Reviewer: 1

My biggest criticism is that your sampling technique, more specifically - how you pooled samples for analysis are not clearly enough explained. In line 138, you state that 444 intact samples were collected. By looking at Table one, I see it’s 200 observations in cherno and 244 observations in fluvo. What makes an sample intact? How does completeness vary between different time periods? How complete did a sample have to be in order to be included in your analyses? This needs to be clarified explicitly. Instead of using abundance data, maybe you could use: (mean abundance/cup) on a site specific basis.

*- We added better description of this issue in methodology section. We hope that it will be satisfactory.*

There also seems to be inconsistencies between the number of individuals reported in your abstract, and the number of individuals given in Table 1. I would make sure those are all double checked.

*- Thank you for catching this one. Corrected.*

There was no discussion about the landscape which surrounds the sampling points, which could have a very strong effect on the abundance and diversity of carrion beetles you find (see Gibbs and Stanton 2001). There is also no mention of the effect agricultural management might have between the different crop types, ie: application of chemical insecticides. This is also worth mentioning in greater detail in the discussion.

*- Thank you for your suggestions, it would be nice to address these topics, but we would like to avoid* *discussing them in this article. The reasons are that all three regions have very similar landscape (open landscape with small patches of forests) and we do not possess the data about agricultural management.*

Introduction: First paragraph is a little bit unclear. Are there any examples where carrion beetles wouldn’t be obligate feeders on vertebrate corpses? Perhaps ‘Most members of the silphidae are obligate carrion feeders.

*- explained in more details.*

You haven’t mentioned that the larvae develop in the soil during the introduction, or the burial activity of the corpse (Is this completely specific to Nicrophorus spp.?). These are important reasons why species might have particular preferences for different soil types, and it should be stated more explicitly.

*- added*

I don’t understand why the paragraph starting on L54 is included in the introduction. Perhaps this might be more appropriate in the discussion. It doesn’t seem necessary to stage your particular research questions.

*- dropped*

I would either flesh out why these findings are useful for forensics in greater detail, or completely drop it as one of the key take-home messages. This wasn't immediately clear when reading the paper.

*- dropped*

Materials and Methods:

As mentioned earlier, you need to be more clear about what a ‘complete sample’ was. Did it include all three collection periods? Did it mean all five traps were intact? How did you select study sites using Cenia 2015, when the sampling took place in 2009. I suppose this was an earlier version of the program?

*- addressed in the text, years of citations were corrected*

Data Analysis:

Results: It seems strange that each of your factors came out with identical p-values for significance. Might be worth double checking to see if something strange is going on there.

*- checked and it is just a coincidence.*

Because N. humator is the only species with a preference for fluvisols, and its status is comparatively stable – perhaps it might be better to frame the paper as selecting conservation sites having chernozem soils, as they support larger communities of rare necrophagous beetles?

*- addressed in the discussion*

Typos that jumped out:

Line 117: Please change ‘fallowing’ to ‘following’

*- corrected*

L118: Please change ‘worm’ to ‘warm’.

*- corrected*

L133: It would be helpful to have justification of why you chose Brillouin rather than an alternative diversity index.

*- explanation added*

L161+163: These lines seem to be saying the same thing. Would be useful to see mean values of beetles captured, or overall abundance.

*- corrected*

L279: Unsure how carrion beetles could be classified as umbrella species. Their requirements seem pretty limited. Could you please elaborate?

- corrected, it should be flagship species

L282: The last part beginning with ‘and we are obliged…’ doesn’t seem to fit with the rest of the paper.

*- deleted*

Reviewer: 2

General comment:

From the paper is not clear, if the authors tested also the influence of geographic region (the three studied areas) on the composition of carrion beetles assemblages? Southern Moravian localities laying in Pannonia opened to large steppes, but the two Bohemian areas are rather isolated. I recommend testing this potential influence on the results, or if the authors really tested that, clearly present the results of the statistics.

*- The effect of the geographic region was filtered out, because we were aware of possible issues. Explanation added to methodology section.*

Minor suggestions (line numbers according to pdf):

Page 1, line 11-12 – the first sentence is a filling sentence, it is general statement valid for almost any group. I recommend reformulate or delete.

*- deleted*

Page 1, line 11-13 – which pests authors mean? This is too general and confusing, cf. Page 2, line 27.

*- examples added*

Page 2, line 33; Page 3, line 66 – why subgenus and not genus? The other subgenera are not mentioned, as well as nominotypic one. I recommend improve the sentence “ All studied species of burying beetles from the genus Nicrophorus…. The information about the rest subgenera are not available (according to my knowledge), but it seems to be similar.

*- The statement about biparental care should be true for the whole subfamily Nicrophorinae, therefore I reformulated it as such. The second sentence is dealing with our working hypothesis and we think that is not correct to broaden it up to the genus level in this case, because we did not study the ecology of species from subgenus Necroxenus.*

Page 6, line 122 - …for each location and region… - authors mean geographical or climatic regions? It needs to be specified.

*-corrected*

Page 6, line 35 – correct the order of citations in brackets according to order of the programs

*-corrected*

Page 6, line 138 – 39 locations with samples mean, that the rest from total amount of 66 trapping sites not contained silphids? This difference is not explained.

*- explanation added*

Page 6, line 143 – (> 63%) means % of total abundance?

*- corrected as suggested*

Page 7, line 158 and elsewhere - ...(0.1884)… uniform rounding to the same number of decimal places (3?) is needed.

*- corrected*

Page 9, lines 209-212 – the authors did not tested the influence of climatic regions on the distribution of carrion beetles, while all studied sites were warm sites. Entire paragraph is speculative and I recommend to omit it.

*- paragraph was removed from the article.*

Page 24 – Fig 5 – axis y showing the total number of collected specimens or specimens per trap/site? Insert unites.

*- corrected*