

# 超微浮游植物在亞熱帶黑潮海域 之分布

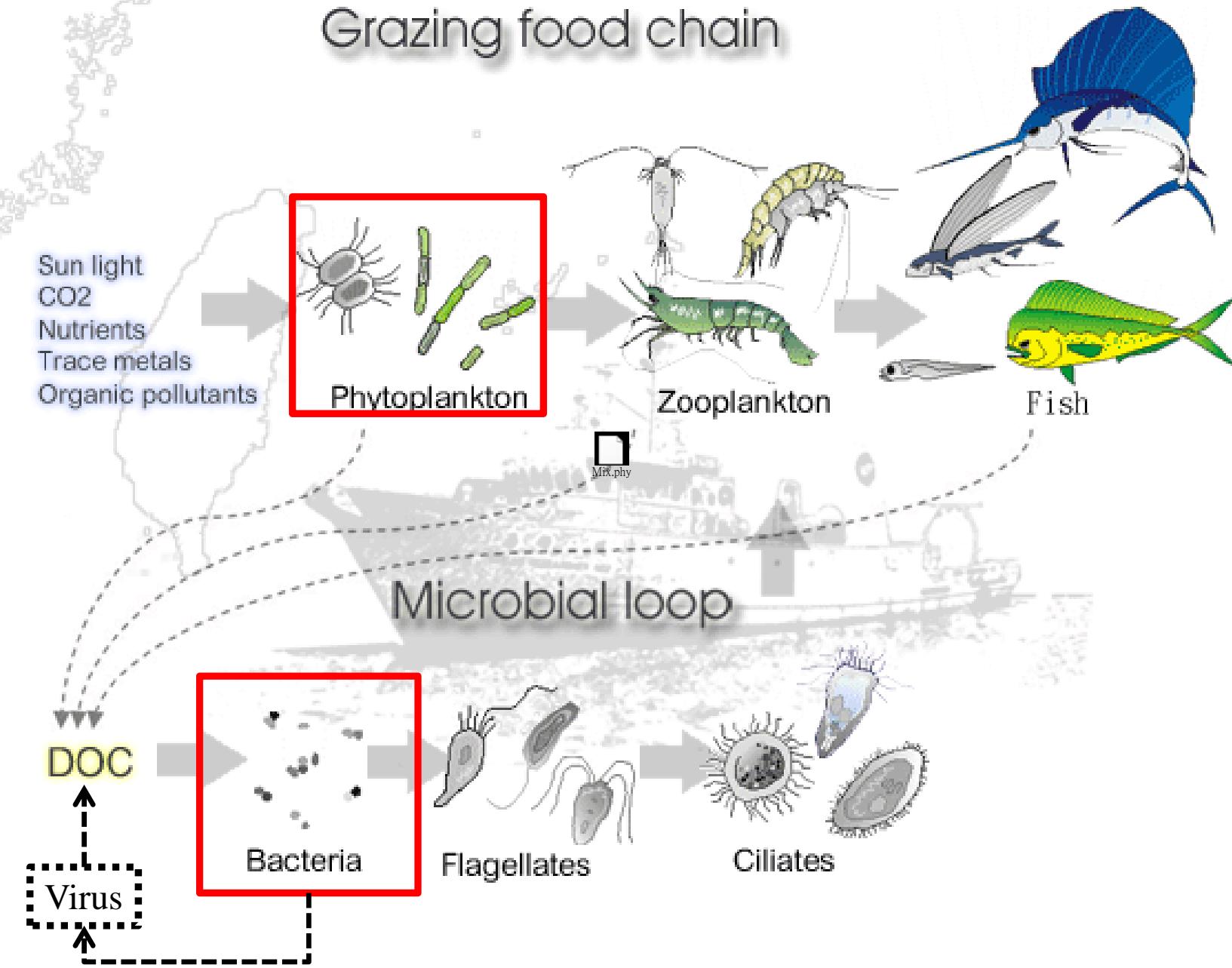
報告學生：黃晉毅

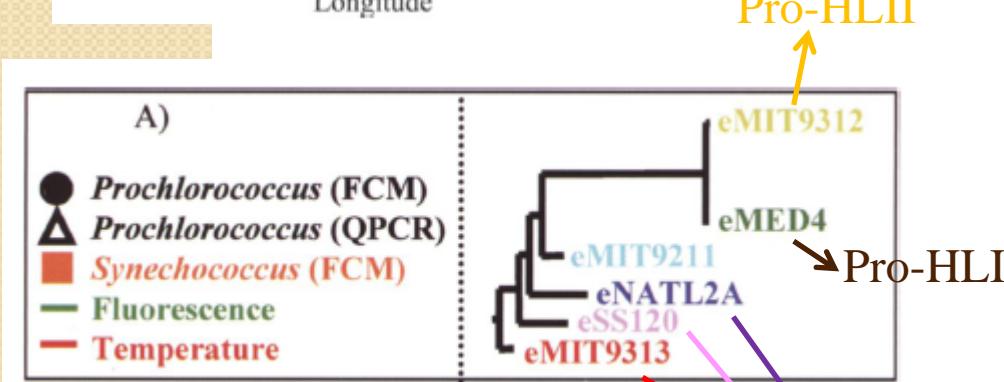
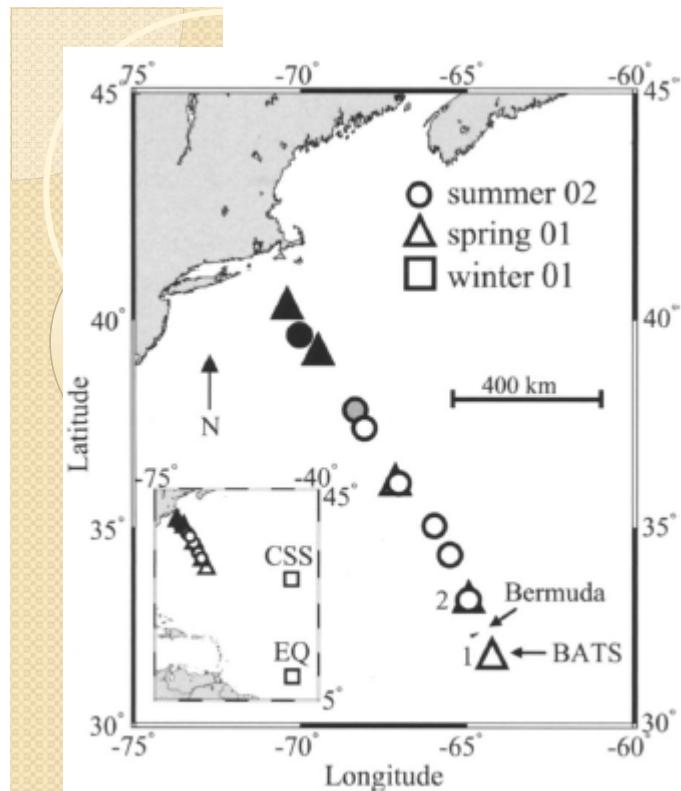
指導教授：張正、鍾至青 老師

