

Henryk SZELEGIEWICZ

Notes on some aphids from Vietnam, with description of a new species
(Homoptera, Aphidodea)

Uwagi o niektórych mszycach z Wietnamu, wraz z opisem nowego gatunku
(Homoptera, Aphidodea)

Заметки о некоторых тлях из Вьетнама вместе с описанием нового вида
(Homoptera, Aphidodea)

[With 19 figures in the text]

No special studies on the aphid fauna of Vietnam have been published. The material on which the present paper is based was collected in 1966 by Dr. R. BIELAWSKI and Dr. B. PISARSKI during their stays in the Vietnam People's Republic and consists of 45 samples which contain 23 aphid species. All these specimens are preserved in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

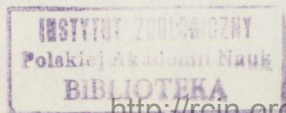
Thanks are due to Dr. R. BIELAWSKI and Dr. B. PISARSKI for making this collection available to me for study and to Dr. V. F. EASTOP for checking some specimens and for information on the distribution of *Hysteroneura setariae* (THOM.). Thanks are also due to Dr. D. HILLE RIS LAMBERS for help in the identification of a great part of the collection and for valuable information.

LIST OF SPECIES IN ALPHABETICAL ORDER

1. *Aiceona litseae* BASU et H.R.L.

Cúc Phúông, prov. Ninh Binh, June 11, 1966, on *Litsea monopetana* — apterae.

This little known aphid, which was recently described from India, was found in a great number on the petioles of leaves of its host and was attended by ants. The specimens are in life strongly powdered with wax, but under the wax they are greenish yellow. After HILLE RIS LAMBERS they (in lit.) differ from the types only in slightly shorter antennal hairs.



2. *Aphis craccivora* KOCH

Co Loa, 20 km. NO Hanoi, May 6, 1966, on *Arachis hypogaea* and *Lablob vulgaris* — apterae; May 12, 1966, on *Arachis hypogaea* — apterae and alatae; Yen So, 10 km. S Hanoi May 20, 1966, on undetermined *Leguminosae* — apterae and alatae; Mai Dich, 10 km. W Hanoi, May 26, 1966, on *Sesbania aculeata* — apterae and alatae; Cúc Phường, prov. Ninh Binh, June 9, 1966, on *Desmodium* sp. — apterae.

Widely spread over the world mostly on *Leguminosae*. In Vietnam very abundant and may have economic importance as a pest of agricultural *Leguminosae* and probably as a vector of the groundnut rosette virus.

3. *Aphis gossypii* GLOVER

Co Loa, 20 km NO Hanoi, May 6, 1966, on undetermined plant — apterae and alatae; Mai Dich, 10 km W Hanoi, May 25, 1966, on *Psidium guajacum* and *Solanum indicum* — apterae and alatae.

Spread all over the world on a very great number of plants of various families. Recorded as a vector of many virus diseases.

4. *Aphis spiraeicola* PATCH

Yen So, 10 km. S Hanoi, May 20, 1966, on undetermined plant — apterae and alatae; Cúc Phường, prov. Ninh Binh, June 6, 1966, on *Crassocephalum crepidioides* — apterae; Thang Ha, prov. Hòa Binh, June 12, 1966, on undetermined plant — apterae and alatae.

This species, which was described from North America, is widely distributed in South America, South Eastern Asia, New Zealand, Australia, South Africa and Southern Europe. In South Eastern Asia it was better known as *Aphis malvoides* VAN DER GOOT or was sometimes confused with *Aphis pomi* DE GEER. The latter is a distinct northern species, differing by its longer last rostral segment and some other characters.

5. *Astegopteryx ?bambusae* (BUCKT.)

Co Loa, 20 km. NO Hanoi, May 6, 1966 — apterae and 1 alata; May 11, 1966 — numerous apterae; both samples were taken from the leaves of an undetermined bamboo and were attended by ants.

There was much confusion in the past in using the name "*bambusae*" and many authors have applied this name to the aphid now known as *Pseudoregma bambusicola* (TAKAH.). Both species were recently redescribed by DONCASTER (1966) upon a material from BUCKTON'S collection from India and Ceylon. As the variation of this species is very little known I add a detailed description of specimens at my disposal.

