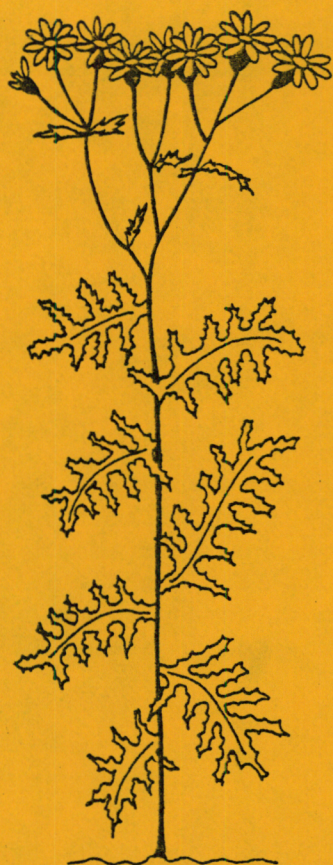


MOTH ATTACKS RAGWORT

by Dr. Leith Thompson, Charlottetown Research Station



An insect attack against tansy ragwort or stinking willie (*Senecio Jacobaea*), a toxic weed in Prince Edward Island, was launched by the Research Station, Agriculture Canada, Charlottetown, Prince Edward Island, in 1964.

The insect is the cinnabar moth, natural enemy of this weed in Europe and Great Britain, according to Dr. L. S. Thompson, entomologist at the Charlottetown Station.

Proof that the insect has no liking for any useful plants was established in feeding trials at the former Belleville Research Institute. Hence, the moth could be established in Canada without risk that it would change to another crop even in the absence of ragwort.

The handsome red and black moth was first released at Monticello, P.E.I., in 1964, but did not become established. A further release made at St. Charles in 1965 has survived. The survivors were apparently better adapted to local conditions than the original stock for they have continued to increase each year since.

Tansy ragwort is one of the most serious pasture weeds on Prince Edward Island. Cattle normally avoid eating the mature plants but the immature ones are often consumed with forage. This produces a chronic, cumulative poisoning involving liver necrosis and in severe cases, death. There may be a latent period of several months following the lethal dose before the poisoning is apparent. The substances in the weed responsible retain their toxicity in hay or silage. Dense infestations of the weed may reduce pasture yields, from crowding, by more than 50 percent.

Ragwort is more toxic to horses than to cattle, while sheep frequently eat the weed without being poisoned. The weed is aggressive, due in part to lack of natural competition, and is spreading over more land each year. Chemicals can control it, but areas of infestation are often so great, and in many cases so inaccessible, that spraying may be economically unfeasible.

Importation of this natural insect enemy is helping to offset spread of tansy ragwort when released in fields heavily infested with the weed. The yellow-orange and black ringed worms or larvae of the moth take at once to the plants and begin to feed upon them voraciously. At St. Charles, the larvae completely infested and stripped leaves from ragwort in a 6.5 acre field, and then moved along the roadside for several miles in search of other ragwort plants. Since 1967 larvae have been taken annually from this area and released in other areas in each of the three counties in Prince Edward Island. It is anticipated that continued seasonal defoliation will destroy much of the seedbeds and greatly deplete the plant's food reserve resulting in reduction of the weed population.

While this form of control will not completely eliminate tansy ragwort, it may, however, eventually keep the weed controlled to the point that it no longer causes economic stress. At present this method of biological control is being supplemented by the introduction of another European ragwort insect, a flea beetle, but it is too early to tell if the beetle will establish itself in this province. Good pasture management is likely to remain an essential part of any program designed to control this noxious weed.