IMB, NTOU

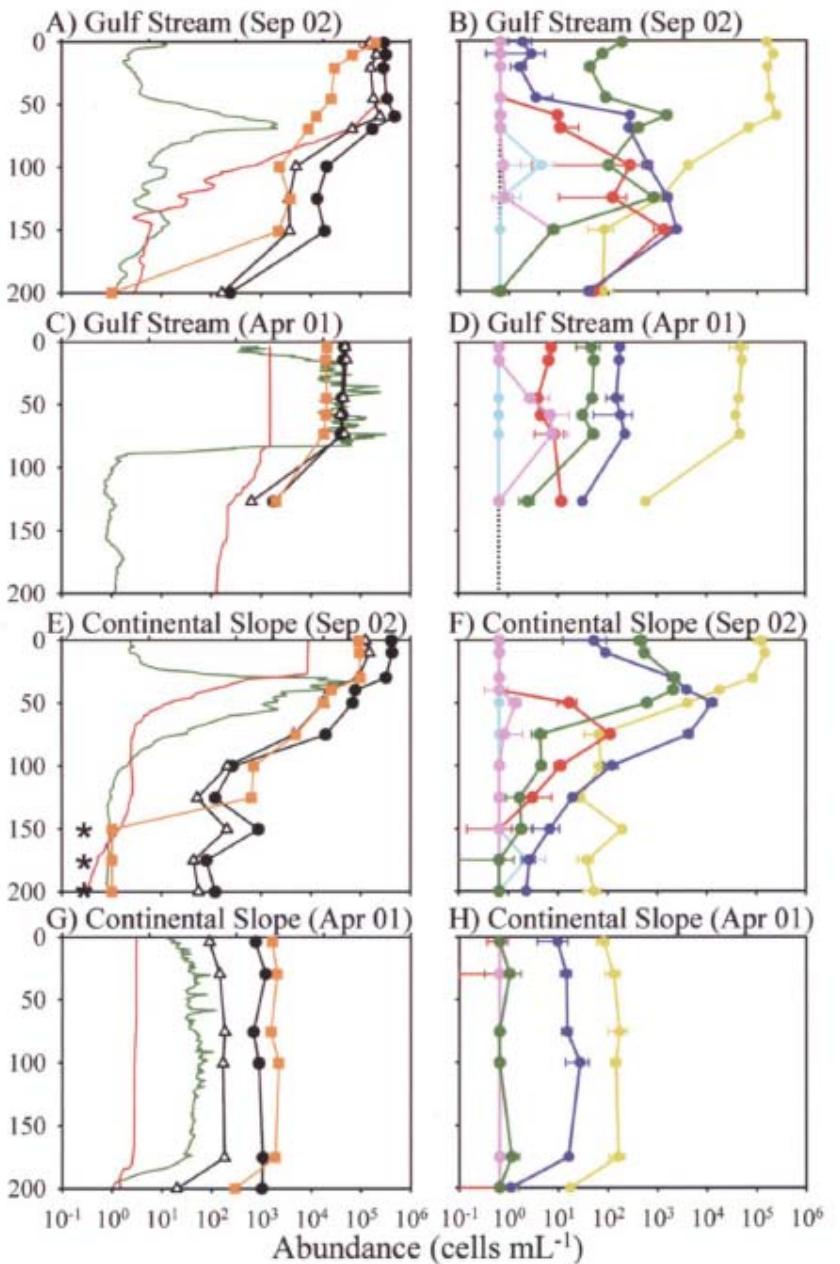
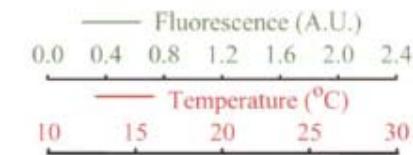
2013/9/9

