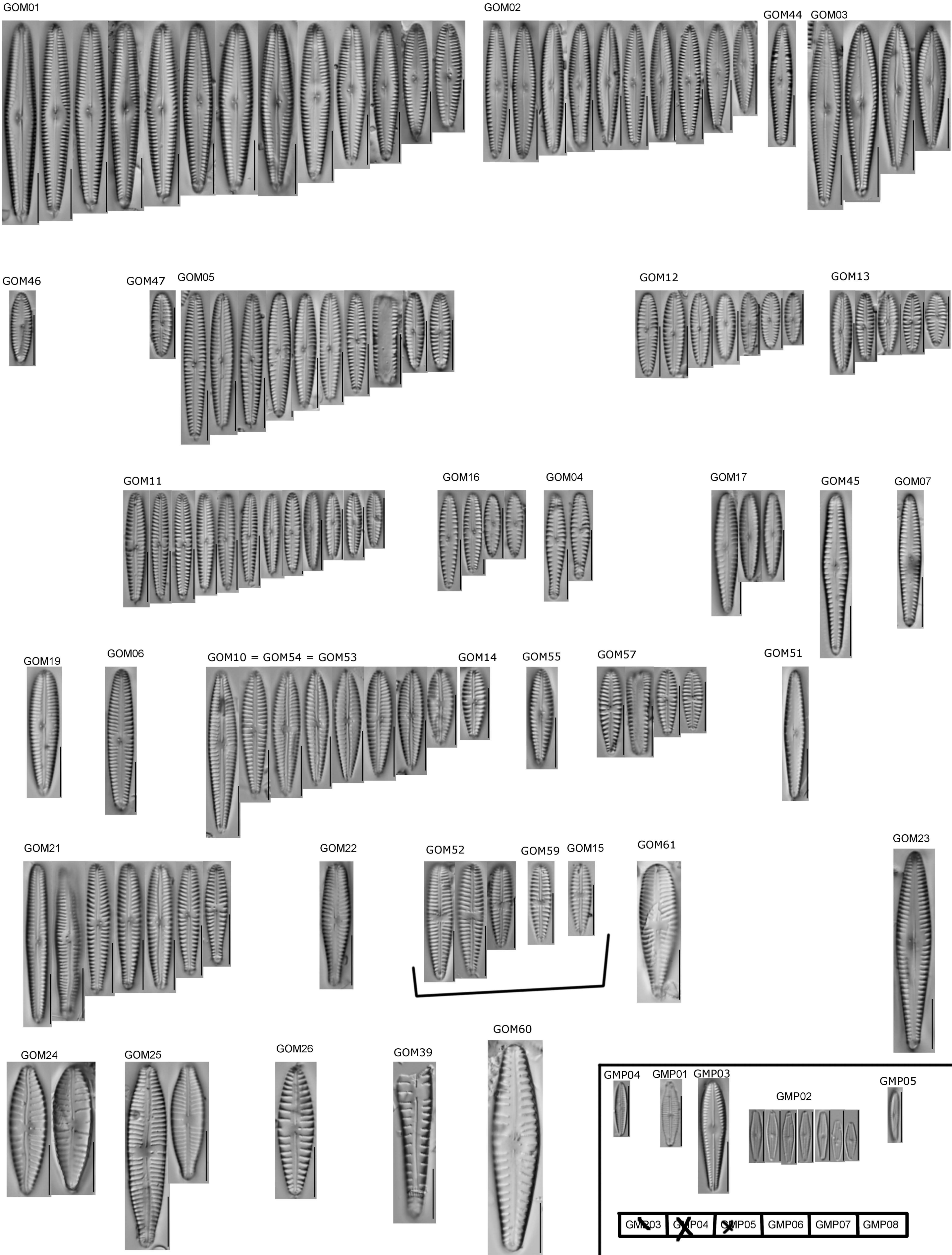
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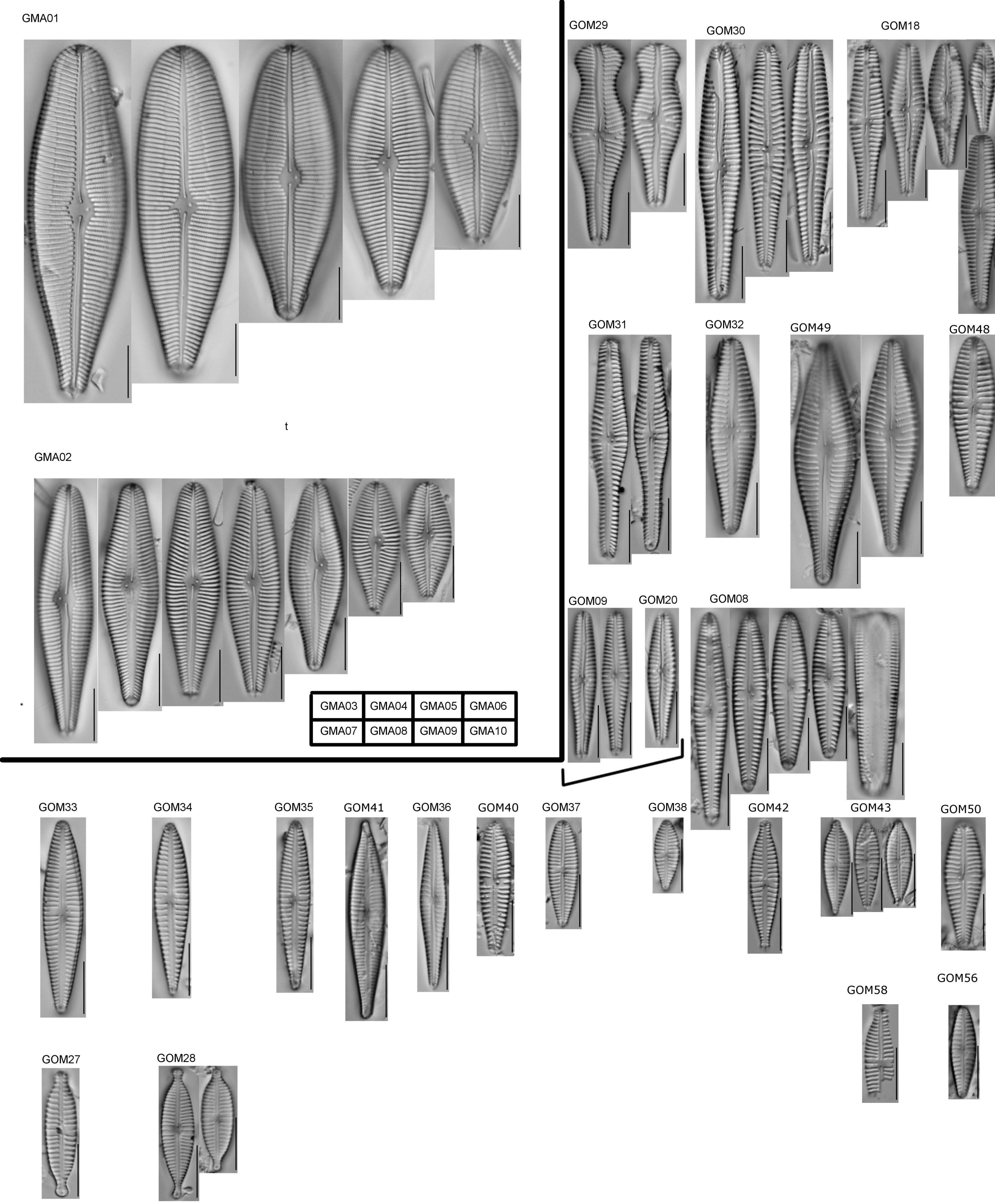

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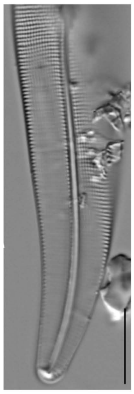

