



Image from USFWS

# Estimating Loggerhead Hatchling Gender Ratios

Answers for a 5Es Lesson by Rachel Teller

## Isle of Palms & Sullivan's Island, South Carolina 2004 Nesting Season

| Nest Data   |                                 |                          | Hatchling Gender Ratio Data                          |                             |                           |  |
|-------------|---------------------------------|--------------------------|--|-----------------------------|---------------------------|--|
| nest number | number of successful hatchlings | average nest temperature | warmer, cooler, or within pivotal temperature range? | estimated number of females | estimated number of males | estimated hatchling sex ratio as females:males |
| 1           | 52                              | 26°C                     | cooler   | 8                           | 44                        | 8:44   |
| 2           | 8                               | 25°C                     | cooler   | 0                           | 8                         | 0:8  |
| 3           | 42                              | 26°C                     | cooler   | 10                          | 32                        | 10:32  |
| 4           | 92                              | 27°C                     | cooler   | 22                          | 70                        | 22:70  |
| 5           | 100                             | 28°C                     | within   | 51                          | 49                        | 51:49  |
| 6           | 94                              | 28°C                     | within   | 44                          | 50                        | 44:50  |
| 7           | 108                             | 29°C                     | within   | 55                          | 53                        | 55:53  |
| 8           | 0                               | 29°C                     | within   | 0                           | 0                         | 0:0  |
| 9           | 65                              | 31°C                     | warmer   | 60                          | 5                         | 60:5   |
| 10          | 86                              | 31°C                     | warmer   | 75                          | 11                        | 75:11  |
| overall     |                                 |                          |  | 325                         | 322                       | 325:322  |

Please note that these are truly estimates- student numbers will differ significantly. The responses should be considered accurate as long as there are more males when the nest is cooler, more females when warmer, and about an equal number when the nest is within the pivotal temperature.