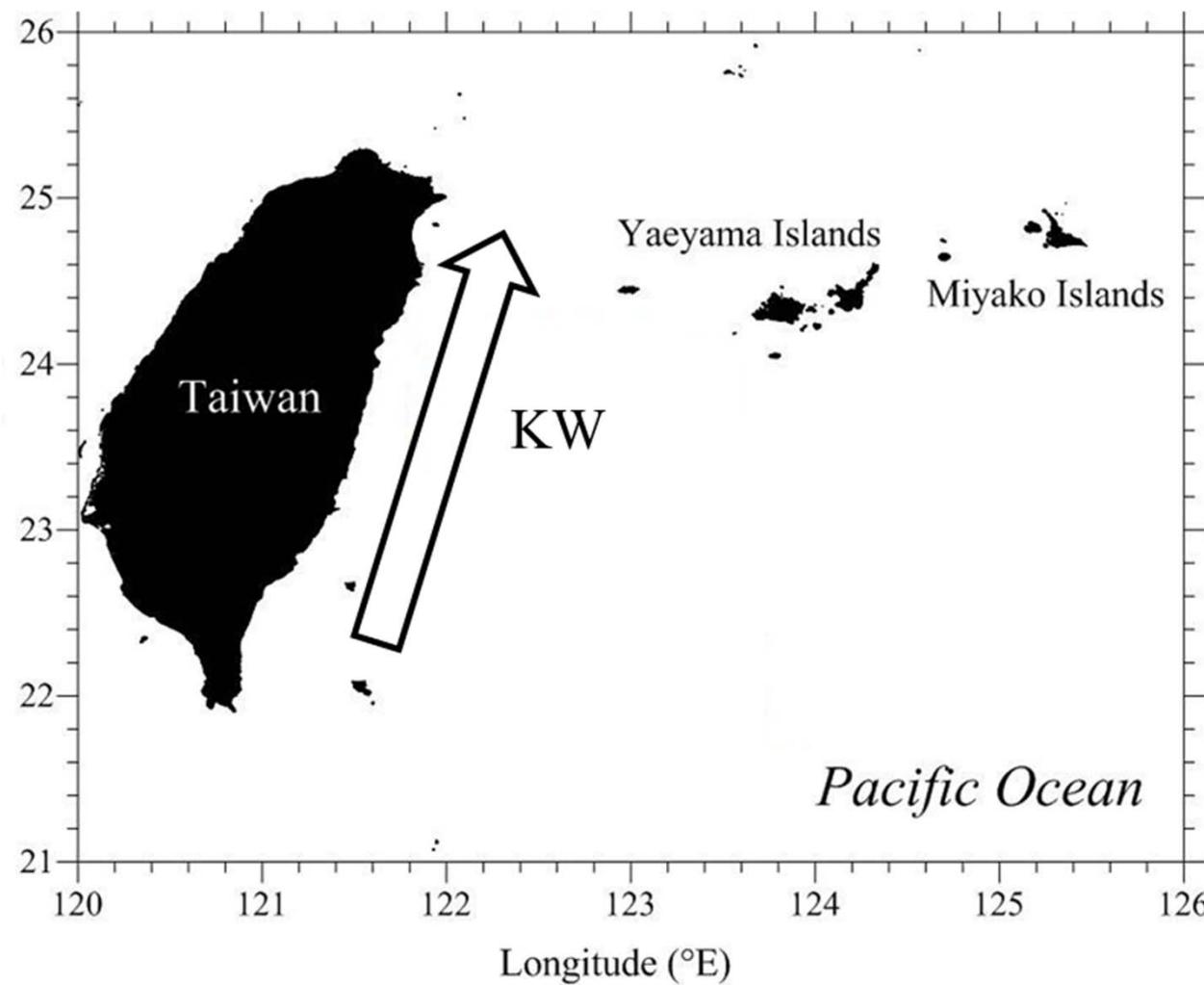
## Grazing food chain



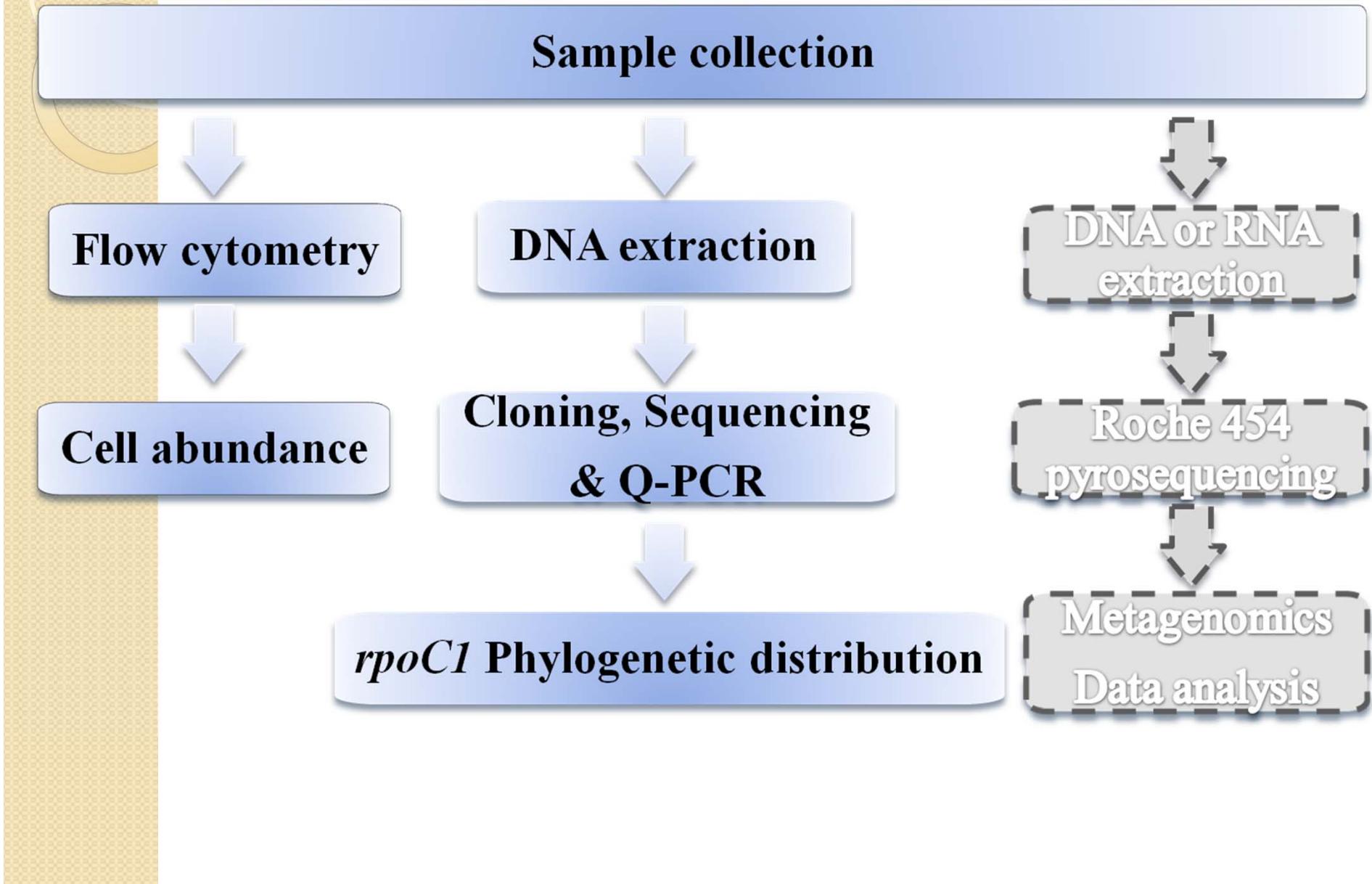


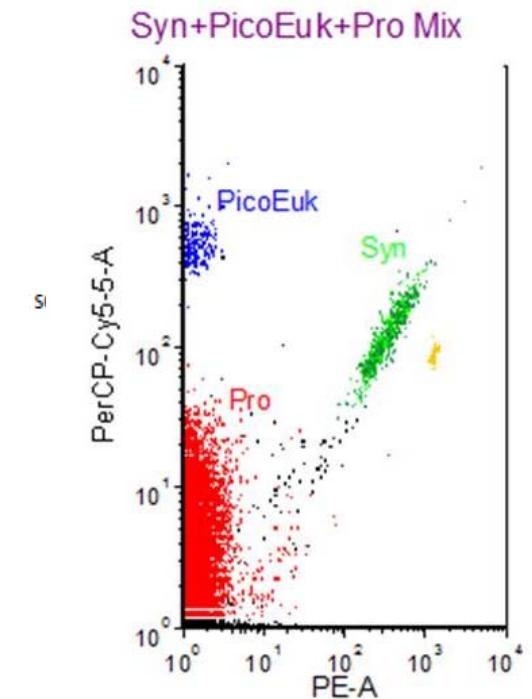
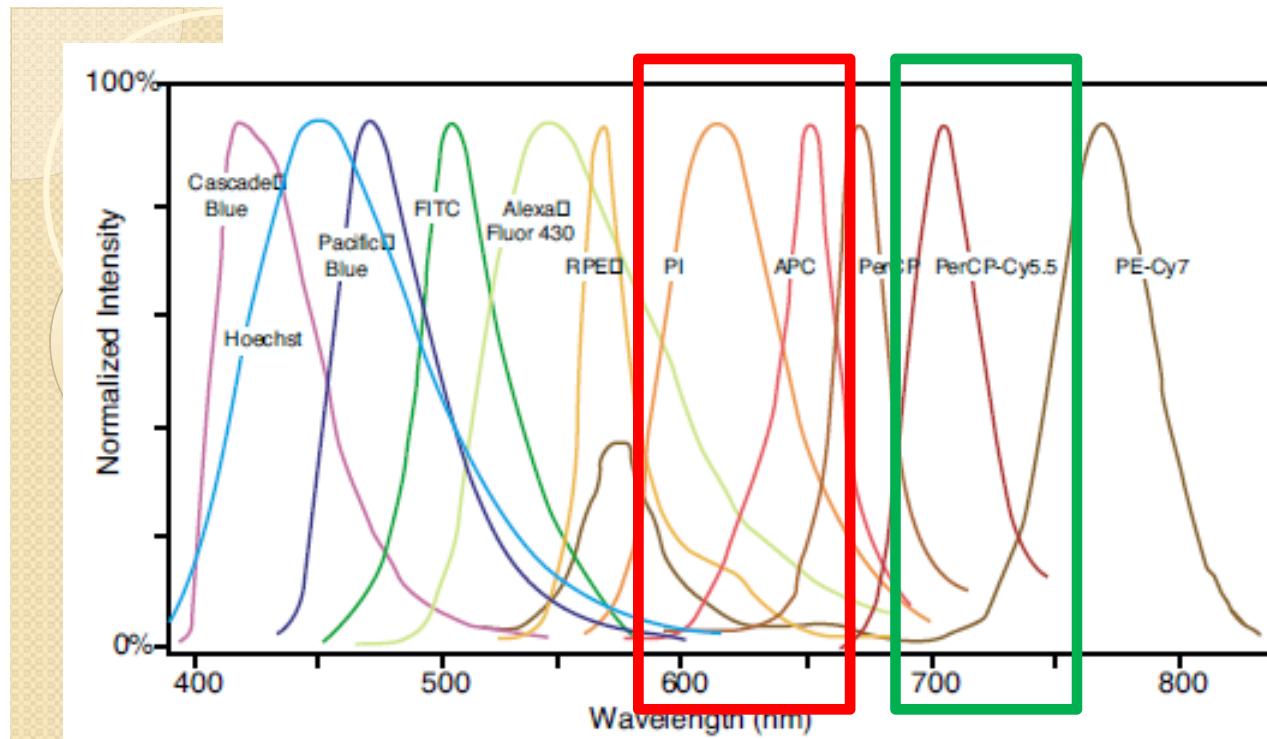
(Zinser *et al.*, 2007)





# Pico-phytoplankton analysis





### 488 nm Blue Laser

Fitc  $530 \text{ nm} \pm 15 \text{ nm}$

