





## OUR VISION





Our vision is a sustainable UAE in which our society, economy, and environment thrive side by side, enabling people to live in harmony with nature globally.

For two decades, Emirates Nature—WWF has been a prominent and active partner in environmental conservation in the MENA region. We work in association with WWF, one of the world's largest and most respected independent conservation organisations, which has a 60-year legacy of environmental conservation and is supported by more than 5 million members worldwide.



## **OUR MISSION**





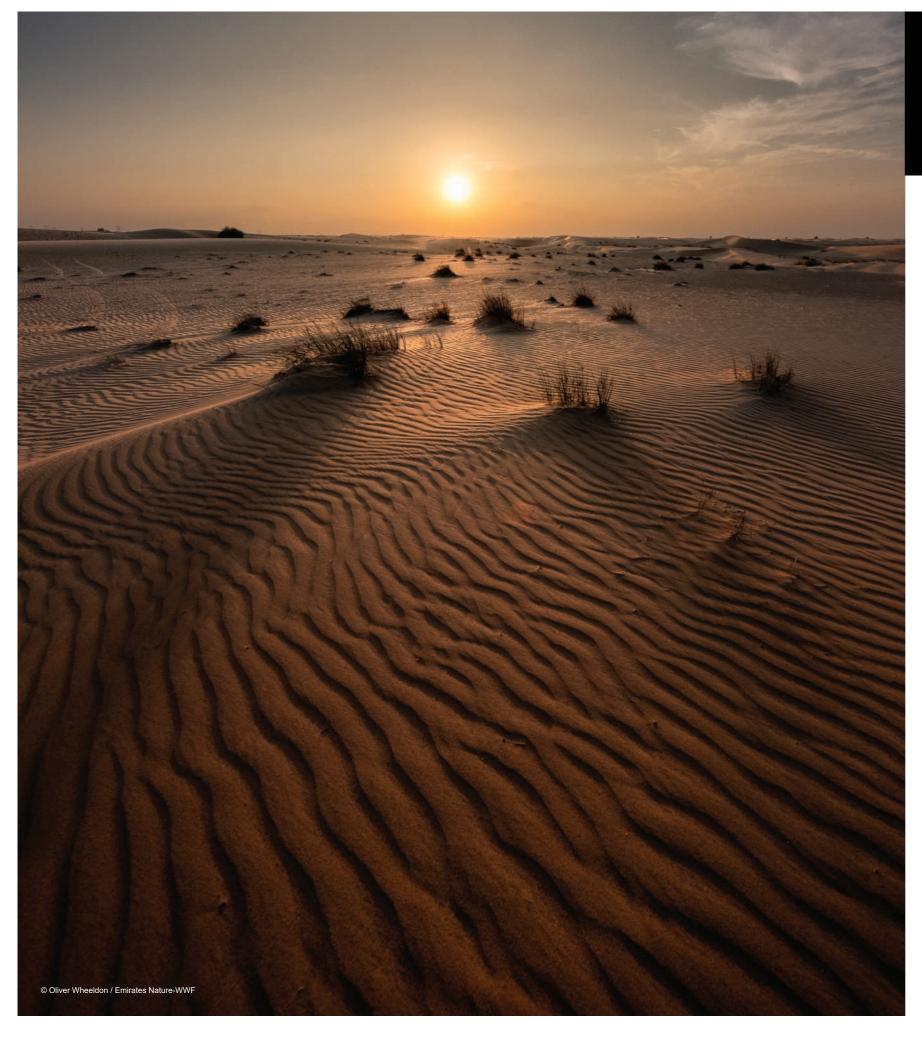
Our mission is to conserve nature and reduce the most pressing threats to the environment for the benefit of society. We partner with individuals and institutions to co-create and implement projects that support local nature and wildlife preservation, climate action, the green recovery and food and water security in the UAE.

Our work includes research and policy activities, training and development, community and corporate engagement, volunteer activation, youth education and raising public awareness.

As a local conservation think tank and volunteer platform, we empower, convene and mobilise civil society, government and business to support the UAE's sustainability agenda and deliver transformative impact at scale for the benefit of people and planet alike.

For more information about Emirates Nature-WWF, please visit *emiratesnaturewwf.ae*.





### **FOREWORD**

Downloading this handbook suggests that you, like us, love nature, and you're willing to volunteer some of your valuable time to help us understand and protect it. We're excited to have you board.

Getting to know nature is the first step towards valuing it, and valuing nature is the first step towards protecting it.

The Emirates Nature-WWF team spends a lot of time in the field surveying local biodiversity to understand our ecosystems and identify what actions are required for further conservation.

By working together with volunteers like you, we will collectively be able to spend much more time in the field, with many more pairs of eyes looking for different species. Thanks to your smartphones and the UAE's impressive network coverage, you can take high quality images and report them with an accurate time and location. This is valuable data that can be used in lots of ways to contribute to our conservation goals.