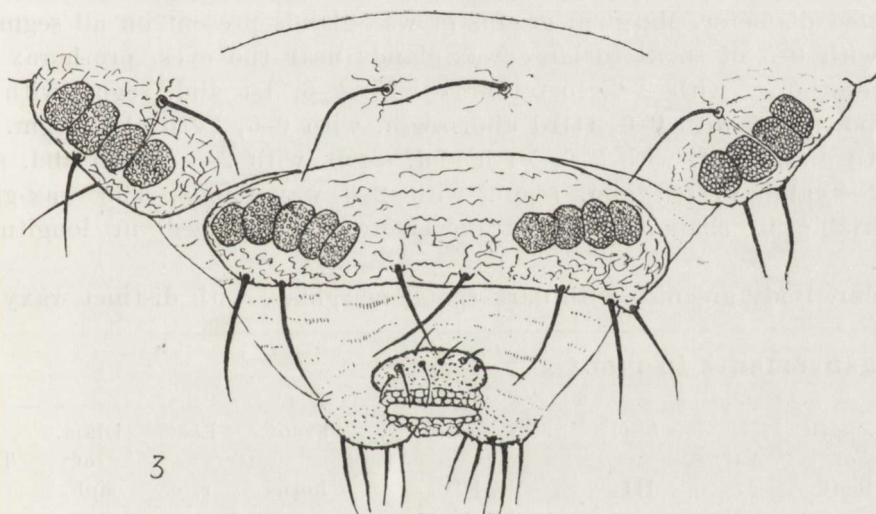
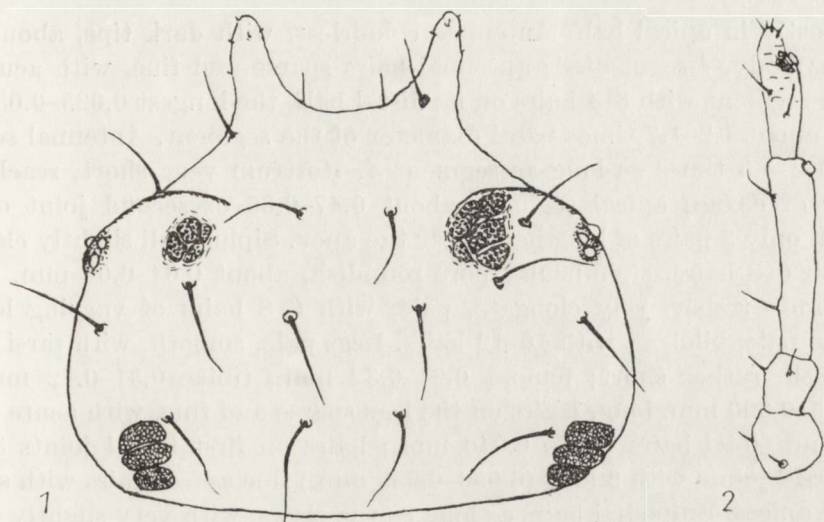


Fig. 1-3. *Astegopteryx bambusae* (BUCKT.), apterous viviparous female: 1 - head and prothorax, 2 - antenna, 3 - hind part of abdomen.

Apterous viviparous female

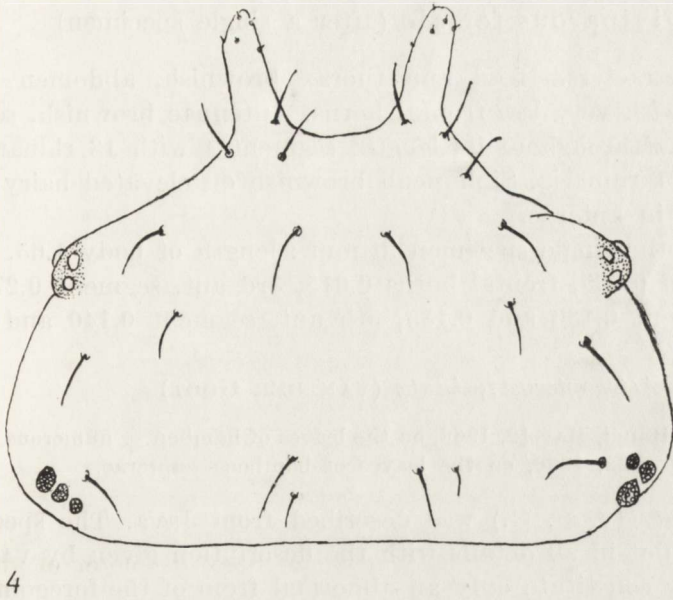
Morphological characters. Body broadly pear-shaped, 1.27-1.52 mm. long. Dorsum membranous, colourless and smooth. Head fused with pronotum, smooth; frontal horns 0.060-0.080 mm. long, expanded at base, slightly tapering to the rounded tips, smooth and bearing about 9-12 very short hairs

