

✕ On three Jassidae of Arachis hypogaea in Java ✕
 by
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During the years 1953 and 1954 a study was made of the leafhoppers of groundnuts in the vicinity of Bogor, West Java. Three species proved to be of special importance as pests of this crop. Their bionomics and economic importance are discussed in a separate paper. In the present contribution one of these leafhoppers is described as a new species of the genus *Empoasca*. The other species were known from Ceylon and Australia respectively, but not from Java. Since it is desirable to fix the identity of the Javanese specimens, drawings are given here of their wing venation, the male genitalia, etcetera, accompanied by some notes.

In the preparation of the male genitalia a technique was used similar to that described by DELONG (1931). The genital chamber was cleared by heating the tips of the abdomen of the males in potassium hydroxyde 20% for a few minutes. After thorough washing in distilled water they were mounted in Fauré's mounting fluid. The slides were kept in a desiccator until the gum arabic had hardened sufficiently and then the coverglass was sealed with Thorne's ZUT or another sealing medium.

Because it is important to draw the genitalia in their natural position, slides with a hollowed centre were always used in order to prevent pressing by the coverglass. The genital chamber was only dissected when some details had to be drawn.

All drawings were made with a camera lucida, as were those of the leafhoppers in dorsal view and details as the face, tegmen etcetera, and they were rechecked several times with an ocular micrometer.

***Empoasca sundaica* spec. nov.**

Colour of living specimen: yellowish green with variable and asymmetric pale spots on vertex (along coronal suture, around ocelli and near eyes), pronotum (near the anterior margin) and on scutellum (a more or less marked H-shaped spot in the middle extending till below and visible through posterior part of pronotum, along posterior margins and a triangular spot in the centre). These spots are caused by the body contents which are visible through the integument. Eyes white with a dark spot; basal two thirds of elytra yellowish green, translucent; face, abdomen and legs yellowish green; claws red.

Colour of dried specimen: more brownish yellow, sometimes greenish; pale spots less marked or absent; eyes dark red.

Length 3.0 mm.

Vertex roundly produced, almost $1\frac{1}{2}$ times as wide between the eyes as length at middle (22 : 16); coronal index according to LOWER = 29; coronal suture incomplete.

Pronotum about as long as width between the eyes and about twice as broad as long. Scutellum about as long as pronotum and slightly broader at base than long.

