pigment from the examples furnished by
you, but as it occurs in such minute quan-
tities I was obliged to give up that idea,
and to experiment on the entire wing; this
may account for my not being able to re-
store the blue color by means of alkalies.

Yours truly,

Joseph M. Wilson, S. B.
Charlestown, Mass.,
25 July 1880.

NOTES ON PHOXOPTERIS ANGULIFASCIANA ZELL.

BY CHARLES HENRY FERNALD, ORONO, ME.

On the 23d of May 1878, between one
and two p. m., I saw a small Tortricid
fluttering in a very peculiar manner over a
patch of clover. Approaching nearer, so
that I could observe more closely, I found
that she was depositing her eggs on the
leaves of the white clover (Trifolium rep-
ens).

She fluttered about on the upper side
of the leaf for a little time, then standing
over and in a line with the midrib, she de-
posited an egg on the midrib, about one-
third the distance from the end. In some
cases only one egg was deposited on a leaf,
in others, two; but in the latter case the
second egg was deposited in the same man-
ner as the first, but at a third of the dis-
tance from the opposite end of the leaf.
Having observed the manner of depositing
the egg, I attempted to capture the fe-
male, but failed to do so. I therefore
took up the plants into a flower pot, taking
them into the house where their trans-
formations could be observed.

The eggs were of an oval form, some-
what flattened, so as to rise but little above
the surface of the leaf. The length was 0.8
mm., width 0.6 mm., thickness about 0.4
mm. Color dull grayish white, transpar-
ent at the edges; surface reticulated,
as could be seen under a strong lens, with
a play of colors.

The moth was not easily disturbed while
depositing her eggs, and readily distin-
guished between the leaves of clover and
sorrel, alighting several times on leaves of
the latter, and as quickly flying off to an-
other leaf, not stopping till she came to
the leaves of clover.

Being called away from home at this
time, I did not learn the time required for
the eggs to hatch, but on my return I found
that the young larvae had hatched and were
feeding. They drew the edges of the leaf-
let up together, securing them with silk,
and fed on the epidermis of the upper side
of the leaflet, and on the parenchyma, leav-
ing the epidermis of the lower side of the
leaflet—now the outside of their domicil
—intact, while the excrements were de-
posited in one end of the closed leaflet.

After having eaten all the food furnished
by one leaflet, they at once left for another,
going down one leafstalk and up another.

I did not have an opportunity to make a
description of the larva at the time, but
remember it as being dull glassy green.
Early in July the moths emerged, and
proved to be Phoxopteris angulifasciana
Zell.
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