Dear Editor, please find enclosed our manuscript “Species identification based on a semi-diagnostic marker: evaluation of a simple conchological test for distinguishing blue mussels Mytilus edulis L. and M. trossulus Gould” by Khaitov et al. Which we would like to submit for publication as a research article in Plos One. We hope you will find is suitable for publication.

Common blue mussels *Mytilus edulis* and *M. trossulus* lack reliable taxonomic morphological traits and are generally identified with the help of multilocus genotyping. Any cues for distinguishing them without genotyping would save much research effort. We have previously shown (Katolikova et al. 2016 in PLoS One) that a simple conchological trait is asymmetrically distributed across this two taxa in the White Sea and can be considered as a semi-diagnostic taxonomic marker. In the present research article we assess the applicability of this trait to taxa identification in sympatric and allopatric populations of *M. edulis* and *M. trossulus* all over the world. We found that the trait usually, though not always, had a high predictive power. Since it is not diagnostic but semi-diagnostic, we applied the approaches developed in evidence-based medicine where identification of a syndrome is associated with probabilistically distributed diagnostic test outcomes. This approach may apply equally well to other taxa identified by semi-diagnostic traits.

The results of the work have not been submitted anywhere. We use some materials published previously in PLoS (Katolikova et al. 2016) but we considered them as a part of broader material.

We suggest Dr. Donald James Colgan (Australian Museum, AUSTRALIA) as an Academic Editor to handle our manuscript.

List of possible reviewers

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