



Pacific Orca Society: Annual Report 2015



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Pacific Orca Society
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- Explore: Remote Cameras/Network Systems
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- Project Cooperation along the Coast
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OVERVIEW

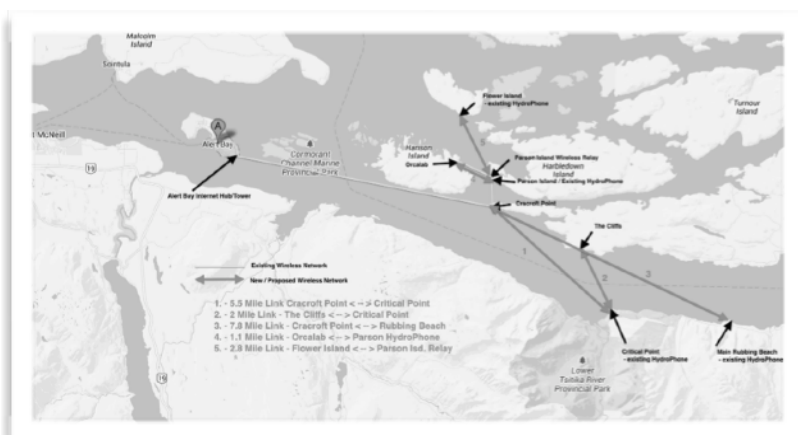
2015 was all about connections: High speed Internet finally became available; OrcaLab's camera network became a reality; acoustic data were sent and received; friends, old and new, came and went; many orca families likewise renewed their bonds; returning humpbacks resumed residency; research groups came together to discuss common goals and methods for monitoring the coast: and all the while, our boat the *June Cove* in good working order, carried loads and people to and fro, connecting OrcaLab to the world beyond.

Explore

The Pacific Orca Society/OrcaLab entered into a partnership with Explore in 2014. The relationship goes back even further to when Explore's founder Charles Weingarten first visited Hanson Island in 2005. OrcaLab, funded at the time by NTT Data of Japan, was already experimenting with streaming live video and audio and offering both to people around the world via www.orca-live.net. Despite its limitations, the project gained a following in more than 70 countries. Paul and Charlie discussed the potential impact of remote cameras and video/audio streaming via the Internet. In the years following the visit, the Annenberg Foundation provided significant support to OrcaLab's efforts.

It was a long held dream of OrcaLab to be able to resume the live video streaming we (and our audience) enjoyed during the six years (2000 - 2005) that NTT Data funded the OrcaLive experiment. When it ended, the costs of maintaining a high speed Internet connection needed for video streaming was beyond OrcaLab's resources but audio streaming was still a viable option. We continued to offer live audio via <http://www.orca-live.net> so anyone interested could tune into the whales when present in our area. JStream Japan kindly donated the bandwidth used by the OrcaLive website. Occasionally, we also streamed a form of live video from cameras mounted at the front of the Lab and underwater at Cracroft Point, but bandwidth limitations made it an imperfect experience for viewers.

Fortunately, Explore was willing to provide the financial and technical support needed to deliver live video once again, this time in high definition. In 2013, Explore sent Tim Sears, their amazing technical wiz, to assess the possibilities. He surveyed the various locations and then designed a complex system consisting of 6 cameras connected to the Lab via a network of microwave radios that used and expanded our existing network.



During a second visit Tim revamped the existing network adding infrastructure and cameras. Unfortunately, sufficient bandwidth to connect the cameras to the internet was not available. We could move data around our own network without cost, just not to the public via the Internet. A long wait ensued.

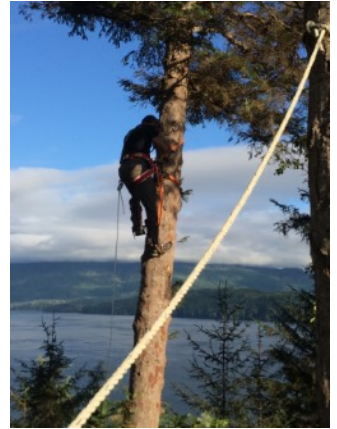
In the background was the promise of high speed internet as part of Telus' commitment to lay fibre optic cable to Northern Vancouver Island. This project was ambitious, difficult, costly and slow. Anyone who has travelled over and through the mountain passes between Woss and Sayward can attest to the challenging conditions. Finally, after two years and millions of dollars the fibre project was completed. The new OrcaLab/Explore camera network moved closer to reality. It took several more months, but eventually in the Spring of 2015, Telus laid a fibre optic cable from its base in Alert Bay to OrcaLab's base of operations in Alert Bay.



It was an exciting moment to see the Telus truck parked next to the pole outside our Alert Bay house. Two days later, after the cable had been strung to the house and equipment mounted inside, high speed internet became a reality! The network was at last ready for the next stage!

