# A NEW SPECIES OF NEVSKYELLA OSSIANNILSSON, 1954 (HOMOPTERA, APHIDIDAE)

by

**D. HILLE RIS LAMBERS**

Bladluisonderzoek T.N.O., Bennekom, Netherlands

and

**R. VAN DEN BOSCH**

University of California, Agric. Experiment Station, Division of Biological Control, Albany, U.S.A.

## INTRODUCTION

Hitherto only one species of *Nevskyella* Ossiannilsson, 1954, was known, viz., the type, *Nevskya fungifera* Ossiannilsson, 1953. This has only been found near Uppsala, Sweden on *Carex caryophyllea* Latour (= *C. verna* Chaix = *C. praecox* Jacq.). A very similar species found in three departments of southern France is described hereafter.

## **Nevskyella meridionalis** nov. spec.

Apterous viviparous female.

Morphological characters. — Body about 1.35 to 1.80 mm long, elongated oval, often quite slender, not depressed. Pigmentation of body very nearly like that figured by Ossiannilsson (1935, p. 235, fig. 1) for the type species, but usually the meso-metathoracic blotches extended more cephalad and often connected with the blotches of the pronotum; the blotches very dark brown to blackish, paler to pale around the bases of the hairs, darker around the siphunculi and on eighth abdominal tergite. The pigmented and the pale dorsal areas covered with low, rather flat warts which in dorsal view look like oval or irregular "rings"; only on the sides of the vertex, around the siphunculi and on the eighth abdominal tergite lines of granular nodules are present. Dorsal hairs numerous, all mushroom-shaped, like *Cantharellus*. Seventh abdominal tergite much wider than eighth, with a fan-shaped hair on each of the rounded, verrucose, processus-like posterior corners; eighth tergite above the cauda with a pair of parallel, fingertip-shaped processi, which are about ¾ of the length of first antennal segment, either of which

bears 2 stout, often curved hairs of 0.025 to 0.050 mm with blunt or slightly widened, flat apices. The processi have more or less oblique apices if the outermost hair stands as usual basad of the innermost hair, almost square apices if rarely both hairs stand at the same level; more rarely they bear a third hair on the outer side near the base; their inner sides are more or less parallel and the cleft between them may be so narrow that the inner sides almost touch. Front with 2 blunt hairs of 0.016 to 0.023 mm. Antennae $^3/_4$ to $^{10}/_{11}$ length of body, very dark with only basal $^1/_2$ to $^3/_4$ part of third segment pale yellowish, densely covered with rings of spinules, without secondary rhinaria; processus terminalis about 1 $^2/_7$ to 1 $^2/_3$ times as long as base of sixth segment. Eyes strongly protruding, without triommatidion. Rostrum not nearly reaching the middle coxae; last segment very stout and blunt. Siphunculi black, very short, cylindrical, on a low-conical base, without flange, ringed with nodules. Cauda blackish, knobbed, the knob globular to trapezoid, broader than long. Subanal plate not very deeply incised, the incision widely V-shaped. Legs rather short; fore and middle legs pale, with the bases ("knee-caps") of the tibiae brown, but hind femora with the middle portion to near apex brown to blackish brown; all trochanters ventrally with a marked processus (particularly the fore trochanters with a tooth-like excrescence) and basad and distad of this processus thick-walled and pigmented; fore femora markedly incrassate; tibiae with the "knee-cap" smooth, the rest ringed with spinules; first tarsal segments with 5 hairs ventrally; empodial hairs ribbon-shaped to spathulate.

Colour in life. — Creamy to yellowish, with black markings as figured by Ossiannilsson (1953, p. 235, fig. 1).

Measurements in mm

| No. | Length body | Antenna | Cauda | Antennal segments III | IV | V | VI |
|---|---|---|---|---|---|---|---|
| 1 | 1.72 | 1.38 | 0.13 | 0.45 | 0.23 | 0.22 | 0.13 + 0.19 |
| 2 | 1.66 | 1.38 | 0.13 | 0.44 | 0.20 | 0.23 | 0.14 + 0.22 |
| 3 | 1.59 | 1.40 | 0.11 | 0.45 | 0.22 | 0.23 | 0.14 + 0.21 |
| 4 | 1.64 | 1.43 | 0.12 | 0.47 | 0.22 | 0.24 | 0.15 + 0.19 |
| 5 | 1.72 | 1.46 | 0.12 | 0.49 | 0.22 | 0.24 | 0.14 + 0.22 |
| 6 | 1.47 | 1.35 | 0.12 | 0.44 | 0.20 | 0.22 | 0.14 + 0.21 |
| 7 | 1.60 | 1.46 | 0.12 | 0.49 | 0.23 | 0.24 | 0.14 + 0.20 |
| 8 | 1.54 | 1.39 | 0.11 | 0.45 | 0.21 | 0.21 | 0.15 + 0.22 |
| 9 | 1.52 | 1.39 | 0.11 | 0.46 | 0.20 | 0.23 | 0.14 + 0.22 |
| 10 | 1.64 | 1.49 | 0.11 | 0.49 | 0.25 | 0.24 | 0.14 + 0.21 |

