

# Apps for the Biologist:

A Workshop for Biologists, Naturalists, and Citizen Scientists

October 21, 2017

[Big Break Regional Shoreline](#)  
[69 Big Break Rd, Oakley, CA 94561](#)



## Instructors:

**Ken-ichi Ueda, co-creator of iNaturalist, California Academy of Sciences**

**Bruce Garlinger, Wildlife Biologist, Eremico Biological Services**

**Matthew Bettelheim, Senior Biologist, AECOM**

**Dr. Tracy Ostrom, UC Berkeley, Earth Team, GLOBE**

**Kathleen Harris, Friends of Sausal Creek**

**Anne Hoff, Workshop Instructor, Golden Gate Audubon Society**

**Nancy Douglas, Wildnote Director of Sales**

**Jose Miguel Lozano, Head of Sales & Marketing, AmigoCloud**

**Jessie Parteno, GIS Manager, AECOM**

**Meredith Rodriguez, Biologist, Transcon**

**Coordinator/Contact for Questions: Ivan Parr, [workshops@twc-west.org](mailto:workshops@twc-west.org)**



**This workshop is worth 7.5 Contact Hours**  
for Category I of the Certified Wildlife Biologist® Renewal/Professional Development Certificate Program

**Description:** This 1-day workshop goes into the most useful applications and smartphone/ipad gadgets for both professionals and students. We will begin by checking out the plethora of applications useful for identification, tracking, data collection, mapping, and most importantly, simple field safety. Then we'll explore mobile apps useful for setting up projects, storing data, and even for managing restoration sites in the field. Presenters will speak on a range of useful tools including AmigoCloud, GLOBE, eBird, iBird, PhotoJoJo, Wildnote, ArcGIS Collector, Audubon Guides, iNaturalist, and even iPhone macro lenses. We'll spend time in lecture, practicing in the outdoors, and processing data back in the classroom.

Participants will be able to follow along on their own devices or on shared ipads provided by the workshop. We'll also have time to try out apps, scopes, and macro lenses in the setting of Big Break Regional Park.

**Audience:** This workshop is intended for professional biologists and students, project managers, citizen scientists, and outdoor enthusiasts who are interested in technologic tools for tracking projects and exploring nature.

**Registration:** Registration cost does not include meals. A limited number of ipads will be available for participants, so participants are strongly encouraged to bring their own devices. A list of apps suggested for upload will be provided prior to the workshop.

All registrants complete the secure online form at:  
[https://www.wildlifeprofessional.org/western/app2017\\_reg.php](https://www.wildlifeprofessional.org/western/app2017_reg.php)

**Registration payable by check or credit card/received or postmarked:**

	<b>On/Before Sept 21</b>	<b>After Sept 21</b>
<b>Member, TWS Western Section</b>	<b>\$115</b>	<b>\$125</b>
<b>Non-Member</b>	<b>\$135</b>	<b>\$155</b>
<b>Student/New Professional*</b> (maximum 4 registrants at this cost)	<b>\$65</b>	<b>\$80</b>

\*Must show proof of current registration at an accredited university, or graduation within 6 months of workshop date.

The maximum enrollment is 41 after which, a waiting list will be kept. A minimum of 17 participants must register for the workshop by **September 21** or the workshop will be cancelled and all registration fees will be returned. If the workshop can be rescheduled,

we will offer transfer to the alternate dates in the priority registrations were received. Registrants will be processed in the order received and successful registrants will receive workshop logistics and information once full payment is confirmed received.

Credit cards are accepted online. Instructions for purchase order or check payments are included as part of the online registration process.

**Cancellation and Refund Policy:** To receive a refund of workshop registration fees, we must receive your cancellation no later than 14 days before the first day of the conference. There will be no refunds due to inclement weather, Federal budget issues, furloughs or other events beyond the control of TWS-West. All refunds are subject to a \$50 processing fee. Requests for refunds must be submitted in writing, either by mail or email. Refund requests received within 14 days of the start of the conference will not be processed regardless of personal or professional emergency, and no refund after that date is available. However, registration may be transferred to another individual for a \$25 transfer fee.

**Location:** Big Break Regional Shoreline, part of the East Bay Regional Parks District, is located along the Sacramento-San Joaquin River Delta, the largest estuarine ecosystem in California and the West Coast. Formerly a farm, the park now features riverside trails, kayak rentals, birdwatching, fishing, and a state-of-the-art museum complete with live fish and unique displays on history, hydrology, and ecology. Friendly staff lead regular programs at the park, including a stargazing program which will be held in the evening of October 21.

For more information, please visit:

[http://www.ebparks.org/parks/big\\_break#about](http://www.ebparks.org/parks/big_break#about)

On the evening of October 21, there will be a special program:

**CATCH A FALLING STAR!**

Big Break      Cat Taylor

7:30-9:30pm, Sat, Oct 21 #18419

The skies are primed for the Orionids Meteor Shower! Dress warmly, bring flashlights, blankets or reclining lawn chairs to view the celestial show above. If overcast, we'll take a night-time stroll along the Delta.