The first step was to get Tim back. After work in Alaska and Churchill, Manitoba Tim brought his crew, Andrew, Andrew (yes, two Andrews), Tiffany and Emma to Hanson Island in late July. Tim had arranged for delivery of the equipment needed, via FedEx while he was working in Churchill. But apparently all the best plans can be easily scuppered, especially by delivery systems confused by the challenge of getting something to Port McNeill. A frustrating wait followed. The crew did all they could to get ready in the meantime. When the equipment finally arrived the *June Cove* was put into service and the crew went into high gear. The work was intense, the time short, the result stunning! By the end of Tim's visit, new radios and cameras replaced existing ones, an underwater high definition camera was installed in the kelp forest off Cracroft Point, a lovely new computer and monitor was put in place in the Lab, the network was tweaked and tweaked again until all the lights, bells and whistles indicated that all was in order.







Suddenly, we were watching most of the area covered by our hydrophone network i.e. a good portion of the orcas' "core habitat". The listening and watching complemented each other beautifully. Especially exciting was to see the scenes of the ever changing kelp forest from the underwater camera, the stunning view of the junction of Blackney Pass and Cracroft Point from the new camera up the hillside on Parson Island and the crystal clear imagery of the orcas blowing bubbles and skimming their bodies over the pebbles of the Main rubbing beach in the Robson Bight (Michael Bigg) Ecological Reserve. Our small group now had the additional challenge, besides monitoring, recording and tracking the whales day and night acoustically, and of watching Blackney Pass for humpbacks, orcas and other events, of locating whales when on the cameras and following them from one camera view into the next and then the next. There were many long but rewarding hours of constant vigilance. Once when after recording the orcas through a long night and then the dawn, a humpback swam in front of the Lab into the amazing hues of the rising sun, all the while swishing pectoral fins back and forth and slapping the deeply coloured water: The Bigg's who were filmed while engaged in a vigorous hunt of a sea lion off the Lab: The bird clusters around feeding humpbacks; and even more that took our collective breath away.



Besides the spectacular and even the day to day, the cameras are a real tool enabling us to locate whales in all kinds of conditions and remote locales. Before, we had to solely rely on our interpretation of acoustic signals or sightings reports from others when the whales were beyond our own view. Despite the challenge, especially in the expanse of Johnstone Strait, we have been able to follow groups throughout the late fall and winter and document human behaviour around the whales, so important for conservation efforts.

There are many components that go into creating the infrastructure needed to support a wireless network - far too many to describe adequately. But imagine scrambling through forest and bush to find the best location, lifting heavy, unforgiving batteries up & over rocks, installing large solar panels, running cables through tangled forest, climbing very BIG trees, hooking up radios while up those very BIG trees, exchanging those unforgiving batteries or replacing radios that fail, scrambling up hillsides or dodging waves to run the generator in hard to get to locations and finally doing it all over again in the next location. There are six microwave radios in the core OrcaLab wireless network, and four more in an extension to the Ecological Reserve in Robson Bight. Finally, when all is working, the signal is carried to Alert Bay (the radio there is up another tree) and out to the world.

We experienced some trials and trying times, especially when one of the radios failed at Cracroft Point. Each link in the wireless radio system is important. Five radios connect the Lab to Alert Bay over an expanse of more than 20 kilometres: from Hanson Island across to Parson Island, from Parson to Cracroft Point, between two radios at Cracroft and finally from Cracroft to Alert Bay where the signal is transmitted to the world via Telus. It's a two way system, so the internet connection on Hanson Island comes from it as well as the transmission of outgoing data. Any failure with any link and OrcaLab's ability to connect to the Internet and get our video or acoustic data "out" is cut off. Not a desirable situation. In 2014, we had such a failure which took weeks to solve. Our caretaker Brittney Cannamore was trying to finish her university courses while at OrcaLab. During the disruption she had to travel to Cracroft Island by boat just about every other day and use the working connection there to do her school work. Not always easy in windy winter conditions. We cut a path across the island so that she and David could walk to the Point and the little shelter to avoid conditions that might be too rough in Johnstone Strait. This situation was finally righted when it was understood that the trees from old clear cut logging had grown sufficiently to block the link. David Howitt, long time OrcaLab volunteer and friend, travelled from Washington, climbed the BIG tree, solved the problem and went home.

So this last Fall when another radio failed we called both Tim and David. Tim figured the radio had simply failed but it would be "just" a matter of running up the tree (!) and popping in a new one. He ordered the radio to be sent by courier from Ontario and we called David. David and his friend Barbara drove up anticipating a fairly quick trip. But the new radio didn't show up. Apparently, UPS is no better than Fedex.



Finally, after what seemed an interminable wait the package arrived - BUT the company sent the wrong unit! Tim patiently contacted the company, they apologized and promised to ship out the right one asap using Canada Post this time. Unfortunately, the company missed the post (they were more used to couriers). We waited and waited. Shortly after it finally came David went up the very BIG tree and “popped” in the new radio as instructed. Tim was right, it was a simple job.

