



# ENDANGERED SOUVENIRS

Hawksbill Sea Turtle Products For Sale  
in Latin America & the Caribbean

*May 2017*

*Photo by Julie Sues*



# Acknowledgements

At the heart of our work is the critically endangered hawksbill sea turtle, at risk of extinction due to the demand for its beautiful shell. Our mission at Too Rare To Wear is to end the demand for hawksbill products by collaborating with conservation organizations and the tourism industry to inform travelers of the plight of the hawksbill and to educate them on how to identify and avoid hawksbill products when traveling abroad. This survey is a result of the hard work of 35 surveyors representing 14 organizations in nine countries (the full list can be found in Appendix One). We also thank the financial supporters of Too Rare To Wear, without their help, this survey and campaign would not have been possible.

Too Rare To Wear is a project of The Ocean Foundation.

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# Contents

Summary	01
Key Findings	02
Introduction	03
Current Situation	08
Nicaragua	11
Costa Rica	15
El Salvador	16
Cuba	17
Grenada	18
Honduras	19
Panama	20
Belize	21
Colombia	22
Conclusion	24
Recommendations	27
Appendices	28
Data Collectors	28
Turtleshell Survey Sheet Example	29
Bibliography	31
Too Rare to Wear Materials	32

# Summary

## Endangered Souvenirs

The hawksbill sea turtle (*Eretmochelys imbricata*) is a unique species that is critical to the health of coral reefs. Its beautiful multicolored shell (also known as a carapace), which helps it hide among the bright colors of the reef, also makes it an attractive souvenir, sold as jewelry and other products to travelers in many tropical countries. Despite national laws prohibiting the sale of hawksbill turtleshell (also known as “tortoiseshell”) products in most countries, as well as laws that prohibit international trade and the movement of products across borders, the sale of turtleshell continues in many places around the world.

Hawksbills are listed on the International Union for the Conservation of Nature (IUCN) Red List and the continued sale of these products is a major barrier to preventing their recovery. These products can be found in souvenir shops and stands in many tourist destinations around Latin America and the Caribbean and travelers often don't know that they are purchasing endangered animals or that it is illegal to buy or transport them across borders.

*In all, surveyors identified more than 10,000 turtleshell products at over 200 locations (of approximately 600 stores and artisan stalls visited), with an estimated total value of almost US \$52,000.*

To better understand the current situation, Too Rare To Wear, a coalition of conservation organization and tourism companies, is working with partners across the region to survey tourist hotspots to assess the current level of trade in turtleshell. In all, surveyors identified more than 10,000 turtleshell products at over 200 locations (of approximately 600 stores and artisan stalls visited), with an estimated total value of almost \$52,000. With this report, Too Rare To Wear will prioritize key destinations and tourist markets with the goal of reducing the demand for endangered hawksbills through a targeted educational campaign aimed at tourists.

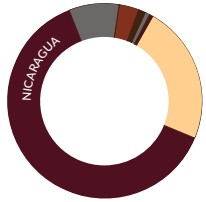
Visit [TooRareToWear.org](http://TooRareToWear.org) for more information on hawksbill sea turtles, the turtleshell trade, informational videos and graphics, and to sign the pledge to avoid turtleshell products.

# Key Findings



# 11,291

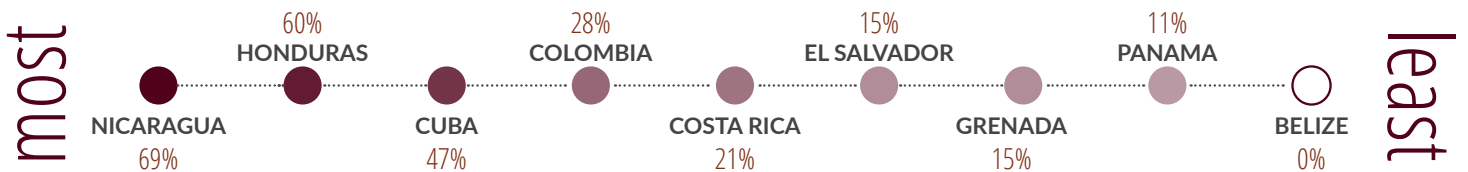
## Minimum Estimate Of Turtleshell Products For Sale\*



# OF TURTLESHELL PRODUCTS

## COUNTRIES VISITED

% of Observed Stores Selling Turtleshell



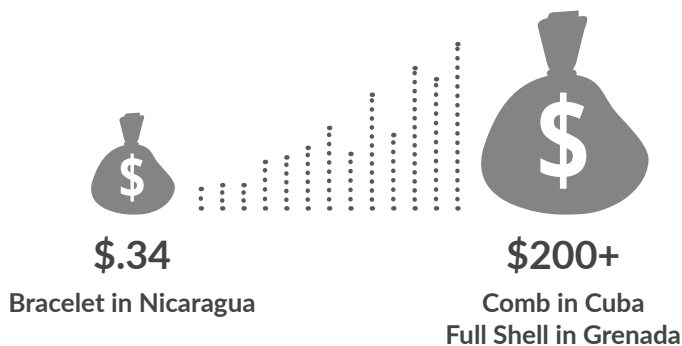
32% OF STORES  
221 of the 687 stores visited carried turtleshell items, exceeding 7,000 products.

COUNTRY	PERCENTAGE OF STORES	NUMBER OF ITEMS RECORDED	ESTIMATED VALUE OF ITEMS
Nicaragua	69% (114/165)	7,090	\$18,385
Costa Rica	21% (15/72)	949	\$4,603
El Salvador	15% (33/222)	372	\$2,050
Cuba	47% (9/19)	131	\$3,285
Grenada	15% (7/46)	108	\$1,862
Honduras	60% (23/38)	Not available	Not available
Panama	11% (1/9)	48	\$605
Belize	0 (0/47)	0	0
Colombia	28% (19/69)	2,593*	\$20,990*
TOTAL	32% (221/687)	11,291	\$51,781

# \$51,781

total estimated **minimum value** of observed items.

## RANGE OF TURTLESHELL PRODUCT PRICES



FOR MORE INFORMATION  
Visit [www.TooRareToWear.org](http://www.TooRareToWear.org)



\*Includes data from Colombia; Colombia data based on 5 year averages from 2008 - 2012

# Introduction

Meat, skin, scales, eggs, organs, claws, and bones - humans have used just about anything when it comes to wildlife parts for profit, subsistence, or cultural beliefs. Eliminating species from the wild adversely impacts biodiversity, the variety of organisms found in the environment, and erodes ecosystems that have evolved over great periods of time. As species are overexploited to satisfy increasing human demands, removing one species affects others, resulting in a ripple effect throughout the environment.

## The Business of Wildlife Trade

Unsustainable extraction of our natural resources is increasing around the globe. From African elephants and rhinos, to exotic birds, primates, tigers, sharks, marine turtles, and other reptiles, no animal is safely out of reach. At the current rate that species are disappearing from the wild, possibly tens of thousands of species will disappear in our lifetime. According to the Center for Biological Diversity, scientists estimate that the current rate of extinction is happening at a speed of 1,000 to 10,000 times the “background” or natural rate of extinction. Left unchecked, by mid-century as many as 30 to 50 percent of all species could be headed toward extinction.

The illegal trade of wildlife and wildlife parts is big business. The trade, estimated by the United Nations Development Programme to be worth a staggering US \$23 billion annually, is the 4th most lucrative illegal trade after drugs, human trafficking, and the arms trade. The United States, along with Europe, China, and Japan are the largest consumers of illegal wildlife products in the world. In a 2016 poll conducted by KRC Research for WildAid titled All Creatures, Great and Small: Illegal Wildlife Trade in the United States, 80 percent of Americans support wildlife conservation, however only 20 percent of people surveyed were aware of illegal trafficking and trade of wildlife in the United States. Although there was some awareness of the trade of elephant ivory, rhino horns, and tiger parts, less was known about the trade of marine species such as sea turtles.