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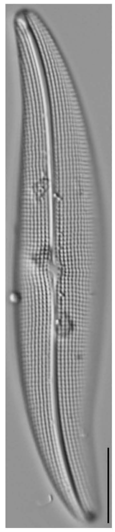

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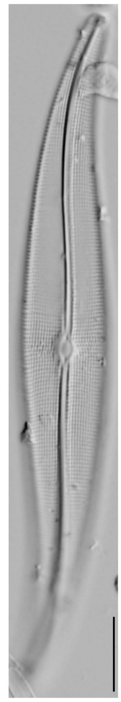

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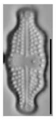

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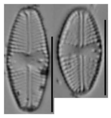

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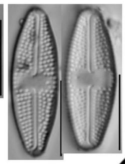

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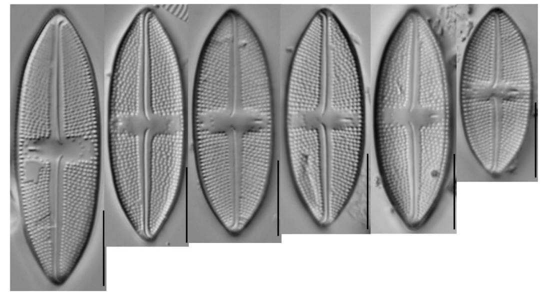

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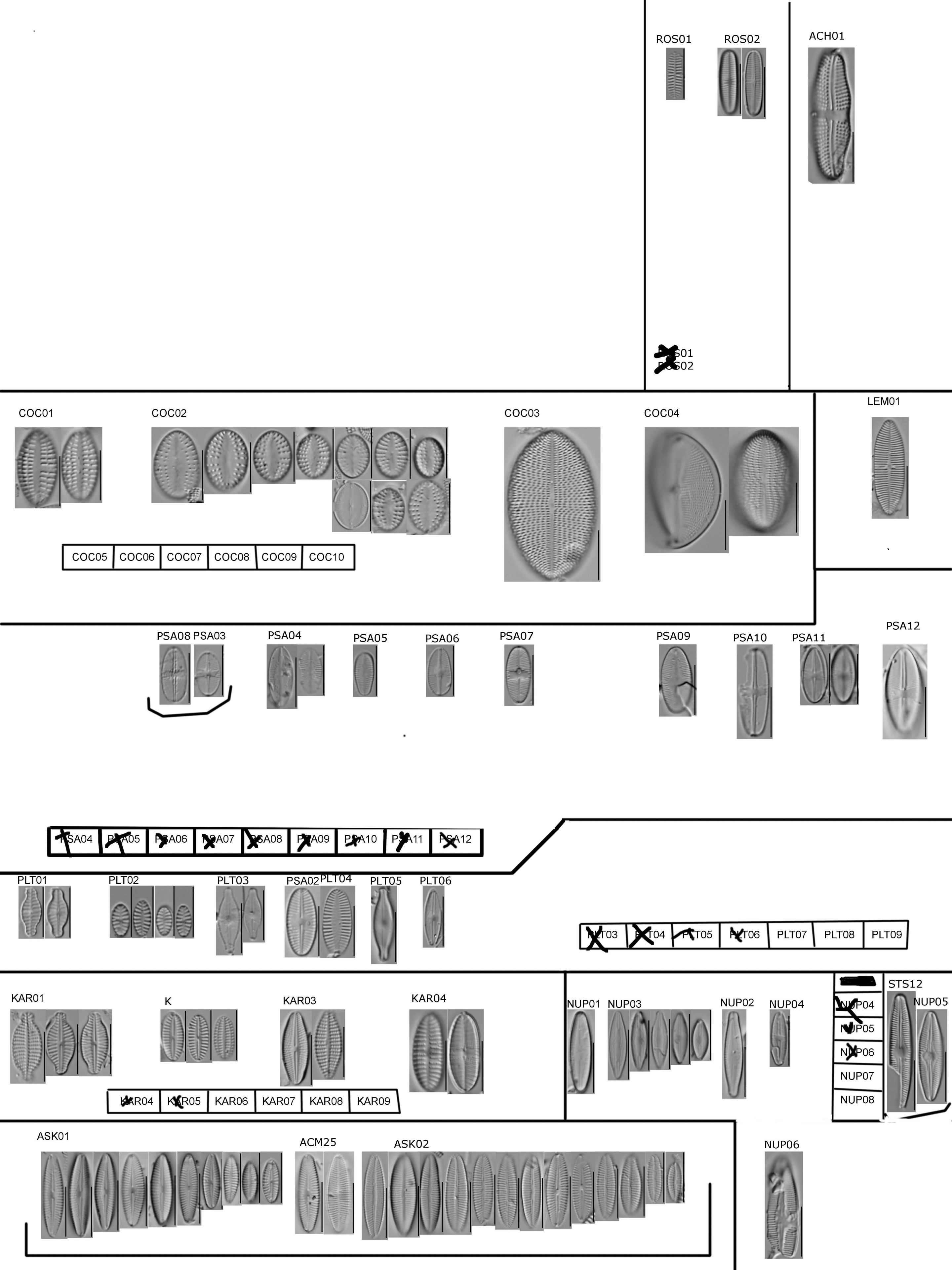
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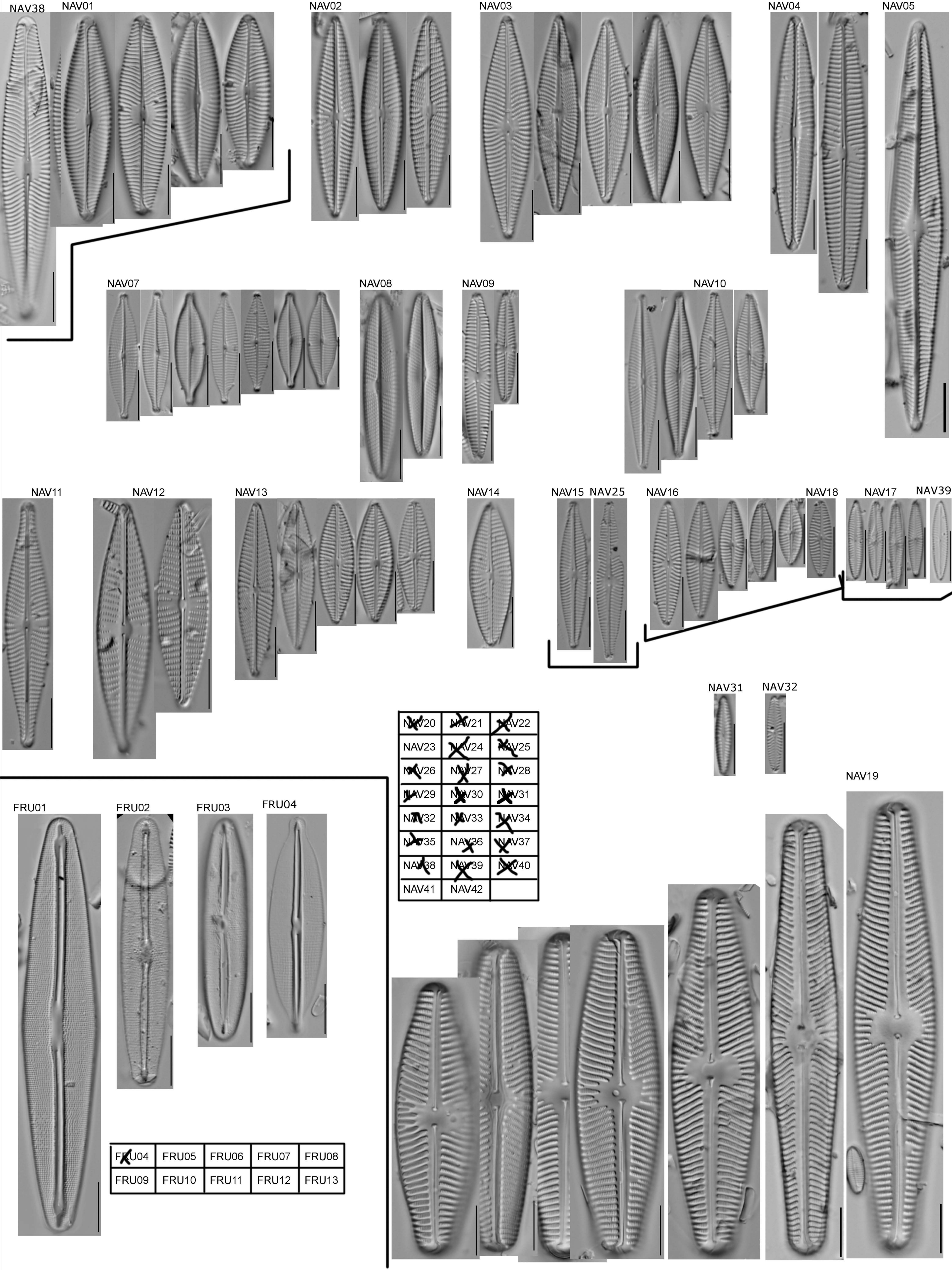