placed mostly in apical half. Antennae colourless, with dark tips, about 0.17–0.27 times body, 4-segmented; antennal hairs sparse and fine, with acute apices; third segment with 3–4 hairs on its distal half, the longest 0.025–0.035 mm. long and about 1.2–1.7 times basal diameter of the segment. Antennal segment 3 about 1.2–1.5 times as long as segment 4. Rostrum very short, reaching to first pair of coxae; apical segment about 0.47–0.66 of second joint of hind tarsi, with only 3 pairs of long hairs near the apex. Siphunculi slightly elevated, dark, with 6–8 hairs, siphuncular pore roundish, about 0.04–0.06 mm. in diameter. Cauda transversely elongate, pale, with 6–8 hairs of varying lengths. Anal plate pale, bilobed, with 10–12 hairs. Legs pale, smooth, with tarsi smoky to brownish, rather short; femora 0.24–0.32 mm., tibiae 0.31–0.42 mm. and tarsi 0.075–0.090 mm. long. Hairs on the legs sparse and fine, with acute apices, femoral and tibial hairs up to 0.040 mm.; hairs on first tarsal joints 3, 2, 2; second tarsal joints with 2 long (0.050–0.055 mm.) fine apical hairs with slightly expanded apices. Empodial hairs as long as the claws, with very slightly expanded apices. Dorsal hairs fine, with acute apices; head with about 8 hairs, which are 0.050–0.070 mm. long and about 2.5–5.6 times basal diameter of antennal segment 3; those on the anterior abdominal tergites up to about 2.5–3.0 times the mentioned diameter; tergite VIII with 4–7 hairs up to 3.2–4.0 times the mentioned diameter. Marginal groups of wax-glands present on all segments: Head with 0–5 of small to large wax-glands near the eyes, prothorax with 2–5, mesothorax with 2–6, metathorax with 2–6, Ist abd. segm. with 2–6, IInd abd. segm. with 0–6, IIIrd abd. segm. with 0–6, IVth abd. segm. with 4–7, Vth abd. segm. with 2–6, VIth abd. segm. with 2–5, VIIth abd. segm. with 2–4 and VIIIth abd. segm. with 2–6 wax-glands. The wax-glands are variable in shape, mostly transversely oval, placed in longitudinal groups.

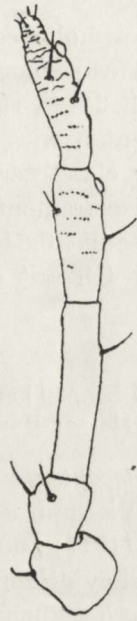
Colour. Body greenish with dark spots; marginally with distinct waxy fins.

Measurements in mm.:

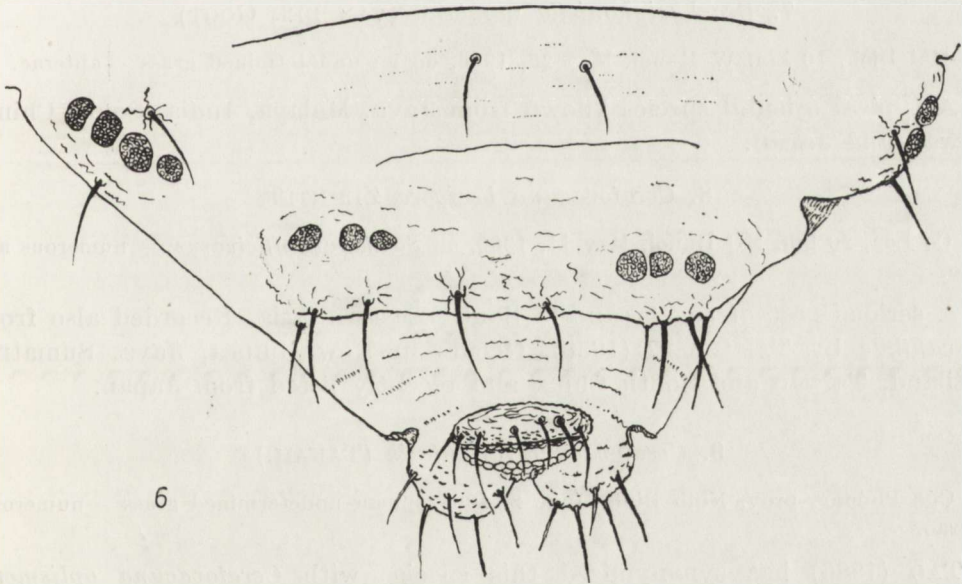
No.	Length of body	Ant. Ant.	Ant. segments		Front. horns	Last r. s.	Diam. of siph.	Tars.
			III	IV				
1	1.48	0.295	0.120	0.070+0.020	0.075	0.050	0.050	0.085
2	1.30	0.290	0.130	0.065+0.020	0.065	0.050	0.045	0.075
3	1.40	0.290	0.120	0.065+0.020	0.070	0.040	0.050	0.085
4	1.50	0.260	0.100	0.065+0.020	0.060	—	0.050	0.075
5	1.37	0.370	0.160	0.085+0.025	0.080	0.050	0.060	0.090
6	1.52	0.365	0.165	0.080+0.025	0.070	—	0.050	0.085
7	1.30	0.350	0.170	0.065+0.025	0.075	0.045	0.050	0.090
8	1.35	0.365	0.170	0.080+0.025	0.075	—	0.050	0.090
9	1.41	0.265	0.095	0.065+0.020	0.070	—	0.040	0.075
10	1.27	0.280	0.115	0.065+0.020	0.060	0.045	0.045	0.075



4



5



6

Fig. 4-6. *Astegopteryx? minuta* (v. D. G.), apterous viviparous female: 4 — head and prothorax, 5 — antenna, 6 — hind part of abdomen.

