

**J. Ocean Univ. China**

<http://www.ouc.edu.cn/xbywb/>  
E-mail: xbywb@ouc.edu.cn

# Seasonal Changes of Reproductive Activity and Biochemical Composition of Pen Shell *Atrina pectinata* Linnaeus, 1767 in Bohai Sea, China

Key Laboratory of Mariculture of Ministry of Education Ocean University of China Qingdao

P. R. China

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**Abstract**

*Atrina pectinata*  
*A. pectinata*

*A. pectinata*

**Key words**

*Atrina pectinata*

## 1 Introduction

*Atrina pectinata*

*et al*

et al

### 2.3 Histology

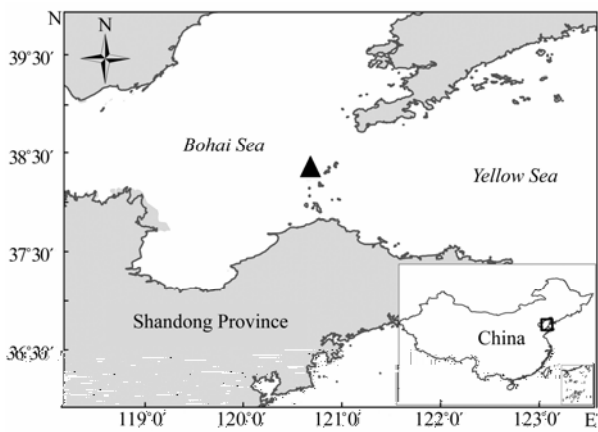
*A. pectinata*

*A. pectinata*

## 2 Materials and Methods

### 2.1 Origin of Material

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*in situ*

*a*

### 2.2 Condition Index

CI

## 2.5 Statistics

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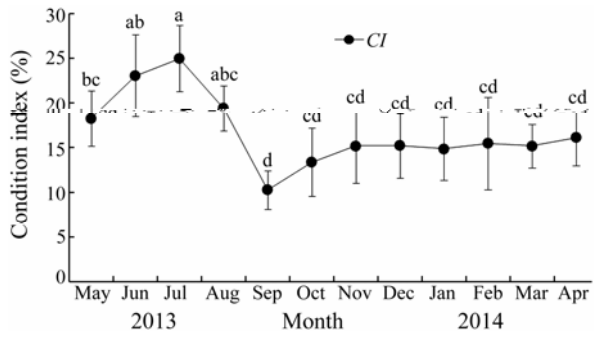
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## 3 Results

