Eosphoropteryx thyatyroides Gn. 2, 6, 19 Aug., 1905, (Y).

Pseudeva purpurigera Walk. 12, 19 July, 1902, (Y); 20 July, 1905, (G); 21 July, 1903, (Y); 28 July, 1904, (Y); 29 July, 1906, (Y).

Phytometra brassicæ Riley. 10 Aug., 1911, (G); 16 Aug., 1900, (G); 31 Aug., 1900, (Y); 3 Sept., 1900, (G); larva on cabbage 5 Sept., pupated 13 Sept., moth emerged in cellar 26 Sept., 1908, (F).

This is a common economic pest of cabbages in the United States, but fortunately it has not as yet appeared as a very destructive species in Canada. In 1907, the larvæ were found rather commonly in a large greenhouse in Toronto where lettuce was being grown. Specimens forwarded to me changed to pupæ on Jan. 27, the moths emerging at Ottawa on Feby. 23. In the Ottawa district I have occasionally found the larvæ on cabbage.

Phytometra rubida Ottol. 5 June, 1905; 13 June, 1906; 17 June, 1904, (Y).

Phytometra putnami Grt. 6, 12, 15 June, 1901, (G); 14, 21 June, 1899, (Y); 23 June, 1908, (G); 26 June, 1905, (F); 28 June, 1899, (G); 14 July, 1899, (G).

Phytometra contexta Grt. 1, 2, 5, 12 June, 1899, (G); 7, 12, 13 June, 1901, (G); 18 June, 1904, (G); 8 July, 1905, (F); 11 Aug., 1903, (Y); 12, 29 Aug., 1902, (G); 13 Aug., 1904, (G); 21 Aug., 1904, (Y); 25 Aug., 1899, (G); 23 Sept., 1911, (Beaulne).

In 1901 eggs were secured from a captive female. Oviposition took place June 14, and the larvæ hatched June 19, the egg stage being thus five days. The larvæ fed readily on Kentucky Blue Grass.

Phytometra biloba Steph. 29, 30 June, 1903, (Y); 2, 3 July, 1903, (G); 2 July, 31 Aug., (Y); 3 Sept., (G); 24 Sept., 1900, (F); 22 Oct., 1903, (G).

Mr. Young has found the larvæ at Ottawa on clover.

Phytometra oo Cram. 25 May, 1903, (G).

This specimen was named *rogationis* by Ottolengui. This however, is placed, by Hampson, as a synonym of *oo*.

Phytometra precationis Gn. 25, 30, 31 May, 1899, (G); 2, 7 June, 1899, (G); 5 June, 1894, (F); 10 June, 1902, (G); 18 June, 1904, (G); 25 July, 1900, (Y); 12 Aug., 1904, (G); 24, 26 Aug., 1899, (G); 30 Aug., 1900, (G); 10 Sept., 1908, (G); 15 Sept., 1899, (G); 24 Sept., 1900, (G).

Common around flowers in late May and June. Many specimens have been seen frequenting the flowers of *Cara-*

gana and other shrubs in the arboretum, Central Experimental Farm. In 1905, eggs were secured from a captured female. They were laid on July 1st and hatched on July 7th. The larvæ in Stage I were pale greenish, skin smooth and shiny, the segments rather deeply divided. Tubercles small, black, each bearing a blackish bristle. Head semi-translucent with a brownish tinge; mouth parts yellowish-brown; ocelli black. Thoracic feet concolorous with head; prolegs concolorous with body. Moulted 14 July. My note on Stage II reads: Length 6.5 mm., pale greenish cylindrical larvæ, with black tubercles, each with a rather long stiff black bristle—much the same as Stage I. Head paler than body. No further notes were taken owing to pressure of other work. The mature larva has been described fully by Chittenden.*

On July 8, 1901, specimens of the larvæ of this species were found at Ottawa feeding on common plantain, *Plantago major*. Pupation took place on July 12, and the moths appeared about a fortnight later. In 1912, I found a larva on cabbage, which changed to pupa on July 30, the moth emerging on Aug. 19. Mr. C. H. Young has found the larvæ feeding on grass and clover.

Phytometra bimaculata Steph. 30 July, 1906, (G); 23 July, 1904, (Y); 6 Aug., 1902, (Y); 11 Aug., 1901, (G).

Phytometra mappa G. & R. 26 June, 1904, (Y).

In addition to this specimen Mr. Young collected a female moth from which he secured eggs. The young larvæ were fed on dandelion and by autumn had grown to rather more than half an inch in length. They stopped feeding and acted as if they wanted to hibernate. They died, however, before winter.

Phytometra ampla Walk. 13 June 1899, (G); 19 June, 1901, (Y); 20, 29 June, 1903, (Y); 23 to 28 June, 1903, (Y); 23 June, 1908, (G); 7 July, 1903, (Y); 6, 9 Aug., 1901, (Y).

