

# Juan Carlos Villaseñor Derbez

jvillaseñor@bren.ucsb.edu | +521(646)102-06-24 | Santa Barbara, CA

## EDUCATION

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**Master of Environmental Science and Management** (Expected July 2017)

**Coastal Marine Resources Management Specialization**

**Latin American Fisheries Fellow**

*Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)*

**Master's Group Project Thesis** (March 2016 – June 2017)

Building a comprehensive framework to be used by marine protected area managers and stakeholders to evaluate the effectiveness of marine reserves in Mexico, including biophysical, socioeconomic and governance data available to the government and NGOs. Project website: [www.turfeffect.org](http://www.turfeffect.org)

Client: Comunidad y Biodiversidad, A.C. (COBI) | Role: Data Manager; Managing and organizing hard copy and electronic data and literature. Leading collaborative development of an R package and a web-based user interface that implement the framework.

**Bachelor of Science in Oceanography, Honors** (March 2015)

*Facultad de Ciencias Marinas – Universidad Autónoma de Baja California (UABC)*

Thesis: Latitudinal differences in size-structure of fish populations along the Pacific coast of Baja California

Involvement: Marine Sciences School Student Committee; Kelp Forest Ecology Research Group

Awards:

- *2012 Distinguished Student of the Oceanography program*
- *2014 Distinguished Student of the Oceanography program*
- *2014 Pedro Mercado Sánchez National Oceanography Award.* For the best undergraduate research project presented at the XVIII National Oceanography Conference, La Paz, Baja California Sur, Mexico

## FELLOWSHIPS

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2015 **CONACyT International Student's Fellowship.** To perform graduate studies at University of California, Santa Barbara (\$ 64,946 USD)

2015 **Latin American Fisheries Fellowship.** To perform graduate studies at University of California, Santa Barbara (\$ 42,000 USD)

2014 **Facultad de Ciencias Marinas, Universidad Autónoma de Baja California.** To attend and present at the XIV National Ichthyology Meeting and III Latin-American Ichthyology Symposium, Morelia, Michoacán, Mexico (\$1,000 USD)

2014 **Facultad de Ciencias Marinas, Universidad Autónoma de Baja California.** To attend to the XVIII National Oceanography Conference, La Paz, Baja California Sur, Mexico (1,000 USD)

2013 **Scholarship by Comunidad y Biodiversidad.** To attend the Marine Conservation Biology Course, by Comunidad y Biodiversidad, Isla Magdalena, Baja California Sur, Mexico

## **FELLOWSHIPS (Continued)**

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- 2013 *Fellowship by Asociación Nacional de Oceanólogos (ASOCEAN)*. To perform a research internship at SQUALUS (NGO), Cali, Colombia (\$ 2,000 USD)
- 2012 *Fellowship by Facultad de Ciencias Marinas, Universidad Autónoma de Baja California*. To attend to the XIII National Ichthyology Meeting and 1<sup>st</sup> Latin-American Ichthyology Symposium, San Cristobal de las Casas, Chiapas, Mexico (\$ 1,000 USD)
- 2011 *Scholarship from The School for Field Studies*. To attend the Coastal Ecology Course, by the School for Field Studies, Puerto San Carlos, Baja California Sur, Mexico