## Sea Turtles and Tourism

The loss of natural resources such as sea turtles can have economic consequences for coastal communities that depend on wildlife assets for revenues generated by ecotourism, a rapidly expanding sector of the tourism industry. Seeing wildlife in its natural habitat is a significant reason why many people travel and removing charismatic animals like elephants, tigers, sharks, and sea turtles from the wild not only harms their habitats but may also reduce the desire to travel. Nature-based tour operators and tourism businesses are increasingly concerned about the effect of the wildlife trade and many companies and organizations have joined the US Wildlife Trafficking Alliance to collaborate on solutions. According to an economic study conducted by Sebastian Troëng and Carlos Drews for World Wildlife Fund (WWF) in 2004 titled Money Talks: Economic Aspects of Marine Turtle Use and Conservation, sea turtle ecotourism generates three times the income that turtle parts (including eggs, meat, and shells) fetch, confirming that sea turtles are worth far more alive than dead.

The greatest numbers of sea turtles are found in developing countries where tourism is often a key source of income and employment for locals. In addition to generating income for local guides and tour operators, and for protected areas, tourist dollars are spent at local hotels, restaurants, bars, shops, and other establishments, which can benefit entire communities, whereas the poaching of sea turtles for profit benefits only a few residents. Many destinations in Latin America and the Caribbean are trying

to move towards a model of ecotourism, where tourism supports local communities and conservation programs but illegal poaching of wildlife undermines these efforts.

Healthy, wild sea turtle populations provide important economic, ecological, educational, and emotional benefits to coastal residents and visitors alike. Indeed this group of animals plays an important role in coastal and marine ecosystems, has long been a source of commerce, be it through turtle products or tourism, and provides a compelling context for teaching ocean science and conservation. Often overlooked, however, are the vast emotional resources sea turtles provide.

Around the world and through millennia, imaginations have been sparked by these animals in many ways, creating designs, art, music, and prose. For many, sea turtles are a symbol of hope, tenacity, and longevity and a source of awe and wonder that builds compassion and empathy. In some cases a visit to a sea turtle project or chance encounter in the wild is therapeutic, cutting through the ills related to stress and anxiety of life in our modern society, and providing a sense of solitude, freedom and relaxation.



*Photo by Hal Brindley/ Travel for Wildlife*

## The World's Sea Turtles In Trouble

Worldwide, six of the seven sea turtle species are classified as at risk of extinction by the IUCN Red List. All sea turtles face a myriad of threats as a result of human activities. These threats include poaching for their meat, eggs, and shell, loss of foraging and nesting habitat, incidental capture in fishing gear, entanglement and ingestion of marine debris, beachfront development, climate change, pollution and oil spills, and more.

All sea turtles are listed under Appendix 1 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which includes species threatened with extinction. Since the inclusion of sea turtles in Appendix 1 in 1992, no legal international commercial trade has been allowed. However, a thriving black market still exists for these species, most prominently the hawksbill sea turtle, which is prized for its beautiful shell. Sea turtles are also protected by the U.S. Endangered Species Act (ESA) which protects all sea turtles found within the United States. Under the ESA, it is illegal to import, export, possess, sell, transport, kill, harass, or harm sea turtles.

Data from the Law Enforcement Management Information System (LEMIS), which is managed by the U.S. Fish & Wildlife Service (USFWS), showed that sea turtle products were the second most commonly confiscated items, mainly coming in from Mexico and Central America. Despite sea turtle parts being illegal to import into the U.S., they are also the most commonly intercepted products by U.S. Customs

agents from tourists returning home from the Caribbean. In another study published by Defenders Of Wildlife in 2015, both hawksbill and green sea turtles (*Chelonia mydas*) were among the top 10 species seized entering the United States.

In the last couple of decades, large shipments of hawksbills intended for the black market have been intercepted by enforcement agencies around the world. In more recent seizures, Philippine authorities intercepted a Chinese fishing vessel in 2014 that was carrying 500 live and dead turtles headed for the black market. In another seizure in November 2016, Chinese customs officials seized 109 stuffed hawksbills, highlighting the continued trafficking of sea turtles despite international protection under CITES Appendix 1. As noted in this report, there are also reasons to believe that the illicit trade of turtleshell products is occurring in Latin America and the Caribbean.

## Engineers of the Coral Reef

*“One hawksbill can consume an estimated 1,000 pounds or more of sponges per year according to the National Wildlife Federation.”*



Photo by Julie Suess

The hawksbill sea turtle is found in tropical and sub-tropical oceans around the world. Though widely distributed, they are critically endangered throughout their geographic range. The hawksbill is one of the smaller of the seven sea turtle species, weighing 150-200 pounds (45-90 kg) and reaching an average length of roughly 2 to 3 feet (~0.5 to 1 meter). They nest in low densities on secluded beaches with the largest numbers of nesting females occurring in the Caribbean, which represent 20 to 30 percent of the total global population.

In portions of their geographic range, primarily the Caribbean, the adult hawksbill diet is highly specialized, feeding almost exclusively on

multi-celled animals called sponges. Sponges have defenses that make them unpalatable to most animals including structural components called spicules, which are tiny glass-like spines that make them difficult to consume, as well as chemical defenses, or toxins, which are found in their tissues. The hawksbill is one of only a handful of marine animals that are adapted to consume these otherwise inedible creatures.

Sponges are found attached to the seafloor, rocks, and coral reefs and have the ability to overgrow and crowd out vital reef-building corals. Because of this, the hawksbill plays an important role in coral reef ecosystems. By consuming only certain types of sponges, they help to increase biodiversity by allowing other less common species to also occupy space on the reef. One hawksbill can consume an estimated 1,000 pounds or more of sponges per year according to the National Wildlife Federation.

Coral reefs are essential to protecting shorelines from storms and erosion, as well as providing habitat for a multitude of organisms. Reefs also provide millions of people with food and their value to the ecosystem is estimated to be nearly US \$10 trillion globally, according to the 1997 study *Changes in the Global Value of Ecosystem Services*. In addition, reefs are critical to the tourism industry, generating an estimated US \$9.6 billion per year in recreation according to the same study. Because coral reefs are being adversely affected by climate change and other factors, the role of the hawksbill as the 'engineer of



the reef' is an important one.

*“Reefs are critical to the tourism industry, generating an estimated US \$9.6 billion per year in recreation.”*

Hawksbills are also an important link between marine and terrestrial ecosystems because they lay their eggs on beaches and mangrove islands. The eggs they deposit in the sand provide nutrients to the beach and surrounding vegetation and hatchlings are an important source of food for many species of birds, crabs, fish, and other animals. Natural predators that consume sea turtle eggs also move nutrients into the system through the passing of fecal material.

## The Turtleshell Trade

Like all sea turtles, hawksbills face a wide range of threats, but it is unique among sea turtles in that it faces a threat like no other - the demand for its beautiful shell. The shell of the hawksbill is covered in colorful plates, called scutes, which are streaked with hues of amber, orange, gold, and brown. For this reason, the hawksbill has been exploited for centuries to meet the demand for luxury items crafted from its shell. *“The demand for these products has driven the hawksbill to the brink of extinction; its global population plummeting by an estimated 90 percent over the last century due to this threat and others.”*

Once a hawksbill is captured and killed, the scutes are removed from the shell and then polished and carved to make 'tortoiseshell' jewelry, eyeglass frames, combs, guitar picks, utensils, hair clips, and other trinkets. Turtleshell products are found in craft markets targeting tourists, both international and domestic, throughout Latin America and the Caribbean. The demand for these products has driven the hawksbill to the brink of extinction; its global population plummeting by an estimated 90 percent over the last century due to this threat and others.



