

Interactive comment on “Seasonal distribution of short-tailed shearwaters and their prey in the Bering and Chukchi Seas” by B. Nishizawa et al.

Anonymous Referee #2

Received and published: 11 February 2016

The phenomenal abundance of food in the Chukchi and Bering seas in the autumn provides for one of the greatest wildlife spectacles on Earth. Marine mammals and seabirds take advantage of a cascade of productivity begun months previously. The authors examine the spatial concordance between the abundance of seabirds (short-tailed shearwaters) and krill in the context of environmental features. They show that shearwater movement northwards coincides with an increase in krill size.

The main drawback of the study is that it investigated relationships only at a single spatial scale. Relationships could be quite different at larger or smaller spatial scales, and it is too bad that some part of the study didn't look at a small spatial scale.

Minor comments:

C9697

Introduction, first paragraph. One of the best examples from seabirds for the effect of sea ice retreat is:

Divoky GJ, Lukacs PM, Druckenmiller ML. Effects of recent decreases in arctic sea ice on an ice-associated marine bird. *Progress in Oceanography*. 2015 Aug 31;136:151-61.

Second paragraph. It might be worth noting the first paper to document large-scale shearwater migration to nearby waters from a geolocator perspective:

Shaffer SA, Tremblay Y, Weimerskirch H, Scott D, Thompson DR, Sagar PM, Moller H, Taylor GA, Foley DG, Block BA, Costa DP. Migratory shearwaters integrate oceanic resources across the Pacific Ocean in an endless summer. *Proceedings of the National Academy of Sciences*. 2006 Aug 22;103(34):12799-802.

I. 20. Seems strange to say "northern North Pacific" perhaps "extreme North Pacific".

last paragraph: add "the" before "net avoidance"; instead of "will...limit" perhaps "provide a rough estimate of krill abundance across several orders of magnitude."

2.1 L21. "an average speed" not "averaged speeds".

2.2 "collected" not "corrected".

2.3 first paragraph. Too bad you didn't include abundances. Why not log-transform the data?

4.1 L 16 "low densities" not "few" for parallelism with the previous part of the sentence.

L 20: "June" not "june".

Interactive comment on Biogeosciences Discuss., 12, 17721, 2015.

C9698