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Abstract

Activity of sit-and-wait predator, red-spotted groupers (*Epinephelus akaara*), was measured using acoustic acceleration transmitters, AccelTag (Thelma Biotel, Trondheim, Norway). Nine red-spotted groupers tagged with the transmitters were released into a fish tank. The transmitter signal intervals derived from acceleration measured were recorded on acoustic receiver for 1 hour for each individual. At the same time, the fish behaviors were recorded using video cameras. The tail beat frequency of the tagged fish was counted as indicator of fish activity. We compared transmitter signal intervals and tail beat frequency. Our results showed that signal intervals distinguished whether red-spotted groupers moved their tail fin or not, suggesting that acoustic acceleration transmitter could detect the activity of red-spotted groupers. Acoustic telemetry with acceleration transmitter will be useful to apply to other sit-and-wait type predators to understand their movement patterns and activity rhythms.