A CURE FOR GROUND MOLES

is not so much in its timber as in its preservation. A region without forests is desolate. The value of a forest as a reservoir of water, as a regulator of water supply, as a protector against erosion, and as a source of timber supply should be facts of common knowledge to every mature youth.

These are lessons to be taught in school as well as the practical work in beautifying the school surroundings.

Before you are through with the spirit which is behind Arbor Day, you, my boys and girls, will see to it that every roadway has its line of trees, that every orchard is trimmed and bearing fruit, that every hillside not under cultivation is raising a crop of noble and useful trees for the coming generation. Don't stop your Arbor Day observance with only a spoken piece and a pretty song. Plant not only one tree, fix up not only Your own school-yard, but all the road from the school to the house, but best of all and most of all, take the spirit and the purpose of the day as you should all the lessons learned in school, directly to your own homes, gardens and fields.

HOW TO RID THE LAWN AND GARDEN OF MOLES, BUGS AND WORMS: BY JOSEPH H. SPERRY

HUMAN beings fight with each other and so do beasts and birds, fishes and insects; but man alone contend with these others, as well as with his own kind and is expected to subdue and even to destroy, whenever necessary, various forms of life. Scarcely have the snows of winter been dissipated and the ground become free from frost, when the fight begins between the suburbanite or countryman, who is the happy possessor of a lawn or garden, and innumerable moles, worms and bugs.

First the mole, that unique little subterranean animal which is no respecter of persons, makes his gallery under the lawn, the cold frame and hot beds, through the borders and beds of hardy herbaceous plants and those of tender seedling vegetable plants; indeed anywhere, and everywhere, he pleases.

The ground mole is not by any means an unmitigated curse. He is a carnivorous animal, in other words a flesh eater, and is never, contrary to general belief, a vegetarian. The subterranean galleries which he digs are boulevards, avenues and streets through which he not only walks, but where he obtains also his meat in the form of countless worms, grubs and bugs, many of which are the enemies of plant life. Along these roadways, constructed most carefully, he afterward returns to his own particular castle, usually located under the roots of some shrub, tree or mound, slightly higher than the surrounding territory, always free from water and comparatively safe from the attacks of men, dogs and cats.

The harm done by the mole overbalances, in the opinion of many, his beneficial work as an insect destroyer. This harm consists in the injury which he unwittingly does to plants by disturbing their roots while he maintains his underground galleries; and by raising unsightly mounds on the lawn and in the garden during the process of forming these galleries.

For the crimes of disturbing plants and of raising ridges which clash with men's ideas of the aesthetic, the flat has gone forth, whether wisely or not, that the ground mole (not the "blind mole," as even Shakespeare, whose knowledge of everyday life was so wonderful, and many others have erroneously called him) must either be destroyed or driven away from the garden and lawn.

How can this sentence, which has been passed upon the mole, be best carried into effect? First there is, if one has the time to spare, the old-time gardener's method of destroying him. It is as follows: stamp down one of the largest mole mounds firmly for a stretch of 10 to 15 feet so that it will be level with the surrounding surface of the lawn or garden. With a garden hoe in hand wait quietly near this leveled molehill from about 11:30 o'clock to 12 at noon or from 5:30 to 6 o'clock in the afternoon. When the mole is repairing his gallery as he passes along and raises the mound again, strike into it with the hoe, about six inches back of his course; never in front of him, and pull him out, and kill him, alas, ruthlessly. The reason for striking back of the mole, instead of in front of him is because with the first tremble of the earth, he turns backward, quick as a flash, in an attempt to reach his castle. His instinct of self-preservation is then met by the hoe.
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The second method is the use of a mole trap, which if properly set and regularly attended will catch and kill many moles. If the garden and lawn are large, several traps may be employed. Care should be used in handling and setting these mole traps. Children should be kept away from them, as through carelessness in setting and handling mole traps, both adults and children have suffered painful injuries to their hands.

Another method of destroying the mole is to sharpen the end of a broom handle and with it make holes at intervals in his runs or galleries. Through these holes small pieces of raw beef poisoned with strychnine or arsenic should then be dropped down and pieces of sod set in such a way as not to press the earth down on top of the meat. If there is a dog on the place, this method would be objectionable, as he might scent the meat and dig down and eat it.

If one is more mercifully inclined and satisfied to banish rather than to kill this little animal which neither disturbs man by making a noise nor injures him by biting, the following methods are more or less effective: Make holes as heretofore described wherever the runs are found and drop into each one a few moth balls. This is the very latest remedy. It is simple and effective. Another method, also a new one, is to pour into each hole a tablespoonful of bi-sulphide of carbon, covering quickly as the bi-sulphide is poured in. Do not use the bi-sulphide while smoking or bring it near a flame or fire. The substance is highly inflammable, and may, if these precautions are not taken, send the mole destroyer to the “happy hunting grounds,” the little velvety creature living on peacefully. However, the bi-sulphide may be used without fear of harm if ordinary care is taken. Indeed, seedsmen and gardeners by its aid kill insects in unplanted seeds and in the soil.

In some situations the nozzle of a hose may be inserted into the gallery of the mole, and water turned on, flooding it and driving the mole, which is averse to a wet run, away from that particular locality.

“Where,” you may ask, “will the mole go when you drive him away?” Into the roadsides, the pasture, and woodlands where his galleries will be less objectionable. If, unhappily, the refugee goes into your neighbor’s lawn and garden, you can tell him of the remedies you have used and he can keep the poor little creature moving on.