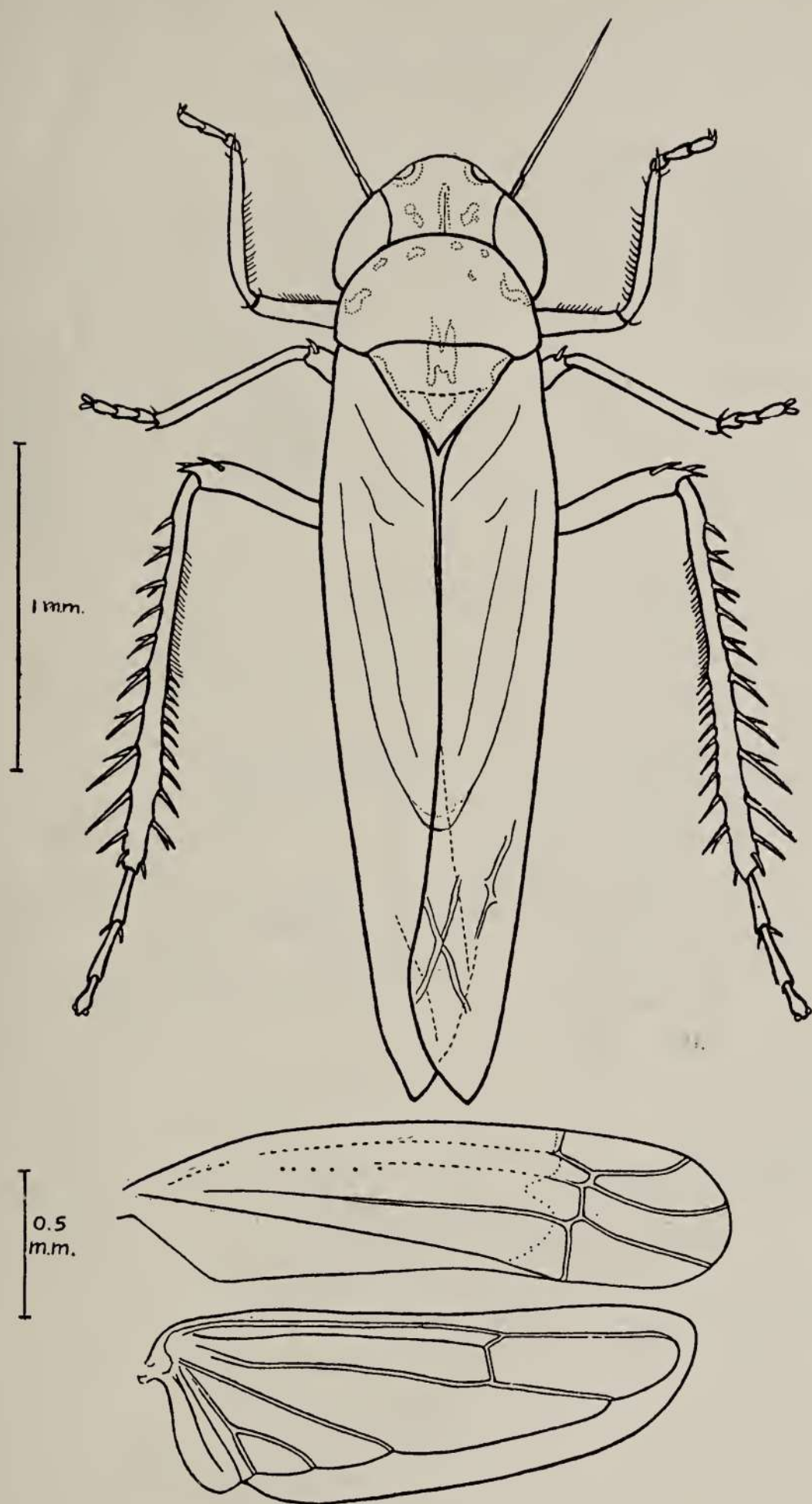


Fig. 1. *Empoasca sundaica* spec. nov. General view, tegmen and wing.

Wings: basal two thirds of tegmen thickened with indistinct venation, apical third hyaline; hind wings hyaline.

Male genitalia (fig. 2, d—h). Subgenital plate long and slender, in profile somewhat narrowed in the middle; apically upturned, with many stout bristles and flagellate hairs and a row of short hairs along upper apical margin.

Styles in ventral view curved inward at about half their length and narrowed with the apices slightly diverging; in lateral view rather stout and suddenly narrowed at the apex, which is provided with a varying number (5—10) denticles

