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Good Morning. I am Marydele Donnelly, a Scientist for the Marine Wildlife Program at The Ocean Conservancy. I am a biologist and have worked to conserve marine turtles for over 18 years. The Ocean Conservancy strives to be the world's foremost advocate for the oceans. With over 80 staff serving 150,000 members, we work to inform, inspire and empower people to speak and act for the oceans through science-based advocacy, research and public education. Headquartered in Washington, D.C., The Ocean Conservancy has additional offices in Alaska, California, Washington, Florida, Maine, Virginia and the U.S. Virgin Islands.

The Ocean Conservancy appreciates the opportunity to testify in strong support of H.R. 3378, the Marine Turtle Conservation Act of 2003 (MTCA). This legislation will support critical programs to prevent the extinction of the world's seven vulnerable species of marine turtles in oceans around the globe. In the following testimony, I will summarize the history of the decline of marine turtle populations and provide some biological context for the need for this legislation. I then will discuss the types of activities authorized under MTCA with a focus on partnership opportunities that will supplement and leverage the appropriation provided by the bill.

Background and Need for H.R. 3378

Descendants of turtles that roamed the oceans more than 100 million years ago, the world's seven existing marine turtle species remained abundant until the last several hundred years. Since the age of European exploration and continuing into the second half of the 20th century, however, populations have been decimated as millions of turtles were killed for meat, eggs, tortoiseshell, oil, leather and calipee (the gelatinous substance used to make green turtle soup). Nesting females on beaches were and continue to be especially at risk as they are slow, easy targets.

The biological ramifications of exploiting breeding animals and their eggs are obvious. Marine turtles have experienced serious population declines in all oceans, with some nesting colonies vanishing altogether. Current assessments by the World Conservation Union (IUCN) list loggerheads, greens, and olive ridley turtles as *Endangered*, based on nesting population declines of 50% or more over a span of three turtle generations. Kemp's ridleys, leatherbacks and hawksbills are listed as *Critically Endangered*, based on population declines of 80% or more over three generations' time. The flatback, whose range is restricted to the Australian shelf, is currently listed as *Data Deficient*.

Between 1970-1978 the United States listed all species of marine turtles except the flatback under the Endangered Species Act, coinciding with international bans by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Conservation measures and international trade prohibitions have benefited turtle populations, but much remains to be done. Local hunting, coupled with global losses of nesting and foraging habitat, accidental capture in fisheries, and pollution, continue to take a toll on marine turtle populations and the species' distinct genetic diversity.

The complex biology of marine turtles makes them especially vulnerable to extinction. Unlike virtually all other marine species, marine turtles must come ashore to lay eggs. Most species do not reproduce for at least 20 years, but once mature, they breed for two decades or more, with older animals being the most productive breeders. Most species do not nest every year, but within a breeding season, a female produces multiple nests. In areas where exploitation is high, individual turtles are unlikely to survive for an entire nesting season. The entire breeding cycle exposes turtles to risk as some species undertake extensive migrations to the beaches where they were hatched to reproduce. Leatherbacks, for example, travel 11,000 km across the Pacific from feeding grounds in the Americas to nesting grounds in Asia.

Females and their eggs can be removed from a nesting beach for decades without obvious effect as turtles produced 20-40 years earlier arrive at the beach for the first time. At some point exploitation comes full circle, however, and an entire nesting colony is wiped out, often with little warning. Dr. David Ehrenfeld, a prominent zoologist at Rutgers University, cautions that, "Looking at green turtle population data…is like looking at the light from a star 25 light years away: it appears to be shining now, but in fact, you are looking at history, and there is no way of telling whether, during the past 25 years, that star has increased in brightness, or perhaps has gone out altogether." As a result of nesting beach fidelity, colonies that vanish are not replaced by turtles from other beaches. With the passing of each unique assemblage, biodiversity and genetic variability are lost.

Marine turtle declines can be arrested, and even reversed, through comprehensive programs focused on addressing the threats to these vulnerable species. Nesting beach protection projects to safeguard females and their offspring are key to these efforts and ensure that turtles are protected during the most vulnerable stage in their lives. Over time, nesting beach projects often evolve into comprehensive programs of national and international significance.

