

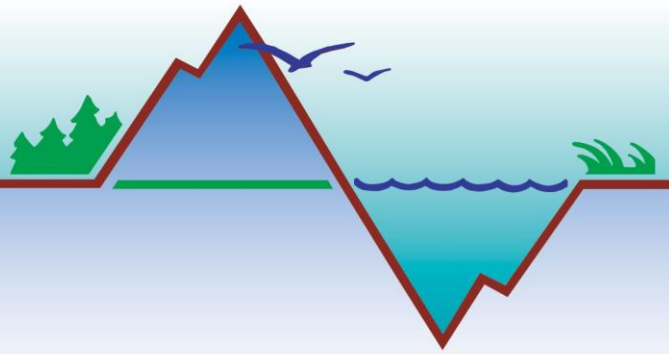
Kachemak Bay Research Reserve Phytoplankton Update

August 21st to August 27th, 2020

Harmful Algal Bloom Program

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Hello Everyone,

This week in Halibut Cove a *Dinophysis* bloom was observed. *Dinophysis* spp. are species of concern that can produce okadaic acid which can lead to diarrhetic shellfish poisoning (DSP) when toxic shellfish are consumed. Diarrhetic shellfish poisoning is a gastrointestinal illness with symptoms similar to food poisoning such as: diarrhea, nausea, vomiting, and abdominal pain. Symptoms can occur within 30 minutes to a few hours after consuming toxic shellfish. There have been no fatal cases of DSP.

KBNERR along with our local and state partners are working closely together to monitor the *Dinophysis* spp. abundances in Kachemak Bay. Additional information on *Dinophysis* spp. and DSP can be found in the second attachment, NOAA PMN Factsheet *Dinophysis* spp, on this week's email update.

Please reach out with any additional questions.

Overall phytoplankton were more abundant throughout Kachemak Bay this week, ending the sparse samples we have been seeing the last couple of weeks. The dominant species at Peterson Bay, Gull Island and throughout outer Kachemak Bay this week is *Bacteriastrium* sp.. This is a diatom with long spines like *Chaetoceros* spp. The difference between these two groups is the forked ends of the spines visible in *Bacteriastrium* species as shown in the illustration by Conrad Field.

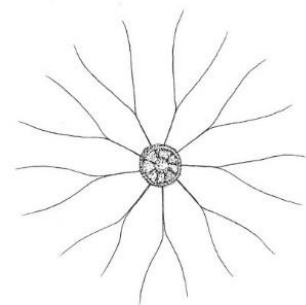


Illustration of
Bacteriastrium sp. by
Conrad Field

Reach out with any questions.

Thanks to all our monitors and partners for the phytoplankton samples!

Rosie Masui, and Jasmine Maurer

Kachemak Bay Research Reserve Phytoplankton Update

Qualitative Analysis Phytoplankton Data

INNER BAY

| DATE | Bay | Water Temp | Salinity | Dominant species | Dinophysis | Pseudo-nitzschia | Alexandrium |
|------------|--------------|------------|----------|-----------------------|------------|------------------|-------------|
| 8/17/2020* | China Poot | 13 | 32 | Sparse Sample | None | None | None |
| 8/19/2020* | Peterson bay | 15 | 28 | Mixed Dinoflagellates | Present | None | None |

| | | | | | | | |
|-----------|--------------|------|------|----------------------------|---------|------|---------|
| 8/22/2020 | China Poot | 13 | 30 | Mixed Dinoflagellates | Present | None | None |
| 8/23/2020 | Peterson Bay | 12.7 | 29 | <i>Bacteriastrum</i> | Present | None | Present |
| 8/25/2020 | Halibut Cove | 13 | 26 | <i>Dinophysis</i> bloom | Bloom | None | None |
| 8/25/2020 | Homer Harbor | 13.8 | 27.5 | Sparse Sample | Present | None | None |
| 8/27/2020 | Gull Island | 13.2 | 28.2 | <i>Bacteriastrum</i> bloom | Present | None | None |

*Samples received after last weekly update

OUTER BAY

| DATE | Bay | Water Temp | Salinity | Dominant species | Dinophysis | Pseudo-nitzschia | Alexandrium |
|------------|-----------------|------------|----------|----------------------|------------|------------------|-------------|
| 8/20/2020* | Seldovia Harbor | 13 | 30 | Sparse Sample | None | None | None |
| 8/25/2020 | Kasitsna | 12.4 | 30.4 | <i>Bacteriastrum</i> | Present | None | None |
| 8/25/2020 | Jakolof | 12.4 | 30.2 | <i>Bacteriastrum</i> | Present | None | None |
| 8/25/2020 | Tutka Bay | 14.4 | 28.9 | <i>Bacteriastrum</i> | Present | None | None |
| 8/25/2020 | Sadie Cove | 14.3 | 29.4 | <i>Bacteriastrum</i> | Present | None | None |
| 8/25/2020 | Eldred | 13.1 | 29.3 | <i>Bacteriastrum</i> | Present | None | None |

*Samples received after last weekly update



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