

## AHAB Monthly Call – December 9<sup>th</sup>, 2021

**Participants:** Thomas Farrugia (AOOS), Patryce McKinney (DEC), Kimberlee Beckmen (ADFG), Dom Hondolero (NOAA Kasitsna Bay), Sarah Schoen (USGS), Dean Stockwell (UAF), Natalie Rouse (UAA/AVPS), Don Anderson (WHOI), Dots Sherwood (UAF), Steve Morton (NOAA Charleston), Sijo Smith (ACF), Grace Ellwanger (KANA), Michael Opheim (Seldovia), Muriel Dittrich (UAF Juneau), Bill Carter (USFWS), Julie Matweyou (UAF Alaska Sea Grant), Karie Holtermann (City of Unalaska), Robb Kaler (USFWS), Emily Bowers (NOAA NWFSC), Caroline Cummings (USFWS), Caroline Van Hemert (USGS), Gay Sheffield (UAF Alaska Sea Grant), Maile Branson (APMI), Annette Jarosz (APMI), Teri King (WA Sea Grant), Anne Garland (ARIES), Dorothy Smith (Organized Village of Kasaan), Marc Suddleson (NOAA NOS), John Harley (UAS), Brock Tabor (DEC), Evie Fachon\* (WHOI), Chandra Poe\* (Qawalangin), Bridget Ferris\* (NOAA AFSC)

\*update provided by email

**Thomas' updates** (more details on AHAB website: <https://aoot.org/alaska-hab-network/>)

### HAB News

- Sitka Tribe of Alaska Environmental Health Lab recognized by Harvard's Honoring Nations program for their shellfish toxin testing
- NOAA announces a total of \$15.2M for HAB research nationwide
  - NCCOS - \$12.4M for new and continuing projects
  - IOOS - \$2.8M for National HAB Observing Network
- 11<sup>th</sup> US Symposium on Harmful Algae
  - October 23-28, 2022 in Albany NY

Sitka Tribe's shellfish lab honored for safeguarding traditional foods

December 7, 2021 by Tash Kinnel, KEAAB, Sitka



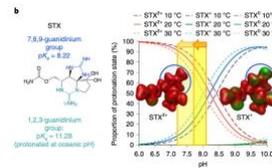
2021 Tribe of Alaska Environmental Health Lab recognized for safeguarding traditional foods by Harvard's Honoring Nations program. Photo by Tash Kinnel, KEAAB, Sitka. © 2021. Credit: AseelBORGES

NOAA Awards \$15.2M for Harmful Algal Bloom Research



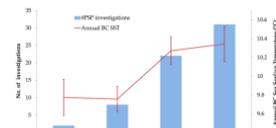
### HAB Science

- Saxitoxin bioavailability predicted to increase under future ocean conditions  
C. C. Roggatz<sup>1,2\*</sup>, N. Fletcher<sup>2</sup>, D. M. Benoit<sup>3</sup>, A. C. Algar<sup>4</sup>, A. Doroff<sup>5</sup>, B. Wright<sup>6,7</sup>, K. C. Wollenberg Valero<sup>2</sup> and J. D. Hardege<sup>2</sup>



- PSP trends reflect increasing temps and changes in harvest practices in British Columbia

Lorraine McIntyre<sup>\*</sup>, Aroha Miller and Tom Kosatsky



- Domoic acid persists in marine sediments in southern California

Jayne Smith<sup>1\*</sup>, Dana Shultz<sup>2</sup>, Meredith D.A. Howard<sup>3</sup>, George Robertson<sup>4</sup>, Vanh Phonstiri<sup>5</sup>, Violet Renick<sup>6</sup>, David A. Caron<sup>1</sup>, Raphael M. Kudela<sup>7</sup>, Karen McLaughlin<sup>8</sup>

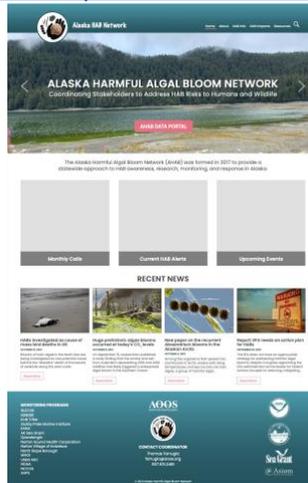


Teri King: Another recent paper that may be of interest: “The silence of the clams: Forestry registered pesticides as multiple stressors on soft-shell clams”

<https://www.sciencedirect.com/science/article/pii/S0048969721071291>

## AHAB work

- Freshwater HAB group initial meeting
- New website in development
  - Pictures from AHAB members
- Revamping of the AHAB data portal
  - Anybody interested in having their data in the AHAB portal, please contact me
- Capturing all the HAB sampling and monitoring work being done
  - List of samplers and sampling locations



Julie Matweyou: Regarding getting our data on to the AHAB portal, are funds required by us to do that?