We were concerned that we had detained David and Barbara for so long. On the night of the day Paul and Helena had gone to Alert Bay to see if the new radio had arrived, Barbara clearly heard Southern Residents calling on the hydrophone in Robson Bight! She knew these calls well from her work as a naturalist in the San Juan Islands, most recently on David’s whale watching sailboat (“All Aboard Sailing”). The next day the radio arrived at last, so Helena and Paul took it back to

Hanson Island. Later in the day Jared Towers messaged that he was with the Southern Residents off Donegal Head and it looked like they were going to come down Blackfish Sound headed for Blackney Pass. We started a recording but instead of the expected Southern Residents we heard Northern Residents! When we told Jared, he remarked “Seriously?” because up to that point he had only seen Southern Residents. The G clan calls were fairly close to the Flower Island hydrophone in Blackfish Sound so we suggested he look in that direction and indeed there was another group. We cannot stress enough how rare this occurrence was. Southern Residents are normally seen in the Vancouver, Victoria and Puget Sound area and occasionally in Georgia Strait and only very rarely in Johnstone Strait. Never in our 45 years of observing had both communities of orcas, Northern and Southern been seen and heard in the same location before! The light was fading but the whales obliged by travelling through Blackney Pass in front of the Lab before dark. The Northern Residents, part of the I11s and I33s (both G clan), appeared first on the far side. Then came the Southern Resident Ks and Ls on the Lab side. Both groups carried on into Johnstone Strait parallel to each other while vocal at the same time. The story was not quite over.



photo: Jared Towers

As Jared followed these groups into the Strait we became aware of yet another group travelling in the middle of the channel in the evening gloom. They were silent but we could make out that it was more Northern Residents, A46 and the A34s, (A clan)! Jared came back for photos and then booted it for Alert Bay arriving there in the dark. We continued to record. The whales became silent once in Johnstone Strait until they reached the Ecological Reserve. The Southern Residents made one last call and disappeared to the east, presumably on their way back to their home waters. The Northern Residents then went in for a rub, perhaps relieved to have their Strait back to themselves. It was an amazing unique event and the coincidence of having whale enthusiasts David and Barbara who are from Southern Resident country here at the same time was not lost on us.

Since the fix, the radios (fingers crossed) have run well and trouble free. We are still struggling with power issues. The idea of the cameras is to have them running all the time, even through the night, so the audience can watch transitions from dark to light and vice versa. However, the drain on the batteries is just too much.

Tim organized and sent new batteries for both Parson Island and Cracroft Point, Paul & David Cannamore with Bill & Wendy Thompson's help installed the new batteries. Solar capacity at Parson Island was increased as well. Despite this effort we still have difficulties. Ever since the dark days of winter we have gotten into the habit of turning off the power to the Cracroft Point camera at night and turning off the Parson Island camera entirely to save power. The rubbing beach system depends on fuel which is swapped out when needed so it still operates continually even though its independently powered hydrophone suffers from winter's short grey days and long nights. Caretakers David and Brittney make frequent trips to Cracroft and Parson Island to run the generators to charge declining batteries. However, a more effective strategy is needed. Once the daylight increases again most of the power issues will hopefully be resolved.

This coming summer we are increasing the number of people we will have helping in the Lab. Lessons have been learned and our skills using the cameras have improved steadily. Hopefully, we will continue to engage the public with the lives of orcas. Two platforms: <http://explore.org/live-cams/player/orcalab-base> or <http://www.orca-live.net/community> will provide access to the audio and camera streams.

In addition to Tim Sears and his crew, Explore has provided OrcaLab with a great support team led by Tom Pollak, Jonathan Silvo and Ann Haggart. As we work out various kinks and power issues (remember those unforgiving batteries?) and learn about our new network and educational outreach Jonathan has been both tirelessly patient and helpful. Explore is always looking for ways to include and inform the public about the potential of remote cameras and their ability to bring the natural world a little closer to all. We are so happy to be a part of this vision.



Acoustic Research / Hydrophone Systems / Prof. Herve´ Glotin / Ocean Noise and IC Listen hydrophone

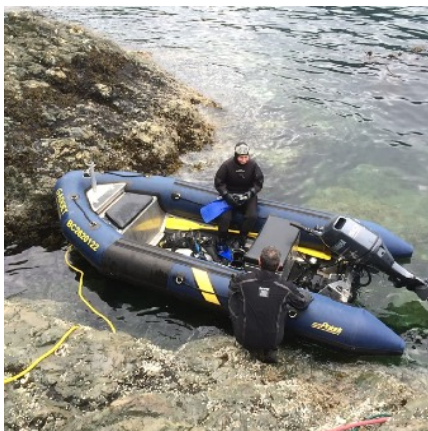
OrcaLab worked on two hydrophone related projects this past summer.



