

## *Hypoderma bovis*, *H. lineatum*

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### ox warbles, cattle grubs, heel flies, bomb flies

**Description:** External parasite. Adults are hairy flies without functioning mouth parts. The abdomen has three bands of hairs; light yellow toward the front, dark in the midsection, and orange-yellow at the rear. The name "bomb flies" comes from the adults' habit of darting at cattle. The larvae or grubs are large, with a segmented surface tapered at both ends.

**Life Cycle:** Adult flies deposit eggs on the hairs of the animal's legs or body. Females can lay as many as 100 eggs on a single host. Tiny larvae hatch in about 4 days, crawl down the hair, and penetrate the skin. *H. bovis* larvae head directly toward the back of the host animal, growing as they move. *H. lineatum* larvae travel to the wall of the esophagus before resuming their trip down the host's back. Eventually larvae leave through the breathing holes they've created in the skin, fall to the ground, and burrow into the soil to pupate.

**Geographic Distribution:** Widely distributed in the northern hemisphere.

**Significance:** Larvae release enzymes to break down tissue and ease their movement as they migrate to the back. The tissue through which the larvae travel becomes greenish-yellow. Allergic reactions to larvae may occur if they die under the skin naturally or are killed during attempts to remove them manually. Larvae emerge through breathing holes in the skin, causing a disease called cutaneous myiasis and leaving a large holes which render the hide worthless. Affected areas of the carcass must be discarded at slaughter. Poor quality hides due to grub damage can cause serious economic losses. Adult flies can annoy cattle enough that they try to escape the flies; in some cases stampedes can result.