

Henryk SZELEGIEWICZ

**Two new Chaitophorids (*Homoptera, Chaitophoridae*)
from the Korean Peninsula¹**

[With 12 text-figures]

The paper contains description of two undescribed species of *Chaitophoridae* collected by the author in the Democratic People's Republic of Korea. The holotypes and part of the paratypes are deposited in the Institute of Zoology, Polish Academy of Sciences in Warszawa, some of the paratypes in the collection of Dr. D. HILLE RIS LAMBERS, Bennekom, to whom the author is much indebted for his useful suggestion concerning the systematic position of the described species.

Periphyllus allogenes sp. n.

(Figs. 1-6)

Apterous viviparous female (after 8 specimens).

Morphological characters. Body (fig. 1) elongate oval, very small, about 1.0-1.2 mm long. Compound eyes (fig. 6) small, about 1.5 times larger than triommatidion, consisting of about 12-20 ocelli. Head and pronotum smooth, sclerotic; meso- and metanotum faintly reticulate at middle part, membraneous, with small marginal sclerites and transverse rows of rather large scleroites at base of the dorsal hairs. Abdominal dorsum membraneous, with rows of scleroites on all tergites and a transverse bar on tergite VIII. Dorsal hairs long, with very fine apices, rather numerous: up to 18 on tergite III and about 10-15 on tergite VI between the siphunculi; longest spinal hairs on tergite III about 0.09-0.13 mm long and 6-8.5 times as long as basal diameter of antennal joint III, the marginal ones about 0.07-0.10 mm long; hairs on tergite VIII 0.14-0.19 mm long. Ventral hairs finely produced, about 0.04-0.06 mm long. Frons straight to slightly convex; frontal hairs resembling the dorsal ones,

¹ Results to Democratic People's Republic of Korea Expeditions of the Institute of Zoology, Polish Academy of Sciences, Warszawa. Contribution No. 32.

about 0.09–0.12 mm long. Antennae (fig. 2) 6-jointed, 0.46–0.55 of body length. Processus terminalis 0.7–1.2 times as long as base of joint VI, and 0.6–0.8 of the length of joint III, without hairs besides the 4 apical ones. Secondary rhinaria absent; primary rhinaria nude. Antennal hairs long and sparse, joint III with 3–5 hairs which are 0.07–0.10 mm long and 4.7–6.6 times as long as basal diameter of that joint; base of joint VI with 2 hairs, the longest of which is about 0.04–0.06 mm and 0.4–0.6 times as long as the length of base, the shorter