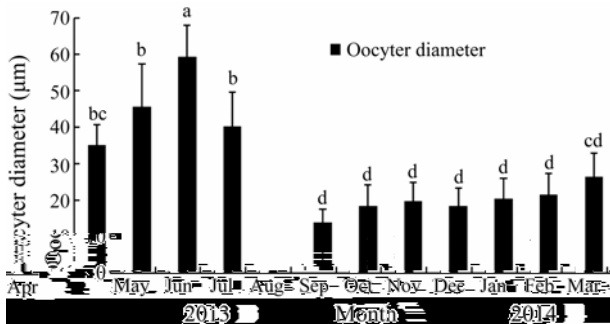
### 3.1 Environmental Parameters

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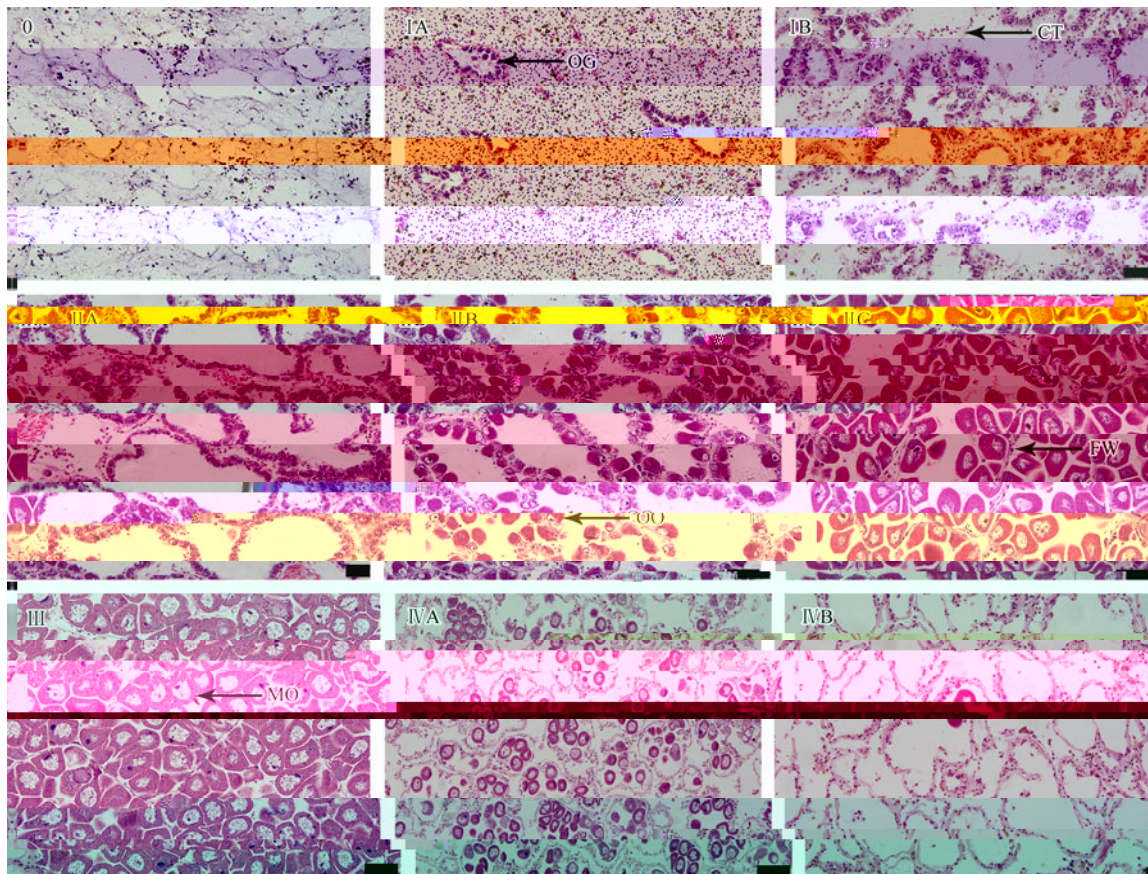
CI

