

COVID Challenges

Coastal Margins researchers cope with coronavirus restrictions

As Brenda Konar sees it, the masks and the social distancing are the easy part.

The real challenges of conducting fieldwork during a pandemic, Konar says, lie in the endless stream of paperwork, the 12-hour drives from Fairbanks to Homer without being allowed to enter a building along the way, and – most onerous of all – the two weeks her research team has had to quarantine before every week-long research trip.

“There are about seven days a month that I’m either not in the field or not in quarantine,” said Konar, co-lead of the Coastal Margins component and head of intertidal and oceanic fieldwork in Kachemak Bay. “I feel like a true homebody right now.”

Konar and her research team aren’t the only Coastal Margins researchers who have had to drastically alter their research plans in the era of COVID. In Kachemak Bay and Lynn Canal, across river and estuary-based research projects, scientists have had to make significant changes in order to continue their five-year project of data collection in the Gulf of Alaska nearshore and the rivers that feed it.

Many of Konar’s challenges relate to the need to base her research out of the Kasitsna Bay Laboratory, a joint NOAA-UAF facility located across Kachemak Bay from Homer. The lab (which includes lodging) was closed entirely due to COVID restrictions in the early part of the summer, but reopened in June for essential research only. That means Konar has had to submit updated research and COVID safety plans both to NOAA and UAF each month to get permission to base out of the lab. Each researcher is required to have their own bathroom, which has limited her teams to a small complement of six people, and various other restrictions have also prevented Konar from supplementing her team with undergraduate students or community volunteers. “What that means is when we get down there, we’re working from the wee hours of the morning at first light through the evening, just to get everything done,” she said.

“Everything” in this case means traveling by boat along the southern shores of Kachemak Bay to seine beaches for fish counts, to sample quadrats in the rocky intertidal zone, to collect samples for food web and other analyses, and to conduct zooplankton and phytoplankton tows. Team members are social distancing and wearing masks and are also required by NOAA to wear gloves at all times while on boats. Konar said the restrictions haven’t hampered the research team, except that they’ve had to minimize scuba dives, which means being unable to check on some underwater sensors. “When you’re diving, you’re supposed to have buddy checks and be with your buddy,” she said. “But how do you do that when you’re supposed to be six feet away from your buddy?”

Across the Gulf of Alaska in Juneau, intertidal and ocean researchers led by Coastal Margins co-lead Anne Beaudreau have faced their own obstacles. Unlike in Kachemak Bay, however, all of the Juneau sites are accessible along the road system, which means no quarantines are needed. Beaudreau said they’ve largely met social distancing and travel requirements by splitting larger research teams into smaller groups of one or two.



Photo by Anne Beaudreau

Anne Beaudreau records data at the Lemon Creek estuary with the help of her “research assistant,” a rock on which she has balanced a YSI water sensor.

Kachemak Bay stream team. “Which means lodging in Homer and using a commercial water taxi for transportation.”

Munk said the water taxi has presented some unexpected advantages: it saves time since Homer is actually slightly closer to most of their research sites than the lab, and the taxis are more appropriate landing craft than the boats available at the lab. On the other hand, Munk noted, the lodging and transport are both more expensive, and it’s also precluding meeting and working with other Coastal Margins researchers. “The drawback is, we’re not at the lab, and we’re not able to interact with the intertidal people like we normally would.”

The other downside to COVID restrictions, Munk said, is the stream team is also laboring with too small a workforce: only four people are participating in each research trip. “We’re just operating at a bare minimum to get the work done,” she said.

That sentiment is echoed by technician Emily Whitney, who is in charge of stream sampling in Lynn Canal and who has had to recruit a rotating cast of co-workers from the ranks of the project. “Part of it has been being a little more creative in finding new field partners,” she said. “I’ve been kind of roping in everyone.”

Whitney said the Lynn Canal researchers have addressed other restrictions by driving separate vehicles and sampling at a distance from one another. She noted they have also had to negotiate both UAS and U.S. Forest Service restrictions, since they have to use both UAS and USFS buildings to store and analyze samples. But she said the biggest challenge came early in the spring, when the team hurriedly placed their network of stream sensors in ice-choked waterways to have them in place before any new restrictions might prevent their installation. “We did a big push to get our sensors out and placed in the streams, with the idea that if all else fails, even if we don’t get to them frequently, at least they are recording data,” she said.

Indeed, delays, cancellations and improvisation in the early days of the pandemic were a common theme across research sites. Most everyone missed out on a couple of months of data collection in the spring before they were able to resume fieldwork in May or June. Munk said those first days of the pandemic were the most challenging from a fieldwork standpoint since they weren’t able to install stream sensors in time for breakup, and there was genuine concern that the entire summer research season could be cancelled. “I was envisioning this 4-year set of data and there was a whole year missing,” she said. “We just made the best of it and tried to be resilient, and I think we have been.”

Considering how bleak and uncertain the situation looked in the spring, Munk said, Coastal Margins fieldwork has rebounded well, and the loss of a couple of months of data is a surmountable obstacle. Beaudreau echoed the sentiment. “In the scheme of it, I think it’s pretty darn awesome that we only lost a couple of months and one part of the data set,” she said. “Overall I don’t think it’s really going to be a huge detriment.”



photo by Brenda Konar

Coastal Margins graduate student Lindsey Stadler checks readings on an aquatic sensor in Kachemak Bay.



Photo by Courtney Breest

Coastal Margins “Stream Team” faculty Eric Klein on a water taxi in Kachemak Bay.