



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY  
Division of Life Science

*LIFS Seminar Series*

Biodiversity and host-usage of coral-associated barnacles  
in the West Pacific: spanning from the tropics to the  
marginal coral communities in Jeju Island, Korea

by

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**Abstract**

Coral-inhabiting barnacles (Thoracica: Pyrgomatidae) are obligatory symbionts of scleractinian and fire corals. They are important suspension feeders in the coral reef systems and have close relationships with their coral hosts. In the present study, we have conducted extensive SCUBA diving samplings in Jeju Island in Korea, Kochi in Japan, Taiwan, Hong Kong, Malaysia and Papua New Guinea to collect coral barnacles (all have DNA barcode sequenced) and with its coral hosts identified. We attempt to study the biogeography of the coral barnacle species and the latitudinal variation in its coral host usage in the Indo-Pacific region. A total of 3833 individuals of coral barnacles (covered 32 barnacle species) had their DNA barcode sequenced and host identified. Most of the barnacles in the genus *Cantellius Nobia*, *Darwiniella* and *Galkinia* have wide distribution, being presences in Korea, Japan, Taiwan, Hong Kong, Malaysia and Papua New Guinea. However, *Cantellius hoegi*, *Neotrevathana elongatum* sp. nov. have narrower distribution, being only found in Taiwan. Comparing the host-usage of the wide spread species, there are latitudinal variation in host-usage in *C. euspinulosum* and *C. arcuatus*. In Jeju island, *C. arcuata* only inhabit *Montipora millepora*, whilst it can be found in 7 coral species in Taiwan. In Japan, > 90% of *C. euspinulosum* is found on *Montipora* coral, whilst > 90% of *C. euspinulosum* are present on *Porites* in Taiwan. In Papua New Guinea, *C. euspinulosum* is collected from *Porites*, *Goniastrea*, *Montipora* and *Psammocora*. All these coral hosts are present in all sampling locations, suggesting such host change pattern is not related to host availability. There are some species are specialist through the Indo-Pacific, including *Darwiniella* which are commonly found on *Cyphastrea* corals and *Cantellius septimus* are associated with *Montipora*.

**Date** : **28 April 2017 (Friday)**

**Time** : **4:00 p.m.**

**Venue** : **Padma and Hari Harilela Lecture Theater (LT-C)**

(Host faculty: Dr. Karen Chan)

***All are Welcome!!***