

# MIDGES *CULICOIDES*

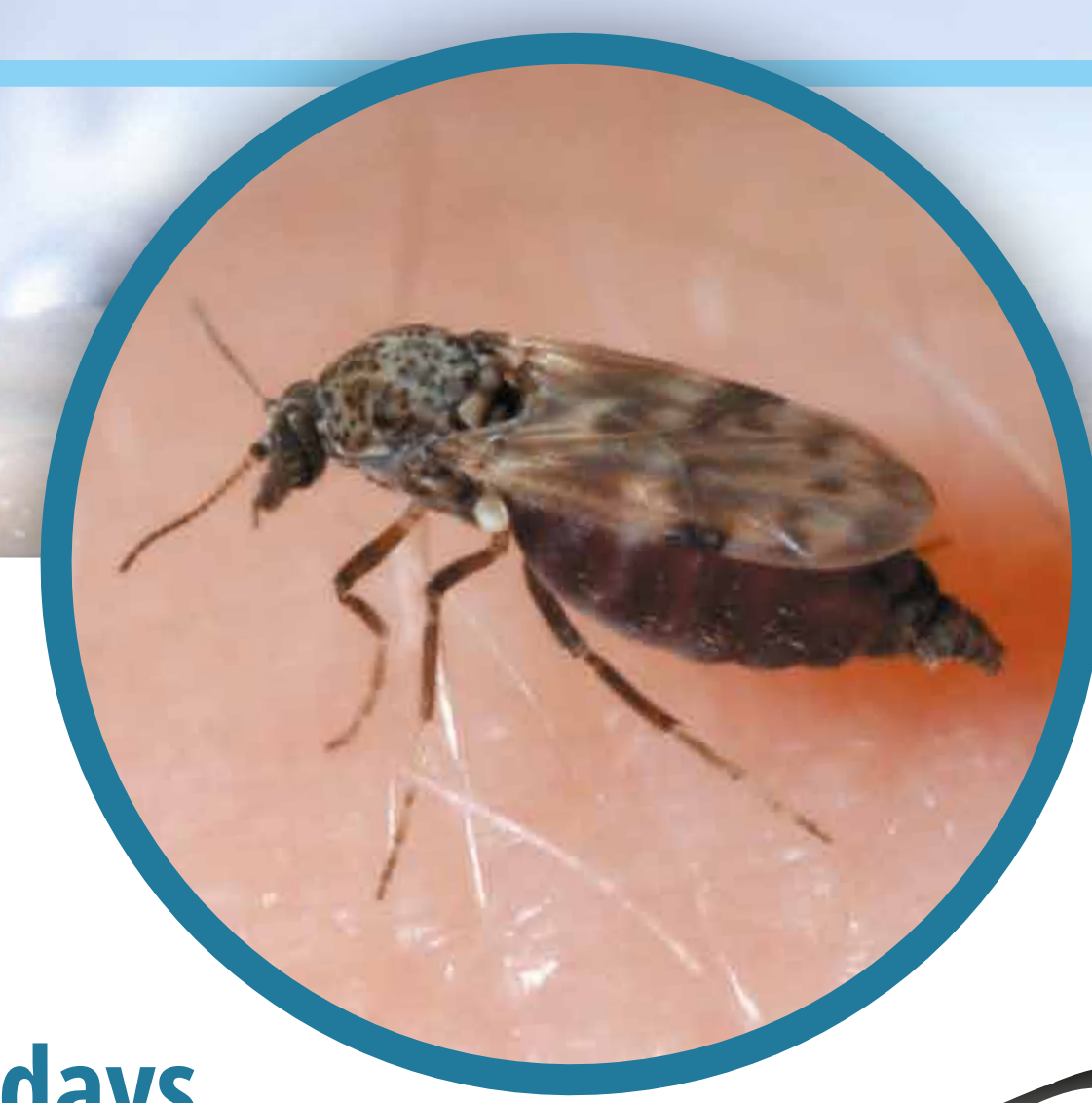
## bluetongue disease

Name *Culicoides imicola*

Length **1-4 mm**

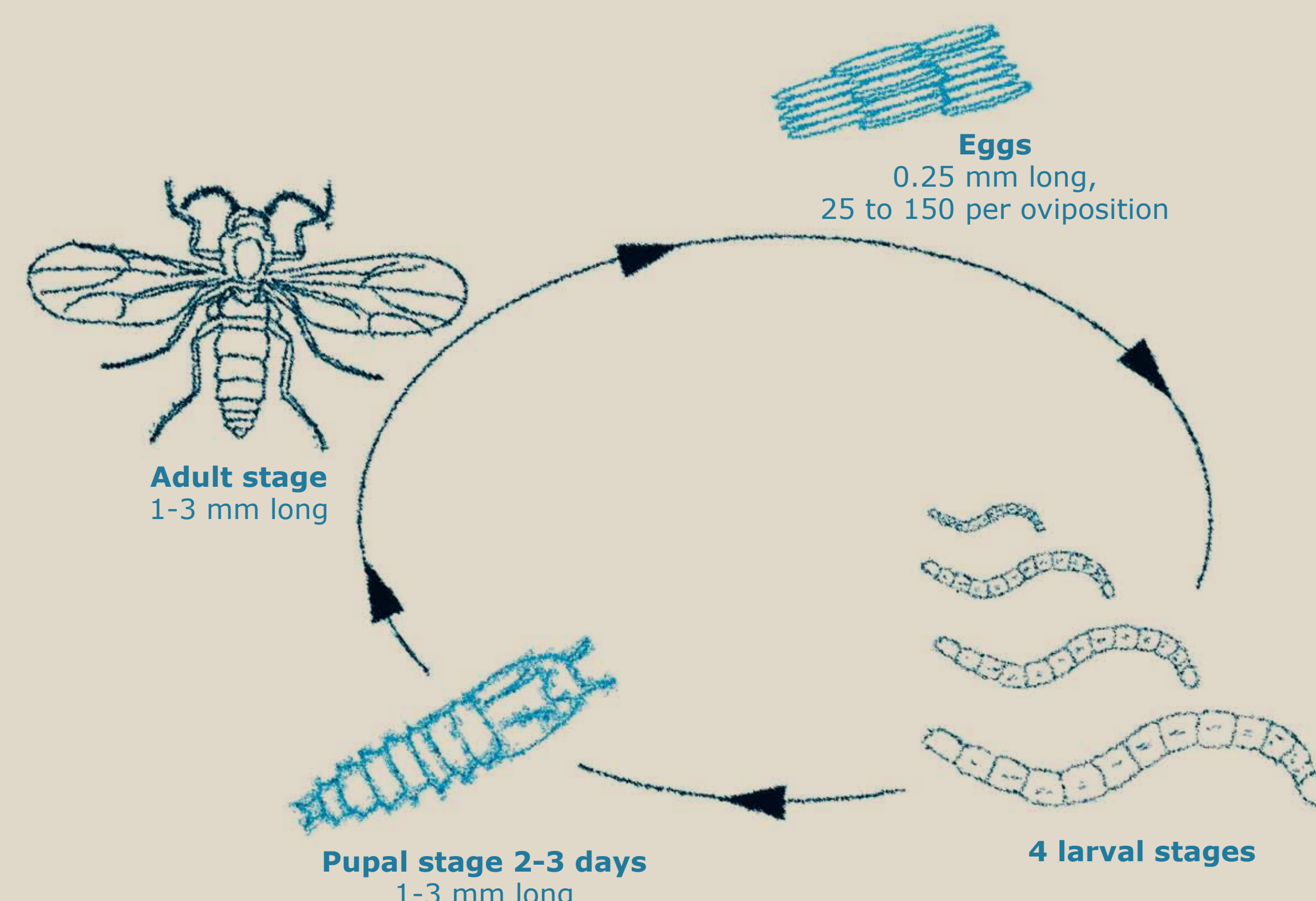
Longevity as a biting insect **20-30 days**

Special feature **its bite is particularly painful**



## Biology of the vector

The female *culicoid* midge **bites humans and animals** to obtain the **blood meal** that is essential for **maturation of her eggs**. These are laid in moist and even **wet soil**. Several **stages** follow hatching, from that of semi-aquatic larva to adult.



## Geographic distribution

Distribution of bluetongue disease in 2012



*Culicoides* are widely distributed **in the world**, but absent in Antarctica, New Zealand and Hawaii.

Nearly **1,400 different species** have been counted, with about **90 reported in France**.

Scientists are discussing the possibility of recent colonisation of the Mediterranean basin by *Culicoides imicola*.

## Vector transmission

Some *Culicoides* species are vectors of **human disease** viruses such as the **Oropouche virus** in South America. But others are the cause of very serious damage to domestic animals. For example, **bluetongue disease in sheep**, whose characteristic clinical feature is a **violet tongue**,

whence the common name of the disease.

**European flocks** and herds have been seriously affected **since the 2000s**. They are exposed to the recent introduction of **exotic virus** that can also be transmitted by local species of *Culicoides*.



## Prevention and control

Various preventive measures are proposed:

- Treat livestock with **insecticide baths**
- Keep livestock in **stables** as adult midges do not enter buildings very much
- Remove **manure** as it is propitious for *Culicoides* larvae
- **Vaccinate livestock** using the appropriate viral strain



**1 400 *Culicoides* species**  
**and considerable impact on animal health**