

- Eucosma derilicta* Heinr.—Michaelmas daisy, in the roots (R.G.)
- \**Halisidota maculata angulifera* Wlk.—red flowered currant (*Ribes sanguineum* Pursh.) (J.R.J.)
- Lycanades (Xanthia) pulchella* Sm.—alder (*Alnus rubra* Bong.), willow (*Salix Scouleriana* (Hook.) Barr.), red flowered currant (*Ribes sanguineum* Pursh.), wild cherry (*Prunus emarginata* Dougl.), bird cherry (*Nuttallia cerasiformis* T. & G.), june-berry (*Amelanchier florida* Lindl.) (J.R.J.)
- \**Malacosoma pluvialis* Dyar.—wild gooseberry (*Ribes divaricatum* Dougl.), black hawthorn (*Crataegus brevispina* Dougl.) (J.R.J.)
- Mineola*, species of—Cotoneaster sp. (R.G.)
- Paonias excaecata* A. & S.—black hawthorn (*Crataegus brevispina* Dougl.) (J.R.J.)
- Pyrrhia umbra experimens* Wlk.—black poplar (J.R.J.)
- Schizura ipomoeae* Dbldy—june-berry (*Amelanchier florida* Lindl.) (J.R.J.)
- \**Schizura unicornis* A. & S.—willows (*Salix Scouleriana* (Hook.) Barr., *Salix Hookeriana* Barr.), crab apple, garden species "Aldenhamensis" (J.R.J.)
- \**Selenia alciphearia* Wlk.—black hawthorn (*Crataegus brevispina* Dougl.) (J.R.J.)
- \**Stilpontia salicis* Linn.—aspen (*Populus tremuloides* Michx.) (J.R.J.)

**A BRIEF NOTE ON AN ATTEMPT TO HYBRIDIZE NOTOLOPHUS  
ANTIQUA BADIA HY. EDW. AND HEMEROCAMPA  
PSEUDOTSUGATA McD.**

by J. R. J. Llewellyn Jones\*

On September 1st, 1936 a female of *Hemerocampa pseudotsugata* McD. emerged in a breeding cage, and it was noted that in addition to three males of this species, six males of *Notolophus antiqua badia* Hy. Edw. were in attendance on the virgin female. The same phenomenon was also noted the following season, September 1937, when breeding a series of *Hemerocampa pseudotsugata*.

It was thereupon decided to attempt to mate a female *Hemerocampa pseudotsugata* with a male *Notolophus antiqua badia*, so several males of this latter species were introduced into the cage with a virgin female. Though the insects were not actually seen "in copula", fertile eggs were laid on the evening of September 7th, 1937, the day upon which the female had emerged from the cocoon.

The ova hatched the following spring between April 27 and May 7, 1938. The young larvae were blackish and clothed somewhat scantily with black hairs.

The "pabula" of both parent species were offered and the young larvae chose the food plants of the male parent, *antiqua badia*, refusing

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Douglas fir, the usual food of *pseudotsugata*. Of the hosts chosen, preference was shown for *Ribes sanguineum* Pursh., *Salix Scouleriana* (Hook.) Barr., and the garden varieties of rose. The larvae were sleeved on the *Ribes* and *Salix* and fed readily on these until mature. Pupation took place about June 22, 1938. Fourteen pupae were obtained, and from these three males and one female emerged on July 4, 1938, and one other male on July 6; no additional imagines were recovered. On examination it was found that moths had formed within the remaining pupae, but had failed to emerge. This peculiarity had been noted also when breeding a series of *Hemerocampa pseudotsugata* the preceding season. It is suggested that possibly unfavorable weather conditions at the time when the insects were due to appear may have been the cause of the high rate of mortality at this stage.

**MATING:** Male *Notolophus antiqua badia*  
Female *Hemerocampa pseudotsugata*

**MATURE LARVA:** The mature larva is very similar to that of *antiqua badia* and would, if found at large, undoubtedly be mistaken for that species, with which it agrees as to size and general characteristics. The head is black and shining. The body is blackish and is covered with short yellowish hairs, having a few longer black hairs interspersed and arising from warts. There are four yellowish tufts of hair reminiscent of shaving brushes on the back of segments five to eight, followed by three sets of three orange-red spots on the three following segments. There is a backward pointing black tuft on segment twelve, and two similar tufts, also black in colour, pointing forward on segment two. On each side of the body is a row of 7 orange-red dots. A yellow stripe runs low down on each side near the spiracles. The legs, claspers, and underside of the body are greenish yellow.

**PUPA:** This is contained in a loose cocoon, is blackish and somewhat hairy, and in general appearance follows the normal "Tussock" moth pupa.

**IMAGINES:** The male is in form very like the corresponding male parent, *pseudotsugata*, but is somewhat paler. It has on the primaries the white dot so characteristic of *antiqua badia*, but better defined and more prominent than in *pseudotsugata* where it is indistinct. The female, which is apterous, resembles closely the female of *antiqua badia* but in the single specimen obtained is considerably smaller than the normal size for that species.

It may be noted, in conclusion, that the moths obtained, in this instance at any rate, possessed an inverse likeness to their parents.