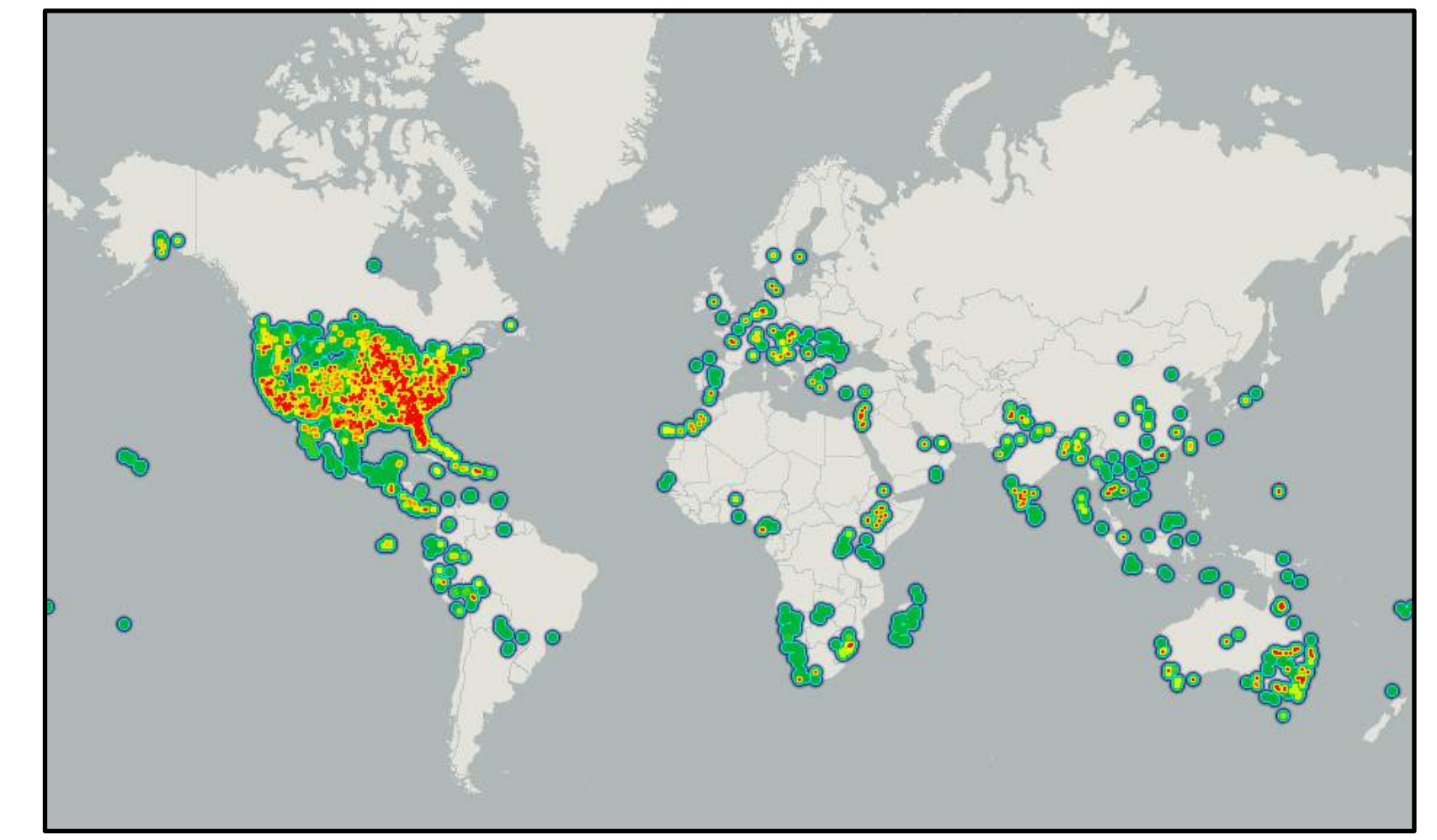# HerpMapper

Project Administrators: Don Becker, Mike Pingleton, and Christopher E. Smith

Contact: Info@HerpMapper.org

Record Count: _____

HerpMapper (HM) is a relatively new global herp atlas and data-hub project that receives "catch and release" data from the general public, herpers, other citizen scientists, and professionals. HM data are only viewable to county level to the public, but HerpMapper does make detailed point-location data freely available to HM Partners – individuals and groups that use these observations for research, conservation, and preservation purposes. See our full list of HM Partners at: HerpMapper.org/Partners

What does it cost?

