Fish Market Survey Results

Fall 2019
What is a Market Survey?

Red Snapper
$30.66 per kg

Tilapia
$18.19 per kg
Sampling

Eight different market names were targeted
Sampling

1. Metadata

2. Tissue Sample
DNA Barcoding

1. Extract DNA
2. Amplify DNA (PCR)
3. Sequence DNA
4. DNA Barcode

6. MARKET SURVEY RESULTS
Results

4. DNA Barcode

5. DNA Barcode Database

Oncorhynchus mykiss (Rainbow/Steelhead Trout)

BARCODE OF LIFE DATA SYSTEM v4
Advance biodiversity science through DNA-based species identification.
Results

+Oncorhynchus mykiss
(Rainbow/Steelhead Trout)
Fall 2019 Results Overview

- 91 samples were analyzed
- 18 had DNA that did not amplify
- 3 were removed because they were cross-contaminated
- 70 yielded a DNA barcode sequence (77% success)

70 total to study for mislabelling
Fall 2019 Results Overview

- Of the 70 sequenced fish samples:
  - 4% were mislabeled
  - 3% did not conform to the CFIA naming convention
7% of the fish samples had labelling errors of some kind
Fall 2019 Results Overview

Why are they considered mislabelled?

Of the 5 samples...

3 samples (4%)
The scientific name and the declared common name exist on CFIA fish list but do not match

True mislabelling

2 samples (3%)
Label name does not appear as the CFIA requires

Name non-conformity
Example of True Mislabelling

What the package says:

King Salmon

*(Oncorhynchus tshawytscha)*

What the DNA says:

Wild Pink Salmon

*(Oncorhynchus gorbuscha)*
Other Example of Mislabelling

What the package says:

Sea Bass

What the DNA says:

Bullhead (catfish)

(Ameiurus nebulosus)
Other Example of Mislabelling

What the package says:
Farmed Steelhead Trout
(Onchorhynchus mykiss)

What the DNA says:
Wild Pink Salmon
(Onchorhynchus gorbuscha)
Other Examples of Mislabelling

Pacific Ocean Perch vs Pacific Snapper

Pacific Halibut vs Atlantic Halibut
Thank you to all participants!

This project is ongoing

Registration for the Spring 2020 is open now on the Let’s Talk Science website
Supporters and Partners