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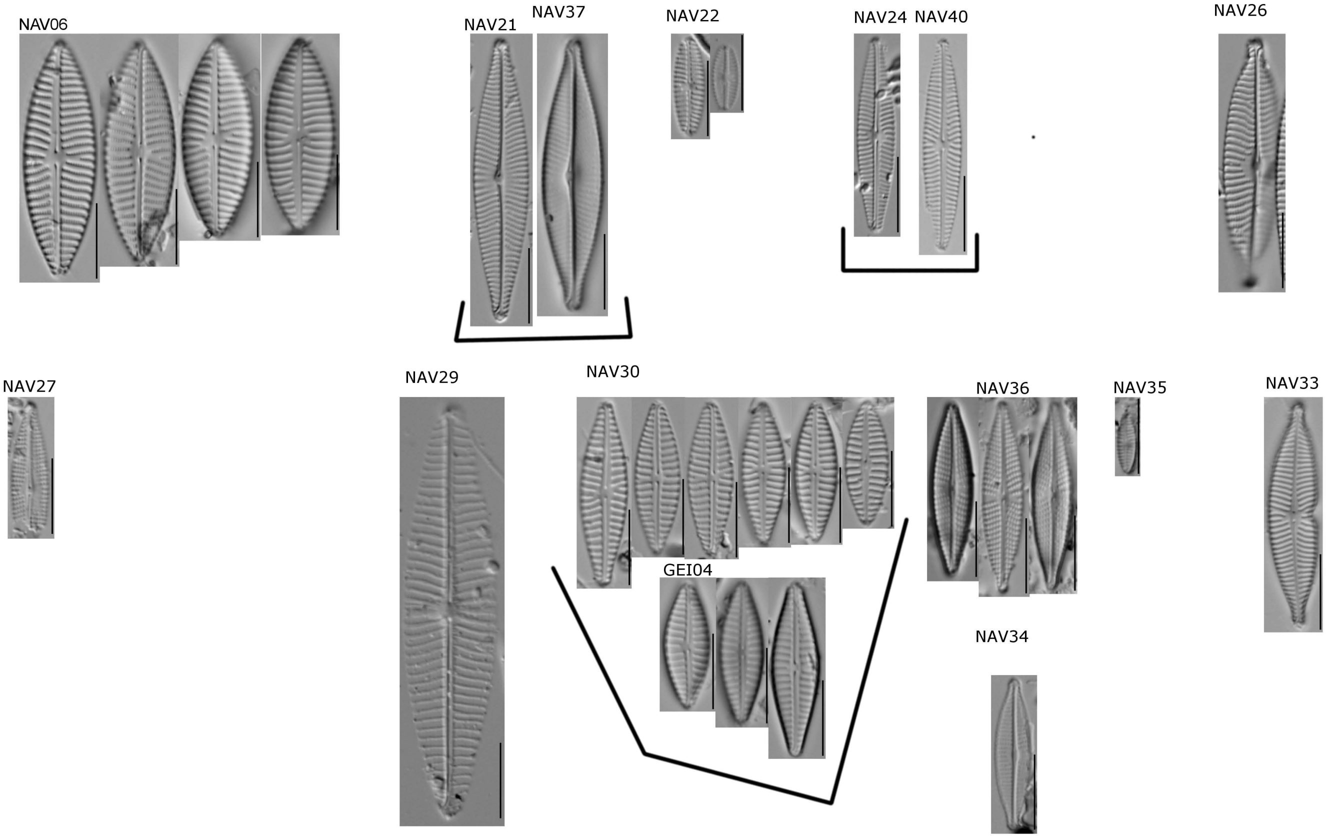
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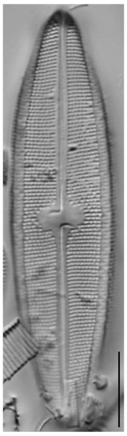

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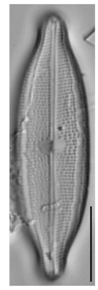

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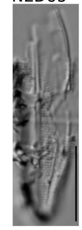

