Description of the Egg of *Culex (Culex) Gelidus* Theobald With a Note on Development (Diptera, Culicidae)

by

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INTRODUCTION

The egg of *Culex (Culex) gelidus* Theobald, 1901 is described and illustrated for the first time. The description is based on 6 rafts of eggs obtained by maintaining a temporary colony in the laboratory at American College, Madurai. The colony was started from larvae collected from ground pools. The immatures are usually found in ground pools containing weed, marshy tracts, etc. (Barraud, 1934: 409). The adults are characterized by mesonotum covered with greyish-white scales and with a pair of submedian black spots (var. *bipunctata*). Routine studies show that females of *gelidus* bite man after dark. In the laboratory, caged females readily fed on the common pigeon, *Columba livia*.

DESCRIPTION OF EGG

As in other raft-laying species, the eggs of *gelidus* were laid in rafts on the surface of water. The rafts were concave dorsally, longer than wide and the length ranging from 2.9 mm to 3.2 mm. Apparently each female laid about 160-180 eggs.

The eggs are subfusiform in outline and circular in cross section. While the anterior end is bluntly rounded, the posterior end is pointed (fig. 1a). Individual eggs are characterized by the presence of, (1) darker anterior and posterior ends while the rest of the egg is light brown, (2) a minute pointed and a blunt papilla on anterior and posterior ends respectively, and (3) numerous closely spaced circular warts on the exochorion (fig. 1c,d).

The eggs are 625-630 microns in length and about 120-125 microns wide at the broadest point. Dehiscence was incomplete (fig. 1b) as in *Culex (Lutzia) fuscanus* (Berlin and Pandian, 1973: 227).

DEVELOPMENT

The females were blood fed on 17th February 1974 and the egg rafts were noticed on the morning of 20th Feb. The first stage larvae hatched on the morning of 21st. The larvae were creamy white in color and were fed with powdered rice and dog biscuits. The following data summarizes the duration of development from egg to adult.

Stage of Development	*Date and Time*	
1. Egg raft noticed	20th Feb. 1974	9.00 hrs.
2. I instar larva	21st Feb. 1974	9.00 hrs.
3. II instar larva	23rd Feb. 1974	9.00 hrs.
4. III instar larva	24th Feb. 1974	12.00 hrs.
5. IV instar larva	25th Feb. 1974	16.00 hrs.
6. Pupa noticed	27th Feb. 1974	9.00 hrs.
7. Adult male noticed	28th Feb. 1974	8.30 hrs.

The above data show that the development of *gelidus* was very rapid as in many species of neotropical *Psorophora* (Howard, Dyar and Knab, 1917: 527; Lane 1953: 731); the whole life cycle from egg to adult stage was completed within eight days. The peculiarity of development was that the duration of both egg and pupal stages was very short lasting for not more than 24 hrs. and the entire larval stage lasted approximately six days. The rapidity of development may be due to their habitats such as temporary pools and marshy tracts which are likely to dry up quickly in the tropics.

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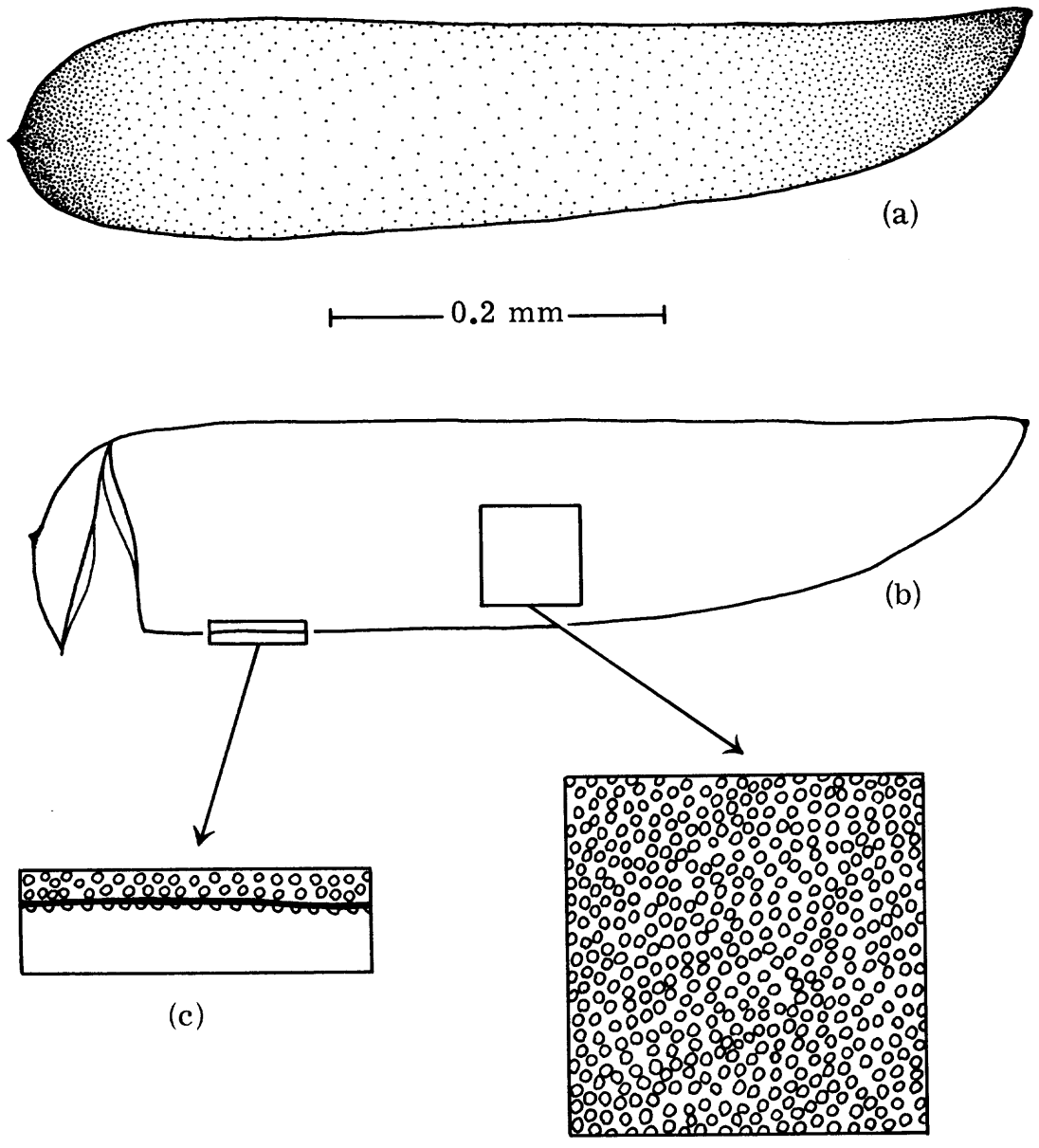
Egg of Culex (Culex) gelidus



a. single egg

b. pattern of dehiscence

c. exochorion sculpturing (side view)

d. exochorion sculpturing (dorsal view)