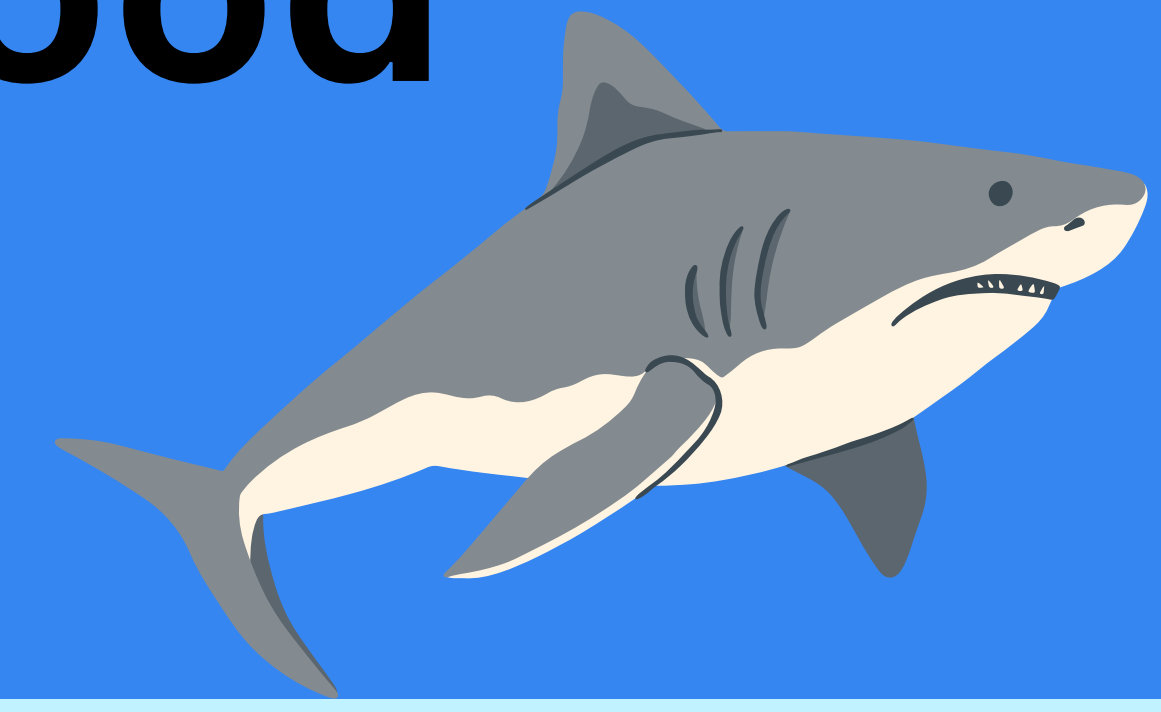




# The Nutritional Impact of Seafood Mislabeling in Pet Food

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## Introduction

- Seafood mislabeling occurs when a seafood product's label misrepresents a species identity
- Seafood mislabeling has nutritional effects such as concealing the mercury levels of the species included
- We quantified mislabeling in seafood flavored cat food and analyzed how mislabeling impacts nutrition

## Methods

- Sample Collection (n= 9)
- DNA Extraction
- PCR Multiplexing
  - Primers: VF2\_tl, FishR1\_tl, FishR2\_tl, Shark150R, Shar474F
- DNA Sequencing and BLAST database

## Soft versus Hard Mislabeling

Hard Mislabeling: Incorrect species

Soft Mislabeling: Generic term such as ocean whitefish

Label	Species Found	Implication
Salmon, chicken	Spotfin river goby	Tetrodotoxin
Salmon, crab	Scalloped hammerhead	Mercury
Tongol tuna	Scalloped hammerhead	Mercury
Whitefish	Scalloped hammerhead	Mercury
Whitefish	Walleye pollock	Fish Oil, PCBs
Ocean whitefish, tuna	Scalloped hammerhead	Mercury

Fig. 1: Cat food labels, the species we identified within them, and the nutritional implication.