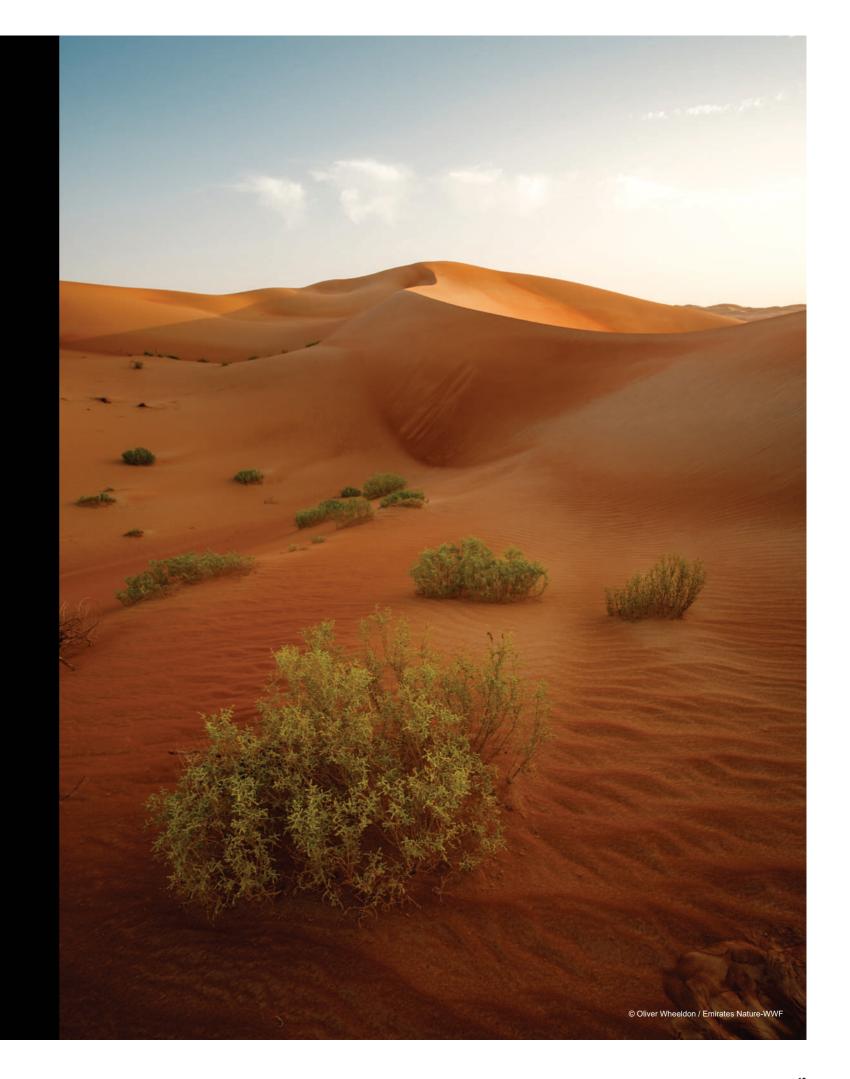
Noticing the wonder of the natural world and finding time to enjoy wildlife in our daily lives is excellent for our health. Research shows that spending time in nature improves our mental resilience, as well as our physical health and wellbeing. I hope that you enjoy noticing nature through this project.

If we care for nature, it will care for us right back.

Arabella Willing Conservation Outreach Manager Emirates Nature-WWF



## PART 1: ABOUT NOTICE NATURE UAE



# INTRODUCING THIS VOLUNTEER HANDBOOK





The Notice Nature UAE Volunteer Handbook is Emirates Nature-WWF's all-inclusive guide on how to take part and lead your own volunteering activity as part of the Notice Nature UAE project. Everything you need to know should be accessible within this handbook.

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The Volunteer Handbook includes a bit of background to the project and the potential impact it can have. Before training as citizen scientists and embarking on these activities, it is important to understand why this project is being run and the important role you will play as a volunteer. By taking part, you will be supporting conservation efforts in the UAE. There are many components and steps when it comes to protecting wildlife, and we will explain how your contribution fits into the bigger picture.

The Volunteer Handbook provides a detailed guide on how to use the relevant technology and tools, such as iNaturalist, as well as how to join Emirates Nature-WWF's Notice Nature UAE project and begin to document local plants wildlife. We provide tips on how to take Research Grade photographs and upload your observations, a basic overview on how to identify species, as well as information on where you can conduct these activities and look for local wildlife. As this will require outdoor exploring, and especially considering the COVID-19 pandemic, we also outline some do's and don'ts, and share basic safety guidelines.



## WHO CAN TAKE PART IN THIS VOLUNTEER ACTIVITY?

Notice Nature UAE is a self-led activity, meaning that volunteers can determine when, where and how they want to take part. The project is open to anyone, and this Handbook reflects that. Activities detailed here can be done at any time and at your own pace. We have provided guidance and criteria on how to produce the best data and observations possible.

Beyond that, have fun and let's NOTICE NATURE!

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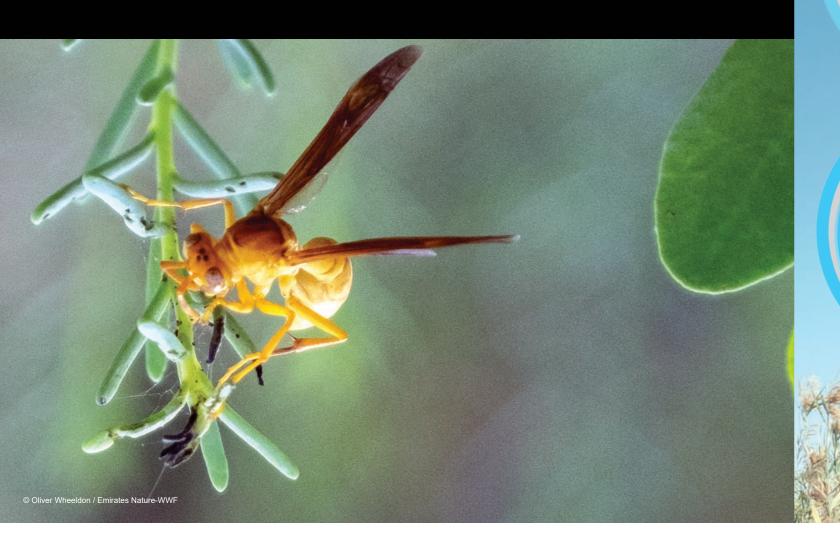
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Biodiversity is all the different kinds of life you'll find in one area—the variety of animals, plants, fungi, and even microorganisms like bacteria that make up our natural world. Each of these species and organisms work together in ecosystems, like an intricate web, to maintain balance and support life. Biodiversity supports everything in nature that we need to survive: food, clean water, medicine, and shelter. But as humans put increasing pressure on the planet, using and consuming more resources than ever before, we risk upsetting the balance of ecosystems and losing biodiversity.



Besides the fact that it is beautiful and provides us with immeasurable wonder and joy, without biodiversity, ecosystems as a whole would collapse and human wellbeing would be at risk. Biodiversity provides us with a huge number of services that directly or indirectly benefit us.

## WHY DOES BIODIVERSITY MATTER?



#### A STABLE CLIMATE

and mitigate its effects. For example, mangroves can help remove carbon from the atmosphere and store it within the trees and soils, helping to atmosphere. Mangroves also help reduce the impact of storm

#### **OUR CULTURE** AND WELL BEING

aspect to biodiversity improve our mental and physical wellbeing.