The first was to invite Professor Herve´ Glotin of the Institute Univ. de France (IUF), UMR CNRS LSIS, Univ. Toulon (UTLN) Head of Scaled Acoustic Biodiversity & Dyni projects to set up a computer link between the Lab's continuous acoustic monitoring and his Lab in France. Herve´ had visited OrcaLab previously in order to introduce himself (and on that occasion, his lovely family as well) and relate his interest in location modelling based on acoustic signals. He has had success doing so with sperm whales and was interested to see if our wide hydrophone array (it covers approximately 50 square kilometres) would afford enough information to accurately pinpoint the location of orcas as they pass through the area. Of particular interest were three hydrophones; Parson Island, Cracroft Point and Critical Point due to their locations. Generally,

any time resident orcas are in Johnstone Strait off the entrance to Blackney Pass they can be heard on all three hydrophones. Although these hydrophones are spaced well apart geographically their ranges overlap thus providing a broad triangulation. Signals from the whales may be heard in sequence arriving at the closest hydrophone first and the furthest last. We have over the years used this feature of the hydrophone network to figure out where the whales are and in what direction they are headed. For instance, if orcas are entering Johnstone Strait from Blackney Pass we will hear their calls loudest on the Parson Island hydrophone. As they move further and begin to turn toward the east the calls will echo to Cracroft Point and as they move even further into Johnstone Strait the calls will be picked up by the Critical Point hydrophone near Robson Bight. Depending on the whales' position the sequence of the received calls will change as they move, and the spacing of the echoes approximately determines where the whales are. We keep track of and note these changes and thus follow the whales whether it is day or night. Professor Glotin hopes to fine tune this process and be able to describe the movement and position of the whales with greater accuracy including how deep the whales are travelling. He was assisted in this effort while at the Lab by Julien Ricard who came to us as a developer with a strong background in audio signal processing and machine learning who had worked as a research engineer in audio analysis both in academic and industrial environments and recently as a freelance developer.

Professor Glotin has already had some results and we will be excited to review these as they develop.



Second, in 2015 OrcaLab was the beneficiary of an IC Listen hydrophone provided by Tides Canada and the World Wildlife Fund with software provided by Ocean Sonics. Roger McDonnell and Jackie Hildering kindly donated their services for the hydrophone installation after John Joynt and Peter Marshall delivered the hydrophone which had been configured by Tom Daikin.

The World Wildlife Fund has directed significant resources in recent years to understanding the potential risks of boat noise in the marine environment.

Positioned in Robson Bight this IC Listen calibrated hydrophone will be used to monitor Johnstone Strait continuously and hopefully contribute to an understanding of boat noise levels in this high traffic waterway. It is additional to our existing 6 hydrophone network. The hydrophones OrcaLab has traditionally used for detecting the presence of whales are of an older technology and not calibrated. This means that more sensitive measurements of signal /noise levels were not really possible. As a main route for a lot of marine traffic, Johnstone Strait is a very busy place. Rarely are there days when no boats transit through these waters. On any given day, there may be sports boats, crew boats, small and large freighters, fish boats, tugs, log barges, military and coast guard vessels, ferry boats and in the summer, cruise ships. Earlier, researcher Rob Williams sampled the same area and found that noise levels in Johnstone Strait were very high. With the potential for increased industrialization along the coast as the result of mega projects such as the expansion of the Ports of Vancouver and Prince Rupert to accommodate ever larger and more numerous vessels, the desirability of using the Inside Passage, of which Johnstone Strait is a part, as a conduit increases. What has been lacking so far is a clear understanding of what chronic noise levels exist presently so that it will be possible to compare these data in the years to come. Another goal is to be able to compare noise levels in the Johnstone Strait area with other locations along the coast. Besides OrcaLab, there are two other projects, Pacific Wild on the central coast and Cetacealab on the north coast. Both have deployed calibrated hydrophones with the same goal of gathering data on noise levels. The three projects are working collaboratively and hope at some point when the data are available to be able to describe and compare noise levels in the different locations. Why does understanding noise matter? There is already sufficient understanding that noise has the potential for disturbance and harm. Acoustic harassment devices were used at one time to deter predators from fish farms but were found to also disperse acoustically sensitive cetaceans. Military sonar has been known responsible for the deaths of cetaceans world wide. Seismic exploration is also a huge acoustic problem. Less understood is the effect of persistent background noise levels from human made sources within known whale habitats. Studies on humans clearly indicate noise causes stress. Johnstone Strait has been designated Critical Habitat for orcas because the orcas are known to return to this area reliably each year during the salmon migrations. Of concern is the trend right now for the resident orcas to arrive late and leave early. The fundamental reason is not clear. In a long list, noise may be a major contributing factor but the data need to be collected and the story told.

