Best Apps for Maine Woodland Owners

For those who are out in the woods regularly, having easy ways to identify things that are found in nature is very helpful. Application software, commonly called Apps, designed to identify pretty much anything can be downloaded on computers, tablets, and smartphones. Once downloaded users can use pictures and GPS coordinates to receive sought after information.

The following list was compiled by Maine Woodlands newsletter contributor Casey Olechnowicz, a University of Maine School of Forest Resources graduate student.

Stars/Sky/Weather

SkyView - *https://www.terminaleleven.com/skyview/iphone/*
From all the stargazing apps on the market, SkyView is a unique "augmented reality" app where you can view all the stars and objects of the night sky through your device's camera in your real-world environment. One major highlight of this app is that it's both free and available for iOS and Android devices. The app has hundreds of astronomical objects you can search for, and the app will point to where those objects are in your night sky.

Sky Map
https://play.google.com/store/apps/details?id=com.google.android.stardroid&hl=en_US
Sky Map is a free Android app similar in appearance to Sky View, with the major difference being that it is not an augmented reality app. The night sky in Sky Taking a Look at the Night Sky by App Map is displayed based on your location rather than through the camera, so you have to use best judgment to estimate which stars are which when using this app. Sky Map also has a search tool, but the shaky compass makes it difficult to pin down where many of the objects are. The one feature this app has that Sky View does not is a time travel tool, where you can view what the night sky in your location looked like in the past, or will look like in the near future.

Night Sky - *https://apps.apple.com/us/app/night-sky/id475772902*
Night Sky is a star gazing app where users use a compass and a horizon line on a scrolling interface to view the night sky at your location. The app displays 3-D constellations and notable space objects with brief descriptions when you scroll over them. This app takes a bit more estimating to locate these objects compared to Sky Map or Sky View, but it does have some unique features, such as a weather tool to forecast the best nights to go stargazing. On iOS this app comes with additional features such as notifications for notable astronomical events on

space objects and forecasts for viewing space objects. These features are only available on the pro version of Night Sky for Android users, costing $2.49.

Star Walk 2 -
https://play.google.com/store/apps/details?id=com.vitotechnology.StarWalk2Free&hl=en_US
Star Walk 2 is similar in design to Sky Map, where users can point their tablet or smartphone across the sky to view where the stars, constellations, planets, and other objects are relative to their location. The app also has extremely detailed information about notable space objects, and a similar search tool to find any space object. Star Walk 2 is free on Android and iOS, but the free version is unfortunately loaded with ads, and heavily limits features. The uncluttered pro version is $1.99 for iOS and $2.99 for Android.

WeatherUnderground - *https://www.wunderground.com/weather-app*
There are hundreds of weather apps on the market today, so it can be difficult to narrow down an app that stands out. Weather Underground meets this test on sheer forecasting accuracy alone, providing localized weather forecasts from a few of the thousands of weather stations it utilizes across the globe. The app allows you to choose activities you like, such as hiking or fishing, and assesses the weather conditions for those specific interests. It also automatically assesses whether there are conditions present for notable weather events, such as ice accumulation, lightning, or wildfire. It's one of the more detailed and comprehensive apps out there, while remaining simple enough so it's not overwhelming for users. It's free for iOS and Android.

Dark Sky - *https://darksky.net/app*
This is one of the best weather apps out there for assessing current and near-term future weather conditions. It offers an easy-to-navigate, location based forecast, with extremely accurate local readings on an hourly basis. It can predict temperature, precipitation (rain and snow percentages and amounts), wind speeds and direction, humidity, and UV index 24 hours out. It also offers longer-term weekly forecasts for any location, and a map feature that displays local and global radar, precipitation, and temperature forecasts. The app is available for $3.99 for iOS, and is free on Android devices with an optional $2.99 yearly subscription that allows for by-the-minute forecasts and alerts.

NOAA Weather Radar - *https://apps.apple.com/us/app/noaa-weather-radar-live/id749133753*
NOAA Weather Radar is one of the best free radar apps for both iOS and Android products, using NOAA radar stations to provide live radar maps and updates. It also provides current location-based meteorological conditions from these NOAA stations, which are generally more comprehensive and accurate than weather stations provided from typical media sites. You can also view NOAA-distributed watches and warnings from the app, read reports straight from the NOAA website during severe weather conditions, and receive alerts when these conditions arise.

