

## — Age and growth of blackfin tuna (

Daily growth increments measured in the otolith of *Thunnus atlanticus* were used to estimate the age and growth of individuals, which were sampled from an artisanal fishery operating around fish aggregating devices (FADs) moored off Martinique Island. In this study, 76 otoliths were analysed for fish ranging from 20 to 68 cm fork lengths (FL). The fish were caught using trolling lines at depths ranging from 0 to 10 m. Counts were made, under a light microscope, on the external part of the transverse section of the sagittae, from the primordium to the ventral edge. The mean coefficient of variation of the age reading was 2.4%. To validate readings, the number of increments for 11 individuals was counted using both optic and scanning electron microscopes. The calculated relationship between readings of both methods was found to be linear, with a slope of 1.03 and  $R^2 = 0.99$ . Frequency of growth increment formation could not be validated. Growth rates derived from otolith readings were, however, compared to those obtained using a modal progression analysis, which was performed on the length-frequency distributions of the landings over a period of two months. The corroboration between the growth rates was good. One increment was assumed to represent one day. The parameters of the von Bertalanffy growth curve for both sexes were  $L_{\infty} = 71.4$  cm FL,  $k = 0.002$  day<sup>-1</sup> and  $t_0 = -80$  days. According to our results, there is no evidence that Martinican moored FADs act as ecological traps for blackfin tuna. Instead, young blackfin tuna probably leave the vicinity of Martinican moored FADs to undergo a trophic migration at 7 to 8 month-old, and then come back about 8 months later to breed in the Lesser Antilles area.

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