Aedes koreicus, a new mosquito imported in Italy

[a]Drago A., [a]Martini S., [b]Montarsi F., [b]Ciocchetta S., [c]Simonato M. [d]Toma. L. [e]Schaffner F, [d]Romi R. [b]Capelli G.

(a)Entostudio, Padova, Italy; (b)Istituto Zooprofilattico delle Venezie, Legnaro, Italy; (c) Agronomy Faculty, Padua, Italy;
(d) Istituto Superiore di Sanità, Rome, Italy; (e) University of Zurich, Switzerland;

The exotic mosquito, ***Aedes koreicus*,** has been recorded in Italy for the first time, in a small town in **Belluno province**, **north-eastern Italy.**

The species has been previously introduced in Europe in **Belgium** in 2008, where successfully established [1].

M&M - The first record of the exotic mosquito occurred on May 24th 2011, during a regular survey, carried out by **Entostudio** within the program promoted by the **Veneto Region** and the **Local Health Unit** (ULSS 2-Feltre, BL, Italy), for monitoring the presence of ***Ae. albopictus*.** Larvae where found in a street catch basin in **Sospirolo** (Province of Belluno, Lat 46° 8'30.27"N, Long 12° 4'19.33"E), located at 467 m.a.s.l. in a subalpine area. Larvae and adults moulted in laboratory were morphologically (fig.2,3) and molecularly identified[2-4] as ***Ae. koreicus.***

After the identification, the monitoring activity was increased to understand the extension of the species and to trace back the possible route of entry of the mosquito. The entomological monitoring was carried out in a large area surrounding the first record.

RESULTS - To date, *Ae.koreicus* has been found in 12 villages (Fig.1). The *Ae. koreicus* larvae were collected in breeding sites typical of ***Ae. albopictus*,** however, in villages where both the species are present, they do not share the same site (fig.1).

The positive sites are scattered in an area of approximately 300 Km^2 and are not apparently related each other, making difficult to understand how and when this mosquito entered in Italy. However, the limited extension of the distribution area, let to reasonably speculate a quite recent entry.

In the area there are no tyres international trading companies, the most common way of entry of exotic mosquitoes worldwide, while there are several nursery gardens.

CONCLUSIONS - ***Ae. koreicus*** is native to Korea, Japan, China and eastern Russia. Not much information is available on its biology and activity. The species is known to feed on humans and domestic animals, and it seems to well adapt to urban environment.

The mosquito is a potential vector of arboviruses and it has been demonstrated to experimentally transmit **Japanese encephalitis** and ***Dirofilaria immitis*** (dog heartworm)[2].

This finding, once again, stresses the importance of implementing the entomological surveillance to early detect new invasive species.

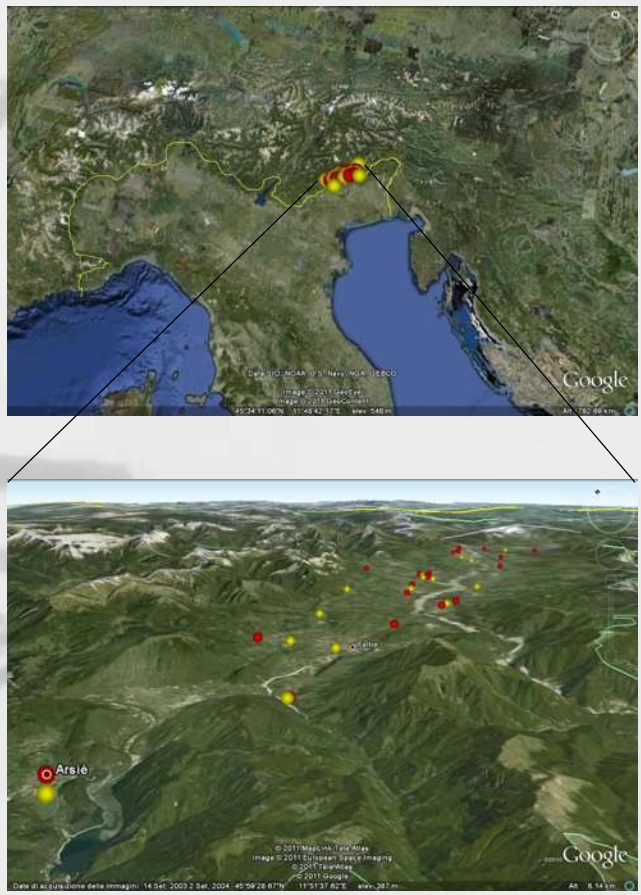

Figure 1 - Sites currently positives for *Ae. koreicus* and *Ae. albopictus* in the area monitored. *Ae. Albopictus* is very common below the yellow line (fig above).

Fig 3 - Difference in mesonotum between *Ae. koreicus* (left) and *Ae. albopictus* (right)

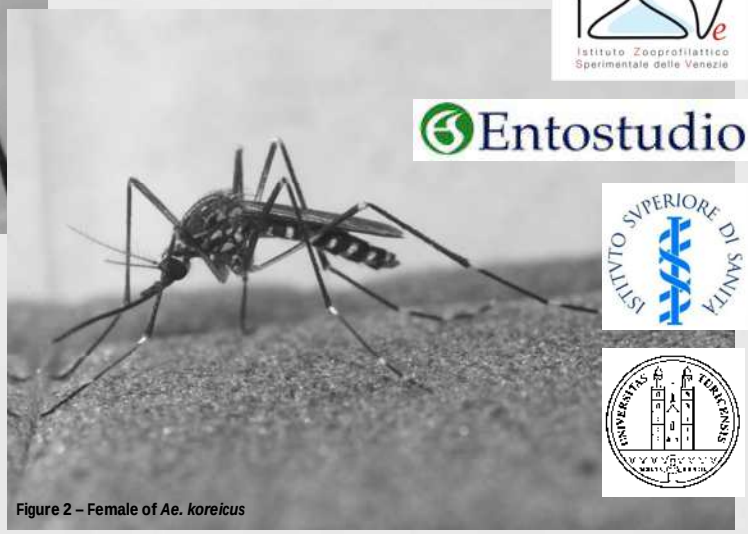

Figure 2 – Female of *Ae. koreicus*

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