H.R. 3378 Will Bring Demonstrable Conservation Benefits

Based on the success of the five multinational species funds enacted by Congress to date (African Elephant, Rhinoceros and Tiger, Asian Elephant, Neotropical Migratory Birds, and Great Ape Conservation Acts), the MTCA funds will support protection, research, technical assistance, law enforcement and education initiatives in foreign countries. Specifically, the MTCA authorizes $5 million annually to support the protection, restoration, and management of nesting habitats; onsite research and monitoring of nesting turtles and nesting habitat; the development, implementation and improvement of national and regional management plans for nesting habitat; enforcement and implementation of CITES and laws of foreign countries; training of local law enforcement to prevent the illegal killing and trade of nesting turtles;

resolution of conflicts between humans and marine turtles over nesting habitat; and community outreach and education. In the developing world, even relatively modest amounts of funding can be very effective and, as demonstrated by the experience of the other multinational species funds, often leverage considerable support from other sources.

The Ocean Conservancy believes that the MTCA will be the foundation of a sea change for marine turtles because it will foster the development of new programs, improve existing efforts, and stimulate research around the world. By supporting a knowledgeable, dedicated marine turtle conservation community already working in foreign countries, the MTCA will ensure valuable programs succeed in reversing the decline of marine turtle populations. During the last decade, many new initiatives to protect nesting beaches, thwart illegal trade, involve communities and engender their support have emerged in the Americas, Africa and Asia, but most are limited by a lack of financial resources. In those areas where resources have been available, marine turtle population increases have been recorded on more than 20 nesting beaches, demonstrating that marine turtle populations can recover.

Sources of Financial Assistance

The authorized annual funding of $5 million in H.R. 3378 will provide critically needed funds for programs to conserve and recover the world's marine turtles. Although $5 million is not a large amount of money given the enormous task at hand, this support is key to safeguarding marine turtles. Fortunately, the growing awareness of the need to conserve the world's marine turtles has attracted funding from other nations as well as the governments within whose jurisdictions work must be undertaken. For example, Japan, Taiwan, the Netherlands, Italy, and Denmark have contributed funds to marine turtle projects in Suriname, Guyana, Costa Rica, Nicaragua, and Brazil. France supports marine turtle conservation in its former Pacific territories and important new work for leatherbacks in West Africa.

In addition, the United Nations Environment Program (UNEP) supports conservation activities and programs for marine turtles in the Caribbean, the Mediterranean, and other regions. The 85 Parties to the Convention on Migratory Species (CMS), a convention under the auspices of UNEP, have developed regional agreements for marine turtles in the eastern Atlantic and the Indian Ocean, two regions that are highly significant for marine turtle biodiversity. Since 1997, CMS has funded projects in these regions, including the first assessment of marine turtle nesting along the west coast of Africa. The World Bank has also provided funding for marine turtle programs in both the Americas and the Indian Ocean.

Finally, non-governmental organizations provide substantial support for overseas marine turtle conservation programs. Established in 1959, the Caribbean Conservation Corporation (CCC) of Gainesville, Florida, is the oldest marine turtle conservation organization. CCC supports one of the world's longest running monitoring programs in Tortuguero, Costa Rica as well as projects in the United States, Panama and Nicaragua. The Ocean Conservancy, WIDECAST (the Wider Caribbean Sea Turtle Network), World Wildlife Fund, and Archelon, the Greek Sea Turtle Protection Society, have supported marine turtle conservation activities for two or more decades. In recent years a host of small, highly effective non-governmental organizations such as Wildcoast in Baja, Mexico and Karumbe in Uruguay have been created to

address local marine turtle conservation problems. Through donations to non-governmental organizations, individual donors provide major support for marine turtle conservation programs.

Like the other multinational species funds, the MTCA will be funded under the Department of Interior and Related Agencies Appropriations Act. Projects supported by the MTCA will be subject to the availability of funds and selected by the Secretary of Interior, after consultation with other Federal officials. The Secretary may convene an advisory group from public and private organizations actively involved in marine turtle conservation to assist in carrying out this Act.

Project proposals may be submitted by wildlife management authorities of foreign countries with jurisdiction over marine turtle nesting habitat and others with demonstrated expertise in the conservation of marine turtles. Proposals must include descriptions of methods for project implementation and outcome assessment, staff and community management, and logistics as well as estimates of the level of funding and time required to complete the project. Evidence of national support, if deemed appropriate, and information regarding the source and amount of matching funding available must also be included.

The Secretary must review projects in a timely fashion and approve or disapprove the project no more than 180 days after receiving the project proposal. The Secretary may approve a project if it will help recover and sustain viable populations of marine turtles in the wild by assisting efforts in foreign countries to protect nesting habitat and marine turtles in those habitats, with preference given to projects that are likely to support effective, long-term conservation. Projects for which matching funds are available also will be given preference.