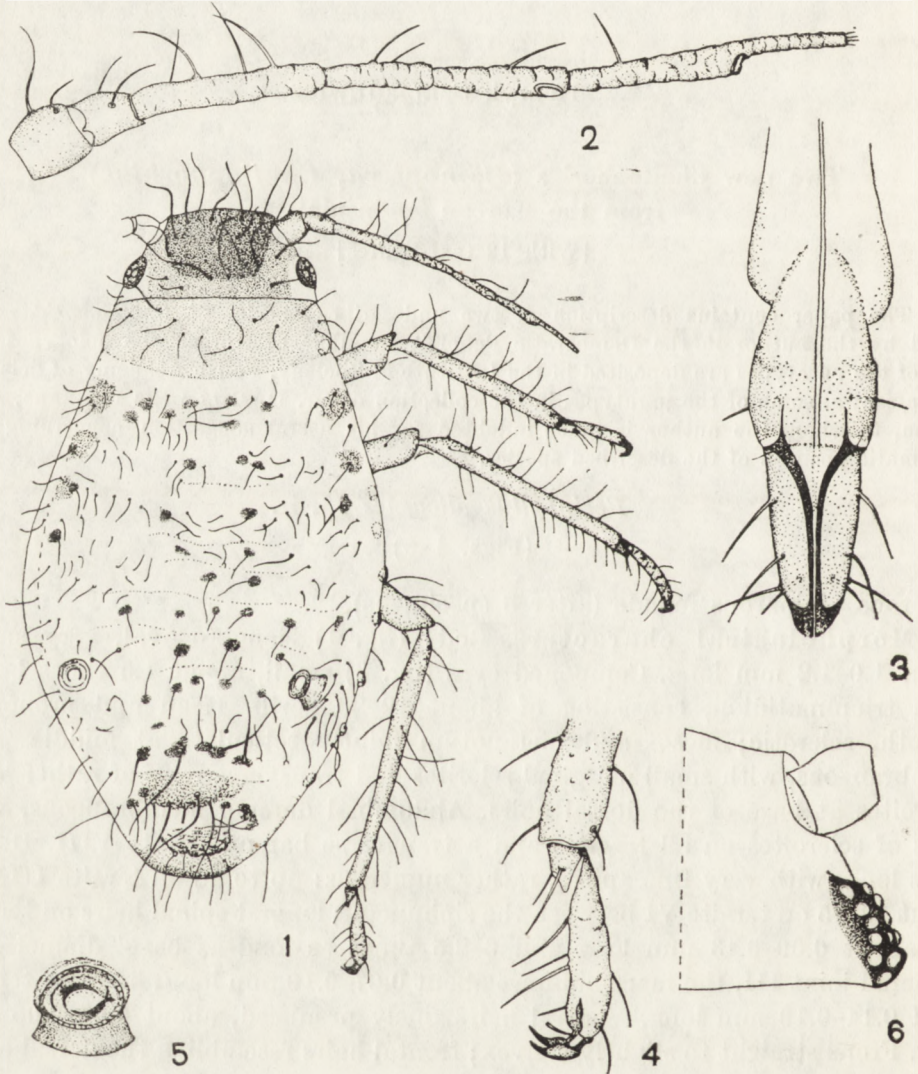


Fig. 1-6. *Periphyllus allogenes* sp. n., apterous viviparous females: 1 – habitus, 2 – antenna, 3 – ultimate rostral segment, 4 – hind tarsus, 5 – siphunculus, 6 – eye.

one 0.02–0.04 mm long. Rostrum reaching to abdominal segment V, about 0.4–0.5 mm long. Ultimate rostral segment (fig. 3) rather thick, obtuse, 0.9–1.1 times as long as hind tarsal joint II, with 2 subsidiary hairs. Siphunculi (fig. 5) short, conical, about 0.5–0.7 as long as their basal width, usually smooth, only exceptional with traces of reticulation at the very wide flange. Cauda semioval, not constricted at base, 0.4–0.5 times as long as its basal width, with about 10–12 hairs of various length. Genital plate crescent-shaped, imbricated, with 18–25 hairs. Legs short, hind femora and hind tibiae 0.20–0.23 and 0.39–0.45 times as long as body, respectively; apical half of hind tibiae (fig. 4) ventrally spinulose. Hairs on tibiae long, the longest dorsal hairs about 3.4–4.6 times as long as middle diameter of tibiae. First tarsal joint with 4 ventral hairs. Empodial hairs (Fig. 4) spatulate, about as long as claws.

Colour. In life brown with dark brown antennae and legs. In cleared specimens with dark head and pronotum; other thoracic tergites and the abdominal ones colourless, with brown sclerites and scleroites. Siphunculi, cauda and genital plate brown. Antennae and legs uniformly brown.

Measurements in mm:

