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## What is a grassroots bioblitz?

*You might be familiar with the National Park Service/National Geographic Bioblitzes, in which scientists, school kids, and others converge on a park for 24 hours to document biodiversity. A grassroots bioblitz is an effort to bring together a smaller group of people to*

*find, record, and share observations of plants and animals in one place, at one time. We use the app and website, iNaturalist, which provides, not only a place to record and share observations, but a community of naturalists, who help to identify finds. Grassroots bioblitzes are usually held in a park or open space for a few hours on one day. Everyone is encouraged to explore and discover biodiversity...and share what they find. Events can be small, 5-15 people, or larger, up to 100.*

*At a typical bioblitz, we make 1000+ observations, of over 200 species with 30-40 people over a few hours.*

***We are coordinating a series of bioblitzes up and down our coast June 1-12, 2016 and need your help.***

*Here are some tips for planning, organizing, and holding a bioblitz.*

## Ten Steps to Intertidal Bioblitzing

1. Pick your audience / pick a site
  - Capacity to organize a public event
  - Site accessibility

These two key decisions go hand-in-hand. Involving the public in your bioblitz is a great way to outreach about the importance of the MPAs and to engage people actively in the scientific process – and to let them experience firsthand the incredible biodiversity of our coast’s rocky intertidal. If you’re planning to hold a public event, pick a rocky intertidal site that is relatively easy to access (or make clear the physical requirements when publicizing the event) and has parking. Even better if there are facilities (but not required – again, just make it clear when publicizing). If you’d prefer to bioblitz just with your MPA Collaborative members or another smaller group (e.g., a college class), you likely have more leeway in site selection. Conversely, if you ONLY have rocky intertidal sites that are more difficult to access, it might be easiest to bring a small group of invited bioblitzers instead of opening the event to the public.

2. Wrap session location
  - Wi-fi! Good, strong, wi-fi!
  - Ideally within walking distance

A wrap session gets everyone who participated in the bioblitz to come together at the end of the blitz at one location to share and upload their observations, get help with

IDs, and to see the collective results of the bioblitz. Providing wi-fi allows people to upload without using their phone's data plan. We definitely recommend testing the wi-fi prior to the bioblitz, with as many devices at once as possible. It's also helpful if the location has a place you can project the iNaturalist bioblitz page – either a screen or a blank wall.

Ideally the wrap session would be in the same location as the bioblitz, like an interpretive center or event space. If your site does not have an indoor space with wi-fi, then try to find some place as close as possible. The farther people have to drive, the fewer will show up to the wrap. Having food at your wrap session is a great way to motivate people to go!

3. Find other potential partners / experienced volunteers
  - Friends groups / Local volunteer groups
  - Environmental education groups

Do any of the organizations represented in your MPA Collective have a volunteer base or members? Does your site have a local friends group? How about people who do MPA Watch, Beach Watch, or lead tidepool trips? Your local colleagues and friends are most likely the best equipped to lead groups into the tidepools responsibly and know the lay of the land. Other local groups with volunteers, like an Audubon society or an aquarium or natural history museum with docents? Not only can you find people to help you plan, you can get volunteers with some expertise!

4. Pick a date & time

The dates of June 1-12, 2016 have good low tides in the morning and correspond with World Oceans Day. You want to plan your bioblitz around the low tide. It's helpful to start the bioblitz as the tide is going out and then plan to end the bioblitz as the tide is coming back in. Account for about 30 minutes in the beginning to get people signed in, do introductions, and talk about the schedule and goals of the bioblitz. Give bioblitz participants 2-3 hours to explore the site and document species using iNaturalist. The wrap session usually lasts 1 - 1.5 hours, with a bit of travel time (if needed) between the bioblitz and wrap session.

Example schedule for a 10 am low tide:

- 7:30 - Participants start to arrive, have coffee/breakfast snacks
- 8:00 - Introductions, schedule, goals, things to look for, safety
- 8:30 - Start bioblitzing! You can send people out to explore on their own or have group leaders that take 5-10 participants out together to different areas of the intertidal
- 11:30 - Stop bioblitzing, send people to wrap session location
- 12:00 - Wrap session: let people upload observations, discuss interesting findings, help each other with IDs, view iNaturalist project page to see results of bioblitz
- 1:00 - Wrap session and bioblitz ends

When picking the specific day you'll bioblitz, keep in mind other events that might be happening in your area that may either compete with your bioblitz or could possibly be piggy-backed on and the bioblitz could be a part of a bigger event.

#### 5. Make an iNaturalist project page & an Eventbrite page

- Banner image, icon, a "place"
- Determine attendee capacity

You'll need to create a new project in iNaturalist. You want your project type to be "bioblitz." To set up a bioblitz project, you need a date and times and a place with a defined boundary in iNaturalist. All of the MPAs are in iNaturalist as places.

Add a description about your bioblitz to the project page: why you're having it, important information, what to bring, etc. Boilerplate language will be provided by the California Academy of Sciences, but be sure to add information specific to your site and event.

If you're holding a public event, having people sign up to attend makes it easier to plan. On the bioblitz project page, you can link to registration for an Eventbrite event, so it's good to have that set up ahead of time (though you can add it later). You can set registration limits on Eventbrite as well as have it make a waitlist. If your bioblitz is event is free, realize that not everyone who signs up will show up - we usually find we get 50-75% attendance. If your organization has a registration system you would like to use, just enter the URL on the iNaturalist page. So think about the total number of people you'd like to participate, keeping in mind the size and accessibility of the site as well as how many group leaders you think you can recruit. Great bioblitzes come in all shapes and sizes, with as few as five people and up to more than 100!

