by **iNaturalist**

seek C

USER GUIDE

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SEEK IS CREATED BY INATURALIST



SEEK BY INATURALIST

Seek allows curious naturalists of all ages to earn badges and participate in challenges to observe organisms with on-screen identification using computer vision for identifications based on data from iNaturalist.

- Best choice if you do not want to create an account or share data, or are just getting started exploring nature
- No login or account required, kidsafe
- Seek's identification model provides an identification in real-time on screen
- This identification does not leave your device or require an internet connection to work
- Users aged 13+ or with parent's permission can optionally log in with their iNaturalist account and post observations to iNaturalist thorugh Seek
- No personally identifiable information is collected from users who do not log in with their iNaturalist account



INATURALIST

iNaturalist is an online community that allows you to share observations to discuss, identify, and create researchquality citizen science data for science and conservation.

- Best choice if you want to connect with others, share data, and are interested in natural history and contributing to citizen science
- Users must be 13 or older to make an account
- iNaturalist's identification model provides initial suggestions, but other people in the iNaturalist community help you identify and confirm your observations
- Records observations as biodiversity data that contribute to citizen science
- Photo, location, and time are recorded with each of your observations in the iNaturalist database

USING THE SEEK CAMERA

To identify an organism using Seek, you can open the **Seek Camera** from any screen by clicking the camera button. The warning popup reminds you to stay safe when using the Seek Camera.



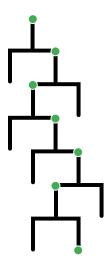
Then, you can point the camera at any living thing to identify it!



The ID meter at the top represents the 7 main taxonomic ranks.

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	MULYHA	CLASS	ORDER	FAMILY	GENUS	SPECIES	

Taxonomy is how scientists group living things, and it is the basis for how organisms are grouped in both iNaturalist and Seek.





You can also upload a photo from the gallery, but you will not be able to get a live, on-screen identification like in the Seek Camera. You can add an observation in Seek when the camera can identify the organism to species, meaning that all 7 dots on the ID meter are filled up.

Once the identification is at species, you can click the green camera button to take a photo to add it to your observations.

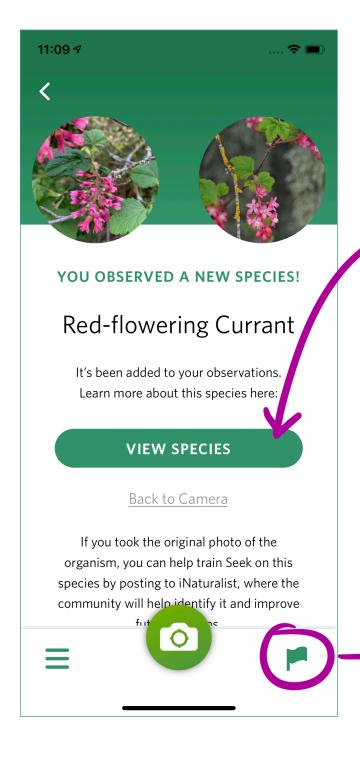
Did you know?

- No Internet is required to identify and add species to your observations!
- You can also pinch to zoom in and fill the screen



There are a few scenarios that can happen when you try to identify something in Seek.

1. THE ORGANISM IS IDENTIFIED TO SPECIES

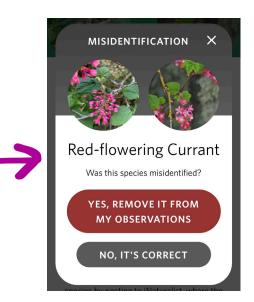


If an organism is identified to species, it is added to your observations!

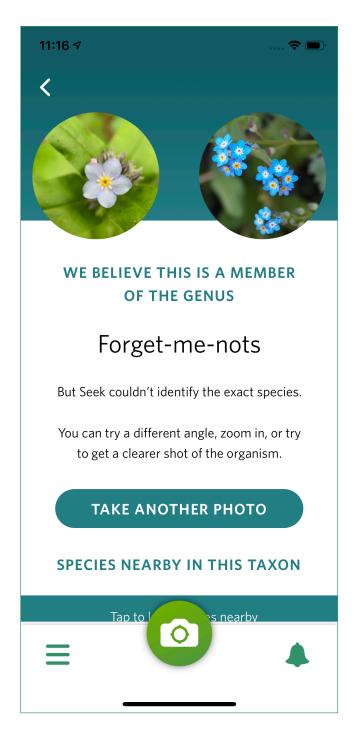
Click view species to learn more about it and view the **Species Page** (This does require Internet)

The Seek Camera can identify 20,000 species, but it does not know everything, so it may be wrong.

