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Conference Abstract

Competitive exclusion of native species by invasive species within *Carassius* genus

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Abstract

Successful invasive non-native fish species can cause enormous damage to native biodiversity. In the continental Europe, the introduction of the gibel carp (*Carassius gibelio*) has led to a decline in populations of the formerly widespread native crucian carp (*Carassius carassius*). Due to the decline of crucian carp populations the status of the specices changed from least concern to critically endangered in Czechia. Its populations have also declined in other countries where the gibel carp has become established. This contribution summarises the findings on the competitive displacement of native species by invasive species from both experimental approaches and historical trends. The recent findings demonstrated that the gibel carp utilises food sources much more efficiently than its native counterpart. The gibel carp are not only more aggressive and utilise shared resources faster, but also use plant material that is not available to the crucian carp as an effective food source. Finally, this contribution provides circumstantial evidence that the gibel carp is behind the transition from the relative abundance of large deep-bodied form of crucian carp to its near extirpation in Czechia, while large and deep-bodied gibel carp have taken over the reports of record angling catches in the genus *Carassius*. Taken together, the current findings strongly suggest that the crucian carp is being locally extirpated by the gibel carp. Due to the uneven competition between *Carassius* species, programmes to repopulate selected waters with crucian carp are necessary (Suppl. material 1).

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Conflicts of interest

The authors have declared that no competing interests exist.

Supplementary material

Suppl. material 1: Competitive exclusion of native species by invasive species within *Carassius* genus doi

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