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<http://marine.bio.ocha.ac.jp/tateyamastafj.htm>, <http://bios.cc.ocha.ac.jp/lab.html>,
<http://researchmap.jp/read0197204>

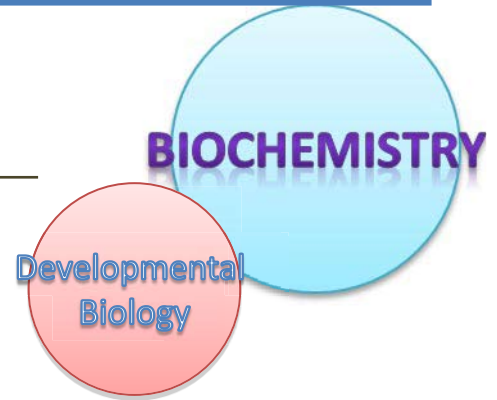
■ Researcher information

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Major

Developmental Biology, Marine Biology (Echinoderm)



■ Research topics

Artificial control of sea urchin breeding season and preservation of gametes

Keywords

Breeding season, gametogenesis, marine animal, experimental material, bioassay

Contents

■ Overview (background, goal, detail)

• The sea urchin is one of useful laboratory animals for the research on developmental biology. But the use is restricted only in the breeding season.

• The Shipping and the culture of mature sea urchins take heavy effort and expensive equipment.

■ Process, case study


• It became possible to adjust the breeding season of a sea urchin species (*Hemicentrotus pulcherrimus*).

• The experiment of fertilization became easy by using egg and sperm preserved for weeks, without taking care of adult sea urchin.

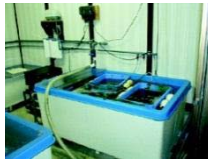
■ Potential (applications, future goals)

• Industrialization of material offer of laboratory animals, Application to bioassays for chemical substances, Experiment kit

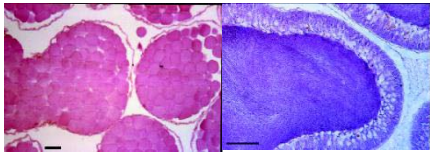
Sea urchin is an important laboratory animal



But research is restricted in breeding season!



Possible to adjust the breeding season by the culture condition!



Gonads fill with egg or sperm

H. pulcherrimus	Feb~Mar
A. crassispina	Jul~Aug
P. depressus	Nov

Intellectual properties (Patents, computer programs), productization, publications and social/industrial contributions

About 30 university and 50 schools are provided with sea urchins as experimental material.

Potential of social/industrial contribution

■ Joint research/ technical consulting