

# Setting the Stage for Understanding Globalization of the Asian Turtle Trade:

Global, Asian, and American  
Turtle Diversity, Richness, Endemism,  
and IUCN Red List Threat Levels

**Anders G.J. Rhodin and Peter Paul van Dijk**

*IUCN Tortoise and Freshwater Turtle Specialist Group,  
Chelonian Research Foundation, Conservation International*



# New Species Described 2010



Photo C. Hagen

***Graptemys pearlensis* - Pearl River Map Turtle**  
Louisiana and Mississippi, USA  
**Red List: Not Evaluated [Endangered]**

# IUCN/SSC

## Tortoise and Freshwater Turtle Specialist Group



Founded 1980

[www.iucn-tftsg.org](http://www.iucn-tftsg.org)

# International Union for the Conservation of Nature / Species Survival Commission



[www.iucn.org](http://www.iucn.org)



# Convention on International Trade in Endangered Species of Fauna and Flora

[www.cites.org](http://www.cites.org)



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and International Union for Conservation of Nature/Species Survival Commission



# *Chelonian Conservation and Biology*

**Thomson Reuters'  
ISI Journal Citation  
Impact Factor  
currently ranks  
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100 zoology journals  
worldwide**

[www.chelonianjournals.org](http://www.chelonianjournals.org)

# CONSERVATION BIOLOGY OF FRESHWATER TURTLES AND TORTOISES

A COMPILATION PROJECT OF THE  
IUCN/SSC TORTOISE AND FRESHWATER TURTLE SPECIALIST GROUP

EDITED BY

ANDERS G.J. RHODIN, PETER C.H. PRITCHARD, PETER PAUL VAN DIJK,  
RAYMOND A. SAUMURE, KURT A. BUHLMANN, JOHN B. IVERSON,  
AND RUSSELL A. MITTERMEIER



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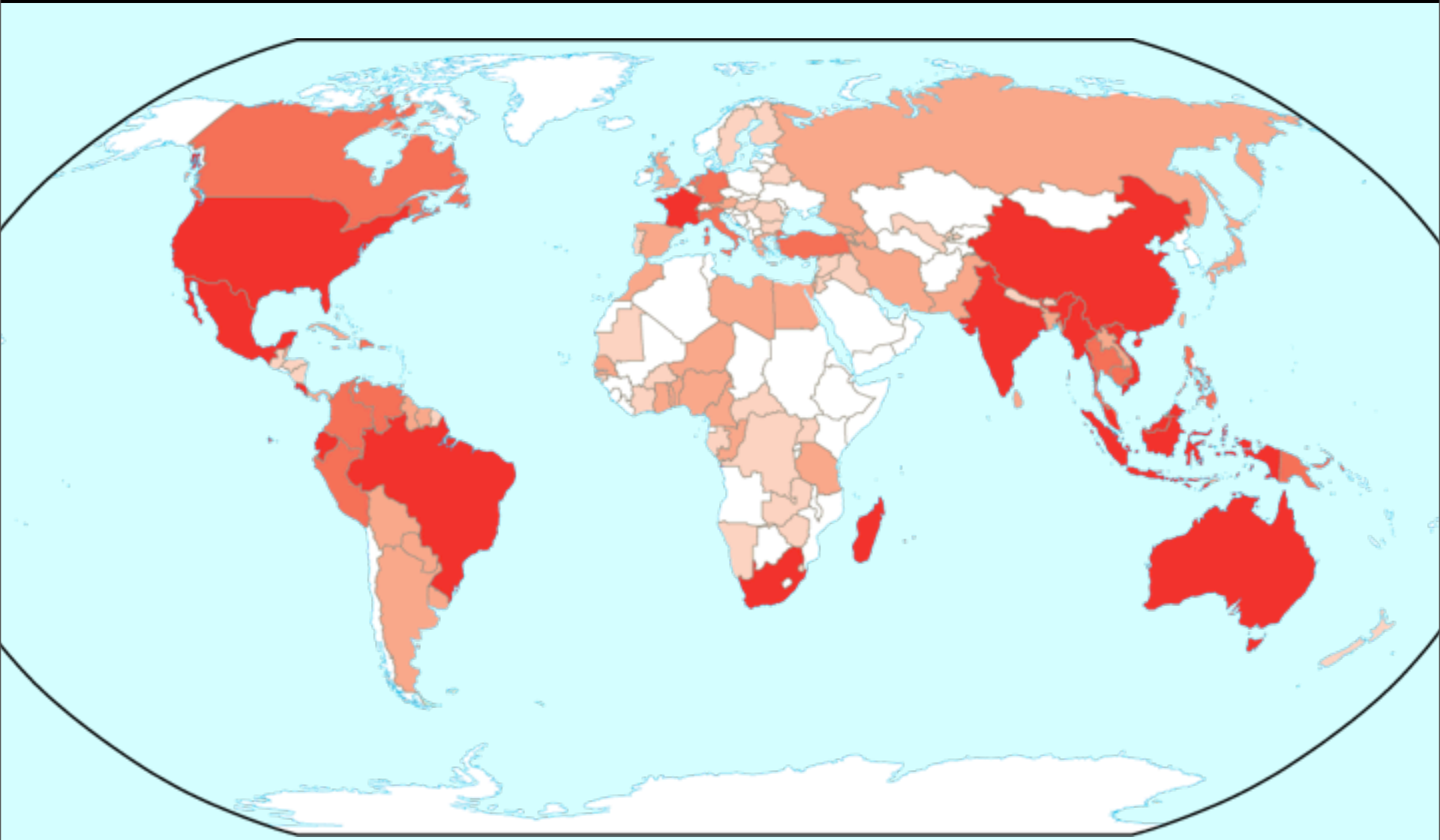


## *Conservation Biology of Freshwater Turtles and Tortoises*

[www.iucn-tftsg.org/cbftt](http://www.iucn-tftsg.org/cbftt)

