

INCIDENCE AND SEASONAL ACTIVITY OF *PRZHEVALSKIANA SILENUS* (BRAUER) IN ANGORA GOATS IN TURKEY

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During the years 1970 and 1972, a study was carried out on the occurrence and life cycle of *Przhevalskiana silenus* in Angora goats in Central Anatolia, Turkey. The materials used for the morphological and bionomical investigations of the warble fly were collected from Lalahan, Çifteler and Yerköy Animal Breeding Farms and also from Ankara abattoir. In addition to these, some specimens of the larvae of this parasite were obtained from the abattoirs in the provinces of Diyarbakir, Samsun, Siirt, Muğla, Antakya, Eğridir, Çanakkale, Bursa, Afyon, Isparta, Sivas, Hakkâri and Niğde.

A total of 765 slaughtered animals was inspected throughout four seasons for 2 years to determine the distribution and development stages of the larvae within the host body. In addition, 37 experimental animals were subjected to postmortem examination for these purposes. Egg laying and the other habits of adult warble fly and dropping season of third stage larvae were observed on 8640 Angora goats on pasture. Pupae and adult flies were obtained from the third instar larvae placed in jars which contained dry sand.

A total of 2116 larvae was collected from slaughtered animals. Of these, 72 were in first stage, 338 in second stage and 1706 in third stage.

P. silenus invasion in angora goats appeared to be prevalent in Central Anatolia. Certain flocks were found to be infested with larvae to an extent of 94%. In a number of cases 40 to 43 larvae were recovered from a single animal. The occurrence of this species was also observed in the places stated above. The larvae in 1st, 2nd and 3rd instars were found in subcutaneous tissue on the backs of the host animals. First instar larvae were also observed in subcutaneous tissue of regio femoralis. They were recovered in the host's body from the beginning of September to

the middle of March, and third instar larvae from November to April. Mature larvae began to drop into the ground at the beginning of February. They developed into pupae within 3 to 7 days, and adult flies emerged from the pupae in 20 to 116 days in laboratory or pasture conditions. The number of flies which emerged from pupae increased, while their pupal period decreased in the laboratory as compared to pasture. The flies did not mate in jars, but laid eggs 3 to 4 days after on wing. Each fly deposited 7 to 12 eggs on the mohair placed in the jars. The life span of flies varied from 3 to 13 days.

No flies were observed on pasture, but their eggs existed on 6 to 12% of the Angora goats. The eggs were deposited on the hairs of the hind legs, front legs and chest. They were attached in rows to a single hair, each egg being at an angle of about 45° to the axis of the hair. One to four eggs were present on a single hair. The eggs were recovered on goats from the middle of April to the middle of June.

First instar larvae emerged at incubations of 15° to 25 °C. and 85% humidity within 5 to 19 days. The incubation period was shorter at 25 °C than at 15 °C. Fresh larvae left in the jar died 1 to 3 hours after leaving the eggs.

Taking these results into consideration, the life cycle of *P. silenus* may be summarized as follows: The adult flies were on the wing from the middle of April to the middle of June. They deposited eggs on the host from the second half of April to the first half of June. First instar larvae hatched out from the beginning of May to the beginning of July. They promptly penetrated the leg skin and entered the subcutaneous tissue to migrate to the back of the animal and developed into 2nd instar from the end of September to the first half of December. Second instar larvae in the subcutaneous tissue on the back of the host developed into 3rd instar larvae from the middle of December to the middle of March. Third instar larvae moulted once more and dropped into the ground from the beginning of February to the middle of April. The pupal instar in the ground took place within 3 to 7 days and continued from the first half of February to the first half of June.

CZĘSTOTLIWOŚĆ WYSTĘPOWANIA ORAZ DYNAMIKA SEZONOWA GZA *PRZHEVALSKIANA SILENUS* (BRAUER) U KÓZ ANGORA W TURCJI

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Badania przeprowadzone na kozach przyżyciowo (8640 sztuk) i po uboju (765 sztuk) w środkowej Anatolii ujawniły w niektórych stadach ekstensywność sięgającą 94%. W wielu przypadkach znajdowano po 40-43 larwy w jednym osobniku żywi-

cielskim. Larwy I, II, III stadium znajdowano w tkance podskórnej grzbietu żywiciela. Poza tym, larwy I stadium trafiają się też w tkance podskórnej regio femoralis. Okresy pojawu larw u żywiciela: I stadium — od początku września do połowy grudnia, II stadium — od końca września do połowy marca, III stadium — od listopada do kwietnia. Dorosłe larwy zaczynały opuszczać ciało żywiciela z początkiem lutego, przepoczwarczały się w ciągu kilku dni i po 20-116 dniach z poczwarki wylęgał się owad dorosły (w warunkach laboratoryjnych i pastwiskowych). Samice trzymane w naczyniu szklanym z kilkoma włosami żywiciela składały na nie jaja w 3-4 dni po wylocie z poczwarek, każda po 7-12 jaj. Żyły 3-13 dni.

Obecność jaj stwierdzono u 6-12% kóz angora. Były rozmieszczone głównie na tylnych i przednich nogach i na piersi, po 1-4 jaja na poszczególnych włosach. Jaja znajdowano u kóz od połowy kwietnia do połowy czerwca.