

# PHLEBOTOMINAE SAND FLIES

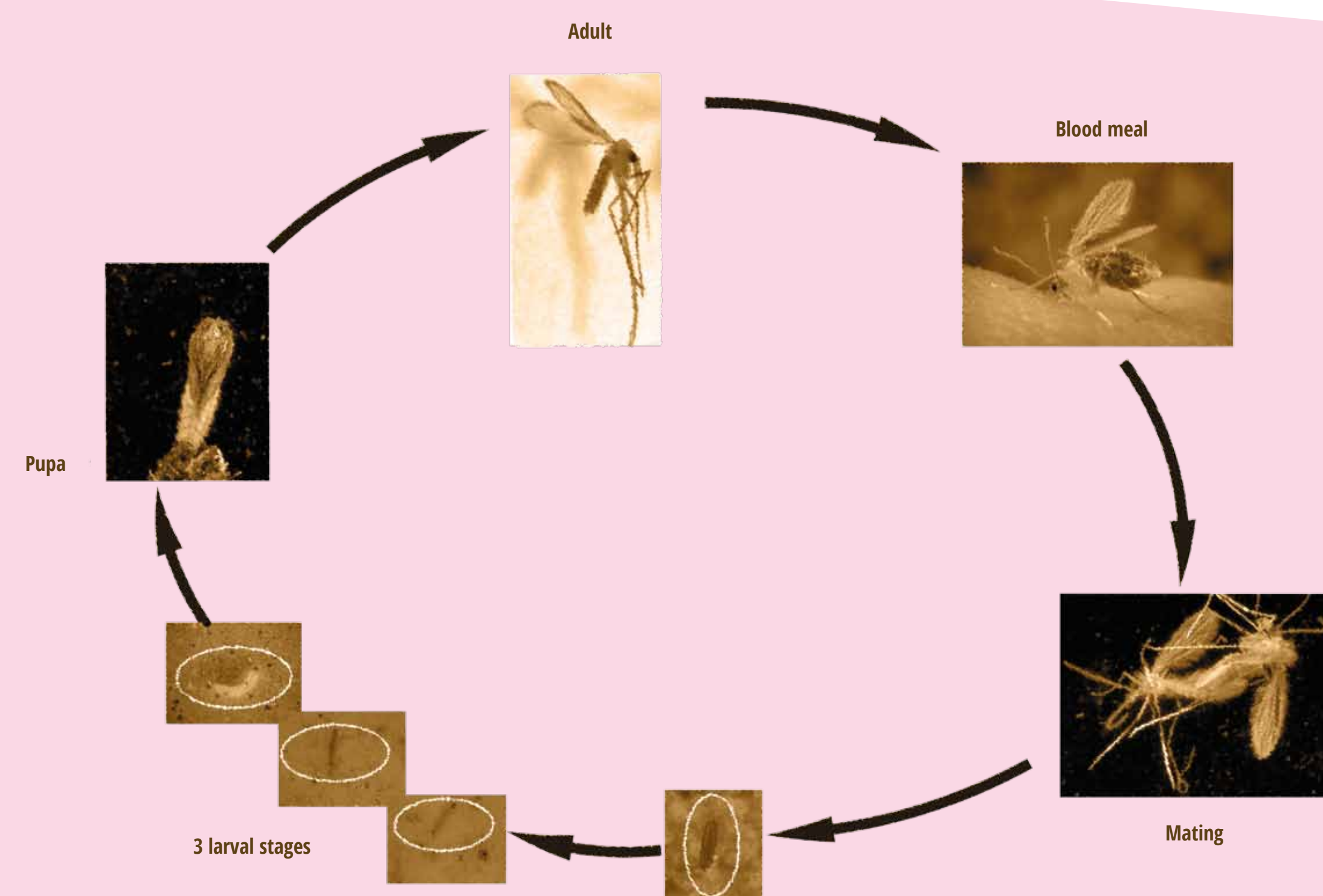
## leishmaniasis

Name *Phlebotomus papatasi*  
Length 2-3 mm  
Longevity as a biting insect 1 month  
Special feature multiple bites on a small area of skin



