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Copies of the abstracts will be distributed among registered delegates
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The abstracts are arranged in alphabetical order by first author, presenting authors are underlined.

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and is listed as an aggressive invasive species by the United States Geological Survey. The vector(s) by which *N. obtusa* was transported to North America and distributed across the landscape remain unknown. In 2015 and 2016, 740 water bodies were surveyed for *N. obtusa* across New York and New England. Results from this work suggested that *N. obtusa* is primarily moved via recreational boating. However, in other states, birds have been hypothesized to transport *N. obtusa*. Organellar genome sequencing and Genotyping by Sequencing (GBS) methods use next-generation sequencing to identify single nucleotide polymorphisms (SNPs) from across a genome. The quantity and distribution of SNPs generated by these methods are ideal to address population-level questions about movement into, and distribution across, the landscape. Analysis of mitochondrial and plastid genomes identified variation between populations in Asia, Europe, and North America. However, little variation was detected among North American organellar genomes, indicating that clonal spread of a single introduced population is possible. Results from GBS data revealed a complicated pattern of spread across North America and suggest that increased sampling from within the invaded range is needed to better understand the spread of *N. obtusa*.

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USING SPECIES DISTRIBUTION MODELS TO EXAMINE THE FUTURE OF CHARACEAE IN NORTH AMERICA

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Freshwater ecosystems are rich in biodiversity, economically important, and increasingly impacted by human activities. Aquatic macrophytes are vital components of freshwater ecosystems that provide numerous ecosystem services. The Characeae, or stoneworts, are a family of green macroalgae found in aquatic ecosystems on all continents except Antarctica. Species in this family are integral parts of ecosystems: they provide forage for birds, invertebrates and fish, and are important for colonizing new habitats and stabilizing sediments. A clear understanding of the distributions and species–habitat associations of aquatic macrophytes is essential for predicting the responses of aquatic systems to global and regional change. Species distribution models can be used to gain insight into ecological processes and allow prediction of distributions under future environmental scenarios. This study uses a survey of 740 water bodies, 11 chemistry variables and 55 climate variables to build species distribution models for 10 species of Characeae across the Northeast USA (an area greater than 325,000 square kilometers). The relative importance of predictor variables was assessed by building models with these chemistry and climate data separately and combined. Models built using chemistry variables alone generally outperformed those built with climate variables. The effects of eutrophication, climate change, and cation leaching on distributions of Characeae species were quantified, with some species expected to increase their range, and others predicted to lose all suitable habitat. We demonstrate that Characeae species have distinct habitat preferences, with some species predicted to be more sensitive to environmental change than others, and argue that landscape scale conservation must account for differences in habitat to conserve these ecologically important macrophytes.

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MICROALGAE OF SAND SUBSTRATES OF THE NORTH-WESTERN BLACK SEA COAST

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The sandy supralittoral (psammocontour) is area of great importance for coastal ecosystem because of its participation in productive processes, transferring elements through the food chain as well as removal of nutrients and organic matter. The objective of this study was to understand the peculiarities of formation of phytopsammic community of the north-western part of the Black Sea. We analyzed the influence of 14 environmental parameters on microalgae of the splash zone. The priority factor for psammon algal community in any season is size of sand grains and siliceous oxide. Other variables depend on the season: while in summer, mineral nitrogen (nitrates and nitrites) effects the microphytes more intensively than others, in autumn it is replaced by organic nitrogen and silty fraction. The effect of size of sand particles was studied in the course of laboratory experiment using specially designed plates. It was shown that a greater abundance of microalgae registered on the grains with a smaller particle diameter (<0.25; 0.25–0.50 mm). The experimental data allow us to predict the number of microalgae in a changing particle size distribution of the sand. In the phytopsammon 100 taxa of algae were found: 78 Bacillariophyta, 4 Chlorophyta,