

Science & Education Report

Alaska & British Columbia

10th – 22nd June

The letters 'HX' are rendered in a large, white, serif font. They are semi-transparent, allowing the background image to be seen through them. The background is a landscape photograph of a calm body of water, possibly a fjord or a lake, with a dense forest of evergreen and some deciduous trees on the far shore. The water is still, reflecting the sky and the trees. In the foreground, there are several icebergs floating in the water, their blue and white surfaces also reflected. The overall mood is serene and majestic.

MS Roald Amundsen 10th – 22nd June, 2025

Alaska and British Columbia

When you arrived on the MS Roald Amundsen you boarded a research-focused expedition ship fully equipped as a floating laboratory and designed to be a center of learning and discovery. In your time on board, you contributed to scientific studies and expanded your knowledge of the world around you. Let's take a look back on our journey and what we accomplished while sailing through Alaska and British Columbia



Arts, Crafts & Creativity

We witnessed the amazing landscapes and culture of Alaska and British Columbia. We were inspired to create art reflecting our surroundings including watercolour post cards, and even attempting Lancy's 'unique' style of drawing!





Science & Education Program

Our onboard naturalists guided our guests using scientific tools to investigate the world around us. Through lectures, discovery sessions, zodiac cruises, and visits ashore we aimed to make every expedition day a memorable and unique learning experience.

Alaska & British Columbia: Culture

One thing is hearing, reading or watching documentaries about the native cultures of Alaska. However, another very different one is to witness Norma, the best ambassador of her ancestral cultural heritage we could have hoped for, telling us all about her people, her culture, her language, her traditions, how they keep their heritage alive. How proud of their culture they are, to listen to her stories from childhood and so much more. This is the most genuine manner to learn about those cultures, and all the wisdom and knowledge Norma had to share with us we will not be able to find in any book or documentary!



History & Culture

Apart from the native Alaskan cultures, during this voyage we have dived deep into the human history from the moment the Russians invaded this territory and how it evolved during the last centuries. We learned the Russians monetary motivations, the time of their glory, their fall, and how it dramatically impacted the lives of those who lived here before. We also learned about the reasons behind the US purchase of Alaska and how it developed from then on. In the end, we finalized with the forgotten episode during WWII, when the Japanese bombarded and invaded US soil, how the US took it back, and all the human consequences for those involved.



Citizen Science iNaturalist

During our voyage we had the chance to explore many different ecosystems: from the rainforest, to the intertidal zone and the kelp forest; from rivers and lakes to glaciated fjords. In these habitats we observed a huge variety of trees, flowers, marine invertebrates, mammals and birds.

In total we recorded:

- **263** Species
- **609** Observations
- **36%** Research grade observations

... and counting; as you upload more photos from home our dataset grows!

Through iNaturalist, these observations can now be used as data in global scientific research.

Thank you for joining the project and contributing to this amazing citizen science platform.

View our data submitted on our iNaturalist project here: <https://www.inaturalist.org/projects/10th-22nd-june-2025-ms-roald-amundsen-alaska-british-columbia?tab=observations&subtab=map>



Event in progress



10th - 22nd June 2025 - MS Roald Amundsen - Ala...

Jun 10, 2025 - Jun 22, 2025

About

Members 22

Observations made by guests and staff on the Amundsen's May/June 2025 "Alaska and British Columbia - Wilderness, Glaciers and Culture (Northbound)" voyage.

[Read More >](#)

[Your Membership](#)

[Edit Project](#)

[Project Journal](#)

Overview

609 OBSERVATIONS

263 SPECIES

86 IDENTIFIERS

10 OBSERVERS

[Stats](#)

[Map](#)

[Grid](#)

[List](#)

[Identify](#)

[Search](#)

[Export Observations](#)



Russet Cottongrass

Eriophorum chamonisii

1 8h



Western Bunchberry

Cornus unalaschensis

1 8h



Baumschwämme

Genus Fomitopsis

1 8h



Pacific Banana Slug

Ariolimax columbianus

1 10h



Purple Shore Crab

Hemigrapsus nudus

2 10h



Nearctodesmus

insularis

2 10h



Crows and Ravens · Krähen & Raben

Genus Corvus

1 7h



Red Alder · Roterle

Alnus rubra

1 9h



Brambles · Brombeeren

Genus Rubus

1 9h



Scotch Broom · Gemelner Besenginster

Cytisus scoparius

1 9h



Scotch Broom · Gemelner Besenginster

Cytisus scoparius

1 9h



Most Observations

1st

llsmith61

222

threewavespro

154

lancycheng

73

katrin_schmidt

73

holly513

68

laurenpeach94

12

[View All](#)

[View Yours](#)



Most Species

1st

threewavespro

109

llsmith61

101

lancycheng

49

katrin_schmidt

37

holly513

35

laurenpeach94

7

[View All](#)

[View Yours](#)