The Robson Bight location for the IC Listen hydrophone was chosen because it affords coverage of a large portion of Johnstone Strait. OrcaLab already has a “regular” hydrophone in place at the same location. They will complement each other, one continuing as part of our hydrophone network, the other dedicated to providing digitized data. Explore has put a camera at this location as well. As of yet, neither the camera nor IC Listen is operating due to technical problems which Tim Sears has been working on and will solve soon. The hope is that as this camera eventually broadcasts it will be able to use the IC Listen hydrophone signal to provide a bonus of acoustic as well as visual information.

“Too small to fail”: Cooperation among coastal NGO groups:

In January, OrcaLab attended a workshop on Saturna Island. Participating in the workshop were several groups and individuals involved in marine research from Puget Sound to Prince Rupert. The aim of the workshop was to explore the common ground between research projects, their goals,

difficulties and successes, methods, resources, concerns and new directions. All present were committed to supporting the welfare of marine life and habitats along the coast. Most of the projects employed the use of hydrophones. A lot of the discussion centred around how projects might gather data using consistent methods and equipment so that data were useful and comparable especially in determining noise profiles at each hydrophone location. Tom Daikin, who works with Oceans Network Canada (ONC), took on the task in 2014 of visiting each NGO project on the coast, OrcaLab included, to determine the capabilities of each hydrophone already in each network. Unlike OrcaLab, the other “newer” projects, Cetacealab and Pacific Wild were already using calibrated hydrophones in their remote hydrophone networks. Although OrcaLab had been a model for their networks they took advantage of the chance to embrace newer technology. OrcaLab’s system was first established in the 1980s when hydrophones that were most affordable and available were old World War II-Korean War sonobuooy devices. They worked well for detecting the presence of whales, even producing great recordings but they were analogue and not calibrated. The World Wildlife Fund, who co-sponsored the workshop, has been for several years dedicated to helping find out the effects of noise in the ocean. To that end, WWF has put a lot of effort into state of the art calibrated hydrophones. OrcaLab, as mentioned, now has one of these.

At the workshop there was also discussion about how to adequately and safely store data received from the hydrophones. Streaming continuous acoustic data creates huge files that need a lot of storage space. Once stored the question remains, how then are the data accessed?

OrcaLab found a solution years ago with its partnership with Dr. George Tzanetakis of the University of Victoria, converting our old tapes (from pre-1980 to the present) into digital waveforms and then archiving them. George found Master then PhD student Steven Ness, who developed a website designed to allow coherent access to the stored recordings (orchive.cs.uvic.ca). The project is still ongoing. The discussion during the meeting grappled with the difficulty of finding suitable media and locations to store data. This then led to a lively discussion.

The ethical treatment of years of data was a sensitive topic at the meeting. The NGO groups involved have not been beholden to industrial or even government agendas and wish to remain so. At the workshop the potential of the NGOs’ contribution to the knowledge of the coastal waters was recognized. The projects already mentioned are well established entities with invaluable data. But they are not large organizations. Fittingly dubbed at one point in the meeting to be, “too small to fail”, the groups therefore recognized the need to support each other in order to be a more effective voice for the whales now and in the future.

“CP” /new camera / Drone

“CP” is OrcaLab’s outcamp located at Cracroft Point on Cracroft Island. The camp overlooks Johnstone Strait and the entrance to Blackney Pass.

This location commands a view from Robson Bight to Telegraph Cove and every whale that enters Johnstone Strait will pass CP at some point. The rich beautiful kelp forest just off the camp is home to a myriad of animal life finding shelter within the thick, long, swaying kelp fronds. As mentioned, one of OrcaLab’s hydrophones is located near the camp.

We have had a hydrophone at this location since the 1980s. We established the camp in 1993 and in 1994 we installed our first underwater cameras at this site and were rewarded when A31 passed by swooping his flukes over the camera view. Since being first established, the camp has taken on more permanent features with a shelter built to house the equipment year round and make it possible for the volunteers to be housed safely from the weather and animal visitors. Cracroft Island is home to both bears and cougars. We reestablish the camp each summer.



In 2015, OrcaLab was fortunate to have skilled photographer and videographer Megan Hockin-Bennett return.

She first came to OrcaLab in 2013 and last year wrote to us offering to look after “CP” for the summer. In addition to the underwater and remote cameras CP also utilizes both a high quality video camera (used to capture events, scenery and passing whales) and a still digital camera (used to document and identify whales). Whale and Dolphin Conservation UK offered OrcaLab part of the proceeds from a Humble Bundle fund raising initiative by the video gaming developer

SEGA with whom they had a long standing partnership. The promotion was given an additional local aspect when British Columbia gamer, Relic, was involved in the event. OrcaLab’s share of the proceeds enabled it to replace its video camera with a newer HD model. The videos from the past summer in Megan’s capable hands were stunning. WDC and Explore both have been able to benefit from Megan’s work. Megan is returning for another summer at CP in 2016.



photo Megan Hockin-Bennett

Last year, while still at home in the UK and before coming to OrcaLab, Megan bought a drone and expressed interest in using it at CP. We encouraged Megan but also decided that the best course of action was to apply for a permit from Fisheries and Oceans Canada (DFO). After discussing the project and going through the permit process OrcaLab was granted a permit under the Species At Risk Act (SARA). OrcaLab hoped this would aid DFO's development of protocols for the use of drones in the presence of whales. Drones are becoming very popular and to date are unregulated. The concern is that increasing unregulated casual use will eventually negatively impact the whales and cause disturbance, even harm.

