

thing that happens to be in the way of their blind flight; sometimes they run till they are completely tired out and are forced to lie down. There is no mistaking a genuine "warble" stampede; a sudden panic runs through the whole herd and away they thunder, heads down, tails up, staid old cows and young calves, each one the embodiment of bovine terror. It is difficult to imagine a good reason for all this, when we consider that the fly does not sting or bite, but merely glues a small egg to the base of a single hair.

animal is at full speed, follows it about two or three yards behind, from time to time darting forward and depositing an egg on the flanks or hind legs. Then she alights on the ground to rest. The position on the ground is curious and quite characteristic of this fly the long fore-legs are stretched out in front, tail depressed and head raised, as though taking an observation.

The other species, *Hypoderma lineatum*, causes no fear in cattle. Dr. Hadwen, Dominion Health of Animals Branch, stationed at Agassiz, B.C.,

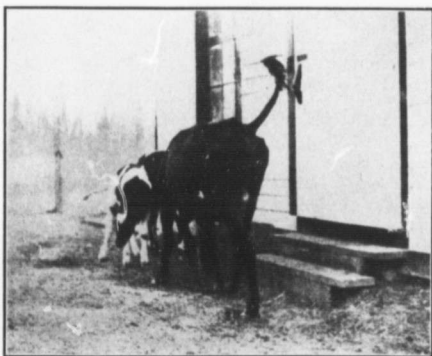


Fig. 2—Calf has just seen fly and is on point of running away.

If it were one of those large black Tabanids, which bring blood each time they alight, one could understand the anxiety of the beasts to get away, but they will hardly move a step for the largest of these blood-sucking flies; whereas a single warble-fly has only got to appear on the scene to send them flying.

The female *Hypoderma bovis* seems to prefer laying its eggs on running animals: like a true sportsman she likes to get the bird on the wing. She selects her victim, planes rapidly over it once or twice, and when the

was the first to discover this. The two flies have been much confused in the past, and it was thought that both of them caused cattle to "gad." Some observers denied that warble flies ever made cattle run; others stated confidently that they did. It appears now that both were right. There is certainly some excuse for these earlier observers, for it seems almost incredible that two species so closely allied, should have such different effects on cattle.

*Hypoderma lineatum* lays its eggs when the cattle are standing quietly