A scientific note on the occurrence of Varroa mites on adult worker bees of Apis nulensis in Borneo

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While examining adult worker honey bees of the new honey bee species, Apis nulensis Tingel, Koeniger and Koeniger, 1996, collected by TER from a mixed colony of A nulensis and Apis cerana Fabricius, we found two species of Varroa mites on the A nulensis worker bees: two Varroa jacobsoni Oudemans and one that looked similar to Varroa underwoodi Delfinado-Baker and Aggarwal, which was tightly tucked in between the sternites of its host A nulensis worker bee. The mixed colony was obtained by introducing brood combs and adult bees from one colony of A nulensis collected from the high mountains of Sabah, Malaysia in Borneo into a queenless A cerana colony located 200 km away from the collection site.

The 'underwoodi-like' mite was compared to V underwoodi from Korea and was found to have only small morphological differences. Both the Sabahn 'underwoodi-like' and Korean V underwoodi are smaller in size and have longer marginal setae than V jacobsoni. However, the 'underwoodi-like' mite from Sabah is larger, and has fewer endopodal setae than the V underwoodi from Korea. The species identity of this Sabah mite cannot be determined since we cannot conduct thorough morphological and molecular comparisons with only one mite sample. However, it is certain that the mite is a member of the genus Varroa.

A cerana is the original host of V jacobsoni and V underwoodi. While V jacobsoni is cosmopolitan in distribution, V underwoodi has only been reported in Nepal (Delfinado-Baker and Aggarwal, 1987), Korea (Woo, 1993), and recently in Papua New Guinea (Lee, 1995). The existence of V underwoodi on A nulensis or A cerana colonies in Sabah is very difficult to explain since no importation is allowed into the country. In addition, the indigenous host of the 'underwoodi-like' Varroa cannot be determined since infested bees were collected from a mixed population of A nulensis and A cerana. However, this is the first observation of this mite in Borneo and the coincidence of its collection with A nulensis workers suggests it likely came from the A nulensis colony.

Regardless of the exact species identity and host bee species of this 'underwoodi-like' mite, it is clear that three species of Varroa mites coexist in Borneo, namely: V jacobsoni infesting A cerana and perhaps A nulensis, V rindereri, a parasite of A koschevnikovi (de Guzman and Delfinado-Baker, 1996); and V underwoodi or a similar species probably parasitizing A nulensis or A cerana.

Eine wissenschaftliche Notiz zum Fund von Varroa – Milben auf Arbeiterinnen von Apis nulensis in Borneo

Note scientifique sur la présence d'acariens Varroa sur des ouvrières d'Apis nulensis à Bornéo
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