Alatae viviparous female (after a single specimen)

Morphological characters. Head and thorax brownish, abdomen colourless. Head smooth, with very low frontal horns. Antennae brownish, segment 3 with 27–28 rhinaria throughout its length, segment 4 with 13 rhinaria and segment 5 with 10–11 rhinaria. Siphunculi brownish on elevated hairy cones. Other characters as in apterae.

Measurements of the single specimen in mm.: length of body 1.65, length of antenna 0.645 and 0.665, frontal horns 0.015, 3rd ant. segment 0.275 and 0.300, 4th ant segment 0.130 and 0.135, 5th ant. segment 0.140 and 0.145.

6. *Astegopteryx ?minuta* (VAN DER GOOT)

Co Loa, 20 km. NO Hanoi, May 12, 1966, on the leaves of bamboo — numerous apterae and 3 alatae; Hanoi, May 22, 1966, on the leaves of bamboo — apterae.

Astegopteryx minuta (v. D. G.) was described from Java. The specimens from Vietnam agree not in all details with the description given by VAN DER GOOT (1917) and may constitute only an abnormal form of the foregoing species. They differ from my material of *A. bambusae* (BUCKT.) by the yellow colour in life, 5-segmented antennae, which are about 0.27–0.30 times body and by smaller and more rounded wax-glands, which are mostly well separated from each other, as well as by the lack of the wax-glands groups on the head and, sometimes, on one side of some abdominal segments too.

7. *Brachysiphoniella montana* (VAN DER GOOT)

Mai Dich, 10 km. W Hanoi, May 25, 1966, on an undetermined grass — apterae.

A typical oriental species known from Java, Malaya, India, South China, Taiwan and Japan.

8. *Ceratovacuna lanigera* ZEHNTER

Co Loa, 20 km. NO Hanoi, May 11, 1966, on *Saccharum officinarum* — numerous apterae.

A serious pest of sugar cane in South Eastern Asia. Recorded also from *Miscanthus* by TAKAHASHI (1958). Occurs in New Guinea, Java, Sumatra, Thailand, Taiwan and South China and recently listed from Japan.

9. *Ceratovacuna ?orientalis* (TAKAH.)

Cúc Phúông, prov. Ninh Binh, June 2, 1966, on an undetermined grass — numerous apterae.

TAO (1966) has synonymized this species with *Ceratovacuna oplismeni* (SHINJI), but this may be not true. After TAKAHASHI (1958) *C. oplismeni* (SHINJI) is identical with *C. nekoashi* (SASAKI) a heteroecious species which

is not very rare in Japan and Korea. My material of this species from North Korea differ from the specimens from Vietnam by shorter, 4-segmented antennae, longer frontal horns, by shorter dorsal hairs, the presence of wax-glands on the head and by more numerous wax-glands on the VIIIth abdominal tergite [32-36 in *C. nekoashi* (SASAKI) and only 22-29 in *C. orientalis* (TAKAH.)]. *C. orientalis* (TAKAH.) is nearly related to *C. graminum* (V. D. G.), but the latter