At one of the largest places in Connecticut, one overlooking the Sound, there lives from year to year a rustic-looking individual, called the “mole man.” In fact, the owner of this place, a man of unique and intensely individual characteristics, has engaged him for life service, enabling him to live in self-styled luxury, provided he rids the place of moles, the pest most dreaded, even though in an imaginary way, on acres broad and well cultivated. The “mole man” uses the spade as the implement of extermination, striking into the ground with ferocity whenever he observes the mole moving through his galleries. He scorns all other and “modern” methods.

It is stated that in one season he killed as many as 4,000 moles, their skins, which are truly valuable, being given to him in addition to a very satisfactory salary. It goes without saying that the “mole man” is an object of envy among other rustic inhabitants of this region, unchangeable and somewhat moss-grown.

The cut-worm, which is of a soft brown or gray color and from ¼ to 2 inches in length, is the earliest spring worm enemy with which the gardener must contend. This worm lives, in the open season of the year, just below the surface of the soil, coming out and feeding mostly at night. It is very destructive to all tender plants, especially to cabbage, cauliflower, tomatoes, peas and beans, eating through and cutting off plants just at the surface of the ground. If it were satisfied to make a meal of the plant after cutting it down, things would not be so bad; but usually it is not, and goes on cutting down plants indiscriminately until its appetite is satisfied by the several portions it obtains in chewing them off. The attacks of this worm are so fierce, especially in a wet cold season, that they frequently destroy nearly all the succulent plants in garden or field in one or two nights. The gardener must therefore begin quickly an offensive warfare or suffer defeat. With the cut-worm there must be no hesitation in acting. It is the most destructive of all pests.

The following are the various up-to-date methods which have been used in warding off or destroying the cut-worm: When transplanting cabbages, tomatoes, peppers and other tender plants from pots or hot beds into the open garden, wrap a piece of
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newspaper about 2 inches square very closely around the stem of the plant so that when set out about one inch of the paper will be below and one inch above the ground. This, if done carefully, will save from 95 to 100 per cent. of the plants, and the paper will not injure them at all, as it will gradually decay and drop off. There is no better proof of the success of this method than the fact that market-gardeners paper in this way large acreages.

Where plants are grown from seeds the proposition is more difficult. The following methods nevertheless are efficacious. Make several smooth holes about 1½ inches in diameter and about 4 inches deep around each hill or along the sides of rows of beans and other plants with a dibber or iron bar, or a broomstick sharpened at one end.

In the night when the cut-worms come out to feed they will fall into these holes and since they cannot crawl up their smooth sides they are prisoners either to die or to be killed the next day. Another method is for two persons to go out after dark, from 8 to 9 o’clock, just as the cut-worms are feeding, and for one to hold a lantern with a reflector or a lamp with a shade, and locate the worms, so the other may kill them.

Still another method is to put Paris green on leaves freshly cut or on grass and to place them at night near the plants, or else to use in the same way Paris green mixed with a soft dough made of flour, bran or cornmeal and water. When the latter mixture is used domestic fowls must be kept out of the garden; and, though its use is frequently resorted to by market-gardeners, it is objectionable, and in some States illegal, since it may poison the birds.

Cut-worms work mostly in the cool spring weather. They are adverse to summer heat and unable to eat plants after the stems become hard and tough. That their active season is short is something for which to be thankful.

If there are currant or gooseberry bushes in the garden, there is another pest which must be fought as soon as the leaves appear or a little later and also at two or three other periods of the open season. This is the currant worm, of which there are two kinds, one a yellowish green in color and about three-quarters of an inch long, the other striped and dotted with yellow and black and about an inch long. These worms appear suddenly in great numbers on the under sides of the leaves, and unless their attack is met vigorously they will entirely denude the bushes in a day or two. There are two remedies. White hellebore, which may be bought of any seedsman, sifted on the leaves of bushes when they are wet with dew, will poison and kill the worms.

Another efficient remedy is to apply Paris green. This must be used only to meet the very early or the late attacks of the worm, before the bushes are in fruit or after they have finished bearing. Use a dessertspoonful of Paris green to a pailful of water. Keep it stirred continually so it will not settle and apply with a hand or auto sprayer, or a bucket spray-pump.

Water in which potatoes were boiled, being impregnated with prussic acid is, when poured in their holes, also an efficacious means of ridding the garden of ants.

The green aphis, more commonly called the green fly, or plant louse, appears on the tender tips of rose bushes. The remedy is Paris green or hellebore, used in the same way and with the same proportion of Paris green as for the riddance of currant worms.

There is a little green worm which attacks rose bushes on the under sides of the leaves and unless destroyed soon makes the bushes look as if fire had devoured them. This same worm also attacks grape-vines. Paris green used as heretofore directed is about the only effective remedy. Right here let it be stated that Paris green should not be used in any larger proportion than directed above, and that the measuring spoon should not be heaped. Too much Paris green burns foliage.

For getting rid of squash bugs (there are two kinds) hellebore is effective and wood ashes can also be used. To kill the black flea beetle and the Colorado potato beetle on potatoes, tomatoes and egg plants Bordeaux mixture containing Paris green is one of the best sprays.

For rose bugs which attack bushes, grape-vines and hardy hydrangeas hand picking is the only remedy.

Whenever it is desirable to rid any portion of ground, whether there is growing vegetation or not, or the soil in a plant plot of angle- or earth-worms, a free application of lime water will accomplish this result without injury to plant life.

There are many other bugs and worms injurious to vegetable life, but the most common and most injurious have herein been mentioned and the proper treatment and remedies given in each case.