No.	Body	Ant.	Antennal segments:				U.r.s.	H.t. II	Siph.	Cauda
			III	IV	V	VI				
1	1.07	0.59	0.14	0.06	0.09	0.10 + 0.09	0.105	0.115	0.040	0.045
		0.58	0.13	0.07	0.08	0.11 + 0.09		0.120	0.040	
2	1.14	0.59	0.14	0.06	0.09	0.09 + 0.10	0.115	?	?	0.045
		0.58	0.13	0.07	0.10	0.09 + 0.10		0.120	?	
3	1.08	0.57	0.12	0.07	0.09	0.09 + 0.10	0.105	0.115	?	0.042
		0.55	0.17	0.09	0.09 + 0.09	0.115		0.035		
4	1.07	?	0.13	0.07	?	?	0.105	0.110	0.045	0.041
		0.55	0.14	0.06	0.10	0.10 + 0.08		?	0.043	
5	1.03	0.55	0.13	0.06	0.10	0.09 + 0.08	0.112	0.110	?	0.045
		0.57	0.13	0.07	0.08	0.08 + 0.09		0.105	?	
6	1.10	0.57	0.14	0.08	0.07	0.09 + 0.10	0.110	0.115	0.040	0.050
		0.57	0.11	0.08	0.09	0.08 + 0.09		0.110	0.045	
7	1.15	0.53	0.11	0.07	0.09	0.09 + 0.09	0.110	0.108	?	0.048
		0.53	0.12	0.06	0.08	0.09 + 0.09		0.110	?	
8	1.06	0.51	0.12	0.07	0.08	0.09 + 0.09	0.106	0.105	0.030	0.038
		0.53	0.13	0.06	0.09	0.09 + 0.07		0.105	0.032	

Explanations: Ant. = antennae, U.r.s. = ultimate rostral segment, H.t. II = hind tarsal joint II, Siph. = siphunculus.

Host plant: *Acer triflorum* KOMAROV.

Bionomy: Unknown. The types were found on a petiole of a leaf and were not attended by ants.

Type material. Holotype (one apterous viviparous female, slide no. 3325): Korean, Peninsula, Prov. Kaesŏng-si, Pakyong at Ch'onma-san, 27. VIII. 1966, coll. H. SZELEGIEWICZ; Paratypes (7 apterous viviparous females): same data.

Taxonomic position: It is the first *Periphyllus* to be known to live on a member of the Sectio *Trifoliata* of the plant genus *Acer* L. The described material represents autumnal apterae developed from aestivating larvae (dimorphs) what makes its determination very difficult. Of the East Asiatic *Periphyllus* such apterae are known in *P. ginnalae* PAIK, *P. californiensis* (SHINJI), and *P. viridis* (MATS.) and these are very different from the new species. *P. kuwanai* (TAKAH.) of which the autumnal apterae are hitherto not known has in spring apterae pale tibiae and a larger processus terminalis and therefore the present species is described as new.

Chaitophorus variegatus sp. n.

(Figs. 7–12)

Apterous viviparous female (after 45 specimens)

Morphological characters. Body (fig. 7) oval, about 1.4–2.4 mm long. Abdominal tergites II–VII fused. Tergum mostly smooth, only the head and the middle parts of thoracal and anterior abdominal tergites covered with blunt nodules. Dorsal hairs on abdomen very numerous, thick and dark pigmented, variable in length; the longest spinal hairs on tergite III 0.12–0.18 mm long and 5–7 times as long as the basal diameter of antennal joint 3; the marginal ones much longer, about 0.17–0.27 mm long. Abdominal tergite VIII with 11–15 hairs which are up to 0.25 mm long. Ventral hairs long and very fine. Antennae (fig. 8) about 0.6–0.75 of body length, distinctly imbricated, on joint 3 with 6–12, on 4 with 3–6, on 5 with 2–5 and on 6 with 2 or 3 hairs; the longest hairs on joint 3 about 0.09–0.12 mm and 3.5–4.8 times as long as basal diameter of that joint. Processus terminalis 3.5–4.5 times as long as basal part of joint 6, distinctly longer than joint 3; joint 4 longer than 5. Rostrum short, reaching to the middle coxae. Ultimate rostral segment (fig. 11) 0.13–0.15 mm long, longer than 2nd joint of hind tarsus, with 6–8, rarely 9 subsidiary hairs. Siphunculi (fig. 9) short, more than $\frac{1}{2}$ the length of 2nd joint of hind tarsus, reticulated on distal half. Cauda (fig. 10) knobbed, with about 7–9 hairs. Legs normal, hind femora 0.33–0.50 mm, hind tibiae 0.56–0.85 mm, 2nd joint of hind tarsus 0.11–0.14 mm long. The longest hairs on hind tibiae 0.12–0.15 mm and 3–4 times as long as the middle diameter of tibiae. First tarsal joints with 7 (6) ventral hairs. Empodial hairs (fig. 12) distinctly spatulate (!), about as long as the claws.

