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A passive sorting device for separating *Aphthona* species biological control agents of leafy spurge from larger insects, seeds and plant debris associated with crude insect sweep net collection

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(*Article begins on following page.)

A Passive Sorting Device for Separating *Aphthona* Species Biological Control Agents of Leafy Spurge from Larger Insects, Seeds and Plant Debris Associated with Crude Insect Sweep Net Collection

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In 1998, USDA-APHIS-PPQ, in support of Team Leafy Spurge activities on *Euphorbia esula*, developed a passive sorting system for the purpose of mass collecting and distributing large numbers of *Aphthona* species flea beetles. Enhancing some ideas and methodologies that had been previously utilized in various forms, technicians at the Bozeman Biological Control Station produced a light, portable, free standing, and easily operable sorting unit from inexpensive and readily available materials. Dubbed the 'Aphthona Accelerator', this sorter can be set up and operating in minutes. This passive sorting device is driven by the typical behavior of *Aphthona* flea beetles to orient upwards and move toward light. The flea beetles actually separate themselves from the larger insects, seeds, and plant debris that are also collected in field net sweepings, by moving through a fine mesh basket to a slick funnel and eventually into a collection jar. It is possible to sort several hundred thousand flea beetles with this device in just a few hours, leaving nearly all of the extraneous material behind. The 'Aphthona Accelerator' can easily be operated by one technician, freeing up everyone else to sweep up more flea beetles!