If you know it is incorrect, you can click the flag to remove the organism from your observations.



2. ORGANISM CANNOT BE IDENTIFIED TO SPECIES



Sometimes, the Seek Camera will not be able to identify the organism to species. This means that it may not be confident enough to suggest a specific species.

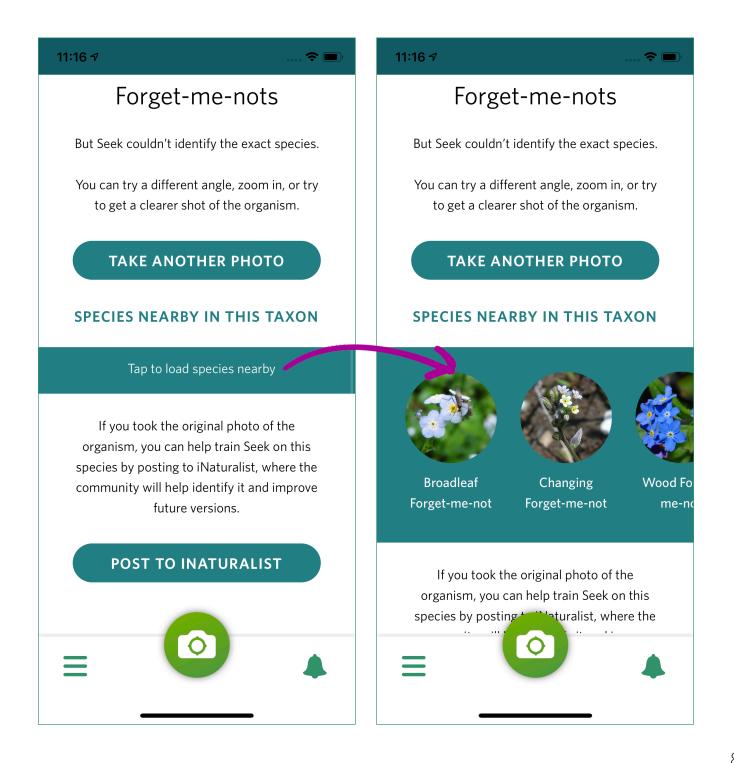
Troubleshooting:

- Try to focus on one species in your frame- Seek can get confused with multiple species.
- Try different angles to see if it can identify. If you are looking at a leaf, try looking at a flower.
- If the ID meter still is not getting to species, it means that Seek likely cannot identify the exact species. In this case, you can take a picture anyway.

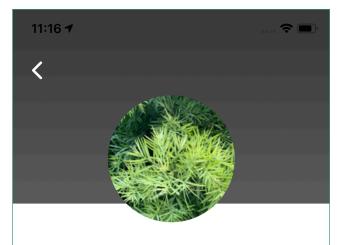
If the identification is stuck at Order, Family, or Genus, take a picture anyway.

On the next screen, you can click view "Species Nearby in this Taxon" to generate species that have been observed nearby in the taxon identified by Seek, and you can view their species pages.

Note: loading species nearby in this taxon works best with wild species, and these species will not be added to your observations.



3. SEEK CANNOT IDENTIFY THE ORGANISM



WE WEREN'T ABLE TO IDENTIFY THIS PHOTO

Sorry about that, Seek is still learning!

You can try a different angle, zoom in, or try to get a clearer shot of the organism.

