

BREEDING HABITAT OF *Culicoider schultzei* EASTERN UTTAR PRADESH OF AZAMGARH DISTRICT

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ABSTRACT

The present piece of work is a result of observation carried on the breeding habitats of *Culicoides schultzei* in Tons (Tamsa) river which flows in Azamgarh District in U.P.

KEYWORDS : *Culicoides*, Drinking Ponds, Mud Sample, Stable-Wash

To make the best use of sound biological, chemical and cultural resource, against *Culicoides* biting midges, it is essential to determine the factors influencing the choice of oviposition site and the preferences for particular larval habitats. With this view investigations were carried out on the breeding habitats of locally prevalent species of *Culicoides* from the Purvanchal region of U.P. (particularly in Azamgarh Mandal). Dasgupta S.K., 1961 studied on the incidence of some Indian *Culicoides*.

MATERIALS AND METHODS

Selection of Site

Mud sample were collected from 35 likely midge-breeding places located at various animals units near the Tamsa River side. Sites chosen were manure heaps, edges of small drainage channels and also around the drinking ponds, water tanks near cattle grazing fields.

Collection and Processing of Mud Samples

Sample were scooped from each site to a depth of 2-3cm with help of a spatula and collected in 200ml capacity plastic containers. These sample were processed in the laboratory as per the tools and techniques suggested by earlier workers. Immature *Culicoides*, viz. larvae and pupae, were transferred to glass-beakers (4.5x1.5cm) containing the culture medium.

Out of the 36 sites, mud samples 17 sites were analysed for various soil constituents at the laboratory.

RESULTS AND DISCUSSION

The 36 sites, from mud samples were screened frequently, for breeding habitats, immature *Culicoides*

were recovered from 25 sites. The 10 sites were devoid of immature *Culicoides* due to high concentration of animal refuses such as urine and dung. Recovered immature *Culicoides* grew without exception into adults. The immature *Culicoides* were found mostly in the mud sample of the slow flowing drainage channels. Other Indian workers spotted *Culicoides* breeding over algal growths near edge of stagnant water, mature pits, reservoirs contain urine of cattle, washing from stables, rotten rug of cloths, soap of trees etc.

Composition of Breeding Sites

Analysis of 11 sample from position and from relative sites showed the mean values for water (%), pH, organic matter (%) phosphorus (Kg/ha), Potassium (Kg/ha) and soluble salts (electric conductivity millions/cm) as 42.34 ± 4.60 and 52.50 ± 4.12 , 8.32 ± 0.187 and 8.2 ± 0.254 , 0.87 ± 0.147 and 1.29 ± 0.187 , 28.68 ± 1.71 and 29.46 ± 2.63 , 529.45 ± 69.75 and 551.04 ± 127.96 and 0.35 ± 0.048 and 0.34 ± 0.036 for positive and negative sites respectively. From the calculated 't' values it is evident that there exist a highly significant difference regarding water (%) between positive and negative sites.

Observation made in the present study showed that breeding activity was not affected by pH, organic matter content and other constituent of the wet soil. These are in agreement with those reported by Lurega and Khamala, (1976) and Boverman et al., (1978) who found positive correlation of pH, nitrogen content, water source, phosphorus content and negative correlation of percent organic matter with lower recovery from *Culicoides* habitats.

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