14 observations

Bald Eagle - Weißkopfseeadler

Haliaeetus leucocephalus



11 observations

Harbor Seal · Seehund

Phoca vitulina



10 observations

Rockweed

Fucus distichus



8 observations

Sitka Spruce · Sitkafichte

Picea sitchensis



8 observations

Arctic Starflower · Siebenstern

Lysimachia europaea



7 observations

Humpback Whale · Buckelwal

Megaptera novaeangliae



7 observations

Devil's Club

Oplopanax horridus



7 observations

Western Bunchberry

Cornus unalaschensis



6 observations

Sea Otter · Seeotter

Enhydra lutris



6 observations

Red Baneberry

Actaea rubra



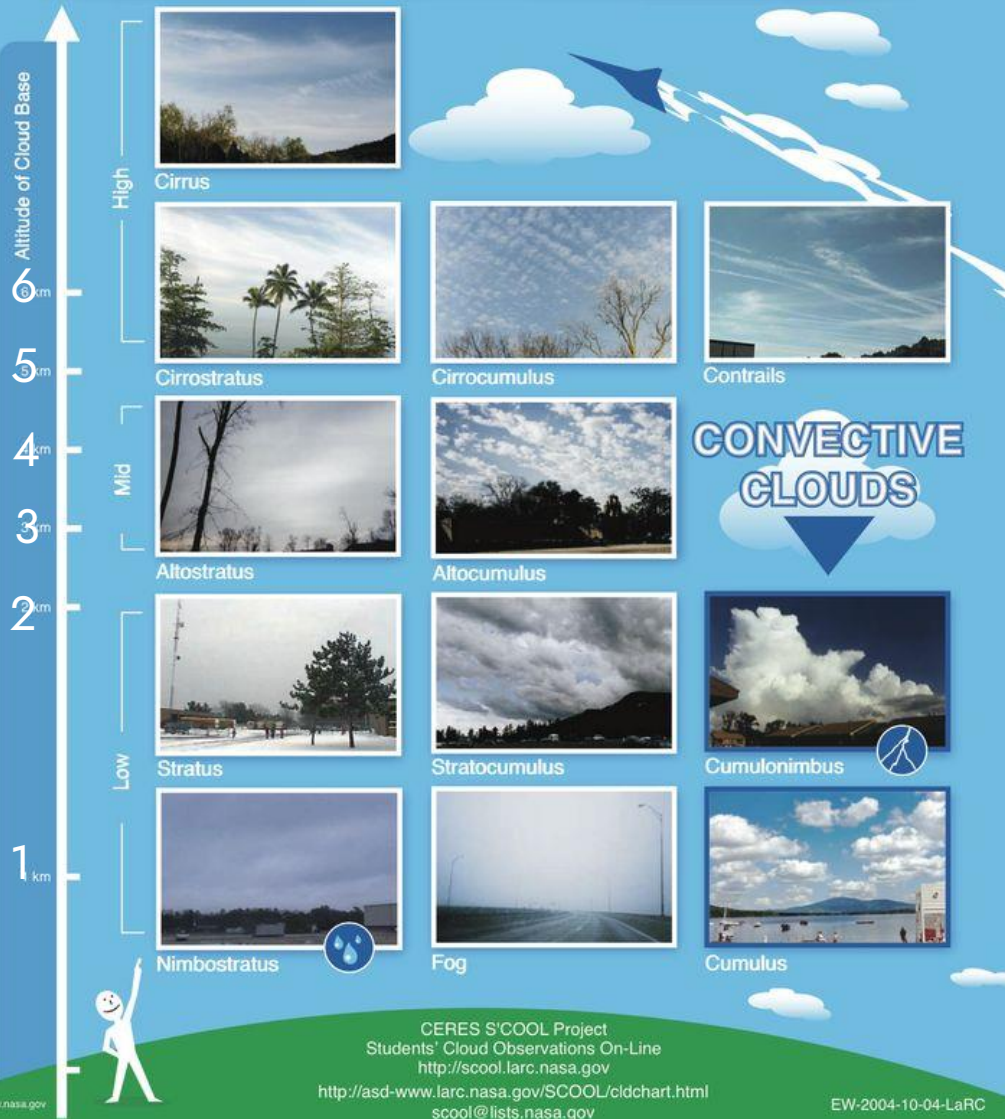
Citizen Science NASA Cloud Observer

Clouds aren't just shapes in the sky; they are important components of Earth's heat budget and balance. Information about when, where, and what types of clouds are forming helps scientists understand more about Earth's climate and climate change. Through NASA's GLOBE Cloud Observer program, we help contribute such data.

Our citizen scientists **submitted 4 observations** to the global database run by NASA. Our observations might be matched to data from weather satellites orbiting above and will be used to better understand global weather phenomena.



S'COOL Cloud Identification Chart



Citizen Science

NASA Cloud Observer

High Clouds (Base above 6,000 meters):

Cirrus: Thin, wispy clouds composed of ice crystals. They often appear as delicate streaks or feathery wisps high in the sky.

Cirrostratus: Thin, sheet clouds that cover large portions of the sky. They can create a halo around the sun or moon.

Cirrocumulus: Small, fluffy clouds, resembling fish scales or ripples.

Medium Clouds (Base between 2,000 and 6,000 meters):

Altostratus: Puffy, grayish-white clouds with rounded edges. They often form parallel rows or patches.

Altostratus: Thick, grayish clouds that partially obscure the sun or moon. They lack the distinct features of cirrostratus.

Low Clouds (Base below 2,000 meters):

Stratus: Uniform, gray clouds that cover the sky like a blanket. They can bring drizzle or light rain.

Stratocumulus: Low, lumpy clouds with defined edges. They often appear in rows or patches.

Nimbostratus: Thick, dark gray clouds associated with steady rain or snow.

If you'd like to explore more examples, you can check out NASA's [On-Line Cloud Chart](#) [View our data](#) on the global map

