



# TURTLE CONSERVANCY

ANNUAL REPORT



2017



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# A WORD FROM OUR FOUNDER



If you are reading this, you are likely acutely aware of the devastating consequences that humans have had on our planet. It seems we are living through an increasingly embattled era; one in which we must fight to protect what is left. As the number of extinct species ticks higher and higher, we at the Turtle Conservancy work harder and strive further to protect the world's most endangered turtles and tortoises.

In December, as if the planet were sending a brutal reminder, we were threatened by a massive wildfire on the doorstep of our Ojai Conservation Center in California. The Thomas Fire, which eventually burned over 280,000 acres in and around Ojai and the Ventura region, poured over the mountains and into our backyard. Thanks to the incredible efforts of the firefighters, first responders and our own Ojai team, we suffered only minor damages. I'm incredibly humbled by our dedicat-

ed staff, who worked tirelessly to evacuate all of the turtles and tortoises from the facility, and then returned to help fight back the flames. We are still working to clean out the ash and debris from our water and air filtration systems, but we anticipate being back in full operation again soon.

Despite the chaotic ending to the year, 2017 proved to be productive for the Turtle Conservancy as we worked to fulfill our mission of protecting the world's most endangered turtles, tortoises and their habitats.

I'd like to highlight the successes of our Geometric Tortoise conservation program in South Africa, directed by TC Senior Conservation Scientists Dr. James Juvik and Dr. Ross Kiester. The Geometric Tortoise is small and incredibly beautiful with yellow and black geometric patterns adorning its shell. Only about 1,000 survive in the wild, earning the species a Critically Endangered status from the IUCN. This particular tortoise is quite difficult to breed in captivity, making in-situ conservation success even more imperative for the species' survival.

Our South African Geometric Tortoise Preserve celebrated several successes this year. The team completed a mark-recapture survey to better estimate the tortoise population on the Preserve, and piloted a program designed to deter predators using 3-D printed juvenile tortoise decoys and field camera-traps, a method that may prove useful for conservation programs around the globe. As if it were foreshadowing things to come, the Preserve also suffered from a local wildfire that destroyed about 47 acres.

Both the fire in South Africa and the fire in Ojai have served to remind us at the Turtle Conservancy that conservation requires dynamism, teamwork and dedication. These difficult times drive us to dig deeper and to work harder. We hope to work with you, our members, collaborators and supporters, as we continue to fight for the planet's most endangered turtles and tortoises.

We are committed to doing our part, and look forward to a productive and prosperous 2018.

Sincerely,

Eric Goode

# INTRODUCTION

**MISSION STATEMENT:** The Turtle Conservancy is dedicated to protecting threatened turtles and tortoises and their habitats worldwide.

**OBJECTIVES:** In-Situ Conservation, Conservation Breeding, Trade Interdiction, Outreach and Awareness, and Science and Research

## STAFF

Ursula Britton  
*Turtle Nanny*

Paul Gibbons, DVM  
*Chief Operations Officer*

Nicholas Goode  
*Communications*

Kelly Herbinson  
*Grant Writer*

Juan Hernandez  
*Property Manager*

Angel Reyes  
*Office Assistant*

Armando Jimenez  
*Senior Keeper*

James Juvik, PhD  
*Senior Conservation Scientist*

Ross Kiester, PhD  
*Senior Conservation Scientist*

James Liu, DVM  
*Director of Communications*

Max Maurer  
*Director of Membership & Public Outreach*

Lukasz Pogorzelski  
*Engineer*

Lynn Rimkus  
*Controller*

Peter Paul van Dijk, PhD  
*Field Conservation Programs Director*

Carly Williams  
*Production Manager*

## BOARD OF DIRECTORS

Eric Goode, *President & CEO*

Anders Rhodin, *Chair*

Matthew Frankel, *Treasurer*

Maurice Rodrigues, *Secretary*

Cullen Geiselman

Gregory George

John Mitchell

Russell Mittermeier

Rick Ridgeway

Andrew Sabin

Julian Sands

Craig Stanford

Fisher Stevens

Michael Zilkha

## HONORARY AND ADVISORY BOARDS

The TC is honored to also be associated with several other global turtle experts and conservationists who provide advice and support as needed.

Debbie Behler, Torsten Blanck, Franck Bonin, Jim Breheny, Julie Christie, Don Church, Bernard Devaux, Taylor Edwards, John Iverson, Paul Gibbons, Retha Hofmeyr, Bill Holmstrom, Rick Hudson, John Iverson, Gerald Kuchling, Peter Laufer, Minh Le, Albert Martínez Silvestre, Vivian Páez, Peter Pritchard, Hugh Quinn, Stuart Salenger, Jeff Seminoff, Brad Shaffer, Chris Shepherd, Brett Stearns, Andrew Terry, Mercy Vaughn, and Dick Vogt.

# IN-SITU CONSERVATION

*The Turtle Conservancy is committed to protecting turtles and tortoises in their natural habitat through conservation land acquisition, stewardship, and management programs around the world.*



## **MEXICO: BOLSON TORTOISE ECOSYSTEM PRESERVE**

The Chihuahuan Desert is composed mostly of arid grasslands and hosts over 3,500 plant species, one-third of which occur nowhere else on the planet. Unfortunately, due to grazing cattle, mining, and unsustainable agriculture, less than 4% remains intact today. These threats imperil the region's biodiversity and endanger North America's largest terrestrial reptile: the Bolson Tortoise (*Gopherus flavomarginatus*).