*Photo by Hal Brindley/ Travel for Wildlife*

According to the article “Trade Routes for Tortoiseshell” in *State of the World’s Turtles Vol. 3*, between 1950 and 1992, Japan, the world’s major importer of hawksbill shell during the 20th century, imported an estimated two million hawksbill shells from the Caribbean, Latin America, Africa, Asia, and Oceania to supply its shell carving industry. Because sea turtles are long lived and late to reach maturity, or breeding age, removing adult hawksbills from the population at unsustainable rates is a recipe for disaster. With current estimates suggesting that only 15,000 - 20,000 nesting hawksbill females remain worldwide, time is running out.

# A Thriving Black Market

Historically the use of sea turtles in Central America has been culturally important. The unregulated exploitation however has pushed the critically endangered hawksbill to near extinction in the region. Despite the illegality of selling hawksbill products, lack of enforcement helps to perpetuate the continued harvest and because sea turtles migrate across borders, protecting them in one country does not protect them in another. A lack of awareness among local communities regarding the importance of sea turtles and how to conserve them is also a major factor in their continued decline.

Between 2001 and 2002 a survey of the availability of hawksbill products, including items made from the shell, was conducted throughout Central America by the Regional Network for the Conservation of Sea Turtles in Central America in cooperation with the Wider Caribbean Sea Turtle Conservation Network (WIDECAST). The resulting June 2002 report titled *Assessment About the Trade of Sea Turtles and Their Products in the Central American Isthmus* concluded that the “illegal trade and international trafficking in sea turtles and their products is widespread, and that the threat posed by this illegal trade is serious.” The report noted that despite continued conservation efforts throughout the region, the recovery of the hawksbill is compromised by high levels of trade, particularly of products made from its shell.

Products made from hawksbill shell were found in craft markets and shops in all seven countries surveyed in the 2002 report (Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, and Panama), with the largest numbers of items found in Nicaragua and Costa Rica. Nicaragua was noted as a source of hawksbill shell for multiple regions surveyed, and the trade of raw, unprocessed hawksbill materials was shown to be occurring between Central America and other countries such as Mexico, Colombia, Venezuela, and Grand Cayman, highlighting the need for international cooperation to adequately protect them.



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# Current Situation

**89%** of These Countries  
have vendors actively  
selling hawksbill products.

**32.2%** of These Locations  
were found selling  
hawksbill products.

**81.5%** of These Items  
were turtleshell products  
found in Nicaragua.

*...this puts the total number of hawksbill pieces found at a minimum of*  
**11,291 pieces.**

To assess the current prevalence and availability of hawksbill merchandise for sale at tourist destinations in Latin America and the Caribbean, Too Rear To Wear in-country campaign partners conducted surveys in eight countries – Belize, Costa Rica, Cuba, El Salvador, Grenada, Honduras, Nicaragua, and Panama. In addition, included in this report is a summary of research conducted on turtleshell trade in Colombia by the conservation organization Fundación Tortugas del Mar. A full list of all campaign partners and surveyors is shown in Appendix One. The majority of surveys were carried out between December 2016 and March 2017, with the exception of Colombia, where surveys were conducted from 2008 to 2012 and beyond.

Data collectors surveyed various types of stores around the region, ranging from temporary mobile street vendors to permanent souvenir shops and markets, with a primary focus on locations at known tourist destinations within each country. At each location, surveyors noted the presence or absence of hawksbill products for sale; where observed, the type and number of items was recorded and, where possible, the value of each item was estimated. If cooperative, the vendor was also asked a series of questions to ascertain more information about the origin of the merchandise, their knowledge about the legality of the sale of hawksbill items and to determine the primary market for the hawksbill products (See Appendix Two for an example data collection sheet and questionnaire).

Despite the sale of hawksbill products being illegal in all of the countries included in the survey, with the exception of Grenada, they were observed in **eight of the nine countries (89 percent)**; the only exception was Belize, where no hawksbill products were observed at any of the sites visited. A total of **687 different locations were surveyed at 52 sites in the nine countries.** Hawksbill merchandise was for sale in 32.2 percent of locations (221 of 687 places visited). Surveyors estimated a **minimum of 8,698 individual turtleshell items for sale**, of which **81.5 percent (7,090) were recorded in Nicaragua** alone. In addition, the survey in Colombia, which took place over a period of five years, estimated an average of 2,593 items per year. Combined with the recent survey, that puts the **total number of hawksbill pieces found at a minimum of 11,291.**

The items observed had an estimated total minimum value of US \$30,791, with merchandise in Colombia valued at an additional US \$20,990, for a total of more than US \$50,000. Surveyors found considerable variability in the type and price of items that were recorded during the surveys; the cheapest merchandise was found in Managua, Nicaragua, where a small bracelet was offered for as little as US \$0.34, similar to the cost of plastic jewelry in some places.

In contrast, a large decorative hair comb seen in Havana, Cuba, was priced at US \$200, and entire preserved hawksbill shells observed in Grand Anse, Grenada, could sell for more than US \$200. Similar products also showed significant variation in price between different countries, presumably correlated with availability and the primary intended market. For example, in Nicaragua, where the majority of items

were more abundant and often sold to national tourists, small items such as rings and earrings were sold at very low prices (less than US \$2), compared to almost US \$10 in Grenada where they were much more scarce and bought primarily by foreign visitors.

Several countries were clearly identified as 'hotspots' for the sale of hawksbill products, namely Nicaragua, Costa Rica, Colombia, and Cuba. El Salvador and Honduras both had significant amounts of turtleshell found though not in as high a quantity as the aforementioned hotspots. In Grenada, where turtleshell artifacts can be sold legally, there was also a significant amount of hawksbill merchandise being offered for sale. In Panama (specifically Bocas del Toro), the prevalence of hawksbill products for sale appears to be quite low.

The results of the surveys conducted in each country are summarized in the following sections; listed in order of the number of hawksbill items reported, from highest to lowest, with the additional research from Colombia at the end.



*Photo by RP Van Dam*

# Target Areas

Campaign partners conducted surveys in nine countries – Belize, Colombia, Costa Rica, Cuba, El Salvador, Grenada, Honduras, Nicaragua, and Panama.

## Percent of Stores Visited Selling Turtlesell

- 60-70%
- 25-50%
- <25%
- Not Surveyed



# Nicaragua

16  
SITES  
VISITED



Sixteen different coastal and inland towns and areas were surveyed by local organizations SOS Nicaragua, Fauna and Flora International, Paso Pacifico, and Universidad Nacional de Nicaragua – Managua. From the recent surveys, Nicaragua clearly displayed the most prolific and widespread availability of hawksbill products.

*“Nicaragua clearly displayed the most prolific and widespread availability of hawksbill products.”*

Items were encountered at 14 of the 16 destinations surveyed (87.5 percent), regardless of their distance from the coast. Surveyors visited a total of 165 different locations and hawksbill merchandise was reported at 114 (69.1 percent) of them, including souvenir shops, temporary street vendors and permanent markets. As many as 385 items were found at individual shops; some stores with a large inventory of stock often acted as the local

165  
STORES  
VISITED



114  
STORES WITH  
TURTLESHELL



distributor, providing articles to neighboring locations.

**Surveyors recorded a total of 7,090 turtleshell items.** At some locations it was not possible to make an accurate count, so this figure should be viewed as a minimum number. Nicaragua accounted for 81.5 percent of the total number of hawksbill items estimated for the entire survey of eight countries (not including Colombia), with a staggering 2,746 and 2,841 items recorded in Managua and Masaya alone which respectively equates to 31.6 percent and 32.7 percent of the total number of products found in the entire survey.

Hawksbill items found in Nicaragua had an **estimated value of US \$18,386** (again this figure should be seen as a minimum as it was not possible to attain price information from vendors at some locations). The prices in Nicaragua appeared to be significantly lower than in other Central America countries included in the survey; a bracelet was offered for just US \$0.34 in Managua and other small jewelry pieces were frequently being sold across the country

7,090  
TURTLESHELL  
PRODUCTS



\$18,385  
TOTAL  
VALUE



for less than US \$2. Even the most expensive item was only valued at US \$15; this was a large necklace for sale on Corn Island on the Caribbean coast. **In some places, the retail price of critically endangered hawksbill products was roughly equal to plastic trinkets.**

The primary intended market for hawksbill products varied among the sites. At Corinto on the Pacific coast, vendors were reliant on international visitors, mainly from the cruise ships that docked at the port during the season. Vendors from the inland sites, including Managua and Masaya, stated that they mainly sold to Nicaraguan nationals and those from other Central American countries; hawksbill products would often be purchased as gifts for Nicaraguan relatives or friends living overseas. León was the only inland site where vendors reported sales to international tourists, and they were able to gain a higher price for items than if they sold to nationals.