High

Cirrostratus

Cirrus

Cirrocumulus

Middle

Altostratus

Nimbostratus

Alto cumulus

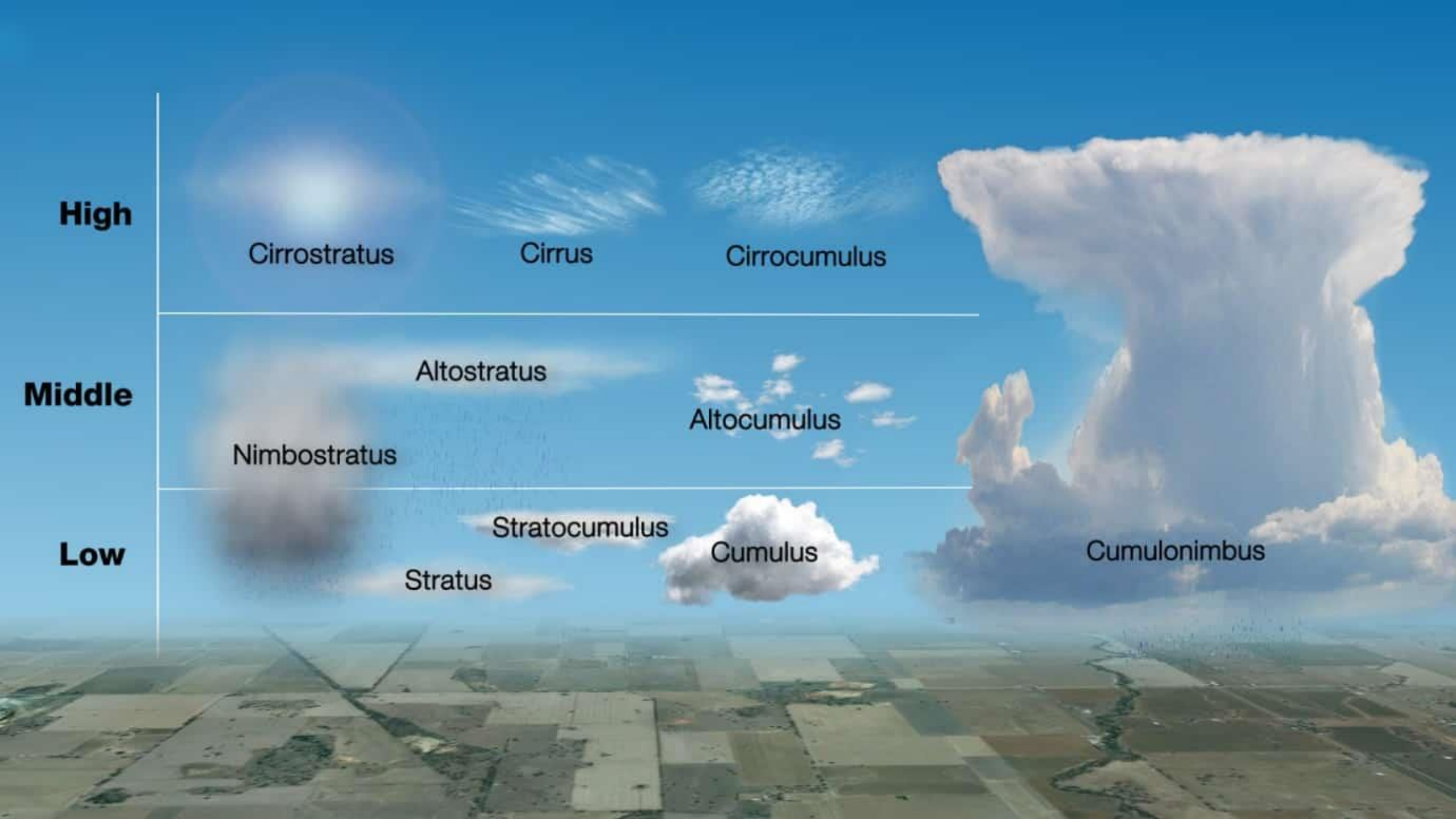
Low

Stratocumulus

Stratus

Cumulus

Cumulonimbus



Observation	GLOBE	
Universal Date/Time	2025-06-15 18:05:00	2025-06-15 18:03
Latitude	57.88	57.56 to 58.2
Longitude	-133.19	-133.51 to -132.87
Total Cloud Cover	Scattered (25-50%) 	Broken 59.09% 
High Clouds		No Clouds 
Mid Clouds	 Altocumulus  Altostratus Cover: Scattered (25-50%)  Opacity: Transparent	Cover: Scattered 27.27%  Altitude: 2.94 (km) Phase: Water 267.17 (K) Opacity: Translucent
Low Clouds		Cover: Scattered 31.82%  Altitude: 1.39 (km) Phase: Water 278.13 (K) Opacity: Transparent
GLOBE Cloud Photos and Corresponding NASA Satellite Images. Click image to view ----> <i>Note: Photos submitted though GLOBE need approval before being displayed, this may take a few days.</i>	GLOBE Photos East South  	GOES-18 Visible  Infrared  GEO Tutorial
Sky Conditions, Surface Conditions and Observer Comments	Sky Conditions Sky Visibility : Clear Sky Color : Blue Surface Conditions Snow/Ice : Yes Standing Water : Yes Muddy : No Dry Ground : No Leaves on Trees : No Raining or Snowing : No	Are there any comments you would like to add? Be su

Our data

Satellite data

Feedback from NASA Globe Clouds

We received an email back from the NASA Globe Cloud project!

The image on the left shows our observations on the 15th June in blue, compared to the GOES-18 Satellite data recordings for the same, albeit larger, area in white.

The comparison highlights the importance of our observations in adding additional data and detail to mid-level satellite imagery.

In contrast, the satellite recorded **31.82% low cloud cover that** we could not see, likely due to the mountains.

Together, our combined data reveals a more complete picture of the sky.

Underwater drone

We had the opportunity to deploy our underwater drone at the following sites:

- Sitka
- Misty Fjords

We saw a variety of the strange and beautiful creatures that inhabit the Alaskan waters, including giant kelp, jellyfish, hermit crabs, sea urchins, sea cucumbers, and sea stars — including ochre, bloody henry, and the critically endangered sunflower star (pictured to the right).

View the highlights from our underwater drone footage on HX Underwater Drone Footage [YouTube Channel](#)





Science Boat

During our voyage we conducted plankton sampling techniques focused on the the abundance and species of phytoplankton present in Alaskan waters.

