

BOOK OF ABSTRACTS



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Conservation biology and remediation ecology

Ecological preferences of the south european nase lasca (*Protochondrostoma genei*, Bonaparte 1939) in the Chiarò di Cialla Creek (Northeast Italy): new insights and conservation perspectives

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Freshwater ecosystems are among the most threatened environments, and inhabiting native fish fauna is very sensitive to anthropogenic impacts. Among the most vulnerable species, the south European nase (or lasca) *Protochondrostoma genei* is an endemic fish of the Po-plain area, distributed also in the Adriatic basins and the southwestern districts of Slovenia (Kottelat & Freyhof, 2007; Carosi et al., 2022). It is included in the Annex II of the European Habitat Directive 92/43/EEC and is listed among the endangered species in the Red List of Italian Vertebrates (Rondinini et al., 2022). In the last years, populations showed fragmented condition and the distribution area significantly decreased, while the species became rare and sporadic in the marginal zones (Puzzi, 2022). This decline is mainly due to synergic effect of habitat degradation, loss and fragmentation (Carosi et al., 2022). Moreover, in the Isonzo River Basin the species is damaged by the allochthonous *Chondrostoma nasus*, which shares the same habitats. Recently, an abundant and well-structured *P. genei* population was observed in the Chiarò Creek (Northeast Italy, Isonzo River Basin), which was included in a Site of Community Importance (PSIC - IT3320041). Here, we analyzed ecological preferences for *P. genei*, as the information are still scarce in literature, despite recent projects for conservation purposes carried out in Slovenia (LIFE for LASCA). Fish samplings were performed from September 2021 to May 2022 and between March – May 2023. Main meso-habitats and main substrate types were recorded, while values of main chemico-physical parameters were measured. Fishes were sampled via electrofishing and the composition of the whole community was investigated, while the lasca specimens were measured to obtain size data and analyze population structure. Ecological preferences were investigated via Redundancy Analysis and highlighted that *P. genei* juveniles prefer pools and glides with moderate current velocity and require a discrete variability of refuge areas. Organic matter was also associated to the presence of juveniles, in relation to trophic requirements. Few specimens of *C. nasus* were collected, but they did not show a clear habitat preference in the investigated watercourse.

The present work provides new information regarding *P. genei*, that could be helpful to prepare adequate management actions in the area and in other watercourses. As *C. nasus* was observed, an eradication project began in 2022, to perform population control and trying to limit damages to the lasca population.

References

1. Carosi A., Lorenzoni F., Lorenzoni M., 2022. Lasca *Protochondrostoma genei* (Bonaparte, 1839) conservation status and measures at Apennine area, Italy. LIFE for LASCA International Congress. Book of abstracts and summaries.
2. Kottelat, M., Freyhof J. 2007. Handbook of European freshwater fishes. Publications Kottelat, Cornol and Freyhof, Berlin.
3. Rondinini, C., Battistoni, A., Teofili, C. 2022. Lista Rossa IUCN dei vertebrati italiani 2022 Comitato Italiano IUCN e Ministero dell'Ambiente e della Sicurezza Energetica, Roma.
4. Puzi C., 2022. Lasca in Po river basin (status and conservation). LIFE for LASCA International Congress. Book of abstracts and summaries.