

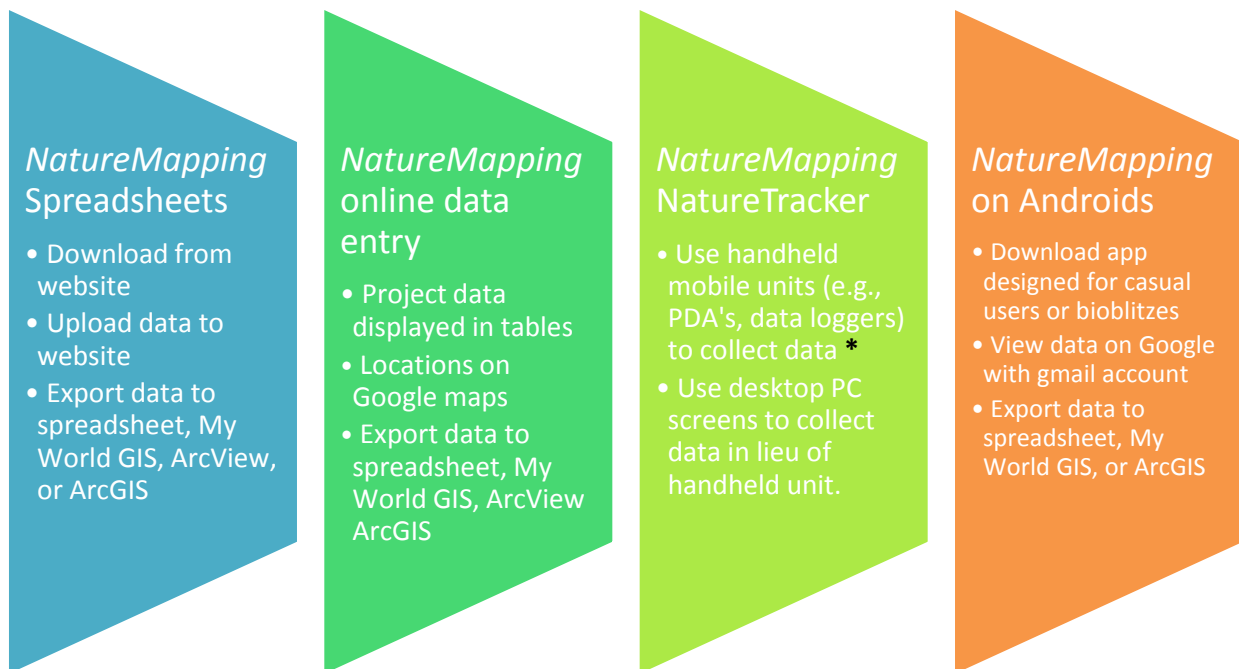
Four Options to Collect Data via *NatureMapping*

There are multiple ways to collect data. You can select which option works best for you.

NatureMapping Spreadsheets are currently created for 12 states (AK, AR, CA, IA, MA, MI, NY, PA, OR, TX, VA, WA). These are created when NatureTracker data collection software is developed for a state. The spreadsheet contains all of the species and codes and multiple other worksheets to analyze data graphically.

