Abstract

1. The oxygen uptake ($\dot{V}O_2$) of eggs and hatchlings of the Nile crocodile was measured at ambient temperatures ($Ta$) of 25, 32 and 37°C.
2. At a $Ta$ of 32°C, $\dot{V}O_2$ was found to be stable during the last month of incubation. It, however, increased with 15% after hatching.
3. Embryos and hatchlings increased their $\dot{V}O_2$, following exposure to increasing temperatures. At $Ta$, between 25 and 32°C $Q_{10}$ were 1.83 and 2.3 for the eggs and hatchlings, respectively. The $Q_{10}$ decreased to 1.27 for the eggs but that of hatchlings increased to 2.59 at $Ta$ between 32 and 37°C.
4. Exposure of eggs to pure oxygen at $Ta$ of 37°C was accompanied by an increase in metabolism ($\dot{V}O_2$) to a level similar to that of hatchlings kept in air.
5. It is postulated that a combination of high temperature and environmental oxygen may reduce the incubation time of the crocodile eggs.