## **Garden Foes: Moth Noctuidae Family – Army Worms**

There are many types of moths in our world, and all begin from an egg laid near the host plant. The larvae hatch from the eggs and proceed to chew their way through the plants in our gardens and this is the stage which causes gardeners to tear their hair out. The next stage is the pupal stage, when the fully larvae spins a cocoon and lies dormant while it changes into a moth, and so the cycle is complete.

We have just had an invasion of Army Worms which are the larvae of the moth family "Noctuidae". They fed very well on our lawn and have for the time being ruined it. We now have an acre of brown looking dead grass which was once our crowning glory. We didn't spray because the birds were feeding on the larvae, and we thought that the poison would affect the birds. We were hoping that the birds would control them, but they were outnumbered. There is also a Carabid beetle which feeds on Army Worms and also wasps carry them off to feed their larvae. I'll be speaking about our friend the wasp in a moment. Army Worms attack the leaves, stems, and seed heads of the lawn. It's a pity the don't keep their diet to the clover and weeds and then they would be a friend instead of a foe. As soon as you are aware of Army Worms, spray with Carbaryl. During Autumn look out for caterpillars of various types. I found Bud Worms on my Geraniums recently. They are tiny to start off with and very hard to see. They make holes in the buds and so ruin the flower heads. Bud Worms belong to the Heliothis family and cause serious damage to a wide range of plants, such as tomatoes, corn, beans, peas, and ornamentals. Stone fruit may be attacked, also hearting lettuces and cabbages are also part of their diet. They feed on the outer leaves for a while the burrow into the heart and ruin these vegetables. Roses, Carnations, Calendulas, Holly Locks, Snap Dragons, and Verbenas are on the menu. When you see them, pick them off and either squash them with your gloved fingers or drop them into a jar of kerosene and water. The small fat moths rest among foliage during the day and fly from plant to plant in the late afternoon, feeding on the nectar and their eggs. The larvae hatch and continue to grow until they are one to one and a half inches long. They pupate in the soil and don't emerge if the soil is dry, so the infestations are less serious in dry summers or if the weather is cold. Actually, the pupae can stay in the soil for up to five months. Bud Worms are particularly hard to control organically. Once they get inside the vegetables for instance, the predators can't get to them. Birds, wasps, and spiders are useful when the Bud Worms can be seen, but usually there aren't enough predators. Prudent gardeners will always consider the beneficial insects and other organisms, before spraying with insecticides.

Research over recent years has shown that parasites, predators, and bees are generally more susceptible to insecticides than the plant feeding insects or caterpillars that you are trying to kill. There is a biological insecticide on the market today which contains the bacterium "Bacillus Thuringiensis". This insecticide kills only caterpillars and is harmless to the beneficial insects. It is commercially available as Dipel.