#### 6. Recruit team leaders & experts

- Team leaders know: how to model searching, tidepool etiquette, how to use iNaturalist, where to go, when to come back, remind people to sync
- Experts to help with IDs - in person or online

If your intertidal site is relatively small where you can see everyone, you could just let participants explore on their own. But for safety, to help volunteers best look for and document species, and to make sure you get maximum coverage of your site, you may want to break into led groups and send each group out to different areas.

Instead of grouping people by specific taxa to look for, we find it's best to group people by area: designate portions of the site for each group to bioblitz, where participants will be looking for and documenting everything they possibly can. It's often a good idea to also have a group that will be more kid-focused for families that show up with younger children: not traveling very far, staying close to shore and bathrooms, maybe some fun equipment (e.g., magnifying glasses) or activities (e.g., bioblitz bingo).

You can find leaders and experts from within your own organization, your partners for the bioblitz, or from others who know the area. Leaders do not have to be experts - the best leaders are ones who have some general tidepool knowledge, know the site, and

are willing to model how to search and to share their knowledge without it turning into a “led tidepool walk” experience. Leaders should also be comfortable using iNaturalist so they can help others in their group.

Experts can definitely be leaders if you feel they can provide the right experience for a group. We often group experts with leaders as “co-leaders” – so they don’t have to lead a group but can still be out documenting and sharing what they know. Calling upon your experts for their expertise is most helpful during the wrap session, so participants can get ID help and ask questions. You can also have experts who aren’t in the room, but who are on iNaturalist helping to ID observations from the bioblitz. Luckily with so many intertidal bioblitzes happening at once, we should have quite a team of people online – both experts as well as amateur naturalists – helping to ID our tidepool finds!

## 7. Outreach! Get the word out!

- Social media
- Local calendars

To find bioblitz participants, you need to promote the bioblitz. Use existing volunteer networks of your partners and other related local organizations. Social media from you and your partner organizations is a great way to find a younger, “tech-savvy” audience. Reach out to local media to see if they’ll promote the bioblitz ahead of time and potentially come out to cover it day-of. Local event calendars are always looking for items to add. The California Academy of Sciences will provide a press release as well where you can add your specific bioblitz info that can be sent to your local media.

## 8. Send out reminder emails

- Logistics
- Information about iNaturalist
- What to bring

A few days before the bioblitz, send an email to everyone who has registered. Remind them when and where to meet, and what the goals of the day are. Ask everyone to create an iNaturalist account and download it on their phone **before** coming to the bioblitz – and make an observation or two to familiarize themselves with the app. Also let them know that they can definitely share a phone with someone if they don’t have one, or can bring a digital camera and upload their observations afterward to the website. Remind people what supplies to bring: phone, water, shoes with good tread that can get wet, layers, etc. The California Academy of Sciences will provide an example reminder email to send out that you can customize with information specific to your bioblitz.

## 9. Bioblitz!

- Gear: signage, sign-in, food, projector, laptop, etc.
- Get participants going ASAP!
- Wrap session: fun & informative & engaging

The day before the bioblitz, it's good to gather all the gear you'll need both for the bioblitz and for the wrap session.

Day-of, make sure it's obvious to participants where they should be going/where to sign in. Generally try to start close to on-time, and limit your introductions so that participants can get out and start bioblitzing! You can spend time during the wrap session for more detailed information about your organizations. It also usually helps to have one person who's willing to stay at your sign-in location for the duration of the bioblitz, to help direct late-comers and talk with people leaving early - and remind them to sync their observations.

Beyond getting people to sync their observations, wrap sessions allow for sharing of observations ("who saw something cool or unexpected?"), helping people get IDs (this is a great time to point out people with expertise in certain areas), and thanking participants. Providing some snacks is always nice! You can project your iNaturalist bioblitz page and look at the "real-time stats" (it's a link on the project page that shows up once your bioblitz starts), which will constantly update with the total number of observations, the number of species, and the leaderboards: who has the most observations and who found the most species. It will also show photos of the most recently-added observations.

#### 10. Follow-up to participants

- Thank you
- Total finds / Interesting finds
- Help with IDs

A week or so after the bioblitz, send out a follow-up thank you email to participants. Highlight some interesting things that were found during the bioblitz, and be sure to share the total numbers of observations and species. Adding photos of organisms and of the bioblitz itself is always nice. Remind people that they should check back in with the iNaturalist project page to see if anyone has added IDs to their observations, and to help add IDs to observations.

The California Academy of Sciences will also provide some summary statistics and findings a few weeks after the bioblitz that you can pass on to your participants.

## Resources

### General

- [California Academy of Sciences Citizen Science website](#)
- [Nerds for Nature website](#)

### Getting Started with iNaturalist

- [iNaturalist Getting Started Guide](#)
- [iNaturalist on Vimeo](#) - good, brief, global impact overview
- [How to Use the iNaturalist App - YouTube](#)
- [iNaturalist: Creating an Account & Account Settings - YouTube](#)
- [McLaren bioblitz video](#)

### Bioblitz

- [iNaturalist Bioblitz Guide](#)
- [Crowdsourced BioBlitz Recipe Book](#)

Results from some grassroots bioblitzes:

- March 7, 2015: [Eastern Golden Gate Park Bioblitz](#)
- September 27, 2014: [Memorial Park Bioblitz](#)
- July 13, 2014: [Pillar Point Bioblitz](#)
- May 4, 2014: [Green Hairstreak Bioblitz](#)
- February 23, 2014: [Lake Merritt Bioblitz](#)

### Educators

- [iNaturalist Teachers' Guide](#)
- [Citizen Science Toolkit for Teachers](#)