Many species such as bees, butterflies, and bats pollinate our plants and crops. Others provide us with a source of food directly or provisional materials like wood to build with.

#### THE AIR WE BREATHE

supports water and nutrient critical benefits.

#### **WHY DOES BIODIVERSITY MATTER?**

**OUR LIVELIHOOD** 

#### **MEDICINE**

Species everywhere – from coral reefs to the Amazon rainforests – are being studied for their potential medicinal benefits.



Around 80% of the UAE comprises arid desert with low rainfall and high temperatures. The plants that live here are adapted to these extreme conditions. Not only do they provide food for animals, but they also stabilise the sand dunes.



Marine and coastal areas play an important role as well, not only in providing food, but economically as well, as a historic source of pearl fishing, for transport, for trade and for recreational activities.



Native plants and animals in the UAE have adapted to harsh environmental conditions, but normal adaptation to warm temperatures may not be sufficient to withstand the increasingly warmer temperatures resulting from climate change.



## BIODIVERSITY IN THE UAE FACES A VARIETY OF PRESSURES AND THREATS, INCLUDING:

## BIODIVERSITY IS AT RISK

Human activity impacts biodiversity and drives species loss at an accelerated rate. In the last 35 years, the planet has lost a quarter of its biodiversity. Populations of vertebrate species, including mammals, birds, reptiles, amphibians, and fish, have declined by an estimated 68% in the last fifty years, according to the latest WWF Living Planet Report published in 2020. This loss means that ecosystem functions and their integrity are failing, and the ecosystem services that many species (including humans!) depend on are threatened. The COVID-19 pandemic is one example of how the breakdown of nature and biodiversity can impact human health, our society and our economy.

68%
OF VERTEBRATE
POPULATIONS
HAVE DECLINED
IN THE LAST 50
YEARS

Growing towns and cities and disturbance of wild areas

Over-use of fresh water

More grazing animals than the sparse desert plants can support and overexploitation of marine life

Pollution from land and sea

Introduced species that out-compete native wildlife

Climate change

## ABOUT THE PROJECT: NOTICE NATURE UAE





Notice Nature UAE was launched to support local conservation efforts by increasing our understanding of what species are present, where they live, and when they are around. The project aims to train people like you to become citizen scientists who can help us increase our wealth of knowledge of what is out there in the UAE, and to help you get in touch with nature and discover more about local species and habitats.

As part of this project, volunteers can enjoy nature and report back to Emirates Nature-WWF with photos of their plant and wildlife sightings through the digital tool iNaturalist. Emirates Nature-WWF will provide the necessary toolkits, materials, and training (including this handbook!) to support volunteers in identifying the species they are reporting, as well as providing verification by our own staff and a global community of scientists and naturalists through the app and website.

## WHAT WE HOPE TO ACHIEVE

Our project aims to make various impacts across three key topics.

CONSERVATION RESEARCH AND POLICY

By contributing to the Notice Nature UAE project, citizen scientists can help conservation efforts by building up a database of species and provide insights into their distribution, seasonality and behaviour. The project will us understand more about local biodiversity, especially in terms of what species exist in the UAE in spaces near where we live as well as the less-disturbed areas.

With this data, Emirates Nature-WWF can compile a baseline of information to inform and monitor our conservation efforts to promote biodiversity and support healthy ecosystems, whilst also informing key decision-makers about the impacts we have on our environment.

The project will help us map the diversity and abundance of local species, as well as the spread of non-native ones into wild areas, monitor trends as the project takes place and beyond, as well as variances in seasonality, etc.



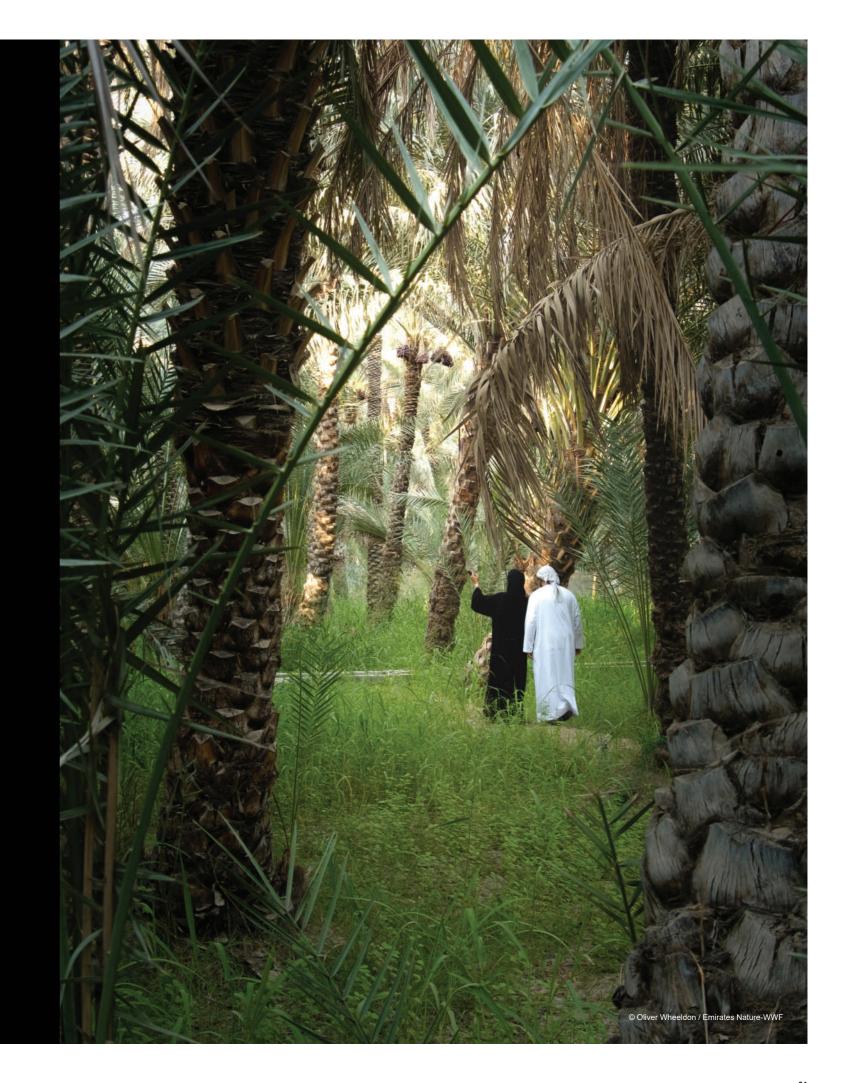
2 COMMUNITY ENGAGEMENT AND AWARENESS

As you learn more about the amazing variety of life around you, we hope you will join us in our goal to improve the understanding and support for local biodiversity from the community as a whole. We would love for you to encourage more people to get in touch with and learn more about the natural environment.

