



Press Release



INTERNATIONAL YEAR OF THE SALMON ANNOUNCES CONTINUED INTERNATIONAL EFFORT TO ADVANCE RESEARCH AND FINDINGS FROM THE 2022 PAN-PACIFIC WINTER HIGH SEAS EXPEDITION

The International Year of the Salmon (IYS) and North Pacific Anadromous Fish Commission (NPAFC) announce a continued international effort to advance research and findings from the 2022 IYS Pan-Pacific Winter High Seas Expedition. Between February and April 2022, five international research vessels participated in the largest ever pan-Pacific research expedition to study the winter ecology of salmon in the North Pacific Ocean (NPO). Together, these vessels successfully sampled 131 stations over approximately 2.5 million square kilometers in the Central and Eastern NPO. Their combined effort saw a catch total of 2,321 salmon and steelhead.

As preliminary cruise reports are finalized, scientists are working to make sense of what happens to salmon in the open ocean. Lab work is ongoing as scientists from all five vessels work through the data and samples collected at sea and prepare to bring a science team together in Vancouver, BC in October 2022 for a preliminary review of expedition findings and research plans. International efforts to integrate datasets across vessels and collaborate over analyses continues to be central to this process.

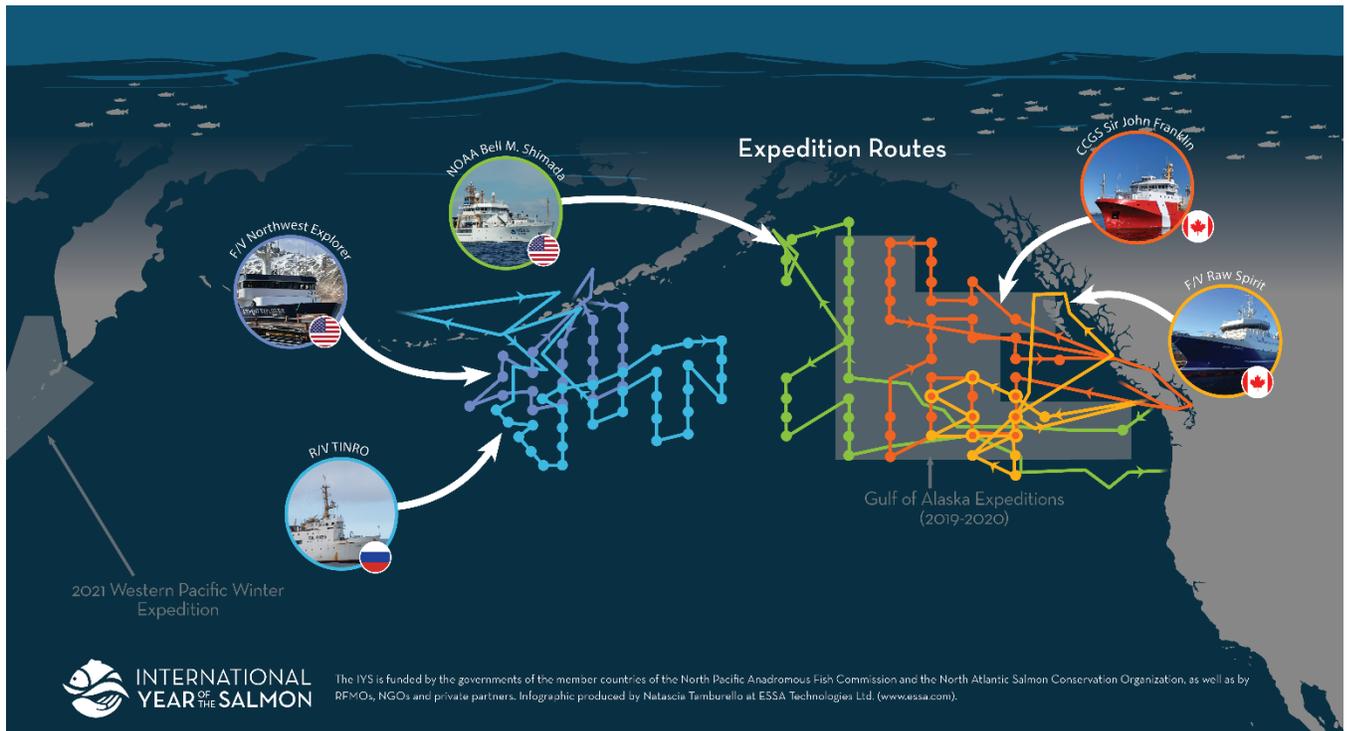
All five vessels successfully completed full ecosystem surveys and collected information and data using a range of emerging technologies. Genetic stock identification and environmental DNA (eDNA) will allow for a better understanding of where salmon from individual populations and other species were present in the NPO. Almost 950 environmental DNA (eDNA) samples were collected during the survey, which represents an eDNA data set unprecedented in spatial coverage for the NPO. Genetic data can help scientists identify stock-specific distribution for species and see how these species respond to habitats across the study area.

An echosounder-equipped uncrewed autonomous glider from the University of Alaska Fairbanks was successfully deployed in the Gulf of Alaska to collect acoustic observations from an array of sensors. Like eDNA, hydroacoustic surveys are tools that continuously sample areas of the ocean and can fill in the gaps in sampling the distribution of salmon. This, combined with oceanographic data that shows how the ocean is changing, can help make connections between salmon distributions and abundance, and conditions in the high seas.

To tell a complete story of what happens to salmon in the open ocean, scientists are combining their data sets across vessels. Data mobilization is a huge piece of the 2022 Expedition as scientists collaborate internationally and prepare data to be shared across research groups. Despite COVID-19 and political events, there has been goodwill amongst scientists to collaborate and cooperate over data mobilization.

Leading up to the Preliminary Expedition Results Meeting in October, scientists will send samples to appropriate parties, compile data for synthesis, identify trends, and conduct laboratory analyses. As

scientists prepare to share their preliminary findings, there remains a continued need for pan-Pacific research expeditions to truly understand factors regulating salmon. By synthesizing data and continuing to conduct at-sea research, scientists can continue working towards understanding open ocean conditions and identify links between oceanographic events in the high seas and salmon returns. Scientists across the Northern Hemisphere must continue to collaborate as ocean conditions rapidly continue to change.



2022 IYS Pan-Pacific Winter High Seas Expedition Zone Map with Completed Vessel Routes