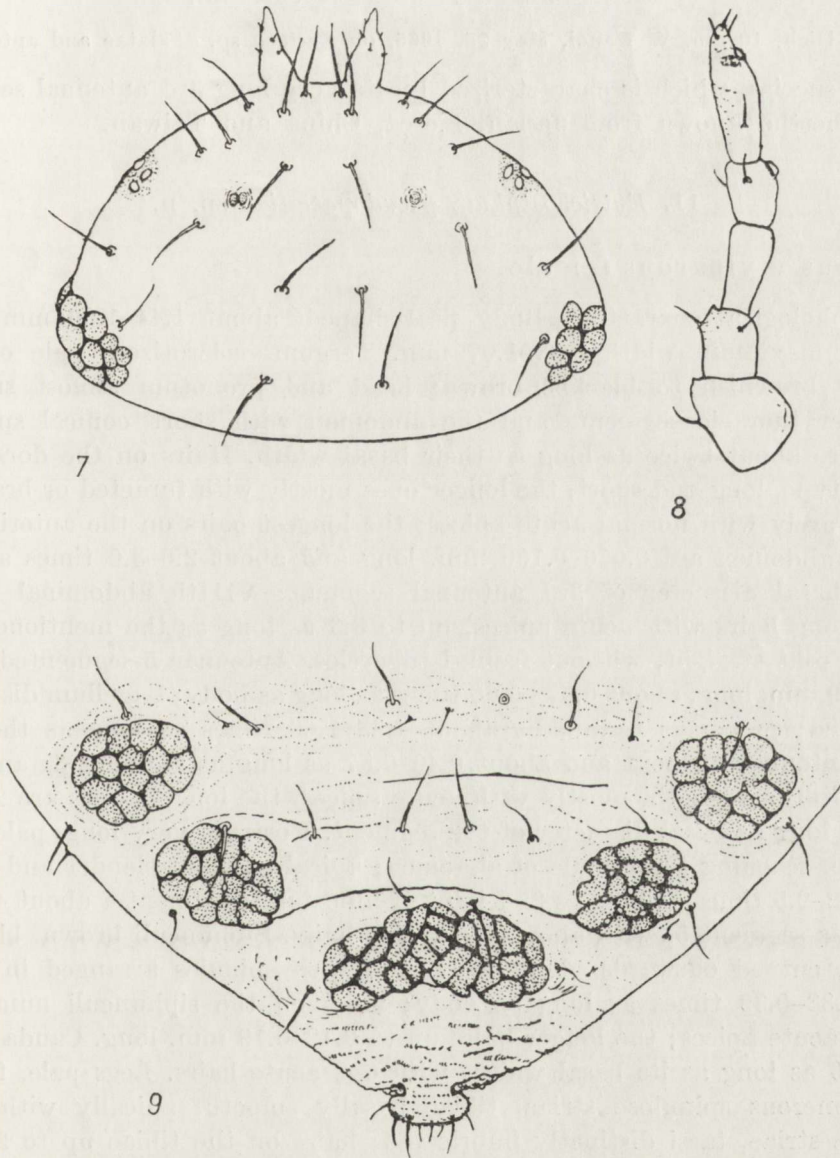


Fig. 7-9. *Ceratovacuna orientalis* (TAKAH.), apterous viviparous female: 7 - head and prothorax, 8 - antenna, 9 - hind part of abdomen.

has a longer rostrum and more numerous (up to 35–40) wax-glands on the VIIIth tergite. In the latter character it resembles more *C. nekoashi* (SASAKI) than *C. orientalis* (TAKAH.). A third very nearly related species is *C. oplismeni* TAKAH. from Taiwan. It is quite likely that it is identical with *C. orientalis* (TAKAH.), but the name is preoccupied by *C. oplismeni* (SHINJI).

10. *Dactynotus formosanus* (TAKAH.)

Mai Dich, 10 km. W Hanoi, May 25, 1966, on *Lactuca* sp. — alatae and apterae.

The species, which is characterized by its very long 3rd antennal segment, was hitherto known from Japan, Korea, China and Taiwan.

11. *Eutrichosiphum pseudopasaniae* sp. n.

Apterous viviparous female

Morphological characters. Body pear-shaped, about 1.44–1.90 mm. long, with as maximum width 0.83–1.07 mm. Tergum sclerotized, pale or only laterally brownish to blackish-brown; head and pronotum almost smooth, the other thoracic segments and the abdomen with short conical spinules, which are about twice as long as their basal width. Hairs on the dorsum of various type, long and short, the longer ones mostly with furcated or branched apices, rarely with normal acute apices; the longest hairs on the anterior tergites of abdomen are 0.070–0.100 mm. long and about 2.0–3.0 times as long as the basal diameter of 3rd antennal segment; VIIIth abdominal tergite with 2 long hairs with acute apices, up to 3.3 as long as the mentioned diameter. Front straight, without frontal tubercles. Antennae 5-segmented, pale, 0.88–1.19 mm. long, about 0.57–0.66 times as long as body; flagellum distinctly imbricated; processus terminalis about 1.33–1.66 times as long as the base of 5th antennal segment and about 0.40–0.57 as long as segment 3; antennal hairs of various length, mostly with acute apices, the longest ones are 2.1–3.1 times as long as basal diameter of the segment. Rostrum very long, pale, with black tip, reaching the middle of abdomen; apical segment slender and acute, about 2.2–2.5 times as long as 2nd joint of hind tarsi; segment 4 about 4.1–6.3 as long as segment 5, with about 12–14 fine hairs. Siphunculi brown, blackish at apex, curved outwards, densely covered with spinules arranged in rings, about 0.33–0.39 times as long as body; hairs on the siphunculi numerous, all with acute apices; the longer hairs up to 0.12–0.19 mm. long. Cauda about 0.25–0.40 as long as its basal width, with 6–8 acute hairs. Legs pale, femora with numerous spinulose striae, tibiae basally smooth, apically with some spinulose striae, tarsi distinctly imbricated; hairs on the tibiae up to 2.0–2.6 times as long as the middle diameter of tibiae. First tarsal joints with 7, 7, 7 hairs.

