SCIENTIFIC NOTE

Neohydatothrips samayunkur (Kudô) (Thysanoptera: Thripidae) Infesting Marigold (*Tagetes patula*, Compositae) in Brazil

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Neohydatothrips samayunkur (Kudô) (Thysanoptera, Thripidae) Infestando Cravo-de-Defunto (*Tagetes patula*: Compositae) no Brasil

RESUMO – *Neohydatothrips samayunkur* (Kudô) (Thysanoptera: Thripidae) é registrado pela primeira vez no Brasil em cravo-de-defunto (*Tagetes patula*: Compositae), no Estado do Paraná. Os danos causados à planta, os sintomas de ataque e os hospedeiros conhecidos, assim como a caracterização dessa espécie de tripes são relatados.

PALAVRAS-CHAVE: Insecta, tripes, nova praga, introdução, caracterização, planta ornamental.

Specimens of *Neohydatothrips samayunkur* (Kudô) were collected in leaves of marigold (*Tagetes patula*) at "Horto Municipal de Guabirotuba" and at "Jardim Botânico", Curitiba, Paraná State, in 1996. This is the first record in Brazil and, according to Brazilian laws (decree 290, 15/April/1996), the authorities ("Secretaria da Defesa Agropecuária") were previously warned. Damage was visible when the third definitive leaf opens, and the thrips was mostly found on young leaves and on the leaf axils. In the nursery, attacked plants showed leaves with scarring, silvering and distortion, with leaves becoming dry in field conditions. Some plants showed purple patches on leaves, but it is not certain if this is due to thrips feeding or to a possible virus vectored by them. Flowers showed no symptoms. In the field, the presence of the pest is indicated by the distortion and purple patches on leaves. Thrips limit the growth of marigold seedlings and also adult plant development. If no control measure is adopted, plants grow less and appear unhealthy, and this is not desirable in ornamentals. Thrips occurs during all the plant's life cycle, including reproductive stage. Population density has been frequently assessed and when it reaches an empirical high level, chemical treatment with acephate (100 g product/100 l H_20) is used, giving efficient control.

It seems that *N. samayunkur* is associated with Compositae plants only of the genus *Tagetes*, although Nakahara (1999) examined specimens from Hidalgo and Michoacán

(Mexico) collected in *Bidens* sp., *Eupatorium* sp., *Salvia* sp. and grass that hardly constitute host records. Seeds used to grow *Tagetes patula* (two varieties) were imported to Brasil from Holland and Germany. It does not seem likely that thrips were in these seeds, even in a hibernating condition, and so the introduction of this pest was probably associated with human transportation.

The name of the marigold thrips has an unfortunately confusing history. Described originally by Kudô (1995) as *Hydatothrips* (*Neohydatothrips*) *samayunkur*, it was redescribed by Mound & Marullo (1996) from Costa Rica, but under the name *N. pseudoannulipes* Johansen. This name was used after comparison of the Costa Rican specimens with a Mexican specimen identified and loaned by Johansen. Furthermore, based on this Mexican specimen, Mound *et al*. (1996) treated *Hydatothrips* (*Neohydatothrips*) *samayunkur* as a synonym of *N. pseudoannulipes*. Subsequently, Nakahara (1999) recognised that the Mexican specimen involved was not the same species as Johansen's holotype specimen of *N. pseudoannulipes* from Mexico, and distinguished the two species from each other. Even before this, Tsuda & Sakimura (1988) recorded the species from Oahu (Hawaii) under yet another name, *Neohydatothrips* (*Sericothrips*) *variabilis* (see Mound *et al*. 1996), a species described from Iowa (USA) and widely associated with soybeans in North America (Stannard 1968).

The species is recorded so far in the EUA: Hawaii (Oahu) (as *Neohydatothrips* (*Sericothrips*) *variabilis*) (Tsuda & Sakimura 1988) and Florida (as *N. samayunkur*) (Nakahara 1999); Australia (Nambour, Redland, Brisbane and Gosford) (as *N. pseudoannulipes*) (Mound *et al.* 1996); Japan (Shizuoka and Okinawa) (as *Hydatothrips* (*Neohydatothrips*) *samayunkur*) (Kudô 1995); Costa Rica (San Pedro de Montes de Oca) (as *N. pseudoannulipes*) (Mound & Marullo 1996); Mexico (Hidalgo) (as *N. pseudoannulipes*) (Mound & Marullo 1996), (Hidalgo and Michoacan) (as *N. samayunkur*) (Nakahara 1999); Sri Lanka (as *N. pseudoannulipes*) (Oda *et al*. 1997) and El Salvador (quarantine interceptation) (as *N. samayunkur*) (Nakahara 1999).

N. samayunkur is bicolored yellow and brown, with the following characters: (a) banded wings (dark base and pale apex, with two dark and two pale transverse bands between them); (b) abdominal tergites with several rows of minute microtrichia laterally (Figure 1E) ; (c) transverse dark line on tergites 2-7; (d) 5-7 pairs of dark spots along the dark line on tergites 3-7; (e) pronotum with a brown blotch in the 2/3 posterior area (Figure 1B); (f) very weak reticulation within the ocellar triangle rather than transverse striation (Figure 1A).

