

Endangered Species Reside at SCC:

Many people on this very campus and in our own communities would probably recognize that the Mexican Gray Wolf and the Condor, both now inhabiting Arizona, are endangered. What many in our community and quite possibly what many faculty and students at S.C.C. may be surprised to discover, however, is that three endangered species reside on Scottsdale Community College's very campus. CNUW's pond, located in the green area in front of the student center, is home to two endangered fish species and to one endangered plant species; the Gila Top Minnow, listed by the U.S. Fish and Wildlife Service as endangered in 1967, the Desert Pupfish, listed as endangered in 1986, and the Huachuca Water Umbel, listed as endangered in 1997.

Water is considered are most limiting factor, our most precious resource here in the desert. But with the human population, and therefore water use and consumption, doubling within the past 15 years alone, it is a resource that is becoming increasingly scarce. In fact, due to groundwater pumping, livestock grazing near streams and rivers, urban and rural development, and the destruction, modification and curtailment/diversion of natural water flow including wetland degradation, approximately 90% of riparian, or streamside, habitat has been lost in Arizona over the last 100 years. This loss of riparian habitat has been extremely destructive to the species that depend upon these areas for survival, including 17 fish species in Arizona, and many semi-aquatic plants.

Both the Gila Top Minnow and the Desert pupfish prefer shallow water, as does the Huachuca water umbel (*Iiliaeopsis*). Both species of fish are quite small, with adults measuring only about 1 ¼"-2" long, and likewise, the water umbel, bright green in color, usually grows about 2"-3". The Gila Top minnow is tan to olive in color, while the female desert pupfish are grayish and the male pupfish are blue, especially during the spring mating season when they turn bright blue. Interestingly, while both species of fish are quite adept at controlling mosquito populations, the introduction of the western mosquitofish to accomplish this same task, along with other factors, has caused great harm to both the desert pupfish and the Gila topminnow, due to competition and predation.

CNUW, along with other conservation groups, is attempting to allow these species to live in an hospitable habitat with the hopes that viable populations will be able to one day be reintroduced into their native environments. Having these endangered species on campus has allowed over 6000 fourth-grade students and hundreds of S.C.C. biology students touring CNUW's facilities to recognize and appreciate these species and the ever-increasing threats to their habitats. Additionally, current and former students of S.C.C. have access to the pond and the species within it for research purposes. Carla Hunt, for example, a former S.C.C. student, recently defended her PhD. dissertation regarding population genetics using data compiled from Gila topminnow populations within the CNUW pond. So if you haven't visited CNUW's pond, or if you have but didn't realize that 3 endangered species lay just in front of you, make a visit to the pond and take a look—you may not have realized how much you could care about three small species that are disappearing from our desert as we speak, until you view them face to face.



(above: Carla Hurt and assistant conducting research at CNUW pond)



(above: Desert pupfish, male & female)

Meet your Desert Neighbors: The Tarantula Hawk Wasp:

By: Adrianna DeFranco

The other day I sat eating my lunch at a picnic table in the Wildlife Demonstration Garden, and as often happens when you're full and happy, I rested my head in my hands, and within minutes I had dosed off . . . that is, until I heard a buzzing near my head that was so loud I thought it was a turbo jet. It was not, in fact a jet, but something much smaller, and yet, as absolutely intimidating as a jet speeding towards me—it was the Tarantula Hawk Wasp resting on a milkweed plant. A jet-black wasp with bright orangish-red wings, this insect measures nearly 2" in length, and is quite a spectacular creature. This wasp receives its name from the female of its species, who, like all members of this genus, requires a spider to serve as host to her larvae. In the Sonoran Desert, the tarantula serves this purpose. Can you imagine a wasp that attacks and uses a *tarantula* as a nursery? That is exactly what this insect will do. She will locate a tarantula by smell and attack it, usually stinging it in the side or abdomen when the tarantula rears its front legs in defense. This sting paralyzes the tarantula within seconds, enabling the wasp to drag the still living tarantula back to her burrow, lay a single egg on its abdomen and then seal the chamber. When the egg hatches the young wasp attaches its head to the abdomen of the spider and begins to feed ravenously (thankfully, at this point the tarantula is dead—who'd have thought I'd feel sorry for a tarantula!).

