

Guanajuato, Mexico, 13. 10. 2016

Advisor's review of PhD thesis by Pável F. Matos Maraví 'Biogeography and evolution of Melanesian and South Pacific ants'.

Pável's work represents a very good example how data and specimens collected for community ecology research can serve as a valuable material for phylogenetic and biogeographic studies and how such analyses can help to reveal ecological history of species or habitats.

During his PhD studies Pável became familiar with many aspects of ant biology and mastered a long list of phylogenetic, phylogeographic and biogeographic methods. These tasks were not always easy as he had to work with largely understudied taxa distributed across one of the most complex region on the planet.

For example the *Prenolepis* genus group (Chapter III) is diverse, taxonomically complex, with dozens of undescribed species and basically any study involving this group is challenging. However, Pável was able to navigate through these difficulties and produced one of the most comprehensive datasets analysed for insects from the Indo-Australian region so far.

Throughout his studies, Pável worked largely independently and often suggesting innovative ways of analyses. He was able to deal with the perils of ant systematics and biology and also gained good knowledge of complex geographic history of the SE Asian and South Pacific regions which can be quite challenging.

The thesis chapters show the wide array of questions he was able to address with different dataset and also the progress of his methods towards quite complex analyses involving diversification rates, speciation patterns and shifts in ecological traits. In the thesis introduction he also demonstrated his ability to synthesize what is known about ant biogeography of the region and thus laid first steps for much needed review.

Although, sadly due to the scheduling issues not all the results, Pável has been working on, appeared in the thesis, the presented work and his publishing record document well the variability of fields he was able to encompass during his PhD studies.

In addition to the work presented here, Pável has been also involved in analyses of next-generation sequencing data and other phylogeographic and population-genetic studies which are now part of additional three manuscripts.

Certainly, some of the evolutionary scenarios or analytical approaches could have been explored more or should have been taken into account, as the reviewers suggested. In particular, the species delimitations or alternative biogeographic reconstruction methods. However, the presented texts are often compromises between the allowed length for the manuscripts for target journals and the lengthy discussions with reviewers and co-authors. These, in some cases, shaped the studies somewhat differently from the structure and analyses we initially intended.

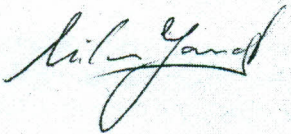
During the four years of joint work, Pável was able to integrate well within the group of researchers working on South Pacific ants as well as developed new collaborations which I believe will lead to further studies in this field.

His erudition, collaborative nature and openness to new ideas gained high respect from our peers who enjoyed their participation in the studies led by Pável and our laboratory.

In conclusion, I think that Pável presented very solid research results and extensive work; and for me personally, it has been honour to work on these projects together.

In my opinion, Pável's thesis demonstrates very well his excellent insights in insect evolution, biogeography and analyses of diverse types of data and there's no doubt he deserves the PhD degree.

Milan Janda,

A handwritten signature in black ink, reading "Milan Janda". The signature is written in a cursive style with a prominent flourish at the end of the name.