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UNIVERSITY OF BANJA LUKA
ТЕХНОЛОШКИ ФАКУЛТЕТ
FACULTY OF TECHNOLOGY



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CIRCADIAN ACTIVITY OF THE WELS CATFISH (*SILURUS GLANIS*) IN THE DANUBE RIVER

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Abstract

In this study, the movements and behaviour of Wels catfish (*Silurus glanis*, Linnaeus, 1758) were monitored during the different seasons when the water level in the river changed significantly. Wels catfish was caught on the Danube River, rkm 863, and tagged with an ultrasonic transmitter. Deployed Vemco receivers recorded detections of spatial movement between years 2015 and 2017. Our telemetry data found relatively short movements within a maximum range (~12km), but as a territorial species most of the time it was recorded by the two receivers, close to the Iron Gate dam and location where it was caught. Circadian rhythm showed that in the summer period, nocturnal activity is evident while during winter Wels catfish stayed most of the time at the same depth under the water surface. Wels catfish changed depths during the autumn and spring when more activity was recorded. The last signal received was during the winter 2017, which was period with the low temperatures and ice cover on the Danube River. This research shows the value and importance of installing coded acoustic transmitters in fish and monitoring their movement using a series of autonomous receivers deployed in the Danube River. Research by telemetry can be used to better understand fish behaviour and movements and to help improve large river management measures.

Keywords: Danube River, Wels catfish, telemetry, spatial movement, temporal movement.



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