STRENGTHENING PHOTO-IDENTIFICATION SOFTWARE

Our efforts to increase sightings on apps such as iNaturalist and Seek of the local biodiversity will help expand the database of species imagery, thus strengthening photo-identification software and making future identification easier. This will strengthen future open-source data and allow for more research into our local wildlife, which is currently a relatively understudied area.

## PART 2: SIGN UP TO OUR PROJECT ON INATURALIST





## WHAT IS INATURALIST?





iNaturalist is a digital tool created jointly by California Academy of Sciences and the National Geographic Society. It can be accessed both via mobile/tablet devices and a website and allows people to record and organise their findings and observations from the natural world, learn more about various species that exist and meet other nature lovers. iNaturalist is used by people from all walks of life and different levels of expertise, from hikers and birders to researchers and fishermen. This allows for unique perspectives of the natural world to come together as people explore their environments and raise awareness of the biodiversity around them.



## FIRST, SIGN UP FOR INATURALIST

#### THROUGH THE WEBSITE:





In the top right corner, select the option to "Sign Up".



Fill in the required information, including e-mail, username, and password.
a. Once you have an account and are logged in, you can customise your profile by changing your icon, adding a bio, etc.



Congratulations!
You now have
an account and
can start
uploading
Observations!

#### THROUGH ANDROID / IPHONE:



Download the iNaturalist mobile app from the Google Play store or the iTunes app store.



Once the download is complete, launch the app.



On the homepage, select 'Settings'. You will be asked if you are ready to sign up. Click OK which will take you to the iNaturalist website where you can set up an account and set your default time zone. You can also sign in via Facebook or Google.



Once your account has been made, return to the iNaturalist app and sign in.



Allow iNaturalist to access your location and camera – this is necessary to make Observations.



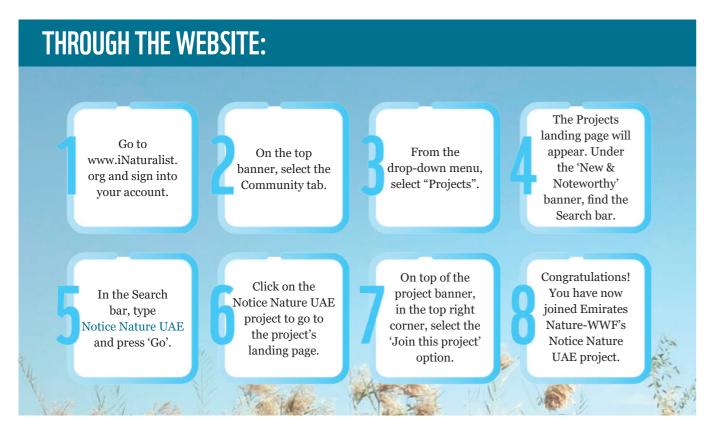
Congratulations! You now have an account and can start uploading Observations!

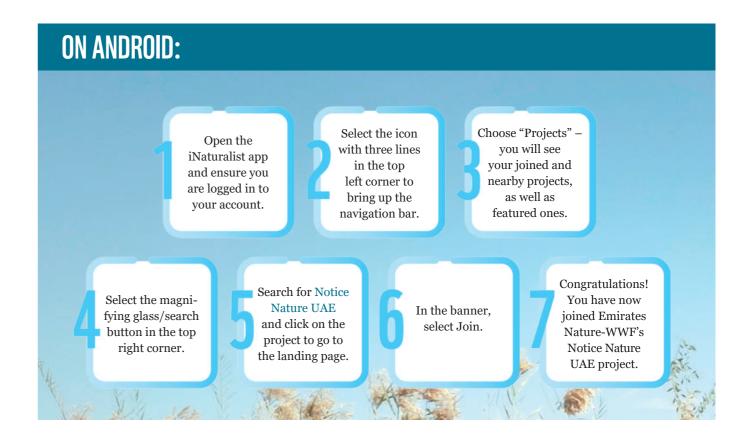
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With iNaturalist, you can make "observations" by taking pictures or recording sounds of species you come across, including location and time recorded, and share them with an online community that can help discuss, identify, and create Research Grade citizen science data. If you are unsure of what you have seen, the software can provide initial suggestions for identifications, but the community will also validate your identification by confirming or suggesting alternative IDs. This Research Grade data can then be used by conservationists and researchers to study biodiversity and the natural environment, while also allowing nature enthusiasts the opportunity to explore ecosystems around them and learn more about species that exist there.

#### NOW JOIN OUR PROJECT, NOTICE NATURE UAE, ON INATURALIST.

Complete the iNaturalist Tutorial to get to know the app better prior to the beginning! Some devices automatically launch the iNaturalist Tutorial when the app is launched for the first time.

