

Southern Leyte Coral Reef Conservation Project (LRCP)



Monthly Project Update

February 2018

Location: Napantao Dive Resort, Napantao, San Francisco, Southern Leyte

Project Scientist: Chelsea Waters
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LRCP Project Aim

The Southern Leyte Coral Reef Conservation Project (LRCP) is a collaborative project to protect the coral reefs of Sogod Bay, providing training and conservation education opportunities for local Filipinos, as part of an integrated programme to develop local capacity and ensure the long-term protection and sustainable use of marine resources throughout the region. Coral Cay Conservation (CCC) is working at the invitation of and in partnership with the Provincial Government of Southern Leyte (PGSL). CCC provides the resources to help sustain livelihoods and alleviate poverty through the protection, restoration and management of coral reefs and tropical forests.

CONTENTS:

- Latest news
- Story of the Month
- Educational & Community Projects
- Survey Update
- Marine Scholarship News
- Marine Creature of the month

Latest News

CCC welcomes back to the team, Gareth Turner (Field Base Manager)!

Gareth is coming back to the Philippine project after spending six months on site as part of Coral Cay's Expedition Management Scheme in 2016. He first came into contact with Coral Cay in Cambodia after he had completed his PADI Instructor course in Thailand. He then became part of a team setting up a new coral regrowth and seahorse monitoring project on the island of Koh Rong Samloem. Previous to that, he spent two years working as a Conservation Project Facilitator on a Green Turtle project in the Perhentian Islands of Malaysia as well as diving around places such as Sumatra, the Philippines and Bali. Looking to consolidate his previous achievements in conservation Gareth found what he was looking for in the CCC Expedition Scheme and has since managed the completion of CCC's Caribbean project on Montserrat.



Welcome back to the CCC team, Gareth!

Stories of the Month

Skills Development Programme, February 2018

February has brought us two new volunteers to undertake the Skills Development Programme (SDP), who have now successfully completed all components of the training! By advancing their skills in buoyancy, identification, and underwater sizing, Boey (Scholar) and Silvia (Volunteer) are now able to assist CCC in our survey efforts to monitor reef health and community assemblage which aids in both the establishment and assessment of Marine Protected Area (MPA) effectiveness throughout Sogod Bay. This month they will be assisting us with the assessment of both Napantao Fish Sanctuary and Tabugon MPA's.

COTS Removal Dive

Crown of Thorns Starfish removal dives have continued into February, with numbers finally beginning to taper out into a controllable and healthy population size within the Napantao Fish Sanctuary. A total of 52 CoTS (average size 6 – 12cm) were removed from Napantao Fish Sanctuary, at an average depth of 6m. Strong feeding preferences towards Acropora Tabulate corals was observed. A complete survey of Napantao Fish Sanctuary will be conducted from February to March, which will act as a guide to determine whether the population size needs to be reduced via human efforts, or if natural predators of the sea star will be enough to control their population size. See our creature of the month section for more information on an unusual, yet natural predator of the CoT sea star!

If you are concerned about the CoTS population size within your Municipality, please contact CCC's Project Scientist via lrcp@coralcay.org.



(Top) From left to right: Boey (Scholar), Silvia (Volunteer), Maisy (SO / Divemaster Trainee) and Raf (SI) very happy after the completion of their Advanced Open Water Dive training!

(Bottom): Maisy Fuller (SO) diving across Napantao Fish Sanctuary

- Photo's by Chelsea Waters (PS).



Crown of Thorns (*Acanthaster planci*)

- Photo by Rafael Manrique (SI)

Meet Our Volunteers – Silvia!

Silvia has travelled all the way from her home country of Bulgaria to undertake CCC's SDP. With a Bachelor of Marine Biology and Oceanography from the University of Liverpool, the microscopic world within the ocean has always taken her interest. This experience with CCC will aim to give her a greater understanding of coral reef ecology, as she pursues a PhD in the effects of climate change on phytoplankton communities. With phytoplankton being a major source of primary production within a coral reef ecosystem, the team at CCC are intrigued to learn what your findings suggest for

the health of coral reef communities under future climatic conditions. Currently, Silvia is working with CCC's database to gauge an understanding of CoTS population fluctuations as well as the predictability of CoTS outbreaks throughout Sogod Bay.

What is your favourite underwater memory here in the Philippines?

