

## NORTHEAST PACIFIC SHARK SYMPOSIUM IV



## Thursday March 5



	title	presenter	Theme
8:50	Welcome to NEPSS4	Shawn Larson and Felipe Galvan Magana	Welcome
8:55	Introductory remarks	Segio Hernandez Trujillo	Welcome
9:10	Ecology and fishing interactions of juvenile white sharks in a nursery area from the Mexican Pacific coast	Emiliano García- Rodríguez	Ecology
9:25	Organochlorine contaminants (OCs) in white sharks (Carcharodon carcharias) and northern elephant seals (Mirounga angustirostris) in Guadalupe Island, Baja California, Mexico.	Gádor Muntaner- López	Ecology
9:40	Diving patterns of the great white shark, <i>Carcharodon carcharias</i> , at Guadalupe Island and their relationship with stomach temperature	Daniel Arellano-Millán	Ecology
9:55	Relative abundance, structure and population distribution of the hammerhead shark ( <i>Sphyrna lewini</i> ) in El Bajo Espíritu Santo, BCS	Walter Ernesto Pisco Limones	Ecology
10:10	Molecular characterization of gonadotropin-releasing hormone (GnRH) in two hammerhead shark species at Punta Lobos, Baja California Sur	Alexis Jimenez	Life History
10:25	Habitat utilization of two juvenile pelagic predators off the Mexican Central Pacific: insight into nursery areas	Sergio A. Briones- Hernández	Life History
10:40	BREAK		
11:00	Use of a multimodel approach to estimate the growth of the brown smooth-hound shark, <i>Mustelus henlei</i> (Elasmobranchii: Triakidae)	Katherin Soto-López	Life History
11:15	Age and growth of the butterfly ray, <i>Gymnura marmorata</i> (Cooper, 1864) in the west coast of Baja California Sur, Mexico	Sánchez-Cota Jesús Bernardo	Life History
11:30	Estimation of the size at sexual maturity of the bat ray (Myliobatis californica) in northwestern Mexico through a multi-model inference	Alain García- Rodríguez	Life History
11:45	Nursery area of a devil ray, <i>Mobula munkiana</i> , at a marine protected area in the Espiritu Santo Archipelago (Gulf of California).	Diaz Palacios Marta	Life History
12:00	Size estimates of white sharks at Guadalupe Island using parallel lasers	Erin Pierce	Life History
12:15	Aggregation size estimation of whale sharks ( <i>Rhincodon typus</i> ) at Bahía de Los Ángeles, Baja California, based on photo-identifications	Salomé Jaramillo-Gil1	Life History
12:30	Lunch will be provided		
1:30	Developing a non-invasive approach to examine the growth of white sharks ( <i>Carcharodon carcharias</i> ) along the Central California coast	Thomas J. Farrugia	Life History



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1:45	Movimientos e índice de residencia del tiburón limón ( <i>Negaprion brevirostris</i> ) en El Parque Nacional Cabo Pulmo, México	Anamaria Posada Prado	Movements
2:00	Performance of passive acoustic telemetry: surface and subsurface mounted receivers	Brian Stirling	Movements
2:15	Residency, space-use and aggregation hot spots in the Southern California juvenile white shark nursery	J. Anderson	Movements
2:30	The influence of environmental and social factors on aggregation behavior of the leopard shark ( <i>Triakis semifasciata</i> ) at Santa Catalina Island, California	Jack H. May	Movements
2:45	Movements and genetic connectivity of the scalloped hammerhead in the eastern tropical Pacific	Juan Pedro Rodríguez Arana Favela	Movements
3:00	Quantification of the seasonal abundance of blacktip sharks ( <i>Carcharhinus limbatus</i> ) at Cabo Pulmo National Park using a quadcopter UAV	Kathryn Anne Ayres	Movements
3:15	Break		
3:35	Movement patterns and residency of bull sharks, Carcharhinus leucas, in the Cabo Pulmo National Park	Lara-Lizardi Frida	Movements
3:50	Movements and residency of giant mantas at an isolated pinnacle in the southern Gulf of California	P.A. Preciado- González	Movements
4:05	Residency and movements of the endangered scalloped hammerhead <i>Sphyrna lewini</i> in two island habitats: Revillagigedo and Espiritu Santo, Mexico	Alejandro Aldana Moreno	Movements
4:20	Ecological love triangles in the red triangle: the complex multispecies interactions of white sharks in the Northeast Pacific	Salvador J. Jorgesen	Reproduction
4:35	Morphological and endocrine correlates of reproduction in the Pacific sharpnose shark ( <i>Rhizoprionodon longurio</i> ) in Bahia de La Paz, Baja California Sur, Mexico	Adrià Bosch-Soler	Reproduction
4:50	Reproductive biology of <i>Pseudobatos glaucostigmus</i> (JORDAN & GILBERT,1883) in Santa Rosalia,Baja California del Sur, Mexico	C. Martínez Riveaux	Reproduction
5:05	Multiple paternity and female choice	Dovi Kacev	Reproduction
5:20	Reproductive biology of the shark <i>Mustelus lunulatus</i> in Bahia Tortugas, Baja California Sur, Mexico	G. García-Vázquez	Reproduction
5:40	Adjourn		

