

BioBlitz



ORGANIZATIONAL GUIDE

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This BioBlitz Organizational Guide was produced in direct response to phone conversations that I had with people from across the country asking “how do you do a BioBlitz?” Each year since 1997, I have been involved in organizing a different BioBlitz event. Each one was larger than the previous and each had organizational nightmares that had to be dealt with. This guide is the compilation of that experience.

For convenience in organizing your BioBlitz, this guide includes a checklist and a schedule. If you have any comments, please feel free to contact me.

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WHAT IS A BIOBLITZ?

The first step in conducting a BioBlitz is to determine why you want to do a BioBlitz. What are the objectives? The BioBlitz is a great tool for educating the public about the diverse array of species in an area. The BioBlitz will not give you a complete inventory of species; it's just a "snapshot" of what species occur in the area. If you want an inventory, there are more comprehensive techniques.

Designed as part contest, part festival, part educational event, part scientific endeavor, the Connecticut BioBlitz brings together scientists in a race against time to see how many species they can count in a 24-hour biological survey of a Connecticut park. The public is invited to observe the scientists' activities, to interact with them, and to participate in other activities that are presented by the Museum and a host of invited nature-oriented organizations.

The BioBlitz is designed to increase the public's awareness of the variety of life in their immediate neighborhood and the services these various species provide to improve the quality of their lives. We usually hear the word "biodiversity" in regard to rainforests with their vast number of species. Yet the diversity of life in our own backyards is phenomenal. We take for granted clean water, fertile soil, and air to breathe. Yet these are all the result of working ecosystems filled with species that perform these tasks. From our morning shower to our late night snack, we are supported by biodiversity every minute of the day. What better way to address the topic than to invite people to share in our 24-hours of discovery and to experience the vast array of species that

we can find in their neighborhood park in just one cycle of the day?

The BioBlitz is an excellent tool for exciting children about science. This event generates energy and enthusiasm among scientists and lay people alike. It is rare for biologists from many disciplines to have the opportunity to get together, share their passions with each other and the public, and work toward a single common goal. This event is designed to capitalize on that and to encourage interaction with scientists at the "base camp." The "base camp" is the hub of the BioBlitz. It is a centralized tent equipped with microscopes, computers, and other tools of the trade. This is where identifications take place, species are recorded, and the tally of species is recorded. Inside the tent, one parent enthusiastically commented about the event, "If I had attended an event like this when I was his age", pointing to her four-year-old son who was busily sorting moths in one of the entomologist's pans, "I probably would have become a scientist. I just never knew that anything like this existed."

The BioBlitz also generates a list of species found in the park, a first step in successful park management. The BioBlitz has the potential to identify species that should be monitored or controlled. It may also identify unique aspects of the park that might otherwise not have been known. This information along with recommendations from the scientists is supplied to the park and the city. Imagine the cost of hiring 168 experts to conduct a survey and make recommendations for park management!

CONNECTICUT STATE MUSEUM OF NATURAL HISTORY'S BIOBLITZ OVERVIEW

The CSMNH BioBlitz kicks-off on a Friday at 3 PM and ends precisely 24 hours later, at 3 PM the next day. Unlike some other BioBlitzes that gather specimens for 24 hours and then continue to count and identify species until they are done, the CSMNH BioBlitz stops counting at precisely 3 PM on Saturday, whether or not there are more species to be counted. There are three reasons for this: a precise beginning and ending point lends to the “race against time” aspect of the event, makes the event more impressionable to lay people as everything occurs in just 24 hours, and allows us to have a closing ceremony where we can announce the final tally.

The base camp is the “hub” of the BioBlitz. It is an area that has a building, pavilion, or tents where most activities take place. The base camp is equipped with microscopes, computers, a tally board, lights, and a large coffeepot. This is where identification of species takes place, data are recorded and species are tallied. It is a hive of activity throughout the 24-hours.

