

# FLEAS

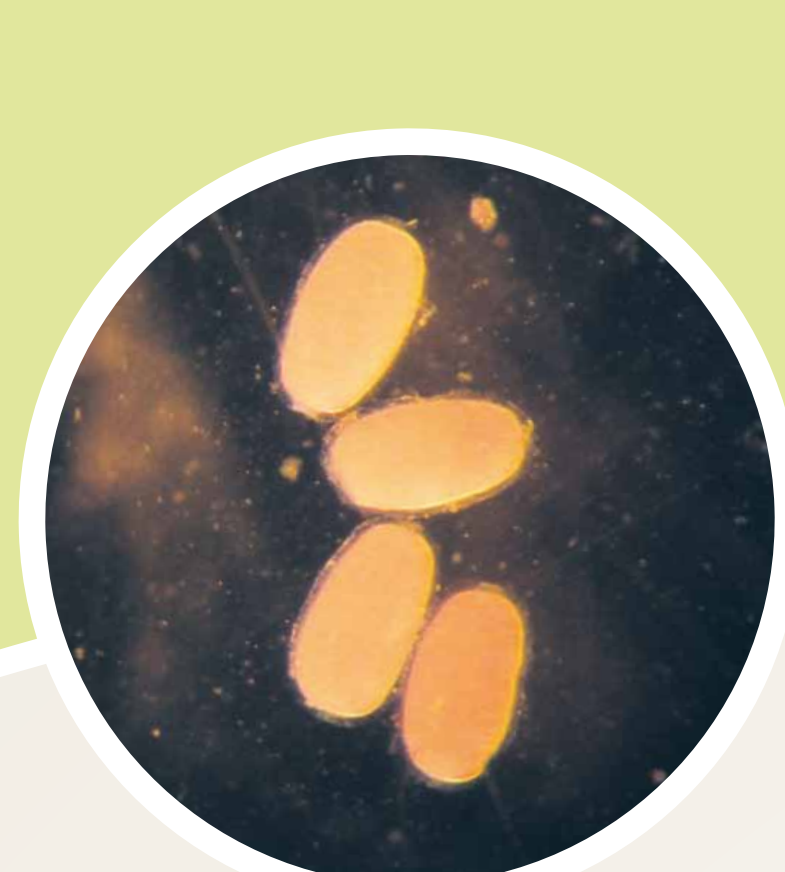
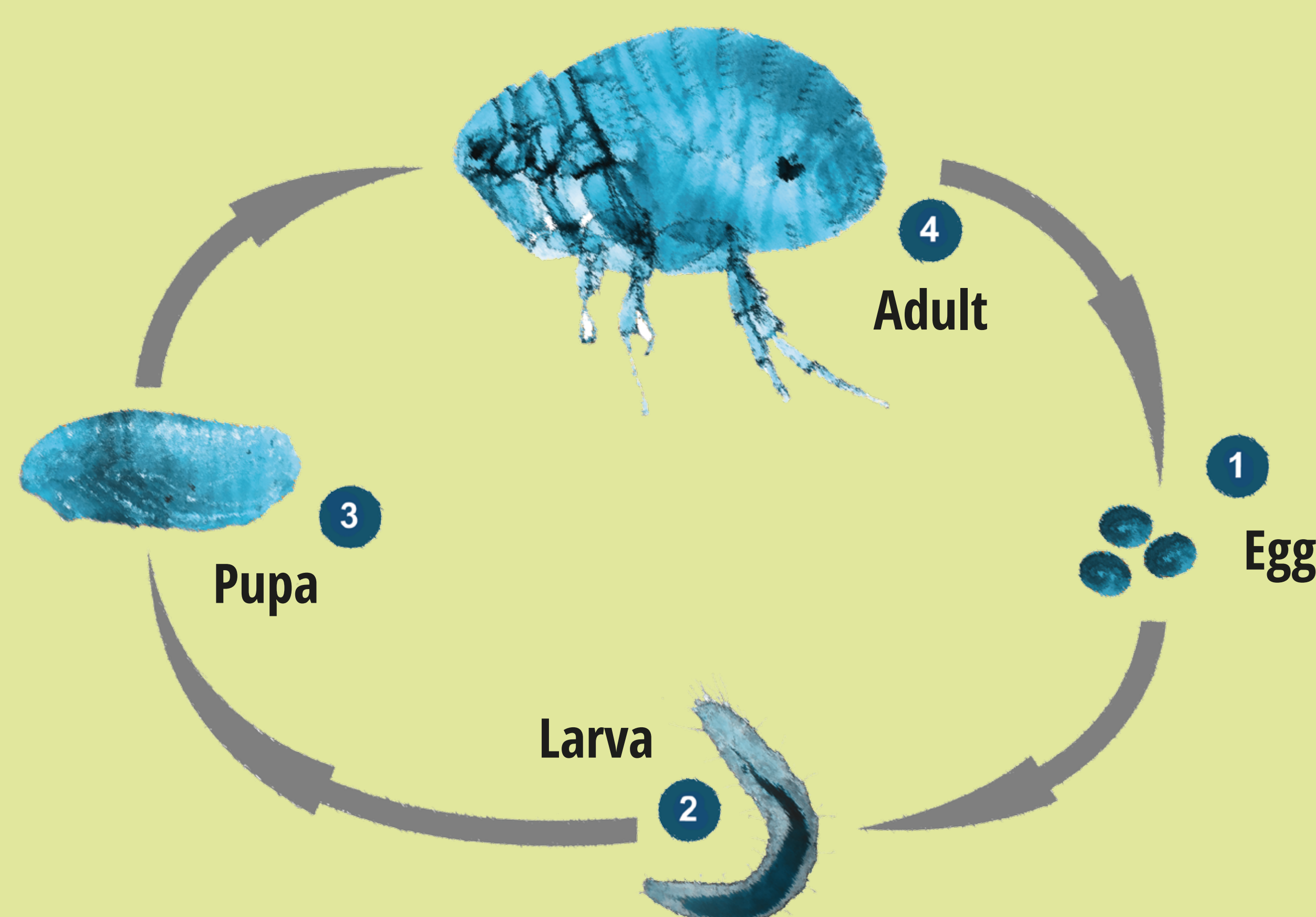
## plague