Like the Chihuahuan Desert it inhabits, the Bolson Tortoise is spectacular both in ecological significance and natural history. Tortoises act as ecosystem engineers, digging multiple burrows in the soil up to eight meters long and two meters deep that they use to thermoregulate through extreme periods of hot and cold. But they aren't the only ones who benefit from the retreat sites they create; an abundance of other species rely on tortoise burrows for refugia from the desert's extreme fluctuations in temperature. Rattlesnakes, lizards, owls, frogs, toads, insects, spiders, and rodents have all been documented inhabiting tortoise burrows, making them one of the most crucial resources in the desert.

In 2016, with help from grants from the Leonardo DiCaprio Foundation and Global Wildlife Conservation, the Turtle Conservancy purchased over 43,000 acres of Chihuahuan Desert and prime Bolson Tortoise habitat in Mexico's Bolsón de Mapimí, and created the Bolson Tortoise Ecosystem Preserve. TC established a Civil Association in Mexico called HABIO, A.C. to enable the local ownership and management of the Preserve.

## **ACTIVITIES IN 2017**

A mission in July 2017 brought the TC together with Mexican and U.S. conservation biologists, Mexican authorities, and partner institutions to discuss property management needs, opportunities, and challenges. The boards and staff of the TC and HABIO worked towards several project goals, including establishing HABIO as a fully-functional, tax-exempt Mexican NGO, taking stock of the status and needs of the property, and developing both a long-term management plan as well as an immediate work plan.

In December, TC scientists and our research partners in Mexico implemented a new burrow scope that will help detect tortoises even when they are underground. The scope is composed of a camera and lights affixed to a long hose. The operator can see in real time as the hose snakes down the burrow tunnel. The device allows researchers to verify the presence or absence of tortoises deep in their burrows, and also gives them the ability to film or photograph inside the burrow. During the field test, most scoped burrows indeed provided clear views of a resident tortoise, often ten feet or further down the tunnel. The scope also gave us insight into the many other organisms using tortoise burrows as refugia. We found rattlesnakes, gopher snakes, spiders and moths, owls, and frogs and toads using the burrows, adding to our knowledge of the overall biodiversity of this magical land.

## TURNER ENDANGERED SPECIES FUND (TESF) BOLSON TORTOISE PROJECT

HABIO and TC also work with Bolson Tortoise conservation in the United States, by supporting our conservation partner, the Turner Endangered Species Fund (TESF), in the research and management of an assurance colony located in New Mexico. The goal of the assurance colony is to eventually re-establish populations in the wild from animals hatched under human care.

The TC and TEF are collaborating on a trans-national effort to protect this tortoise from extinction, which will include reintroducing the species in key locations of its former range in the United States. In May 2017, TC'S Paul Gibbons joined TEF in New Mexico to help with the first ever release of captive-born Bolson Tortoises into the wild.

TESF lead tortoise biologist Dr. Chris Wiese spoke as she placed a radio-tagged, captive-born tortoise into the soft-release pen: "Twelve thousand years in the making, with most of the work in the last eight years." These tortoises are the first to walk in this area since they disappeared somewhere between 10 and 15 thousand years ago. The Bolson Tortoise was extirpated north of the Rio Grande by climate-influenced habitat fragmentation, degradation, and loss, as well as human exploitation.

Following this historic event, Gibbons carried back to Ojai the first legal Bolson Tortoises to enter California in nearly half a century. The three tortoises will help build an extra assurance colony to provide an additional line of defense against extinction. In addition to the Turner Ranches, the network of Bolson Tortoise assurance colonies includes the El Paso Zoo in Texas and The Living Desert Zoo and Gardens in Carlsbad, New Mexico.

## BOLSON TORTOISE REASSESSMENT FOR IUCN RED LIST

TC scientists in 2017 led the preparation of a reassessment of the Bolson Tortoise's status in the IUCN Red List of Threatened Species. The Bolson Tortoise was previously assessed as Vulnerable for the Red List in 2007 based on a modest amount

of partly outdated information. Bolson Tortoise scientists, and those living in and around the remaining Bolson Tortoise populations, have noted and reported a marked decline in the species and have found that the species is far more imperiled than previously thought. In October a reassessment was submitted, incorporating extensive new information and data to document that the Bolson Tortoise meets the IUCN criteria to be categorized as Critically Endangered, the highest category of risk of extinction in the wild. The assessment is making its way through the IUCN Red List review and update process and we expect to confirm the updated status determination in our next annual report.

## A LOOK TO THE FUTURE

The TC, HABIO, TEF, and partners are only just beginning on the long road to recovery of the Chihuahuan Desert and its keystone species, the Bolson Tortoise. We at the TC hope to continue building on the Mexican Bolson Tortoise Ecosystem Preserve through the purchase of additional, adjacent land parcels for conservation, as opportunities and funding arise. We plan to recruit a local property manager for the Preserve who will oversee operations on site, including inspecting and repairing perimeter fences, removing stray cattle, maintaining roads and infrastructure, and supporting research activities.

