Saroj Rermdumri 2010: Effect of Decreasing Salinity on Growth Development and Survival Rate of Senatorial Scallop (*Mimachlamys senatoria*) from Veliger Larvae to Early Juveniles. Master of Science (Aquaculture), Major Field: Aquaculture, Department of Aquaculture. Thesis Advisor: Associate Professor Prathak Tabthipwon, Doctorat de 3 e cycle. 138 pages.

The effect of decreasing salinity on growth development and survival rate of Senatorial scallop (*Mimachlamys senatoria*) from veliger larvae to early juvenile were studied in hatchery of Sriracha Fisheries Research Station. First stage veliger larvae (D-shaped veliger) of *M. senatoria* from hatchery at a density of 3 larvae/ml were stocked in 10 l cylindrical plastic jars with 5 different salinity levels at 10, 15, 20, 25 and 30 ppt. Larvae of scallops were studied on fed with mixed phytoplankton of *Isochrysis* sp., *Chaetoceros* sp. and *Tetraselmis* sp. at density 25,000 to 35,000 cells/ml. The growth development and survival rate of larvae were studied from D-shaped veliger (1 day) until to early juvenile (50 days). The results showed that growth development and survival rate of larvae in different salinity levels were significantly different ($P<0.05$). Larvae of scallops nursed at 30 ppt had best growth and survival rate in every development stage of larvae from D-shaped veliger to early juvenile. At 25 and 20 ppt larvae could only developed to settlement and umbo stage, slow growth and high mortality. Whereas salinity at 15 ppt larvae had least growth and all were died in 3 days. Low salinity at 10 ppt could not nursed larvae.

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