Notes on the Life Cycle of certain Introduced Cerambycid Beetles

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It is known that many of the cerambycid beetles spend considerable time in the larval stage. Little is definitely known about the length of the life cycle of the endemic species of cerambycids in Hawaii, or of the dozen or so introduced species. I have lately made some observations which demonstrate that some of the introduced species have a surprisingly short life cycle.

About the middle of October, 1948, some living healthy branches were pruned from my large breadfruit tree. Some of these were left standing beneath the trees, by the boundary fence. Unfortunately, as it turns out, close observations were neglected, and never were any adult cerambycids observed attracted to these branches. It may be that they are entirely nocturnal and only visited the branches at night time for oviposition. I have often seen the beetles coming to the window screens at lights, which indicates that they have nocturnal activities. Be that as it may, late in December there was evidence that the branches were infested with larvae as shown by extrusions of frass from the bark. At this time a 4-foot branch about two inches in diameter was sawed into foot lengths and placed in a large battery jar for further observation.

On January 5, 1949, scolytids began to issue. There were four species, and the number that issued by the time they had finished at the end of the month were as follows:

9 **Xyleborus fornicatus** Eich.
88 **Ericryphalus sylvicola** (Perkins)
13 **Ericryphalus** sp.
1 **Crossotarsus externedentatus** Fairmaire

It is apparent that their life cycle is not more than two or three months.

Cerambycid beetles were later in issuing, and were of four common species. They were as follows, with their issuing periods:

20 **Lagocheirus obsoletus** Thomson, January 28 to March 6.
28 **Oopsis nutator** (Fabricius), February 1 to March 3.
16 **Pterolophia camura** Newman, February 7 to March 3.
13 **Sybra alternans** Wiedemann, February 11 to February 27.

Thus it is shown that the life cycle of these four cerambycids is rather short, even for the largest one, *Lagocheirus obsoletus*. The majority of the beetles issued during February, which would make their life cycle not

more than four months. The larval period would of necessity be determined by the condition of food supply. Their habit being to feed on the inner fermenting and decaying bark and the outer wood, they must obtain their growth before these food materials become too much dried up. This is a different matter than with those cerambycids whose larvae feed in living wood. The larvae of these four species eventually bore into the wood to form pupal cells for final transformation, but I am not certain whether in this boring of the wood any is actually consumed. At any rate, they depend chiefly on the outer wood and inner bark for making their main growth, and doing this before these materials become too much dried up.

During the above observations single specimens issued of the following beetles, indicating for them also a short life cycle:

Oxydema fusiforme Wollaston
Dryophthorus distinguendus Perkins
Exillis lepidus Jordan