The injection of irritants as turpentine or benzine into the nostrils of the sheep to bring on violent sneezing and activity on the part of the grub is sometimes quite effective in bringing the grubs out. Grubs can be removed by surgical interference, but this is expensive and can only be applied to highly valuable sheep. Protection is always better than treatment and the little labor required is always well repaid in the thrift of the flock.

Sheep running on bare fields where there is no natural cover or shrubbery into which they can go during the heat of the day, can be protected by applying pine tar to their nostrils each week and by plowing shallow furrows across the field, into which the sheep can dip its nose when the fly is about. Salt and feed troughs can be so constructed that the sheep will keep its own nose smeared with pine tar, thus saving the labor of hand work. Such a trough can be made by boring holes, three inches in diameter and five inches deep into a cedar log of suitable size and length. The holes are filled with salt and pine tar smeared around the edge of the hole frequently enough to keep it sticky and in good condition to mess up the sheep's nose when she comes to lick the salt. Sheep running on pasture land where there is an abundance of tall grass or other forage plants, as sweet clover, alfalfa, or have a wood lot into which they can go are seldom bothered by this pest.

The Sheep Ked *(Melophagus ovinus)*

Description.— The Sheep Ked, commonly called the Sheep Tick in Canada, is a reddish brown insect infesting the skin and wool of sheep. The females are one quarter of an inch or more in length and about one eighth of an inch across the abdomen. The males are a little smaller than the females. The body is hairy and has a hard covering. Three pairs of short strong legs are attached to the thorax. These legs are furnished with grasping claws useful to the Ked in making its way through the wool. The abdomen is oval or nearly round in outline and quite large.

Life History of the Sheep Ked.— The female Ked gives birth to living young, seven or eight days after having mated. The newly born larva is enshrouded in a soft whitish membrane, which is quite sticky and serves to attach it to the wool. On aging the membrane covering the larva changes color, becoming a chestnut brown and also quite hard. In size and shape the newly liberated larva resembles a radish seed. In warm weather the period of development takes place in less than 20 days, while during cold weather and on exposed sheep it may take 40 or more days. The pupa may remain attached to the wool or it may fall to the floor of the pen or soil. The young Ked should it fail to get back onto another sheep or lamb will perish. When the wool is long the pupa is not likely to fall from the sheep but remain there and complete its development. On the other hand during the short wool season after shearing, many of the pupae will fall off and perish. This is one reason why the Ked is more abundant during the winter.