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Aphid species (*Homoptera, Aphidodea*) new to the Polish fauna

[With 6 photographs]

1. *Phylloxerina capreae* BÖRNER, 1942

Originally described (BÖRNER 1942: 265) from material collected on *Salix caprea* at Naumburg, German D.R., and separated from other species mainly by larval characters. IGLISCH (1965) gave a more extensive descriptions of all morphs, supplied by very good illustrations. The species seems to have a transcontinental distribution, and is at present known from Sweden, German F.R., German D.R., Poland and Japan.

The only Polish material of this apparently rare species is of apterae taken from *Salix caprea* growing along the artificial lake at Goczałkowice, Upper Silesia, on 28. V. 1974 (H. SZELEGIEWICZ and W. WOJCIECHOWSKI coll.). These apterae agree well with the excellent description given by IGLISCH, and can be easily separated from the apterae of *Ph. salicis* (LICHTS.) by the lack of wax glands on the basis of the fore and hind coxae.

2. *Iziphya austriaca* BÖRNER, 1950

First described from Austria (BÖRNER 1950: 4) as follows: "Färbung ähnlich *I. bufo* WALK. (= *familiaris* LAING non WALK.), Tiere etwas kleiner (1,4–1,7 mm), lange Stabborsten nur an den Hinterleibsringen 8. und 7. Vermutlich an *Carex goodenoughi*, Moore in Steiermark, Verfasser und FRANZ leg."

The species was subsequently described from Sweden (HILLE RIS LAMBERS 1952a: 57) as *Iziphya suecica* sp. n. on the basis of two specimens which were

taken with *I. ingegardae* H.R.L. from an undetermined *Carex* sp. "growing in a small wet spot in the woods near Nacka-Erstavik". HILLE RIS LAMBERS compared his new species with *I. austriaca* BÖRN. and stated that it resembles this species in chaetotaxy, but differs by less developed sclerotic pattern and greater body length, both rather variable characters in this aphid genus in my opinion. Therefore QUEDNAU (1954: 45) stated that *I. suecica* H.R.L. is a synonym of *I. austriaca* BÖRN., and that the true host plant of this species is *Carex canescens*. OSSIANNILSSON (1959b: 407) recorded this species from many localities in Sweden on *Carex canescens*, and stated that material from Erstavik (type locality of *I. suecica* H.R.L.) was reared on *Carex canescens* in 1953. Later the species was recorded from Scotland (SHAW 1964: 58) and Ukraine (MAMONTOVA-SOLUHA 1964: 60).

SZELEGIEWICZ (1958: 76) published an account of aphids taken on *Carex* sp. at Bydgoszcz, Poland, in July and September 1956, which were tentatively determined as "*I. austriaca* BÖRN.?" Though later (SZELEGIEWICZ 1961: 54) the host plant was established as *Carex ligerica* and the aphids correctly determined as *I. bufo* (WALK.), *I. austriaca* was still noted as a Polish insect (RICHARDS 1971: 22). Yet the only Polish material of *I. austriaca* has been recently discovered in the alcohol collection of the late HUCULAK and consists of a sample of apterae and alate taken on 27. VI. 1967 from *Carex canescens* at Bobolino, district Sławno, on the Baltic shore (S. HUCULAK coll.). As the species is very little known and the alate were never described, I give the following description based on the Polish material.

Apterous viviparous female (from 6 specimens)