Taking into account other existing sources of financial assistance, the relatively low cost of implementing conservation programs in less developed foreign countries, and the demonstrated ability of similar U.S. programs to attract significant funding from other sources, we believe the authorized levels in H.R. 3378 through 2009 are sufficient. As introduced, we believe the bill will make a major contribution to the survival and recovery of marine turtles.

Types of Projects to be Funded

Programs around the world have successfully prevented the demise or arrested declines of individual marine turtle populations as conservationists in communities in many regions have demonstrated how marine turtles can be conserved through research, education and community outreach. The following projects are examples of ongoing international sea turtle conservation efforts that would greatly benefit from enactment of the MTCA.

Kemp's ridleys in Mexico

Perhaps the best example of the benefit of conservation programs focused on nesting habitat is the story of the Kemp's ridley, identified in 1975 by the IUCN as one of the world's most endangered species. Thanks to the early efforts of the Mexican Government in the 1960s, and with the subsequent assistance of the U.S. Fish and Wildlife Service, the extinction of this species in our lifetime has been prevented. The Kemp's ridley's decline from more than 40,000

nesting females in 1947 to fewer than 300 in the mid-1980s was primarily the result of decades of intense egg collection and the killing of adults for meat. In 1966, Mexico sent troops to protect female turtles and their eggs at Rancho Nuevo, the species' major nesting site along a remote section of beach in the Gulf of Mexico. Working with these guards, biologists moved turtle nests to protected corrals for hatching. Although new turtles did not begin arriving at the beach until the late 1980s, the nesting population has increased substantially every year since that time, with about 3,600 females producing 9,000 nests in 2003. The MTCA could help to ensure this critical program continues.

Projecto TAMAR in Brazil

Projecto TAMAR is the quintessential marine turtle conservation project, evolving from protecting dozens of loggerhead and leatherback females and their nests in the early 1980s into a large, highly effective conservation program. Recognizing that local fishermen were killing almost all nesting females, two young researchers convinced the fishermen to conserve the turtles by protecting nesting females, recording data, and evaluating hatching success, tasks for which the fishermen were paid. Over the years, this program has grown to include hundreds of fishermen and their communities. To ease families' transition away from relying on turtle products and encourage support for the program, TAMAR developed local community vegetable gardens and helped villages to build t-shirt factories and sell locally produced crafts to tourists. TAMAR's main office also markets t-shirts and products from distant communities in remote areas to ensure that all coastal communities conserve marine turtles and in turn benefit from their protection.

In the last 22 years TAMAR personnel have set up 20 research stations and expanded their work to include in-water surveys and research on fishing boats. TAMAR played a major role in the development of the Inter-American Convention for the Protection and Conservation of Sea Turtles and assists the Brazilian government in developing positions on marine turtles in international fora. TAMAR shares its expertise with developing programs in the Americas and elsewhere and hosts young researchers from other countries. Educating people everywhere about marine turtles, TAMAR's website is accessed widely. The MTCA will be well positioned to encourage this type of local effort and creative problem-solving.

Hawksbill conservation in Sri Lanka, Chiriqui Beach, Panama and other areas

Hawksbill conservation programs, such as new, struggling programs in Sri Lanka, Madagascar, and Panama need special attention as hawksbills have been hunted to the brink of extinction. Working in Panama and other areas of the western Atlantic in the 1970s, Dr. Archie Carr, regarded as the father of marine turtle conservation, questioned whether the Kemp's ridley or the hawksbill was the world's most endangered marine turtle, noting that the modern distribution of the hawksbill is a ghostly outline of its former range. Although hawksbills formerly nested in at least 86 countries, often in large numbers, nesting has been greatly reduced and today only six nesting assemblages number more than 1,000 females annually. Two of these populations are in decline, including the hawksbills of Madagascar, and two others appear to be decreasing.

Historical accounts, however, document high numbers of hawksbills in the Atlantic, Pacific and Indian Oceans within the last century. One such account from Sri Lanka describes

an organized hunting system that divided hawksbill nesting beaches into sectors---in a good night a turtle hunter could kill 20 or more females on his mile of beach. The impact of this exploitation is readily apparent as fewer than 70 hawksbill nests are produced by a dozen or so hawksbills in Sri Lanka today. The Turtle Conservation Project headquartered in Colombo is struggling to protect hawksbills and four other marine turtle species that nest in Sri Lanka.

