

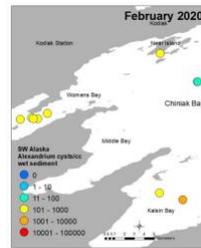
## AHAB Monthly Call – March 10<sup>th</sup>, 2022

**Participants:** Thomas Farrugia (AOOS), Katie Gavenus (CACs), Dean Stockwell (UAF), Gay Sheffield (UAF/AK Sea Grant), Evie Fachon (WHOI), Emma Pate (NSHC), Rachel Lekanoff (APIA), Rosie Masui (KBNERR), Patryce McKinney (DEC), Sarah Schoen (USGS), Charla Hughes (Prince William Sound Stewardship Foundation), Carol Brady (DEC), Matt Smith (USGS), Danielle Gerik (USGS), Naomi Bargmann (USGS), Caroline Cummings (USFWS), Natalie Rouse (AVPS), Sijo Smith (ACF/NLP), Kate Helfrich (ADHSS), Anne Garland (ARIES), John Harley (UAS), Teri King (WA Sea Grant), Emily Bowers (NOAA), Bridget Ferris (AFSC), Sarah Pease (Sen Murkowski), Steve Kibler (NOAA NCCOS), Lori Verbrugge (CDC/DHSS), Grace Ellwanger (KANA), Dom Hondolero (NOAA Kasitsna Bay), Maile Branson (APMI),

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

### HAB News

- AK Sea Grant article describes the ongoing research by Julie Matweyou in Kodiak and Courtney Hart in Southeast Alaska to sample, identify and enumerate *Alexandrium* cysts
  - Part of a larger project that also include WA state and the Gulf of Maine.
- Dinoflagellate blooms in Southern California manifest as bioluminescent waves
  - Aggregations of *Lingulodinium polyedra* are considered red tides, though not highly toxic
  - Will usually last weeks up to a month



*Alexandrium catenella* cyst abundance (cysts/L) and spatial mapping in Chikma Bay. Samples collected by UAF H0M5C and cell counts and maps produced by UAF Tacoma. Photo courtesy Julia Matweyou.



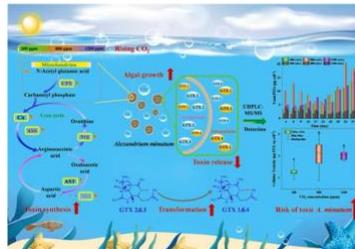
Dean Stockwell: Those blooms along the California Southern California beaches are very common and date way back. So it's nothing really unusual.

### HAB Science

- Lab study indicates that increased CO<sub>2</sub> levels will increase toxicity of *Alexandrium minutum*

Rising CO<sub>2</sub> will increase toxicity of marine dinoflagellate *Alexandrium minutum*

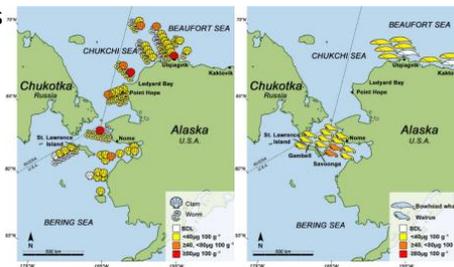
Zhu Lian<sup>1,2,3,4</sup>, Fang Li<sup>5,6</sup>, Xueping He<sup>7</sup>, Junhui Chen<sup>8</sup>, Ren-Cheng Yu<sup>1,4</sup>



- PSTs found in all Arctic food web layers in 2019, with clams having the highest concentrations

Paralytic shellfish toxins in Alaskan Arctic food webs during the anomalously warm ocean conditions of 2019 and estimated toxin doses to Pacific walrus and bowhead whales

