

BY3

Biogeography of the Deep Octocorals of the North Pacific

BY14

BY12

You (2003)

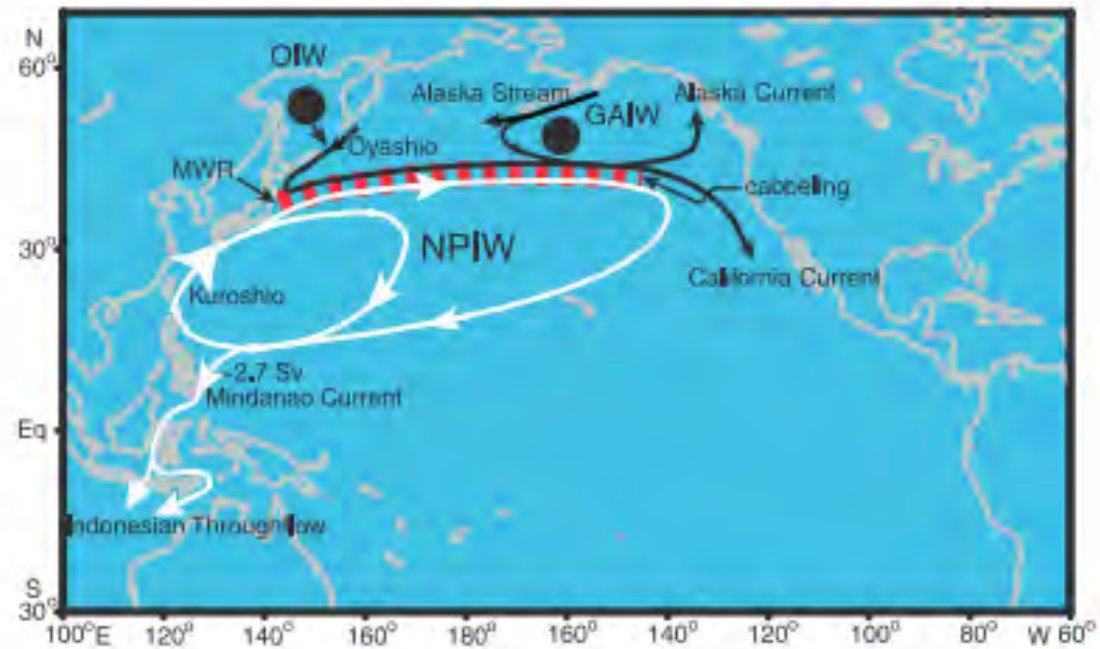


Figure 1. A schematic of NPIW circulation from the source formation regions “●”, Okhotsk Intermediate Water (OIW) and Gulf of Alaska Intermediate Water (GAIW), to the Indonesian Throughflow (ITF). The exporting transport of 2.7 ± 0.2 Sv is a basin-wide mean (see *You et al.* [2003] for details). The thick dashed line (in red) marks transformation of OIW and GAIW by cabbeling to the subtropical NPIW along the SATFZ (see *You* [2003] for details).

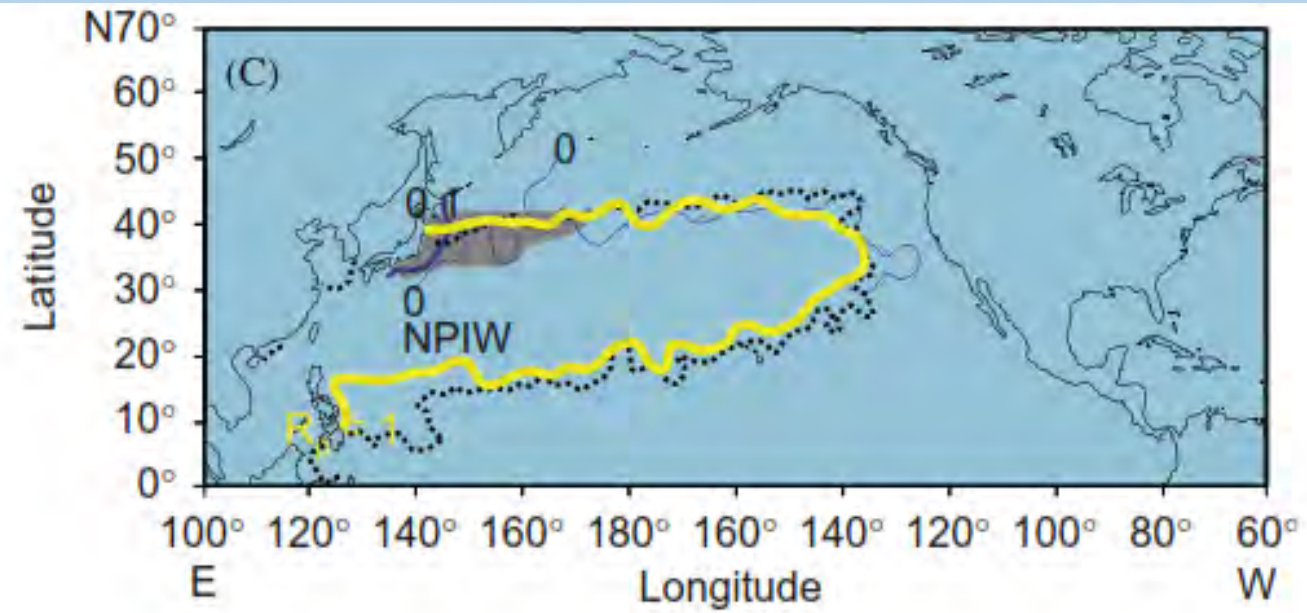
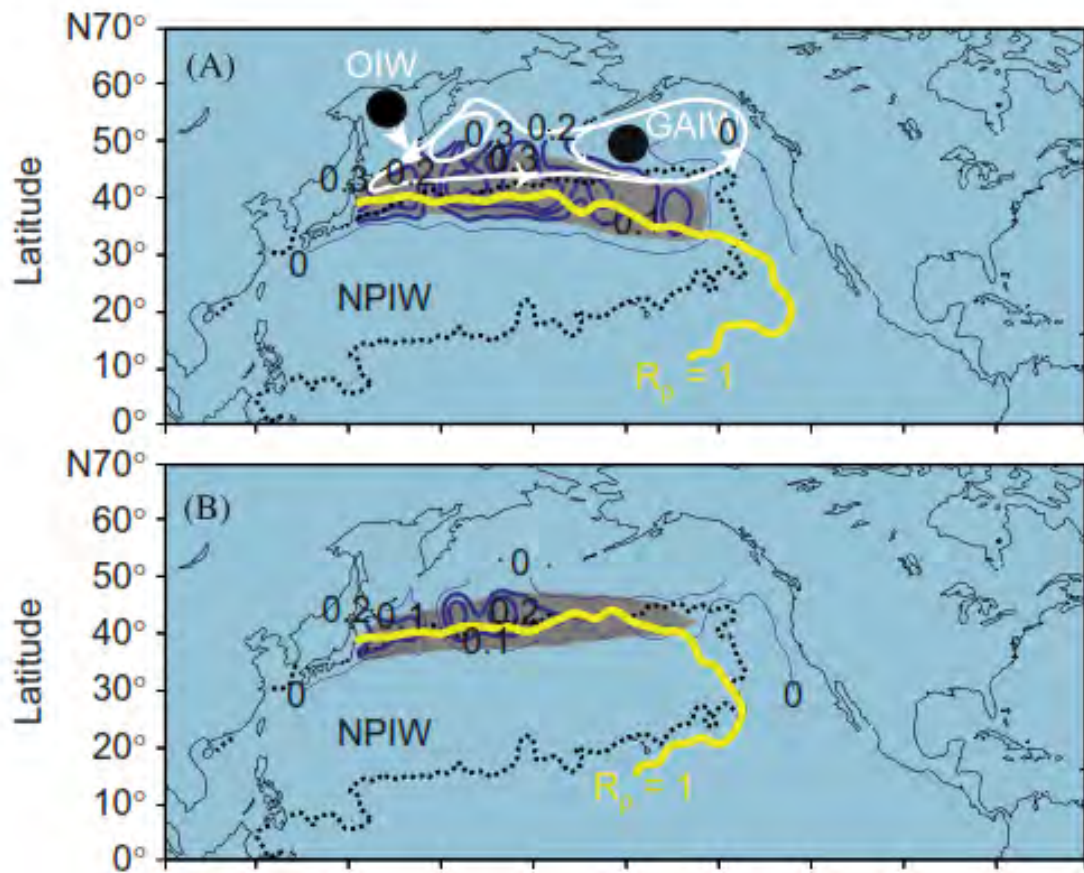
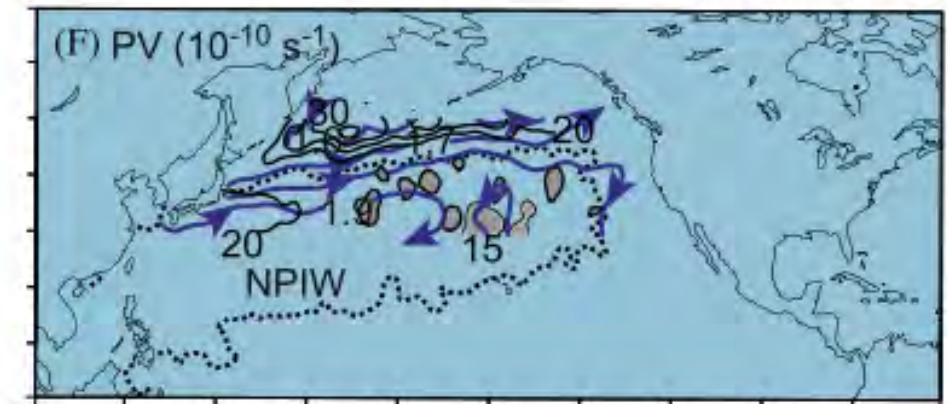
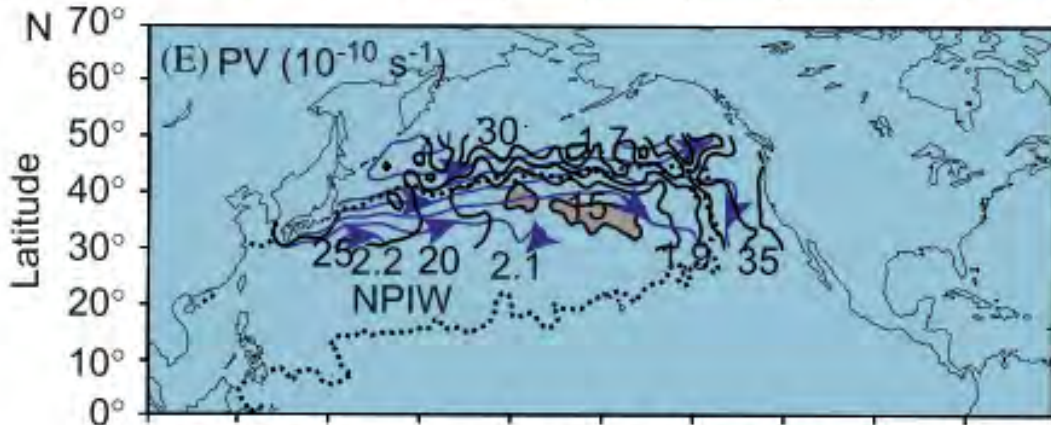
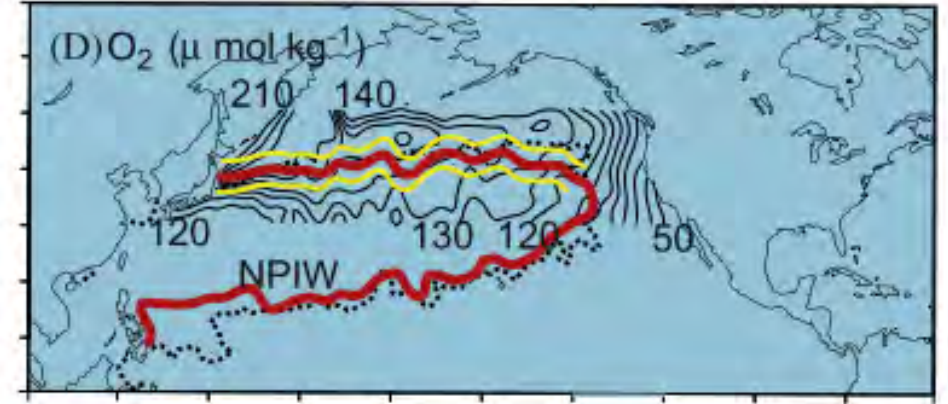
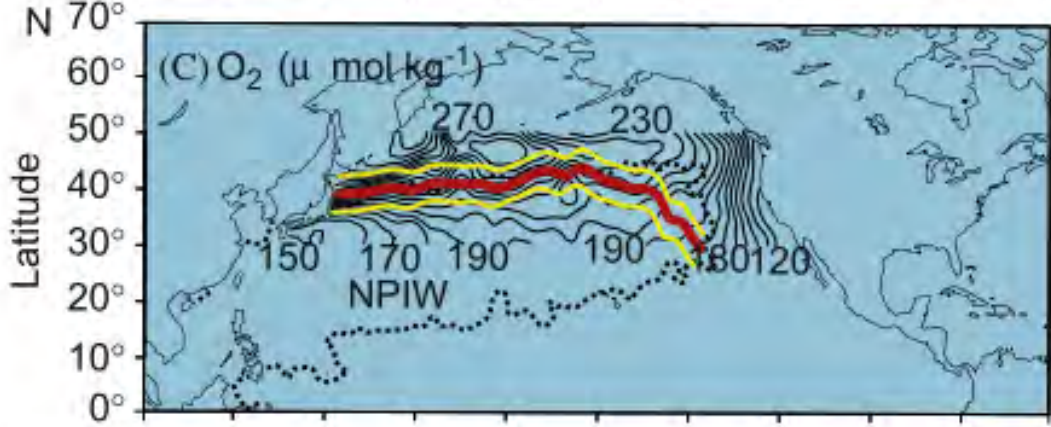
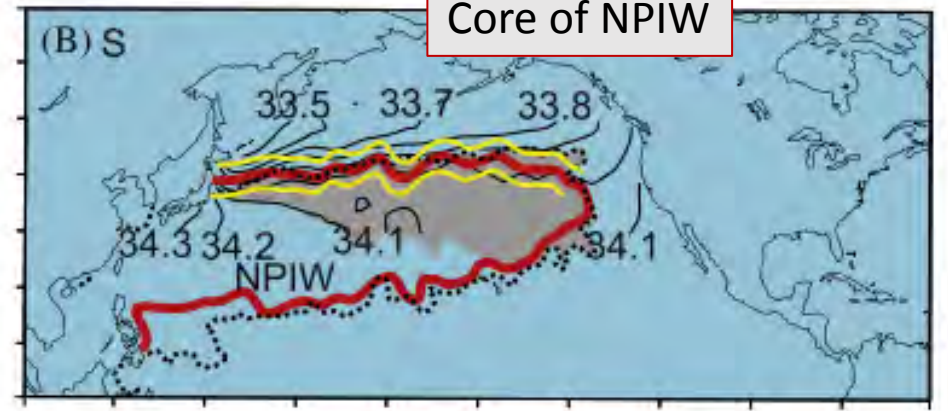
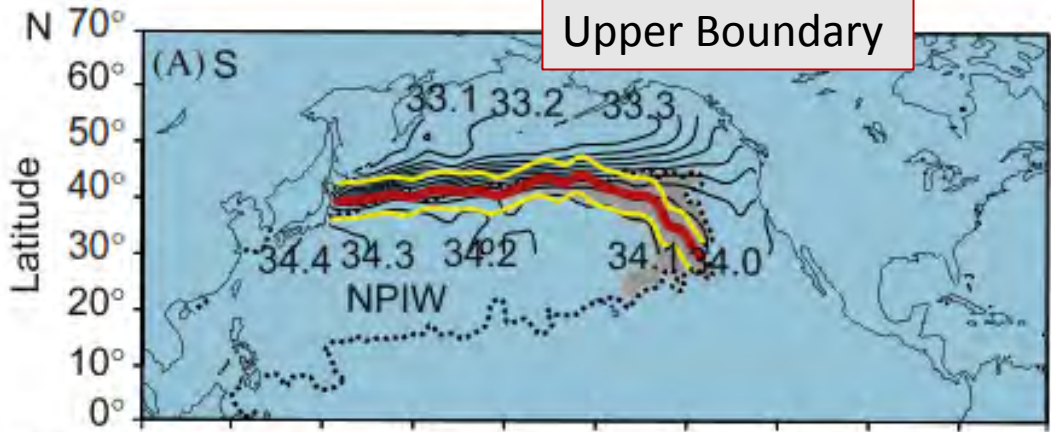


