



Pacific WildLife
Foundation

40th anniversary report





Dr. Ron Ydenberg
Chair and President

Message from our President

This year was full of changes and challenges. Despite the unexpected pandemic and its restrictions, Pacific WildLife Foundation celebrated 40 years of objective science for conservation by assembling long term data sets into useful products and launching some new and exciting projects. In this report, we will introduce you to some of our new Associates and their projects, reveal our latest discoveries, and share our enthusiasm in a new Marine Centre. The results are testament to the resilience of Pacific WildLife Foundation now celebrating 40 years of objective science for conservation. This report was written to thank you, our donors and supporters, and to provide a sense of how your support has been used.

Objective Science for Conservation

Our approach is guided by our Ocean Strategy's four goals: building a knowledge foundation, supporting habitat conservation, enhancing access, and strengthening awareness. Each of these goals is illustrated with examples that give the flavour of what we have achieved so far with your support.

BUILDING A KNOWLEDGE FOUNDATION

West Coast Whales

West Coast Whale Research Foundation (WCWRF) was founded in 1981 to support and encourage the study of living whales in their natural habitats – a very young science at the time. WCWRF conducted whale and other marine mammal research programs in BC – some still ongoing – and initiated whale studies in Hawaii, Alaska, and Japan. In the decades since, studies of living whales at sea, the institutions that support this work and the resulting knowledge has exploded worldwide and we are pleased with our contribution to it.

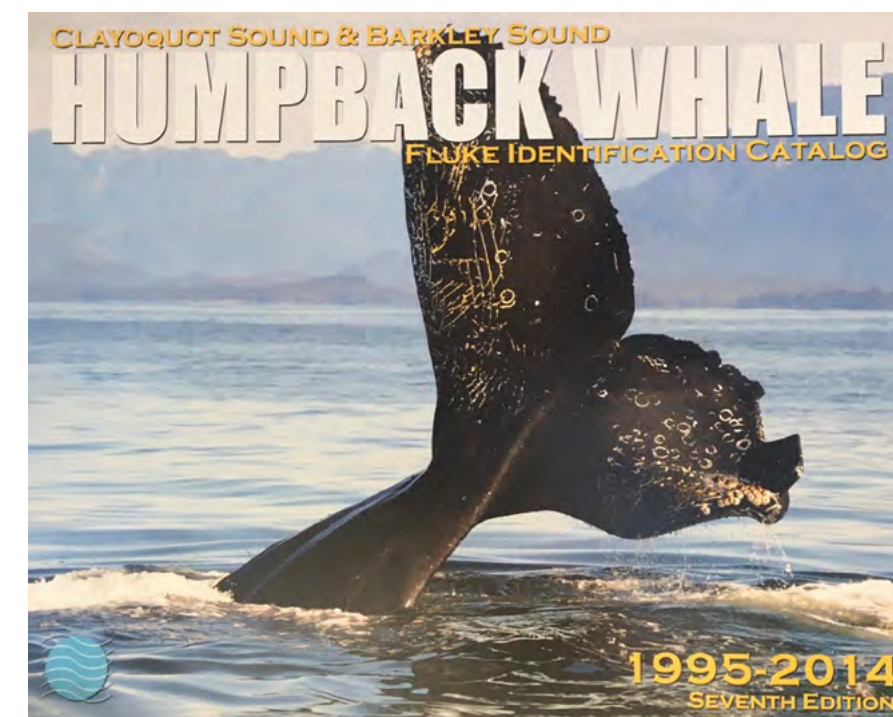
In 2003 WCWRF expanded with a new name – Pacific WildLife Foundation – with a mandate to support scientific research on

all wildlife in coastal BC. However, whales are still a core program with the ongoing studies of BC gray and humpback whales and collaboration with many other research organizations here and abroad.

Studies on the abundance, population definition, behavior, habitat use and prey species of gray and humpback whales off the west coast of Vancouver Island have been conducted over the last 40 years. Included in this work was a collaborative study with the Tla-o-qui-aht First Nation which explored through DNA analysis, a cache of ancient whale bones at one traditional whaling site. Species present and hunted approximately 1000 years ago were identified, provi-

ding unprecedented insight into the local marine ecosystem long before colonialism.

Currently a study of gray whale social organization on the feeding grounds, based on long term associations of individuals and genetic analyses, is underway. A database, including all photo identifications, sightings histories, DNA results and behavioral observations of individual gray whales resident along the west coast of Vancouver Island, 1970-present, is being developed. The purpose is for continuing study but also to archive and make accessible this information to everyone through the web.