# **IUCN Tortoise and Freshwater Turtle Specialist Group**

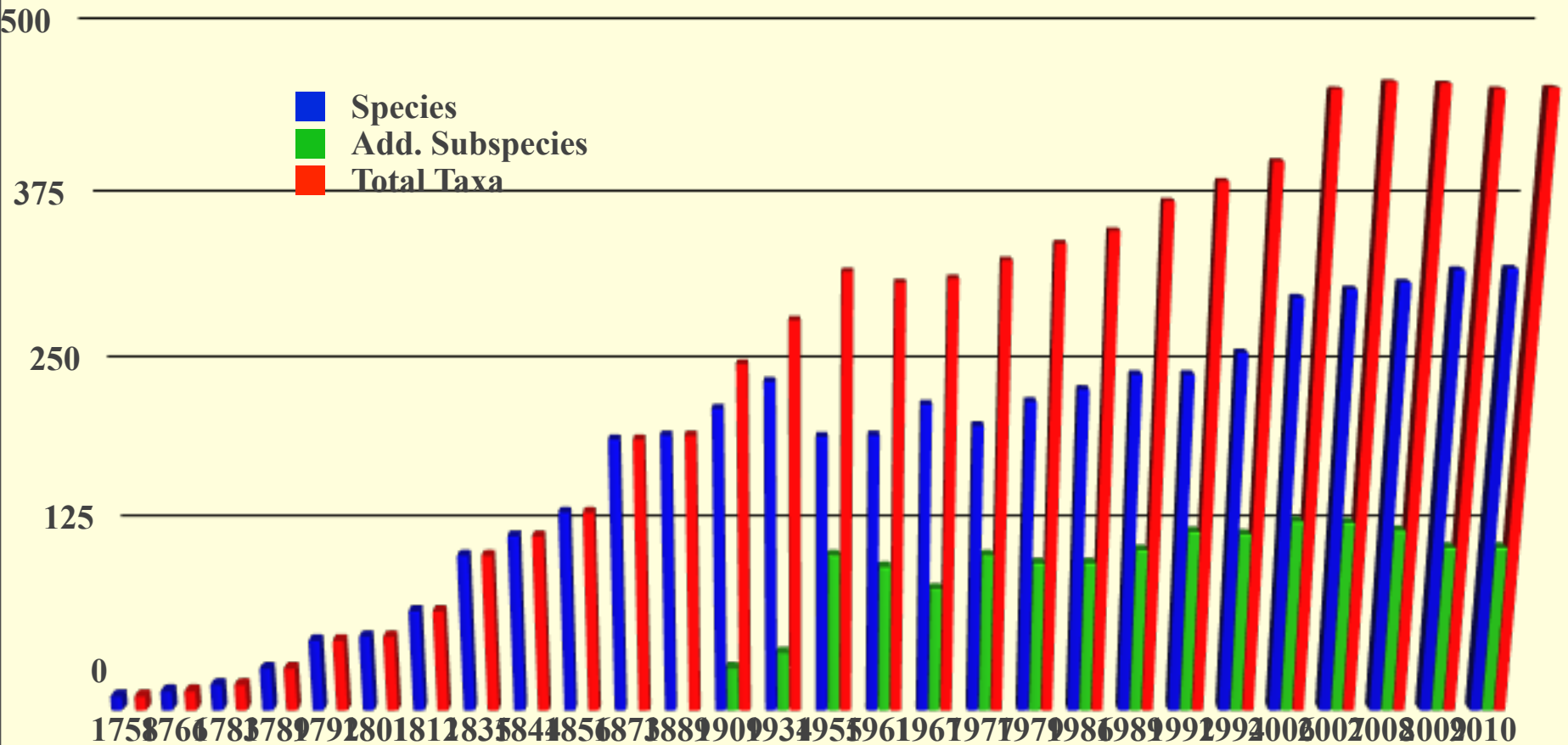
## **Members: Work or Focus - 2010**



**274 Members - 107 Countries**



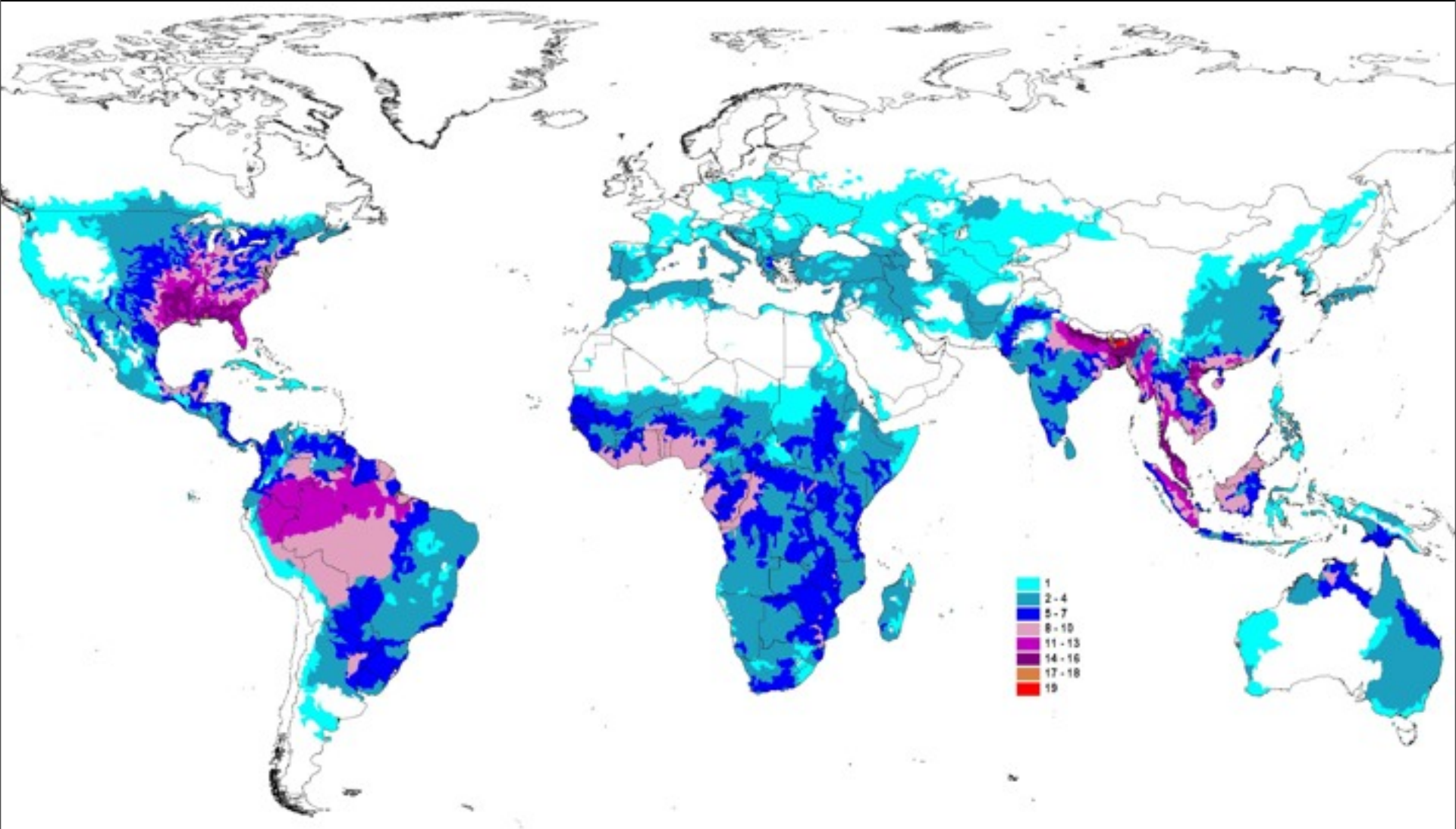
# Species, Additional Subspecies, and Total Taxa of Turtles and Tortoises



**Currently Recognized:**

**334 species, 127 add. subspecies, 461 total taxa**

# Tortoise and Freshwater Turtle Species Richness



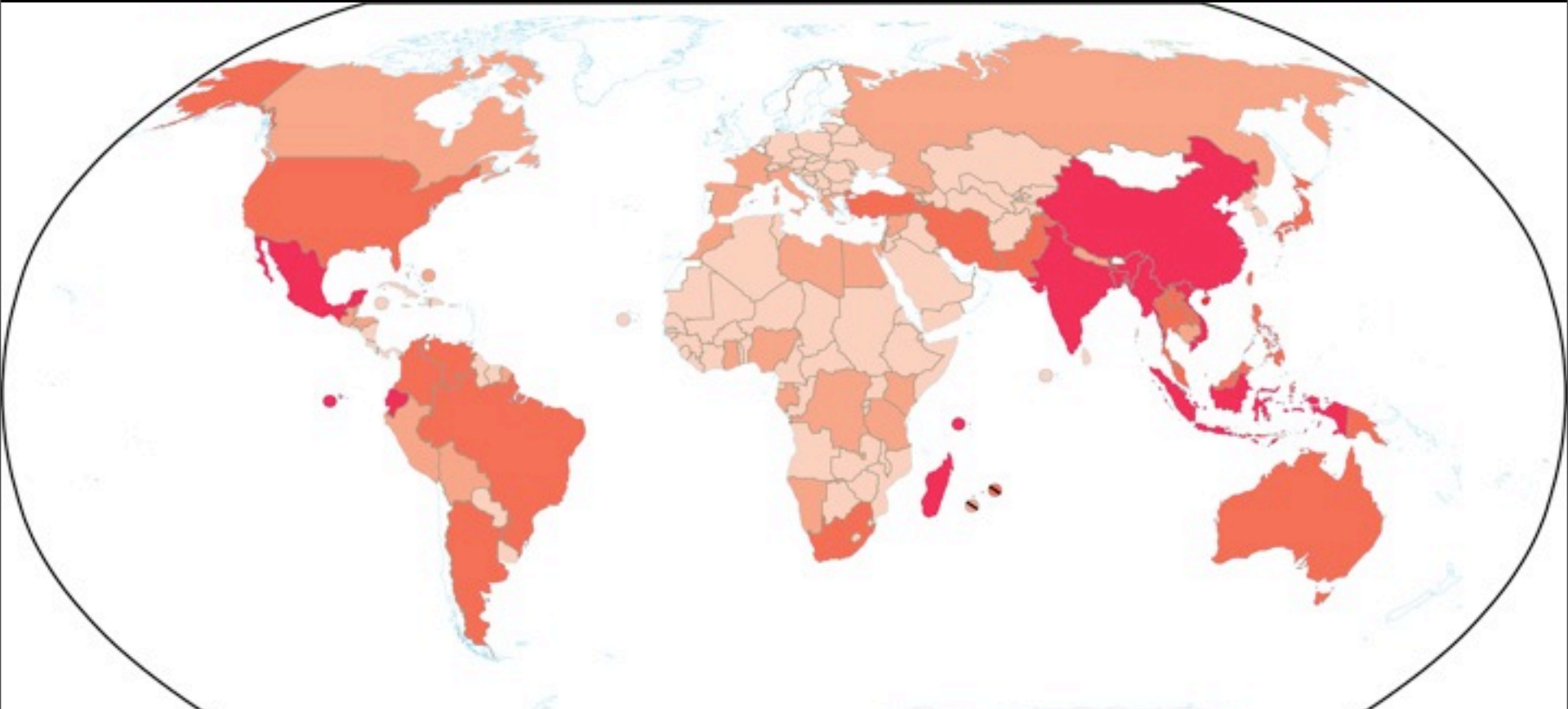
**Buhlmann, Akre, Iverson, Karapatakis, Mittermeier, Georges, Rhodin, van Dijk, and Gibbons. 2009. *Chelonian Conservation and Biology* 8:116–149.**

# **Tortoise and Freshwater Turtle Species Richness – Global Rankings**

- 1. USA – 51 species**
- 2. Mexico – 36 species**
- 3. Australia – 30 species**
- 4. Brazil – 29 species**
- 5. Indonesia – 28 species**
- 6. India – 27 species**
- 7. Vietnam – 27 species**
- 8. China – 25 species**

**Texas (24), Alabama (23), Mississippi (23),  
Louisiana (20), Florida (20), and Georgia (19)  
would all be in the global Top 15 if ranked as nations**

