

SCIENTIFIC NOTE

The Bee Mite *Melittiphis alvearius* (Berlese) (Acari: Laelapidae) in Colombia, South America

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*Depto. Microbiología, Facultad de Salud, Universidad del Valle, A.A. 25360 Cali, Valle, Colombia**Neotropical Entomology 33(1):107-108 (2004)*O Ácaro *Melittiphis alvearius* (Berlese) (Acari: Laelapidae) na Colômbia, América do Sul

RESUMO - O total de 21 fêmeas do ácaro *Melittiphis alvearius* (Berlese) foi coletado sobre adultos de abelhas melíferas (*Apis mellifera* L.) em 12 colméias no departamento de Nariño, Colômbia. Este é o primeiro registro do ácaro na América do Sul.

PALAVRAS-CHAVE: Distribuição, abelha melífera, Nariño

ABSTRACT - A total of 21 females *Melittiphis alvearius* (Berlese) were found on adult honey bees (*Apis mellifera* L.) from 12 beehives in Nariño department, Colombia. This mite has not been previously reported in South America

KEY WORDS: Distribution, honey bee, Nariño

Melittiphis alvearius (Berlese) is a little known mite that has been found in continental Europe, England, New Zealand, Korea, Canada and the United States (Delfinado-Baker 1988, 1994). Its life cycle is largely unknown, and its systematic position is uncertain within the Laelapidae (Mesostigmata) in the broad sense (Eickwort 1988). This highly specialized mite was considered for many years as a predator or parasite of other mites or small insects, but Gibbins & van Toor (1990) observed that *M. alvearius* is not attracted to bee brood or eggs. They demonstrated by serological procedures that this species feeds on stored pollen. Mites have been found in beehives. Adults, usually females, use the workers or attendant bees for dispersal. Because of these characteristics *M. alvearius* was considered to be non-parasitic in the recent revision of Sammataro *et al.* (2000). Studies on mites of honey bees in Colombia are rare, but Morales (1995) informed the following mites associated with *Apis mellifera* L.: *Blattisocius kegnani* Fox, *Leptus ariel* Southcott, *Varroa jacobsoni* Oudemans and *Acarapis woodi* (Rennie).

In a survey for *Varroa* at 20 municipalities (counties) of the departamento (state) of Nariño, 77 beehives were sampled from January to October 1995. Although wax scrapings were negative and *V. jacobsoni* was not found, 21 females of *M. alvearius* were recovered from adult honey bees (*A. mellifera*) from 12 hives. The five positive counties were Ipiales (7 specimens), Aldana (6), Pupiales (4), Imues (2) and Sapuyes (2). The altitude of the positive sites ranged from 2,850 m to 2,920 m a. s. l. All were located south of Pasto (1°13'N, 77°17'W), the state capital, located in southwest of Colombia near Ecuador. Commerce between both countries is high, but

there are no reports on honey bees being transported from country to country.

As far as we know, this is the first report of *M. alvearius* in Colombia or South America. Its presence in the subcontinent probably reflects the increasing transport of honey bees in the world, but strict quarantine on bees found carrying this mite is considered unnecessary (Delfinado-Baker 1994).

The mites will be deposited in the Arthropod Collection of the Departamento de Microbiología, Universidad del Valle, Cali, Colombia.

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Literature Cited

- Delfinado-Baker, M. 1988.** Incidence of *Melittiphis alvearius* (Berlese), a little known mite of beehives, in the United States. *Amer. Bee J.* 128: 214.
- Delfinado-Baker, M. 1994.** A harmless mite found on honey bees *Melittiphis alvearius*: From Italy to New Zealand. *Amer. Bee J.* 134: 199.
- Eickwort, G.C. 1988.** The origins of mites associated with honey bees, p. 327-338. In G.R. Needham, R.E. Page Jr, M. Delfinado-Baker & C.E. Bowman (eds.) *Africanized honey bees and bee mites*. Chichester, Harwood, 572p.

Gibbins, B.L. & R.F. van Toor. 1990. Investigation of the parasitic status of *Melittiphis alvearius* (Berlese) on honeybees, *Apis mellifera* L., by immunoassay. *J. Apic. Res.* 29: 46-52.

Morales, G. 1995. Reconocimiento de plagas y enfermedades en apiarios del suroeste antioqueño. *Mis. Soc.*

Colombiana Entomol. 32: 99-113.

Sammataro, D., U. Gerson & G. Needham. 2000. Parasitic mites of honey bees: Life history, implications and impact. *Annu. Rev. Entomol.* 45: 519-548.

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