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## THE PESKY ANT AND SOME OF HIS WAYS

By C. H. COULSON, '26

### Some of the Ways in Which We Can Eradicate the Troublesome Ant A Few of the Social Habits of the Ant We Intend to Kill

"THE most marvelous atom in the world, the brain of an ant." Thus wrote Darwin, but we are usually less complimentary when we write or speak of these six-footed contemporaries of ours, especially when we find them in the pantry, or notice a round clearing in the garden, or find one of the favorite fruit trees trimmed of its leaves. We seldom think of the highly civilized life of the ant, its mysteries and romances, but at once want to know how to exterminate this pest. Since we usually do things backward, let us first consider how to kill the ant and then consider the social habits of the slain.

One of the oldest ways of combating the ants which infest our pantries is by soaking a sponge in dilute syrup and placing it where the ants will find it. Attracted by the sweet, they will infest the sponge by the hundreds, and may be killed by dropping the sponge in hot water. Such sudden loss of workers spreads consternation among the colony and they will often abandon the house entirely.

A more efficient method, however, is to poison the ants if the colony can be located. Pouring kerosene or carbon bi-sulfide (High life) in the hole and covering with earth will kill most of the living ants, but does not affect the eggs or those ants deep in the holes. For field ants cyanide of potassium dissolved in water at the rate of one ounce to a gallon of water and applied as kerosene gives excellent results. Colonies may be completely exterminated by a few applications of this deadly poison. Great care should be exercised in handling this poison as it is fatal to man as well as ants.

But why not feed the ants poison as we do other insects? In this way not only the workers would be killed, but the queens and young as well. Much work has been done to prepare a suitable and effective ant poison. The United States Department of Agriculture recommends the following:

Dissolve five pounds of sugar in one and one-half pints of water and boil slowly for a few minutes. Then dissolve a quarter ounce of sodium arsenite in a little hot water and add it to the syrup. The crystals formed when the mixture cools may be placed near the colonies and the workers will do the rest. This poison is also fatal to man and animals and great care should be used in handling it. Perforated tin cans partly filled with the poison will give the ants the necessary opportunity and at the same time safeguard the farm animals.

Repellants are often used to advantage around the kitchen or store room. The repellants are composed largely of corrosive sublimate and can be purchased at any drug store. They give off an odor which is highly repulsive to the ant and a thin line of the repellant will prevent their entrance.

But with all of our poisons, repellants, and traps, we have little hope of exterminating the ant. We can only hope to keep it out of mischief. Against man ants are practically defenceless, their salvation being in their ability to reproduce with great rapidity. Their only weapons are a pair of biting jaws and in certain species a painful sting. The sting of an ant carries with it a small amount of formic acid which adds zest to the sting, and if soda or a similar substance be applied to the injury quickly some relief is realized. But usually we can only let it hurt, knowing that no serious damage will result.

Yes, the ant has a bad reputation, is often a serious pest, and yet is the most wonderful of all insects. The brain of an ant which Darwin terms the most marvelous atom in the world is even smaller than a quarter of a small pin head. But this tiny speck of matter conducts a social organization second only to that of man. A civilization which seems so carefully planned—care in rearing the young, storing of food for winter, holding of

slaves, running of dairies, and waging of wars are a few of their complicated maneuvers.

All ants are social, many individuals living in a common home. There are three types, males, females, and workers. The males and females are winged, and sometimes on a warm summer day they may be seen by the thousand in full flight. This is the wedding journey which is of short duration and they drop to the earth. The males soon die, but the queens tear off their now useless wings and seek a place to lay their eggs. They may join other colonies, or start a new one, caring for the young until they are able to work. The workers are by far the most numerous, and in an established colony care for the queens with extreme devotion.

One of the most interesting accomplishments of the ant is the dairy enterprise. Ant "cows" are nothing more than common aphids or plant lice. The ants have learned that aphids will yield honeydew, a most delicious food from the ant's viewpoint. If you should watch an ant as it nears the aphid you would see that the ant gently strokes the aphid on the back with its feelers and the aphid, greatly pleased, secretes a tiny drop of honeydew on its back which the ant immediately devours. The far-sighted ant is very careful with the "cows" and carries them to new pasture if it is needed, and further carries the aphid eggs into the ant colony for the winter. And when spring comes the ants carry the newly hatched aphids to their favorite plants. Is man always so good to his cattle?

Certain species of ants enslave others, and in these cases it is the larger, stronger ants that are kept in bondage. This fact is unexplainable unless the weaker species exert some hypnotic influence over the stronger slaves. At any rate bondage exists, and often the slave holders become

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completely dependent upon their slaves and will perish if not waited upon.

The ant again mimics man on the battle field. No living creature so closely resembles man in the tendency to wage pitched battles as do ants. There is a small dark brown species known as the pavement ant, common to both Europe and America, which engages in community wars. The details of one of these battles is typical of ant warfare in general. In the center the warriors are heaped high and the whole mass seems to boil with the intensity of the action. No orderly "line of battle" can be seen, but it is literally a melee, recalling descriptions of battles of old when armed warriors fought hand to hand. From the central mass the numbers gradually decrease and out a few feet may be seen duels or perhaps small groups engage each other. And all the while from the separate warring communities come two streams of recruits, their bodies fairly quivering with the intensity of their emotion as they dash in to feed the fury of the battle. The battle usually ends without victory to either side and the dead and dying are left on the field.

But why should friendly communities of ants engage in war? Nearly all battles and wars rise from the same cause. Ants are all foragers and when ants of different communities seek the same forage the uncertain temper of the ants gives way and a fight results. Sometimes ants of different species engage each other on sight. They seem to bear the attitude of "He does not bear the odor of my species, my community, or my caste, therefore, we will fight." Thus

sometimes ants aid us by killing each other.

The domestic or colony life of the ant is a most regulated one. They seem to be imbued with a strong sense of industry and loyalty, each individual laboring not for itself alone but for all its fellows. A division of labor exists, groups of workers performing their definite functions from nursemaid to warrior.

The much worshipped queens do not rule the colony as is generally believed, but are imprisoned within the nest where they are cared for by the workers with utter devotion. The workers, really undeveloped females—Amazons, so to speak—run things, apparently guided by some divine instinct which teaches them the things they do.

Thus we can see the ants in all their wonderful activities, and as we work out new and deadlier ways with

which to combat them, we might well spend a little time studying the habits of the insects we are intending to kill.

A kitchen sink that is big enough to hold washing and rinsing pans or other large containers is a convenience that is worth while for any home.

Follow the price movements when buying feed, fertilizers, and other articles that are large items of expense on the farm if you want to make each dollar do the most that it can.

Run the ensilage cutter a few minutes before anyone goes into the silo the first thing in the morning. This will stir up and dilute the gas that accumulates on top of the freshly cut ensilage.

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## Must farm homes be comfortless

Vacation over. The pleasure of seeing school friends again; the change from country to town life, with its greater comforts. Bath facilities, possibly were primitive at home and it's good to get under a shower again.

Perhaps too there's a little touch of sadness; mother and father seemed this summer to be showing their age, the marks of a life of hard work and deprivation. You wish they didn't have to do without so many things that town people have: running water, to take away the drudgery of kitchen and laundry; a bathroom to freshen them up, after a hot, hard day. Need they be without running water? Shouldn't they too benefit from the labor-saving developments in plumbing?

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