While there is scientific survey activity for the 24-hour period, the general public is invited to attend the event from 10 AM to 3 PM on Saturday. They are encouraged to interact with the scientists as they identify and count species. In addition, supplemental activities, such as demonstrations, relevant exhibits, and make-and-take projects are offered under public education tents near the base camp. These activities are held in close proximity to the base camp so visitors can see what the scientists are doing at all times. A stage and microphone are set up in the same vicinity, and periodically during the day announcements are made and interesting discoveries are communicated. In addition, a tally board is placed in a visible spot and the number of species found is updated throughout the event.

The closing ceremony starts between 2:30 PM and 2:45 PM. Dignitaries in attendance are given the opportunity to speak to the gathered public at this time. At 3 PM, the scientists are asked to stop counting and the interesting results of the BioBlitz are presented and the final tally announced.

HOW TO ORGANIZE A BIOBLITZ

There are several aspects to organizing a BioBlitz, from recruiting scientists to choosing a site to finding funding. The details for the Connecticut State Museum of Natural History's BioBlitz are outlined below.

RECRUITING SCIENTISTS

A key component of conducting a successful BioBlitz is to recruit as many scientists as possible. In addition, the greater diversity of expertise, the more species will be found. And, the more

invertebrate specialists recruited, the more species will be counted. This is because there are a limited number of vertebrates that will be found in a given area, but the number of invertebrates seems limitless. The more disciplines that are represented among the experts, the larger the tally.

Keep in mind when recruiting surveyors that you need “experts” to conduct the survey. The objective of the survey is to count as many species as possible in a

24-hour period. Because of this time constraint, the surveyors must be able to identify species correctly and as quickly as possible. For the most part, only invertebrates will be collected to aid in identification. Other species will be identified in situ. Complete confidence in the identifications that are being tallied is essential for a successful BioBlitz. If a surveyor says that he/she saw species x, you must trust that it is species x. For that reason, the Connecticut State Museum of Natural History relies on team leaders to assemble their survey teams.

➤ Team leaders – one or two people for each taxon should act as the team leader. That is, one or two botanists to head up the botany team, one herpetologist to head up the amphibian and reptile team, etc. These should be people who not only are experts in their field but also know other experts.

1) Team leader(s) gather together a team of experts to conduct the survey. The team leader determines who is or is not on the team. Quality control at this level is essential to maintaining confidence in species identifications.

2) Team leaders set the strategy for the team and determine who does what. For most teams this is not complicated (e.g., herps – determine who goes where and all members look for all species). For insects and other invertebrates, however, it becomes more complicated. Generally, collecting is done through the night and intensive identification begins in the

morning. Someone goes through the samples sorting to Class or Order, then a specialist for each group sorts to species. It should be clear that the objective is to determine how many species you have, NOT to put a name on each species. This is another reason why you want experts doing the survey. They will know what constitutes a species (in their area of expertise) even if they do not have a name for it at the moment.

3) Team leaders communicate with their teams on all aspects of the survey. Other communications about logistics (e.g., when to arrive, where to go, etc.) can be done by the BioBlitz organizer. The easiest way to impart this information is via emails.

➤ At the event, surveyors should check-in at base camp before heading out to survey. At that time they should sign-in, receive a map of the park with a tally sheet, be given any special instructions about food, sleeping arrangements, access to park, etc., and meet with the team leader.

CHOOSING A SITE

Choosing a site may seem simple; however, there are several things that should be kept in mind when making your decision.

➤ There should be an area that can serve as “base camp.” This site, at best, will have a building or pavilion out of which to work. At minimum, it should be a large area where a tent(s) can be erected for scientific and educational activities.

➤ The “base camp” should be accessible by the public and by the scientists themselves. The area should be large enough to

accommodate the number of people (surveyors and visitors) that you anticipate. The area should be near a parking lot or an area with ample parking. If possible, there should be separate parking for the scientists.

- The base camp should have access to an electrical supply. You will need electricity for microscopes, lights, a microphone, laptops, and most importantly, the coffeepot.
- If possible, the site should be diverse in habitats. The more types of habitats there are, the more species you will find.

