

Vaucheria compacta (Xanthophyceae), an alien algal species, from the Volga River

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1. FIRST OCCURRENCE OF *VAUCHERIA COMPACTA* (MARINE SECTION *PILOBOLOIDEAE*)



New records in 2017-2021



Sampling sites (arrows) in Rybinsk, 2017

3. MAPPING THE SPECIES DISTRIBUTION revealed Northern Atlantic range and isolation of new localities in endorheic basin



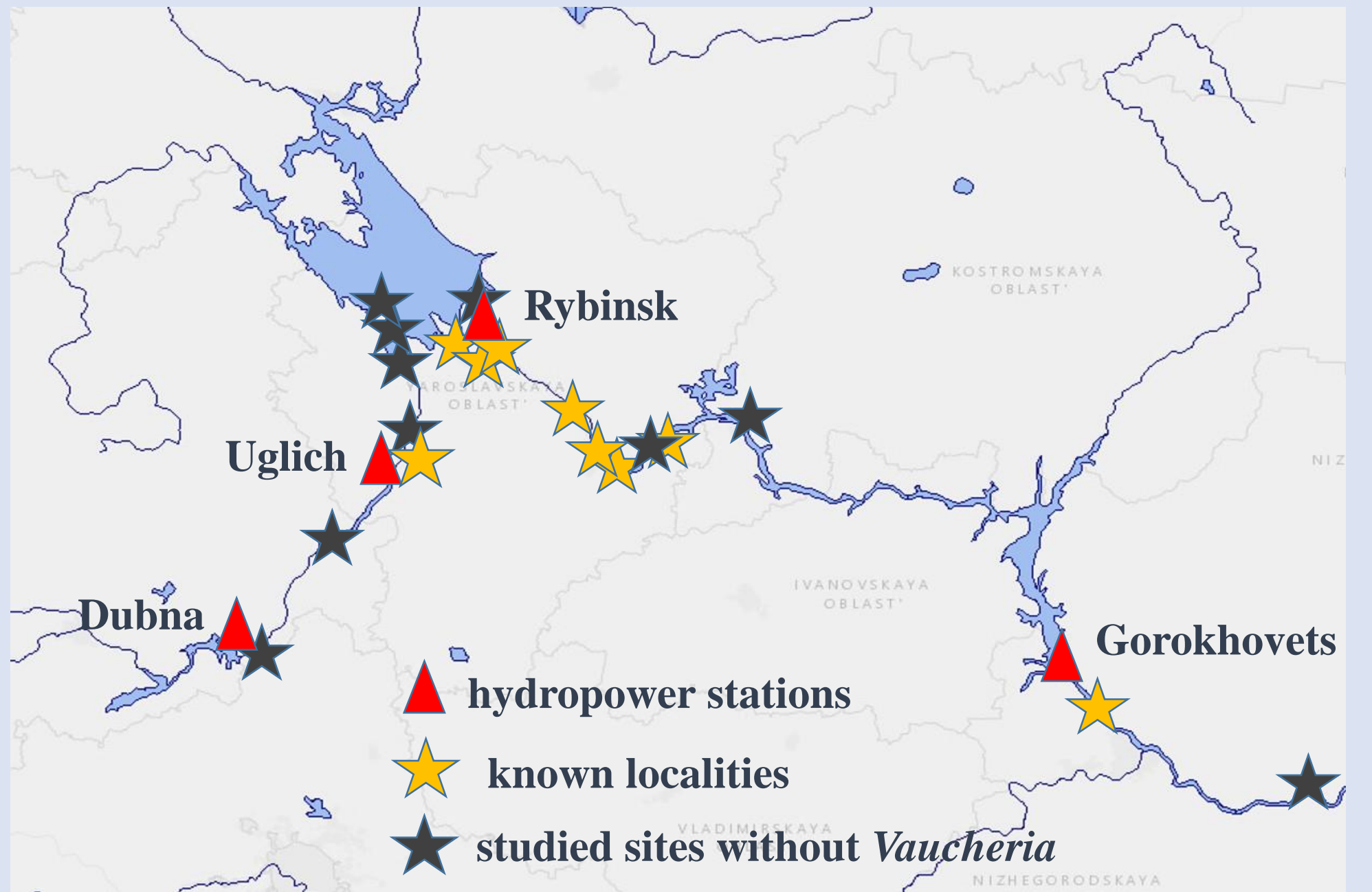
4. DISTRIBUTION ALONG THE UPPER COURSE OF THE VOLGA RIVER: the localities are confined to tailraces of the hydropower stations