## Friday March 6



	title	presenter	Theme
8:30	COLSHARK program: first satellite tagging of thresher shark (Alopias pelagicus) in Eastern Tropical Pacific Ocean	Armelle JUNG	Movements
8:45	Exploratory analysis of size structure of the silky shark (Carcharhinus falciformis) captured by the longline fleet operating in the Mexican Central Pacific	Natalia Melgar- Martínez <sup>1</sup>	Life History
9:00	Maternal transfer of mercury in placental and yolk-sac viviparous elasmobranchs from the Gulf of California	Isis Baró-Camarasa	Reproduction
9:10	Reproductive biology of the shark <i>Rhizoprionodon longurio</i> (JORDAN & GILBERT, 1882) of Santa Rosalía, Baja California Sur	M.F.D Chávez-Siles	Reproduction
9:25	Reproductive biology of the horn shark <i>Heterodontus francisci</i> on the western coast of Baja California Sur, Mexico	V. Gómez-Vázquez	Reproduction
9:40	Short update on sixgill shark genetics in the Salish Sea and five- minute video of a necropsy on a stranded pregnant sixgill shark	S. Larson and P, Mieras	Reproduction and Genetics
9:50	Assessment of the population genomic structure of the shovenose guitarfish, <i>Pseudobatos productus</i> , from Southern California to Baja California Sur	A. Meyer	Genetics
10:05	Genetic diversity and population structure of the Pacific sharpnose shark, <i>Rhizoprionodon longurio,</i> in the Tropical Eastern Pacific	Juan Andrés Sánchez Cota	Genetics
10:20	Comparison of two analytical techniques of trace elements Zn and Fe in the shark muscle <i>Rhizoprionodon longurio</i>	Julio Cesar Martinez	Trophic Ecology
10:35	Break		
10:55	Ontogenetic change on the diet of <i>Rhizoprionodon longurio</i> in La Paz Bay, B.C.S.	A. Acosta-Alonso	Trophic Ecology
11:10	Trophic habitat of Pacific sharpnose shark, <i>Rhizoprionodon longurio</i> , and Munk´s devil ray, <i>Mobula munkiana</i> , within their nursery areas	Abel Trejo Ramírez	Trophic Ecology
11:25	Dietary ontogeny of the blue shark, <i>Prionace glauca</i> , based on the analysis of [Symbol] <sup>13</sup> C and [Symbol] <sup>15</sup> N in vertebrae	Colombo Estupiñán- Montaño	Trophic Ecology
11:40	Trophic retention and partition of essential fatty acids in sharks	D. Lladó-Cabrera	Trophic Ecology
11:55	Feeding habits of <i>Narcine entemedor</i> and a comparison with a sympatric ray, <i>N. vermiculatus</i> in the southeastern Gulf of California, Mexico	E. Vilchis-Guadarrama	Trophic Ecology
12:10	Isotopic segregation in the trophic habitat from sharks species in the western coast of Baja California Sur, Mexico	E. Méndez-DaSilveira	Trophic Ecology
12:25	Lunch will be provided		
2:00	Isotopic variation in blood components based on their biochemistry: a comparison between sharks and fur seals	Elena Tamburin	Trophic Ecology



