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Impact of climate warming on carbon metabolism and on morphology of invasive and native aquatic plant species varies between spring and summer

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Highlights

- ● A 3°C increase was applied on two invasive and two native species at two seasons
- ● The warming induced changes in morphological traits and in carbohydrate contents
- ● The growth of the invasive species was particularly stimulated by the warming in spring
- ● Carbohydrate patterns suggest common physiological mechanisms for the two invasives
- ● Climate warming may favor the colonisation by invasive species over native species

Abstract

The rise of global surface temperature by between 1.2°C and 4°C by 2100 is expected to affect freshwater ecosystems and the growth of aquatic plants. By extending the distribution range of invasive macrophytes, climate warming could increase their management costs. The aim of this study was to test the impact of a 3°C warming in spring and in summer on the morphology and physiology