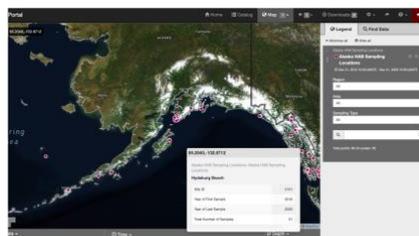
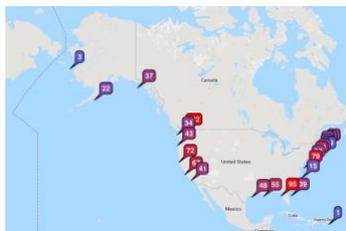
Kahn A, Lefebvre J, Evangeline Fachon J, Emily K. Bowers J, David G. Kimmel J, Jonathan A. Snyder J, Raphaela Stimmelmayr J, Jacqueline M. Gendres J, Steve Kibler J, D. Ransom Hardison J, Donald M. Anderson J, David Kulis J, Jim Murphy J, Jeanette C. Gann J, Dan Cooper J, Lisa B. Eisner J, Janet T. Duffy-Anderson J, Gay Sheffield J, Robert S. Pickart J, Anna Mounsey J, Margaret L. Willis J, Phyllis Stabenro J, Elizabeth Siddon J



Gay Sheffield: Here's the link to the PST paper -  
<https://www.sciencedirect.com/science/article/pii/S1568988322000348>

## AHAB work

- Meetings/conferences coming up
  - HAB Observing Group Webinar (Mar 16), Kodiak ComFish (Mar. 24-26), Mariculture Conference (Apr 12-14), APIA Food Security Symposium (Apr 12-14)
- Harmful Algal Event Database (HAEDAT)
  - Meta database that records harmful bloom events
  - Alaska has been included in the past
  - 2021 events needed by **March 11**
- AHAB data portal progress – sampling map first draft
  - Do you have sampling locations to share?



Gay Sheffield: The herring, which are near and dear to us out here, there was a herring event in October. Herring were washing up dead all over and people were picking them up and there was some samples taken. Was there any outcome? Have those been analyzed?

Thomas: Alex has been trying to track that down. And last time, I talked about, he had sent the herring off to pathologists to look at any kind of physical impacts that could be detected either to the gills or whatever. That came out kind of inconclusive, partly because they had been frozen, and it's hard to see damage. There was no smoking gun in terms of saxitoxin or anything like that. There were low levels in it, but nothing that could explain the die off, and they just got sent to the east coast to somebody to analyze for cyanotoxins. And that just came back actually yesterday. And there were some low levels in there. Again, I'll probably let him share those details. It's not a clear-cut cause of this die off, but there were detectable levels of cyanotoxins in the in the herring. So we're still working through all the results of that. But it's mostly been Alex, I helped getting the samples through Anchorage to to the east coast.

Evie: Are you interested in locations that maybe have only been sampled once? Because we're on a ship and just had the chance to take a sample? I have tons of locations I can give you for that sort of coverage, but it's nothing long term.

Thomas: Yes, I can send you the sheet, and you'll see on it, there'll be the first time sampled and the last time sampled, so a single location would show up, but when you kind of hover over it, the number of samples will be one, which is fine and people can filter out for one-off samples versus longer time series. So yeah, any of those samples locations will be great to get.

