OCEAN
NETWORKS
CANADA

Orca Inquiry
Researcher Profile

Name
Jeannette Bedard (she/her)

Job Title
Scientific Data Specialist

Years of Experience
5 years in current role
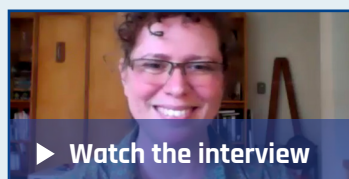
Greatest Scientific Accomplishment
PhD looking at the soundscape of Cambridge Bay, an Arctic site.

Hobbies
Writing science fiction and gardening

Super Power
Learning new things

▶ **Watch the interview**

Glossary

Hydrophone: A scientific instrument used to collect sounds

Spectrograms: A visual representations of sound

Vocalizations: Making of a sound, especially for communication purposes

Acoustic: Having to do with sound

Anthropogenic Noise: Human-made sounds

IN PARTNERSHIP WITH:

ROYAL **BC** MUSEUM

My role at Ocean Networks Canada

As a Scientific Data Specialist, one of my duties is to make sure that Ocean Network Canada's (ONC) **hydrophones** work properly and are recording ocean sounds. Since ONC records significantly more sounds than any human could listen to, this data is evaluated by looking at **spectrograms.** Finding whale **vocalizations** is a bonus! I also work to present this **acoustic** data in different ways for use in answering different scientific questions. Finally, I help researchers from around the globe access the data for their projects.

My typical day goes like this

Check incoming data (on average I spend 2-3 hours a day doing this). For any hydrophone not working properly I troubleshoot with the technicians. Additionally, if I observe any noteworthy sounds, such as whale calls, I make an annotation in the data.

- Check emails and respond to requests from researchers who want to use the data
- Perform data analysis around hydrophone performance and ambient noise levels
- Attend meetings for various other projects I'm involved in

Other tasks

- Attend and present at international and national conferences
- Collaborate in writing peer reviewed papers

Inquiry Connection

In your opinion, what needs to be considered when creating a plan to manage orca habitat?

A first step would be to measure the acoustic environment orcas live in. Like how we would use our visual information of the landscape around us, orcas do the same thing with sound. The soundscape on our coast varies wildly from site to site with the biggest influencer being anthropogenic noise. With acoustic measurements, we can map the quiet and loud places, then compare that to the spaces orcas use now and have used in the past.

How do you think we should manage orca habitat?