Morphological characters. Body egg-shaped, about 1.85–2.14 mm long. Tergum sclerotic with abdominal tergites III–VI completely fused, pigmented as in the photographs. Dorsal hairs numerous, the spinal ones placed on distinct tubercles; on the head, thorax and the anterior abdominal tergites broadly fan-shaped, about as long as their maximum width, more caudad larger and with rod-shaped shafts and fan-shaped or enlarged apices; true rod-shaped hairs present only on tergite VIII and marginally and medially on tergite VII. Head, thorax and the pigmented areas of abdomen distinctly sculptured with rows of small nodules. Frons convex, not protruding, with two normal hairs. Antennae about 0.7–0.8 as long as body; flagellum covered with transverse rows of minute spinules, dark brown to black, with basal 0.6–0.8 of segment III yellowish; without secondary rhinaria. Hairs on IIIrd antennal segment sparse, short and acute, about 0.3–0.4 of diameter of the segment in the middle. Processus terminalis about 1.5–1.7 times as long as base of antennal segment VI. Rostrum short, not reaching the middle coxae; ultimate segment short and blunt about 0.5–0.65 of 2nd joint of hind tarsi, with 8 hairs. Siphunculi as typical for the genus. Cauda dark, knobbed, with two long apical hairs, and about 12 shorter ventral ones. Legs as typical for the genus, dark, with only the distal $\frac{3}{4}$ of tibiae and the 1st joint of tarsi pale; hind tibiae with several

subbasal hairs one of which is large and sometimes rod-shaped. First tarsal segments mostly with 5 ventral hairs, but on the fore- and middle-legs sometimes with only 4.

Colour in life not noted.

Measurements in mm:

No.	Body	Ant.	Antennal segments				H.-fem.	H.-tib.	2nd j. of H.-tar.	Last rostr. joint
			III	IV	V	VI				
1	2.14	1.57	0.50	0.24	0.25	0.15 + 0.25	0.38	0.60	0.14	0.09
		1.57	0.51	0.24	0.25	0.15 + 0.24	0.37	0.60	0.14	
2	2.06	1.50	0.46	0.25	0.25	0.16 + 0.25	0.38	0.60	0.14	0.07
		1.46	0.47	0.26	0.25	0.15 + 0.27	?	?	?	
3	2.10	1.60	0.46	0.26	0.28	0.16 + 0.26	0.38	0.60	0.14	0.08
		1.65	0.46	0.25	0.28	0.17 + 0.26	0.39	0.60	0.15	
4	2.01	1.52	0.49	0.23	0.24	0.14 + 0.25	0.36	0.57	0.14	0.08
		1.55	0.49	0.23	0.24	0.15 + 0.23	0.36	0.57	0.14	
5	1.85	1.50	0.45	0.23	0.24	0.14 + 0.24	0.37	0.56	0.15	0.08
		1.47	0.45	0.23	0.23	0.14 + 0.24	0.37	0.56	0.14	

Alate viviparous female (from 3 specimens)

Morphological characters. Much as in apterous viviparous female. Body about 2.06–2.10 mm long, pigmented as in the photograph. Dorsal hairs mostly fan-shaped but more slender; rod-shaped hairs present on tergites VIII, VII and medially on VI. Antennae about 0.8–0.83 as long as body; segment III with 19–21 secondary rhinaria arranged in a row, IV segment normally without but exceptionally with two rhinaria of one of the antenna. Processus terminalis 1.6–1.8 times as long as the base of antennal segment VI. Wings as typical for the genus.

Colour in life not noted.

Measurements in mm:

No.	Body	Ant.	Antennal segments				Sec. rhin. on	
			III	IV	V	VI	III	IV
1	2.10	1.68	0.55	0.28	0.26	0.14 + 0.26	20	0
		1.66	0.55	0.26	0.27	0.15 + 0.25	21	0
2	2.08	1.70	0.55	0.29	0.26	0.15 + 0.28	20	0
		1.65	0.54	0.24	0.25	0.15 + 0.26	19	2
3	2.06	1.71	0.56	0.30	0.26	0.16 + 0.27	19	0
		1.71	0.54	0.30	0.27	0.16 + 0.26	20	0

Embryo: Dorsal and marginal hairs as in *I. bufo* (WALK.); fan-shaped on head, thorax and the anterior abdominal tergites, and rod-shaped on the posterior ones.

Notes: *I. austriaca* is very nearly related if not identical with *I. bufo* (WALK.). BÖRNER (1950) and HILLE RIS LAMBERS (1952a) separated both species by the dorsal sclerotic pattern, the body length, and the dorsal chaetotaxy, particularly the arrangement of the rod-shaped hairs. All these characters are very variable within a species, and the chaetotaxy seems to be submitted to seasonal changes. After RICHARDS (1971: 15) both species are easy to separate morphologically, but there is no doubt that RICHARDS has mistaken *I. memorialis* BÖRN. for *I. bufo* (WALK.) and his *I. austriaca* seems to be also a mixture of different species including the true *I. bufo* (WALK.).

