

## ABSTRACT

The study aimed to determine the species of nettle caterpillars (Limacodidae) as well as the patterns of distribution and exploration of egg and pupa parasitoids in oil palm agroecosystems in PT. Perkebunan Nusantara IV Kebun Pabatu, Serdang Bedagai Regency, North Sumatra Province, namely in the Producing Crops (PC) phase from January to March 2024. The research used a survey method by selecting research locations according to research criteria, namely the producing crops phase that experienced the attack of nettle caterpillars. In one field, 25 sample plants were taken and analyze the distribution pattern and exploration of parasitoids eggs and pupa. The results showed that the nettle caterpillars pests species found as many as seven species, namely *Setora nitens*, *Olonia gateri*, *Darna diducta*, *Thosea vetusta*, *Setothosea asigna*, *Parasa lepida* and *Susica malayana*. The distribution pattern of the nettle caterpillars pest population shows the results of distribution clustered and similar, this was due to the physical conditions of the environment that are rarely similar and caused by the presence of individuals. Physical environment is rarely similar and is caused by the presence of individuals that will group in a habitat that suits their needs. The egg parasitoids found include two families, namely Braconidae and Bethylidae. The highest parasitization found in the order Hymenoptera from the Braconidae family at 70.29%. While parasitization of pupa parasitoids the highest parasitization rate was found in the Diptera order from 3 different families at 70%. The diversity of eggs and pupa parasitoids was in the category of medium diversity.

**Keywords:** distribution pattern, exploration, nettle caterpillars, palm oil, parasitoids