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, howe 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.