

DRAFT PROGRAM

5th INTERNATIONAL WHALE SHARK CONFERENCE - PRESENTATION SCHEDULE

Tuesday, 28th May 2019

| Time | Activity | Presenter |
|---------------|--|--|
| 08:00-08:20 | Registration and Coffee | |
| 08:20-08:45 | Official Opening and Welcome to Country | Hon. Stephen Dawson, Minister for Environment Traditional Owner |
| 08:45-08:50 | Housekeeping | Mark Meekan |
| 08:50-09:45 | Keynote: Ecotourism impacts on sharks: research priorities & approaches | Neil Hammerschlag |
| Theme: | Ecotourism | Chair: David Rowat |
| 09:50-10:05 | How do we improve conservation planning for whale sharks? | Simon Pierce |
| 10:05-10:20 | Baitfish, bagans and big sharks: an overview of CI's Indonesian whale shark conservation research initiative | Mark Erdmann |
| 10:20-10:50 | Break | |
| 10:50-11:05 | The needle in the haystack: In search of a whale shark aggregation on the Great Barrier Reef | Adam Barnett |
| 11:05-11:20 | Whale shark tourism development: opportunities and challenges, a lesson learned from Botubarani – Gorontalo, Indonesia | Asril Djunaidi |
| 11:20-11:35 | The economic value of community-based whale shark tourism in Sumbawa - Indonesia | Maulita Hani |
| 11:35-11:50 | The contributions of whale shark tourism to sustainable integrated coastal management: Oslob whale sharks | Judi Lowe |
| 11:50-12:05 | Top-down versus bottom-up management: finding the balance when provisioning an endangered species | Christine Legaspi |
| 12:05-12:20 | Protecting an endangered species: whale shark tourism as an incentive-based conservation approach | Jackie Ziegler |
| Theme: | Understanding whaleshark demographics in various places | Chair: Mark Meekan |
| 12:20-12:35 | Donsol: a bright spot for whale sharks and its people | Josephine Alcantara-Cruz |
| 12:35-12:50 | Whale sharks - a historical perspective | Geoff Taylor |
| 12:50-13:50 | Lunch | |
| 13:50-14:05 | A review of threats to whale sharks in the Arabian Gulf and the Sea of Oman | David Robinson |
| 14:05-14:20 | The whale shark in the Americas | Deni Ramirez Macias |
| 14:20-14:35 | Philippines: a global hotspot for the world's largest fish | Gonzalo Araujo |

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| 14:35-14:50 | Status of whale sharks in Pakistan: seasonal abundance, distribution, interaction with fisheries and conservation | Muhammad Moazzam Khan |
| 14:50-15:05 | Using citizen science to reveal trends in whale shark sightings in Hawaii | Stacia Marcoux |
| 15:05-15:20 | Population ecology and habitat use of whale sharks off Nosy Be, Madagascar | Stella Diamant |
| 15:20-15:35 | Whale shark monitoring in Botubarani Beach Bone Bolango Regency Gorontalo Province, Indonesia | Sukirman Tilahunga |
| Theme: | A taste of Ningaloo | Chair: Peter Barnes |
| 15:35-15:50 | The whale shark aggregation at Ningaloo Reef, Western Australia is 'bucking' the global trend downwards for this ENDANGERED species | Brad Norman |
| 15:50-16:20 | Break | |
| 16:20-16:35 | The key approach to whale shark interaction management | Emily Wilson |
| 16:35-16:50 | Using an electronic monitoring system and photo-identification to understand effects of tourism encounters on whale sharks in Ningaloo Marine Park | Dani Rob |
| 16:50-17:05 | The use of ecotourism to monitor scarring patterns, apparent survival and residency of whale sharks aggregating at the Ningaloo Reef, Western Australia | Emily Lester |
| 17:05-17:20 | Understanding the link between the oceanography and the whale sharks of Ningaloo Reef | Paul Thomson |
| 17:20-17:35 | The bio-physical drivers of the 3D movements of whale sharks at Ningaloo Reef | Michele Thums |
| 17:35-17:50 | Movement and diving behaviour of whale sharks tagged at Ningaloo Reef | Richard Pillans |
| 17:50-19:30 | Poster session | |

Thursday, 30th May 2019

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| 08:00-08:15 | Coffee | |
| 08:15 -08:20 | Housekeeping | Mark Meekan |
| 08:20-09:15 | Keynote: Tracking the lives of pelagic sharks in a changing world | David Sims |
| Theme: | Movement and tracking I | Chair: Simon Pierce |
| 09:20-09:35 | Population dynamics, connectivity and movement of whale sharks from a global hotspot in Palawan, Philippines | Ariana Agustines |
| 09:35-09:50 | Residency and patterns in habitat use of whale sharks at Mafia Island, Tanzania | Christoph Rohner |
| 09:50-10:05 | Analyzing passive acoustic data from whale shark aggregations: a comprehensive review of two papers | Jesse Cochran |