1, from *Carex* sp., 5 km N.E. of Vallauris, dépt. Alpes Maritimes, 5 May 1959; 2-4 (no. 4 is the holotype), as no. 1 but 7 June 1959; 5, from *Carex halleriana* Asso, Balcons de la Mescla, dépt. Var, 4 September 1959; 6, 7, from *Carex halleriana*, Riez-

Moustier Ste. Marie, dépt. Basses Alpes, 5 September 1959; 8, 9, as 6 and 7, but 8 October 1959; 10, from *Carex* sp., 8 km N.W. of Valensole, dépt. Basses Alpes, 9 October 1959.

Oviparous female.

Morphological characters. — Very much like apterous viviparous female, but slightly broader. The pale parts of the abdomen marginally slightly pigmented. Below each siphunculus a very large, pale brownish wax-gland with marked "parenchymatic" cells. Hind tibiae in contrast to the other tibiae slightly curved inwards, dark brown except at base and apex, rather evenly swollen to about 1¾ the thickness of the middle tibiae, with some 60 roundish pseudosensoria.

Colour. — Not noted.

Measurements in mm

| No. | Length body | Antenna | Cauda | Antennal segments III | IV | V | VI |
|---|---|---|---|---|---|---|---|
| 1 | 1.71 | 1.46 | 0.12 | 0.47 | 0.22 | 0.25 | 0.15 + 0.22 |
| 2 | 1.71 | 1.49 | 0.12 | 0.47 | 0.25 | 0.24 | 0.14 + 0.23 |
| 3 | 1.66 | 1.46 | 0.13 | 0.46 | 0.24 | 0.24 | 0.16 + 0.20 |
| 4 | 1.53 | 1.31 | 0.12 | 0.39 | 0.21 | 0.21 | 0.15 + 0.20 |
| 5 | 1.78 | 1.39 | 0.14 | 0.47 | 0.22 | 0.21 | 0.14 + 0.19 |

1, 2, with apterous viviparous female no. 10; 3, from *Carex halleriana* Asso, Balcons de la Mescla, dépt. Var; 4, with apterous viviparous females nos. 8 and 9; 5, from *Carex* sp., 5 km E. of Aiguines, dépt. Var, 15 October 1959.

Apterous male.

Morphological characters. — Body only 1.15 to 1.45 mm long, very narrow. Pigmentation like that of apterous females, but dark areas much reduced and paler; thoracic blotches not reaching the sides of the body, abdominal blotches much less developed and cephalad disintegrated. Processi of eighth abdominal tergite not or not much pigmented, much reduced in size, rather as in apterous *N. fungifera* (Ossiannilsson), mostly still with 2 hairs each. Antennae longer than body, with basal half of third segment not much paler than the rest; third segment with about 7 to 20 small round rhinaria with a spinulose rim in an irregular, partly doubled row; some even smaller ones especially on basal half; fourth with about 4 to 8 rhinaria; fifth with 3 to 8. Genitalia very well developed.

Measurements in mm

| No. | Length body | Antenna | Cauda | Antennal segments III | IV | V | VI | Rhinaria on segments III | IV | V |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.42 | 1.43 | 0.09 | 0.47 | 0.23 | 0.23 | 0.14 + 0.21 | 18 & 18 | 7 & 6 | 6 & 6 |
| 2 | 1.29 | 1.34 | 0.09 | 0.42 | 0.23 | 0.22 | 0.14 + 0.20 | 15 & 15 | 4 & 5 | 5 & 7 |
| 3 | 1.30 | 1.39 | 0.10 | 0.42 | 0.23 | 0.24 | 0.14 + 0.23 | 12 & 12 | 6 & 5 | 6 & 7 |
| 4 | 1.28 | 1.31 | 0.09 | 0.39 | 0.23 | 0.22 | 0.13 + 0.20 | 13 & 15 | 8 & 6 | 4 & 5 |
| 5 | 1.22 | 1.19 | 0.10 | 0.37 | 0.18 | 0.21 | 0.12 + 0.19 | 7 & 12 | 4 & 7 | 3 & 4 |

1, 2, with apterous viviparous female no. 10; 3, 4, with apterous viviparous females 8 and 9; 5, with oviparous female no. 5.

