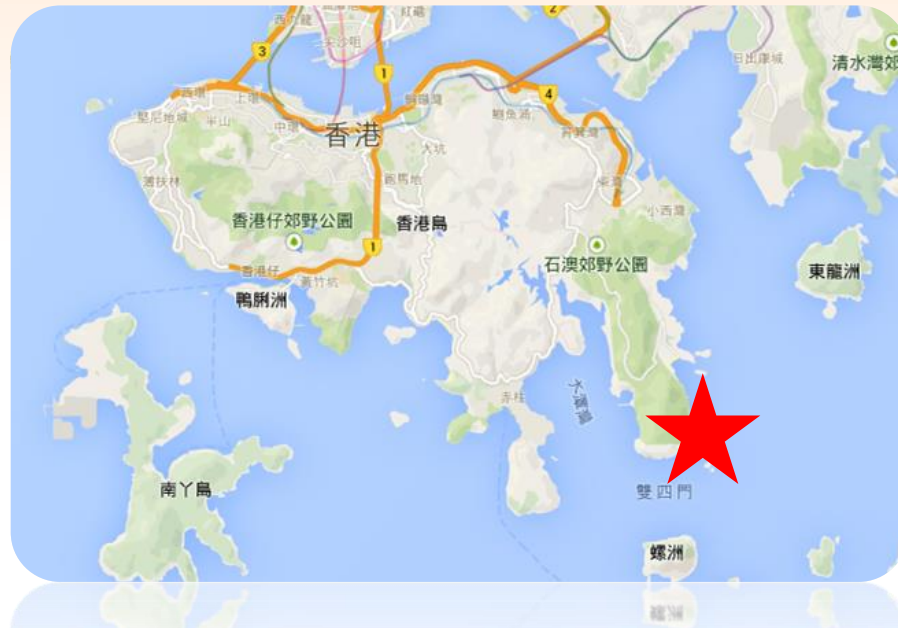




The Swire Institute of Marine Science (SWIMS)

A research facility of
the University of Hong Kong



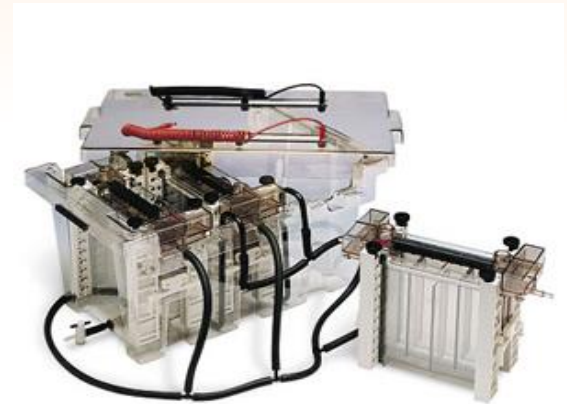


Research Report (Dr. Dineshram Ramadoss)

Hiroto Inomata
Tokyo University of Marine Science and Technology

2-D(two dimensional) gel Electrophoresis

- Separate proteins by pH (charge) and size(molecular weight)
- Effective for studying total proteome of non-model organisms





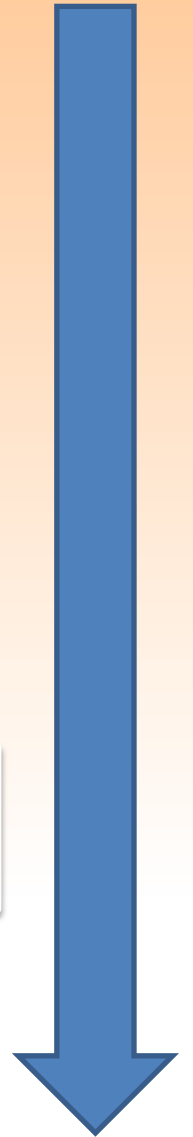
Protein

Purification

1st Dimension (pH)

2nd Dimension (size)

