

## NOTA CIENTÍFICA

***Rhizoecus cyperalis* (HAMBLETON) (HEMIPTERA: RHIZOECIDAE), A NEW RECORD FOR COLOMBIA****Andrea Amalia Ramos-Portilla***Instituto Colombiano Agropecuario (ICA), Gerencia Seccional Antioquia; Grupo Taxonomía y Sistemática de Insectos, Museo Entomológico UNAB; Facultad de Agronomía, Universidad Nacional de Colombia, Bogotá, Colombia; correo electrónico: andrea.ramos@ica.gov.co, andreaamaliaramos@gmail.com***Alejandro Caballero***Facultad de Agronomía, Universidad Nacional de Colombia, Bogotá, Colombia; correo electrónico: lacaballeror@unal.edu.co***Takumasa Kondo***Corporación Colombiana de Investigación Agropecuaria (CORPOICA), Centro de Investigación Palmira, Laboratorio de entomología, Palmira, Colombia; correo electrónico: takumasa.kondo@gmail.com*

The family Rhizoecidae Williams, 1969 (Hodgson 2012) is composed of 244 species of mealybugs distributed in 18 genera (Ben-Dov *et al.* 2013). According to Hambleton (1946) all species in the Rhizoecidae are hypogeal in habit. The soil-inhabiting mealybugs that feed on the roots of plants, although less well-known than those that feed above ground, damage a wide variety of commercially grown, subtropical ornamental plants (Hambleton 1976). In the USA, the following species of *Rhizoecus* Künckel d'Hercule, 1878, have been considered the most damaging: *R. falcifer* Kunckel d'Hercule; *R. kondonis* Kuwana [a junior synonym of *Ripersiella kondonis* (Kuwana)]; *Rhizoecus americanus* (Hambleton); *Rhizoecus simplex* (Hambleton); *Rhizoecus floridanus* Hambleton and *Rhizoecus pritchardi* McKenzie [a junior synonym of *Rhizoecus dianthi* Green] (Hambleton 1976). According to Hambleton (1976), one

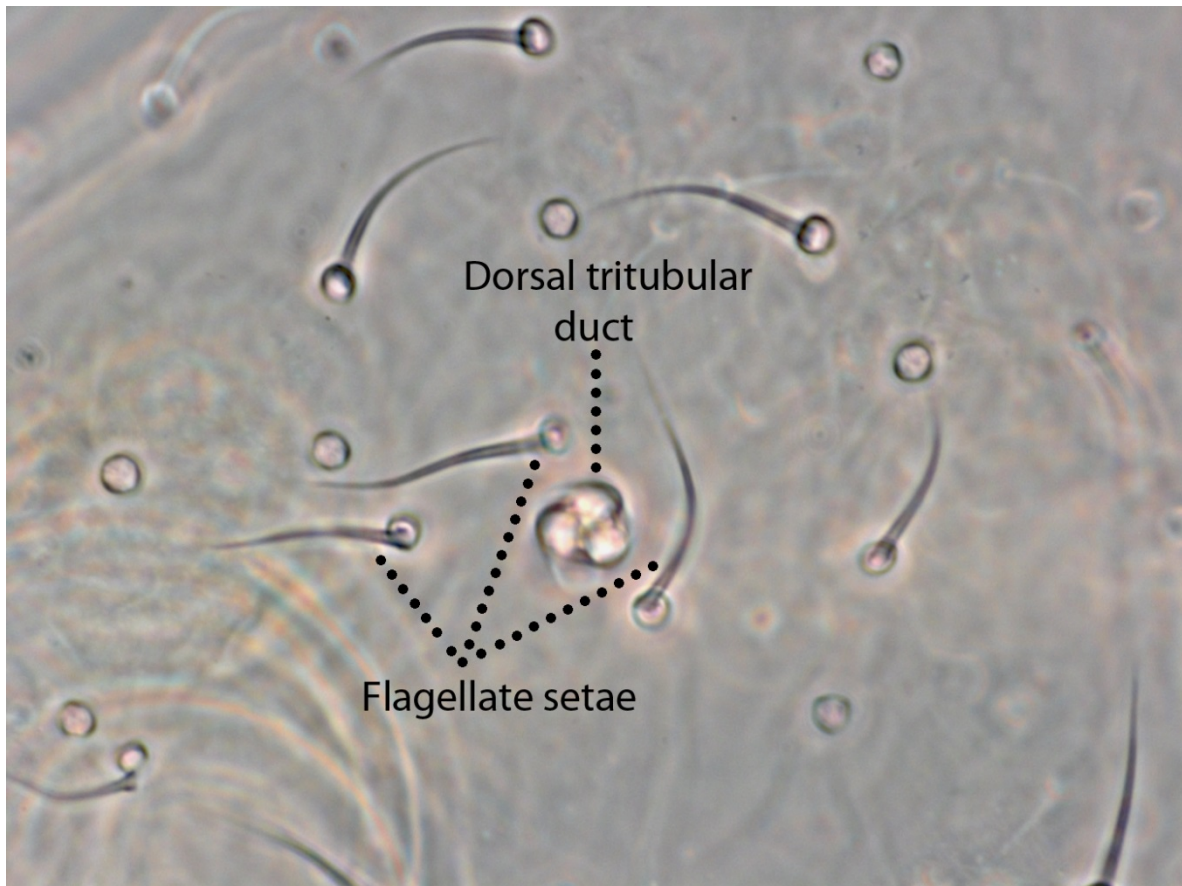
of the important factors affecting coffee production in several countries of Central and South America is directly related to the feeding of *Rhizoecus* and related mealybugs, and several species have been reported attacking other important crops such as cacao, citrus, cotton and bananas (Hambleton 1976).