Fig. 1. The density anomaly (solid line in blue) across the SATFZ (defined by density ratio $R_p=1$ in orange colored line) from (A) the lower main thermocline, (B) upper NPIW to (C) NPIW core with zero anomaly (thin solid line). Cabbeling maximum ($> -0.2 \times 10^{-7} \text{ m s}^{-1}$) is shaded (in gray). Dotted line is the subtropical NPIW domain defined by WTU (You et al., 2000)

Upper Boundary

Core of NPIW



100° E 120° 140° 160° 180° 160° 140° 120° 100° 80° 60° W 100° E 120° 140° 160° 180° 160° 140° 120° 100° 80° 60° W

E Longitude

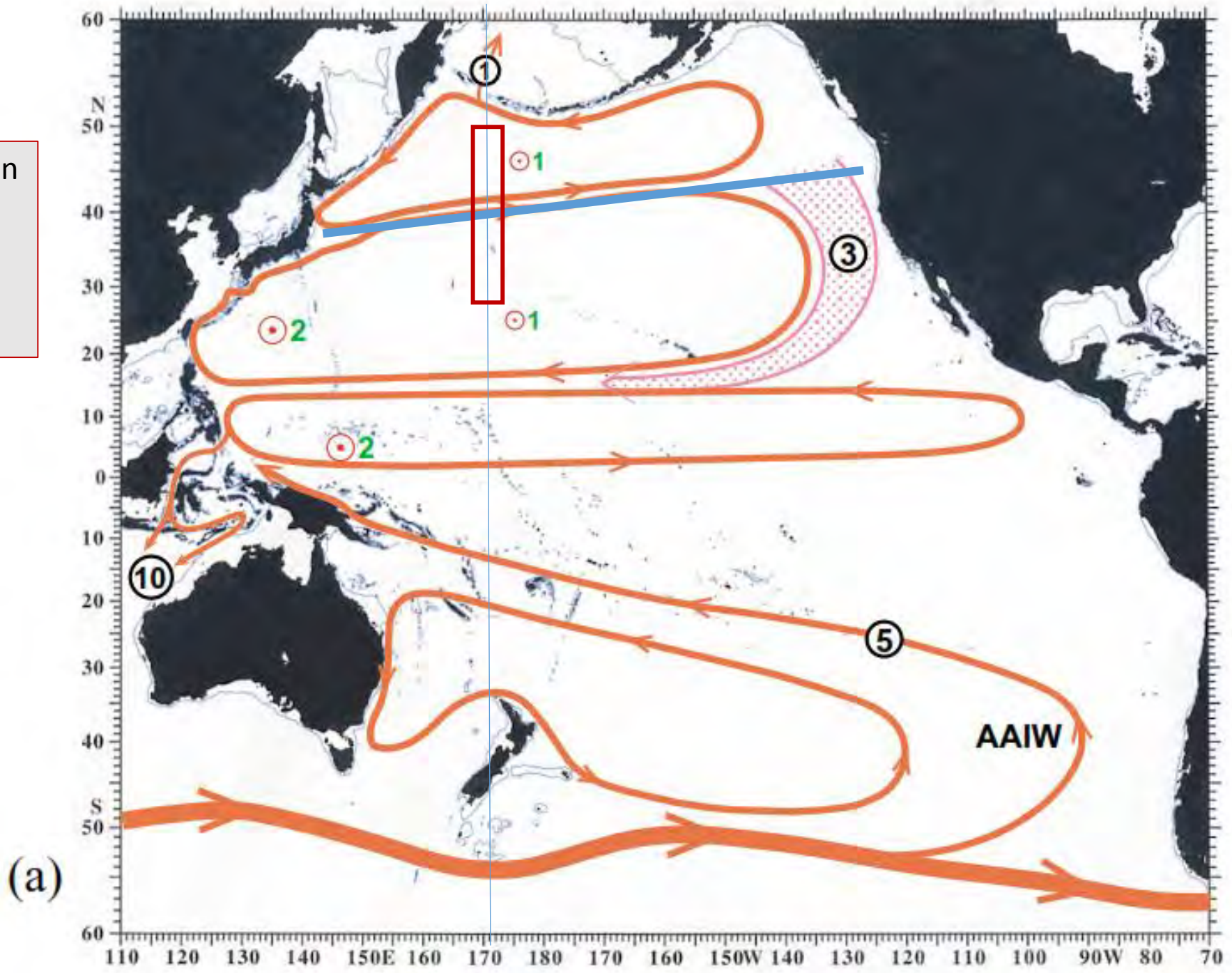
W Longitude W

You (2010)

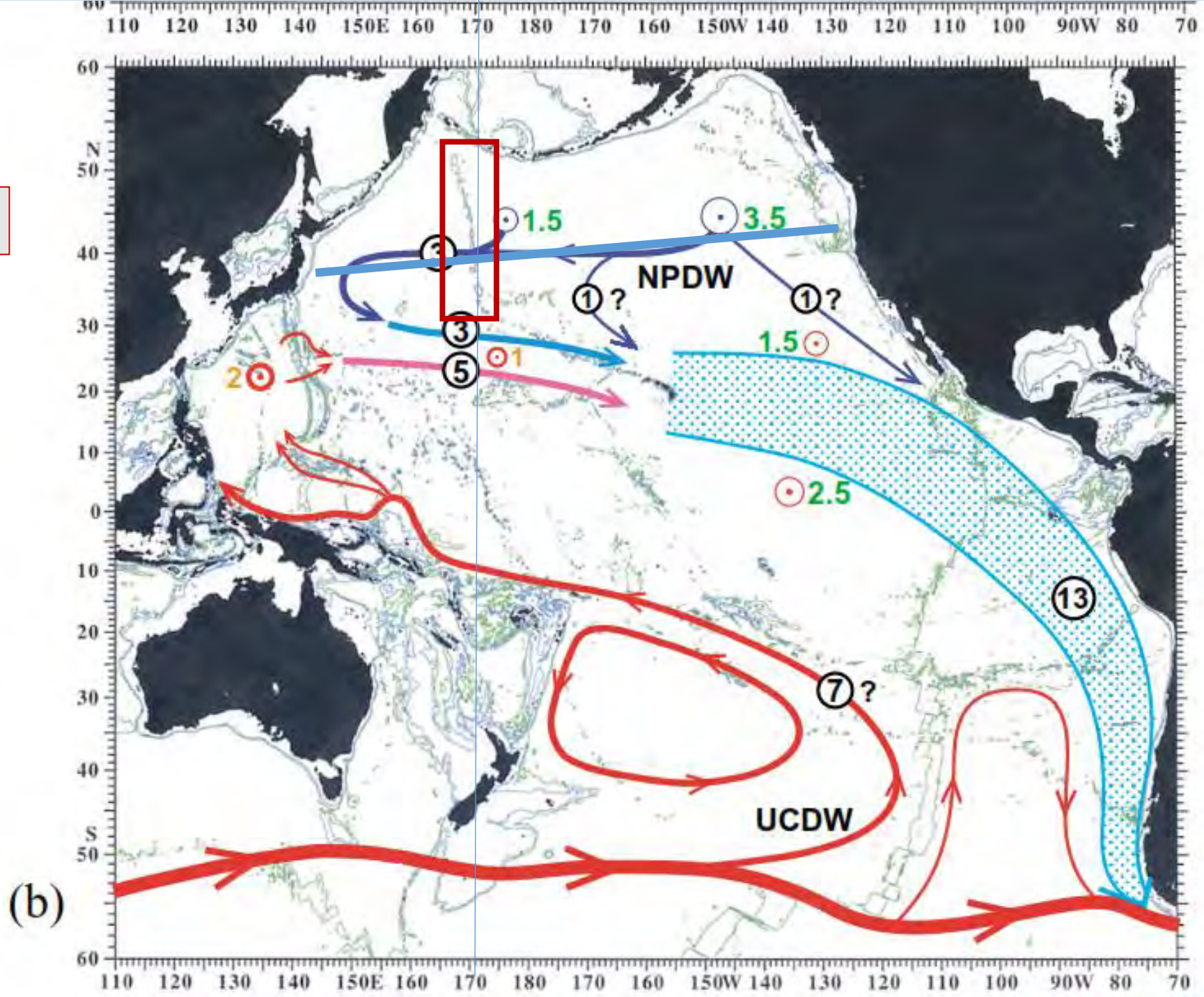
Surface intermediate layer circulation

Line is from 37 N in the West to 40 N in the East

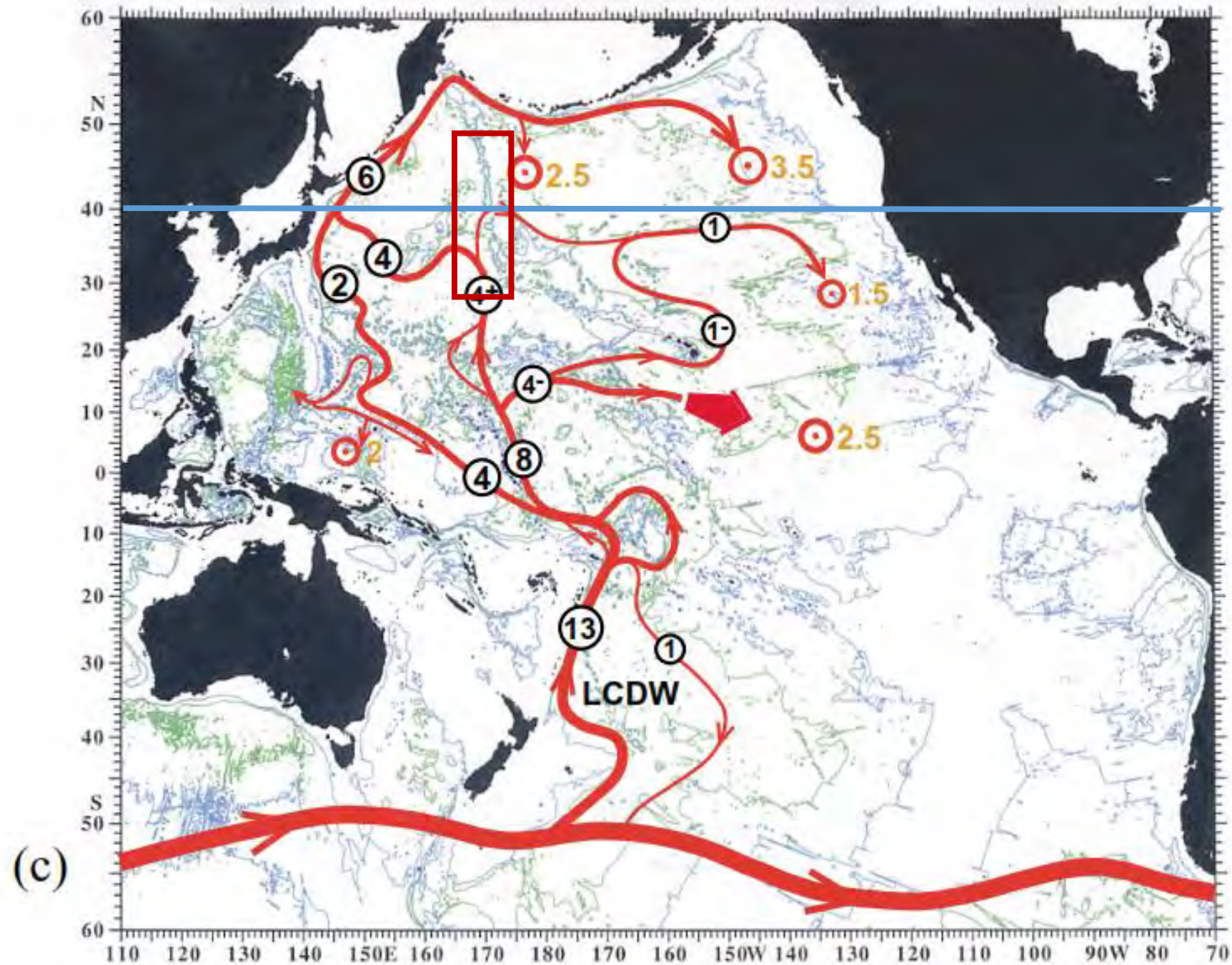
From Kawabe & Fujio (2010)



