

PENNY CRESS POISONOUS TO LARVAE OF THE NATIVE WHITE AT THE PAS, MANITOBA

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Recently in trying to get eggs from butterflies enclosed in jars over Penny-Cress *Thlaspi arvense* it was found that though dozens of eggs were laid by Native White *Pieris napi* females not one living larva could be found a few days later. Further laboratory work has established that the larvae will eat the plant but will die from it. Even the slightest nibble will apparently kill the larva.

Penny-Cress is a frequent agricultural weed of European origin and is now spreading into the native habitat of *napi* as well as along disturbed roadsides. The plant was already a pest in Manitoba in 1883 — but only in the south — according to the exploring botanist, John Macoun. Following the disturbance of soil by road building into the North, this weed has spread into the true native habitat of *Pieris napi*. Female *napi* were observed to oviposit freely on this plant in the wild on Rahl's Island, some five miles east of The Pas on May 31, 1977. Here it was flying freely along the edge of a garden. The area is to a large extent still native bordering the Saskatchewan River and in 40-60 year old Black poplar woods. Housing and acreage developments are now gradually moving in. A study series of *napi* taken here is preserved in the author's collections.

Very likely the toxic effects of the plant take effect, killing off the growing larvae in the field. Just to what extent that takes place will require further work.

Evidently, the local native food plant for *napi* is yellow Cress *Rorippa*

islandica var. *Fernaldiana*. This is generally an infrequent species but occurs in quantity in established colonies. It occurs in wet to dry ditches over peat or clay and has a wide Ph tolerance. It's a rather plastic species and marked ecological forms occur from time to time. Lush or depauperate forms occur on wet or dry soils. Loose or compacted soils tend to produce characteristic forms also.

If the poisonous traits of Penny-Cress are general (some races may be less virulent), this may well be a contributing factor to the decrease of *napi* in agricultural areas where Penny-Cress would be most frequent as a weed. Here *Pieris rapae* would also thrive. The pressure of *rapea* parasites would have a doubly reinforcing deleterious effect on the native *napi* white.

In The Pas area fortunately the Native cress, *Rorippa islandica*, *Fernaldiana* will thrive in gardens and peaty fields. It sets seed abundantly. The seed capsules, globose to short ellipsoid, are usually full of seed. Indeed, it has all the makings of a future agricultural weed in the Hudsonian zone as it is gradually opened up to farming.

In the town of The Pas, *napi* flies all through the town around May 20th in an average year. It visits garden flowers and may be establishing itself in new niches. *Napi* in wooded areas will weave its way through fairly thick bush. Ovipositing females search out openings in the woods where the food plant occurs. It is on the wing just as the poplars are coming into leaf. The second generation appears in late July.



Canada goldenrod

Wayne Lync



Western wild bergamot

Barbara L. Shourounis

Black-eyed susan

Wayne Lynch

