



Larvae eaters of Fall Army worm, *Spodoptera frugiperda* (J E Smith) in Sikkim

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Abstract

Spodoptera frugiperda J.E. Smith is the pest of horticultural plants across the world and the Sikkim is not exception. In recent time, the farm produces are destroying especially maize and other horticultural crops in Sikkim Himalaya. Thus, this communication includes the observation of three birds which are eating the larvae of this pest, *Spodoptera frugiperda* J.E. Smith

Keywords: *Muscicapa thalassia*, *Parus monticollis*, *Spodoptera frugiperda* J.E. Smith, *Turdus bouboul*.

INTRODUCTION

The Fall Armyworm, *Spodoptera frugiperda* J E Smith, is a alien pest of Sikkim and is reported from the different parts of Sikkim. Generally, it affected the lower belt of Sikkim to 1800 m. Recently, it reported from the forest fringes village of Dzongu, North Sikkim. Notably, it is not only ingesting maize but also other grasses such as *Polygonum reticulata*, *Hydrocotyl asiatica*, *Rheum nepalensis* etc. So, it indicates that this species can survive ingesting other species.

Several reports of crops' damaged due to the Fall Army worm reported affecting the horticultural crops like maize, cabbage, potato, onion, tomato [Pogue, 2002; Nagoshi *et al.*, 2019; Singh *et al.*, 2020) and many believed that it may lead to the threat to the food and nutritional security in consequence of migratory nature of pest. Even FAO warned that Fall Armyworm could threaten to India along with many South East Asian countries (FAO, 2019; Nagoshi *et al.*, 2019 Repalle, *et al.*, 2020).

OBSERVATION

In the field study, the following birds are found eating Fall Army worm as their food. Those birds which feed on the larvae, are namely:

I. Verditer Flycatcher, *Muscicapa thalassia*.

Altitude: 152-2623m.

DISTRIBUTION: INDIA: Sikkim, Kashmir. Uttaranchal. NEPAL, SOUTH EAST ASIA.

Local Name: Fayerlayufoo (Lepcha)

Specimen seen : Upper Dzongu, Sikkim.

Description:

Male is uniformly bright greenish- blue having broad black line in front of eye. Female is dull in colour in comparison. This migratory bird flocks in the Himalayan regions during spring every year. It hatches its eggs and feeds its young during spring season in the Himalayan regions. The availability of this species around the mountainous hills is from April to October.

II. Gray-winged Blackbird, *Turdus bouboul*

Altitude: 120-2745m.

DISTRIBUTION: INDIA: Sikkim, Kashmir. Uttaranchal. NEPAL, PAKISTAN TO TONKIN.

Local Name: Foyoung foo (Lepcha)

Specimen seen: Upper Dzongu, Sikkim.

Description:

The male bird is Black with pale gray wingbar and orange bill whereas female has olive- brown with bright orange bill. It is shy in nature and lives in the mosses bearing trees preferentially Oaks tree.

III. Green - backed Tit, *Parus monticollus*

Altitude: 1372-3660m.

DISTRIBUTION: INDIA: Sikkim, Kashmir. Uttaranchal. NEPAL.

Local Name: Chungfung foo (Lepcha)

Description: This bird has black head with bright yellow colour. Suitable habitat in mountainous hills is Oak-Rhododendron hills, *Quercus* habitat in lower belt. It also lives in bushes and lower parts of plant. It feeds on the larvae of the insect so it flies near the ground for gathering food.

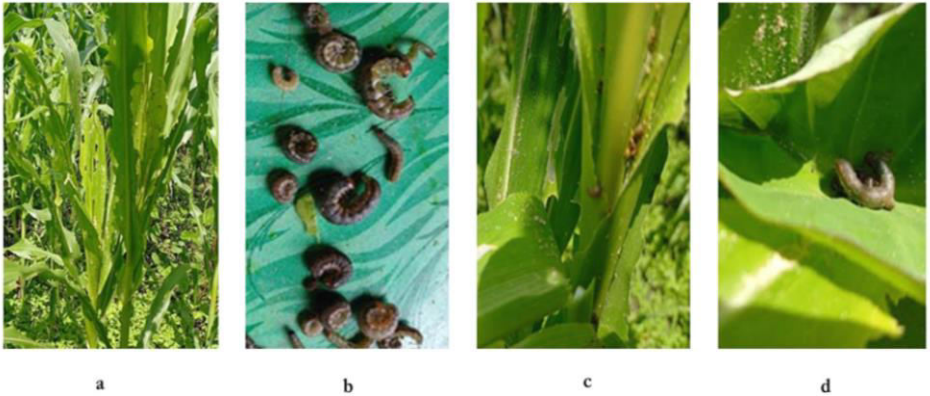


Fig 1. : *Spodoptera frugiperda* J E Smith. a. Ingested Maize plant. b. Larvae of *Spodoptera frugiperda* J E Smith. c.-d. Ingested aerial part of maize with larva.

Eventhough there are several birds which gather larvae for food. In the farm field, these three species found gathering larvae of the fall army worm. So, it is observed that agroforestry approach is suitable for the pest management whereby the quality forest development is primarily essential where these birds live in.

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