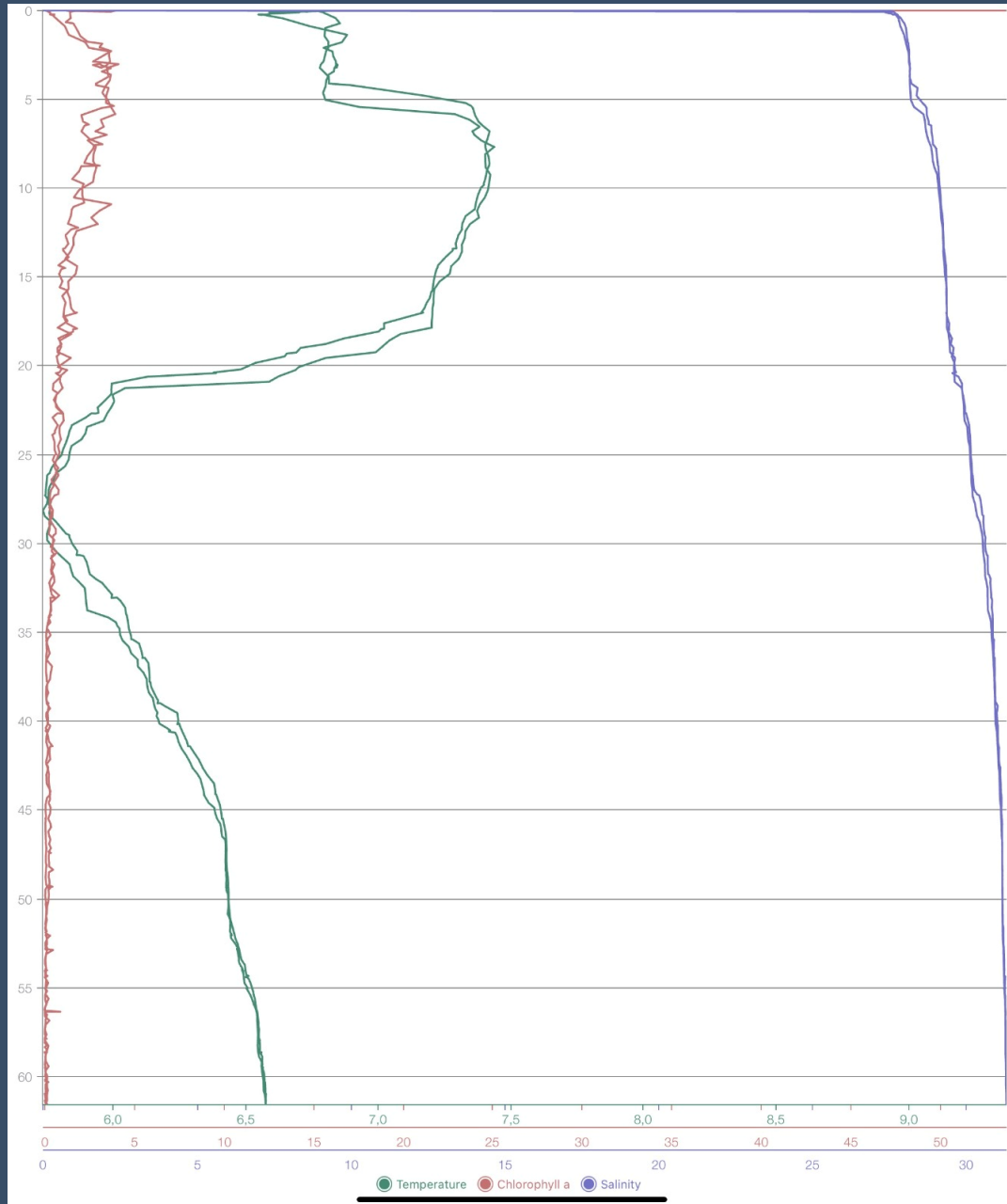
The samples and data which you recorded provided invaluable data for the NOAA-funded Harmful Algal Bloom (HAB) project, to monitor potentially harmful phytoplankton blooms.

During the science boats in Tracy Arm, Red Bluff, Icy Bay, and Misty Fjords, we used a CTD to create a physical profile of the water column, took measurements of turbidity to estimate phytoplankton abundance, then deployed a plankton net to collect phytoplankton and zooplankton.

Science Boat: CTD data

Our CTD casts gave us insight into the way salinity, temperature, and chlorophyll changed with depth. Typically, salinity increases with depth while temperature decreases, since cold, salty water is more dense. Measuring chlorophyll—the photosynthetic pigments in phytoplankton—gives us information on phytoplankton abundance and primary productivity, usually more chlorophyll is detected in the first 20m of depth, where sunlight is able to penetrate the water.

Example of a CTD cast taken in Tracy Arm pictured left.





Plankton samples

Plankton are ocean drifters transported by currents and tides, and the lack of ability to navigate against these natural forces. Animals (zooplankton) and plant-like algae (phytoplankton) play a key role in supporting the marine food web and health of our oceans.

The image on the left shows a plankton sample from Red Bluff, AK including bivalve larvae, jellyfish, and phytoplankton.

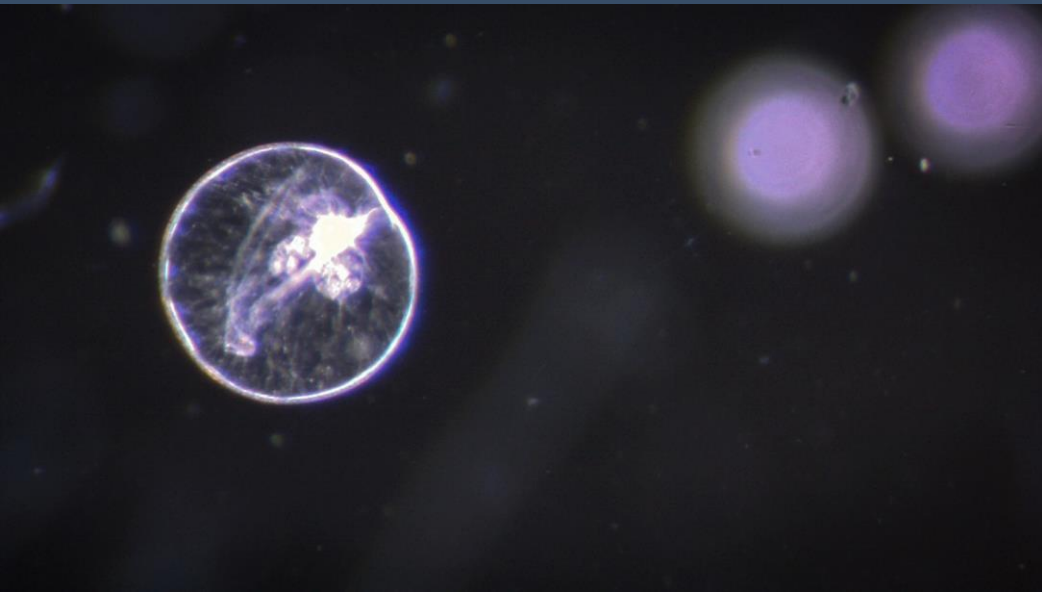


Chaetoceros spp.