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2:15	New insights into the trophic ecology of young white sharks (Carcharodon carcharias) in Baja California waters, Mexico	Elena Tamburin	Trophic Ecology
2:30	Diet of the blue shark, <i>Prionace glauca</i> , in northern Peru	Francisco Cordova Zavaleta	Trophic Ecology
2:45	Mercury trophic sources for the great white shark in the Northeast Pacific	Gaël Le Croizier	Trophic Ecology
3:00	Dietary comparisons of nine Batoids species in the northwest of Baja California Sur, Mexico	H. Reyes-Ramírez	Trophic Ecology
3:15	Using mercury isotopes to characterize the trophic ecology of sympatric shark species in the Pacific coast of Baja California Sur, Mexico	Lucien Besnard	Trophic Ecology
3:30	Break		
3:50	Ecophysiology of the muscle fatty acid profile of five elasmobranch species, off Mexican Pacific	María José Alderete Macal	Trophic Ecology
4:05	Trophic ecology through stomach contents and stable isotopes in the muscle of <i>Mustelus henlei</i> and <i>Mustelus californicus</i> in the area of Las Barrancas, Baja California Sur, México	Pablo Martín Pestano	Trophic Ecology
4:20	Trophic ecology of silky shark <i>Carcharhinus falciformis</i> (Müller y Henle, 1839) in the western coast of Baja California Sur based on stomach contents and stable isotopes of $\delta^{13}$ C y $\delta^{15}$ N	S. Ballesteros- Hernández	Trophic Ecology
4:35	Trophic ecology of juvenile mako sharks Isurus oxyrinchus (Rafinsque, 1810) on the west coast of Baja California Sur, Mexico	Valentina Peña Moreno	Trophic Ecology
4:50	Priority shark species and potentially strategic regions as key to fisheries management and shark conservation in the Gulf of California	Christian D. Morales-Portillo	Fisheries Management
5:05	Description of the artisanal chondrichthyan fishery in the northern limit of Mexican Pacific	Luz Erandi Saldaña-Ruiz	Fisheries Management
5:20	Fisheries interactions and the challenges of both target and non-targeted take in shark conservation in the Mexican Pacific	O. Sosa-Nishizaki	Fisheries Management
5:35	Identifying safe marine foods: Organotropism of some elements trace in the pelagic thresher shark, Alopias pelagicus, in western Pacific coast, Mexico	Ariagna Laraa	Fisheries Management
5:50	Adjourn		