PE (*Synechococcus* PE-rich)  $576 \text{ nm} \pm 13 \text{ nm}$

PE-TxRed  $610 \text{ nm} \pm 10 \text{ nm}$

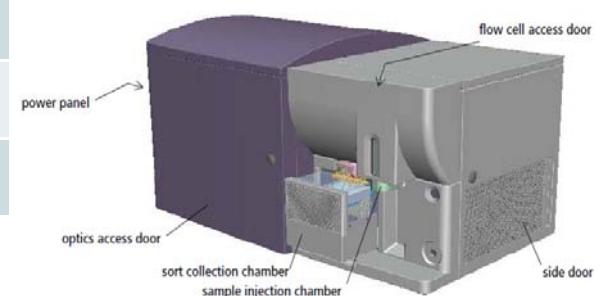
PE-Cy5 (*Prochlorococcus*)  $695 \text{ nm} \pm 20 \text{ nm}$

PE-Cy7  $780 \text{ nm} \pm 30 \text{ nm}$

### 633 nm Red Laser

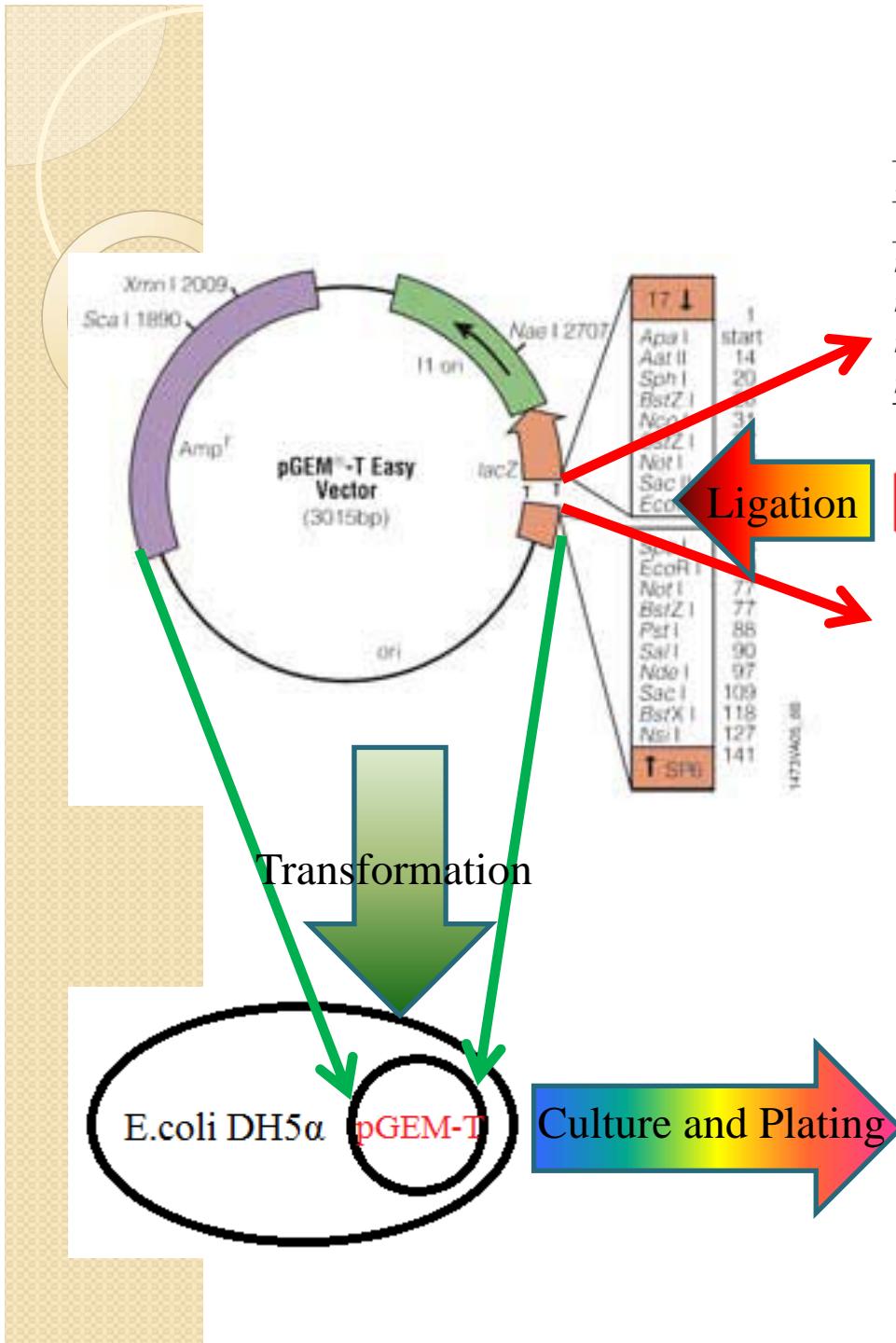
APC (*Syn* PC-rich)  $660 \text{ nm} \pm 10 \text{ nm}$

