

Section VI  
Biological and Cultural Controls

DISTRIBUTION AND OCCURRENCE OF A SOLITARY PARASITE,  
COTESIA RUBECULA, ON THE IMPORTED CABBAGE WORM IN WASHINGTON AND OREGON  
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Cotesia rubecula, is a solitary parasite of the imported cabbageworm, Artogeia (=Pieris) rapae accidentally became established in British Columbia in ca. 1963. The specific origin of the species is unknown. Attempts to introduce it into the U.S. at several locations in 1968 were unsuccessful primarily due to its inability to synchronize with host populations. In 1982 a biotype of this species collected in Yugoslavia was successfully introduced and established in Missouri. The British Columbia biotype of C. rubecula was first recovered in Washington State in 1984 at Yakima. During 1985 and 1986 we acquired distribution and occurrence data on this parasite. In 1985 we recovered this parasite at 5 different sites in Washington and 9 sites in 1986. In Oregon in 1986, we collected it at 3 locations. Percent parasitism ranged from 0 to 100% (Table 1).

Cotesia rubecula appears to have a widespread distribution throughout the Northwest and provides important suppressive pressure on populations of Artogeia.

Table 1. Rates of parasitism of Artogeia rapae by Cotesia rubecula in Washington and Oregon in 1986.

<u>Location</u>	<u>% Parasitism</u>	<u>Date of Highest Parasitism</u>
Mesa, WA	0-54	Sept. 3
Othello, WA	0-19	Sept. 3
Yakima, WA	0-19	Aug. 21
Puyallup, WA	0-60	Sept. 25
Rockport, WA	0-100	July 30
Hermiston, OR	0-50	Sept. 16
Corvallis, OR		Aug. 13
Hillsborough, OR	0-50	Aug. 11