



SOUTH KUIU CLEANUP 2021 PROGRAM SUMMARY

OVERVIEW

The issues surrounding marine debris and the high concentration of plastic in fresh and saltwater environments has been the driving focus of the Ikkatsu Project since it began operations in 2012.

Every year, between 8 and 12 million tons of plastic, much of it single-use, enter the ocean. While larger pieces may break into smaller ones in the water and on



the beaches, that plastic never completely breaks down. Individual pieces of plastic are rendered microscopic, difficult to see, perhaps, but they are not gone. The effects of this growing plastic load in the oceans – on all kinds of sea life, from plankton to whales, and even the people who depend on seafood in their diets – are only beginning to be understood.

Cape Decision, on the southern tip of Kuiu Island, is one of the most remote locations in southeast Alaska, almost 100 miles west of Wrangell and just under 100 miles south of Sitka. The beaches on the windward side of the peninsula are exposed to the full force of the Pacific while the coves and inlets to the east are more protected. The waters are busy with whales and otter, sea lion and salmon. Kelp forests run along the near shore in many places and there are always several eagles watching from the tall spruce trees at the edge of the forest.

Although Decision Pass is frequently used by fishing vessels and other craft, Cape Decision itself is difficult to access. (Notable for their absence this year were the cruise ships, an everyday sight most summers. Because of the pandemic, Alaska cruise ship voyages didn't start back up until after we'd already left Cape Decision.)

The area is prone to high winds and inclement weather that makes dependable travel to and from the Cape, as well as between certain points on south Kuiu, extremely difficult. Beaches are rocky and large swells can make landing and launching in small craft a risky proposition. As with other projects in Alaska, flexibility is key to success.

The main objectives of the 2021 program were to continue the established deposition survey and to set up another similar study beach on the west side of the island, to conduct debris surveys on several other remote wilderness beaches



near the south end of Kuiu Island and clean accumulated debris from target beaches. Survey results will be shared in Ikkatsu Project programs and will be available online for use by research partners. (No microplastic studies were on the calendar for this year, and water sampling was not done as part of the 2021 program.)

The multi-year deposition study that was first begun in 2018 involves an effort by volunteers to ensure complete debris removal, collecting and counting each item found, until the target beach is free of all plastic and other debris. With each successive visit, it is certain that anything collected has come ashore in the intervening time. By repeating this process on a regular basis, we are beginning to have a better understanding of how debris travels and the rate at which it builds up on shore. With the addition this year of the new deposition study beach in Comma Cove, it will be possible to use parallel data to compare impacts on each of the separate beaches.

PERSONNEL

The surveys and cleanup efforts involved volunteers as well as lighthouse personnel. A total of eighteen individuals worked on some aspect of the program, over a three-week period from July 6 – July 24, 2021.

PROTOCOL

For purposes of debris counting, the NOAA Standing Stock Survey protocol was used. Because this method is intended for beaches of 100 meters or more in overall length, some modification was necessary on several of the smaller



beaches that were studied. (Howard Cove and Wolf Track Beach were laid out according to established protocol; The Landing and Comma Cove (Beach #3), the two selected deposition study beaches, were counted and cleaned using the method described previously.)

Given the number of logs lining the high-water mark of each of these beaches and the way they are deposited in shifting piles, often many layers deep, it can be difficult to determine exactly how much debris remains after cleanup

operations are completed. All efforts were made to get to beach level and where debris was spotted, it was retrieved, even under the logjams. This is especially true for the deposition study beaches and any outsized or trapped debris that had to remain in place has been documented.



