



Markaida, U., C. Quiñonez Velazquez & O. Nishizaki S. (2004). Age, growth and maturation of jumbo squid *Dosidicus gigas* (Cephalopoda: Ommastrephidae) from the Gulf of California, México. Fisheries Research, 66(1): 31-47. DOI: 10.1016/S0165-7836(03)00184-X

## Age, growth and maturation of jumbo squid *Dosidicus gigas* (Cephalopoda: Ommastrephidae) from the Gulf of California, México

U. Markaida, Casimiro Quiñonez Velazquez & O. Nishizaki S.

This study describes the age and growth of large specimens of the jumbo squid *Dosidicus gigas* that supported the fishery in the Gulf of California in 1995-1997. Statoliths of 299 females (10.8-87.5 cm mantle length, ML) and 147 males (17-73.9 cm ML) were read. Assuming a daily rhythm of statolith deposition the smallest female (10.8 cm ML) was 84 days old and the largest (87.5 cm ML) 386 days old. The oldest females were 14-15 months old. The smallest male (17 cm ML) was 135 days old and the oldest male (71.5 cm ML) was 372 days old. The logistic model best described growth in jumbo squid. Growth curves were similar to those reported from other studies on this species using statolith reading. However, they suggest a faster growth than that described by size frequency analysis. No differences in growth were noted between seasons, except that females from Sta. Rosalia weighed more than those caught off Guaymas at the same age. Females grew faster than males, but both sexes grew more than 2 mm/day between 140th and 300th day of life: one of the highest absolute growth rates recorded so far for squids. Large size females mature late, at an age of 1 year and 73 cm ML and males matured at 10 months and 60 cm ML. Females of the medium-sized maturing group mature at 7 months and 37 cm ML and males at 7 months and 34 cm. Thus, this latter group was regarded as an early maturing group, living probably less than a year, and the former as a late maturing group, living a year or slightly more. Hatch dates were distributed throughout the whole year, without reflecting any reproductive pattern. Large jumbo squid in the Gulf of California comprised a population of multiple intra-annual cohorts using alternate upwelling seasonal areas during their growth.

Palabras clave: Specialist, *Dosidicus gigas*, Jumbo squid, growth, Age, Maturation

Para obtener copia del documento contacta con el autor (cquinone@ipn.mx) o con el personal de la biblioteca (bibliocicimar@ipn.mx).