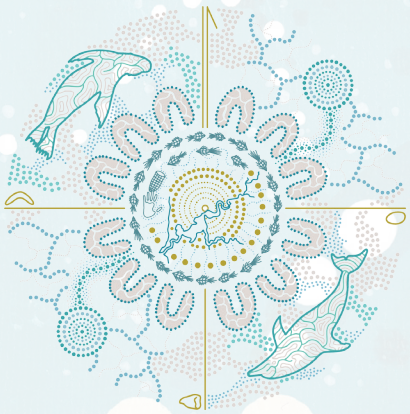

Culture and Conservation: Fishing for Change

25th Biennial Conference on the Biology of Marine Mammals

11-15 November 2024 • Perth, Western Australia

BOOK OF ABSTRACTS

The Society for Marine Mammalogy
- November 2024 -

We acknowledge the Traditional Owners of the land on which this conference is being held, **the Whadjuk Noongar people**, and pay our respects to Elders past, present and emerging.

This artwork was created by local artist, Sarah Humphries, to depict the conference theme "**Culture and Conservation: Fishing for Change**".

The artwork embodies the spirit of this conference and serves as the inspiration for the logo. The centre of the artwork represents coming together on the banks of the Swan River (*Derbyl Yerrigan*), to share knowledge and ideas (*kaartdijin*). The U-shaped icons represent people sitting in a meeting circle. Fish (*djildjit*), a net and human hand capture the theme of our conference, "Culture and Conservation: Fishing for Change". Spears and boomerangs represent traditional cultural fishing practices, and symbolise the need to recognise lessons from the past while striving for sustainability into the future. The endangered and endemic Australian sea lion (*manyin*) and iconic bottlenose dolphin (*kwilena*) swim around the meeting circle as locally occurring species but also represent marine mammal species across the globe. Marine mammals hold immense cultural and spiritual significance to traditional custodians, and some of these stories will be shared at the conference. Finally, the two outer circles symbolise the home origins of delegates, connected to the inner meeting circle by physical travel routes and virtual access paths by which they came and on which they will return to share the knowledge and stories gained.

Culture and Conservation: Fishing for Change

The 2024 biennial conference of the SMM will be held in Australia for the first time. Our theme, “Culture and Conservation: Fishing for Change” shines a light on one of the most significant threats to marine mammals worldwide, their interactions with fishing gear.

We will further focus on marine mammal cultures, and how conservation and management planning require their consideration, together with human dimensions. Specifically, we aim to identify actions to reduce fishing-related marine mammal mortality, upskill management agencies and individuals responsible for marine mammal incident response, support capacity building of Indigenous and developing country participants, and facilitate collaboration among scientists, managers, policymakers and Traditional Owners.


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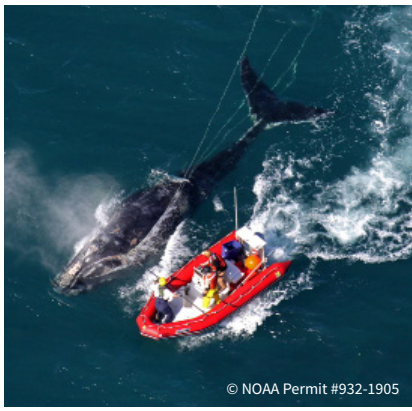
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Conference Co-chairs