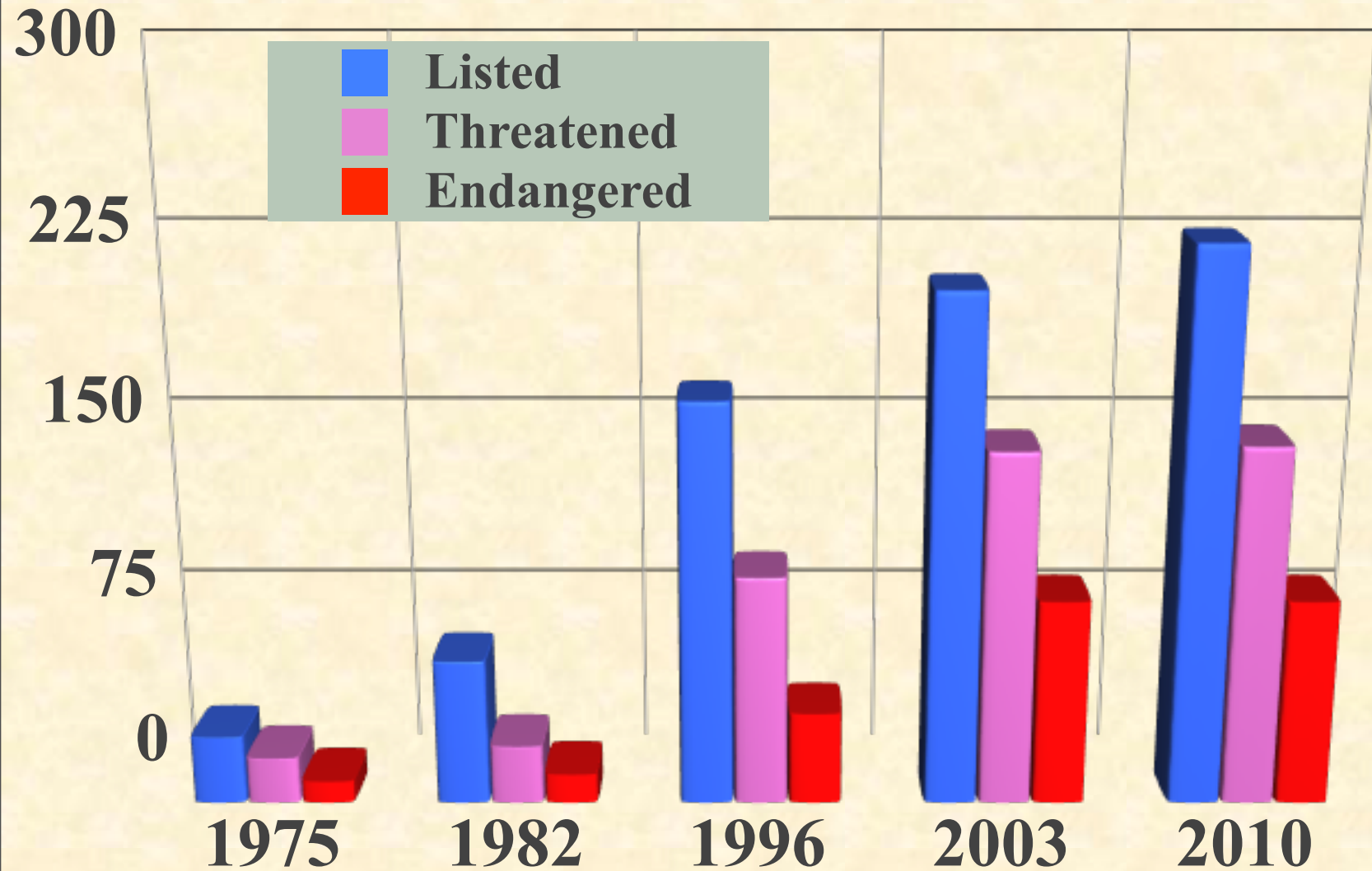
# **Turtle Priority Nations** **(Ranked by Diversity + Endemism + Threat Levels)**



**Tortoises and Freshwater Turtles**

# Turtles on IUCN Red List

Taxa (species and subspecies)





# 2010 IUCN Red List

<b>Turtle Species Listed</b>	<b>207</b>
<b>% Threatened (of those Listed)</b>	<b>63%</b>
<b>Turtle Species not yet Listed</b>	<b>127</b>
<b>Total Turtle Species</b>	<b>334</b>
<b>% Threatened (of all turtles)</b>	<b>39%</b>
<b>Including Provisional Assessments</b>	
<b>% Threatened (of all turtles)</b>	<b>43%</b>

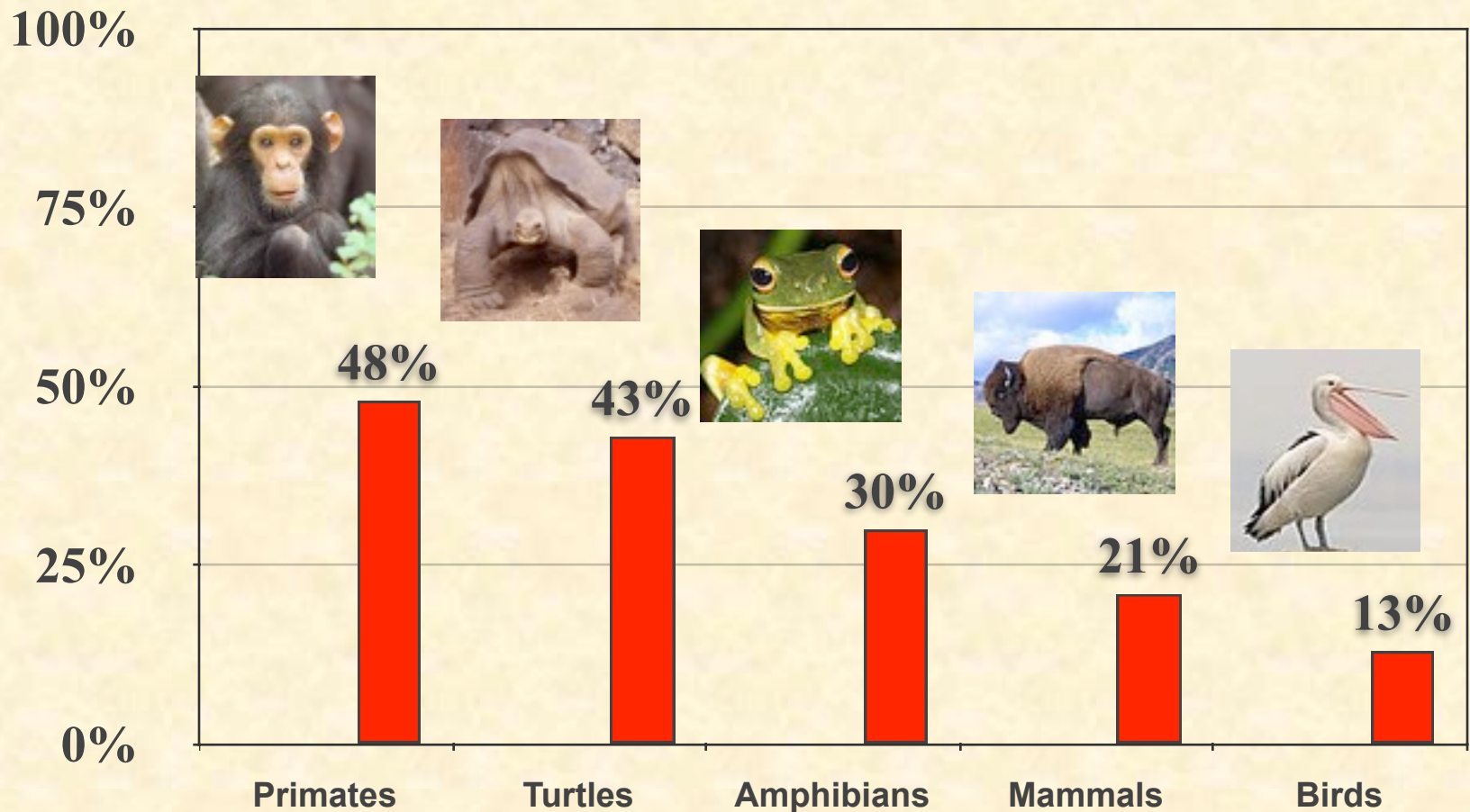
**Among the Highest % Threatened Species  
of any of the major vertebrate groups**

