

Modeling the effects of temperature and food availability on the growth of individual *Aurelia aurita* medusa in the Inland Sea of Japan

The Inland Sea of Japan is home to the jellyfish *Aurelia aurita*. From early spring to mid-summer the average *A. aurita* experiences a period of high growth before reproducing. This study sought to build a model that closely matches the individual growth of average *A. aurita* jellyfish that was seen *in situ* during the period of high growth in 1990 and 1991. Three successive models were built; one based on the carbon budget of *A. aurita* and no environmental factors included, one that includes the effect of sea surface temperature (SST), and a third that includes the effects of both SST and food concentration in the water column. The models show that both environmental factors must be included to produce a growth curve that accurately represents the data. These results support claims of previous literature that SST and food concentrations are major factors in the growth of the jellyfish.

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