We are looking forward to the possibility of incorporating more technology into our research methodologies by purchasing a fixed-wing survey drone that can be used to collect high-resolution aerial photos of the Preserve. We hope to be able to use those photos to train software to locate tortoise burrows, creating a more effective tortoise survey methodology, especially in the difficult-to-access reaches of the Preserve. Stay tuned for an update in 2018.

*Funding and in-kind support: Andrew Sabin Family Foundation, Desert Tortoise Council, Global Wildlife Conservation, Leonardo DiCaprio Foundation, Rainforest Trust, Sundance Biology, Tucson Herpetological Society, and Turtle Conservation Fund.*



## SOUTH AFRICA: GEOMETRIC TORTOISE FYNBOS ECOSYSTEM PRESERVE

The TC along with the Southern Africa Tortoise Conservation Trust (SATCT), the local conservation authority CapeNature, and other donors, have devoted more than a decade to an effort to protect the critically endangered Geometric Tortoise (*Psammobates geometricus*). This tortoise lives only in the Western Cape Province of South Africa in the diverse fynbos shrub-land habitat. Over the past few centuries more than 90% of this habitat, and consequently its tortoise populations, have been destroyed through agricultural and urban expansion. It is estimated that less than 1,000 Geometric Tortoises survive in the wild today, and many of these are confined to isolated habitat patches. In 2014, the TC identified the last substantial fynbos habitat parcel surviving in the Breede River Valley near Cape Town and purchased 800 acres, resulting in the Geometric Tortoise Ecosystem Preserve.

### ACTIVITIES IN 2017

The year 2017 brought a series of accomplishments led by TC's James Juvik and Ross Kiester, and a few minor setbacks for the Geometric Preserve. Several efforts were made to combat some of the largest threats to the Geometric Tortoise, including fire, predation, and invasive plants. In February, the 12-kilometer perimeter fence and associated firebreaks were completed. A plan to remove invasive plant species was created with the help of local governmental experts, and an eradication team worked to remove the targeted species. Significant progress was made to assess local pre-

dition threats to the tortoise population in this largely agricultural and predator-rich area, using artificial juvenile tortoise decoys and field camera-traps. A cutting-edge program was developed to deter predators by deploying a battalion of 3D-printed baby Geometric Tortoise shells. Motion-sensing cameras documented predators, including pied crows, ravens, foxes, mongooses, and even honey badgers, as they attempted to prey upon the mock tortoises. Preserve staff now feel confident they can employ tortoise predator avoidance training techniques to reduce juvenile tortoise predation.

Two linked setbacks compromised conservation efforts in 2017. The first was an unprecedented local drought extending from the previous year, leading to an elevated wildfire hazard. The lack of water and vegetative growth meant the tortoises were not well prepared for the cold winter. Then, in March, a local wildfire breached the Preserve firebreaks and burned about 6% (47 acres) of the Preserve, killing several dozen adult Geometric Tortoises. Although the fynbos habitat is a fire-adapted ecosystem and is prone to burn occasionally, the drought conditions tested the Preserve's fire mitigation efforts. Protection of the Geometric Tortoise population from fire is now the most important management problem.

A comprehensive vegetation survey was completed in 2017, increasing the list of plant species occurring on the Preserve to 432. Of these, 397 are indigenous species and 35 are alien plants, some of which are invasive. An impressive 40 plant species are on the IUCN Red List of endangered South African Plants. Notably, the Preserve is home to approximately 50 specimens of an extremely rare fynbos herb, *Aspalathus amoena*. The species was thought to be nearly extinct prior to this discovery on the Preserve.

In collaboration with CapeNature, field scientists and their trained tortoise detection dogs have continued mark-recapture surveys of the Geometric Tortoise on the Preserve. The team covered 70% of the Preserve in six days, yielding 26 previously marked and 93 new Geometric Tortoises. All tortoises were weighed, measured and inspected for general health conditions before release. Because of unique shell markings in this species (like finger-prints), an effort is also under way to develop



a biometric photo ID system to identify tortoises in the field using cell-phone images. A conservative estimate based on our findings indicates that as many as 600–800 Geometric Tortoises reside on the Preserve. This represents a majority of all the surviving Geometric Tortoises over the entire range of this species in the Western Cape. The survey also found three other tortoise species living on the Preserve, including two other protected species, the Angulate Tortoise (*Chersina angulata*) and the Parrot-beaked Padloper (*Homopus areolatus*), as well as the non-native Leopard Tortoise (*Stigmochelys pardalis*).

Despite the year’s challenges, 2017 ended on a positive note for the Geometric Tortoise Preserve. In December 2017, with the help of several donors, TC initiated purchase of a 50-acre area of fynbos tortoise habitat contiguous to the existing Preserve. The expanded protected area will prove critical for the tortoises that reside there, and the purchase is another step forward along the path to sustainable conservation for this highly imperiled species.