Megan deployed the drone 11 times and demonstrated that she could successfully manipulate the drone while maintaining a distance of at least 30 meters above the whales. She detected no



disturbance. The usefulness of the exercise is still under consideration but generally we reached the conclusion that commercially developed drones may be of limited use for research as they do not include a zoom lens. However Megan's drone does have 4k technology that was not used last summer. This may prove useful in that it allows closer inspection of images. It is possible we will apply for another permit and do further experimentation next summer.

The Whales

Besides the exciting event of 21 October when the Southern Residents travelled through Blackney Pass alongside Northern Resident families, the whales kept everyone busy as usual. The weather last winter was far from bleak and less windy than usual. One of the A5 family groups, the A42s, actually stayed through most of January in the upper Georgia Strait. Unfortunately, this is out of our range but it was good to know they had continued their historic habit of returning during the winter. Other Northern Resident families returned briefly in February but basically the area belonged to the Bigg's orcas. Also known as Transients these orcas favour eating other marine mammals. They hunt by stealth and are often silent as they travel. Sightings are often opportunistic but the hydrophones help to locate them when vocal. If it happens to be daylight the cameras now also aid tracking.

The humpbacks began to arrive as early as April. They would remain a steady presence to December. The resident fish eating orcas returned mid July. This rather late arrival was in keeping with recent years and perhaps indicates a trend for shorter stays in the area - departures by mid September have become the new norm. Basically, all the summer activity is squeezed into two months. The good news for 2015 was that a greater number of different families, from all three of the Northern Resident community clans, decided to visit the area. This had not happened for a while. Everyone at the Lab was treated to many of these whales arriving and pausing in Blackney Pass while they organized themselves before moving on.



We were all so pleased to finally see Springer, the famous orphaned orca who was returned to her community in 2002. Springer had not returned to the area for two years.

The sign we have on the side of the Lab welcoming her home was beginning to look a bit out of place. Not only did she come back she brought her little one, Spirit, with her and came along the Hanson Island shore close to the Lab! It was a great moment. Springer is all grown up and by having a baby her place in her community is fully secure.

In our 2014 report we told the sad story of Plumper (A37)'s death in August. His struggle through the summer had been so obvious and had touched us all. The future for his brother Kaikash (A46) was far from certain as he became the last survivor of his immediate family. We were heartened to see that he left the area in the company of related family and then relieved when on their return in the summer he was still with them and that he looked energetic and well.

Springer was not the only whale to come close to the Lab. Inukshuk, the humpback decided one evening to come right up to the Lab surrounded by attentive sea lions and on another occasion, another humpback (it was too dark to see who) decided to tour the inside of our bay, not once but twice. The tide was dropping and the bay was shallowing out. We held our breaths imagining how the eel grass must have been tickling his or her chin.

There were concerns too. In August, the Vancouver Aquarium and NOAA were busy doing a follow-up of their 2014 drone exercise to determine the physical condition of individual whales with use of aerial photogrammetry when they noticed that the young orca Fern (A95) had a nasty looking wound across



Fern (A95) 2015: photo Vancouver Aquarium/NOAA



Fife (A60) 2004: photo Graeme Ellis

and below the dorsal fin eerily similar to the injury Fern's uncle, Fife (A60), suffered years ago.

The conclusion was both were caused by coming in contact with a boat's propeller. These whales belong to the A5 pod which has had a disproportionate number of boat accidents: The matriarch, Eve (A9) had deep but healed wounds along her back before orca research began in the 1970's; A21, a sibling of Corky, probably died from being hit by the Powell River ferry in 1973; Sharky (A25) had a distorted fin caused by some sort of accident and; Corky's mother Stripe (A23) had a large gash on her side. We personally were witness to Fife's unfortunate boat attraction when he put his head under our moving prop when he was about two years old. It was a dangerous game which he shared with his older cousin Ivy (A52). Both swam under the prop's wash and repeatedly repositioned themselves while their watchful, respective mothers flanked our boat on either side. Although there were no consequences it was quite scary. Hopefully, Fern has learned the lesson and will stay further away from boats in the future.

This underscores the need for boaters to be very aware while they are in an area frequented by whales and populated by other marine life as well. Efforts are being made to educate the public to slow down and be careful, "See a blow Go slow!" but it is difficult when boaters are in a hurry to get from "A" to "B" and the ocean is full of busy traffic every day.

