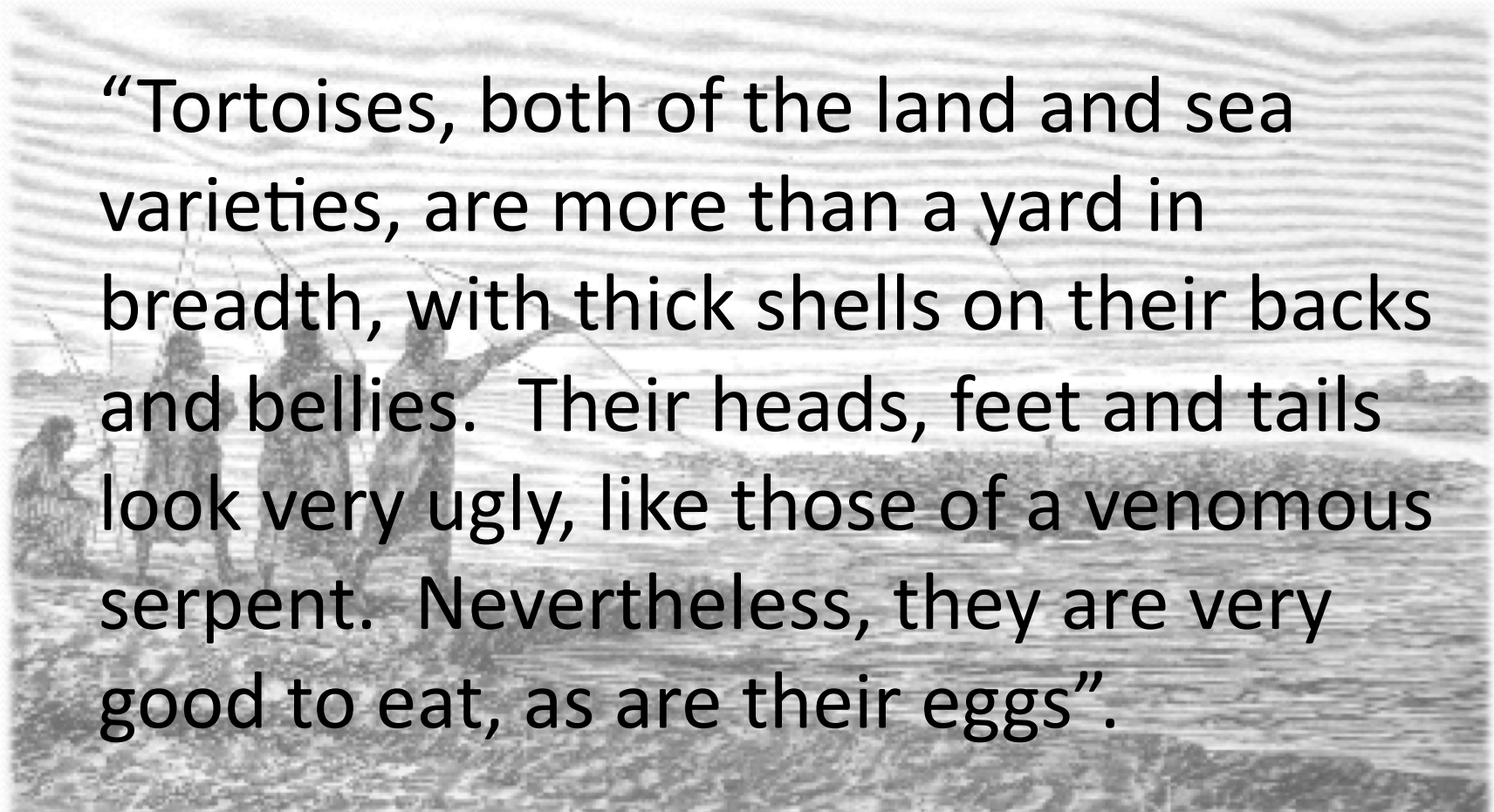



A photograph of two turtles resting on a large, weathered log in a pond. The water is greenish and reflects the surrounding environment. The turtles are positioned diagonally across the log, with one slightly behind and to the left of the other. The background shows a shoreline with some vegetation and a clear sky.

**Historical and Contemporary Trends in the
Trade in Aquatic Chelonians and its Effect on
Wild Populations in the United States**

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“Tortoises, both of the land and sea varieties, are more than a yard in breadth, with thick shells on their backs and bellies. Their heads, feet and tails look very ugly, like those of a venomous serpent. Nevertheless, they are very good to eat, as are their eggs”.

Thomas Hariot. 1588. Brief and True Report of the New Found Land of Virginia.”



