

DEPARTMENT OF INVERTEBRATE SYSTEMATICS AND ECOLOGY

Wrocław, 27.07.2017

To whom it may concern

OPINION ON THE SUMMARY OF PERSONAL ACCOMPLISHMENTS OF DR ALEXANDR A. STEKOLNIKOV SUBMITTED IN ORDER TO OBTAIN THE DEGREE OF DOCTOR OF SCIENCE

Dr Alexandr A. Stekolnikov studies systematics, biology and ecology of trombiculid mites. Trombiculidae, known also as chiggers in their larval stage, with more than 3 000 species, distributed on all continents and in all climatic zones, constitute the most speciose family-level taxon within ecologically distinct terrestrial Parasitengona group. Contrary to arthropod-associated parasitengones, chiggers are ectoparasites of vertebrates except fishes. The systematics of trombiculids, based predominantly on parasitic larvae, requires special, holistic approach, due to the large discrepancies between the description standards adopted by various authors and thus uneven knowledge of intraspecific variation, being the main obstacle in inferring on species boundaries and on faunas of particular regions. The latter are of special significance also in view of medical and veterinary importance of these mites.

I have followed the scientific contributions of Dr Alexandr A. Stekolnikov for more than 20 years now. The sound achievements of the Candidate, outlining the path of his subsequent research activity, were published already before 1998, i.e. prior to completion of his Doctoral degree (PhD). After 1998, the already gained expertise allowed Dr Alexandr A. Stekolnikov to focus on the main problems related to the systematics of Trombiculidae, and among them the lack of clearly defined species concept caused by the paucity of knowledge of intraspecific variation in morphology-based inference.

The scientific activity of Dr Alexandr A. Stekolnikov since he was awarded the Doctor of Philosophy degree aims at establishing the criteria of ring-fencing the species based on morphological evidence and contains a critical approach to the species concept, backed up with

the multifaceted analysis of factors governing the intraspecific variation. Such an attitude, justifying and elucidating the morphology-based criteria applied in species discrimination, constitutes an excellent starting point for further inference with the application of molecular techniques.

The list of Dr Alexandr A. Stekolnikov's publications issued after 1998 and related to the subject of his dissertation comprises at present more than 45 original papers, with vast majority of items published in the international journals, covered by the Journal Citation Reports. An array of papers was published in co-authorship with researchers from both European and extra-European countries.

Among the most important and sound results I would recognize the monograph study of *Leptotrombidium* of the World and of Trombiculidae of Turkey, which contains a comprehensive characteristics of species, based on extensive material and backed up with several taxonomic decisions, such as the change of taxonomic status and synonymization of taxa at generic and specific level. The sound and valuable results achieved by Dr Alexandr A. Stekolnikov are contained also in a wide array of papers dealing with intraspecific variation and embracing a thorough analyses of the phenomenon and indication of several factors (ecogeographical circumstances, impact of altitude, impact of host species) which underlie the variation.

The Candidate's scientific activity has been internationally appreciated and he is no doubt in the lead of world specialists dealing with systematics and taxonomy of trombiculid mites. The contribution provided by Dr Alexandr A. Stekolnikov is outstanding and considerably expands the knowledge of Trombiculidae in the World's fauna, thus I strongly and with great pleasure recommend the Candidate's application to be granted the degree of Doctor of Science.

Kierownik Zakładu

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