TAKE ANOTHER PHOTO

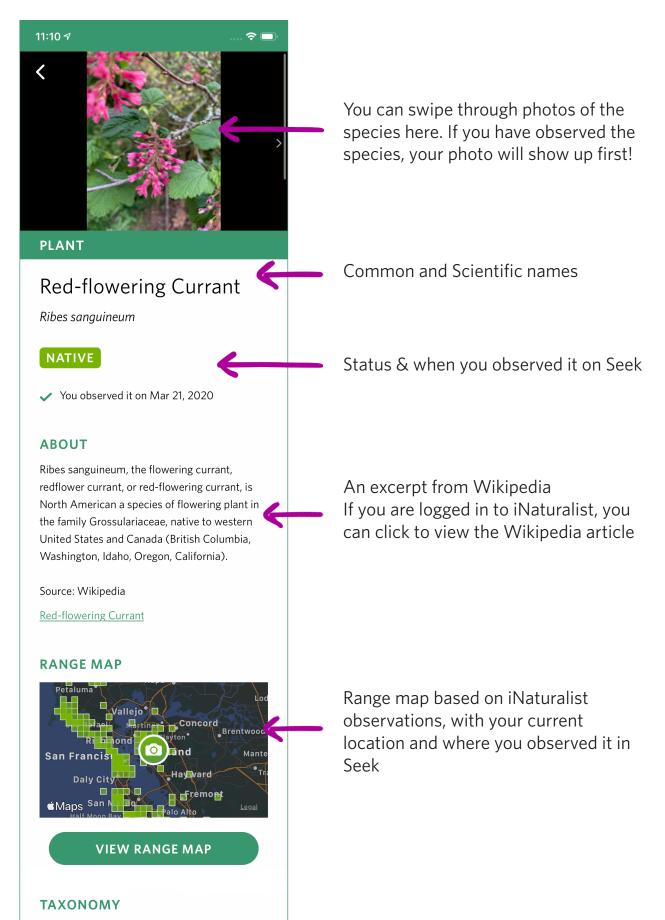
If you took the original photo of the organism, you can help train Seek on this species by posting to iNaturalist, where the community will help identify it and improve future versions.

Seek is best at identifying species with a lot of iNaturalist observations. So if there are not a lot of iNaturalist observations of the species you are trying to identify, then it likely will not be able to identify the exact species.

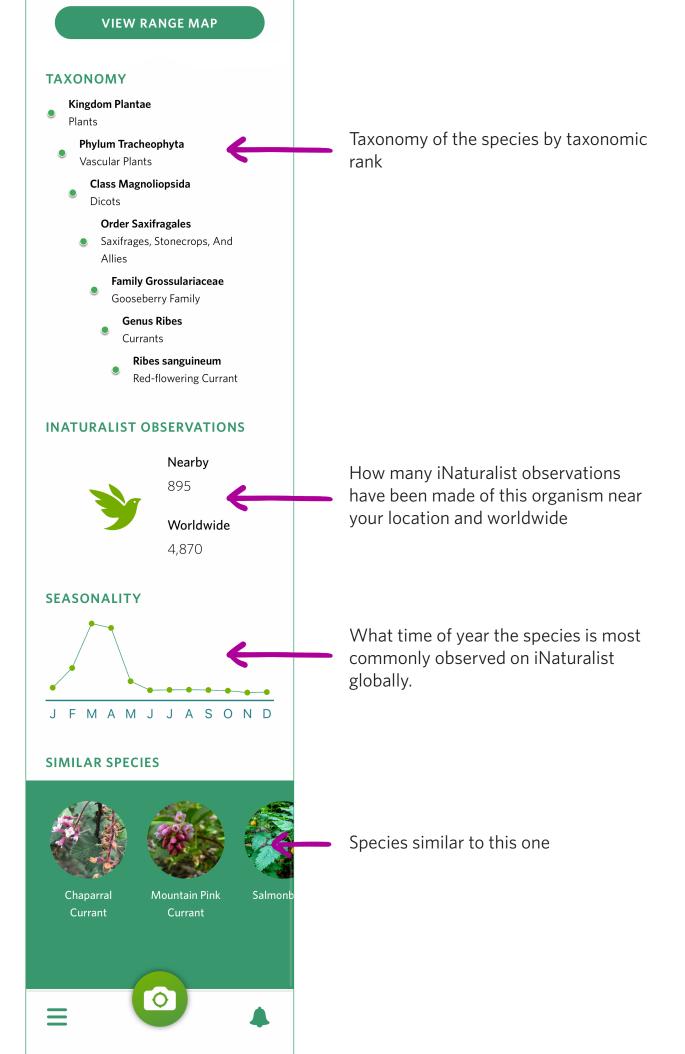
It is also important to know that there are many species that cannot be identified from phone photos alone because they require microscopic inspection by an expert.

In the next section, we will go over how to identify a species if Seek cannot identify it, and how you can help improve future versions of Seek's identification model!

