



Birds + Science

## They Are What They Eat

Some birds give literal meaning to the phrase

Up until a few decades ago, cedar waxwings were distinguished by their yellow-tipped tails. But beginning in the 1960s, these birds began to show some orange in their tail feathers in the Northeast.

Author Marie Read says the new color came from changes in the birds' diet. Read says cedar waxwings started eating orange berries from honeysuckles, a non-native ornamental shrub.

“The pigments that are in these introduced honeysuckles end up making the tail orange, so in this respect it really is kind of ‘you are what you eat.’”

Read, a wildlife photographer, has written a new book, “The Secret Lives of Common Birds.” Read says cedar waxwings aren't the only birds that change color according to the foods they eat.

“There is a lot of evidence that cardinals, northern cardinals, the wonderful red birds that we see, if you look at them as individuals, you look at a lot of different ones, some of them are very bright red, some of them are deep crimson, some of them are more orange and some of them are kind of washed-out looking. Well, that apparently is due to the kinds of things they are eating.”

The varying shades of red and yellow in most birds result from the amount of carotenoid-based pigments they get from their diet. And a bird's color, especially in males, serves a purpose far beyond vanity. Take that northern cardinal. Scientists say more brightly colored males hold territory with more abundant food, and they attract higher quality females. So which comes first: do the brighter males get better territory because of their color? Or does their better red result from ruling over the best food sources? Scientists say they don't yet know.