

to the cocoons of the Bombycidæ. The cocoon made by the Worm of the Orient has, from the circumstance that its silk is so extensively used in manufacture, been fully described. This paper concerns those of the Polyphemus, Cecropia, Cynthia, Luna and Promethea caterpillars, and it may be regarded as an endeavor to foster an organized system of silk culture with these worms, the Cynthia worm especially favoring cultivation, as it is double brooded, and since its introduction from the East, together with its food plant, the Ailanthus, it has become largely distributed throughout the country. The habitat of some of these species is co-extensive with the Union, and silk culturers are alike advantaged in every section of the country with an abundance of food plant in our native trees. The silk produced by them, though not of as fine a texture as that spun by the Mori Worm, is yet abundant and of much greater strength. Notwithstanding the fact that the pointed end of the cocoons of the Cecropia, Cynthia and Promethea worms is left open for the exit of the moth, the threads are unbroken and the cocoons can be unwound. The Mori Worm covers the interior lining of the cocoon with a gummy secretion, and when the moth escapes, the threads, if not broken, are thought to be in such danger that cultivators of silk destroy the pupa before the period of emergence. There are Entomologists, however, who deny that the threads are broken at all, for they admit having succeeded in unwinding cocoons from which the moths have escaped. The Cecropia, Cynthia and Promethea worms line each layer of silk, as well as the interior of the cocoon, with a gummy secretion, leaving the silk at the exit opening free of agglutinating properties. This allows of a ready escape of the imago without danger to the thread. If the cocoons of these worms be divided lengthwise, and immersed in boiling water for a few seconds, a careful manipulation will permit the separation of the several layers of silk, when, by the aid of a lens, the life work of the caterpillar is beautifully presented and the continuity of the thread can be discovered. The exterior section of the cocoons of the Cecropia and Cynthia worms can be easily divided into three layers of silk, while the interior portion is divisible into six. The Luna and Polyphemus worms construct cocoons somewhat similar to the Mori Worm, and as all parts of the interior lining are sealed, it becomes prudent, perhaps necessary, to destroy the pupa.