On the Caribbean coast, the level and type of tourism highly influenced the market and value of items. Puerto Cabezas

experiences very low levels of tourism (mainly Nicaraguans) and so vendors there often acted as intermediary distributors to sites inland and on the Pacific. Bluefields also receives few international tourists, and so vendors sold predominantly to Nicaraguan tourists from other parts of the country. In addition, there were reports from other sites that merchandise was being transported from artisans in Bluefields. Only vendors from Corn Island stated that they primarily sold hawksbill products to international tourists and prices were consequently higher at this site than others along that coast.

Of the vendors who responded to the additional questions asked by surveyors, the majority knew that the products they were selling were made of hawksbill shell; in fact only one vendor from Corinto on the Pacific coast specifically denied that the products were hawksbill. From their responses, there was clearly some confusion among vendors about the legality of the sale of hawksbill and sea turtle products in general. Throughout the country, the majority of people knew that it was illegal to kill sea turtles; however, on the Pacific coast some vendors stated that they understood it was legal for some part of the year, apparently confusing the legal green turtle fishery with hawksbills. A few also spoke of 'special government permits' for artisans on the coast to work with hawksbill shell though there is no law that allows this activity. On the Caribbean, one-third of vendors thought that the sale

of raw materials was illegal, but the sale of finished artifacts was legal. At inland sites, the majority of vendors were aware that it is illegal to sell hawksbill items. However, despite this clear discrepancy in public knowledge about the illegality of the sale of hawksbill products in Nicaragua, all of the vendors were openly displaying their merchandise. However, vendors at sites on the Pacific coast mentioned specifically that they retained a low number of hawksbill products in their inventory, not for lack of availability, but rather to avoid any issues with the police.

Furthermore, more than one vendor told surveyors that the hawksbill items they had were 'old stock' that remained from when it was legal to sell turtleshell, and that they were not going to purchase any more once it was sold. As in other countries, for the majority of vendors the sale of hawksbill products did not comprise the major source of income and they formed only a small percentage of the inventory of items for sale. However, at some of the inland locations, vendors did benefit significantly from the sale of hawksbill products, with reported earnings of up to US \$500 per month per vendor.

The surveys also revealed the extent of transport of both raw materials and finished products within Nicaragua, primarily from the Caribbean coast to sites inland and on the Pacific. One vendor in León revealed that an artisan came directly from Puerto Cabezas on the Caribbean coast every 1½ to 2 months,

bringing approximately 30 lbs of merchandise (such as earrings, bracelets, and other small items of jewelry) on each visit; assuming that all these items are routinely sold, this would equate to an annual turnover of almost 200 lbs of hawksbill products, solely in the city of León.



Photo by Hal Brindley/ Travel for Wildlife

Intermediary distributors in Managua and Masaya provide regular distribution of items, with many vendors at other sites talking about visits from known hawksbill artisans every few months. In addition, **several Pacific coast vendors mentioned that there was a market to export products to Costa Rica**, corroborating the findings from surveys there, which mentioned the import of items from Nicaragua. The results also gave an indication of the price mark-up from distributor to final point of sale; for example, bracelets could be purchased from an intermediary for US 0.67 and sold in-store for \$US 1.69. Raw material is also subject to similar price increases as it passes along the chain of sale; in Puerto Cabezas raw hawksbill scutes sell for US \$2.37/lb and in Managua they can fetch up to US \$6.77/lb in resale.

The turtleshell trade was previously assessed in the 2002 regional survey as well as a more recently in 2011-2012 by Fauna & Flora International. Both surveys showed that Nicaragua is a major location for the turtleshell product trade, with more than 4,000 items identified in 2002 and over 16,000 items recorded in the 2011-2012 survey. In 2002, 24 places were listed as selling turtleshell, though the total number of stores visited was not indicated. The more recent survey listed 139 places selling turtleshell out of 153 visited, equating to approximately 93 percent of shops. Since different places were visited during the two surveys, it is not possible to determine if the trade is declining.



*Photo of Turtleshell in Nicaragua*



*Photo by Hal Brindley/ Travel for Wildlife*



# Map of Nicaragua



# Costa Rica

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8

SITES  
VISITED



72

STORES  
VISITED



15

STORES WITH  
TURTLESHELL



949

TURTLESHELL  
PRODUCTS



\$4,604

TOTAL  
VALUE



Eight different coastal sites were surveyed by the organizations Latin American Sea Turtles, Equipo Tora Carey, and Global Vision International; six on the Pacific (Jacó, Manuel Antonio, Playa del Coco, Puntarenas, Quepos, and Tarcoles) and two on the Caribbean (Limón and Tortuguero). Hawksbill products were identified at four sites, on both coasts (Jacó, Puntarenas, Limón and Tortuguero). A total of 72 locations were surveyed, including souvenir shops, markets and street vendors; 15 (20.8 percent) stores had hawksbill products for sale. Surveyors estimated a total of 949 items, with some stores selling just one or two small pieces, up to a maximum of 462 items in one store in Puntarenas. The combined minimum total estimated value of the 949 items was US \$4,604, with individual items ranging in price from under US \$4 to US \$90 for rings of varying quality and size.

Interestingly, the primary intended market for hawksbill products varied between the different sites; Jacó and Tortuguero vendors were catering predominantly to international tourists, while

vendors in Limón stated that they mainly sold to Costa Rican nationals. Puntarenas, the site with the greatest abundance of hawksbill products for sale in the country (833 of the 949 items - 87.8 percent - were reported there) had a mixed market, with both national and international tourists (mainly from cruise ships) purchasing items.

Vendors that chose to respond to the additional questions (all sites except Tortuguero, where they declined to answer) all admitted that the products they were selling were made from hawksbill shell and they all knew that the material comes from a sea turtle. Furthermore, every single vendor was aware that it is illegal to sell hawksbill items, and yet they continue to do so openly in their stores. Only one vendor, of all those who responded, stated that the sale of hawksbill merchandise formed their main source of income, though there was no indication of how much they earned.

Several vendors on the Pacific coast reported that there is an apparent international trade in the raw material, with hawksbill shell reportedly being imported

from Nicaragua and Cuba. However, a more encouraging sign was the fact that surveyors noted that at several locations on the Pacific they sensed a decrease in the amount of hawksbill merchandise available in comparison to surveys conducted several years ago. This might also be a positive result of concerted efforts by Ministry of Environment and Energy (Ministerio de Ambiente y Energía) officials in the Central Pacific Conservation Area who have been actively working to reduce the sale of hawksbill products in their region.

In the 2002 regional assessment, 38 of 54 places visited were selling turtleshell products (70 percent). More than 2,100 pieces were identified in that survey. The current survey shows a much lower percentage of shops with turtleshell (21 percent) though as with other countries, the current survey visited different locations, so whether there is a significant decline in sales of turtleshell is difficult to determine.

# El Salvador

13  
SITES  
VISITED



Local organization ProCosta surveyed 13 sites throughout El Salvador, both on the coast and inland – Apaneca, Ataco, El Boquerón (Volcán de San Salvador), El Tunco, Ilobasco, Juayúa, La Libertad, La Palma, Los Planes de Renderos, Panchimalco, Salcoatitán, San Salvador, and Suchitoto. Hawksbill products were encountered at nine sites (69.2 percent – all except El Boquerón, Los Planes de Renderos, Panchimalco, and Salcoatitán).