Thomas: No, the goal is to provide this to anybody who would like their data to be accessible on a publicly-available portal.

Julie: Years ago when we were first organizing this I was having conversations with Molly, and it sounded like we might need to come up with funds, so that’s interesting. And I’m assuming that you’re mostly looking for ongoing and current sampling locations and not discrete projects posted?

Thomas: As an initial step, we’re looking more at current and long-term sampling locations, but there’s no limitations to what we can include on the portal map, so we can add those discrete and historic sampling locations as well. We will likely also have some meta data such as the first date and last date of sampling at a location, so people could filter out if they are looking for just current sampling locations. But if you have a list of sampling locations, even if they are one-time samples, we can include those.

Julie: And one more thing, are you aware of the Skipper Science program? There are a lot of captains at sea that are looking and sometimes want to know what they are seeing. There have been red and white *Noctiluca* blooms recently that were detected so skippers could be another source of HAB information.

Thomas: Thanks for that, I will definitely look into it and see if I can meet with the Skipper Science people.

## Round Robin Updates (going by region of work)

### SOUTHEAST

#### John Harley

Submitted an LOI for the NOAA OA/HAB funding call, so hopefully we’ll see more money coming in for those endeavors. I’m also looking forward to jumping on those upcoming freshwater HAB calls.

**Muriel Dittrich**

Our EPSCoR project is wrapping up so we're finishing up our year time series of sampling at oyster farms. We're working with UAS to get our nutrient samples analyzed and getting lots of results.

**Dorothy Smith**

This will be my last AHAB meeting as Tuesday is my official last day as the Organized Village of Kasaan's Water Quality and Waste Management Specialist, it was great working with all of you and learning so much!

Julie: Dorothy, will OVK be able to continue their efforts after you leave?

Dorothy: Yes, OVK will have Carol Fletcher I believe until they find a new WQWMS

**SOUTHCENTRAL****Maile Branson and Annette Jarosz**

Not much to report here. Since getting those EVOS funds, we've been busy ordering equipment. We're building qPCR, RBA and ELIZA capacity, so trying to get all of that online within the next couple months. Also wanted to mention that since we are doing all that, we are looking for people, if anybody knows of somebody looking for a HAB lab job, let us know ([alutiipridemarineinstitute@gmail.com](mailto:alutiipridemarineinstitute@gmail.com)). We're located in Seward.

**Michael Opheim**

No updates here, enjoying the snow and a real winter, and hopefully people will be out harvesting some clams here soon.

**Dom Hondolero**

No updates on HAB stuff, just continuing the monthly sampling. The issue is finding weather windows. Luckily we were able to get out last month, hoping to get out this month, but haven't found a window yet. It's winter so we're not seeing a lot of phyto or zooplankton right now.

**Patryce McKinney**

Bruce Wright has been keeping us very busy with samples, otherwise it's business as usual, just clicking along.

For those on the call who aren't on our client list, we have a schedule of when we typically run samples, especially PCOX samples. That schedule is posted on our website (<https://dec.alaska.gov/eh/lab.aspx>) and can help people schedule when they ship their samples into the lab for testing.

**Caroline Van Hemert**

No major updates, Matt has been working on some lab samples over the last few months. We're getting rolling with the captive study in collaboration with the Alaska Sea Life Center

**Matt Smith**

The captivity study is going well, we ended up hatching 30 birds from the eggs harvested this summer. I did a site visit down there and the birds are all growing and eating well. We have a few more things to figure out before we can start the dosing, but the toxins arrived from the FDA. Should start next month.

We also tested the herring from Kotzebue from last month and we're working on getting those data moved through and out to Alex in Kotzebue.

### **Robb Kaler**

Nothing on HABs, but a quick update on the avian botulism type C. Sarah Schoen had shared the positive results from 2 specimens from Middleton Island that were part of the abbreviated die-off there (July-August 2021). We sent additional carcasses to the National Wildlife Health Center including glaucous-winged gulls and black legged kittiwakes. One gull was a positive for the avian botulism-C, which is not a human concern, it's very focused on birds.

### **Natalie Rouse**

We are revisiting some sea otter samples from 2015 with funding from USFWS. That was a big HAB year and we couldn't prove the HABs connection to the sea otters that died very quickly during that year. So we're very excited that we can run the samples that we saved from that time. I just sent those to Kathi Lefebvre and hopefully will make more connections. When we analyze all those data, we'd like to pair it with some of the HABs data from that time, so if anybody is interested in that, get in contact with us. We're still trying to figure out how exactly we want to go about doing that. I wanted to put this out to this group because I'm sure somebody in here might know what we're trying to figure out.

