

## **Mosquito Abatement Options**

### **McCall Environmental Advisory Committee**

To those living in the mountains, being surrounded by water certainly adds to our quality of life. However, one aspect of this blessing that is not pleasurable is the amount of mosquitoes we have. There are several 'solutions' we implement as an attempt to remedy the buzzing annoyance and itchy bites. One of them is commercial repellent, which typically utilizes DEET as the active ingredient. Although the Environmental Protection Agency (EPA) has reported DEET to be a safe chemical when used as directed, there have been several studies suggesting otherwise. A 2001 study observed cases of DEET toxicity in children and recommends that the product not be used on children. Another study, conducted in 2009, found excessive doses of DEET could be toxic to humans, with the potential to cause seizures.

In addition to DEET use, the installation and use of misting systems has become an increasing trend. These outdoor misting systems are used to spray insecticide in our commercial and residential spaces, ridging them of mosquitoes. Pyrethrums, the insecticide often used with the product, is known as harmful to fish and birds. Once pyrethrums are in the food chain they do not leave. The alternative Green Enzyme chemical used in the misters, although safer for birds and fish, kills insects indiscriminately. This means it kills insects from which we receive ecological services such as honeybees, ladybugs, butterflies, and many more. Insects are a necessary part of the food chain that enables us to appreciate the presence of birds, fish, and other wildlife. Killing insects indiscriminately is not a wise approach to our mosquito issue.

McCall's Environmental Advisory Council encourages your stewardship of our home. We suggest the following alternatives for our mosquito solutions. First, you can plant mosquito repellent plants. There are six plants that are scientifically proven to repel mosquitos, these include lantana (*Lantana camara*), bee balm (*Monarda didyma*), lime basil (*Ocimum americanum*), catnip (*Nepeta cataria*), sacred basil (*Ocimum sanctum*), and thyme (*Thymus vulgaris*). The compounds found in these plants were found to repel mosquitoes best when fresh leaves were rubbed on the skin and clothing and reapplied as needed. Also, growing them outdoors, in your yard or garden, or wherever you spend most of your time keeps mosquitoes out of our spaces and their bites off our skins. To increase the plants' repellent virtues, leaves and branches can be clipped and placed on a patio or porch from which the compounds are released when stepped on.

In addition to these useful plants, homemade mosquito traps have also been effectively used to diminish up to 90% of local mosquito populations. Making the traps is as easy as letting a "fruit salad" spoil in a container with a perforated lid.

Materials and instructions are provided below for your own homemade mosquito trap:

Materials:

1/16-inch-diameter nail or drill bit (for punching holes in a lid)

Quart-sized, large mouth plastic container with lid (yogurt containers work great)

3tsp sugar

1/2 tsp boric acid  
1 cup smashed, fermented fruit with the fruit juice  
Jasmine essential oil (optional)

Instructions:

Set smashed fruit in the sun for one day to accelerate fermentation. Punch or drill several holes into the plastic container lid (small holes let mosquitoes in while excluding beneficial insects like bees). Mix the ingredients in the container and place it outside under a shelter where it will not be rained on. The mosquitoes will be attracted to the fruit and Jasmine and die in the acid.

Another possible solution, "hire" bats to battle mosquitoes for you. A single bat can eat up to 1,200 mosquitoes an hour. You can entice bats to your property by purchasing bat boxes for them to live in. The boxes can also easily be built by following instructions that you can find online. Because bats feed at night, they provide a service that does not interfere with your use of space and should be a welcomed addition to any property.

The McCall Environmental Advisory Committee is working to find environmentally friendly alternatives in our lifestyles to maintain and protect the natural beauty we call home. We invite your comments and suggestions in our effort of addressing community concerns with environmental stewardship.