Citizen Science

Phytoplankton & the Harmful Algal Bloom (HAB) Project

Phytoplankton underpin the marine food web as they, like plants on land, contain photosynthetic pigments (chlorophyll) that convert sunlight into energy and oxygen, and also sequesters carbon dioxide.



Noctiluca spp.

We collected phytoplankton samples in Tracy Arm, Red Bluff, Misty Fjords, and Icy Bay and reported the abundance and species present for the HAB project, to detect harmful blooms of microalgae.

These blooms, caused by excessive nutrient pollution and environmental changes, can produce toxins or provide physical stress that is harmful to aquatic life, disrupt ecosystems, and pose health risks to humans. The HAB project aims to monitor outbreaks, identify contributing factors, and develop strategies to predict, prevent, and manage HABs. The data we collected showed the presence of some of the HAB target species such as Chaetoceros, and Noctiluca, but no worrying elevated levels to report.

Zooplankton

We collected zooplankton samples in Tracy Arm, Red Bluff, and Misty Fjords. Samples included both categories of zooplankton. 'Holoplankton', which remains planktonic their whole life cycle, which includes copepods, and scale worms (pictured bottom left). 'Meroplankton', is only planktonic for part of their life cycle, which includes larvae such as the crab zoea larvae (pictured top left).

The photos taken on our microscopes have also been added to our iNaturalist project, to help monitor plankton biodiversity.



Crab zoea larvae, Red Bluff



Spionid worm, Tracy Arm



Bryzoan



Jellyfish medusa (approx 1mm)



Water flea



Bivalve larvae, Misty Fjords



Pterpod – Sea butterfly



Copepod

Zooplankton

Zooplankton collected in Red Bluff, Misty Fjords, Tracy Arm and Icy Bay



Crab zoea larvae



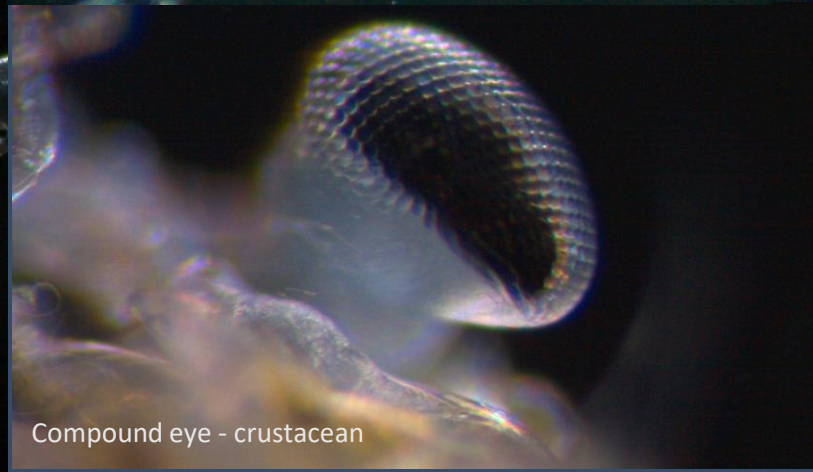
Tintinnid



Barnacle larvae



Shrimp-like larvae



Compound eye - crustacean



Amphipod

Zooplankton

Zooplankton collected in Misty Fjords



Amphipod and jellyfish medusa

Citizen Science

Happywhale

Cetaceans— whales, dolphins, and porpoises— capture our imaginations and our hearts whenever we witness them. And, doing something as simple as taking a photo of them can help scientists learn more about these animals. That's where Happywhale comes in: by using AI to match images of whales submitted by users, they can track individuals as they migrate across the world and through their lives. When you submit a photo of a whale, you will be notified of any past and future matches of that individual!

We uploaded in total 17 observations of three species: humpback whale, orca and Dall's porpoise. Nine humpback whales were known to Happywhale and had already been sighted between Hawaii and Alaska.

[View](#) the MS Roald Amundsen's submissions to Happywhale during our voyage





[Unnamed]