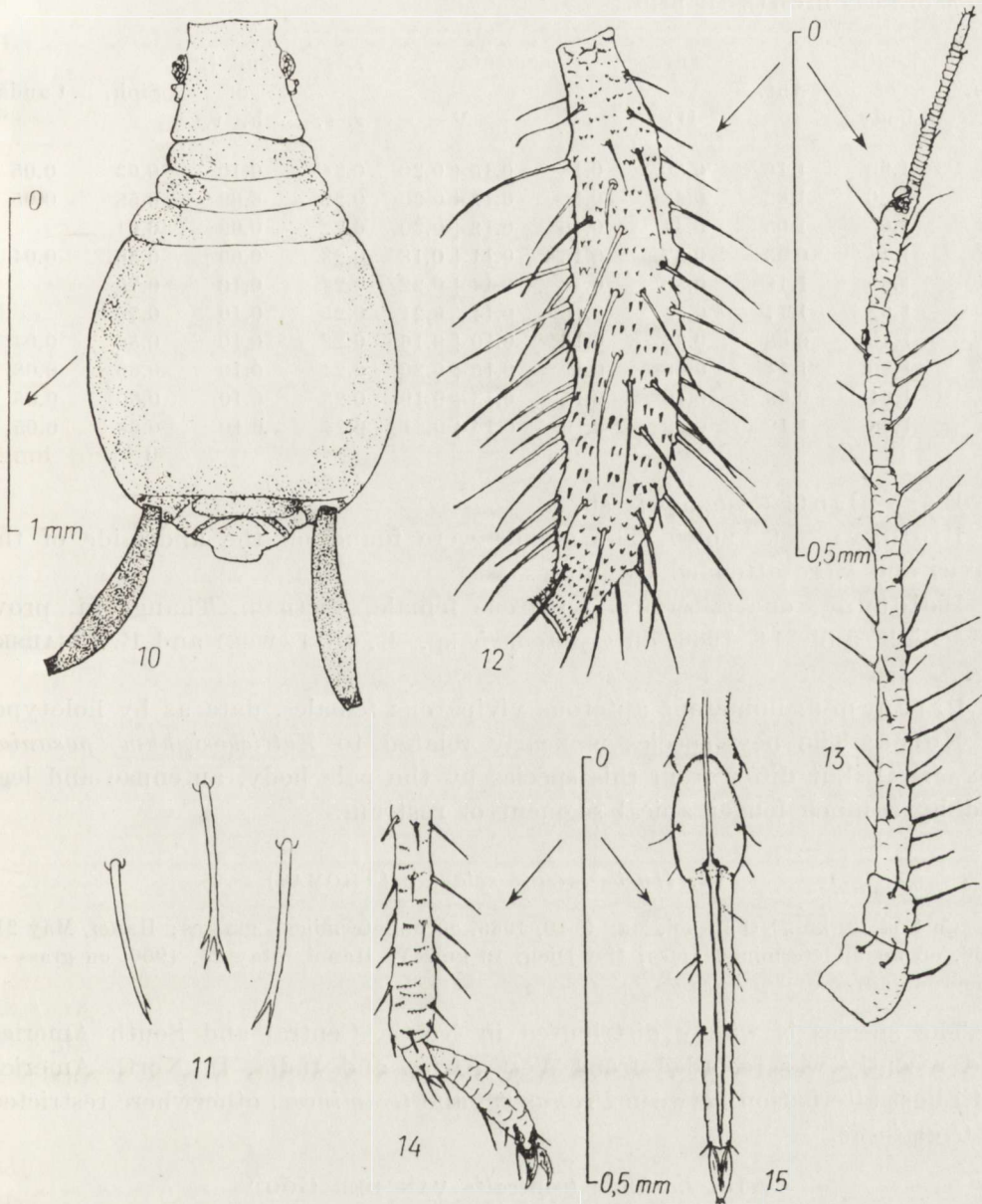


Fig. 10-15. *Eutrichosiphum pseudopasaniae* sp. n., apterous viviparous female: 10 — pigmentation of dorsum, 11 — dorsal hairs from the posterior abdominal tergites, 12 — siphunculus, 13 — antenna, 14 — hind tarsus and apical part of tibia, 15 — apical segments of rostrum.

Colour in life greenish or green with dark longitudinal spots at the body margins.

Measurements in mm.:

No.	Lenth of body	Ant.	Ant. segments			Last r. s.	2nd j. of h. t.	Siph.	Cauda
			III	IV	V				
1	1.90	1.16	0.50	0.18	0.15+0.20	0.24	0.10	0.63	0.05
2	1.60	1.02	0.43	0.16	0.12+0.20	0.22	0.09	0.58	0.05
3	1.65	1.05	0.44	0.16	0.12+0.20	0.22	0.09	0.61	—
4	1.44	0.93	0.37	0.15	0.11+0.18	0.23	0.09	0.56	0.04
5	1.80	1.18	0.50	0.18	0.14+0.22	0.24	0.10	0.70	—
6	1.82	1.17	0.52	0.18	0.14+0.21	0.25	0.10	0.70	—
7	1.49	0.88	0.36	0.15	0.10+0.16	0.22	0.10	0.56	0.04
8	1.80	1.14	0.48	0.19	0.15+0.20	0.24	0.10	0.66	0.08
9	1.61	0.99	0.40	0.15	0.13+0.19	0.23	0.10	0.60	0.05
10	1.78	1.18	0.49	0.19	0.14+0.21	0.24	0.10	0.68	0.05

Host plant: *Castanopsis* sp.