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

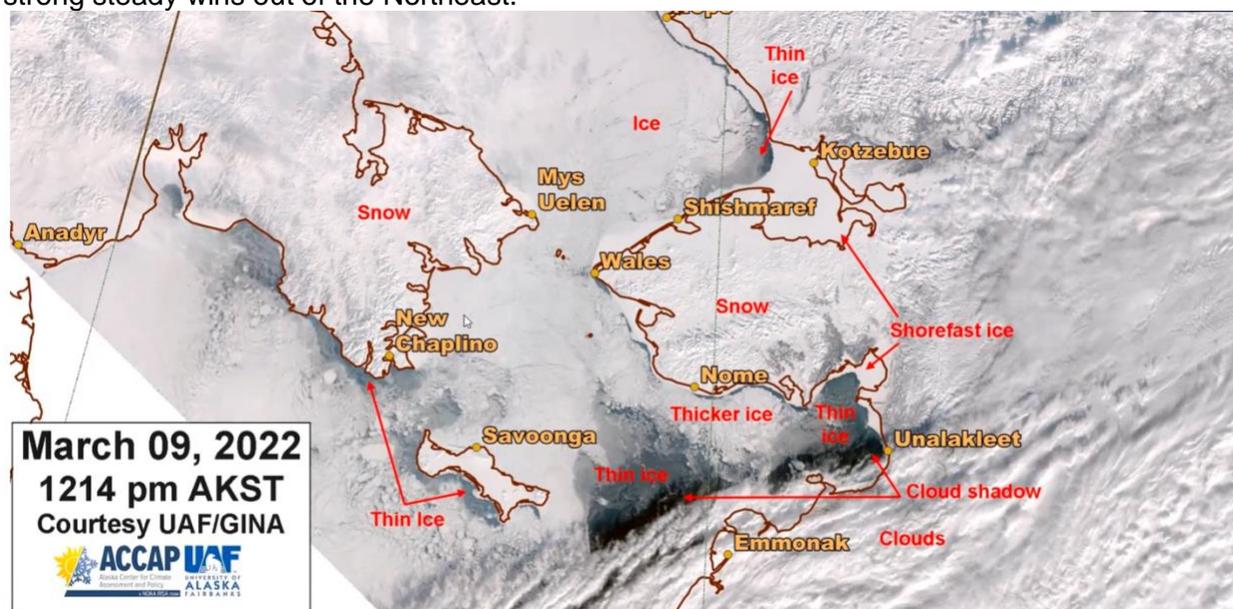
### ARCTIC

#### Evie Fachon

No big updates for us today. Thank you.

### Gay Sheffield

So I just wanted to let people know, this is the latest from Rick Thoman regarding sort of the eye in the sky, it's a bit cloudy. And we're having a multi day wind event right now out of the Northeast with some pretty strong winds, not as strong as they forecasted, which is good. But strong steady wins out of the Northeast.



So you can see that it looks like our sea ice maximum will be called as of February 17. And that's looking more and more really set in stone. So that's kind of interesting, it's about a month early. But it's opening up quite a bit here and not sure why. But the ice is not in good shape. And it is also being hit with some pretty strong winds recently, like right now, but not in the last week or so. I think between February 17<sup>th</sup> and now we're being told there's been a 28% reduction in sea ice pretty quickly and without a major storm. How these winds are going to treat this I don't know. But I just thought you'd be interested in that. And then also for the paper that just came out that Kathy Lefebvre is the lead on and the EcoHAB project, I think it's like their 1000th of publication! And she'll be doing a Strait Science talk on March 31<sup>st</sup> at 6:30pm AK time. I'm sure we'll have a way to advertise that out.

### Anne Garland

No updates from the monitors in Utqiagvik, thanks.

### Dean Stockwell

No have updates but this has been the snowiest winter since '93. We've had over seven feet of snow here in Fairbanks. So doesn't have anything to do with HABs though.

### NORTHERN BERING SEA

#### Emma Pate

The only update I have is I'm starting to travel to the different communities in our region, starting with St. Lawrence Island, to provide training on collecting water samples for the microscopy of phytoplankton. So I'll start that at the end of this month, and then work my way through each community. I had two workshops in October. So we had some participants that were amazed with the microscopy process. And so we took them out and collected water samples, showed

them how to do it, and walk them through the microscopy process and identifying what was in the water. So they're very interested in continuing with this.

#### ALEUTIAN AND PRIBILOF ISLANDS

**Rachel Lekanoff**

No updates today!

#### KODIAK

**Grace Ellwanger**

No updates from Kodiak or KANA

#### SOUTHCENTRAL

**Rosie Masui**

We have some kind of big updates from the Reserve. I've let a few folks know already, mainly our local partners and community monitors, but I am leaving the Reserve. And my last day will be March 25. And so Jasmine Mauer who's been working in the program for the past two years, is going to be the point person. And it's been great working with this group. Our program is in the midst of some changes, surrounding capacity issues, which I mentioned at one of the last meetings as well. And so Jasmine will keep you posted. We will be hiring a technician to provide support at least through the summer season as well. But we are still planning on doing our monitoring, we just might be adjusting the geographic span of it because of capacity limitations. The reserve is still really dedicated to supporting community monitoring of harmful algal blooms across the states and are happy to continue to share all the resources that we have. And a big thank you to folks on this call, who I have dragged into trainings multiple times.