APC-Cy7  $780 \text{ nm} \pm 30 \text{ nm}$



Obtained from BD Biosciences (Becton, Dickinson and Company).

# Polymerase Chain Reactions

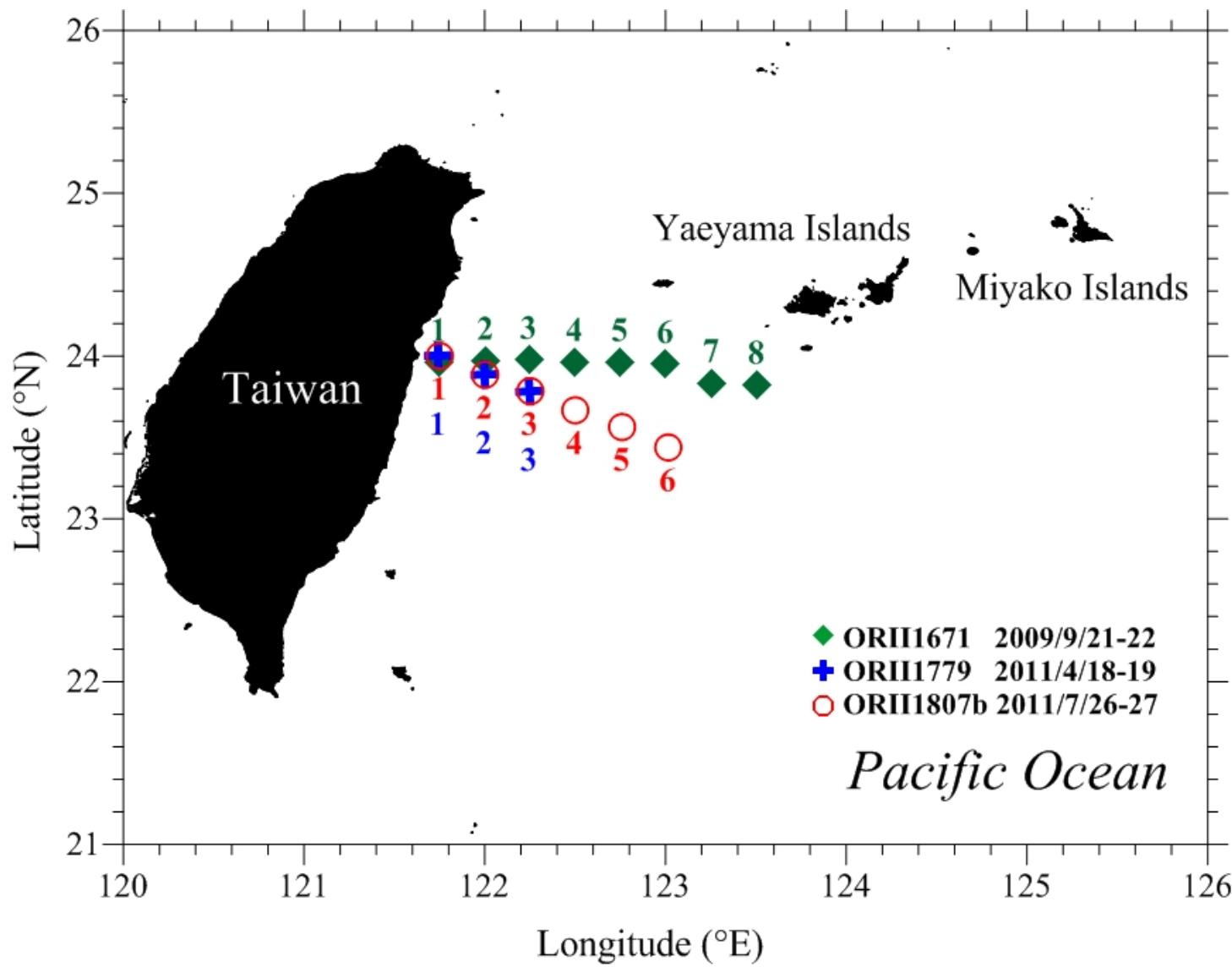
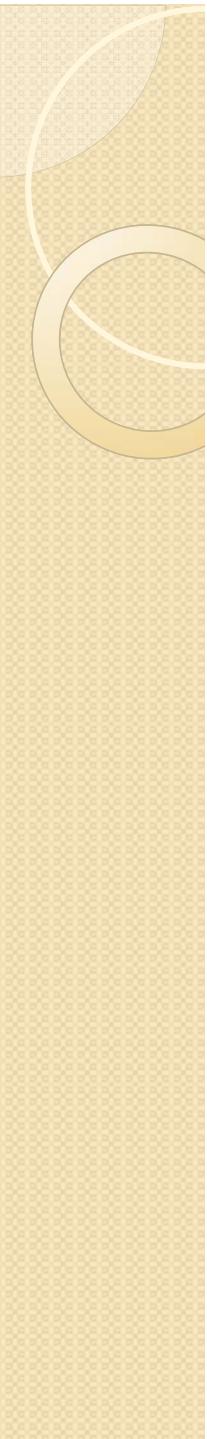


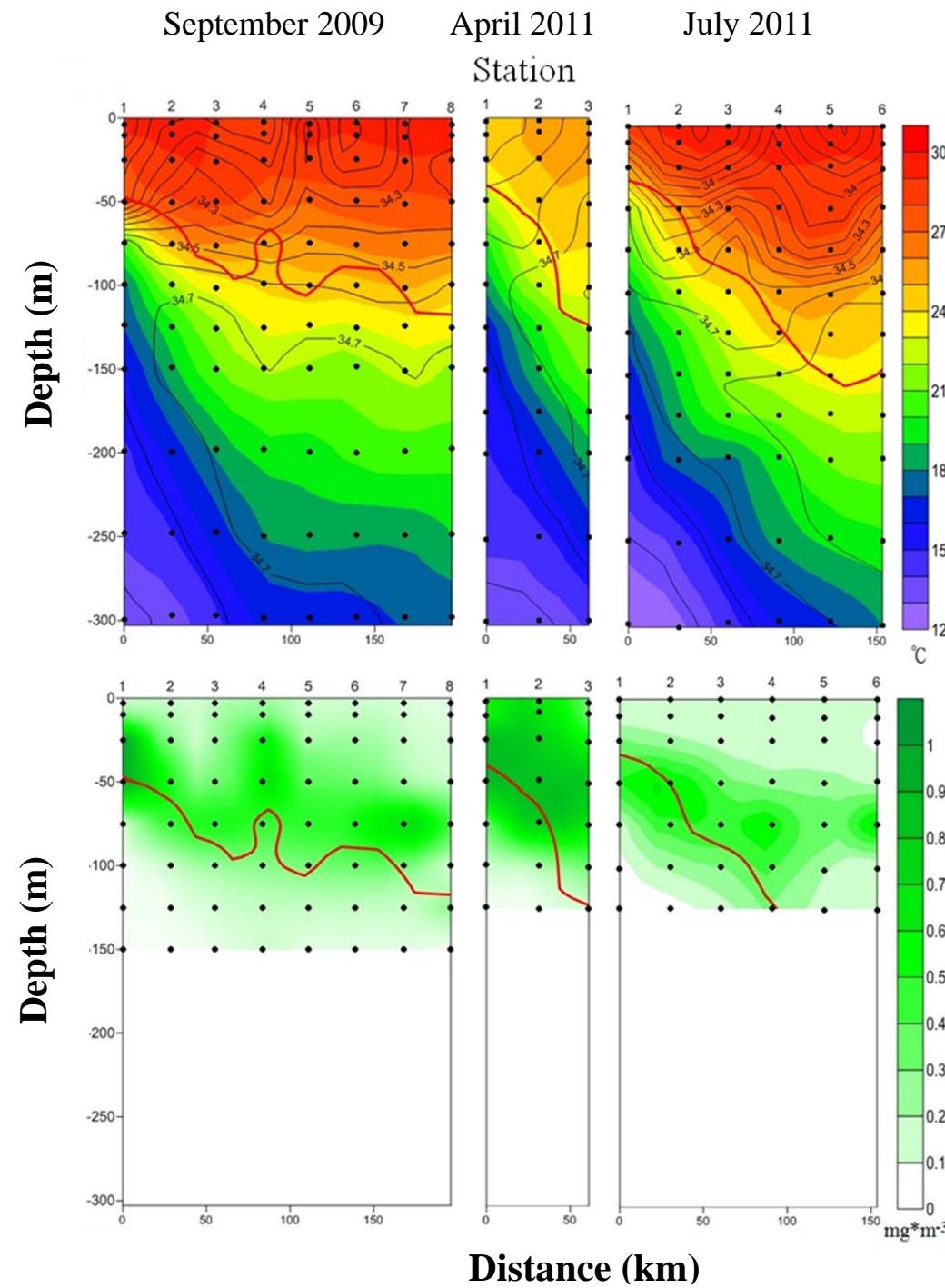
本研究使用之引子對序列 (Tai & Palenik. 2009 )

