The Community VOICE

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SSU and zoos team up to bring back turtle population

By Dr. Nick Geist August 27, 2009 05:36 pm

While the California tiger salamander is getting most of the wildlife conservation headlines lately, another local species is making considerable progress. Once found in the millions all along the coastal plain of California, western pond turtles have declined to the vanishing point in many parts of their former range.

Virtually eradicated in most of urban southern California, the Central Valley, and Northern Oregon and Washington State, this resilient species has a few strongholds left-mostly from Sonoma County north into southern Oregon.

What happened to drive California's only native aquatic turtle (desert tortoises, found in the eastern California Mojave Desert are the other native turtle species) to the edge?

As is usually the case, there isn't a single cause - it has taken a steady assault on pond turtle populations for them to reach this point. Early Californian Gold Rush migrants prized turtle soup in Bay Area restaurants, and hundreds of thousands of turtles met their end in commercial kitchens in the late 1800s through early 20th century.

While they are no longer on the menu, rampant urban and agricultural development has drained and polluted the creeks and pools they call home and covered nesting grounds with asphalt. The Cotati-Rohnert Park area was a marshy wetland that was home to a large western pond turtle population mostly wiped out as the farms and homes went in. On top of habitat loss, non-native species such as bullfrogs and released pet store slider turtles further threaten pond turtle populations, while the growing specter of global climate change could deal them yet another blow.

On the positive side, a collaborative effort between Sonoma State University biologists and the Oakland and San Francisco zoos is working diligently to reverse the declines through a carefully planned conservation program. We have been able to gather key data on the biology of the turtles while raising hatchling turtles for release into the wild to bolster their dwindling populations.

Last year we gathered, incubated and hatched out nearly 50 baby turtles in my laboratory at SSU. In the process we are gaining critical information on how temperature and other factors affect the developing turtles. Among things we discovered was the temperature range of the incubating eggs that determines their sex (girls at high temperatures, boys at the lower ones), and that even a fairly slight increase or decrease in the temperature of incubation results in a sharp decline in the percentage of eggs that hatch successfully.

In August our group reintroduced the first pond turtles we "headstarted" at the zoos into Lake County waters. This was an exciting event for us, and good news for a project that will help establish the procedures needed to keep native pond turtles from following so many other threatened species into extinction.

This year we have even more eggs and nests under our watchful eyes, and are expanding the scope of the project to learn more about the natural history of pond turtles and hopefully keep them around for a long time.

Dr. Nicholas Geist is an associate professor of biology at Sonoma State University. His research focuses on the reproductive biology and conservation of local populations of the western pond turtle.

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