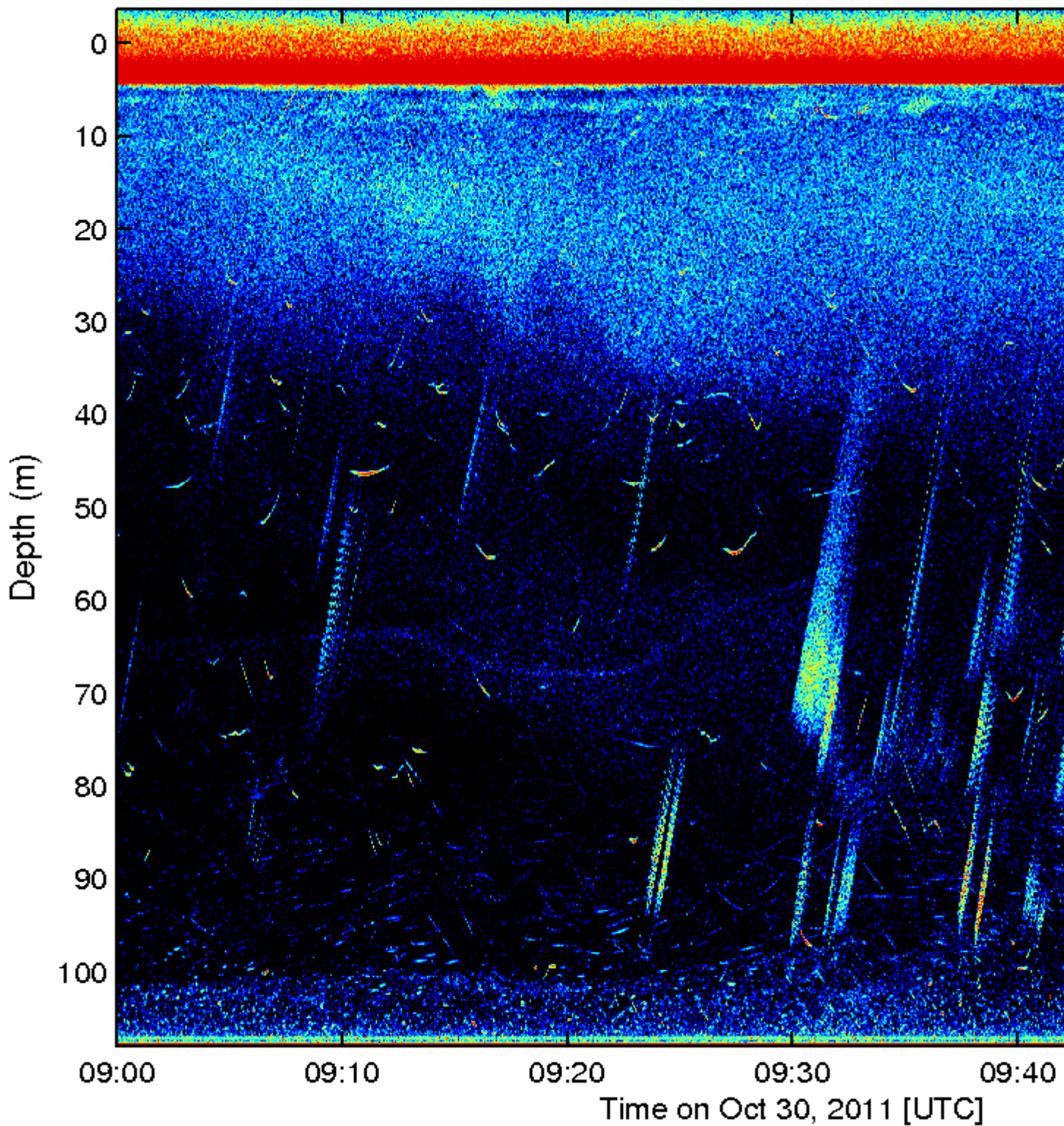


Bubbles Rising From the Delta Sediments ^[1]

Submitted by Rory Lattimer Mon, 2011-11-07 00:00

SG East Node 49°5.0532' N/123°19.746' W AS



31-Oct-2011 07:35:51 PDT

[2]

Dynamic sediments and sediments with active biogeochemistry often generate a variety of chemical compounds, some of which will be gaseous. This inverted echo-sounder image from

30 October 2011 at the Delta Dynamics Laboratory in the Strait of Georgia at 108m water depth near the mouth of the Fraser River has captured numerous clouds of rising bubbles. Such bubbles have several distinct characteristics.

