

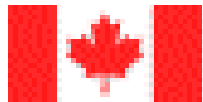
DBO Zooplankton PAG/DBO November 2017

Genetics and underway system
Microplastics update



British Columbia • Canada

R.J. Nelson, B. Williams, S. Vagle, R. Hopcroft **SeaStar Biotech**
K. Young, G. Nickoloff, D. Wan, C. Martin, L. Howell,
Peter Ross, P. Benoit, D. Varela



**Fisheries and Oceans
Canada**

**Pêches et Océans
Canada**

82°N

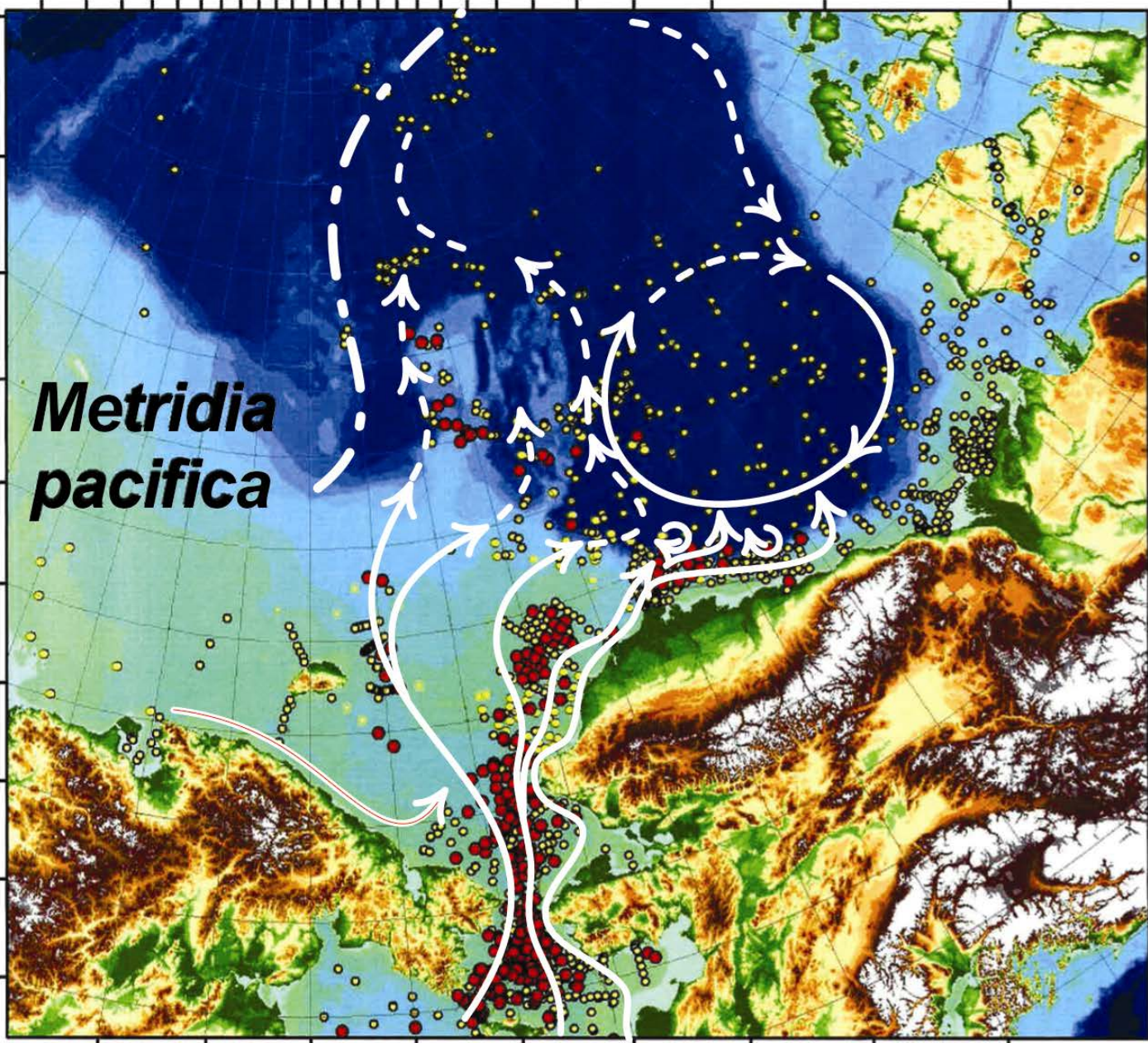
78°

74°

70°

66°

***Metridia
pacifica***



Collections 2002 to present



Calanus glacialis 16S ribosomal DNA gene



