

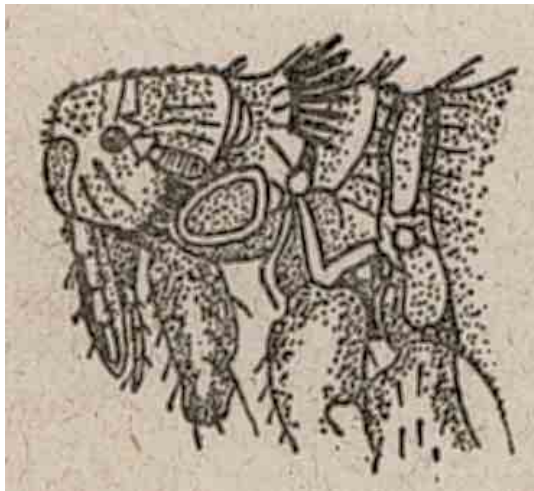
Fleas and Rabbits

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Fleas can plague rabbits as well as humans. Wild rabbits are mainly infested by the rabbit flea *Spilopsyllus cuniculi*. The lifecycle of *Spilopsyllus cuniculi* is synchronized to the lifecycle of the wild rabbit in such a way that eggs are laid after the birth of newborn rabbits. The female flea deposits her eggs inside the nest, where the necessary humidity is present for their development. The survival of the hatched larvae can only happen when humidity is higher than 50%. They feed on the feces of the adult fleas, which are rich in blood sucked from the host.

The population of the flea that live with the rabbit is composed of eggs (50%), larvae (35%), pupas (10%) and only 5% adults. The development of the fleas is quick and will infest new rabbits.

The length of the lifecycle depends on the humidity of the air and the temperature. In general it lasts between 12 and 14 days, but can take as long as 6 months. Inside a house or an apartment, the complete life cycles takes between 9 days and 4 weeks time.



Farmers Bulletin 1568 – bureau of Animal Industry; M.W. Meek, Diseases and Parasites of Rabbits and their control

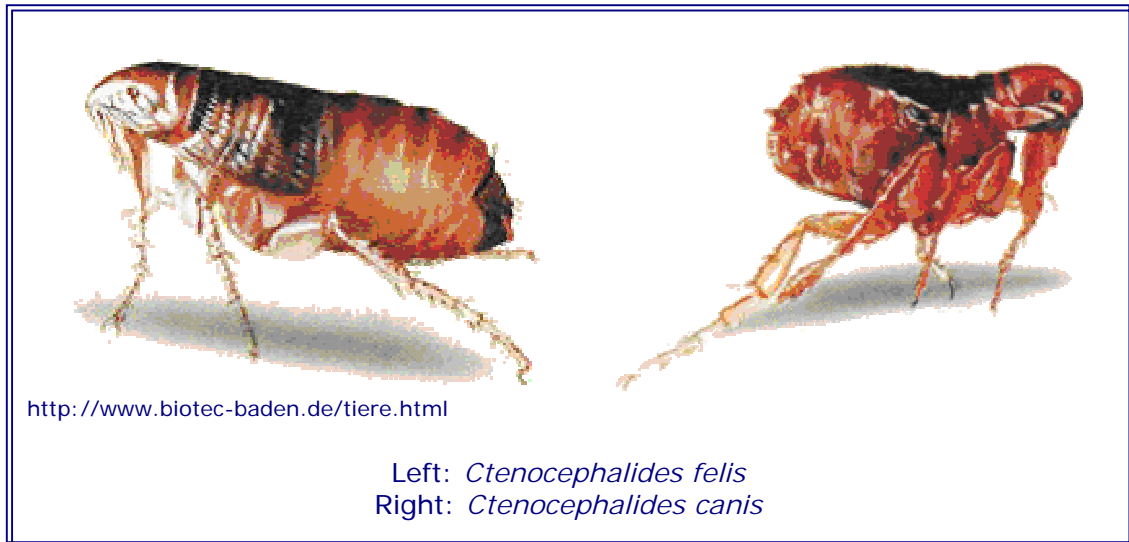
Left: *Spilopsyllus cuniculi*, the rabbit flea

Right: *Echinophaga gallinacea*, a chicken flea that can also infest rabbits



Domestic rabbits are commonly infested by the cat or dog fleas: *Ctenocephalides felis* or *Ctenocephalides canis*, respectively.

The presence of *Ctenocephalides felis* can result in serious irritation in both animals and human beings. It is often coupled with an allergic reaction against the anti-coagulase enzyme, present in the injected saliva of the flea. This enzyme is necessary to keep the induced fleabite open.



Various species of fleas have been found on rabbits. They include *Pulex irritans*, *Cediopsylla simplex*, *Odontopsyllus multispinosus*, *Echinnophaga gallinacea*, or *Echidnophasis mymecobil*.

Fleas can be carrier of the tapeworm parasite or of contagious diseases that can affect the rabbit, like myxomatosis, tularemia, or pest. Myxomatosis is mainly spread by the rabbit flea *Spilopsyllus cuniculi*.

Symptoms and diagnosis

The presence of fleas is typically subclinical and seasonal, with a peak observed at the end of the summer. Infestation is characterized by the presence of the feces of the fleas and their eggs. The fleas are frequently noticed at the periphery of the ears, between them, on the eyelids or the nose of the rabbit. Other locations on the body should nevertheless not be ruled out.

In rare cases, a strong allergic reaction against the saliva injected by the flea takes place. If such a reaction is observed, it is recommended to examine the rabbit for further skin disease.

The presence of *Spilopsyllus cuniculi* often leads to pruritic skin and the



appearance of crusts.

In rare cases, a fleabite is accompanied by secondary bacterial infection. Oral antibiotics are indicated in this case. Best is to carry out a bacterial culture, followed by a sensitivity test, to determine the best antibiotic option.

Treatment

It is important to treat both the rabbit infested by fleas and the environment.

Fleas are eliminated by sprays, powder products or topical products:

- pyrethrin based products.
- selamectin: Revolution® (US) or Stronghold® (Europe) - Pfizer, 18 mg/kg. A single topical (local) dose should be sufficient; if not, repeat in 30 days.
- imidacloprid: Advantage® - Bayer, one single application is generally sufficient to remove the fleas. If this is not the case, the treatment can be repeated after 30 days. The vapors of this product can lead to irritation of the eyes; it is thus recommended to aerate the room where the rabbit lives in.
- lufenuron: Program® - Novartis, 10 mg/kg. One sole treatment should be sufficient. If not, the treatment can be repeated after 30 days.

Impregnated anti-flea collars should never be used in rabbits. They lead to severe irritation of the skin. There are reported cases, where the rabbit attempted to remove its collar, and died as a result of jamming its jaw in the collar.

Treatment of the environment is important (boric acid such as Fleabusters®; Vet-Kem Acclaim Plus® - Sanofi; Staykil® - Novartis; Indorex® - Virbac; acaricide spray). When treating a carpet, vacuum first in order to further penetration of the spray or powder. Shampooing and steam cleaning are not ideal; their residual humidity can increase the mite problem. During treatment of the environment, rabbits should be kept in another part of the home to avoid the danger of contact with the products.

Further Information

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