Rybinsk, 2021. Green mats of *Vaucheria compacta*



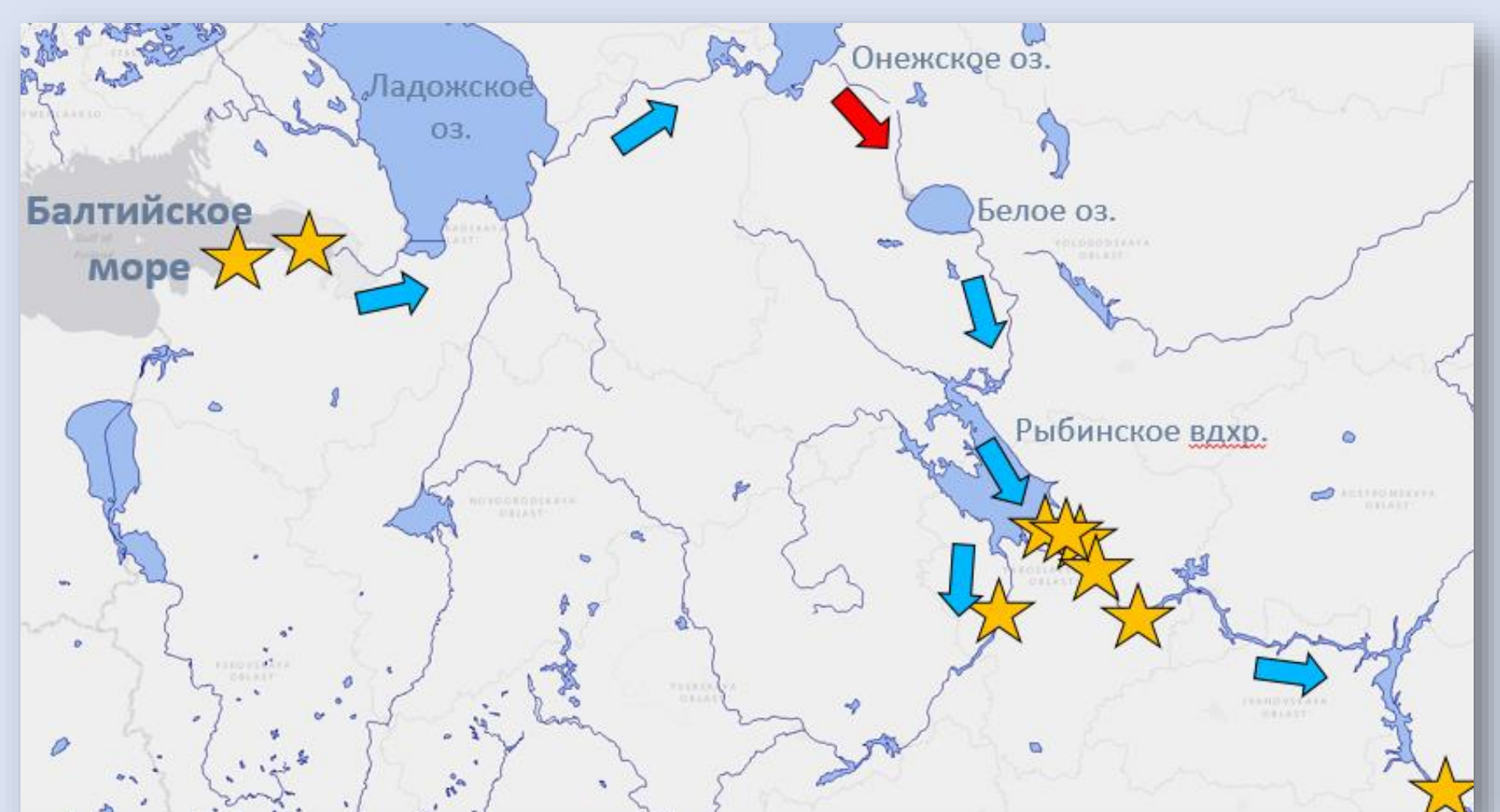
Specimens collected for microscopic studies



