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Metabolic heat estimation of the sea turtle *Lepidochelys olivacea* embryos

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Several studies have reported the importance of metabolic heat on the increment of temperature in the sea turtle nests; however, the metabolic heat has not been calculated for sea turtle eggs. In this study, the metabolic heat generated by embryos of the sea turtle *Lepidochelys olivacea* was estimated from a thermal balance model by means of three measured temperatures—one in the center of the nest, and the others in the sand above and beside the nest. An experiment was conducted with a sample of 100 eggs from a *Lepidochelys olivacea* nest collected in the Baja Peninsula, Mexico. The results showed that during the incubation period, no metabolic heat was detected before day 19 but it increased from that day until a maximum of 0.84 W at day 34, when the incubation process was interrupted due to rain. This value corresponds to 31 emerged hatchlings. The novel model is a suitable framework to predict the temperature and metabolic heat within the nest.

Palabras clave: *Lepidochelys Olivacea*, Incubation temperature, Metabolic heat

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