## Sequences

<i>rpoC1</i> 多樣性分析	F : YTN AAR CCN GAR ATG GAY GG
<i>rpoC1</i> 多樣性分析	R : CYT GYT TNC CYT CDA TDA TRT C
<i>rpoC1</i> -Clade II(Q-PCR)	F : CTA CGT GGC CAT CCT GCT
<i>rpoC1</i> -Clade II(Q-PCR)	R : TCG GAR TCT TCG GCG TAG ATC

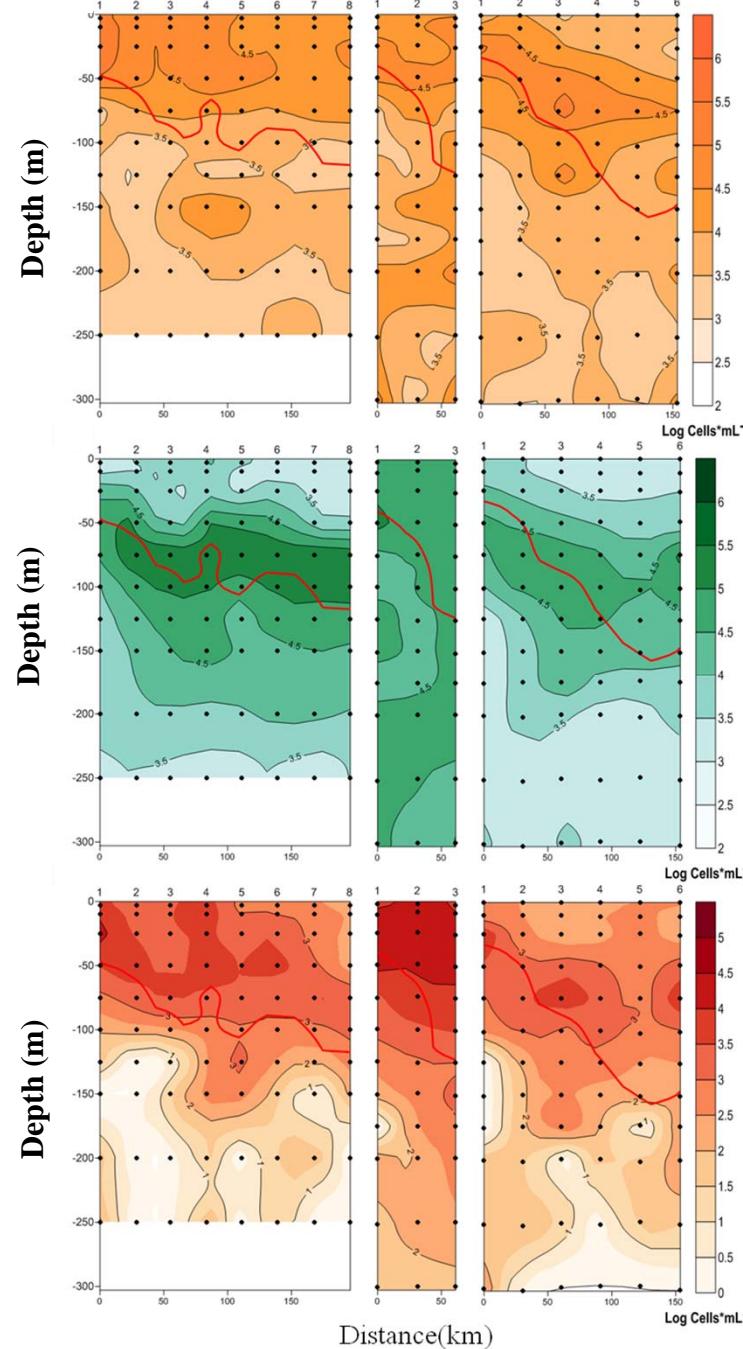
Sequencing  
&  
Analysis







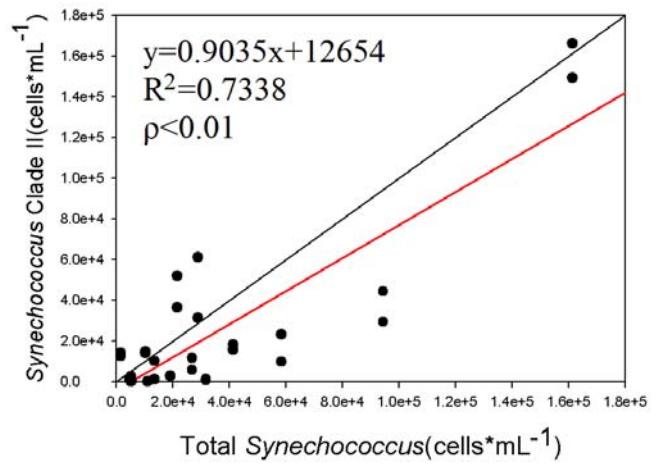
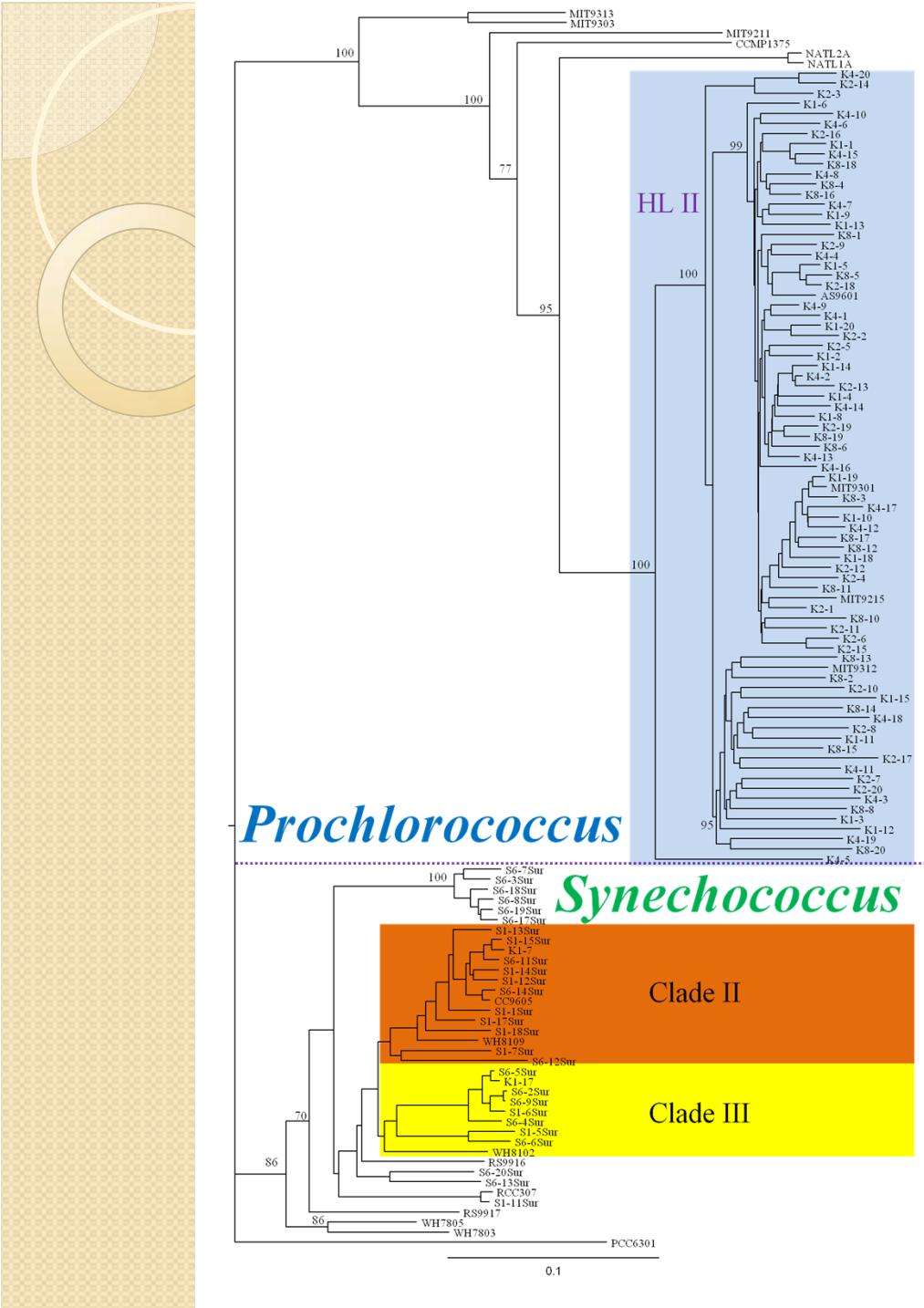
September 2009 April 2011 July 2011



