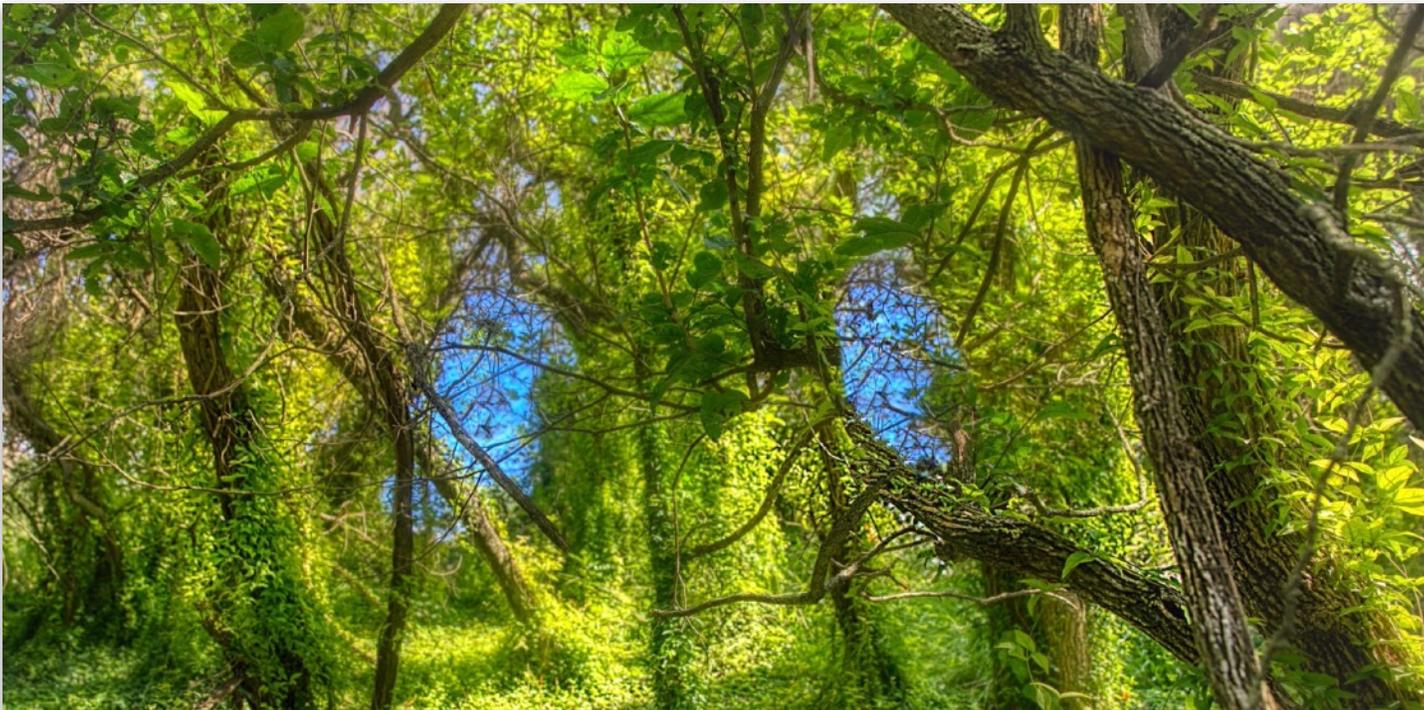


EAHCP STEWARD

News from the Edwards Aquifer Habitat Conservation Plan - August 2021



Invasion of the “Water Body” Snatchers

Non-native plants, animals taking their toll on ecosystems

Film buffs regard *Invasion of the Body Snatchers* from the 1950s as a classic sci-fi movie. It depicts alien plant spores falling from space and growing into large seed pods. The scary complication is that each pod becomes capable of producing a visually identical replacement of a human being. Interestingly, there were two endings written for that movie. One left the viewer wondering what happens to the townspeople. The other included a happier resolution to the invaders taking over the town.

While there isn't any body snatching going on in 2021, there is an intrusion of water bodies by non-native plants and animals happening around the country. In fact, it's been occurring for decades and the ending for this story is still being written.

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Inasives - Continued

The Texas Parks and Wildlife Department (TPWD) not only calls these encroaching species “invasive,” but also estimates that the economic cost to the U.S. is approximately \$219 billion each year, with global impacts estimated at more than \$4 trillion. According to TPWD, non-native aquatic invasive species negatively affect fish and wildlife, fishing, boating, and hunting opportunities, water infrastructure, and even waterfront property values. They acknowledge this is a critical problem that must continue to be addressed over the long term.

The significance of those impacts is not lost on Edwards Aquifer Habitat Conservation Plan (EAHCP) team members.