Thomas: Well, that is very sad for us. So sorry, to see you go. You've been a huge part of this network and HAB monitoring obviously, for a long time. And, and I'm looking forward to working with Jasmine, of course, who is also great. But we will miss you. And I put it up the technician position announcement on the AHAB website, is there a deadline for applying to that?

Rosie: Yeah, it's pretty soon. But I'll send you the posting and we can see if we can get it shared real quick.

Dean Stockwell: I just wanted to thank you for all your help over the years, and I really appreciate it.

Rosie: Yeah, of course, thanks. It's been great to see this group grow and really expand.

Sarah Schoen: Yes, thanks Rosie for all your great work!!

Patryce McKinney: Best wishes, Rosie!

**Dom Hondolero**

We're continuing to do a monthly monitoring. We're starting to see some phytoplankton and zooplankton showing up so probably seeing our spring bloom starting up here soon. Yep, other than that, I don't have any updates this month.

**Maile Branson**

No updates.

### **Charla Hughes**

I'm glad to be on this morning and just listening in and learning about everything that's going on right now. The Prince William Sound Stewardship Foundation is really looking forward to working with Alutiiq Pride again this summer.

Thomas: So just as a reminder to everybody, last summer through Tim Lydon at the Forest Service, and with the participation of the Stewardship Foundation, samples were collected throughout Prince William Sound and sent to Alutiiq Pride for analysis. This was funded mostly by the Stewardship Foundation. So that's really great. And, and I guess they're gonna keep doing it so that we'll have more locations in Prince Sam sound as well to see what toxins levels we get there. So that's really great. And we really appreciate your support Charla, thank you.

### **Patryce McKinney**

Good morning, mostly things are just business as usual. I think I'd mentioned to this group that we were working on maybe some method validations. But that project has not moved forward yet. And then, you know, farsight, looking at some projects, possibly with SE conference with some of that influx of money about some other method validation. So we're definitely having some conversations about expanding and/or new techniques. So, but for the near side, things are farther out. But otherwise, we're just plodding along with business as usual.

### **Carol Brady**

Good morning, everyone. Um, there have not been any farm closures, which is good news. And that is a major update that I have.

### **Sarah Schoen**

I don't have anything too big update. Naomi has been working hard in the lab so she can give an update there but much for me.

### **Naomi Bargmann**

Lab work is going slowly. I'm working on domoic acid now. Abraxis has stopped making the Biosense kits. So they have a different one, that's not as sensitive. So I've been trying to work with Matt on the protocol for that and hope to run my first plate today. We have a lot of prey samples as well, fish and invertebrates that were collected in Cook Inlet this summer. I suspect there's gonna be a lot of below detection limit hits or no hits. So we'll see.

### **Matt Smith**

So we finished up last week the first phase of the murre rearing project for the ED50 and dose finding portion of it. That all went nowhere near as expected. We had some very interesting findings. And it took longer than we originally thought just due to the nature of the study design. But yeah, we found some really interesting results, drastic differences between purified toxin and natural isolate toxins that are theoretically the same saxitoxin equivalencies. So that was really interesting. And then we'll be starting the second phase on the 23<sup>rd</sup> for the chronic portion of the study, we're going to be feeding them dose fish instead of using a gavage delivery method. So we'll see how that goes.

And I'm hoping to, once I can get some time to analyze all the data and put it together to be able to present it a few places here in the coming months, so that'll be good to get out quick.

### **Caroline Cummings**

Hi, good morning. Thanks for having me. I don't have any updates. I'm here to listen from you guys. And to see if there's anything I should be worried about. So yeah, it's great to hear all the work that's going on. Thanks.

