1st Summer Course
Cave Life: Biodiversity, Adaptation & Evolution

Professors:
Dr. Luis M. Mejia-Ortiz
Dr. Marilú Lopez-Mejia
Dive Master: German Yañez Mendoza

University of Quintana Roo –Cozumel
Dates: June 17 to June 28 of 2013
Register: luismejia@uqroo.mx

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Previous abilities: 1) Basic background of diving activities, or at less swimming.

Language: English

Dates: The course begins on June 17 and end in June 28 from 2013. The first week will be in classrooms in order to discuss and review the theory contents, and the second week the course included practices in cave systems (Full-water and dry systems).

Important dates:
Register from April 15 to May 30.
Start June 17, 2013
End: June 28, 2013.

Cost: $ 12,000. 00 MX Pesos to foreign students
$ 6,000.00 MX Pesos to national students

Include: Material to theory part, Use of equipment and material to cave dive, transportation, food and material to practice part in Riviera Maya during three days.

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- **Theory Contents:**

- Caves classification.
- Biodiversity in caves.
- Classification of biodiversity of caves.
- Energy sources and their links.
- Adaptation in cave life.
- Symbiosis among cave inhabitants.
- Dangerous species and Conservation actions.
- Phylogeography from cave crustaceans.
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- **Practice contents:**

- Cave diving in Cozumel two dives by group. Two different cenotes: Aerolito and Chankanaab System.
- Visit to two cave systems (semi dry and dry caves) in Riviera Maya in order to see the geological formations cave animals, and zonation according with light influences and energy links.

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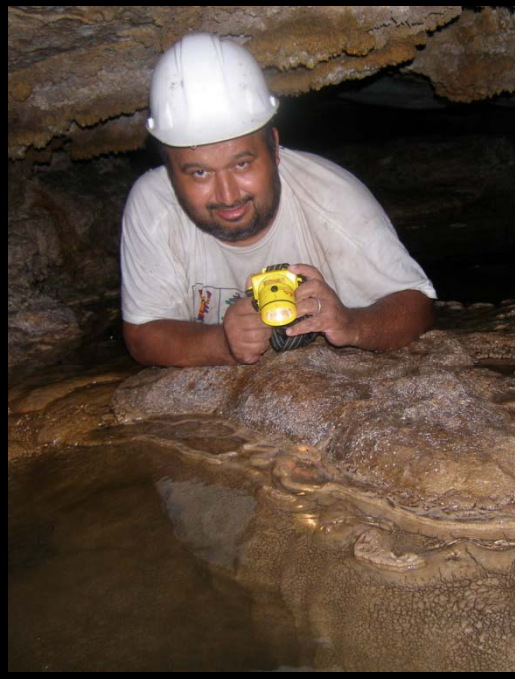
- Cozumel
- Cozumel Island is located at 20°35'15'' N and between 87°01'48'' & 86°43'48'' W, and has an area of 482 $km^{2.}$ This Island is on the north-eastern side of the Yucatán Peninsula in the Mexican Caribbean Sea
- How to reach Cozumel Island
- You can take a flight connection with Houston or Dallas Airports from any place of USA. There are one flight diary from Mexico City. If you take your flight directly to Cancun airport then you can take a shuttle bus just outside of airport building to Playa del Carmen, where you can take a ferry to Cozumel Island.
- Where you stay during the course:
- In Cozumel there are several options to stay, there are hotels, hostels, bed & breakfast, to more information you can review the web site:
- *www.booking.com/**Cozumel-Hoteles***

Cave Life: Biodiversity, Adaptation & Evolution

- Luis M. Mejía-Ortiz

He completed his undergraduate studies at the Metropolitan Autonomous University Xochimilco, did his master's degree from the Faculty of Sciences of the UNAM and earned his doctorate at the Marine Laboratory in Port Erin, from University of Liverpool (England). He is currently a research professor at the University of Quintana Roo, Cozumel and Biospeleology and Carcinology lab director in the same University. He is a member of the National System of Researchers since 2006 in Mexico, in addition to belonging to several scientific societies. He has taught more than 45 courses of Biodiversity, Natural Resources, Zoology, Marine Ecology and Management of Mangroves and Wetlands in the UAM Xochimilco, UQROO-Cozumel and the University of Oldenburg (Germany). He has published 28 articles in journals indexed, fifteen book chapters and five books on Carcinology topics, adaptations to cave life, new species taxonomy and sustainability. His main research interests are the study of groundwater biodiversity of Mexico, crustaceans adaptations to these conditions and caridean crustaceans taxonomy and conservation and natural resource management. He has also been a visiting professor at the Institute of Biology of the UNAM, the Marine Laboratory in Port Erin (England), Aquatic Ecology Laboratory at the Università Tor Vergata (Italy), Department of Integrative Biology of University of California Berkeley and Brigham Young University, (USA) and also in the Zoology Department from Nelson Mandela Metropolitan University (South Africa), and recently in the Water and Coastal Management Postgraduate Studies from University of Oldenburg (Germany).



