

DBO Synthesis

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Fall Pacific Arctic Group Virtual Business Meeting

November 24-25, 2020:1900-2200 EST

- 2nd DBO special issue: PLOS ONE
- ASSW21 DBO #78 session: abstracts due Nov 30, 2020
- Other updates

DBO Synthesis Activities 2020-2021

2nd DBO Special Issue: PLOS ONE, 21 articles, open access

Deadline: end February 2021 for manuscript submission

If interested in submitting an article, please contact me as there is an **open access/special collection cost associated with this publication**; I will hold a lead author zoom call in December

Project webpage and blog-under development

Arctic Science Summit Week 2021 Virtual Science Meeting: DBO Session #78;
abstract deadline Nov 30, 2020-**The Distributed Biological Observatory: A Change Detection Array in the Arctic**

Alaska Marine Science Symposium, January 26-28, 2020: multiple DBO relevant abstracts accepted for oral presentations

2nd DBO SI: PLOS ONE draft titles Sep-20				Deadline submission end February 2021			
	Lead Author						
#	Last name	First Name	Co-authors	Draft title			
A. Introduction							
1	Grebmeier	Jacqueline	LW Cooper, KE Frey, and SE Moore	An Introduction			
B. Sea ice, hydrography, microbial and plankton dynamics							
2	Frey	Karen	LNC Young, JC Comiso, LV Stock, JM Grebmeier, and LW Cooper	Trends in sea ice cover, sea surface temperature, and chlorophyll biomass across the Distributed Biological Observatory in the Pacific Arctic region			
3	Cooper	Lee	C Magen, and JM Grebmeier	Changing Freshwater Fluxes in the Arctic: A Tale of Melted Ice, River Runoff			
4	Collins	Eric	R Lekanoff	Co-occurrence networks of bacteria and phytoplankton in the Chukchi Sea			
5	Lekanoff	R	E Collins	Diversity and Community Structure of Eukaryotic Phototrophs in the Bering			
6	Waga	Hisatomo	Hirawake, YFukamachi, and H Eicken	Satellite observations of spring phytoplankton phenology on the Bering and			
7	Ashjian	Carin J.	Stephen R. Okkonen, Robert G. Campbell, Philip Alatalo	Lingering Chukchi Sea sea ice and late spring Chukchi Sea mean winds influence population age structure of euphausiids (krill) found in the bowhead whale feeding hotspot near Pt. Barrow, Alaska			
8	Hubbard	Kate	D Andersson, and E Fachon	Seasonal and spatial variability in Pseudo-nitzschia species assemblages in the Alaskan Arctic			
D. Export production, sediment dynamics and benthic populations							
9	Lalande	Catherine	JM Grebmeier, R Hopcroft, and S Danielson	Time-series measurements of export fluxes across the Bering Strait			
10	Goethel	Christina	JM Grebmeier, LW Cooper, and CL Rowe	Impacts of predicted increased temperature and food supply change on sediment oxygen consumption, the benthic community and individual			
11	Grebmeier	Jacqueline	LW Cooper, CL Goethel	Time series macrobenthic populations and sediment dynamics at in Chukchi			
12	Gemery	Laura	T.M. Cronin, L.W. Cooper, H. Dowsett, J.M. Grebmeier	Incipient benthic ostracode species change in the northern Bering, Chukchi and Beaufort Sea ecosystem			
E. Upper Trophic Levels: Marine Mammals and Seabirds							
13	Berchok	Catherine	et al.	Changes in timing and occurrence of marine mammals in the Northern Bering and Southern Chukchi Seas, 2012-2019			
14	Wegner Koch	Chelsea	LW Cooper, JM Grebmeier	Importance of ice-derived resources for Pacific walrus (<i>Odobenus rosmarus divergens</i>)			
15	Moore	Sue E	SE Okkonen, JM Grebmeier, JT Clarke, CL Berchok, and KM Stafford	Changes in baleen whale phenology and seasonal distribution near DBO regions 2-6, related to aspects of the Arctic Marine Pulses model			
16	Stafford	Kate	et al.	Bowhead and beluga whale acoustic detections at DBO 6 in the western Beaufort Sea 2008-2018			
17	Gall	Adrean	Kathy Kuletz, S. Danielson, A. Prichard, E. Labunssi et al.	Influence of water masses on the structure of the seabird community in the northeastern Chukchi Sea			
18	Kuletz	Kathy	S Okkonen, C Ashjian, E Osnas, E Labunski, and A Gall	Environmental drivers, krill, and the spatio-temporal variability of short-tailed shearwater migration through the Distributed Biological Observatory in the Pacific Arctic			
F. DBO and Modeling Studies							
19	Clement-Kinney	Jackie	W Maslowski	On the relationship between sea ice presence and the formation of the Bering Sea Cold Pool			
G. DBO as a pan-Arctic observing network							
20	Bluhm	Bodil	Randi ingvaldsen, Arild Sundfjord, Marit Reigstad	Atlantic DBO's – what do we have and what do we need?" or "Monitoring the Atlantic gateway to the Arctic Ocean by DBO's"			
21	Majewski	Andres	Andrea Niemi, Christie Morrison, Bill Williams	Active acoustics detect mass transport of biota during episodic wind events near Cape Bathurst, Beaufort Sea			

Arctic Science Summit Week March 20-26, 2021 Virtual Science Meeting

<https://assw2021.pt/>, **abstract deadline Nov 30, 2020**

DBO Session #78-The Distributed Biological Observatory: A Change Detection Array in the Arctic

Variations in upper-ocean hydrography, light penetration, lower and upper trophic levels, pelagic-benthic coupling and carbon cycling are being evaluated through the Distributed Biological Observatory (DBO), which was initiated in 2010 in the Pacific Arctic. The DBO sampling approach emphasizes annual standardized sampling by an international suite of ships occupying agreed-to transect lines in order to measure the status and developing trends for the ecosystem. Continuous data are also obtained through mooring and satellite observations. The first decade of DBO sampling has revealed seasonal and interannual hydrographic changes are driving shifts in biological species composition and abundance, northward range expansions for some temperate species and negative impacts for some ice dependent species. This model of change detection is being expanded to other Arctic regions beyond the initial implementation in the Pacific Arctic. An Atlantic DBO is in development through coordination of ongoing international field activities in the Eurasian Arctic, and planning has started for an effort in Davis Strait/Baffin Bay. This session invites presentations on results related to ongoing and planned DBO activities in all Arctic regions.

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Research Networking Activities for Sustained Coordinated Observations of Arctic Change (CoObs RNA); <https://sites.google.com/alaska.edu/rna-observations/>

Lead: Hajo Eicken, UAF/International Arctic Research Center, plus Co-Investigators and Institutional Partners

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