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| 10:05-10:20 | The monitoring study of whale sharks (<i>Rhincodon typus</i>) uses acoustics in the waters of Botubarani, Gorontalo Province | Kris Handoko |
| 10:20-10:50 | Break | |
| Theme: | Movement and Tracking II | Chair: Richard Pillans |
| 10:50-11:05 | Vertical movements and temperature preference of the whale shark (<i>Rhincodon typus</i>) in the Galapagos Marine Reserve, through the use of SPOT satellite transmitters | Kevin Morales |
| 11:05-11:20 | Characterisation of fine-scale feeding behaviour of whale sharks at Ningaloo Reef from tri-axil accelerometer and video data | Luciana Ferreira |
| 11:20-11:35 | Investigating links between vertical and horizontal movement patterns of whale sharks | Lucy Arrowsmith |
| 11:35-11:50 | Preliminary study of whale shark occurrences and association with zooplankton biomass in Saudi Arabian waters of the Arabian Gulf | Hua Hsun Hsu |
| 11:50-12:05 | Horizontal movement patterns of whale sharks in the North-Western Indian Ocean | Charan Kumar Paidi |
| 12:05-12:20 | Whale sharks in a warming ocean: the implications of climate change for movement patterns and suitable habitat | Samantha Reynolds |
| 12:20-12:35 | Movements of real time satellite tagged whale sharks, from Isla Mujeres, Mexico | Rafael de la Parra |
| 12:35-12:50 | Horizontal movement patterns of whale sharks in Cenderawasih Bay, Indonesia | Megan Meyers |
| 12:50-13:50 | Lunch | |
| Theme: | Biology/Ecology I | Chair: Brad Norman |
| 13:50-14:05 | The evolution of gigantism in filter-feeding marine vertebrates: lessons from the world's largest fish | Mark Meekan |
| 14:05-14:20 | Are whale sharks social animals? A perspective from the Djibouti aggregation | David Rowat |
| 14:20-14:35 | Comparing length-measurement methods and estimating growth parameters of free-swimming whale sharks near the South Ari Atoll, Maldives | Cameron Perry |
| 14:35-14:50 | Enhancing insights into foraging specialisation by whale sharks using a multi-tissue, multi-isotope approach | Alex Wyatt |
| 14:50-15:05 | Thermoregulatory behavior of whale sharks to extreme temperatures in the Arabian Gulf: is one of the world largest aggregation sites threatened by global warming? | Steffen Bach |
| 15:05-15:20 | Where'd all the whale sharks go? Discussing dramatic declines in aggregation attendance within the Red Sea | Royale Hardenstine |
| 15:20-15:35 | First ever observation of ovary in Galápagos whale sharks made using underwater ultrasonography | Rui Matsumoto |
| 15:35-15:50 | Relationship between the water temperature and heart rate of captive whale sharks | Kiyomi Murakumo |
| 15:50-16:20 | Break | |

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| Theme: | Biology/Ecology II | Chair: Simon Pierce |
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| 16:20-16:35 | Connecting the dots: using multiple methods to understand whale shark ecology in the Red Sea and beyond | Michael Berumen |
| 16:35-16:50 | Fine scale whale shark behaviour | Eugenio de la Parra |
| 16:50-17:05 | A Tale of Three Bays: comparison of movement patterns of three whale shark populations in eastern Indonesia | Abraham Sianipar |
| 17:05-17:20 | Characterising behaviours of the worlds largest shark through the application of machine learning algorithms | Darren Whitehead |
| 17:20-17:35 | Health assessment of whale sharks facilitated by bagan fishery interaction in Cenderawasih Bay, Indonesia | Alistair Dove |
| 19:00 | Conference Dinner | |

Friday, 31st May 2019

| 08:00-08:25 | Coffee | |
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| 08:25-08:30 | Housekeeping- Mark Meekan | |
| Theme: | Genetics | Chair: Jennifer Schmidt |
| 08:30-08:45 | Population genetic analysis of the whale shark (<i>Rhincodon typus</i>) | Jennifer Schmidt |
| 08:45-09:00 | Inferring global population structure of whale sharks using target capture on environmental water samples | Mads Jensen |
| 09:00-09:15 | Whale shark skin microbiomes reflects host genetic similarities | Michael Doane |
| 09:15-09:30 | Using Close-Kin Mark-Recapture to estimate the abundance and survival rates of adult whale sharks (<i>Rhincodon typus</i>) | Rich Hillary |
| 09:30-09:45 | Visual ecology of whale shark revealed by whole genome sequencing | Shigehiro Kuraku |
| 09:45-10:00 | Connecting the dots: genetic characterisation of the worlds' most remote whale shark aggregation. | Alexandra Watts |
| 10:00-10:15 | Community perspectives and portable sequencers for sustainable whale shark conservation in India | Shaili Johri |
| 10:15-10:30 | Population genetic structure of the whale shark along the Indian coast using mitochondrial and nuclear markers | Bheem Dutt Joshi |
| 10:30-11:00 | Break | |
| Theme: | Health | Chair: David Rowat |
| 11:00-11:15 | Microplastics a macro-disaster: a threat to the largest fish of our seas? | Ibrahim Shameel |

