Reviewer: 2  
  
Comments to the Author  
I think this paper presents an interesting study and is generally well-written. I also think the authors’ main finding that the estimated thresholds of prey abundance needed to sustain high predator productivity are similar across various predator and prey taxa and studies is important one. However, I do have some concerns with the analysis and I had trouble evaluating the authors’ interpretation of the results given these concerns.

Namely, I think the model fitting and threshold analysis needs to be more rigorous. In my opinion, it makes sense to first determine if the relationships are ‘strongly nonlinear’ and then determine if/where thresholds exist. Some of the relationships presented in the figures (main text and supplemental materials) look as if they could be linear and weakly nonlinear. You might consider using a model selection approach to determine whether a linear/nonlinear model fits the data best, then using the EDF estimated by the GAMs as a measure of the strength of nonlinearity, and then quantify where thresholds exist in the strongly nonlinear relationships (e.g. EDF >2).

Individual relationships were first visually examined and determined to be generally non-linear, but the reviewer points out that a few of the relationships look as if they could be linear.

The global seabird meta-analysis of Cury et al. (2011), which we were expanding upon, applied a parametric approach using model selection criteria (AIC) across a range of deterministic models to verify and reinforce the results revealed by the GAM.

**Cury SOM p.15: Model fitting -** We used a series of parametric models to evaluate possible inconsistency in the global asymptotic model. We examined 11 equations that covered a range of log-linear relationships (table S2); we fit these equations to the pooled dataset using the “*nls*” function in ***R*** (*135*). To select the best model, we used the Akaike Information Criterion (AIC). The model 4 in table S2 (y = c + a.(1-e(- b.x))) was selected as the “best” model. In order to validate the global analysis and to examine the robustness of the fitted functional relationships, we fitted this parametric model to the data for each ecosystem (Fig 2C & Fig 3) and for each seabird species (Fig. 2D). To examine effects at the ecosystem level, data were pooled across the seabird species within each ecosystem.

I also suggest limiting the number of knots to 3 when applying GAMs to your data to prevent overfitting.

We referred to Cury et al. (2011) of which the SOM contains much of this detail, but we also added more detail here in the methods (e.g., model was restrained to 3 knots, etc.).

It might also be worth testing whether you get the similar threshold values using the changepoint analysis vs. calculating second derivatives along the curves (see Large et al 2013, Burthe et al. 2016 as examples).