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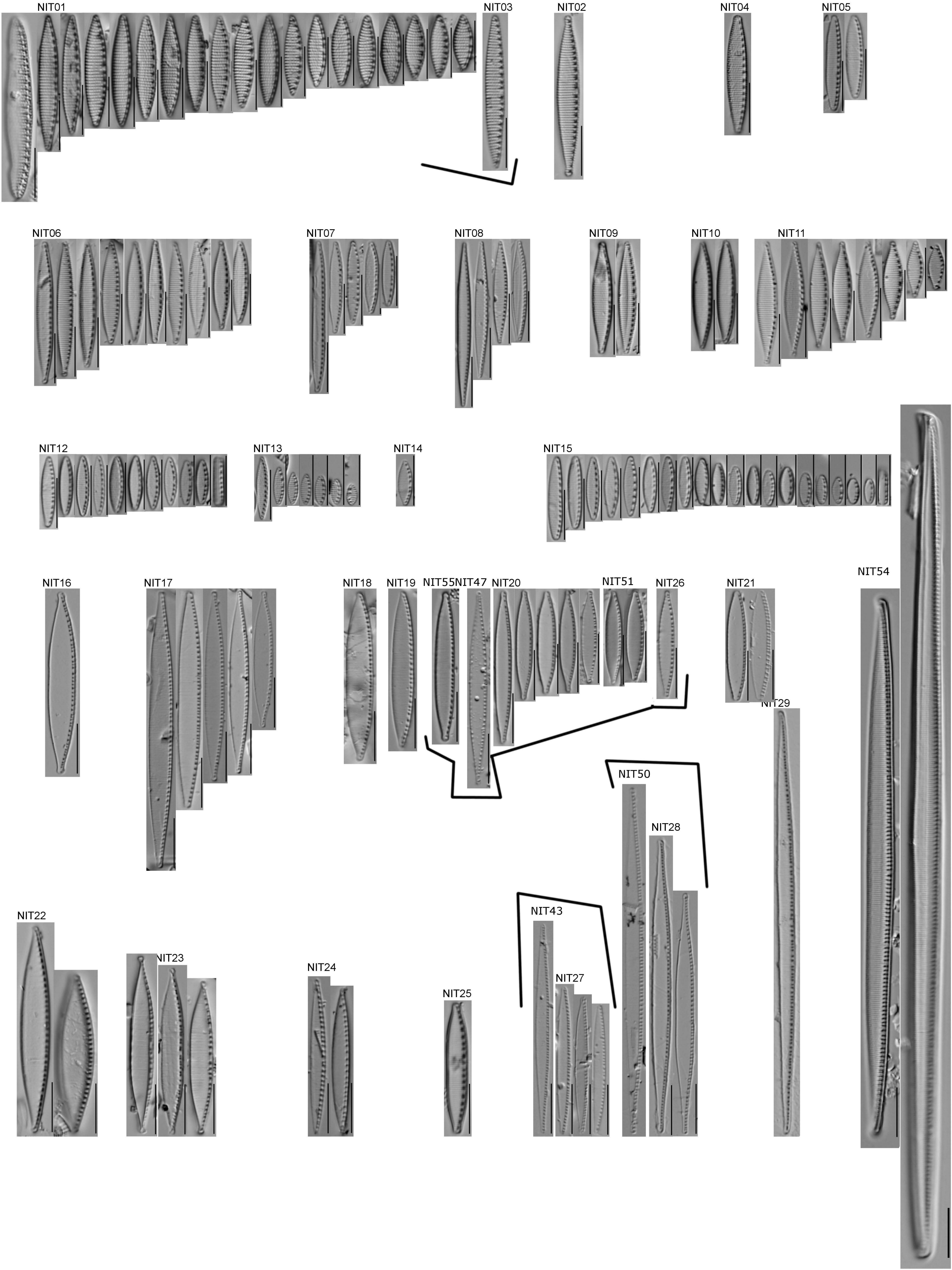
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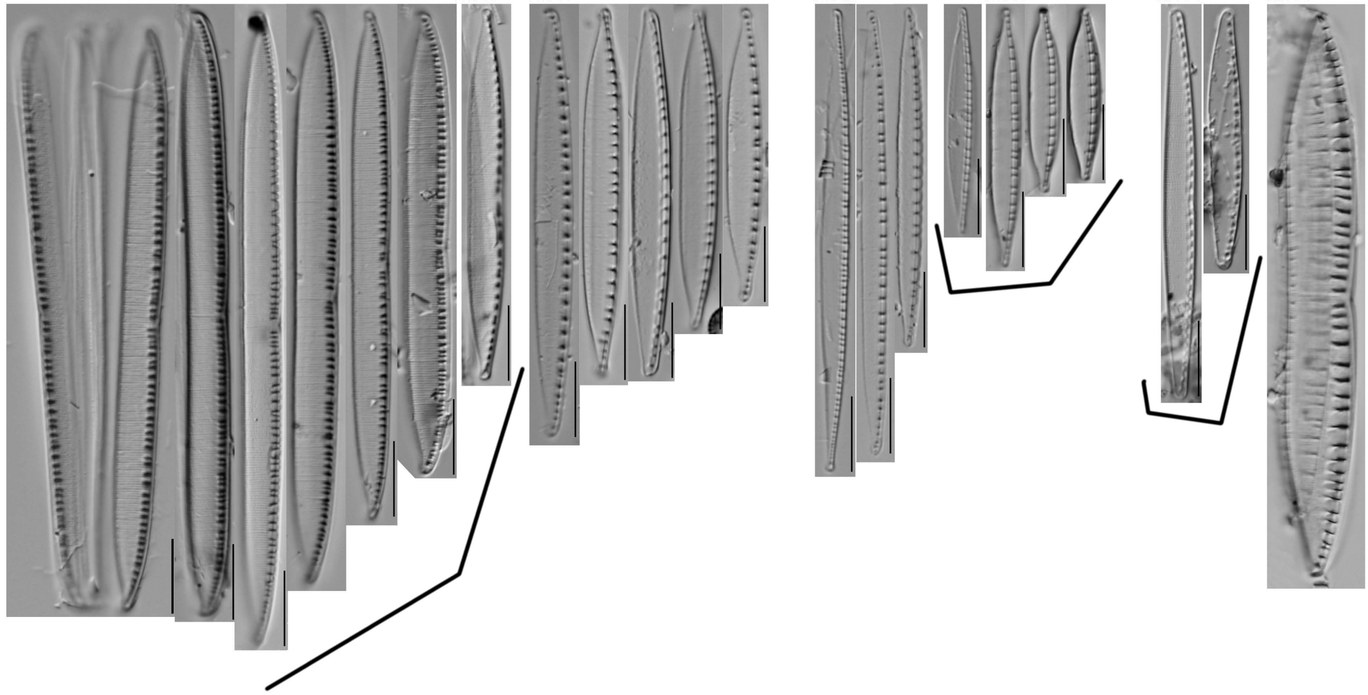

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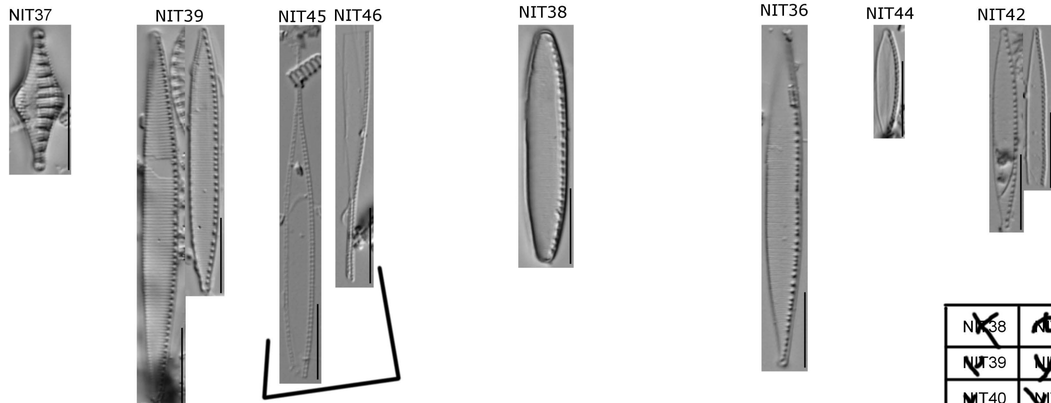

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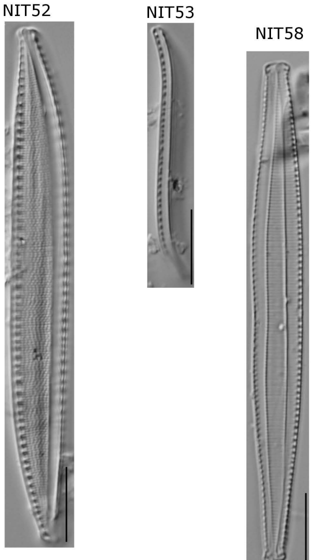

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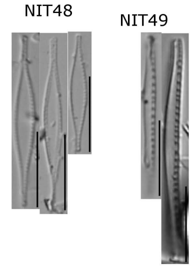

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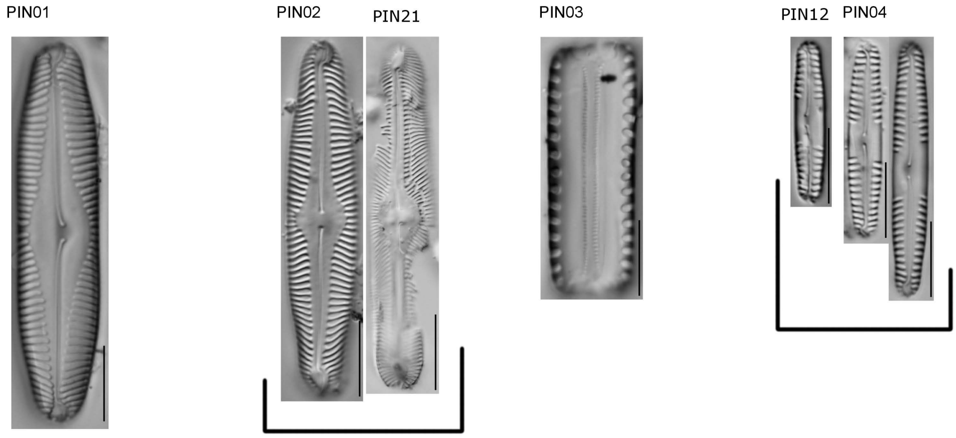
NIT56 NIT57



