

Results of Fall DFW Socially Distant BioBlitz, September 6 - 12

Zoom presentation on Friday, September 25 (details below)

On Saturday, August 29, Dallas had a high temp of 106... Summer was still upon us, and I was getting a bit worried about a bioblitz! A few days later, a cool front and a bit of rain came through and nature responded. It was a great time to have a socially distant bioblitz! A crazy amount of folks participated in this bioblitz from Sunday, September 6 through Saturday, September 12. During this time, around 35,000 observations of 2700 species were made by 1136 citizen scientists. <https://www.inaturalist.org/projects/fall-socially-distant-bioblitz-dfw-urban-ecosystem> Just to put this in perspective, in 2019 at the same time, 3600 observations of 960 species were made by 600 citizen scientists... https://www.inaturalist.org/observations?d1=2019-09-06&d2=2019-09-12&place_id=57484&subview=grid If you're not good with numbers, that's a MASSIVE increase!

All observations were automatically added to an umbrella project that was divided into 6 subprojects. <https://www.inaturalist.org/projects/fall-socially-distant-bioblitz-dfw-urban-ecosystem> Each subproject was bounded by the counties served by one of the 6 chapters of the Texas Master Naturalists. There was a sprinkling of competition involved with this bioblitz too. If you're curious, the Elm Fork chapter had the most observations followed by the Cross Timbers and Blackland Prairie chapters. The Elm Fork chapter also observed the most species, followed by the Cross Timbers and North Texas chapters. The North Texas chapter had the most participants, followed by the Cross Timbers and Elm Fork chapters. Both the Indian Trails and Rio Brazos chapters had over 1000 observations of over 400 species as well! The amount of data that came out of each area was simply wonderful.

Not every participant had to be a master naturalist. The contest was open to all citizen scientists and curious naturalists, so if someone made an observation on iNaturalist during this time and in the area, it was added to the umbrella project and specific subproject. As a matter of fact, some of the biggest observers aren't officially master naturalists. Instead, we were all citizen scientists documenting the biodiversity in the urban ecosystem. It was amazing to see some of the top observers go "all out" during this week too. Here are the top 500: <https://www.inaturalist.org/projects/fall-socially-distant-bioblitz-dfw-urban-ecosystem?tab=observers> The top ten observers all documented over 300 species! This is tremendous. Way to go!

There were a few things that I tried to watch closely during this bioblitz. Honestly, it was pretty hard to keep up! Observations came in frequently, so I didn't get the opportunity to look at all 35,000 (yet)... Nonetheless, I hoped to see some interesting observations, new documentations for certain areas, and of course, participation. Check, check, and definitely check!

Each day there was a challenge to motivate participants to look for behaviors, multiple species, reproductive structures of plants, and I did sneak in a little bit of a required action (oh, how I enjoyed seeing roots of invasive plants!). The daily challenges were actually completed by many folks! Here are some of the completions (hard to include all of these – so here are a few of the ones that caught my eye):

On Sunday, the challenge was to watch a spider catch prey. Ideally, you spent a bit of time watching the behavior of various spiders – some are active hunters (jumping spiders) whereas others are more passive and patient hunters (orb weavers).

Spider with prey: <https://www.inaturalist.org/observations/58779450>

Spider with spider prey: <https://www.inaturalist.org/observations/58801046>

52 species of spiders were observed on just this one day!

https://www.inaturalist.org/observations?on=2020-09-06&place_id=any&project_id=fall-socially-distant-bioblitz-dfw-urban-ecosystem&subview=grid&taxon_id=47118&verifiable=any&view=species

On Monday, I was hoping to see some roots of invasive plants! As expected, to see the roots of plants, you have to yank it up! I save the term “invasive” for the non-native and aggressive plants. Just because a plant is “weedy” doesn’t mean it’s non-native. Ragweed is native!

Invasive species roots:

<https://www.inaturalist.org/observations/58887372>

<https://www.inaturalist.org/observations/58868242>

Crabweed – in the same family as mulberries: <https://www.inaturalist.org/observations/58860953>

Privet roots – best time to yank up privet is after a rain!