ID: SEAK-1386

SEX: Male

Humpback Whale

Also Known As

HW-MN0400419

HIHWNMS-2012-1-12_A01

SPLASH-470237

OSUWTG-MnSEAK-343

Sightings 34

First

2004-07-07

Alaska, United States

Last



2025-06-15

Alaska, United States

Followers

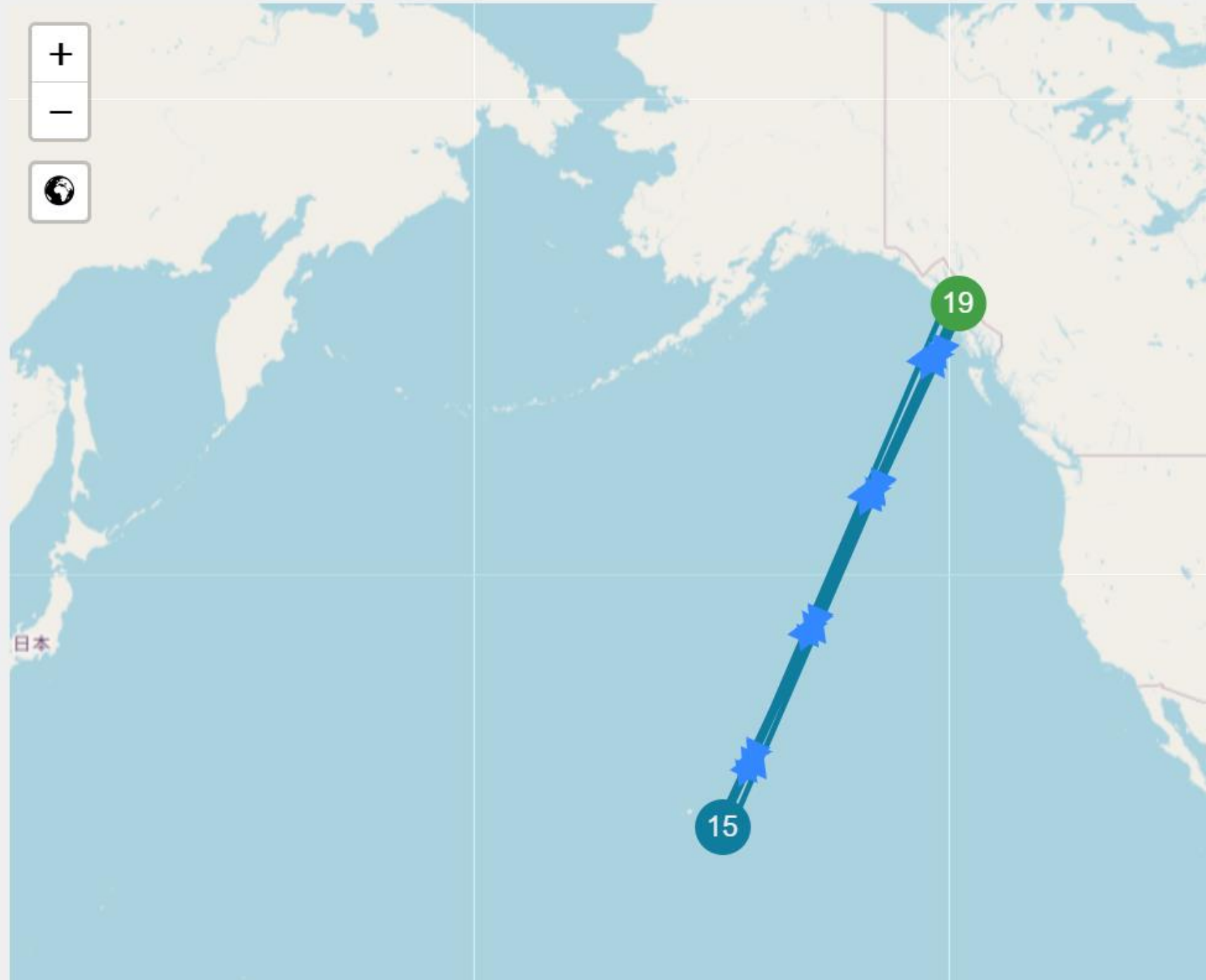
7

Unfollow



Seen this individual?

Share Your Experience





Goomba (BC)

ID: BCX1770

SEX: Unknown

Humpback Whale

Also Known As

BCXUKNC2016_6

Sightings 116

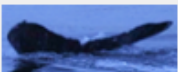
First



2016-07-25

Alaska, United States

Last



2025-06-14

Alaska, United States

Followers

11

Follow

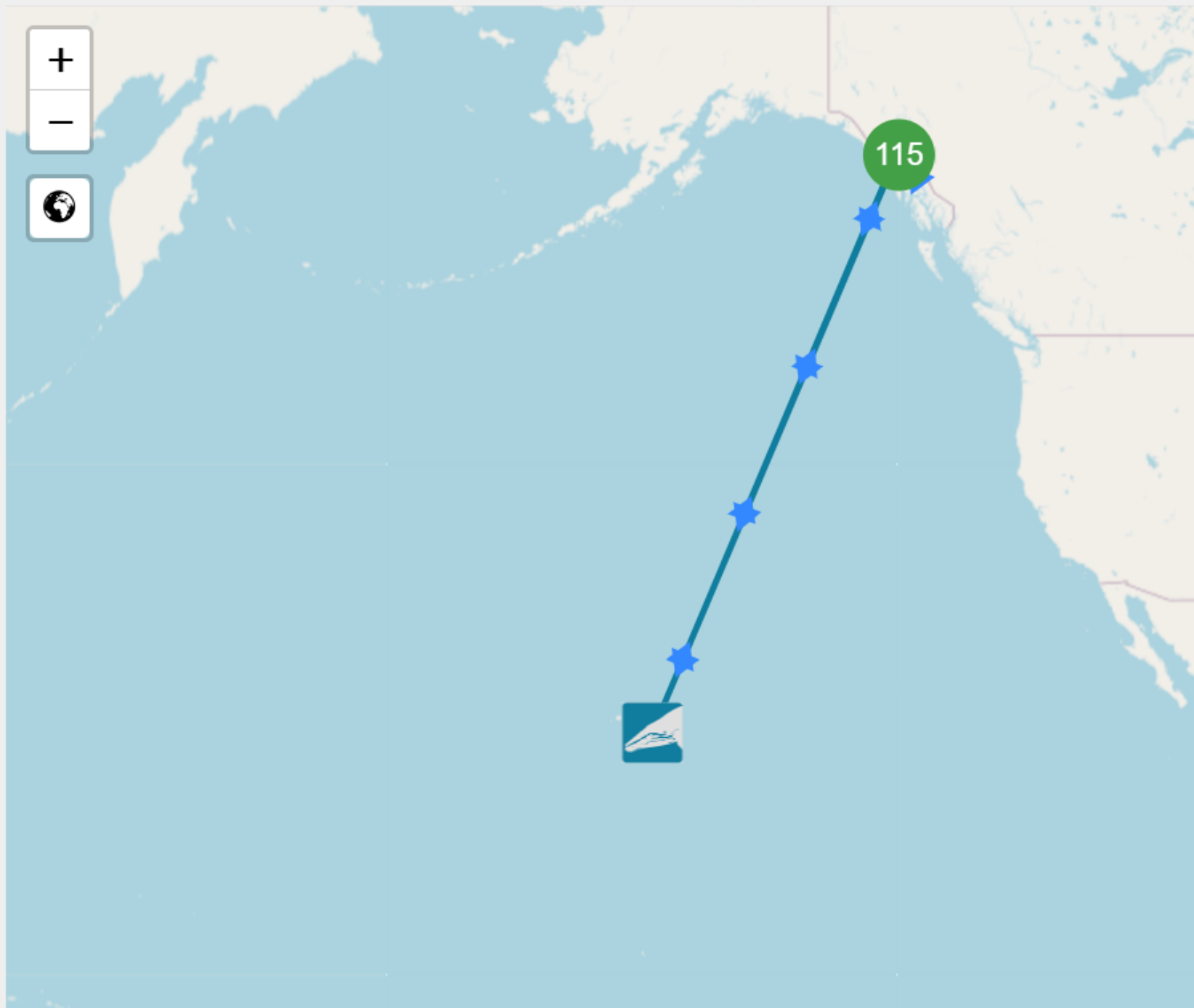


Seen this individual?

