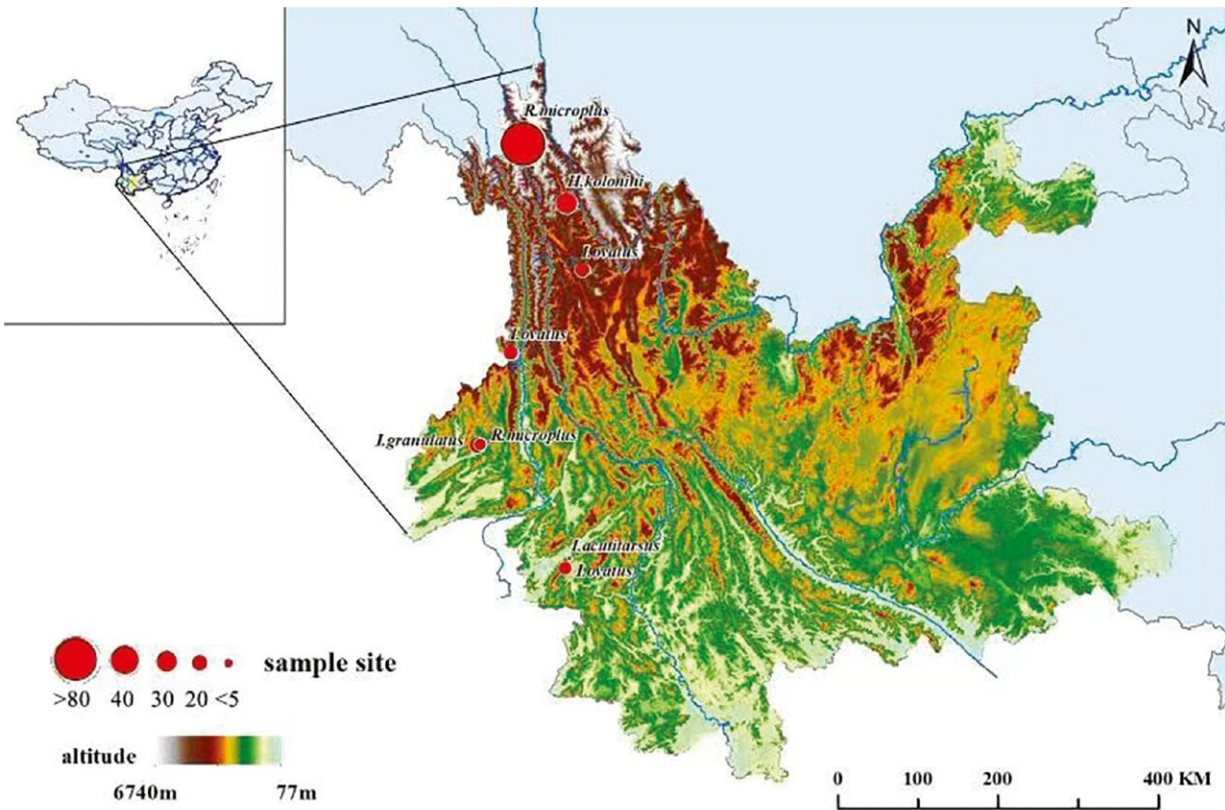


High diversity of tick-associated microbiota from five tick species in Yunnan, China

August 3 2023



Sample size in each tick collection site in Yunnan province, southern China.
 Credit: *Zoonoses* (2023). DOI: 10.15212/ZOONOSES-2023-0005

Ticks are obligate blood-sucking vectors for multiple zoonotic diseases. In a new study published in *Zoonoses*, tick samples were collected from

Yunnan Province, China, which is well-known as a global biodiversity hotspot. This study aimed to clarify the microbial populations, including pathogens, associated with ticks and to identify the diversity of tick-borne microbiota in this region.

The 16S rRNA full-length sequencing from pooled tick DNA samples and PCR amplification of pathogenic genera from individual samples were performed to understand tick-associated microbiota in this region.

A total of 191 adult [ticks](#) of five [tick species](#) were included and revealed 11 phyla and 126 genera bacteria, including pathogenic *Anaplasma*, *Ehrlichia*, *Candidatus Neoehrlichia*, *Rickettsia*, *Borrelia*, and *Babesia*. Further identification suggested that *Rickettsia* sp. YN01 was a variant strain of *Rickettsia* spp. IG-1, but *Rickettsia* sp. YN02 and *Rickettsia* sp. YN03, were potentially two new SFGR species.

This study revealed the complexity of ecological interactions between host and microbe and provided insight for the biological control of ticks. A high microbial diversity in ticks from Yunnan was identified, and more investigation should be undertaken to elucidate the pathogenicity in the area.

More information: Jie Zhang et al, High Diversity of Tick-associated Microbiota from Five Tick Species in Yunnan, China, *Zoonoses* (2023). [DOI: 10.15212/ZOONOSES-2023-0005](https://doi.org/10.15212/ZOONOSES-2023-0005)

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