Analysis / Identification



pH3

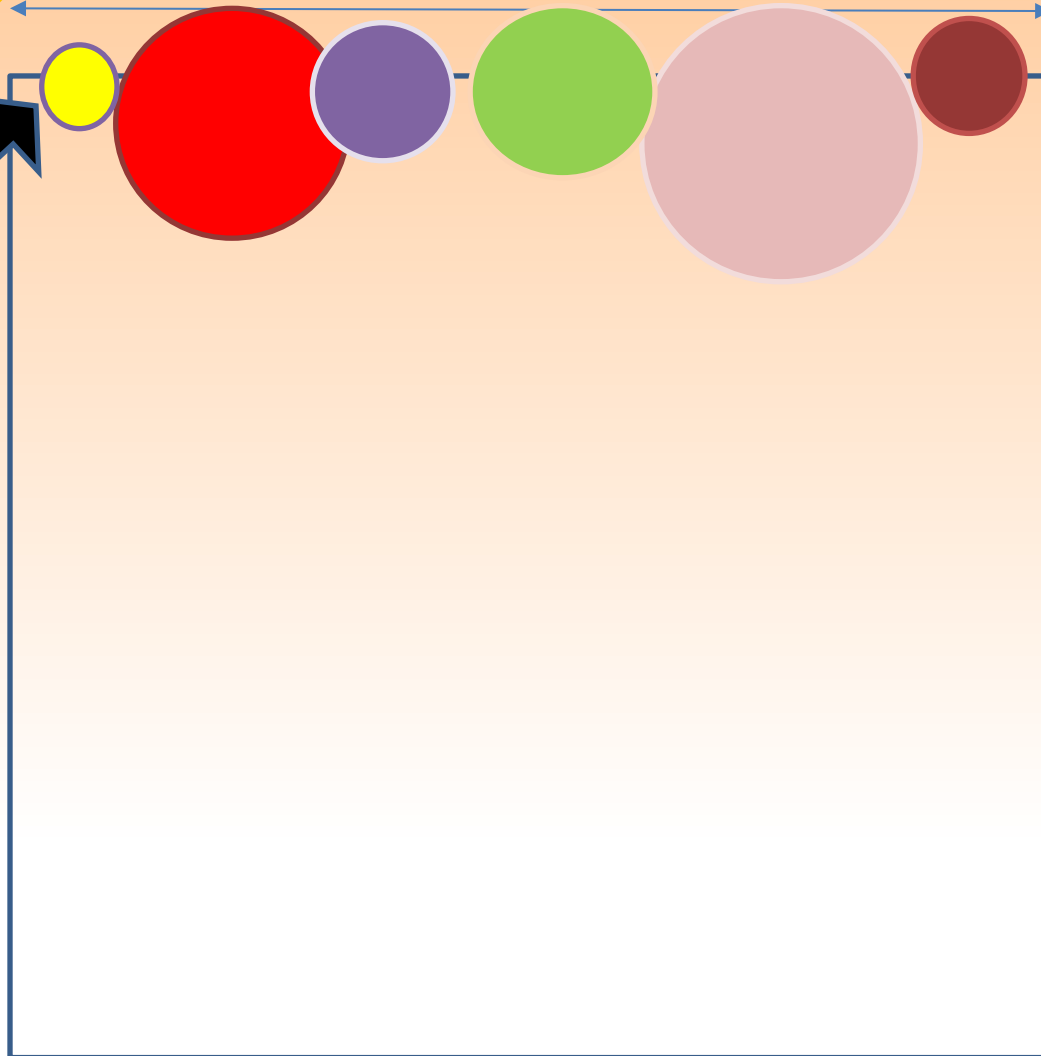
(1st dimension)

pH10

Big
(\approx 2nd dimension)

