Response to Reviewer 1

The authors express their sincere gratitude to the reviewer for his constructive comments, which have significantly enhanced the manuscript. Authors respond to each comment (in the red font, pls see below) and have made tracked changes to the script.

Line 230: The designation “(Asia II-1)” requires no parentheses.

Ans. Removed

Authors' response to previous comment: “Arsenophonus was analyzed using both 16S and 23S rRNA. In the original submission, only 16S-based trees were shown, underrepresenting Arsenophonus. This has now been corrected by constructing a combined 16S+23S phylogeny, improving its representation.”

However:

- The Materials and Methods section contains no mention of 16S rDNA primers for Arsenophonus; only 23S rDNA is referenced in the text and Table 1.
- The initial phylogenetic trees were appropriate, except that the figure legend failed to specify they were based on 16S rDNA. The current Arsenophonus tree is unreadable.
- Combining 16S and 23S sequences in a single tree is inappropriate. Present a 23S rDNA tree for Arsenophonus as a separate figure or, alternatively, as a supplementary figure.

Ans. Thanks for pointing out this missing information. In MM section, 16S rDNA primers for *Arsenophonus* have been added. Please see updated Table 1.

The purpose of presenting a combined *Arsenophonus* tree is to show its widespread occurrence and its clustering with the regional isolates. To address the comment, authors added separate, 16S and 23S, trees to the supplementary data (Fig S1).

Lines 309–313: Revise according to changes in the phylogenetic tree presentation.

Ans. Although it was modified in R1, authors modified it further in this round of revision. Please see lines 310-317.

Lines 409–410: Change “Like” to “like”. Also there should be “spider mites” instead of “ticks, spider”. Please read the cited articles carefully.

Ans. “Like” corrected to “like” and spider mites added at line 416.

Supplementary table: Insert the “Symbionts” row above the bacterial designations. Standardize “Asia II 1” to “Asia II-1”, consistent with the main text.

Ans. The suggested correction have been made in the revised Supplementary Table 1.