Humpback Whale
Fluke Identification Catalog
1995 - 2004

◀ **The Salish Sea**

Salish Sea Atlas

One of the first steps in conserving nature is to do an inventory of what is present, when and where. In 2021, Pacific WildLife Foundation launched the first Salish Sea Marine Bird and Mammal Atlas. We focused on the inland waters of British Columbia and Washington known as the Salish Sea because of its high conservation values and potential threats from millions of people who reside around its shores. The need for easily accessible baseline information will help in environmental assessments, development proposals, and conservation research and restoration.

The open data sourced atlas combines georeferenced locations of all birds and mammals seen on our surveys of the Salish Sea and over 20 years of Coastal Waterbird Surveys led by our partner, Birds Canada. Users can find monthly counts for the entire Salish Sea or focus on specific beaches.

Associate Rachel Sullivan-Lord
on board Matsu during harbor
seal cruise

Seals and Killer Whales

Sighting a killer whale is a life-time experience for many people but to seals, the mere presence of this predator can greatly influence their behaviour that possibly reverberates through the marine ecosystem. That is why understanding the role of predators in the marine environment is a major emphasis of Pacific WildLife Foundation.

In 2021, the Pacific WildLife Foundation launched a new project to explore how a top predator, Bigg's killer whale affected the behaviour of the harbour seal. Led by PWLF Associate Rachel Sullivan-Lord under the supervision of President Ron Ydenberg, Rachel has mapped and measured harbor seals haul-outs to understand how these sites decrease or increase a seal's vulnerability to killer whales. Joined by fellow captain and research assistant, Felicity Johnson, Rachel completed the first research cruise in the restored sailboat Matsu through the Southern Gulf Islands. She visited harbor seals haul-out sites to classify the surrounding habitat, and deploy some trial time-lapse cameras. Engineering camera tripods that could withstand wind and tide using PVC pipe and a cordless drill and driftwood and rocks found in place was a fun challenge. She deve-

loped a solid solution that withstood the forces of wind and tide enough to minimize camera movement for her time-lapse photos to be crystal clear.

The time-lapse cameras had great range during daylight hours, but the night vision was inadequate so Rachel will be using a better infrared camera recommended by Parks Canada

to set up cameras this fall that will run throughout the year to examine seasonal changes in haul-out use and day/night patterns. The results will be combined with Department of Fisheries and Oceans survey data for harbor seals and killer whales that will help build layered "danger maps" of the Salish Sea and then test for differences



Harbor seals at haul out

colleagues. Historical Department of Fisheries and Oceans aerial survey data helped Rachel choose priority haul-out sites for long-term monitoring. She plans

in behavioral and physiological responses at different "dangerous" and "safe" sites.

Ecology and Community Structure of West Coast

Transient Killer Whales

Along the outer Pacific shores from Alaska to California lives a genetically distinct group of killer whales that eat mammals. The ‘West Coast Transient Killer Whale is a major predator of seals and sea lions. As their name implies, transient killer whales roam that coastal inshore and offshore waters in search of prey. Understanding how transient killer whales use coastal waters has been studied extensively but little is known about how and when they use the offshore waters. Preliminary study hints that there might be many social groups requiring different needs.



To understand how killer whales use the offshore waters, PWLF Associate Josh McInnes has been mapping sightings of individual whales to their habitats, and recording their behaviour, diet, and interaction with other west coast transients. Josh is using the findings toward a Master of Science degree under the supervision of PWLF fellow Dr. Andrew Trites at the University of British Columbia’s Institute for the Oceans and Fisheries Marine Mammal Research Unit. This year, he and his colleagues have published an extensive National Oceanic and Atmospheric Administration publication describing the transient outer coast killer whales of California and Oregon.