## **PEER-REVIEWED PUBLICATIONS**

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- In prep. **Villaseñor-Derbez, J.C.**, Gómez-Sánchez, M.D., Dreyfus-Leon, M.J. (*in prep.*). Environmental indices and size structures of the yellowfin tuna in the Northeastern and Pacific.
- In prep. **Villaseñor-Derbez, J.C.**, Trujillo-Ortiz, A., Torres-Moye, G., Montaña-Moctezuma, G., Ramírez-Valdez, A. (*in prep.*). Fish-size structures of commercially important species along the Baja California Peninsula
- In prep. **Villaseñor-Derbez, J.C.** & Ramírez-Valdez, A. (*in prep.*). Revisiting the Biological Value Index (Sanders, 1960; Loya-Salinas & Escofet, 1990)
- 2016 Hernández-Velasco, A.J., Fernández-Rivera Melo, F.J., Melo-Merino, S.M., **Villaseñor-Derbez, J.C.** (2016). Occurrence of *Holacanthus clarionensis* (Pomacanthidae), *Stegastes leucorus*, and *S. acapulcoensis* (Pomacentridae) at Isla Magdalena B.C.S., Mexico. *Marine Biodiversity Records*, 9(1). <http://dx.doi.org/10.1186/s41200-016-0062-1>
- 2015 Ramírez-Valdez, A., Dominguez-Guerrero, I., Palacios-Salgado, D.S., Cota-Nieto J.J., Hinojosa-Arango G., Correa-Sandoval, F., Reyes-Bonilla, H., **Villaseñor-Derbez, J.C.**, Hernandez, A., Aburto-Oropeza, O. (2015). The nearshore fishes of the Cedros archipelago and their biogeographic affinities, northeastern Pacific. *CalCOFI Reports*, 56
- 2015 **Villaseñor-Derbez J.C.**, Hernández-Velasco, A, Erauskin, M., Fulton, S., Cota-Nieto, J.J., Torre-Cosio, J., Herzka-Llona, S., Aburto-Oropeza, A. (2015). Effects of short-term marine reserves on grouper and bass populations. *DataMares. InteractiveResource*. <http://dx.doi.org/10.13022/M33K52>
- 2015 Dreyfus M., Mejía-Trejo A., **Villaseñor-Derbez J.C.** (2015). Analysis of null sets (no catch) made by the Mexican tuna seine fleet (2000-2013). *Ciencias Marinas*, 41(2):85-92. <http://dx.doi.org/10.7773/cm.v41i2.2471>
- 2014 Ramírez Valdez A., Montaña Moctezuma G., Torres Moye G., **Villaseñor Derbez J.C.**, Aburto-Oropeza O. (2014). Counting fish in the Kelp forests of Baja California. *DataMares. InteractiveResource*. <http://dx.doi.org/10.13022/M3BC7X>
- 2014 **Villaseñor-Derbez J.C.** & Herrera-Pérez R. (2014). Brief description of prey selectivity and ontogenetic changes in the diet of the invasive lionfish *Pterois volitans* (Actinopterygii, Scorpaenidae) in the Mexican Caribbean. *Pan-American Journal of Aquatic Sciences*, 8(2):131-135

## **OUTREACH PUBLICATIONS**

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- 2016 Dreyfus, M., Robles, H., **Villaseñor-Derbez, J.C.** (2016). Distribución espacial de tallas del atún aleta amarilla (*Thunnus albacares*) capturado por la flota atunera mexicana durante el 2001 y 2014. *El Vigía*, 20(43), 5:8.
- 2015 Hernández-Velasco, A., **Villaseñor-Derbez, J.C.**, Suárez Castillo, A., Torre Cosío, A., Espinoza, A. (2015). Isla Natividad en la Reserva del Vizcaíno. *Espacio Profundo*, 136: 34-40.
- 2015 Robles H., Dreyfus M., **Villaseñor-Derbez J.C.** (2015). Descargas de la flota atunera mexicana en el Pacífico Oriental en 2014 y su comparación con el período 1992-2013. *El Vigía*, 19(42), 3:5.

## **MARINE RESEARCH EXPERIENCE**

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**Monitor Diver** - Facultad de Ciencias Marinas, Universidad Autónoma de Baja California (11/11- 3/15)  
*Ecologic characterization of the communities associated to kelp forests (*Macrocystis pyrifera*) off the coasts of Baja California.*

Principal Investigators: Dr. Gabriela Montaña, Dr. Quillermo Torres Moya

- Performed SCUBA dives for *in situ* fish community sampling (richness, abundance, and estimating lengths) and video-transects for in-lab processing.
- Conducted algae sampling to determine habitat complexity and heterogeneity.

