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Vectors on the rise –survivability of R. sanguineus s.l. in Germany

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Changing temperatures and climate conditions led to expanding distribution areas and endemization of alien species in recent years. *Rhipicephalus sanguineus* s.l. is globally distributed and endemic in the Mediterranean region in Europe. Due to its close contact to dogs as hosts and its adaptation to dry and warm areas *R. sanguineus* s.l. is frequently introduced to Germany by vacationers with dogs and imported rescue dogs. These introductions led to infestations of homes including tick reproduction. Based on several reported autochthonous infestations, the question arose as to whether *R. sanguineus* s.l. survives in the field and possibly even form stable populations. Therefore, the ability of the two most frequently introduced species (*R. sanguineus* s.s. and *R. linnaei*) to survive under climatic conditions in Germany inside an experimental setup as close to nature as possible was investigated. For this purpose, the survivability of all developmental stages as well as of engorges females, the oviposition and the hatchability of egg masses was documented in weekly intervals from February 2023 to May 2024. *R. sanguineus* s.s. exhibited longer average survival time than *R. linnaei* at all developmental stages, whereas *R. sanguineus* s.s. survived outdoors for up to 44 weeks. Engorged females of both species successfully laid eggs from which viable larvae hatched. However, no stage of either species was able to survive the winter period (Nov. to Feb.) for more than 2–4 weeks.

Keywords

Rhipicephalus sanguineus s.s., R. linnaei, outdoor survival, Germany

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