*Funding and in-kind support: CapeNature, Fondation Segré, Matthew Frankel, Mohamed bin Zayed Species Conservation Fund, Rainforest Trust, Brett Sterns and Michael Zilkha.*



## MADAGASCAR: PLOUGHSHARE TORTOISE CONSERVATION

The Ploughshare Tortoise or Angonoka (*Astrochelys yniphora*) has long been recognized as one of the most severely endangered tortoise species

in the world. Its range is restricted to just a few habitat patches near Baly Bay in northwestern Madagascar and less than 300 animals remain in the wild. Captive breeding and re-introduction of captive-bred animals into their natural habitat was highly successfully until about 2010, when a rising demand in Asia for Ploughshare Tortoises as pets led to rapidly escalating poaching of wild and re-introduced animals and subsequent illegal trade via a diversity of smuggling routes.

To address this severe increase in threats to the species’ survival, the International Angonoka Working Group (IAWG), of which the TC is a founding member, held a crisis meeting in June 2016. The group agreed on a radically revised conservation strategy for the species, in addition to maintaining a breeding program at Ampijoroa, managing Baly Bay National Park and engaging local communities for conservation support.

### ACTIVITIES IN 2017

Due to the sensitive nature of this dire scenario, details about the conservation mechanisms used in the field cannot be detailed here. However, we are pleased to report that progress was made in 2017 towards goals outlined at the IAWG crisis meeting, mostly through the hard work of our partner, Durrell Wildlife Conservation Trust.

We are happy to report that TC was awarded a substantial grant from the U.S. Fish and Wildlife Service in 2017 to aid in the Ploughshare recovery effort. The money will be used to accomplish some of the goals set forth by the IAWG. Despite the incredibly difficult challenges inherent in recovering a species on the edge of extinction, TC remains committed to supporting the efforts of our partners in this fight for the survival of one of the planet’s most incredible and rare tortoise species.

*Funding and in-kind support: Andrew Sabin Family Foundation, Association of Zoos and Aquariums, Global Wildlife Conservation, Mohamed bin Zayed Species Conservation Fund, Phoenix Zoo, and United States Fish and Wildlife Service.*



## PHILIPPINES: PALAWAN FOREST TURTLE CONSERVATION

The Palawan Forest Turtle (*Siebenrockiella leytenensis*) is among the 25 most endangered turtle species in the world, and is listed in the IUCN Red List as Critically Endangered. This enigmatic freshwater species is endemic to the island of Palawan in the Philippines. For over 80 years, its true geographic distribution in the Philippines remained a mystery, until the chance discovery of one specimen in a Palawan market in the late 1980s. Wild populations were later rediscovered in 2004, however, the re-discovery spurred a collecting frenzy to supply the illegal wildlife trade. The Palawan Forest Turtle is legally protected under Philippine law, but a lack of habitat reserves and parks protecting the species has facilitated the illegal collection of the species for the pet trade, traditional medicine, and food. In 2015, a confiscation of 4,124 illegally traded live turtles (including 3,907 Palawan Forest Turtles, representing a large portion of the entire population) occurred in Palawan. Many were subsequently released back into the wild through the efforts of the Katala Foundation (KFI) and international contributors and supporters, including the TC. Many of the repatriated animals survived and effectively integrated into the local turtle populations.

### ACTIVITIES IN 2017

In December 2017, KFI, with support from TC, Rainforest Trust, Global Wildlife Conservation, and the local government, designated 1,890 acres of forestlands as a protected watershed. This effectively created a wildlife protection area that will directly

benefit the Palawan Forest Turtle. Additionally, 23 acres of land was purchased outright from local farmers to prevent further agricultural development and to restore the original riverside rainforest habitat. This conservation site is also habitat for the most trafficked mammal in the world, the Endangered Palawan Pangolin (*Manis culionensis*).

The work here is not yet complete; KFI, TC and partners continue to raise funds to add fences and guards that will further secure the area from poachers, and to complete much needed reforestation work.

**Funding and in-kind support:** *Global Wildlife Conservation and Rainforest Trust.*



## MEXICO: GOODE'S THORNSCRUB TORTOISE CONSERVATION

Goode's Thornscrub Tortoise, *Gopherus evgoodei*, is the newest member of its genus. The species was described in 2016, and is a sister species to the two other desert tortoises that inhabit the southwestern United States. The species was named after TC founder Eric V. Goode in honor of his lifelong dedication to the protection of turtles and tortoises. The naming rights were purchased by a group of philanthropists, including TC and our partners Andrew Sabin Family Foundation, Global Wildlife Conservation, and Rainforest Trust at the 2015 Turtle Ball. The money was donated to our Mexican conservation partners Nature and Culture International (NCI) to purchase a 1,000-acre ranch to add to their existing 15,000-acre Reserva Monte Mojino, which protects tropical deciduous forest in

Sonora, Mexico, and the many Thornscrub Tortoises that reside there.

TC is privileged to continue working with NCI, whose mission is to protect biologically diverse ecosystems in concert with local people in Latin America. NCI believes that success is defined by allowing nature to thrive so the people who depend upon it can too.

Other important species also benefit from the Goode's Thornscrub Tortoise reserve, including the Beaded Lizard, *Heloderma horridum*. The Beaded Lizard is one of two truly venomous lizard species in the world (the other being the Gila Monster). It grows up to three feet long, climbs trees and can dig extensive burrows in search of shelter and food. Although not endangered, Beaded Lizards are medically important—researchers have found that their venom contains a protein that can be used to regulate blood sugar and treat diabetes in humans. Yet another reason to protect the planet's biodiversity.

