



Diamondback Terrapin
(*Malaclemys terrapin*)



Bog Turtle (*Glyptemys muhlenbergii*)



Suwannee Cooter
(*Pseudemys concinna suwanniensis*)



A Joint Initiative to Transform Turtle Conservation

THE ATLAS OF TURTLE GENOMES FOR CONSERVATION (ATGC)

A collaborative effort between Turtle Survival Alliance and UCLA's Institute of the Environment and Sustainability

Turtles are among the most endangered vertebrates on Earth. Worldwide, more than 50% of the 359 total species are threatened with extinction, driven by habitat loss, illegal trade, overharvesting, and climate change. More than one million turtles enter illegal trade each year, with tens of thousands passing through major U.S. airports alone. Confiscated turtles often face uncertain fates because we cannot determine where they were taken from. Releasing them in the wrong location can harm both the turtles and the ecosystems receiving them.

To address these urgent challenges, Turtle Survival Alliance (TSA) and UCLA's Institute of the Environment and Sustainability (IoES) have joined forces to build the Atlas of Turtle Genomes for Conservation (ATGC)—a national initiative to generate high-quality genomic reference maps that will revolutionize conservation and support the repatriation of trafficked turtles.

Explore our website for full details on the project: turtlesurvival.org/genetics/atgc/



Phase I: Reference Genomes

A **reference genome** is a high-quality, complete map of an organism's DNA—essentially a detailed genetic blueprint of a species. It acts as the master guide scientists use to assemble and interpret DNA sequences from other individuals of the same species. Without this guide, genomic data are like puzzle pieces without the picture on the box: the pieces exist, but it's difficult to know how they fit together.

The first phase of ATGC focuses on completing reference genomes for all 59 native U.S. turtle and tortoise species. Currently, 45 species are missing a high-quality reference genome.



Loggerhead Musk Turtle
(*Sternotherus minor*)

Adopt-a-Turtle: Help Build the Genomic Foundation for Turtle Conservation

Where You Come In: Completing Reference Genomes for All U.S. Turtle Species

Thanks to advances in sequencing technology, a resource that once cost \$1 million can now be produced for approximately \$8,500 per species.

Your support helps close this critical gap and prepares ATGC for Phase 2, generating detailed genetic maps for turtle species across their entire native ranges to provide a new way to pinpoint the geographic origin of confiscated turtles, allowing us to return them home.



Southern Pacific Pond Turtle
(*Actinemys pallida*)



Eastern Box Turtle
(*Terrapene carolina*)

Spotted Turtle
(*Clemmys guttata*)

Adopt a Turtle. Build a Genome. Secure the Future of Turtle Conservation.

When you adopt a species with an \$8,500 gift, you help create reference genomes that drive turtle conservation. Your adoption supports critical open-access DNA data for scientists to advance conservation genetics.

Benefits:

- Name recognition in scientific publications, acknowledged in the funding section of peer-reviewed genome release papers
- Donor acknowledgment in TSA's Impact Report and ATGC campaign materials
- A species-specific adoption certificate
- Regular milestone updates via the TSA website (Reference Genomes for Conservation), including notification when data collection begins and when genome assembly is complete

To learn more about what species are available to be adopted and how you can make history for turtle conservation efforts, please contact:

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The mission of Turtle Survival Alliance is to protect and restore wild populations of turtles through science-based conservation, global leadership, and local stewardship.

UCLA

The mission of the UCLA Institute of the Environment and Sustainability is to move knowledge to action to address major sustainability challenges.

turtlesurvival.org/genetics/ref-genomes/