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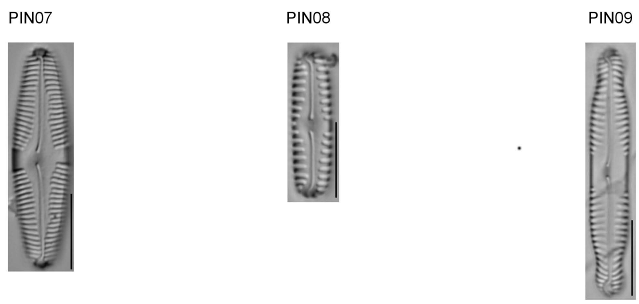

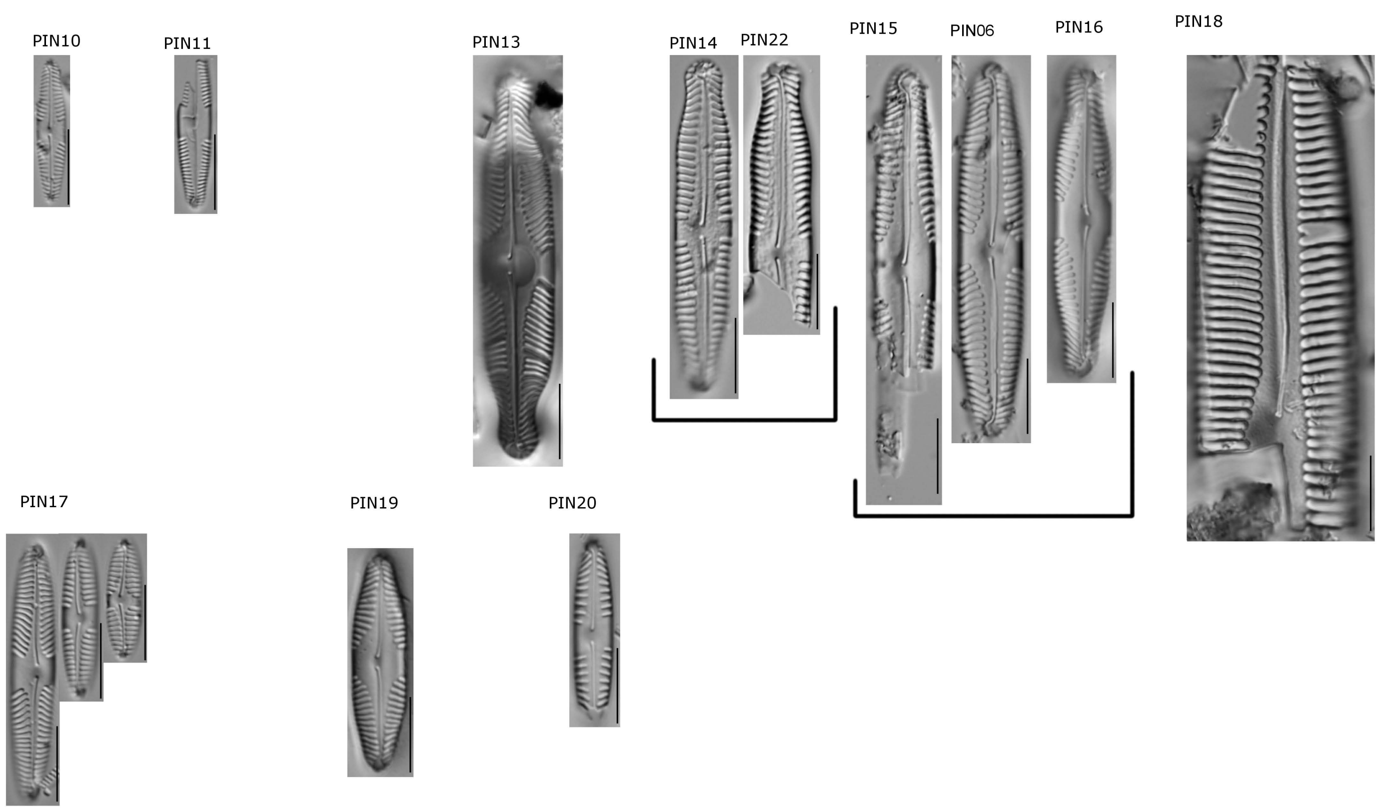

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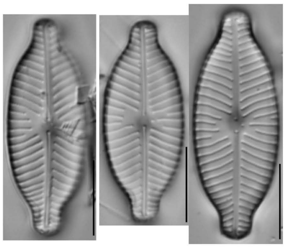

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PLC04

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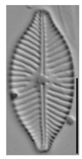

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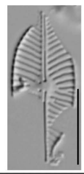

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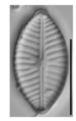

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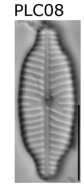

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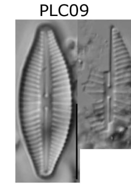

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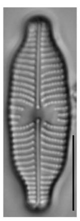

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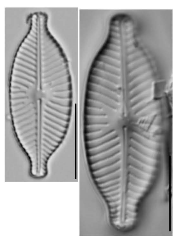

PLA01

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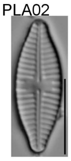

PSA01

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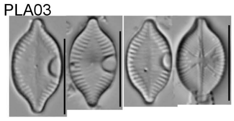

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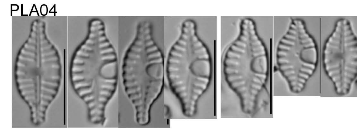

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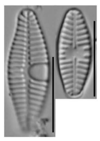

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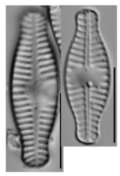

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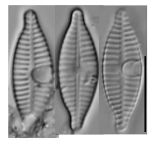

PLA09

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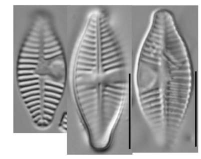

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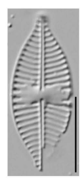
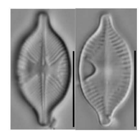


PLA14

PLA13



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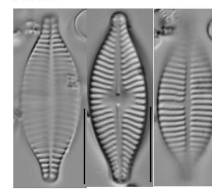

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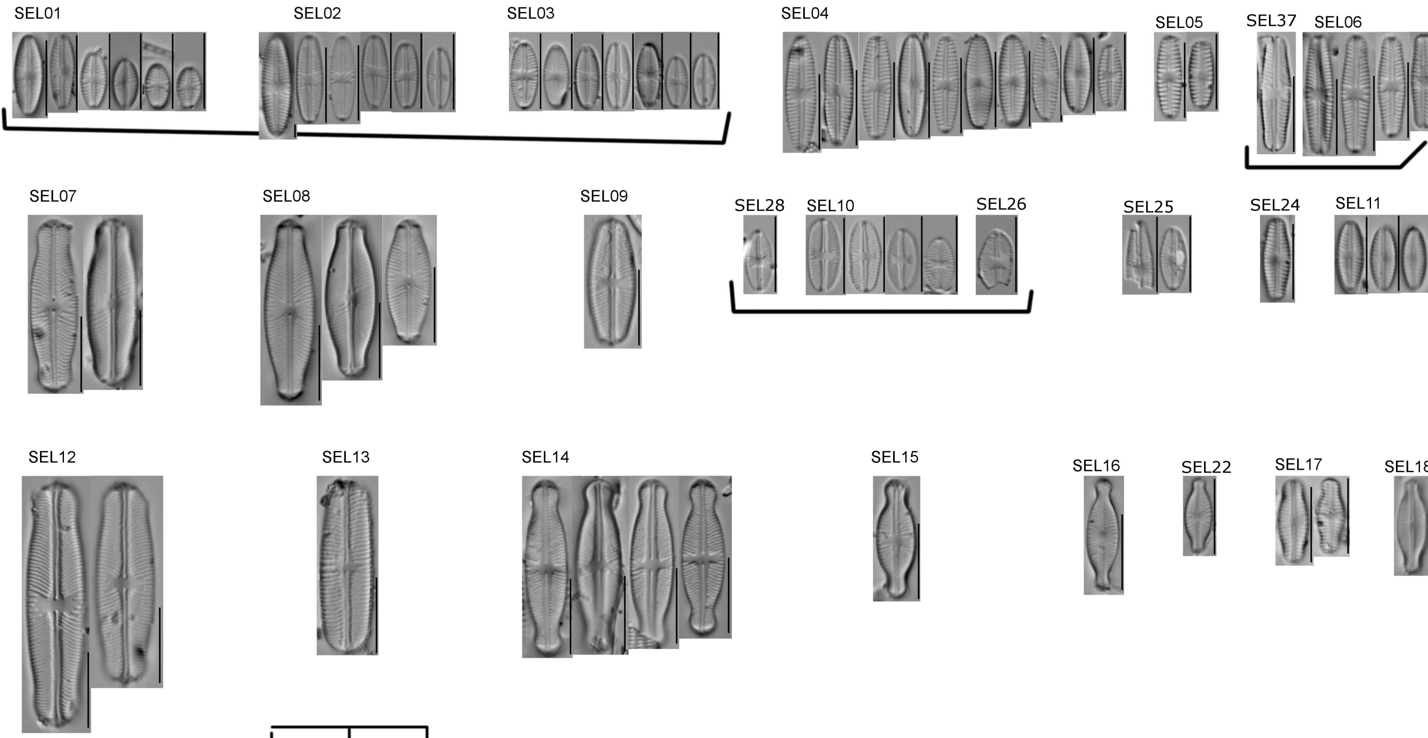

