

# Genus- Ornithodoros

Morphology , Lifecycle , Pathogenesis ,  
Prevention & control

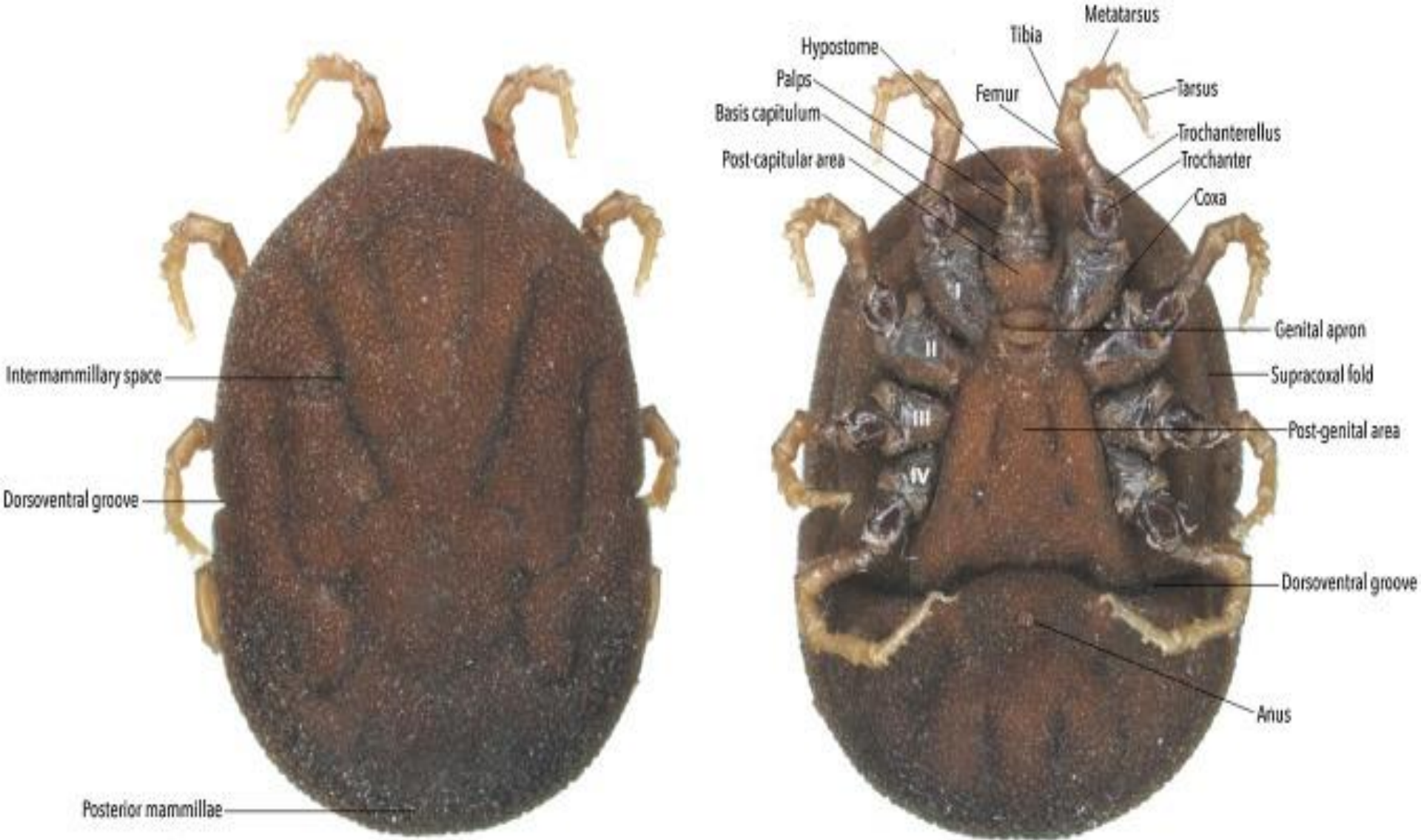


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# Morphology : *Ornithodoros*

- ❑ The ventrally located head, invisible from the dorsal side.
- ❑ The scutum absent.
- ❑ The surface of body is leather-like, wrinkled, and covered by small nodules.
- ❑ They have no eyes.
- ❑ “suture line” absent at the border of dorsal and ventral surfaces,
- ❑ long mouthparts (hypostomum), equipped with long and backward-pointing chitin barbs.
- ❑ The female is about 10 mm and the male 8 mm long