It is really hard to choose as I have spent more than 45h underwater! We had just finished surveying our house reef

on the South wall, an area with a big drop in depth, known for its high biodiversity. By the end of the survey we met up with the other team and headed to see 'Tippy', the white-tip shark. 'Tippy' was hiding and did not reveal itself to me; instead, we spotted a huge sea krait. Chelsea, our Project Scientist, is terrified from snakes and as we were doing our safety stop, the krait went up to the surface, swimming dangerously close to my buddy, Dudong. It was a scary experience, but also hilarious at how unpredictable the marine environment is!

CCC says goodbye to Susan, Field Base Manager

We sadly said goodbye to Susan (FBM) this month, as she ends her first 6 month stay with the CCC team here in Napantao. We thank Susan immensely for all the work and ideas she has put into this organisation. It is motivating and thought provoking people like Susan that keep that keep ideas flowing and the passion for marine conservation alive within organisations such as CCC. We hope to have you back on site again someday soon!



Top: Silvia in her natural habitat.

- Photo by Maisy Fuller (SO).

Bottom: The Tabugon survey team after a day of surveying and surprise whale shark encounters around the site.

- Photo by Chelsea Waters (PS).



Photo: Susan with the local team on her last day on site. You will be missed!

- Photo by Maisy Fuller (SO).

Education and Community Projects

International Year of The Reef 2018

The International Coral Reef Initiative has declared 2018 as the third International Year of the Reef (IYOR). The initial IYOR was designed in 1997 in response to increasing threats on coral reefs and associated ecosystems. The hope was to increase awareness of the value and threats to coral reefs, and to promote conservation, research and management efforts on a global scale.



The goals of the 2018 IYOR are to:

<http://www.iyor2018.org/>

- Strengthen awareness globally about the value of, and threats to, coral reefs and associated ecosystems.
- Promote management partnerships among all shareholders: government, the private sector, academia, and the local community.
- Identify and implement effective management strategies for conservation, increased resiliency and sustainable use of these ecosystems.
- Share information on best practices in relation to sustainable coral reef management.

GET INVOLVED and organise an event by contacting CCC at lrcp@coralcay.org!



Rafael Manrique (SI) diving across incredible coral cover at Napantao's Fish Sanctuary.

- Photo by Chelsea Waters (PS).

Survey Monthly Update

Survey background: Since January 2013, survey efforts have been focused on assessing potential and existing Marine Protected Areas in Sogod Bay to provide appropriate management recommendations. To do this CCC uses an expanded version of the Reef Check protocol, which has been customised to perfectly fit our work in Sogod Bay. Prior to this a baseline appraisal of marine resources in Sogod Bay was carried out. If you would like more information about our surveying please contact our Project Scientist, Chelsea Waters.

February's survey has been dedicated to Barangay Tabugon MPA (Liloan Municipality), to obtain valuable information on its MPA effectiveness since its establishment in 1993, and associated boundary shift in 2014. For CCC's 2018 survey year, re-visiting existing MPA's will be our priority to determine whether factors such as environmental conditions and/or fisherman compliance towards MPA guidelines is leading to an increase/decrease in fish and benthic community productivity. A 2016 study by Di Franco *et al.* identified healthier fish stocks, higher fisherman incomes, and the social acceptance of management practices if five attributes are present:

1. High MPA enforcement
2. Presence of a management plan
3. Fisherman engagement in MPA management
4. Fisherman representative on the MPA board
5. Promotion of sustainable fishing



Jesse Tinapay (CLO) and Jose Ydel (DM) setting off between underwater surveys to conduct a social survey at Tabugon.
- Photo by Chelsea Waters (PS).

These findings could deem pivotal to Filipino coastal communities in order for them to achieve conservation goals, whilst allowing for profitable exploitation of fisheries and the reef's resources.



- Photo of Tabugon MPA by Chelsea Waters (PS).

Scientific reports from all of CCC's sites around the world are available on our website at
<http://www.coralcay.org/science-research/scientific-reports>

Marine Scholarship News

Each month CCC offers Filipino nationals who display an ambition to study and protect the vital marine ecosystems of the Philippines an opportunity to take part in our Marine Conservation Scholarship. The programme lasts for one month and involves training in SCUBA diving to the level of PADI Advanced Open Water. Scholars then take part in an intensive Skills Development Programme giving them the knowledge and expertise to conduct sub-marine surveys of the coastline.