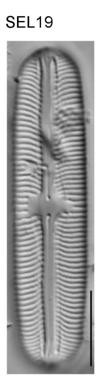

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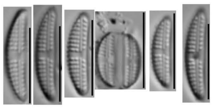
AMA01



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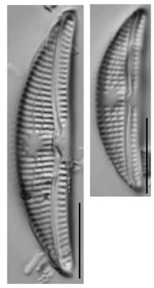

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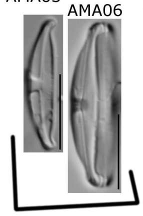
AMA03 AMA06



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AMA07

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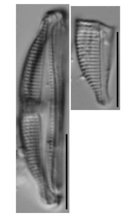

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~~REI02~~	REI03	REI04

REI02 = R. uniseriata

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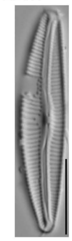

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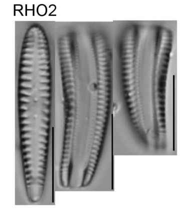

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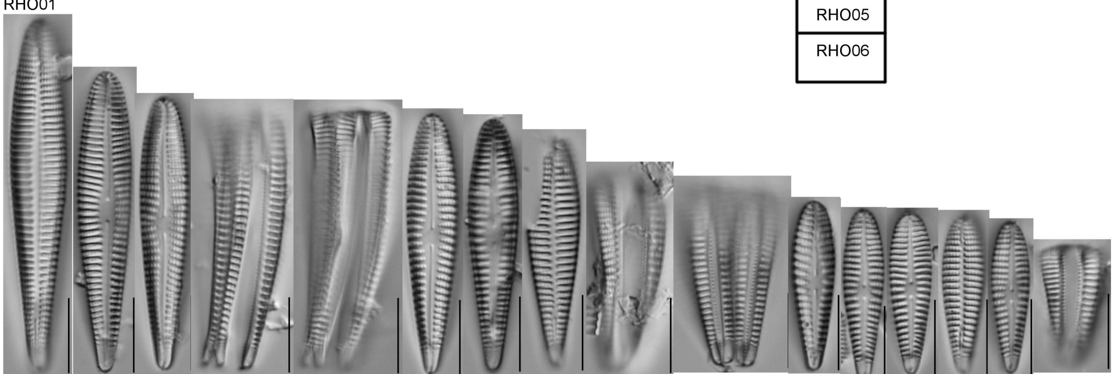
RHO06

RHO01



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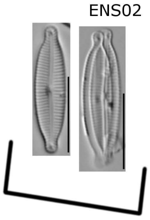

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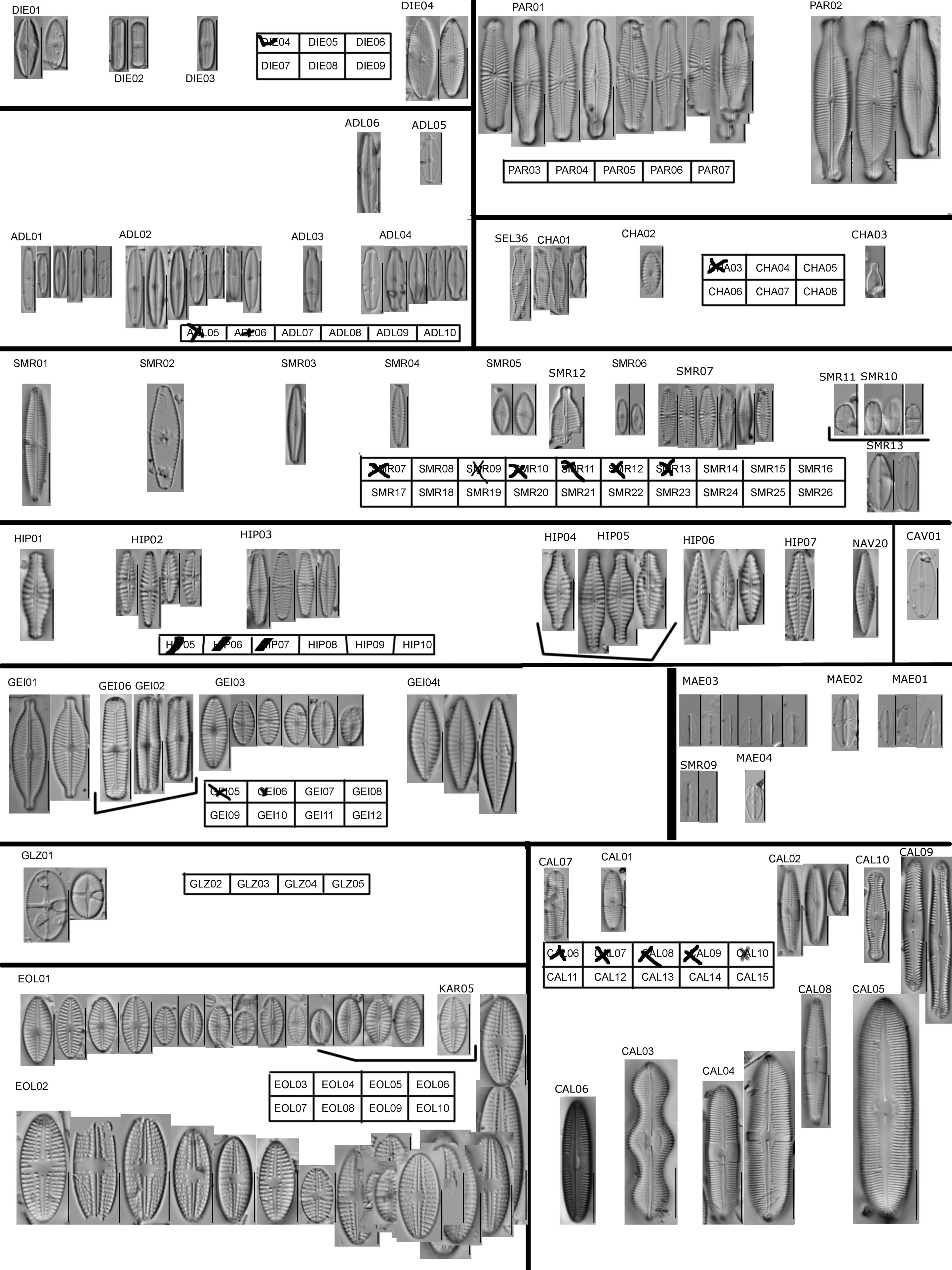
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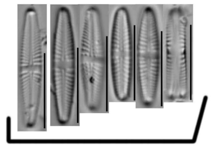