Larvae.

First instar larvae with the spinal and marginal hairs very widely fan-shaped, slightly wider at apex than their length, placed on little dark sclerotic plates, but marginal hairs of seventh and spinal hairs of eighth abdominal tergite rod-shaped or at apex slightly widened and flattened; those on seventh tergite about 0.030 mm long, those on eighth about 0.045 mm, the latter on small tubercles.

Notes. — The insects lived on the underside of the leaves of a *Carex* that at the time of collection had no flowers or fruit and therefore could not be identified. Living host plants were then grown at Bennekom and after flowering identified by Dr. Reichgelt of the Rijksherbarium, Leiden, as *Carex halleriana* Asso. Alatae apparently were very rare throughout the collecting period from 5 May to 15 October, as only one alatoid nymph was taken. Sexuales appeared in great number from the first week of October.

The species resembles *Nevskyella fungifera* (Ossiannilsson) strikingly, but it can readily be recognized by the different ornamentation of the tergum. In *N. fungifera* the integumentum is covered with very fine dark granule-like, blunt spinules, arranged in lines; the lines locally forming patterns. But in the new species similar granules occur only around the siphunculi and to some extent on the head; elsewhere it has a sort of tortoise-shell like pattern of "rings" which in lateral view appear to be flattish warts. Also the processi on the eighth tergite are quite different, in *N. fungifera* conical, much shorter than their basal width with a wide V-shaped gap in between and with one apical hair and often a shorter lateral hair; but in the new species finger-like, almost parallel-sided, as long as their basal width, with a very narrow mostly parallel-sided gap and with two equally long apical hairs. The pigmentation of the antennae differs also, while in *N. fungifera* the rhinaria in males are considerably larger than in *N. meridionalis*. Oviparous females of *N. fungifera* have the hind tibiae only on basal half swollen and dark

and with much fewer pseudosensoria (sometimes only 8 to 10) than in *N. meridionalis* nov. spec.

We found in our species no trace of the fantastic dimorphism in apterous viviparous and oviparous females that Ossiannilsson (1959) described for *N. fungifera* and which to our knowledge is unique in its kind in aphids.

It should be mentioned here that the curious structure of the trochanters that we described is also present in *N. fungifera* and other *Iziphya*-like aphids with a jumping habit.

Types. — Holotype: one apterous viviparous female, from *Carex* sp., 5 km N.E. of Vallauris, dépt. Alpes Maritimes, in the collection of D. Hille Ris Lambers. Paratypes: 1 apterous viviparous female, from *Carex* sp., 5 km N.E. of Vallauris, 5 May 1959; 8 apterous viviparous females, as preceding, but 7 June 1959; 1 apterous viviparous female from *Carex halleriana* Asso, Grand Canyon, dépt. Var, 4 September 1959; 7 apterous viviparous females from *Carex halleriana,* Riez-Moustier Ste. Marie, dépt. Basses Alpes, 5 September 1959; 3 apterous viviparous females, 29 oviparous females and 10 males from *Carex* sp., 8 km N.W. of Valensole, dépt. Basses Alpes, 9 October 1959; 2 oviparous females from *Carex* sp., 5 km E. of Aiguines, dépt. Var; 8 apterous viviparous females, 7 oviparous females, and 8 males, from *Carex halleriana,* 10 km W. of Moustier Ste. Marie, dépt. Basses Alpes, 8 October 1959; 1 apterous viviparous female, 8 oviparous females and 2 males, from *Carex halleriana,* Balcons de la Mescla, dépt. Var, 7 October 1959; 1 apterous viviparous female, 12 oviparous females, and 4 males, from *Carex* sp., 8 km E. of Valensole, 8 October 1959; 3 apterous viviparous females, 15 oviparous females, and 10 males, from *Carex* sp., 5 km E. of Aiguines, 15 October 1959; all in the collection of D. Hille Ris Lambers.

## References

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