The larva moulted on 25 July, and was 25 mm. long and of the same colors and marks as before.

On 27 July faint lines of a reddish color began to appear above the oblique yellow lines.

On 30 July the larva was 44 mm. long, and ate voraciously. The tips of the feet had become red. The yellow stripes on the head had grown very bright.

On 31 July it moulted again, being 53 mm. long.

The mouth parts were black; the yellow face-lines were edged with black; and the caudal horn had a black line on each side instead of a yellow line. Other marks as before.

On 2 August the colors had changed somewhat.

The face-lines had become pale green edged with black — rather faint —; the seven obliques were white edged above with pinkish lilac; the yellow horizontal line had gone from the first three segments, and those segments, as well as the lower half of all the others, were marked with tiny white dots, each encircled with black.

The props had a faint purplish tinge. The spiracles were red.

The head had grown more round, with a slight indentation on top — not enough to call the head bifid.

On 4 August the larva was 62.5 mm. long, and the marks were brighter. The caudal horn was short in proportion to the size of the caterpillar.

On 10 August the length of the larva was 87.5. mm., and the marks were unchanged.

On 12 August it began to be restless, and on 13 August it went into the ground during the night, but re-appeared again on the 14th, though it ate nothing.

On 15 August it had gone into the ground again, and 21 August it had become a bright mahogany-colored pupa, 37.5 mm. long, with a tongue-case 3 mm. in length and lying close against the pupa.

On 7 June, 1888, the pupa had grown much darker and duller, and on 10 June, at about 8.30 A.M., a fine ♀ emerged.

The larva was fed entirely on poplar.

I had netted a ♂ imago in a field near the poplar where I found this larva, only a few days before, flying at almost noon, and feeding at kale blossoms.

THE ARRANGEMENT OF THE NEW ENGLAND SPECIES OF THANAOS.

BY SAMUEL HUBBARD SCUDDER, CAMBRIDGE, MASS.

An examination of the androconia concealed in the costal fold of the fore wing in the species of this genus has brought to light some very curious facts, showing how closely related, as far as these scales are concerned, some of the

species are to each other and how very distinct some that were supposed to be doubtfully separable. This has led to some further examination of the eccentric abdominal appendages of the males, and to a new arrangement of the groups proposed by Mr. Burgess and myself (Proc. Bost. Soc. Nat. Hist., v. 13, p. 282-306, pl.) when we first described these organs. The following table brings out the more striking features and arranges the New England species in a more logical order than before. Ausonius, a somewhat anomalous species, is included in the list as found upon the confines of New England. The only known specimen having been only partially examined (Mr. Lintner kindly permitted me to remove enough scales to study the more prominent characteristics), such features as it is only presumed to have in common with its nearest ally, are placed in brackets.

A. With subapical white spots on fore wings. Terminal hooks of upper organ of ♂ genitalia separate; blades of clasps very long, especially on left side, when compared to the main body. Costal fold furnished with long pediform bristles, curving at base, but with no thread-tipped tapering scales, or apple-seed shaped scales, or twisted ribbons.

I. Species of smaller size. Upper organ of ♂ genitalia without a crest; tooth of same reduced to a bristle; basal process of left clasp unarmed; the blade very slender. Costal fold with many long rod-shaped scales ending in two minute points.

a. Processes of left clasp of ♂ genitalia almost as slender as the blade. The smaller boat-shaped scales of the costal fold often no more than twice as long as broad.....*lucilius.*

b. Processes of left clasp much broader than the blade. The smaller boat-shaped androconia rarely or never so short as above.....*persius.*

II. Species of larger size. Upper organ with a distinct prickly crest; tooth well developed; basal process of left clasp armed with spinules; the blade moderately slender. Costal fold with no 2-pronged rod-like scales and the different species of this group show no distinction in androconia.

a. Crest of upper organ of ♂ genitalia slightly elevated and bearing a vertical shield expanding apically: lobe of right clasp dactylate, curving inward.....*juvenalis.*

b. Crest strongly elevated and surmounted by a horse-shoe shaped ridge; lobe of right clasp greatly expanded, broadest apically.....*horatius*.

c. Crest forming a gibbous prickly protuberance; lobe of right clasp greatly expanded, broadest basally.....*terentius*.

B. With or without subapical spots. [Terminal hooks of upper organ separate]; blade of clasps moderately long as compared to the main body. [Costal fold furnished with long pediform bristles, curving at base, and apple-seed shaped scales, but with no thread-tipped tapering scales nor twisted ribbons].

a. With subapical spots. Right clasp with a slightly prominent median denticle; beyond the bend moderately produced.....*martialis*.

b. Without subapical spots. Right clasp with a somewhat prominent median denticle; beyond the bend much produced.....*ausonius*.

C. No subapical spots. Terminal hooks of upper organ consolidated and stout; blades of clasps very short when compared with the main body. Costal fold furnished with thread-tipped tapering scales or twisted ribbons, but with no long pediform bristles, or apple-seed like scales, or 2-pronged rod-like scales.

a. Of moderate size. Blade of right clasp stout. Costal fold with twisted ribbon-like scales.....*brizo*.

b. Of small size. Blade of right clasp slender. Costal fold with thread-tipped tapering scales.....*icelus*.

THE USE OF TWO DOORS IN A TRAP-DOOR SPIDER'S NEST.

BY GEORGE F. ATKINSON, COLUMBIA, S. C.

Certain of the species of *Nemesia*, the habits of which Mr. Moggridge studied, make two trap-doors to their nests, one at the surface of ground at the upper end of the main tube, the other a short distance below at the beginning of a branch tube. Mr. Moggridge supposed the use of the branch and second door was to afford the spider a means of escape when pursued by an enemy. When chased into the main tube, the spider would go into the branch and close the