

DEVICE FOR INSECT CONTROL AND METHOD

This invention relates to the art of insect control, and is more particularly concerned with a new and improved insect control device and method.

Numerous and varied expedients for insect control have been proposed with more or less success, such as male insect sterilization requiring elaborate laboratory procedures, chemical poisoning which is generally not selective so that both noxious and beneficial insects are indiscriminately destroyed, trapping which is generally not selective, and the like. Further, at least some prior insect control or exterminating expedients have discouraged or even substantially eliminated noninsect predators, such as birds and fish, and more particularly those predators which feed on certain species of insects. Inasmuch as it is virtually impossible to irradicate any species of insects completely, the predator population should be maintained for assurance of continued insect control.

It is therefore an object of the invention to provide a new and improved device and method for insect control which is environmentally safe, efficient, which may be selective as to the insects to be controlled and which is adapted for inviting predators to assist in the insect control.

Another object of the invention is to provide a device and method for insect control operating on the principle of causing the insects to waste their fertility.

The invention provides a device for insect control, which comprises means for providing an environment to which at least certain fertilized female insects will be attracted to deposit their eggs, and said means assuring wasting of the thus deposited eggs.

More particularly the invention provides an insect controlling device comprising an insect barrier adapted to intervene between an insect infested environment and an insect incubatory medium attractive to at least a certain species of fertilized female insects from the insect infested environment, and the barrier having hole means therethrough small enough to preclude any adult insect or developed larva from escaping from inside the barrier through said hole means, such hole means being only large enough to receive therethrough from outside the barrier insect eggs from said medium, or to permit entry of tiny newly hatched larva attracted to the medium, and the small size of the hole means assuring that developed larva and insects maturing from the larva will be trapped inside said barrier against leaving said barrier to enter said environment.

The invention also provides a method of controlling insects which comprises providing an environment to which at least certain fertilized female insects will be attracted to deposit their eggs, and assuring wasting of the thus deposited eggs.

More particularly, the invention provides a method of controlling insects comprising intervening an insect barrier between an insect infested environment and an insect incubatory medium attractive to at least a certain species of fertilized female insects from said insect infested environment, receiving from outside said barrier eggs from said female insects or tiny newly hatched larva through hole means in said insect barrier small enough to preclude an adult insect or developed larva from escaping from inside said barrier through the hole means, and trapping within the barrier and against en-

tering said environment any developed larva or insects maturing from the larva.

Other objects, features and advantages of the invention will be readily apparent from the following description of certain representative embodiments thereof, taken in conjunction with the accompanying drawings although variations and modifications may be effected without departing from the spirit and scope of the novel concepts embodied in the disclosure and in which:

FIG. 1 is a perspective view of an insect controlling device embodying the invention and serving also as a bird feeder;

FIG. 2 is an enlarged top plan view partially broken away and in section of the device in FIG. 1;

FIG. 3 is a sectional detail view taken substantially along the line III—III of FIG. 2;

FIG. 4 is an enlarged fragmentary detail view of one of the screen panels employed in the device of FIG. 1;

FIG. 5 is a fragmentary detail elevational view of a modified form of the screen;

FIG. 6 is a schematic vertical sectional detail view of a device embodying the invention and adapted to float upon a body of water and having a fish feeding capability;

FIG. 7 is an enlarged fragmental sectional plan view taken substantially along the line VII—VII of FIG. 6; and

FIG. 8 is a fragmentary sectional perspective view showing a further modification especially suitable for mosquito control.

In one best mode embodiment of the invention (FIGS. 1-3) a device for insect control comprises means including a generally cup-shaped container 11 for providing an environment to which at least certain fertilized female insects will be attracted to deposit their eggs. In a preferred form, the container 11 is formed from thin self-sustaining plastic material which may be molded or drawn to shape and of suitable size to provide an upstanding wall of adequate diameter for the intended purpose. Within the container 11 is adapted to be received a suitable attractant or bait 12 for the insects which it is desired to control.

Support of the container 11 is adapted to be in suspended relation from a chambered housing 13 within which is provided a chamber 14 defined by an upright wall 15 and a top closure wall 17 desirably having a central upstanding hanger 18 adapted to receive a suspension cord 19 by which the device is adapted to be hung from a support such as a tree branch 20 or the like adapted to support the bird feeder in suitable position for the intended purpose. To permit the roof wall 17 to be made as thin as practicable, it may be provided with reinforcing ribs 21 radiating from the center toward the outer perimeter of the roof. Any suitable material may be employed for the housing 13 such as opaque plastic adapted to be cast or molded into desired form.

At its lower end, the wall 15 of the generally inverted cup-shaped housing 13 defines an opening 22 for registration with the top opening from the container 11. About the opening 22 means are provided for separably connecting the container 11 to the housing 13 so that from time to time the container may be cleaned out and refilled with the bait 12. For this purpose, a horizontal floor partition of a diameter to fit within the opening 22 has an upstanding annular attachment flange 24, and a depending annular connector bead flange 25 provided with a radially outwardly opening annular groove 27 receptive of a snap-in complementary annular connec-