EDUCATIONAL ACTIVITIES

The most effective educational activity that occurs at the BioBlitz is the interaction between the visitor and scientists. This should be encouraged because the passion that the scientists have for their study cannot be duplicated through activities. With that said, it can be enhanced by providing activities that help to explain what the scientists are doing, why they are doing it, and what biodiversity is and why it is relevant. To do this, you might want to invite other organizations, nature centers, and societies to help you provide activities. The number that you invite will vary depending on your own ability to provide these activities. A separate tent or tents should be erected near the base camp for these activities.

PUBLIC SUPPORT

The BioBlitz is a great tool for educating the public about biodiversity. In order to do this, then, you need to get the public to attend the event. We have been successful in getting attendance at the BioBlitz at little cost to the Museum by sending press releases for advance articles to the local media, and alerting

radio and television stations about the event. A press release must have:

- Name of organizing group
- Name of organizer's media contact person with phone number and email address
- Headline such as "BioBlitz in Keney Park June 1, 2000"
- First paragraph should include the date, time, place, event name, and a one-sentence explanation of what will happen at the BioBlitz, who the organizer is, admission fee or "free" if there is no charge, and a phone number that the public can call for more information.

The community can be alerted by sending postcards to residents in the local area. Flyers can be sent to schools in the region, and signs or billboards announcing the event can be placed in the vicinity of the park.

It is important to invite politicians to this event. Every opportunity should be taken to educate our elected officials about biodiversity and the environment, as they are the ones casting the final votes on issues that relate to these topics. In addition, if you are able to attract politicians to the event, you may also attract media attention.

EXPENSES AND FUNDING

The BioBlitz can be relatively inexpensive to run. There are, however, costs that will be incurred. The following is a list of possible expenses:

- Tent rentals: If you do not have a building or pavilion for the scientists to work under, you may have to rent a tent. Likewise, you may have to rent tents for activities.
- Tables and chairs: You will need an adequate number of tables and chairs for scientific and educational activities.

- Portable Toilets: Depending on the facilities at the park, you may have to provide portable toilets.
- Food for volunteers: Consider providing dinner on Friday night for surveyors, breakfast for all surveyors that stayed overnight or arrived early, lunch for surveyors and educators, and snacks/drinks throughout the 24 hours.
- Microphone and speaker rental: You will need these for making announcements throughout the event and for the closing ceremony.
- Permits: Some cities/parks require permits for putting up a tent or for hosting an event.
- Insurance: You should have at least \$1 millions of liability insurance.
- Police & Fire: You may be required to have police and/or fire coverage for the event.
- Garbage disposal and recycling: You may need to contract for this.
- Other expenses: T-shirts, educational materials, signs, maps, cups, napkins, First Aid kit, etc.

Of course, you may be able to get all of the items listed above as donations, which brings us to fundraising issues. We always try to involve the city in the event as a co-sponsor. The city may waive permit fees and provide insurance for you. The BioBlitz is a great community event and we have been successful in getting support from local organizations and community foundations.

AFTER THE BIOBLITZ

Following the event, we prepare and provide the list of species that were found in the 24-hour period to the park personnel. We also provide recommendations on how to improve or maintain the park. For example, in one of the parks we found an exceptionally pristine hillside with very few invasive plant species. Recommendations were made as to how to keep this hillside pristine. In another park, the butterfly count was low and recommendations were made as to how the habitat might be improved to attract them. We also provide information on any interesting or unusual species that we have found.

CHECKLIST OF BIOBLITZ NEEDS

- Tents: Depending on the amenities in the park, you may need tents for the scientists base camp and educational activities.
- Tables/chairs: You will need enough tables and chairs for scientists to do their identifying and recording. To determine the number of tables, plan on two microscopes per 8-foot table, and then add 6-8 more tables for other uses, including the coffeepot. You will also need tables for the organized educational activities. Two tables per organization are usually sufficient.
- Portable toilets: If the park does not have toilet facilities sufficient to handle the number of surveyors and visitors, you should provide portable toilets.
- Permits to hold event, if needed
- Insurance: At least \$1 million in liability insurance.
- Police/Fire Coverage: The park may require this.
- Garbage disposal and recycling: You will need to provide garbage and recycle containers if the park does not.
- Coffeepot: You will definitely need coffee throughout the event.

