PROJECT LAUT

GOOCEAN

APRIL 2024 COMMUNITY OUTREACH EVENT

Local Staff At Nomads & Surrounding Dive Centers

For this month, the school children were not available to join a community event at our facilities, so instead we took this opportunity to introduce and train some of the local staff on our conservation initiatives.
The local staff included the captains, the compressor service attendant, and several local dive guides.
We introduced them to our initiatives, gave them a brief overview of our coral restoration project, and then engaged them with painting the structures.

Local Staff Integration

This initiative will be a long term project by Project Laut, to engage and include more locals in our surrounding area into our conservation projects. Many of the older generations don't get as much focus when it comes to community outreach, and we believe it is highly beneficial to take the time to include this demographic.

In addition to this, many of the local guides have been diving in Penida for several years but lack the deeper knowledge and understanding of the ecosystem that they are frequenting.
It is important for us at Project Laut to share our love for the oceans and it's inhabitants with everyone, and to deepen their knowledge so they can act as environmental stewards and educators.

Our longer term plans involve engaging local divemasters in the in-water planting portion of our restoration efforts, so they can get first-hand experience with handling coral fragments and planting techniques.

Through engaging them in hands-on conservation activities, it is hoped that they will begin to think of the coral with a new perspective & appreciation, and this can spread throughout the local dive community, and through them, to the local community at large in Nusa Penida.

APRIL 2024 UPDATE
UMICORE
500 CORAL STRUCTURE PROJECT

GoOcean April 2024 Goals:

- 175 Total Coral Spiders Planted in the Umicore Patch
- Dropping additional Cement Painted Spiders to accumulate Coralline Crustose Algae (CCA)
- 2 Boat Outings for Turtle Monitoring
- Monthly Coral Restoration Update

Project Laut April 2024 Accomplishments:

- 30 Cement Painted Spiders dropped in the ocean to collect Crustose Coralline Algae (CCA)
- 175 Total Spiders Planted in the Umicore Patch (as of 30 April 2024)
  - 50 planted in April 2024
- 15 Individual Donor Structures were planted on
- 14 Dives performing Coral Work (12 via boat, 2 via shore entry)
- 1 land-based Coral Work Days - painting concrete on the structures
- 2 Boat Outings for Turtle Monitoring in the Restoration Area