Biology: Not known. The aphids were found on the underside of the leaves and were attended by ants.

Holotype: one apterous viviparous female, Vietnam, Thang Ha, prov. Hũa Binh, June 14, 1966, on *Castanopsis* sp., R. BIELAWSKI and B. PISARSKI leg.

Paratypes: numerous apterous viviparous females, data as by holotype.

Notes: The new species is nearly related to *Eutrichosiphum pasaniae* (OKAJIMA), but differ from this species by the pale body, antennae and legs and by a much longer apical segment of rostrum.

12. *Hysteroneura setariae* (THOMAS)

Co Loa, 20 km. NO Hanoi, May 3-10, 1966, on undetermined grasses; Hanoi, May 21, 1966, on an undetermined grass; Mai Dich, 10 km. W Hanoi, May 25, 1966, on grass — numerous apterae.

The species is widely distributed in North, Central and South America and recently was recorded from West Africa and India. In North America with host alternation between *Prunus* sp. and *Gramineae*, elsewhere restricted to *Gramineae*.

13. *Lachnus tropicalis* VAN DER GOOT

Cúc Phúông, prov. Ninh Binh, June 3, 1966, on *Castanopsis* sp. — apterae.

This species infests *Quercus* ssp., *Castanea* ssp., *Castanopsis* ssp. and some other trees and shrubs of the family *Fagaceae* and is restricted to South Eastern Asia.

14. *Longiunguis sacchari* (ZEHNTER)

Co Loa, 20 km. NO Hanoi, May 11, 1966, on *Saccharum officinarum* — apterae.

Widely spread over the world on sugar cane and other *Gramineae*. After HILLE RIS LAMBERS (1963) it may be only an anholocyclic form of the species *Longiunguis pyrararia* (PASS.) which in Europe alternates between *Pirus communis* L. and grasses.

15. *Macrosiphoniella yomogifoliae* (SHINJI)

Thang Ha, prov. Hōa Binh, June 13, 1966, on *Artemisia* sp. — apterae.

This oriental species seems to be very nearly related to the European *Macrosiphoniella artemisiae* (B. DE F.) and was hitherto known from Japan, Korea, China, Taiwan and Malaya.

16. *Pseudoregma bambusicola* (TAKAH.)

Co Loa, 20 km. NO Hanoi, May 7, 1966, on bamboo — apterae; Hanoi, May 14, 1966, on bamboo — apterae.

This oriental aphid, which is widely spread in South Eastern Asia, was called in the past erroneously "*bambusae* BUCKT." by many authors.

17. *Rhopalosiphum maidis* (FITCH)

Co Loa, 20 km. NO Hanoi, May 6, 1966, on *Zea mays* — apterae and alatae.

Widely spread all over the world on various *Gramineae*. Recorded as a vector of many virus diseases.

18. *Rhopalosiphum padi* (L.)

Co Loa, 20 km. NO Hanoi, May 6, 1966, on *Zea mays* and on an undetermined grass — apterae and alatae.

Spread all over the world. In North America, Europe and Northern Asia the species overwinters as eggs on *Padus* spp., elsewhere anholocyclic on *Gramineae*.

19. *Schoutedenia lutea* (VAN DER GOOT)

Co Loa, 20 km. NO Hanoi, May 6, 1966, on *Glochidion* sp. — apterae and alatae; Yen So, 10 km. S Hanoi, May 20, 1966, on an undetermined shrub — apterae; Cúc Phóng, prov. Ninh Binh, June 6, 1966, on *Glochidion* sp. — apterae.

This very interesting species is widely distributed in Australia, South Eastern Asia and Africa. The genus *Schoutedenia* RÜBSAAMEN contains six species, namely *S. ralumensis* RÜBS. from the Philippines, *S. lutea* (v. d. G.) and *S. viridis* (v. d. G.) from Java, *S. bougainvilleae* (THEOB.) from Africa,

S. formosana (TAKAH.) from Taiwan and *S. emblica* (PATEL et KULK.) from India. Many of these species cannot be separated from each other and may be the same. The morphological characters of these aphids are very variable.

