



CONTRIBUTIONS

Collaborations and Moving Past COVID-19: The Human Ecology and Applied Ecology Sections

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The Applied Ecology and Human Ecology sections of the Ecological Society of America (ESA) have collaborated for several years, given their overlapping and common interests in the human dimensions of ecology. Starting in 2008, the sections have worked together on combined activities at annual meetings, including field trips, BioBlitzes, collaborative workshops, and mixers (Fig. 1). While each section has its own mission and objectives concerning the integration of human dimensions into ecological scholarship, our combined efforts have led to greater participation among ESA members in selected cities. Going forward, our sections' visions will continue to elevate our collaborative relationship, which is grounded in integrating human dimensions into our activities and scholarship.

Human Ecology section

Human Ecology was first constituted within ESA in 1950 as the Committee for Human Ecology. One of the main roles of the Committee for Human Ecology was to provide advice from ESA to the United Nations on conservation strategies. By the end of the 1950s, Human Ecology was on the brink of being awarded section status, which would have made it one of ESA's first sections, although not as old as Applied Ecology. It is unclear why this formalization never went ahead at the time (for an historical account, see Dyball 2017). Although work of a human ecological nature continued within ESA, it was another 50 years until a Human Ecology section was inaugurated at ESA's 93rd annual conference in Milwaukee, Wisconsin, in 2008. The section was conceived of as a home for ecologists concerned with

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Fig. 1. Applied Ecology and Human Ecology section student travel award winners during the 2019 ESA annual meeting in New Orleans, Louisiana. Photo credit: Gillian Bowser.

the human dimension of ecological change, including justice and fairness issues. The founding bylaws read: “The objectives of the Section shall be to encourage cross-disciplinary research and publication in areas relating to the interface of humans and the environment and to explicitly encourage linkages between practicing scientists and researchers in the social sciences, arts and humanities” (draft bylaws for the Human Ecology section, passed in 2007).

Applied Ecology section

Applied Ecology is one of the oldest sections within ESA and is the second largest section in the society, with 659 members at the end of 2019. Section members focus on combining ecological research with human and society needs and encouraging the application of ecological principles to solutions for practical environmental problems. The Applied Ecology section specifically advocates for active and sustained relationships with and among those specialists who use ecological principles in the resolution of their problems, such as in public policy and administration, law, engineering, education, urban and regional planning, public health, political science, agriculture, and natural resources.

Collaborating across sections

Both the Applied Ecology and Human Ecology sections are concerned with the nature of the interactions linking humans, their cultures, and their ecosystems where those interactions are problematic (i.e., they cause unsustainable environmental harm, are unethical, or both). Both promote a biosensitive worldview, within which ecologically literate people can understand, respect, and work to enhance environmental processes and realities and, in so doing, enhance their health and well-being. In that sense, the sections share philosophies regarding sustainable environmental solutions for both people and the planet. Human Ecology's particular concern for justice and fairness sees these problem-solving challenges as inextricably linked to issues of diversity, equity, and inclusion. The Applied Ecology section includes concerns for ecosystem services, management of ecosystem services, and the associated organisms. Both embrace the co-production of knowledge with stakeholders or communities, including basic data gathering activities such as BioBlitzes and community participation in research design.

Past Applied Ecology and Human Ecology section combined activities

BioBlitzes within communities hosting ESA annual conferences

The two sections (with the Environmental Justice section) co-hosted BioBlitzes from 2010 to 2015, beginning at the ESA annual meeting in Pittsburgh, Pennsylvania. BioBlitzes are pre-arranged, day-long community events that typically partner with minority or disadvantaged groups. ESA conference attendees volunteer their time to help these community members gather and identify various organisms (typically plant and invertebrate species) on an urban site of the community's choosing. For example, the Brownfield BioBlitz in Pittsburgh was hosted in partnership with the Liberty Neighborhood, a predominately African American neighborhood that had created several vegetable gardens on abandoned lots. ESA members joined the Applied Ecology, Human Ecology, and Environmental Justice sections, and SEEDS students on a BioBlitz that included participation from the Carnegie Museum and other local institutions. The success of this joint effort led to three more BioBlitzes, each centered in a lower-income neighborhood within the host city of the ESA annual meeting, including Sacramento, California, Austin, Texas, and Baltimore, Maryland (Fig. 2). Starting with the BioBlitz in 2013, citizen science databases such as Project Noah (<https://www.projectnoah.org>) and iNaturalist (<https://www.inaturalist.org>) were utilized to create long-term records of the BioBlitz (Figs. 3, 4). Invertebrate and plant specimens collected during the Pittsburgh and Austin BioBlitzes were donated back to the community or partnering organization to provide an accessible record for community members of the species found. In Pittsburgh, each insect was carefully labeled and pinned by a six-year-old community member who hand-printed each label and scientific name!

