

A NOTE ON THE BIRD PREDATORS OF KAIL DEFOLIATOR IN AZAD KASHMIR

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Kail defoliator, (*Biston regalis* Moore), appeared in epidemic form in August, 1980 in the blue pine forests Azad Kashmir and Murree invading about 1215 ha area. The insect has annual life cycle with moths emerging in May.

To control the pest, Entomology Branch of the Pakistan Forest Institute, Peshawar decided a mechanical approach towards the pest through collecting and destroying pupae and adults. It helped, on one side in strengthening the natural anti-pest forces and on the other, in avoiding the use of pesticides which is no longer a desirable practice.

Since a number of workers in many countries have noted that birds were one of the important factors in the final reduction of an insect infestation, investigations were carried out during June, 1981 on the avi-fauna at Loon Bagla in Azad Kashmir where the pest had invaded about 526 ha area with serious defoliation in about 300 ha and mild defoliation in about 210 ha. During June, the insect was available in all stages. Although peak emergence period of the insect was over, moth population was dominant over the rest of the stages.. Bird activities were, thus also confined more to the adult insect. Following birds were found feeding on the moths:

Black and yellow Gros beak (*Mycerobas icteroides*) Common Myna (*Aceridotheres tristis*), Black Bulbul (*Hypsipetes madaga scariensis*), Yellow-billed Blue Magpie (*Urocissa erythrorhyncha*), Grey-winged Black Bird (*Turdus boulboul*), Tickell's Thrush (*Turdus unicolor*), Missel (*Thrush, Turdus viscivorus*), Himalayan Pied or Kashmir pied of Mahratta wood pecker (*Picus mahrattensis*), Scaly-bellied Green wood pecker (*Picus squamatus*), Himalayan Tree creeper, (*Certhia himalayana*) Chest nut-bellid Nuthatch (*Sitta castanea*), Tree sparrow (*Passer montanus*), Rock Bunting (*Emberiza cia*), Verditer Flycatcher (*Muscicapa thalassina*), Scarlet Minivet (*Pericrocotus flameus*), Blue headed rock thrush *Monticola concolorhyncha*), Black Drongo or King crow (*Dicrurus adsimilis*), Chiff Chaff (*Phylloscopus collybita*), Jungle Owlet (*Glaucidium radiatum*) Green-backed Tit (*Parus monticolus*), Indian Grey tits (*Parus major*), Himalayan Coal Tit (*Parus ataraemodius*) and Rufous fronted Tit (*Aegithalos iouschistos*).

Hoopoe (*Upupa epops*) was found feeding on pupae of Kail defoliator. Pied Shrike or Bar winged Flycatcher-Shrike (*Hemipus picatus*), Streaked Laughing Thrush (*Garrulax lineatus*) and Jungle Crow (*Corvus macrorhynchos*) were also available in the area in great number but it could not be confirmed whether they fed on this insect or not.

To find out the percent moths killed by the insectivorous birds, studies were conducted in compartment 3 and 9 at Loon Bagla. Two different sampling techniques were adopted. In compartment 3, 1 m² quadrates were laid out on northern side of every 10th tree taking

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ed physical life.

Kill by birds was determined as 54%.

sparrow, Scarlet Minivet, Tits and Black Drongo.

in the near future, as the most important factor in the final reduction of this serious pest.