Sandpipers in Fraser River Delta

SUPPORT HABITAT

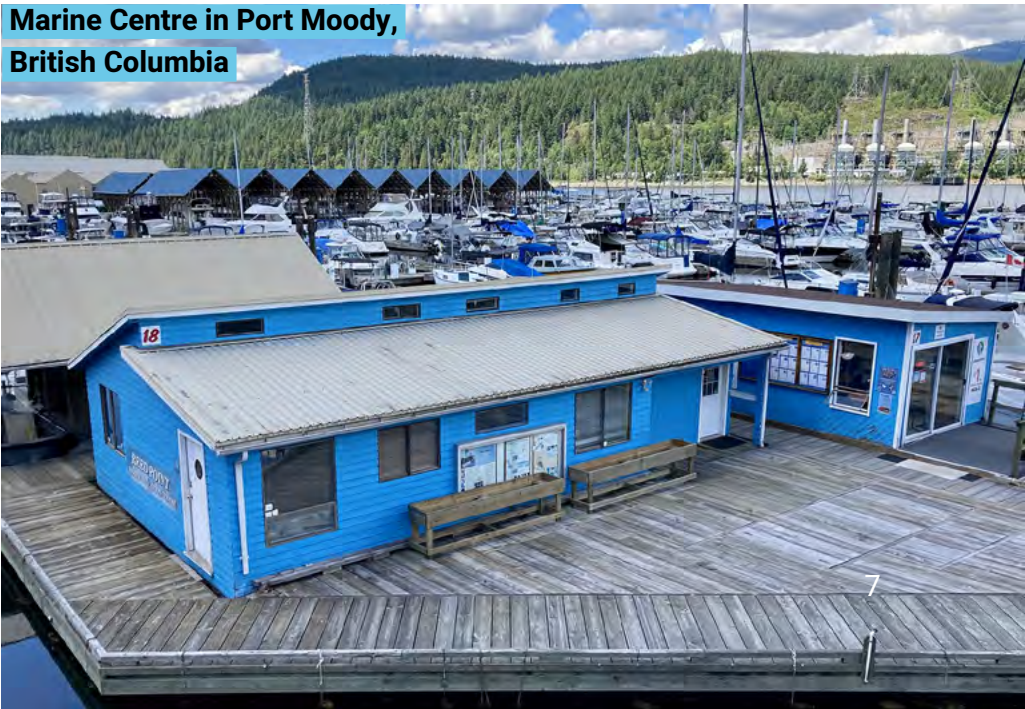
In 1987, Honorary Director Rob Butler co-authored a report that raised awareness to the international importance of the Fraser River Delta to migratory birds. What followed was the highest conservation designations for large areas of the delta. This year, Rob and co-authors summarized the last 30 years of work to show that the conservation was paying off. The report was adopted by the Pacific Birds Habitat Joint Venture – the largest bird conservation partnership on the west coast.

ENHANCE ACCESS

We are delighted to announce that Pacific WildLife Foundation, Simon Fraser University and Reed Point Marina have formed a partnership to establish a Marine Centre in Port Moody, British Columbia. Led by Director Rod MacVicar, the floating centre will be a marine laboratory and classroom and a new home office for Pacific WildLife Foundation. The Marine Centre will be a one-of-a-kind facility in Vancouver where students and the public will be able to experience marine life.

Reed Point Marina generously offered to renovate the Marine Centre building in Port Moody to become a floating marine teaching lab with Simon Fraser University and office for Pacific WildLife Foundation.

Marine Centre in Port Moody, British Columbia



ENHANCE AWARENESS

For more than forty years, the Pacific WildLife Foundation has been raising awareness of the ocean and its marine life. We have produced television documentaries, popular books, public lectures, media interviews, and led tours to see the Pacific Coast.

Our decades of scientific work contributed to a new book Pacific Flyway: Waterbird Migration from the Arctic to Tierra del Fuego published by Sasquatch/Random House by Audrey Benedict, Geoff Hammerson, and Honorary Director Dr. Rob Butler and launched in Seattle in 2020. The Nautilus Books silver medal award winning book summarizes decades of research by biologists along the Pacific Coast of the Americas.

We are pleased to announce that Honorary Director Rob Butler will be publishing a new book on his years of research on crows along the Pacific Coast. The book will take the reader to a remote coastal island where he conducted pioneering research 50 years ago. Board Member Mike McKinlay will be joining Rob to produce a film for television on crows and Associate Liron Gertsman will put his award-winning photography talents to securing captivating images of the life of crows.

► Director Mike McKinlay on set with the Pacific WildLife Foundation film RETURNING in 2018

▼ Directors Dr. Jim Darling and Rod MacVicar being filmed by Honorary Director Rudi Kovanic for the film Island of Whales in 1989

New Faces

Every organization undergoes renewal and this year has seen several new faces take on new roles. We are delighted to announce that Dr. Ron Ydenberg will serve as Chair and President following 18 years of service by Rob Butler. Rod MacVicar has become the new Vice President. Rob Butler and Rudi Kovanic have stepped down from the Board but will stay on as advisors as our newly established Honorary Directors. We are pleased to announce that Mike McKinlay has joined the Board of Directors. Mike served as an Associate for many years where he produced stunning videos and films you can view on the web site.

With 40 successful years behind us, Pacific WildLife Foundation has built a solid reputation for the next generation. We are delighted to announce the appointment of new Associates Rachel Sullivan-Lord, Josh McInnes, Liron Gertsman, Ruth Joy and Fiona Beaty. Rachel and Josh are studying killer whales toward graduate degrees at Simon Fraser University and University of British Columbia, respectively. Liron Gertsman is completing his undergraduate degree at the University of British Columbia and brings his award-winning photography skills to Pacific Wildlife Foundation. Ruth Joy is a marine statistician affiliated with Simon

Fraser University where she serves as an advisor to the Dean of Science. Fiona Beaty is completing her doctoral degree on climate change effects on marine life and community engagement.



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Photo credits:
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Design:
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Harbor seals at haul out on
Boiling Reef, British Columbia





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The glaucous-winged gull is the
most frequent and widespread
seabird in the Salish Sea

