

# First record of the spawning capable climbing perch *Anabas testudineus* (Teleostei: Anabantidae) during the dry season

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The reproductive state of the climbing perch *Anabas testudineus* was studied for the first time in situation when its sexual activity is least expected (in the main stem of a large river, during the dry season and in the arid area). Most of examined specimens in riparian zone of the upper Đà Rằng River (Central Highlands in Vietnam) were spawning capable. All variants of the spawning capable females were found: ready to spawn, partially spent and running ripe, indicating their current spawning. This result contributes to a better understanding of timing and seasonality in the climbing perch reproduction.

## Introduction

Timing and duration of the spawning are two critical factors in reproductive biology and life history strategy of teleosts (Wootton & Smith, 2015). Most freshwater tropical fish spawn in the rainy season when environmental factors act as a trigger for breeding (Lowe-McConnell, 1987). However, some fish species exhibit reproductive plasticity, and the distinctive temporal patterns of reproduction can be found even in groups of related species inhabiting the same biotopes (Kramer, 1978; Waddell et al., 2019). Although the peak spawning date may not vary much from year to year, significant variations in the distribution of the times of reproduction within year exist across years and habitats (Wootton & Smith, 2015; Rizzo & Bazzoli, 2020). Knowing how

reproductive strategy is implemented under different environments is an important contribution to a better understanding of the organization of life history.

*Anabas testudineus*, the climbing perch, is one of the most widely distributed freshwater fish in South and Southeast Asia. It is generally agreed that its reproduction usually occurs during a rainy season (Poulsen & Valbo-Jørgensen, 2000). The histological examination of gonads also leads to a conclusion that peak of spawning occurs in a wet season, even in the case of batch spawning (Jacob, 2005; Bernal et al., 2015). At the same time the presence of mature oocytes in gonads most of the year implies to the potentially prolonged pattern of reproduction (Bernal et al., 2015). One wonders, therefore, if the climbing perch is able to spawn several times a year, then could the fish

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Received 22 December 2020

Revised 8 March 2021

Accepted 22 April 2021

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