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INHOUD: ROSITA M. BINK-MOENEN, A new whitefly of *Erica tetralix*: *Trialeurodes ericae* sp. n. (Homoptera, Aleyrodidae) (p. 17). — FER WILLEMSE, New records of Pholidoptera Wesmael from Greece (Orthopteroidea, Decticinae) (p. 20). — B. J. LEMPKE, *Caloptilia alchimiella* (Scopoli) en *Caloptilia robustella* Jäckh (Lep., Gracillariidae) (p. 26). — JEAN BELLE, Notes on *Phyllocyca elongata* (Selys in Selys & Hagen, 1858) (Odonata: Gomphidae) (p. 31). — Literatuur (p. 30: G. Kruseman). — Korte mededelingen (p. 30: Nieuwe aanwinsten voor de bibliotheek; p. 32: Ter overname).

A new whitefly of *Erica tetralix*: *Trialeurodes ericae* sp. n. (Homoptera, Aleyrodidae)

by

ROSITA M. BINK-MOENEN

A *Trialeurodes* species, which appeared to be new to science and which will be described below as *Trialeurodes ericae* was discovered by Dr. G. L. van Eynhoven and Dr. G. Kruseman near Dwingelo (Netherlands) in June 1971. During surveys in 1975 by the author, it turned out to be common throughout the Netherlands in dry and wet heaths on *Erica tetralix* L. Material has been collected in Beetsterzwaag, Fochtelo, Diever, Dwingelo, Giethoorn, Callantsoog, Ilpendam, Leersum, Veenendaal, Amerongen and Schinveld. In Diever the species was very common on *E. tetralix* in a pinewood, in Giethoorn and Veenendaal it was found in sedge meadows (*Cirsio-Molinietum*) which are mown once a year. In Callantsoog, Ilpendam and Schinveld the species was found in very small relicts of heath with a few *E. tetralix* plants.

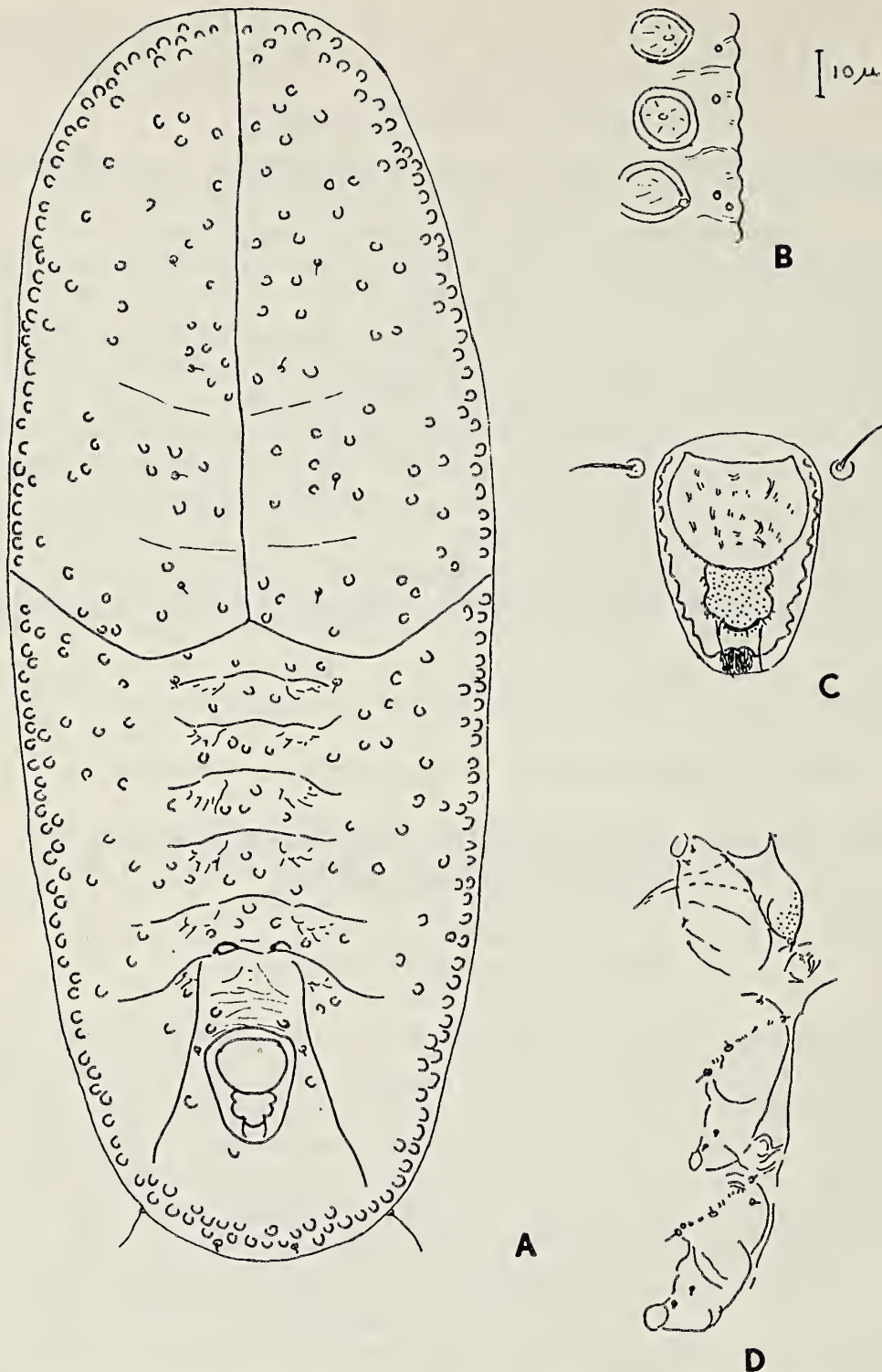
T. ericae has one generation a year. The first adults were observed in the beginning of June but in the first week of July unhatched pupal cases could still be found.

