CAUTION: Pesticides can be injurious to humans, domestic animals, desirable plants and fish, or other wildlife—if they are not handled or applied properly. Use all pesticides selectively and carefully. Since approved uses of a pesticide may change frequently, it is important to check the label for current approved and legal use. Follow recommended practices for the disposal of surplus pesticides and pesticide containers. Mention of a pesticide in this publication does not constitute a recommendation for use by the USDA, nor does it imply registration of a product under Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Mention of a proprietary product does not constitute an endorsement by the USDA.

European Yellow Underwing

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Additional information on this insect can be obtained from your local Alaska Cooperative Extension office, Alaska State Forestry office, or from:

USDA Forest Service
State and Private Forestry
Forest Health Protection

2770 Sherwood Lane, Suite 2A
Juneau, Alaska 99801-8545
Phone: (907) 586-8883

3301 "C" Street, Suite 202
Anchorage, Alaska 99503
Phone: (907) 743-9455

3700 Airport Way
Fairbanks, Alaska 99709
Phone: (907) 451-2701

www.fs.fed.us/r10/spf/fhp

***Cover photo**. Adult European yellow underwing, showing the distinguishing yellow hindwing. Photo by Kenelm Philip, University of Alaska–Fairbanks.*

European Yellow Underwing

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Introduction

The European yellow underwing, *Noctua pronuba L.* was first recorded in North America in Nova Scotia in 1979. Since then it has rapidly spread throughout the rest of Canada and the United States. During the 1980s it was reported that this insect was spreading west and south about 80 miles per year. In 1996 it was discovered in Louisiana, which may indicate more than one introduction into the United States. By 1999 the European yellow underwing had reached Colorado; in 2000 and 2001 it was recorded in California and Oregon; in 2002 it was first recorded in British Columbia; and in 2005 it was discovered in Haines, Alaska. From 1998–2002 the range expanded approximately 1,800 miles, an average of about 450 miles per year. The moth has since been collected from other localities in southeast and south-central Alaska and is expected to be in interior Alaska by 2009.

Life History

The European yellow underwing is distinctive in size and coloration and not easily confused with any other species present in Alaska (see cover photo). Adult moths have a wingspan of about 40–60 mm. The forewing is variable from pale to dark brown with some dark circular markings (reniform spots). The distinguishing feature is the hindwing which is bright yellow to orange-yellow with a black border. Moths are active from May through September, are strong fliers and are very proficient at dispersing long distances. Larvae are about 43–50 mm long when fully grown and are a pale yellowish green to brown with a double row of dark brown dashes along its length. They have a diagnostic C-shape. Eggs are laid in clusters of several hundred in June through August, depending on the latitude, and are usually deposited on foliage, sticks, grass, and manmade surfaces such as fences and campers. Caterpillars hatch in late July to August and feed mostly at night until freeze-up. They overwinter as late instar larvae and pupation takes place underground in May or June. There is one generation per year.

Detection and Damage

European yellow underwing caterpillars are considered to be cutworms and feed on foliage and stems. They often snip plants off at the soil line or totally consume them. This caterpillar is a generalist feeder and feeds on many varieties of agricultural and ornamental plants. Caterpillars can be active during thaws in late winter and early spring and also are active during most planting seasons. Host plants include tomatoes, potatoes, carrots, beets, cabbage, tobacco, grapes, and other plants in the Brassicaceae family. Caterpillars will also feed on ornamentals such as *Potentilla*, dogwoods, hawthorns, and they will feed on a variety of grasses, low growing forbs, and cultivated flowers. It is not entirely known which Alaskan plant species will be preferred host plants but the European yellow underwing could potentially be a significant garden and ornamental tree pest, and a threat to certain native herbaceous plants such as native dandelions.

Control Measures

Common control measures for cutworms include placing plastic, paper, or metal collars around the base of small agricultural or ornamental plants. The collar must be placed about halfway into the soil. Larvae can be hand picked and destroyed on a daily basis although this can be difficult due to their nocturnal behavior. There are some biological controls such as predators, parasites, and diseases that can keep populations of cutworms in check; however, it is not known how well this works in a small environment such as a garden or nursery. *Bacillus thuringiensis* or BT, a naturally occurring bacterium, can be applied to the soil in the form of a spray or powder and is effective against caterpillars. Parasitic nematodes can also be applied to the soil to control cutworms. There are also some chemical controls that can be applied directly to the soil to help control the European yellow underwing. Please contact your local Cooperative Extension office for more information and recommendations for insecticide treatments.