**Monitor Diver** - Facultad de Ciencias Marinas, Universidad Autónoma de Baja California (08/14)  
*Feeding ecology of *Phoca vitulina richardsi* off the coasts of Baja California and Baja California Sur*

Principal Investigator: Dr. Yolanda Schramm

- Performed SCUBA dives in seal feeding grounds to identify fish species that could be potential prey.

**Research Intern** - Fundación para el Estudio y Conservación de Condrictios, SQUALUS (06/13 - 08/13)  
Supervisors: Dr. Andrés Felipe Navia y Dr. Paola Mejía

- Performed studies on sexual maturity, reproduction, and trophic ecology of six elasmobranch species.

**On-board scientific observer** – CICESE (9/13)

*Biological Monitoring Program for Guadalupe Island: White shark observation*

Principal Investigator: Dr. Oscar Sosa

- Scientific observer on recreational vessels for white shark observation.
- Taking information on efforts of the activity, social perspective, and etology.

**Intern** - Facultad de Ciencias Marinas, Universidad Autónoma de Baja California (08/11 – 07/12)  
*Marine pollution by trace metals off the coasts of Baja California, Mexico*

Principal Investigator: Dr. Francisco Delgadillo

- Field work on collecting water samples for Trace metals, Chlorophylls, Dissolved Organic Carbon, Salinity and Oxygen.
- Lab work analyzing water samples with spectrophotometers, oxygen titration (Winkler's Method) and preparing equipment for future sampling campaigns.

**Volunteer** - Facultad de Ciencias Marinas, Universidad Autónoma de Baja California (08/12 – 12/12)  
*Support to the Phycological Herbarium*

Supervisor: M.Sc. Cristiane Aguilar

- Identification, classification and care of marine macroalgae dried samples of Baja California.

## **MARINE RESEARCH EXPERIENCE (Continued)**

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**Intern** - Centro de Investigación Científica y Educación Superior de Ensenada (CICESE) (3/12)

*IMECOCAL #53 (1203) Oceanographic Cruise, FU1203-287 Oceanographic Campaign.*

Cruise Boss: Dr. Timothy Baumgarten

- In charge of performing CTD/LADCP casts, and keeping track of navigation logbook.
- Spent 28 days at sea

**Independent research** (05/11 – 08/11)

*Feeding ecology and biometrics of the invasive lionfish (*Pterois volitans*) off the coasts of Playa del Carmen, Quintana Roo, Mexico.*

- Sampling organisms to perform visual stomach content identification.
- Statistic analyses to biometric and feeding data.
- Published peer-reviewed article on major findings.

**Volunteer** - Xcacel-Xcacelito Marine Turtle Sanctuary, Quintana Roo, Mexico (06/10)

*Protection and Conservation of Marine Turtles in the Mexican Caribbean*

Supervisor: BSc Liliana Guevara

- Tagging, measuring and tissue sampling of sea turtles (*Chelonia mydas* and *Caretta caretta*).
- Counted and took care of eggs and nests.

## **MARINE WORK EXPERIENCE**

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**Field Assistant & Data Manager** – Comunidad y Biodiversidad (COBI), La Paz, Mexico (03/15 - 07/15)

- Coordinated fieldwork to evaluate recovery of voluntarily-established marine reserves along the Baja California Peninsula
- Maintained a database with fish, invertebrate, and algae abundances derived from the underwater ecological surveys performed in the marine reserves
- Enabled communication among fishing community leaders, NGOs, and universities
- Wrote a 20 page protocol on how to operate oceanographic instruments used by fishers and staff. Produced 3 brochures, 1 interactive visualization and a peer-reviewed article on occurrences of tropical fish in temperate regions

**Consultant** – Mexican Tuna Purse Seine Fleet Research Trust, Ensenada, Mexico (02/2015 – 06/2015)

- Managed a database with information on tuna biometrics and landings from by the Mexican tuna fleet between 1992 and 2014.
- Maintained accurate records for reference by decision makers using the data to regulate fishing quotas and inform policy and management decisions.