# Vertebrates on IUCN Red List 2010

## Percent of Species that are Threatened

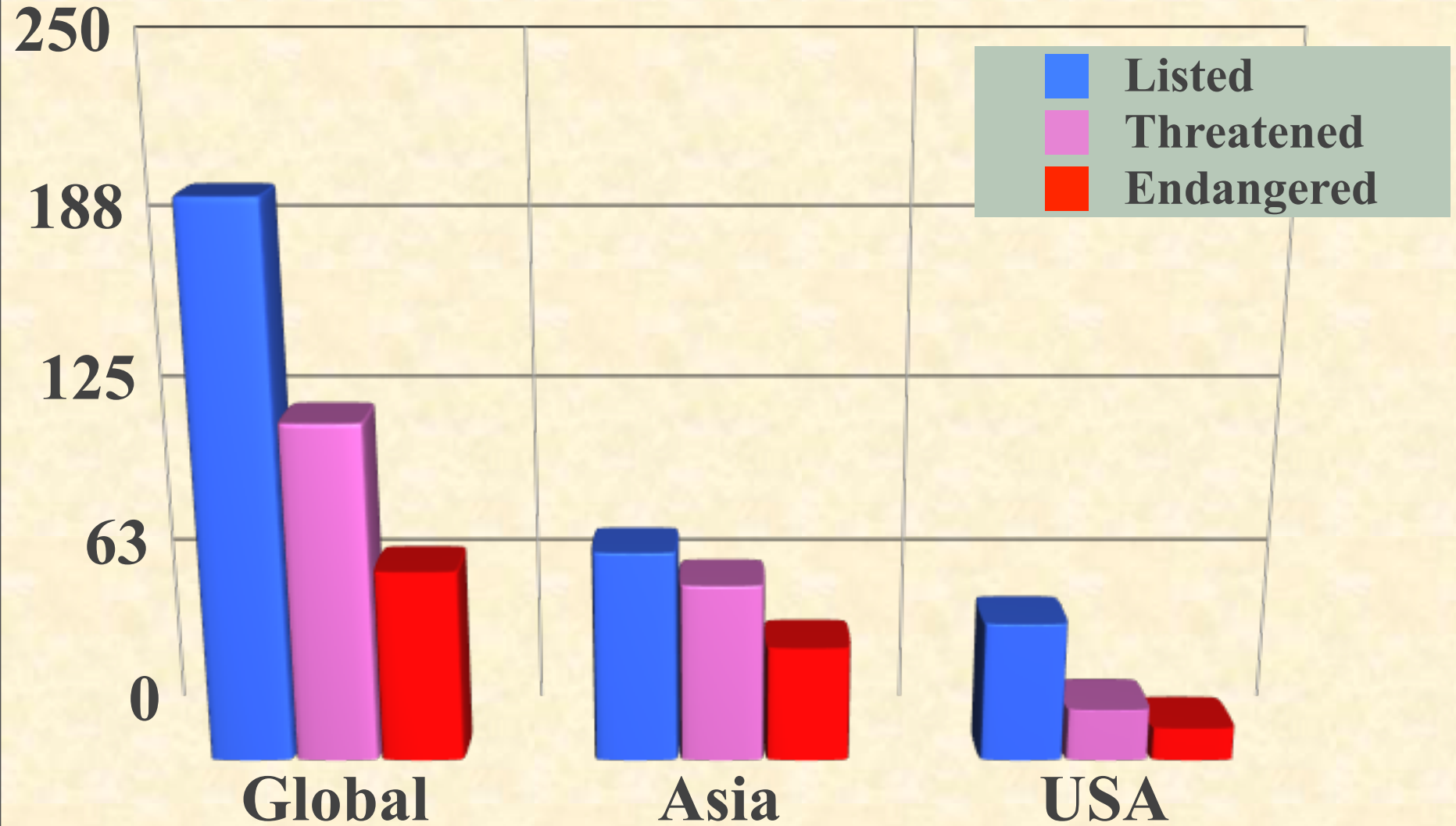
CR + EN + VU

(Percent of Described Species)



# Turtles on IUCN Red List

Freshwater Turtle and Tortoise Species Only



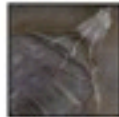


# Top 25 Turtles on Death Row

## SNAPSHOTS OF THE WORLD'S TOP 25 MOST ENDANGERED TURTLES—2003



**River terrapin**  
*Batagur baska*  
S.E. Asia (Indo-Burma & Sundaland Hotspots)  
High Queen, Cleveland  
Metropark Zoo



**Striped narrow-headed softshell turtle**  
*Chitra chitra*  
S.E. Asia (Indo-Burma Hotspot)  
Choi Tabaka, DVM



**Roti snake-necked turtle**  
*Chelonia mydas*  
Southern Indonesia (Wallacea Hotspot)  
R. Andrew Olson, Toledo  
Zoological Society



**Chinese three-striped box turtle**  
*Cuora trifasciata*  
Northern Vietnam & China (Indo-Burma Hotspot)  
Kurt Bullmann, Conservation  
International



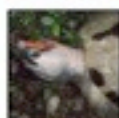
**Arakan forest turtle**  
*Manouria depressa*  
Myanmar (Indo-Burma Hotspot)  
James E. Reepik



**Burmese star tortoise**  
*Geochelone platynota*  
Myanmar (Indo-Burma Hotspot)  
Choi Tabaka, DVM



**Sulawesi forest turtle**  
*Leucocephalon yuwonoi*  
Indonesia (Wallacea Hotspot)  
Choi Tabaka, DVM



**Painted terrapin**  
*Collyer barrowensis*  
S.E. Asia (Indo-Burma & Sundaland Hotspots)  
Rock Reed, Fort Worth Zoo



**Burmese roofed turtle**  
*Kachuga trilobata*  
Myanmar (Indo-Burma Hotspot)  
Gerald Kuchling



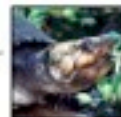
**Vietnam leaf turtle**  
*Manouria annamensis*  
Vietnam (Indo-Burma Hotspot)  
Rock Reed, Fort Worth Zoo



**Southern speckled padloper tortoise**  
*Homopus signatus capri*  
South Africa (Succulent Karoo Hotspot)  
Thomas F. J. Lonerette



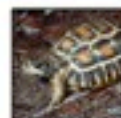
**Yangtze giant softshell turtle**  
*Apalone muticus*  
China and Vietnam  
Hu Dush Dou



**Madagascar big-headed turtle**  
*Erymnochelys madagascariensis*  
Madagascar (Madagascar and Indian Ocean Islands Hotspot)  
Gerald Kuchling



**Ploughshare tortoise**  
*Geochelone yulphara*  
Madagascar (Madagascar and Indian Ocean Islands Hotspot)  
Thomas F. J. Lonerette



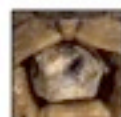
**Flat-tailed tortoise**  
*Pyxis planicauda*  
Madagascar (Madagascar and Indian Ocean Islands Hotspot)  
John L. Bullock, Wildlife  
Conservation Society



**Geometric tortoise**  
*Psammobates geometricus*  
South Africa (Cape Floristic Region Hotspot)  
Thomas F. J. Lonerette



**Philippine forest turtle**  
*Manouria leptostoma*  
Philippine Islands  
Willem W. Timmermann, IRT  
World Biodiversity Database



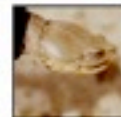
**Egyptian tortoise**  
*Testudo kleinmanni*  
S.E. Mediterranean  
(Mediterranean Basin Hotspot)  
Omar Attam



**Western swamp turtle**  
*Pseudemydura anandrae*  
Australia (Southwestern Australia Hotspot)  
Gerald Kuchling



**Mary river turtle**  
*Elseya maccartneyi*  
Australia  
John Cann



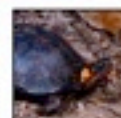
**Dahl's mud-headed turtle**  
*Batrachemys dahl*  
Colombia  
Russell A. Mittermeier,  
Conservation International



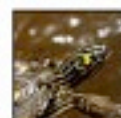
**Abingdon Island tortoise**  
(Galapagos Tortoise)  
*Geochelone nigra abingdoni*  
Galapagos Islands (Chico-Darwin-Western Ecuador Hotspot)  
Andres G. J. Blandin, Chelonian  
Research Foundation



**Central American river turtle**  
*Dermatemys mawii*  
Central America (Mesoamerica Hotspot)  
John Polisar



**Bug turtle**  
*Clemmys muhlenbergii*  
United States  
Roger Barbour



**Yellow-bellied map turtle**  
*Graptemys flaviventris*  
United States  
David E. Collins

This list of the world's top 25 most endangered tortoises and freshwater turtles was compiled by the Turtle Conservation Fund (TCF)—a partnership of the Center for Applied Biodiversity Science (CABS) at Conservation International (CI), The World Conservation Union Species Survival Commission's (IUCN/SSC) Tortoise and Freshwater Turtle Specialist Group (TFTSG), and IUCN/SSC Turtle Survival Alliance (TSA).

IMAGES AVAILABLE UPON REQUEST.





# Turtles on the Brink – 2010

## The World's 25 Most Endangered Tortoises and Freshwater Turtles



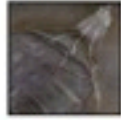
**River terrapin**  
*Batagur baska*  
S.E. Asia (Indo-Burma & Sundaland Hotspots)  
High Queen, Cleveland  
Metropolitan Zoo



**Vietnam leaf turtle**  
*Mauremys annamensis*  
Vietnam (Indo-Burma Hotspot)  
Rock Road, Fort Worth Zoo



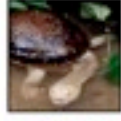
**Western swamp turtle**  
*Pseudemydura anandrae*  
Australia (Southwestern Australia Hotspot)  
Gerald Kaeding



**Striped narrow-headed softshell turtle**  
*Chitra chitra*  
S.E. Asia (Indo-Burma Hotspot)  
Choi Tabaka, DVM

**Yunnan box turtle**  
*Cuora yunnanensis*

**Magdalena river turtle**  
*Podocnemis lewyana*

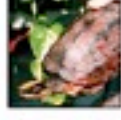


**Roi snake-necked turtle**  
*Chelonia mydas*  
Southern Indonesia (Wallacea Hotspot)  
R. Andrew Ohm, Toledo Zoological Society

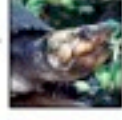


**Yangtze giant softshell turtle**  
*Rafinesquina sinensis*  
China and Vietnam  
Hu Dush Dou

**Yellow-headed box turtle**  
*Cuora aurocapitata*



**Chinese three-striped box turtle**  
*Cuora trifasciata*  
Northern Vietnam & China (Indo-Burma Hotspot)  
Kurt Bullmann, Conservation International

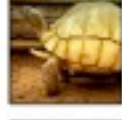


**Madagascar big-headed turtle**  
*Erymnochelys madagascariensis*  
Madagascar (Madagascar and Indian Ocean Islands Hotspot)  
Gerald Kaeding



**Abingdon Island tortoise (Galapagos Tortoise)**  
*Geochelone nigra abingdoni*  
Galapagos Islands (Chico-Dirazon Western Ecuador Hotspot)  
Andres G. J. Blandin, Chelonian Research Foundation

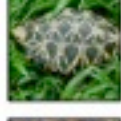
**Hoge's Sideneck Turtle**  
*Phrynops hoguei*



**Ploughshare tortoise**  
*Geochelone yulphara*  
Madagascar (Madagascar and Indian Ocean Islands Hotspot)  
Thomas F. J. Leuteritz



**Central American river turtle**  
*Dermatemys mawii*  
Central America (Mesoamerica Hotspot)  
John Polgar



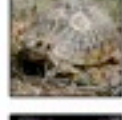
**Burmese star tortoise**  
*Geochelone platynota*  
Myanmar (Indo-Burma Hotspot)  
Choi Tabaka, DVM

**McCord's box turtle**  
*Cuora mccordi*

**Red-crowned roofed turtle**  
*Batagur kachuga*



**Salween forest turtle**  
*Leurostopholus javanensis*  
Indonesia (Wallacea Hotspot)  
Choi Tabaka, DVM

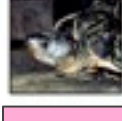


**Geometric tortoise**  
*Psammobates geometricus*  
South Africa (Cape Floristic Region Hotspot)  
Thomas F. J. Leuteritz

**Southern river terrapin**  
*Batagur affinis*



**Painted terrapin**  
*Colaptes barrowensis*  
S.E. Asia (Indo-Burma & Sundaland Hotspots)  
Rock Road, Fort Worth Zoo



**Philippine forest turtle**  
*Mauremys lewinii*  
Philippine Islands  
Walter W. Timmermann, ITR World Biodiversity Database



**Burmese roofed turtle**  
*Kachuga trilobata*  
Myanmar (Indo-Burma Hotspot)  
Gerald Kaeding

**Zhou's box turtle**  
*Cuora zhoui*

This list of the world's top 25 most endangered tortoises and freshwater turtles was compiled by the Turtle Conservation Fund (TCF)—a partnership of the Center for Applied Biodiversity Science (CABS) at Conservation International (CI), The World Conservation Union Species Survival Commission's (IUCN/SSC) Tortoise and Freshwater Turtle Specialist Group (TFTSG), and IUCN/SSC Turtle Survival Alliance (TSA).