The objective of this paper was to report a new species record of *Rhizoecus* for Colombia, briefly diagnose the species, listing some important features that help to differentiate it from closely related species, and to provide an updated list of all *Rhizoecus* species recorded from Colombia.

Samples of hypogeal mealybugs were collected on the roots of potted plants of *Thimus vulgaris* (Lamiaceae), in a greenhouse located at the Universidad Militar Nueva Granada in the city of Cajicá, in the department of Cundina-

marca. The mealybugs were found in high populations causing dieback of the plants. Slide-mounted specimens were prepared according to Williams & Granara de Willink's (1992) protocol with author's modifications. The mealybugs were identified as *Rhizoecus cyperalis* (Hambleton) using the morphological description of Hambleton (1946) and

the keys by Kozár & Konczné Benedicty (2007) and Williams & Granara de Willink (1992). The diagnostic features that identify *R. cyperalis* are the absence of a cephalic plate and the presence of tritubular pores on dorsum closely surrounded by 1–4 (usually 3) body setae (Fig. 1).



**Figure 1.** Dorsal tritubular duct with associated flagellate setae in *Rhizoecus cyperalis* (Hambleton) (Photo by A. Ramos).

*Rhizoecus nemoralis* (Hambleton 1946) and *R. pauciporus* Hambleton, 1976, are close to *R. cyperalis*, but they differ from the latter species by the absence of flagellate setae associated with dorsal tritubular ducts. The falcate sensory pores in the last antennal segment are

filiform in *R. cyperalis*, whereas in *R. nemoralis* and *R. pauciporus* they are clavate or slightly clavate (Hambleton 1946, 1976). In the Neotropical Region, 38 species in the genus *Rhizoecus* have been recorded, out of which 10 are known to occur in Colombia (Ben-Dov

*et al.* 2013). With the discovery of this mealybug, the total number of *Rhizoecus*

in Colombia is increased to 11 species (Table 1).

**Table 1.** Mealybug species of the genus *Rhizoecus* Künckel d'Herculeis, 1878 (Hemiptera: Rhizoecidae) reported from Colombia.

Species	References
<i>Rhizoecus americanus</i> (Hambleton)	Hambleton 1946; Williams & Granara de Willink 1992; Ben-Dov 1994; Kondo 2001
<i>Rhizoecus arabicus</i> Hambleton	Hambleton 1976; Hamon 1982; Williams & Granara de Willink 1992; Ben-Dov 1994; Kondo 2001
<i>Rhizoecus cacticans</i> (Hambleton)	Williams & Granara de Willink 1992; Ben-Dov 1994; Kondo 2001
<i>Rhizoecus caladii</i> (Green)	Williams & Granara de Willink 1992; Ben-Dov 1994; Kondo 2002
<i>Rhizoecus coffeae</i> Laing	González-Mendoza 1956; Ben-Dov 1994
<i>Rhizoecus compotor</i> Williams & Granara de Willink	Williams & Granara de Willink 1992; Ben-Dov 1994; Kondo 2002
<i>Rhizoecus cyperalis</i> (Hambleton)	Present study
<i>Rhizoecus latus</i> (Hambleton)	Williams & Granara de Willink 1992; Ben-Dov 1994; Kondo 2001
<i>Rhizoecus mayanus</i> (Hambleton)	Kondo <i>et al.</i> 2008
<i>Rhizoecus setosus</i> (Hambleton)	Hambleton 1977; Williams & Granara de Willink 1992; Ben-Dov 1994; Kondo 2001; Kondo <i>et al.</i> 2008
<i>Rhizoecus variabilis</i> Hambleton	Hambleton 1978; Williams & Granara de Willink 1992; Ben-Dov 1994; Kondo 2001; Kondo <i>et al.</i> 2008

**REPOSITORY: UNAB:** Museo Entomológico Facultad de Agronomía, Universidad Nacional de Colombia, Sede Bogotá, Bogotá, Cundinamarca, Colombia. **Material Studied:** *Rhizoecus cyperalis* (Hambleton 1946). **Colombia:** Cundinamarca, Cajicá. Universidad Militar Nueva Granada. 2565 m a.s.l., 4°56'29.65"N, 74°0'54.47"W, coll. M. Cortez, *ex* Roots of *Thimus vulgaris* (Lamiaceae), 3 specimens (UNAB).

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*Recibido octubre 8, 2013, publicado diciembre, 2013*