**Research Intern** – Kelp Forest Ecology Research Group, Ensenada, Mexico (12/2011 – 12/2014)

- Performed underwater ecological surveys at kelp forests along the Baja California Peninsula and supervised dive safety
- Created a MatLab-based software to capture information from the ecological surveys
- Maintained a database with the group's ecological data of fish species, used in different analyses
- Communicated the group's results to audiences of 20-50 people at local, national, and international scientific conferences

## ACADEMIC AWARDS

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- 2014 *2<sup>nd</sup> Place for the best undergraduate presentation.* 2<sup>nd</sup> State Meeting of Young Researchers, Tijuana, Baja California
- 2013 *1<sup>st</sup> Place for the best undergraduate presentation.* 1<sup>st</sup> State Meeting of Young Researchers, Tijuana, Baja California, Mexico
- 2013 *1<sup>st</sup> Place for the best undergraduate presentation.* XXI Student Conference at the Facultad de Ciencias Marinas, Ensenada, Baja California, Mexico
- 2012 *2<sup>nd</sup> Place for the best undergraduate presentation.* XX Student Conference at the Facultad de Ciencias Marinas, Universidad Autónoma de Baja California, Ensenada, Baja California

## CONFERENCE PRESENTATIONS

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- 2015 **Juan Carlos Villaseñor-Derbez**, Arturo Ramírez-Valdez, Gabriela Montaña-Moctezuma, Guillermo Torres-Moye, Octavio Aburto-Oropeza. Does Size Matter? Changes in Size Distributions of Six Kelp Forest Associated Fish Species. *145th Annual Meeting of the American Fisheries Society.* August 2015, Portland, Oregon.
- 2014 **Juan Carlos Villaseñor-Derbez**, Arturo Ramírez-Valdez, Gabriela Montaña-Moctezuma, Guillermo Torres-Moye. Because size matters: Differences in size structure of exploited and unexploited fish populations along the coasts of Baja California, Mexico. *XIV National Ichthyology Meeting and III Latin-American Ichthyology Symposium.* November, 2014, Morelia, Michoacán.
- 2014 Ramírez-Valdez A., Montaña-Moctezuma G., Torres-Moye G., Aburto-Oropeza O., **Villaseñor-Derbez JC.** Biogeographic relationships of fish communities associated to Kelp Forests off the coasts of Baja California, Mexico. *XIV National Ichthyology Meeting and III Latin-American Ichthyology Symposium.* November, 2014, Morelia, Michoacán.
- 2014 **Juan Carlos Villaseñor-Derbez**, Arturo Ramírez-Valdez, Gabriela Montaña-Moctezuma, Guillermo Torres-Moye. Effects of recreational fisheries over sizes and biomasses of fish associated to Kelp Forests. *2<sup>nd</sup> State Meeting of Young Researchers.* October, 2014, Tijuana, Baja California. **(Awarded).**
- 2014 **Juan Carlos Villaseñor-Derbez**, Arturo Ramírez-Valdez, Gabriela Montaña-Moctezuma, Guillermo Torres-Moye. Latitudinal distribution of sizes of fish associated to Kelp Forests off the coasts of Baja California, Mexico. *XVIII National Oceanography Conference.* June, 2014, La Paz, Baja California Sur. **(Awarded).**
- 2014 **Juan Carlos Villaseñor-Derbez**, Arturo Ramírez-Valdez, Gabriela Montaña-Moctezuma, Guillermo Torres-Moye. Latitudinal distribution of sizes of fish associated to Kelp Forests off the coasts of Baja California, Mexico. *XXII Student Conference at the Marine Sciences School and 1<sup>st</sup> National Student Conference on Marine and Environmental Sciences.* May, 2014, Ensenada, Baja California, Mexico.