IMAGES AVAILABLE UPON REQUEST.





Photo A. Rhodin

***Chelonoidis abingdonii* - Pinta Island Tortoise**  
Ecuador (Galapagos)

**Red List: Extinct in the Wild**

**CITES: Appendix I**

**ESA: Endangered**



Photo T. McCormack

***Rafetus swinhoei* - Red River Giant Softshell Turtle**  
China, Vietnam

**Red List: Critically Endangered**

**CITES: Appendix III**

**ESA: Not Listed**





Photo Zhou Ting, W.P. McCord, & T. Blanck

***Cuora yunnanensis* - Yunnan Box Turtle**  
China

**Red List: Critically Endangered [previously: Extinct]**

**CITES: Appendix II**

**ESA: Not Listed**



Photo S.M.A. Rashid

***Batagur baska* - Northern River Terrapin**  
Bangladesh, India, Myanmar

**Red List: Critically Endangered**

**CITES: Appendix I**

**ESA: Endangered**





Photo R. Hudson

***Batagur trivittata* - Burmese Roofed Turtle**  
**Myanmar**

**Red List: Endangered [Critically Endangered]**

**CITES: Not Listed**

**ESA: Not Listed**





Photo Lee Kwok Shing

***Cuora trifasciata* - Chinese Three-striped Box Turtle**  
China, Vietnam

**Red List: Critically Endangered**

**CITES: Appendix II**

**ESA: Not Listed**



Photo A. Rhodin

***Astrochelys yniphora* - Ploughshare Tortoise**  
Madagascar

**Red List: Critically Endangered**

**CITES: Appendix I**

**ESA: Endangered**





***Chelodina mccordi* - Roti Island Snakeneck Turtle**  
Indonesia (Roti)

**Red List: Critically Endangered**

**CITES: Appendix II**

**ESA: Not Listed**



Photo M. Merida

***Dermatemys mawii* - Central American River Turtle**

Mexico, Belize, Guatemala

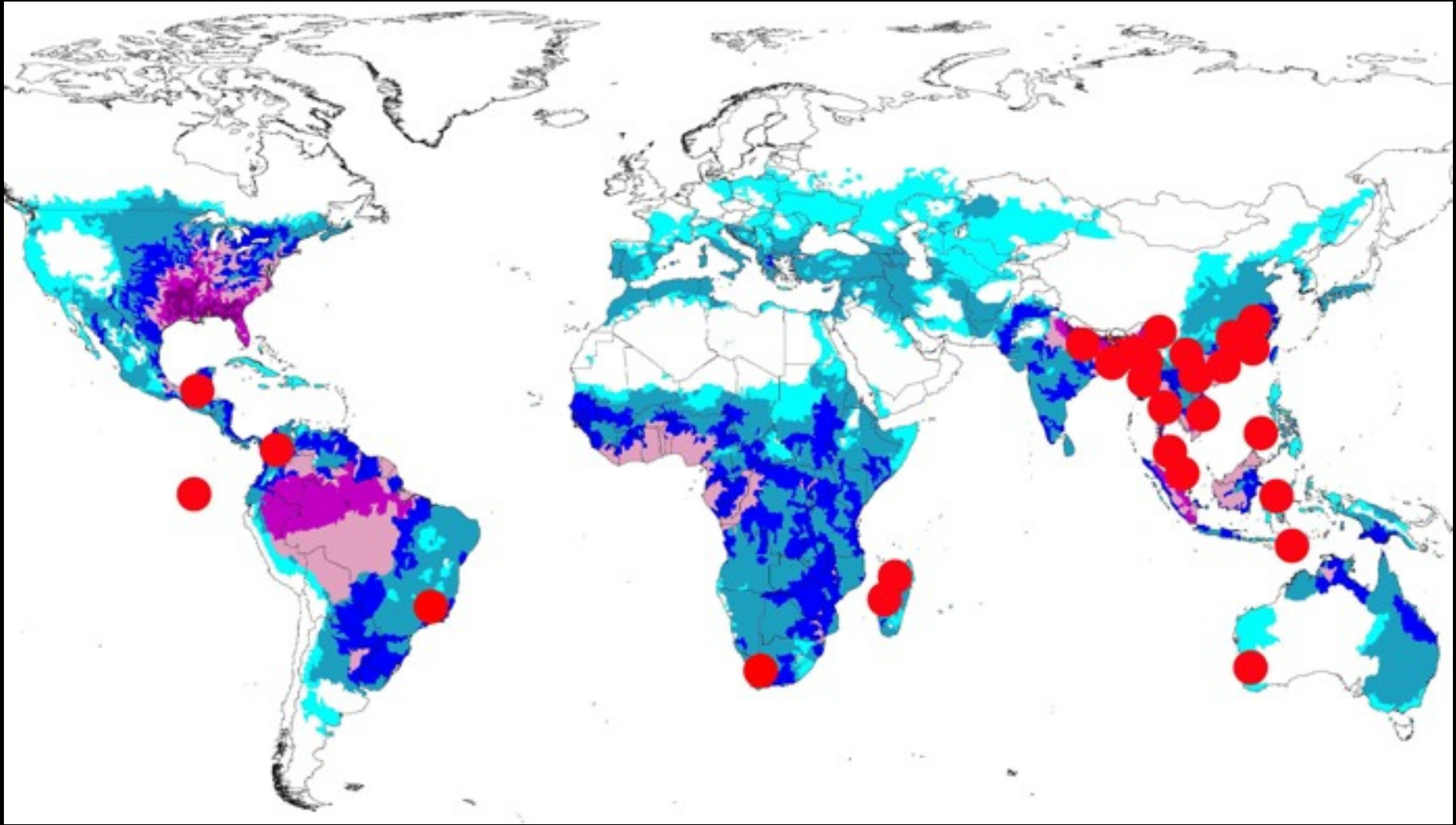
**Red List: Critically Endangered**

**CITES: Appendix II**

**ESA: Endangered**



# Top 25 Turtles on the Brink



# **Of the Top 25 Turtles on the Brink**

**17 (68%) are from Asia**

**5 (20%) are from China**

**None are from the USA**



Photo A. Rhodin

***Astrochelys radiata* - Radiated Tortoise**  
Madagascar

**Red List: Critically Endangered**

**CITES: Appendix I**

**ESA: Endangered**





Photo J.M. Jones

***Terrapene coahuila* - Coahuilan Box Turtle**  
Mexico (Coahuila)

**Red List: Endangered**

**CITES: Appendix I**

**ESA: Endangered**



Photo M. Traphagen

***Gopherus flavomarginatus* - Bolson Tortoise**  
**Mexico**

**Red List: Vulnerable [Endangered]**

**CITES: Appendix I**

**ESA: Endangered**





***Glyptemys muhlenbergii* - Bog Turtle**

**USA**

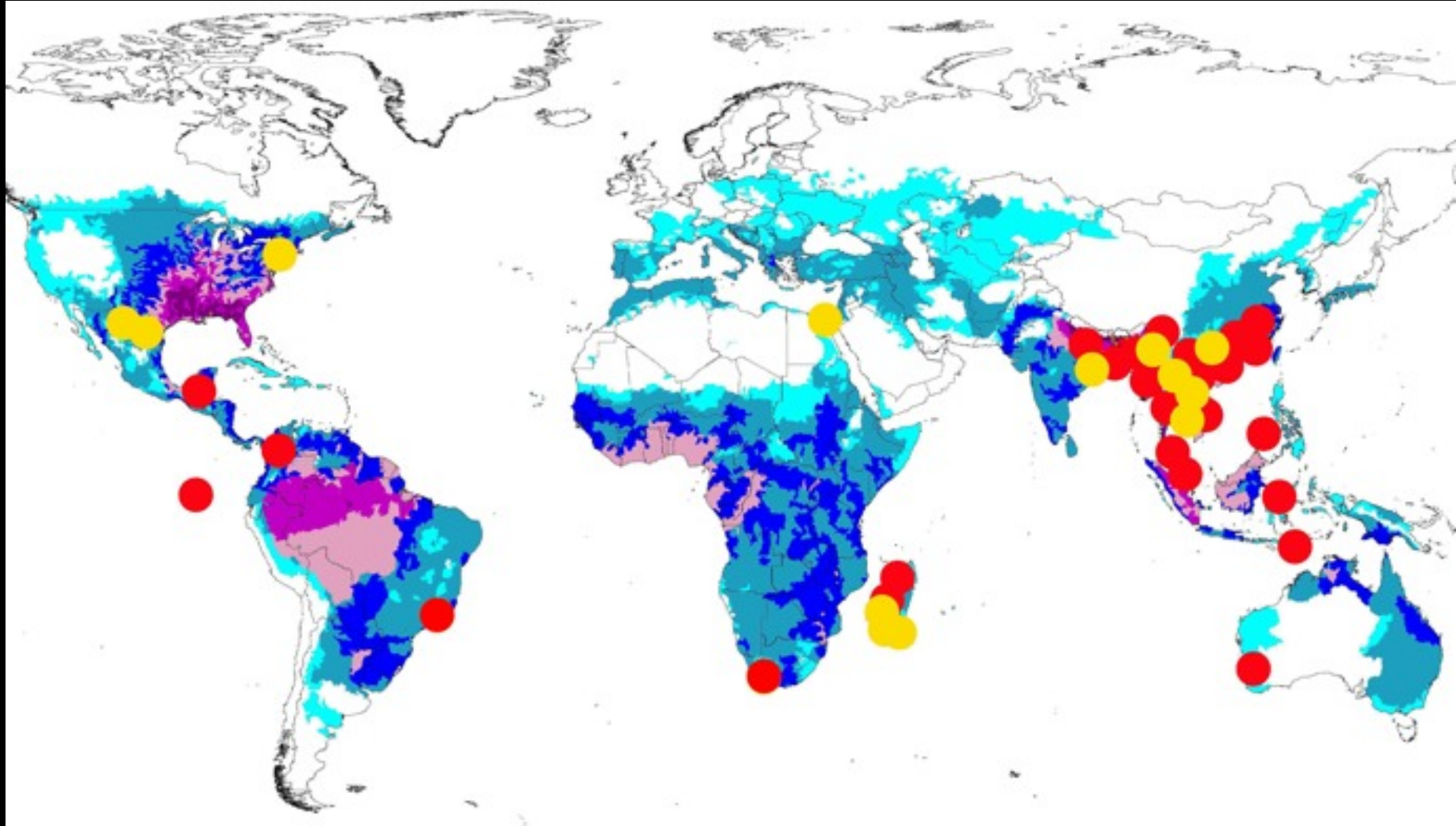
**Red List: Endangered [Critically Endangered]**

**CITES: Appendix I**

**ESA: Threatened**



# Top 40 Turtles on the Brink and at High Risk



(Top 25 in Red)

# **Of the Top 40 Turtles on the Brink or at High Risk**

**25 (63%) are from Asia**

**7 (18%) are from China**

**5 (13%) are from Madagascar**

**1 (< 3%) is from USA**

# Asian Turtle Trade





Photo C. Shepherd

***Cuora amboinensis* - Southeast Asian Box Turtle**  
Southeast Asia

**Red List: Vulnerable**

**CITES: Appendix II**

**ESA: Not Listed**



Photo C. Shepherd

***Orlitia borneensis* - Malaysian Giant Turtle**  
Indonesia, Malaysia  
**Red List: Endangered**  
**CITES: Appendix II**      **ESA: Not Listed**





Photo C. Shepherd

## **Unregulated Live Turtle Trade, Indonesia**

Thursday, January 20, 2011





Photo A. Rhodin

## Unregulated Live Turtle Trade, Hong Kong

Thursday, January 20, 2011



Photo M. Lau

## Unregulated Live Turtle Trade, China





Photo C. Shepherd

***Amyda cartilaginea* - Asiatic Softshell Turtle**  
Southeast Asia

**Red List: Vulnerable**

**CITES: Appendix II**

**ESA: Not Listed**





Photo A. Rhodin

## Traditional Chinese Medicine, Hong Kong



Photo H.C. Chang

## **Unregulated Turtle Shell Trade, Taiwan**

Thursday, January 20, 2011





Photos R. Kendrick

## **Illegal Turtle Shell Trade, Indonesia - Hong Kong**



# **Asian Turtle Trade**

**15,500 Metric Tons Annually**  
**(10.3 Million Turtles Annually)**  
**(ca. 30,000 Turtles per Day)**  
**(Late 1990s)**



Photo A. Rhodin

# Cambodia Turtle Trade Workshop, 1999

Thursday, January 20, 2011

# ASIAN TURTLE TRADE

PROCEEDINGS OF A WORKSHOP ON CONSERVATION AND TRADE OF  
FRESHWATER TURTLES AND TORTOISES IN ASIA

PHNOM PENH, CAMBODIA, 1-4 DECEMBER 1999

EDITED BY

PETER PAUL VAN DIJK, BRYAN L. STUART, AND ANDERS G.J. RHODIN



CHELONIAN RESEARCH MONOGRAPHS

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Kadoorie Farm & Botanic Garden, and U.S. Fish and Wildlife Service



