Nymphs were not active during the day. They usually stayed under rocks, or partially buried in the sand. When at rest, the last three abdominal segments are bent dorsally with the caudal filaments over the body. In the laboratory, we sometimes saw the nymphs wave their caudal filaments in a steady up and down motion. This beating probably aids respiration by creating a water current. Other possible reasons for such movements are: they help the nymphs maintain balance and position, or they clean silt and debris from the nymphs' bodies.

Newly collected nymphs brought to the laboratory were positively phototactic. In an experimental study on the dorsal light response, the nymphs exhibited "somersaulting" behavior. "Somersaulting" is a term used to describe the light-orientation response displayed by many aquatic invertebrates. When a light is directed into a container from the side, nymphs swim with the dorsal surface to their body towards the light and the ventral surface away. After passing the light they return to their normal orientation. This behavior resembles a loop or a "somersault." In a further experiment, we covered an aquarium with black paper, leaving only one small spot of light. Nymphs crawled to and congregated at the light. When this light spot was moved under the aquarium, nymphs tried to dig down, head first, to it. Evidently the position of the light source has a very marked influence on the maintenance of the primary dorsoventral orientation of the nymphs. Hughes (1966a) postulated that the dorsal light response of *Baetis harrisoni* Barnard is initiated by the ocelli and maintained by the compound eyes. He further stated that the ocelli are only transparent to light and therefore only a very small response is elicited. Whether the same explanation could be offered for the nymphs of *B. rogersi* needs further investigation.

Nymphs remained motionless when touched. As their coloration closely resembles their habitat, such behavior has apparent survival value.

The swimming activities of various species of *Baetisca* nymphs have been described by Walsh (1864), Traver (1931), and Berner (1950). Our observations of the movement of *B. rogersi* nymphs agree with those given by Berner (1950). Nymphs swim by the vigorous and rapid undulation of the last three abdominal segments including the caudal filaments. The legs are drawn under the body with the prothoracic legs oriented forward and with the tibiae and tarsi at right angles to the femora. The mesothoracic and metathoracic legs are directed posteriorly. As the nymphs come to rest the legs spread and seize any available supporting object. The legs are not used in the actual process of swimming. The force that initiates swimming apparently comes from the last three abdominal segments. These are bent upward with the caudal