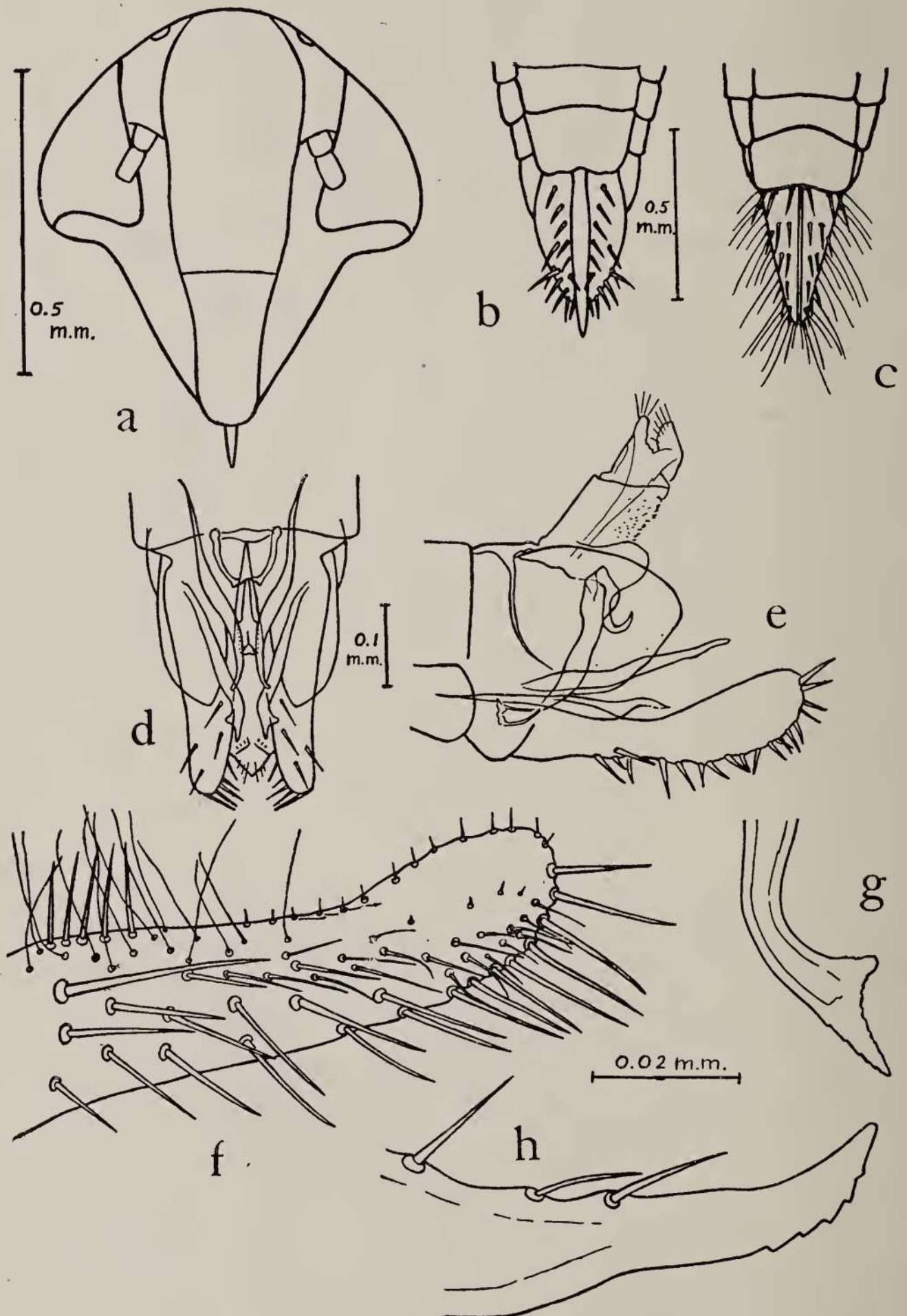


Fig. 2. *Empoasca sundaica* spec. nov. (a) face; (b) female, external genitalia, ventral view; (c) male, do.; (d) internal male genitalia, ventral view; (e) do., lateral view; (f) tip of subgenital plate; (g) do. of lateral process of pygofer; (h) do. of style.

and 3 stout bristles. Lateral processes of pygofers in ventral view converging, near apex strongly curved outwards and here with a tooth on the outer side; in lateral view long and slender and gently tapering. Spine of tenth segment with a broad base and hooked backward and slightly inward into genital chamber.

Female genitalia. Last ventral segment about $1\frac{1}{2}$ times as long as preceding segment, truncate at end, posterior margin almost straight.

Holotype male, allotype female, both in "Rijksmuseum van Natuurlijke Historie", Leiden. Paratypes: in coll. Division of Entomology, Faculty of Agriculture, Bogor; in Museum Zoologicum, Bogor; in U.S. National Museum and in British Museum.

Type locality: Bogor, West Java, November 1954, "on *Arachis hypogaea*".

Erythronaura tripunctula (Melich.)

The description of *Typhlocyba tripunctula* Melich. was cited by DISTANT in the "Fauna of Br. India", 4: 415:

"A very small delicate cicadine of a pale lemon-yellow colour; vertex acutely angulate; face pale yellowish, eyes greyish white; in middle of vertex a pale longitudinal line, within which in the nape a short depressed line is visible; pronotum as long as vertex, semicircular; scutellum with several indistinct longitudinal spots and an impressed transverse line; tegmina extremely delicate with very delicate veins, pale lemon-yellow, and with three small sanguineous spots of which the largest and most distinct is on the transverse veins, a smaller one on the tip of the clavus and another on the costal margin behind the middle; middle apical cell narrow; wings hyaline, vitreous; body beneath and legs white (Melichar).

Length of female $1\frac{1}{2}$ mm."

Specimens collected in West Java do not agree with MELICHAR'S description in the following details: length of female measured from vertex to wingtips: 2.3 mm., and measured from vertex to tip of abdomen: 1.8 mm.; number of sanguineous spots on the tegmen not always three, but varying from one to six, often not completely sanguineous but brownish or even hardly visible. The three most conspicuous spots are, if present, situated as described by MELICHAR.