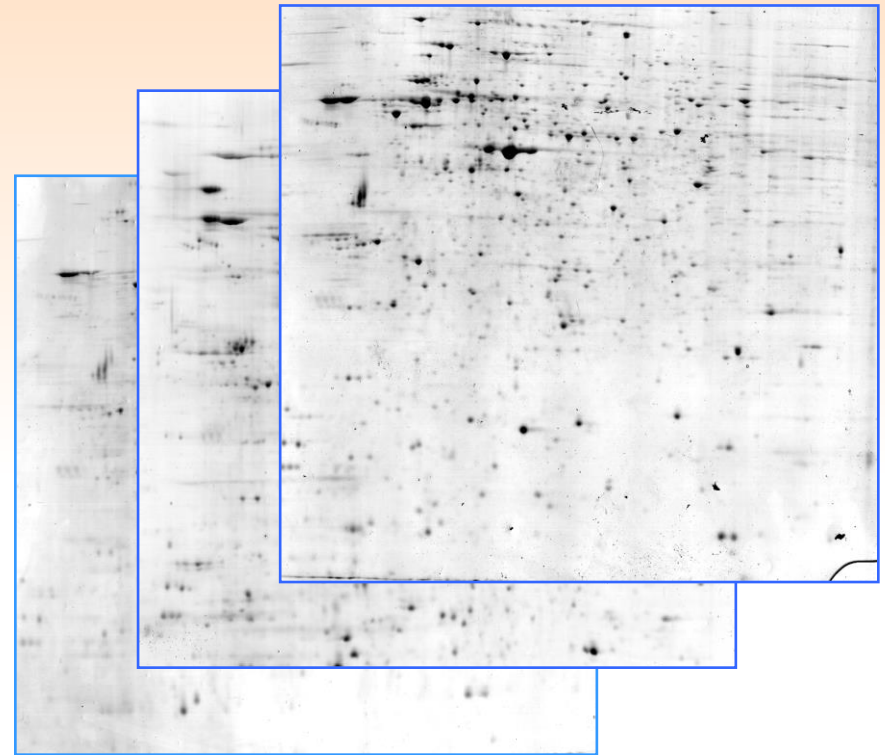
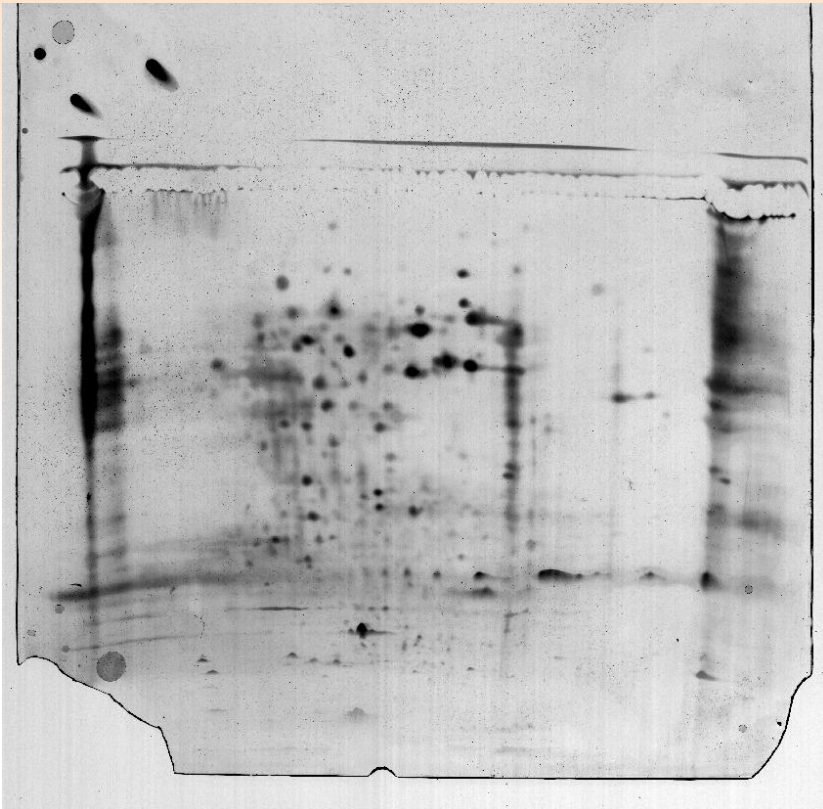
Small

Protein



Analysis

- Find causative protein of the disease



Reflection



Thank you!



Research Report

(Yoshimi Katayama with **Dr. Terence P. T. Ng**)

