



## INTRODUCTION

The genus Culicoides Latrielle 1809 belongs to Tribe Culicoidini, Family Ceratopogonidae (Heleidae). They belong to most primitive group of Diptera, the Nematocera.

Culicoides is a genus of small flies, generally known as "biting midges" or "sand flies" or "lin" in Thai. The flies are all minute in size and usually slender of body. The wing usually has spots, with the radial cell. Culicoides have small simple claws, humeral pits on the pronotum and sucking mouth-parts. The female have well-developed biting mouthparts including a pair of toothed mandibles which work on the "scissors" principle. The males (which do not bite) have mouthparts resembling those of the Culicidae (Mosquitoes). The larvae are normally developed from eggs laid in aquatic or moist situations.

Species of Culicoides are found in most parts of the world and the blood-sucking habit appears to be universal. Their food is obtained from vertebrate hosts which the flies attack. Their bites can cause extreme annoyance or even fatal blood-poisoning by subsequent infection of a scratch. They transmit certain parasites (chiefly filarial worms) to the hosts including man.

Their common name "sand-flies" arises because they frequently occur so abundantly along beaches.

Although, the Siamese Culicoides are not known to be responsible for the transmission of any disease, Causey reported finding filaria in Culicoides peregrinus Kieff at Nakornsrithamarat.

Also Dorsey (1949) reported that during World War II, the palau gnat (Culicoides pelilieuensis Tokunaga) in Palau, Western Caroline Islands, reduced efficiency among troops and scratching the bites resulted in numerous cases of secondary infection that produced ulcerous conditions requiring hospitalization. This species also occur in Thailand.

As little is known about Culicoides in Thailand, the purpose of the present study is to gather all information regarding the distribution of species which are known to occur in this country, and to obtain information on their abundance and seasonal distribution. The Bang-Phra region of Southeastern Thailand was chosen as the chief study area since specimens were readily available from there. The specimens were collected by light-trap from June 1963 to February 1964.

While most specimens were from Bang-Phra, the writer also examined light trap collections from Bangkok, Chiangmai, Karnchanaburi, Udonthani, Khao Yai (Nakorn Nayok), Petchburi, and Rajburi to determine the species present in these areas as well. All description were based upon slide-mounted materials. In addition, the collection of a large number of Culicoides from routine light-trap made possible a determination of seasonal abundance of Culicoides species at Bang-Phra during June 1963 to February 1964.

No studies have been made on the Culicoides of Thailand as vectors of disease. This study was made with the hope that the basic study of Culicoides of Siam will clarify the general identity of species and their distribution in the country as a basis for further detailed study of this potentially important group in the future.