Dr. DLABOLA of the Narodni Museum in Prague, Czechoslovakia, was so kind to compare some of my material with MELICHAR'S type specimen (female) of *T. tripunctula*, present in the collection of the Moravian Museum at Brno (Brünn). He found complete identity in all details except in the colour of the tip of the abdomen, which is green in the type specimen but sanguineous in my material. Examination of this character in a large number of specimens revealed, that the red colour at the tip of the abdomen may be faint or even entirely lacking. Apparently this feature is as variable as the number of spots on the tegmen.

For this reason I prefer to regard the Javanese specimens from groundnuts as identical with *Typhlocyba tripunctula* Melich. However, it is desirable to compare them with material from Ceylon, MELICHAR'S type locality, because the Javanese form may represent a different subspecies.

Orosius argentatus (Evans).

This leafhopper was described by EVANS as *Thamnotettix argentata* (*Proc. Royal Soc. Tasmania* for 1938, p. 15, 1939). Since this paper is not available in Indonesia, I give EVANS' description as cited by HELSON (1942):

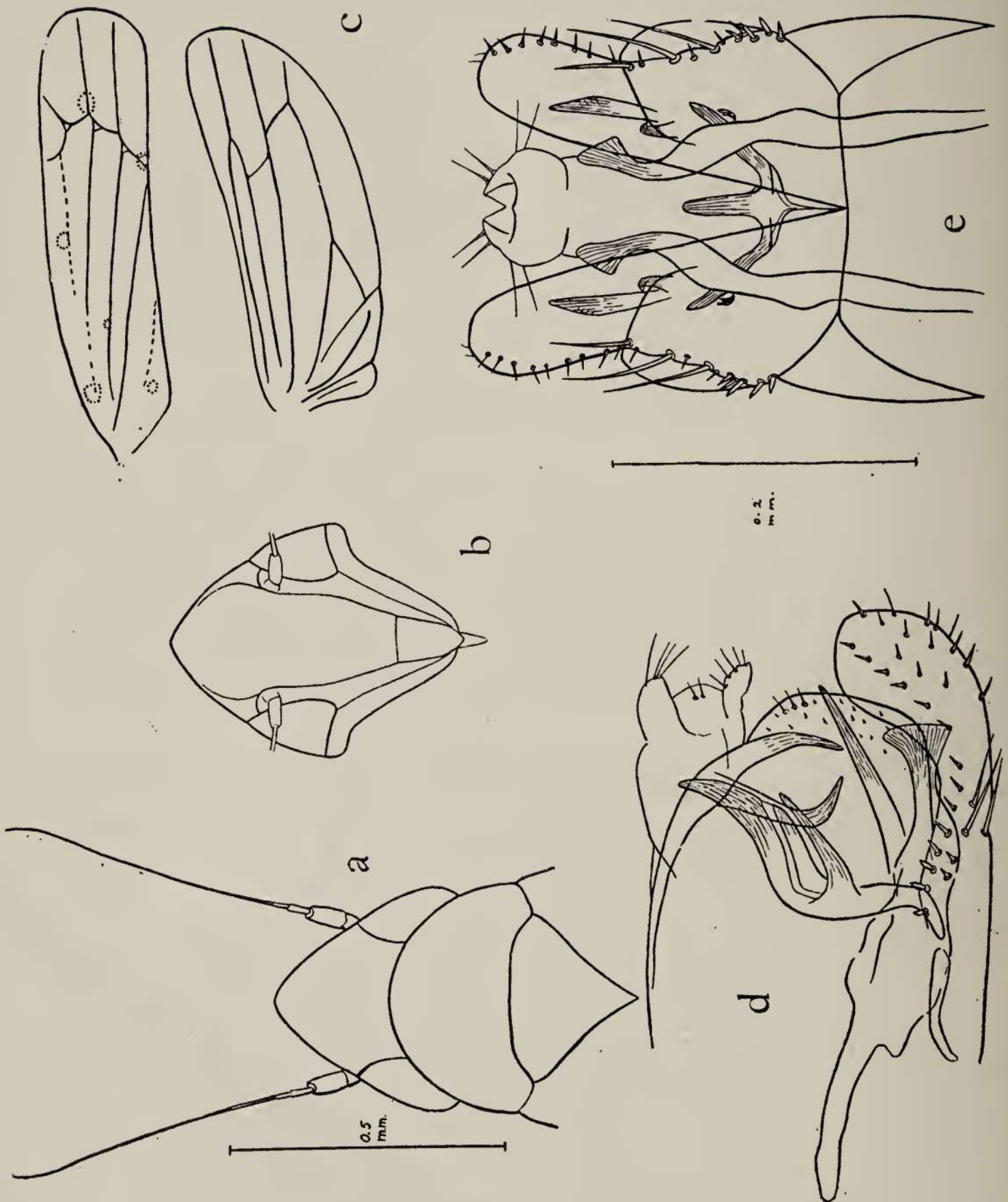


Fig. 3. *Erythronera tripunctula* (Melich.). (a) head, pronotum and scutellum; (b) face; (c) tegmen and wing; (d) internal male genitalia, lateral view; (e) do., ventral view.

"Length of female 3.2 to 3.5 mm.; length of male 2.9 to 3.0 mm. Head pale yellow, marked with an irregular dark-brown pattern; eyes dark-brown. Pronotum, anterior third pale yellow, posterior two-thirds grey, flecked with transverse dark-brown markings. Scutellum, yellow, but for the apex, which is dark brown. Tegmen, hyaline, with a silvery appearance, due to the sheen of the underlying wings, patterned with an irregular network of dark-brown markings. Thorax and abdomen ventral surface, pale yellow with scattered dark-brown markings".

In the specimens from Bogor the colour varies from pale yellow to reddish brown. Also the number of the dark-brown markings in EVANS' description and