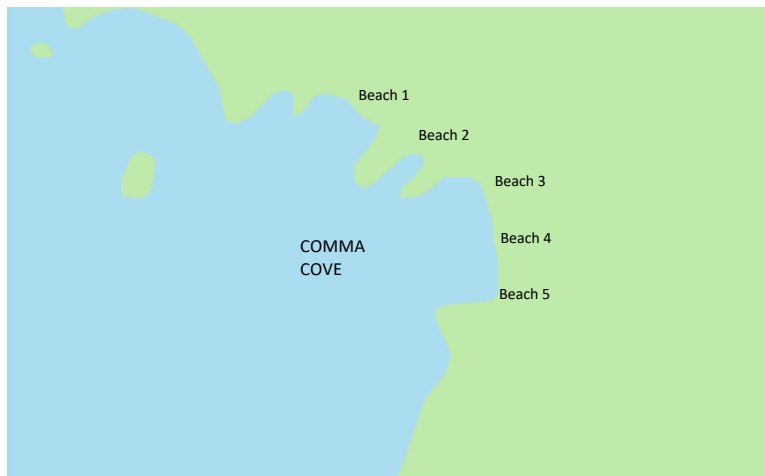
FIELD SITES

The Landing

Located approximately a half-mile northeast of the lighthouse, the Landing was chosen as the original beach for the multi-year deposition study because of its accessibility in all weather conditions and its clearly defined boundaries. Although there are a considerable number of drift logs at the top of the rocky cove, it is possible to work around them with more success than at other locations. Also, because this beach is accessed more frequently than the others in the program, it has turned out to be easier to monitor over time.

Comma Cove

A semi-circular cove on the western side of the island with five separate and distinct beaches. The deposition pattern overall is a noticeable difference in



debris concentration, with the southern and central sections set at shallower angles and more likely to retain landed debris. The steeper portions of the cove, around Beach 1 and Beach 2 show signs of more regular scouring although there are still

heavy concentrations of plastic bottles and fishing gear in the tall grasses and the forests above the high-water mark.

Howard Cove

With a sweeping arc of golden sand stretching a mile and more, located about 4 miles north of the lighthouse on the exposed west side, Howard Cove is something of an anomaly for the area. Although Wolf Track beach is fairly sandy and there are other places like it, there are not many. A typical southeast shoreline is a rocky place with a gravel landwash, not something that looks like it was beamed here from southern California. Some cleanup work was done

here in 2019, but this is the first year that surveys were completed and of all the locations covered thus far, this one likely has the most debris, with large numbers of buoys, bottles and rope balls deposited well into the trees above the sand.

Wolf Track Beach

This beach has been surveyed before and some debris was transported off-site and back to Wrangell for disposal in 2018 and in 2019. It is located on National Forest property about 4 miles north of the lighthouse on the east side. Items that were collected but not transported are secured in a supersack well above the beach. Oversized items left in place from the original survey are still in place, including several ropes and a large plastic dock bumper.

RESULTS

Standing Stock surveys at each of the locations yielded varying amounts of debris, with the outer coast beaches of Comma Cove and Howard Cove being more affected than those on the protected east side of the peninsula. As has been the case in previous years, however, every beach we visited was significantly littered and most of what we found was plastic. There was a mix of items, most of them quite familiar and relatively common. (Individual survey forms are included in the Appendix.)

A total of 913 lbs. of debris, almost all of it plastic, was removed from beaches. Approximately 300 lbs. of this total was transported to Wrangell for disposal. The remaining debris is concentrated in areas above the beach, past the high tide mark and storm surge zone, with smaller items stored in super sacks and buoys and other large items stacked alongside. Removal and disposal of this debris will be a major focus of the 2022 cleanup.

- The 2021 Landing deposition cleanup totaled 114 pounds, and with 15 volunteers and two full surveys , an initial and a sweep, we were able to get detailed and meaningful results. Foamed plastic debris was heavily

represented here, as it was elsewhere, and hard plastic and rope fragments were not difficult to find. No significant large items were found this year and most of the debris that was collected was placed in a supersack at the cache site near the south end of the beach.

- Comma Cove 3 was surveyed again this year and the west side deposition study was set up on a pocket beach between Comma Cove 3 and 4. In addition, portions of Comma Cove 4 and 5 were cleaned but not surveyed. All the debris collected from Comma Cove beaches in 2021 was added to the three caches already in place. 2021 total weight collected: 279 lbs.
- Howard Cove debris totaled 239 pounds, but that number only scratches the surface of what is still there. While most of the beaches we visit have a collection of logs piled at the high tide mark, there are significantly more of them present in Howard Cove and these zones are where we



find the most problematic debris. Ropes that are wrapped around the logs are extremely difficult to remove and there is still plenty to be done here. The debris that was collected was added to the cache located near the center of the cove.

