Chrysemys picta (Schneider)

Painted turtle

Testudo picta Schneider, 1782: 348. Type-locality, unknown, originally listed in error as England; designated as vicinity of New York City by Schmidt (1953: 99). Type and collector not stated.

Chrysemys cinererza Bonnaterre, 1789: 25. Type-locality, unknown, designated as vicinity of Philadelphia by Schmidt (1953: 99). Type and collector not stated.


Chrysemys picta: Gray, 1839: 358. Transfer to Chrysemys.


Chrysemys pulchra Gray, 1873: 147. See C. p. bellii.


- DEFINITION. Adults are 100-252 mm in carapace length; females average larger than males. The carapace is smooth, unkeeled, and posteriorly un serrated. It is black to olive in ground color and marked with patterns of red and yellow. The marginals always contain red markings. The plastron is unkeeled, and posteriorly unserrated. It is black to olive in ground color and marked with patterns of red and yellow. The legs and tail are striped with red and yellow. A yellow line runs backward from below the eye and may meet a similar line from the lower jaw. A yellow streak on the throat enclose a narrower yellow stripe and meet at a yellow spot occur behind the eye. Two yellow lines may meet a similar line from the lower jaw. A yellow streak from the upper jaw has a weakly developed ridge. The skin color is black to olive. The legs and tail are striped with red and yellow. A yellow line runs backward from below the eye and may meet a similar line from the lower jaw. A yellow streak on the throat enclose a narrower yellow stripe and meet at a yellow spot occur behind the eye. Two yellow lines may meet a similar line from the lower jaw. A yellow streak from the upper jaw has a weakly developed ridge. The skin color is black to olive. The legs and tail are striped with red and yellow. A yellow line runs backward from below the eye and may meet a similar line from the lower jaw. A yellow streak on the throat enclose a narrower yellow stripe and meet at a yellow spot occur behind the eye. Two yellow lines may meet a similar line from the lower jaw.

- DESCRIPTIONS. General descriptions are given by Babcock (1919), Bishop and Schmidt (1931), Pope (1939), Carr (1952), and Conant (1958). Detailed anatomical and histological descriptions are given by Agassiz (1857), Ruckes (1837), Walker (1847), Williams (1950), Mosimann (1958), Parsons (1959, 1960, 1968), Shah (1962), McDowell (1964), Burda (1966), and Zug (1956).

- ILLUSTRATIONS. For color photographs of adults see Babcock (1919), Schmidt and Inger (1957), Conant (1958), and Pritchard (1967); for other photographs and drawings of adults see Cahn (1937), Pope (1939), Carr (1952), Smith (1956), and Smith (1961). Juvaniles and hatchlings are shown by color photographs in Conant (1958) and Pritchard (1967), and by other photographs in Agassiz (1857), Hahn (1937), and Carr (1952). Photographs or drawings of the egg are presented in Agassiz (1857), and Pope (1939). The bony structure of the shell is photographed in Pope (1939). Plastral markings are illustrated in Cahn (1937), Bishop and Schmidt (1931), and Smith (1961). Anatomical illustrations are found in Ruckes (1937), Walker (1947), Parsons (1959), Burda (1965), and Zug (1966).

- DISTRIBUTION. Chrysemys picta is restricted to North America, but extends from the Atlantic to the Pacific coast. Four subspecies occur within the range. Chrysemys p. picta ranges from Nova Scotia, New Brunswick, and eastern Quebec, southward through New England and the Atlantic coastal states to Georgia, and westward into eastern Alabama. Chrysemys p. marginata ranges from western Quebec and adjacent Ontario south in the east-central United States to Tennessee, and eastward into New York, Pennsylvania, West Virginia, Maryland, Virginia, North Carolina, and northern Georgia. Chrysemys p. dorsalis ranges from southern Illinois and Missouri southward along both sides of the Mississippi River to the Gulf Coast, eastward into Alabama, and westward to southeastern Oklahoma. Chrysemys p. bellii ranges from western Ontario across southern Manitoba, Saskatchewan, and Alberta to British Columbia in Canada, southward to Missouri, Kansas and the Oklahoma panhandle in the east, and across the Rocky Mountains in Colorado and Wyoming to Idaho, northern Oregon and Washington in the west. Chrysemys p. bellii is also found in scattered relic populations in Utah, Arizona, New Mexico, and Chihuahua, Mexico.