SPECIES PAGES



Kingdom Plantae

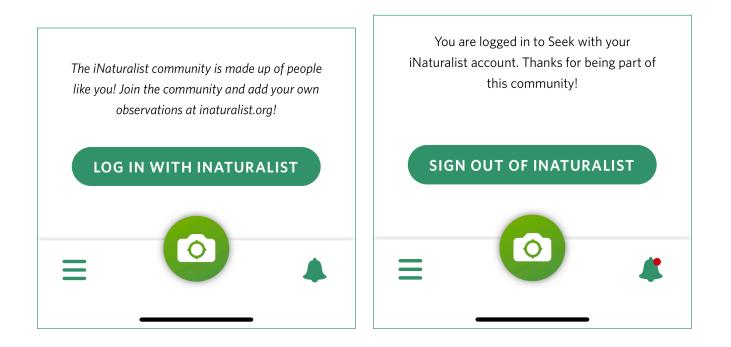


LOGGING IN WITH INATURALIST

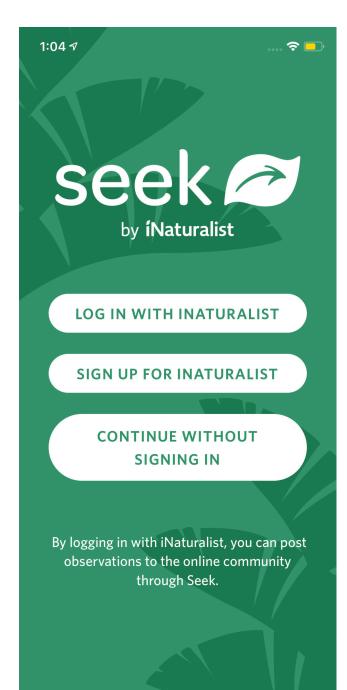
If Seek cannot identify your observation, you may want to post your observation to iNaturalist and someone in the community might be able to identify it for you.

Logging in with iNaturalist lets you post your observations to iNaturalist as well as view detailed Wikipedia pages on species pages.

You can log in to Seek with your iNaturalist account when you first download and open Seek, or by going to the **iNaturalist** or **Achievements** pages from the menu and scrolling to the very bottom. To log out of your account, navigate to either page to find the sign out button in the same place.



LOGIN SCREEN



If you are 13 or older, you can create an iNaturalist account within Seek itself.

If you are under 13, you must get a parent's permission to create an iNaturalist account, which Seek will walk you through.

POSTING TO INATURALIST WITH SEEK

Once you are logged in with your iNaturalist account in Seek, you can post your observations directly after you observe something using the Seek Camera.

On iNaturalist, data quality is important. **iNaturalist focuses on wild species**, meaning species that are naturally found in the wild and were not placed there by humans. Wild species could be birds and insects in your neighborhood or plants in a forest preserve, but not things like garden plants, pets, or zoo animals.

When Seek cannot identify something, it likely means that there are not that many iNaturalist observations of that species or it is difficult to identify even for experts. So when Seek cannot identify a wild species, you should definitely post it to iNaturalist.

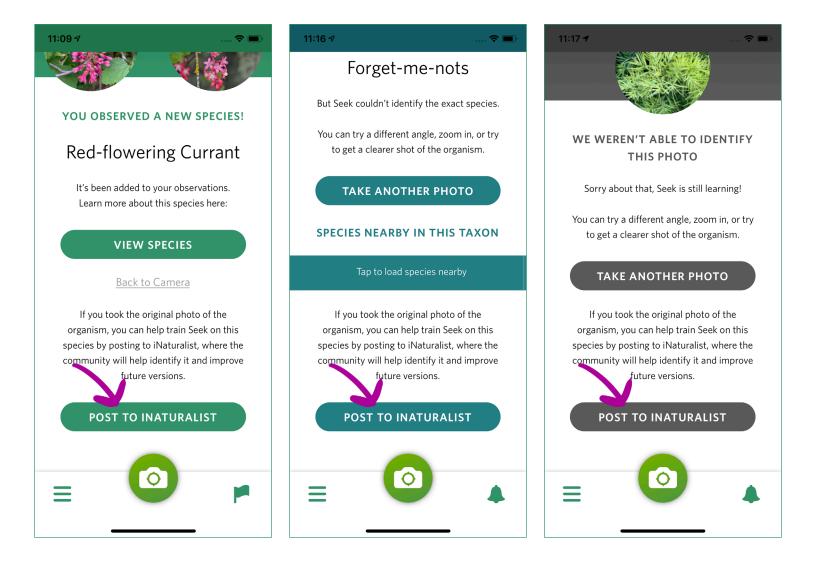
Identifications by the iNaturalist community help train Seek's identification model



High-quality photos of wild organisms that Seek cannot identify help future versions of the model learn

POST TO INATURALIST BUTTON

When you are logged in with your iNaturalist account in Seek, you can scroll to the bottom of the Identification screen to see the "Post to iNaturalist" button. This will appear whether Seek could identify your organism or not.