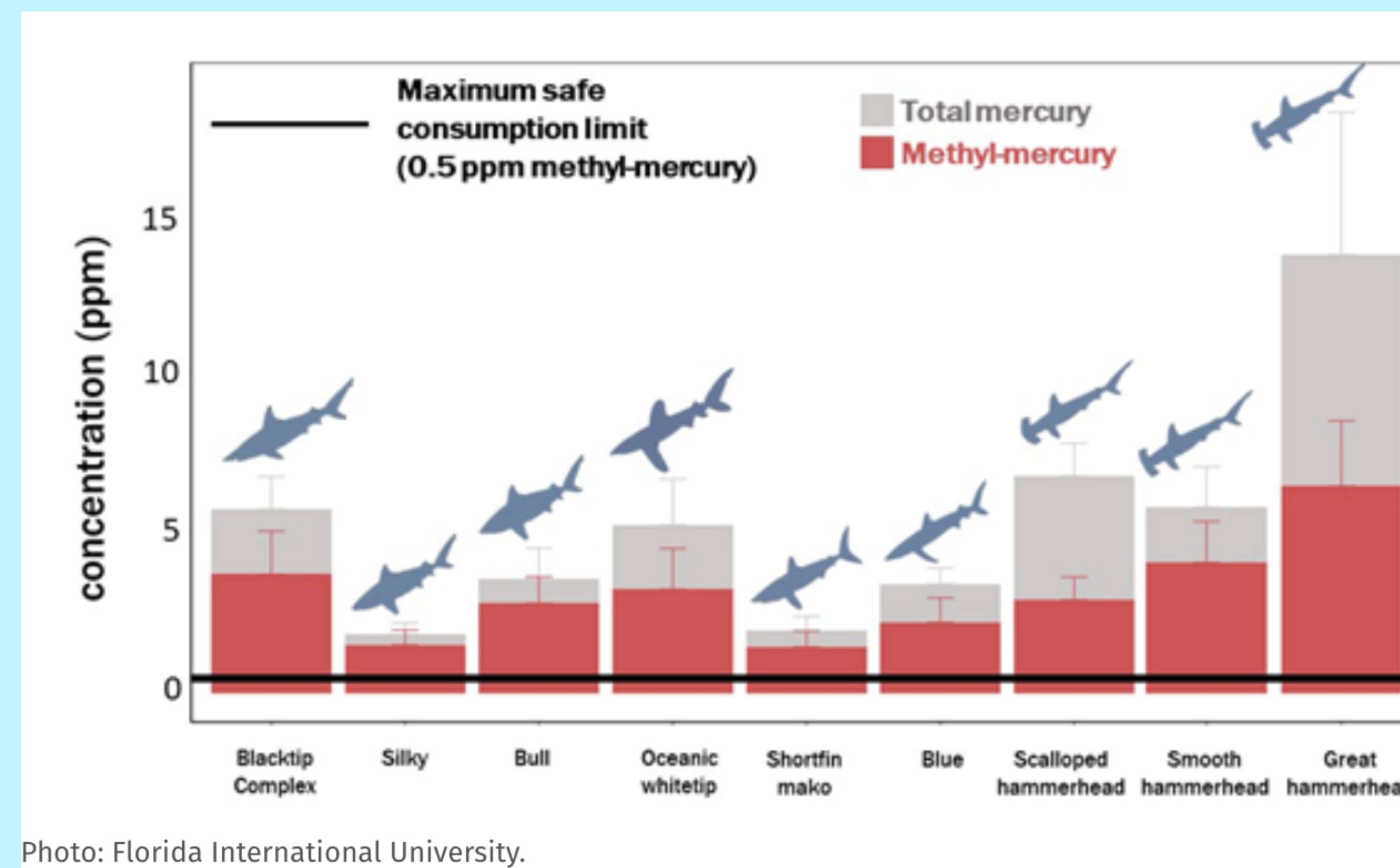


Photo: Florida International University.

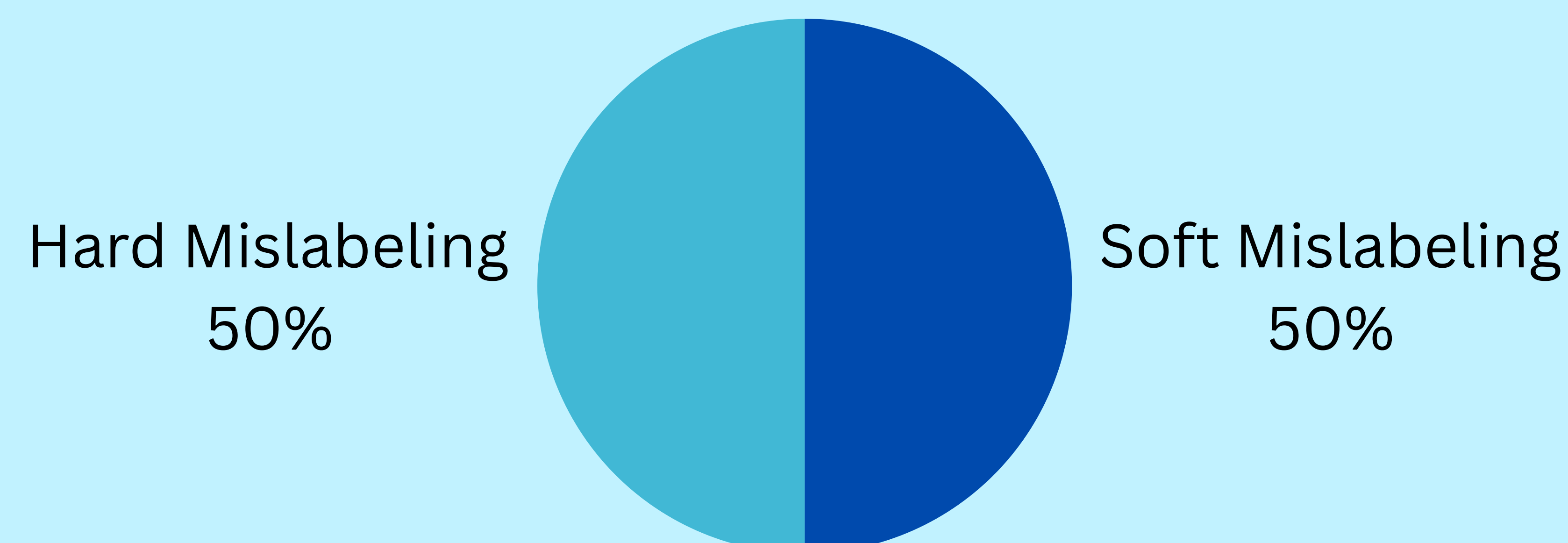


Fig. 2: The percentages of hard versus soft mislabeling in our samples.

## Discussion

**Tetrodotoxin** = neurotoxin

- limb weakness, nausea, coordination loss, respiratory failure, and potentially death

**Mercury** = neurotoxin

- tremors, memory loss, headaches, motor dysfunction

**Fish Oil**

- protect from cardiovascular disease
- protect from age related cognitive disorders

**PCBs** = industrial contaminant

- carcinogen

## Conclusion

**There are certain health benefits to fish consumption but seafood mislabeling thwarts the ability to avoid high toxin levels.**

**Higher regulations are needed for accurate labeling of pet food products.**