

The Turtle Conservation Fund

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The mission of the Turtle Conservation Fund (TCF) is to ensure that no tortoise or freshwater turtle species becomes extinct and that sustainable populations of all species persist in the wild. To make sure this happens, TCF has focused its conservation efforts on the most critically imperiled turtles, those that are teetering on the brink of extinction.

A good example of TCF enacting its mission involves the ongoing support for conservation programs involving the Yangtze giant softshell, *Rafetus swinhoei*. Only four living specimens of this turtle are known, making it one of the world's most critically endangered species. One individual is in Vietnam's famous Hoan Kiem Lake in Hanoi, another is in the wild in a lake east of Hanoi, and a pair now resides at the Suzhou Zoo in China's Jiangsu province.

Taking a two-pronged approach to conserve this species, TCF supported both field and captive programs. Surveys to locate wild populations focused in northern Vietnam and southeastern China, where continued existence of this softshell seemed most likely. In June 2004 TCF supported field surveys in Vietnam, an effort spearheaded by Doug Hendrie, partnering with Cleveland Metroparks Zoo, Wildlife Conservation Society (WCS), Hanoi National University, and Education for Nature – Vietnam. This effort eventually led to the location of the only known living wild specimen, which resides in a wetland east of Hanoi. Worldwide fanfare accompanied the announcement of this truly monumental discovery, and efforts to locate additional specimens continue in this area. Searches are also underway in China's Yunnan Province by Lu Shunqing of WCS-China. Following leads that populations may still persist in the Honghe River (Red River) and its tributaries in Yunnan, TCF is also supporting surveys by Wen Cheng (Peking University), Wang Jian (Southwest Forestry Institute), and Zhang Li (Conservation International China). These surveys will hopefully result in the discovery of remnant wild populations in China. Additionally, a much needed examination of the genetic variability of this species was also supported by TCF and undertaken by Minh Duc Le of the American Museum of Natural History and Peter Pritchard of the Chelonian Research Institute. A quick glance at the names and affiliations of the people working to save the Yangtze giant softshell clearly indicates that conservation work is a team effort requiring partnerships that unselfishly and cooperatively contribute to the overriding goal of salvaging this species from the very brink of extinction.

Also emphasizing the importance of forming effective partnerships in conducting conservation programs is the captive aspect of this initiative. This effort brought together the two remaining captive animals in China, a male and a female. Partner organizations that

banded together to help fund this union included TCF, WCS, TSA (thanks to funding support from the Batchelor Foundation, Kadoorie Farm and Botanic Garden, Ocean Park Hong Kong, Walter Sedgwick, and David Shapiro). Through the Herculean efforts of Gerald Kuchling (University of Western Australia and Chelonia Enterprises) and Lu Shunqing (WCS-China), coupled with expertise and support from Rick Hudson and Scott Davis (Turtle Survival Alliance), Mitch Kalmanson (Lester Kalmanson Agency, Inc.), and Paul Calle (WCS), the female from the Changsha Zoo in Hunan Province was united with the male at the Suzhou Zoo. Hopefully this will eventually result in a dramatic increase in the number of Yangtze giant softshell turtles.

Another good example of the TCF focusing its conservation efforts on the most critically imperiled turtles is the continued support provided to conservation efforts of the river terrapin, *Batagur baska*. This large Asian species has suffered dramatically due to over-collection of turtles and eggs for food. TCF has supported six conservation projects regarding this species. These have ranged from surveys and protection of the last known wild populations in Cambodia to headstarting and educational initiatives in Malaysia. Educational initiatives in the Sundarbans region of Bangladesh were also supported, as were surveys along the eastern coast of India. Funding these projects has resulted in a better understanding and protection of the fragile Cambodian populations, a scientifically monitored release program in Malaysia, and heightened awareness in Cambodia, Malaysia, and Bangladesh regarding the conservation needs of this Critically Endangered species. Taxonomic issues regarding the river terrapin were also clarified by the TCF-supported work of Peter Praschag and colleagues, and it is now recognized as two species, *Batagur baska* of northeastern India and Bangladesh and *B. affinis* of the southern Malay Peninsula and Sumatra. The taxonomic allocation of the extant and extirpated populations in the northern Malay Peninsula, Cambodia, and southern Vietnam remains unclear. Dr. Praschag's work makes it clear that *Batagur baska*, restricted to a few fragile and relatively unstudied populations from India and Bangladesh, is also teetering on the brink of extinction, and emphasizes the critical need for conservation measures to be taken immediately if this species is to persist.

In Mexico and Central America, the Critically Endangered Central American river turtle, *Dermatemys mawii*, has been a focus of TCF support. Its numbers have declined due to overharvest of turtles and eggs for food. Projects involving the distribution, ecology, genetics, management, and recovery of this species have been funded by TCF. Through these efforts, we now have a better understanding of the distribution, abundance, and habits of the Central American river

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Dr. Eng Heng Chan of the University Malaysia Terengganu, is joined by a group of elementary school children in releasing headstart River terrapins, *Batagur affinis*.

turtle in Guatemala. Additionally, facilities at a turtle farm in Mexico were enhanced to better care for the turtles there, and the farm staff benefitted from capacity building and training. Genetic analysis of tissues taken from animals of Mexican and Guatemalan origin helped shed light on the variation within this species.

