

**The first observation of
Utamphorophora humboldti (Essig, 1941)
on its host, *Poa annua*, in The Netherlands
(Homoptera, Aphididae)**

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Abstract: The aphid *Utamphorophora humboldti* (Essig, 1941) is recorded from The Netherlands.

Key words: Sternorrhyncha, Aphidoidea, Aphidinae, non-persistent virus, persistent virus, *Avena sativa*, *Juncus bufonius*, food-plant, new record, The Netherlands

Introduction

Utamphorophora humboldti (Essig) has been described in 1941 as *Myzus humboldti* (Essig, 1941). A long time this aphid species only has been observed in the USA. In 1975, it has been found for the first time in Europe, in the United Kingdom (PRIOR 1975). Since 1978, a permanent network of suction traps allowed the detection of new aphid species in France among which was *U. humboldti* (HULLÉ et al. 1978). The Dutch General Inspection Service (NAK AGRO) also has a network of suction traps and yellow water traps scattered through The Netherlands with which they monitor the aphid situation to set the haulm killing date for seed potatoes. Only this year and last year a few winged individuals of *U. humboldti* (Figure 1) were caught. In September 2009, I found *U. humboldti* feeding on *Poa annua* in Wageningen.

Results

In September 2009 a winged aphid producing nymphs on a leaf of *Poa annua* was observed in Wageningen, The Netherlands. Using the identification keys of TAYLOR (1980) and BLACKMAN & EASTOP (2000), it seemed to be *Utamphorophora humboldti*. After searching more carefully, also some apterae were found. The species is rather difficult to find, since the colour is more or less the same as the colour of *P. annua* and the wingless aphid presses itself very close to the surface of the leaf during feeding. It is a rather big aphid, with an average length of >2 mm. The body is apple-green and elongated with 2 longitudinal dark-green stripes, a rather long pale cauda, slightly swollen siphunculi, the length of the antennae is more or less the same length of the body and on its head it has pronounced frontal tubercles (Figure 2).



Fig. 1. Alate *Utamphorophora humboldti* on a leaf of *Poa annua*.



Fig. 2. Apterous *Utamphorophora humboldti* on *Poa annua*.

Utamphorophora humboldti has been described from a number of grasses, such as *Dactylis*, *Festuca*, *Lolium*, *Poa*, etc. (BLACKMAN & EASTOP 2000). In North America *U. humboldti* overwinters on its primary host which is *Physocarpus* (HEIE 1994). Until now the aphid has not been found on its winter host in Europe despite in England sexuales have been observed.

Since we wished to screen this species on its ability of transmitting non-persistent viruses, I reared *U. humboldti* in the greenhouse on *P. annua*. Because we needed several hundreds of individuals, I collected several hundreds of small *P. annua* plants in the garden since seeds were not available. I assumed to need that many plantlets because I didn't notice more *U. humboldti* on older plants than just one or two colonies on each young plant. In the field, aphids start to walk and look for other plants after they reach a certain density. Therefore it was amazing to see how much individuals were on one plant in the greenhouse: almost no empty place on the leaf was left. It happened to be that the mass-rearing was done near oats (*Avena sativa*), cv. Gigant, sown in pots. After a few weeks, unexpectedly some of these plants were also infested with colonies of *U. humboldti* (Figure 3). The speed of growth and multipli-

cation on the oats plants was comparable with the individuals living on grass.

In the garden all kind of weeds are growing, a.o. *Juncus bufonius*. During sampling of the young grass plants, also *J. bufonius* plants were found that harboured small colonies of *U. humboldti*. As far as I know, *A. sativa* and *J. bufonius* are new host records for *U. humboldti*.



Fig. 3. Apterous *Utamphorophora humboldti* on *Avena sativa*.

To my knowledge, there are no data available on *U. humboldti* damaging cultured grasses. The only damage one could imagine is, that they eventually can transmit non-persistent viruses to all kinds of agricultural crops on which they land when searching for a food plant. As other aphid species, belonging to the Aphididae, *U. humboldti* can be a potential virus vector of non-persistent viruses (De Bokx & Piron, 1990).

If *U. humboldti* is able to transmit persistent viruses to agricultural crops such as cereals is not known and should be investigated further. Theoretically it could be possible since *U. humboldti* feeds and reproduces on oats.

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