- It's free. There are no costs to contributors or data partners.
- HerpMapper is volunteer driven.
- Operating costs covered by donations. Contribute today by visiting: www.HerpMapper.org/Donate
- IT developers, admins, advisors, and others are committed to the cause.
- HerpMapper intends to register as a 501(c)(3) nonprofit organization.

Organizational Structure

The Front End: Data Collection

- Done by the general public, naturalists, field herpers, students, and professionals.
- Citizen Science – participants agree up front to share their data by giving HerpMapper full rights.

The Back End: Data Partners

- Accredited individuals and organizations conducting research, conservation, etc.
- Partners access data within the scope of their project in real-time or via one-time requests.

In-Between: Data, Middleware, and People

- Secure database.
- Middleware – tools for data collection, curation, and partner export.
- Documentation – FAQs and how-to instructions.
- People – developers, curators, advisors, media relations.

Data Collection

Records can be added:

- Via browser at: www.HerpMapper.org (including past observations). Scan to watch how-to video:
- Via the mobile app for Android and Apple devices, even when outside of cellular signal (Fig. 1).
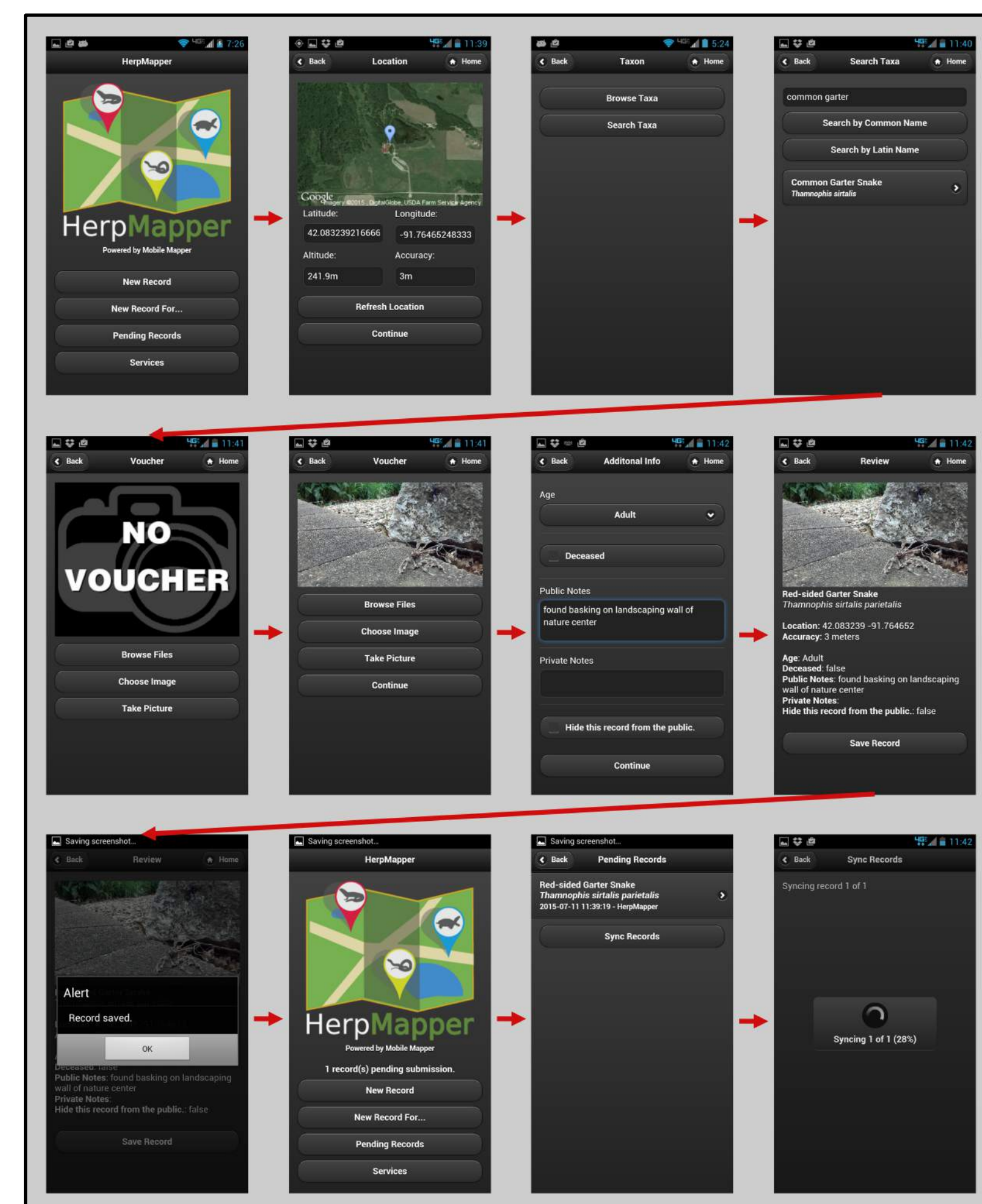