Weather Live -
https://play.google.com/store/apps/details?id=com.apalon.weatherlive.free&hl=en_US
Weather Live is an elegant, free alternative to the Apple Weather and Android Weather apps that come with most tablets and smartphones. For those looking for a simple and easy-to-navigate interface, this may be the weather app for you. It provides easy-to-read short-term and long-term weather forecasts that include temperature, wind, and precipitation outlooks. It also has a simple radar map for users, but like most simple and free weather apps (such as Apple Weather and Weather Channel) the free version can unfortunately be riddled with ads.

RadarScope - *https://www.radarscope.app/*
As an avid weather enthusiast myself, I would be remiss if I didn't mention my favorite weather app of all, RadarScope. The price tag of this app is one of the highest out there for weather apps at $9.99, but with it you get the most powerful, accurate, and comprehensive radar tool available. It provides radar data from Nexrad Level 3 radars around the country, which offers the highest resolution radar images and complex weather data like super resolution reflectivity, precipitation mapping, super resolution velocity, and much more. This app probably isn't for you if you are just looking for simple weather outlooks, but for woodland owners with a strong passion and knowledge for weather, or those looking to accurately assess severe weather conditions, I strongly recommend this app.

Land Work/GIS/Maps

Planimeter - *https://apps.apple.com/us/app/planimeter-measure-land-area/id423492040*
While the world of forest measurement apps is much thinner, Planimeter stands out as a useful GPS measurement tool that excels in accuracy. The app can measure the distances and areas of any location based on satellite imagery. It differs from other GPS measurement apps in that it allows users to take notes, place pins, share or save maps you've created, as well as, upload information from the app onto Google Earth. For Android devices this app is $2.99, and for iOS, $7.99. If you're looking for a free app that includes some of the features of Planimeter, GPS Field Area Measure is a good alternative.

Avenza Maps - *https://www.avenzamaps.com/maps/how-it-works.html*
One of the most popular mapping apps, Avenza Maps allows you to download and view hundreds of maps of practically any location in the U.S. Types of maps range from remote imagery and topographic for Maine Woodland Owners maps, to simple satellite images. Once downloaded, these maps can even be viewed offline, and the app comes with the functionality to record GPS pins, tracks, notes, and to measure distances. Many of the maps are free, or available for a small charge, and the app itself is free for both iOS and Android.

Google Earth - *https://www.google.com/earth/*

One of the most popular apps in the world, Google Earth is much more than just a tool for viewing the best sights around the globe. With Google Earth, you can see detailed 2D or 3D images of your woodlands, street-view images, and you can even import geographical data into Google Earth. This can be used to display any information you would like to see on the app, such as your property boundaries or points of interest. Despite how large and data-filled Google Earth is, the app is still free for smartphones and tablets through iOS or Android.

US Topo Maps - *https://topomapsapp.com/guide_welcome.html*
US Topo Maps was created by the U.S. Geological Survey, and is a GPS locater that uses your precise geographic location to display a wide range of geological map layers in your area. The layers range from simple topography and agricultural imagery, to Many Mapping, GPS Choices for App Users live weather maps, such as current cloud cover maps. Each of these maps and layers can be exported as a downloadable PDF file to view while offline, and are all free. The app also comes with features such as GPS routing and distance tracking to view and measure woodlands. The app is free, and available for iOS and Android products.

GPS Essentials - *http://www.gpsessentials.com/*
GPS Essentials is a free Android app that boasts of being the "Swiss army knife" of GPS apps. The app itself contains a wide variety of features outside the standard ability to serve as a GPS and navigation tool. It allows you to download offline maps, take photos within the app, use Google Maps, and mark specific tracks and streams that you might find in your woods that won't normally show up on most apps. It's simple to use, and easily customized, allowing users to create their own dashboard of GPS tools that they use, and excluding ones they find unnecessary.