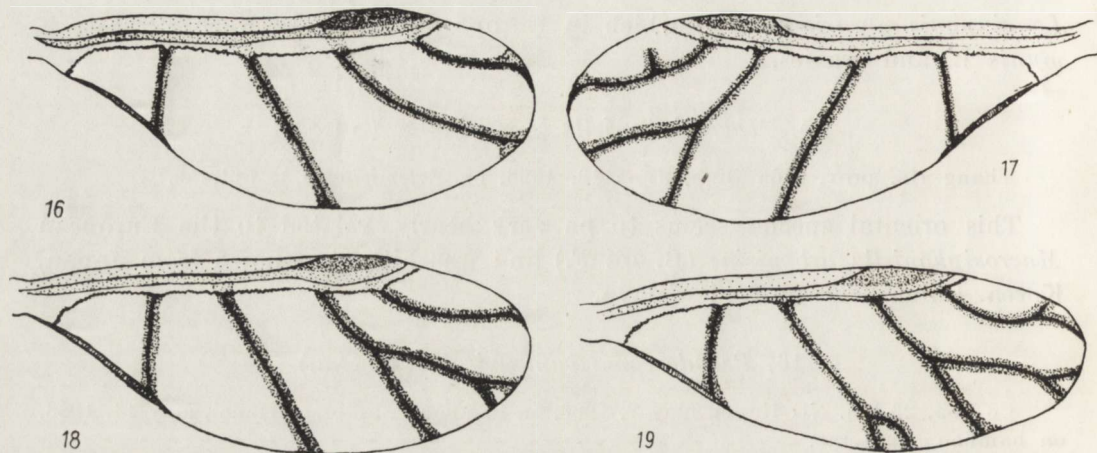


Fig. 16-19. *Schoutedenia lutea* (v. D. G.), alatae viviparous female: variability of wing venation.

20. *Semiaphis heraclei* (TAKAH.)

Mai Dich, 10 km. W Hanoi, May 26, 1966, on *Umbelliferae* — alatae and apterae.

Widely distributed in Japan, Korea, China, Taiwan, Sumatra and Hawaii. The species alternates between *Caprifoliaceae* and *Umbelliferae*. Placed by many authors in the genus *Brachycolus* BUCKT., but belongs undoubtedly in *Semiaphis* VAN DER GOOT.

21. *Sitobion rosaeformis* (DAS)

Hanoi, May 4, 1966, on cultivated roses — apterae.

A member of the taxonomically difficult "*ibarae-rosaeformis*" group which is widely spread over South Eastern Asia.

22. *Toxoptera citricidus* (KIRKALDY)

Hanoi, May 21, 1966, on the leaves of *Citrus limon* — apterae.

Widely spread over the New and Old World tropics and restricted to *Rutaceae*. Known as a vector of *Citrus tristeza* virus.

23. *Toxoptera odinae* (VAN DER GOOT)

Yen So, 10 km. S Hanoi, May 20, 1966, on *Sapium sebiferum* — apterae; Hanoi, May 27, 1966, on the same plant — apterae and 1 alata.

This south-east Asian species feeds on a variety of shrubs, mainly from the families *Anacardiaceae*, *Rubiaceae* and *Rutaceae*.

REFERENCES

- DONCASTER J. P. 1966. Notes on some Indian Aphids Described by G. B. BUCKTON. Entomologist, London, **99**: 157-160.
- GOOT P. VAN DER 1917. Zur Kenntnis der Blattläuse Java's. Contr. Faune Indes Néerland., Buitenzorg, **1**: 1-301.
- HILLE RIS LAMBERS D. 1963. Notes on Suriname Aphids. Agric. Epx. Sta. Surinam, Bull. **80**: 1-5.
- RAY CHAUDHURI D. N. 1956. Revision of *Greenidea* and related Genera (*Homoptera*, *Aphididae*). Zool. Verhandl., Leiden, **31**: 1-106.
- TAKAHASHI R. 1941. Some injurious insects of agricultural plants and forest trees in Siam and Indo-China, I *Aphididae*. Govt. Agr. Res. Inst. Formosa Rpt., Taihoku, **18**: 1-27.
- TAKAHASHI R. 1958. On the aphids of *Ceratovacuna* in Japan. Kontyû, Tokyo, **26**: 187-190.
- TAKAHASHI R. 1962. Key to Genera and Species of *Greenideini* of Japan, with Descriptions of a New Genus and Three Species (*Homoptera*: *Aphididae*). Trans. Shik. Ent. Soc., Shikoku, **7**: 65-73.
- TAO CHIA-CHU Ch. 1966. Revision of Chinese *Hormaphidinae*, *Aphidae*, *Homoptera*. Quart. J. Taiwan Mus., Taipei, **19**: 165-179.

STRESZCZENIE

Na podstawie materiałów zebranych w Wietnamie przez dra R. BIELAWSKIEGO i dra B. PISARSKIEGO autor omawia 23 gatunki mszyc występujących w Obszarze Orientalnym i opisuje nowy gatunek, *Eutrichosiphum pseudopasaniae* sp. n.

РЕЗЮМЕ

На основании материалов собранных в Вьетнаме д-ром Р. Белявским и д-ром Б. Писарским автор обсуждает 23 вида тлей встречающихся в Ориентальной области и описывает новый вид, *Eutrichosiphum pseudopasaniae* sp. n.