I. austriaca occurs on *Carex canescens* growing only in wet spots, whereas *I. bufo* on *Carex arenaria* and *C. ligerica* growing on very dry places. In view of the different biotopes and the differences in the host plants they can not be the same species but yet I can find no distinct morphological differences which separate these species.

3. *Cinara acutirostris* HILLE RIS LAMBERS, 1956

Originally described by HILLE RIS LAMBERS (1956: 246) from the Netherlands, England and Czechoslovakia, and subsequently recorded from Portugal, France, Italy, Bulgaria, Hungary and Crimea (U.S.S.R.). I have seen specimens from the German D.R. (Aschersleben, 23. IX. 1970, *Pinus nigra* — apt., H. SZELEGIEWICZ coll.). The species is very nearly related with *C. pini* (L.) and differs from this species mainly by longer last rostral joint and some other minor characters.

Samples of this species were collected in Poland from *Pinus nigra* in Katowice-Panewniki, Upper Silesia, on 29. V. 1974 (H. SZELEGIEWICZ and W. WOJCIECHOWSKI coll.), in Kampinos Forest at Łomna near Warszawa, on 2. VIII. 1974 (H. SZELEGIEWICZ coll.) and in Gdańsk-Górki Wschodnie, on 15. VI. 1975 (H. and J. SZELEGIEWICZ coll.).

4. *Cinara cembrae* (CHOLODKOVSKY, 1892)

This species was first described by CHOLODKOVSKY (1892: 73–74) as *Lachnus pini* var. *cembrae* from *Pinus cembra* in Leningrad. Later the same species was described from Austria as *Lachnus cembrae* by SEITNER (1936: 34). Some authors therefore ascribed the name “*cembrae*” to SEITNER and not to CHOLODKOVSKY, but this is not in agreement with Art. 45 (e) (i) of the International Code of Zoological Nomenclature.

The only Polish material of this species that I have seen to date consists of apterae and oviparous females taken from *Pinus cembra* at the lake Morskie Oko in the Tatra Mts., on 6. IX. 1971 (J. WAGNER coll.).

C. cembrae (CHOLOD.) is distributed only in Europe and it is known from

the Alps, the Tatra Mts., and the East and South Carpathians. My record (SZELEGIEWICZ 1962: 48) of this species from Bulgaria was based on specimens from *Pinus peuce*, which belong to another hitherto not described species. Also the records from *Pinus silirica* in Mongolia and *Pinus pumila* in East Asia refer all to another undescribed species.

5. *Aphis eryngiiglomeratae* BOZHKO, 1963

Described from apterae and alate taken from *Eryngium campestre* and *E. maritimum* in East Ukraine (BOZHKO 1963: 111). Later recorded from Crimea (HOLMAN 1961), Western Siberia (IVANOVSKAJA 1961), Czechoslovakia (HOLMAN 1965) and Hungaria (SZELEGIEWICZ 1966) from *Eryngium campestre* and *E. planum*.

Some alate and apterae were taken on 25. VII. 1967 by the late Mr. HUCULAK at Kały, district Zamość, Southeastern Poland, from *Eryngium planum*, in a typical steppe habitat.

6. *Aphis oenotherae* OESTLUND, 1887

This North American aphid was first recorded as an European insect by HILLE RIS LAMBERS (1971: 155) from Italy, and subsequently by F. P. MÜLLER (1974: 129). The last author noted this aphid from several localities in the German D.R. (Berlin, Hohe Neuendorf at Berlin, Zwickau, Edle Krone at Tharandt) always on *Oenothera biennis*.

I have collected a colony of this species from *Oenothera biennis* at the Isle of Uznam, Northwestern Poland. The aphids were visited by ants!