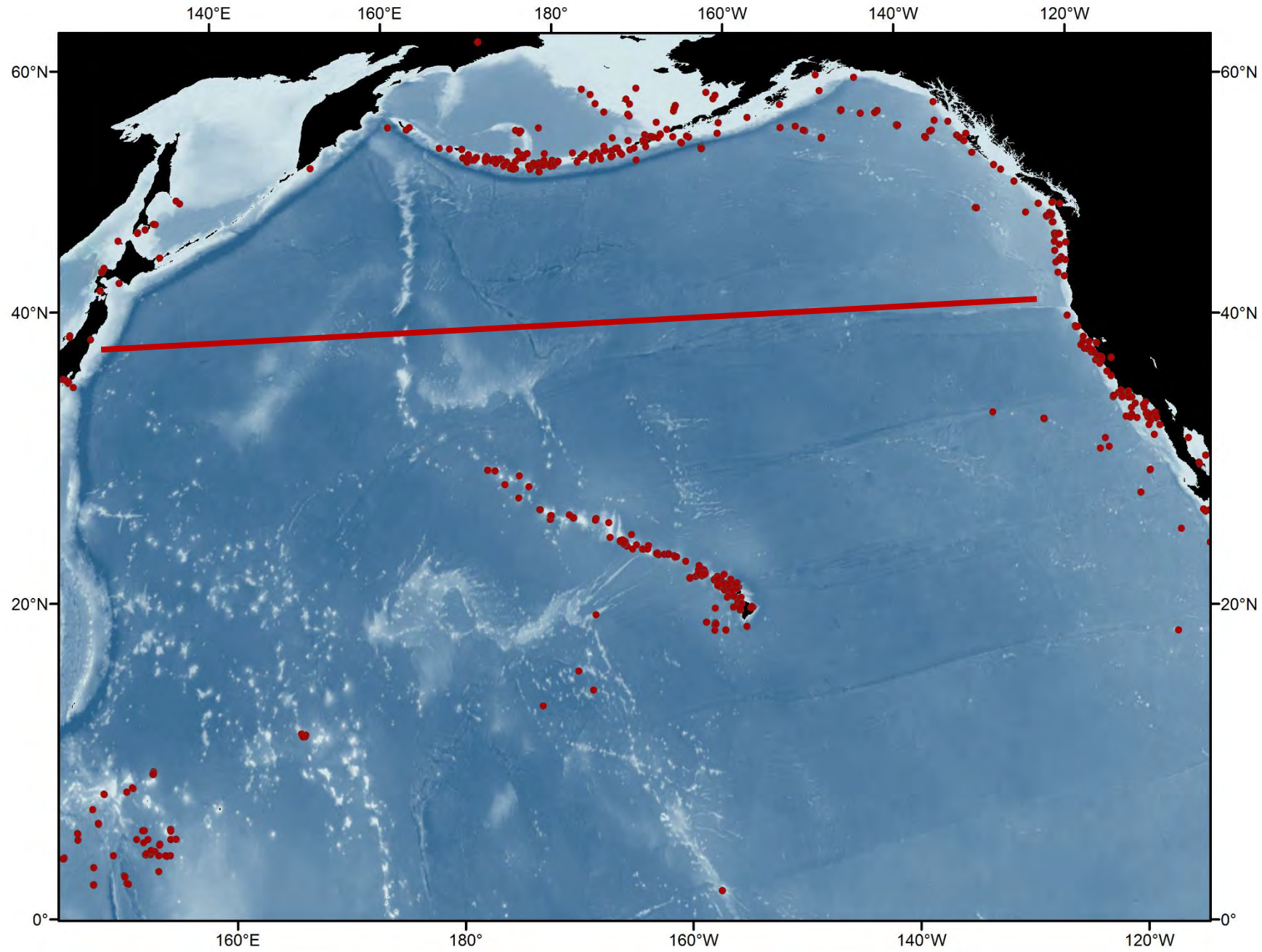
Upper deep layer circulation

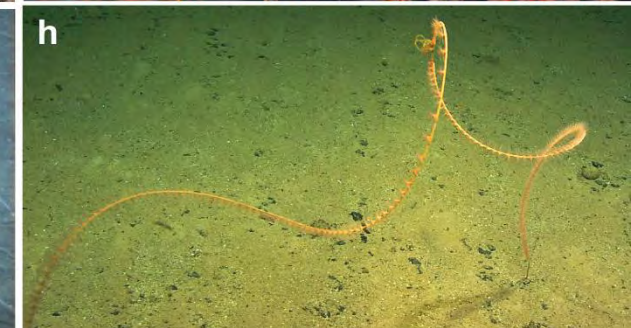
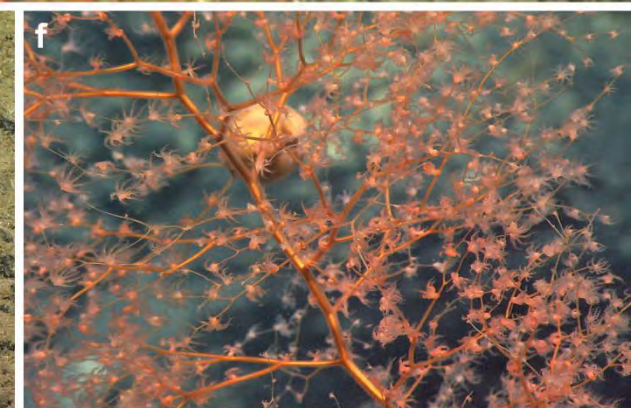
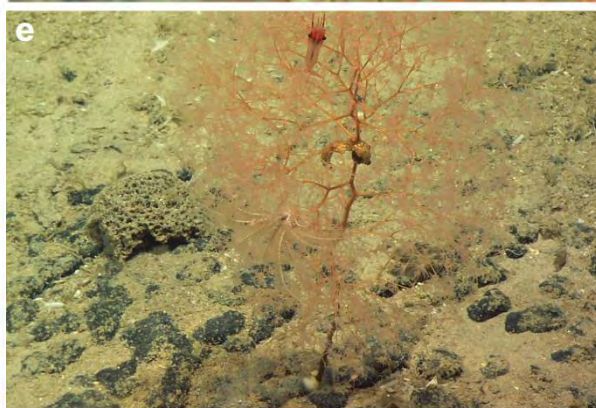
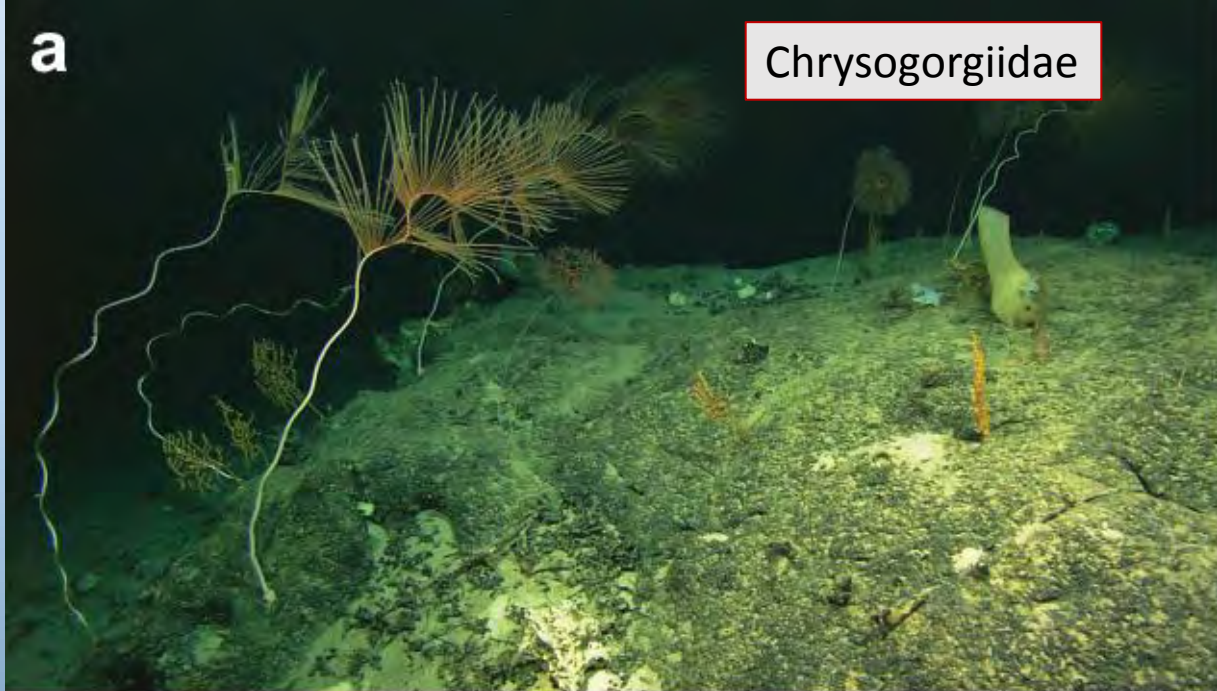


