

Proceedings of 4th International Symposium on /

EASTAR 2000

and Asian Bio-logging Science

December 15-17, 2007 Royal Phuket City Hotel, Phuket, Thailand

Edited by Nobuaki Arai

Preface

It is my pleasure to publish the proceedings on 4th International Symposium on SEASTAR2000 and Asian Bio-logging Science (The 8th SEASTAR2000 workshop). We, as a part of the biosphere should perform sustainable use of biological resources without destroying the ecology. Whilst there still are mysterious things in aquatic ecology, expectations for the possibility of providing the necessary biological resources exist. However, in recent years, the number of aquatic species has decreased. Conservation of these species is becoming a major social problem.

We set the challenge to clarify the ecology of aquatic animals which are not readily visible by using bio-logging. Bio-logging is a new method to monitor, record, and measure a living organism's basic physiological functions making the best use of information technology. We place small transmitters or recorders on target species and obtain ecological information of aquatic animals. This is a method to see "what is unseen".

We are performing the Southeast Asia Sea Turtle Associative Research (SEASTAR2000), the Mekong Giant Catfish Tracking Project (MCTP) and the Dugong Biological Survey (DBS) as part of the 21st Century Centers of Excellence (COE) Program (2002-2006) and the Global COE Program (2007-2012). All the species of the projects are seriously endangered and need a sufficient degree of protection. They are listed in the Convention on International Trade in Endangered Species (CITES) Appendix I. However, very little is known of the species whilst the implementation of their conservation is a pressing problem in Thailand and neighboring ASEAN countries. From this standpoint, it is important to discuss mutually with each other and among the researchers and administrators of the countries concerned.

We launched the first SEASTAR2000 workshop in 2000 in Kyoto, Japan. Since then the meeting has been held every year and 8 proceedings were published. The proceedings now include many topics other than sea turtles.

I hope to continue the meetings and create the next generation.

だ井 病 売 Nobuaki Arai Secretariat to SEASTAR

Associate Professor, Kyoto University

Part I: SEA TURTLE

Tagging activities of olive ridley turtle at Gadongalay and Gayetgyi Islands, Bogalay township in Ayeyarwady division, Myanmar

by Maung Maung Lwin

p.3

Conservation efforts of sea turtles in India: Socio-economics and the need for a comprehensive action plan

by A. Murugan

p.7

Assessment of incidental catch of sea turtles in relation to the fishing practice in Indonesia

by Ngurah N. Wiadnyana

p.11

Genetic diversity of the green turtle nesting populations in Yaeyama Archipelago, Japan by Hideaki Nishizawa, Junichi Okuyama, Osamu Abe, Masato Kobayashi, Kenzo Yoseda and Nobuaki Arai p.15

Comparison of the activity budget between wild and reared juvenile hawksbill turtles by Kengo Kataoka, Junichi Okuyama, Masato Kobayashi, Osamu Abe, Kenzo Yoseda, Tohya Yasuda and Nobuaki Arai p.19

Preliminary result of ontogenetic change of wave orientation of green turtles in the initial growth stages

by Junichi Okuyama, Hideaki Nishizawa, Osamu Abe, Masato Kobayashi, Kenzo Yoseda and Nobuaki Arai p.23

Electroejaculation and semen evaluation in olive ridley turtle (*Lepidochelys olivacea*) and hawksbill turtle (*Eretmochelys imbricata*) in Thailand

by Manita Tanasanti, Chanita Sujaritthanyatrakul, Kamolporn Dhanarun, Komsin Sahatrakul, Parinya Sakorncharoun, Sontaya Manawatthana, Pornchai Sanyathitiseree and Kaitkanoke Sirinarumttr

p.29

Part II: AQUATIC MAMMALS

Are ancient dugong bones useful for analyses?

by Osamu Hoson, Go Ogura, Noriyuki Ohtaishi and Sen-ichi Oda

p.35

Seasonal characterization of dugong feeding and biomass utilization on selected site in Talibong Island

by Nanako Amamoto, Kotaro Ichikawa, Nobuaki Arai, Tomonari Akamatsu, Tomio Shinke, Takeshi Hara and Kanjana Adulyanukosol p.41

Community protected area at Cape San Agustin in Philippines

by Gliceto O. Dagondon and Lilia Paglinawan

p.45

Preliminary estimation of detection rate of dugong acoustical observation

by Kotaro Ichikawa, Tomonari Akamatsu, Nobuaki Arai, Tomio Shinke, Takeshi Hara and Kanjana Adulyanukosol p.47

Stranding records of dugong (Dugong dugon) in Thailand

by Kanjana Adulyanukosol, Chaiyapat Prasittipornkul, Somchai Man-anansap and Pantaruk Boukaew p.51

Development of detection device for dugong calls

by Rika Shiraki, Kotaro Ichikawa, Tomio Shinke, Nobuaki Arai, Tomonari Akamatsu, Takeshi Hara and Kanjana Adulyanukosol p.59

Small-scale towing survey combined acoustical and visual observation for finless porpoise in the Yangtze River

by Satoko Kimura, Tomonari Akamatsu, Kexiong Wang, Songhai Li, Dong Shouyue, Ding Wang and Nobuaki Arai p.63

Part III: FISH

Diel behavioral pattern of hatchery-reared black-spot tuskfish determined by acoustic telemetry in natural environment and video observation in a fish tank

by Yuuki Kawabata, Junichi Okuyama, Kimio Asami, Kenzo Yoseda and Nobuaki Arai

p.69

Hatchery-reared Mekong giant catfish utilized deep areas in the Mae peum reservoir, northern Thailand

by Hiromichi Mitamura, Nobuaki Arai, Yasushi Mitsunaga, Thavee Viputhanumas and Metha Khachaphichat p.73

Hydatid cysts of zebra shark (Stegastoma fasciatum): a case report

by Nongnut Assawawongkasem, Achariya Sailasutra, Yaoprapa Mathura, Thanida Haetrakul and Nantarika Chansue p.77

A case report: stomach foreign object in whale shark (Rhincodon typus) stranded in Thailand

by Thanida Haetrakul, Somchai Munanansup, Nongnut Assawawongkasem and Nantarika Chansue

p.83

Part IV: SEA BIRD

Distribution of emperor penguins' dive directions under the fast sea ice

by Kozue Shiomi, Katsufumi Sato, Nobuaki Arai, Yasuhiko Naito and Paul J. Ponganis

p.89

Part I: SEA TURTLE

Part II: AQUATIC MAMMALS

Part III : FISH

Part IV: SEA BIRD

Proceedings of the 4th International Symposium on SEASTAR2000 and Asian Bio-logging Science (The 8th SEASTAR2000 workshop)

December 15-17, 2007 Royal Phuket City Hotel, Phuket, Thailand

Organized by
Graduate School of Informatics, Kyoto University,
JSPS Bangkok Liaison Office,
Japanese Society of Bio-logging Science and
Informatics Education and Research Center for Knowledge-Circulating Society

SEASTAR2000 is partly supported by Grants-in Aid for Scientific Research <KAKENHI> (no. 16255011) and Informatics Education and Research Center for Knowledge-Circulating Society<Global COE Program>

The editing work was supported by Dr. Junichi Okuyama. Special thanks to Dr. Tohya Yasuda for his beautiful illustration of front and back covers.

Proceedings of the 4th International Symposium on SEASTAR2000 and Asian Bio-logging Science (December 15-17, 2007) published in 2009