A sting by one of these critters is considered by entomologists to be the most painful of any insect in North America, due to the potency of its venom, but these wasps are solitary creatures, so unless you are purposely (and foolishly) looking to be stung, the chances of an unfortunate foray with a Tarantula Hawk Wasp is unlikely.

Male Hawk wasps also engage in an interesting behavior. Because they're extremely territorial, they will use "hill-topping," or perching on high points of land or vegetation, to attain a good view of any perspective females receptive to mating. One entomologist remarked that this behavior seems to be eerily similar to the behavior of males of our own species, when one considers some males posted at the front of a bar, keeping an eye on the entrance . . .



Meet the Members of CNUW: Member Bio: Kathleen Grigg

"I have always been an animal lover. After taking environmental biology with Mr. Barnes, and natural history of the southwest with Mrs. Rigden, I wanted to become more involved in exploring and taking care of the desert here in Arizona. My favorite part of working at CNUW is being around the animals that we keep here on campus and hanging out with people who share the same love for nature as I do. I have loved to watch the baby tortoises grow up—they've grown considerably since I began here at CNUW. My favorite animals are the chuckwallas; its fun to feed them and see how they thrash the lettuce around as if it were an exciting kill, as opposed to a lifeless leaf. I've also recently begun to take an active part in our forth-grade education tours. I really enjoy it when some of the children show excitement about the animals living in the Sonoran Desert. I feel as if most of them are really absorbing our message about how important it is to protect our native wildlife. It's very fulfilling to be part of a group that you love and that affects so many people."



Tid bits:

Did You Know...

Research on our native Gila Monster has found that a compound in its saliva is helpful in reducing insulin levels in people with Type II Diabetes. The FDA approved the manufacturing of a drug containing the compound, which can now be synthesized artificially. Amylin Pharmaceuticals will begin selling their version of the drug Byetta, scientifically known as exenatide, on June 1st of this year.

Note of Thanks:

We'd like to thank each of our CNUW employees and volunteers for ensuring that this spring's Biodiversity Education Tours remained as successful as those of the past.

We'd also like to extend our appreciation to the faculty, staff and administration of S.C.C. for your continued support in our daily operations.

Thanks too, to all of those who purchased plants or made donations to CNUW for our annual Earth Day Plant Sale. Your contributions are certainly appreciated.

And of course, we'd once again like to thank all of our Friends of CNUW for your unwavering interest, appreciation and support for all of our projects, endeavors and goals.

Please continue to look for **cnews** . . . coming out monthly during the summer.

Thank you,
Staff of CNUW

CNUW Biodiversity Tour Update:

Since fall 2002, CNUW's educational Biodiversity Tours have impacted more than 6,000 fourth-grade students from all over the valley. We'd like to share with the Friends Of CNUW the comments of these students regarding their CNUW experiences.

"Thank you for letting me look at the cool animals. I learned that the female owls are larger than the male owls." --4th grader from Kiva Elementary

"I like the Wildlife Demonstration Gardens because we got to see tadpoles and three endangered species." --4th grader from Yavapai Elementary

"The plants were kind of weird." --4th grader from Wilson Elementary

"I liked the number of species and how they all had something to do with water." --4th grader from Aztec Elementary

"I liked Toad Hall because you could see with your own eyes the amphibians." --4th grader from Navajo Elementary

"I didn't like Toad Hall because of all the gross stuff in there." --4th grader from Desert Canyon Elementary

"Lizzards are so cool!" --4th grader from Desert View Learning Center

"Thank you very much to everyone that helped my dad and me learn about wildlife!" --4th grader from Kiva Elementary