- Electricity: You will need enough amperage to run the microscopes, lights, microphone setup, laptop computers, some types of traps near base camp, and the coffeepot.
- Microscopes: The number of scopes you need is dependent on the number of people who will be using scopes to identify species. We ask scientists to bring their own scopes, if possible.
- Microphone/stage: You should have a microphone set up, preferably on a stage, to make periodic announcements throughout the event and for the closing ceremony.
- Extension cords/power strips: You will need enough extension cords and power strips to feed the microscopes (2-3 per extension cord). You should have a separate extension cord for the coffeepot.
- Laptop computers: It is easiest to use laptop computers to keep track of the species that you are finding, especially the vertebrates and plants. They can be entered into a spreadsheet and, if you have divided the survey area into zones, you can keep a record of the zones in which species are found.
- Tally Board: You will want some sort of board to keep track of the number of species as they are recorded. We generally post vertebrates and plants species on the tally board throughout the night and into the next day because it is easy to keep track of what you are posting as they are identified to species.
- Sleeping area for scientists: Surveyors may choose to stay overnight. There should be a designated area where they can set up tents. Keep the toilet facilities in mind when choosing the area, if possible.
- Food
 - Dinner
 - Breakfast
 - Lunch
 - Snacks/drinks: Should be available for the surveyors throughout the 24-hour event.
- Check-in table: Set-up a check-in table about an hour before the event begins. The purpose of having people sign-in is to record who is helping, to provide materials needed to conduct the survey, and to give any last minute instructions.
 - Sign-in: Have a sign-in sheet.
 - Map: Provide a map of the park that is divided into zones.
 - Datasheets: Provide datasheets for recording species and zones.
 - T-shirt: Provide BioBlitz T-shirt, if you choose.
 - Instructions: Last minute instructions may include informing people where the refreshments are and when meals will be available, any information on the park that they may not have, etc.
- Signs: You will need directional road signs to get surveyors and visitors to the base camp area. You will also need signs within base camp to guide people to the proper tents. You will need signs for parking, both visitor and surveyor. The number and type will be dependent on the park. And you will need signs for the tables in the educational activity's tent(s).
- Vendors: You may want to provide food for sale for the visitors to the park. The easiest solution is to recruit independent vendor trucks to provide food. Caution: first check whether the park will allow vendors.
- Press kits and a cell phone for media contact
- Educational Activities
- Supplies: duct tape, cups, napkins, etc.

SCHEDULE

1 year prior to event

- Choose site and date
- Designate a spokesperson from the organization
- Gain local support
- Begin to secure funding

9 months prior

- Send first notice of the BioBlitz to surveyors; include date & location
- Send press release to national/regional media announcing BioBlitz is coming
- Continue fundraising
- Continue garnering local support

6 months prior

- Meet with team leaders – provide information on park, etc.
- Meet with Mayor or Selectman to explain BioBlitz and garner support

3 months prior

- Arrange for rental tents, tables, chairs, and other equipment
- Arrange for electrical needs
- Arrange for parking needs
- Arrange for food vendors
- Take team leaders to park so that they can plan their strategy
- Send second notice to surveyors, telling them more specific information
- Contact nature-oriented organizations to invite to participate with activities
- Get in touch with significant contacts/science reporters from local media

6 weeks prior

- Send press releases to events editors
- Follow-up with important media

1 month prior

- Send invitations to legislators
- Start preparing educational activities and exhibits
- Order T-shirts
- Secure maps of park and divide into zones
- Keep surveyors informed of any new developments

2 weeks prior

- Place advertisement signs
- Meet with team leaders to make sure that they have what they need
- Inform surveyors of where and when to report and what to do when they get there

1 week prior

- Send Media alerts
- Prepare press kits to distribute at event
- Send (email) any last minute instructions to surveyors

1 day prior

- Take some Valium

Day of Event

- Enjoy the energy and excitement
- Follow up with press by phone relaying the results of the BioBlitz (for daily media)

1 week after

- Send thank you letters (emails) to all volunteers (surveyors and educators) and sponsors
- Do press release on the results for regional and weekly media

2 months after

- Send completed report (list of species and recommendations) to park