

# COMPARATIVE ASPECTS OF THE ECOLOGY OF FOUR SYNTOPIC SPECIES OF ANGLE-HEADED LIZARDS, GENUS *GONOCEPHALUS*



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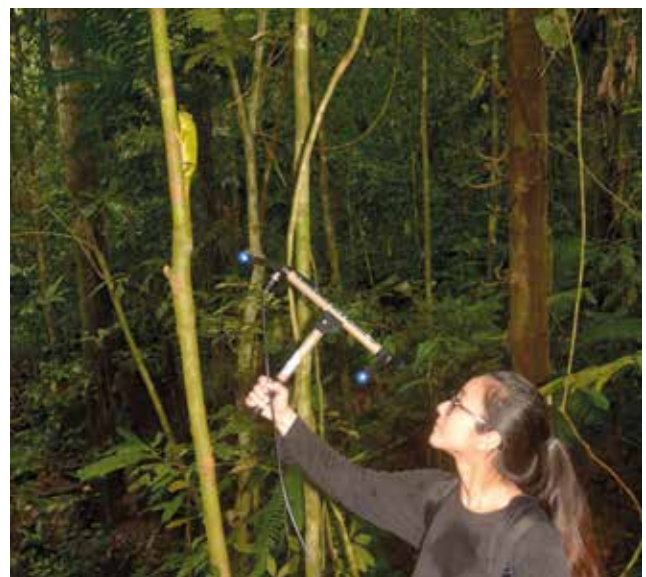
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*Gonocephalus* is a genus of arboreal agamid lizards, endemic to south-east Asia. Four syntopic species of *Gonocephalus* have been recorded in the lowlands of Sarawak- *G. doriae*, *G. bornensis*, *G. liogaster* and *G. grandis*. Most are associated with tree trunks, saplings and shrubs, sometimes occurring in syntopy. Morphologically similar and closely related species living in sympatry tend to avoid niche overlap by differing in one or more aspects of their ecology, which are presumably caused, maintained and/or reinforced by interspecific competition. Successful partition of resources within a system, thus, is vital in reducing competition and increasing feeding efficiency, thus facilitates coexistence. Ecological theory dictates that spatial, trophic and temporal dimensions are the main dimensions of ecological space. The four species of *Gonocephalus* can be broadly similar in their biology, so the question raised was, are there striking differences in their respective ecologies? Studies on comparative ecology at Kubah National Park has been ongoing since June 2018. The objectives of this study were to test whether tropical lizards partition resources spatially and trophically? In addition, we wanted to understand the thermal biology, habitat preference and home range of these species. Structural and thermal microhabitat characteristics were recorded. Stomach contents of individuals were removed via stomach flushing for identification to ordinal level. Temperature-sensitive radio transmitters were attached for 10–14 weeks to the dorsum of pelvic girdle of at least 16 individuals (that weigh over 27 gm) for thermal and home range studies. Towards the end of this project, new ecological data for the syntopic species of *Gonocephalus* are expected, of potential value for conservation and management.

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*Gonocephalus liogaster* with transmitter attached to pelvic girdle.



Field tracking *Gonocephalus doriae* at Kubah National Park.