

JADOT, C., OVIDIO, M. Diel activity of *Sarpa salpa* (Sparidae) by ultrasonic telemetry in a *Posidonia Oceanica* meadow of Corsica (Mediterranean sea). Fourth European Conference on Fish Telemetry in Europe. Trondheim, Norway, 25-30 June 2001.

Abstract

In the Mediterranean Sea, the fish *Sarpa salpa* (Sparidae) is the only vertebrate grazer of *Posidonia oceanica* meadows. In order to gain knowledge about the behaviour of *S. salpa* and a better understanding of the meadow's primary production recycling, an original study was designed using ultrasonic telemetry to investigate activity patterns and space utilisation in the field. During June to September 2000, we compared diel movements of six adult *S. salpa* (249 to 317 mm FL and 313 to 633 g) in the Bay of Calvi. These fish were tagged by intraperitoneal insertion of ultrasonic transmitters. Their positions were recorded with a directional hydrophone from a small boat with an accuracy between 10 and 50 m, depending on the local environment. The tracking duration ranged from 3 to 22 days (average 11.8 ± 7.3). Locations were performed from at least dawn to dusk or early night, and one fish was tracked during the entire 24-h cycle. Fish were more mobile during the twilight periods, but statistical analysis indicated individual differences for the precise period of mobility. Two major behavioural patterns were observed: first, the fish remained in close vicinity of the harbour during the day and moved away to the north or the south at dusk to access nocturnal sites, occupying a home range of about 4.3 ha. The second behavioural pattern involved persistent occupation of the same sites during day and night within a relatively restricted home range (about 0.8 ha). Great variation in mobility was found and the same individual fish could show both kinds of behaviour.