Yoshimi Katayama
Tokyo University of Marine Science and Technology

Thermal ecology of intertidal animals

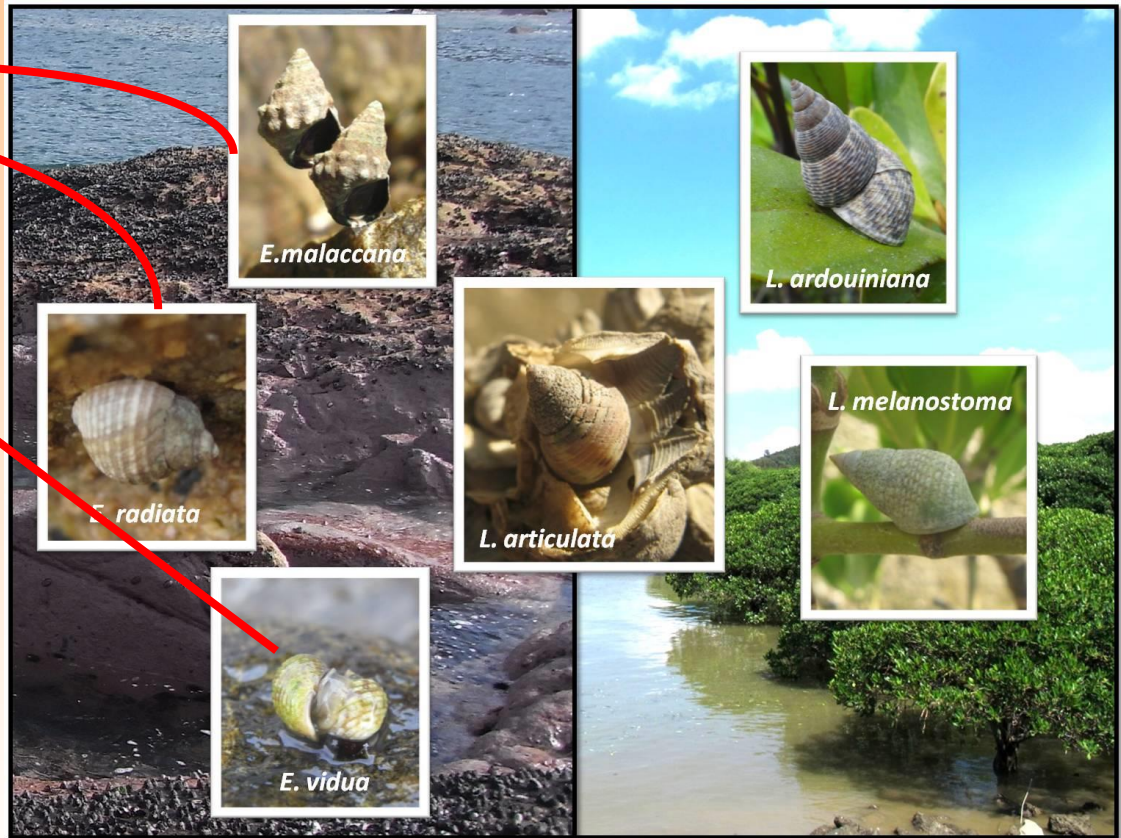
Aims of the project

- To understand how intertidal animals (e.g. snails) cope with heat stress
- To investigate the heat tolerance of intertidal animals

Tower



A. knysnaensis



E. malaccana

L. ardouiniana

E. radiata

L. articulata

L. melanostoma

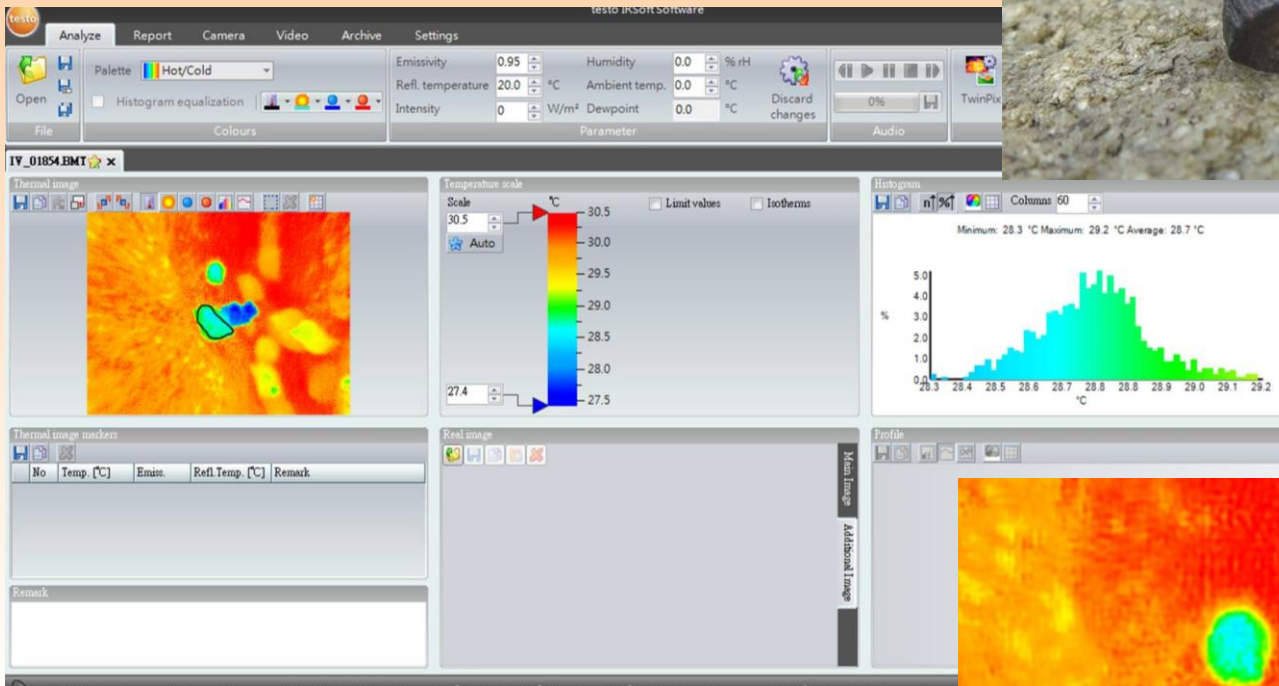
E. vidua

Study animal : Littorinids (Family: Littorinidae)