### **Kate Helfrich**

Hi, everyone. I'm Kate Helfrich. I'm the nurse supervisor for the Infectious Disease Program at the section of Epidemiology, but also the foodborne illness/enterics/waterborne person point of contact. So I'm kind of the primary person to wrangle grant stuff and do data cleaning for our Paralytic Shellfish Poisoning, and also kind of run the response to when we have shellfish human health events. And I don't have any updates, although I know we're kind of inching closer to the summer season. So depending on what happens with COVID, we'll try to get some messaging out to remind folks of signs or symptoms for like Paralytic Shellfish Poisoning to make sure that they go and see a doctor right away. But other than that, not too much is happening on our end here.

### SOUTHEAST

#### **John Harley**

No updates from me.

### OUTSIDE ALASKA

#### **Teri King**

Thanks, everybody, for being here today. I would just say that our monitors are seeing full spring blooms here in Puget Sound. And it looks like on the outer coast as well. And one of the things is we are seeing *Dinophysis* and not concerning levels of *Pseudo-nitzschia*. But they're increasing. So as things happen, it can always come through BC and then up to you. But we believe this atmospheric river that's headed our way this weekend, probably will knock all those levels down again. So yeah, and thanks to everybody that's been reaching out for their login, and, you know, for the patience for the new system, and a lot of great data coming in. So thank you all.

#### **Emily Bowers**

Still working through samples slowly but surely, no other real updates, but it did kind of perked my ears when Naomi was talking about the DA kits. We're also kind of feeling the loss of the Biosense kits being discontinued. But we had kind of talked to the Abraxis folks back in like October kind of asking about what they're doing about it. And they said that they were in the process of developing a new kit with the same sensitivity as the old Biosense kit that was supposed to come out sometime in this first quarter of 2022. I haven't heard anything since October. But hopefully there's a similar kit that's on its way.

#### **Steve Kibler**

Hey, Thomas, it's going pretty well. So in terms of updates, we've got a sampling trip planned for Kodiak, the last two weeks of June. We're going to try to do some community and stakeholder meetings as well, we'll be there bringing possibly Dave Kidwell with us from the NCCOS HAB program office, so you know, getting feedback, science needs of the future, that sort of thing he's interested in finding out from people in Kodiak. We are trying to finish up our NPRB project on toxins in the food web that ends in May. So we're sort of at the tail end of a few samples, left to analyze, working with Xiuning Du and Oregon State University, and Rob at Prince William Sound Science Center. So that's coming along pretty quickly. We are trying to

schedule some more stakeholder feedback meetings for later in the summer. And I know you and I've talked about a bigger workshop and because of the delays in the federal budget, we haven't gotten the chance to really push that forward. So I haven't bugged you about it lately. But yeah, but I'll definitely be in touch, probably in the coming weeks to try to work out some plans for the rest of the year. And then finally, we're shipping up to try to go to Kachemak Bay in August, for some of the same reasons, sampling plus community meetings, that sort of thing.

**Lori Verbrugge**

I guess the only thing that I wanted to say is this that I was excited to see Kate on the phone from the State Division of Public Health and happy to have my state partner on the call. And I'll reach out to you separate to introduce myself. Thanks. But no other updates.

Dean Stockwell: Last question. The group from SEATOR had been meticulously putting out the public service announcements and with their transitions that's kind of slowed down. Is there a plan to keep those coming? It's a very valuable tool and I hope you can encourage them.

Thomas: Yes, as far as I know, there is. I think it's just taken longer than they thought to get everybody up to Alaska and started and established. I'm really hoping that we'll be able to get them to come and join onto these calls as well. And I believe that the plan is to once they're all kind of established and producing data to put those back up online again.

John Harley: I don't know if anybody from Sitka tribe is on as well, but I know they had a big delay of several months because the manufacturer of the radio labeled saxitoxin that they were using and RBA assay ran out of product or the product was not up to par. And so basically they didn't run any samples between October and February, I believe.

**NEXT AHAB MONTHLY CALL WILL BE: THURSDAY April 14<sup>TH</sup>, 2022 AT 9:30AM AK  
(The meeting schedule for 2022 will remain the 2<sup>nd</sup> Thursday of every month)**