11:23 -	7	🗢 🔲					
<	POST TO INATURALIST	?					
	Bigleaf Maple Acer macrophyllum	>					
Add n	otes here						
	DATE 2020-03-21	>					
Q	LOCATION Oakland	>					
	GEOPRIVACY Open	>					
	CAPTIVE/CULTIVATED No	>					
POST TO INATURALIST							

Captive/Cultivated

- No means this is a wild organism and wasnt placed in this location by humans.
- Yes means this organism was placed in this location by humans. This applies to things like garden plants, pets, and zoo animals.

The **Identification** at the top should be one you are confident of. You can go with Seek's identification, or suggest something else.

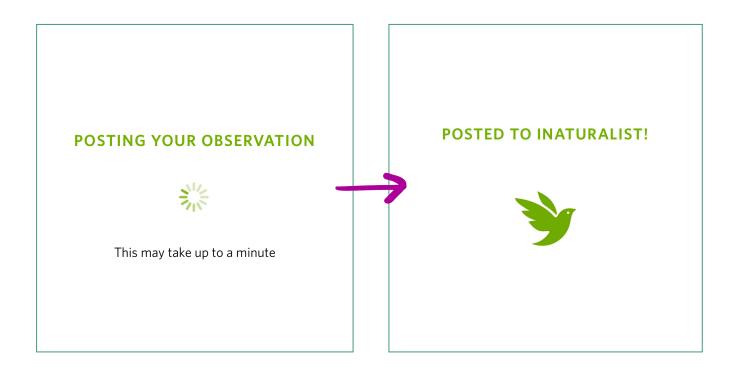
- This can be a general group like "plants" or "birds", or a specific species like American Robin.
- After your observation is posted to iNaturalist, our community will help identify or confirm the species.
- You can also choose to add optional notes to your observation.

Date & **Location** should automatically be filled in, but if not, make sure they are correct.

Geoprivacy

- **Open** means other users on iNaturalist will be able to see where this species was observed, and scientists can use this data for research.
- **Obscured** means the exact location of this observation will be hidden from other users on iNaturalist, and instead shown as a random point in a larger area.
 - » *Note*: The locations of threatened and endangered species are automatically obscured on iNaturalist for species at risk from disturbance.
- **Closed** means the location of this observation will not be shared with other users on iNaturalist.

Once you have filled out the posting screen, you can click "Post to iNaturalist." Do not close the app or lock your screen until the observation has been uploaded.



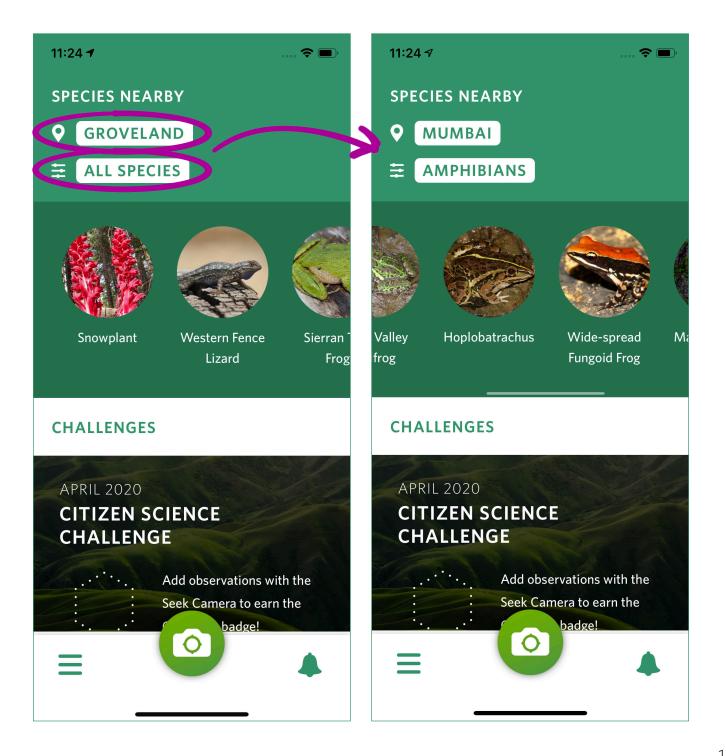
Note:

- You can only post to iNaturalist immediately after you observe the species. If you would like to post it later, we encourage you to post the observation using the <u>iNaturalist iOS app</u>, <u>iNaturalist Android app</u>, or <u>inaturalist.org</u>.
- To check the status of observations posted to iNaturalist, you can log in at inaturalist.org or using the iNaturalist app to see identifications and comments added by the community.

SPECIES NEARBY

On the home screen, you can view species most often seen near your current location on iNaturalist using the **Species Nearby** feature.

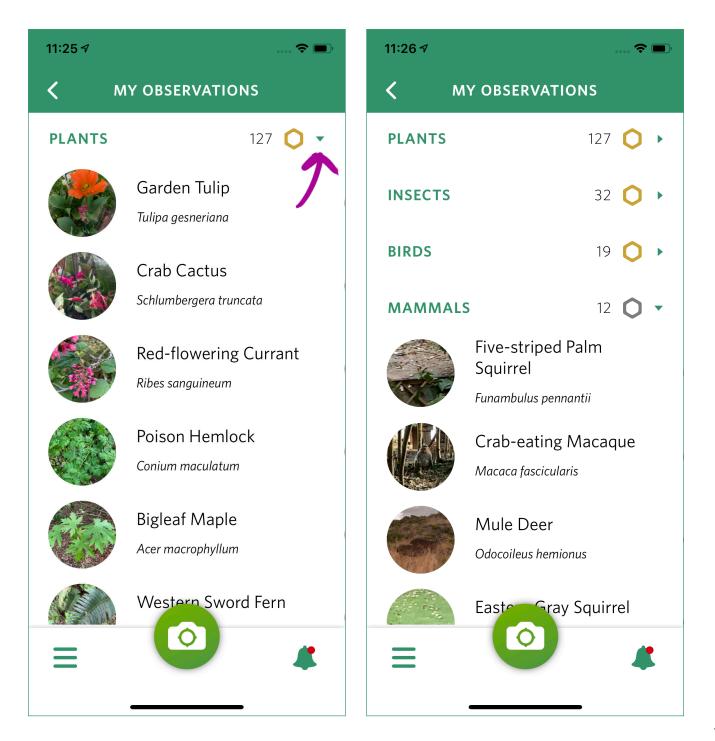
You can change the location to view species nearby anywhere in the world, or filter by specific taxa by clicking the location and "All Species" buttons.



MY OBSERVATIONS

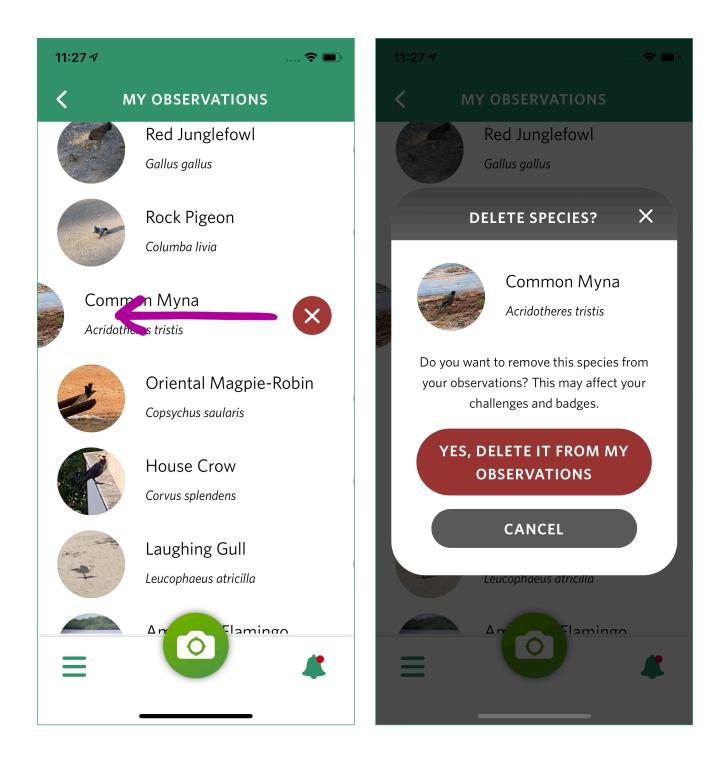
You can view all the species you observed in **My Observations**. The badge icon in the top of each section indicates how many species you have observed and what level badge you have earned for that taxon (bronze, silver, gold).