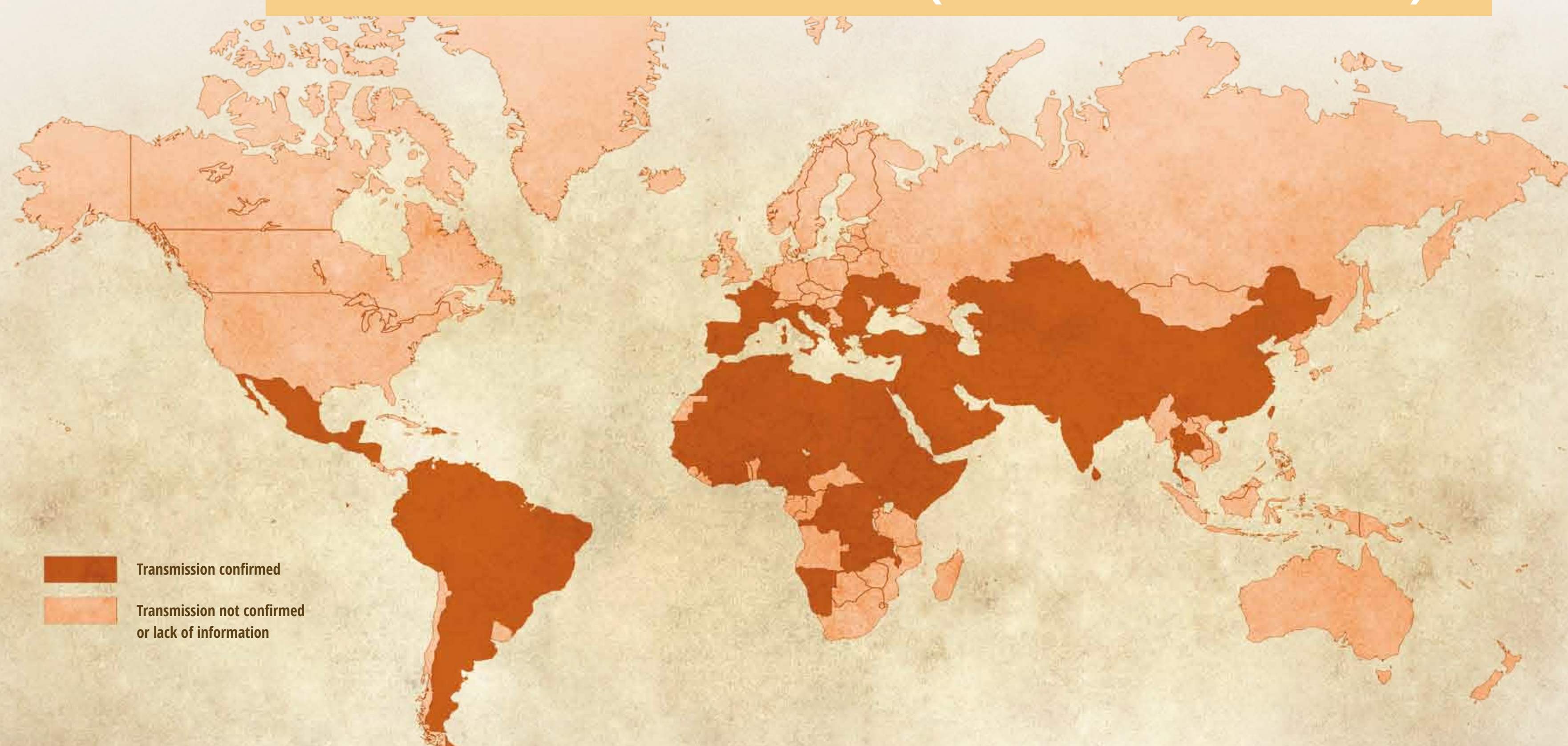
## Biology of the vector

Of the same order as flies, Phlebotominae sand flies are **silent** and **active at night**. Eggs, larvae and pupae have a terrestrial habit with a preference for **dark places**. The males do not bite. Each **blood meal** taken by a female is sufficient for the development of about a hundred eggs.



## Geographic distribution

Distribution of leishmaniasis (visceral and cutaneous)



These sand flies are found in the **tropical zones** of all continents. Seen in both the **Amazon forest** and in the **Andes**, they are also present in the **South of France** and the **Mediterranean region**.

## Vector transmission

70 of the 800 *Phlebotomus* species are potentially vectors of leishmaniasis. The pathogens that cause this disease are members of the genus *Leishmania*. The parasite infects **humans, dogs** and other **mammals**. The most benign form of the disease causes **cutaneous ulceration**. The mucocutaneous form is more serious.

The visceral form is fatal without treatment, affecting **liver, spleen** and **bone marrow**. The World Health Organization (WHO) estimates that there are 2 million new cases per year and **350 million** persons at risk.



## Prevention and control

The drugs available have serious undesirable secondary effects and so preventive measures should be taken:

- ➔ Use **cutaneous repellents** and **insecticide-treated nets**
- ➔ **Destroy any resting habitats** of adult sand flies around dwellings
- ➔ **Vaccinate dogs** in zones where the disease is endemic using the vaccine developed by IRD and its partners



A discreet but fearsome insect!