

that of the water in which it was active. Brattstrom (1965) and Edgren and Edgren (1955) reported cloacal temperatures of *Sternotherus odoratus* closely approximating the surrounding water, and Boyer (1965) noted body temperatures of aquatic turtles in water were nearly identical to water temperatures.

Of 121 *T. coahuila* caught in marshes in July and August 1965, cloacal temperatures of 114 were slightly different from water temperatures. Approximately half the temperatures varied from 0.1 to 1.7°C greater than water, and about half had an identical range below the water temperature. A trend for cloacal temperatures to be slightly lower than the surrounding water in the morning was apparent, but during the afternoon most individuals were warmer than the medium. Only 21% of 45 turtles between 6:00 and 8:00 AM had cloacal temperatures higher than water, whereas between 4:00 and 7:00 PM, 64% of 69 turtles had temperatures above that of the water. This may result from the more intense afternoon sunlight and an increasing heating effect of light waves as the angle of incidence becomes greater. Boyer (1965) found angle of incident light to be a factor in increasing heat gains of turtle models, and noted that turtles of the genus *Pseudemys* orient while basking to receive maximum heat absorption through a more direct angle of incidence. Moll and Legler (1971) reported that a basking *Pseudemys scripta* changed its antero-posterior orientation as much as 360° in one hour. In marshes almost all active *T. coahuila* were in shallow water with the carapace dry and exposed to sunlight.

During December 1965 and April 1965 and 1966, approximately two-thirds of the cloacal temperatures were higher than water temperature. Differences ranged from 0.2 to 1.3°C in December and from 0.1 to 3.4°C in April, but the mean cloacal temperature in December does not reflect this trend, being slightly less than the mean water temperature (Fig. 9). In several instances turtles that apparently had recently emerged from deep in the mud had body temperatures as much as 3.3°C lower than surface water temperatures, thereby lowering the mean. The same situation obtained in January 1966, when temperatures in 9 of 10 turtles varied from 0.1 to 3.0°C below that of the surrounding water. Three emerging *T. coahuila* had cloacal temperatures 2.7°, 2.9°, and 3.0°C less than that of the surface water.

Although cool, all days during December 1965 were clear and sunny; air temperatures averaged 17.6°C. In contrast, 3 of the 4 days on which turtles were captured in January 1966 were overcast, and the air averaged 11.1°C. Some differences are to be expected, therefore, between temperature data from these two winter months. Active turtles, with carapaces exposed to air, probably are affected by low air tempera-