Figure 1. Step-by-step example on how to use mobile application.

Records require:

- Common or scientific name of the herp.
  - Identification to family or genus supported.
  - Observations can be marked as unknown.
- Geographic coordinates:
  - Via browser, mapping tool lets you select location.
  - Mobile app uses smartphone GPS to pinpoint location with accuracy as precise as 3 – 4 meters.
  - One or more photo(s) or audio recording(s).

Optional:

- Life-stage (adult, neonate, larva, etc.).
- Deceased (Yes/No) for tracking mortality.
- Observer comments (public or hidden).

HerpMapper automatically extracts some data:

- Date, time, coordinates from the EXIF data embedded in digital photos (when present).
- Country / state / region / municipality from coordinates.

Support for Projects: Example

- *Minnesota Turtle Crossing Tally & Count* - This collaborative project uses HerpMapper and its mobile app to document and monitor turtle crossing and mortality hotspots with the specific goal of implementing data-driven mitigation strategies to help conserve Minnesota's turtles and other small species of wildlife. Learn more: HerpMapper.org/Projects

PROJECT PARTNERS
HerpMapper
Minnesota Herpetological Society
MNDNR - Nongame Wildlife Program
Three Rivers Park District

User Benefits

- Easily visualize collected data in Google Earth (Fig. 2).
- Profile page with metrics, most recent and frequent finds, life list, badges, and personal info. (Fig 3.).
- See what others are finding around the world (to county level).
- Knowing data are being used to help study and conserve herps.
- Mobile-friendly website.
- Bulk import data from other databases (incl. HERP and iNat.).
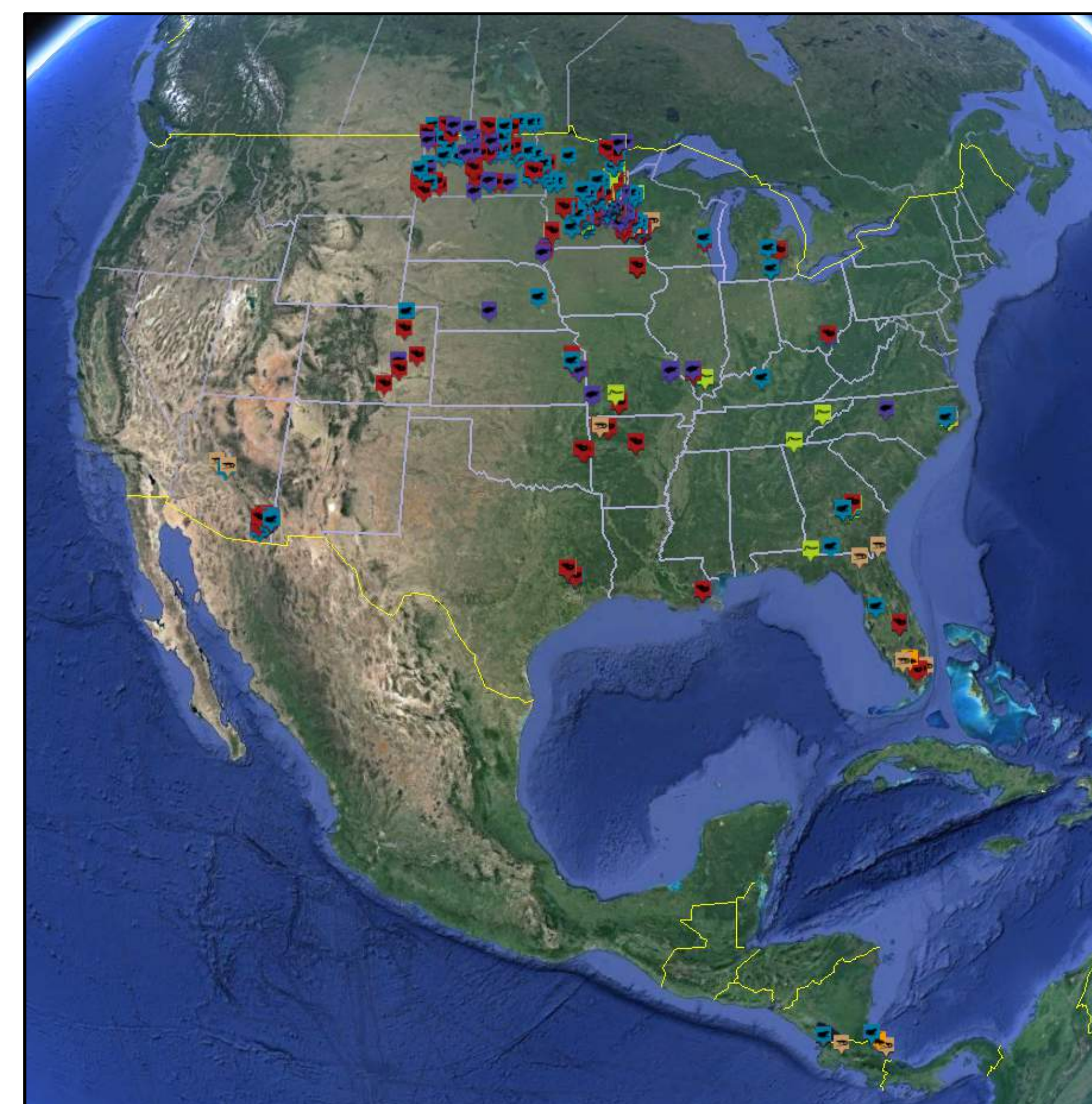- Save time and money required for data management.

Figure 2. Easily export data into .csv, .gpx, and .kml files. User can load these data into GIS software. Seen here is a single-user example of data viewed in Google Earth. Each observation is color coded and is clickable to view observation details.

