

the elevations, are reddish purple. In other examples the whole space between the lines, except four or five greenish patches, is reddish purple, there being various intergrades. In all cases the purple is mottled. The sides are specked with purple; stigmal line yellow with traces of orange above this. Head with a dark purple line each side, outside of which is a yellowish line.

The larvæ from which this description was taken, 13 in all, were taken on a young elm tree September 29, 1884. By October 5th all but one had disappeared for the purpose of pupation, going beneath the surface of the dirt in the breeding cage. Nine imagines were produced the following spring, the times of emergence ranging from May 24th to June 7th. There seems to be two broods in a season, for larvæ were found on elms during the early part of summer, but these were not reared to find out the period of the summer brood.

NOTES ON PAPILIO TURNUS AND PYRAMEIS CARDUI.

BY MRS. C. H. FERNALD.

Previous to the summer of 1884, *Papilio turnus* and *Pyrameis cardui* had been quite rare in Orono, Me., and vicinity, not more than half a dozen of the former and two or three of the latter having been seen each year; but in June of that year *P. turnus* was so abundant that it was not uncommon to see a dozen or more flying together. In August of the same year fresh specimens of *P. cardui* were so abundant that in a small piece of red clover, not more than two rods from the house, I captured twenty-five in half an hour, and the numbers were not perceptibly diminished. The next day they were equally abundant, but the following day we had a cold rain storm, after which only a very few poor, faded examples were seen. The next summer (1885) *P. turnus* was again rare, and not one example of *P. cardui* was seen by myself, nor by any one in this vicinity. Parasites might have made the difference in the number of *P. turnus*; but could they have done so with that immense number of *P. cardui*, or did that storm so effectually destroy them before laying their eggs that there were none the next year, or is it possible that some epidemic attacked them, leaving none to perpetuate the race? We can understand the gradual increase and decrease of certain species which is noticeable every year, but the sudden abundance and scarcity of some