**TRAFFIC**  
NETWORK





# CITES

## TFTSG Input

**CoP 10 (1997) - 1 sp. App. II**

**CoP 11 (2000) - 9 spp. App. II**

**CoP 12 (2002) - 24 spp. App. II, 1 sp. App. I**

**CoP 13 (2004) - 5 spp. App. II, 1 sp. App. I**

**CoP 14 (2007) - Trade Review; Checklist Adopted**

**CoP 15 (2010) - Trade Review Presented**

**39 species listed**

# CITES

## **Tortoise and Freshwater Turtle Specialist Group**

**Contracted by CITES  
to Review the Effects of  
Appendix Listings on the  
Asian Turtle Trade**

# Chinese Turtle Farms



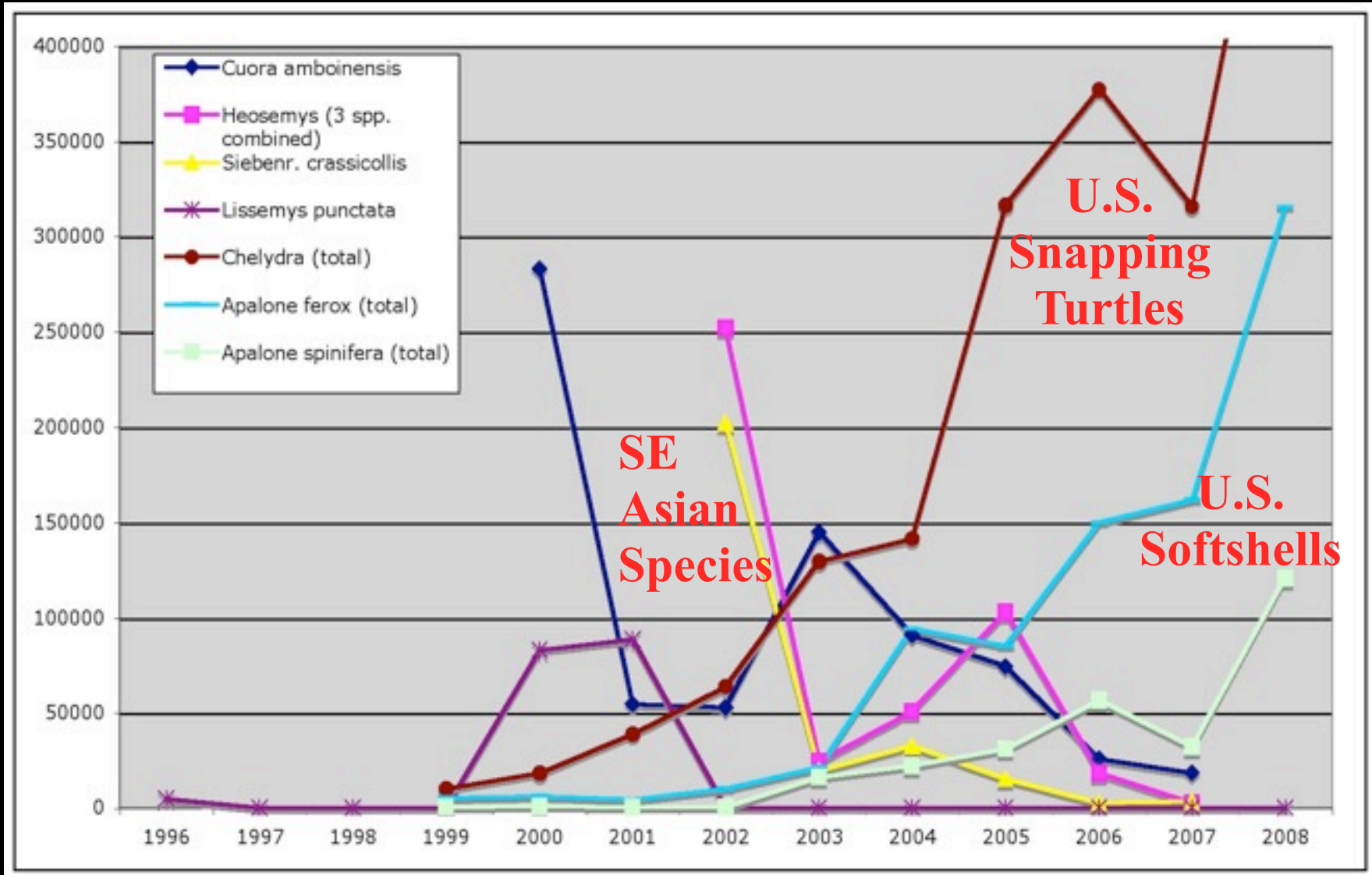
Photo J. Parham

**A billion dollar industry.  
Over 1000 farms produce >300 million turtles each year.**



# Asian Turtle Trade

Number of Animals Exported to China Annually



**Scientific Concerns on Proposed Regulations of  
Florida's Commercial Softshell Turtle Harvest**



**Presentation to Governor Charlie Crist**

Tallahassee, Florida, 17 November 2008

*by*

**Florida Turtle Experts Working Group**

**and**

**IUCN/SSC Tortoise and Freshwater Turtle Specialist Group**



# **Florida Turtle Trade**

## **Presentation of Concerns to Governor Charlie Crist and Florida FWC 2008**

## **Recommendation to Ban all Commercial Turtle Take in Florida**

## **Ban Enacted 2009**

# IUCN/SSC

## Tortoise and Freshwater Turtle Specialist Group



# IUCN Red List Authority



**American  
Freshwater Turtles and Tortoises  
on the IUCN Red List –  
TFTSG **Draft** Assessments 2010**

**51 species evaluated  
(48 freshwater turtles, 3 tortoises)**

# IUCN Red List Criteria 3.1

Use any of the criteria A-E	Critically Endangered	Endangered	Vulnerable
<b>A. Population reduction</b>	Declines measured over the longer of 10 years or 3 generations		
<b>A1</b>	> 90%	> 70%	> 50%
<b>A2, A3 &amp; A4</b>	> 80%	> 50%	> 30%
<p><b>A1.</b> Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible AND understood AND ceased based on and specifying any of the following:</p> <ul style="list-style-type: none"> <li>(a) direct observation</li> <li>(b) an index of abundance appropriate to the taxon</li> <li>(c) a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality</li> <li>(d) actual or potential levels of exploitation</li> <li>(e) effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.</li> </ul> <p><b>A2.</b> Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased OR may not be understood OR may not be reversible, based on any of (a) to (e) under A1</p> <p><b>A3.</b> Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on any of (b) to (e) under A1.</p> <p><b>A4.</b> An observed, estimated, inferred, projected or suspected population reduction (up to a maximum of 100 years) where the time period must include both the past and the future, and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible, based on any of (a) to (e) under A1.</p>			
<b>B. Geographic range</b>	in the form of either B1 (extent of occurrence) OR B2 (area of occupancy)		
<b>B1.</b> Either extent of occurrence	< 100 km <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
<b>B2.</b> or area of occupancy	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
and 2 of the following 3:			
(a) severely fragmented or # locations	= 1	< 5	< 10
