

문서번호 APCC-출장-16-0679(2016-06-28)

TRAVEL REPORT FORM

출장보고서

결 재	선임연구 원	팀장	부서장	원장
	06/27	06/27	06/28	06/28
협 조	유태우	김옥연	김형진	정홍상

I. Reporter 보고자

Department 소속	Position 직위(직급)	Name 성명	Travel Date 날짜	Note 비고
기후변화연구팀	선임연구원	유태우	6/19~6/26	

II. Major Activities 주요업무 수행내용

1. Main Contents and Activities 주요내용 및 활동

- 해양생태계 분야 세계 최대 학회인 13th International Coral Reef Symposium에 참여하여 온난화와 해양산성화에 따른 생태계의 영향 및 관련 연구 정보를 수집
- 해당 분야의 major player들과의 네트워킹을 강화함
- 추후 국제공동연구에 대한 논의를 진행함

2. Relevance to APEC Climate Center's Activities 결론 및 소감

- 최근 기후 변화 연구에서 중점적으로 논의되는 분야 중의 하나인 해양생태계, 특히 태평양 도서국과 동남아를 아우르는 열대/아열대 지역 (Coral triangle)의 산호초 생물들의 기후 변화에 따른 영향 그리고 현재 어느 분야의 연구가 활발히 진행되는지를 파악하였음. 이를 통해 APEC 기후 센터의 추후 연구 방향을 고려할 수 있었음.
- 현재 본 선임연구원이 포함된 국제공동연구그룹의 연구가 leading 연구임을 확인할 수 있었고, 연구팀의 미래 방향 및 인력 확충 방안을 논의하였음.
- Leading Scientist들에게 APEC climate Center를 소개함.
- 태평양 도서국 및 동남아 지역의 해양 생태/정책 연구자들의 발표를 듣거나 미팅을 진행하였고, 이를 통해 해양 지역의 현재 상황 및 연구 수준을 파악함.

III. References 참고사항

(with attachment of any information or report in case of attendance of conferences, workshops and meetings) 학술대회, 워크숍, 회의 등 참석 시 관련 정보 및 문서 첨부

1. Presented and Collected Materials 주요 수집자료

2. Suggestions and Remarks 건의사항

13th International Coral Reef Symposium (ICRS)

Bridging Science to Policy

The 13th International Coral Reef Symposium (ICRS)

The ICRS is sanctioned by the International Society for Reef Studies (ISRS) and held every four years. It is the primary international meeting focused on coral reef science and management. The Symposium will bring together an anticipated 2,500 coral reef scientists, policy makers and managers from 70 different nations in a forum to present the latest research findings, case histories and management activities, and to discuss the application of scientific knowledge to achieving coral reef sustainability.

ICRS In The News

Caring About Coral - Ruth Gates, Robert Richmond and Mark Hixon

A Preview of the ICRS - Caring About Coral" An interview with Bob Richmond, Ruth Gates and Mark Hixon on ThinkTechHawaii on Thursday, 31 March 2016.

Theme: "Bridging Science to Policy"

Coral reefs provide essential ecological, economic and cultural services to the people of tropical and subtropical islands and coastal communities worldwide. While scientific knowledge about coral reefs and their structure, functioning and responses to stressors has increased exponentially over the past few decades, the state of reefs globally has declined during this period, at a comparable rate in many places. To address this disconnect, a theme of the 13th ICRS will be "Bridging Science to Policy" with specific goals focusing on:

1. Improving trust and communications among scientists, policy makers, managers and stakeholders.
2. Developing strong partnerships between political leaders and the scientific community.
3. Guiding efforts and strategies for effective allocation of limited financial, human and institutional resources to halt and reverse coral reef decline locally and globally.
4. Developing a framework for quantitatively evaluating the effectiveness of coral reef protection and recovery activities and initiatives by applying the best available science.

About the ISRS and ICRS 2016

The world's major coral reef science meeting, the International Coral Reef Symposium (ICRS), is held every four years.

The sanctioning organization is the International Society of Reef Studies.

- Founded in 1980, ISRS is the largest society of reef scientists in the world, with over 800 members.
- The principal objective of ISRS is to promote the production and dissemination of scientific knowledge and understanding of coral reefs, both living and fossil, for public benefit.
- The ISRS publishes Briefing Papers and Statements about the state of coral reefs for the benefit of the wider community.
- ISRS produces and distributes the quarterly scientific journal *Coral Reefs* containing peer-reviewed scholarly works on the geology, biology, ecology, and environmental issues regarding the world's coral reefs.
- ISRS holds annual meetings, sponsors biannual conferences, prints and distributes the newsletter *Reef Encounter*, and supports students through fellowships.

The ICRS is devoted to the best reef science available, with the purpose of sharing scientific findings with government agencies, resource management, and non-government organizations throughout the world.

Previous ICRS have been held in Cairns (Australia) (2012), Fort Lauderdale (2008), Okinawa (2004), Bali (2000), Panama (1996), Guam (1992), Australia (1988), Tahiti (1985), the Philippines (1980), Miami (1977), Australia (1974), and the 1st ICRS in India (1969).

The ICRS 2016 is important because it provides the international science community with a platform to:

- Increase global knowledge and interest in coral reefs, including sustainable use and conservation strategies;
- Showcase successful science, conservation and management efforts;
- Develop collaborations and partnerships to increase international capacity to address coral reef issues; and
- Increase global awareness of reef degradation and possible solutions by extensive promotion in the media.



» 인쇄



인쇄: 2016년 4월 19일 화요일 오후 1:52:42

인쇄

보낸사람	2016 ICRS <confirmation@sgmeet.com>
보낸일시	2016/04/19 13:31
받는사람	Taewoo Ryu <TaewooRyu16@apcc21.org>
참 조	Taewoo Ryu <TaewooRyu16@apcc21.org>
제목	2016 ICRS Invitation Letter

4/18/2016

Taewoo Ryu
12, Centum 7-ro, Haeundae-gu
Busan 48058 Republic Of Korea

RE: 2016 ICRS – Honolulu, Hawaii, USA, 19–24 June 2016, Letter of Invitation

Dear Dr. Taewoo Ryu :

On behalf of the planning and organizing committee for the 2016 ICRS, we would like to confirm your paid registration ID #20797 to attend this meeting and invite you to participate.

We encourage you to visit the web site for more information on this important meeting at <https://www.sgmeet.com/icrs2016/>.

This letter does not convey any obligation by the society for your hotel, transportation, registration or any additional expenses associated with your attendance at the meeting. Also this letter of invitation does not reflect any action by the ICRS 2016 travel awards selection committee. We look forward to your participation and, to meeting you at the conference.

Sincerely,

Dr. Robert Richmond,
Convener
13th ICRS Kewalo Marine Laboratory
University of Hawaii at Manoa
richmond@hawaii.edu

Epigenetic mechanisms of transgenerational acclimation during climate change

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Rising ocean temperature threatens survival of marine organisms. Although many species are susceptible to future climate change, some show remarkable ability of acclimation after generations. However, molecular mechanisms for such transgenerational acclimation are unclear yet. Here, we sequenced and analyzed genomes, methylomes, and transcriptomes of coral reef fish, *Acanthochromis polyacanthus*, exposed to future ocean temperatures and reared multiple generations. We identified 200 key genes involved in thermal acclimation including cardiovascular, transporter, and metabolic genes. This implies how epigenetic inheritance of DNA methylation on cardiovascular genes contribute the acclimation capacity of the reef fish.