Lower deep layer circulation

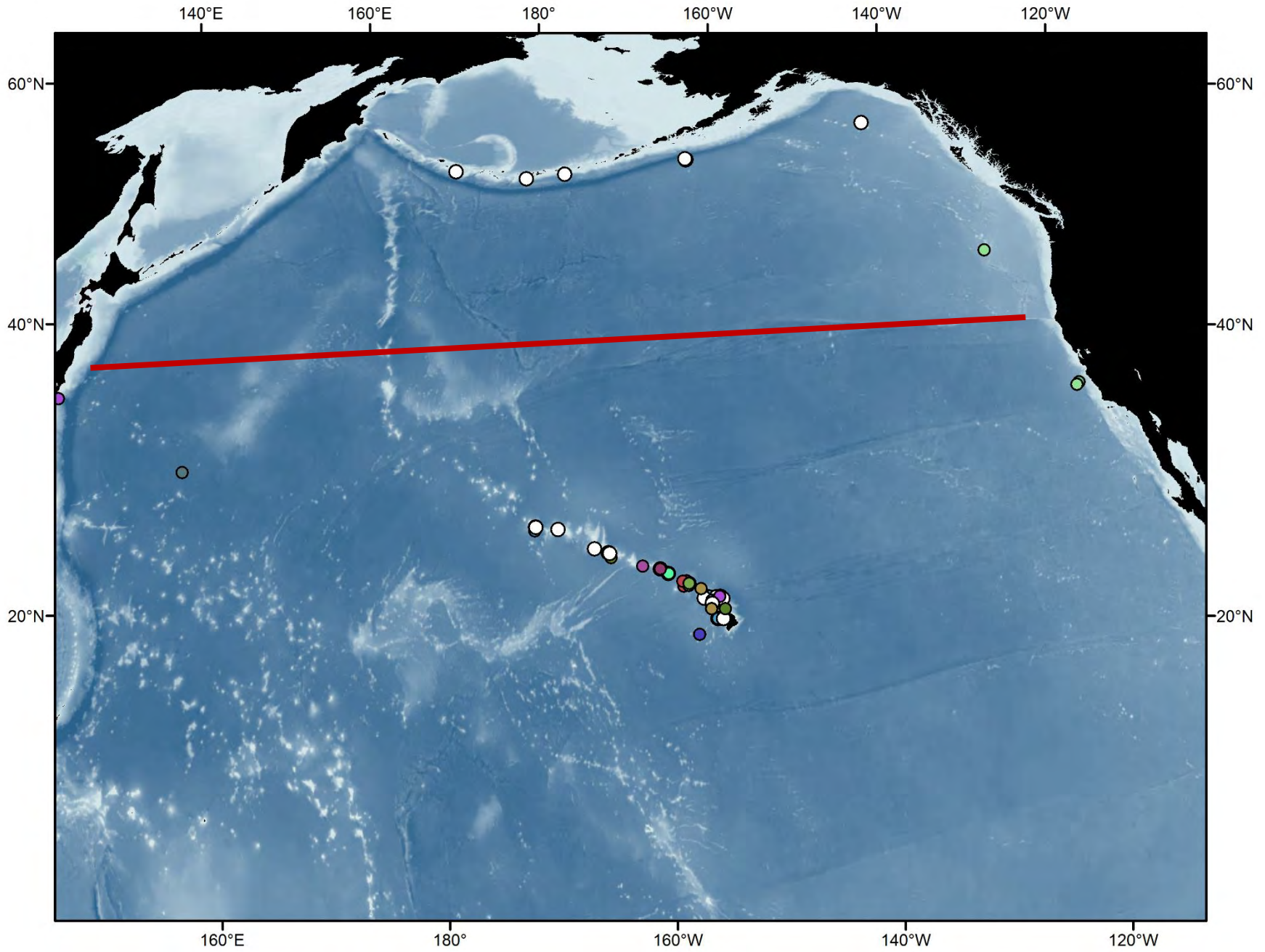


All octocoral bathyal records

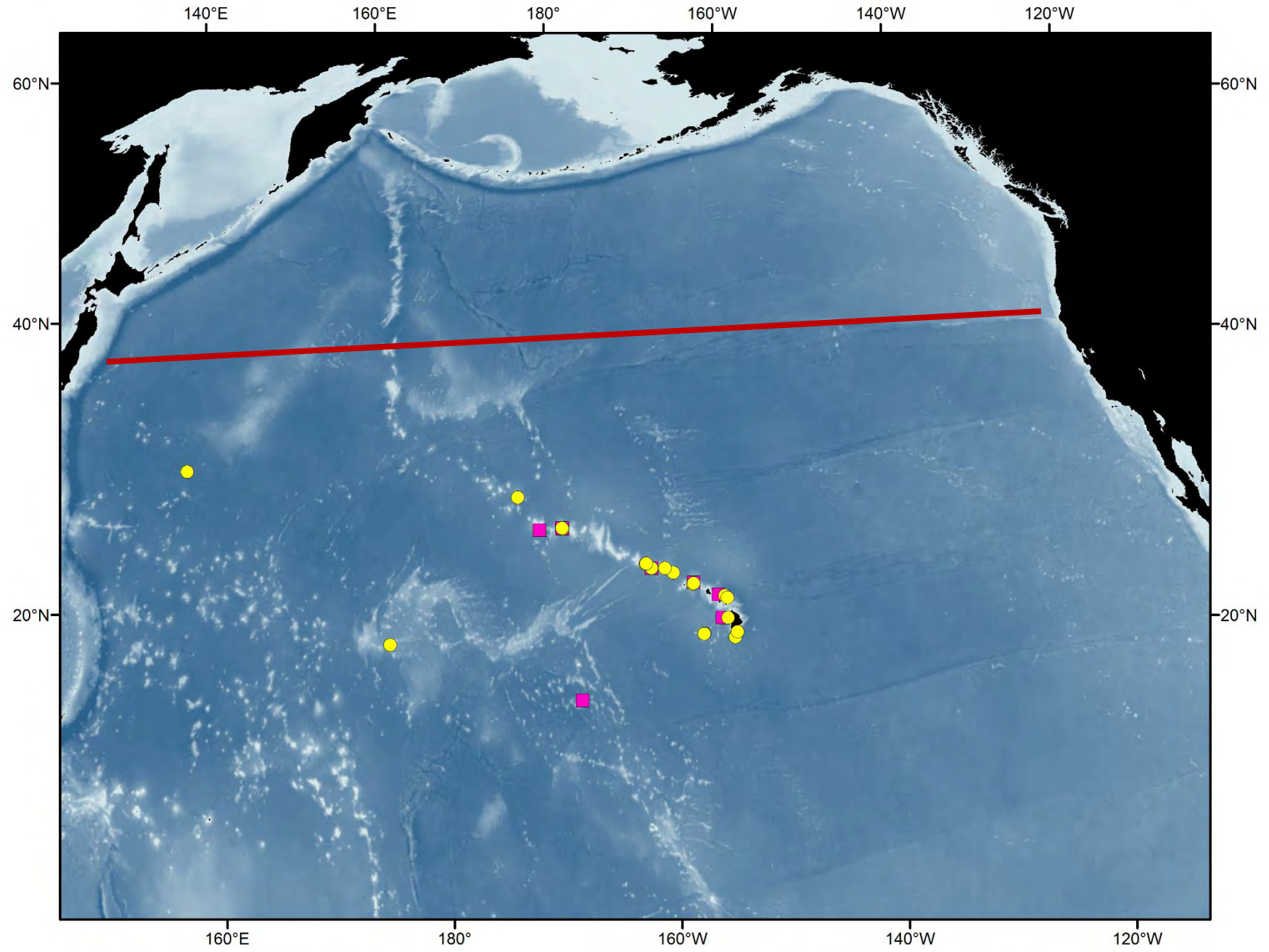




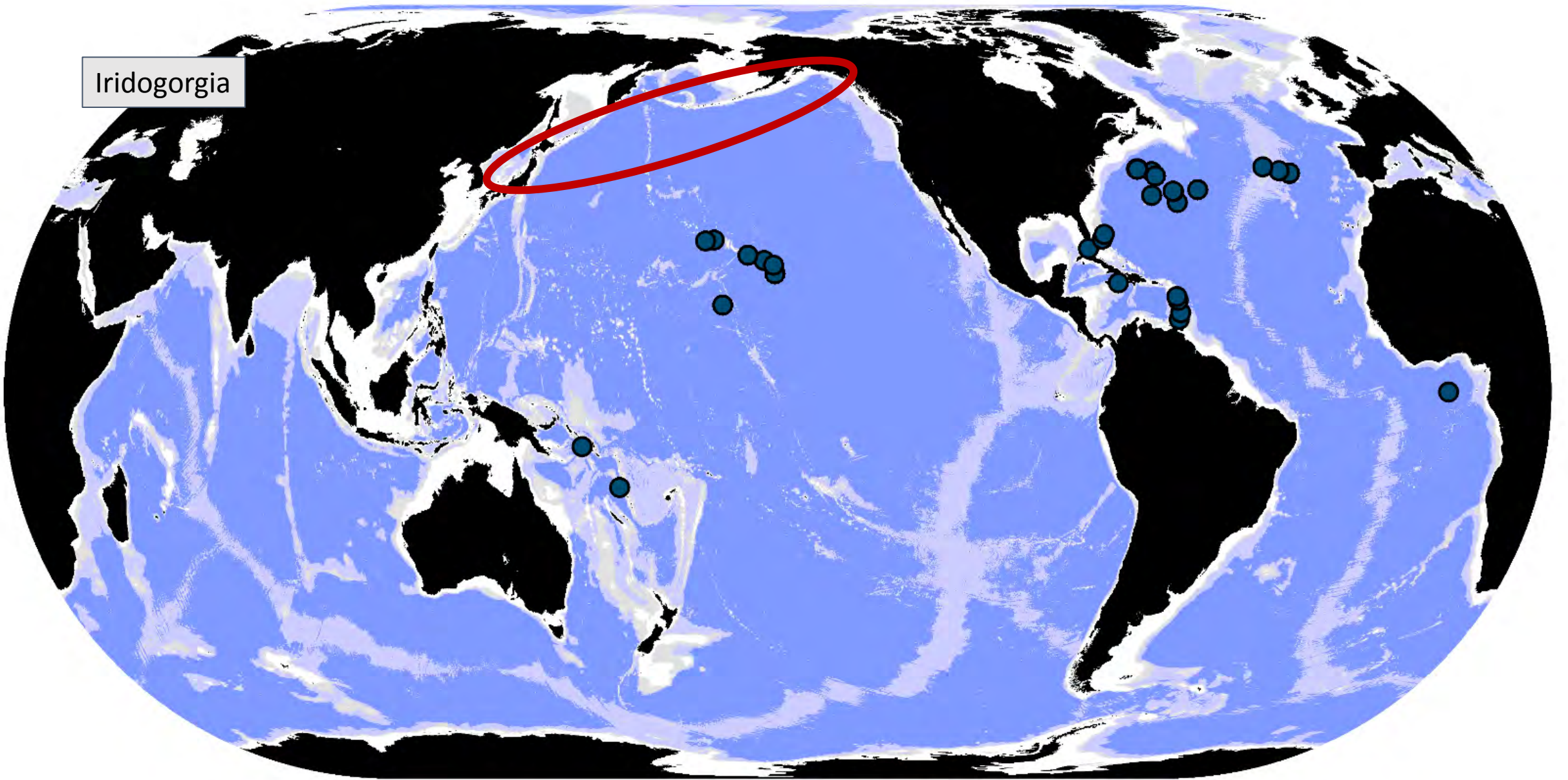
Chrysogorgia
(white, undescribed)



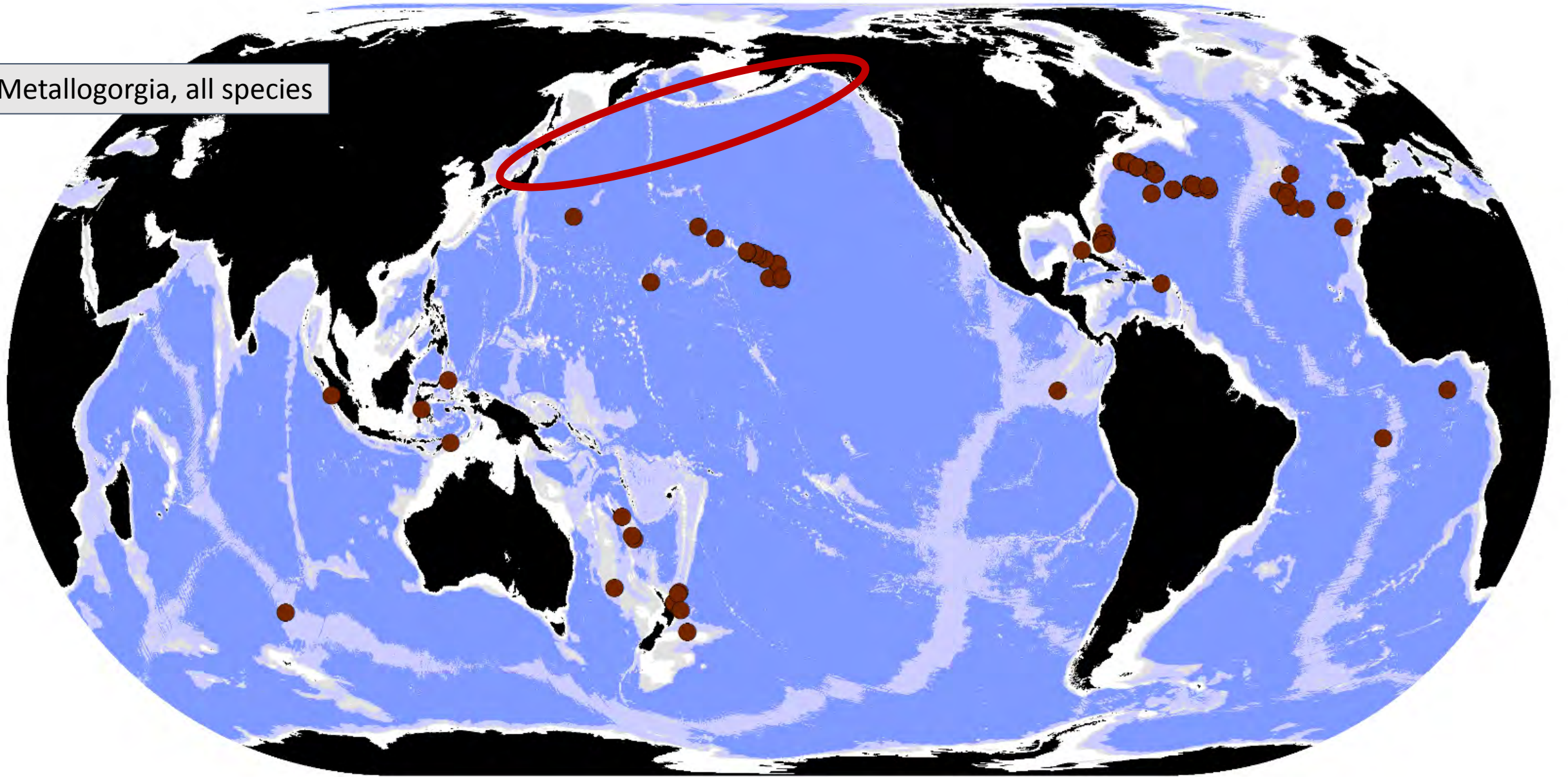
Metallogorgia (circle)
Iridogorgia (sq.)