Antenna. 8-segmented (Figure 1C).

Head. 3 pairs of ocellar setae; very weak reticulation within ocellar triangle; pos-ocellar setae 1 conspicuous; transverse striae on posterior part (Figure 1A).

Thorax. Pronotum with transversely striate sculpture and a brown blotch in the 2/3 posterior area; one pair of well developed postero-marginal setae (Figure 1B). Mesonotum with transversely striate sculpture, with lines very close. Metanotum with median setae inserted near anterior margin; sculpture transversely striate near anterior margin but longitudinal and obliquely striate in the 2/3 posterior area; no campaniform sensilla; setae about half metanotum length (Figure 1C). Wings without setae on second vein.

Abdomen. Tergites with rows of microtrichia laterally. Tergite VIII with posterior comb complete with regular and fine teeth, many discal microtrichia and a pair of well developed median setae. Tergite IX B1 setae longer than B2 and subequal to B3; no discal microtrichia (Figure 1E).

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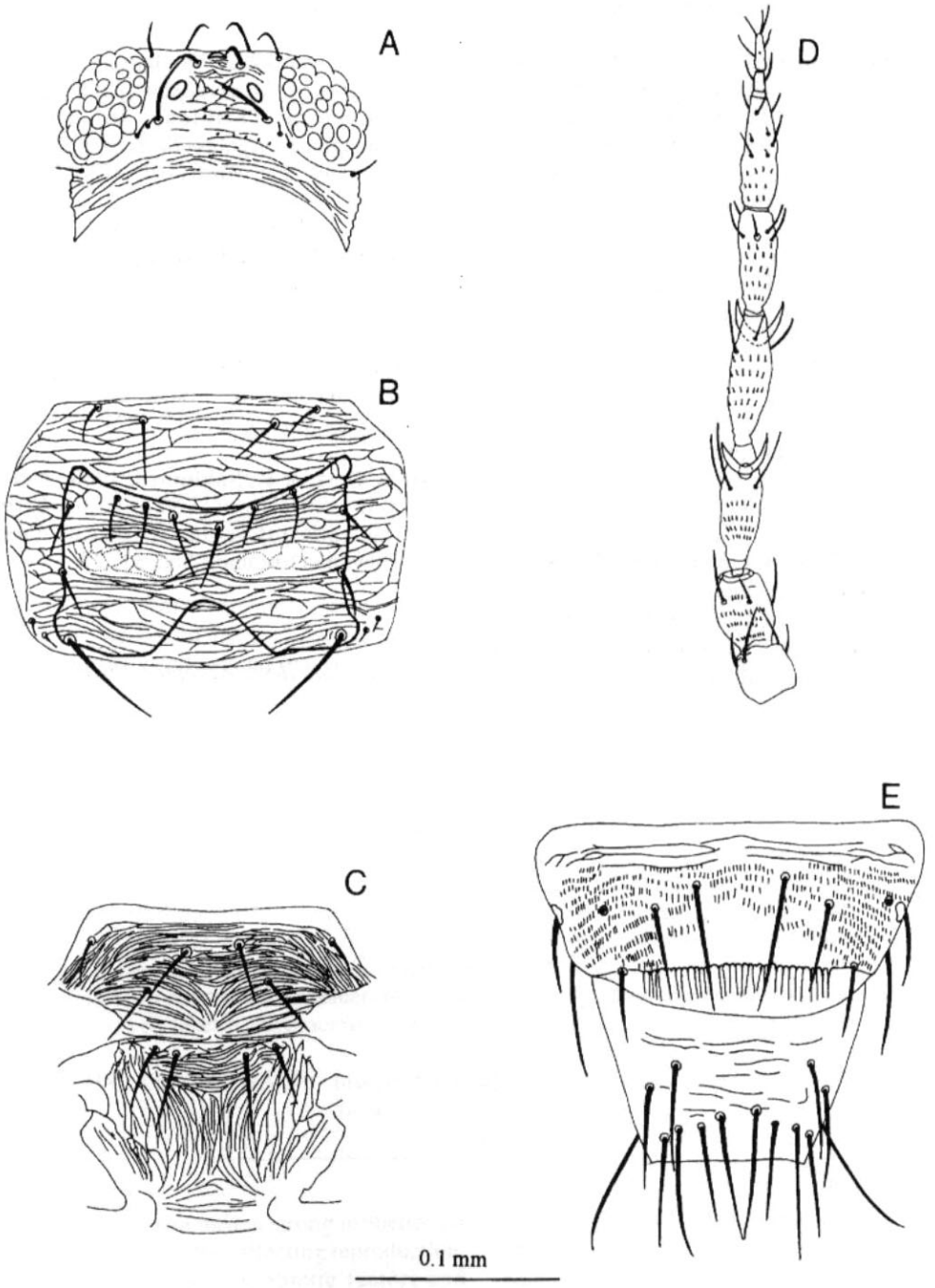

Figure 1. *Neohydatothrips samayunkur*. A. head (dorsal); B. pronotum; C. meso-metanotum; D. antenna; E. abdominal tergites VIII and IX.

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