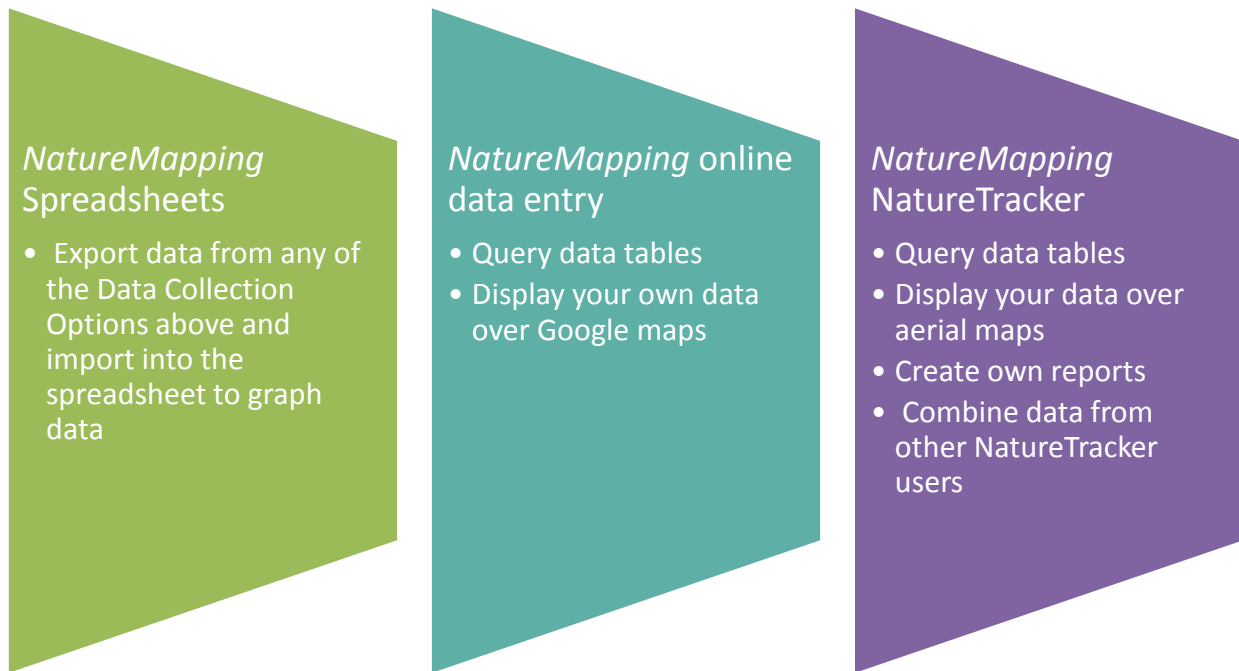
Online Data Entry is available for every state that has a NatureTracker sequence. It uses the same list of species as the spreadsheet. Users see only their data. All data are stored at the NatureMapping Foundation.

NatureMapping on Androids was tested for a bioblitz with photos and vocalizations/maps for the bioblitz area. The underlying software (ODK) does not work on iPhones. *NatureMapping* data are uploaded to the *NatureMapping* account in Google's cloud server on the Internet. A complete NatureTracker for the Android is being planned.



* Any mobile handheld device that has built-in GPS software, a mobile central processor unit (computer), touch screen, and the ability to synchronize with a PC to upload and download data. Data are stored in the PC. Trimble, HP, and Garmin are vendors of these types of units.

Tables and graphs with own or multiple user data



Analyze Data using GIS

ESRI, Inc. (developers of ArcView & ArcGIS) is giving GIS software to states for free for 4 years after a state license is signed. Washington State signed the agreement with ESRI in 2010.

As a precursor to using ArcGIS Desktop, *NatureMapping* has developed instructions for teachers working on projects together using ArcGIS online <http://www.arcgis.com/home/> These instructions can be found at <http://naturemappingfoundation.org/natmap/tech/>.

ArcGIS allows ANYONE to develop their own maps and create user groups. Some *NatureMapping* teachers have developed their own slide shows with their students (search for Salmon maps created by 3rd graders Gannon, Riley and Jocynl Salmon map or Hailey and Mr. T. Salmon map)

The Pacific Education Institute (PEI) partnered with Pasco who is a vendor for My World GIS to develop lessons for K-12 schools. My World GIS is very intuitive for teachers. The software also works on Mac's.

The success of teachers using ArcGIS Desktop comes with support from GIS professionals that mentor their classes.

Not shown, but still used is ArcVIEW. Many schools and professionals still used this software to create their own data layers.

Data Collection and Analyses Options

ArcGIS Online

- Share locations and projects
- Use available online maps
- Use *NatureMapping* data and wildlife range maps (in development)

My World GIS

- Lessons developed by PEI
- Create maps, point locations, polygons
- Collect and display data
- Upload data to *NatureMapping* website

ArcGIS Desktop

- Create maps, point locations, polygons
- Link data from spreadsheets
- Export into format that can be used for ArcGIS online
- GIS mentors available to help teachers
- ESD's technology team provide computer support