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The Influence of Temperature on Egg Deposition and Development of *Physella Gyrina*, a Freshwater Gastropod

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**THE INFLUENCE OF TEMPERATURE ON EGG DEPOSITION AND
DEVELOPMENT OF PHYSELLA GYRINA, A FRESHWATER
GASTROPOD**

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Adults of Physella gyrina were reared in the laboratory at four temperatures (15° C, 20° C, 25° C, and 27° C) to show how temperature influences egg deposition and development. Developmental parameters measured included number of capsules deposited, size of egg capsule, number of eggs per capsule, egg size, duration of development, and size of newly hatched juveniles. All measurements were made using a Zeiss stereo dissecting microscope equipped with an ocular micrometer. Three adults in each of five dishes were maintained in spring water at the four temperatures under a 16L/8D photoperiod. Dishes containing the adults were checked every day for egg capsule deposition. Egg capsules were removed from dishes containing adults and placed in separate dishes within 24 hours of deposition. Generally fewer capsules were deposited at lower temperatures (15° C, 8 capsules) than at higher temperatures (25° C, 25 capsules). A similar relationship was observed for mean number of eggs, mean egg size, and mean size at hatching. The number of eggs deposited was greater at higher temperatures than lower temperatures, as was egg size and size at hatching. The number of days for juveniles to hatch was inversely related to temperature. The mean number of days to hatch at 15° C (\bar{X} =19.0 days) was less than at 27° C (\bar{X} =5.8 days). Based on the data, an increase in temperature causes an increase in the production of egg capsules. Developmental rate from egg to hatched juvenile increases with temperature as well. The data suggests that for the temperature range of 15° C to 27° C, 25° C was best for development.