Despite the high percentage of sites where turtleshell products were found, the percentage of stores selling merchandise was quite low at each site; only 33 of 222 locations (which included souvenir stores, permanent vendors, and temporary street traders) had hawksbill items on display. More than 40 percent of the 372 items recorded in the country were found at three large markets within San Salvador.

There was also quite a significant amount of turtleshell merchandise at two additional sites – Ataco and Ilobasco – suggesting that the sale of hawksbill products,

222  
STORES  
VISITED



33  
STORES WITH  
TURTLESHELL



while prevalent at low levels throughout the country, is quite concentrated at a few specific sites. The value of the items was estimated at US \$2,050, and prices for individual pieces were generally quite low, ranging from less than US \$2 for rings to just US \$18 for a necklace. The primary intended market for merchandise was tourists, probably international visitors.

*“More than 40 percent of the 372 items recorded in the country were found at three large markets within San Salvador.”*

The majority of vendors admitted that the products were made from hawksbill shell, although some said they were other materials, such as plastic, and a few did not know. El Salvador law prohibits the sale of hawksbill products and the majority of vendors knew that it is illegal to sell such items, although some appeared to be unaware of the law. However, surveyors reported that the products were on open sale in all

372  
TURTLESHELL  
PRODUCTS



\$2,050  
TOTAL  
VALUE



locations, thus it does not appear to be a deterrent to vendors. As in Costa Rica, some vendors reported the international trade in raw hawksbill shell, which is sometimes imported from Honduras and Nicaragua to be crafted into jewelry in El Salvador.

The findings of the 2002 assessment were unclear as to what percentage of shops sold turtleshell items, but the report did mention four shops selling a total of 133 turtleshell items.

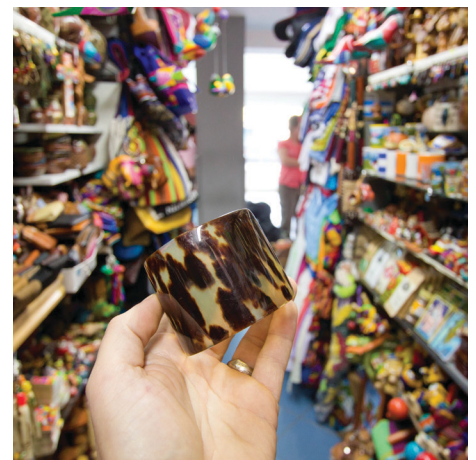


Photo by Hal Brindley/ Travel for Wildlife

# Cuba

1

SITES  
VISITED



19

STORES  
VISITED



9

STORES WITH  
TURTLESHELL



131

TURTLESHELL  
PRODUCTS



\$3,285

TOTAL  
VALUE



The island nation of Cuba also showed relatively high abundance of hawksbill products for sale. Surveys were conducted by volunteers with the Instituto Superior de Tecnologías Y Ciencias Aplicadas (InSTEC) at one site, Havana. The 2016 survey was updating a similar survey conducted in 2014 by WWF; many of the same locations were visited in both years, thus it was possible to detect changes in the prevalence of hawksbill merchandise for sale.

In 2016, hawksbill artifacts were reported at nine (47.4 percent) of the 19 stores and markets that were visited. The results were very similar to the findings from the 2014 survey, when 12 of 25 (48 percent) locations surveyed had turtleshell merchandise available. In both years there were vendors who stated that they did not have any hawksbill items 'at the moment', so presumably would normally have them available. In 2016, one person had no turtleshell merchandise due to a recent inspection by officials and others knew where to acquire hawksbill items if requested by customers.

*"Hawksbill artifacts were reported at nine (47.4 percent) of the 19 stores and markets."*

A total of 131 items were identified, with an estimated value of US \$3,285; some items could not be priced, so this should be seen as a minimum value. In addition to the more common jewelry items, surveyors also encountered several larger, more intricate (and more valuable) products such as fans and large hair combs, which were on sale for up to US \$200. Vendors indicated that the primary market for turtleshell items were tourists, mainly Cuban-Americans. All of the vendors knew that the items were hawksbill and they were also all aware that it is illegal to sell turtleshell, hence why, in contrast to other countries, the majority of vendors were selling the artifacts surreptitiously; very few items were on open display and surveyors had to request them. However, as in other countries, the sale of hawksbill products did not constitute the major source of income for any of the vendors questioned.

*"Surveyors also encountered several larger, more intricate (and more valuable) products such as fans and large hair combs."*



Photo by Brad Nahill/ SEE Turtles

# Grenada

9

SITES  
VISITED



46

STORES  
VISITED



7

STORES WITH  
TURTLESHELL



108

TURTLESHELL  
PRODUCTS



\$1,862

TOTAL  
VALUE



In Grenada, nine sites across the island were surveyed by staff from Ocean Spirits Inc.: Belmont, Calivigny, Concord, Grand Anse, Grand Etang, Hillsborough, Paradise Beach, Port Louis, and St George. Three of these sites (33.3 percent) had hawksbill products for sale – Concord, Grand Anse, and Hillsborough. Of the 46 souvenir stores and street vendors surveyed, seven (15.2 percent) had hawksbill items for sale.

In one store in Port Louis, the merchandise was displayed on pieces of hawksbill shell and bones; however, the vendor told surveyors that they were not for sale. A total of 108 items were recorded, with an estimated total value of US \$1,862. In general, prices were higher in Grenada than the other countries surveyed; rings and guitar picks were on sale for around US \$9, compared to less than US \$2 elsewhere.



Photo by Ocean Spirits

Furthermore, Grenada was the only country where whole hawksbill carapaces were observed for sale, with a value of around US \$200. The vendor told surveyors that the shells were purchased directly from fishermen. Tourists were the primary intended market, predominantly international visitors including those on board cruise ships. The majority of vendors knew that the items were produced from hawksbill shell, though several initially stated they were other materials when questioned.

While the sale of hawksbill products is not prohibited in Grenada, the country is a signatory to CITES and so it is illegal to take turtleshell items out of the country. Therefore international visitors could face problems with customs authorities in their home country if they attempt to bring turtleshell items home. Some vendors, however, were advising tourists that there were no problems to travel with hawksbill internationally and they were clearly not concerned about potential problems for their customers once they left Grenada. Only one

of the vendors who answered questions stated that they received the majority of their income from the sale of hawksbill items.



Photo by Ocean Spirits

# Honduras

3  
SITES  
VISITED



38  
STORES  
VISITED



23  
STORES WITH  
TURTLESHELL



N/A  
TURTLESHELL  
PRODUCTS



N/A  
TOTAL  
VALUE



Photo by Hal Brindley/Travel for Wildlife Conservation organization Protective Turtle Ecology Center for Training, Outreach, and Research, Inc. (ProTECTOR Inc.) conducted surveys at three sites in Honduras; La Ceiba, Tegucigalpa, and Valle de Angeles, visiting a total of 38 souvenir stores. Hawksbill products were observed for sale at 23 locations (60.5 percent). Unfortunately, surveyors were not able to estimate the number of items available or assess their total value. In contrast to other countries, the majority of vendors (73 percent) were not aware that it was illegal to sell hawkshell items, despite national laws being in place that prevent the commercialization of turtleshell products.

Surveys in Honduras were the only ones that provided information about the scale of

trade of hawkshell products. Although not all vendors had exactly the same range of merchandise available, they were able to provide basic information about the number of items they sold each week. The places that sold turtleshell reported averaging five pairs of earrings, three bracelets, five rings, and four necklaces per store. Items varied in price from US \$2.12 (earrings) to US \$11.89 (necklace) and it was possible to estimate that the average weekly income for vendors from the sale of hawkshell items was approximately US \$78. However, there was no indication if the sale of hawkshell merchandise provided the main source of income for vendors.