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- **Marilú López Mejía**

- She did her undergraduate studies in Biology at the Metropolitan Autonomous University Campus Xochimilco, obtained the master's and doctoral degrees at the Institute of Marine Sciences and Limnology, UNAM. She is currently Research Professor Full-time at the University of Quintana Roo, Campus Cozumel. She is a member of the National System of Researchers since 2008 and SEP PROMEP profile since 2009. It registered accredited evaluator CONACYT (QSAR)-National System of Science and Technology Assessment (SINECYT) and research projects Strengthening Programme for Research of the University of Quintana Roo. Dr. Lopez is also recognized as an evaluator of the Committees for the Evaluation of Higher Education, AC (CIEES). Marilú has likewise as referee for reviewing chapters of books already published articles and journals like the Journal of Biodiversity. Belongs to several international scientific societies. She has presented over 60 papers at conferences and published 30 articles in indexed international journals, seven book chapters and three books. Her main research interests are taxonomy, biology, genetics and conservation of Mexico, and also the scientific knowledge divulgation through actions and programs of environmental education and sustainable development which involves the community in general. Marilú has directed and advised 26 undergraduate's thesis. She has also conducted research at the Institute of Biology (UNAM), the Marine Biological Laboratory in Port Erin (University of Liverpool), Aquatic Ecology Laboratory (Universitä Tor Vergata, Italy), the Genetics Lab Crandall (Brigham Young University , Utah, USA), the Sustainable Development Department of the University of Oldenburg, Germany and Crustacean Collection of the Department of Invertebrate Zoology, Smithsonian Institution. Currently she is a member of the International Union for Conservation of Nature (IUCN) Red List-like crustacean expert advice cambarids of Mexico in coordination with the Zoological Society of London and the Encyclopedia of Life (EOL).

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- Germán Yáñez Mendoza

German Yañez is originally from Mexico City and is one of pioneers of Cave Diving in the Yucatan Peninsula.

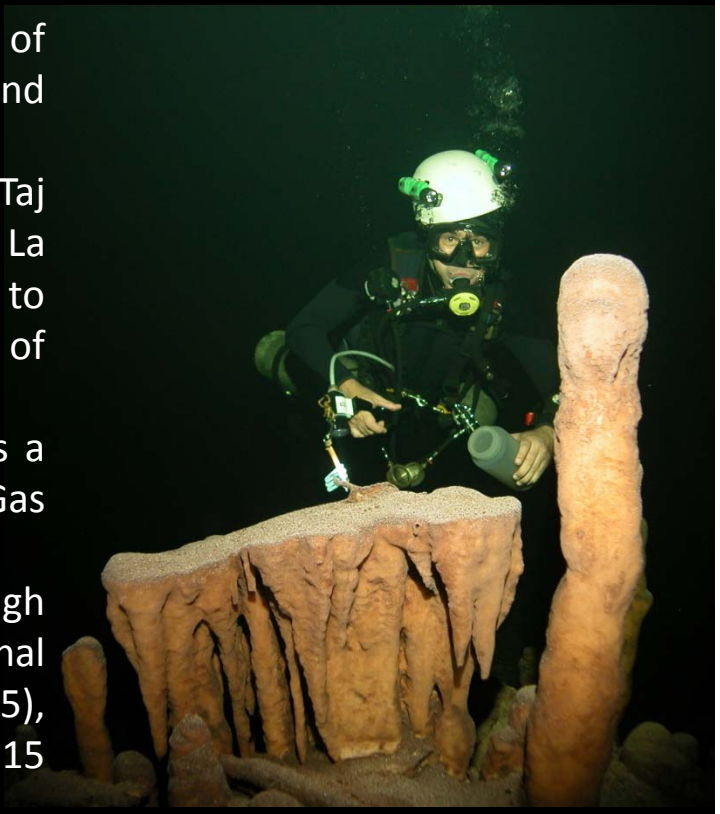
Is the author of two technical manuals for the Mexican Federation of Diving Activities, those are: Subterranean Diving Manual and Introduction to Dry Caving Techniques.

He is one of the main explorers of classic cave systems such as: Taj Mahal, Ponderosa (Eden), Aktun Ko, Aktun Chen (Dry Cave), La Quebrada (Chankanaab Park), Aerolito de Paraiso, Cocodrilo just to name some of them, laying more than 80 thousand feet of exploration line during more than 2,000,00 survey dives

The teaching career in Cave and Technical Diving is long and has a tradition in Mexico, certifying more than 300 Cave Divers and Mix Gas Divers.

German is an Instructor Trainer for Cave and Mix Gas Diving through Technical Diving International (TDI) IT-712, also the National Association for Cave Diving (NACD) Cave Instructor Sponsor (I-95), and is the Safety Officer for the NACD and the NSS-CDS for the last 15 years.

At this moment German Yañez is a Test Pilot for the NAUTILUS CCR Rebreather, utilizing the unit for long deep dives with mix gases, and is a Closed Circuit Rebreather Instructor for this specific Unit through FMAS/CMAS at all levels.



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- **Form to register**
- 1) Name:
- 2) Age:
- 3) Nationality
- 4) Education last level:
- 5) Postal address
- 6) E-mail address
- 7) Telephone in case of emergency
- 8) Chronic diseases
- 9) Know dive or swim
- 10) Send copy of dive certification

Information
Dr. Luis M. Mejía-Ortíz
University of Quintana Roo
E-mail: luismejia@uqroo.mx
cavecrustaceans@hotmail.com

Price: $ 12,000. 00 MX Pesos to foreing student
$ 6,000.00 MX Pesos to national student

Capacity 15 participants