

## A new Auchenorrhyncha species, *Javesella simillima* (Linnavuori, 1948) (Hemiptera: Fulgoromorpha: Delphacidae) in the fauna of Romania

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### Abstract

A fulgoromorph species, *Javesella simillima* (Linnavuori, 1948) is recorded for the first time in the fauna of Romania. Data concerning genital morphology of males and general occurrence in Europe are given.

### Rezumat

**O nouă specie de cicadă, *Javesella simillima* (Linnavuori, 1949) (Hemiptera: Fulgoromorpha: Delphacidae) în fauna României**

Specia de fulgoromorf *Javesella simillima* (Linnavuori, 1948) este semnalată pentru prima dată în fauna României. În acest articol sunt tratate aspecte legate de morfologia sistemului genital mascul al acestei specii, precum și aspecte legate de răspândirea sa pe plan european.

**Keywords:** *Javesella simillima*, new record, fauna of Romania.

In the fauna of Romania, up to now, 5 species belonging to the genus *Javesella* Fennah have been recorded. These species are: *J. discolor* (Boheman, 1847), *J. pellucida* (Fabricius, 1794), *J. dubia* (Kirschbaum, 1868), *J. obscurella* (Boheman, 1847) and *J. forcipata* (Boheman, 1847) (MONTANDON, 1900; CANTOREANU, 1958, 1959, 1970). In the central-european fauna, there are recorded 10 species (HOLZINGER et al., 2003).

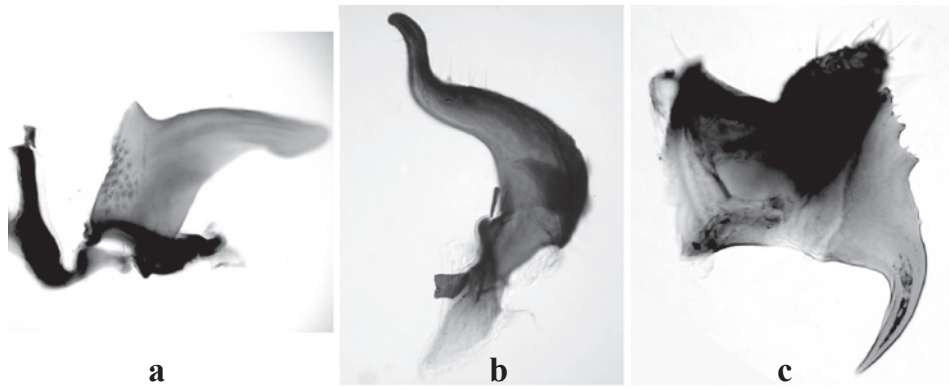
As results of our faunistic studies performed during 1998 – 2003 in the Arieș Basin (Transylvania County) we identified a new species for the fauna of Romania, *Javesella simillima* (Linnavuori, 1948).

Material examined: 1 male individual captured on 2.06.2000 in a spruce forest (*Sphagno – Piceetum*) in Arieșeni; 1 male individual captured on 17.07.1998 in a oligo-mesotrophic swamp, located on the touristic route leading to the Scărița – Belioara, botanical Reserve. As usual, this species live in bogs with *Eriophorum angustifolium* and *Carex rostrata* (HOLZINGER et al. 2003).

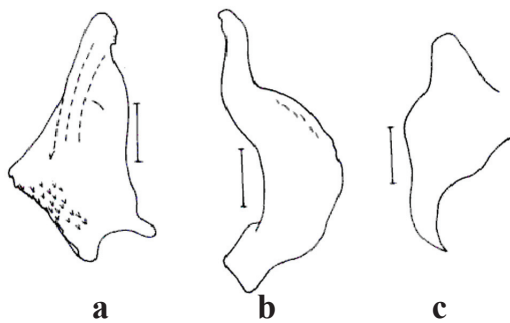
Considering the morphology of male genital system of the *Javesella simillima* (Linnav.), this species belong to *discolor* group (OSSIANNILSSON, 1978). The *discolor* group is composed by three species: *J. discolor* (Boh.), *J. bottnica* Hulden și *J. simillima* (Linnav.). Aedeagus of all these three species is expanded at the base and very narrow on the top. On