ArcGIS Collection - *https://www.esri.com/en-us/arcgis/products/collector-for-arcgis/resources*
Not just one app, ESRI's ArcGIS app collection is an assortment of several apps, which encompass many of the tools and features ArcGIS offers online. Some of the apps include ArcGIS explorer, Navigator, Workforce, Survey123, and Collector, among many others. This collection allows users to search and download maps through ESRI, collect geographic data, navigate online or offline using geographic coordinates, and share and download ArcGIS information. For users familiar with geographic information systems, the apps are simple and easy to use, and even for those who are unfamiliar, the apps have learning tutorials to help. All of the apps are free and available for both iOS and Android products.

Trees/Plants
LeafsnapHD - *http://leafsnap.com/*
LeafsnapHD is essentially a large database of trees in North America that has detailed photographic images of tree leaves, needles, branches, flowers, fruit, bark, seeds, cones, and petioles to match with the tree you are attempting to identify. Another useful feature of this app is that you can take photographic images of the tree you are trying to identify, label the tree once you've identified it, and pin it in the exact geographic location in which you found it. This

could allow any woodland owner to map out the species of trees that are available on their woodlands with pins on a map, or you can view your pins/property from a satellite image. Unfortunately for any Android owners out there, this app is only compatible with Apple devices, but it worked excellently with my iPhone and iPad. The biggest drawback I saw with this app is that its photo feature, which attempts to automatically identify the tree species you've photographed, sometimes takes quite a bit of time to load – or does not load at all. Despite this, all of the app features make it one of the more powerful tree identification tools available.

vTree - *http://dendro.cnre.vt.edu/dendrology/vtree.htm*
This app is based out of Virginia Tech and specializes in Shenandoah Mountain species, yet has an extremely large database of tree species available. One of its most useful features is that it narrows down tree species to search for based on your network or GPS location from your tablet or phone. The app also has an identification tool that asks a series of simple questions with images to attempt to identify the tree you're looking at, and has a search bar so you can narrow down the list of trees to show only oak species or only maple, and so on. The app also works quickly and effectively on all Apple and Android phones and tablets.

FindATree - *http://calloftheforest.ca/plant-a-tree/*
The interface of this app is very simple and easy to use, and has several step-by-step questions in an attempt to identify your tree. After you've answered all the questions, it takes a guess at what that tree is. It seems to be fairly effective in correctly identifying species, but I will caution that it's not perfect, and seems to do much better at correctly guessing conifer species versus deciduous ones. This app is only compatible with Android or Google products.

Maine Wildflowers - https://wildflowersearch.org/search?page=Apps
When it comes to identifying and learning about Northeast wildflower species, there are few apps that can beat MaineWildflowers. The app contains a database of 1,874 flower species, any of which can be searched by common or scientific name. Each flower has photographs, brief descriptions, links to online resources about the flower, and even a map showing where in Maine the plant was found. Best of all, this app is free on both iOS and Android.

PlantNet - https://plantnet.org/en/
Available for iOS and Android for free, PlantNet is an enormous plant database where users can find a particular plant and search through hundreds of user provided images of the flowers, fruit, stem, and leaves of the plant. Each plant also provides a portal to the species' Wikipedia page, and you can tag your own observations of any plant species you identify. The app however, does not provide any identification tools similar to Roger's Mushrooms or Maine Wildflowers, only the aforementioned features and a search tool to browse through species.

Invasive Species

Forinsects - https://www.fs.fed.us/foresthealth/technology/pdfs/Forest_Pest_Insects_Photo_Guide_508.pdf

Not actually for all insects, Forinsects is a photographic guide to forest pest insects in North America created from a USDA Forest Service project along with the University of Massachusetts, and the Center for Invasive Species and Ecosystem Health. The guide includes very detailed photographs and information regarding all of the major North American forest pests. This includes fact sheets, articles, and what the damage from these forest pests looks like. This app is available for free on iOS products.