<https://www.inaturalist.org/observations/59593781>

<https://www.inaturalist.org/observations/58871118>

Tuesday was all about botanical terminology! Dioecious plants are plants that have just one kind of flower – either male or female. Here are some examples:

Juniperus: <https://www.inaturalist.org/observations/58991041>

Osage orange female: <https://www.inaturalist.org/observations/59005608>

I also asked for a monoecious plant with imperfect flowers. These plants have both male and female flowers, but they’re separate. Here are a few examples:

Ragweed: <https://www.inaturalist.org/observations/58994635>

Cocklebur: <https://www.inaturalist.org/observations/58996803>

Getting up a bit early was the goal on Wednesday. I was pleasantly surprised to see quite a few observations come in around 6:45 – 7:00 AM!

Sunrise observation of snail: <https://www.inaturalist.org/observations/59033055>

Sunrise observation of still sleeping lizard: <https://www.inaturalist.org/observations/59034139>

Sunrise moths:

<https://www.inaturalist.org/observations/59033727>

<https://www.inaturalist.org/observations/59037623>

Thursday came with a bit of rain, so the challenge was a bit more “challenging!” Frogs and toads were the target organisms with bonus points on the tadpoles. The spots that I had seen tadpoles before were now more “flowing streams” instead of little puddles! Nonetheless, quite a few toads and frogs were documented:

Gulf coast toads can get in ground pipes/boxes! <https://www.inaturalist.org/observations/59177846>

Tadpoles: <https://www.inaturalist.org/observations/59177167>

6 species of frogs/toads observed today: https://www.inaturalist.org/observations?on=2020-09-10&place_id=any&project_id=fall-socially-distant-bioblitz-dfw-urban-ecosystem&subview=grid&taxon_id=20979&verifiable=any&view=species

Friday was all about pollination! We are fortunate to have quite a few species that pollinate here in DFW. Some are native and some are introduced. Both are practicing a tremendous service to the propagation of plants.

Non-native bee: <https://www.inaturalist.org/observations/59264837>

Natives like *Megachile*: <https://www.inaturalist.org/observations/59287607>

70 species of bees, wasps, and ants (Hymenoptera) were documented on this one day in the project:
https://www.inaturalist.org/observations?on=2020-09-11&place_id=any&project_id=fall-socially-distant-bioblitz-dfw-urban-ecosystem&subview=grid&taxon_id=47201&verifiable=any&view=species

Finding a bird nest out of season can be a challenge. On the last day of the bioblitz, that was the task. It was neat to see some old bird nests recorded.

Vireo: <https://www.inaturalist.org/observations/59395115>

Some birds will even use plastic: <https://www.inaturalist.org/observations/59383473>

Another fairly interesting part of a large project like this is the new documentations for the area. Sometimes, it's something like a county record, but in these cases, it was a new record for the entire DFW metroplex!

New dragonfly species for DFW! <https://www.inaturalist.org/observations/59409382>

New weevil for DFW: <https://www.inaturalist.org/observations/59534632>

Another new beetle for DFW: <https://www.inaturalist.org/observations/59646372>

New springtail for DFW: <https://www.inaturalist.org/observations/59417860>

New tiger beetle for DFW: <https://www.inaturalist.org/observations/59457133>

Purple loosestrife only DFW location: <https://www.inaturalist.org/observations/58992510>

New weevil – only seen in the Lower Rio Grande Valley before:

<https://www.inaturalist.org/observations/58896569>

These were a couple of state records on iNaturalist!

New beetle on iNat for Texas: <https://www.inaturalist.org/observations/59637719>

Another new springtail for Texas: <https://www.inaturalist.org/observations/59365017>

There were so many interesting observations... It's hard to narrow it down to just a few... Nonetheless, here are some of the neat ones that were observed:

Migrating warblers were moving through the metroplex during this week as well. Here are a few observations of those birds.

Black and White: <https://www.inaturalist.org/observations/59008605>

Canada warbler: <https://www.inaturalist.org/observations/59009513>

Mourning warbler: <https://www.inaturalist.org/observations/58918343>

Yellow warbler: <https://www.inaturalist.org/observations/58932607>

Window strike sora: <https://www.inaturalist.org/observations/59091413>

Bobcat: <https://www.inaturalist.org/observations/59271917>

Hall's Dalea: <https://www.inaturalist.org/observations/59409010>

Fluted bird's nest fungus: <https://www.inaturalist.org/observations/58799437>

Roadkill timber rattlesnake: <https://www.inaturalist.org/observations/58998521>

Slime mold ID'ed by mycologist from Australia: <https://www.inaturalist.org/observations/59405666>

One of the most valuable things that people did was put on identifications for observations. I can't emphasize the importance of this enough... When you add an ID or a comment on an observation, this engages the observer and starts up a positive feedback loop. It can be the kind of encouragement that a new (or regular) citizen scientist needs to keep him/her engaged and involved. There is fear of being wrong when we ID, so I tell others that when we add an ID, it's starting a conversation. "I think it may be this species..." or "it's a type of this kind of organism..." is a crucial step to learning for both the observer and identifier. Being wrong is an ok part of this process too!