the dorsal outline of the aedeagus, there is a rounded prominence and on the lateral outline there are small thorns evenly distributed and downward orientated (fig. 1a, 2a, 3a, 4a, 5a). In the case of *J. discolor* (Boh.), morphology of male genital system is quite different comparing with the other two species of *discolor* group (fig. 5). On the other side, comparing aedeagus morphology of *J. simillima* (Linnav.) (fig. 1a) and *J. bottnica* Hulden (fig. 4a), we can find a lot of similarities. Small differences can be observed at the ventral outline of aedeagus. In the case of two male individuals captured by us, the aedeagus morphology is very similar to that of *J. bottnica* Hulden (fig.1a), but the morphology of left genital style and outline of the anal tube (fig. 1b,c), show very clearly that the two male individuals belong to the species *J. simillima* (Linnav.). In VILBASTE (1971) drawings (fig. 3), we can observe small differences regarding left genital style morphology and anal tube outline, comparing with OSSIANNILSSON (1978) drawings (fig. 2). It is quite possible that *J. simillima* to present an intraspecific variability of the male genital system. Further studies, performed on large number of male individuals, will confirm this hypothesis.

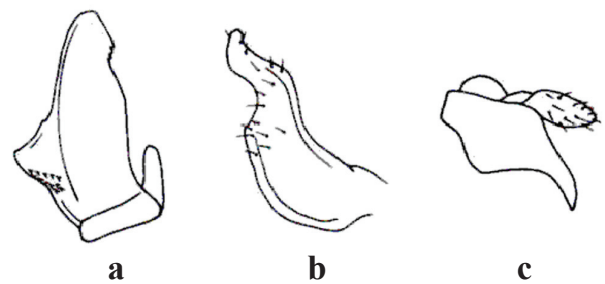
Occurrence in Europe: Finland, Russia, Estonia, Germany and Poland (NAST, 1987). After NICKEL & REMANE (2002), *J. simillima* is a north-siberian species.



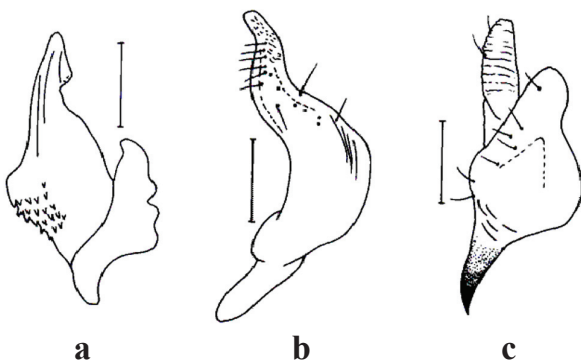
**Fig. 1.** *Javesella simillima* (Linnavuori, 1948), morphology of male genital system (original photos) a-aedeagus; b-left genital style; c-anal tube appendage; magnification scale: a-130 X; b, c-160 X



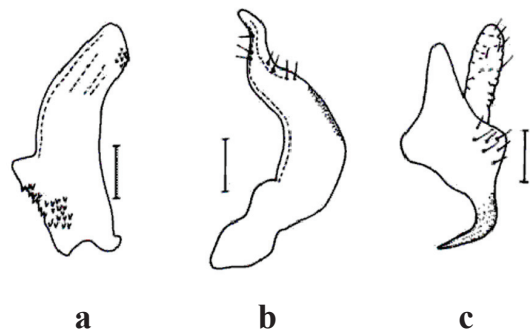
**Fig. 2.** *Javesella simillima* (Linnavuori, 1948), morphology of male genital system (after OSSIANNILSSON, 1978) a-aedeagus; b-left genital style; c-anal tube appendage Scale = 0.1 mm



**Fig. 3.** *Javesella simillima* (Linnavuori, 1948), morphology of male genital system (after VILBASTE, 1971) a-aedeagus; b-left genital style; c-anal tube appendage magnification scale: a,b – 120 X; c – 90 X



**Fig. 4.** *Javesella bottnica* Hulden, 1974 morphology of male genital system (after OSSIANNILSSON, 1978) a-aedeagus; b-left genital style; c-anal tube appendage; Scale = 0.1 mm



**Fig. 5.** *Javesella discolor* (Boheman, 1847), morphology of male genital system (after Ossiannilsson, 1978) a-aedeagus; b-left genital style; c-anal tube appendage Scale = 0.1 mm



Fig. 6. Occurrence map of *Javesella simillima* (Linnav.) in Europe

- - Literature data
- - Personal data



By recording *J. simillima* (Linnav.) in the fauna of Romania, her european distribution area is more extended toward south – east (fig. 6). As HOLZINGER et all.(2003) confirmed, *J. simillima* is a glacial relict, considering the present boreo-mountainous distribution.

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