*Funding and In-Kind Support: Andrew Sabin Family Foundation, Global Wildlife Conservation and Rainforest Trust.*

To date, over 170 nests have resulted from "re-beaching," or restoring habitat on local waterfront properties. By replacing the clay and decorative rock yards with natural sand, female terrapins have been able to nest naturally for the first time in decades. In addition to these sites, over 120 nests have been relocated from rock or clay yards and placed in the TNP's hatcheries.

#### ACTIVITIES IN 2017

The TNP had a very successful seventh season, releasing 2,687 terrapin hatchlings into the marshes in the bay, and effectively uniting the community along the 18-mile long barrier island in an effort to save the species.

*Special thanks to Kathy Lacey and the TNP team for your extraordinary efforts to protect the Northern Diamondback Terrapin!*



#### UNITED STATES: TERRAPIN NESTING PROJECT

2017 was another great year for the Terrapin Nesting Project (TNP), an effort to restore the population of Northern Diamondback Terrapins (*Malaclemys terrapin*) on one of New Jersey's barrier islands. Terrapin conservationist Kathy Lacey spearheads the Project.

# CONSERVATION BREEDING CENTER

*TC's Conservation Breeding Center, located in Ojai, California, provides expert care for over 35 species of highly endangered tortoises and freshwater turtles. The Center acts as an assurance colony, or last line of defense against extinction, with the ultimate goal of restoring wild populations.*

## SUMMARY OF HATCHINGS

In 2017, 133 turtles and tortoises of 10 different species were successfully hatched at the Center.

COMMON NAME	SCIENTIFIC NAME	NO. HATCHED
PANCAKE TORTOISE	<i>MALACOCHERSUS TORNIERI</i>	6
ARAKAN FOREST TURTLE	<i>HEOSEMYS DEPRESSA</i>	1
PARROT-BEAKED TORTOISE	<i>HOMOPUS AREOLATUS</i>	3
BURMESE STAR TORTOISE	<i>GEOCHELONE PLATYNOTA</i>	61
FORSTEN'S TORTOISE	<i>INDOTESTUDO FORSTENII</i>	3
GUERRERO WOOD TURTLE	<i>RHINOCLEMMYS PULCHERRIMA</i>	6
ROTI ISLAND SNAKE-NECK TURTLE	<i>CHELODINA MCCORDII</i>	28
PAN'S BOX TURTLE	<i>CUORA PANI</i>	3
RADIATED TORTOISE	<i>ASTROCHELYS RADIATA</i>	21
SPINY TURTLE	<i>HEOSEMYS SPINOSA</i>	1
<b>TOTAL</b>		<b>133</b>

area of central China, and may have been locally common until the 1990s, when collection for traditional Chinese medicine trade rendered the species functionally extinct in the wild.

Also of note was the hatching of a Critically Endangered Arakan Forest Turtle (*Heosemys depressa*) in January 2017. It was the first hatching of this species at the Center and one of only 28 ever recorded in the United States. The Arakan Forest Turtle was long thought to be possibly extinct, having last been seen in 1908, until it was rediscovered in 1994 in a food market in China. The species was originally known from the hills of western Myanmar, and was recently discovered to range into nearby Bangladesh. The population is declining due to demand across Asia and beyond for food, traditional medicine, and the pet trade.



## NOTABLE HATCHINGS

Of particular note was the hatching of three Critically Endangered Pan's Box Turtles (*Cuora pani*) in September 2017. This is the first time this species has hatched from captive-born parents in the United States. Pan's Box Turtles are endemic to a small



## PARTNERING TO ESTABLISH NEW ASSURANCE COLONY

In January 2017, turtle conservationist Stuart Salenger partnered with the TC to create a new assurance colony of Radiated Tortoises (*Astrochelys radiata*). TC sent 50 Radiated Tortoises that had hatched in captivity in our Ojai facility to Salenger's

new property in Florida, where they will continue to serve as a genetic assurance colony for this imperiled species.

systems were added to best suit the turtles until they could be moved to a facility in a more suitable climate zone.



Lastly, we decided to create a new outdoor habitat to better accommodate our Golden Coin Turtles (*Cuora trifasciata*). Three, 12-foot diameter and three-foot deep ponds were built and outfitted with waterfalls and aquatic vegetation and logs that closely resemble the habitat the turtles would use for cover and hibernation in their native Asia.

## UPDATES TO THE CONSERVATION BREEDING CENTER

In order to properly house and, at times, breed, the 35 species of turtles and tortoises present at the Center, a team of animal and grounds-keepers work constantly to make sure every individual animal is healthy, well fed, and properly housed. That includes creating water features with the perfect temperature and filtration system, or planting vegetation that mimics the species' native habitat in Myanmar or Madagascar or Southeast Asia.

In 2017, the team created three new habitats. The largest was a 3,000 square foot enclosure for the three Bolson Tortoises brought in from the TEFB Bolson Tortoise Breeding Program. The new outdoor enclosure mimics the native Chihuahuan Desert habitat and includes a rock wall perimeter, a desert floor vegetated with bunch grasses, Palo Verde trees and cactus, and several tunnels leading down into an underground area where the tortoises can hibernate or retreat from hot temperatures, just as they would in the wild.

