

The next Barton Springs salamanders?

Three tiny species could boost environmental protections over Edwards Aquifer

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Proposed federal habitat protection for three tiny, obscure, endangered species that live in Comal and Hays counties could lead to more stringent environmental protections for the entire Edwards Aquifer.

As part of a settlement with an Arizona environmental group, the U.S. Fish & Wildlife Service is expected to designate as critical habitat the homes of the dryopid beetle and the Peck's cave amphipod, a shrimp-like crustacean, which can be primarily found in Comal Springs, and the riffle beetle, which lives in Comal Springs and San Marcos Springs.

The animals are tiny — the riffle beetle, according to a Fish & Wildlife press release, is "about as long as an uncooked spaghetti noodle is wide" — but the consequences of the designation, expected by next June, could be huge. The species could find celebrity, or scorn, akin to that of the often-mentioned, seldom-seen Barton Springs salamander.

Protection of the salamander, named as an endangered species in 1997 but which does not have a critical habitat designation, has become an important, if not always successful, tool for groups seeking to combat development over the Barton Springs recharge zone.

Under the Endangered Species Act, critical habitat refers to specific areas that contain features essential for the conservation of a threatened or endangered species.

The proposed habitat area amounts to only 50.4 acres, much of it water. But the aquifer feeds the springs, so anyone requiring a federal permit while developing land over the aquifer or taking water out of it would need to address the impact on the critical habitat if the proposal is approved.

"Groundwater pumping over Edwards Aquifer is the main threat (to the species)," said Peter Galvin, the conservation director of the Center for Biological Diversity, which sued the federal agency for the habitat designation. "Even if the activity is not occurring inside that area, the critical area might be negatively impacted. Building over the recharge zone, or additional water withdrawals over the Edwards Aquifer, could also have an impact."

"These are three rather obscure species, but if we take care of them, they take care of us."

The center and other environmental groups have assailed the department and the Bush administration for dragging their feet on establishing the protected habitats. Even after a settlement with the center, the Fish & Wildlife Service has embarked on the critical designation reluctantly:

"The Service has found that designation of critical habitat provides little additional protection for most listed species, while preventing the agency from using scarce conservation resources for activities with greater conservation benefits," according to the press release requesting public comment on the proposed designation.

Comments will be accepted through Sept. 15.

"It's not a priority for us," said Robert Pine, supervisor of the Austin Ecological Services Office of the wildlife department.

He said preparing a habitat designation takes up staff time and requires pricey consultants, time and money that could be better spent reviewing whether animals should be on the Endangered Species List.

Yet, according to an April 2005 article in the journal BioScience, species with critical habitat designation for two or more years were more than twice as likely to grow in population as species without.

The beetles and the amphipod have been listed as endangered since 1997, but because of their size and because the dryopid beetle and the amphipod live below ground, their numbers are nearly impossible to determine.

Peck's cave amphipod Discovered in June 1964 Eyeless and unpigmented, indicating that its primary habitat is a zone of permanent darkness in the underground aquifer feeding the springs. Above ground, individuals are easy prey for predators, but they usually take shelter in the rock and gravel crevices and may succeed in re-entering the springs orifice.



Comal Springs riffle beetle Discovered in 1976 About 2 mm long, with females slightly larger than males Occurs in the gravel substrate and shallow riffles in spring runs. Some species can fly.



Comal Springs dryopid beetle Discovered in 1987 About 3 mm long Has vestigial non-functional eyes, is weakly pigmented, translucent and thin-skinned.



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