No registration required: Drop-in program



## **DRAFT WORKSHOP SCHEDULE (SUBJECT TO CHANGE PER INSTRUCTORS)**

7:30-8:00 Registration

8:00-8:15 Introduction (Ivan)

8:15-9:15 Basic Must-Have Apps (Matthew Bettelheim)

9:15-9:30 Creating Add-Ons (Matthew Bettelheim)

BREAK

9:40-10:40 Best Apps for the Field Biologist (Bruce Garlinger)

10:40-11:10 eBird (Anne Hoff)

11:15-11:40 Outside Demos

11:40-12:00 Participant Forum

12:00-1:15 Lunch

1:15-1:40 ArcGIS Collector (Jessie Parteno)

1:40-2:10 Photojojo Macro Lenses (Kathleen Harris)

BREAK

2:20-2:40 GLOBE Observer (Tracy Ostrom)

2:40-3:00 Outdoor GLOBE Observer demo (Tracy Ostrom)

3:00-3:45 Wildnote (Kristen Hazard, Nancy Douglas)

BREAK

3:50-4:15 AmigoCloud (Jose Miguel Lozano)

4:15-4:45 iNaturalist and Citizen Science (Ken-ichi Ueda)

4:45-5:20 iNaturalist Outside (Ken-ichi Ueda)

5:20-5:45 Post-Processing (Ken-ichi Ueda)

5:45-6:00 Apps for Bat Detection (Meredith Rodriguez)

6:00-6:30 Outdoor Practice of Apps with Instructors



## Instructor Biographies



### **Ken-ichi Ueda**

A discussion of apps for the biologist is not complete without Ken-ichi Ueda, co-creator of the iNaturalist app. A developer, GIS specialist, wildlife technician, and self-described informaticist and batcaver, his realm of expertise knows no bounds. In addition to co-running the iNaturalist platform, Ken-ichi is a naturalist for the California Center for Natural Diversity, Redwood Coast Tours, the Insect Sciences Museum of California, and innumerable facebook pages. If Ken-ichi seems familiar to you, you may have seen or heard him on NPR, the BBC, National Geographic, or the Commonwealth Club. We are lucky to have Ken-ichi guide us through the value of citizen science using social media, using lecture, outdoor practice, and post-processing.

Ken-ichi currently works for the California Academy of Sciences, where he co-directs a department dedicated specifically to iNaturalist.



### **Bruce Garlinger**

Mr. Garlinger has nearly 40 years of experience conducting wildlife and plant surveys in the deserts of California and Nevada. His expertise includes aspects of nearly every listed desert taxon, from desert tortoise to Inyo California towhee, Mohave ground squirrel, and plants. Bruce is best known for his studies in desert bighorn sheep. He is involved in camera trapping, relocation assessment, capture and transplanting, and monitoring of bighorns throughout Kern, Inyo, and San Bernardino Counties. In addition, Bruce owns a virtual library of iPhone apps covering every interest related to the outdoors - identification, data, weather, field safety, and more.

Bruce has worked as a biologist for the Bureau of Land Management, a volunteer with the California Department of Fish and Wildlife, and currently, as a senior biologist at Eremico.



### **Matthew Bettelheim**

Mr. Bettelheim is a familiar face to many in the Western Section. A former president of the San Francisco Bay Area Chapter, he is involved in countless projects inside and outside of The Wildlife Society. Most recently, he is working on the Western Section TaxaDerby app, and a helium balloon tracker called Must Come Down. Matthew's research has focused principally on the western pond turtle, on which he has authored numerous publications. He is also the author of [Sardis and Stamm](#), a children's book about the endangered Lange's metalmark butterfly. His multifarious range of interests cover many aspects of Californiana and natural history, which can be reviewed in his blog, (bio)accumulation.

Currently, Mr. Bettelheim is working as a senior biologist at AECOM and is a senior advisor on the board of the San Francisco Chapter of the Wildlife Society.



### **Kristen Hazard**

In 2011, Terra Verde Environmental Consulting worked with Kristen Hazard, a principal at the company, to build an environmental compliance reporting app for PG&E. The app was so valuable that PG&E started using it on all large construction projects. Over the last five years, PG&E has utilized it to submit over 50,000 reports and upload over 300,000 photos from more than 600 users. Kristen moved on to start Suntoucher Software, where she continued to work on environmental compliance. While supporting the users of that application, she built her knowledge base regarding the needs of data collectors and data managers, which led to the creation of Wildnote.

Kristen and her team took three years to design and build Wildnote because they wanted a flexible, feature-rich app that would meet the specific needs of the environmental-services community while setting the bar higher for environmental-data collection, management, and reporting.