CI *Atrina pectinata*

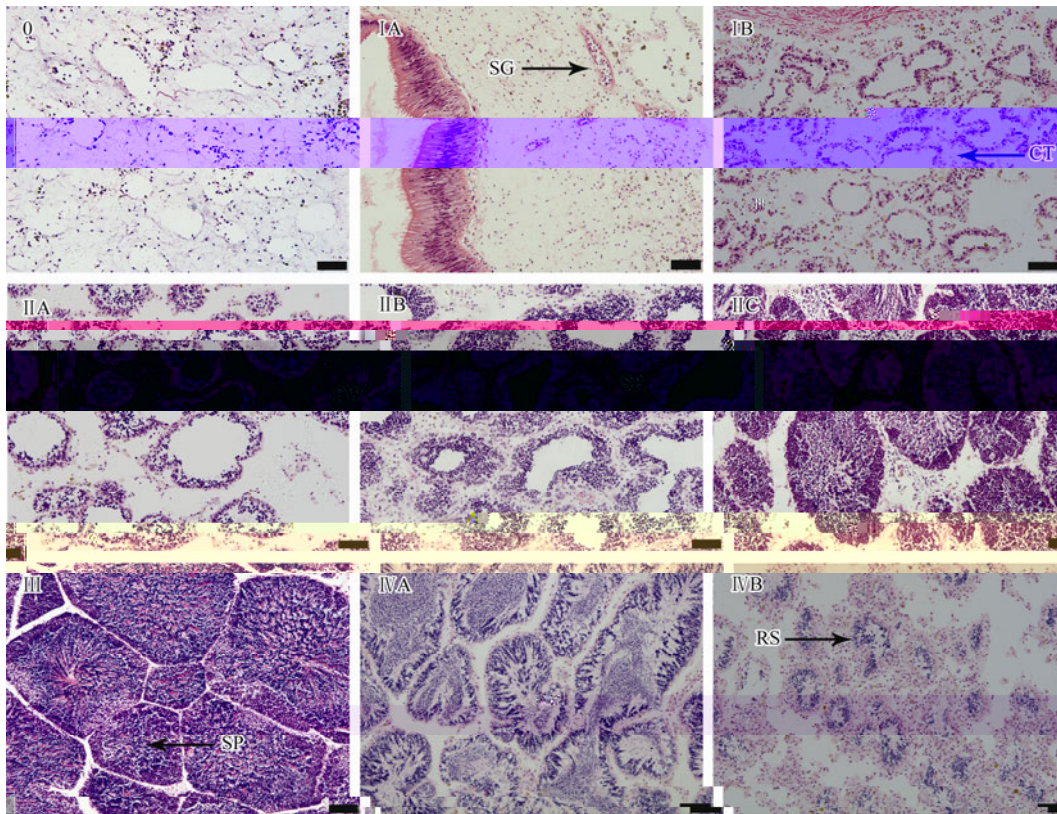


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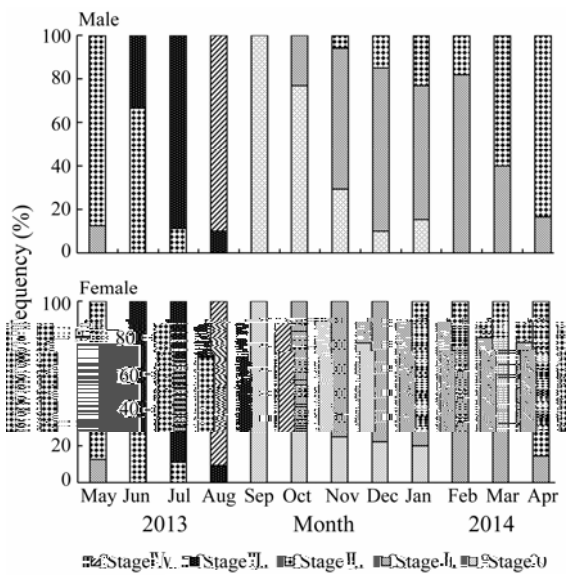
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*A. pectinata*