Tortoiseshell hunters in Chiriqui Beach, Bocas del Toro Province, Panama (once reputed to have been the most important hawksbill nesting beach in the Caribbean), also were organized into a system that divided the beach into extraction zones. At the height of the trade, hundreds of hawksbills came ashore each night, and the daily price of tortoiseshell was the topic of early morning discussions along the coast. Population declines here have been particularly telling: while 35-50 hawksbills could be taken on each mile of beach each night in the early 1950s, by 1980 only 1-5 turtles could be intercepted per sector. Today, fewer than 50 hawksbills nest on the entire 20-mile section of coast in a season. Although international tortoiseshell trade is now prohibited, some communities in Chiriqui Beach still hunt hawksbills for local sales. Fortunately, with the establishment of a new project involving the area's Ngobe Indians in 2003, several hundred nests were protected last year in Chiriqui Beach. The MTCA could help to expand this program.

West African turtles

West Africa is an important region for marine turtles, but exploitation on nesting beaches is extensive. All the turtles of West Africa--olive ridleys, greens, hawksbills, leatherbacks and loggerheads--need dedicated conservation assistance to ensure they do not disappear under a regime of intense egg collection and the hunting of adults. In Ghana, fishermen historically have revered turtles, protecting their nesting beaches and releasing turtles caught in their nets in the belief these animals will save drowning fishermen. However, as the old ways change, marine turtles receive diminished respect and protection. Turtle carapaces (upper shells), meat, oil, and even stuffed heads are sold in local West African markets along the coast for food, traditional medicine, and tourist items. In Liberia, marine turtles have been recorded nesting in some numbers, but in the aftermath of a long civil war the government has no funds for natural resource conservation. Nevertheless, dedicated individuals for SAMFU, the Liberia Sea Turtle Project initiative of the Save My Future Foundation, have worked under difficult and dangerous circumstances for nearly a decade and need financial assistance to support their efforts to protect and monitor nesting populations. The MTCA could also provide assistance for this program.

Eastern Pacific Green Turtles (Black Turtles)

In Pacific Mexico a dedicated group of university researchers has worked for more than 20 years to save a unique subpopulation of green turtles, known locally as black turtles, that nests only in the State of Michoacan at Maruata and Colola and in the Galapagos. Although there is debate within the marine turtle scientific community as to whether this subpopulation qualifies as the eighth marine turtle species, there is no question that this population is distinct in appearance and behavior and very endangered. Nesting numbers have declined extensively in the last few decades, from perhaps 500-1,000 turtles nesting each night during the September to December nesting season in the early 1970s to several thousand turtles during the same nesting season today. Since 1982, researchers from the University of Michoacan have conducted a conservation-research project focused on the nesting turtles and building community support

through participation in conservation and education. Thanks to their efforts in Colola, the commercial poaching of nesting females has stopped and egg poaching has been significantly reduced. Due to current financial restraints, however, Maruata remains unprotected. Support is still needed to protect nesting turtles and their eggs and to develop economic alternatives for local communities to ensure that the conservation gains made will last long into the future.

Recommendations

The Ocean Conservancy is fully supportive of H.R. 3378, as drafted, and urges the Subcommittee to take action as soon as possible so that marine turtle conservation efforts can move forward to meet the challenges and opportunities for global recovery. We stand ready to work with the Subcommittee to ensure this legislation is enacted this year. Several letters of support from projects overseas are also attached to provide the Subcommittee with additional information in the words of those working in the field.

Conclusion

In conclusion, the potential for the MTCA to bring tangible, critically-needed gains for turtle conservation across the globe is enormous. Survivors of the age of dinosaurs, magnificent in their own right, and representative of the world's biodiversity, marine turtles contribute to marine and coastal ecosystems in ways we are only beginning to understand. While it is widely accepted that marine turtle eggs and hatchlings are an integral part of coastal and marine food chains, new research reveals that nutrients from decaying turtle eggs are taken up by the roots of dune grasses on beaches and strengthen the ability of these grasses to hold dunes together; sea grass beds grazed by green turtles are healthier and more nutritious. These examples demonstrate that we still have much to learn about the importance of marine turtles and the roles they play in coastal and marine ecosystems. With the assistance of the MTCA, we will work to arrest the decline of these incredible animals and restore them to abundance. Thank you again for the chance to speak to this bill on behalf of The Ocean Conservancy and our members. I would be happy to answer any questions you might have.