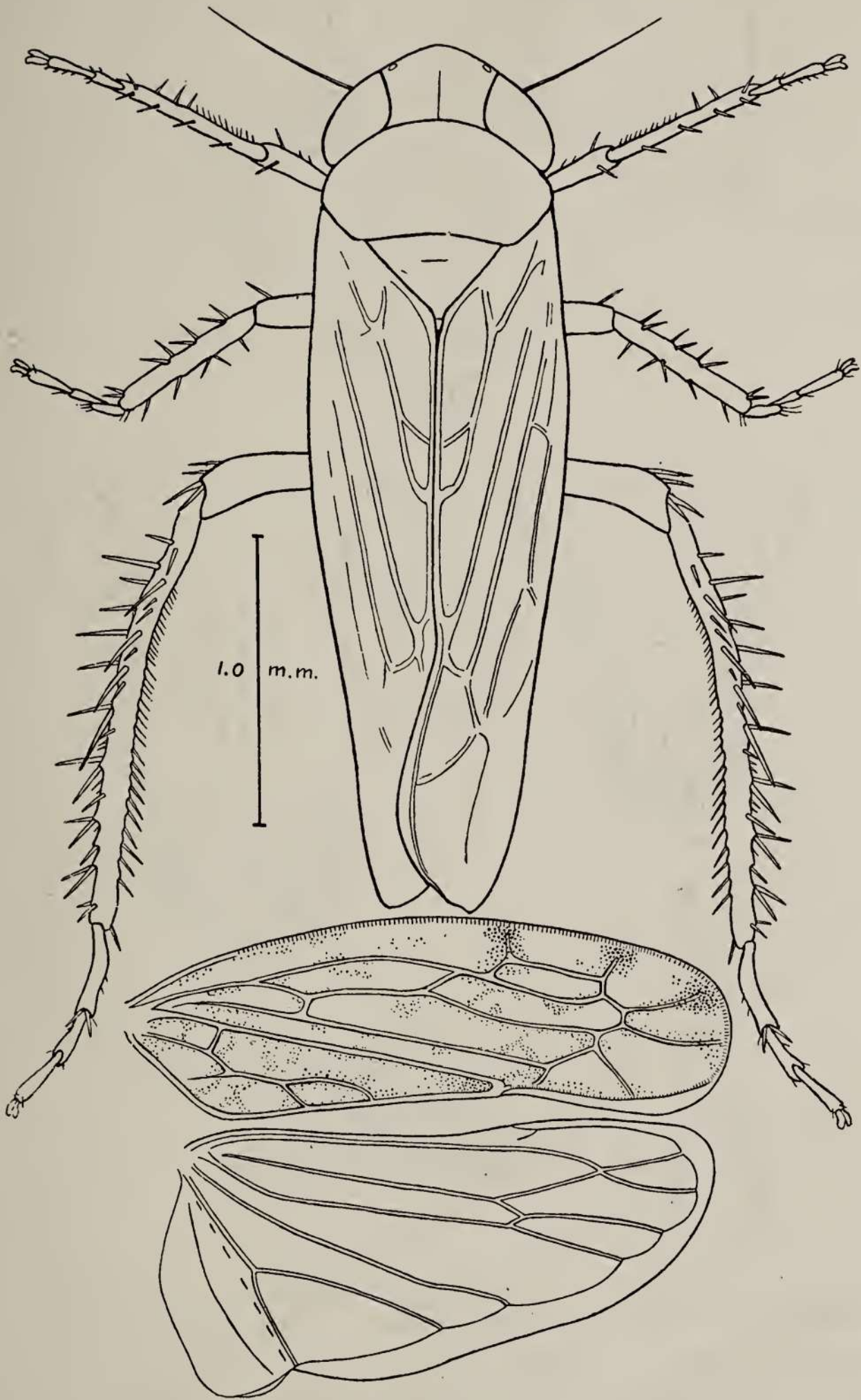


Fig. 4. *Orosius argentatus* (Evans). General view, tegmen and wing.

