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MAPPING THE GOODS: USING THE *TURT* SMARTPHONE APPLICATION TO RECORD HAWKSBILL PRODUCT USE

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The historical and recent exploitation of hawksbill turtle shell (tortoiseshell) has been a driving force in the decline of hawksbill populations on a global scale. However, the hawksbill is by no means the only species that has been severely impacted by the anthropogenic use of turtle products. People around the world consume turtle meat and eggs on a regular basis, while tourists may request turtle products for consumption as a novelty, or unwittingly purchase turtle products as souvenirs. However, without a clear understanding of where turtle products are both sourced and marketed, turtle conservation efforts to inform government agencies, tourists, and tourism operators, will be hampered by lack of product-use locations and trends. Recently, ProTECTOR, Inc. released the *Turtles Uniting Researchers and Tourists* (*TURT*) smartphone application for recording in-water and nesting beach turtle sightings on a global scale. We decided to investigate the use of the *TURT* application for recording and mapping both locations and photographs of turtle products use in the country of Honduras. We used a standard oral survey in conjunction with the *TURT* smartphone app to collect information and map restaurants, souvenir shops, airports, open food markets, and hotels that use or sell either primary or secondary sea turtle products. We considered products that came directly to the vendor without pre-production to be primary products (eggs and meat), whereas products that underwent some form of pre-production prior to reaching the vendor were considered secondary products (jewelry, carvings). We also recorded sites that did not sell turtle products, allowing us to calculate a ratio of turtle product sellers to non-sellers for different types of vendors (hotels, restaurants, markets, souvenir shops). Additionally, we also collected information on the motivation of vendors for selling turtle products.

We have surveyed 21 sites of potential turtle product sales in the cities of Tegucigalpa and Choluteca, Honduras, to date (surveys are continuing). Of these, 7 were souvenir shops, 5 open food markets, 5 restaurants, and 4 hotels. When survey data is combined for both cities, we found that 100% of souvenirs shops sold secondary turtle products, 100% of markets sold primary products, 60% of restaurants sold primary products, and 50% of hotels sold primary products. Motivations for selling primary products appear to be for sale to the tourism market, while sales of primary products appear to be motivated by traditional demand by local residents. The *TURT* app was a highly useful mobile tool for quickly collecting data and immediately mapping sites and product types. This study provides good evidence that mobile phone technology can be used to map trends in turtle product use at both local and national levels. Understanding where turtle products are used and sold will provide government agencies information on how to enforce national and international laws governing turtle exploitation, and increase awareness by tourists of their impacts on the use of turtle products. In the future, *TURT* may be used to map global trends in turtle products uses and movements, in conflict with both national and international regulations.

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