The team had to quickly respond to an incoming delivery of USFWS confiscations, including 38 Spotted Turtles in 2017. Three, eight-foot diameter aluminum horse troughs were sunk into the ground to create ponds that would mimic the Spotted Turtles' natural habitat. Once the ponds were created, aquatic vegetation and water filtration and cooling

# TRADE INTERDICTION



## US FISH & WILDLIFE SERVICE CONFISCATIONS

The TC supports the USFWS in law enforcement and the seizure of illegally traded turtles and tortoises by providing accommodation for seized turtles and tortoises from the Los Angeles airport and surrounding region. In 2017 TC made a home for 38 Spotted Turtles (*Clemmys guttata*) and two Big-headed Turtles (*Platysternon megacephalum*). The Spotted Turtles were later transferred to a partner's facility on the east coast, where the cooler climate better suits the species.

services ranging from identification support to national wildlife enforcement authorities when they encounter unfamiliar turtle specimens in suspect trade shipments, to engagement in the deliberations of the Conservation on International Trade in Endangered Species (CITES) Animals and Standing Committees. TC's Peter Paul van Dijk was an invited presenter and facilitator at the CITES Tortoises and Freshwater Turtles Task Force Meeting held in Singapore in April 2017, where issues such as the scope and significance of illegal trade, available identification resources, law enforcement communications networks, existing rescue facilities, and future needs were deliberated with wildlife enforcement authorities from Asia and other regions.

Van Dijk's participation in the 29th meeting of the CITES Animals Committee (Geneva, July 2017) focused on the effective oversight of turtle trade sourced from wild populations, as well as the new mechanism to evaluate turtles and other commercially traded species claimed to originate from captive production facilities. While rarely in the spotlight, CITES regulation of international turtle trade has led to significant successes. Still, not all international turtle trade is without detriment to wild turtle populations, and further efforts within and beyond CITES to ensure responsible turtle trade are needed.



## CITES WORK FOR TORTOISES AND FRESHWATER TURTLES

TC staff contribute significantly to international trade management and policy concerning tortoises and freshwater turtles. The team provides

# OUTREACH AND AWARENESS

*Working to disseminate information about the planet's most endangered turtles and tortoises through media, action and events.*

Christopher Wool donated work to the live and silent auctions, which raised over \$500,000 for land acquisitions and turtle and tortoise conservation.

## EVENTS

TC Founder Eric Goode gave two keynote addresses in 2017. He addressed the Desert Tortoise Council at their annual conference in Las Vegas in February and delivered an impassioned talk highlighting the often-overlooked desert species, Mexico's Bolson Tortoise. The aim was to emphasize that as few as 2,000 of these animals may remain in the wild, making them the most endangered tortoise in North America.

In October, Goode delivered the keynote address at the Orlando Science Center Inspiring Innovation Gala, honoring Dr. Peter Pritchard for his achievements in turtle and tortoise conservation.

The TC team traveled to Long Island in July to present at the Green Beetz Food, Environment and Sustainability Fair. Children were able to meet tortoises face-to-face, and learn how their daily choices impact wildlife. Visitors to our booth were also able to feed the turtles and tortoises, and participate in our "eat like a turtle" activity, where they consumed everything from berries to dandelions to bugs. The fair was a great public outreach event and we look forward to participating again in the future.

## PARTNERING FOR YELLOW-FOOTED TORTOISE CONSERVATION

TC staff traveled to the Peruvian Amazon guided by one of our partners, Rainforest Trust. Meetings in Peru covered new ways in which the two organizations can partner to identify, purchase, and maintain wild habitat for turtles, tortoises, and thousands of other creatures. The organizations also met with indigenous groups to discuss a conservation path for the Yellow-footed Tortoise (*Chelonoidis denticulatus*). Locals rely on the species for food and thus have a clear interest in maintaining wild populations to ensure that their off-take remains sustainable. The meetings were productive and insightful, and represent the possibility for collaboration between various groups.

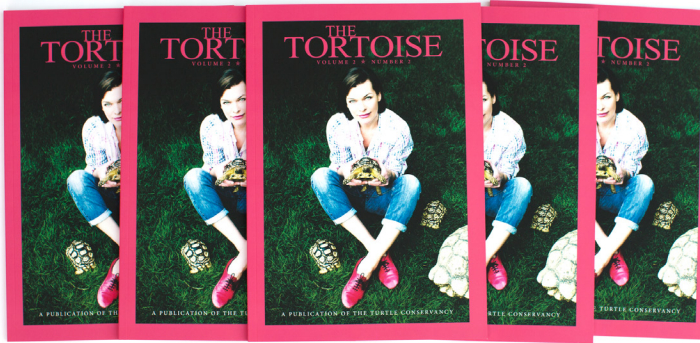
## THE TORTOISE MAGAZINE

The Turtle Conservancy's annual publication *The Tortoise* features journalism, artwork and photography exploring international and domestic environmental issues, particularly those related to the world's most endangered turtles and tortoises. The sixth issue of the magazine was released in June 2017, featuring a cover story about actress Milla Jovovich and her love of tortoises. The feature articles delved into everything from multimillionaire Chinese turtle collectors to the effect of climate change on tortoises in the U.S., and also included a look at artist Doug Aiken's latest undersea art installation.