### **Dots Sherwood**

Hello everybody, I'm a veterinarian in Homer but I have left the clinical profession and am doing a One Health masters at UAF. And several people on this call have been very helpful over the last month as we've been doing a study using One Health principles to look at problems with domoic acid in Kachemak Bay. I've got a lot to learn from many of you so thank you.

### **KODIAK**

#### **Julie Matweyou**

I'll be trying to get out this December to collect some sediment samples for our MERHAB cyst project that I'm working on with Cheryl Greengrub and Steve Kibler. I've been counting cells under the microscope using epifluorescence this fall and our technique has been established and is working out well.

#### **Grace Ellwanger**

The HAB monitoring project we've been working on for 3 years that's been funded by BIA is coming to a close at the end of the month. It's going to really limit our HAB monitoring capacity at KANA. We're still going to be doing the bare minimum until we get some additional funding. But that means we have the opportunity to apply for some additional funding and we're looking at a project with Julie, so hopefully that works out and we can pick up full steam ahead later next year.

We're also going to be taking time to put together some interesting data from the 3 years of monitoring we've done. That will be something we can share with everybody here.

#### ALEUTIAN AND PRIBILOF ISLANDS

##### **Chandra Poe**

We will not be sampling until the spring, I am working to identify partners and funding to continue shellfish sampling and start some phytoplankton tows, and all of our results through the NOAA event response work are now up-to-date on [www.qawalangin.com/psp](http://www.qawalangin.com/psp).

##### **Karie Holtermann**

Still planning on setting up the qPCR method in my lab and working with the tribe and Chandra. I did a few net tows for the winter, there's some Alexandrium but very few. They are around year-round here, and Pseudo-nitzschia as well.

#### NORTHERN BERING SEA

##### **Gay Sheffield**

The news here is that we are iced in and a rather large low so lots of windy weather in the Strait and lots of the ice has been pushed around. It probably turned over the water column as well I'd imagine where there was no ice. Everybody is fine and no damage so far.

Right now the North Pacific Fisheries Management Council meeting is under way, and that is a big deal. It's the entity that sets the fisheries for next year, and it's also the time when NOAA fisheries puts out their Ecosystem Status Reports. There are 3 reports for the Gulf of Alaska, Aleutian Islands and Eastern Bering Sea. HABs are part of these reports, and it's a great compilation of the status of the ecosystem in these three regions.

2021 NOAA Ecosystem Status Reports: <https://apps-afsc.fisheries.noaa.gov/refm/reem/ecoweb/index.php>

Eastern Bering Sea: [https://apps-afsc.fisheries.noaa.gov/Plan\\_Team/2021/EBSecosys.pdf](https://apps-afsc.fisheries.noaa.gov/Plan_Team/2021/EBSecosys.pdf)

Aleutian Islands: <https://apps-afsc.fisheries.noaa.gov/refm/docs/2021/Alecosys.pdf>

Gulf of Alaska: [https://apps-afsc.fisheries.noaa.gov/Plan\\_Team/2021/GOAecosys.pdf](https://apps-afsc.fisheries.noaa.gov/Plan_Team/2021/GOAecosys.pdf)

Also, as an AHAB Steering Committee member, our last meeting was in April, so are we planning on having another one soon, or is that a once-a-year meeting?

Thomas: We don't have a set date, but I will send out a scheduling email to find a time in early 2022 for a steering committee meeting.

#### ARCTIC

##### **Bill Carter**

Nothing new here, happy to hear that those herring samples are making their way through the system. Alex Whiting is on leave for the next month. But wanted to plug Gay's seminar series, I got to watch Don's seminar and it's a great series.

We got the same storm that Gay was talking about, but a little bit less.

Gay: do you have open water?

Bill: we did, it's starting to refreeze but we had enough shorefast ice that we got flooding when the wind came in. But we've been frozen in since the end of October, at least out a mile or two

from shore. People have been travelling on Kobuk lake and up the Noatak since the end of October.

Gay: And thanks for the plug for the Strait Talk seminar series, here are the links to the recordings to both the ones that Bill mentioned:

Strait Science - recording: (Don Anderson) Chukchi Sea: Warming Waters and Toxic Algae "seeds" <https://www.youtube.com/watch?v=Zksf9Fd78Nw>

Strait Science - recording: (Seth Danielson / Jackie Grebmeier) SIKULIAQ Returns: November 2021 Report from the North <https://www.youtube.com/watch?v=ybSjQvwp1yk>

The next one is with the USCG tribal government affair officer and he's going to be talking about tribes, the coast guard and the Bering Strait region.

Strait Science:

[http://www.nwc.uaf.edu/index.php?option=com\\_content&view=category&layout=blog&id=79&Itemid=286](http://www.nwc.uaf.edu/index.php?option=com_content&view=category&layout=blog&id=79&Itemid=286)

### **Dean Stockwell**

Following up on Bill and Gay's comments about the storm: that big storm came in there and the shorefast ice in Shishmareff broke up same as in Kotzebue. That same storm brought southerly winds in Utqiagvik and blew out all of their shorefast ice, so Gay's original comment about mixing, yes it mixed that whole coast pretty good. So I imagine that a lot of Don's cysts were resuspended in that event and have fallen back down now. Impressive storm.