IPANE - https://www.eddmaps.org/ipane/

IPANE stands for the Invasive Plant Atlas of New England, and it's an enormous database of all known invasive species in New England created Getting a Handle on Invasives and Forest Pests by the Center for Invasive Species and Ecosystem Health, along with the University of Connecticut and Invasive Plant Control. The app is identical in design to Forinsects, with just as much information and simplicity available for woodland owners. While the networks created for invasive species reporting with IPANE are no longer active, this app can still serve as a useful identification tool for woodland owners. Unlike Forinsects however, this app is available for both Apple and Android products, and is free.

iMap Invasives - https://www.imapinvasives.org/mobile-tools

iMap Invasives is a free invasive species observation tool where users can catalog photographic or descriptive observations of invasive species based on GPS coordinates with Android or iOS products. The app is straightforward and easy to use; users simply need to create a free Maine iMap account, and observations will be directly available for the Maine Natural Areas Programs. While the app does not offer any identification tools or information about invasive species, this is the app that is officially promoted and used by the Maine Natural Areas Programs to monitor and control the spread of invasive species in the state. So, for any woodland owners who want to be part of a citizen science project to help curb the spread of invasive species in Maine, this is the app for you.

Outsmart Invasives - https://masswoods.org/outsmart

Outsmart Invasives is another excellent invasive species app with an emphasis on monitoring and tracking the spread of invasive species in the United States. Through this app, woodland owners can identify any invasive plant, tree, or insect species, and then report any observations of these species on your land.

General Wildlife IDing

iNaturalist- https://www.inaturalist.org

iNaturalist is another great free wildlife app for both Android and Apple users in which users mark wildlife, tree, or plant sightings on a satellite imagery-based map that can be tagged with descriptions as well as photographs. You can create your own list of observations on your

woodland, and the satellite-based map is incredibly detailed, allowing users to easily identify the precise locations of their observations. The app also comes with guides to help users identify the wildlife or plant life they are observing. It also allows for "crowdsource" identifications which connects users with experts who can identify the organisms observed.

About My Woods - https://www.aboutmywoods.org/
While each of the apps previously mentioned are good at helping with one category of woodland activities, About My Woods excels in several. It's designed as a helpful tool for woodland owners in New England, and succeeds by providing woodland owners information and images of all types of flora and fauna they would expect to find on their land, based on the apps location filter. It can also assist in finding a nearby forester. Currently, this app is available for free on all Android products, and Apple smartphones.

Animal Tracking

iTrack - http://www.naturetracking.com/itrack-wildlife/
iTrack is one of the better apps on animal tracks for Apple users, and it comes in three versions: Lite, Basic, and Pro. All three provide images of tracks, size ranges, brief descriptions, and other notable signs of the wildlife species using detailed photographic imagery. Lite provides this information on eight species and is free; Basic includes 40 species and is $4.99, and Pro contains 66 species and sells for $14.99. The basic version provides information for species most commonly found in New England.

MyNature Animal Tracks - http://www.mynatureapps.com/mynature-animal-tracks/
For those using Android products who want an effective animal-tracking app, MyNature Animal Tracks is one of the better ones. The "lite" version of this app is only a very brief trial, so you will need the full app, which costs $4.99. With this you get information on 46 North American wildlife species,which, similar to iTrack, includes photographs and information, gait patterns, and images of the animal. While it does not have images or descriptions of notable signs of wildlife species, as iTrack does, it does provide some extra features, such as species range maps and vocalizations.

Ticks/Lyme Disease

TickCheck ID - https://www.tickcheck.com/info/app
Available for Android products, TickCheck ID is the most useful and innovative app on the list. The app not only provides images and descriptions of North American tick species, tick removal techniques, and tick related diseases, but also provides a free tick identification service. Produced by a startup company in Pennsylvania, where ticks have long been prevalent, this app allows you to upload or take a photo of a tick and provides a response on what species it is within 1 to 2 business days. The app also offers resources for users to send in ticks to a Pennsylvania laboratory to be tested for diseases, for a fee, that varies depending

on how many diseases the tick will be checked for. The wide variety of resources this app offers makes it a must-have for woodland owners with Android smartphones or tablets.

Zecke - https://zecke-tique-tick.ch/en/app-tick/
Zecke means tick in German, and despite this app being developed by a team from Switzerland, it manages to offer the most detailed information guide about ticks among all the apps on our list. The apps tick reporting and local tick risk map features are, unfortunately, not relevant for non-European users, but the app still offers many other resources that are of use to Maine woodland owners. Zecke has a tick diary tool for users to collect their sightings and reports of ticks based on location (a tool that works globally), as well as detailed information databases about tick biology, habitats, and diseases. This app is available for both Android and iOS users.