7. *Aphis uvaeursi* OSSIANILSSON, 1959

This aphid was described by OSSIANILSSON (1959a: 19) from apterae and alate collected on *Arctostaphylos uva-ursi* in Sweden. The sexuales were not described. The fundatrix was described by STROYAN (1969: 236) on the basis of two specimens taken in Scotland. I have Polish specimens, apterae and sexuales, found on *Arctostaphylos uva-ursi* in a dry pine forest between Nadliwie and Puste Łąki, district Wołomin, Masovien, on 12. IX. 1974. This is the first record of this species in Middle Europe.

This apparently boreal or subboreal species can be separated from other species of the "*Pergandeida*" species-group by the combination of short siphunculi, the short second joint of hind tarsus, short body hairs, and the presence of secondary rhinaria on 3rd antennal segment. A description of the hitherto undescribed sexuales follows.

Oviparous female (from 12 specimens)

Morphological characters. Body widely oval, 1.33–1.52 mm. Tergum of abdomen membranous with some indistinct reticulation. Dorsal hairs blunt,

0.015–0.025 mm long and 0.6–0.8 of the basal diameter of antennal joint III; marginal hairs on abdominal segments II–VII 2+2 per segment; tergite VIII with 10–12 hairs, which are a little longer than those on proximal tergites. Ventral hairs acute, up to 1.5 times as long as the dorsal ones. Marginal tubercles dark, present on prothorax and abdominal segments I and VII. Antennae 6-jointed, 0.4–0.5 of the body length, without secondary rhinaria. Processus terminalis 1.5–2.1 times as long as the base of joint VI. Antennal hairs blunt, about 0.4–0.7 of the basal diameter of joint III. Rostrum reaching to the hind coxae. Apical rostral joint 1.4–1.6 times as long as the 2nd joint of hind tarsus, with 2, very rarely 3, subsidiary hairs. Siphunculi and cauda as in viviparous female. Subgenital plate oval with the middle part not pigmented and with about 32 hairs. Hind tibiae swollen in the basal $\frac{2}{5}$, with about 17–26 pseudosensoria.

Colour in life black. In macerated specimens body membranous; head, the sclerotic areas on pro- and mesothorax, siphunculi and cauda about concolorous, dark brown; antennae brown to dark brown, only joint III and the basal half of joint IV pale; legs brown, the middle portions of tibiae and sometimes the very bases of femora paler. Subgenital plate pale with two lateral brown spots.

Measurements in mm:

No.	Body	Ant.	Antennal joints:				A. r. j.	2nd j. h.-t.	Cuada	Sipho
			III	IV	V	VI				
1	1.37	0.77	0.180	0.100	0.115	0.105 + 0.180	0.12	0.07	0.14	0.12
2	1.52	0.77	0.190	0.100	0.125	0.105 + 0.150	0.12	0.08	0.15	0.13
3	1.33	0.71	0.165	0.095	0.105	0.080 + 0.170	0.11	0.08	0.14	0.11
4	1.53	0.75	0.185	0.100	0.110	0.090 + 0.170	0.11	0.08	0.14	0.11
5	1.45	0.74	0.180	0.090	0.115	0.085 + 0.160	0.11	0.07	0.13	0.11
6	1.40	0.76	0.170	0.105	0.110	0.095 + 0.160	0.12	0.08	0.15	0.12
7	1.46	0.72	0.160	0.075	0.105	0.090 + 0.175	0.11	0.08	0.14	0.12
8	1.51	0.73	0.185	0.095	0.110	0.095 + 0.155	0.11	0.08	0.14	0.12

Apterous male (from 2 specimens)

Morphological characters. Body of about 1.0 mm, oval, relatively wide. Tergum resembling that of the apterous viv. female but the sclerotic bands much smaller and separated from another and from the marginal sclerites. Ocelli absent. Antennae 6-jointed, of about 0.75 of the body length, completely dark, sclerotized. Secondary rhinaria very small, on IIIrd joint 9–13, on IVth 6 and on Vth 2–4. Processus terminalis about 2–2.2 times longer than the base of joint VI. Apical rostral joint 1.4–1.5 times as long as the 2nd joint of hind tarsus. Siphunculi cylindrical, a little shorter than the triangular cauda. First tarsal joints with 2,3,3 hairs. Otherwise like the apterous viviparous female.