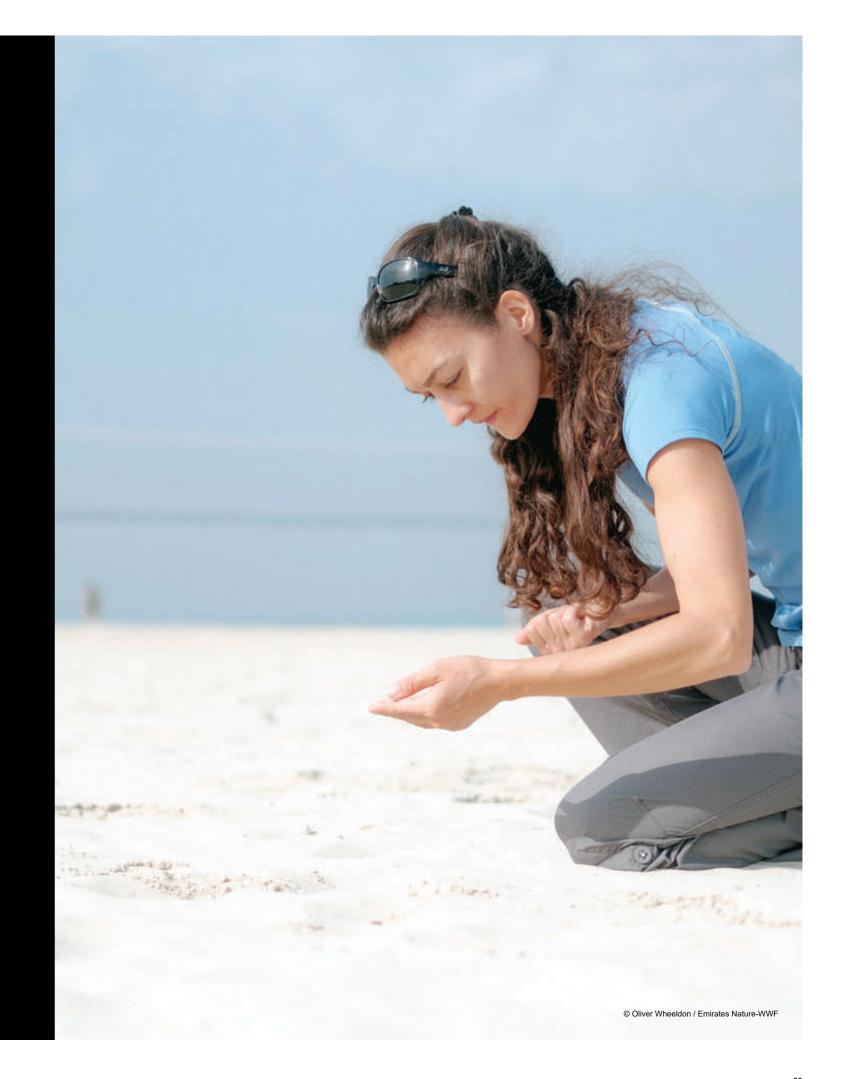


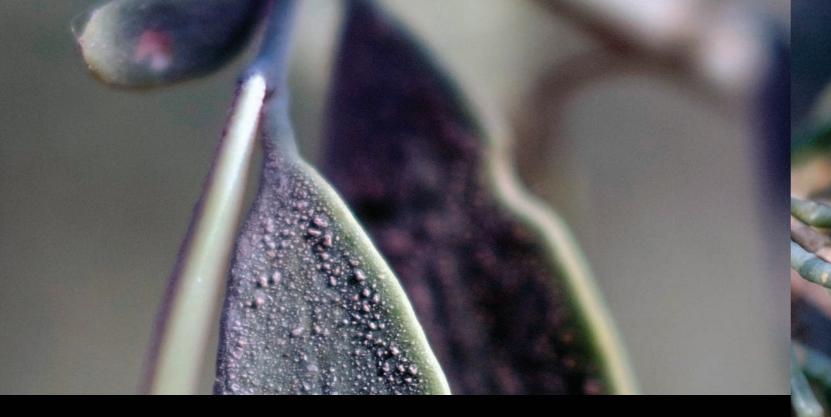


Need more information? Visit the Help section on the iNaturalist website: <a href="https://www.inaturalist.org/pages/help">www.inaturalist.org/pages/help</a>

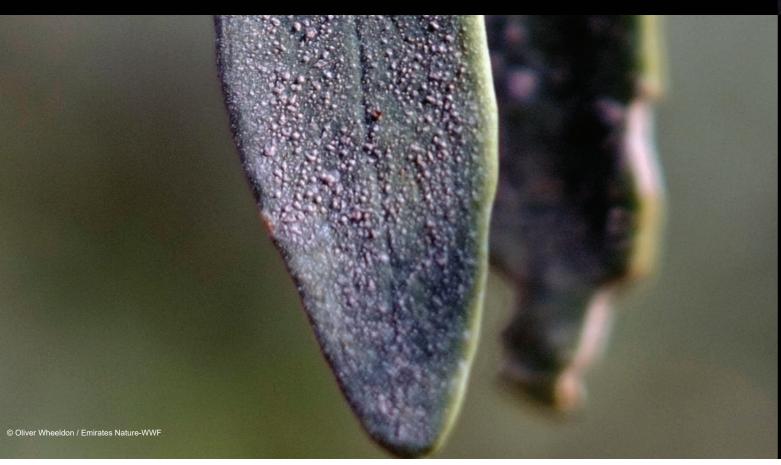


## PART 3: START MAKING OBSERVATIONS





### WHAT TO LOOK FOR?





While data on all wildlife is welcome, for the first phase of the Notice Nature UAE project we are focusing on plants. Specifically, plants that are growing naturally. This means that they have not obviously been planted (such as in a garden) and that they are growing unassisted i.e., not being watered or irrigated.

"Why plants? They are the bottom of the food chain and determine which animals are able to survive and thrive."

Note: We have created a beginner's guide to plants in the UAE that will help you identify wild flora that you come across. More on this later!



The UAE has a varied landscape with different ecosystems and habitat types. These include wide open sand deserts, sand dunes, rock mountains, valleys (or wadis), oases, as well as coastal and marine areas such as sabkhas, mangrove forests, salt marshes, beaches, and others. Furthermore, many species co-exist with us in our cities and built-up areas, and so species can be sighted in urban areas as well.

As such, there are limitless possibilities in finding species and activities can take place close to your home or place of work, or during a day out for a hike or stroll in undisturbed areas.

