

I. INTRODUCTION

The Sarcophagid flies, popularly known as flesh flies, belonging to the family Sarcophagidae of the superfamily Sarcophagoidea in the order Diptera are of cosmopolitan distribution.

These flies often carry the germs of diseases of man and animals in their gut and may also act as mechanical carriers of such germs.

According to Greenburg (1971) the Sarcophagid flies have found associated with the following ~~microorganisms~~ : Polio virus, Kocherich coli, Salmonella typhi, Pasteurella pestis, Bacillus radiciformis, B. thuringiensis, Giardia intestinalis, Trichomonas hominis, Endolimax nana, Entamoeba coli, E. histolytica, Lodamoeba bütschlii, Trichuris trichura, Enterobius vermicularis, Asecaris lumbricoides, Leishmania donovani and Mycobacterium tuberculosis. Greenburg (1971) also reports that the larvae of these flies have been found associated with the larvae of other Dipterous flies, vis. Dermatobia hominis (Cutebriidae) and Chrysomya rufifacies (Calliphoridae) in cases of myiasis in man and animals.

The larvae of some Sarcophagid flies are also of economic importance because they are parasitic on other animals. For example, some species are parasitic on various insects which are harmful to man directly or indirectly. The parasitic habits of Sarcophagid larvae on various Arthropods, such as cockroaches, grasshoppers, locusts, mantids, camel crickets, spiders, bumblebees, honeybees and wasps,

certain coleopteran genera (Asida, Eledera, Plectodera), Neuroptera and Lepidopteran larvae and pupae, have been discussed by various authors (Karsch, 1885, Townsend 1893, Aldrich 1916, Geborn 1919, Branch 1919, Frisen 1926, Marchionatto and Blanchard 1933, ^{Wood, 1933,} Bonna 1936, Iyer 1940, Bibby 1942, Breland 1942, Smith 1944, Callan 1946, Dambach and Good 1943, Arthur and Coppel 1953, Smith and Finlayson 1950 and Downes 1955^a

Thompson (1943) mentioned Sarcophaga parasitising Glossina palpalis in the Upper Congo. Downes (1955^b) recorded that the larvae of the subgenus Fletcherimyia live in the water in pitcher-plant and feed on other insects found therein. He also mentioned that the larva of Sarcophaga devour eggs in the egg-sacs of certain spiders.

Pandian and Delvi (1973) reported from India that the larvae of Blaesoxipha kaestneri are parasitic on the grasshopper Pezomachus pictus. They also pointed out the possibility of using these larvae for the effective biological control of this grasshopper which feeds on buds and flowers of cultivated plants like brinjal and castor.

Cases of parasitisation of Oligochaeta and Mollusca by the larvae of Sarcophagid flies were reported by Schmitz (1917), Keilin (1919, 1921), Lopes (1940, 1942b) and Nair (1968). Some of these larvae are scavengers eating dead insects, molluscs and decomposing animal matter.

Lopes and Vogelsang (1953) reported a case of parasitisation of Bufo granulatus by Sarcophagid larvae. Knipling (1953) reported Sarcophagid larvae parasitic on turtle and tortoise.

Some Sarcophagid species cause myiasis in different parts of body of animals and man. For example, larvae of the Sarcophagid flies affect ear, mouth, eye, skin, nasal cavity, chest of infants and vagin of human beings (James 1947, Zumpt 1951b, 1965). Kano et al. (1967) reported several cases of intestinal myiasis caused by the larvae of Parasarcophaga similis (Meade) from Japan. Dasgupta et al. (1972) recorded from Darjeeling, India, a case of intestinal myiasis in leopard and its Keeper caused by the larvae of Sarcophaga macroauriculata Ho. Ali-Khan and Ali-Khan (1974) reported two cases of myiasis from Quebec; one (Sarcophaga haemorrhoidalis Fallen) from the stool of a 5-year old child; the other (Sarcophaga crassipalpis Macquart) from the toe of a middle-aged man.

A few larvae of Cuoniomyia Roback and Sarcosyia Lopes, are venomous and can destroy all the larvae of other species in the same environment (Lopes, 1969a).

Various workers in different parts of the world worked on the Taxonomy of these flies. The Indian Sarcophagid fauna, particularly from West Bengal, has not however been thoroughly investigated. A review of the literature shows that only 0.14% of the Sarcophagid fauna of the world have so far been recorded from West Bengal.

In view of lack of adequate information on Sarcophagid fauna in West Bengal the present work has been undertaken covering all Districts of this State.

West Bengal is bounded on the north by Nepal, Bhutan and Sikkim, on the east by Bangladesh and Assam, on the south by Bay of Bengal and on the west by Orissa and Bihar. It lies between 21° - 28° and 27° - $10'$ north latitude and 85° - $50'$ and 89° - $50'$ east longitude.

The present study has shown that West Bengal with its varied geographical factors and diverse climatic conditions provide the habitat for many species of this cosmopolitan group of flies. Some of these species recorded in the present work are new to science.