

**A COMPARISON OF THE TWO ALTERNATIVE
EARLY LIFE-HISTORY STRATEGIES OF THE ANTARCTIC FISH:
Notothenia gibberifrons AND *Nototheniops larseni***

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ABSTRACT

Four early life-history strategies of Antarctic fish are identified based upon trophic type (planktotrophic and lecithotrophic) and duration of the pelagic stage (restricted to summer = summer larvae, extended over winter = winter larvae). Summer larvae are hypothesized to have evolved to take advantage of high productivity during summer months; winter larvae to take advantage of an extended period of growth and development, use pelagic resources unavailable to summer larvae, and recruit to the demersal environment when competition from summer larvae is lowest.

Otolith techniques were successfully used to reconstruct growth histories and determine the hatching period of larval *Notothenia gibberifrons* (planktotrophic summer larvae) and *Nototheniops larseni* (planktotrophic winter larvae) from the Antarctic Peninsula and South Georgia. Growth and development of summer larvae were much more rapid than winter larvae, as expected. However, the hatch period of winter larvae was much more closely tied to the seasonal productive cycle than expected.