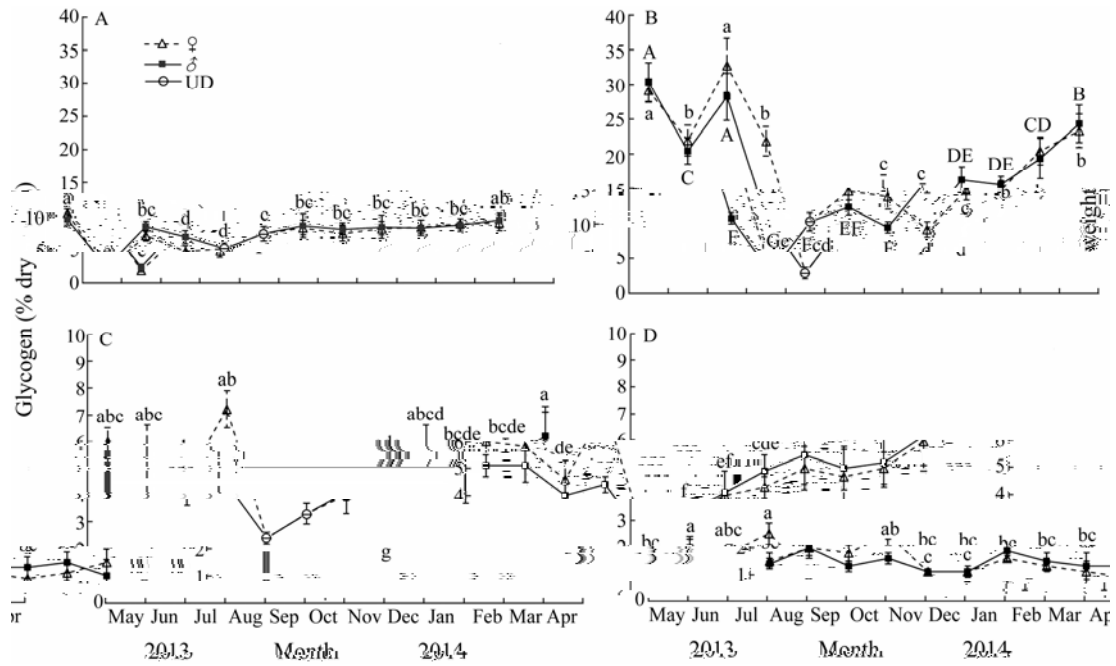
*A. pectinata*



*A. pectinata*

### 3.3 Biochemical Composition

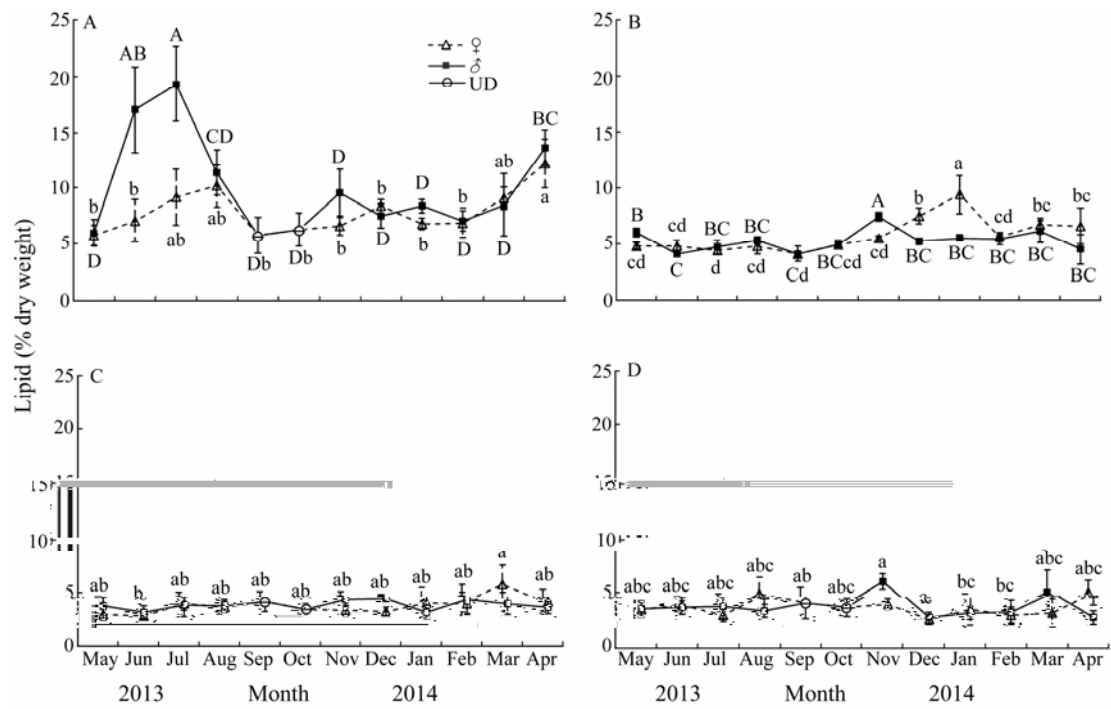
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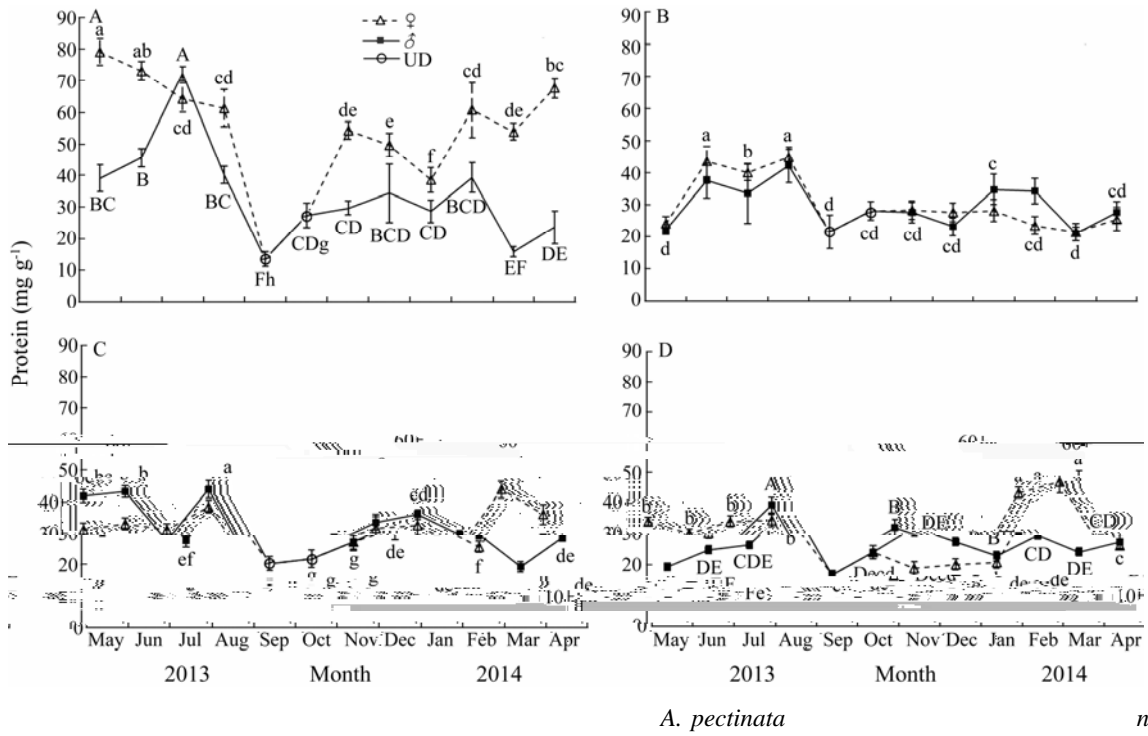
P



