Response to the recommender
We would like to thank you again for evaluating our work. We tried to address all the remaining concerns and apologize for missing some of your previous annotations. Please, find below our answers, and find at the following link the new version of the manuscript:
https://www.biorxiv.org/content/10.1101/2020.04.14.038893v4

We also provided a pdf with more meaningful tracked modifications. This version of the track changes contains both the modification of round 2 and 3.

(line number according to the annotated pdf provided by the recommender on round 3)

l. 56 I would not call foraging parental investment

In the case of bees (at least the solitary ones), females forage mostly to provide food for their brood. In this case, we think that foraging is tightly linked to parental investment. We have slightly modified the text to make it clearer that this is what we meant.

l. 58: In your cited paper the degree of parental care is estimated as the ratio of propagule size to adult size. Do you mean to say here that the ability to forage succesfully in bees can affect the amount of resources invested in the offspring (i.e., through egg provisioning or providing nutrition for larvae in the hive)? I think you need to explain this more clearly.

What we mean with this citation is that species that generally invest a lot energy in their offspring (e.g. species where individuals leave the parents/nest as adults) generally displays low *Ne*. Pollinating bees are expected to be in this case, because their larvae needs pollen, which is a particularly rare resource that is impossible to collect by the larvae themselves and has to be provided by the parents along with a nest. This means that the reproductive output of the average bee should mechanically be lesser than that of the average Hymenoptera, leading to smaller Ne in bees. Propagule size to adult size has been used as a general proxy of the energetic investment into each offspring, but it is sadly very complicated to define and retrieve for every species of this dataset (in the case of pollinating bees this ratio is expected as very high as individuals typically leave the nest and disperse as adults). We rephrased this part of the manuscript and hope it is now clearer.

l. 86 state what they are

We agree that the formulation “life-history descriptor variables” is vague but we thought that giving the full-extent of the tested variable would have been too long. We opted for a slightly more detailed description and for links to supplementary tables.

Table S3 “Binding” What does this mean?
This is indeed a very non-specific GO term. A more thorough definition is:
“The selective, non-covalent, often stoichiometric, interaction of a molecule with one or more specific sites on another molecule.” More details can be found here:
http://www.informatics.jax.org/vocab/gene_ontology/GO:0005488