Colour in life black. Macerated specimens pigmented like the apterous viviparous female but the dorsal sclerites much smaller and the antennae completely black.

Measurements in mm:

No.	Body	Ant.	Antennal joints:				Caud.	Siph.	Sec. rhin.		
			III	IV	V	VI			III	IV	V
1	1.03	0.74	0.20	0.11	0.11	0.07 + 0.15	0.09	0.08	?,13	?,6	?,4
2	1.04	0.78	0.22	0.12	0.12	0.07 + 0.17	0.08	0.07	9,12	6,6	2,4

8. *Ossiannilssonina oelandica* HILLE RIS LAMBERS, 1952

Originally described (HILLE RIS LAMBERS 1952: 41) from one aptera found in Sweden on *Galium boreale*. A supplementary description of the apterae and the oviparous female and alate male is given by OSSIANNILSSON (1959a: 27). The same author (1959b: 446) noted this species from many Swedish localities, mostly a very sun-exposed ones. There is only one record of this species from Middle Europe, i.g. from the southern slopes of the Kyffhäuser in German D.R. (F. P. MÜLLER 1968: 105). I have seen two apterae collected by Dr. L. OLESIŃSKI at Chrzanów on *Galium boreale*.

9. *Ovatomyzus stachyos* HILLE RIS LAMBERS, 1947

First described (HILLE RIS LAMBERS 1947: 306) from the Netherlands, the aphid was found later in Great Britain (STROYAN 1950: 99), France (REMAUDIÈRE 1951: 139) and Czechoslovakia (HOLMAN 1965: 280). I have found one alata and numerous apterae on *Stachys lanata* at Katowice-Ligota, Upper Silesia, on 22. IX. 1974. The Polish specimens agree well with the excellent description given by HILLE RIS LAMBERS.

10. *Paczoskia longipes* TASHEV, 1964

First described by TASHEV (1964: 45) from material collected in Bulgaria on *Echinops banaticus*. Polish material of *P. longipes* TASHEV has been recently discovered in the alcohol collection of the late Mr. HUCULAK and consists of 6 apterae taken from *Echinops commutatus* at Przemyśl, Southeast Poland, on 26. VII. 1967.

The species resembles very strongly *P. major* BÖRN., the only other species of this genus known from Poland, and can easily be distinguished from it by the chaetotaxy of the first tarsal joints (5 hairs in *major*, and only 3 in *longipes*)

and of the last rostral segment (with 17–22 subsidiary hairs in *major*, and only 5–7 ones in *longipes*). *Paczoskia longipes* is new to the fauna of Middle Europe, and *Echinops commutatus* is a new host plant for this species.