Phytometra æreoides Grt. 24, 30 June, 1904, (Y); 7 July, 1899, (G); 7 July, 1899, (Y); 7 July, 1902, (Y); 8 July, 1905, (F); 24 Aug., 1904, (Y).

On May 28, 1901, I found the larvæ fairly aeundant, on a hillside near the Rideau Canal, feeding on *Solidago canadensis*. The larvæ were nearly full grown and it was extremely difficult to see them on the food plant. They were nearly all collected by "beating." The following descrip-

*Bull. 33, U.S. Div. Ent., p. 71.

tion was taken: Length when mature 34 mm., cylindrical in shape, tapering towards the head, which is slightly smaller than segment 2. The whole of the body is pale green, the dorsal vessel a darker green. The dorsum is covered with short, whitish, crooked lines, which slope from about 1 mm. above the stigmatal band to a faint, whitish crooked line which borders the thin median skin through which the dorsal vessel is seen. Stigmatal band yellowish-white; spiracles whitish, ringed with black. All the feet concolorous with body. Head slightly paler than body, no markings; ocelli black; tips of mandibles blackened. The larvæ spun cocoons and pupated soon after collection, and the moths emerged on June 9 and 10.

A very brief description of this larva was published by Thaxter in 1876.*

Phytometra ærea Hbn. 18 July, 1899, (G); 18 July, 1899, (Y); 12, 19, 22 Aug., 1900, (Y); 16, 24, 30 Aug., 1900, (G); 15 Sept., 1899, (G); 1 Oct., 1902, (G).

A single larva of this species was found on mint at the Central Experimental Farm, on May 9, 1901, from which the following description was drawn: Length 31 mm. Head 2 mm. wide, rounded, slightly indented at vertex, lobes full; concolorous with body excepting antennæ, which are paler and slightly brownish at tips; mouth parts also slightly brownish; ocelli black; hairs on face slender. Body cylindrical, plump, tapering towards extremities, light green on dorsum, dark green on sides and venter, the whole body spotted with white dots. From centre of dorsum to spiracles are five stripes, all white with exception of spiracular stripe, which is yellow. Spiracles faintly orange, ringed with black. Tubercles normal, white, setae dark, tubercle IV in a line posterior to lower end of spiracle. Thoracic feet and prolegs concolorous with venter. On May 13 the larva began to spin its cocoon, and by the 16th had changed to pupa. The moth emerged on June 4. In 1899 a cocoon was found on a celery leaf, the moth emerging on Aug. 10.

Phytometra balluca Geyer. 7 July, 1899, (G); 7 July, 1903, (Y); 9, 14 July, 1900, (Y); 20 July, 1904, (G); 9 Aug., 1900, (G).

Mr. Young has found the larva on cabbage, from which he reared the moth on 13 Sept., 1906. Fletcher, in 1878, found the larva at Billings' Bridge feeding on Red

*Psyche, vol. 1, p. 188.

Raspberry, and in 1880 on mint. The pupa is a striking object, being of a cream colour beautifully marked with a wide, irregular, broken, black band on dorsum and a row of lateral black spots. In length it is about 20 mm.

Palæoplusia venusta Walk. 2 July, 1899, (Y); 24 Aug., 1900, (Y); 27 Aug., 1902, (G); 30 Aug., 1899, (G).

Abrostola urentis Gr. 19 Aug., 1900, (Y).

The moths have also been reared by Mr. Young from mature larvæ collected on 15 Aug., 1898, 15 Sept., 1899, and 8 June, 1905. The larvæ were found on nettle. I have recently had an opportunity of examining two inflated specimens. The caterpillar is a rather handsome one, being pale green in colour or pale brownish, with whitish V-shaped marks on dorsum, one on each abdominal segment, the sides of which inwardly are bordered with pale brown in the green specimens and darker brown in the pale brownish variety. On segments 5, 6 and 12, the lower portion of the V-shaped mark is filled with brown, an indistinct whitish dorsal stripe is present, and a wide white stigmatal band bordered above with brown. On either side of each abdominal segment is a wide oblique dark dash. Head pale green, reticulated with brown. Down the centre of each cheek is a darker band of brown and on either side a wide margin of the same colour. In the brownish larvæ the head is of a much darker brown, the reticulations being very distinct. The thoracic feet are pale brown, the prolegs being concolorous with the body. The posterior half of the anal feet are brown.

RANDOM BOTANICAL NOTES FROM PORTNEUF COUNTY, QUE.

By BRO. M. VICTORIN, of the Christian Schools, Longueuil College, Que.

Botanically speaking, the Laurentian area of Quebec is very nearly untrodden ground. It has been the good fortune of the writer to spend a full week on the upper part of the River Ste. Anne, Portneuf Co., towards St. Raymond and the vicinity, and to observe some of its prominent floristic features.

As could be expected we find that the flora of the district, though not differing essentially from that of the Laurentian zone north of Montreal, exhibits, nevertheless, a somewhat more pronounced boreal aspect.