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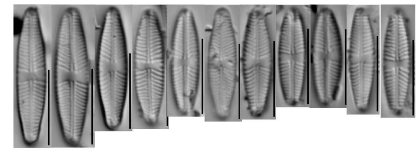

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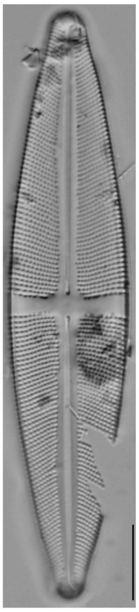

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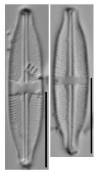

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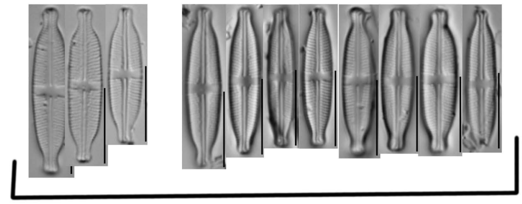

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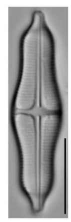
STS11



STS13

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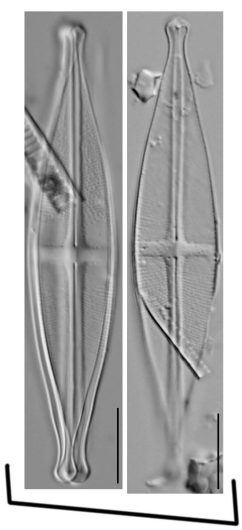
STS14

STS15 STS16



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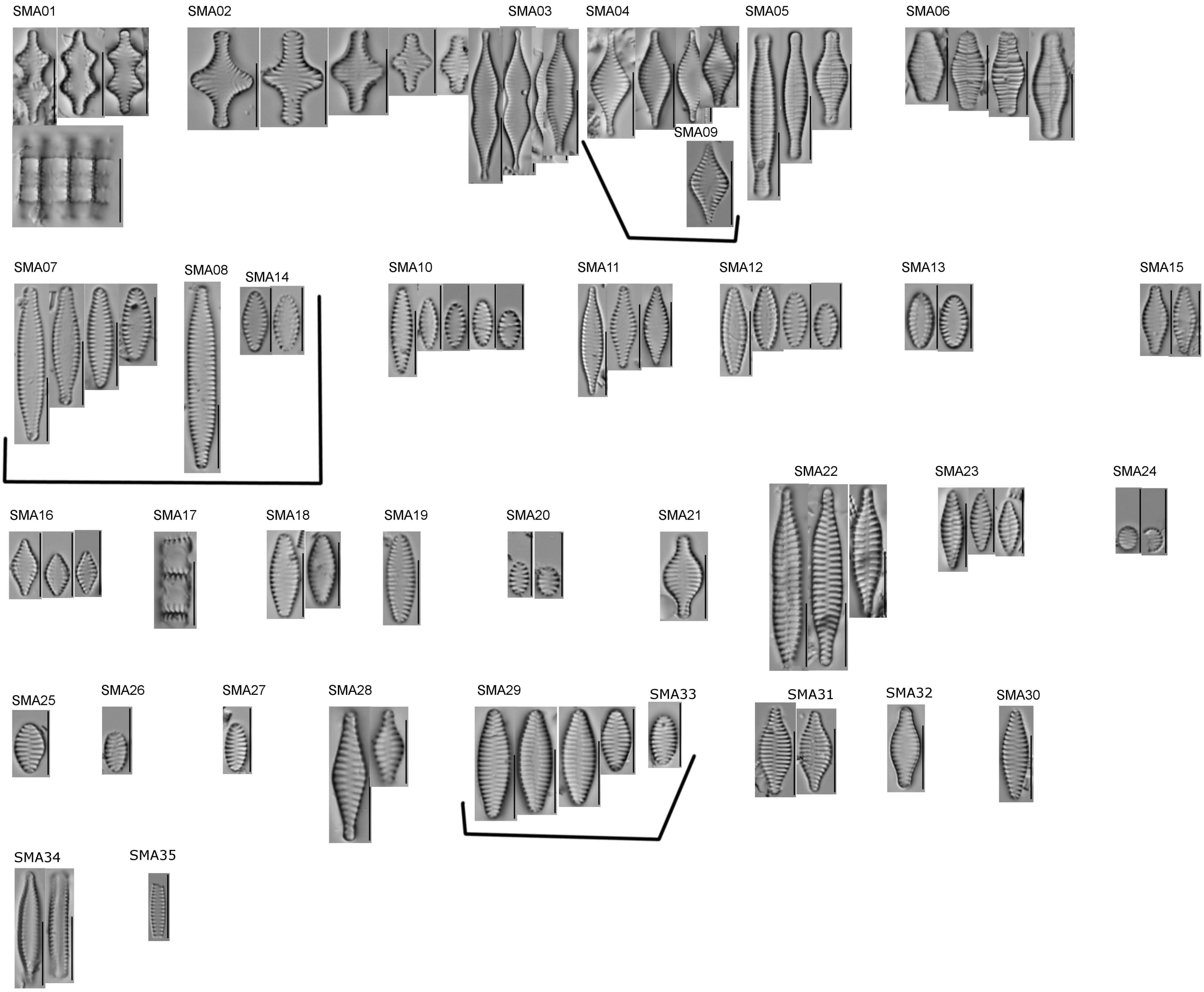

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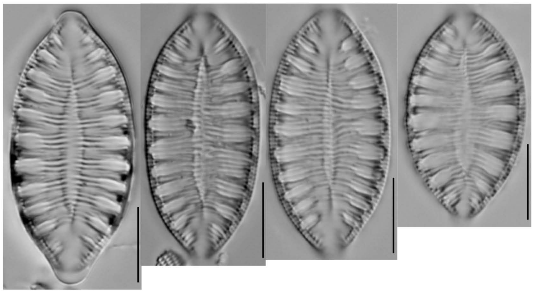

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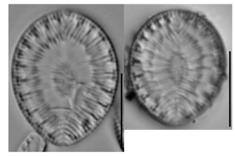

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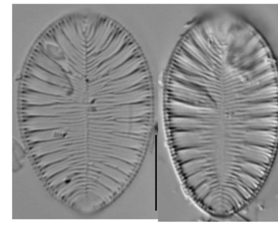

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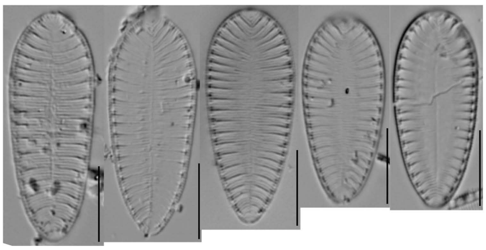

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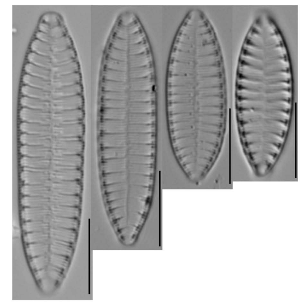
SUR06



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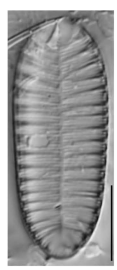
SUR07



