Carotenoids: better than thought for birds

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PHOENIX, June 14 (UPI) — A U.S. study finds carotenoids -- nutrients found in brightly colored vegetables and fruits -- have more health benefits for birds than thought.

The Arizona State University-led study determined carotenoids appear to fight the negative impacts testosterone can have on an animal's health.

ASU Assistant Professor Kevin McGraw and Daniel Ardia of Franklin and Marshall College in Pennsylvania note carotenoids also act as antioxidants, which improves immune system function.

"Researchers in animal behavior often study what keeps sexual signals like bright colors or elaborate songs 'honest,' or why all individuals cannot produce them ...," said McGraw. "The reason typically is that long tails and fancy dances incur costs. Testosterone, for example, has been thought of as a double-edged sword as it relates to sexual signals, because it enhances trait production, but comes at a health price to the animal.

"This study shows that testosterone may not be as costly as previously thought, so long as animals can nutritionally offset the immune detriments of testosterone. They may even experience a net health benefit as a result," added McGraw.

The study appears in the June issue of the journal Biology Letters.

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