

# THE INTEGRAL ROLE OF THE RVT IN A SPECIALIZED FIELD TEAM

BY EMILY JOHNSON, RVT

“DAY TO DAY, THE ANIMAL CARE TEAM AT THE VAMMR, WHICH IS PRIMARILY COMPRISED OF RVTs, IS RESPONSIBLE FOR THE CARE OF APPROXIMATELY ONE HUNDRED MARINE MAMMAL PATIENTS EACH YEAR.”



Race Rocks RVT Sion Cahoon and Dr. Marty Haulena getting the sedatives drawn up and loading the dart.

On September 19, 2022, the Vancouver Aquarium Marine Mammal Rescue Society (VAMMR) received a report from the Eco-guardian at Race Rocks Ecological Reserve, near Victoria, BC, of a severely entangled California sea lion. It was entangled in some type of monofilament that was encircling his neck and had caused gruesome infected wounds, including two large open areas on the dorsal aspect of the neck. For a response to be initiated, there must be consecutive sighting reports documented and ideally a second target (mammal) in the same area to increase the chances of observing at least one target on response day. A second sighting of the above sea lion was reported on October 14, 2022, along with several other entangled sea lions, some with plastic packing bands and others with fishing flasher entanglements. In the early morning of October 19, 2022, the team made their way to Metchosin, on Vancouver Island, in hopes of finding the severely injured California sea lion. Unfortunately, the animal was not observed, but the team was successful in disentangling another sea lion with a plastic packing band around the neck.

Such is the work of the RVTs with specialized training and expertise which makes them a key part of the team at the VAMMR, a nonprofit organization dedicated to the welfare and conservation of marine mammals along the coast of British Columbia. With a rich history of over six decades, this centre plays a pivotal role in the protection and rehabilitation of marine mammals in distress.

Fast forward to one year later when another report was received from the Eco-guardian at Race Rocks of a California sea lion with horrific wounds from some kind of entanglement encircling the neck. At first, we did not connect the current pictures to the animal from the previous year because the wounds had advanced so significantly. There had been reports of several entangled sea lions, both Steller and California, with fishing flasher entanglements, so a response was already in the works.

RVTs were working frantically behind the scenes, documenting the sightings, and communicating with Fisheries and Oceans Canada to procure vessel support. Once the date of the response was confirmed, important work was immediately underway to pack up all the specialized gear and ensure it was all in good working order. The dart gun, darts, and sedatives were carefully inspected and packed into the rescue van. The team ensured that there was an ample supply of sedatives so if given the opportunity of conducting multiple disentanglements they would have enough supplies. Other specialized gear included a backpack anesthetic machine, portable monitoring devices, ultrasound, oxygen tanks, medic packs filled with essential medical supplies, emergency drugs, assorted sizes of endotracheal tubes, specially designed shepherd hooks to elevate sedated animals in the water, special tools to remove fishing hooks embedded in the esophagus, and marine grade PPE to ensure staff safety. This part of the mission is not the only aspect that is the sole responsibility of the RVTs. One RVT is responsible for travel coordination including transportation reservations, rendezvous locations with Fisheries and Oceans Canada personnel, communication with on-site personnel and other network members, and team communication, including an itinerary outlining the day's events.

As with all our cases, once the team was finally on the water, the RVTs became spotters, using binoculars to scan sea lion haul outs for potential tangled animals. When targets had been observed, the work did not stop. The RVTs helped the



Tangled Cali Oct 2022.



Tangled Cali side profile Oct 2022.

veterinarian determine weight approximation, and they calculated the three-part sedative, reversals, and emergency drugs needed. Once the veterinarian darted the animal, the RVTs all had important assigned tasks and leapt into action. Depending on whether the sea lion stayed on land or went in the water, the three to four RVTs were divided between two boats or split up on land. Boat support RVTs needed to keep searching for the tangled animal in the water as the sedation took effect while the others were drawing up reversals, emergency drugs and getting flipper tags loaded into the tagging guns. Documenting events throughout the response, such as the time the dart was administered, when reversals were given, and total response time is always critical. If the animal stays on land, the team is able to take blood samples and collect other data that the veterinarian or Fisheries and Oceans Canada requests.

With the California sea lion at Race Rocks, we were lucky enough that the animal stayed on the rocks after being darted. After 12 minutes, the sedative had taken effect and one RVT accompanied the veterinarian to assist with cutting and cataloguing the monofilament entanglement, tagging the animal, administering the reversals, and, in this case, an injection of long-acting antibiotics. The sea lion recovered uneventfully, and we observed him exhibiting normal behaviour post-procedure. It was not until we were able to see the wounds up close, when the animal was fully sedated, that we were able to identify this sea lion as the same animal we had hoped to disentangle a year earlier. Although this trip was a huge success, and we were even more ecstatic to have finally gotten the opportunity to help this particular animal, it serves as a stark reminder of the massive impact a small and seemingly insignificant piece of discarded plastic can inflict.

It is estimated that there are approximately 400 entangled sea lions along the coast of British Columbia throughout the year. This important VAMMR program is not a solution to the ocean plastic problem, but it certainly makes a difference for each individual animal that we successfully disentangle. It is also a fitting example of RVTs' contributions to such a unique niche of veterinary medicine.

The dedicated team of experts and volunteers works tirelessly to rescue, rehabilitate, and release injured, stranded, or orphaned marine mammals, ranging from seals and sea lions to sea otters and

wayward sea turtles. Day to day, the animal care team at the VAMMR, which is primarily comprised of RVTs, is responsible for the care of approximately one hundred marine mammal patients each year. The team, whose work is predominantly remote from the veterinarians, has a wide range of responsibilities, including infield assessments and determination of rescue, and implementing individual treatment plans established by the veterinarians and critical care.

The RVTs are immersed in the entire process, from rescue to release. In addition to the RVTs' work on-site at the rescue centre, much of the VAMMR Sea Lion Disentanglement Team is comprised of RVTs. This led by Executive Director and Head Veterinarian, Martin Haulena, who specialized in zoological medicine with a subspecialty in aquatic species. The team responds to both California and Steller sea lions that are horrifically caught in ocean plastic and derelict fishing gear. Together with the support of Fisheries and Oceans Canada, the team tirelessly works to free these magnificent creatures from life-threatening entanglements that are a direct result of human impact and neglect of the marine ecosystem.

From fielding the first report, to reaching out to network members for resighting information, liaising with support partners, organization, maintenance, and expansion of equipment, travel logistics, team communication, allocating equipment between support vessels, and even ensuring there is an ample supply of team snacks, RVTs are the backbone of this team and make an important contribution towards successfully executing responses of this magnitude.

Much of the preparation and planning for these responses happens months in advance. The most important driving factor for a response is receiving sighting reports and the RVTs work year-round organizing outreach and information events highlighting how to properly make a report and what information is required. It's important to get this information to the "eyes on the water" so the outreach events target local mariners, wildlife enthusiasts, eco-tourism companies, Parks Canada, and First Nations Guardians along the BC coast. In this way, the team extends its reach and its ability to help save more marine animals.

For more information on the Marine Mammal Rescue Sea lion Disentanglement Program and how you can help, please visit [www.vammr.org](http://www.vammr.org). **WCV**