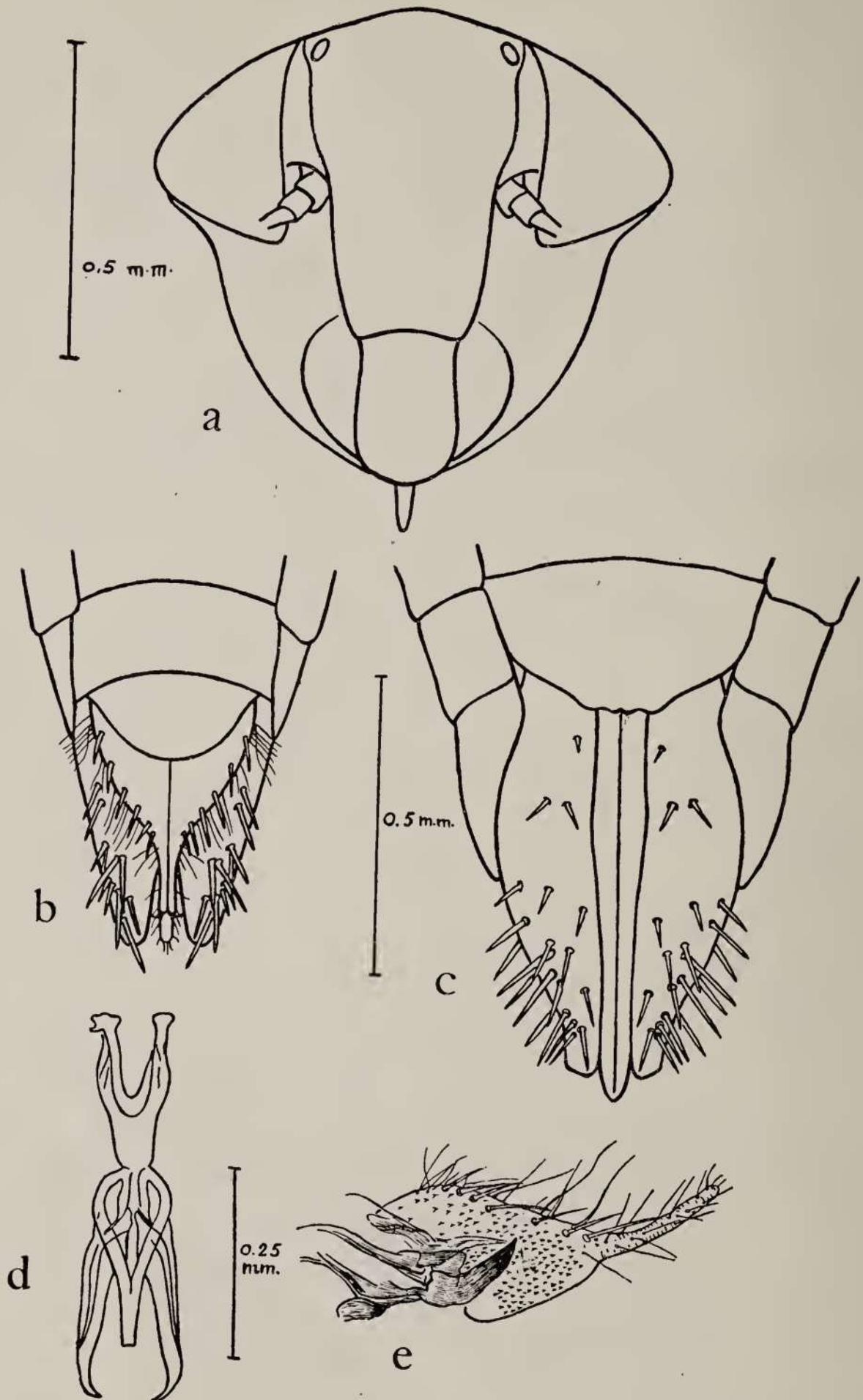


Fig. 5. *Orosius argentatus* (Evans). (a) face; (b) external male genitalia, ventral view; (c) external female genitalia, do.; (d) aedeagus; (e) right subgenital plate and stylus.

the intensity of the colour of these markings vary greatly, the latter from greyish-brown to almost black, especially on the ventral surface of the abdomen. Often the more reddish specimens bear less dark markings. However, in all specimens examined no differences could be found in the genitalia of the males and therefore I am sure that we are dealing with a single species.

Dr. EVANS was so kind to compare some specimens I sent him with material present in the British Museum and he assured me that they were in fact the same species as described by him.

References

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- LOWER, H. F., 1952, A revision of Australian species previously referred to the genus *Empoasca* (Cicadellidae, Homoptera). *Proc. Linn. Soc. N.S.W.* 76 : 190—221.
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Vlindertrek

door

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Nog korte tijd en we kunnen de eerste immigranten weer hier verwachten. Tenminste, als alles normaal verloopt. Maar dat is nu juist dit jaar de vraag. Onze Atalanta's en Gammauilen, om nu maar de meest bekende trekvlinders te noemen, zijn ongetwijfeld afkomstig uit de gebieden om de Middellandse Zee. Maar tot ver in het zuiden heeft de zeer koude winter dit jaar huis gehouden. Wat zal er in Zuid-Frankrijk, Italië en een groot deel van Spanje van de daar aanwezige dieren over gebleven zijn? Het is zeker niet uitgesloten, dat deze gebieden eerst vanuit