Daniella Hanf
O2 Marine

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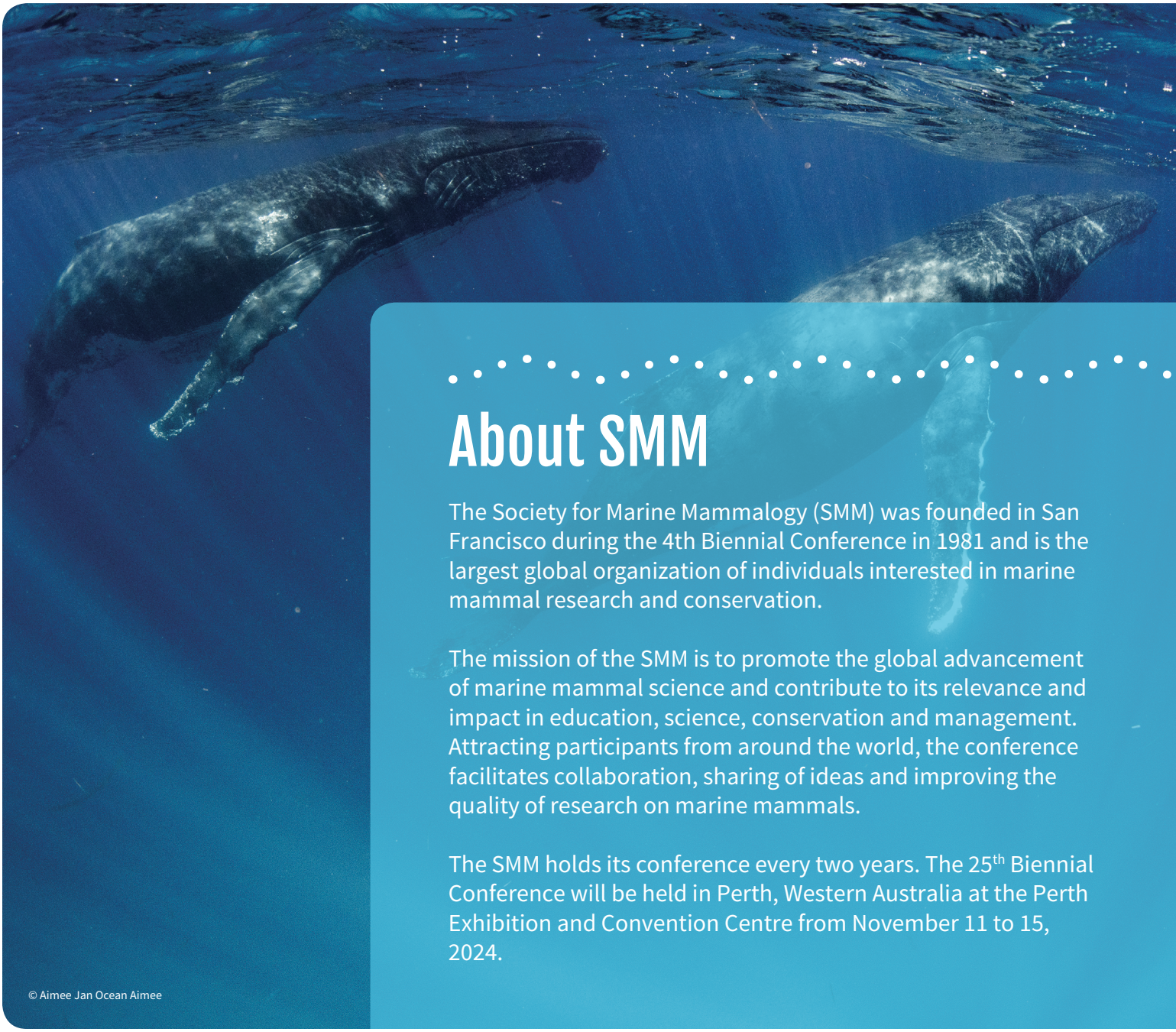
Murdoch University

Dr Delphine Chabanne
Murdoch University

Dr Simon Allen
Shark Bay Dolphin Research

SMM President

Simon Goldsworthy
South Australian Research and Development Institute



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About SMM

The Society for Marine Mammalogy (SMM) was founded in San Francisco during the 4th Biennial Conference in 1981 and is the largest global organization of individuals interested in marine mammal research and conservation.

The mission of the SMM is to promote the global advancement of marine mammal science and contribute to its relevance and impact in education, science, conservation and management. Attracting participants from around the world, the conference facilitates collaboration, sharing of ideas and improving the quality of research on marine mammals.

The SMM holds its conference every two years. The 25th Biennial Conference will be held in Perth, Western Australia at the Perth Exhibition and Convention Centre from November 11 to 15, 2024.

“The 25th Biennial Conference in Perth, Australia presents an incredible opportunity to shape the future of marine mammal science and conservation. This landmark event re-engages our global community, showcasing a remarkable diversity of topics that push the boundaries of research and conservation efforts worldwide. Our members should take pride in their critical contributions, advancing knowledge and driving impactful change for marine mammals and their ecosystems.”

- Prof Simon Goldsworthy, SMM President

SMM2024 ABSTRACTS:

LONG, SHORT, VIDEO AND POSTER PRESENTATIONS

The following is a list of all abstracts for long, short, video and poster presentations that were presented at SMM2024.