(b) continuing decline in (i) extent of occurrence (ii) area of occupancy, (iii) area, extent and/or quality of habitat, (iv) number of locations or subpopulations and (v) number of mature individuals.			
(c) extreme fluctuations in any of (i) extent of occurrence, (ii) area of occupancy, (iii) number of locations or subpopulations and (iv) number of mature individuals.			
<b>C. Small population size and decline</b>			
Number of mature individuals and either C1 or C2:	< 250	< 2,500	< 10,000
<b>C1.</b> An estimated continuing decline of at least up to a maximum of 100 years	25% in 3 years or 1 generation	20% in 5 years or 2 generations	10% in 10 years or 3 generations
<b>C2.</b> A continuing decline and (a) and/or (b)			
(a i) # mature individuals in largest subpopulation	< 50	< 250	< 1,000
(a ii) or % mature individuals in one subpopulation =	90-100%	95-100%	100%
(b) extreme fluctuations in the number of mature individuals			
<b>D. Very small or restricted population</b>			
Either (1) number of mature individuals or (2) restricted area of occupancy	< 50 na	< 250 na	< 1,000 typically: AOO < 20km <sup>2</sup> or # locations ≤ 5
<b>E. Quantitative Analysis</b>			
Indicating the probability of extinction in the wild to be at least	50% in 10 years or 3 generations (100 years max)	20% in 20 years or 5 generations (100 years max)	10% in 100 years

# American Freshwater Turtles and Tortoises on the IUCN Red List – TFTSG **Draft** Assessments 2010

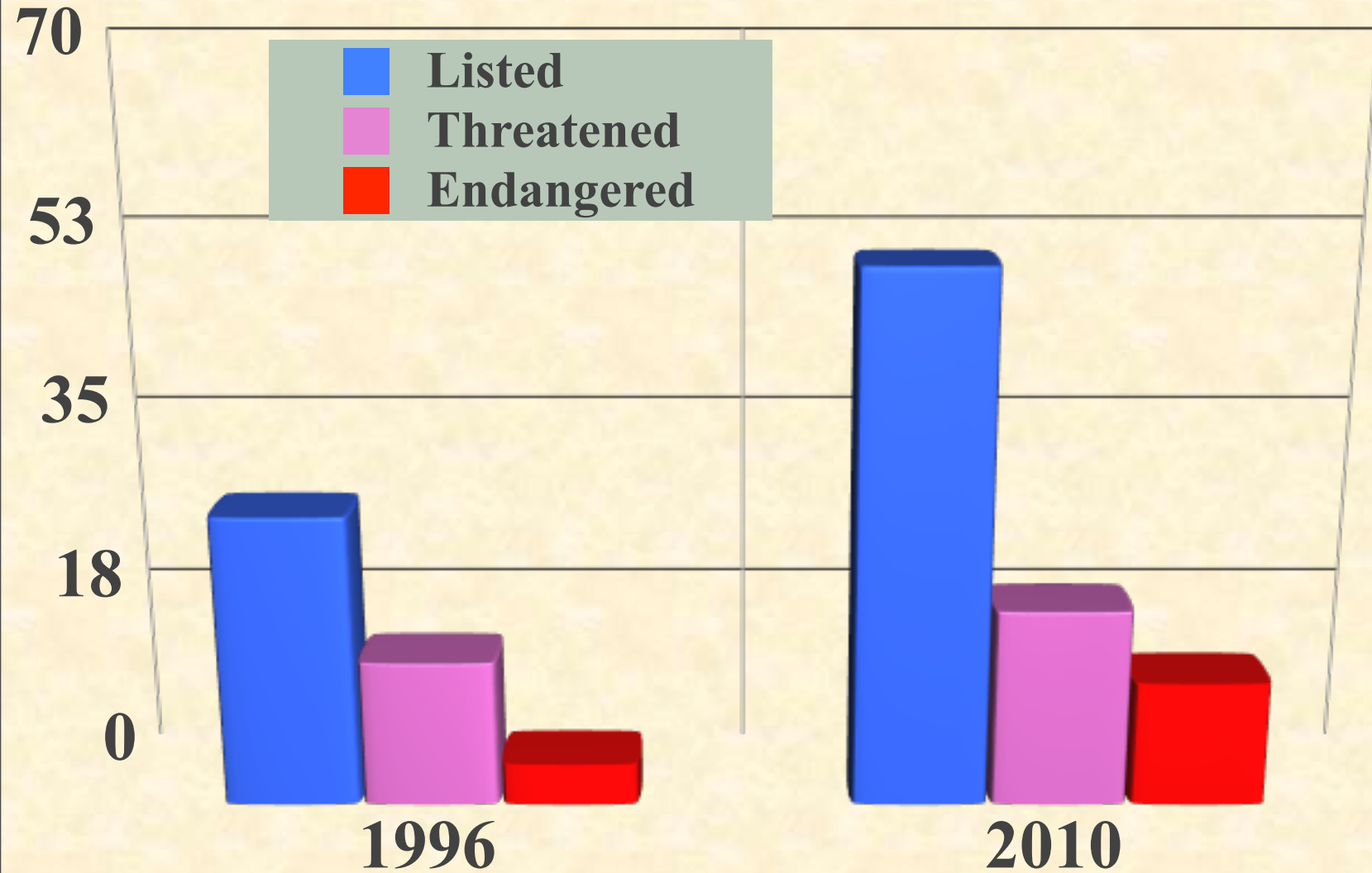
51 species evaluated

Critically Endangered	3	(6%)
Endangered	9	(18%)
<b>total endangered</b>	<b>12</b>	<b>(24%)</b>
Vulnerable	7	(14%)
<b>total threatened</b>	<b>19</b>	<b>(37%)</b>
Near Threatened	7	(14%)
Least Concern	25	(49%)



# American Turtles on IUCN Red List

Freshwater Turtle and Tortoise Species only



**American  
Freshwater Turtles and Tortoises  
on the IUCN Red List  
1996 – 2010**

**5 species moved up  
from non-threatened to threatened**

**1 new species assessed as threatened**

**1 species moved down  
from threatened to non-threatened**

**American  
Freshwater Turtles and Tortoises  
on the IUCN Red List  
1996 – 2010**

**13 (46%) are more threatened**

**10 (36%) are unchanged**

**5 (18%) are less threatened**



**American  
Freshwater Turtles and Tortoises  
on the IUCN Red List  
1996 – 2010**

**of the 19 species considered  
Least Concern in 1996,  
only one (9%) has moved up to  
Near Threatened**

**American  
Freshwater Turtles and Tortoises  
on the IUCN Red List  
1996 – 2010**

**Threatened species [CR + EN + VU]  
have increased from  
14 in 1996 to 19 in 2010,  
a 36% increase**

**American  
Freshwater Turtles and Tortoises  
on the IUCN Red List  
1996 – 2010**

**Endangered species [CR + EN]  
have increased from  
4 in 1996 to 12 in 2010,  
a three-fold or 200% increase**



# IUCN Red List Draft Assessments

## Critically Endangered

*Glyptemys muhlenbergii* -- Bog Turtle

*Sternotherus depressus* -- Flattened Musk Turtle

*Graptemys gibbonsi* -- Pascagoula Map Turtle



*Glyptemys muhlenbergii* - Bog Turtle

USA

**Red List: Endangered [Critically Endangered]**

**CITES: Appendix I**

**ESA: Threatened**





Photo C.K. Dodd, Jr.