## CONFERENCE PRESENTATIONS (continued)

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- 2014      **Juan Carlos Villaseñor-Derbez.** Description of feeding habits and ontogenetic changes in the invasive lion fish *Pterois volitans* (Linnaeus, 1758) diet off the coasts of Playa del Carmen, Quintana Roo. *1<sup>st</sup> Student Conference of Biological Sciences*. March, 2014, Ensenada, Baja California, Mexico.
- 2013      **Juan Carlos Villaseñor-Derbez,** Cira Gabriela Montaña-Moctezuma, Guillermo Torres-Moye y Juan Arturo Ramírez-Valdez. Community relationships of fish associated to Kelp Forests off the coasts of Baja California, Mexico. *1<sup>st</sup> State Meeting of Young Researchers*. November, 2013, Tijuana, Baja California, Mexico. **(Awarded)**
- 2013      **Juan Carlos Villaseñor-Derbez,** Cira Gabriela Montaña-Moctezuma, Guillermo Torres-Moye y Juan Arturo Ramírez-Valdez. Community relationships of fish associated to Kelp Forests off the coasts of Baja California, Mexico. *XXI Student Conference at the Marine Sciences School*. May, 2013, Ensenada, Baja California, Mexico. **(Awarded)**
- 2012      **Juan Carlos Villaseñor-Derbez.** Contribution to knowledge of diet and biometrics of the invasive lion fish [*Pterois volitans* (Linnaeus 1758)] off the coasts of Playa del Carmen, Quintana Roo, Mexico. *XIII National Ichthyology Meeting and 1<sup>st</sup> Latin-American Ichthyology Symposium*. October, 2012, San Cristobal de las Casas, Chiapas, Mexico. DOI: 10.13140/2.1.3483.4889
- 2012      **Juan Carlos Villaseñor-Derbez.** Contribution to knowledge of diet and biometrics of the invasive lion fish [*Pterois volitans* (Linnaeus 1758)] off the coasts of Playa del Carmen, Quintana Roo, Mexico. *XX Student Conference at the Marine Sciences School*. May, 2012, Ensenada, Baja California, Mexico. **(Awarded).**

## ATTENDED COURSES

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**Marine Spatial Planning. Ecosystem-Based Management Tools Training Event** (March 2016)  
NatureServe, San Juan, Puerto Rico

**Scientific Monitoring of Fishes Associated to Kelp Forests of *Macrocystis pyrifera*** (October 2013)  
**Instituto de Investigaciones Oceanológicas (IIO), Facultad de Ciencias Marinas (FCM), Universidad Autónoma de Baja California (UABC),** Ensenada, Baja California, Mexico  
Training on methodology for scientific diving, north oriental Pacific fish species identification, abundance, and length estimations, macroalgae and heterogeneity of substrata. Lecturer: M. Sc. Arturo Ramírez

**Marine Conservation Biology Course (Scholarship)** (March 2013)  
**Comunidad y Biodiversidad,** Isla Magdalena, Baja California Sur, Mexico.  
Natural resource management, social research, society-nature interactions. Lecturers: Andrea Sáenz Arroyo, Larry Crowder, Elena Finkbeiner

**Coastal Ecology Course (Scholarship)** (June 2011)  
**School for Field Studies (SFS) and Center for Coastal Studies**  
Puerto San Carlos, Baja California Sur, Mexico  
Natural resource management, social research, society-nature interactions. Field work on marine ecology projects answering to local issues with different species (e.g. scallop, octopus, sea-lions, sea turtles, mangroves). Director: Dr. Gustavo Hinojosa

## **SKILLS**

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Language: Fully fluent in Spanish and English (TOEFL iBT: 102); Semi-fluent in French (DEL F A2)

Computer: Microsoft Office (Word, Excel, PowerPoint, Publisher, Outlook), Tableau, MatLab, R, Git, Primer, Ocean Data View, ArcGIS, Surfer, and SeaBird Electronics SeaTermV2

SCUBA: PADI Dive Master (2500+ dives), UABC Scientific Diver (100+ dives), TDI Sidemount diver