
SHORT REPORT

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SEVERE DEFOLIATION OF *AVICENNIA ALBA* BL. BY LARVAE OF *CLEORA INJECTARIA* WALKER

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Abstract

A vast area of Avicennia alba BL. forest in the upper portion of the Gulf of Thailand was defoliated by the larvae of Cleora injectaria Walker (Lepidoptera: Geometridae). The defoliation occurred around September in the forest along the banks of Bang Pakong River mouth, Chachoengsao Province, to Muang district, Chonburi Province. The destruction was first observed in October, 1980. The trees have partially recovered by showing the buds or young leaves since beginning of January, 1981.

Reports on the destruction of tree in mangrove forest by insects in Thailand are rather scanty. Chaiglom¹ reported that the larva of *Cleora injectaria* Walker was the cause of destruction of the leaves of *Rhizophora mucronata* Lamk. This species was also considered by him as an insect pest in the mangrove forest. Vainijkul² found that this geometrid butterfly was the most abundant species at Bangpoo mangrove forest area. However, there are no previous reports on the vast area destruction of this species on *Avicennia alba*.

On October 11th, 1980, during ecological study at the mouth of Bang Pakong River, I noticed from the distance that most of the *Avicennia alba* trees along the banks of the river from Thephasadin Bridge to the mouth of the river were shedding their leaves. It was an unusual phenomenon; for these trees have never been known to shed their leaves. After approaching the scene closely, I found that the leaves of these trees were eaten by insect larvae. Some of these leaves were curled up and the color had turned to light brown with empty capsules of insect pupae inside. No living larvae were observed on the leaves. It was also noted that the trees which stand

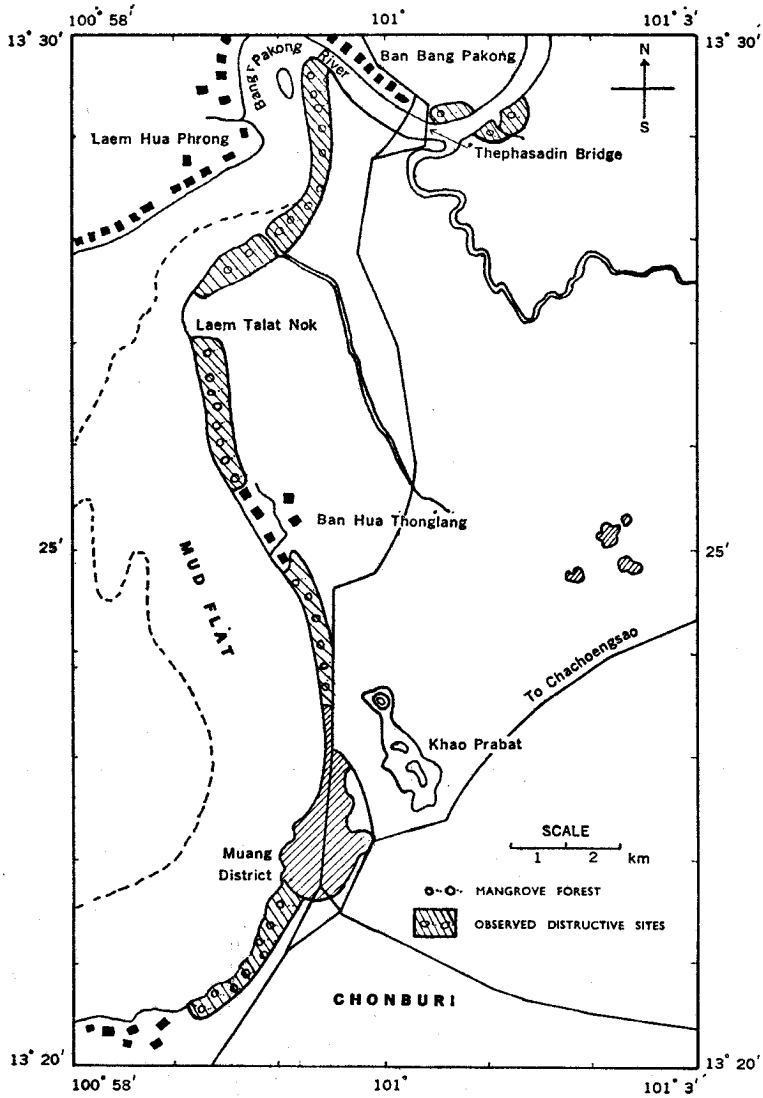


Fig. 1. Map indicating the destructive sites of *Avicennia alba*.



Fig. 2. *Avicennia alba* trees which were destroyed by *Cleora injectaria* larvae. Picture taken on Nov. 22, 1980 at Muang District, Chonburi Province. Note the undisturbed *Rhizophora apiculata* trees on the left hand side corner.



Fig. 3. Partial recovery of *Avicennia alba* at Bang Pakong river during January 1981 expedition.

on the outermost edge of the river bank were not attacked to the same extent as those on the landward side.

On November 22nd, 1980, I went to collect environmental data in the *Avicennia alba* forest in Chonburi province, about 15 kilometers from Thephasadin Bridge (Fig. 1). I also found that *Avicennia alba* leaves were severely attacked by an unidentified species of insect larva. The pictures of the destroyed leaves were similar to those found along Bang Pakong River mouth. No such phenomenon was ever observed in the past four years. It was also noted that the insect larvae did less damage to the front row of the trees than inside rows. It was also observed that these insects did not attack the two species of *Rhizophora* (*Rhizophora mucronata* and *R. apiculata*) which were mixed within the *avicennia* forest (Fig. 2). In both places, no young shoots or buds from these damaged *avicennia* trees were observed. However, young buds and leaves have been observed on most of these trees since January, 1981 expedition (Fig. 3).

With the courtesy of Mr. D. Chaiglom from the Department of Forestry, Ministry of Agriculture and Co-operatives, a sample of pupa within the cage from the leave was identified as *Cleora injectaria* Walker. Thus, this paper is the first to report that *Cleora injectaria* can not only cause damage to the *Rhizophora mucronata* leaves, but can also damage *Avicennia alba* leaves.

References

1. Chaiglom, D. (1975) Research Work on Insect Pest Control. Forestry Department, Ministry of agriculture and Co-operatives.
2. Vaivanijkul, P. (1976) A General Survey of Insect at Bangpoo, *Proceedings of the First Thai National Seminar on Mangrove Ecology*, Phuket Marine Biological Center, 10-15 January, 1976, National Research Council of Thailand, Vol. 1, Part 2, pp 257-262.

บทคัดย่อ

ตัวอ่อนของแมลงชนิดหนึ่ง คือ *Cleora injectaria* Walker ได้ทำลายใบของต้นแสมขาว (*Avicennia alba* BL.) ตั้งแต่บริเวณชายฝั่งแม่น้ำบางปะกง จังหวัดฉะเชิงเทรา ไปจนถึงป่าแสมขาวเขตอำเภอเมือง จังหวัดชลบุรี เพิ่งสังเกตเห็นการทำลายอย่างรุนแรงนี้ในเดือนตุลาคม 2523 ต้นแสมขาวดังกล่าวได้ฟื้นตัวในเดือนมกราคม 2524 คือ ส่วนใหญ่จะมีใบอ่อนออกมา แต่ยังคงแสดงให้เห็นร่องรอยของการถูกทำลายอยู่