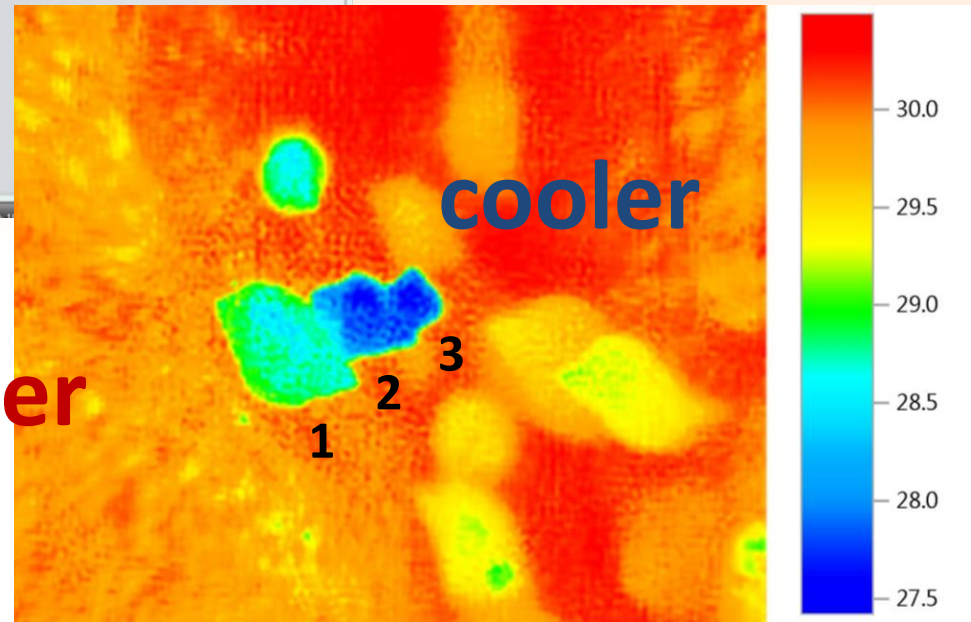
Size : 6-15mm

Habitat : Intertidal zone

Why do snails make tower?