### **Don Anderson**

There was a Sikuliaq cruise about a month ago and we had a HAB person on there, focusing much more on Pseudo-nitzschia in the late season. We also got sediment samples from there so it should give us another cyst map, but we have no results as of yet. On the subject of cruises, there's ongoing discussions about this dedicated HAB cruise that is an NSF funded effort that have been delayed 3 different times. There were 2 options, one was that we try to do it in 2022 and another was in 2023. But the 2022 option involved a much smaller vessel whereas originally the cruise was supposed to be on the Healy with a large crew largely dedicated to HABs going from Nome up into the Beaufort sea in July and August. Now it looks like we'll be using the Norseman II which is a much smaller boat, we can only fit 17 scientists, so it looks like there may be back-to-back cruises, one specific to HABs, and then followed right away by a bio-geochemistry cruise (Dean Stockwell would be on that cruise). It's still not clear if that's going to happen, or if the alternative with the Sikuliaq in 2023. It's in the program manager's hands right now because there are costs associated with all these options. The sad thing is if there were other people hoping to jump on the cruise to get some additional sampling that might not be part of our sampling that might be harder to do because of space.

The final comment is that there are actually 3 manuscripts being prepared right now about the work going on in that general region that are either submitted or about to be submitted. One is the one that Kate Hubbard is leading on the DBO data that will focus on Pseudo-nitzschia and domoic acid. Then Kathi Lefebvre has one that is on PSTs in 2019 as well as toxin doses to walrus and bowhead whales, so that will be interesting and important paper. And finally, we're putting together more of a glossy paper about HABs in the Alaskan Arctic for the Oceanography

Society. Their journal *Oceanography* is still great science but it reaches a bit of a different audience and we were asked to put something together for that.

### **Evie Fachon**

We just received sediments for cyst analysis from the DBO cruise that happened on the *Sikuliaq* in November. Haven't worked these up yet but we will eventually have a 2021 cyst map which combines NBS and DBO cyst samples.

Don: just a comment on that, we now have 4 years of this cyst mapping where we really have a comprehensive picture of where the *Alexandrium* cysts are in the whole region. We've done that for 14 years in the Gulf of Maine and it's hugely valuable since we are actually able to use that cyst map in a forecasting mode. It helps to initiate and inform some of the forecasts we have but there are even empirical linkages between the number of cysts and the extent of the blooms and extent of coastline that is closed. So the fact that we've got a system up and running and we should be able to sustain these maps for a number of years through the NOAA Arctic Research Program, it's really a good trend and the beginnings of a really important time series.

### **Emily Bowers**

The WARRN-West lab is finally opening up again, so we can start analyzing the otter samples that Caroline was talking about, and also the herring samples we got from Michael Opheim soon. Lots of backlog, so can't give a timeline quite yet as to when they will be done but things are moving.

## **OUTSIDE ALASKA**

### **Bridget Ferris**

Thanks to everyone again this year for contributing to the AFSC Ecosystem Status Reports. The North Pacific Fisheries Management Council December meeting is ongoing right now. We have presented to the Science and Statistical Committee, the Advisory Panel, and next week the Council for Gulf of Alaska, Aleutian Islands, Eastern Bering Sea. The HABs contributions are in all 3 reports submitted to the Council, and are welcome additions.

### **Teri King**

We've been having flooding here so some of our stations have been down. But we've been finding *Alexandrium*, *Dinophysis* and *Pseudo-nitzschia* in our samples. Our monitors sample every other week for us, which is great. We're gearing up for our annual meeting and annual training. The annual meeting will have a number of projects that our monitors have contributed to and participated in.

### **Marc Suddleson**

The next national HAB symposium will be October 23-27, 2022. We're aiming for an in-person meeting but we'll see if we can include a virtual component. There will be travel grants for managers and students. I expect the abstract call to come out in the next few weeks.

Also, the HAB Observing Group is trying to build stakeholder awareness for a national HAB observing network with regional components. AHAB is part of the pilot projects of this national

network. And there are a series of webinars that have been put forward for stakeholders. There have been 2 so far, the most recent one was Dec 1, and the next one is in March. All those details and the past recordings are up on the NHABON website:

<http://www.ioosassociation.org/nationalhabobserving>

**NEXT AHAB MONTHLY CALL WILL BE: THURSDAY January 13<sup>TH</sup>, 2022 AT 9:30AM AK  
(The meeting schedule for 2022 will remain the 2<sup>nd</sup> Thursday of every month)**