

Testudines

TEMPERATURE AS A SEX DETERMINANT – Does incubation temperature affect the sex of the hatchlings?

| Species | Common Name | Sex Determination by Temp |
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| Cheloniidae | sea turtles | |
| <i>Caretta c. caretta</i> | Atlantic loggerhead | Y (several citations within Ernst et al. 1994, p. 69) |
| <i>Chelonia m. mydas</i> | Atlantic green turtle | Y (Ernst et al. 1994) |
| <i>Eretmochelys i. imbricata</i> | Atlantic hawksbill | Y - the pivotal temperature at which 50% of each sex is produced is 29.2°C (Mrosovsky et al. 1992) |
| <i>Lepidochelys kempii</i> | Kemp's ridley or Atlantic ridley | Y (Shaver et al. 1988) |
| Dermodochelyidae | leatherback sea turtles | |
| <i>Dermodochelys c. coriacea</i> | Atlantic leatherback | Y - an incubation temperature of 29.5°C produces some individuals of each sex, and is considered the pivotal temperature for sexual differentiation of the gonads (Rimblot-Baly et al. 1987) |
| Chelydridae | snapping turtles | |
| <i>Chelydra s. serpentina</i> | eastern snapping turtle | Y (Ernst et al. 1994) |
| Emydidae | pond turtles | |
| <i>Chrysemys p. picta</i> | eastern painted turtle | Y (Ernst et al. 1994) |
| <i>Chrysemys p. marginata</i> | midland painted turtle | Y (Ernst et al. 1994) |
| <i>Clemmys guttata</i> | spotted turtle | Y (Ernst et al. 1994) |
| <i>Clemmys insculpta</i> | wood turtle | N (Bull et al. 1985; Ewert and Nelson 1991) |
| <i>Clemmys muhlenbergii</i> | bog turtle | Unk (Ernst et al. 1994) |
| <i>Deirochelys r. reticularia</i> | eastern chicken turtle | Y (Ewert and Neson 1991) |
| <i>Emydoidea blandingii</i> | Blanding's turtle | Y (Ernst et al. 1994) |
| <i>Graptemys geographica</i> | northern map turtle | Y (several ref.'s in Ernst et al. 1994, pp. 371-372) |
| <i>Graptemys ouachitensis</i> | Ouachita map turtle | Y (several ref.'s in Ernst et al. 1994, p. 408) |
| <i>Malaclemys terrapin terrapin</i> | northern diamond-backed terrapin | Y (Ernst et al. 1994) |
| <i>Pseudemys c. concinna</i> | eastern river cooter | Unk |
| <i>Pseudemys c. floridana</i> | coastal plain cooter | Y (Ewert and Neson 1991) |
| <i>Pseudemys rubriventris</i> | northern red-bellied cooter | Unk |
| <i>Terrapene c. carolina</i> | eastern box turtle | Y (Ernst et al. 1994) |
| <i>Trachemys s. scripta</i> | yellow-bellied slider | Y (several citations in Ernst et al. 1994, pg. 311) |
| <i>Trachemys s. elegans</i> | red-eared slider | Y (several citations in Ernst et al. 1994, pg. 311) |
| <i>Trachemys s. troosti</i> | cumberland slider | Y (several citations in Ernst et al. 1994, pg. 311) |

| Kinosternidae | mud and musk turtles | |
|------------------------------------|--------------------------------|--|
| <i>Kinosternon s. subrubrum</i> | eastern mud turtle | Unk - it has not been definitely established that the sex is determined by its incubation temperature, more data needed (Ernst et al. 1994) |
| <i>Kinosternon baurii</i> | striped mud turtle | Unk |
| <i>Sternotherus minor peltifer</i> | stripeneck musk turtle | Unk |
| <i>Sternotherus odoratus</i> | stinkpot or common musk turtle | Y (Vogt et al. 1982; Clark et al. 1986) |
| Trionychidae | softshell turtles | |
| <i>Apalone m. mutica</i> | midland smooth softshell | N - appears to have genetic sex determination. Roughly equal numbers of males and females are produced at incubation temperatures ranging from 27-33°C (Ewert and Nelson 1991) |
| <i>Apalone s. spinifera</i> | eastern spiny softshell | N - sex ratios are essentially 1:1 under a wide range of incubation temperatures (Ernst et al. 1994) |

Sex Determination Codes: Y = yes, N = no, Unk = unknown