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| 11:15-11:30 | Plastics on the menu: Microplastics Present in Indonesian Whale Shark Feeding Grounds | Elitza Germanov |
| 11:30-11:45 | Bioaccumulation of trace elements in whale shark (<i>Rhincodon typus</i>) tissues of the Gulf of California | Francesca Pancaldi |
| 11:45-12:00 | Monitoring shark health with the skin microbiome | Elizabeth Dinsdale |
| 12:00-12:15 | The biggest fish in the ocean: can we unravel the mystery with biochemistry? | Clare Prebble |
| 12:15-12:20 | Closing Remarks: oral presentation | Mark Meekan |
| 12:20-13:00 | Lunch | |
| Workshops | | |
| 13:00-15:00 | Managing the impacts of tagging on whale sharks - balancing science, welfare, conservation and tourism | Parks and Wildlife WA |
| 13:00-15:00 | Using stable isotopes to understand whale shark ecology | CSIRO |
| 15:00-15:30 | Break | |
| 15:30-17:30 | Can we determine sustainable levels of tourism? | Parks and Wildlife WA |
| 15:30-17:30 | Kin based population genetics; potential for deeper understanding of whale shark populations | CSIRO |
| 17:30 | Conference close, delegates own time | |

Tuesday 28th

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| 17:30-19:30 | Poster session | |
| 1 | Differentiation of euphausiid and fish prey in foraging grounds used by Whale sharks and Omura's whales off Madagascar | Stella Diamant |
| 2 | Marooned: a trapped whale shark in Nukunonu Atoll, Tokelau | Brad Norman |
| 3 | Whale shark strandings in the Gulf of California, Mexico | Darren Whitehead |
| 4 | Isotopic assessment of whale sharks from two geographical sites: Gulf of California and the Mexican Caribbean | Darren Whitehead |
| 5 | Key elements for managing whale shark tourism in the Gulf of California | Deni Ramirez Macias |
| 6 | Use of Drone to Assess the Effect on Whale Shark Behavior by Tourism Activities | Deni Ramirez Macias |
| 7 | Conservation of Whale Shark (<i>Rhincodon typus</i>) in Andhra Pradesh with reference to East Godavari, Andhra Pradesh, East Coast of India | Eswar Narayana |
| 8 | Whale shark retinal pigments and visual foraging ecology | Katherine Serba |

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| 9 | St Helena Island, a Bone shark paradise | Kenickie Andrews |
| 10 | The pattern of emergence of the whale shark in waters Botubarani-Gorontalo based on daily direct monitoring | Kris Handoko |
| 11 | Using passive acoustic telemetry to investigate whale shark (<i>Rhincodon typus</i>) residency behavior in Botubarani Beach, Gorontalo, Indonesia | Kris Handoko |
| 12 | Whale sharks target dense copepod patches in Southern Leyte, Philippines | |
| 13 | Fathoms below: Vertical movements and diving behaviour of whale sharks in West Papua, Indonesia | Megan Meyers |
| 14 | Whale shark (<i>Rhincodon typus</i> Smith, 1828) population structure in Probolinggo waters during 2017 season: what next to do? | Mohammad Kamal |
| 15 | Development of a Protocol for Safe Release of Whale Shark in Gillnet Fisheries | Muhammad Moazzam Khan |
| 16 | Whale shark individual photo-identification in Mexico largest aggregation | Rafael de la Parra |
| 17 | Whale shark monitoring and Conservation program along Balochistan coast, Pakistan | Abdul Rahim |
| 18 | New insights into the presence of whale sharks off northern Peru | Deni Ramirez Macias |
| 19 | From fish to flagship: 15 years of whale shark conservation, case study from India | Charan Kumar Paidi |
| 20 | In situ estimates of the prey field of whale sharks via animal mounted sonar tags | Mark Meekan |
| 21 | Is the world's largest fish a herbivore? | Mark Meekan |
| 22 | Whale shark conservation and stranding response | Dinesh Goswami |
| 23 | Whale Shark's (<i>Rhincodon typus</i>) Occurrence, Bycatch & Conservation Efforts in Bangladesh Marine Territory | Zahirul Islam |
| 24 | Spatial Analysis of Plankton Community and Nutrients in Coastal Environment of Mozambique | unmanned |
| 25 | Promoting Slow Fish Concept in Southern Taiwan | Hsiao-chien Lee |