Interestingly, vendors in Honduras were the only ones who stated that they sold turtleshell items to meet the demand of foreign tourists (10 of 23 vendors surveyed – 43.5 percent), who were presumably the primary market for their products. Furthermore, they were the only group to allude to the tradition of utilizing hawkshell products in their country (6 of 23 vendors who responded – 26.1 percent), with one vendor

mentioning their 30 year tradition of selling turtleshell items.

In the 2002 regional assessment, surveyors visited 29 shops in five sites, finding an estimated 590 items at 27 of the shops (93 percent). The town of Tela was reported to be a place where the products originated, though this site was not visited during the current survey. While the current survey found a lower percentage of shops selling turtleshell, it appears to continue to be a significant threat to hawkshells across the country.



Photo by Hal Brindley/Travel for Wildlife

# Panama

1

SITES  
VISITED



9

STORES  
VISITED



1

STORES WITH  
TURTLESHELL



48

TURTLESHELL  
PRODUCTS



\$605

TOTAL  
VALUE



In Panama, one site (Bocas del Toro) was surveyed, Bocas del Toro town, on the Caribbean coast. Sea Turtle Conservancy staff visited nine shops and only one store (11.1 percent) had hawksbill items for sale. A total of 48 pieces of jewelry were recorded, with an estimated total value of US \$605. Individual items ranged in price from US \$3 for rings to US \$25 for large bracelets. The vendor selling the turtleshell products knew that they were hawksbill and that it is illegal to sell such items. They stated that they sold the products to support their family but it was not the main source of income. Both foreign and Panamanian tourists purchased turtleshell artifacts, though sales to nationals increased significantly during festivals, when Panamanians from across the country participated in the local celebrations.

Bocas del Toro has a long and intense history of providing turtleshell to the international market; a study in 2008 by Marydele Donnelly and Jeanne Mortimer showed that the equivalent of more than 150,000 individual hawksbills were exported to Japan between 1950

and 1992, making it the top exporter over that time period.



*Photo by Hal Brindley/ Travel for Wildlife*

Sea Turtle Conservancy has conducted a sea turtle conservation program for more than a decade in this area, which may have resulted in a decline in the open commercialization of sea turtle products in the area. The surveyors noted that one of the same stores had previously sold hawksbill items but now no longer had products available, possibly due to outreach efforts. In addition, a 2013 study by Anne and Peter Meylan and Cristina Ordoñez also attributes some of the decline in turtle hunting to “the presence of conservation-minded visitors.”

Given the restricted range of the surveys to a single town on the Caribbean coast, it is feasible

to presume that had they been conducted more extensively throughout the country, a more widespread abundance of turtleshell merchandise may have been encountered. This theory is also supported by anecdotal evidence gained during this survey, which indicated that hawksbill products were being sold in other tourist destinations close to Bocas del Toro town, including Isla Bastimientos and Bocas del Drago.

The 2002 assessment identified 16 vendors in five sites across the country, primarily in the Bocas del Toro area. More than 400 pieces were found at these shops. While the previous survey covered more sites than the current survey, the data suggests that the sale of turtleshell has declined, though to what extent is not clear.



*Photo by Hal Brindley/ Travel for Wildlife*

# Belize

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Three different sites were surveyed by the Oceanic Society; Belize City, San Pedro, and Belize City international airport. A total of 47 locations were visited, including a tourist village and permanent markets, with a minimum of seven locations surveyed at each site. **Belize was the only country where no hawksbill products were observed at any location.**

In the 2002 assessment, seven sites were visited in Belize and turtleshell was observed for sale at just two of approximately 80 places visited. It appears that this country has not been a major site for turtleshell sales both then and now. The surveyor believes that further study is needed to confirm this, both in different sites around the country as well as at different times of the year.



# Colombia

1  
SITES  
VISITED



69  
STORES  
VISITED



19  
STORES WITH  
TURTLESHELL



2,593  
TURTLESHELL  
PRODUCTS



\$20,990  
TOTAL  
VALUE



Information from Colombia has been collected since 2008 by Fundación Tortugas del Mar, as part of an ongoing independent study they have conducted to assess the trade of hawksbill products in the town of Cartagena de Indias on the Caribbean coast. Each year 60 – 65 street vendors were surveyed; a further 32 souvenir shops and retail stores were also visited. Prior to 2012 none of the permanent locations had any hawksbill products for sale, but in the last five years turtleshell items have been recorded in these stores.

*“60–65 street vendors were surveyed.”*

Of the street vendors, from 2008 – 2012, 15 – 24 stalls were recorded selling hawksbill products each year (20 – 36.9 percent), exclusively in the area of Amurallado. Since 2012, surveyors have observed an expansion of the trade of hawksbill items into neighboring tourist locations, such as Bocagrande and Castillo de San Felipe, and a minimum of 18 stores and stalls were reported selling turtleshell products during

each survey.



Estimations of the number of items available for sale were calculated differently to surveys in other countries; photographs and videos taken at stalls where hawksbill products were identified were used to determine the number of items and these figures were subsequently extrapolated to account for all the other vendors observed with the same products. Each year from 2008 to 2012, from 1,800 to 2,800 items were estimated to have been on sale, giving an overall annual average of 2,593 items over the five year period; these figures should be taken

as maximum values, given the extrapolation method used. Similarly, the estimated value of merchandise was determined using the average number of items per year and the average price of products during the five years; giving an estimated total annual value of US \$20,990.

There was a significant range of the price of individual items, from US \$2.50 (rings) to US \$50 (necklace).

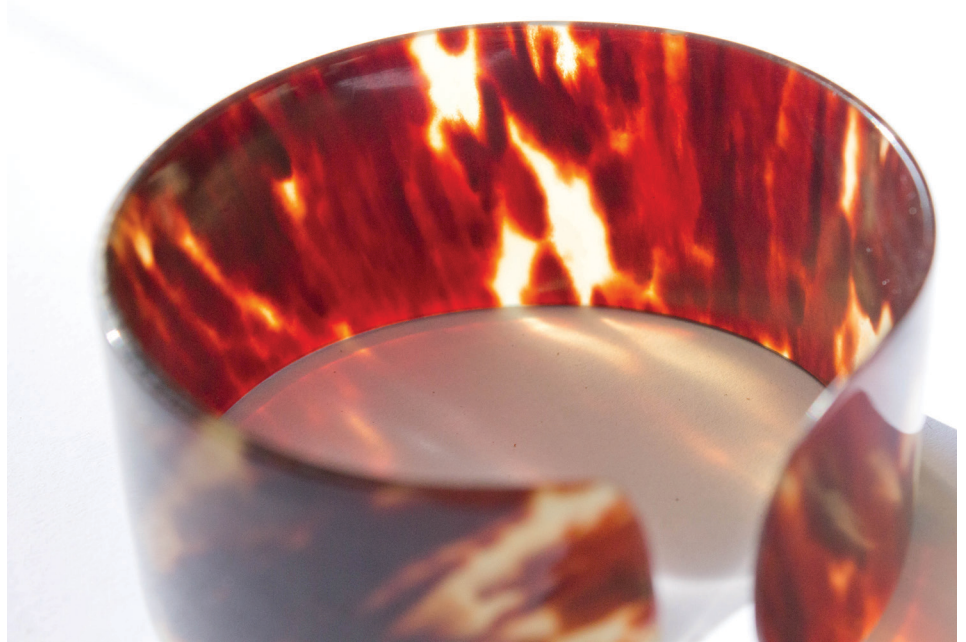


There were several items recorded in Colombia that were not seen in any of the other countries including large salad servers, teaspoons, knives, and bowls. Prices were observed to vary considerably depending on the quality of the product, the season, and the nationality of tourists purchasing the products. Surveyors noted that there were four artisans observed in several different years and they were presumed to be acting as

*Note: This study used different methodology than other survey sites and during a different time period.*

distributors for the other vendors in the area; they might have also had an influence on the retail prices, as they were similar between all vendors. The primary intended market was reported by vendors as US and French tourists, and a smaller number of Colombian nationals; visitors from other Latin American countries also purchased turtleshell items.

