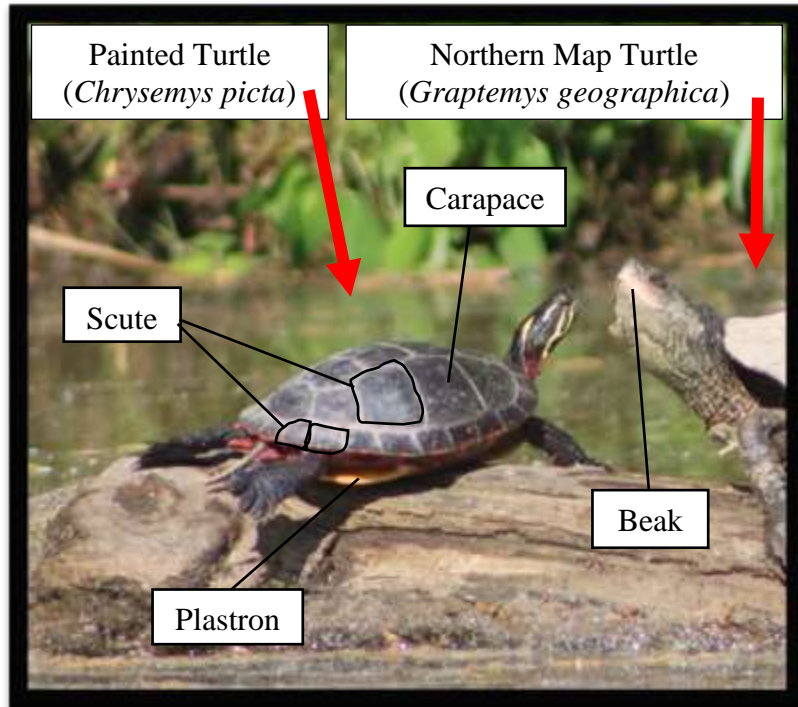


Turtle Shells

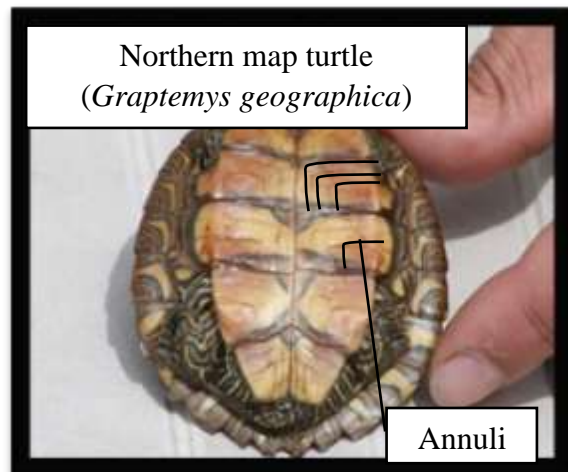
Nearly all turtles (freshwater, sea, terrestrial) have a shell made of hard bony plates that grow from the spine and ribs of the turtle. All these bony plates have a dermal (outer) layer called scutes that are made of a protein called *keratin*. Keratin can be found all over the natural world. We find this protein in the claws and beaks of *turtles*, *human* fingernails and hair, and the beaks, feathers, and talons of *birds*. Damage to a turtle shell can be naturally repaired, just like fractured bones in humans.

The shells make adult turtles very unappealing to predators. However, during early life stages, they have many predators. Raccoon, fox, and skunk often dig up the nests of turtles, and tiny hatchlings are tasty treats to large birds of prey (osprey and eagle) and large predatory fish (bass, pike, muskie).

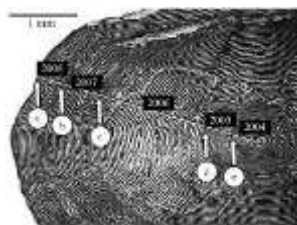


Fun Fact!

Each growing season (warm months when turtles are foraging), the bony plates and scutes grow incrementally which creates annuli, similar to tree rings and some fish scales. This allows us to age the organism. Older turtles sometimes have worn plastrons and this method of aging becomes ineffective.



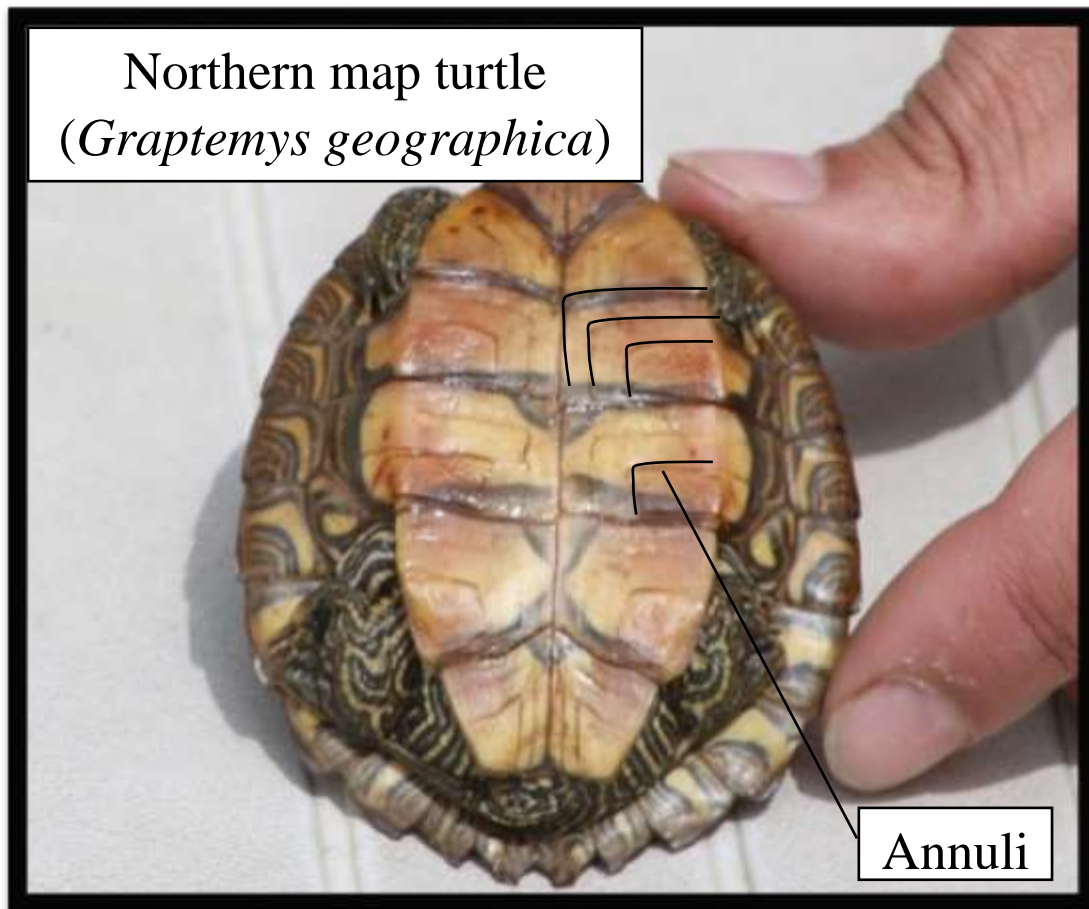
Tree Rings



Annuli on a fish scale

1. Why is a shell advantageous?

2. Why do some turtles have different patterns on their shells?



3. How old is this turtle?