

NOTES

Human Myiasis in Kentucky Caused by *Cuterebra* sp. (Diptera: Oestridae).—Species of *Cuterebra* (Diptera: Oestridae) parasitize rodents and rabbits. The rabbit *Cuterebra* can be found also in young dogs and cats (1, 2). Little is known about the host range of this genus in Kentucky. The few documented infestation rates for natural hosts have been quite variable. Over 70% of the trapped specimens of *Peromyscus leucopus*, the white-footed mouse, on Kentucky Lake islands in western Kentucky and Tennessee were infested with *Cuterebra fontinella fontinella* (3). In another study, 36% of *P. leucopus* individuals captured in eastern Tennessee harbored the same oestrid (4). Only three adult specimens of this genus, all identified as *C. fontinella*, are in the entomology collection of the University of Kentucky. No biological information is associated with the material.

The case of myiasis reported herein involved a 19-year-old male. The larva was submitted to the Cooperative Extension Service for identification following its removal from a lesion on the ankle. I determined it to be a late second or early third instar *Cuterebra* sp. The larva was sent to Dr. R. D. Hall, University of Missouri, who confirmed the identification (pers. comm.). Accurate identification of immatures of this group is best accomplished with mature third instars so that cuticular spines and caudal spiracles can be examined (5). Most documented cases of human oestrid myiasis have involved the rabbit-infesting species (6) *C. buccata* and *C. abdominalis*. These parasitize eastern cottontail rabbits and are the two members of this group ranging into Kentucky (R.D. Hall, pers. comm.).

The man answered a set of questions for me that described the general circumstances of the incident at which the infestation might have started and its course. This information is summarized as follows.

The most obvious opportunities for exposure appear to have occurred on four occasions between 5 Sep and 10 Sep 1995 while the man was squirrel hunting in Greenup County, Kentucky. He wore long pants, long socks, and high-topped canvas tennis shoes on all trips. While hunting, he sat at the base of trees in wooded areas for 1 to 2 hours at a time. In most cases he cleared away fallen leaves before sitting on the ground, but occasionally he sat on a fallen tree.

The first indication of a problem was noticed on 14 Sep 1995. He experienced “warm, itching sensation, similar to the feel of a mosquito bite” and discovered a small red bump on skin of the medial surface of an ankle. Two more bumps appeared 2 days later. At that point, the irritation was described as a “gnawing sensation as if the flesh were being torn.” Ten days after the initial bump appeared, there were five bumps spaced at about 2-cm intervals along the ankle. At that time, the largest bump was about 2 cm in diameter and protruded about 1.5 cm above the surface of the skin.

Anxious about the increasing size and numbers of le-

sions, the man visited a physician on 25 Sep 1995. By that time, the largest bump had “come to a head like a boil.” The wound was diagnosed as a spider bite; topical application of a hydrocortisone cream was recommended for the area. After returning home, the man squeezed a single bot larva from the boil-like spot. The area itched for about a week after the larva was removed but healed normally.

Following the anxiety associated with the removal of a live maggot from the boil, the young man in this case was relieved to learn the identification of the insect. He remembered that he had occasionally encountered mature bot larvae in subdermal cysts or warbles when skinning squirrels taken on previous hunting trips.

Eggs of *Cuterebra* spp. are laid near burrows or areas frequented by the host (7). Mature eggs can hatch rapidly in response to stimulation of the host, such as an increase in air temperature and CO₂ concentration (8). These maggots can complete a portion of their development in humans (9). Human infestations usually occur when an individual spends some time near a host lair and comes in contact with eggs.

Some human subjects of oestrid myiasis are aware of a “stinging” feeling. This probably occurs as the larvae use their mouth hooks to enter the skin. Penner (10) observed the activity of three *Cuterebra* larvae intentionally placed on his skin. The stinging sensation developed within 9 to 17 minutes and as the larvae entered the skin. Complete penetration took at least 18 minutes. Edema and reddening of the area developed and persisted for 2 weeks even though the larvae were removed immediately after penetration.

The site of infestation, the ankle, is unusual in this Kentucky case. Rice and Douglas (11) reviewed five previously reported cases and documented two new ones. Four were on the face in or around the nose or eyes. The remainder were on the neck or torso. In two of the cases, the individual was outdoors at the time and felt the initial penetration. Baird, Podgore, and Sabrosky (6) summarized the 30 cases of human infestation by *Cuterebra* known to 1982; Baird, Baird, and Sabrosky (5) provided an update 7 years later. All but four infestations were on the torso or head. The infestation site for three was unknown and one was on the scrotum.

In this case from Kentucky, there was a delay of 4 days between the last hunting trip and skin penetration by the maggot. These trips were the most obvious times that this individual could have come in contact with *Cuterebra* oviposition sites. However, a few cases indicate no history or activity that places the person near oviposition sites. In the Kentucky case, an egg may have been picked up and remained on a shoe until development was complete or it was stimulated to hatch.

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