All vendors knew that it was illegal to sell hawksbill products, but they did so openly. Surveyors observed police officers conversing with vendors and others had official municipal vendor ID cards authorizing them to sell merchandise on the streets of Cartagena's old walled city, suggesting that there was little government enforcement of the law or fear of prosecution. Vendors reported that the primary source of the raw material was the La Guajira Peninsula in Colombia, an area known to be an important foraging ground for adult hawksbills and a key developmental habitat for juveniles, and to a lesser extent from Corales del Rosario and San Bernardo National Park, 45 km southwest of Cartagena Bay. There was no indication given as to whether the sale of hawksbill products constituted the main source of income for vendors, although they constituted a large proportion of the inventory of several vendors.



*Photo by Hal Brindley / Travel for Wildlife*

# Conclusions

The results of these recent surveys reveal that the (mostly) illegal sale of hawksbill products is still widespread throughout the Central America and Caribbean region, with Belize being the only country where no turtleshell items were reported. Furthermore, the findings highlight distinct 'hotspots' in Nicaragua, Costa Rica, and Cuba, the former having quantities of hawksbill items that were significantly higher than in any other country surveyed.

## Who Buys Turtleshell?

It was interesting to observe that the intended purchaser of hawksbill products varied both between and within countries, and it was clear that this was influenced by the extent and type of tourism at a given site, although it should be noted that the majority of sites included in this survey were selected because of the fact that they are tourist destinations. There obviously still exists a considerable market for turtleshell items, both among nationals from Central America and Caribbean countries and also among visitors from further afield such as North America and Europe.

In three countries, vendors specifically identified cruise ship passengers as one of their primary intended markets for hawksbill artifacts; Corinto, on the Pacific coast of Nicaragua, Grand Anse in Grenada, and Puntarenas on the Pacific coast of Costa Rica. Quite surprisingly, despite the large number of cruise ships visiting Limón on the Caribbean coast of Costa Rica, vendors in that town did not cite them as a principal market for turtleshell items.

National tourists in various countries are frequently purchasing hawksbill items was reported by many vendors. A good example of this is a comment from a vendor in Panama who noted that sales of turtleshell products increased during local festivals, when many Panamanians visited the coastal town of Bocas del Toro to participate in the celebrations. Similarly, in Chinandega, Nicaragua, vendors also stated that sales were particularly good at Christmas and Easter, coinciding with an increase in national tourism to the zone. In other countries vendors catered more specifically to the international trade; for example, in Honduras some vendors suggested that they maintained hawksbill items in stock to meet the demand from foreign tourists.

## Supply & Demand of Turtleshell

Small jewelry items such as rings or earrings were very cheap in many countries, frequently less than US \$2. In Nicaragua, for example, at some sites turtleshell jewelry was comparable in price to plastic items; in places with high international tourism, however, surveyors noted that hawksbill products were priced up to 200 percent higher than similar articles made of plastic. This may reflect the unwillingness of many national visitors to pay a higher price for an item they regard as 'traditional' and vendors at several sites noted that items purchased by international visitors could fetch much higher prices than if sold to nationals. Alternatively, the low prices of turtleshell may simply reflect the abundance of raw product, which can be purchased cheaply by artisans. Given that hawksbill merchandise in many of the locations did not have a very high retail value, it was perhaps not surprising to discover that for the majority of vendors who responded that it did not constitute their principal source of income.

The raw material appears to be readily available and abundant in Nicaragua where significant volumes of merchandise are being produced, suggesting that it remains relatively easy for artisans to purchase turtleshell. The level of trade identified from this survey could potentially limit the continuing recovery of hawksbill populations in the region. Furthermore, if the Caribbean populations become depleted the

demand for turtleshell might shift to Eastern Pacific hawksbills, which are not currently assumed to be hunted in significant numbers. This shift would put additional pressure on a very vulnerable regional hawksbill population that until fairly recently was thought by some researchers to be beyond recovery but now has conservation programs in place at its primary nesting beaches in Nicaragua and El Salvador. The variability in price of hawksbill items between the different countries may correlate with availability of the raw materials; lower prices possibly indicative of greater abundance and a corresponding ease of purchase. One particularly noteworthy comment, related to the abundance and use of the raw material, was made by a vendor in León, Nicaragua, who had contemplated the possibility of offering laser tools to hawksbill artisans to improve their utilization of the turtleshell. The rationale was that if they could make better use of each shell, they would need less, resulting in fewer turtles needing to be killed. Demand for these products could also depend on a variety of factors that were not studied in this survey, including the cultural preferences of consumers, the availability of substitute products, the quality of the products, and other factors.

## The International Trade Continues

A related issue that arose from the results was the worrying observation that there appears to be a flow of both raw materials and finished products across international borders. Vendors in Costa Rica reported imports of hawksbill shell from both Nicaragua and Cuba, while those in El Salvador mentioned that raw turtleshell came from Nicaragua and Honduras. Nicaragua clearly emerged as the primary source of material for neighboring countries and this was also corroborated by comments from vendors on the Pacific coast there, who mentioned exports to Costa Rica of both shell and finished products.

*“Foreign visitors to Central America and the Caribbean are often unaware of these laws and therefore could face potential legal issues when trying to bring hawksbill merchandise obtained overseas back into their home countries.”*

These transactions, if accurate, are in clear breach of CITES regulations, which prohibit the international sale of products that originate from protected species such as hawksbills. Foreign visitors to Central America and the Caribbean are often unaware of these laws and therefore could face potential legal issues when trying to bring hawksbill merchandise obtained overseas back into their home countries. It was surprising to observe in Grenada that vendors were encouraging visitors to purchase turtleshell items, and even providing advice on how to avoid issues with customs officials; although one vendor expressed no concern over problems that customers may experience once they left the island.

In several countries there was some misunderstanding among vendors about the legality of selling products made from turtleshell, despite the fact that national laws exist which prohibit their sale (except in the case of Grenada). While the majority of vendors were aware that it was illegal for them to sell merchandise made from hawksbill shell, there was definite confusion about this issue. In Nicaragua, for example, where there is a limited legal harvest of green turtles, numerous vendors were confusing or misinterpreting the law particular to that species with the one for hawksbill turtles and their products, for which commercialization is completely prohibited. Only in Honduras were nearly all vendors under the (mistaken) assumption that hawksbill products could be sold legally, which is clearly a concern. Obviously, it would appear that each of the countries where surveys were conducted need to readdress the information available to citizens about national laws pertaining to the sale of turtle products.

# Law Enforcement Issues

Survey findings also clearly highlight another issue common to all of the countries where hawksbill products were for sale, namely a significant lack of enforcement by government agencies. The sale of turtleshell products is prohibited in every country surveyed (with the exception of Grenada) and yet there appears to be little or no apparent enforcement, and vendors openly display and sell hawksbill merchandise. Indeed in Nicaragua, several locations exhibiting hawksbill items were within sight of police stations; only in Cuba were products typically hidden from view for fear of reprisals from the authorities.

However, there were indications that enforcement initiatives in some countries had prompted several vendors to stop selling hawksbill products, such as in Costa Rica, Nicaragua, Cuba, and Panama, where either vendors mentioned specifically that previous operatives by police that had involved decommission of merchandise were a deterrent to them currently selling turtleshell items, or surveyors had personally observed hawksbill products in stores on previous occasions. In the case of Cuba, products were not sold in the open to prevent fines from inspectors and confiscation of the products. Long-term turtle conservation programs in several countries also have played a part in raising awareness about the status of hawksbill populations, which in turn may have decreased the numbers being killed. It was also very encouraging to learn about a targeted campaign to reduce the sale of hawksbill items by environment ministry officials in the Central Pacific Conservation Area of Costa Rica that showed signs of success.