## Saturday March 7



8:40 Nutritional contribution of zooplankton to whale sharks (Rhincodon typus) in La Paz Bay, Mexico  8:45 Ecological lifestyles and the scaling of shark gill surface area Jennifer S. Bigman Physiology  9:00 Effects of temperature on the thermal sensitivity and metabolic allometry relationship of the round stingray, Urobatis halleri Coronsumption rates of juvenile Pacific sleeper Sarks, Somniosus pacificus  9:15 Oxygen consumption rates of juvenile Pacific sleeper Taylor Smith Physiology  9:26 Comparison of temperature preference and O₂ between two juvenile shark species  9:27 Skelton Physiology  9:28 Bioaccumulation of Hg and Se in brown smooth-hound Mustelus henler in Las Barrancas, Baja California Sur, Mexico  9:48 Mustelus henler in Las Barrancas, Baja California Sur, Mexico  10:40 Sex-related metabolic outcomes in wild stingrays with differential exposure to polychlorinated biphenyl exposure from southern California  10:51 Uncovering the global trade in shark meat Christopher Mull Conservation  10:45 Break  11:40 Christopher Mull Conservation  10:45 Break  11:40 Challenges for the sustainable use of shark CITES species in Mexico: A systematic quantitative review H. Sánchez-Gómez Conservation  11:15 Shark research in Mexico: A systematic quantitative review H. Sánchez-Gómez Conservation  11:45 California white shark research, education and outreach program C. Lowe Conservation  11:45 California white shark research, education and outreach program C. Lowe Conservation  12:40 The use of UAVs to quantify marine recreation and juvenile white shark interactions in Southern California  12:30 Developing a photo and acoustic detection ID database for white sharks at Guadalupe Island  12:30 Developing a photo and acoustic detection ID database for white sharks at Guadalupe Island  12:30 Courrence of manta rays in Kaneohe Bay, Oahu Karen Crow Conservation  12:45 Parks of Mexico: Biology, Ecology and Conservation  12:45 Sharks of Mexico: Biology, Ecology and Conservation Detables of Parks of Mexico: Biology, Ecology		title	presenter	Theme
9:00 Effects of temperature on the thermal sensitivity and metabolic allometry relationship of the round stingray, Urobatis halleri  9:15 Sharks, Somniosus pacificus  9:30 Comparison of temperature preference and Q₁₀ between two Juvenile shark species  9:45 Bioaccumulation of Hg and Se in brown smooth-hound Mustelus henle! in Las Barrancas, Baja California Sur, Mexico  9:46 Bioaccumulation of Hg and Se in brown smooth-hound Mustelus henle! in Las Barrancas, Baja California Sur, Mexico  9:47 Sex-related metabolic outcomes in wild stingrays with differential exposure to polychlorinated biphenyl exposure from southern California  10:10 Uncovering the global trade in shark meat Christopher Mull Conservation  10:11 Uncovering the global trade in shark meat  10:30 Combating the international illegal trade  10:45 Break  11:00 Challenges for the sustainable use of shark CITES species in Mexico  11:15 Shark research in Mexico: A systematic quantitative review H. Sánchez-Gómez Conservation  11:45 California white shark research, education and outreach program C. Lowe Conservation  11:45 California white shark research, education and outreach program  12:00 The use of UAVs to quantify marine recreation and Juvenile white shark interactions in Southern California  12:15 Tor white sharks at Guadalupe Island  12:30 Currence of manta rays in Kaneohe Bay, Oahu Karen Crow Conservation  12:30 Currence of manta rays in Kaneohe Bay, Oahu Karen Crow Conservation  13:45 Sharks of Mexico: Biology, Ecology and Conservation  14:45 Sharks of Mexico: Biology, Ecology and Conservation  25:15 Sharks of Mexico: Biology, Ecology and Conservation  26:26 Knowledge gaps and research, opportunities for sharks of Mexico  26:27 Knowledge gaps and research opportunities for sharks of Mexico  27:28 Knowledge gaps and research opportunities for sharks of Mexico  27:28 Knowledge gaps and research opportunities for sharks of Mexico  28:28 Knowledge gaps and research opportunities for sharks of Mexico  28:29 Knowledge gaps and research opportunities fo	8:30		Anabel Suarez	Trophic ecology
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Cabo Pulmo: a success story of top predator recovery in the Gulf of California  11:45 California white shark research, education and outreach program  C. Lowe  Conservation  12:00 The use of UAVs to quantify marine recreation and juvenile white shark interactions in Southern California  Developing a photo and acoustic detection ID database for white sharks at Guadalupe Island  12:15 Developing a photo and acoustic detection ID database for white sharks at Guadalupe Island  12:30 Lunch and drinks provided  1:30 Occurrence of manta rays in Kaneohe Bay, Oahu  Karen Crow  Conservation  1:45 Is marine debris a threat to oceanic manta rays in the Mexican Pacific Ocean?  Chondrichthyan research, conservation and fishery management in Washington state: what does the future hold?  Sharks of Mexico: Biology, Ecology and Conservation parts A and B books  Knowledge gaps and research opportunities for sharks of Mexico  F. Galvan-Magana and O. Sosa-Nishizaki  Conservation  Conservation  Conservation  F. Galvan-Magana and O. Sosa-Nishizaki	11:00			Conservation
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3:00 Adjourn	2:25	Knowledge gaps and research opportunities for sharks of Mexico		Conservation
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