

seen no better description of this dreaded pest than that given by Mr. Gaylord in 1843, and published in the "Transactions of the New York State Agricultural Society" for that year. We shall copy the substance of his remarks on the subject.

"The wheat fly is in form somewhat like a musquito, only smaller; body orange colored; legs long and slender, as usual with the gnat family; and the wings transparent, changeable in color, or reflecting the colors of the rainbow. Having had frequent opportunities of examining the parent fly of our grain worm, which agrees well with the description given by Kirby and Spence, we think it the same insect—one that has been known and described in England for nearly one hundred years. It is possible, however, there may be some shades of difference, but their appearance and habits as described by Gullet and Masham, (see Dr. Harris, page 437), are so like ours, that they may be considered the same for all purposes. These flies make their appearance in June, or at the time wheat is usually in blossom, in great numbers, and are most active in depositing their eggs immediately after dusk; few being found in the day-time, or after nine o'clock in the evening. In the day-time they are secreted among the leaves and stems of the grain, rarely coming forth until after sundown. The female is provided with an ovipositor, or retractile tube, which she thrusts with her eggs between the scales of the chaff, depositing them in clusters from five to twenty. In some instances from thirty to forty larvæ have been found within the chaff of a single grain. The larvæ when first hatched are colorless, but they soon become of a deep orange, or bright rust color; are true maggots without feet, working their way with difficulty from one place to another. They gather around the central point of the chaff where the formation of the kernel commences, and completely nullify or destroy the grain. When full grown, the maggot is about one-eighth of an inch in length. Some few are changed to the pupa state in the ear, but the greater part fall to the ground, where they finish their transformations, and appear in the spring or summer as perfect insects, ready to deposit their eggs on the growing wheat crop. So great and wide-spread has been the damage occasioned by this insect, that ample opportunity has been had to try all the preventives usual in such cases, and we are sorry to say with very little effect on the whole. Fumigating the fields with sulphur, or smoke from any other materials will retard their action for a time, and could they be continued might destroy them. All pungent odours are offensive to the grain fly, as they are to the musquito, and that most offensive of all odours, the one proceeding from the skunk, has been tested, and highly recommended as a preventive. Quick lime strewed over the field while in blossom, has been highly recommended by Mr. Colman and others, but its success does not appear to be uniform, perhaps owing to its not being applied at the proper time or in sufficient quantities. A half bushel of lime mixed with the same quantity of ashes, and sown on an acre, has produced good results. In the case where lime has failed, Mr. C. has suggested that the sowing took place too early, and that two or three sowings might be advisable, so as to certainly cover the time of the fly's appearing. A friend who is an extensive farmer in Rensselaer county, N. Y. assures us that the present year, wheat sown early in autumn, and which of course came forward early in the spring, has wholly escaped the grain worm, while the late sown has suffered materially; and that his experience in former years has convinced him, the same will hold good as a general rule. Where spring wheat is sown, it is found the early sown suffers the most, it being in blossom at the right time for the action of the fly. Sowing spring wheat as late as it will ripen, say the 10th or 15th of May, will save it from the worm; but such late wheat is very apt to blight, and be of inferior quality. Perhaps, where the worm prevails, giving wheat up for a short time, taken in connexion with burning stubbles and deep plowing, would be the safe course."

BONES AS A MANURE.—A late number of the *Country Gentleman* has an elaborate article by Levi Barlett, of New Hampshire, on bone manure. He concludes that there is no other manure whose effects are so lasting as an application of ground bones. Besides the increase of crops he says it supplies phosphate, which grasses generally lack, on old and long grazed fields in New England, and the want of which, cause what is called "bone disease" in cattle. Mr. W. recommends that the bones be pounded; and thus broken to pieces, boiled or ground, and then spread evenly over the soil, and mixed with it. He has a field that was thus dressed years ago, and the effect is yet very perceptible on clover.