



DISCUSSION

Most diagnostic characters of the subgenera and species were agreeable with those of Bram (1967). Some morphological variations seen during preparing the thesis which might be worthwhile considered were as follows :

1. The strong pigmentation or colouration of head hair 1 - C in addition to the numbers of lateral teeth of mental plate found in some Culex (Culex) sinensis might cause misunderstanding as to be a new subspecies or species, but the male genitalia was quite similar to those of Bram (1967).

2. Median distal spines of larvae of Culex (Culex) mimulus collected at the elevation of approximately 1200 meters were obviously longer and broader than the lateral spicules, and hair 14- C frequently bifid. This variation might be due to the effect of ecological influence, because no other distinction seen from mass rearing of adults and male genitalia pointed to a new species or variety.

3. Head hair 14 - C of Culex (Neoculex) brevipalpis were all dendritic beyond the basal half, never single.

4. Head hair 14 - C of Culex (Lophoceraomyia) ganapathi and Culex (Lophoceraomyia) infantulus collected, usually from 3 to 6 branches, and at least 2 of them were strongly divergent from the base.

The differences between those of Bram (1967) and the author might be the result of either the structural character of the local strain or the effect of mounting. During the study it was indicated that Hoyer's media was excellent in spreading side hairs.

Eventhough chaetotaxy of only one pupa of each species was drawn and studied during the course, it was revealed that some pupal characters exhibited consistent subgeneric features. The distinctive characters were the following :

1. Hairs

Cephalothoracic hair 2, 3 - C were widely separated in the subgenera Culex, Culiciomyia, Lophoceraomyia, Mochthogenes and Neoculex, but closed together in the subgenus Lutzia.

8 - C were simple or pectinate

10 - C were multiple, simple or pectinate, or with from 1 - 4 simple or pectinated branches.

11 - C 1 - 3 branches, simple or pectinate

1 - I dendritic or branched

9 - VII - VIII were near or far removed from the caudolateral angle.

2. Features of respiratory trumpet. Length and width of pinna, tracheid and meatus were widely different.

3. Paddle. Apex of paddle strongly emarginated in Lutzia, slightly produced in Neoculex and rounded in Culex and Culiciomyia.

The results would be more impressive if a phase contrast microscope were employed. Through this study only an ordinary microscope was used, therefore some of the very small structures of the specimen could have been missed.