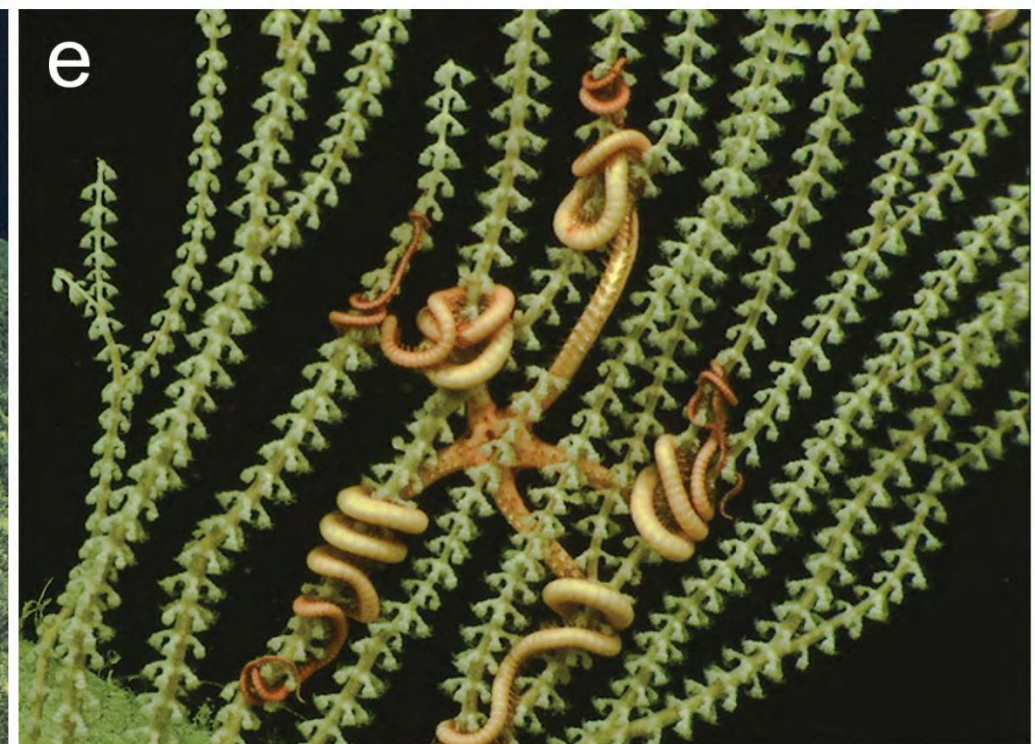
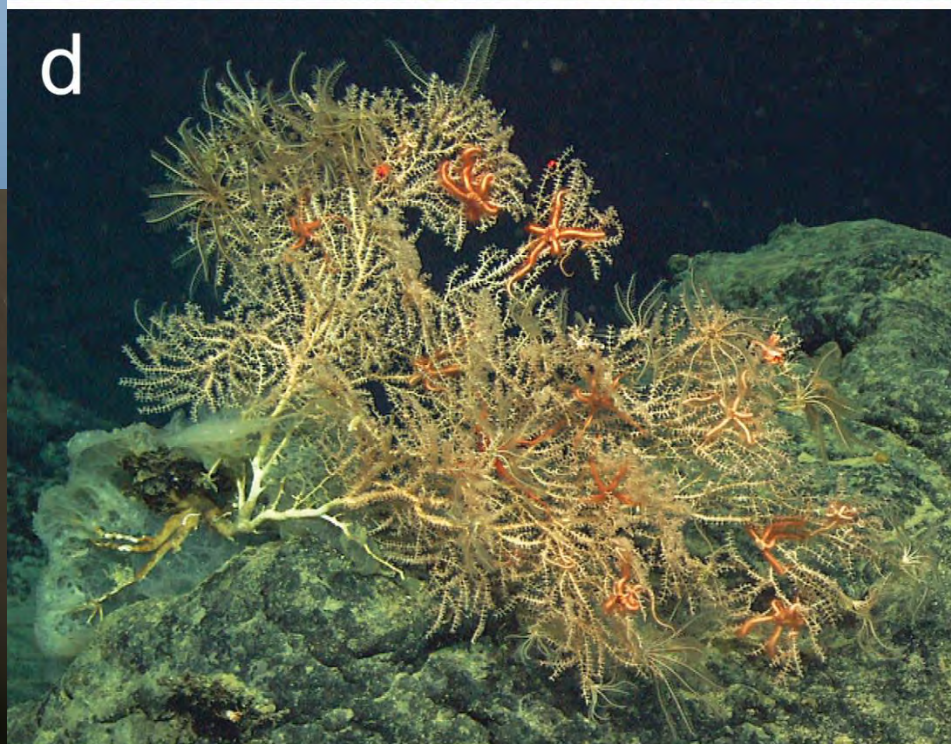
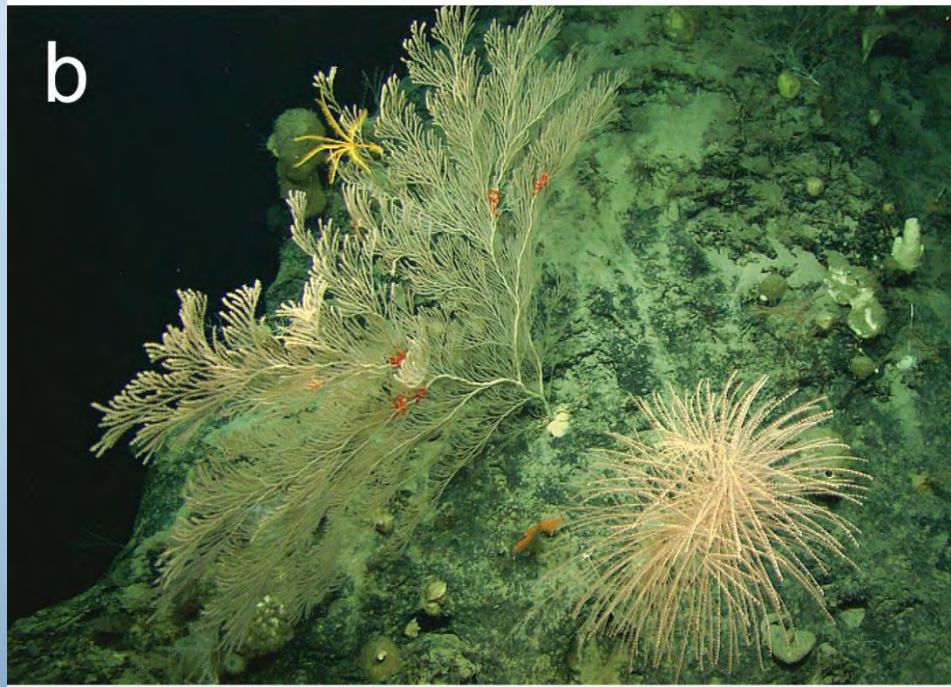
Iridogorgia

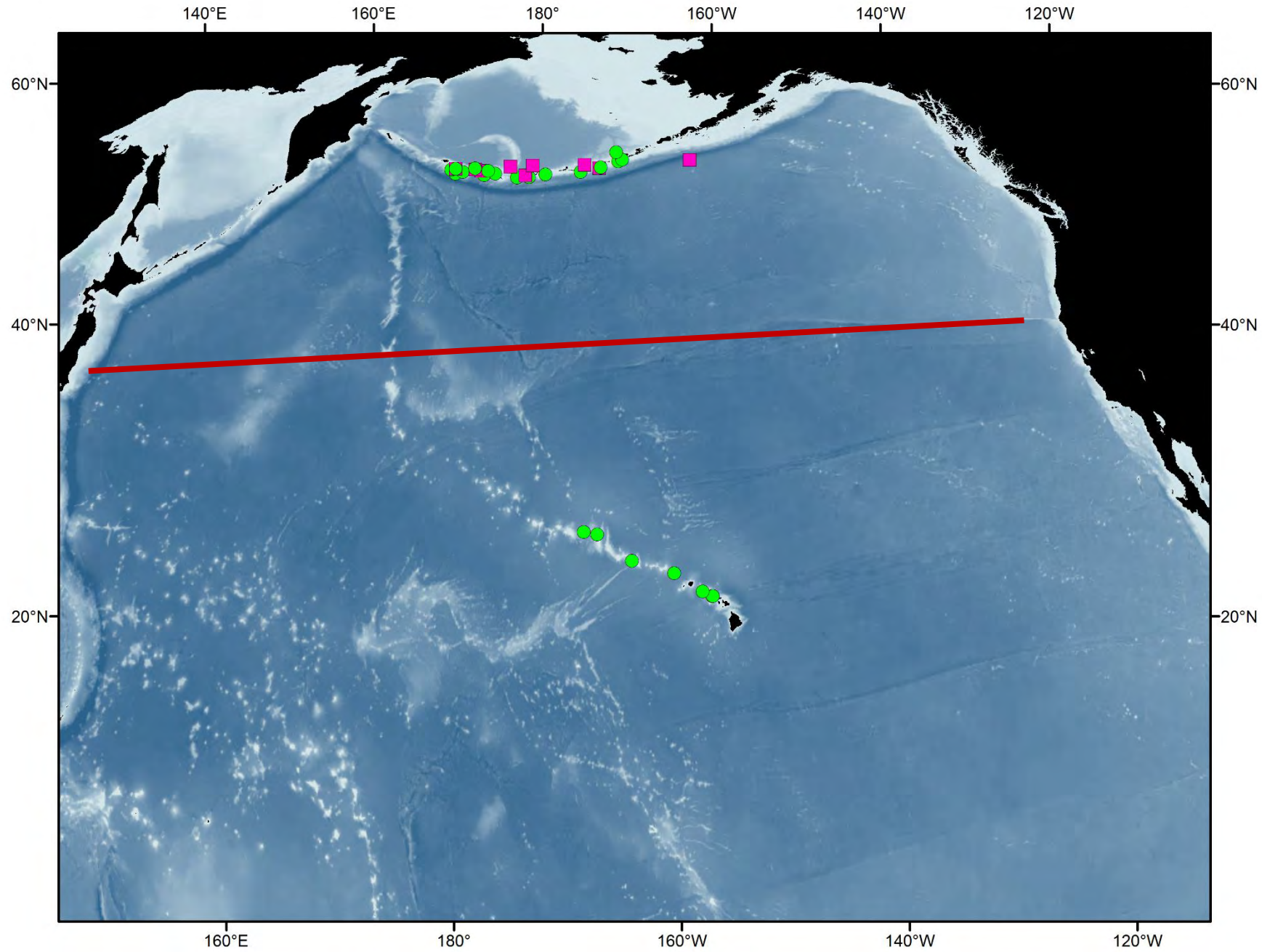
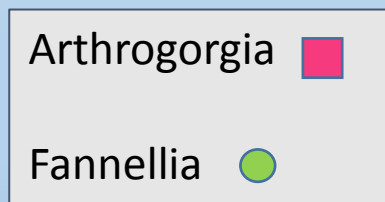