I strongly encourage you to try to ID observations for others. It's a wonderful chance to learn and engage new and regular citizen scientists. It starts a positive feedback loop that is rewarding to both the observer and identifier. Here is the link for ID'ing recent observations in DFW:

https://www.inaturalist.org/observations/identify?quality_grade=needs_id%2Cresearch&place_id=57484

Around 900 other naturalists from around the world ID'ed observations made in this project:

<https://www.inaturalist.org/projects/fall-socially-distant-bioblitz-dfw-urban-ecosystem?tab=identifiers>

Here are some of the experts that chimed in on observations:

Lupoli Roland – French entomologist specializing in stink bugs
Roman Romanov – Russian botanist specializing in aquatic plants
Michal Sloviak – Slovakian mammologist specializing in carnivores
Dan Kluza – New Zealand invasive species biologist specializing in moths
Matthew Pintar – Florida ecologist specializing in aquatic beetles
Radek Walkowiak – Polish botanist specializing in ferns
Nick Block – Prof of biology at Stonehill College, MA specializing in Lepidoptera
Susan Hewitt – Malacologist New York specializing in snails and bivalves
Chris Cohen – PhD East Carolina University specializing in robber flies
Clint Perkins – Texas Tech Mammalogist
Blaine Mathison – Parasitologist specializing in click beetles
Barbara Wilson – botanist in Oregon specializing in sedges

I like to spend a bit of time on relevancy of doing something like this. What does 35,000 observations of bugs, birds, and bees mean and why should we care?

First and foremost, this bioblitz was about engagement. To make an observation, you have to be engaged with nature, even if just for a moment. You have to be in the presence of that plant or bird or beetle to take a photo or sound recording. We all need to do this more often! The second part of engagement is that with the naturalist community. As you upload an observation to iNaturalist, you share that with other naturalists around the world and start a conversation. Each data point (observation) provides evidence that the organism existed in space and in time. Who knows what questions the collection of data will address?!? There is scientific merit in this engagement.

Secondly, iNaturalist is a learning tool. What's in a name? Well, when you learn a name of an organism, you get the password to learning more about it. It's like getting the key into the room of knowledge. Fortunately for us

in the DFW metroplex, we have mansions of rooms of knowledge – there is a tremendous amount of biodiversity here! I encourage you to go through the ‘digital field guide’ of species here in DFW. https://www.inaturalist.org/observations?place_id=57484&view=species This is filterable, so you can learn the names of the birds (https://www.inaturalist.org/observations?place_id=57484&taxon_id=3&view=species), beetles (https://www.inaturalist.org/observations?place_id=57484&taxon_id=47208&view=species), bees (https://www.inaturalist.org/observations?place_id=57484&taxon_id=630955&view=species), beans (https://www.inaturalist.org/observations?place_id=57484&taxon_id=47122&view=species)... and more! You could spend several lifetimes studying just the biodiversity in the urban ecosystem of DFW. One of the first steps of appreciation is learning the names of our natural neighbors.

Finally, for me, iNaturalist is a tool of policy change. After a successful bioblitz like this, we have more evidence of not just the biodiversity here but also the growing number of naturalists that seek out this biodiversity. As public land managers recognize this, real changes can and do happen! This collection of data points and engagement of naturalists is used as a tool of meaningful change. As I talk to a city council, park board, or anyone interested, I bring this with me. It’s meaningful.

On Friday, September 25th from 7 to 8 pm, we’ll have a zoom presentation on exploring the bioblitz results, addressing a few commonly asked questions, and shout out to some of the top observers and ID’ers!

https://zoom.us/webinar/register/WN_ssLSn7T6Qe6r_HfTAiyCtg

It will also be recorded, so if you don’t get a chance to watch in person, the NTMN chapter will post it on vimeo with the password (big time thanks to the NTMN team, especially Bruce Stewart!).

Most of all, thanks so much for participating. It is a challenging time right now, so it’s vital for all of us to engage with what makes us happy (and sane!) – nature. Please spend some time engaging with nature – it’s good for you.

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