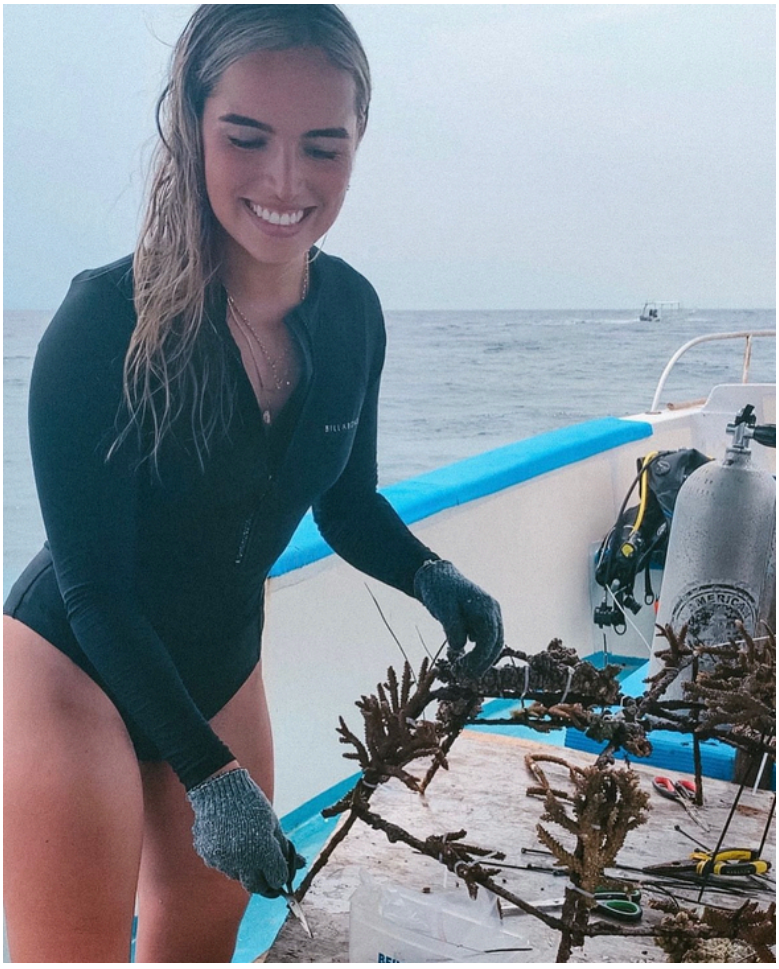

Figure 1. New Divemaster and Conservation Intern, Btitney, attaching coral fragments

APRIL CORAL WORK OVERVIEW

April water conditions continued to fluctuate quite a bit over the month - with some days not allowing for any structures to be completed due to intense currents and other days allowing for up to 12 structures to be completed in one session. One major challenge our team faced this month was many of our Divemaster and Research Interns finished the program. We were able to just barely reach the goal of 50 spiders on the last day of the month. Currently, we only have one intern, whereas we strive to have 5-8 interns at any given period of time. We will almost certainly, not reach the coral spider goal in May due to the lack of divers. However, Project Laut is working to resolve this issue - we have a local divemaster joining the team in the middle of May and have an additional intern joining at the end of May. It will take a little time to train everyone to ensure their safety, but will put us on the right track.

Throughout this month, the Project Laut Team spent significantly more time planting on coral structures compared to maintenance. Conditions (i.e. no unusually high temperatures) remained more suitable in April, allowing for a higher percentage of the fragments to survive that were planted over the past few months.

Week One: Project Laut took used the boat three times for coral work days. Each of these days, Project Laut had 5 divers in the water and three team members on the boat attaching corals. Two of the boat work days were very successful with the team planting on 13 structures in total and on the other boat day, the team had to abort the dive without completing any structures due to extreme currents. All of these 13 structures counted towards the 15 individual structures need to be planted on this month.

Week Two: The team both painted 30 structures and dropped them to start accumulating crustose coralline algae (CCA). Additionally, one maintenance dive was performed and the team used the boat two days, deploying 9 structures.

Week Three: Conditions were highly variable this week. However, the team did coral work on three different days using the boat. A total of 21 structures were planted. Additionally, the research team attempted to map the restoration sight again on two occasions, but due to poor visibility one day and strong current the other, they were unable to do so.

Week Four: The team also conducted three boat days this week in generally good conditions. In total, we ended up deploying a total of 23 structures. At the end of the month, we were able to plant 15 individual structures and 50 Umicore structures

APRIL OVERVIEW OF PHYSICAL CONDITIONS

Temperature

- Water temperature remained more favorable, but still on the higher side of the threshold for coral fragments
    - Average water temperature was closer to 27C (the upper threshold for fragment survival = 28C) during our dives, allowing a higher percentage of fragments to survive

Visibility

- Water clarity was really good over the month of April in general. Only two days had very poor visibility (less than 5 meters). The overall good clarity in the water also allows for more irradiance, needed for the photosynthesis required to provide energy to the corals

Currents

- Water conditions were wildly variable this month, making some days very easy to work in and other days extremely difficult. On days with strong currents, the Project Laut team had to end the coral work early as conditions became unworkable on several occasions. Besides one maintenance diver performed via shore entry, two other shore dives were attempted, but currents were far too strong.

APRIL SEA TURTLE MONITORING

In April 2024, two Turtle Monitoring Dives were conducted at our Dan's Reef Restoration Site (includes the Umicore Restoration site to the West). In total, 5 Hawksbill sea turtles were observed on Dan's Reef Restoration Site this month. Of these 5 turtles, 2 were new sightings, having never been observed before, and 3 were resightings. Notably, one of the turtles (Iverson - pictured below) that was resighted had not been seen since 2021. Four of the turtles were observed during our turtle monitoring dives, while one member of the team was able to record a turtle durning our coral work.

Figure 2. Hawksbill Sea Turtle (NP0040, Iverson) on Nusa Penida, photo by: Sita