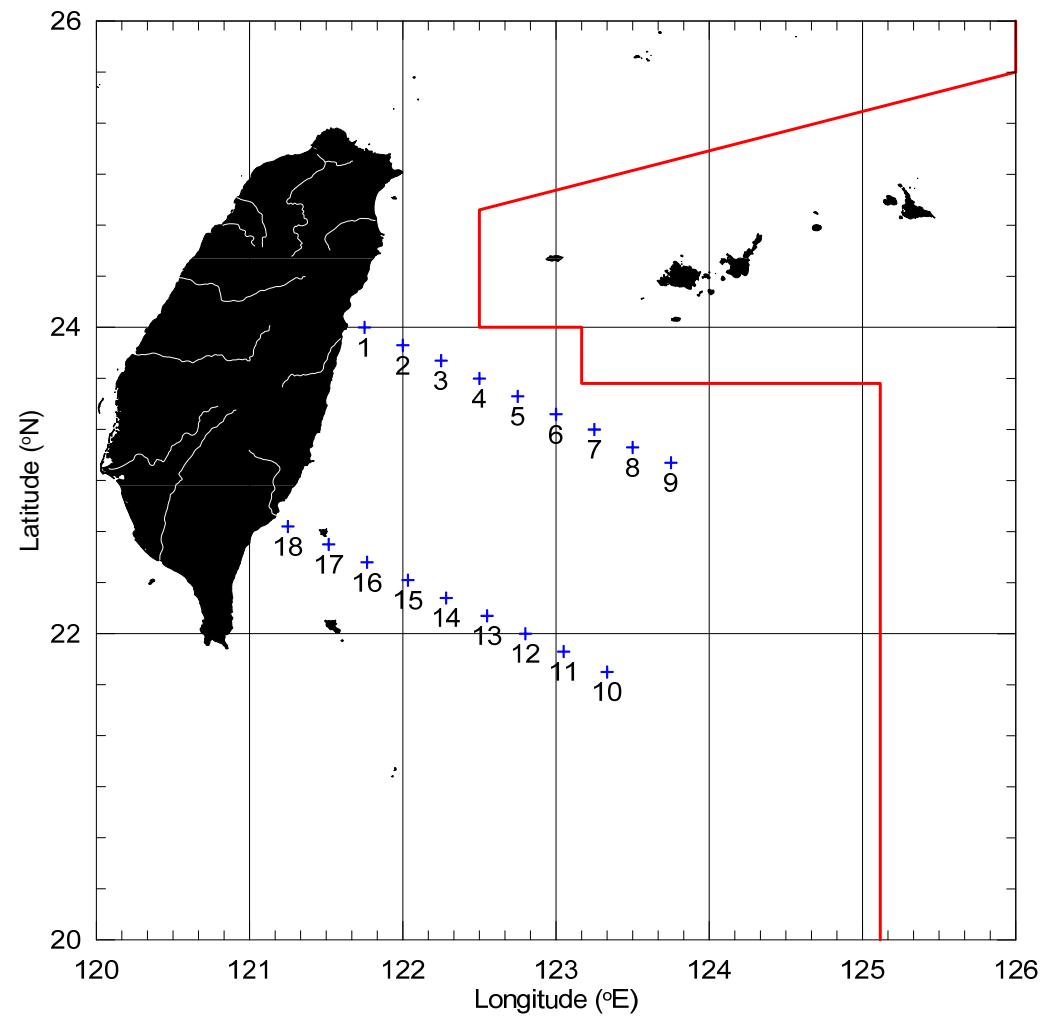
*Synechococcus*

*Prochlorococcus*

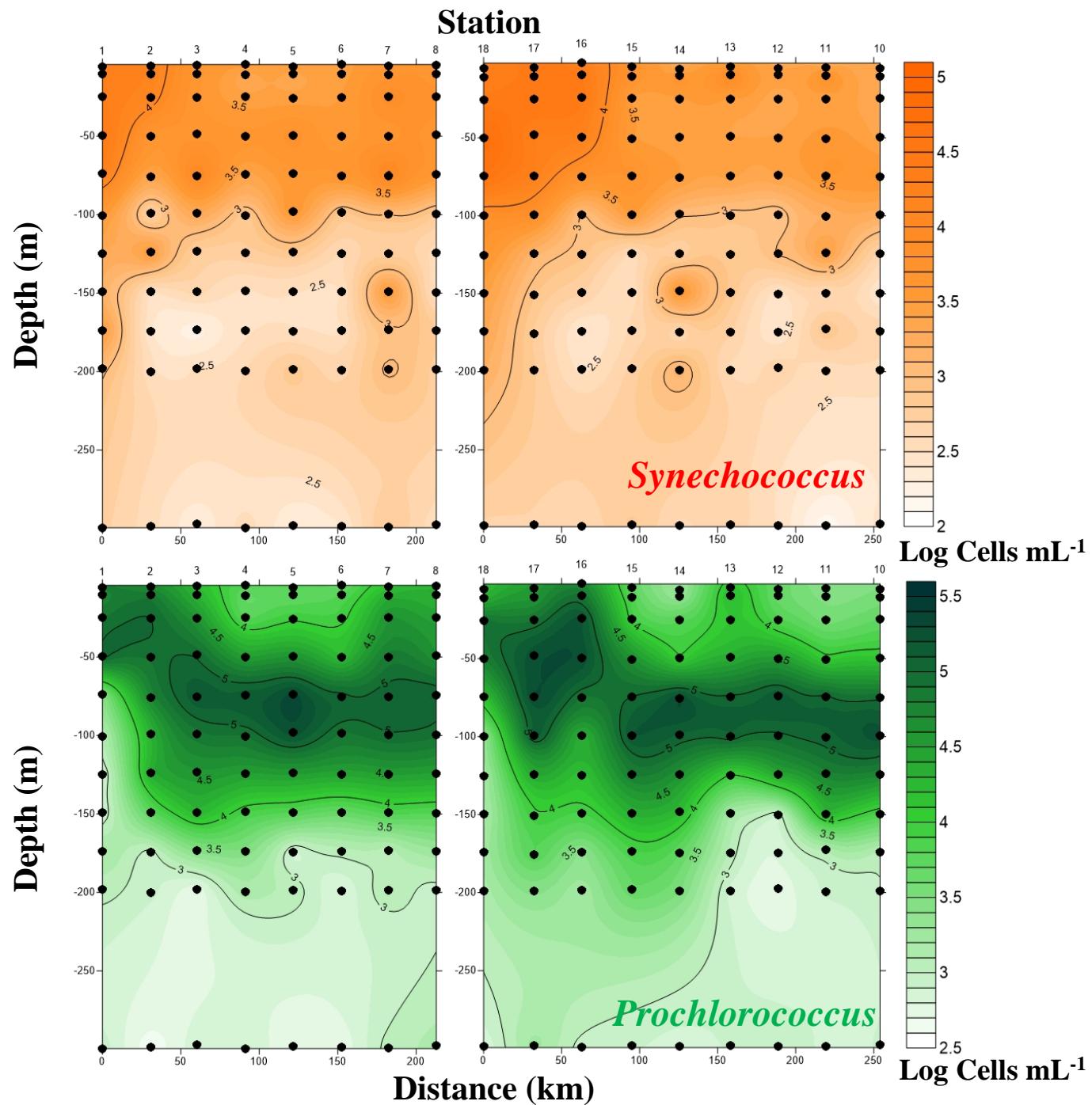
*Eukaryotic pico-phytoplankton*

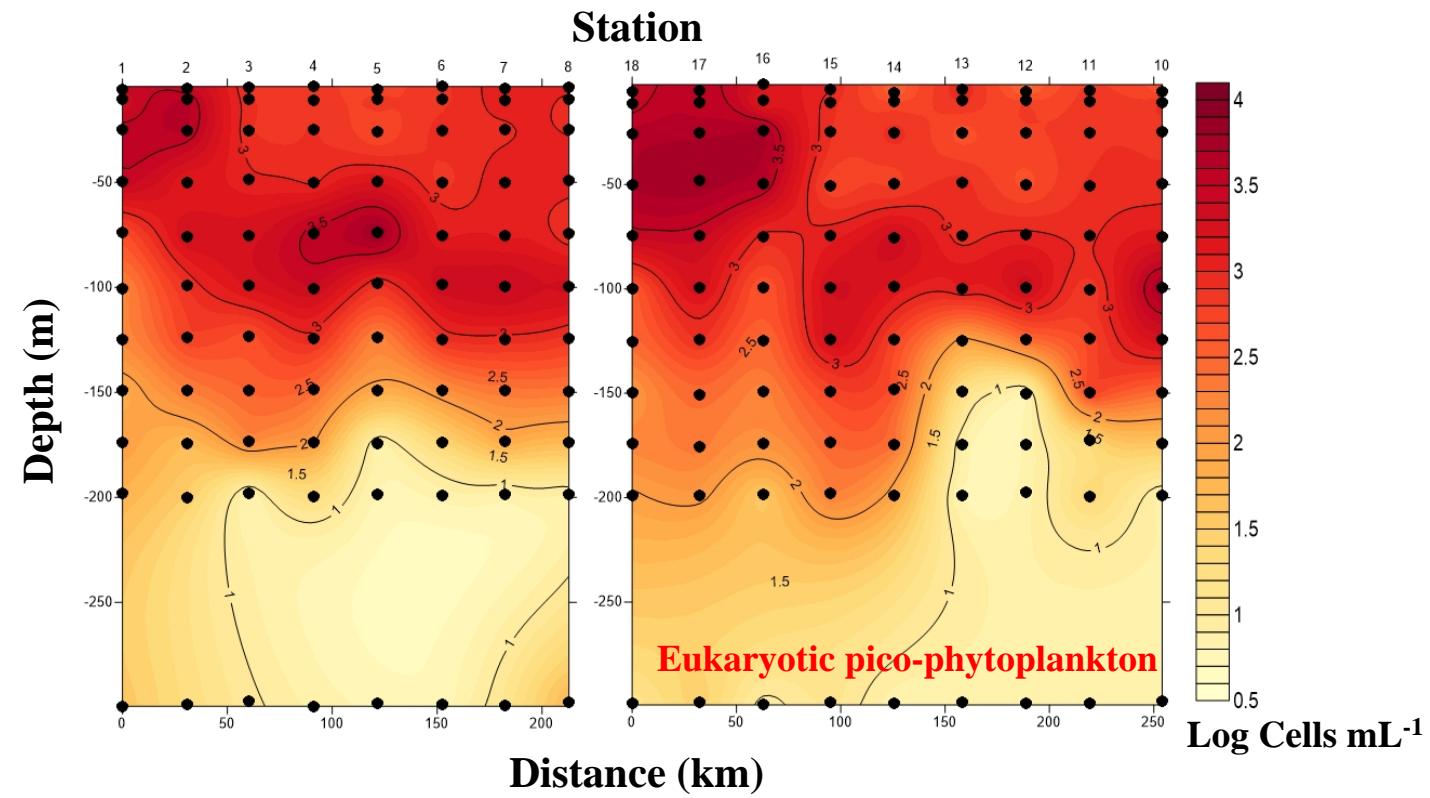
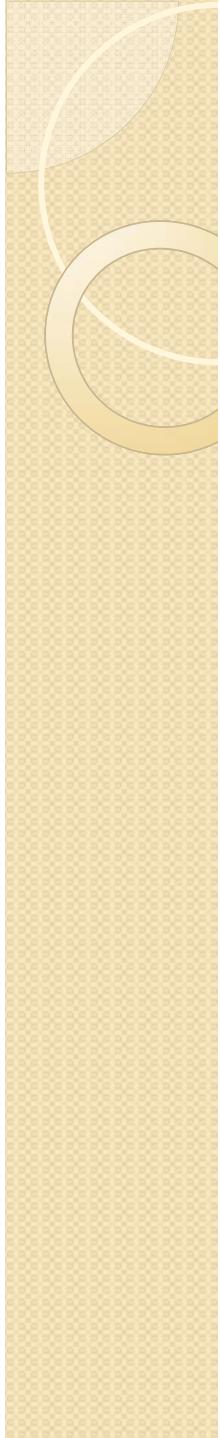


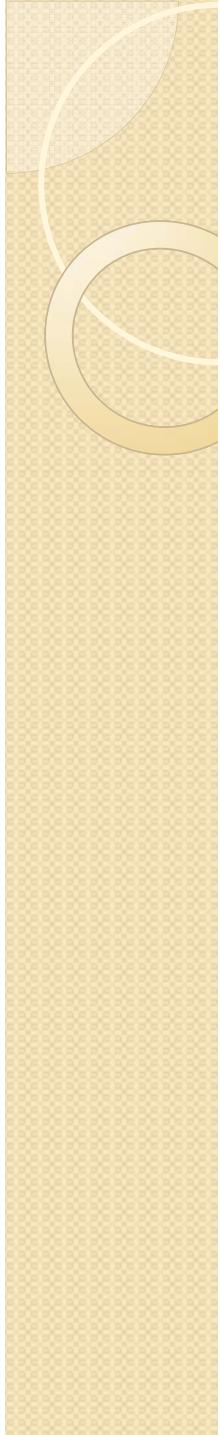
## ORI-1016 (October 2012)