***Sternotherus depressus* - Flattened Mud Turtle**  
USA (Alabama)

**Red List: Vulnerable [Critically Endangered]**

**CITES: Not Listed**

**ESA: Threatened**



Photo J. Lovich

***Graptemys gibbonsi* - Pascagoula Map Turtle**

**USA (Mississippi)**

**Red List: Near Threatened [Critically Endangered]**

**CITES: Appendix III**

**ESA: Not Listed**



# IUCN Red List Draft Assessments

## Endangered

*Clemmys guttata* -- Spotted Turtle

*Emydoidea blandingii* -- Blanding's Turtle

*Glyptemys insculpta* -- Wood Turtle

*Graptemys caglei* -- Cagle's Map Turtle

*Graptemys flavimaculata* -- Yellow-blotched Map Turtle

*Graptemys pearlensis* -- Pearl River Map Turtle

*Pseudemys alabamensis* -- Alabama Red-bellied Turtle

*Gopherus agassizii* -- Desert Tortoise

*Gopherus polyphemus* -- Gopher Tortoise



Photo B. Mansell

***Clemmys guttata* - Spotted Turtle**

**USA, Canada**

**Red List: Vulnerable [Endangered]**

**CITES: Not Listed**

**ESA: Not Listed**





Photo T.E. Graham

***Emydoidea blandingii* - Blanding's Turtle**  
USA, Canada

**Red List: Near Threatened [Endangered]**

**CITES: Not Listed**      **ESA: Not Listed**





Photo M. Ouellette

***Glyptemys insculpta* - Wood Turtle**

**USA, Canada**

**Red List: Vulnerable [Endangered]**

**CITES: Appendix II**

**ESA: Not Listed**



Photo P. Lindeman

***Graptemys caglei* - Cagle's Map Turtle**  
USA (Texas)

**Red List: Vulnerable [Endangered]**

**CITES: Appendix III**

**ESA: Not Listed**





Photo P. Lindeman

***Graptemys flavimaculata* - Yellow-blotched Map Turtle**  
USA (Mississippi)

**Red List: Endangered**

**CITES: Appendix III**

**ESA: Threatened**





Photo C. Hagen

***Graptemys pearlensis* - Pearl River Map Turtle**  
USA (Louisiana, Mississippi)

**Red List: Not Evaluated [Endangered]**

**CITES: Appendix III**

**ESA: Not Listed**



Photo R.H. Mount

***Pseudemys alabamensis* - Alabama Red-bellied Turtle**  
USA (Alabama, Mississippi)

**Red List: Endangered**

**CITES: Not Listed**

**ESA: Endangered**





Photo B. Steveson

***Gopherus agassizii* - Desert Tortoise**

**USA, Mexico**

**Red List: Vulnerable [Endangered]**

**CITES: Appendix II**

**ESA: Threatened**





Photo R. Bartlett

***Gopherus polyphemus* - Gopher Tortoise**  
**USA**

**Red List: Vulnerable [Endangered]**

**CITES: Appendix II**

**ESA: Threatened**

# IUCN Red List Draft Assessments

## Vulnerable

*Macrochelys temminckii* -- Alligator Snapping Turtle

CITES: Appendix III

*Actinemys marmorata* -- Pacific Pond Turtle

*Graptemys barbouri* -- Barbour's Map Turtle

CITES: Appendix III

*Graptemys oculifera* -- Ringed Map Turtle

CITES: Appendix III    ESA: Threatened

*Malaclemys terrapin* -- Diamondback Terrapin

*Terrapene carolina* -- Eastern Box Turtle

*Trachemys gaigeae* -- Big Bend Slider

# IUCN Red List Draft Assessments

## Near Threatened

*Graptemys ernsti* -- Escambia Map Turtle

CITES: Appendix III

*Graptemys pulchra* -- Alabama Map Turtle

CITES: Appendix III

*Pseudemys gorzugi* -- Rio Grande Cooter

*Pseudemys rubriventris* -- Eastern Red-bellied Turtle

ESA: Massachusetts populations: Endangered

*Terrapene ornata* -- Western Box Turtle

*Trachemys stejnegeri* -- Central Antillean Slider

ESA: Bahamas subspecies *malonei*: Endangered

*Gopherus berlandieri* -- Texas Tortoise



# IUCN Red List Draft Assessments

## Least Concern

18 species, including

*Chelydra serpentina* -- Snapping Turtle

*Apalone ferox* -- Florida Softshell

*Apalone spinifera* -- Spiny Softshell

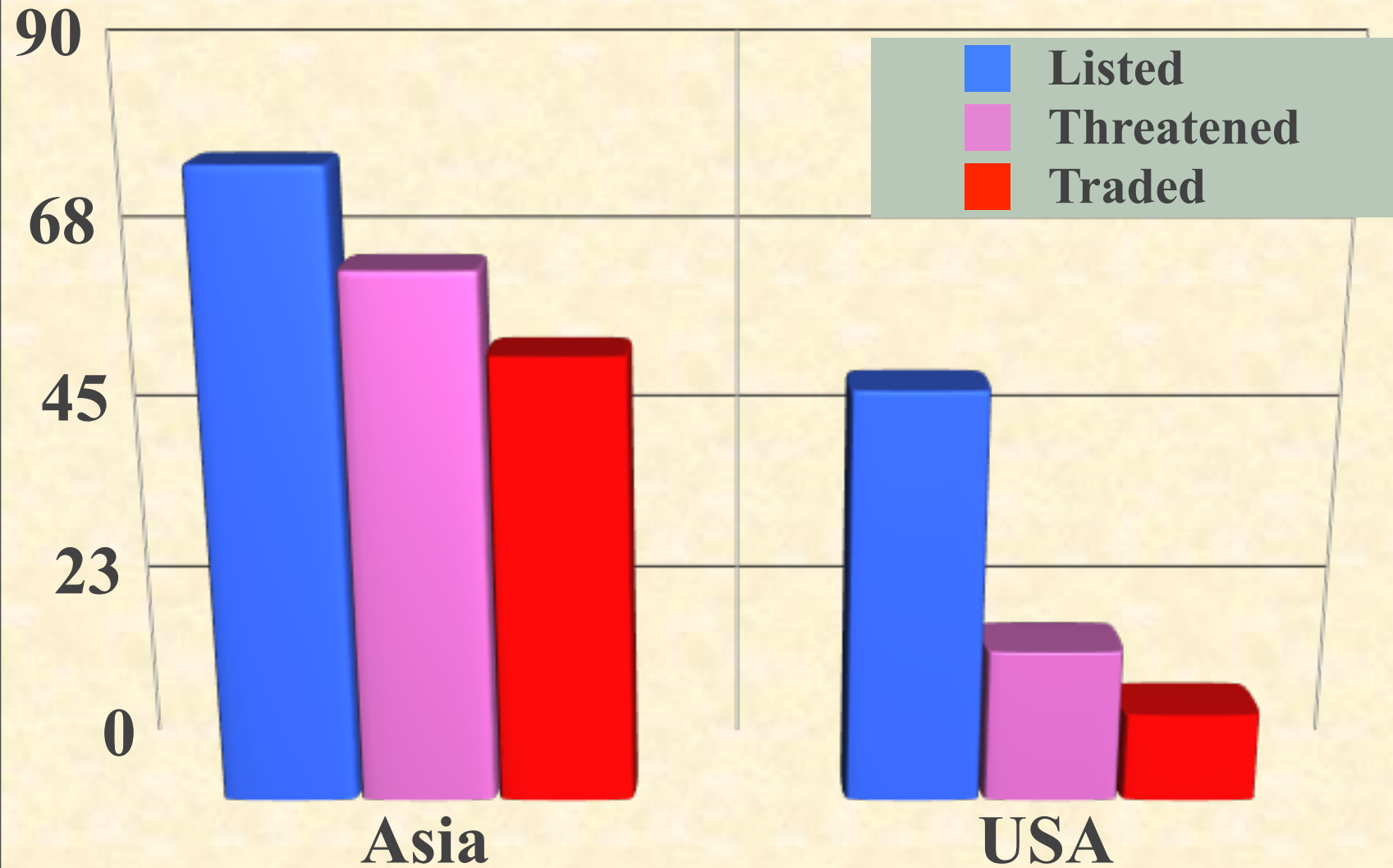
*Trachemys scripta* -- Slider Turtle

“Least Concern”

does **NOT** mean “No Concern”

**These Species are Being Heavily Exploited and  
Traded for Asian markets**

# Threatened Turtles on IUCN Red List Exploited by Trade – 2010



**Though deteriorating since 1996,  
the proposed IUCN Red List status of  
American turtles remains on average  
at much lower threat levels  
than for Asian species**



**However, levels of  
exploitation and trade of  
American turtles destined for  
Asian markets  
have increased sharply  
in several states  
in recent years**

**thereby increasingly affecting  
their survival status,  
and causing some states  
(Florida, Texas, Maryland,  
Oklahoma, and others)  
to regulate or curtail  
commercial take of turtles**

**This trend of  
increased exploitation and trade  
of American turtles  
for Asian markets may now require  
broader enactment of  
proactive conservation measures  
to stabilize or reduce  
these national threat levels**



**Compared to Asian species,  
American turtles are still at  
lesser threat levels and  
not yet as heavily exploited**

**BUT...**

**If present trends continue,  
American turtles will gradually  
disappear from the wild,  
as most Asian species have already**

**Let us learn**  
**from the Asian experience**  
**and their loss of wild turtles,**  
**and not allow the same scenario**  
**to play out here in the USA**



**Let us keep our  
common species common...  
and our national turtle heritage  
from being exploited into  
oblivion...**

# *Thank You*

