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Supervisor's review of the PhD thesis of Jana Martinů

Jana's phd topic grew from her master's project aimed at co-evolution between *Polyplax serrata* louse and its host *Apodemus* mice. Nevertheless, Jana has been an active researcher in the field of ectoparasitology even as an undergraduate student, when she studied host-parasite associations and morphology of Trombidiform mites for her bachelor diploma, supervised by Dr. Dusbábek. This research led to two publications, one of them first authored by Jana.

For her phd thesis, focused on studying and testing population genetic and evolutionary parameters of host-parasite co-evolution, Jana extended her selected model groups to include not only mouse lice, but also bird chewing lice, and she successfully contributed also to the research on host specificity and genetic diversity in coccidian parasites of *Apodemus*. The width of the studied co-evolutionary models presented many advantages, but also challenges, mainly in obtaining sufficient numbers of samples for population genetic inference across continent wide scales, in the case of *Apodemus*, or even on a global scale, in the case of the *Menacanthus* chewing lice. Part of the material was a product of collaborative work, of course, yet, much of the sample acquisition and vast majority of subsequent laboratory and computational analyses were Jana's effort.

On the top of that, Jana managed to tackle probably an even more challenging task in the life of many junior researchers. She successfully combined her research and family life. During her phd Jana became a mother of two children (in two steps) and sometimes she literally had to combine family care and field collecting. Perhaps thanks to that we now have a very good sampling from the NW corner of Czechia, where Jana discovered a secondary contact zone in *Polyplax*, but where, co-incidentally for sure, her parents (i.e. grandchild helpers) also reside 😊.

As a result of her phd, Jana managed to publish four manuscripts in international scientific journals and, despite the last task (writing up the thesis itself) had to be done a bit too hastily, I am very happy about the final product. I am looking forward for Jana to present her main findings today. I am also looking forward for future results of the continuation of her work on ectoparasites with the use of advanced genomic methods that she already started to pursue.

Jan Štefka

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