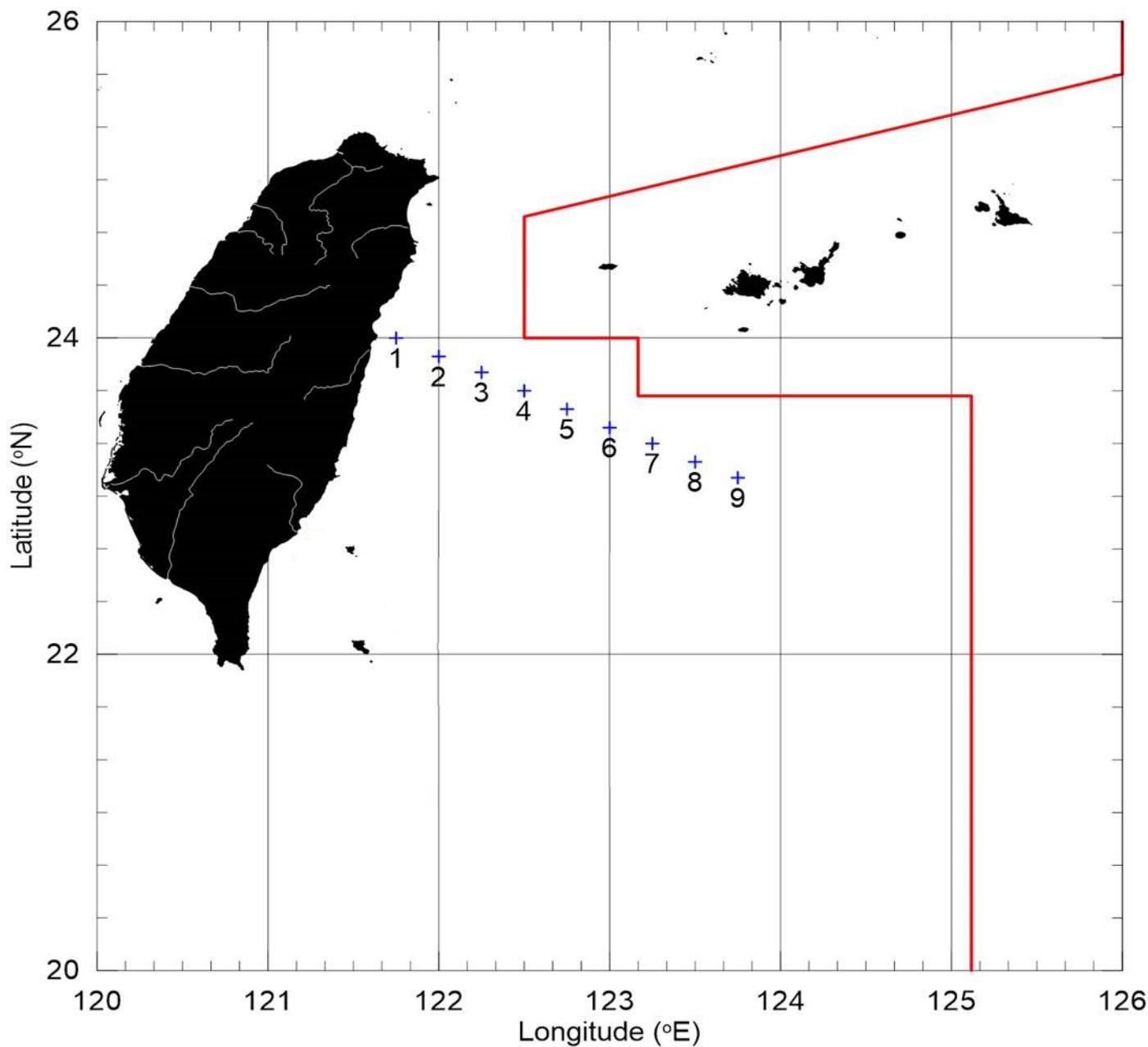


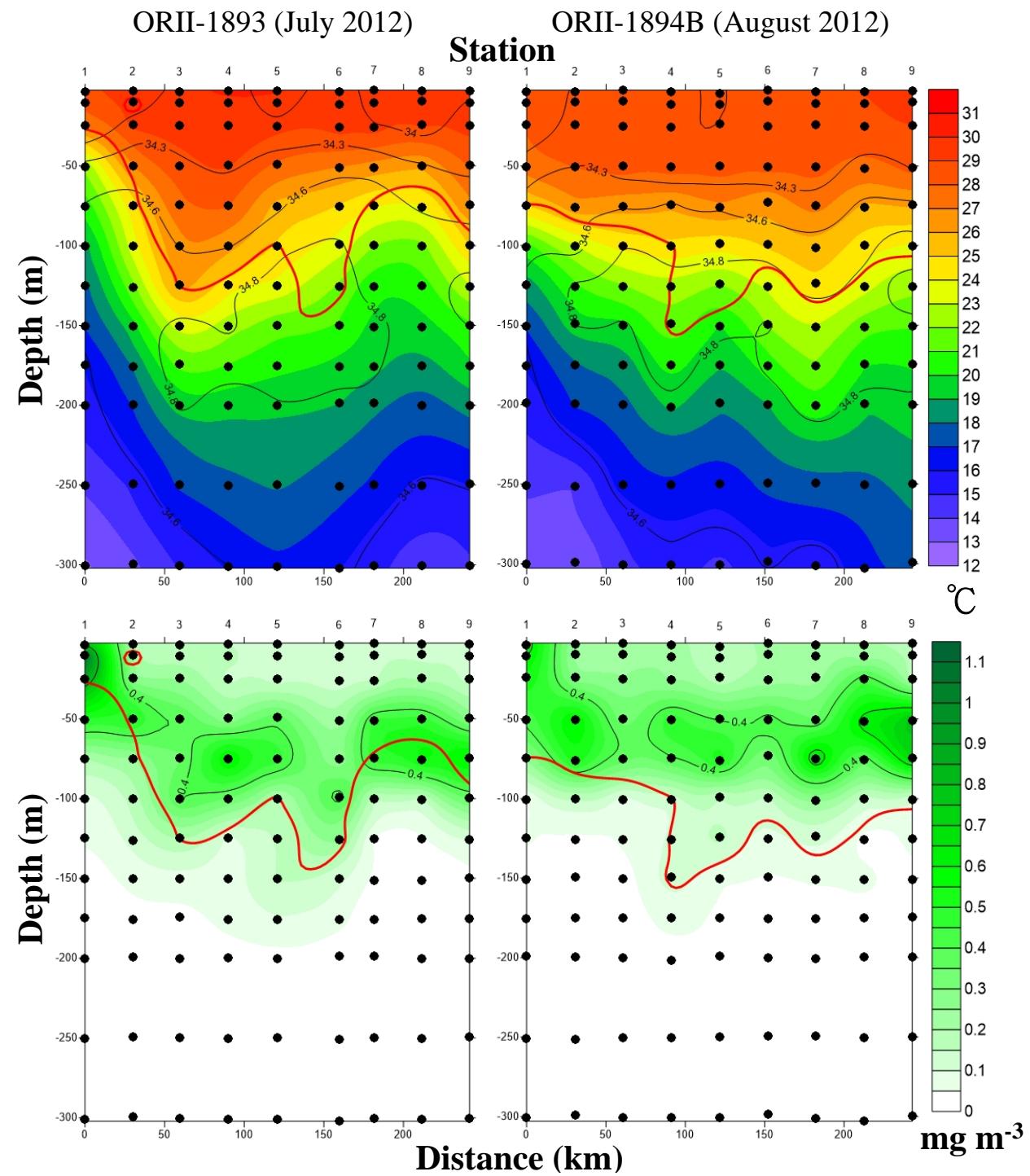


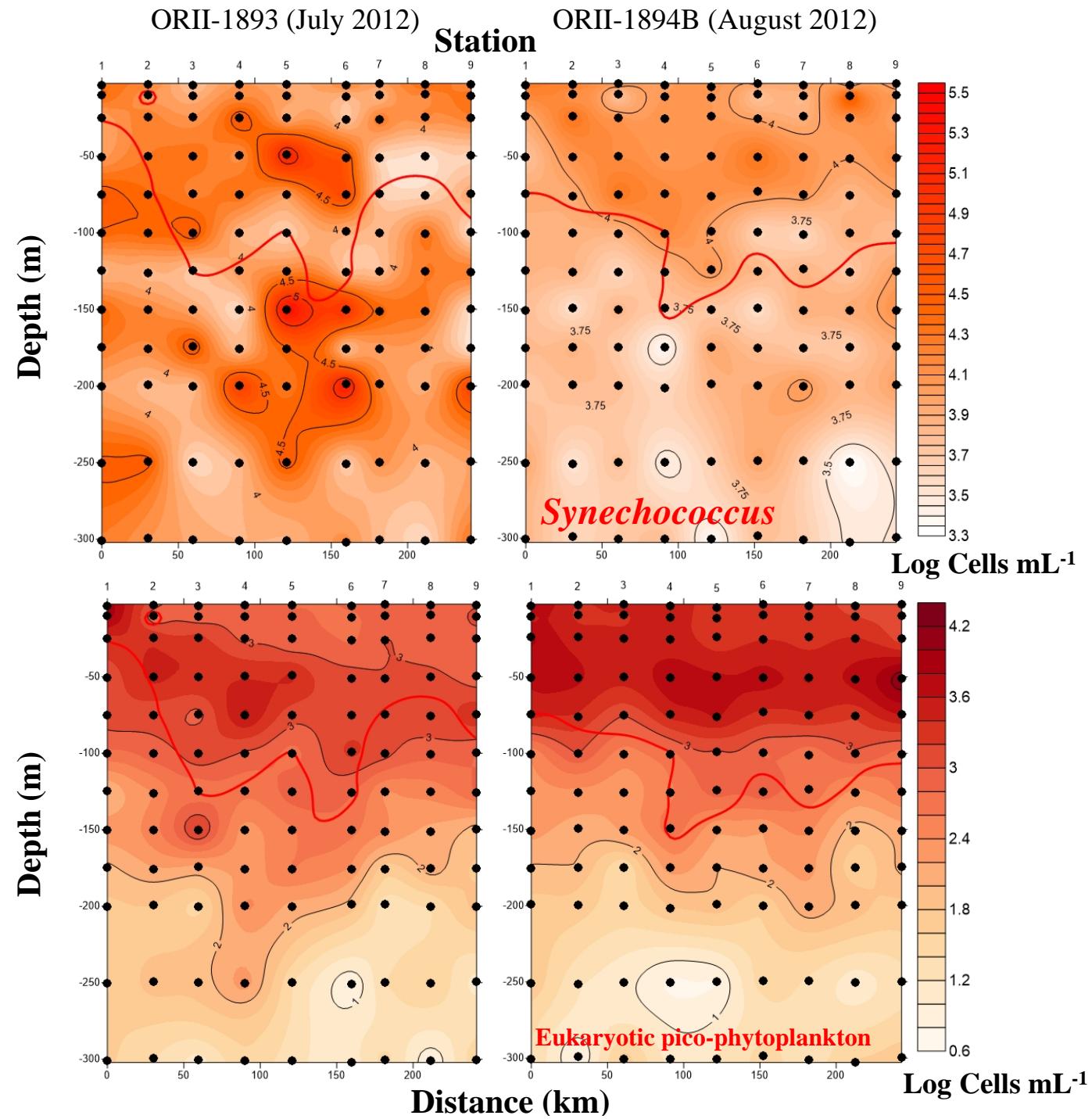




ORII-1893 (July 2012)、ORII-1894B (August 2012)







Thanks for attention