Abstracts are in alphabetical order based on the presention title.
An author index follows the list of all abstracts.

is consulting on other whale entanglement risks such as offshore wind and aquaculture.

Marine Debris as a Threat Factor for the Caspian Seal (Pusa caspica Gmelin, 1788)

Assel Baimukanova[1], Zhanna Baimukanova[1], Akzhan Iskakov[1], Sultan Ryskulov[1], Mukhabat Sirazhitdinova[1], Zhazira Sydykova[1], Anuar Shagilbayev[1], Mirgaly Baimukanov[2]
[1]Institute of Hydrobiology and Ecology, Almaty, Kazakhstan, [2]Institute of Hydrobiology & Ecology, Almaty, Kazakhstan

The Caspian seal (*Pusa caspica*), is the only endemic marine mammal in the Caspian Sea, is classified as "Endangered" by the IUCN Red List and is included in the national Red Data Books of all Caspian littoral countries. This study investigates the impact of marine debris, particularly discarded fishing nets, on this critically endangered species. Annual research was conducted in the Northern Caspian Sea at the Tupkaragan Peninsula and Tyuleniy Islands from 2019 to 2023. Marine debris was collected, categorized, and quantified. Seal carcasses were examined for entanglement in fishing gear.
Over a four-year period, researchers collected 36.13 tonnes of marine debris, with discarded fishing gear accounting for nearly half (46.8%, 16.92 tonnes). Land surveys revealed a high density of abandoned fishing gear on land (149.2 kg/km^2), with significant quantities (15.9 kg/km^2) persisting in coastal waters within 2 km of the shoreline. Analysis of 395 seal carcasses identified entanglement in fishing gear as the cause of death in 9.4% of individuals. Notably, all age groups, including a significant proportion of newborns, were impacted.
In addition, terrestrial mammals such as hedgehogs, birds, fish, crayfish, and other crustaceans were also found ensnared in these nets, often leading to their death. Notably, five live sturgeons were successfully disentangled and released near the western coast of the Tupkaragan Peninsula.
Microplastics and macroplastics, likely originating from degraded fishing nets, were found in all surveyed locations. Furthermore, nine fish species (detritivores, zooplankton feeders, benthivores, and predators) – potential prey for the Caspian seal – contained macroplastic residues in their digestive tracts. This study emphasizes that marine debris, especially discarded fishing gear, poses a new and significant threat to the endangered Caspian seal population and the health of the entire Caspian Sea ecosystem.
The authors gratefully acknowledge the funding support provided by Tengizchevroil LLP and the Ministry of Agriculture of the Republic of Kazakhstan (project number BR23591095).

Marine Debris Ingestion as Cause of Death in a Sperm Whale from Hawai‘i

Nicholas Hofmann[1], Ilse Silva-Krott[2], Jana Phipps[3], **Beverly Beebe**[4], Kristi West[5]
[1]University of Hawaii, Kailua, HI, [2]Honolulu, HI, [3]University of Hawaii at Manoa, Health and Stranding Lab, Honolulu, HI, [4]University of Hawaii at Manoa, Hawaii, [5]Kailua, HI

A 17-meter-long, adult male sperm whale (Physeter macrocephalus) carcass washed up on Lydgate Beach in Kaua‘i County, Hawai‘i on January 28, 2023. A field necropsy revealed marine debris in the main chamber of the stomach and distended fluid-filled intestines. Histological evaluation of abdominal tissues showed tissue necrosis and bacterial colonies but limited sampling did not allow for detailed organ examination. The forestomach contained a minimum of 1633.6 grams of dry-weight marine debris including fishing net remnants, monofilament lines, sheet plastics, and miscellaneous hard plastics. Identified within that were 2 partial plastic bags, 7 eel/hagfish trap pieces, a light fixture guard, and buoys. The fluid-filled intestinal tract was absent of normal ingesta. Combined with gastric marine debris and evidence of necrosis and peritonitis, an acute obstruction is the probable cause of death. Eel/hagfish traps are widely used by fisheries to trap Conger eels and discarded traps accumulate in the Great Pacific Garbage Patch. In other regions of the world, ingested marine debris, fishing nets, and plastics were the cause of death for two sperm whales in Northern California and two sperm whales in the Mediterranean. Large amounts of ingested marine debris were found in 30 sperm whales stranded on North Sea shores over six weeks in 2016, although

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