

flowers of the grain, or when the wheat is still in the milky state. The eggs hatch in about eight days, when the little yellow maggots or worms may be found within the chaffy scales of the grain. The seed scales of grass also sometimes serve as a shelter for these depredators. The worms, which are of a bright yellow or orange color, do not exceed an eighth of an inch in length, and are often much smaller. I have seen as many as twelve within the chaff of one single grain, sent to the Patent Office from Ohio. These maggots prey upon the wheat when only in a milky state. When they begin their depredations, soon after the blossoming of the plant, they do the greatest injury, as the grains never fill out. Towards the last of July or beginning of August, the full-grown maggots cease eating, and become sluggish and torpid, preparatory to shedding their skins, which takes place in the following manner: the body of the maggot gradually shrinks in length within its skin, and becomes more flattened and less pointed, as readily may be seen through its delicate transparency. This torpid state lasts only a few days, after which the insect casts its skin, leaving the latter entire, except a little rent at one end of it. These empty cases, or skins, may be found in great abundance in the wheat ears, after the moulting process is completed. Mr. J. W. Dawson,* of Pictou, Nova Scotia, says that sometimes the maggot descends from the plants and moults on the surface of the ground. After shedding this skin, it recovers its activity, and writhes about as at first, but takes no food. It is shorter, somewhat flattened, and more obtuse than before, and is of a deeper yellow color, with an oblong greenish spot in the middle of the body. Within two or three days after moulting, the maggots either descend of their own accord or are shaken out of the ears by the wind, and fall to the ground. They do not let themselves down by threads, as has been supposed by some, for they are not able to spin. Nearly all of them disappear before the middle of August, and they are rarely found in the grain at the time of harvest. Hon. William D. Lindsley, of Sandusky City, Ohio, however, sent me several specimens of wheat with this insect in it as late as the beginning of August. From observations and remarks made by intelligent farmers, it appears that the descent of these insects is facilitated by falling rain and heavy dews. Having reached the ground, the maggots soon burrow under the surface, sometimes to the depth of an inch, those which have not moulted casting their skins before entering the earth. Here they remain without further change through the following winter. It is not usually before June that they are transformed to pupæ, this change being effected without another moulting of the skin. This pupa state lasts but a short time, a week or two at most, and in many cases only a few days. Under the most favorable circumstances, the pupa works its way to the surface before liberating the included fly, and when the insect has taken wing, the empty pupa

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