A. knysnaensis



Thermal picture

Thermal ecology of intertidal animals

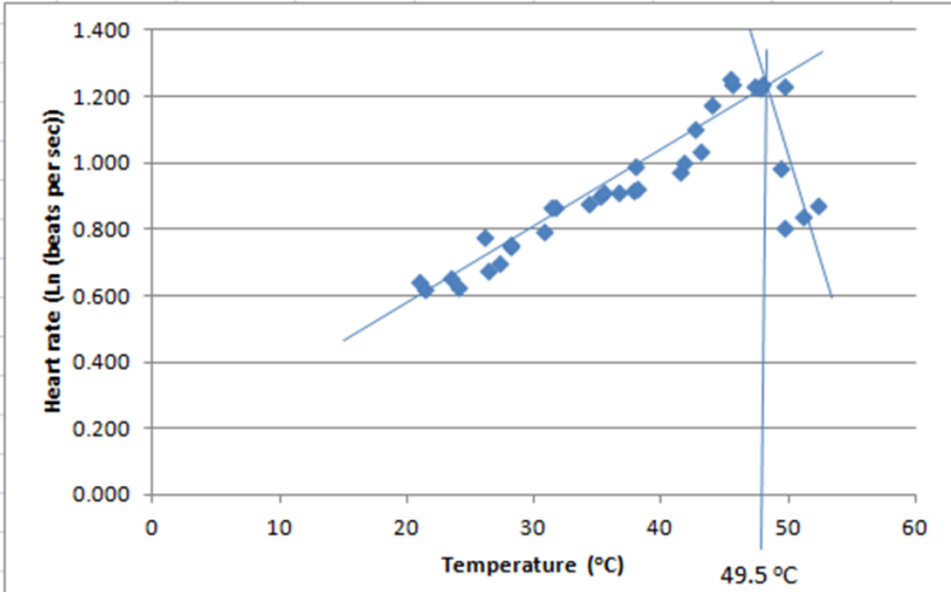
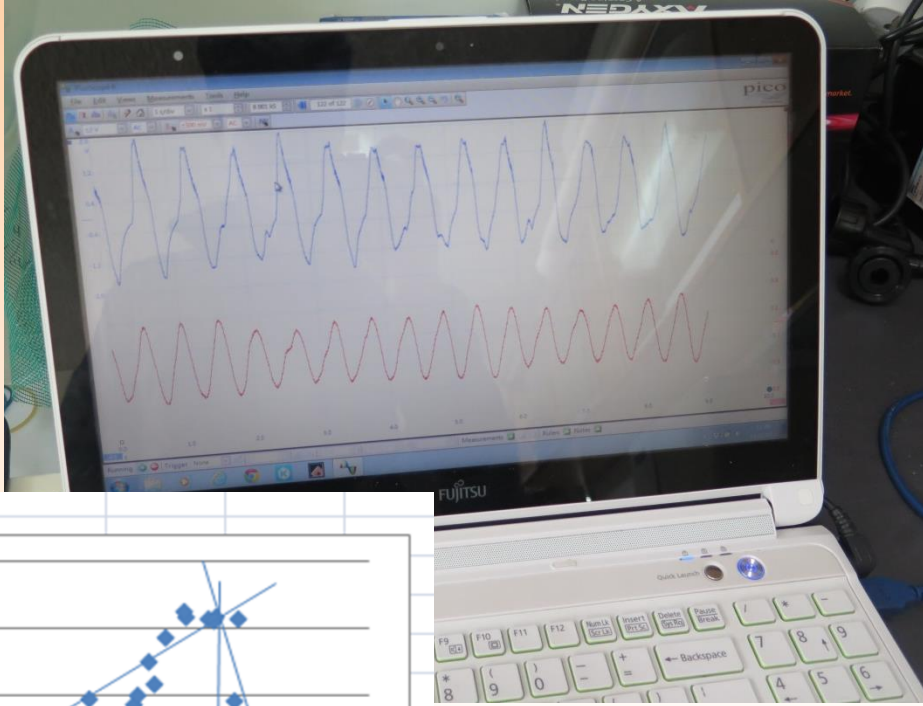
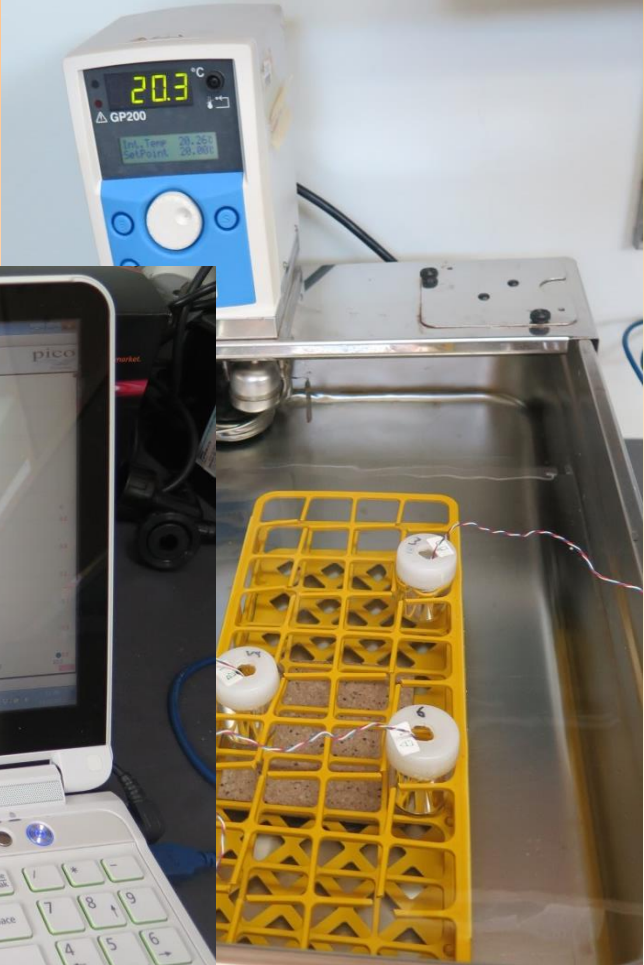
Aims of the project

- To understand how intertidal animals (e.g. snails) cope with heat stress
- To investigate the heat tolerance of intertidal animals

How hot can they tolerate?

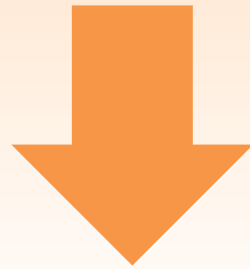
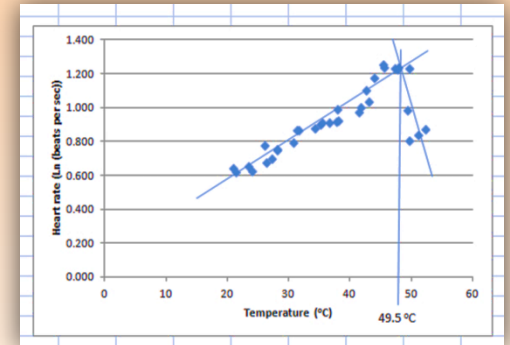
Putting snails in high temperature.

Measure the heart rates



Find out the break point temperature

The heart rates of different species peak at different temperature.



- Make comparisons between species
- Predict who will be the winners and the loser under climate change

Reflection



Thank You !!!