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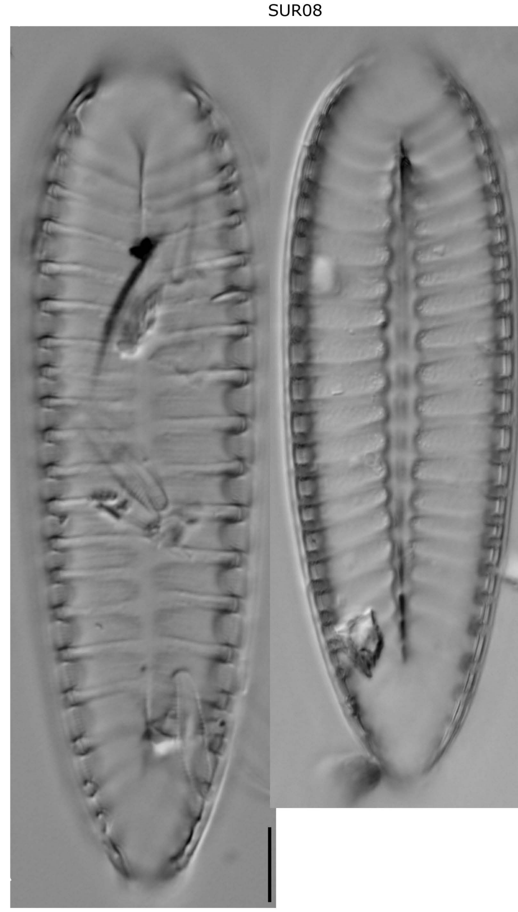

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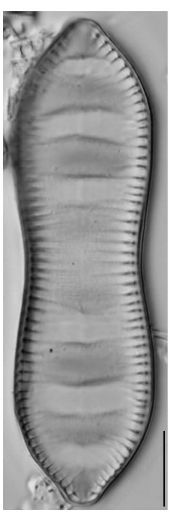

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CYP03
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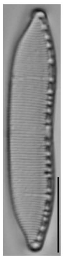
HNZ01



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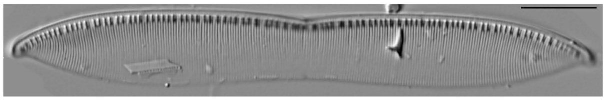

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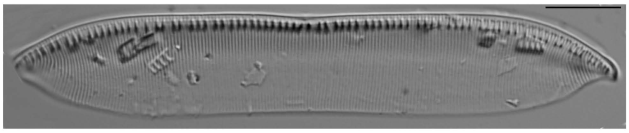

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HNZ04
HNZ05
HNZ06

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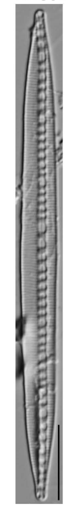


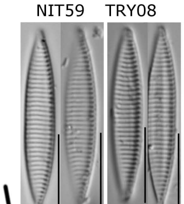
SIM01

SIM02

SIM03

SIM04	SIM05	SIM06	SIM07	SIM08	SIM09

NIT59 TRY08



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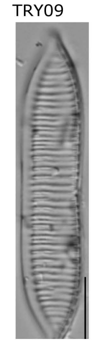

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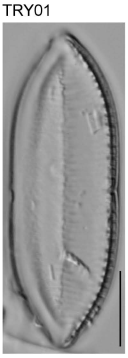
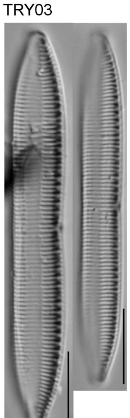
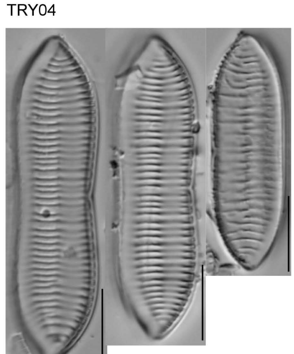


TRY02

TRY03



TRY04



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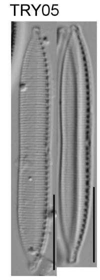
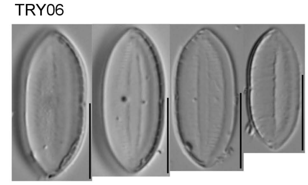
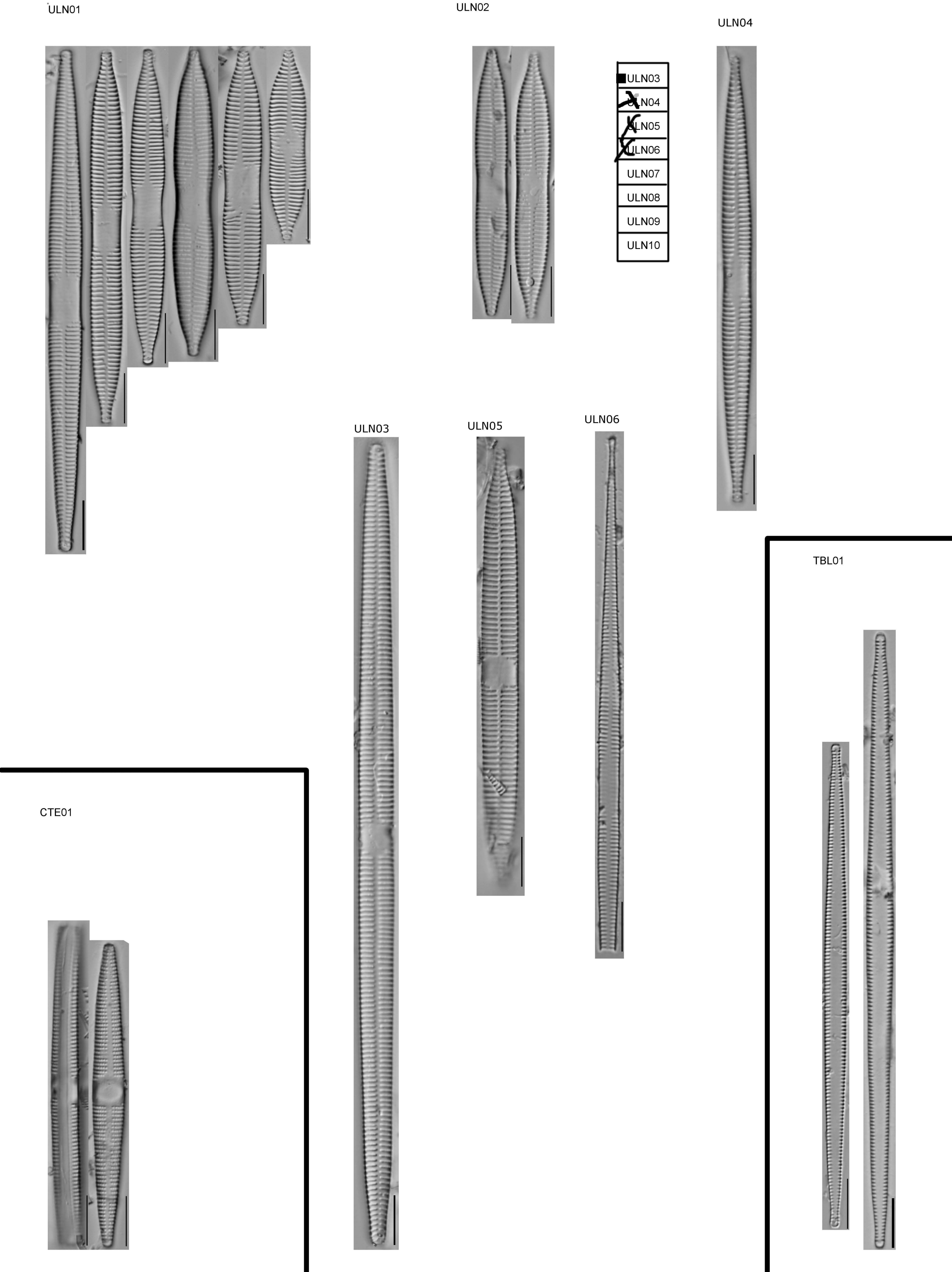


TRY06



TRY07

~~TRY07~~	~~TRY08~~	~~TRY09~~	TRY10	TRY11	TRY12	TRY13	TRY14	TRY15	TRY16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