First, we can see the uniform rise velocity, suggesting nearly constant bubble size. Bubbles have been detected that dissolve with height (common in unsaturated water conditions, as the bubbles shrink they slow and the traces arc to the right) or bubbles that grow as a result of reduced hydrostatic pressure (the traces curve upwards). This image coincides with low tide, another condition that is known to encourage gas release as the water pressure is at a minimum. We have also detected bubbles rising from schools of fish.

One final observation: the ensonified volume of water is an 8 degree cone expanding upwards from the transducer head. The bubbles may appear in the acoustic back-scatter at any height as they enter the beam, and with the strong tidal currents in the Strait of Georgia, they can easily be advected horizontally both into and out of the beam, thus the random appearance of bubble clouds into and out of the ensonified volume.

Tags:

- [bubbles](#) [3]
- [ddl](#) [4]
- [Sediments](#) [5]
- [echosounder](#) [6]
- [Fraser River Delta](#) [7]
- [strait of georgia](#) [8]
- [biogenic gas](#) [9]
- [tidal influences](#) [10]

Categories:

- [Data Highlights](#) [11]

```
// FIXES AMPERSAND IN BREADCRUMB var ONC_breadcrumb =
document.getElementById("breadcrumb"); if (ONC_breadcrumb) { var ONC_innerHTML =
ONC_breadcrumb.innerHTML; ONC_innerHTML = ONC_innerHTML.replace("&", "&");
ONC_breadcrumb.innerHTML = ONC_innerHTML; }
```

Highlights

- [Audio](#)
- [Data](#)
- [Learning](#)
- [Science](#)

- [Video](#)

Reading Room

- [Active Research](#)
- [Backgrounders](#)
- [FAQs](#)
- [Glossary](#)
- [News Briefs](#)
- [News Stories](#)
- [Newsletters](#)
- [Publications](#)

Cool Stuff

- [Apps](#)
- [Digital Fishers](#)
- [iBooks & e-Pubs](#)
- [Live Video](#)
- [Maps](#)
- [Images](#)
- [State of the Ocean](#)

Data & Tools

- [Apps](#)
- [Data Plots](#)
- [Data Search](#)
- [Data Policy](#)
- [Data Help](#)
- [OPeNDAP Web Services](#)

Opportunities

- [Calendar](#)
- [Educator Opportunities](#)
- [Global Partnerships](#)

- [Industry Network](#)
- [Jobs](#)
- [Staff List](#)
- [Technology Services](#)

Sites & Instruments

- [Arctic Sites](#)
- [Northeast Pacific Sites](#)
- [Salish Sea Sites](#)
- [Notice to Mariners](#)

Follow Us



[Sign up for our newsletter](#)

Feedback

Send us your questions and comments *

How could we improve this page?

Your Name

Your Email *

Your Location

CAPTCHA

This question is for testing whether or not you are a human visitor and to prevent automated spam submissions.



What code is in the image? *

Enter the characters shown in the image.



[About Us](#) | [Contact Us](#) | [Media Relations](#) | [Legal Notices](#)

© Ocean Networks Canada. All rights reserved. 2474 Arbutus Road, Victoria, BC, V8N 1V8
| 1.250.472.5400

```
(function () { var d = new Date; var year = d.getFullYear();  
document.getElementById("copyright-date").innerHTML = year; })();
```

Source URL: <https://www.oceannetworks.ca/bubbles-rising-delta-sediments>

Links:

- [1] <https://www.oceannetworks.ca/bubbles-rising-delta-sediments>
- [2] https://www.oceannetworks.ca/sites/default/files/images/pages/data/IOTW_-VSG-ASLZAP1009-hour9to10-Oct302011.png
- [3] <https://www.oceannetworks.ca/article-tags/bubbles>
- [4] <https://www.oceannetworks.ca/article-tags/ddl>
- [5] <https://www.oceannetworks.ca/article-tags/sediments>
- [6] <https://www.oceannetworks.ca/article-tags/echosounder>
- [7] <https://www.oceannetworks.ca/article-tags/fraser-river-delta>
- [8] <https://www.oceannetworks.ca/article-tags/strait-georgia>
- [9] <https://www.oceannetworks.ca/article-tags/biogenic-gas>
- [10] <https://www.oceannetworks.ca/article-tags/tidal-influences>
- [11] <https://www.oceannetworks.ca/article-categories/data-highlights>