Accepted Manuscript

Title: The importance of distinguishing between cryptic species by morphological characters

Author: Igor Uspensky

PII: S1877-959X(17)30531-9

DOI: https://doi.org/10.1016/j.ttbdis.2017.12.004

Reference: TTBDIS 920

To appear in:

Received date: 17-11-2017

Please cite this article as: Uspensky, Igor, The importance of distinguishing between cryptic species by morphological characters. Ticks and Tick-borne Diseases https://doi.org/10.1016/j.ttbdis.2017.12.004

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Letter to the Editor

The importance of distinguishing between cryptic species by morphological characters

Igor Uspensky

The Hebrew University of Jerusalem, Israel

Present address: 16, Yustman Moshe St., Apt. 65, Jerusalem 9384208, Israel

E-mail address: igorusp.acarina@gmail.com

The finding of multiple specimens (8 adults and 4 nymphs) of *Ixodes persulcatus* on the European roe deer (*Capreolus capreolus*) in a forest near Diesdorf in Saxony-Anhalt, Germany (Negrobov and Borodin, 1964) remained enigmatic for decades (Petney et al., 2012). How did this species appear at a location which is over 1,000 km to the west from the known range of *I. persulcatus* (Uspensky, 2016)? The authors suggest that the ticks may have been introduced by migrating birds, which, in our opinion, appears unlikely. First, the routes of bird migrations are primarily oriented in the south-north rather than in east-west direction, and second, in cases of bird transmission only single specimens of the foreign tick species are usually found in a new area, rather than the multiple specimens of different parasitic stages on a single host animal reported by Negrobov and Borodin.

Ixodes inopinatus is a recently described tick species which used to be confused with and reported as *I. ricinus* (Estrada-Peña et al., 2014). Since the new species was also found in certain areas of Germany (Chitimia-Dobler et al., 2018), it is possible to hypothesize that the ticks identified by Negrobov and Borodin (1964) as *I. persulcatus* were in fact specimens of *I. inopinatus*. Indeed, certain morphological characters are very similar between the two species, including scutum punctuations, absence of the marginal groove and the shape of the internal spur on coxa I in females. To date, no side

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