Pacific type

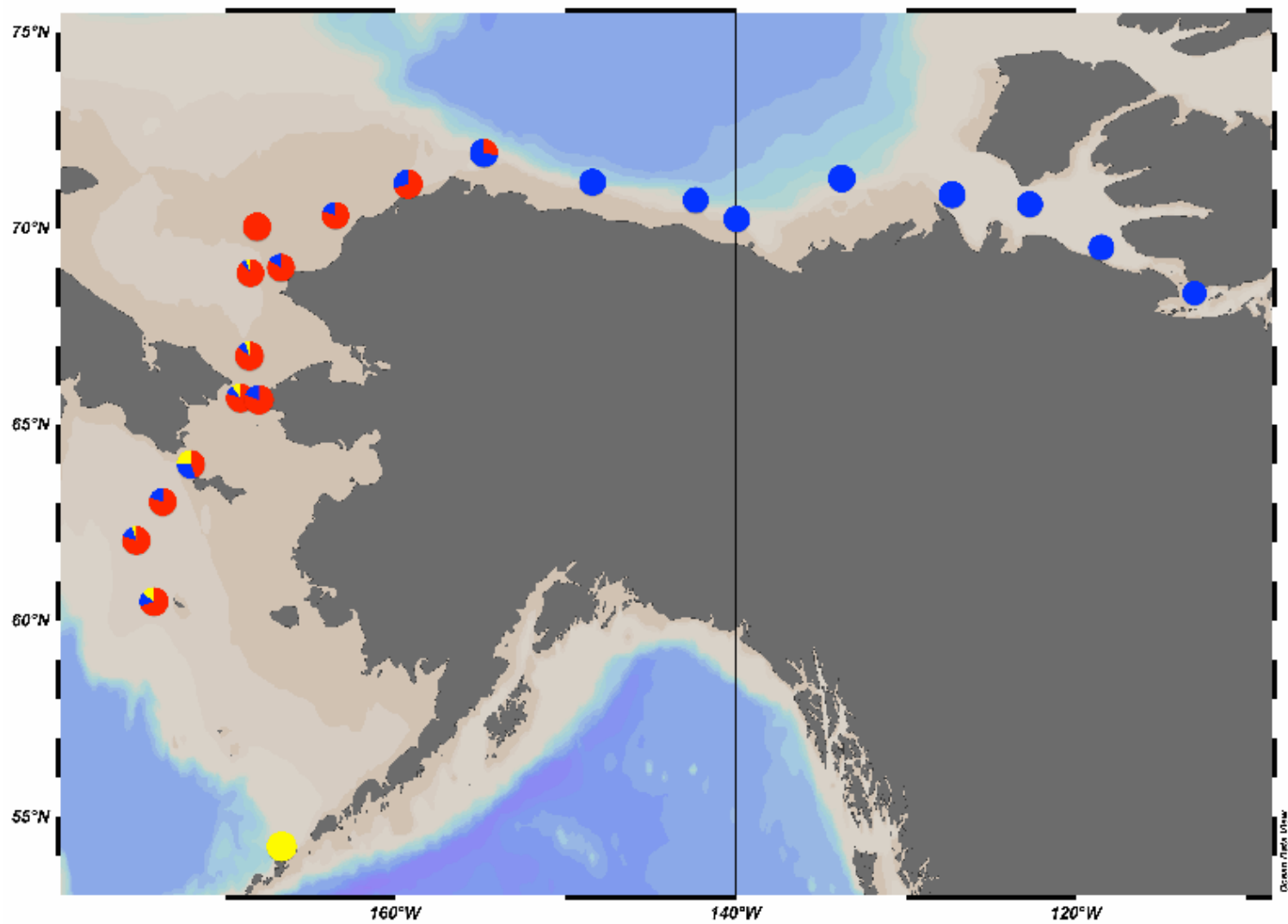


arctic type



Calanus marshallae

2008 C30

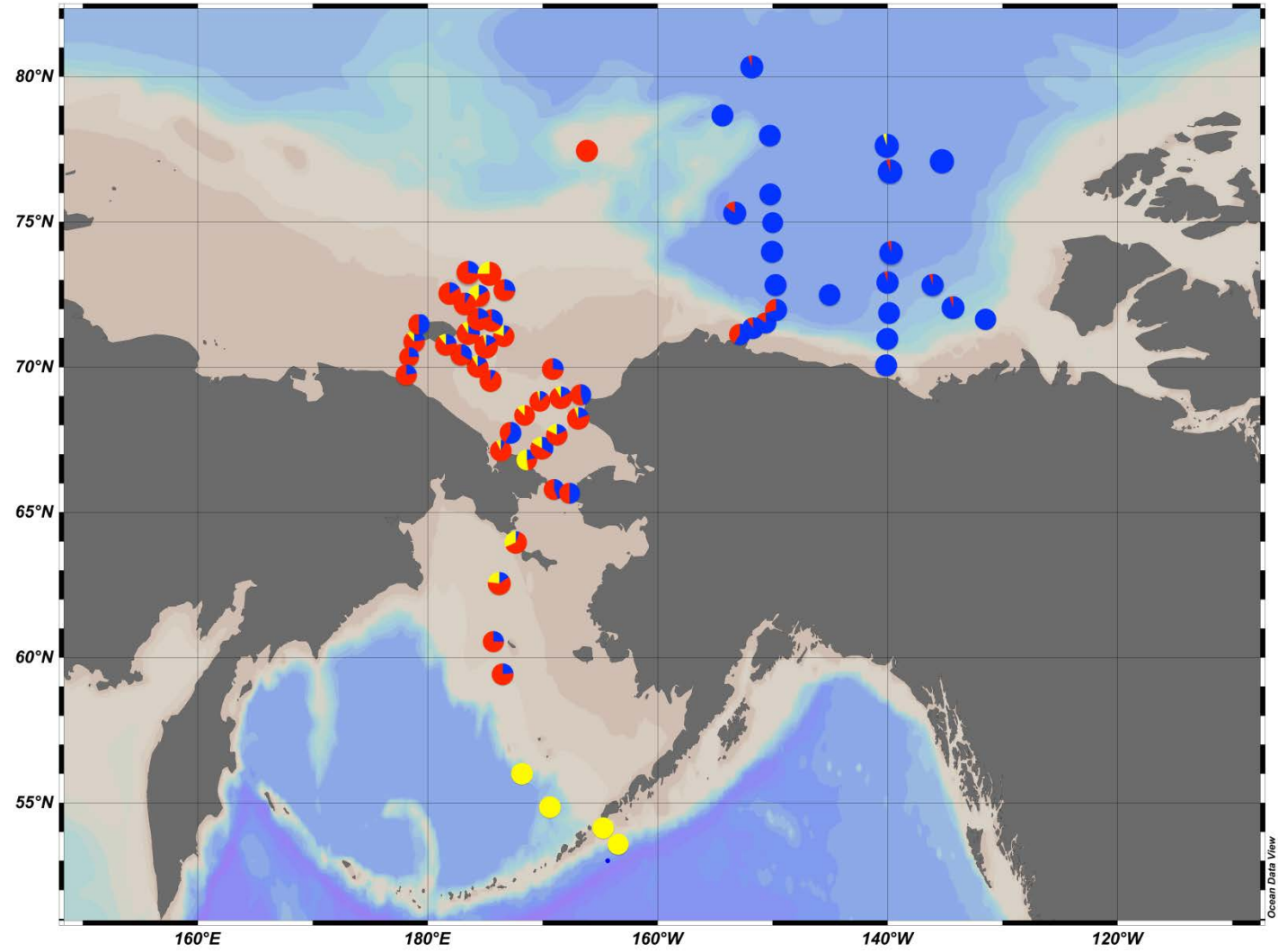


2009

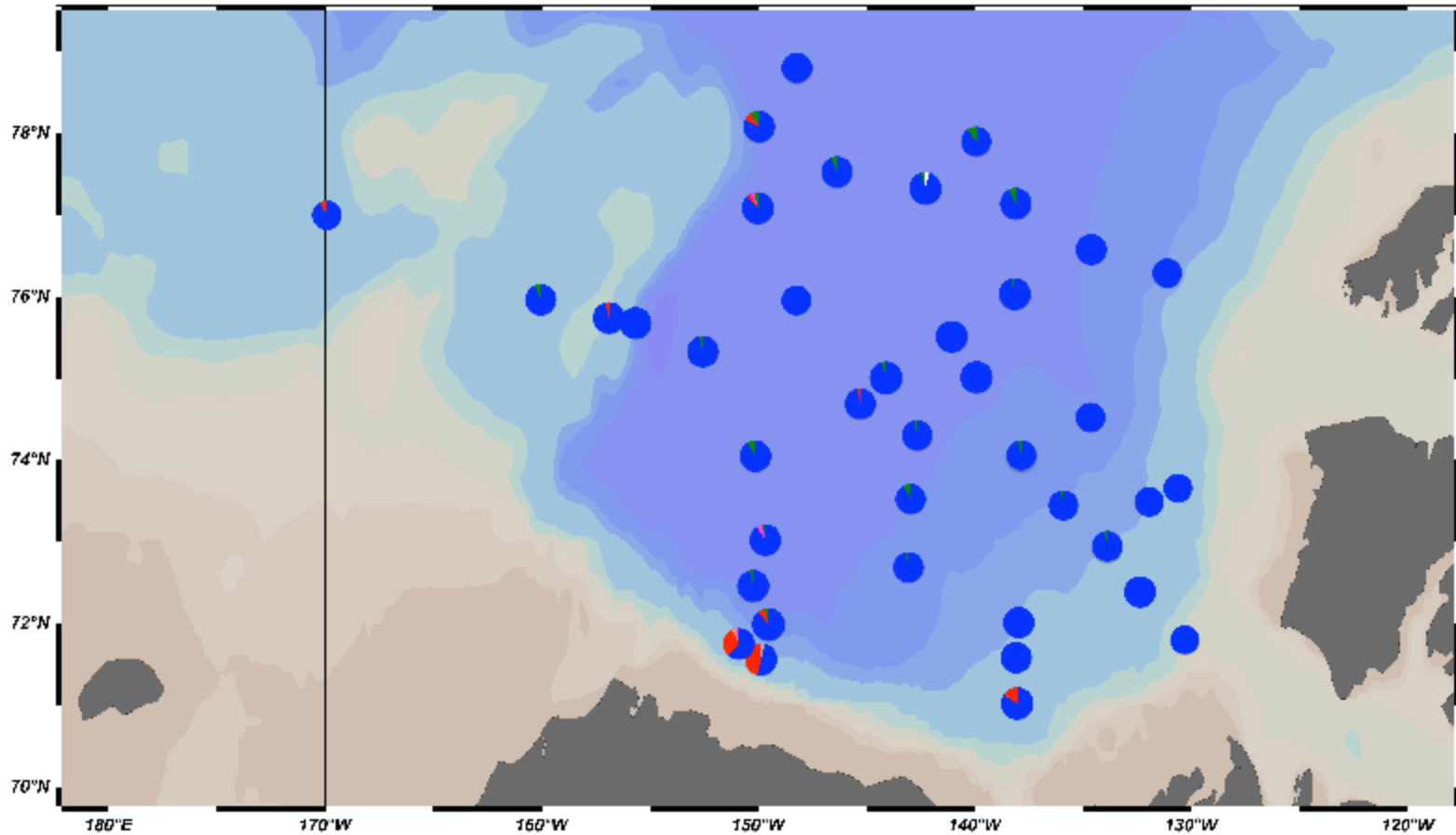
C30/DBO

RUSALCA

JOIS/BGOS

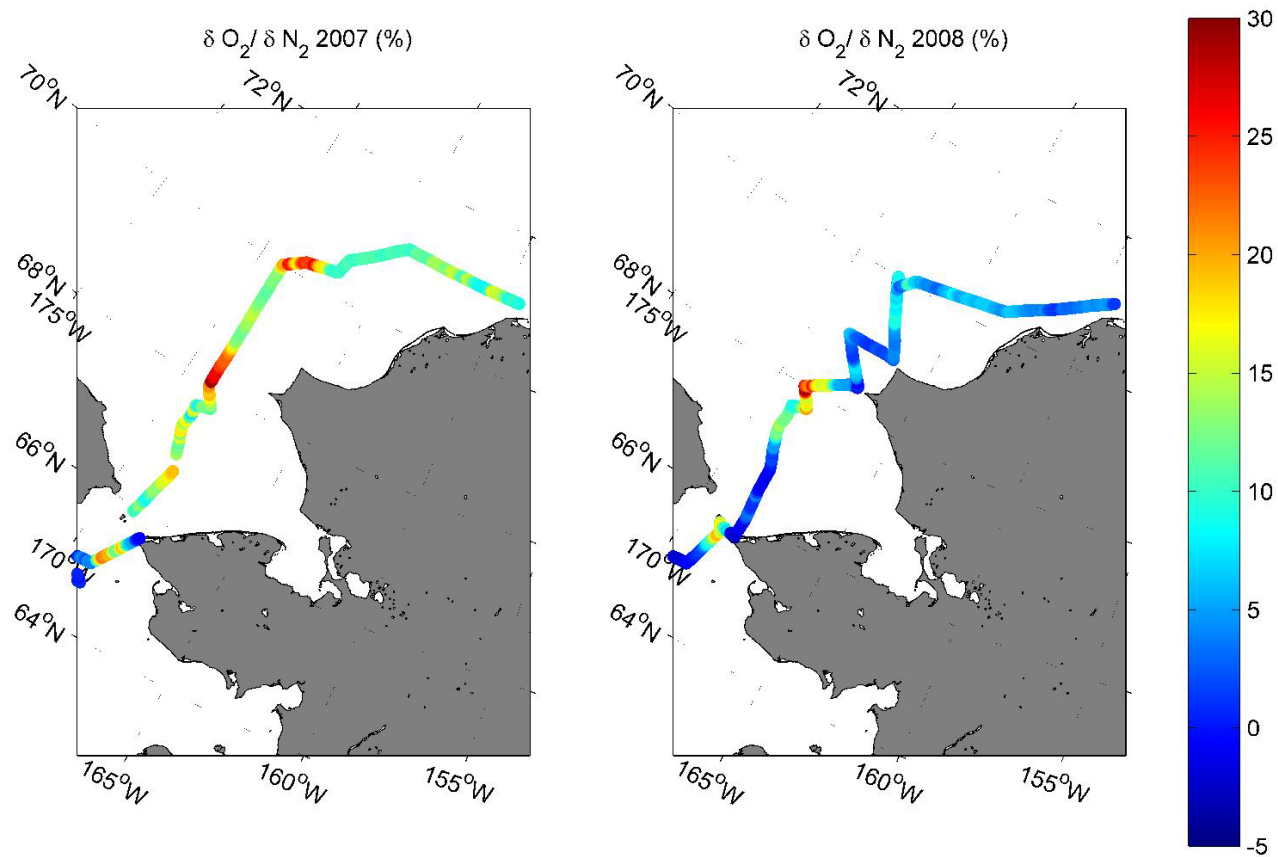


2013 JOIS/BGOS



Underway system gas tension device to estimate Net community production 2007
2008: currently working on data from 2007 to 2017 with the aim of
Time series analysis

$\delta O_2 / \delta N_2$ saturation ratios



Benoit et al. in prep

Zooplankton microplastics impacts

2017 – contents of bongo nets frozen for examination of microplastic gut contents

incubation experiments to examine viability and for effects of microplastics in the gut

individuals picked into RNA later to judge physiological state and gut contents

THE END

