
Temporal patterns of small and large pelagic fish species under drifting and anchored FADs

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Résumé

We assessed telemetry data collected during experiments carried out in Reunion Island, Hawaii, Mauritius and in the Mozambique channel. The experimental protocol was similar between the different areas, consisting of passive monitoring of various species tagged with acoustic tags around drifting or anchored FADs. Acoustic transmitters were internally implanted in the studied individuals. In order to characterize the periodicity of visits to FADs we analyzed and compared the temporal patterns of different species known to associate with FADs: small pelagic fishes included the bigeye scad (*Selar Chrumenopthalmus*) and the oceanic trigger fish (*Canthidermis maculatus*), and large pelagic fishes included tunas (yellowfin, skipjack and bigeye tuna), silky shark (*Carcharhinus falciformis*), wahoo (*Acanthocybium solandrii*) and rainbow runner (*Elagatis bipinnulata*). We found periodicity in a subset of individuals of all the species and identified a diel pattern, with fish aggregating closer during the day and performing excursions at night. We investigated the consequences of this pattern on the exploratory capabilities of each species. We discussed the intra and inter specific variability in view of the knowledge on releasing factors involved in animal rhythms.

Mots-Clés: associated behaviour, diel rhythm, FAD

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