

TABLE 2.—DURATION OF NYMPHAL INSTARS OF *Baetisca rogersi* UNDER LABORATORY CONDITIONS.

Instal	No.	Minimum—maximum no. days duration	Average duration
I	37	2-4	3.2
II	22	3-5	4.2
III	2	died after 2 days	?
IV	4	collected in field— 2-5 days	?
V	4	10-12	10.7
VI	4	11-14	12.5
VII	5	12-15	13.2
VIII	5	12-16	14.8
IX	6	14-16	15.2
X	6	14-18	16.8
XI	8	16-19	17.6
XII	7	17-21	19.1

nymphal growth under natural conditions, being much more prolonged than laboratory growth, could involve additional instars; however this appears unlikely in *B. rogersi*. Further, as Degrange (1959) conclusively demonstrated, instars from eggs of one female reared under identical conditions can have different numbers of molts. Nevertheless, we shall refer to 12 instars of *B. rogersi* as they are distinct and recognizable.

Table 2 shows the minimum, maximum, and average durations of nymphal instars reared in the laboratory, except for the third and fourth instar nymphs. The duration of the later instars is longer than that of the earlier instars; average duration increased progressively from the first to second and from the fifth to twelfth instars. Although there was no record of the duration of the third and fourth instars, we estimate that each of these instars require no more than 10 days. Therefore the approximate length of nymphal development of *B. rogersi* in the laboratory is about 4 months.

We collected nymphs in the study area from September through early July. Collecting continued through the summer unsuccessfully. The earliest record of young nymphs was 20 September 1968 and the nymphs were in the fourth instar based on size and external features. The eggs probably hatched in early September. In the laboratory incubation time of the eggs ranged from 20-31 days averaging 23.8 days, and hatching continued for 7-17 days. If the same length of time is required to hatch eggs in the field, then those laid in March should have hatched in April and May. However diapause and dormancy at high and low temperatures have been demonstrated in Ephemeroptera eggs (Bohle 1968). Although no experimental work was done with *B. rogersi*, we