CCC welcomed Jorgine ("Boey") Peña to the programme this month! Living in Manila, perfecting her snorkelling and SCUBA diving skills to explore the underwater world was limited to holidays and her high school physical education classes. After pursuing a career in Speech Communication, she has realised that you can make your hobby a career if you have the motivation to do so! Since participating in CCC's Skills Development Programme, she is now Reef Check certified and able to dive with an entirely new perspective with her newly acquired identification skills. On behalf of the CCC team, we are so proud of your accomplishments, and how quickly you eased into becoming an underwater surveyor. Good Luck in your ventures to becoming a Wildlife Conservationist!



Boey, now a natural at hanging upside-down underwater.

- Photo by Maisy Fuller (SO)

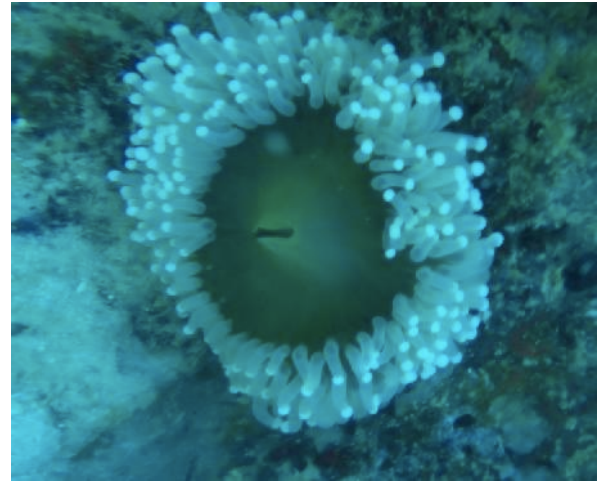
"The past month has been a dream. From getting to dive six days a week to learning about different marine species to going on actual underwater surveys, the work didn't feel like work at all. And even then, there was still some time for play, with recreational dives, trivia games, hide and seek even, and pretty much anytime the dogs would be pretty close by. I still can't believe how much happened in one month, and how much I've been able to accomplish. Without a doubt, the highlight of my entire experience was being in the company of people who were all working towards this same goal of conserving marine life, and just learning all that I could from them. A huge thank you to Coral Cay Conservation for the incredible opportunity, all the lessons, and a month's worth of incomparable memories."

If you would like to apply for the CCC Marine Conservation Scholarship programme or read more about it, please visit: <http://www.coralcay.org/volunteer/scholarship-opportunities/>

Marine Creature of the Month!

CCC's *Creature of the Month* goes to the Hoplites Corallimorph (*Paracorynactic hoplites*). This creature of the month is dedicated to CCC's Field Base Manager, Susan Robertson, who we will sadly be saying goodbye to at the end of this month. Corallimorphs form a relatively small group of boneless animals within the order Anthozoa (Phylum Cnidaria). They are most closely related to stony or reef building corals, due to the presence of nematocysts (stinging cells) found within the tentacles.

The Hoplites Corallimorph can be identified by the fringe of tentacles surrounding a central mouth, and can be found settled under coral ledges and in reef crevices. Studies looking into the size of the nematocysts (stinging cells) found within the tentacles, suggest these corallimorphs are highly efficient predators. Living in ocean waters of up to 28m, a strong correlation between depth and feeding preference of the Crown of Thorns Starfish (CoTS) has been established, with CoTS numbers being persistently low in areas where the Hoplites Corallimorph are abundant. In order to capture their prey, polyps actively move their tentacles to detect potential prey. Once a prey item has been detected, and a tentacle comes into contact with a suitable prey item, it will immediately stick onto the preys skin whilst firing its stinging cells (nematocysts). The Hoplites Corallimorph has the ability to quickly and actively extend themselves to latch onto their prey and pull the items toward the mouth. The body can extend to five times its normal length when doing this, ingesting the prey item whole. Once the soft tissues are dissolved, the undigested pieces of the prey (e.g. spines) are regurgitated. Polyps of the Hoplites Corallimorph have the ability to ingest a sea star larger in diameter than itself. Whilst a large portion of the Hoplites Corallimorphs daily metabolic energy requirements can be obtained from predating on these large bodied sea stars, they also specialise in predating on short-spined sea urchins, sea cucumbers, brittle stars, nudibranchs, and plankton when prey is scarce.



Top: Hoplites Corallimorph.

- Photo by Chelsea Waters (PS).

Bottom: Extended Hoplites Corallimorph feeding on a sea star.

- Photo by ACCESS

Learn More!

To learn more about the CCC Philippines project, to join the expedition, or to find out about local marine scholarships, visit www.coralcay.org