## THE TURTLE BALL

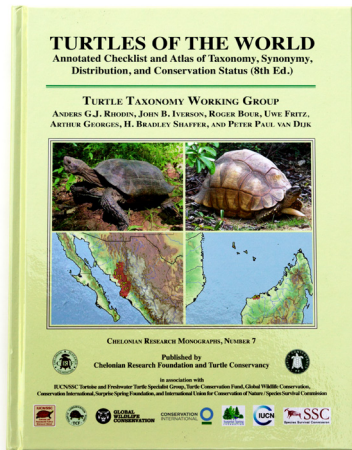
Philanthropists from the realms of art, entertainment, and science came together to support the TC and Global Wildlife Conservation at the fourth Turtle Ball, held at the Bowery Hotel in New York City in April 2017.

This year the event honored actor and environmentalist Mark Ruffalo for his environmental leadership. Drew Barrymore, Edward Norton, Rashida Jones, Fisher Stevens, Eric Goode, and Brian Sheth hosted the event. Robert F. Kennedy, Jr., Norton, Sheth, and Goode delivered speeches on wildlife preservation, while comedian Sarah Silverman served as master of ceremonies. Renowned contemporary artists including Nan Goldin, Walton Ford, Taryn Simon, and



# SCIENCE AND RESEARCH

The TC is committed to advancing tortoise and freshwater turtle scientific knowledge through research and participation in scientific advisory groups and publications. Each of our programs is designed to maximize conservation protection for our target species and habitats, and TC's staff employ current scientific methodologies as the foundation of all activities, and in some cases develop cutting-edge new science and technology.



tion with IUCN/SSC Tortoise and Freshwater Turtle Specialist Group, Turtle Conservation Fund, Global Wildlife Conservation, Conservation International, and Surprise Spring Foundation. This comprehensive 292-page updated checklist and atlas of all the world's turtles and tortoises includes detailed color distribution maps of all 356 recognized turtle species (478 taxa including subspecies) and 461 color photos of nearly every taxon. The book is an invaluable resource for all turtle and tortoise conservationists, researchers, and enthusiasts. Not only is the printed version a must for every turtle library, its availability as a freely downloadable document is a significant and much-appreciated public service.

## SCIENTIFIC PUBLICATIONS

In 2017, the TC entered into a partnership agreement with Chelonian Research Foundation (CRF) to become co-publishers of the long-established professional scientific turtle journals *Chelonian Conservation and Biology* (CCB) and *Chelonian Research Monographs* (CRM). These publications are the gold standard for academic publications on turtles and tortoises: CCB is a regular twice-a-year peer-reviewed journal publishing articles on biology and conservation of the world's tortoises, freshwater turtles, and marine turtles, while CRM has issued several monographic books concerning particular biological, thematic, or regional aspects of turtle biology and conservation.

Of particular significance this year was the publication in the CRM series of the 8th edition of *Turtles of the World: Annotated Checklist and Atlas of Taxonomy, Synonymy, Distribution and Conservation Status*, prepared by the Turtle Taxonomy Working Group and co-published by CRF and TC in associa-



## FIELD PROGRAMS

Science and technology are integrated in all field programs and conservation breeding efforts, and are highlighted in the preceding program descriptions. In South Africa, the Geometric Tortoise program implements mark-recapture surveys to establish tortoise population size, is developing



predator deterrent strategies, and biometric identification of individual tortoises. Moreover, habitat restoration and fire management planning and implementation are coordinated closely with the nation's leading botanical science institutions.

In Mexico and the USA, conservation work for the Bolson Tortoise is based on sound scientific principles as well as technological advances, from preparations for tortoise population survey methodology using grid transects and drone imagery in the Bolsón de Mapimí to evaluation of settlement success of translocated juveniles in New Mexico.

Science and technology are deeply integrated in the efforts to secure the last Ploughshare Tortoises and their habitat in Madagascar and manage their assurance colonies in Madagascar and overseas.

Population monitoring of Palawan Forest Turtles has convincingly documented that repatriated animals from the 2015 confiscation have successfully adapted to their new environs in protected streams, and have integrated seamlessly into the populations of turtles that already resided in those streams.

of Tortoises & Freshwater Turtles (Charleston, SC) and a keynote address by Eric Goode at the Desert Tortoise Council annual conference (Las Vegas, NV).



## STAFF SCIENTIFIC PARTICIPATION AND ACCOMPLISHMENTS

TC staff and board members participated in a variety of science and conservation meetings in 2017, including giving several presentations at the 15th Annual Symposium on the Conservation & Biology

# NEWS



## THE THOMAS FIRE

The Turtle Conservancy and its hometown of Ojai, California, ended 2017 in chaos as the Thomas Fire, then the largest fire in California's history, burned 281,000 acres throughout the region. On December 4, 2017, the fire began in nearby Santa Paula, and spread 15 miles in just a few hours. Fortunately, the TC team had recently held its annual fire drill and evacuation planning meeting, so staff were prepared to take action immediately. Smoke engulfed the facility, and the horizon glowed orange as flames poured across the mountainside. The facility was given mandatory evacuation orders as staff carefully loaded the collection of turtles and tortoises into vehicles. We were extremely grateful to have help from Charles Paddock Zoo personnel, who arranged an emergency evacuation center for the animals at the historic City Hall in Atascadero. ZooMed Labs also helped immensely by providing specialty equipment for the animals during the evacuation.