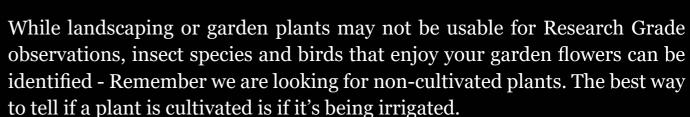
## WHERE TO LOOK?





Are you limited in where you can go and how much time you can spend on seeking out species? Look for wildlife around your garden, near your home or workplace, or when you're out in the city. Wild plants and weeds growing around your neighbourhood or in unconstructed sand patches can be recorded.

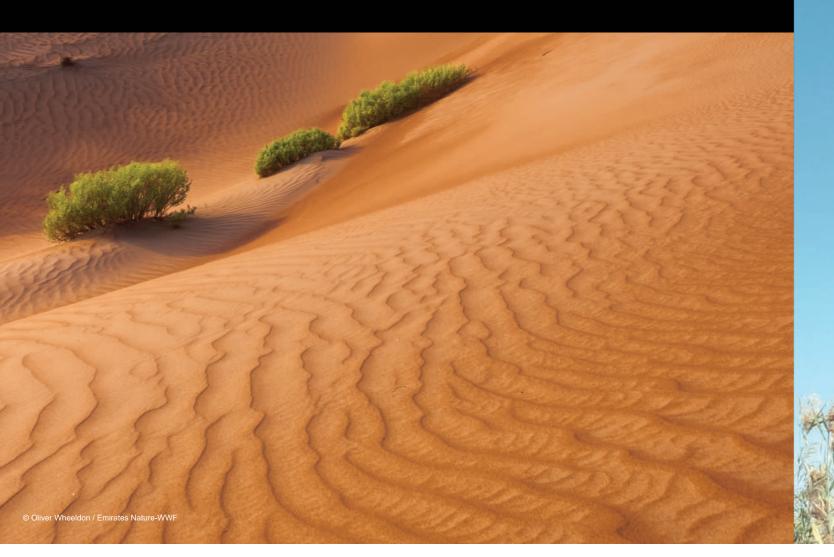
### URBAN ENVIRONMENTS







### UNDISTURBED AREAS



A short drive outside of the major urban areas, you can often encounter less disturbed ecosystems such as desert landscapes just off the road; the coastal habitats, mountains and wadis of the northern emirates; and the mangrove forests, sand dunes and rock formations of Abu Dhabi. Nature can be found almost everywhere. There are many well-worn hiking trails that can be found online or with tour operators, but you can also search for species while going out for a picnic in the desert or enjoying a day at the coast.

The UAE boasts over 40 protected areas. While some are closed to the public or offshore, several are open and accessible, and these could be great spots to look for biodiversity.

- Al Wathbah Wetland Reserve in Abu Dhabi
- Al Zorah Nature Reserve in Ajman
- Al Marmoom Conservation Reserve in Dubai (including the Al Qudra area)
- Ras Al Khor Wildlife Sanctuary in Dubai
- Wasit Nature Reserve in Sharjah



Do respect the land, livelihood, and properties of others.



Do pick-up after yourself and make an effort to leave nature better than when you arrived in it.



Do have fun and learn as much as you can about our wonderful biodiversity!



Do not litter or otherwise damage or befoul the local environment.



Do not try to handle, catch, stress, or in any way damage the local wildlife. Be mindful of where you are stepping and use selfie sticks and zoom lenses on cameras where possible to increase distance between yourself and wildlife.



## HOW TO TAKE RESEARCH GRADE PICTURES





## WHAT DOES A RESEARCH GRADE OBSERVATION MEAN?

In short, it means that it's good enough quality to be used for research. iNaturalist assesses the quality, accuracy, completeness and suitability of observations to be used and shared with data partners through a <u>Data Quality Assessment</u>. The observation needs to be verifiable and then has to attain a Research Grade status through votes by the iNaturalist community.

## HOW CAN I VERIFY MY OBSERVATION AND MAKE IT RESEARCH GRADE?

To be verifiable, the observation needs to:

- $\cdot$  Have a photo or sound of the species.
- $\cdot$  Be georeferenced (where the photo was taken (location in terms of coordinates)
- $\cdot$  Be dated (date and time photo or sound was taken)
- · Not be of a captive or cultivated organism (example photos from Zoos or rescue sanctuaries, or cultivated plants in a garden)

  What does captive / cultivated mean?



To become Research Grade, a verifiable observation will need to have its identification agreed upon by the community at a species-level or lower. Two thirds of identifiers need to agree on a taxon for it to become Research Grade.



## WHAT KIND OF PHOTOS CAN BECOME RESEARCH GRADE?





Follow these tips to make sure your photos are easy to verify and can be turned into Research Grade observations. While we are focusing on plants below, similar methods should be applied for all other taxa if possible.



**Take multiple pictures** of the species, including different parts of it and at different angles. Wildlife is separated into different taxonomic groups that share certain features, and so clear photos of these features can help make identifying and verifying the species easier.

- Take close-up photos of the leaves both on the upper and lower surfaces.
- ✓ Take close-up photos of where the leaves attach to the stem, as alternating versus opposite leaves can help with identification.
- ▼ Take close-ups of the flowers head-on and sideways, allowing for a clear view of the different parts of the flower. The shape and various parts of the flower such as number of petals, as well as the colour can help with identification.

© Oliver Wheeldon / Emirates Nature-WW



- ✓ Take close-ups of the fruits, and if possible and present, a picture of the fruits and flower at the same time.
- ✓ Take close-ups of other parts of the plant. Does it have small hair-like coverings? Are any roots exposed? Does it have any tendrils? The more photos the better!
- ✓ Take photos of the entire plant as well, and include the habitat/location it was found in. This should be your main image for the observation.



**Use props!** A selfie stick can help you get closer to wildlife without scaring, disturbing, or trampling on them. If you are using your phone, you can also take a photo through a magnifying glass to help capture small things!







**A zoom lens** on cameras can help take pictures from far away and macro settings on cameras and devices could help take photos of smaller critters or identifying aspects of a species.



**Provide scale!** It is difficult to tell scale with photos, so providing an item for reference is a great idea. A ruler, pencil, lens cap, or even a reusable water bottle can be placed near the species to give a better idea of scale.



