

mence operations at the junction of the stalk with the joint, which they completely sever, and ensconce themselves *within* the straw itself, there to undergo their transformation to their next stage of existence. (We have found hundreds of them varying from one-eighth to three-eighths of an inch in length.)—In this case, although the lower portion of the plant is vigorous as ever, all communication being cut off from the lower straw or stalk, vitality at once ceases, and the unfilled ear immediately assumes a ripened appearance, but contains only the shrivelled remains of the embryo grain. We would observe that this insect is never seen on the leaf, but only within the straw.

S. H. states that the chrysalis requires a heat of 75 degrees to enable it to emerge again into life as the devastating fly, to go through the operations of its progenitors. Now, as the period of these insects' appearance (we speak from repeated observations) is from about the 10th to the end of June, it would follow that the heats of July and August would produce a second edition of the plague. From this (and we do it with every respect for S. H.) we are compelled to dissent, and for this reason: Nature, the most studious of all careful mammas, endows all creatures with sufficient instinct to perpetuate their species, by placing their progeny (or the ova from which they proceed) in a situation the best suited to afford the needful nutriment for their earliest wants and immediate support on entering into existence, taking into account time and season when such nutriment is abundant. But let the new race make their appearance in July and August, and the saccharine substance is lost in hard woody fibre, and the consequence would be the extirpation of the race; no such luck we fear, but perhaps S. H. will set us right, as all we wish is to elicit facts.

Our friend S. H. next adverts to the Potato insect, which he entomologically describes, and which he is "confident injures the plant." The insect named, we have noticed repeatedly, and have no doubt of its materially retarding the growth of the plant; but unless it takes away its vitality, we doubt its *destroying* the potato or tuber, and still more its capability of conveying so destructive a virus to the potato; indeed could such be the case, how are we to account for sound and unsound tubers on the same plant?

If in arraying "a host of chemical professors" against Professor Smeo, he means to deny the Professor's theory of the disease originating in the top and descending to the tubers, which his language seems to imply, he has himself fallen into the same error, for he says "keep off the fly, and you have healthy plants and no rot in the potato." A maggot is then mentioned as the devastator, which generally kills the plant *completely* in August; from the chrysalis of this maggot proceeds a moth, after 30 days' suspension of vitality—the result of whose operations is that no potatoes are to be found. Surely there must be some mistake here, for the tubers even in late potatoes are fully formed long before this moth makes its appearance, which cannot be earlier than September. Do we misunderstand S. H.? or does he mean us to infer that the maggot proceeds from the bug with fluted wing covers, and which "destroys the potato," and furthermore, that from the chrysalis of this maggot a night-flying moth makes its appearance, to render negatory all the labours of his precursors, as the result of his visits seems to be that there are no potatoes to rot? Really, (to our obtuse comprehension) as it now stands, we are forcibly reminded of the famous sugar-kettle case, wherein a Yankee lawyer defends his client in some such manner as this:—"Gentlemen of the Jury—This is an action of trover, wherein the plaintiff seeks to recover damages for a loss alleged to have been sustained in a certain injury done to a sugar kettle, said to have been borrowed by us of the Plaintiff. My learned friend on the other side has sought to prove, (very unsatisfactorily to you, I do not doubt,) that said kettle was perfectly sound and whole when we received it, and that when returned by us it was irrecoverably injured, and rendered valueless by being cracked. Now, gentlemen, I will convince you by irrefragable proof that the said kettle, when we got it, had a crack in it as large as the worst flaw in an Attorney General's Indictment,—and I shall moreover show by equally veracious witnesses, that when we returned it there was *not* a crack in it sufficient to contain so small a matter as a lawyer's conscience; but, gentlemen, we have still more tenable ground of defence, for we shall call witnesses whose testimony must satisfy the most incredulous, who will prove most clearly that we never had the *darned old kettle at all!!!*"

But to return to the potatoes (as we shall have to do), we must say that we have no faith whatever in Professor Smeo's theory; and with all due deference to S. H., we believe that fly, flea, bug, maggot and moth, are the result, and not the cause of the disease at all; and whatever be the cause, that it has yet to be fathomed. We have potatoes this year, on which, though closely examined, none of the above were found; the tops exhibited vegetation in its utmost luxuriance, and still the tubers were unsound; while others, whose stems and leaves never from the first bore a healthy appearance, and on which the flies were abundant, are now (the tubers) as far as our scrutiny can extend, perfectly sound. We shall not enter on the electricity question further than to state, that we were informed that the potatoes on the farm wrought by Mr. Mason in Cobourg, were destroyed immediately after one of our most terrific storms of lightning.

IS FARMING PROGRESSIVE?—From an interesting experiment, lately published in the *Times*, it appears that one grain of wheat, sown in July 1842, produced four plants (*by division*) in August, 32 in September, and 50 in November. These were harvested in August 1843, and produced 1970 ears, 98,600 grains. A similar experiment was made in the botanical garden at Cambridge many years since. One grain of red wheat, sown on the 2nd of June, produced 18 plants in August, 67 in October, and 500 in the following April. These plants when harvested, produced 21,109 ears, which yielded 3½ pecks of clear grain, weighing 47lbs. 7oz. The number of grains estimated by average, was 576 840.

WATER PROOFING FLUID.—This preparation is used for preserving and softening leather, and repelling snow-water: Linseed oil, three pints; yellow rosin, four ounces; common do., two ounces; bees-wax, twelve ounces; melt and add cod oil, two pints; oil of turpentine, one pint; mix, and it is ready for use.

ENORMOUS PUMPKIN.—We observe that Mr. Pegler, fruiterer to her Majesty, 101, Union Street, has received into his stock a pumpkin weighing 175½ lbs., and measuring no less than 7 feet 6 inches in circumference. This is probably the largest pumpkin ever grown.—*Scottish Farmer.*

A Farmer in the neighbourhood of Paisley has, for some time past, placed garlic at the bottom of his grain stacks and cows, and since adopting this plan has never been troubled with rats or mice, although they abounded before.