What are OSTRACODA ?

small



Crustacea

Shells



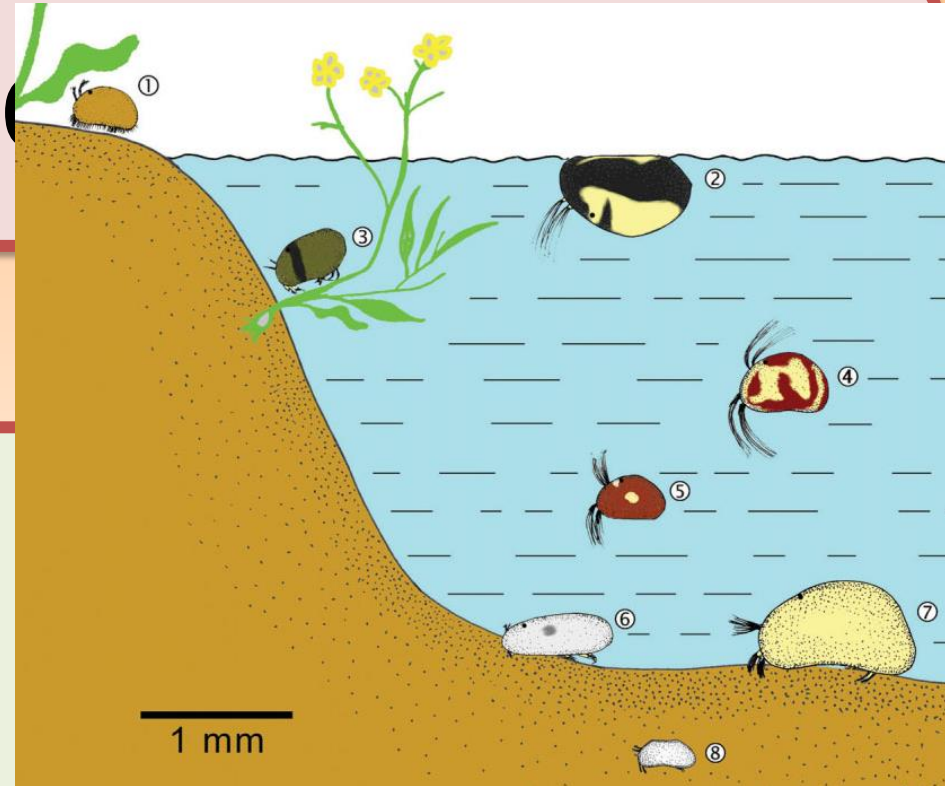
What do OSTRACODS

OSTRACODA

- good fossil record
- Inhabit mainly aquatic environments (fresh and sea water)

We can understand...

Past Environments
(five hundred million years)



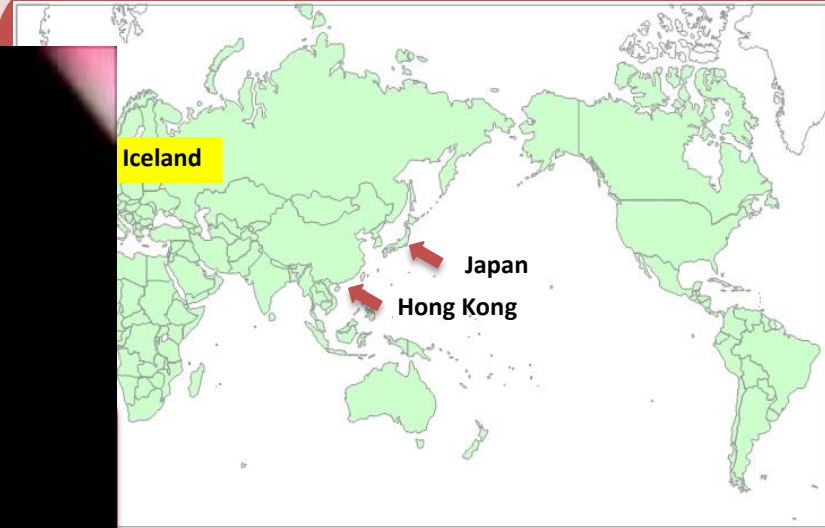
What is her work?



places around Iceland (spacial) and cores (temporal distribution)