Name *Xenopsylla cheopis*  
Length **2 mm**  
Longevity as a biting insect **10 months**  
Special feature **reputed for jumps of more than 300 times its size**



## Biology of the vector

Every flea species lives in **close contact** with an associated host species (land **mammals** and sometimes **birds**).  
Adult males and females live **in the fur of their hosts** and feed on **blood** alone. But the larvae live **in the litter** of mammals.



## Geographic distribution

Present distribution of plague



Fleas are present **all over the world**.

*Pulex irritans* has 'specialised' **in human hosts** but is not a vector.  
The rat flea, *Xenopsylla cheopis*, is the main **vector of bubonic plague** in humans. It is still present **in more than 25 countries**.

## Vector transmission

Fleas transmit the bacterium, *Yersinia pestis*, from one **rodent** to another. However, the bacterium can infect **humans**, causing catastrophic plague epidemics before the discovery of a vaccine and antibiotics.  
It is estimated that in the Middle Ages the **Black Death**

killed **25 million people** in Europe, that is to say 40% of the population **in five years**.  
No cases have been reported for decades in Europe.  
In contrast, cases are reported in the United States.



## Prevention and control

The vaccine for plague was discovered by Institut Pasteur.  
In countries where vaccine cover is absent or imperfect, measures must be taken in a precise order in case of epidemic:

- First kill fleas using **fast-acting insecticide**
- Then eliminate rats by **slow-acting rat poison**
- Treat cases of plague with **antibiotics**

**A traumatising historical disease that still exists today**

