

capture of the imago on July 19th raises the other question:—Were these belated individuals of the spring brood, or abnormally early specimens of the summer brood?

Eggs laid at about the middle of July would not hatch until early in August, at a time when those first hatched would already be nearly one month old. In September I found full grown and less than half grown larvæ together in one stem, and the full grown larvæ were getting ready to spin up. Those half grown at that time increased very slowly, and up to the first weeks in October were still feeding. Meanwhile, the larvæ that spun up early in September were quiescent within the cocoon, and up to date—February 23rd—none of them have transformed to pupæ. To get two broods into one season, all the periods must be considerably shortened and the development must be much more rapid.

For these reasons I believe that we have in New Jersey and northward one brood only; that the time of appearance of the imago extends over nearly if not quite one month, and that six weeks may be the period of flight; that at least 15 days are required for the eggs to develop; that the larva requires from seven to eight weeks to come to maturity; that the larva remains unchanged within the cocoon during the winter. The date of pupation and the period passed in that stage has not yet been ascertained. I hope Dr. Kellicott will be able to ascertain this positively, and thus complete the life history of the insect. The economic problem of how best to deal with the species need not be discussed in this connection, but is much simplified by the better knowledge we have of its habits.

OBITUARY.

THE ABBÉ PROVANCHER.

It is our painful duty to record the death, in his 72nd year, of the Abbé Léon Provancher, who for many years, despite great discouragements and disadvantages, laboured zealously and assiduously to develop and disseminate a knowledge of the natural history of Canada, and especially of his native province. He was born in 1820, at Becancour, Que., and for some years was Curé of Portneuf, and one of his earlier entomological writings was a list of the Coleoptera of that district. Compelled by enfeebled health to relinquish the regular and more active duties of the ministry, he removed to Cap Rouge, near Quebec, and

devoted his remaining time and strength almost entirely to the study of the natural sciences. In 1869 he commenced the publication of the *Naturaliste Canadien*, and, notwithstanding many discouragements, completed in 1891 the twentieth volume, when its issue had reluctantly to be abandoned, through the Quebec Government refusing to continue the scanty annual grant it had received. As early as 1858 Provancher published an elementary treatise on botany, and in 1862 his *Flore du Canada*. Subsequently he devoted his attention specially to entomology, and in 1874 commenced his *Faune Entomologique du Canada*. Vol. I., treating of the Coleoptera, was completed in 1877, with three supplements in 1877, 1878 and 1879. Vol. II. was commenced in 1877 and completed in 1883, and contains the Orthoptera, Neuroptera and Hymenoptera. In 1885-1889 he published *Additions aux Hymenopteres*, and issued Vol. III. upon the Hemiptera, which was completed in 1890. He was also an enthusiastic conchologist, and his last publication was a treatise upon the univalve molluscs of the Province of Quebec. His writings include the account of a pilgrimage to Jerusalem, an excursion to the West Indies, treatises on agriculture, etc. He will be best known, however, by his entomological work, and as he described a large number of new species and genera, particularly of Hymenoptera and Hemiptera, it is sincerely to be hoped that his collections may be placed where the types will be carefully preserved and be accessible to students of entomology.

There is a disposition on the part of some American students to ignore the work of Provancher, and to accuse him of want of care, etc., in the determination of genera and species. The enormous disadvantages under which he laboured must, however, be considered, for he was remote and isolated from libraries, collections and fellow-workers, and in his writings he often laments the fact that so few could be found to take any active interest in his pursuits, or to assist him in his labours. His entomological work would have been more exact and complete had not the publication of the *Naturaliste* greatly interrupted his investigations, and forced him to spend much of his time in other directions. His labours had the result of starting natural history collections in some of the colleges in the Province of Quebec, but our French citizens do not appear to have any special leaning to the sciences he loved, and he has left behind him no entomological student of any distinction. Above all Provancher was an ardent Canadian, strongly imbued with love of his race, language and religion, and often in his writings he impresses these sentiments upon his readers. A few years ago he was elected a Fellow of the Royal Society of Canada, and he was also a member, active or honorary, of many other societies.

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