

Field Observations of Face Fly (*Musca autumnalis* DeGeer) in Indiana, 1960

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Observations on the presence, abundance and habits of the face fly were continued through 1960. These insects were reported from the northern half of the state during the first week in June. The weather remained rather cool and wet for the remainder of the month and populations remained low, averaging 2-5 per animal. The first week in July, populations on the eastern side of the state increased to averages of 15 per animal. Numbers in the west and northwest were still fairly low. As the temperatures increased, so did the fly numbers. The third week of July they reached a maximum of around 70-80 per face in the northern and eastern parts of the state. With higher infestations, the flies dispersed to other parts of the body. Counts of flies over the entire animal frequently exceeded 200.

Observations made throughout the season indicated, as last year, that the most serious infestations of this insect were confined to the eastern and northern half of the state. Counts dwindled rapidly south of U. S. Highway 36 west of Indianapolis and U. S. Highway 52 east of Indianapolis.

Observations in 1959 indicated that cattle could avoid the annoyance from face flies by remaining in shade during the hot part of the day. However, in 1960, as populations rose in numbers, it became apparent that many of the flies were following the cattle into the shaded areas. In early September, face flies were taken from cattle in a barn in Tippecanoe County, an apparent reversal of the habit previously noted.

The authors (1) conjectured that these flies might invade homes and attics in cool weather. This statement was confirmed in Indiana this year. Several complaints from rural householders regarding large swarms of flies were reported to our offices. Investigation proved these flies to be adult flies apparently seeking shelter for the winter. Enormous numbers were observed crawling over the outside walls of the houses, seeking entrances under the eaves and around windows and doors. They congregated in unilayer groups in the evening and then clustered in masses several layers deep as darkness advanced and the temperature declined. Apparently activity is dependent on temperature since each afternoon as the temperature rose they became active, flying about and buzzing noisily.

Behavior. Other behavior characteristics of this fly were observed. The males were usually found during the day resting on fence posts, gates, and on leaves of trees near the cattle while the female flies were much more evident on the animals themselves. Counts taken from flies collected from the faces or backs of cattle showed a ratio of about 15 females to one male. Samples taken from fences and poles near the cattle showed males to be in the large majority.

The females seemed to be restricted to very fresh manure for oviposition. Manure freshly dropped was immediately investigated by the female and eggs deposited just beneath the surface. The ovipositor was forced below the surface and a dimple or very small opening remained

when the ovipositor was withdrawn. The females usually lay two to three eggs, each in its own spot in the fresh droppings and then moved on. After the eggs were deposited, a tiny stalk-like tube (a part of the egg-sac) protruded through the upper surface of the manure. This is the stalk referred to in earlier literature. Whether or not the female was capable of laying more mature eggs at one time has not been determined.

The face fly is a much noisier and more persistent insect than the house fly. The buzzing produced by the flies going into hibernation has been compared to that of a honey bee swarm. Flies confined to cages produce a very characteristic sound quite unlike the house fly.

In the early fall, this insect was noticed as a pest species annoying man. Swimmers, tennis players and golfers reported an annoying, clinging fly which was attracted to their skins but was not as easily driven off as the house fly. Examination of specimens showed them to be *M. autumnalis*. This habit was most apparent late in the season and in areas as far as two to three miles from livestock.

Literature Cited

1. MATTHEW, D. L. and R. C. DOBSON. 1960. *Musca autumnalis* DeGeer, A New Livestock Pest in Indiana. Proc. Ind. Acad. Sci. 69 : 165-66.