Colour. In life greenish yellow, sometimes with darker head and thorax. Cleared specimens mostly colourless or with brownish head, thorax and abdominal tergites I and VIII. Antennae brown, only joint 3 and basal half of 4 colourless. Siphunculi and cauda pale. Legs brownish with pale distal halves of tibiae.

Measurements in mm:

No.	Body	Ant.	Antennal joints:				Siph.	Cauda	U.r.s.	H.t. II
			III	IV	V	VI				
1	1.96	1.34	0.32	0.18	0.17	0.09+0.45	0.08	0.13	0.13	0.12
		1.32	0.30	0.19	0.15	0.11+0.44	?			0.12
2	1.69	1.18	0.28	0.14	0.13	0.10+0.41	0.07	0.12	0.13	0.12
		1.15	0.27	0.15	0.14	0.10+0.40	0.09			0.11
3	1.41	1.05	0.24	0.11	0.12	0.09+0.38	0.05	0.11	0.13	0.11
		1.08	0.24	0.12	0.12	0.10+0.39	?			0.11
4	1.61	1.14	0.26	0.15	0.12	0.09+0.40	0.06	0.12	0.13	0.11
		1.12	0.23	0.15	0.14	0.10+0.41	0.07			0.12
5	2.26	1.44	0.35	0.19	0.16	0.11+0.45	0.11	0.16	0.15	0.14
		1.40	0.34	0.18	0.17	0.11+0.44	0.10			0.13
6	1.75	1.27	0.28	0.16	0.15	0.10+0.39	0.07	0.14	0.14	0.12
		?	0.30	0.14	0.14	0.10+?	0.08			0.12
7	2.20	1.40	0.34	0.19	0.17	0.11+0.39	0.09	0.14	0.15	0.14
		1.32	0.33	0.19	0.16	0.10+0.38	?			0.13
8	2.26	1.38	0.32	0.19	0.16	0.11+0.42	0.08	0.17	0.15	0.13
		?	?	?	?	?	0.09			0.13
9	1.92	1.26	0.33	0.15	0.14	0.10+0.40	0.07	0.15	0.14	0.12
		1.24	0.32	0.16	0.13	0.11+0.40	0.08			0.12
10	1.50	1.15	0.24	0.13	0.13	0.10+0.42	0.06	0.11	0.13	0.11
		1.10	0.24	0.13	0.13	0.10+0.42	0.07			0.11

Explanations as in the preceding species.

Host plant: *Populus koreana* REHDER.

Bionomy. Unknown. Two colonies were found on the undersides of leaves attended by ants.

Type material. Holotype (one apterous viviparous female, slide no. 3415): Korean Peninsula, Prov. Hamgyōng-pukto, Onp'o-ri, distr. Kyōng-sang, 11. IX. 1966, coll. H. SZELEGIEWICZ; Paratypes (44 apterous viviparous females and larvae): same data.

Taxonomic position: It is the first *Chaitophorus* with distinctly spatulate empodial hairs, a character typical for *Periphyllus* and not *Chaitophorus*. In the length of processus terminalis it resembles *Ch. inouyei* H.R.L. but the