The Mega Mixah

The Applied Ecology section has held multi-section social mixers for at least the last decade. Human Ecology section members were informally invited to join these events from the outset. The first effort, promoted as "Mega Mixah" with a long drawn out "h" at the end, was formally listed in the conference handbook for the ESA annual meeting in Minneapolis, Minnesota, in 2013 and included the Applied Ecology and Human Ecology, Environmental Justice, Urban Ecosystem Ecology, and Agroecology sections. The collegial atmosphere, forum for informal exchange of ideas, and networking opportunities



Fig. 2. Photos from BioBlitz events in Pittsburgh, Pennsylvania, Austin, Texas, and Sacramento, California. Photo credit: Gillian Bowser.

Add Observations to This Project

Event Stats

Totals	Most Observations	Most Species	Most Observed Species
<p>211 Observations »</p> <p>124 Species »</p> <p>12 People »</p>	<p>penelopegillette 44 observations</p> <p>schrstel 33 observations</p> <p>oalminas 32 observations</p> <p>tonycullen 28 observations</p> <p>jmichaelgonzalez 16 observations</p>	<p>penelopegillette 44 species</p> <p>schrstel 31 species</p> <p>oalminas 25 species</p> <p>tonycullen 24 species</p> <p>wolfgirlElizabeth 10 species</p>	<p>Western Fence Lizard 16 observations</p> <p>Mule Deer 5 observations</p> <p>Pipeline Swallowtail 4 observations</p> <p>Yellow Starthistle 4 observations</p> <p>Black-tailed Jackrabbit 3 observations</p>

Members 21 members

Export Observations
Atom / CSV

About

The Ecological Society of America is hosting the 2014 conference in Sacramento, CA.

This bioblitz is to collect information on the flora and fauna in River Bend Park located inside the American River Parkway.

Ecologist from across the country will be partaking and engaging others in the advancement of data collection along the American River Parkway.

mocko created this project on July 22, 2014

Fig. 3. Screenshot of iNaturalist database created by Applied Ecology and Human Ecology joint BioBlitzes. Photo credit: Gillian Bowser.
















proved popular and were thus expanded as the “Section Bash” in Sacramento, California, in 2014. The Mega Mixah was designed to encourage partnership across sections and to bring section members together in a fun, social event.

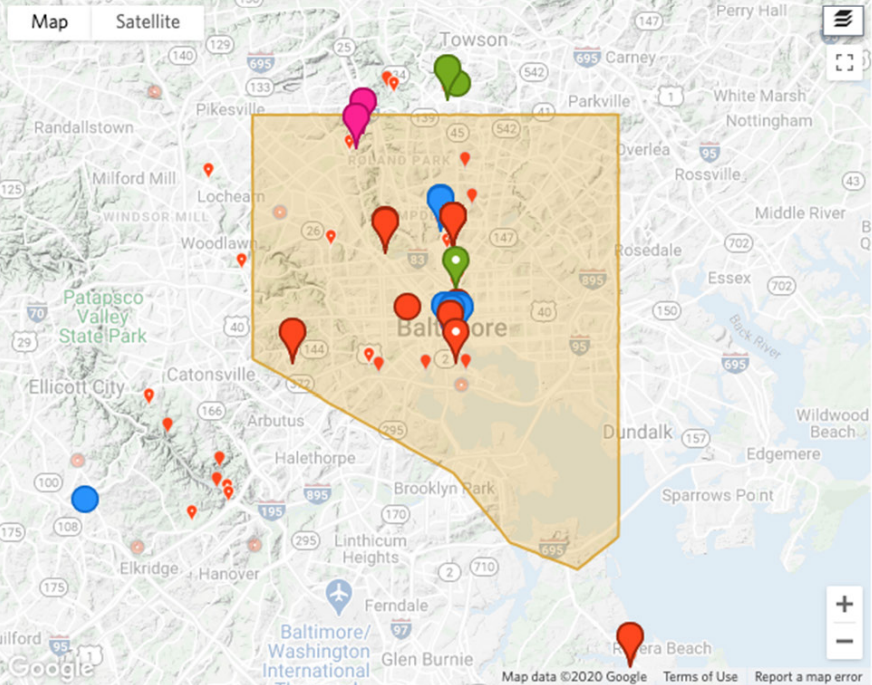
In 2015, the Baltimore Centennial Conference was the largest Mega Mixah held to date. Applied Ecology and Human Ecology banded together to host one big mixer that embraced multiple sections

 Baltimore Ecosystem Study LTER


[Add Observations to This Project](#)

Stats

Totals	Most Observations	Most Species	Most Observed Species
<p>134 Observations »</p> <p>102 Species »</p> <p>21 People »</p>	<p> gwsn-peru 30 observations</p> <p> elipousson 20 observations</p> <p> apolex 19 observations</p> <p> cdbrinker 12 observations</p> <p> aclaborn 10 observations</p>	<p> elipousson 18 species</p> <p> apolex 18 species</p> <p> gwsn-peru 12 species</p> <p> cdbrinker 8 species</p> <p> aedrahos 7 species</p>	<p> Mallard 3 observations</p> <p> Common Box Turtle 3 observations</p> <p> Common Yellowthroat 2 observations</p> <p> Monarch 2 observations</p> <p> Eastern Amberwing 2 observations</p>



