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博士学位論文の要旨

琵琶湖水系固有の希少淡水魚スジシマドジョウ類 2 種間における繁殖干渉によって引き起こされた個体群の衰退とその知見を応用した保全手法

Reproductive interference between two endangered striated spined loaches endemic to Lake Biwa riverine system as a mechanism driving to extinction and the application to the species conservation

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論文要旨の英文抄訳(150 語程度)

This study aimed to reveal the declining factor of a striated spined loach, *Cobitis minamorii oumiensis*, that is endemic to Lake Biwa riverine system, and to establish the conservation method of the species. The sympatric closely related species, *Cobitis magnostriata* males not only decreased the spawning opportunity of *C. minamorii oumiensis* females but also produced sterile hybrids through crossing with *C. minamorii oumiensis* females. The field surveys were conducted to analyze the spatio-temporal dynamics of these loach populations in the sequential six spawning seasons. All of these results indicated that *C. magnostriata* males exerted the effect of reproductive interference, the interspecific sexual interaction with fitness cost, to the other species. In addition, this study devised and implemented the conservation for *C. minamorii oumiensis* to relieve the reproductive interference by segregating the spawning habitats of the two species. In the areas arranged for spawning of *C. minamorii oumiensis*, the juveniles of the species were collected more than the other areas. This shows that this conservation measure has performed effectively.

論文の要旨(200 字程度)

琵琶湖水系固有の希少淡水魚であるオオガタスジシマドジョウ (以下、オオガタ) とピワコガタスジシマドジョウ (コガタ) を対象に、衰退要因の解明とその緩和を目的に、保全生

態学的研究を行った。オオガタはコガタとの性的な種間相互作用を通じて繁殖干渉を引き起こし、コガタの衰退をもたらしたと結論付けられた。さらにこの知見を応用し、両種の繁殖場所を分割させることで繁殖干渉を緩和するコガタの保全策を考案・実施し、一定の効果があることを示した。