

Forum

Reply to: European barn swallows use melanin pigments to color their feathers brown

Riccardo Stradi

Dipartimento di Chimica Organica, Università degli Studi di Milano, via Golgi 19, I-20133 Milan, Italy

McGraw et al. (2004) have recently presented evidence that barn swallow (*Hirundo rustica*) feathers from the forehead and throat do not contain carotenoids, and melanins are the determinants of their chestnut coloration. This contradicts evidence I presented in a book entitled *The colour of flight: carotenoids in bird plumage* (Stradi, 1995, 1998), where a tridimensional high-performance liquid chromatogram of carotenoids extracted from these feathers is presented and feathers are described as containing carotenoids (lutein, zeaxanthin, and 3-hydroxy-echinenone).

After the publication of the paper by McGraw et al. (2004), I have analyzed a pool of throat feathers collected from 20 adult barn swallows from a population breeding in Italy. This analysis confirmed the findings of McGraw et al. (2004). In addition, optical stripping by Raman spectroscopy confirmed the absence of carotenoids from barn swallow throat feathers. Thus, the information contained in my book (Stradi, 1995,

1998) about the composition of pigments in barn swallow feathers is not correct. The book resulted from an extensive analysis of pigment composition of feathers from hundreds of specimens belonging to more than 80 different species carried out for 2 years. The inconsistency of the information provided for the barn swallow may have arisen because of insufficient cleaning of the carotenoid extraction system.

I wholeheartedly apologize to all the researchers who have used this information for any inconvenience this may have caused.

Address correspondence to R. Stradi. E-mail: riccardo.stradi@unimi.it.

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