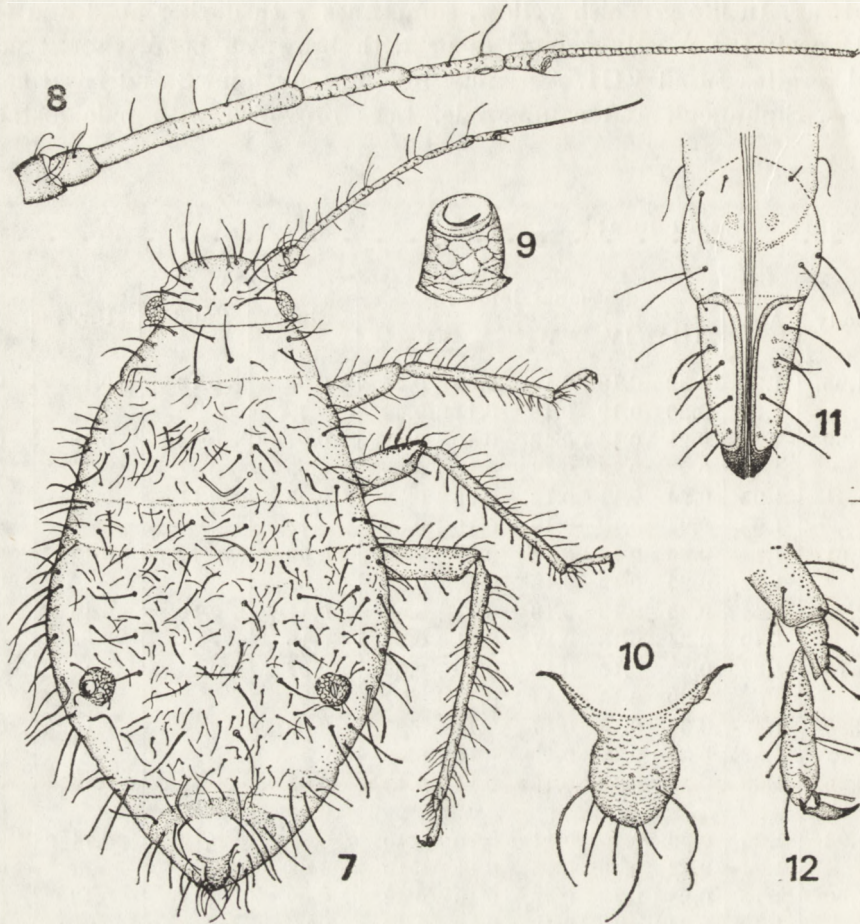


Fig. 7-12. *Chaitophorus variegatus* sp. n., apterous viviparous female: 7 - habitus, 8 - antenna, 9 - siphunculus, 10 - cauda, 11 - ultimate rostral segment, 12 - hind tarsus.

hairs are not nearly dense enough and of a very different shape. *Ch. shantungensis* has a very different processus terminalis, and *Ch. dorocola* MATS. has hairs with furcated apices in a different arrangement.

LITERATURE

- HIGUCHI H. 1972. A taxonomic study of the subfamily *Callipterinae* in Japan (*Homoptera: Aphididae*). *Insecta Matsum.*, Sapporo, **35**: 19-126.
 PAIK W. H. 1972. Illustrated encyclopedia of fauna and flora of Korea. Seoul, **13**. V., 752 pp.

SZELEGIEWICZ H. 1974. A list of aphids from the Democratic People's Republic of Korea.
Part I. *Adelgidae* to *Chaitophoridae* (*Homoptera*). *Fragm. faun.*, Warszawa, 19: 455-466.

Instytut Zoologii PAN
ul. Wilecza 64
00-679 Warszawa, Poland

STRESZCZENIE

[Tytuł: Dwa nowe gatunki włośchatkowatych (*Homoptera*, *Chaitophoridae*) z Półwyspu Koreańskiego]

Praca zawiera opisy dwóch nowych gatunków mszyc zebranych przez autora w r. 1966 w Koreańskiej Republice Ludowo-Demokratycznej.

РЕЗЮМЕ

[Заглавие: Два новых вида хайтофорид (*Homoptera*, *Chaitophoridae*) из Корейского Полуострова]

В работе содержится описание двух новых видов тлей собранных автором в 1966 году в Корейской Народно-Демократической Республике.

Redaktor pracy — prof. dr J. Nast

Państwowe Wydawnictwo Naukowe — Warszawa 1981
Nakład 940 + 90 egz. Ark. wyd. 0,5, druk. 0,5. Papier druk. sat. kl. III, 80 g, B1. Cena zł 10, —
Nr zam. 2005/80 — Wrocławska Drukarnia Naukowa

ISBN 83-01-01903-4
ISSN 0003-4541

INSTITUT ZOOLOGII
Polskiej Akademii Nauk
<http://rcin.org.pl>