Metallogorgia, all species

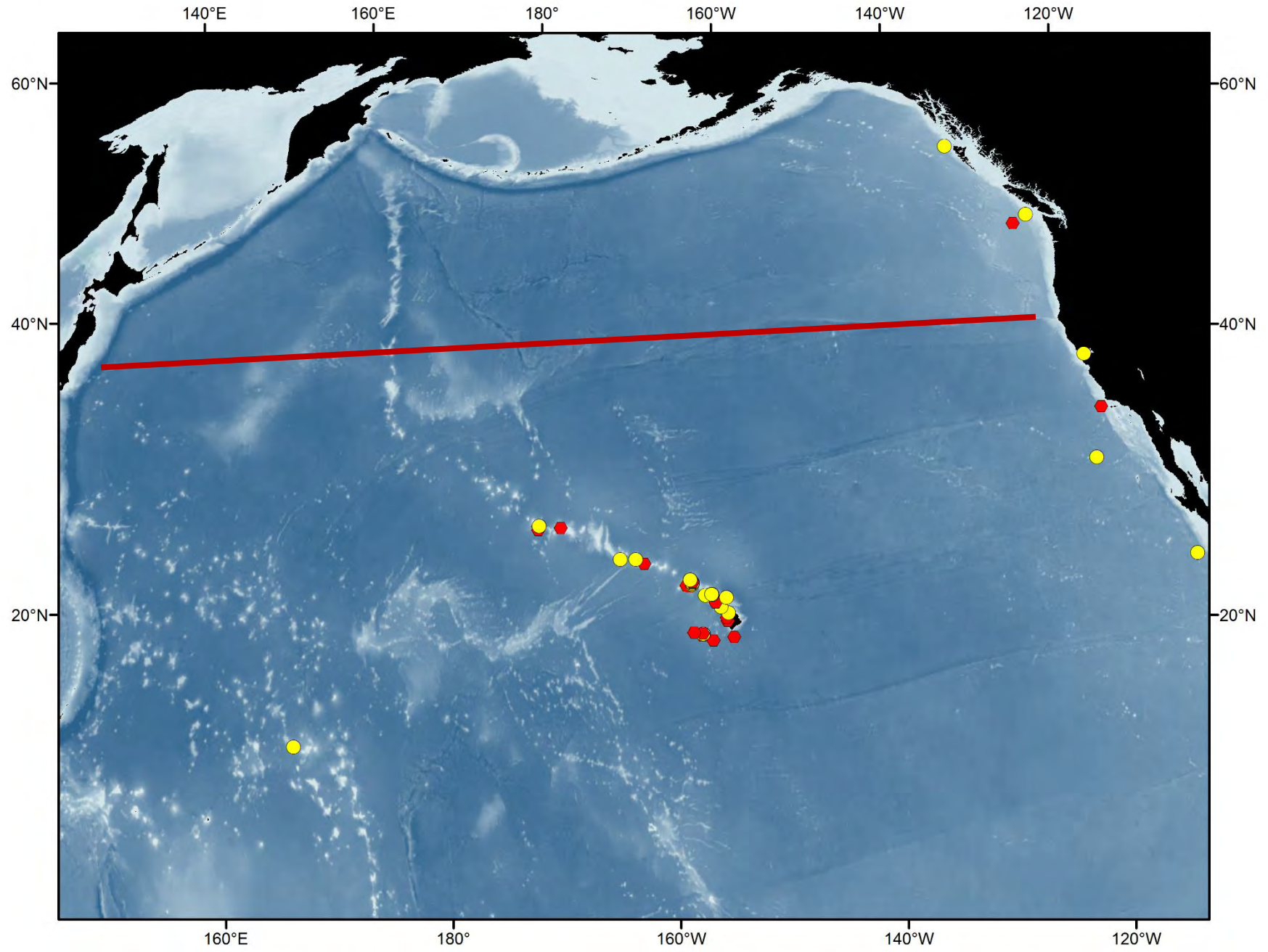


Primnoidae

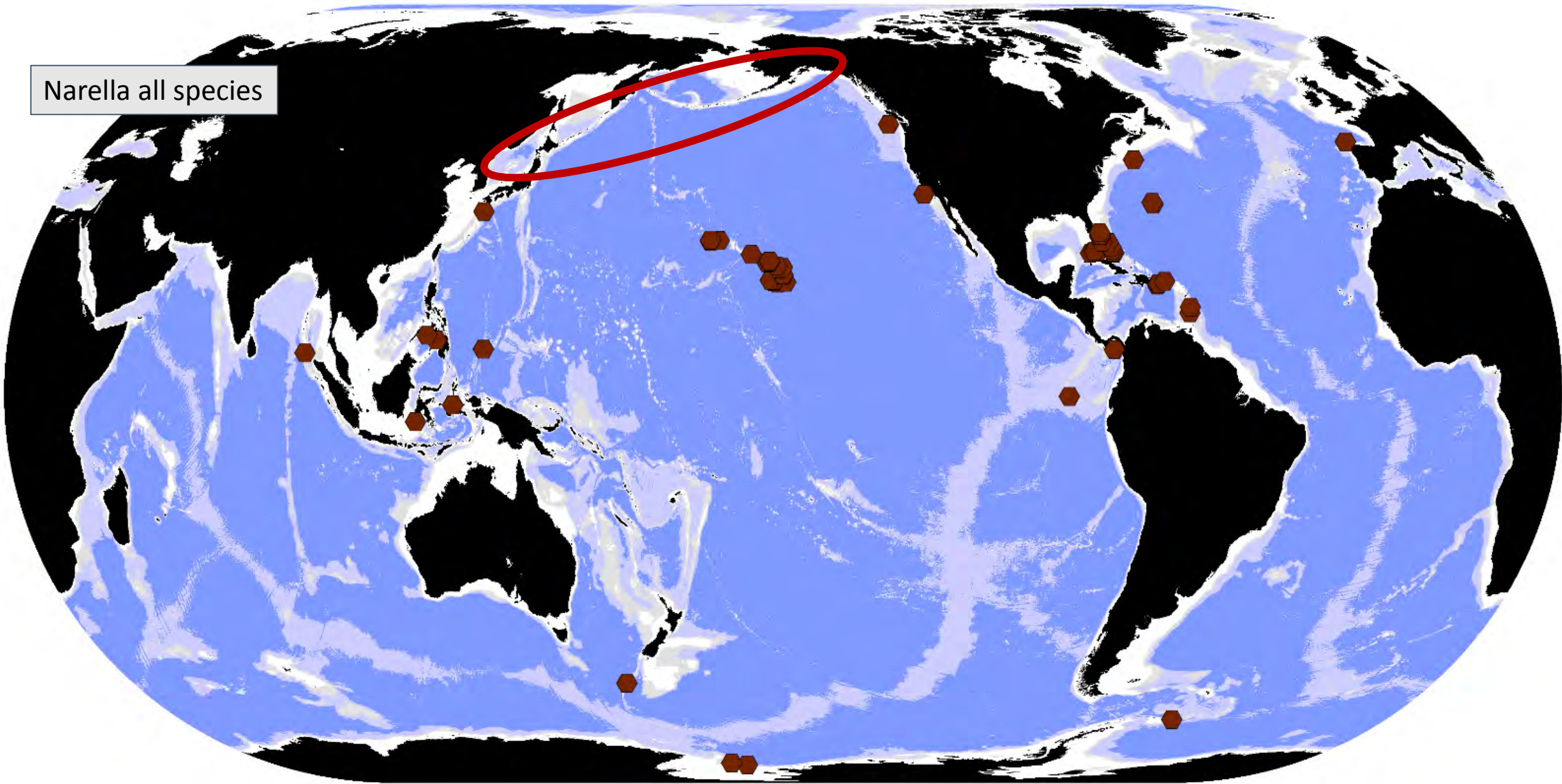




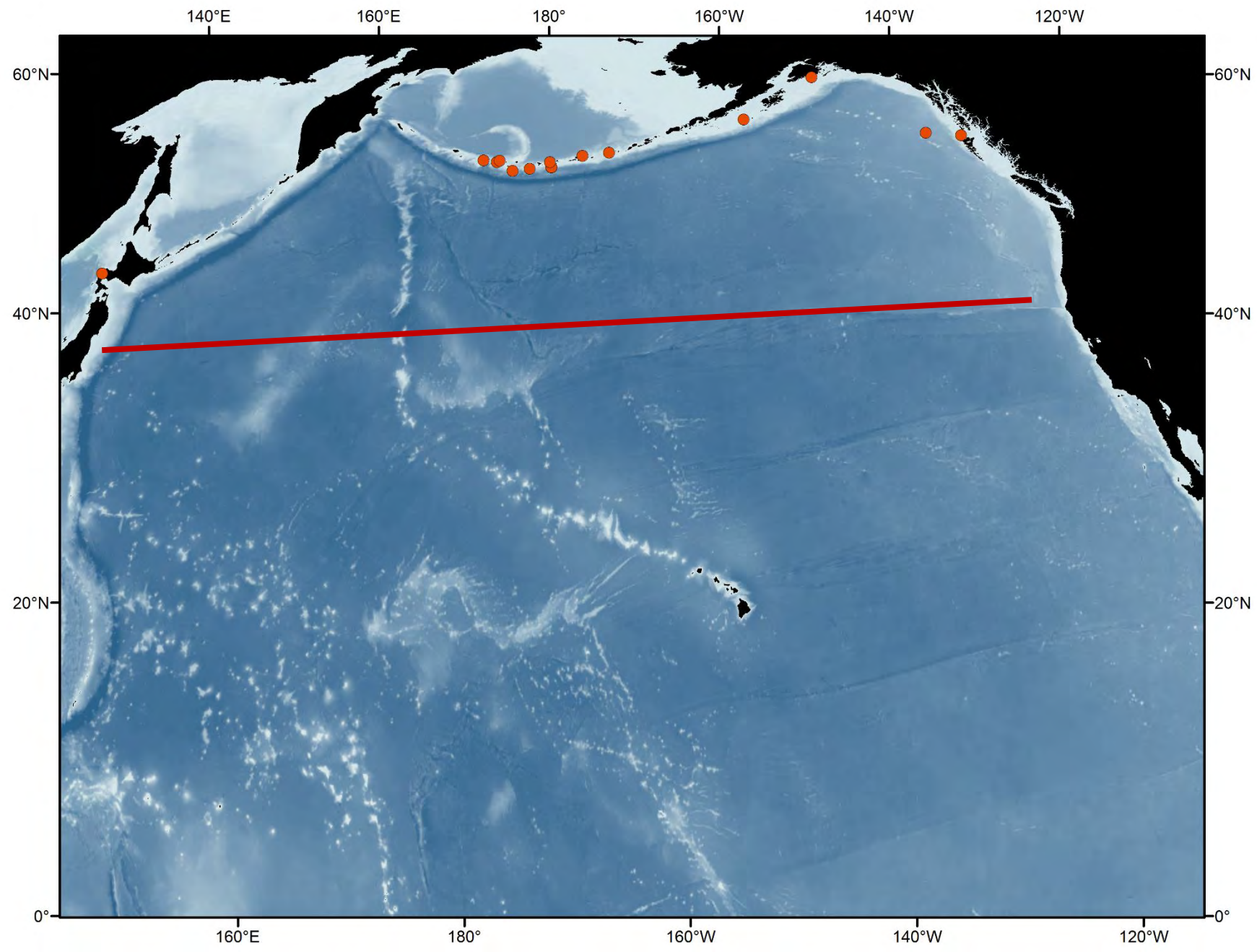
Callogorgia yellow
Narella red



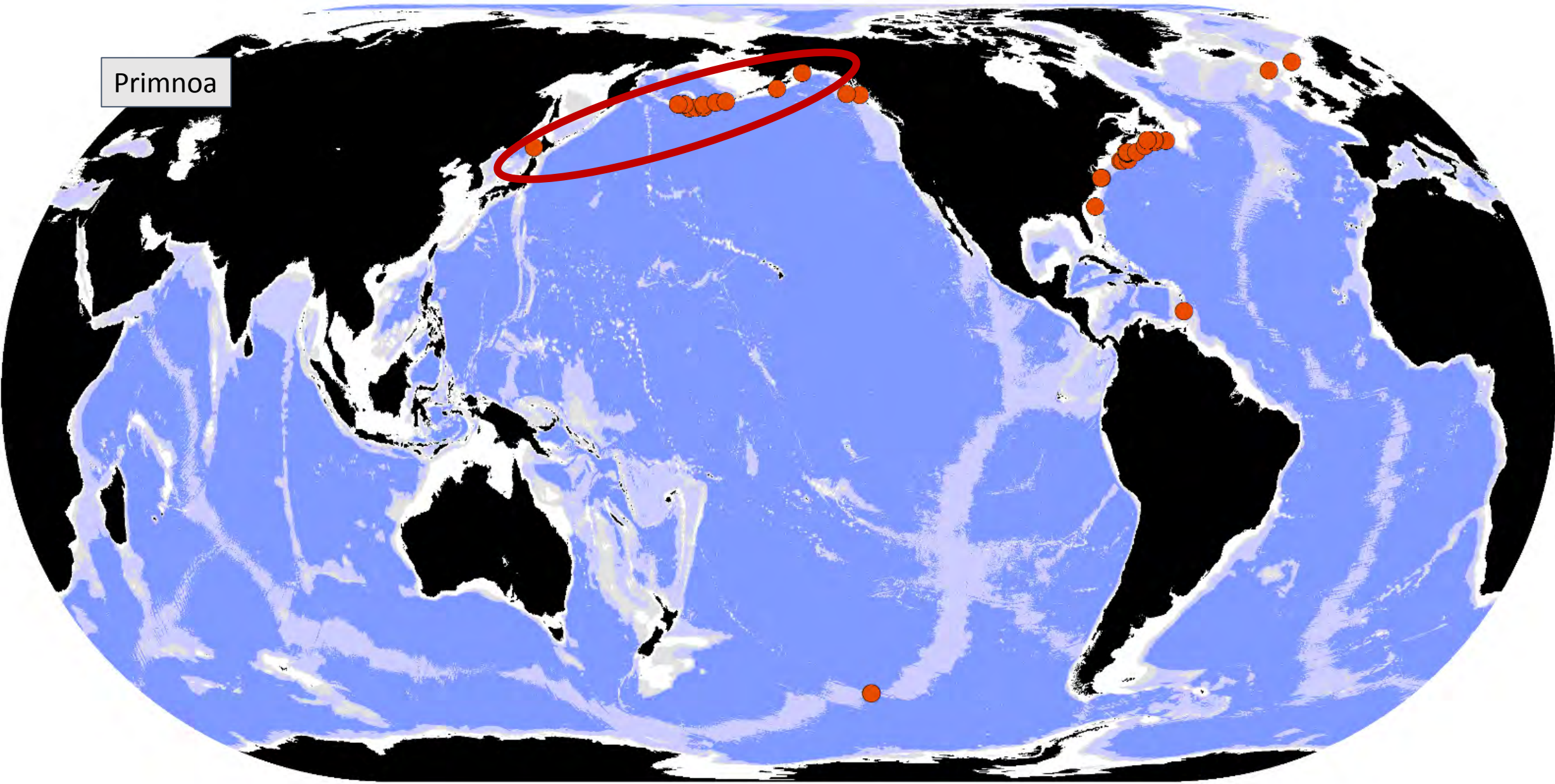
Narella all species



