SN IN HIGH SCHOOLS

November 26, 2016

The Artistry of Animal Coloration

Quest Through the Archives

Directions: After reading the articles "Color me dino" and "Protein paints chipmunks' stripes," use the archives at www.sciencenews.org to answer these questions:

1. Find another article about fossilized dinosaur remains. Was this fossil older or younger than the fossilized feathers discussed at the end of "Color me dino?"

2. Both articles include references to the form of camouflage called countershading (on *Psittacosaurus* and rodent belly fur), when an animal's pigmentation is lighter on areas typically in shadow and darker on areas that are typically exposed to light. What is the earliest article you can find that gives an example of a different type of camouflage? State the type of camouflage.

3. Have there been other *Science News* articles referencing the possible identification of pigments in fossilized remains? Explain by citing a specific article.

SN EDUCATOR GUIDE

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Responses to Quest Through the Archives

1. **Find another article about fossilized dinosaur remains. Was this fossil older or younger than the fossilized feathers discussed at the end of "Color me dino?"** Possible student response (answers will vary): www.sciencenews.org/article/parasites-wormed-way-dino%E2%80%99s-gut. *"Parasites wormed way into dino's gut" references a 77-million-year-old hadrosaur fossil that may have been infected with parasitic worms. This fossil is younger than the 120-million-year-old feather fossil described in "Color me dino."*

2. **Both articles include references to the form of camouflage called countershading (on Psittacosaurus and rodent belly fur), when an animal's pigmentation is lighter on areas typically in shadow and darker on areas that are typically exposed to light. What is the earliest article you can find that gives an example of a different type of camouflage? State the type of camouflage.** Possible student response: www.sciencenews.org/archive/nature-ramblings-praying-mantis. *The 1929 article "Nature Ramblings: Praying Mantis" refers to a praying mantis as having "leaf-and-stick camouflage." This type of camouflage can be categorized as a protective coloration.*

3. **Have there been other *Science News* articles referencing the possible identification of pigments in fossilized remains? Explain by citing a specific article.** Possible student response: www.sciencenews.org/blog/science-ticker/green-was-ancient-snakes-signature-color. An article from earlier this year describes scientists who identified pigment structures linked to bright green coloration in well-preserved 11.2-million- to 8.7-million-year-old snakeskin.