- FOSSIL RECORD. Pleistocene records are from Brazos County, Texas (Hay, 1924), Meade County, Kansas (Schultz, 1965), Oakland County, Michigan (Wilson, 1967), and Pulaski County, Indiana (Field Mus. Nat. Hist. PR-432). Other fossils that may represent either C. picta or the fossil species C. timida (Hay, 1908) have been reported from the Lower Pliocene, Trego County, Kansas (Wilson, 1968), the Miocene-Pliocene, Brown County, Nebraska (Estes and Tihen, 1964), and post-glacial, Coles County, Illinois (Galbreath, 1938).


- Etymology. The name picta derives from the Latin pictus, meaning painted and probably refers to this turtle's bright markings. Subspecific names are derived as follows: bellii, for Thomas Bell; marginitus, from the Latin marginis (genitive margines) meaning edge or border and probably refers to the marginal, bright red markings; and dorsalis, from the Latin dorsum pertaining to the back and refers to the dorsal stripe.

1. Chrysemys picta picta (Schneider)


- Definition. Vertebral and costal seams aligned. Carapacial seams have wide, light borders. Plastron is unicolor yellow. A narrow, pale, dorsal carapacial stripe may be present. Adult carapace length is 100-182 mm.

- Remarks. Intergradation with C. p. marginata has been reported in New England by Hartman (1958), Waters (1964, 1969), and Pough and Pough (1968), and in eastern Tennessee by Johnson (1954) and Ernst (1970). Intergradation with C. p. dorsalis occurs in Alabama (Ernst, 1967). Because the type locality of C. p. picta is unknown, Mittleman (1945) suggested that it be restricted to Lancaster County, Pennsylvania. My study of over 1000 specimens from Lancaster County, Pennsylvania, shows that they compose an intergrade C. p. picta × marginata population, so the restriction of the type locality to the vicinity of New York City by Schmidt (1953: 99) is more logical and should be accepted.

2. Chrysemys picta bellii (Gray)

Emys bellii Gray, 1831: 31. Type-locality not stated; designated as Manhattan, Kansas by Smith and Taylor (1950: 34). Type and collector not stated. Original description of C. p. bellii was based on a specimen purchased from Ashton Lever by the Museum of the Royal College of Surgeons of England in 1866. The type was destroyed during the bombing of 1941.

Emys orogeniensis Harlan, 1837: 382. Type-locality, vicinity of Oregon or Columbia River. Type not stated. Collector, Thomas Nuttall.

Chrysemys nuttalli Agassiz, 1857: 642. Type-locality unknown. Schmidt's (1953) statement of the type-locality is incorrect. Type not stated. Collector, James M. Barnard.

Chrysemys pulchra Gray, 1873: 147. Type-locality, North America, Mississippi, restricted to upper Mississippi River by Schmidt (1953: 100). Type and collector not stated.


Chrysemys marginata bellii: Stejneger and Barbour, 1917: 118. Relegated to a subspecies of C. marginata.

Chrysemys picta bellii: Ruthven, 1924: 340. Reinstated to specific level.


- Definition. Vertebral and costal seams alternating. Carapacial seams have dark borders. A reticular pattern present on the carapace. Plastron with a large branching figure. A narrow pale, dorsal carapacial stripe may be present. Adult carapace length is 100-252 mm.

Intergradation with C. p. marginata and C. p. dorsalis occurs in Illinois (Bishop and Schmidt, 1931; Cuhn, 1897; and Smith, 1961). It supposedly also intergrades with C. p. marginata in Wisconsin and the northern peninsula of Michigan, but this has not been confirmed.

3. Chrysemys picta marginata Agassiz


- Definition. Vertebral and costal seams alternating. Carapacial seams have dark borders. Plastron with a non-branching figure. A narrow pale, dorsal carapacial stripe may be present. Adult carapace length is 100-187 mm.


4. Chrysemys picta dorsalis Agassiz

Chrysemys dorsalis Agassiz, 1857: 440. Type-localities: "Mississippi" (market at Natchez, Adams County; Washington County), and "Louisiana" (Lake Concordia); restricted to vicinity of Natchez, Mississippi by Ernst (1967: 135). Cotypes: U. S. Natl. Mus. 21, collected by B. L. C. Walles; Mus. Comp. Zool. 1801, collected by B. L. C. Walles, and 31960, collected by W. Sargent. Dates of collections not given. Cotypes examined by the author.

Chrysemys marginata dorsalis: Stejneger and Barbour, 1917: 118. Relegated to a subspecies of C. marginata.


- Definition. Vertebral and costal seams alternating. Carapacial seams have wide, light borders. Plastron is unicolor yellow. A prominent, wide, dorsal carapacial seam is present. Adult carapace length is 100-352 mm.

Comment

The zones of intergradation between the subspecies of C. picta have been studied in greater detail than in any other American turtle. Continued studies of this type will insure that all the intergradation patterns will be understood in the near future.
LITERATURE CITED


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