

Accidental discovery: Some cat food manufacturers regularly change ingredient composition

February 28 2020



Credit: CC0 Public Domain

A study that set out to measure how much wildlife domestic cats eat to supplement the food they are given by their owners was unsuccessful due

to an unexpectedly high variability in cat food ingredients. This accidental discovery suggests that some cat food manufacturers regularly change ingredient composition, even within the same flavors of cat food.

Feral cats are responsible for several native wildlife declines, like the Key Largo woodrat, but the impact of pet cats on urban wildlife isn't well understood. This inspired a collaborative study led by researchers at North Carolina State University to directly measure how often pet cats eat outside of their food bowls.

A common way to understand the composition of animal diets is to collect samples of fur, nails, or blood from an animal and analyze its carbon and nitrogen isotopes. All organic materials contain isotopes of elements that get locked into body tissues, following the basic principle that you are what you eat. For example, the ratios of nitrogen isotopes present in carnivores are dependably distinct from those of plant eaters. Similarly, researchers can distinguish the types of plants that an animal eats by measuring the ratio of carbon isotopes.

For this study, researchers collected isotopes from things a cat might eat, including different brands and flavors of cat foods. They predicted cats that only ate from their food bowls would have an identical isotopic match to the food, while differences between cat and pet food would indicate a cat supplementing its diet with wild prey.

"We really thought this was going to be an ideal application of the isotope methodology," says Roland Kays, a co-author of the study and scientist at NC State and the NC Museum of Natural Sciences. "Usually these studies are complicated by the variety of food a wild animal eats, but here we had the exact pet food people were giving their cats."

This assumes that cat food producers use consistent types and amounts of ingredients. As it turns out, that is not the case.

The carbon and nitrogen [isotopes](#) in cat foods varied widely—even between foods that were the same flavor and from the same brand. The only clear relationship found was that the least expensive cat foods had higher carbon values, indicating a strong presence of corn product in inexpensive cat [food](#). In addition, pet foods sampled from the United Kingdom had lower carbon values, suggesting less input from corn products.

"This isn't what we aimed to study, but it is important in as much as there are hundreds of millions of cats (perhaps more) on Earth," says Rob Dunn, co-author of the study and a professor in NC State's Department of Applied Ecology. "The diets of cats, dogs and domestic animals have enormous consequences for global sustainability, cat health and much else. But they are very non-transparent. In short, at the end of this study we are still ignorant about why some cats kill more wildlife than others, and we have also found we are ignorant about something else, the shifting dynamics of "Big Pet Food."

The paper, "High variability within pet foods prevents the identification of native species in pet cats' diets using isotopic evaluation," is published in the journal *PeerJ*.

More information: Brandon W. McDonald et al. High variability within pet foods prevents the identification of native species in pet cats' diets using isotopic evaluation, *PeerJ* (2020). [DOI: 10.7717/peerj.8337](https://doi.org/10.7717/peerj.8337)

Provided by North Carolina State University

Citation: Accidental discovery: Some cat food manufacturers regularly change ingredient composition (2020, February 28) retrieved 9 May 2024 from <https://phys.org/news/2020-02-accidental-discovery-cat-food-regularly.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.