Share Your Experience



Show My Encounters Only





Citizen Science eBird

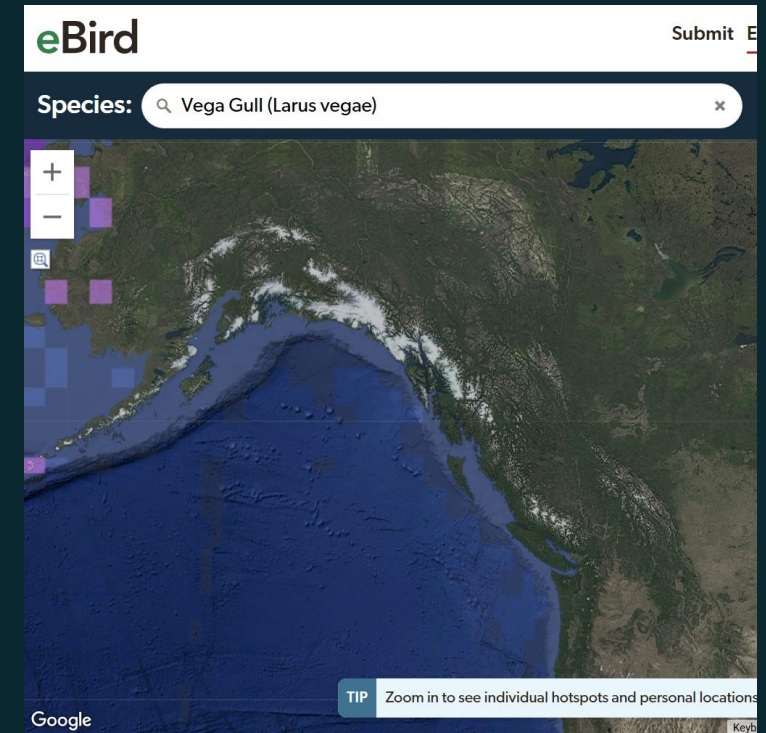
At sea and on land, our onboard ornithologists were constantly surveying the avifauna we encountered along our route. The diversity of habitats we traveled through provided us with an equally diverse array of birds, from majestic albatrosses at sea to resplendent jungle parrots.

Including 13 onboard Wildlife Watches and eBird sessions on deck, we recorded 55 bird species across 16 eBird checklists. Through the eBird platform, the data we collected is available for scientists around the world to help understand patterns of bird distribution, migration, and habitat use.

View our data for this trip here:

[AMALA2504b Alaska and British Columbia -
Wilderness, Glaciers and Culture \(Southbound\)
June 10 to 22, 2025 - eBird Trip Report](#)

Lancy's Highlight: Vega Gull/Ostsibirienmöwe/Goéland de la Vega *Larus vegae*



1st recorded sighting in
South East Alaska in 125
years!

Wildlife List - Birds



Wildlife List – Birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	NORSK
<i>Branta canadensis</i>	Canada Goose	Kanadagans	Bernache du Canada	Kanadagås
<i>Cygnus buccinator</i>	Trumpeter Swan	Trompeterschwan	Cygne trompette	Trompetersvane
<i>Anas platyrhynchos</i>	Mallard	Stockente	Canard colvert	Stokkand
<i>Anas acuta</i>	Northern Pintail	Spießente	Canard pilet	Stjertand
<i>Histrionicus histrionicus</i>	Harlequin Duck	Kragenente	Arlequin plongeur	Harlekinand
<i>Melanitta perspicillata</i>	Surf Scoter	Brillenente	Macreuse à front blanc	Brilleand
<i>Melanitta americana</i>	Black Scoter	Pazifiktrauerente	Macreuse à bec jaune	Amerikasvartand
<i>Bucephala islandica</i>	Barrow's Goldeneye	Spatelente	Garrot d'Islande	Islandsand
<i>Mergus merganser</i>	Common Merganser	Gänsesäger	Grand Harle	Laksand
<i>Dendragapus fuliginosus</i>	Sooty Grouse	Küstengebirgshuhn	Tétras fuligineux	Sotjerpe
<i>Columba livia</i>	Rock Pigeon	Felsentaube	Pigeon biset	Klippedue (Bydue)
<i>Selasphorus rufus</i>	Rufous Hummingbird	Rotrücken-Zimtelte	Colibri roux	Rødkolibri
<i>Haematopus bachmani</i>	Black Oystercatcher	Klippenausternfischer	Huïtrier de Bachman	Amerikasvarttjeld
<i>Cerorhinca monocerata</i>	Rhinoceros Auklet	Nashornalk	Macareux rhinocéros	Neshornlunde
<i>Fratercula corniculata</i>	Horned Puffin	Hornlund	Macareux cornu	Hornlunde

