area. Tubercles well shown, brownish black; on joint one the cephalic plate forms a complete covering dorsally, being wider than the head, of similar texture, and edged at the side with black; on joint two an elongate plate occurs anterior to Ia and Ib, the fusion of Xa and Xb apparently, and is about twice the length of a spiracle; Ia, Ib and IIa show as mere dots; IIb, III and IV are much larger, being greater than a spiracle; VII of similar size; on joint three tubercles similar, except the elongate plate is absent; on the abdominal joints IV slightly exceeds the spiracle, and on ten is low down; on joint eleven III and IIIa are well separated, and I and II assume their usual large proportions; anal plates well developed; spiracles black.

Stage V.—Similar; on joint ten there is indication of tubercle IVa, but it is not stable for this nor succeeding stages.

Stage VI.—Body colour much lighter; otherwise no change.

Stage VII.—Head has lost oblique lateral marking, body colour fades to whitish translucence at maturity; the fused tubercle Xa and Xb is less prominent; otherwise similar. Larva measures 21, 27, 35, 40 mm. for the stages respectively.

Maturity is reached August 8th to 15th, and the gallery is left for pupation. The pupa is shorter and chunkier than usual, of chestnut brown colour and shows no unusual developments; the cremaster is two sharp, curved hooks; length, 15 to 16 mm.

The emergence dates for thirty specimens include August 26th to September 19th.

Moeseri larvæ in early stages are almost identical with *impecuniosa*, in the last two stages its larger size and middle girth, together with a slight difference of tubercle delineation, readily separate them.

Papaipema stenocelis Dyar.

This species, represented by a unique type from Baltimore, Md., was described in 1907. A second specimen was taken at light at Lakehurst, N.J., by Mr. O. Buchholz, in September, 1910. A relationship is apparent to *P. inquaesita* G & R., and more closely still to *speciosissima* G & R.