Quantifying the Frequency of Seafood Mislabeling by Sushi Vendors in the Triangle Area

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Seafood mislabeling represents a significant global issue, impacting public health, eroding consumer trust, and affecting marine ecosystems. It is difficult to track mislabeled seafood as it is unknown for certain where in the supply chain mislabeling commonly takes place and one seller may receive seafood from many suppliers. The purpose of this study was to quantify the mislabeling rates of sushi samples across North Carolina's various establishments, utilizing samples collected by the WRAL. We followed standard DNA barcoding procedures to determine the identity of 36 sushi samples collected from 7 local (Triangle area) sushi vendors. Our results indicate that 6 out of 30 (19%) samples were fully mislabeled. Additionally, 19 out of 36 samples (53%) were "soft" mislabeled, where samples are labeled under broad seafood categories rather than specific species. We found that the most frequently mislabeled species was tuna, with 6 out of 8 samples labeled "Tuna" either fully mislabeled or "soft" mislabeled. Our study gives insight into the prevalence of mislabeled sushi from restaurants in the Triangle of North Carolina. These insights are critical for guiding state legislatures in formulating more targeted policies and clearer guidelines for restaurants' labeling formats. It also highlights the need for increased consumer awareness and more strict industry regulations to guarantee seafood authenticity and safety.