“There is definitely no shortage of invasive species in the Comal, Guadalupe and San Marcos river basins, and their impacts are profound on these ecosystems,” said Mark Enders, Watershed Program Manager for the City of New Braunfels. “What we’ve come to learn is that many of the riparian non-native species originated from Asia and were brought to the United States because they

are ornamental and look nice. The non-native fish species have proliferated through the aquarium trade and other means such as aquaculture. We think this was done very innocently decades ago by people not knowing the giant problem they would be causing in the future. But, the bottom line is that future is now and we are fighting an uphill battle against non-native species overrunning native species and causing harm to endangered species and their habitats.”

Many plants and animal species not native to an area cannot survive due to a drastic change in climate or other ecosystem conditions drastically different than from their original locations in the world. However, South Texas has warm climate and the Edwards Aquifer provides a consistent water temperature year-round. So those two elements make this area good growing locations for non-native riparian trees like Chinese tallow and Ligustrum and non-native elephant ear plants. Non-native aquatic plants like hydrilla and hygrophila had proliferated not long ago to a point of taking over large swaths of Landa Lake in New Braunfels and Spring Lake in San Marcos. Non-native armored sucker-mouth catfish from South America and tilapia from tropical Africa also found conditions in the Edwards Aquifer Region ideal for thriving.

“Before the EAHCP partners began addressing this issue in the 2013-14 timeframe, the problem with non-natives in New Braunfels and San Marcos was still escalating,” said Melani Howard, EAHCP Program Manager for the City of San Marcos. “So, we developed programs to begin the removal of non-natives and restoration of native species. The main problem with non-natives is they crowd out native plant and animal habitats and that is detrimental to the endangered species we are charged with protecting. In other words,

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Invasives - Continued

they compete for food sources and disrupt spawning areas. So in time, populations of the endangered species decline. Additionally, some non-native snails can emit parasites which can be harmful to endangered fountain darters. Some good news is that we've made great strides in tackling the invasive species problem over the past seven or eight years. But, we continue to spend a good portion of our EAHCP budgets as well as our respective city budgets on invasive removal programs."



The San Marcos Discovery Center takes aquarium fish from citizens in order to stop the dumping of the invasive fish and plants in the creeks and rivers.

One major concern for the many professionals charged with environmental protection is that as they are working at removing non-natives, commercial establishments are continuing to sell invasive species. Howard noted that trailing purple lantana and tree of heaven plants can be easily found in plant nurseries and big box stores around San Marcos. She explained that there were areas of the Sessom Creek

watershed, one of the

five upper San Marcos River tributaries which empties into the headwaters of the San Marcos River, covered with the purple lantana and had to be removed. And, horticulturists and developers are still recommending these types of non-native plants for landscapes.

The United States does have laws which limit the types of plants and animals that can be imported into the country. Additionally, state agencies like the Texas Parks and Wildlife Department govern that type of activity and work to educate the public on how non-native species can be transported from one region to another. For example, at many Texas boat ramps, you will see signs about preventing "hitchhiker" species like the infamous zebra mussels from spreading by cleaning boats and other gear after each use.

"In addition to traditional public outreach methods such as brochures, signs, websites and social media, we are trying a new method of reducing invasive species by visiting with individual homeowners we see that have invasive plants or trees in their yards," Howard explained. "We are even offering to remove the invasive species and replace it with a native one. This is a pilot project we're trying in a few small watersheds, but it is another attempt to reduce non-native plants in this area. As far as aquariums go, the Discovery Center in San Marcos will gladly take aquarium fish from people if they can't take care of them any longer. We would rather have them than seeing the owner dump the aquarium in the river."

While Enders and Howard both seemed fairly resigned to the fact that eradication of non-native plants and animals is probably not possible, they were not content with settling into maintenance mode forever.

"With our federal permit coming up for renewal in 2028, this should be a time for doing some investigation of new ideas to expand our protections of native species," Howard said. "Maybe there are ways we can enhance what we're doing that will get us closer to the ultimate elimination of non-natives. For example, we've had great success with removing elephant ears, so I feel we should at least strive for non-native eradication while being realistic that doing so is an extremely tall order."

EAHCP STEWARD SHORT TAKES

EAHCP Implementing Committee Meeting Set for Aug. 19

A meeting of the Implementing Committee meeting will be held on August 19, 2021 at 10:00am via Microsoft Teams. Please email eahcp@edwardsaquifer.org if you would like to attend.

National HCP Coalition Conference Registration

Registration is now open to attend the National Habitat Conservation Coalition Conference. This year's event will be held via web conference October 5 - 6 from 10:00 am - 2:30 pm (PDT) followed by a virtual networking and social hour.

Please follow the link to register: www.nhcpcoalition.org/2021-annual-meeting.



National HCP Coalition Conference Update

Our community of practice is going virtual in 2021—the National Habitat Conservation Plan (HCP) Coalition will be held via web video conference **October 5th and 6th from 10 am – 2:30 pm (PDT)** followed by a virtual networking and social hour. A business session for NHCP members will be held on **October 7th from 10am -12** followed by a virtual social hour. Please join us for HCP-relevant presentations on policy, HCP development and implementation, and science. Registration is \$25 (flat rate).