Wildlife List – Birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	NORSK
<i>Brachyramphus brevirostris</i>	Kittlitz's Murrelet	Kurzschnabelalk	Guillemot de Kittlitz	Kortnebbdvergteist
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	Marmelalk	Guillemot marbré	Marmordvergteist
<i>Cephus columba</i>	Pigeon Guillemot	Taubenteiste	Guillemot colombin	Beringteist
<i>Uria aalge</i>	Common Murre	Trottellumme	Guillemot marmette	Lomvi
<i>Synthliboramphus antiquus</i>	Ancient Murrelet	Silberalk	Guillemot à cou blanc	Nordstarik
<i>Rissa tridactyla</i>	Black-legged Kittiwake	Dreizehenmöwe	Mouette tridactyle	Krykkje
<i>Chroicocephalus philadelphia</i>	Bonaparte's Gull	Bonapartemöwe	Mouette de Bonaparte	Kanadahettemåke
<i>Larus brachyrhynchus</i>	Short-billed Gull	Kurzschnabel-Sturmmöwe	Goéland à bec court	kortnebbmåke
<i>Larus vegae</i>	Vega Gull	Ostsibirienmöwe	Goéland de la Vega	sibirmåke
<i>Larus smithsonianus</i>	Herring Gull	Kanadamöwe	Goéland hudsonien	Amerikagråmåke
<i>Larus californicus</i>	California Gull	Kaliforniermöwe	Goéland de Californie	Præiegråmåke
<i>Larus glaucescens</i>	Glaucous-winged Gull	Beringmöwe	Goéland à ailes grises	Gråvingemåke
<i>Larus glaucoides</i>	Iceland Gull	Polarmöwe	Goéland arctique	Grønlandsmåke
<i>Sterna paradisaea</i>	Arctic Tern	Küstenseeschwalbe	Sterne arctique	Rødnebbterne
<i>Gavia pacifica</i>	Pacific Loon	Pazifiktaucher	Plongeon du Pacifique	Amerikastorlom

Wildlife List – Birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	NORSK
<i>Oceanodroma leucorhoa</i>	Leach's Storm Petrel	Wellenläufer	Océanite cul-blanc	Stormsvale
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Weißkopf-Seeadler	Pygargue à tête blanche	Hvithodehavørn
<i>Megaceryle alcyon</i>	Belted Kingfisher	Gürtelfischer	Martin-pêcheur d'Amérique	Belteisfugl
<i>Sphyrapicus ruber</i>	Red-breasted Sapsucker	Feuerkopf-Saftlecker	Pic à poitrine rouge	Rødbrystsevjespett
<i>Falco sparverius</i>	American Kestrel	Buntfalke	Crécerelle d'Amérique	spurvefalk
<i>Empidonax alnorum</i>	Alder Flycatcher	Erlenschnäppertyrann	Moucherolle des aulnes	Oreempid
<i>Empidonax difficilis</i>	Western Flycatcher	Feuchtwald-Schnäppertyrann	Moucherolle obscur	vestempid
<i>Vireo gilvus</i>	Warbling Vireo	Sängervireo	Viréo mélodieux	Sangvireo
<i>Cyanocitta stelleri</i>	Steller's Jay	Diademhäher	Geai de Steller	Furuskrike
<i>Pica hudsonia</i>	Black-billed Magpie	Hudsonelster	Pie d'Amérique	Svartnebbskjære
<i>Corvus brachyrhynchos</i>	American Crow	Amerikakrähe	Corneille d'Amérique	Amerikakråke
<i>Corvus corax</i>	Common Raven	Kolkrabe	Grand Corbeau	Ravn
<i>Poecile rufescens</i>	Chestnut-backed Chickadee	Rotrückenmeise	Mésange à dos marron	Kastanjemeis
<i>Tachycineta bicolor</i>	Tree Swallow	Sumpfschwalbe	Hirondelle bicoloré	Tresvale
<i>Corthylio calendula</i>	Ruby-crowned Kinglet	Rubingoldhähnchen	Roitelet à couronne rubis	Rubinfuglekonge

Wildlife List – Birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	NORSK
<i>Regulus satrapa</i>	Golden-crowned Kinglet	Indianergoldhähnchen	Roitelet à couronne dorée	Ildkronefuglekonge
<i>Troglodytes pacificus</i>	Pacific Wren	Pazifikaunkönig	Troglodyte de Baird	Barsmett
<i>Sturnus vulgaris</i>	European Starling	Star	Étourneau sansonnet	Stær
<i>Ixoreus naevius</i>	Varied Thrush	Halsbanddrossel	Grive à collier	Båndtrost
<i>Catharus ustulatus</i>	Swainson's Thrush	Zwergmusendrossel	Grive à dos roussâtre	Brunkinnskogtrost
<i>Catharus guttatus</i>	Hermit Thrush	Einsiedler-Musendrossel	Grive solitaire	Eremittskogtrost
<i>Turdus migratorius</i>	American Robin	Wanderdrossel	Merle d'Amérique	Vandretrost
<i>Spinus pinus</i>	Pine Siskin	Fichtenzeisig	Tarin des pins	Stripesisik
<i>Junco hyemalis</i>	Dark-eyed Junco	Winterammer	Junco ardoisé	Vinterjunko
<i>Melospiza melodia</i>	Song Sparrow	Singammer	Bruant chanteur	Sangspurv
<i>Parkesia noveboracensis</i>	Northern Waterthrush	Drosselwalsdänger	Paruline des ruisseaux	Vannparula
<i>Leiothlypis celata</i>	Orange-crowned Warbler	Orangefleck-Waldsänger	Paruline verdâtre	Oransjekroneparula
<i>Setophaga petechia</i>	Yellow Warbler	Goldwaldsänger	Paruline jaune	gulparula
<i>Setophaga coronata</i>	Yellow-rumped Warbler	Kronenwaldsänger	Paruline à croupion jaune	Myrteparula
<i>Setophaga townsendi</i>	Townsend's Warbler	Townsendwaldsänger	Paruline de Townsend	Granparula

Wildlife List — Birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	NORSK
<i>Cardellina pusilla</i>	Wilson's Warbler	Mönchswaldsänger	Paruline à calotte noire	Kalottparula
<i>Patagioenas fasciata</i>	Band-tailed Pigeon	Nördliche Bandtaube	Pigeon à queue barrée	Bånddue
<i>Sitta canadensis</i>	Red-breasted Nuthatch	Rotbrustkleiber	Sittelle à poitrine rousse	Rustspettmeis
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	Dachsammer	Bruant à couronne blanche	Hvitkronespurv
<i>Molothrus ater</i>	Brown-headed Cowbird	Braunkopf-Kuhstärling	Vacher à tête brune	Brunhodetrupial

ORCA Trip Survey Totals

Humpback



51

Orca



19

Dall's porpoise



27

Harbor porpoise



5

Pacific white-sided dolphin



4

Thank you for participating!