These are only a few examples to illustrate the impact TCF has had on turtle conservation as it strives to meet its mission. Initiatives involving a host of other Endangered and Critically Endangered species from around the globe have received TCF support. A total of 142 grant proposals have been received by TCF from 2003 to March 2008, of which 56 (39 percent) were funded. Total requests were \$823,039, with \$242,584 (30 percent) awards granted. Support ranged from \$1,000 - \$10,000 per project, with the average award \$4,332. Grants were given to projects in 32 nations (Bangladesh, Benin, Bolivia, Brazil, Cambodia, Cayman Islands, China, Colombia, Cuba, Dominican Republic, Egypt, Germany, Ghana, Guatemala, Haiti, India, Indonesia, Iran, Jamaica, Madagascar, Malaysia, Mexico, Myanmar, Nigeria, Pakistan, Philippines, Puerto Rico, South Africa, Tanzania, Togo, Turkey, and Vietnam). Such a broad geographic distribution of funds reflects TCF's mounting impact on international turtle conservation.

To help provide focus to TCF's efforts, a list of target species was prepared (Top 25 Turtles on Death Row). To date, projects representing 12 (48 percent) have been funded. An intense proposal solicitation effort will continue for target species, especially those in extreme peril. The world's Top 25 most endangered turtle and tortoise species as currently defined by the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group (<http://www.iucn-tftsg.org/trouble/>) are (bold print indicates TCF support): *Astrochelys yniphora*, ***Batagur baska***, *Batagur borneoensis*, ***Batagur trivittata***, *Chelodina mccordi*, *Chelonoidis nigra abingdoni*, *Chitra chitra*, *Chitra indica*, *Cuora aurocapitata*, *Cuora trifasciata*, ***Cuora yunnanensis***, *Dermatemys mawii*, *Elusor macrurus*, *Erymnochelys madagascariensis*, ***Geochelone platynota***, *Heosemys depressa*, ***Leucocephalon yuwonoi***, *Mauremys annamensis*, ***Psammobates geometricus***, *Pseudemydura umbrina*, ***Pyxis planicauda***, ***Rafetus swinhoei***, ***Siebenrockiella leytensis***, *Terepene coahuila*, and ***Testudo kleinmannii***.

Of the 23 turtle taxa listed by IUCN as Critically Endangered (CR), TCF has supported projects specifically involving 9 (39percent), and of the 43 taxa listed as Endangered (EN), TCF has supported specific projects for 9 (21 percent). Of the 66 taxa in these two threat categories, TCF has supported projects specifically involving 18 (27 percent). The Critically Endangered (CR) and Endangered (EN) species impacted have been *Batagur baska* (CR), *Batagur*

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(=*Kachuga*) *dhongoka* (EN), *Batagur* (=Kachuga) *kachuga* (CR), *Batagur* (=Kachuga) *trivittata* (EN), *Chelodina mccordi* (CR), *Cuora mccordi* (CR), *Dermatemys mawii* (CR), *Geochelone platynota* (CR), *Indotestudo forstenii* (EN), *Pelochelys cantorii* (EN), *Podocnemis lewyana* (EN), *Psammobates geometricus* (EN), *Pyxis planicauda* (EN), *Rafetus euphraticus* (EN), *Rafetus swinhoei* (CR), *Siebenrockiella leytensis* (CR), *Testudo kleinmanni* (CR), and *Trachemys taylori* (EN).

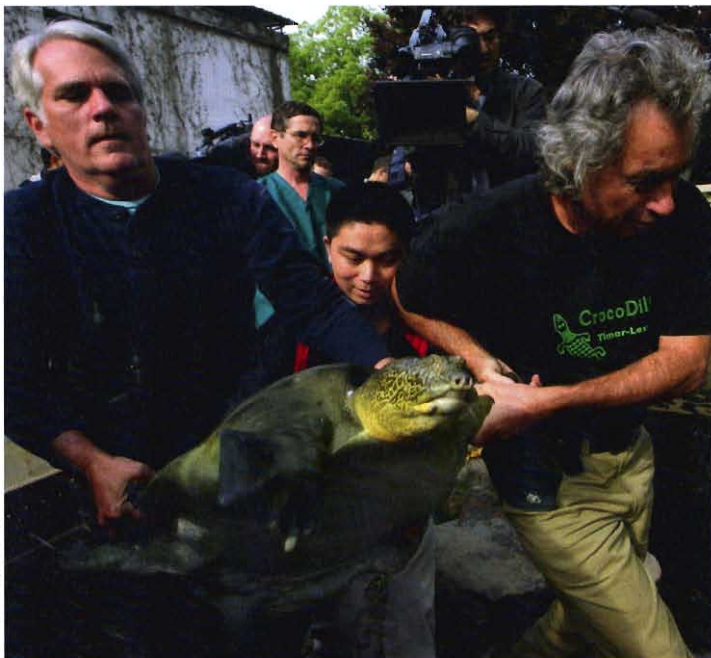
TCF has also supported projects involving species listed by IUCN as Extinct (EX) (but since rediscovered) (*Cuora yunnanensis*), and as Extinct in the Wild (EW) (*Aspideretes nigricans*) (though now known to also exist in the wild). In addition, TCF has provided support for facilities or broad projects that impact additional CR and EN target species. Examples include Cuc Phuong Turtle Conservation Center, Allwetter Zoo, Madras Crocodile Bank Trust, Parque Nacional de Brazil, Parque Nacional Noel Kempff Mercado, Madagascar Turtle Workshop, Myanmar Turtle Confiscation Workshop, Turtle Conservation Initiative in Pakistan, and Guangdong Province Survey, China. TCF will continue to target its support for Critically Endangered and Endangered species as we strive to pull them back from the brink of extinction.

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Drs. Scott Davis and Gerald Kuchling carry the only female captive Yangtze giant softshell, *Rafetus swinhoei*, to join a male at the Suzhou Zoo.



RICK HUDSON

The Critically Endangered *Batagur baska* is currently known only from the Sundarbans region of northeastern India and Bangladesh.