**Think of sunlight!** The UAE can be extremely hot and sunny, and some photos may be bright. Try to avoid mid-day sun especially in the summer, and when taking photos make sure the sun is behind you. If images are still too bright, you can try to shade them.



We have created a beginner's guide to plants in the UAE that will help you identify wild flora that you come across. There are also some flash cards that you could print out to take with you into the field. You can download them both from the Notice Nature UAE homepage.

The UAE is home to several hundred species of plants, so it's highly likely that you will come across one not on this modest list.

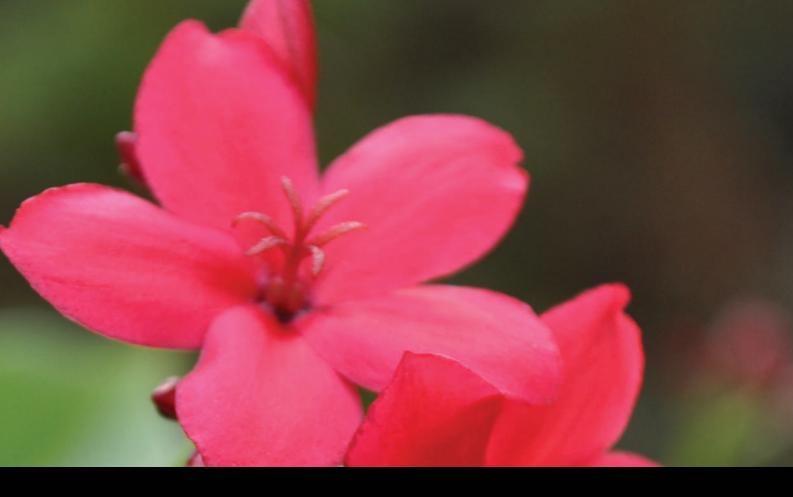
- The most comprehensive guide is *this book*.
- Previous entries in iNaturalist can also help you. Click on the "Explore" tab and filter your searches to show plants previously recorded in the UAE.
- Consider Using <u>Seek by iNaturalist</u> which is an educational tool built on iNaturalist. It provides some tools such as automated species identification and nature journaling. <u>Download the Seek User Guide</u>

O Do use the scientific names as these are universal.





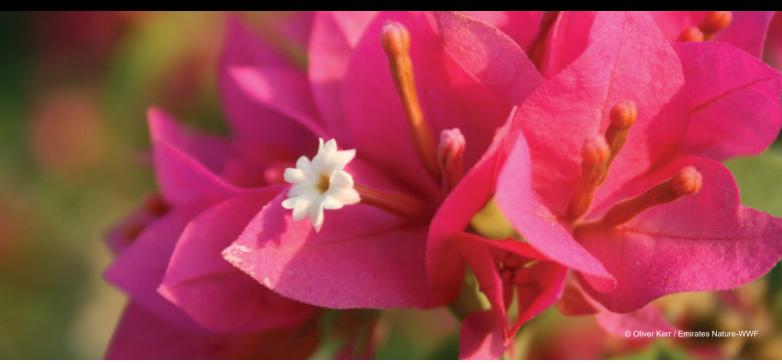




## HOW TO UPLOAD AND SHARE YOUR OBSERVATIONS

- Tap observe.
- Add one or more photos as evidence.
- Choose what you saw. iNaturalist will make a suggestion, but we recommend using the scientific name from your field guide. If you are offline, type in a placeholder and edit the observation later. Identify the species as well as you can while being accurate, for example, you may know roughly what you are recording e.g. dragonfly, but not which species precisely.
- ✓ Don't worry if this is the case, as long as you have provided good photos, the iNaturalist community can help you to identify it fully.
- When you saw it should be added automatically as the current date and time, edit if necessary.
- Where you saw it should also be added automatically. If it doesn't, check Privacy in the Settings.
- ✓ Projects as long as you have already joined the Notice Nature UAE project and your recording is from within the UAE, your observations should automatically be added to our project.
- Save your observation.
- ✓ Upload to share with the community. This should happen automatically. If it doesn't, tap the Upload button. You can turn off automatic upload from the app settings from the Me tab.
- ✓ Check back for activity on your observation from the community e.g., someone confirmed your identification.

Need more help? <u>Check out this iNaturalist video tutorials</u>

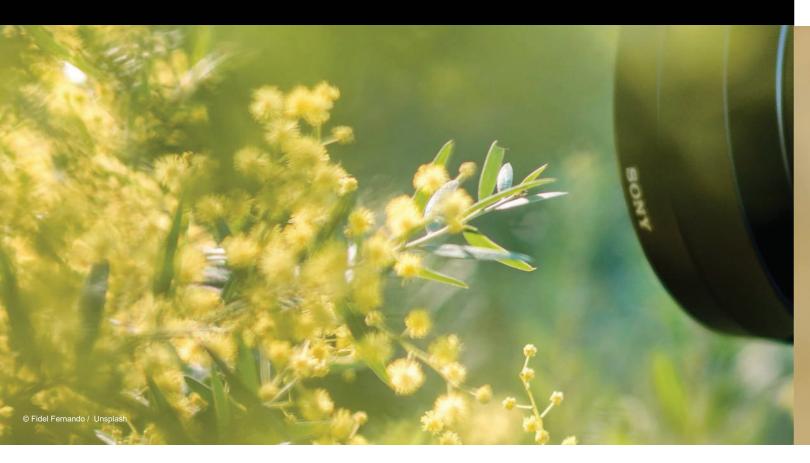




- O use the scientific names as these are universal.
- O use only your own photos from your own experiences.
- Tag us on social media
- f <a href="https://www.facebook.com/emiratesnaturewwf/">https://www.facebook.com/emiratesnaturewwf/</a>
- <u>https://www.instagram.com/ews\_wwf/</u>
- https://twitter.com/ews\_wwf
- in <u>https://www.linkedin.com/company/2684284/</u>