nog zuidelijker gelegen streken bevolkt moeten worden en dat er pas na ontwikkeling van een nieuwe generatie voorraad genoeg is voor emigratie naar het noorden. Het is dus heel goed mogelijk, dat de trekkers hier wel komen (ongetwijfeld zal dit gebeuren), maar later dan anders. Dank zij onze goed functionerende trekvlinderdienst hebben we nu eens een prachtige gelegenheid om nauwkeurig na te gaan, hoe de immigratie hier na zo'n enorme koudeperiode zal verlopen. Nu, nog meer dan in andere jaren, komt het er op aan, nauwkeurig te noteren. Niet u maar tevreden stellen met vage algemene opmerkingen, maar juiste data en aantallen! Vele helpers doen dat trouwens al op een uitstekende manier. Elke keer, als ik uit De Bilt het pak kaarten ontvang, verheug ik me weer over het enthousiasme van de medewerkers, die voor al hun moeite toch zelden of nooit een persoonlijk bedankje krijgen (waar zou ik de tijd vandaan moeten halen?), en eigenlijk alleen maar waarnemen en noteren om het plezier, dat hun zulk werk verschaft.

Er zijn de laatste jaren nogal wat nieuwe vlindermensen lid van onze vereniging geworden. Meestal stuur ik zo'n slachtoffer dadelijk een verzoek mee te helpen met het trekvlinderonderzoek. Maar soms ontsnapt er een, doordat ik geen tijd heb om te schrijven. Mocht er dus onder de lezers nog iemand zijn, die het niet alleen leuk vindt om het trekverslag te lezen, maar er ook graag aan mee wil helpen, laat die dan even een briefkaart sturen naar het K.N.M.I. te De Bilt, Afdeling Landbouwmeteorologie, en vragen om toezending van kaart F, zo mogelijk ook met de erbij behorende aanwijzingen.

Behalve de vraag, hoe de reactie van de immigranten dit jaar op de koude-