Data Security

- HM users can only see details of records they enter.
- General public only sees basic information and photos – all specific-locality data is blocked from view (users can opt to hide observations completely).
- Images viewed by general public have EXIF data stripped.
- Every database has administrators – HM has admins with super-user privileges, but not for the purpose of viewing records.
- Data partners only have access to a subset of records defined by the scope of their project.
- Partners can ask to have certain types of records completely hidden from view.
- No partners have access to all records.
- Only admins can delete records (data permanence).
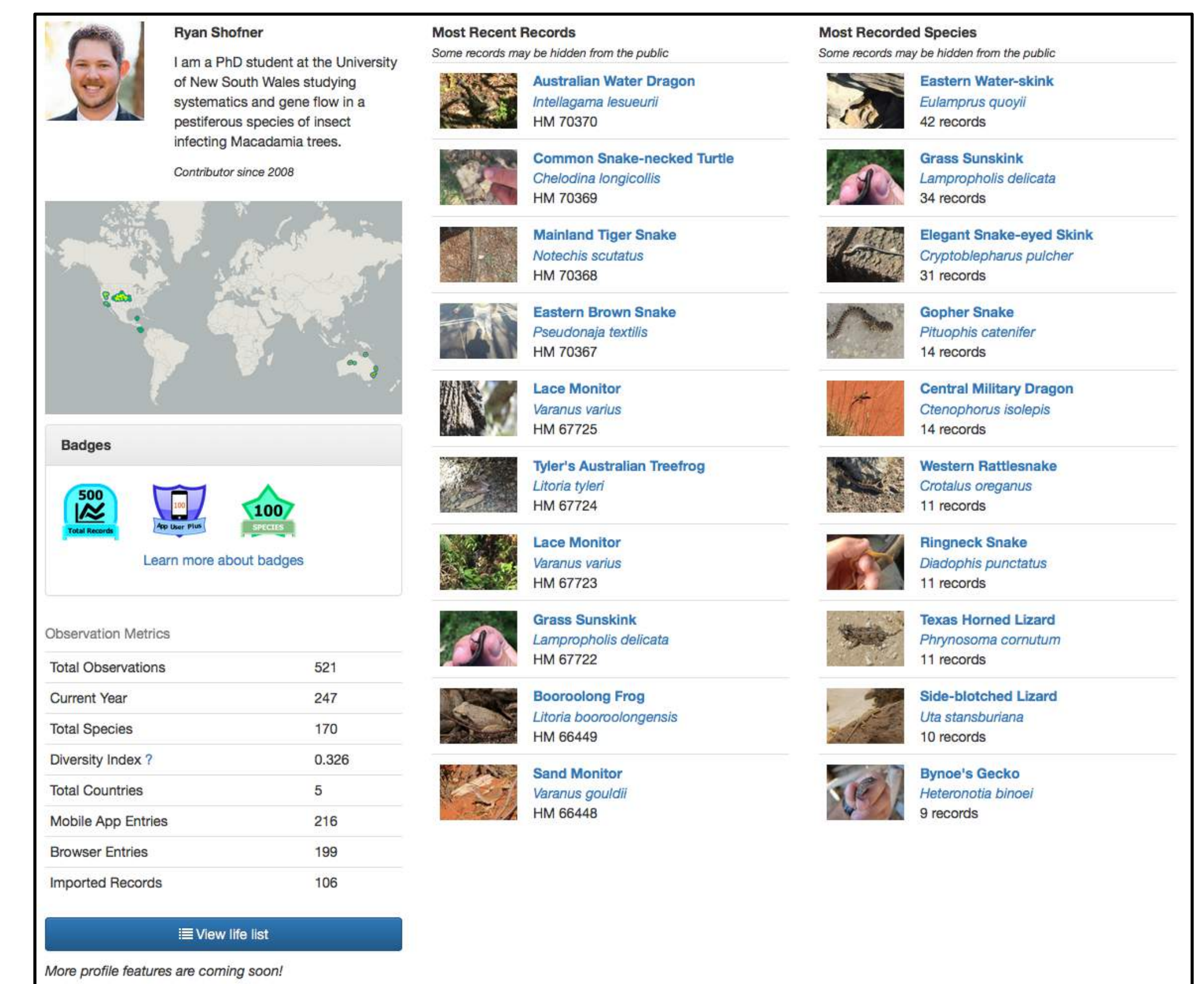- All records are assigned unique HM #.

Figure 3. User profiles feature an activity map, several metrics that users can choose to share with others, a life-list feature, the user's most recent and frequently reported species, and badges assigned based on database accomplishments. More features are in development.

HerpMapper Wants You!

HerpMapper te Necesita!

HerpMapper sucht Sie!

HerpMapper 需要您的加入!

In collaboration with

THE Orianne Society

Be sure to join us on Facebook and follow on Twitter.