### **Nancy Douglas**

Nancy Douglas's goal is to build authentic connections, learn about others, and promote creative thinking. This is evidenced in her wide range of interests and talents, spanning everything from administrative management to the arts. She has worked as the associate director and director of the San Luis Obispo Americorps Program, as a technical writer and illustrator for First Virtual Corporation product manuals, as the executive director of the San Luis Obispo Vocal Arts Ensemble, a senior manager of Geneologists.com, and as the front of house manager for the San Luis Obispo Performing Arts Center. In 2006, Nancy founded and built a successful property management company called Northern Utah Property Management.

Nancy's experience in apps comes in her current position as the Ambassador of Buzz and director of sales for Wildnote., an app specifically designed for environmental consultants.



### **Tracy Ostrom**

Mrs. Tracy Ostrom has been involved in education and the sciences for 15 years. She has taught chemistry, physics, environmental science, and biology. As Director of the Green Energy Academy at Skyline High School, she was a principal participant in The GLOBE Program, an educational platform which connects students, teachers, scientists, and citizens from different parts of the world to conduct real, hands-on science within their local environment and apply it to a global perspective. Her involvement has included everything from restoration along Sausal Creek to involvement in 350.org's International Day of Climate Action. Mrs. Ostrom is also active with EarthTeam, a program dedicated to encouraging teens

to become active environmental stewards. She now works with the College and Career Academy Support Network.

Tracy is going to discuss GLOBE Observer, and how it relates to studies in biodiversity.



### **Kathleen Harris**

Kathleen Harris has had a 45-year career in cell and molecular biology. Her studies began in endocrinology and diabetes research. For over 20 years, she worked at Bayer HealthCare as a research biologist, cell banking manager, and a process development scientist. Afterwards, she became a process developer at Progenitor Cell Therapy for 7 years. Now retired, Kathleen is an ardent volunteer with the Friends of Sausal Creek. This restoration group is dedicated to improving water quality, habitat, and ecosystem health - in addition to connecting communities with nature - within urban Oakland. Kathleen's subject of study is larger than the molecular level, but is still tiny. She has become a specialist of aquatic macroinvertebrates larvae, and leads volunteer efforts in bioassessment through monitoring the diversity of insects within streams.

Amazingly, Kathleen documents and identifies these tiny denizens using an iPad or iPhone, and a handy set of macro lenses specifically designed for the iPhone camera.



### **Jessie Parteno**

Jessie Parteno has a rare expertise which spans software development, habitat modeling, and biological studies. She has an extensive background in environmental conservation, data management, and GIS services. Jessie began her career as an analyst for USGS, then moved on to become a product engineer for ESRI. Her background also includes carbon development manager for Wildlife Works Carbon, and as a stewardship manager for the Pacific Forest Trust. Currently, Jessie works at AECOM as a GIS Manager, where she leads large-scale projects conducting habitat mapping, database management, and even field efforts.

Jessie has mastered many programs related to the field, including MaxEnt, Circuitscape, and ArcGIS. We are glad that Jessie will be able to show us the utility of ArcGIS Collector, an app designed for field data collection, both in the classroom and in the field.



### **Jose Miguel Lozano**

Jose Miguel Lozano received his Masters of Science at Universidad Europea in Madrid, Spain, and worked as the director of sales and marketing at a telecommunication company before taking over as the CEO. His extensive career in sales and marketing has made him director of business development at the energy division of Batex Holding, a real estate and retail expansion corporation. After moving to California, he became the head of business development for the US Iberia Group. Currently, Jose is the director of sales and marketing at AmigoCloud Inc., the first collaborative mapping platform which uses a cloud-based dashboard that helps collect and manage locational data.





### **Meredith Rodriguez**

Meredith is a wildlife biologist who specializes in bat ecology. She has experience working on a variety of bat projects throughout California, Canada, and the Caribbean. Meredith received her Masters of Science degree from the University of Western Ontario where she studied edge effects under the direction of Dr. Brock Fenton. She has worked extensively with acoustics and R, and has experience working on a wide range of field projects, from vegetation studies to avian monitoring. Meredith has taught workshops on acoustic analysis and has experience conducting bat assessments at natural gas, solar, wind, and mining facilities across the

western United States. She is currently working as an environmental consultant with Transcon Environmental in Berkeley, California.

### **Anne Hoff**

Anne Hoff grew up in Connecticut and earned a BA in Biology and an MS in Nursing before moving to the Bay Area. Always interested in birds, after a visit to Alaska in 1998, she began to focus on California birds and eventually branched out to the rest of the world. In 2013, she became a Master Birder through the Course offered by the California Academy of Science and Golden Gate Audubon (GGAS). Inspired by GGAS birding class instructors, Bob Lewis and Rusty Scalf, and SF City College professor Joe Morlan's Extension classes, after nine years in the birding mix, she began to teach Beginning Birdwatching classes for GGAS. In that capacity she has introduced hundreds of fledgling birders to the field, survived the transition from slideshow to PowerPoint, and promoted the use of eBird to new birders who can begin using it at the beginning of their birder careers instead of starting after many years of handwritten lists.