Reviewer B:
Dear Reviewer! Thank you very much for the attentive and comprehensive review. We tried to correct our mistakes, our manuscript was profoundly revised. Our answers to your notes are given just after them in yellow Arial font.

Especial thanks for recommended papers, we plan to cite them in our next paper on altitude variation in Siberian species of carabids.

COMMENTS TO AUTHORS

General comments:

The manuscript called „Intra-specific Body Size Variation of Ground
Beetles (Сoleoptera: Сarabidae) in Latitudinal Gradient“ is focused on
interesting issue of intraspecific geographical variation in body size.
Unfortunately, the text is a little bit chaotic. It will be nice to enhance
text flow, present lower number of partial results (but those crucial in
more clear manner) and be more precise (detailed) in description of
important issues (e.g., sampling design, statistical methods etc.). I
suppose that language corrections provided by a native speaker will be very
useful.

Specific comments:

LL22-24: I am not sure with the meaning of this sentence (are there
published data or not?).

We found a lot of published papers which showed that Bergmann's clines occurred in ectotherms. A positive correlation between latitude and body size is, for example, suggested to be: (1) a consequence of developmental processes that cause insect cells to grow larger at lower temperatures (van der Have & de Jong, 1996; van Voorhies, 1996) and ⁄ or (2) an adaptation, with larger individuals having higher fitness in colder climates (Cushman et al., 1993; Hassall et al., 2006).

 Hassall, M., Walters, R.J., Telfer, M. & Hassall, R.J. 2006. Why does a grasshopper have fewer, larger offspring at its range limits? J. Evol. Biol. 19: 267–276.

van der Have, T.M. & de Jong, G. 1996. Adult size in ectotherms: temperature effects on growth and differentiation. J. Theor. Biol. 183: 329–340.

van Voorhies, W. 1996. Bergmann size clines: a simple explanation for their occurrence in ectotherms. Evolution 50: 1259–1264.

Cushman, J.H., Lawton, J.H. & Manly, B.F.J. 1993. Latitudinal patterns in European ant assemblages: variation in species richness and body size. Oecologia 95: 30–37.

LL24-26: What is the difference between points (i) and (ii)?

(i) The first task was clarify what factors affected body size variation in carabids. So at first we used linear models to identify the significance of those factors impact. The second task was (ii) to sort out the impact of the region only, to check the values, which body size assumed under the region (latitude) impact and then used those values in illustrations design. Detailed description of sampling design and statistical methods we present in the revisited paper.

LL30-31: I am not convinced about this statement (3) based on description of
statistical techniques in materials and methods.

Comments are given in revisited paper (see Material and methods).
L71: ref no. 10 instead of 19? (please be more precise – see also L239:
no. 35 instead of 34)

Corrected
LL72-85: This paragraph is completely copied from the abstract of Shelomi
2012 (in my opinion, this is not a standard way of managing scientific
text).

We gave reference to M. Shelomi (11) and did not think that it was plagiarism.
LL86-90: Please be more precise in describing HOW you avoid mistakes of
previous studies and ensure model correction for effects other from
latitude.

Here we took into account the paper by M. Shelomi and the way we avoided mistakes of previous studies was as follows:

Shelomi wrote: “… studies that were too geographically broad, such as over multiple continents—or too small, such as a single city, tended to miss the real patterns behind the insect sizes” or “…covered continents instead of states … your results would be different”.

Our design: i) samples were taken from different **large province of Russia** in the spectrum of habitats and anthropogenic impact . (In other words, in all studied regions natural habitats were explored as well as cities, suburbs and arable lands.

Shelomi wrote: “If you measured a leg instead of a wing, or males instead of females… your results would be different” or : "Some examples include examining one species at a time … when in reality each individual species was following or countering Bergmann's Rule in its own way” or “Closely related species could act very differently” or “…studies of "Bergmann's Rule" should focus within species and look at widespread but contiguous populations”.

Our design: (ii) several traits in every of six generalist widespread species were studied

About “(iii) linear models were used to isolate effect exactly latitude position into the variation of every trait in every of studied species” - I shall speak later.

Materials and Methods:
Please provide more detailed information on sampling (the same habitats were
sampled in all regions?,

In all regions the same habitats in the spectrum of anthropogenic impact (cities and their suburbs, arable lands and natural biotopes) were explored

 how many specimens of particular species were
sampled in each region?,

Supplement 1

what was the smallest sample size analysed per
region per species?, …).

Supplement 1
I am a little bit puzzled from model description (reading of cited
literature 13, 14 do not help me a much – almost the same sentences are
written there as on LL113-128).

We have revisited “Material and methods”
L121: I expected that “region” will be at the last place in the model
(to ensure its correction for all previous terms = covariates). Why was
“region” (latitude) used as factorial variable and not as continuous
variable in the model? May be that this will allow you to assess effect of
latitude on body size directly and not to employ additional steps (e.g.,
meta-analysing of treatment contrasts).

Since we had too few locations in the data, and they were too sparcely located to use the locations lat/lon coordinates as a scalar covariate, we defined it as a categorical covariate (“region”).

LL129-144: I am not sure if you want to analyse just body size or you are
also interested in body shape.

We analyzed the shape also and we added this aim into the revisited manuscript too.
Results are really complicated and it is not easy to make an impression of
your key findings based on this section. Is it possible to reduce number of
figures and clearly highlight the most important findings?
The discussion is probably the best written part of the manuscript. The last
paragraph (LL263-266) include almost no useful information and I suggest to
discard it completely.

Let me disagree: in fact, papers, concerning intra-specific shape variation in carabids can be counted on fingers (Benitez et al. plus three-four researchers else), and I think, that our findings in this field can be useful and promising.
There are also some additional papers that could be interesting for you:

Body size evolution under character release in the ground beetle Carabus
japonicus
By: Okuzaki, Yutaka; Sugawara, Hisashi; Sota, Teiji
JOURNAL OF BIOGEOGRAPHY  Volume:  42    Issue:  11    Pages:  2145-2158
Published:  NOV 2015

Genetic differences and phenotypic plasticity in body size between high- and
low-altitude populations of the ground beetle Carabus tosanus
By: Tsuchiya, Y.; Takami, Y.; Okuzaki, Y.; et al.
JOURNAL OF EVOLUTIONARY BIOLOGY  Volume:  25    Issue:  9    Pages:
1835-1842    Published:  SEP 2012