

Annual Back to Nature and Arbor Day Celebration

From Bob Ross

After a week of severe thunderstorms in North Texas with lots and lots of rain, Saturday morning April 25th the skies opened up and it was sunny, cloudless and the high temperature for the day got into the mid-80s. Keep Trophy Club Wild (KTCW) had scheduled its annual Back to Nature and Arbor Day celebration in Trophy Club Park where all the previous days of pouring rains had run off the sloped terrain, allowing for an ideal location for all the outdoor booths.

Hundreds and hundreds of adults and children turned out for the event. Everyone had been suffering from “cabin fever” with all the storms and rain, thus making the attendance at the event the best ever. There

were plenty of fun and exciting things for everyone to do, such as vendor booths, arts and crafts, face painting for the kids, free rides on horses, and hands-on activities with raptors and snakes. The event was a great success.



EFC members working in several booths were: Veronica Ruangskul, Kim Orlandella, Jan Deatherage, Tom Mills, Bob Ross and Richard Johnson. Also in attendance, working for the City of Trophy Club Parks and Recreation, was 2013 training class member Jacob Lohse. It was enjoyable to see everyone working hard and having such a good time.



You must not know too much, or be too precise or scientific about birds and trees and flowers and water-craft; a certain free margin, and even vagueness—perhaps ignorance, credulity—helps your enjoyment of these things, and of the sentiment of feather'd, wooded, river, or marine Nature generally. ~Walt Whitman, “Birds—And a Caution,” *Specimen Days*

Project No. 040708-Mgrs. Dave Rowley,
Sherrill Campbell, Cheryl Kesterson

Clear Creek Trail Building

Jon Reynolds shares these photos from a work day at **Clear Creek Natural Heritage Center**. "There is a green tree frog we found on the dam, Jonathan Smith taking a photo of the lake/pond, Scott Kiester and Jonathan Smith looking at birds with Bastard Cabbage in foreground, and last, a shot of our trail team on the trail."

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Black-bellied Whistling-Duck; *Dendrocygna autumnalis*

The Black-bellied Whistling Duck is not shy and noisy flocks can be found in Texas and Louisiana. These ducks have adapted to human altered landscapes and are expanding northward. While the residents of South America do not migrate, the ducks here often return south to Mexico for the winter.

"To find these large ducks with long necks and pink legs, follow the whistle calls."

They are a true tree duck, so look up. They nest in stands of mesquite, hackberry, willow, live oak, and other trees. They do not build nest, but lay their eggs in debris in hollows where a limb has broken or the trunk has rotted away. They will use nest boxes or sometimes scrape up a site on the ground under thick vegetation.



Black-bellied Whistling-Duck;
Dendrocygna autumnalis

To find these large ducks with long necks and pink legs, follow the whistle calls. They have a chestnut and black body with a bright pink bill highlighting their gray face. Large white wing patches can be seen in flight.



Article and photos by Joanne Fellows

Every Species has Its Niche

And NUH is the letter I use to spell Nutches
 Who live in small caves, known as Nitches, for hutches.
 These Nutches have troubles, the biggest of which is
 The fact there are many more Nutches than Nitches.
 Each Nutch in a Nitch knows that some other Nutch
 Would like to move into his Nitch very much.
 So each Nutch in a Nitch has to watch that small Nitch
 Or Nutches who haven't got Nitches will snitch.

The hypervolume according to Dr. Suess

Since we visited last month on the topic of species, I thought maybe we ought to make a social call on the niche. As the Good Doctor says, every nutch has its niche. A lot of folks think of an organism's niche as being what its function is in the ecosystem, rather like its job, "Oh, well a red-shouldered hawk is second tier predator..." Others want to call a niche an organism's place of residence "Woodpeckers are primary cavity nesters ..." Well... it's a bit more nuanced. In the modern sense, the ecological niche is an **n-dimensional hypervolume**. Cool! Right out of Star Trek! Yeah... but like a lot of ecology, it's more common sense than it sounds.

