RADIOMETRIC AGE DETERMINATION OF THE GIANT GRENADIER (*Albatrossia pectoralis*) USING ²¹⁰Pb:²²⁶Ra DISEQUILIBRIA

A thesis submitted to the faculty of San Francisco State University in partial fulfillment of the requirements for the degree

Master of Science in Marine Science

by

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Age estimates determined from growth increments in sagittal otolith sections indicated that *Albatrossia pectoralis* is slow growing (*K* ≤ 0.023) and lives up to 56 years. Growth increments found in otolith sections, however, were difficult to interpret. The von Bertalanffy growth function for *A. pectoralis* otolith section age estimates did not fit size-at-age data well. To validate age and longevity estimates, ages were determined using the radioactive disequilibria of ²¹⁰Pb:²²⁶Ra in otolith cores from adult *A. pectoralis*. Radiometric and growth increment ages agreed for 6 of the 12 pooled otolith age-groups. Radiometric age determination confirmed longevity to at least 32 years for females and 27 years for males. Additional age and longevity estimates are still necessary to develop an informed fishery management plan for *A. pectoralis*.

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