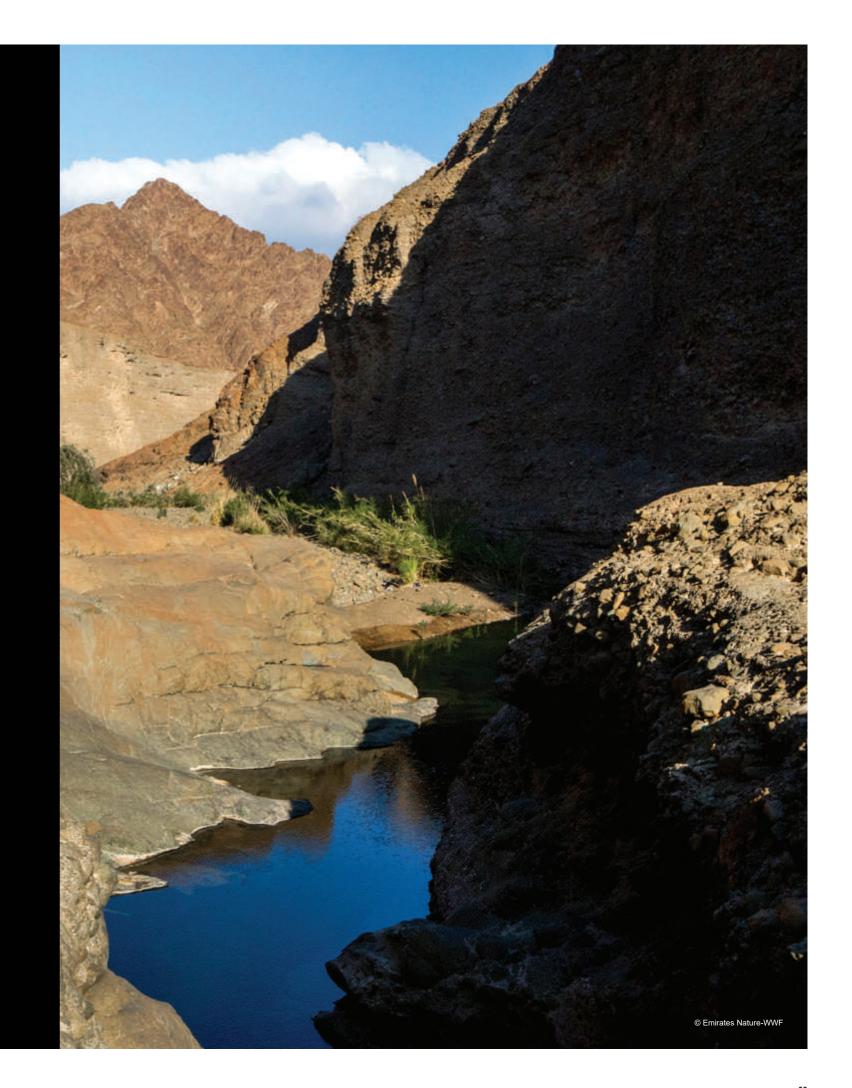
### HOW TO UPLOAD: DO'S AND DON'TS

- Do not photograph people's faces: Especially when kids are involved, iNaturalist is completely public so please ensure that you respect others' privacy.
- **Solution** Do not use photos that are not your own or that are found elsewhere.





# PART 4: RESPECT NATURE AND STAY SAFE!



We applaud your commitment and taking the steps to notice nature but remember that this experience also comes with responsibilities from a safety and environmental point of view. The below are general guidelines – please ensure to check that your activities are in line with local laws and regulations prior to venturing out, especially in light of the COVID-19 pandemic.



### TAKE CARE

- Wear adequate gear depending on where you are heading and what time of year it is, especially footwear, flexible clothing, etc.
- Make sure to bring enough water with you and some snacks / food.
  Hydration tablets may be useful in light of the temperatures in the UAE.
- ✓ Bring sunscreen and a hat to protect you from the sun.

  Avoid going out during the hottest periods of the day, such as around noon in summer. If hiking in wadis and mountain areas, please keep in mind how rocks can radiate heat.
- ✓ Be mindful of where you put your hands and feet. The terrain may come loose, and you may surprise hiding wildlife.
- Bring a basic first aid kit with you.
- Tell someone where you are going and when you plan to be back.
- ✓ Make sure your communication devices are charged and consider bringing a power bank with you.
- ✓ Avoid inaccessible or unauthorised sites please follow all local and federal laws.
- Avoid doing anything that does not feel safe or comfortable.



### **COVID-19 PRECAUTIONS**



Take necessary precautions with COVID-19:

- With rules changing frequently, please stay up to date with local regulations and guidelines and abide by the advice of the authorities.
- ✓ Make sure to keep a mask and hand sanitiser on you at all times.
- ✓ If possible, conduct excursions with members of your household only. If organising a group excursion with members outside of your house hold, please follow the rules and recommended guidelines for group sizes, carpooling, and social distancing, etc.
- ✓ If you have ANY SYMPTOMS or feel ill for any reason, please do not participate in any activities until you are confirmed negative for COVID-19.



## FOLLOW THESE SIMPLE DO'S AND DON'TS



- ✓ Do be a good role model with behaviour and a positive attitude in line with Emirates Nature-WWF's values (Respect, Impact Driven, Courage, Adaptable, Together Stronger)
- ✓ Do respect the land, livelihood, and properties of others.
  Do ensure and promote respect towards the environment and its inhabitants.
- Op pick-up after yourself and make an effort to leave nature better than when you arrived in it.
- O bo use only your own photos from your own experiences.
- ✓ Do have fun and learn as much as you can about our wonderful biodiversity!







### DONTS

- 😵 Do not undertake any activity that may be a risk towards you or others.
- **Solution** Do not ignore safety guidelines or local regulations.
- Do not try to handle, catch, stress, or in any way damage the local wildlife. Be mindful of where you are stepping and use selfie sticks and zoom lenses on cameras where possible to increase distance between yourself and wildlife.
- Do not litter or otherwise damage or befoul the local environment.
- No not use insensitive or offensive language.
- Do not use photos that are not your own or that are found elsewhere.
- Do not photograph people's faces: Especially when kids are involved, iNaturalist is completely public so please ensure that you respect others' privacy.

We hope you enjoy NOTICING NATURE, and look forward to seeing your photos on iNaturalist!

