Asian Tiger Mosquito, *Aedes albopictus*

**Overview**

*Short description of Aedes albopictus, Asian Tiger Mosquito*

Adults of Asian tiger mosquito are relatively small, black mosquitoes with a white pattern on the legs and other parts of the body. The diagnostic character to differentiate this species from similar species is the presence of a median silver-scale line on the scutum (dorsal part of the thorax).

*Description of Aedes albopictus, Asian Tiger Mosquito status in GB*

Asian tiger mosquito is present in a number of countries in Europe but not yet reported in GB.

**Habitat summary: Aedes albopictus, Asian Tiger Mosquito**

Asian tiger mosquito breed in natural and artificial aquatic habitats including tyres, barrels, vases and drinking troughs. In Europe, a preference for urban and suburban habitats has been noted.

**Overview table**

| Environment: | Terrestrial |
| Species status: | Non-Native |
| Native range: | Indo-China, Malesia, Kazan-retto, Nansei-shoto, Ogasawara-shoto |
| Functional type: | Omnivore |
| Date of first record: | Unknown |

**Invasion history: Aedes albopictus, Asian Tiger Mosquito**

**Origin**

Asian tiger mosquito originated in the tropical forests of south east Asia but has since spread globally to at least 45 different countries. In Europe it has been reported in Albania, Belgium (not established), Bosnia & Herzegovina, Croatia, France (incl. Corsica), Germany (not established), Greece, Italy (incl. Sardinia and Sicily), Malta, Monaco, Montenegro, the Netherlands, San Marino, Slovenia, Spain, Switzerland and Vatican City.

**First Record**

Asian tiger mosquito has not been reported in GB but was first reported in Europe in 1979 in Albania. It was then reported in Italy in 1990 where it has become fully established. It has since been reported in a number of other countries in Europe but not all populations have become established.

**Pathway and Method**

The spread of Asian tiger mosquito has been facilitated by the importation of used tyres (e.g. Italy) and lucky bamboo (e.g. The Netherlands) containing desiccation resistant eggs and through public and private transport which can sometimes transport adult mosquitoes from one area to another. Used tyres have been suggested as the most likely route of entry for this species into GB.

**Species Status**

Although eradication has been successful in some areas including France and Belgium, other countries have been unsuccessful which has resulted in the establishment of Asian tiger mosquito (Israel, Italy, USA etc). Risk mapping projections suggest that the geographical spread of this species in Europe will increase and studies have suggested that it could survive within GB if it were introduced.

**Ecology & Habitat: Aedes albopictus, Asian Tiger Mosquito**

**Dispersal Mechanisms**

Adult flight range is reported to be less than 200m so spread of this species is mainly through passive transport of desiccation resistant eggs (in tyres lucky bamboo) or adults (in vehicles). This species was introduced into Italy following importation of used tyres through Genoa. During the first 10 years of colonisation in the country, Asian tiger mosquito spread throughout 22 provinces, mainly in the northeast of the country. It is now become established in most areas of the country <600m above sea level and is highly abundant in many urban areas. Italy is now the most heavily infested country in Europe.

**Reproduction**
Asian tiger mosquito produce 5–17 generations per year.

**Known Predators/Herbivores**
Aquatic predatory invertebrates (e.g. beetles).

**Resistant Stages**
Desiccation and freeze resistant eggs are laid by temperate strains. Adults have been shown to overwinter in Italy.

**Habitat Occupied in GB**
None known.

**Distribution: Aedes albopictus, Asian Tiger Mosquito**

Although not currently reported in GB, a study using a GIS based model suggests that abiotic factors would not limit the establishment of Asian tiger mosquito throughout large parts of lowland GB, with at least 4–5 months of activity. This activity would be more prolonged in urban centres around London and the southern coastal ports.

**Impacts: Aedes albopictus, Asian Tiger Mosquito**

**Environmental Impact**
They breed in a wide range of container aquatic habitats and have been shown to outcompete resident mosquito species.

**Health and Social Impact**
An outbreak of chikungunya in Italy in 2007 was the first known local transmission of chikungunya in Europe and resulted in over 200 cases, one of which was fatal. Asian tiger mosquito was reported to be the main vector involved in the transmission of the disease during this outbreak and has also been associated with dengue virus transmission in China, Japan and Seychelles and the transmission of Dirofilaria in Asia, North America and Europe. More recently it has been suggested as the vector involved in cases of chikungunya and dengue reported in France during 2010. It is also considered a competent vector experimentally of at least 22 other arboviruses and a number of these viruses have also been isolated from field-collected Asian tiger mosquito in different countries. Such viruses include; Eastern equine encephalitis (Turell et al., 1994), La Crosse virus, Venezuelan equine encephalitis West Nile virus and Japanese encephalitis virus.

**Economic Impact**
Currently GB invest some money (<£10k) in surveillance at GB ports and imported tyre companies - all work conducted by the GB Health Protection Agency. In Europe, some municipalities in Italy spend >1 million Euros on control.

**References & Links: Aedes albopictus, Asian Tiger Mosquito**

**Identification**

**Biology, ecology, spread, vectors**


Management and impact


General