*“Hawksbill populations remain threatened in order to provide the raw material for the considerable demand for turtleshell products that exists in the region.”*

While this survey can only offer a relatively limited analysis of the current situation with regard to the prevalence of the commercialization of hawksbill products, what the data definitively indicates is that hawksbill populations remain threatened in order to provide the raw material for the considerable demand for turtleshell products that exists in the region. As with any research, the findings raise further questions and indicate topics that warrant more detailed investigation, such as a survey to determine the level of understanding of those purchasing hawksbill products about the origins of the material and pertinent laws protecting sea turtles, as well as surveys on the knowledge and motivations of tourists who purchase these items.

# Education is Critical

The results of this survey also emphasize the need for outreach that primarily targets potential consumers. International tourists may be more readily dissuaded from buying turtleshell products if they learn that obtaining the raw material involves killing a critically endangered species, that the sale of hawksbill items is prohibited by national laws, or that they could be in contravention of international conventions if they attempt to transport turtleshell items back to their home countries (in the case of international tourists).

The survey results also made it apparent that turtleshell products are also frequently purchased by nationals from Central American countries, many of who perceive hawksbill items as part of their heritage. **Any outreach campaign aimed at primary consumers, therefore, also needs to encompass the traditional and cultural beliefs of this potentially significant proportion of the market.** While this potential means of trying to reduce the demand for turtleshell merchandise will obviously be a complex challenge that requires prompt implementation and regional collaboration to maximize success, it has the potential to provide positive impacts on the hawksbill populations in the region.

# Recommendations

The findings from the regional assessment of the trade in hawksbill products raised several recommendations for the next phase of the Too Rare To Wear campaign, which are summarized below.

## 1. Educational Outreach Campaign

A regional educational outreach campaign is needed that focuses on raising awareness among primary consumers, domestic and international tourists. The goal should be to try and reduce the demand for turtleshell items by providing information about the methods employed to source turtleshell, the negative impact of the trade on critically endangered hawksbill populations, the illegality of purchasing turtleshell in the majority of countries, and the potential legal implications of transporting hawksbill products across international borders. The strategy adopted may need to be tailored to address the target consumer market in a given country or at a given site, as foreign tourists may respond differently to nationals, thus a wide-ranging, inclusive campaign needs to be designed.

## 2. Key Focus

Nicaragua clearly should be a high priority for intensive outreach efforts around this issue. Sea turtle conservation organizations should work with national authorities as well as domestic tourism businesses including hotels. Efforts should build on existing outreach efforts including the long-term work of Fauna & Flora International and other Nicaraguan organizations.

## 3. Address Illegal Trade

Relevant government ministries in each country need to be engaged to highlight the current situation regarding the (mainly) illegal trade of hawksbill products in the region, provide officials with training to identify hawksbill products, and assist in the development of plans to improve the enforcement of national laws and encourage better compliance with international conventions, including regular assessments of the scope and level of trade in turtleshell merchandise.

## 4. Partner with Cruise Lines

For the international tourism market to the region, the cruise lines appear to be a key player for outreach as several vendors mentioned that cruise passengers were key purchasers of these products. A targeted outreach campaign in partnership with cruise companies could be an effective way to reduce demand for turtleshell products at a number of destinations.

# Appendices

## Appendix 1

### PARTICIPATING ORGANIZATIONS & SURVEYORS

Country	Organization	Surveyor Name
Belize	Oceanic Society	Eric Angel Ramos
		Kristi Ashley Collom
Costa Rica	Latin American Sea Turtles	Didiher Chacón
		Didiher Chacon-Vargas
	Global Vision International	Alejandra Carvallo
	Equipo Tora Carey	Maike Heidemeyer
Colombia	Fundación Tortugas del Mar	Karla Barrientos-Muñoz
		Cristian Ramirez-Gallego
Cuba	InSTEC	Andy Russet
		Claudia Cabrera
		Claudia Ruiz
		Randy Calderón
El Salvador	ProCosta	Ani Henríquez
		Carlos Vallecamos
		Carolina Rivas
		Iris Chavarría
		Kevin Hernández
		Mauricio Bolaños
		Mauricio Soriano
		Melissa Valle
		Sofía Chavarría
Yesenia Flores		
Grenada	Ocean Spirits Inc	Kate Charles
		Kester Charles
Honduras	ProTECTOR Inc.	Lidia Salinas
		Stephen Dunbar
Nicaragua	Fauna and Flora International	Velkiss Gadea
	SOS Nicaragua	David Melero
	Paso Pacifico	Franciska May
		Julia Martínez
		Karen Lacayo
	UNAN-Managua	Yahaira Vargas
Panama	Sea Turtle Conservancy	Gena del Carmen Abarca
		Cristina Ordoñez Espinosa
		Georgina Zamora Quílez

# Appendix 2

## EXAMPLE OF TURTLESHELL PRODUCT SURVEY

Date:

Data Collector Organization:

Data Collector Name:

City/Town:

Country:

Store Name:

Type of Business:

Souvenir Shop

Vendor

Location/ Type of Store:

Market

Market Name

Shopping Mall

Airport Gift Shop

Hotel Gift Shop

Individual Store

Street Vendor *permanent*

Street Vendor *temporary*

Turtleshell Items Found: Yes  No

Types, Prices & Estimated Number of Items

Type of Product	Price Per Item	Estimated # of Items	Total Estimated Value
Rings			
Bracelets			
Guitar Picks			
Earrings			
Other (specify)			
Other (specify)			



# Optional Questions for Vendors/ Sellers

Do the sellers know or admit that the products are turtleshell?

Do they know the origin of the turtleshell products?

Are they aware that it is illegal?

Why buys the products?

Is turtleshell a major source of income?

Notes

# Appendix 3

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# Appendix 4

## TOO RARE TO WEAR OUTREACH MATERIALS

### A. Hawksbill Infographic

Being a sea turtle is hard enough.

**Don't make one your souvenir.**

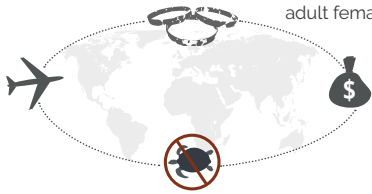
It is **illegal to buy** hawksbill products most places yet it is still **frequently sold worldwide.**



#### THE PROBLEM: TURTLESHELL JEWELRY THE IMPACT: WORLDWIDE

Hawksbill sea turtles are **critically endangered**, and the use of their shells to make souvenirs like **jewelry** are one of their **top threats.**

**15,000 REMAINING**  
adult females **worldwide.**



**4,000 BABY TURTLES**  
won't hatch when **one female is killed.**



**1,000 LBS OF SPONGES**  
are eaten by a hawksbill per year, helping **coral reefs grow.**



**MILLIONS OF PEOPLE**  
inspired by seeing them in a coral reef or on the beach.

#### HOW YOU CAN HELP

##### 1 DON'T BUY THEM

Help save this turtle by **avoiding stores and vendors** who sell these products.

##### 2 SIGN OUR PLEDGE

Get more information at [www.TooRareToWear.org](http://www.TooRareToWear.org)

##### 3 SHARE

Spread the word on social media and **follow @TooRareToWear** on Facebook.

[WWW.TOORARETOWEAR.ORG](http://WWW.TOORARETOWEAR.ORG)

### B. Guide To Recognizing Turtleshell



## HOW TO IDENTIFY & AVOID HAWKSBILL TURTLESHELL

Endangered hawksbill turtles are **hunted for their shells to make souvenirs.** Help save this turtle by **avoiding vendors selling turtleshell products.**



#### IMITATION

##### PLASTIC



Uniform pattern with markings



##### COCONUT

Brown on top, beige underneath



##### HORN

Heavy with black/white coloring

#### TURTLESHELL

##### COLOR



Browns, oranges, amber, yellow

##### PATTERN



Assymetric and irregular shapes

##### SURFACE



Color pattern visible throughout



VISIT [WWW.TOORARETOWEAR.ORG](http://WWW.TOORARETOWEAR.ORG)

Photos: MurSadies-Etsy.com, Hal Brindley/Travel For Wildlife, Latin American Sea Turtles, RP Van Dam, Julie Sues