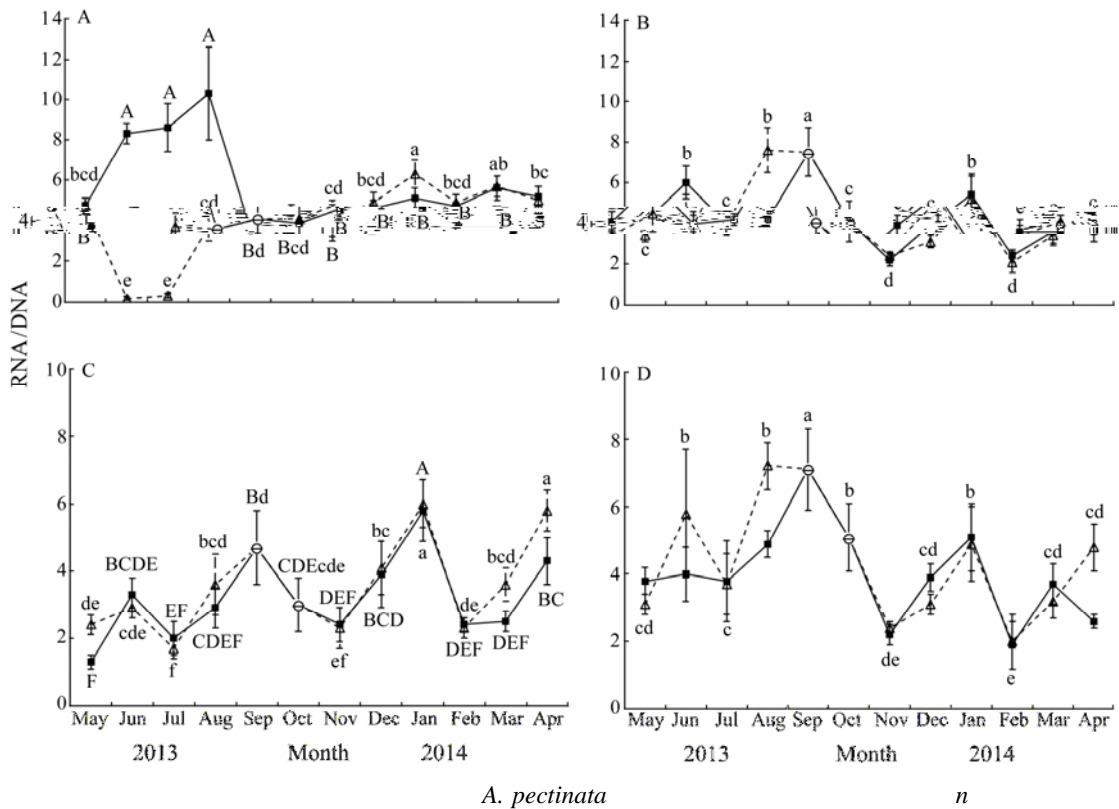
*A. pectinata*

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P



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P

A.

*pectinata*

*et al*

P

*Mytilus edulis*

*et al*

*Crassostrea gigas*

*et al*

*A. pectinata*  
*a*

*Mactra chinensis*

*et al*

F.

*mutica*

*et al*

*C. sinensis*

*et al*

#### 4.2 Biochemical Content and Reproductive Strategy

P

*et al*

*et al*

P

### 4 Discussion

#### 4.1 Gametogenesis and Environmental Factors

*et al*

*et al*

*et al*

*et al*

*et al*

*et al*

*et al*

*et al*

*A. pectinata*

*et al*

*a*

*et al*

*et al*

*et al*

*A. pectinata*

*et al*

*A. pectinata*

*et al*

*gigas*

*et al*

*C. sinensis*

*et al*

C.

*nata*

*A. pecti-*

*et al*

*a*

*et al.*

*a*

*A. pectinata*



*et al*

*M. chinensis et al*

*et al*

*et al*

*et al*

*et al*

*et al*

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*edulis*  
**112** *Ostrea*  
*Marine Biology*

*ventricosus*  
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*Pecten maximus*  
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