## *Body parts: **Ornithodoros.***



*Ornithodoros moubata*





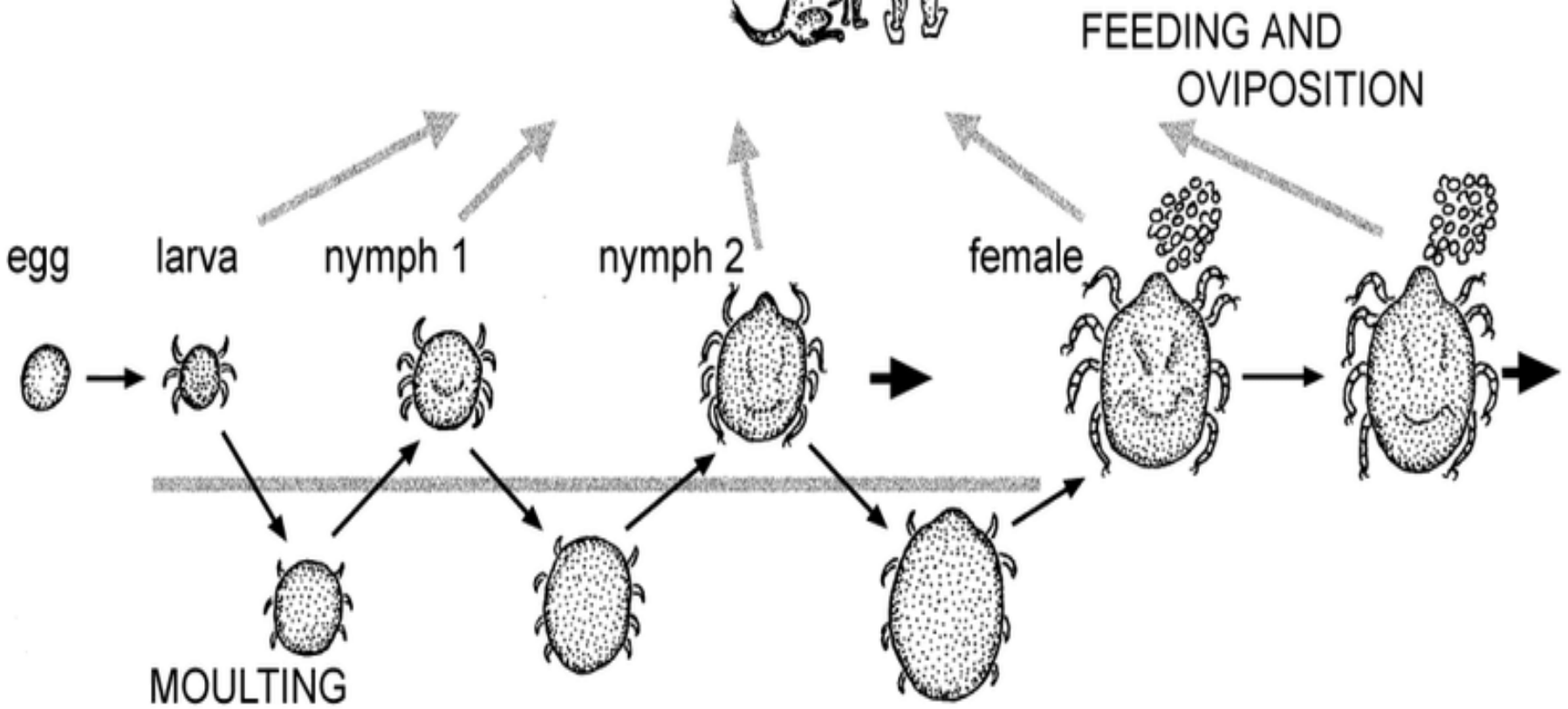
*Ornithodoros savignyi*

SOURCE-GOOGLE

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# Life cycle : *Ornithodoros*

- ❑ Egg-laying always occurs outside the host in a sheltered area. Eggs hatch into six-legged larvae.
- ❑ Once a suitable host is found, they feed from one hour to several days
- ❑ After feeding, the larvae leave the host and moult into the first nymphal instars which quest for feeding on the second host rapidly.
- ❑ The second host is usually the same species, and often the same individual, as the first host.
- ❑ This cycle can continue up to seven nymphal instars , depending on the species.
- ❑ After the last nymphal instar has fed, it leaves the host and moults into an adult.
- ❑ Adults may continue to feed on the host, feeding rapidly and detaching after each blood meal. .



# *Life cycle : Ornithodoros*



# Pathogenesis

- ❑ The ticks feed nocturnally.
- ❑ Relapsing fever caused by infection with bacteria e.g Borrelia, which is transmitted through the bites of Ornithodoros spp.
- ❑ They are also responsible for transmission of Tampan toxicoses and tick paralysis .
- ❑ These ticks are blood feeders, and caused spirochetes from a blood meal invade all tissues of the tick within hours.
- ❑ The spirochetes can persist for years in the tick salivary glands, and transmits during the short feeding period of 20 minutes.
- ❑ The tick bites are painless so many patients give no history of a tick bite.



# SYMPTOMS OF RELAPSING FEVER



**FEVER**



**HEADACHE**



**JOINT PAIN**



**LOSS OF APPETITE**



**NAUSEA & VOMITING**

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*Relapsing fever*

# Prevention / Control

- ❑ Prevention requires damage of tick habitats and bites.
- ❑ It can also be minimize by vector control by using various types of acaricides.
- ❑ Personal protection may be possible by the use of repellents on the skin and clothing in tick-infested areas.

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- ❑ The removal of attached ticks within 24 hours may prevent spirochaete transmission.
- ❑ Prophylactic antibiotic therapy may be desirable following the bite of an infected tick.