



## What is ATMEC?

Aow Thai Marine Ecology Center (ATMEC) is a marine science focused initiative by Love Wildlife Foundation, aimed at providing education in marine biology and ecology to students of all ages. ATMEC also prioritises conducting original research and conservation projects, in collaboration with the Department and Marine and Coastal Resources (DMCR), in the Gulf of Thailand.

The field station is based at Koh Mun Nai, Rayong, throughout most of the calendar year. Through ATMEC, students and researchers will be given exclusive access to stay on the island which is closed to the public outside of visiting hours. Our facilities on the island are partially run off solar energy, with sustainable use of resources the focus of every daily activity. The island is under the jurisdiction of the DMCR and, as a key site for migratory birds, is also an avian research station.

Education efforts at the center combine theoretical classroom-like conditions with practical activities in the sea and in the lab. In-depth SCUBA training is provided for a variety of marine science topics via courses certified by Conservation Diver.

ATMEC was launched in 2020 and was co-created by Dr. Rahul Mehrotra, a marine ecologist from the UK and graduate from Chulalongkorn University, Bangkok. In particular Rahul manages research and field-based activities at the center and his recent academic pursuits include coral reef ecology, benthic malacology and integrating citizen science approaches in marine science in Thailand.



Founder of Love Wildlife and co-creator of ATMEC, Nancy Gibson is a conservationist and educator and is renowned in Thailand for her years of work. Nancy maintains the smooth functioning of ATMEC, in the classroom, in the water and behind the scenes. She is also the creator of ChomWhales and the executive director of the Bird Conservation Society of Thailand, both of which rely on citizen science efforts.

Amir Patel began volunteering with the sea turtle identification project in 2017 and has since taken up his role as head of citizen science at ATMEC. Apart from being an identification expert, Amir is also well versed in database management. His experience working with citizen science projects around the world makes him well suited to his role in outreach and collaboration.



# Citizen Science at ATMEC

## Ongoing Projects

### Sea Turtle Database

Tao Talay Aow Thai - เต่าทะเลอ่าวไทย (TTAT) is the latest iteration of the sea turtle project which aims to document and monitor sea turtle populations throughout the Gulf of Thailand. The project began in early 2015 at Koh Tao, and has since amassed over 1200 observations of over 150 turtles across 10 years and 5 provinces. Observations and identifications typically require clear photo or video evidence of a turtle's head, the patterns of which can be used to identify individuals. In addition, information regarding date and location of sighting are crucial. While certain areas are well represented, sea turtles from other regions (i.e. Chanthaburi, Chumphon, Trat etc) remain largely unknown. Despite its history, TTAT is entirely voluntarily run and thus, data collection in most areas remain in their infancy. The primary means of data collection are through Facebook submissions, with some use of Instagram, Flickr and other similar portals.



## Sea Slug Thailand

The Facebook page 'Sea Slug Thailand' was created and is administered by a group of enthusiastic divers from various backgrounds and remains one of the most popular marine wildlife pages from Thailand. In collaboration with ATMEC, Sea Slug Thailand has begun the process of cataloguing and analysing the diversity and distribution of these remarkable marine animals in Thailand. The collaboration aims to provide insights into ecosystem variability across Thai waters and has curated over 5000 observations. This includes dozens of previously undescribed species requiring further investigation.



## MARsCI

Short for Marine science Citizens Initiative, MARsCI represents an effort to improve engagement by the recreational diving and snorkelling community throughout Thailand, by contributing observations of marine life to a freely viewable public portal. MARsCI began in early 2020 with a more formal public introduction to the concept due at TDEX of the same year. The concept aims to initiate and develop stronger integration between Thai marine tourism, and marine biological research efforts. MARsCI is unofficially partnered with multiple citizen science projects in Thailand.



## Completed Projects

### Sea Slugs at Koh Tao

Between 2012 and 2015, an in-depth series of investigations into sea slug diversity at Koh Tao was carried out. The research utilised a combination of field surveys and citizen science contributions to document 87 species, of which 25 had not been previously recorded from Thailand. The research was published in the journal *Marine Biodiversity* (link below) and subsequent investigations resulted in the description of 6 new species (at the time of writing). A compilation of species was published in book format in 2018 as a result of the initial surveys.

### Stinging Jellies at Koh Tao

The Gulf of Thailand has been the home of numerous cases of human injury and fatality by specific types of stinging jellyfish. Based on the well-developed community efforts at Koh Tao, and its position as an island wholly reliant on marine tourism, a localised study was carried out between 2013 and 2019 to study ecological and economic impacts of specific stinging jelly species, based on field surveys, citizen science reported data and public questionnaires. The final results are being analysed at the time of writing.



## **The Team**

### Claudia Marcellucci and Alyssa Allchurch

Claudia and Alyssa are both ATMEC staff and as such, are both active in data collection and management of all research aspects, including citizen science efforts. Additionally, Alyssa has managed data entry of the successful Sea Slug Thailand project. Both team members have published research on various topics.



### Thanyaporn Longprasert (Thanwa)

Project coordinator for the TTAT initiative, Thanwa is the first point of contact for the sea turtle project and may be contacted Facebook group link (below). Thanwa is passionate about human-wildlife interactions and conflict, and has participated in numerous social causes throughout her years as a conservationist.



### Pravina Hasselbalch

Our newest member Pravina is an accomplished marine science educator and trainee instructor at ATMEC. She handles the cataloguing of observations under the MARsCI and TTAT projects. Pravina is particularly fond of sea slugs, an obsession that has propelled her to stardom among her many students and the ATMEC team.



Please contact us directly for further information or material on project-specific details, either past or present.

[www.atmec.org](http://www.atmec.org)

[www.facebook/atmec.org](https://www.facebook.com/atmec.org)

At present we welcome initiatives from stakeholders in tourism and education in particular, however we do work alongside multiple organisations including universities, governmental and NGOs. Please see below for public links to the projects listed.

### **Sea Turtle Identification**

#### **- TTAT**

facebook.com/groups/taotalay

#### **- Koh Tao Turtles**

facebook.com/groups/kohtaoturtles

### **Sea Slug Thailand**

facebook.com/seaslug.thailand

### **MARsCI**

facebook.com/groups/marsci

### **Sea Slugs from Koh Tao**

#### **- Journal Papers**

link.springer.com/article/10.1007%2Fs12526-015-0424-7

link.springer.com/article/10.1007/s12526-017-0691-6

biotaxa.org/Zootaxa/article/view/zootaxa.4551.5.4

#### **- Book**

conservationdiver.com/product/nudibranchs-and-sea-slugs-of-koh-tao-and-nearby-islands