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STRESZCZENIE

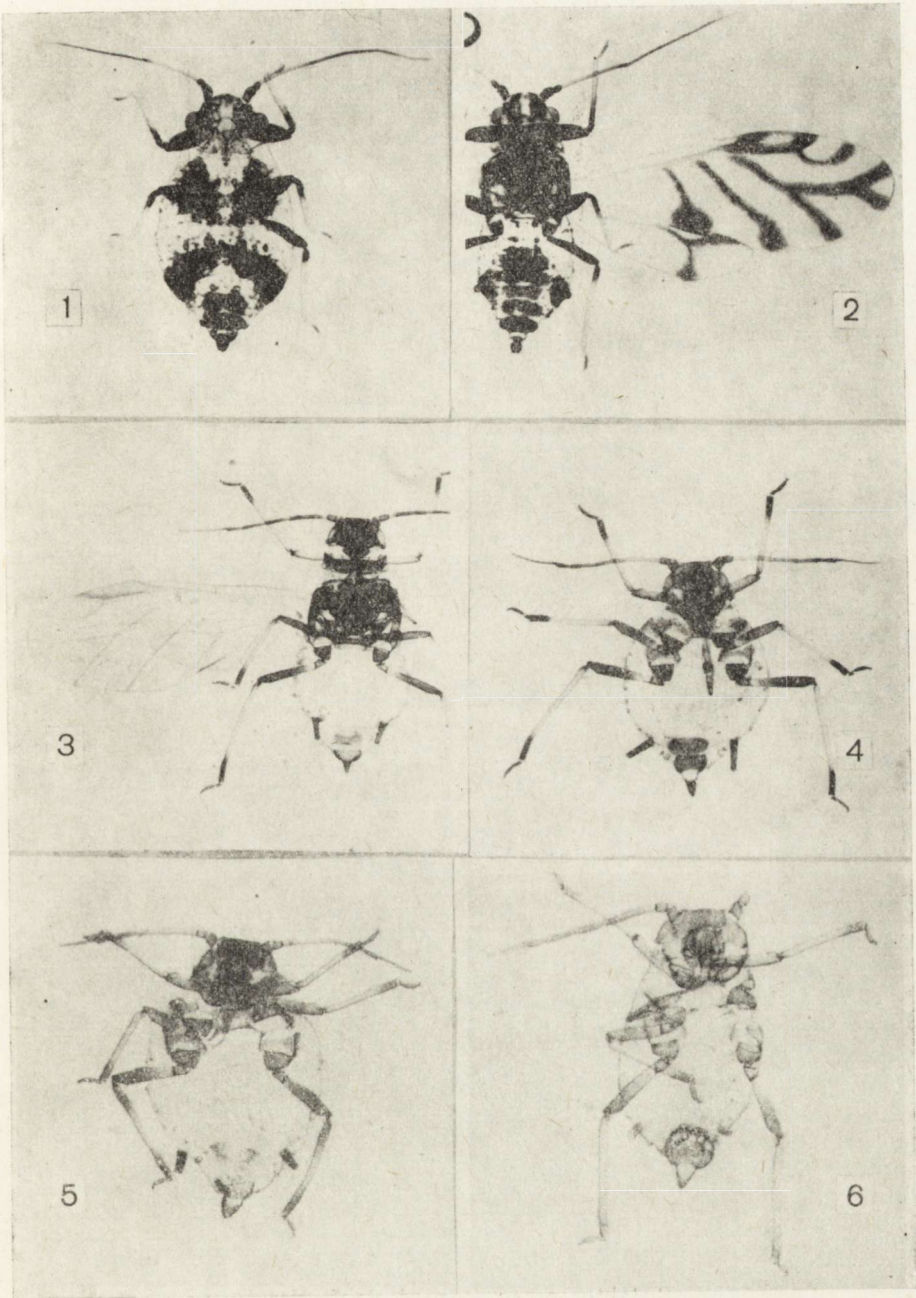
[Tytuł: Nowe gatunki mszyce (*Homoptera*, *Aphidodea*) dla fauny Polski]

Autor omawia 10 gatunków mszyce nie notowanych dotąd z Polski, z których dwa (*Aphis wvaeursi* OSSIANN. i *Paczoskia longipes* TASHEV) nie były również znane z Europy Środkowej. Praca zawiera także opisy nie znanych dotąd morf *Iziphya austriaca* BÖRN. i *Aphis wvaeursi* OSSIANN.

РЕЗЮМЕ

[Заглавие: Новые для фауны Польши виды тлей (*Homoptera*, *Aphidodea*)]

Автор рассматривает 10 видов тлей, неизвестных до настоящего времени с территории Польши. Два из них (*Aphis wvaeursi* OSSIANN. и *Paczoskia longipes* TASHEV) не приводились также из средней Европы. В работе содержится также описание неизвестных до настоящего времени форм *Iziphya austriaca* BÖRN. и *Aphis wvaeursi* OSSIANN.



Phot. 1-6

1-2. *Iziphya austriaca* BÖRN.: 1 - Apterous viviparous female, 2 - alate viviparous female;
 3-4. *Aphis eryngiiglomerata* BOZHKO: 3 - alate viv. female, 4 - apterous viv. female;
 5-6. *Aphis wuaeursi* OSSIANN.: 5 - oviparous female, 6 - apterous male.

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