Until now only one species of whitefly was known on *E. tetralix*, viz. *Tetralicia ericae* Harrison, which is known to occur in Austria, Czechoslovakia, England and Sweden (Zahradnik, 1963). In the Netherlands this turned out to be present as a rare species; it was found by the author near Schinveld and Amerongen.

Trialeurodes ericae sp. n.

Pupal case: colour light-brown, oblong in shape, broadest across metathoracic segment. Surrounded by a high waxy palisade, anteriorly less high than posteriorly. Anterior and posterior margin with some short wax-hairs. Length ♂: 850-900 μ , ♀: 1000-1050 μ . Breadth ♂: 330-390 μ , ♀: 390-440 μ . Margin dentate, 10-15 teeth in 100 μ . Apparent margin faintly and irregularly crenulate, about 20 crenulations in 100 μ . Anterior setae not seen but posterior setae up to 45 μ in length. Tracheal pore areas not differentiated.

Dorsal surface: submargin with about 150 papillae close together in an irregular



Figs. A-D, *Trialeurodes ericae* sp. n.; A. Pupal case, B. Apparent margin with papillae, C. Vasiform orifice, D. Legs with antenna and spiracles.

single or double row. Submarginal ridges short, often faint, not passing submarginal papillae. Caudal setae distal of papillae, short, 5-15 μ , scarcely extending beyond apparent margin. Dorsal disc and subdorsum with a mosaiclike structure. Moulting suture reaching apparent margin. Disc pores developed to papillae associated with porettes. Short submedian cephalic, pro-, meso- and metathoracic setae present, 4-15 μ in length. First and eighth abdominal setae present, respectively 5-12 μ and 7-20 μ . Abdominal segments with submedian depressions. Anterior margin of segment 8 medially confluent with posterior of segment 6; seven segments visible. Segment 8 broader than 6, segments 1 and 3 to 6 equal in size, segment 2 smaller than 1. Vasiform orifice subcordate, length 1.1-1.4 times its breadth, internal lateral margin with fine irregular teeth, curving posteriorly, giving an impression of a pore between internal

and posterior margin. Operculum fills half of orifice exposing tip and two pairs of subapical lobes of lingula. Lingula with a pair of long setae, 20-30 μ in length. Operculum with horizontal and vertical markings. Caudal furrow faint.

Ventral surface: colourless with light-brown pigmented legs and antennae. Distal parts of legs with three minute setae. Meso- and metathoracic legs with a rugose band bearing two slender setae and one or more minute setae. Antennae stout, not extending beyond base of anterior legs. Tip of antennae ending in a fine seta. Thoracic spiracles well developed. Adhesive sacs present. Anterior abdominal spiracle not seen, posterior abdominal spiracles well developed. Ventral abdominal setae long and slender, 30-50 μ in length.

Adult: greyish; head, thorax and eighth abdominal segment more pigmented than remaining part of abdomen. Male and female antennae similar, segment 3 as long as total length of segments 4, 5 and 6, with three rhinaria present distally. Lingula about as long as operculum. Operculum nearly filling orifice. Male claspers with two irregular rows of long setae and two rows of smaller setae. Penis curved and about as long as claspers.

Holotype: ♀ pupal case, Netherlands, Leersum, reserve Leersumse Veld (52°02'N-5°26'E) on *Erica tetralix* L., 6.VI.1975, collector R. M. Bink-Moenen, deposited: Instituut voor Taxonomische Zoölogie at Amsterdam.

Paratypes: 2 ♀♀ and 1 ♂ pupal case on the same slide and collected with the holotype, one slide with 3 ♀♀ and 1 ♂ pupal case collected with the holotype, one slide with 1 ♀ and 1 ♂ adult emerged 8.VI.1975 from puparia collected with the holotype, all deposited in the same institute, one slide with 3 ♀♀ and 2 ♂♂ pupal cases collected with the holotype, deposited in the British Museum (Natural History), London, one slide with 2 ♀♀ and 2 ♂♂ pupal cases and one slide with 4 ♂♂ pupal cases collected with the holotype, deposited in the collection of the author.

This species is easily distinguished from all other *Trialeurodes* species by the presence of the submedian pro-, meso- and metathoracic setae. *T. bauhinae* Corbett (1935) and *T. longispina* Takahashi (1943) agree with *T. ericae* in having more than one pair of median thoracic setae but the former species have a row of submarginal setae. In my opinion it is however doubtful whether these two species belong to the genus *Trialeurodes* since the description of their vasiform orifice does not agree with *Trialeurodes*.

Russell (1947) characterizes her new "tribe" Trialeurodini, in which she included the genus *Trialeurodes*, as follows: "submedian cephalic setae present but submedian thoracic setae absent". Although *T. ericae* does not agree with *Trialeurodes* in this respect, all other characteristics viz. form and place of vasiform orifice, the lingula having three pairs of lateral lobes and an unpaired terminal one, and the absence of anterior abdominal spiracles are typical for the genus *Trialeurodes*.

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