Endangered turtles will soon be released to the wild Turtle power, tiny but mighty

SEATTLE—Washington state's population of endangered western pond turtles (Actinemys marmorata) will be bolstered when Washington Department of Fish and Wildlife (WDFW) and Woodland Park Zoo release close to 29 turtles next month to the wild at local protected sites.

The turtles are a part of the collaborative Western Pond Turtle Recovery Project, a head start program initiated in 1991. It is Washington state's longest-running species reintroduction project.



Each spring, WDFW biologists go in the field to attach transmitters to adult female western pond turtles and monitor them every few hours during the nesting season to locate nesting sites; the nests are protected from predators with wire exclosure cages. A portion of the eggs are collected in late summer and the hatchlings are given a head start on life under the care of Woodland Park Zoo and Oregon Zoo where they can grow in safety. The head start improves their chance of survival in the wild.

"Due to the fact that wild turtles don't feed in the winter, they become active in the ponds at a very small size and are easily predated on. Head-started turtles are fed all year and so when released, are less likely to be predated on just because of their larger size," said Kevin Murphy, an animal curator at Woodland Park Zoo. "Once the turtles reach a suitable size to escape the mouths of invasive predatory bullfrogs, about 2 ounces, we return them to protected sites in their natural range where they're monitored by biologists."

Before the turtles are released each summer, zoo staff and WDFW prepare each turtle by weighing, measuring and marking for identification.

The western pond turtle ranges from the Puget Sound area of Washington through western Oregon and California to Baja California. By 1990, its numbers plummeted to only about 150 in two populations in the state of Washington, and the species nearly became extinct. These last remaining individuals struggled for survival as they battled predation by the non-native bullfrog, disease and habitat loss. A respiratory disease threatened the remaining turtles and biologists could not find evidence confirming hatchling survival.

In 1993, the state listed the western pond turtle as endangered. In 1999, Oregon Zoo joined the recovery team and, over the years, other nonprofits, government agencies and private partners have contributed to the multi-institutional conservation project.

Collaborative recovery efforts over the last 29 years have resulted in more than 2,300 turtles being head started and self-sustaining populations being re-established in two regions of the state: Puget Sound and the Columbia River Gorge. Surveys indicate that 800 to 1,000 of the released turtles have survived and continue to thrive at six sites.

"Woodland Park Zoo and other partners have been essential in the key stage of raising the turtles and helping to bring this species back from the brink," said Hannah Anderson, WDFW Diversity Division Manager. "With invasive species, low reproductive rates, and real challenges from habitat loss and disease, it is good to know caring organizations like Woodland Park Zoo are working alongside us through their head start program to bring this once prevalent species back to Puget Sound and other areas around Washington."

Slow, but steady

Turtles have existed on Earth largely unchanged for 220 million years and survived the massive extinction that wiped out the dinosaurs. These ancient survivors are facing their own massive extinction crisis today with almost 50 percent of known turtle species listed as critically endangered or endangered. In fact, this incredibly diverse group of animals is going extinct faster than any other group of terrestrial vertebrates.

- The main threats to turtles are habitat loss and degradation, overhunting, competition with invasive species and the illegal pet trade.
- Western pond turtles can live to be 50 years old. They have a slow growth rate, taking 10 to 12 years to reach reproductive age. Few hatchlings make it to adulthood in the wild.
 Without intervention, these populations likely would not recover.
- From observing pond turtles foraging, biologists have found that western pond turtles swallow all their food in water and appear unable to swallow food in air!

Help save turtles

- Reduce pollutants to turtle habitat by eliminating chemical pesticides from your gardening practices.
- Improve the quality of wildlife habitat by joining a habitat restoration program in your community.
- Use a reputable source when purchasing or adopting pet turtles and make sure the species is legal to own and the animals have been sourced legally.
- Take care to not release unwanted pets or animals into wild habitat—invasive species
 can outcompete or prey on native turtles. Call your local animal shelter to find a new
 home for an unwanted pet.
- Support Woodland Park Zoo and other organizations working to conserve endangered turtles.

Over the last several years, an emerging shell disease affecting more than 80 percent of the wild population threatens decades of recovery progress. Known to cause lesions in a turtle's shell, severe cases can lead to lowered fitness and even death. Chicago's Shedd Aquarium and the University of Illinois at Urbana-Champaign have joined the recovery efforts by looking at the disease from a microbial and pathological perspective to better understand its origin and the role environmental factors could play. The goal is to give young turtles a better chance at survival in the wild.

Woodland Park Zoo and Oregon Zoo are working with WDFW and other partners to address this urgent situation: studying the disease, treating severely diseased turtles, and providing overwinter care for turtles to allow their shells to heal before they are released back into the wild. After the treated turtles are released, WDFW monitors the turtles to determine if they remain healthy and are able to reproduce normally in the wild.

Learn more about other species recovery and human-wildlife coexistence efforts through Living Northwest, a Signature Program of Woodland Park Zoo.

Woodland Park Zoo has reopened—visit now! Go to www.zoo.org to purchase timed-entry admission tickets and to learn about changes to help keep zoo visitors, animals and staff healthy. For additional ways to support your zoo, consider a membership or contribute to the Relief Fund at www.zoo.org/relief. The zoo appreciates the community support!

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