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Field and laboratory experiments on the locomotor activity patterns in juvenile and adult individuals of the desert isopod *Hemilepistus reaumurii*

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ABSTRACT

In recent years, many studies were interested in the activity behaviour in the field which represents the best way to study ecological aspects of locomotor activity behaviour. This has been facilitated by advances in methodological approaches to the recording of locomotor activity in the laboratory. Behavioural activity of adults and juveniles of *Hemilepistus reaumurii* collected from the arid region of Bchachma (Kairouan, Tunisia) was investigated by both field and laboratory studies during the beginning of summer (June). In their natural environment, results showed a bimodal distribution of activities occurring around dawn and dusk for both adults and juveniles. However, adults were more active in the early morning whereas the most important activity peak of juveniles occurred later in the afternoon. Under controlled environmental conditions, our results showed that adults and juveniles exploit differently the temporal niche. Furthermore, adults' locomotor rhythm was more stable and better defined than juveniles. Activity patterns of adults recorded in the laboratory were found to be similar to that observed in nature. Indeed, adults have limited their activity to light-dark transition periods coinciding with the experimental dawn and dusk. However, juveniles were found to be more active around sunrise and during the middle of the experimental day.

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