

Where exactly do mosquitoes rest inside houses?

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Background

Long-lasting insecticide treated nets and indoor residual spraying particularly target indoor-biting and indoor-resting malaria transmitting mosquitoes. It is important to understand resting behaviours of the major malaria vectors inside houses and how much they can be affected by indoor interventions. We investigated the resting behaviors of mosquitoes inside common house types in rural south-eastern Tanzania to identify preferred resting surfaces for the two main malaria vectors, *Anopheles arabiensis* and *Anopheles funestus*.

Methodology

A total of 80 households were selected and evenly divided into four groups based on the following characteristics: i) thatched roofs and un-plastered mud walls, ii) thatched roofs and un-plastered brick walls, iii) iron roofs and un-plastered brick walls, and iv) iron roofs and plastered brick walls. In each of these houses, mosquitoes were collected from multiple surfaces (floors, walls, roof and ceilings, furniture and utensils, clothes and bed nets) using Prokopack aspirators.



Fig 1. Showing common house types in the study area and mosquito collection methods

Results

Anopheles funestus

Anopheles arabiensis

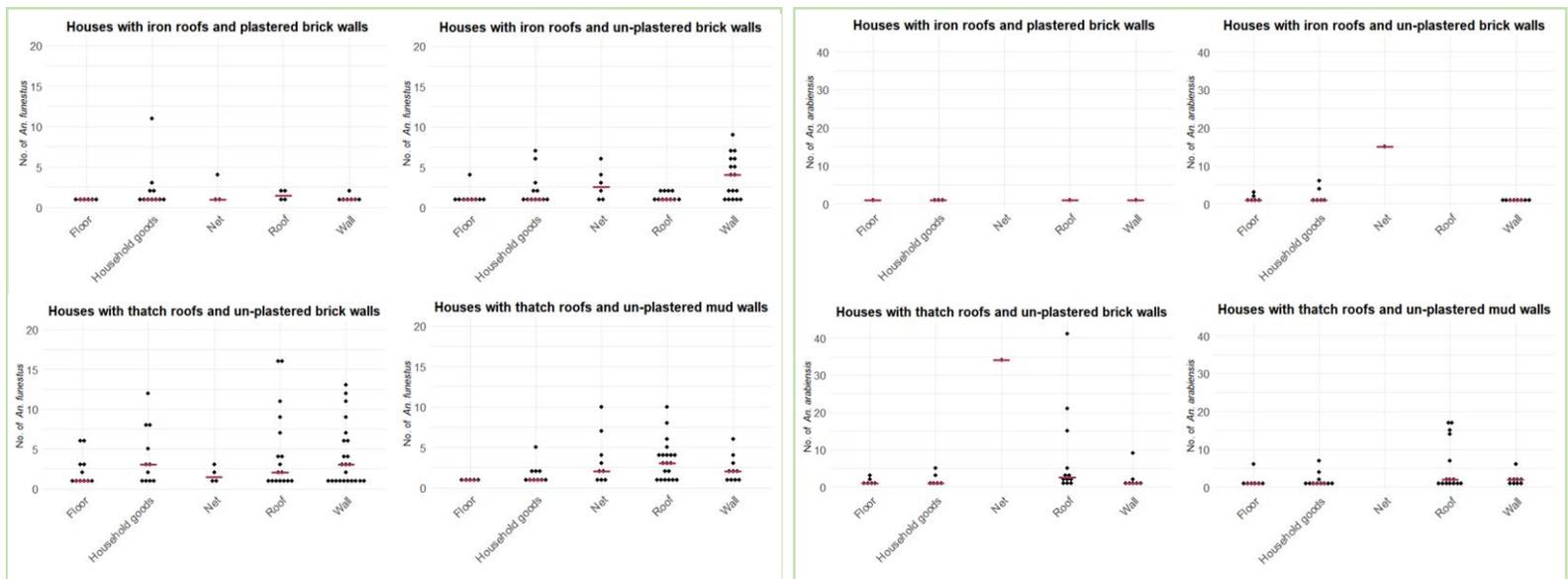


Fig 2: Number of *An. funestus* and *An. arabiensis* collected in different house types

Conclusion

Vector species do not only rest on walls, where they could be targeted with IRS, but also on the underside of roofs and other surfaces such as on bed nets, floors, furniture and utensils. More mosquitoes were collected from houses with thatched roofs compared to iron roofs. While *An. arabiensis* were observed to rest mostly on the underside of the roof, *An. funestus* were observed to rest on other surfaces such as on the walls, floors, bed nets and on normal household goods as shown in Fig. 2.