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RESEARCH ARTICLE

# Impact of warblers with special reference to Indian wren-warbler, *Prinia subflava* Sykes on insect pests of ragi

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ABSTRACT

Insectivorous warblers, namely, Indian wren-warbler, *Prinia subflava* Sykes (IWW), streaked fantail warbler, *Cisticola juncidis* (Franklin) (SFW) and ashy wren-warbler, *Prinia socialis* Sykes (AWW) were found to frequent ragi fields. Indian wren-warbler was the most abundant and dominant species found in ragi fields when compared to other two species. Several insect pests infest ragi crop during various stages of the crop stand. Sampling of insects in ragi fields revealed a total of 23 insect taxa. The food items consumed by theses insectivorous warblers were mostly from within the ragi field itself. Seven species of insects were consumed by the nesting warblers. The food of Indian wren-warbler consisted of mainly insects (98.44%) and spiders (1.56%). The proportion of beneficial insect was only 6.29 per cent of insect pest species. The food of streaked fantail warbler consisted of insects alone (100%).

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## INTRODUCTION

Finger millet (*Eleusine coracana* Gaertn.), commonly known as ragi is one of the most important dry land crops in India being cultivated mainly in states of Karnataka, Andhra Pradesh, Tamil Nadu, Orissa and Maharashtra where little or no plant protection measures are adopted by the farmers. Several insect pests infest ragi crop during various stages of growth. The major pests are pink stem borer (*Sesamia inferens* Walker), ragi white borer (*Saluris inficita* Walker), aphids (*Rhopalisiphum maidis* (Fitch)), root aphids (*Tetraneura nigriabdominalis* (Sasaki)), leaf hoppers (*Cicadulina bipunctella bipuntella* (Mats.)), weevils (*Myllocerus discolor* Boh.), black hairy caterpillar (*Estigmene lactinea* Cram.) and ear head caterpillars like *Helicoverpa armigera* Walker, *Cryptoblabes aungustipenella* (Hampson) and *Archips micaceana* (Walker) (Puttarudraiah, 1982).

Verghese and Subramanya (1985) reported that insectivorous birds do frequent ragi fields Ali and Ripley (1987) also mentioned about a large number of birds frequenting cultivated areas among which Indian wren-warbler was one of the common birds found breeding in grasslands, cultivated land and in open wasteland. A number of bird species frequent cultivated fields mainly for feeding (Subramanya, 1987). Birds are general predators and exploit prey species opportunistically (Lack, 1954). The studies carried out by Khvatova (1960) and Ponznanin (1960) showed that the birds suppress many noxious insects and by enhancing nesting conditions birds could be encouraged in agro-ecosystems. The stomachs of the birds collected included insect pests inhabitating cultivated fields and in agricultural tracts, the birds play an indispensable part in the protection of crops from insects (Mason and Lefroy, 1912).

The food of Indian wren-warbler consisted of insect pests of rice and food of streaked fantail warbler comprised of insects and spiders thus making them economically important to rice crop (Subramanya, 1987). Hence, the impact of these