• **Correlation to physical and chemical properties**

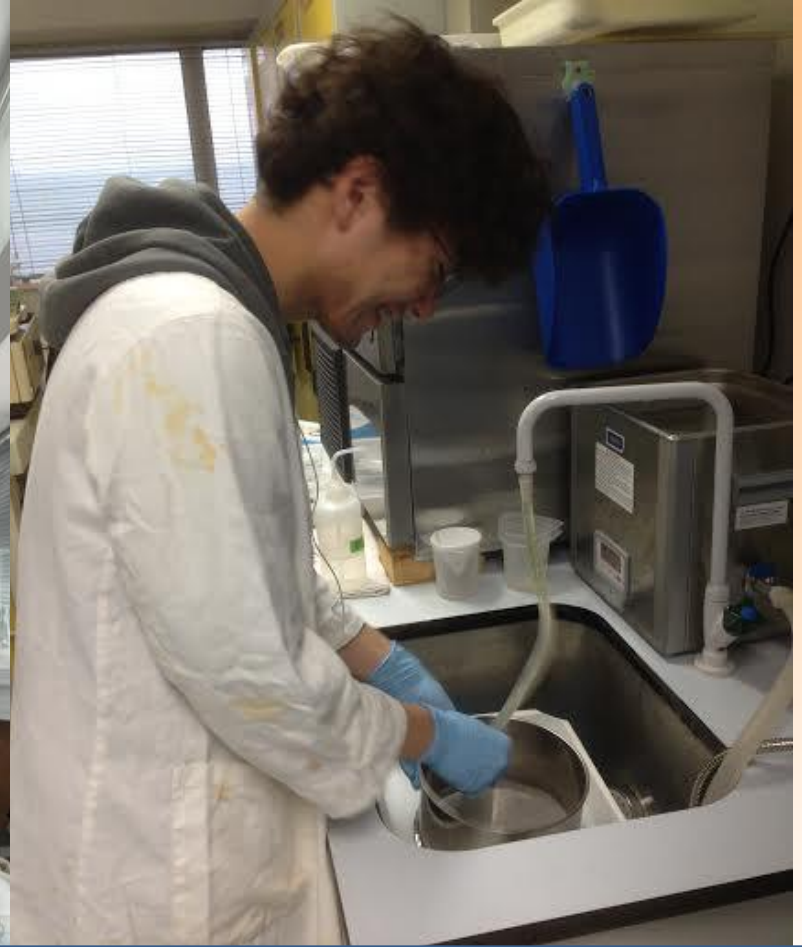
→ In order to determine the controlling factors of deep sea environments



Reflection



Thank you for your cooperation!!



Research Report (Ms. Marielle & Ms.Circle)

Kunpei Kosaka

Tokyo University of Marine Science and Technology

Paleoecological Approach in *HK*

HK marine ecosystem has been influenced by human...

Feature of
Ostracoda



To understand HK shallow marine environment

What she does



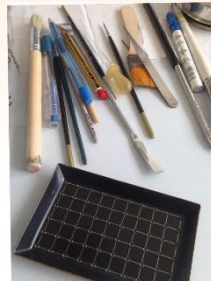
Sediment



Wash



Dry



Pick up



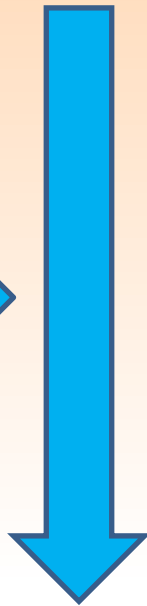
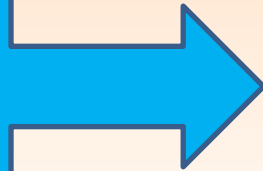
Sort



Sea Cucumber

Resource, but not understanding

Understand
their...
Growth
Reproduction



Understand their "Population
Dynamics"

What is this?

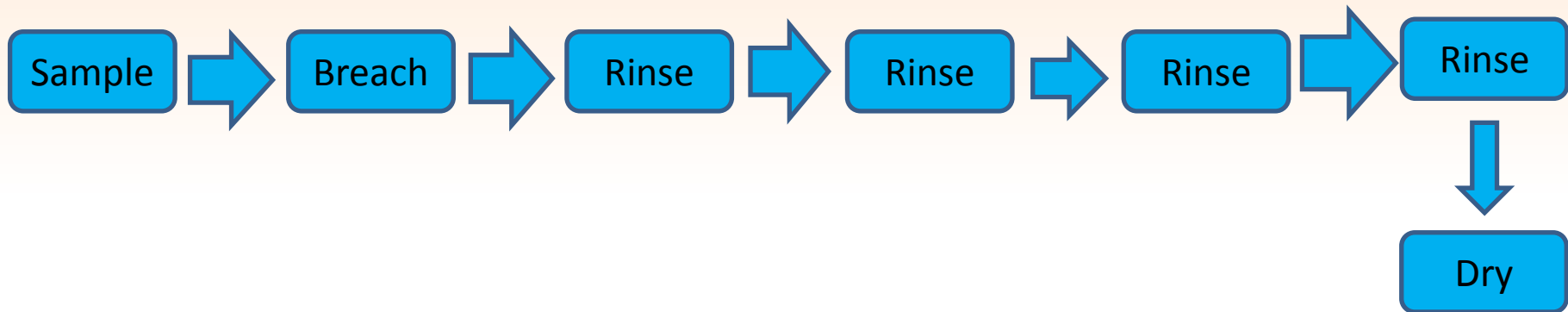


Gonads
(生殖腺)

Gonads



Dermal



Reflection



Thank You !!!



The Swire Institute of Marine Science (SWIMS)

Question time



Thank you for listening!!