LymeMap - https://lymediseasemappingproject.org/resources.php
LymeMap is a citizen science initiative from the Lyme Disease and Related Co-Infections Mapping project, and has the goal of geographically displaying locations of individuals infected with Lyme Disease. Users who have Lyme Disease can participate in the project by reporting their location, and those interested in tracking locations or spread of the disease can view the map for free. The app also offers links to great online resources on treating tick bites, avoiding ticks when out in the woods, as well as information provided by medical experts on the disease. While this app is purely a Lyme Disease based resource, it does provide information that could prove to be useful for woodland owners in preventing tick bites and tracking the disease. The app is free for iOS products.

Mushrooms

Roger's Mushrooms - https://roger-phillips-mushrooms.soft112.com
This is the most comprehensive mushroom ID and guidebook app available, and includes detailed drawings and photographs of every mushroom species you can think of. Each species comes with a description of the characteristics, and where to find the mushrooms, and the app has a cookbook with recipes for any edible mushrooms you might find. Roger's Mushrooms is available in a free "lite" version for both iOS and Android users, but it's limited in comparison with the full version, which sells for $4.99.

Book of Mushrooms -
https://play.google.com/store/apps/details?id=com.headcorp.bookofmushrooms&hl=en_US
Another great mushroom app, Book of Mushrooms has detailed images and descriptions about 254 mushroom species, including their edibility, location, and season of growth. While it does not have as many features as Roger's Mushrooms and is not as comprehensive, one of the most useful tools of this app is a mushroom calendar, which shows the growing periods of species and when it is best to hunt for them. It also provides links to articles and other resources for users to learn more about mushrooms. This app is free, and available exclusively for Android products.

Birds

Merlin - https://merlin.allaboutbirds.org/
One of the most underrated birding apps available, Merlin has a guidebook similar to the comprehensive Audubon and Peterson bird apps. Where Merlin stands out is its location-based identification tool, detailed photographic images, range maps, and a huge database of bird calls and sounds. The app is location based, so it narrows the birds you can view based on your region, making it very simple to sort through. The app is free for Android users; for any Apple users looking for an alternative, Audubon Birds and Peterson Birds still are exceptional, and free.

Audubon Birds - https://www.audubon.org/app
Audubon Birds is another free birding app that essentially serves as a detailed guide to every bird species in North America. While this app does not have an identification tool or location filters as Merlin does, it's an extensive resource, containing vast amounts of information and sounds from every North American species. This app also has a citizen science component; with every bird species, you can view reported sightings pinned on a map, and report sightings of species yourself. This app is available both on iOS and Android.

Peterson Birds - http://petersonguides.com/apps/apps.php
If you've ever owned a Peterson Field Guide, this app will look familiar: It's an online Peterson Field Guide that includes all the detail, images, and information of a hard copy version for iOS and Android devices. The app also has a search filter to sort through birds based on the time of year and location you viewed them. One major benefit of the app, compared to the text version, is that the app is free.

Sibley Birds - https://www.sibleyguides.com/about/the-sibley-eguide-to-birds-app/
iBirds - https://ibird.com/
Larkwire - https://www.larkwire.com/
Sibley Birds, iBirds, and Larkwire are all included in their own section here because they all are a bit pricier compared to previously mentioned apps. These apps are designed for those with a passion for birding, and have some of the most extensive resources of any birding apps available. Sibley Birds and iBirds are both identification tools, with extensive visual ID information about all North American bird species and vast bird sound databases. Both apps have free versions for iOS and Android, but they are so limited that the upgraded versions of the apps are almost essential. Sibley Birds' pro version is $19.99 and iBirds has upgraded versions ranging from $2.99 to $19.99. Larkwire is an iOS app aimed at teaching users to master birding by ear. It's an interactive learning tool that quizzes you on various bird sounds to help you identify birds by call alone. It comes in two parts: $14.99 for land birds, and $12.99 for water birds.