Historical Exploitation Patterns of Aquatic Chelonians in the United States

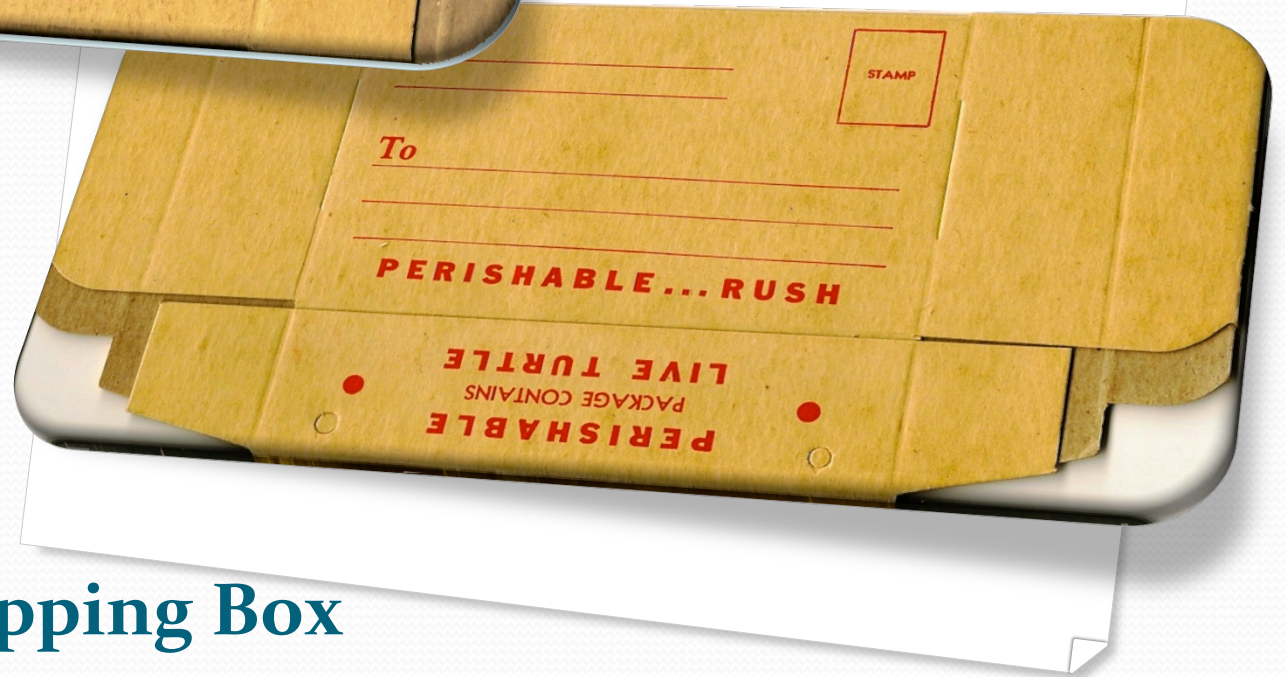
- A. Native American Use of Aquatic Turtles
- B. The Colonial Period and Later Trade in Chelonians in Eastern North America
- C. Late 19th and Early Twentieth Century Exploitation with Emphasis on Chelonian Harvesting in the Upper Midwest
- D. Exploitation of the Pacific Pond Turtle *Actinemys marmorata* in the Far West

Pacific Pond Turtle

***Palace Hotel, San Francisco,
Christmas Dinner, 1904***

"Mock Turtle, Premartin	30¢"
"Clear Green Turtle, Granday	50¢"
"Terrapin Maryland	\$2.50"

(From Bettelheim, 2005)



Live Turtle Shipping Box



Modern Exploitation Patterns of Aquatic Chelonians in the United States

A. Uses of Commercially Harvested Chelonians in the United States Today

1. Domestic Use for Food, Science and the Pet Trade
2. The Export Trade for Food, Traditional Medicines and Pets

B. Chelonian Exploitation on the Eastern Seaboard and the Gulf Coast

C. Chelonian Exploitation in the Midwest and the South-Ground Zero in the Modern United States

1. Direct Harvesting for Domestic and Foreign Markets
2. Turtle Farming Issues

United States aquatic turtles which have been utilized for subsistence and commercial food use (summarized from Carr, 1952).

