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Photoperiodism in the somatic growth and gonad production and quality of the sea urchin *Tripneustes gratilla*

Facundo B Asia, Erlyn S Allado, Venus Suerte R Ramos and **Pilar Carolyn V Pascual**
Mariano Marcos State University, Philippines

Somatic (wet weight and equatorial and polar test diameters), gonad production (gonadosomatic index) and gonad quality (color) of the sea urchin *T.gratilla* reared in plastic basins to determine the effect of light exposure were done *in vitro* from December 2011 to May 2012. The experiment consisted of four treatments with three equal replications arranged in a completely randomized design as follows: Treatment I - 12 hours exposure; Treatment II - 8 hours exposure; Treatment III - 4 hours exposure; and Treatment IV - no exposure time. Results show that organisms in treatments III and IV had significantly ($p \leq 0.05$) higher growth rates (wet weight and test diameters) than the organisms in treatments I and II. In terms of gonad growth (GSI) and quality (color), the organisms reared in shorter light exposure time showed significantly better gonad quality than those in longer light exposure time. However, it was noted that the gonads of the organisms in treatment IV (no light exposure time) are less firm and liquefies when exposed to the air than in the other treatments particularly that of Treatment III. It is therefore recommended that *T. gratilla* can be best reared in covered plastic basins with four hours exposure time.

Biography

Facundo B Asia is a professor in College of Aquatic Sciences and Applied Technology, Mariano Marcos State University, Philippines.

dong_asia@yahoo.com

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