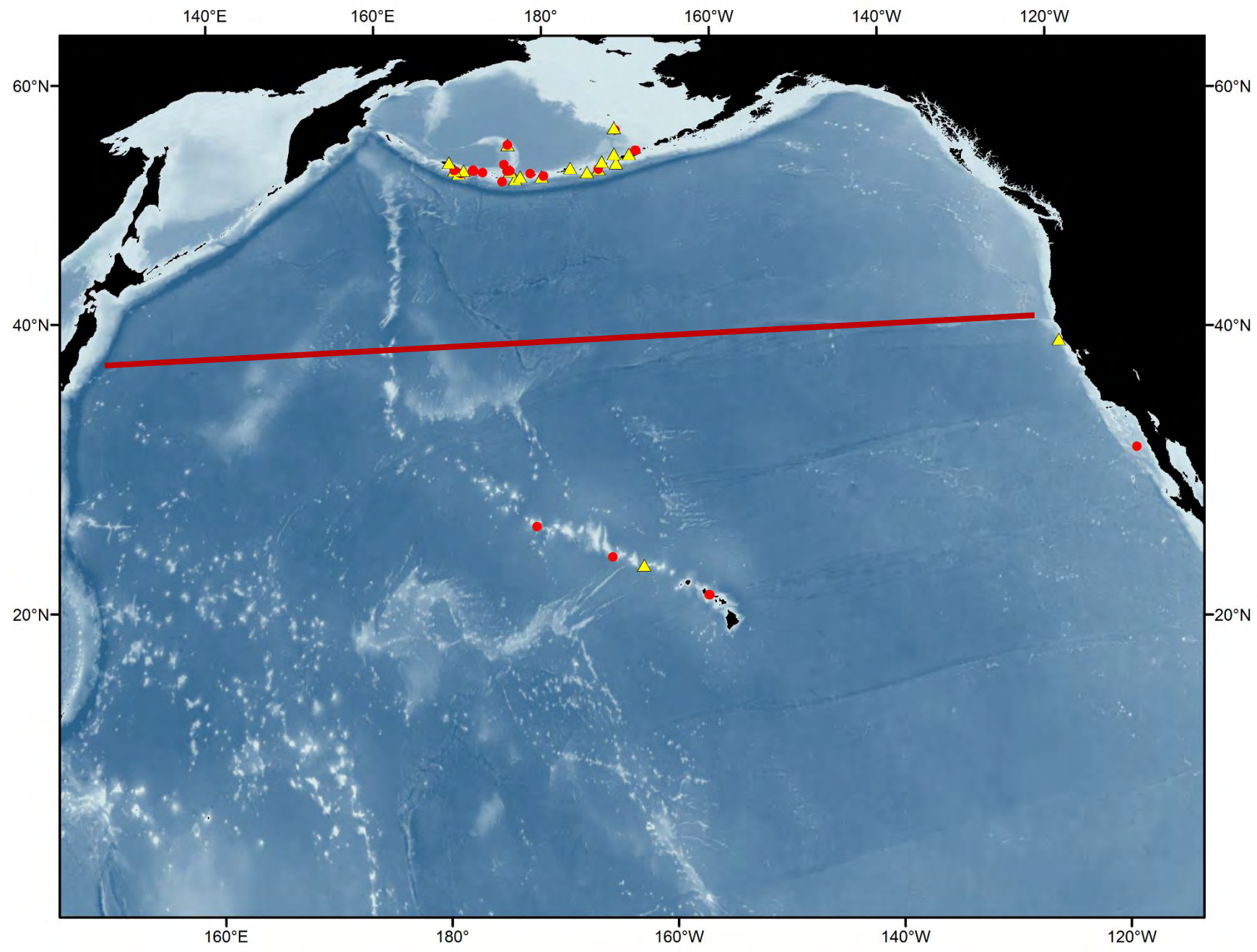
Primnoa



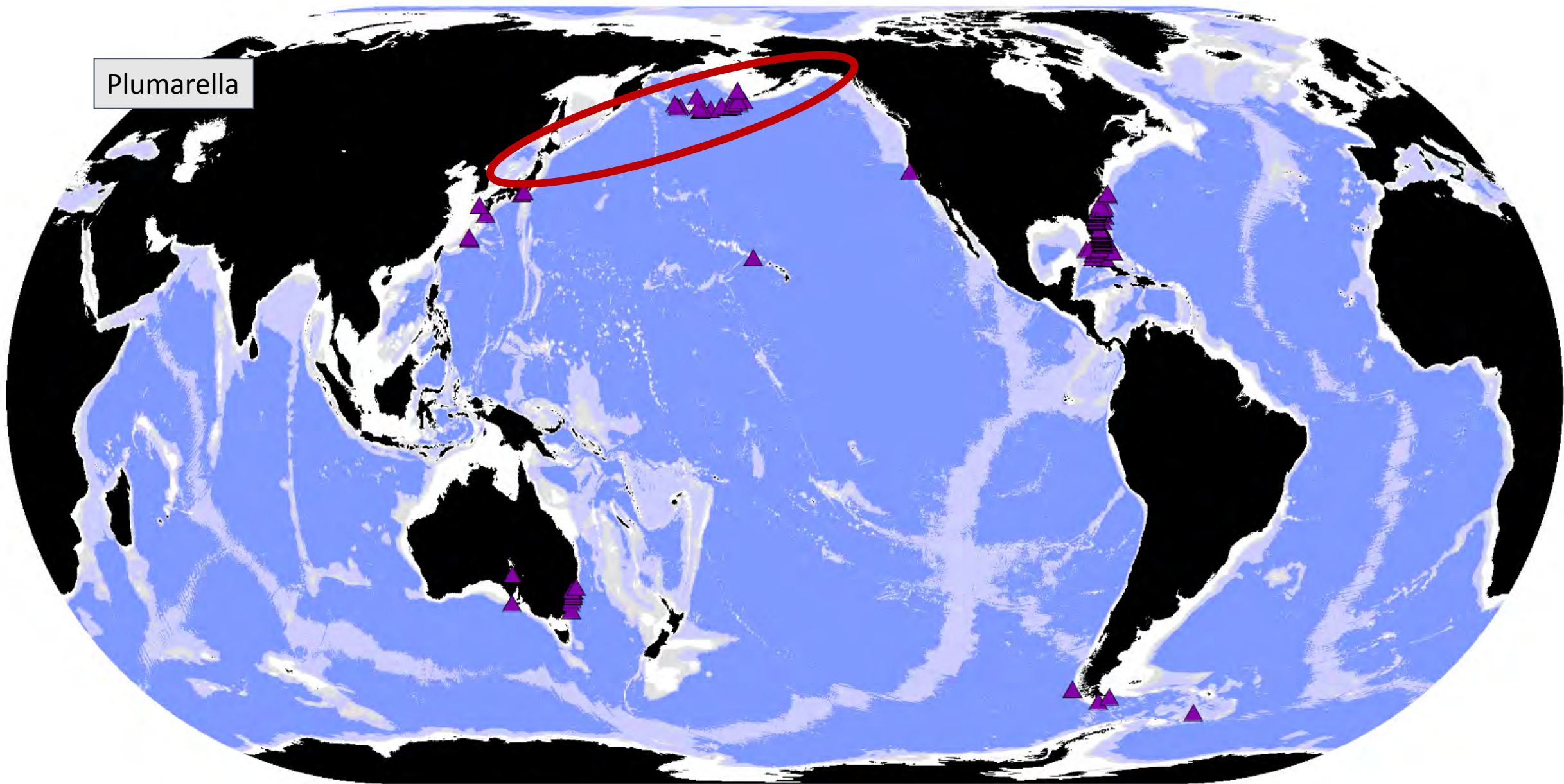
Primnoa



Thouarella (red)
Plumarella (yellow)

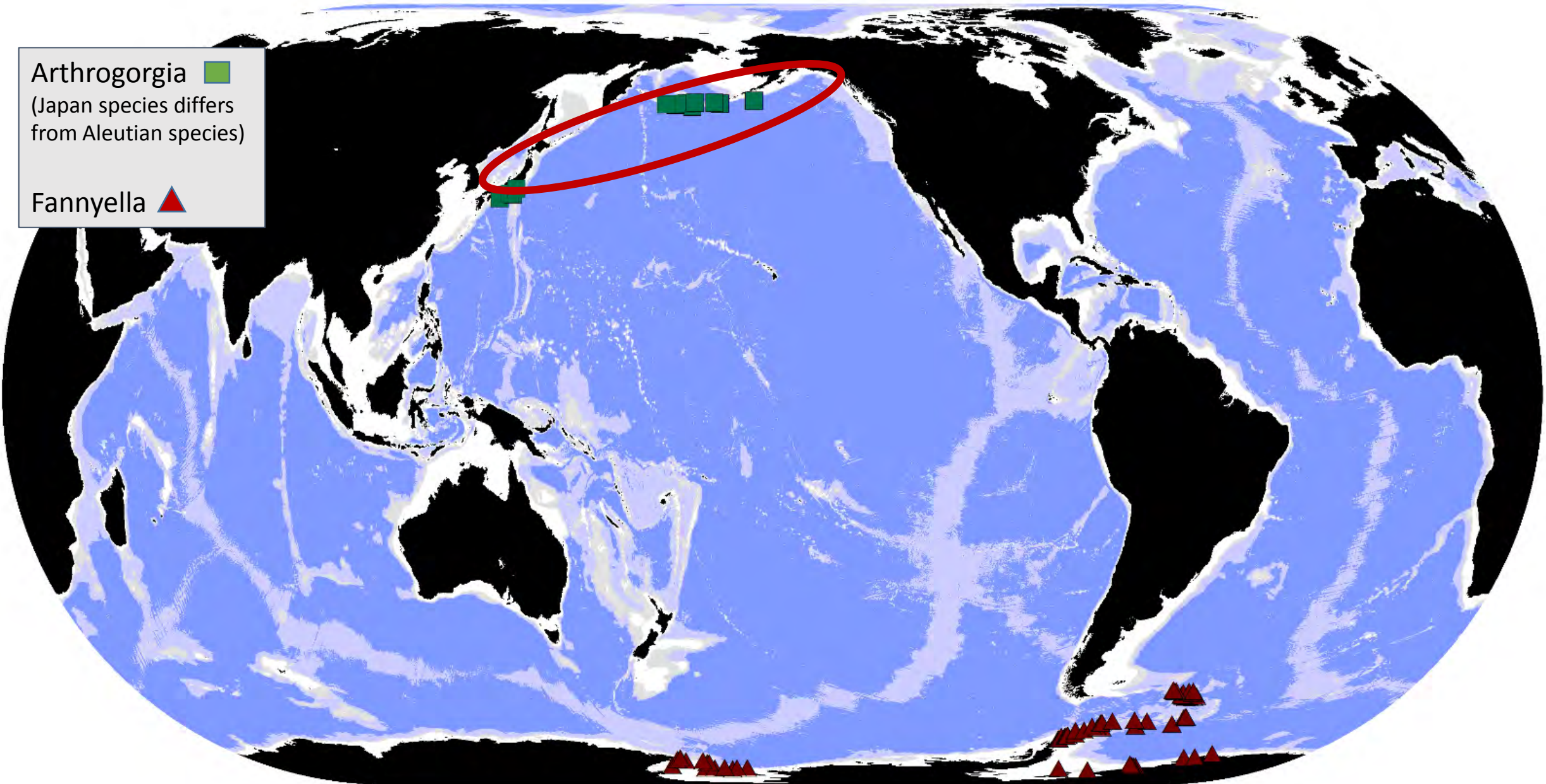


Plumarella

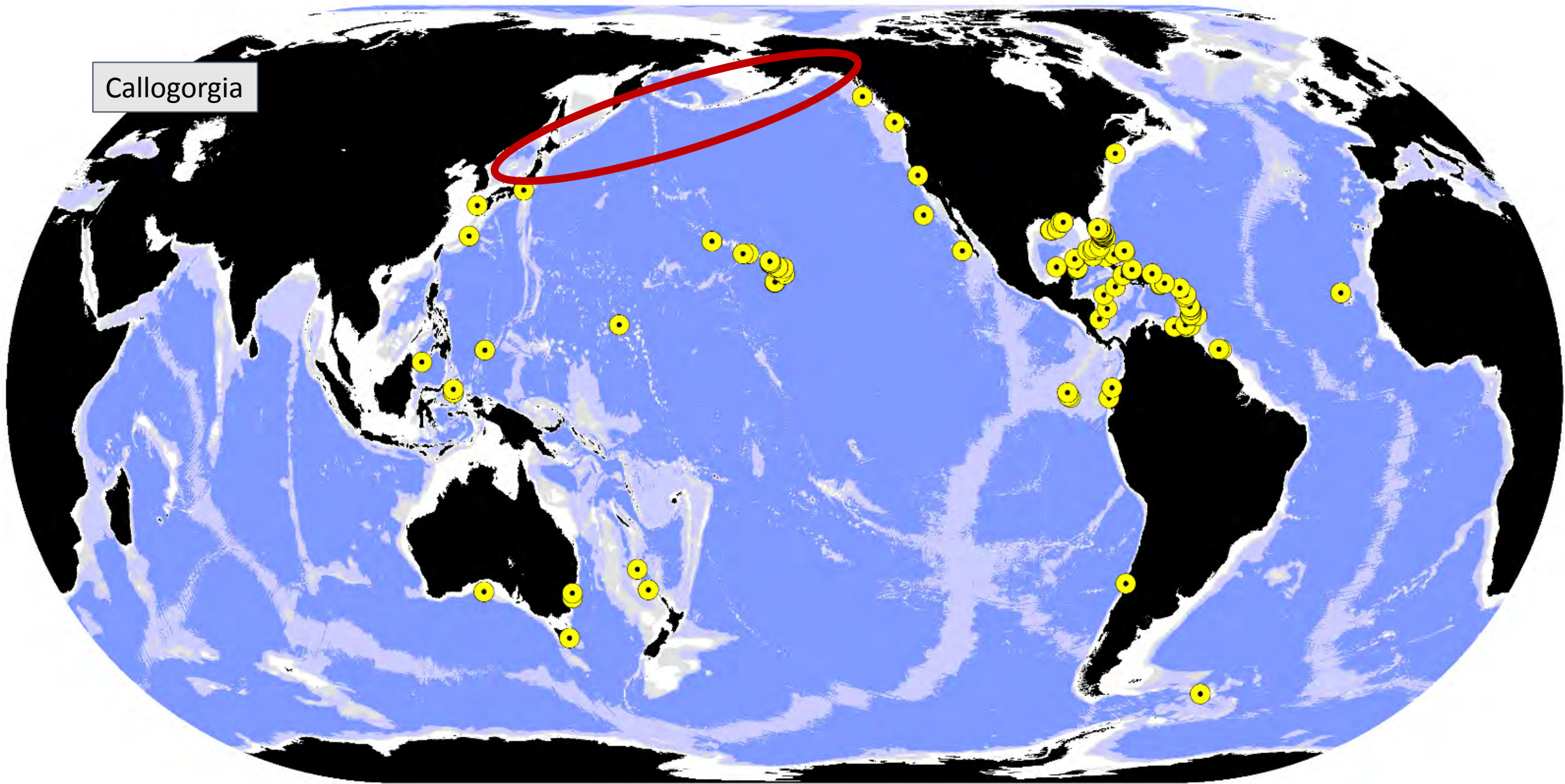


Arthrogorgia ■
(Japan species differs
from Aleutian species)