Issues

As the International Whaling Commission (IWC) is now on a biannual schedule there was no meeting in 2015. IWC66 will be held in Portoroz, Slovenia, 20-28 October 2016. This is the same venue as 2014. Meanwhile, Japan has declared its intention of resuming whaling in the Antarctic in early 2016 despite the ruling of the International Court of Justice (ICJ) March 2014 that Japan had not offered sufficient scientific data to support the claim that they had been conducting scientific research under

the IWC provision that allows for such. The ICJ ordered Japan to stop “research whaling” but Japan ultimately refused to obey the ruling of the world’s highest court.

No doubt Japan will be challenged in the courts and at sea again. Japan has killed many thousands of whales since the moratorium on commercial whaling was agreed by the IWC in 1982 and has now declared its intention to kill 333 more minke whales this year. Over the next twelve years Japan plans to kill 4000 whales. Support for whaling and the consumption of whale meat are both in decline in Japan. The reasons for Japan’s illogical intransigence lies rooted deep in an obscure nationalistic agenda. In 2014, the majority of the IWC Scientific Committee (SC) agreed that Japan’s whaling did not meet scientific criteria. In June 2016, ahead of the Plenary in October, the SC gathers once again in Bled, Slovenia. This will be after Japan has gone whaling again. There is, therefore, an urgent need to counter Japan’s defiance of International Law and determined intention to continue slaughtering whales. Joji Morishita is Japan’s Commissioner and the Commission’s Vice Chair. As IWC custom is for the person holding the Vice Chair position to automatically become the next Chair, there is a lot to be done in a very short time. IWC66 should be interesting, to say the least.



On 8 October 2015, the [California Coastal Commission](#) (the agency with oversight over land use and public access in the California coastal zone) held a public meeting at the Long Beach Convention & Entertainment Center to review SeaWorld’s application to expand tanks at its San Diego facility as part of its “The Blue World” project. Public interest was very high. After a very packed meeting and after receiving 200,000 emails and 50,000 letters the Commission supported SeaWorld’s proposal to increase its tanks from 5.8 million to 9.6 million gallons with a depth of 50 feet. But significantly they

also imposed a condition that SeaWorld not populate the tanks with orcas caught in the wild or use genetic material from wild caught orcas to breed orcas in captivity. This would mean a cessation of SeaWorld’s breeding programme, at least in San Diego. SeaWorld filed a lawsuit against the decision on 29 December, so the outcome has become unclear. However, the decision marked a turning point in anti-captivity campaigns.

SeaWorld’s breeding programme came into sharp focus with the release of the documentary film “Blackfish” and the publication of “Death at SeaWorld”. The tragically infamous male orca Tilikum is the key to their whole breeding programme. He has fathered the majority of the captive born orcas at SeaWorld. This means there is little genetic diversity and SeaWorld faces the problem of what to do if Tilikum is no longer available. SeaWorld has certainly been reeling since the release of “Blackfish”. Attendance and stocks are down. Last year, we helped host the successful orca freedom concert “Kiss the Sky” inspired by the musicians (there was a long list) who refused to perform at SeaWorld in opposition to captivity,

At the Coastal Commission meeting Corky was well represented. Corky, is held captive in San Diego,. She was captured in December 1969 in Pender Harbour, British Columbia. She belongs to the A5 pod of the Northern Resident orca community. First held at MarineLand, Los Angeles she was moved to SeaWorld, San Diego in 1987 and has been there ever since. OrcaLab has been lobbying for Corky’s

release for decades. Years ago, an impressive 21/2 kilometre Banner, made from painted cloth patches contributed by children and adults from around the world, was displayed outside SeaWorld, San Diego, and in many other venues. Corky's Freedom Banner still exists and portions of it were displayed at the Coastal Commission hearing, being seen behind many of the speakers. Corky's story, of how she was taken captive and separated from her family, of where she belongs, of how she suffered seven pregnancies from which no babies survived beyond 46 days, of how she has endured 46 years of living in tanks lent weight to the debate. Learning about individual captives provides powerful arguments for ending this dismal practice. The Commission heard the pleas and did what was within their jurisdiction. SeaWorld has never had such opposition. They need to change. Perhaps at some point they will finally embrace public goodwill and get behind the idea that Corky might be allowed to end her days in an ocean facility. One can only hope.

