end of the dental tubes, Figs. 4 and 5. Drill a smaller hole through each of two sides of the cages and glue patches of nylon mesh ribbon over these vents. In the absence of equipment for heating glass to put a flange on the broad end of the tubes, a ring of household cement will serve the purpose. The tubes may be cemented to the cages intruding a few mm. or they may be just dropped through the hole, resting on their flange, Fig. 6. The latter takes less storage space when the equipment is not in use, but requires more careful handling, to avoid jamming the tube against the lid and squashing the pupa when moving the cages about on the racks. (Some cages were fitted with thin sheet-cork bottoms, containing a hole for the tube, and a strip of adhesive tape on the two sides not containing the vents, while others were roughed-up on the inside with steel wool. These provisions for providing the flies with better footing are apparently not necessary.)

Pack the tubes firmly, but not too tightly, with absorbent cotton, being careful to fill the last quarter inch with a separate wad of cotton. Drop the tubes into the cages and place the cages on the racks with the tubes extending through the hardware cloth so that the bottoms of the tubes are immersed in water, Fig. 7. After the cotton becomes wet at the top the loose strands can be tamped into place. Then put an intact dark pupa, ventral side down, on the moist cotton and replace the lid of the box. When the adult emerges the date can be written on the lid with a wax pencil and the following day the specimen killed and labeled along with the associated pupal exuviae. Specimens are easily killed by inverting the cage and carefully removing the lid, then tapping the cage while it is held about ¼ inch above a Syracuse dish of alcohol. The writing can be wiped off the lids and the cages used again. After a few weeks the top of the cotton sometimes becomes corroded or mouldy so the uppermost wad should be removed and a clean one substituted.—Kathryn M. Sommerman, Arctic Health Research Center, Public Health Service, Department of Health, Education, and Welfare, Anchorage, Alaska.

THE EGG AND IDENTITY OF ALASKAN *Anopheles*. About a hundred anopheline eggs were skimmed from a pond at Eklutna, Alaska on June 6, 1956 and examined on the spot under the binocular microscope. Twenty of 25 selected perfect, unhatched ova were plainly banded dorsally, fitting reasonably well the description given by Rozeboom (1952, Am. J. Trop. Med. & Hyg. 1:477–83) of barred eggs of *Anopheles earlei* Vargas in Montana. Departures from Dr. Rozeboom's photograph and description included: (1) one egg grey, unicolor; (2) four eggs mottled, unbanded; (3) nearly half the eggs with two pigmented lines on the dorsum along the floats, which is evident also in Marshall's fig. 84, egg photograph 3 of *A. maculipennis* var. *typicus* of Europe. A large majority of the seventy-odd remaining imperfect ova, mostly hatched, also showed transverse bars under the lowest power of the microscope, 9x.

Since acceptance (about 1948) of *Anopheles earlei* Vargas as a northern species distinct from *A. occidentalis* D. & K., culicidologists have often assumed on larval morphological grounds (*earlei* —branched antepalmate hair 2 on abdominal segments IV and V; *occidentalis*—those hairs single) that the Alaskan anopheline is *A. earlei*. The egg of the Alaskan *Anopheles* has not been described. I have lately used *Anopheles* sp. even though aware the antepalmates are almost invariably multiple in Alaskan large larvae. I avoided use of *"earlei"* chiefly because the ova I collected from a pond near Chitina, Alaska and preserved, some in alcohol some in formalin, appeared entirely grey-brown, unbanded. It now seems likely that the Chitina eggs should have been examined fresh to reveal the color pattern. The purpose of this note is to acknowledge the morphological identity of Alaskan anophelines, at least from the coast of central Alaska, with *A. earlei* Vargas and to call attention for heuristic reasons to biological differences from Montana *earlei*.

Rozeboom (l.c.) suggests "that fundamental relationships between closely related species or subspecies are revealed more clearly through genetic and biological studies than through morphological comparisons." He showed that the multivoltine Montana form of *A. earlei* can be bred in the laboratory uninterruptedly generation after generation, that it will swarm and mate readily even in small cages simply upon insertion of the observer's hand, and that the female takes blood without protracted delay for an obligatory diapause. He considers the stenogamous behavior a specific character separating *earlei* from the morphologically similar *maculipennis* (type species) of Europe which requires a very large cage for swarming and mating.

Now, just such fundamental biological idiosyncrasies appear to separate Alaskan *earlei* from Montana *earlei*, including: (1) life cycle of the *Culiseta impatiens* type, i.e. single-broodedness with the female mating the season she emerges, engorging and ovipositing, however, only after hibernation nearly a year later; (2) courtship and mating eurygamous, requiring specific stimuli, still conjectural after two years' unsuccessful attempts at colonization. No mating took place in small cages or even in a large walk-in insectary under the stimulation of various arrangements of colored and white lights.

Hence, further biological studies like Dr. Rozeboom's work with Montana *earlei*, permitting comparison of Alaskan, Canadian, and United States populations of *A. earlei* with each other and with Siberian *A. maculipennis* might lead to more correct and significant names than the present ones.—William C. Frohne, Arctic Health Research Center, Public Health Service, Department of Health, Education, and Welfare, Anchorage, Alaska.