

SOME NOTES ON INSECT PESTS OF PADDY

By

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1. Time and frequency of migration of the paddy spiny beetle larvae Hispa similis Uhmann.

Fukuda (1) noted in his report that migration of the paddy spiny beetle larvae occurred mostly between 4 and 6 A.M. Miwa (2) also stated that the larvae come out of the mine and migrate during the time from 2 A.M. till dawn. These authors, however, showed no actual data about that.

From the standpoint of economy in the application of insecticide, it is desirable to determine time and frequency of the migration. The following observation was made at Taipei from August to October 1951. Coupled females were collected from paddy field and released on paddies planted in the pots which were covered with screen cages and placed in the laboratory yard (where the sun shines only from about 7:30 A. M. to 1:30 P. M.). Only one egg per plant was selected for observation and the rest were destroyed. After hatching, migration of the larvae was observed at interval of one hour from 6 A. M. to 10 P. M. and at 11:30 P. M. Only 12 among 41 tested larvae were successfully investigated. The relation between time and frequency of migration was shown as follows:

Time	A. M.						P. M.		
	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3
Frequency of migration	3	1	14	2	0	4	0	0	0

Time	P. M.									
	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-11:30	
Frequency of migration	0	2	0	0	0	1	0	0	1	

The average larval stage was $12\frac{1}{4}$ days, and the mean frequency of migration of larvae was $\frac{28}{12}=2.33$

2. Host plant of the rice borer Schoenobius incertellus Wlk.

For a long time it has been believed that the rice borer, S. incertellus, is usually unable to mature on the upland rice, though they often feed on the crop. This, however, is not the case. In the summer of 1951, at Nan-chin, Chiayi, the writer found a seriously injured upland rice field of about one acre. The plant was just in shooting period, the variety was native. Many pupae were found in the basal part of the culms, and imagoes emerged normally from these pupae. This field adjoined a wet paddy field of about 10 acres on the north-east and south-east. The paddy was all in harvest-time, variety was Honrai, and was also damaged by the rice borer. However, the damage seemed not more serious than that of the upland rice field.

At any rate, it has become clear that the rice borer, S. incertellus, can mature on

the upland rice, and this is important from the point of view of agricultural control of the pest.

3. Cucumber beetle, Aulacophora similis Olivier, and Borolia venalba Moore as pest of paddy.

In Formosa more than 100 species of insects have been recorded as pest of paddy. However, the cucumber beetle, A. similis and a Noctuidae, Borolia venalba have never been reported as pest of paddy in Formosa up to the present. The writer observed these cucumber beetles attacking the paddy flower in swarm at Sui-san, Chiayi, in August 1944. They appeared to be biting off the stamens of the flower, and actually not feeding on them.

In the summer of 1944, at Taipei, the writer found a larva of Borolia venalba devoured the paddy leaf, and pupated on the paddy stem. This pest was also reported as paddy pest from Ceylon. But little is known about this insect.

1. Fukuda, K. 1937. Investigations on Hispa similis Uhmann (in Japanese). Report No. 130. The Dept. of Agri. of Central Res. Inst.

2. Miwa, Y. 1944. Control measures of paddy insect pests of the first crop (in Japanese). Taiwan Agriculture. 1:3.

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中 文 摘 要

本文係記述水稻害蟲之若干新發現事實，要點如下：

1. 鐵甲龜幼蟲之移動時刻：依民國41年8月—10月間之實驗視之，以上午8—9時間為最多（詳見本文）。
2. 一點大螟蛾之寄生植物：經實地觀察之結果，判明一點大螟蛾可於陸稻上繁殖，該事實在農業防除法之觀點上頗為重要。
3. 黃守爪 Aulacophora similis Olivier 嚙斷水稻雄蕊而加害，另一種夜蛾 Borolia venalba Moore 幼蟲食害水稻葉均為本省稻作害蟲之新記錄者。