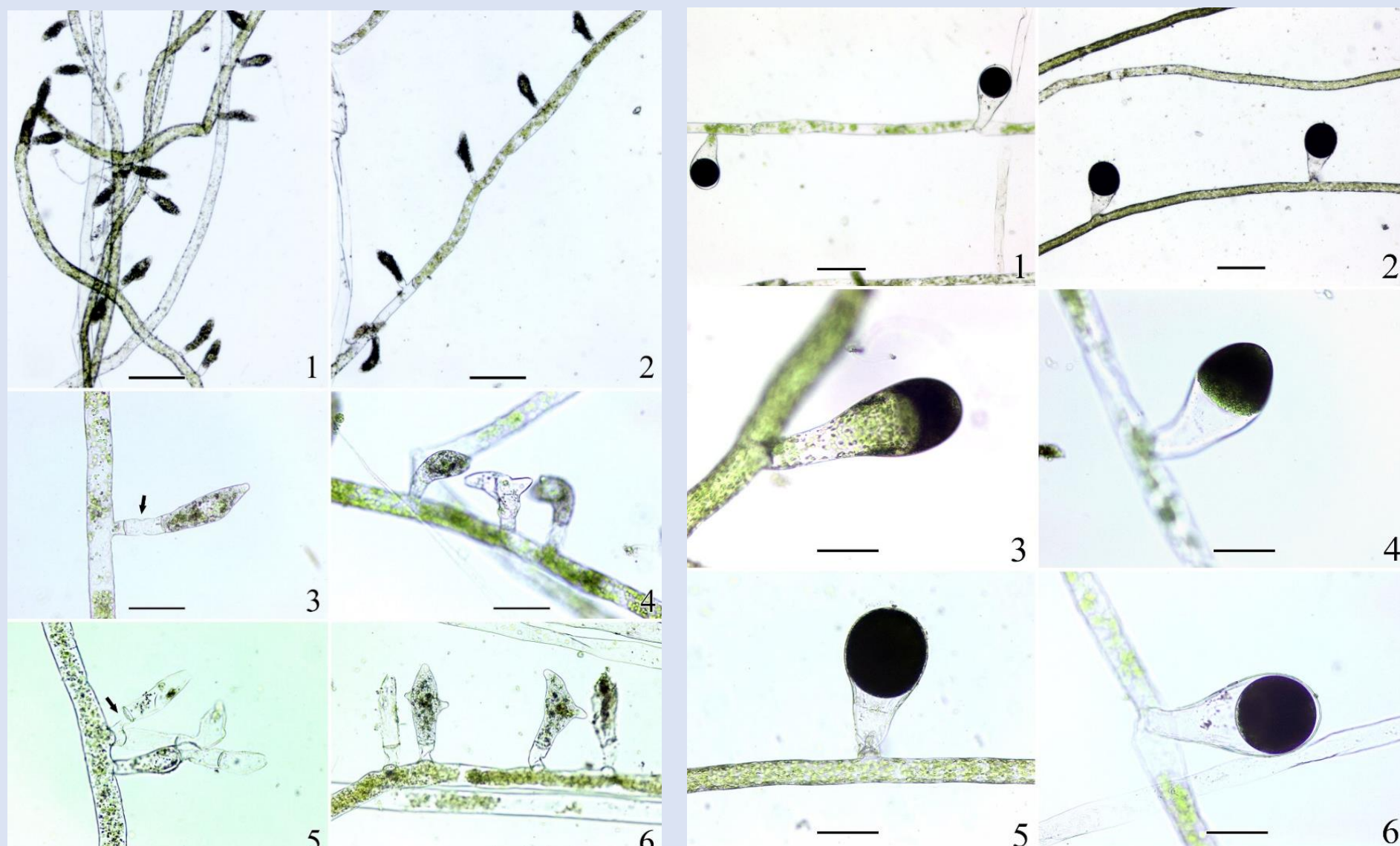
5. DAILY FLUCTUATIONS OF WATER LEVEL IN RYBINSK BELOW THE DAM (arrow)



6. HYPOTHETIC PERVERSION OF *VAUCHERIA* IN THE VOLGA RIVER BASIN



2. MORPHOLOGICAL STUDIES REVEALED *V. COMPACTA* VAR. *DULCIS*, WHICH DWELLS IN FRESHWATER ZONE OF ESTUARIES



Male filaments (1–6): general view with a focus on antheridia supposed by empty cells (arrow). Scale bars: 1, 2 – 200 μ m, 3–6 – 100 μ m.

Female filaments: 1, 2 – general view, 3, 4 – juvenile oogonia, 5, 6 – oogonia containing oospores. Scale bars: 1, 2 – 200 μ m, 3–6 – 100 μ m.