

expected that they would produce relatively fewer eggs. Table 12 shows this to be generally true.

SEASONAL DISTRIBUTION

The seasonal distribution of imagos as determined from emerging subimagos extended from March through early July. Tables 3 and 4 show that twelfth instar nymphs first appeared in February, increasing in March. Emergence began in March. The earliest emergence record in the field was 13 March 1969 and the latest 8 July 1969, but, we revisited the stream the following week and found two more nymphal exuviae on stumps. The exact emergence date of these specimens cannot be ascertained because the exuviae were decolorized and disintegrated. Newly cast nymphal exuviae retain the color of the last nymphal instar for a day, and the linings of the rupture are whitish in color. We made several more attempts to collect imagos, nymphal exuviae, and nymphs in the following weeks, but found none. In the laboratory, the earliest emergence was 10 March 1968 and the last 30 June 1968. In 1969 emergence extended from 9 March to 26 June. One twelfth instar nymph however remained alive until July but did not emerge.

The peak of emergence occurred in April both years (Tables 3 and 4). Laboratory emergence records also showed an April peak. Emergence did not extend past the middle of summer, reflecting a strictly seasonal distribution permitting only one generation a year.

SUMMARY

We studied the life history, ecology, and seasonal distribution of *Baetisca rogersi* in the laboratory and in Rocky Comfort and Bear Creeks, Gadsden County, Florida, 1967-1969. In the laboratory fertilized eggs began to hatch in 20-31 days, averaging 23.8 days, and unfertilized eggs averaged 26.6 days. We found nymphs in the study areas from September through June and assume that eggs remained dormant during the summer. We raised twelve nymphal instars in the laboratory, a nymph taking approximately four months to mature. In the field, early instar nymphs lived on a substratum with water moss, *Leptodictyum riparium*, and filamentous algae, *Spirogyra* sp. Mature nymphs at Rocky Comfort Creek lived in shallow areas of gravel and sand. In Bear Creek, a sand bottom stream, the nymphs lived on submerged logs or in the sand. Twelfth instar nymphs migrated to quiet sections of the stream prior to emergence, probably searching for above-water objects where the nymphs could emerge.

The nymphs swim with vigorous and rapid undulations of the last