You can click the arrow to collapse sections to better navigate your observations, and you can click into any species to view its species page.



If you would like to remove a species from your observations, you can swipe left on the species to reveal the delete button.

Note: removing a species from your observations may affect your challenges and badges.

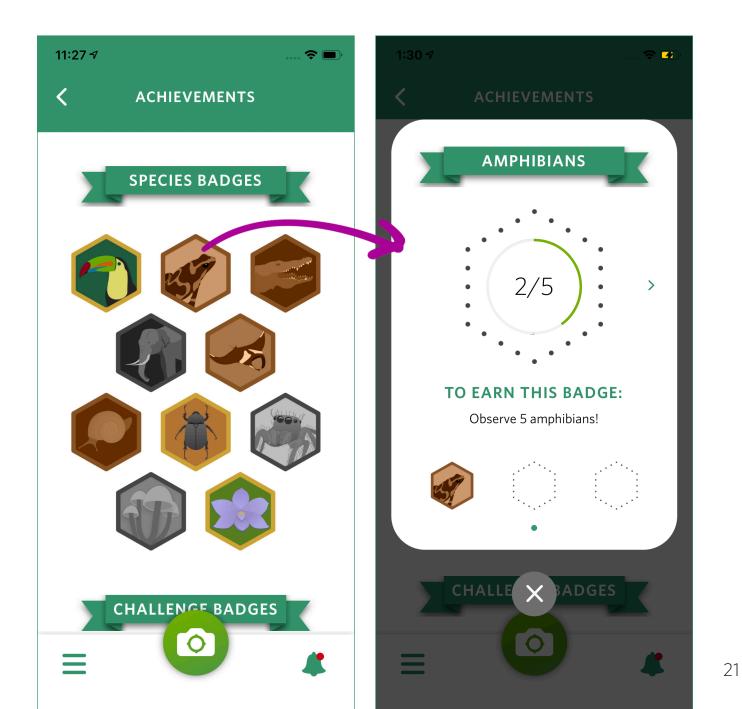


ACHIEVEMENTS

On the **Achievements** screen, you can view your level at the very top, as well as how many species you need to observe to get to the next level.

You can also view the badges you have earned for seeing different taxa and completing challenges here. If you click on a badge, you will be able to see how many species you need to observe to earn the next level of that badge.

At the bottom, you will see a count of how many species you have observed as well as how many badges you have earned.

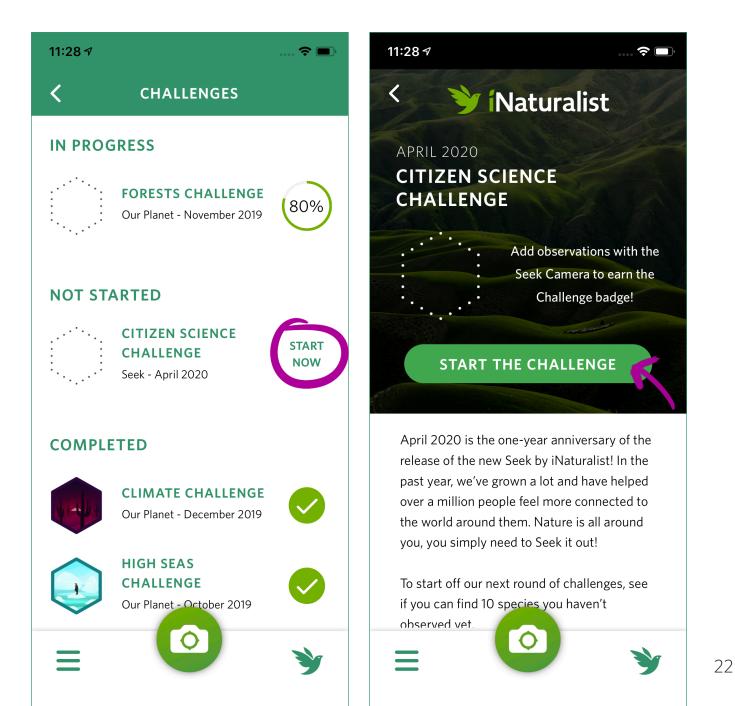


CHALLENGES

Seek has 8 challenges from 2019 that you can participate in, as well as new challenges each month starting in April 2020.