Volunteers & Caretakers

In 2015 Orcalab welcomed many visitors from around the world. Ten people came to help out around the Lab throughout the summer from June to October. American Megan Howes and Stephanie Chanvallon from France started things off in June. They kept an eye on everything while supplies and equipment were bought. The humpbacks were well established by this time so they were kept busy. Eventually, the others arrived, including Momoko Kobayashi returning from Japan for her sixth year and Megan Hockin-Bennett from the United Kingdom for the second time. Chelsea Meaney from the United States and Julien Ricard from France came as well. They were followed by long term returnee Tomoko Mitsuya from Japan. Shari Manning, a close friend of Megan Hockin-Bennett, came for August to help Megan at Cracroft Point. Dylan Smyth, the lone Canadian, Colleen Weller from Oregon and Krsztina Balotay from Hungary filled out the roster later in the season. Everyone responded very



well to the challenges of keeping the Lab running, observing, recording, taking pictures, operating the remote cameras, keeping the house supplied with chopped wood, the dishes washed and assisting with the remote systems.



In September, it was decided to finally tackle the roof of the Lab which was beginning to resemble more garden than roof. All well and good but it was leaking badly. Something had to be done and soon.

Mark McCallum, who had been a winter caretaker two years ago, a metal worker and handyman as well as a great help during our 2013 solar upgrade project was invited to put a metal roof on the most urgent section of the Lab roof. His partner Bec McGuire came as well. Mark set to work pulling off the old roof. The rotting shakes and beams made the job difficult. Copious amounts of old wood, insulation, moss, plants and tar paper were thrown down onto the deck. Bec organized its removal. She was helped by Momoko and Kat Jefferson who had come to visit with friends earlier in the summer and returned in September to help out in the Lab. Kat like Bec is

from Australia. After a tedious sorting of the debris, bag after bag was hauled to the Bathhouse heater and burned. Anything organic went back to the forest. We were lucky the summer's drought had finally eased and we were able to run the Bathhouse. Everyone was able to take showers with water warmed by the busy heater. Meanwhile, Mark "lived" up on the roof until the under structure was secured, new insulation laid and new metal roofing and gutters in place. The upstairs sleeping loft, usually available for the Lab helpers, was off limits for a while. We took advantage of this to get Mike Durban to redesign the interior space so that two people might sleep there more comfortably.

Mike was responsible for completing several other needed tasks.



In June, the old ailing cast iron cook stove, "the Queen" was replaced with a brand new Amish made stove. Many steps were needed before the new stove was installed in the kitchen. After the stove arrived crated in Port McNeill the very heavy load was winched onto our trusty *June* Cove and transported to Alert Bay, where there was a lot of discussion about how best to proceed. This was one big and heavy object (500 lbs) and the design of the *June* Cove's bow

did not lend itself to an easy unload. We stripped everything we could from the package and Dave Towers supervised winching the stove from the *June* Cove onto Larry Roy's front loading skiff. Larry then drove his boat to Hanson Island. Sointula friends Paul Ross and Twyla Roscovich, along with friends of theirs, came over to Hanson Island to help unload. Megan Howes and Stephanie were already there waiting. Larry eased his boat into the shallows and lowered the front onto the beach. The new stove was slid and edged up the beach and a make shift ramp helped the stove onto the



deck. More sliding, pushing and edging got the stove up and into the house and finally to the kitchen. There it sat until Mike was able to knock out the eight inches of old tiled concrete platform that held the "Queen" and lay new tiles in its place. With new wall protection in place the new stove was shifted into position and when finally the stovepipe was connected, the stove was fired up and the first loaves of new bread were made. The stove, named Amia is a great addition to the house, easy to use, with a bigger oven, and warmer. Many thanks to everyone who helped!

We soon put Mike to work doing improvements to the caretaker/guest house. Mike put in a new secure winter door and laid new beautiful tiles for the hearth.

Two other maintenance efforts helped greatly. Each year winter storms take a toll on the buoy we use to moor our boats. Fortunately, the winds bring the loosened buoy ashore and we are able to secure it until once again installing it. The re-installation requires diving and retrieving the rope attached to big concrete blocks on the bottom. Early last summer, Steve Lacasse of Sun Fun Divers, working with his dad had the mooring back in place in no time. Soon after, "2Dive4" partners Lynn Klassen and Darryl Harris came virtually out of the blue and offered to dive on two of the hydrophones that had not been serviced for a long while.

Our winter caretakers David and Brittney Canamore looked after everything through mid April. David contributed his lively writing about their experiences in his blog <http://raincoastwanderings.com>. After they left they made the long trip back to Alaska and spent the summer guiding kayak tours. In May, Mark Worthing and Jesse Howardson came and stayed for the month. Mark built a huge planter from a massive cedar log on the beach and Jesse started some heritage seeds in smaller containers. After they left, Paul and Helena filled in the box, planted some potatoes and transplanted Jesse's seedlings. This box was still producing produce well into winter. David and Brittney returned just after Hallowe'en, along with Potter the cat and Penny the bunny, to settle once more into their Hanson Island home.

Pacific Orca Society and OrcaLab are deeply grateful to all of our supporters. Given the progress we made last year, we anticipate that 2016 will be another productive year. We look forward to sharing many more exciting moments with you.

Thank you so much,

Paul & Helena.