- The 173 pounds of debris collected from Wolf Track Beach was placed in the cache located in the woods above the high tide line. Big items found here included tarps and cables, along with a large rope collection.
- The beach just south of the Pastures and on the way to Comma Cove was not surveyed but it was cleaned for the first time since Ikkatsu Project operations began at Cape Decision. It was eye-opening, once again, to see how much debris there can be in a relatively small area. We pulled out 108 pounds (with plastic bottles being the most common find, by far), that was among the debris subsequently transported to Wrangell for disposal.

DECISION, (THE FILM)

The film, DECISION, a 12-minute story of Cape Decision, marine plastic and the volunteers working to clean it up, was released in late 2020 and enjoyed wide circulation throughout 2021. Beautiful visuals of breathtaking Alaskan scenery, wildlife and the lighthouse are mixed with the story of plastic, how it got to such a remote location and the decisions we all need to make for real change to happen. Selected to the Paddling Film Festival's world traveling list and to NRS Duct Tape Diaries, among several other film festivals and online events, this film is a great introduction to the work the Ikkatsu Project is doing in southeast Alaska. Thanks to Beau Gaughran for the excellent camera work and the post-production wizardry and to Werner Paddles, who provided key financing. The film is available for online viewing at no charge.



NEXT STEPS

Efforts in 2022 will be focused on two main tasks. The first priority will be the deposition study areas at the Landing and at Comma Cove. The goal will be to once again do two complete sweeps of each, generating reliable data that will allow comparisons over time and across locations. The anticipation is that these comparisons will be an important part of the 2022 Program Summary and those that follow.

The second priority for next year is to remove all the debris from each of the cache sites and transport it out for proper disposal. We are excited to be partnering with the *Tahoma*, a large vessel out of Wrangell that will be transporting supplies and volunteers out to Cape Decision, then remaining on site for at least a week while debris is shuttled by skiff and loaded aboard for the return trip. Extracting the caches from Howard Cove, Wolf Track Beach and the Marble Islets should be fairly straightforward, while the ones at Comma

Cove will be more difficult. Accessing Comma Cove by water presents a number of problems for even a small skiff and it will take good conditions and multiple trips in and out to move the three caches located here.

Besides these action items, we are also planning to use the skiffs to get us further up Affleck Canal and possibly transport kayaks, as well, which would allow for volunteers to paddle one-way back to the lighthouse, surveying new locations as they go.



With four single kayaks and two doubles, the Cape Decision fleet is almost complete. The focus for 2022 is on maintaining the boats we have, improving the long-term storage facilities and purchasing new spray skirts and life vests. Going forward, the kayaking aspect of the South Kuiu Cleanup is expected to continue to be a big part of

the program, the best way to get volunteers into isolated locations to collect both debris and data.

CONCLUSION

This was the fourth year that the Ikkatsu Project has worked at Cape Decision and it is encouraging to see that the efforts have made a real difference in the amount of debris on the beaches we've visited. The problems associated with marine plastics have serious consequences for people as well as other life up and down the entire food chain. The fact that so much plastic is on these remote beaches still provides a powerful illustration of the ubiquitous nature of the situation. The debris removed from Cape Decision beaches is a small step in the direction we need to go to make our oceans healthier.

While the data provides critical information, what really matters is how it is used and how connections can be made between wild places like these and people

everywhere. People protect what they know and love and it is important for us all to understand what is happening on these wilderness shorelines and how our own behaviors and habits play a part if there is to be any real progress in improving conditions. There needs to be that spark in each of us, that connection, and working consistently toward that point is one of the Ikkatsu Project's primary goals.

ACKNOWLEDGEMENTS

Thanks to the individual volunteers for all of their hard work and tireless effort: Micah Campbell, Sawyer Campbell, Lucas Drawdy, Eleanor Hines, Jillian Kirschke, Ian Mackie, JoAnn Moore, Leo Newburg and Stena Troyer. It could not have happened without you. Thanks also to the staff of the Cape Decision Lighthouse Society for the excellent base camp and the support throughout the project. Speaking of support, thanks also goes out to Werner Paddles, Klean Kanteen, Exped USA and Lush Cosmetics for all they have done and continue to do to make this program a success.

The Ikkatsu Project

2522 N. Proctor St. #360

Tacoma, WA 98406

253.691.7941

ikkatsuproject.org