After the turtles and tortoises were evacuated, our dedicated team of animal keepers and grounds keepers, as well as TC president Eric Goode, fought back the flames that at times reached within 20 feet of our property boundary. Firefighters staged a major effort at the Conservation Center, thankfully sparing the majority of the property, although several neighbors lost their homes. The animals were brought back to their home several days later. Although the facility was fortunate to be spared from the incredibly destructive fire, we lost a large oak tree that had caught fire, and subsequently toppled over, and a thick layer of ash blanketed the

entire facility, requiring a significant cleanup effort to ensure clean water and air for both the animals and the staff. We are incredibly thankful to our local and visiting firemen and first responders for their courageous and skilled effort, to the Charles Paddock Zoo, ZooMed, and the Atascadero City Hall for their generous support and provision of accommodation in our time of need.



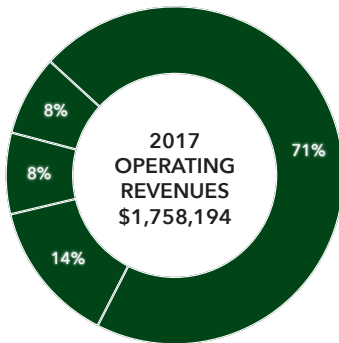
## BEHLER TURTLE CONSERVATION AWARD TO PETER PAUL VAN DIJK

We are proud to report that TC's very own Field Conservation Program Director, Dr. Peter Paul van Dijk, was awarded the prestigious 2017 Behler Turtle Conservation Award. The award was presented at the TSA/TFTSG Annual Symposium on Conservation and Biology of Tortoises and Freshwater Turtles in August. The award was established in 2006 in memory of John Behler's legacy to honor excellence and outstanding contributions and leadership in the international chelonian conservation and biology communities.

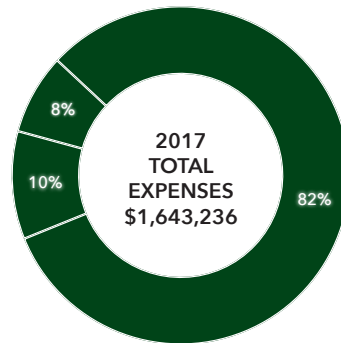
"Peter Paul is a walking encyclopedia of turtle biology, taxonomy and conservation and is both a critically important resource and leader for the global turtle conservation community, having focused a large portion of his efforts on improving regulatory aspects of the unsustainable global turtle trade," said Anders Rhodin, Chair of the Turtle Conservancy's Board and co-founder of the Award.

Congratulations Peter Paul, the Turtle Conservancy is honored to have you provide leadership and expertise to our team.

# FINANCIALS



Individuals	\$ 1,243,894	71%
Corporations	241,642	14%
In-Kind & Other	137,058	8%
Foundations	135,496	8%
Investments	104	0.01%



Programs	\$ 1,346,475	82%
Administration	170,012	10%
Fundraising	126,749	8%

## STATEMENT OF ACTIVITIES

<b>Public Support and Revenues</b>	<b>2017</b>	<b>2016</b>
Contributions & grants	1,604,231	2,533,630
Program service revenues	60,163	137,372
Other revenue	93,696	11,595
Investment income	104	171
<b>Total Public Support and Revenues</b>	<b>1,758,194</b>	<b>2,682,768</b>

<b>Expenses</b>		
Program expenses	1,346,475	2,977,588
General and administrative expenses	170,012	180,350
Fundraising expenses	126,749	58,782
<b>Total Expenses</b>	<b>1,643,236</b>	<b>3,216,720</b>

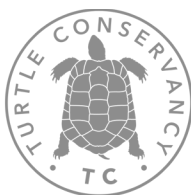
<b>Change in Net Assets</b>	<b>114,958</b>	<b>(533,952)</b>
Net assets at beginning of year	1,367,652	1,901,604
Net assets at end of year	1,482,610	1,367,652

## STATEMENT OF FINANCIAL POSITION

<b>Assets</b>	<b>2017</b>	<b>2016</b>
Cash and cash equivalents	562,852	409,132
Inventory	85,480	46,334
Prepaid expenses	32,245	44,344
Fixed and intangible assets	921,068	975,743
Other assets	4,137	15,653
<b>Total assets</b>	<b>1,605,782</b>	<b>1,491,206</b>
<b>Liabilities and net assets</b>		
Payables and accrued liabilities	123,172	123,554
<b>Net assets</b>		
Unrestricted net assets	983,348	999,068
Temporarily restricted net assets	499,262	368,584
<b>Total net assets</b>	<b>1,482,610</b>	<b>1,367,652</b>
<b>TOTAL</b>	<b>1,605,782</b>	<b>1,491,206</b>

*Data taken from the Turtle Conservancy's 2017 Form 990.*





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