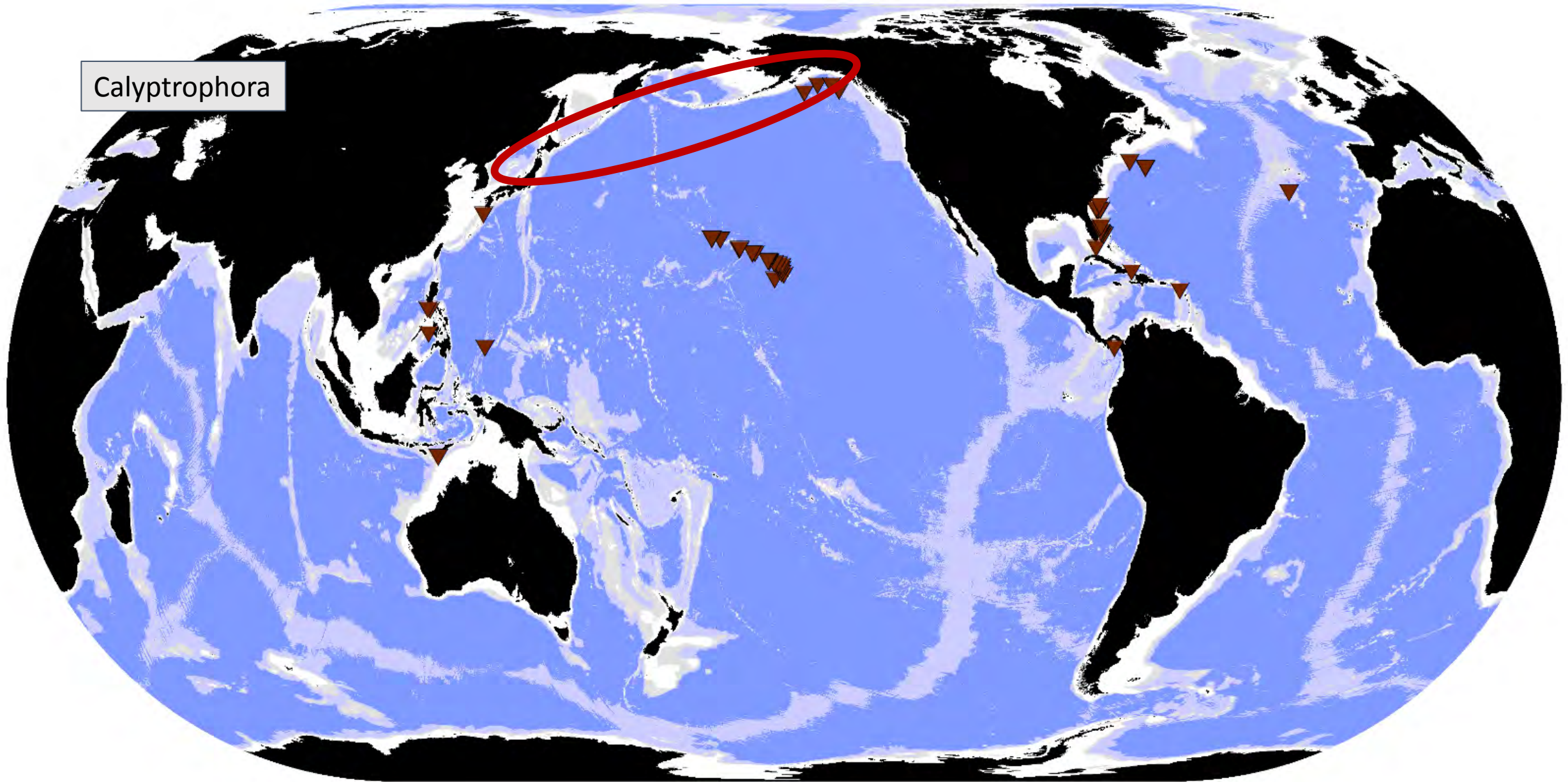
Fannyella ▲



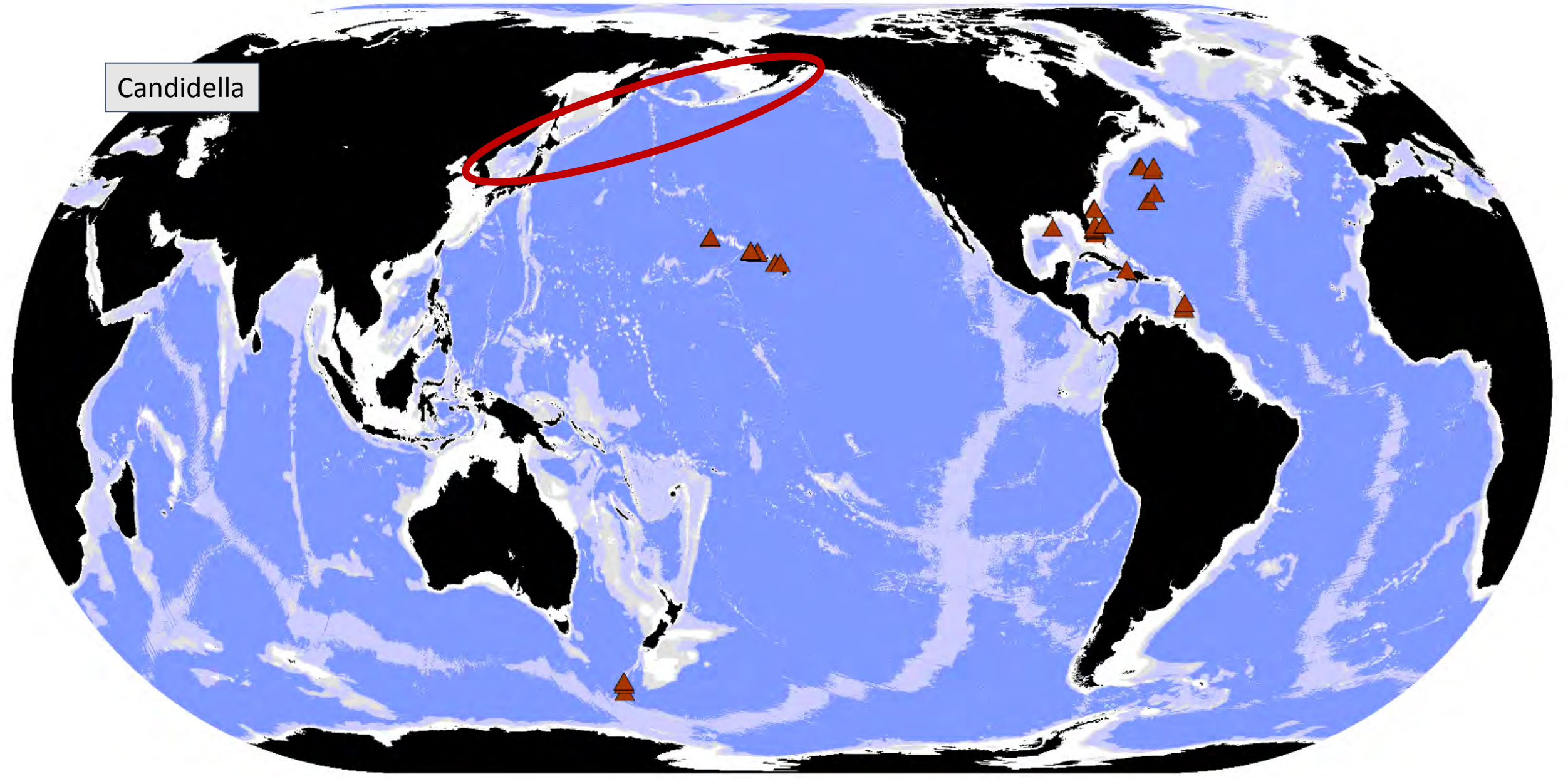
Callogorgia



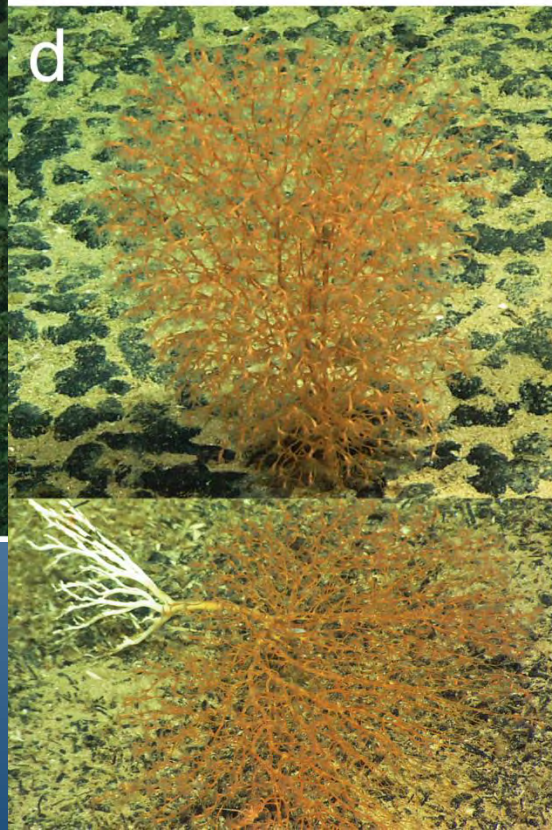
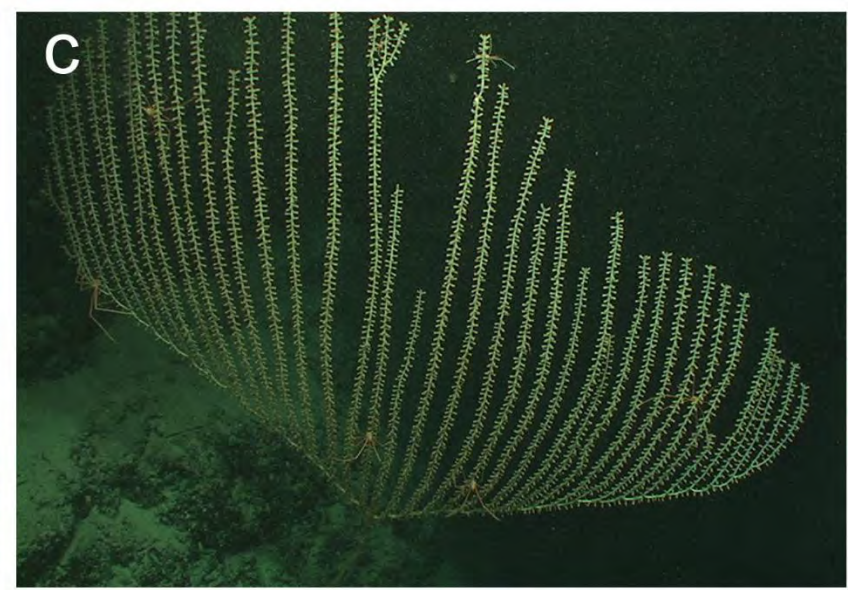
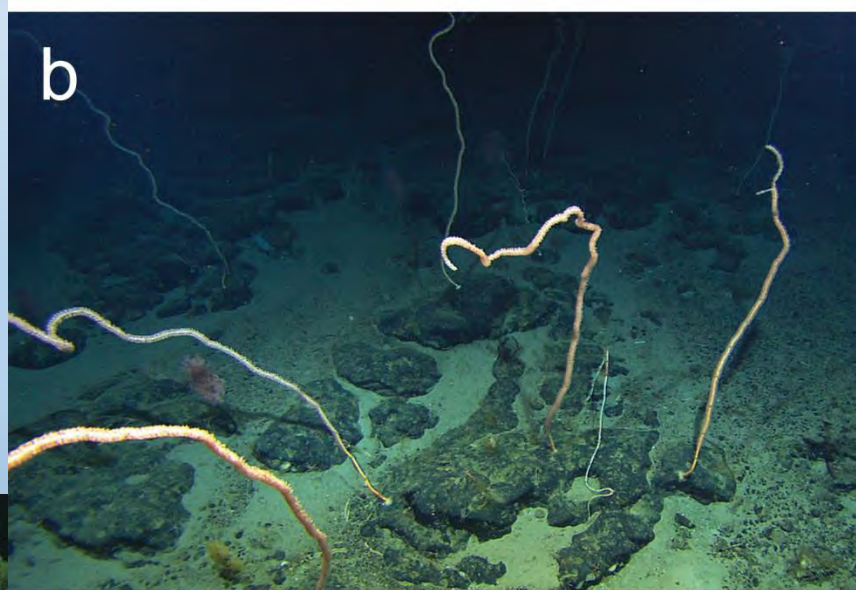
Calyptraphora



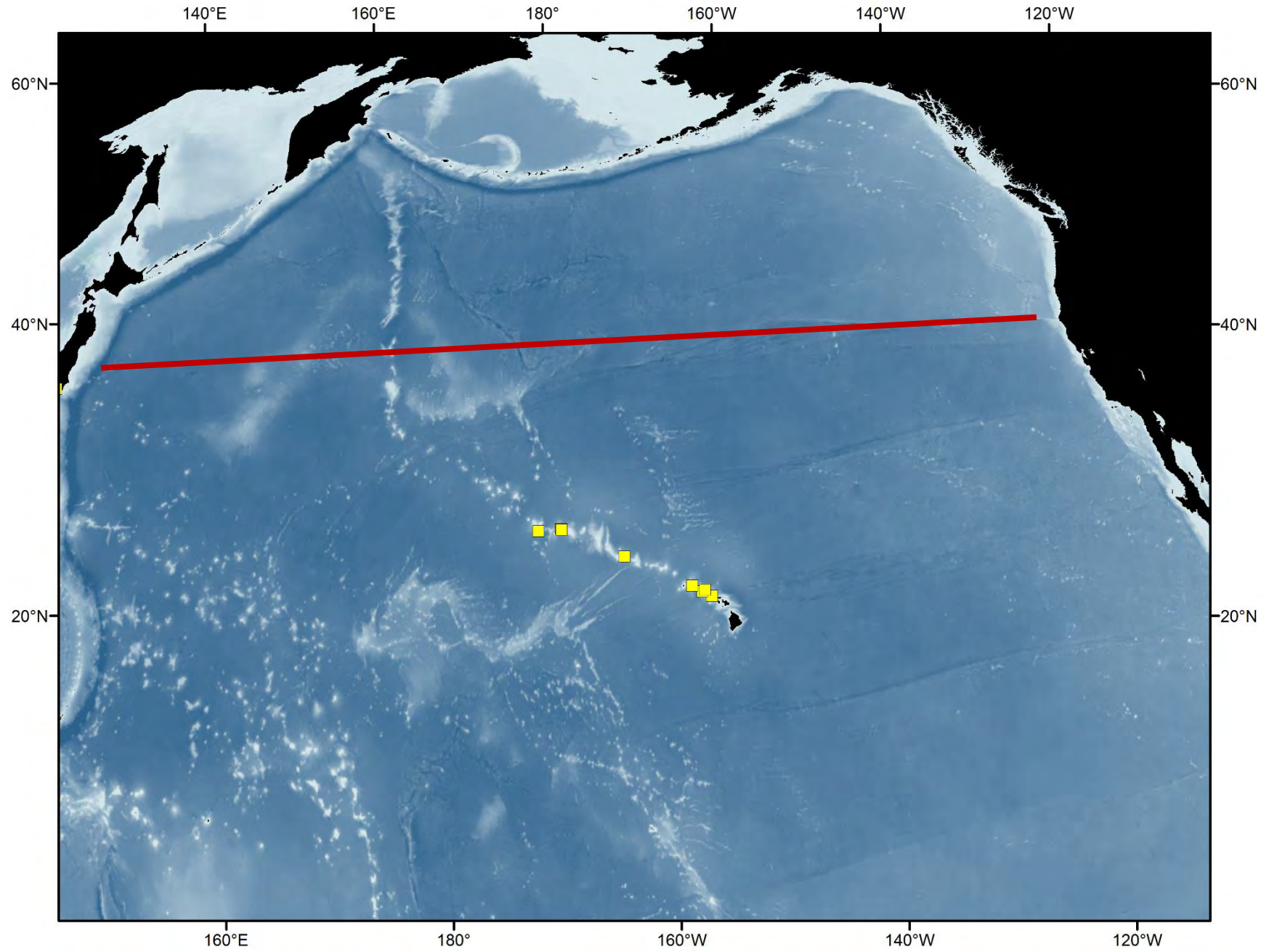
Candidella



Keratoisididae, the bamboo corals



Acanella



Keratoisis (most Undescribed)