Species	Subsistence Use	Commercial Use
Alligator snapping turtle, <i>Macrochelys temminckii</i>	Yes	Yes
Common snapping turtle, <i>Clelydra serpentina</i>	Yes	Yes
Pacific pond turtle, <i>Clemmys marmorata</i>		Yes
Blanding's turtle, <i>Emydoidea blandingii</i>	Yes	Yes
Diamondback terrapin, <i>Malaclemys terrapin</i>	Yes	Yes
Common map turtle, <i>Graptemys geographica</i>	Yes	
*False map turtle complex (<i>Graptemys pseudogeographica</i> and <i>Graptemys ouachitensis</i>)	Yes	Yes
Painted turtle, <i>Chrysemys picta</i>	Yes	Yes
Slider, <i>Trachemys scripta</i>	Yes	Yes
Red-bellied turtle, <i>Pseudemys rubriventris</i>		Yes
Florida red-bellied turtle, <i>Pseudemys nelsoni</i>	Yes	Yes
Cooter, <i>Pseudemys floridana</i>	Yes	Yes
River cooter, <i>Pseudemys concinna</i>	Yes	Yes
Chicken turtle, <i>Deirochelys reticularia</i>	Yes	Yes
Florida softshell, <i>Apalone ferox</i>	Yes	Yes
Spiny softshell, <i>Apalone spinifera</i>	Yes	Yes
Smooth softshell, <i>Apalone mutica</i>	Yes	Yes

**G. pseudogeographica* and *g. ouachitensis* were not recognized as distinct species until R. C. Vogt's revision of the group in 1993 (Vogt, 1993).



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Summary of Data Concerning Southern and Midwestern Turtle Species Affected by Commercial Harvest (in AR, FL, GA, IA, KY, LA, MO, OH, OK, SC, TN and TX).

Data from the Center for Biological Diversity.

- Number of species and subspecies affected: 37
- Species and subspecies which have been depleted to the point that they may warrant Federal Endangered Species Act listing:
 - Western chicken turtle (*Deirochelys reticularia miaria*) – AL, FL, GA, KY, MO, OK, TN, TX
 - Barbour's map turtle (*Graptemys barbouri*) – FL, GA
 - Cagle's map turtle (*Graptemys caglei*) – TX
 - Escambia map turtle (*Graptemys ernsti*) – FL
 - Sabine map turtle (*Graptemys onachitensis sabinensis*) – TX
 - Alabama map turtle (*Graptemys pulchra*) – GA
 - Texas map turtle (*Graptemys versa*) – TX
 - Rio Grande river cooter (*Pseudemys gorzugi*) – TX
- Turtle species in these states listed under the Endangered Species Act:
 - Southern bog turtle (*Clemmys muhlenbergii*) – GA, NC, SC, TN, VA
 - Yellow-blotched map turtle (*Graptemys flavimaculata*) – LA, MS
 - Ringed map turtle (*Graptemys oculifera*) – LA, MS
 - Alabama red-belly turtle (*Pseudemys alabamensis*) – AL, MS
 - Flattened musk turtle (*Sternotherus depressus*) – AL

Summary of Data (Continued)

- Number of turtle species protected under state laws (but often illegally caught by collectors):

Arkansas	3	Missouri	3
Florida	4	Ohio	4
Georgia	7	Oklahoma	2
Iowa	7	South Carolina	3
Kentucky	2	Tennessee	2
Louisiana	2	Texas	4

- Average annual number of live wild caught turtles (38 categories) declared exported from the U.S. from 2002 – 2005: 244,316 live wild caught turtles annually.
- The top five categories in terms of average annual number exported from the above list are:
 1. Red-eared sliders (*Trachemys scripta*) – 74,354
 2. Common snapping turtles (*Chelydra serpentina*) – 57,748
 3. Unidentified painted turtles (*Chrysemys sp.*) – 24,015
 4. Unidentified cooters (*Pseudemys sp.*) – 21,220
 5. Mississippi map turtles (*Graptemys pseudogeographica kohnii*) – 11,354



Impacts of Commercial Harvesting on Wild Aquatic Turtle Populations in the United States

- Changes in average body size (reduction) in harvested populations
- Changes in population sex ratios and age structure
- Inadequate reproduction to offset normal sources of mortality
- Reduction in population sizes in harvested populations; prospects for recovery are poor



Some Significant Recent Legislation Affecting the Commercial Trade in Aquatic Turtles in the United States

- Florida has recently banned all commercial turtle harvests in public and private waters and North Carolina, Alabama, Mississippi and Michigan have also banned commercial harvest of all native freshwater turtles in the last decade.
- In 2007, Texas voted to ban commercial collection of native Texas turtles on public lands and waters, with an allowance for commercial capture from private property for a few more common species.
- Oklahoma in 2008 enacted a three year moratorium on commercial harvest of turtles from public waters.
- Georgia is currently developing recommendations for potential harvest regulation.



Why Should We Care About the Consequences of Aquatic Turtle Trade?

1. Turtles compose (or once composed) a major component of the vertebrate fauna of aquatic ecosystems.
2. Turtles play important, but inadequately known, ecological roles in aquatic ecosystems.
3. Aquatic turtles may benefit humans in other diverse roles, and are themselves harmless to humans.
4. Each turtle species is a unique evolutionary product whose premature extinction should be prevented on ethical and aesthetic grounds.
5. Aquatic turtles may negatively influence human health in various ways (e.g., salmonellosis; ingestion of bio-accumulated toxins)

The End