A niche is the set of;

conditions (*think things mostly abiotic; like average air temperature, amount of sunlight, soil moisture, or water pH, but it can even include things like a low predator population*)

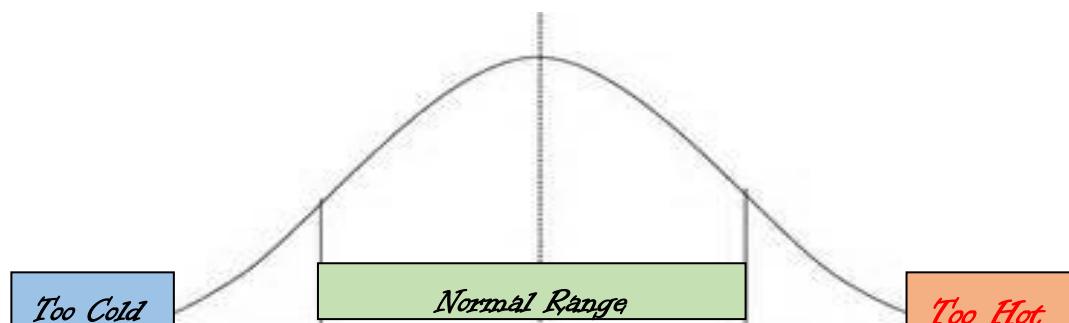
and resources (*think things mostly biotic, like lots insects living in the bark, blooms with nectar and pollen, fruits or nuts, but it can include things like a particular soil nutrient or enough room for a breeding territory*),

that an organism needs to carry on its life; that is, survive, grow and reproduce. In general conditions are things that exist separate from the organism and resources are things that are consumed by the organism. But, the distinction can get a bit fuzzy.

"As the Good Doctor says,
 every nutch has its niche."

Taken together there is a set of *n*- conditions and resources that create a multidimensional space, *the hypervolume*, in which an organism can successfully go about its life. In the real world of course, it's an actual space, but it's just as much an idea.

Each of those necessary conditions and resources has an acceptable range between extremes. Sort of like a bell curve. Take temperature, all living things have a thermal range. For us it runs from about 35°F to about 105°F with a sweet spot from 77°F to 86°F. Spend too much time outside of the normal range and you're prospects for long term survival get pretty slim.



Every species or population in an ecosystem has dozens, maybe hundreds, of differing factors that define its niche. Nature being what it is, there is no such thing as the perfect niche. So that utopian sweet spot is referred to as the *idealized niche*, the place where everything is just exactly what it needs to be. Then there's real life again, where nothing is exactly what it needs to be, but ... just about all the important stuff is within acceptable bounds. This is the *realized niche*. Maybe you won't run as fast and catch as much prey or have as many offspring as you might, but you will survive, grow and reproduce.

Let's add another layer to this: the neighbors. Now you have competition, niches that overlap. Leaving plants aside for a minute, most animals belong to what are called feeding guilds, groups of various species that exploit the same resources, often in related ways. Insect eating song birds, for instance. This overlap of a resource reduces the available supplies and thus shrinks the niche "space" for each species. These things often have a way of sorting themselves out, called partitioning. Going back to our song birds, some may forage in the top of the tree canopy, some in the lower branches, some may forage in the bushes. Partitioning the bug resources. And then there's always predation, parasites and disease, all part of that less than perfect realized niche.

Plants have ways of coping too.

The Credo of the Kudzu.

"Let the stupid trees put all those resources, time and energy into growing a huge trunk to get their leaves up high in the sunlight! I'll just quick grow me a nice little stem, climb up 'em, get my share and steal theirs, NAYYAAH So There!"

Not only does Mother Earth not provide the perfect place to begin with, the neighbors nibble away at it. Sometimes literally.

More formally, the niche "space" responds to the abundance of a population's resources and enemies, by growing when resources are abundant, and predators, parasites and pathogens are few or shrinking in the opposite circumstance. Also, an organism or population can affect those same factors, by reducing the abundance of resources through consumption or contributing to the population growth of predators by falling prey to them. The description of a niche includes something of an organism's life history, habitat, and place in the food chain because all of those aspects are defined by the necessary conditions and the available resources.

Finally, according to the Competitive Exclusion Principle, no two species can occupy the same niche in the same environment for very long. Which brings us back to our Nutes and their Nitches.

Scott (Kiester)

For further reading on Nutes and Nitches...

