



FINAL REPORT OF 3rd OCEANOLOGY COURSE (EBC/FMAS/CMAS)

The 3rd Course of Oceanology of the Science Diving Team (EBC), UNAM, was held in Puerto Morelos, Quintana Roo from July 1 to 5, 2017, with a total academic load of 30 hours, plus 8 dives.

The course consisted of 8 assistants and 1 new Marine Science Instructor, who seek to advance their preparation as divers, or acquire new knowledge to increase their knowledge in their different areas of study.

The inauguration of the event was carried out by the M. in C. and Instructor Laura Ivonne Martín Pérez. Giving the objectives of the course, defining the field of Oceanology as a multidisciplinary science and how with the study of this science it is possible to delve into the different problems, promoting the change in some habits for the preservation of the oceans. Then to present to the Staff of instructors, composed by Earth Sciences Intern and Instructor Diego Arriaga Fernández and Dr. and Instructor Norma Angelica Corado Nava.

During the course development, the candidates participated in conferences held in the areas of Oceanography, Geology, Biology and Conservation, according to the CMAS standard.

The sessions that were presented were:

- History of the planet
- Ocean physics
- Tides and current management
- Biotopes and marine profile
- Biodiversity (general)
- Biodiversity (zonal)
- Current state of the oceans (global change)
- Corals
- Immensity of the ocean, incursions and encountered in it

The field work was developed based on the topics seen in the presentations, the operational planning resulted in the assignment of work groups, diving zones, equipment and preparation of the vessel, as well as safety procedures for the implementation of the corresponding practices on land and under water, to conclude with the processing of the data obtained.

During the development of the output:



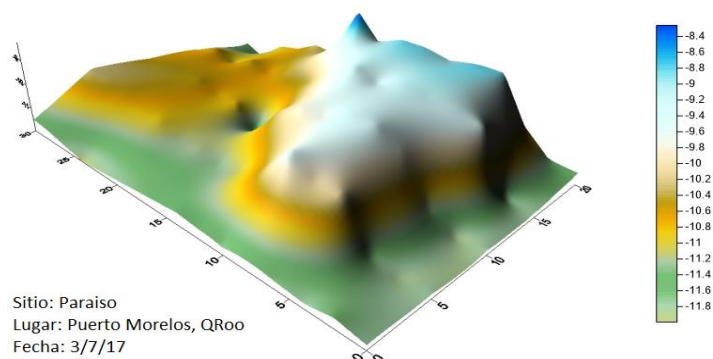
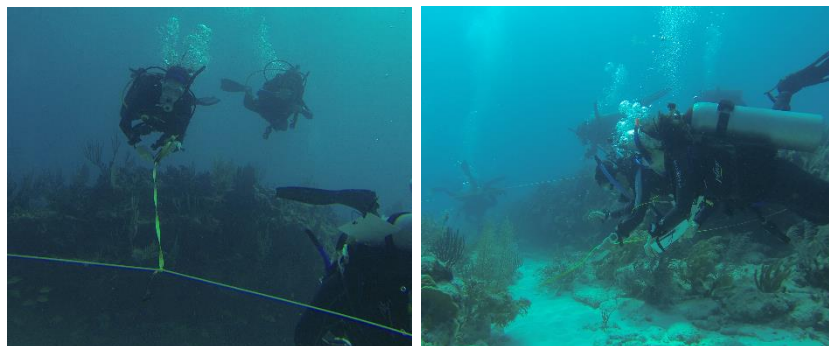
- First day, it began in the afternoon with the inauguration and the first two sessions "History of the planet" and "Physics of the ocean"



- The second day in the morning was the presence of Dr. Ma. Carmen Garcia, who talked about the "Protected Areas in Quintana Roo", in the first dive was the adjustment of the equipment in the site "El bajito", to then start with the practices, measuring the current velocity and turbidity in "Miniwall". In the afternoon, the session "Tides and currents" was continued.



- Third day, began with the session "Biotopos and Marine Profile", in the dives sought to identify the parts of the reef "El Puente", and recreate a profile of the bottom taking data of depth, type of background and temperature along of four transects of 30 m, taking the data every 2 m, with this the candidates could experience the implications of a sampling of this type, to later generate the bathymetric profile with the data obtained. In the afternoon the first session of "Biodiversity".



- Day four, in the morning, a biodiversity workshop was held, identifying different species within the videos of the previous days. In the dives continued the work of identification in the sites "Aquarium" and "Fish Market".



In the afternoon, the Choral Talk was held, showing the identification of the different species and the use of Coral Watch (coral health instrument).

- The fifth day started with two dives, 1st on the shipwreck "Juan Escutia" to see the corals on artificial sites, and in the 2nd. the practice was implemented with the use of CoralWatch tables. In the afternoon "Dimensionalized the Ocean" and saw the "Current Situation of the Oceans" where a debate about climate change and different concepts was generated today, to end with the talk of Biol. Clotilde Zeckua, about the "FMAS and the Scientific Committee within the CMAS", which detailed the objectives of these programs, as well as the different levels that exist in scientific diving.



In the afternoon, the course was concluded emphasizing the responsibility of being a scientific diver.



The continuing development of instructors and scientific divers in Mexico and Latin America to achieve the professionalization of educators who use scuba diving as a tool to promote conservation awareness is undoubtedly one of the priorities of the Mexican Federation FMAS.

The Scientific Committee of CMAS Zona América brings together specialists from different areas of science and reaffirms its commitment to boost the work of schools and to facilitate the Federations to achieve certification of professionals involved in scientific work, as well as in disclosure for the protection of natural resources.