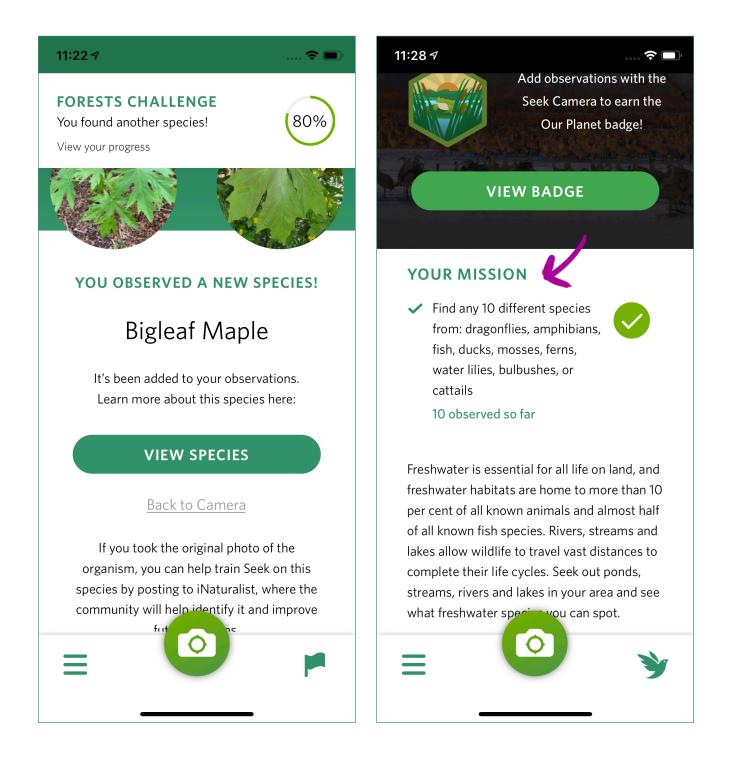
To participate in a challenge, go to the **Challenges** screen and click "Start Now" next to a challenge or go to the page for the specific challenge and click "Start the Challenge"

You can participate in challenges at your own pace- you can do them one at a time, or all of them at once.



Each observation you make will count towards **all** of your challenges that are in progress, meaning observing one new species could help you progress towards more than one challenge badge.

You can find instructions on how to earn a challenge badge under **Your Mission** on the challenge page. Some challenges have general requirements, like "observe 10 new species" and some are a lot more specific, like "observe 5 insects and 10 plants"



TIPS FOR SEEK

When taking photos:

- Try to focus on one species in your frame- Seek can get confused with multiple species.
- Try different angles to see if it can identify. If you are looking at a leaf, try looking at a flower.
- If the ID meter still is not getting to species, it means that Seek likely cannot identify the exact species. In this case, you can take a picture anyway and use the species nearby in this taxon on the identification page and/or post it to iNaturalist.

Since Seek was designed with privacy in mind to make it kid-friendly, its data is stored entirely on your device, and **deleting Seek will delete your observations**. To move observations to a new device, please follow the instructions for transferring your data to a new phone provided by your phone's operating system.

The on-screen identification model in the Seek camera is pretty sophisticated, so it may run slowly on older devices, and is not compatible with iOS 10 or earlier. If this is the case, you can still upload photos you have already taken to earn badges in Seek.



Seek is designed & developed by the iNaturalist team:

Abhas Misraraj, Amanda Bullington, Alex Shepard, Johannes Klein, Scott Loarie, Kenichi Ueda, Carrie Seltzer, Tony Iwane, Patrick Leary, Yaron Budowski, Sylvain Morin, and Angie Ta. Special thanks to Visipedia and the iNaturalist community.

Seek was originally created with support from California Academy of Sciences, the National Geographic Society, HHMI Tangled Bank Studios and enhanced with support from Our Planet on Netflix and WWF.

For help with Seek, please email <u>help+seek@inaturalist.org</u>