

Controlling Pests the Natural Way

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From that blood-sucking mosquito to the gross worm inside your apple, pests torment us. They can be such, well, pesky, because they are very good at finding food and shelter in places we don't want them to be. Where humans dwell, there are insects. They are our uninvited guests.

How do we get rid of these pests?

Killer Ants

The history of pest control probably began with the first human who ever swatted a mosquito or picked off a louse. But researchers revealed that pest control measures were used thousands of years ago. As early as 1200 B.C., ancient Chinese already implored natural pest control techniques.

For instance, in the countryside, frogs were considered a forbidden food because they helped eliminate insects by eating insects. To drive away leaf-eating insects from chrysanthemums, praying mantises were released in gardens.

No doubt the Chinese have shown clever techniques in controlling pests. However, the most remarkable and economically important of the ancient Chinese biological weapons were the yellow citrus killer ants. These predatory ants were used to protect citrus groves from caterpillars and wood-boring beetles.

Mandarin orange or mandarin is a small citrus tree (*Citrus reticulata*) with fruit resembling the orange. Its fruits are exceptionally sweet, thus, they are a favorite among fruit-sucking insects. Chiao-Chih people sell these fruits with ants in bags of rush matting. The nests are like silk. The bags are all attached to twigs and leaves, which, with the ants inside the nests, are for sale. These ants do not eat the fruits, but attack and kill the insects which do.



Killer ants. These ants are deadly when it comes to protecting citrus plants.

Later on, this innovative way of defending their crops against pests became a flourishing business in the southern part of China. Ants were trapped by filling a pig or sheep bladder with fat and hanging it up next to an ants' nest. Once the ants had moved house to the bladder, they were taken off to market to be sold to fruit growers. To help ants spread through an entire citrus grove, ropes or bamboo sticks between adjacent trees were built.

From Artificial to Natural

In his continuous struggle to combat pests, man has taken advantage of advanced means of exterminating them. Chemical pesticides abound nowadays. However, these pesticides are persistent and pervasively poisonous, harming not only insects but also people and pets. They present risks to human health. Although the rate of post-application degradation may vary widely, almost all pesticides present some direct risk to human health through residual toxicity, that is, direct human contact with pesticide residues remaining after treatment, whether through inhalation of volatile toxic vapors, skin contact and transdermal absorption, or ingestion. In addition, many pesticides present indirect risks to human health in the form of environmental pollution, most notably pollution with persistent, halide-substituted organics which accumulate in the fat stores of food fish and other animals. These problems have led to complete bans on the use of some pesticides (e.g., DDT, chlordane, heptachlor, aldrin, and dieldrin). The continued use of the remaining pesticides has produced a new problem: the increasing development of widespread resistance to pesticides in insects.

In this context, traditional and natural pest control is still recommended to achieve safe, nontoxic control of pests.

The Role of Biology

The early natural pest control techniques among ancient Chinese prove the importance of biology. Understanding the interconnectivity of species in the ecosystem allows man to find ways on how to control the proliferation of certain species which are harmful to his existence. Knowing the environmental factor that keeps a pest population below its economic injury level is certainly of great help for him. Man must continue in his search and study of environmental factors like geographical barriers, cold temperatures, habitats, or natural enemies, to keep population growth in check.

Sources

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Guess That Pest!



Flea



Ant



House Fly



Bed Bug



Cockroach



Termite



Rat



Mosquito

1. This insect can lift 20 times its own body weight.
2. They like to suck human blood and get their name because they like to live and feed in beds.
3. This household pest can live for up to one week without its head.
4. This small creature can jump up to 8 inches high. That's 150 times its own height. (If you could do this, you'd be able to leap over even tall skyscrapers!)
5. Female species of this pest suck human blood and some even causes a deadly disease called dengue.
6. This common house guest tastes with its feet, which are 10 million times more sensitive to sugar than the human tongue.
7. These pesky species have an excellent sense of taste and a good memory. They can identify certain substances, including poisons, after just a tiny taste of it.
8. They are 24/7 bugs, which means they eat nonstop — 24 hours a day, seven days a week. They have hard, saw-toothed jaws that help them to eat lumber, wallpaper, plastics and fabric made of plant fibers.

Answers: ant, bedbugs, cockroach, flea, mosquito, housefly, rat, termites

Predator–prey Matching Game

Match the pests with their common predators.

Column A	Column B
1. rats	a. spiders
2. worms	b. lizards
3. ants	c. nematodes
4. cockroaches	d. birds
5. mosquitoes	e. wasps
6. housefly	f. anteater
7. leafhoppers	g. snakes
8. fungi	h. frogs
9. moth eggs	i. mirid bugs
10. aphids	j. lady bugs

Answers: 1. g-snakes, 2. d-birds, 3. f-anteater, 4. a-spiders, 5. b-lizards or h-frogs, 6. b-lizards or h-frogs, 7. a-spiders or i-mirid bugs, 8. c-nematodes, 9. e-wasps, 10. j-lady bugs