Members 70 members



[View All Members »](#)

Export Observations
[Atom / CSV](#)

Usage stats

About

The goal of this project is to engage researchers and non-researchers alike in assembling a comprehensive understanding of the biodiversity in the Baltimore region.

cmswan created this project on February 02, 2013

Is this inappropriate, spam, or offensive? [Add a Flag](#)

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Fig. 4. Screenshot of the BioBlitz results jointly created with the Baltimore LTER project. Data were included into part of the long-term species database for the Baltimore project. Photo credit: Gillian Bowser.

including Environmental Justice, Early Career, Education, Urban Ecology, and Traditional Ecological Knowledge. The event featured section leaders asking short quiz questions for small prizes. These large events were expensive, not least because they were catered by the conference centers, and the funding format was to split the bill from ESA pro rata to the membership of participating sections. This allowed larger sections, such as Applied Ecology, to cross-subsidize smaller sections, such as Human Ecology and Environmental Justice. Later, the model allowed the participation of new sections, such as Inclusive

Ecology and Black Ecologists, to attend even without sufficient funding to contribute. The Mega Mixah tradition continued up to and including Portland, Oregon, in 2017. Here, an unfortunate space allocation onto a long narrow balcony precluded mingling and caused some sections to question its value. For New Orleans, Louisiana, in 2018 and Louisville, Kentucky, in 2019, the Applied and Human Ecology sections held off-site social gatherings (although Inclusive Ecology joined in 2019, as it had selected the same off-site venue). The personal connections, friendships, and serendipitous exchanges of ideas that occur in social spaces were some of the great achievements of the Mega Mixah, and the tradition was revived in 2020. Even though COVID-19 forced the Mega Mixah to become an online social session, it was still well received with more than 100 members participating.

Workshops, Inspire, and other activities

Joint Inspire sessions between the Applied and Human Ecology sections have occurred since Minneapolis, Minnesota, in 2013 and continued through 2020. The Inspire format is a rapid-fire presentation, comprising 20 slides of largely visual material on 15-second auto-advance. The sessions are quick and lively with six speakers sharing a lot of information in a short period of time. The sections have used them to provide updates on section activities, introduce award winners, and announce officer vacancies. The New Orleans, Louisiana, 2018 Inspire session, “Expanding Ecology: Your ESA sections and chapters focused on diversity, equity, and inclusion,” gave rise to the Human Dimensions Collaborative workshop in Louisville, Kentucky, in 2019. A second Inspire session co-sponsored with the Early Career section produced a published series of short articles in *Frontiers of Ecology and Evolution*. Such collaborations resulting in scholarship on human dimensions in ecology are envisioned products for future virtual and hybrid meetings (see also *Expanding ecology: Your ESA sections and chapters focus ed on diversity, equity, and inclusion*).

The Human Dimensions Collaborative

The Human Dimensions Collaborative workshop in 2018 was a joint session with the Union of Concerned Scientists that brought together the usual participant sections: Applied Ecology, Human Ecology, Policy, Environmental Justice, Communication and Engagement, Traditional Ecological Knowledge, Inclusive Ecology, Agroecology, and Urban Ecology. At the close of the 2018 New Orleans, Louisiana, conference, a group of section members discussed the prospect of semi-formalizing the various interactions among participating sections to augment their primary purpose. A Long-Range Planning Grant, applied for in the name of the Human Ecology section, was submitted to initiate that collaboration and seek ESA funds to host a 2019 pre-conference workshop in Louisville, Kentucky. The proposal was written specifically to bring together several ESA sections oriented around the human dimensions of environmental problems and the unjust distribution of their burdens. The grant resulted in a day-long workshop where section delegates participated in a systems-based collaborative visioning processes to see what, if any, common core values and goals they had that they would do well to work on together (Fig. 5).

The workshop outcome found agreement that there was great potential for the work of the Human Dimensions Collaborative to inform interdisciplinary research questions, cultivate knowledge-to-practice exchange through professional projects, develop new forms of communications bridges leveraging contemporary technology, foster new funding opportunities, and/or build cross-sector bridges to support



Fig. 5. The Human Dimensions Collaborative's Long-Range Planning Grant identified common values and goals. Photo credit: K. Gentner for Human Ecology section.

diverse career development opportunities for both early and later career scientists (Fig. 5). Specific outcomes, other than reinstating the Mega Mixah, were to continue with jointly organized paper sessions and Inspire sessions and to propose that ESA commits to work with local communities and leave a legacy of improved environmental management in its annual meeting program. The plan was to implement a demonstration at the Salt Lake City, UT, conference in 2020 and then to make activities become regular sessions at the annual meetings starting with Long Beach, California, in 2021 (Fig. 6).

Going forward: Human Ecology and Applied Ecology activities in a post-COVID-19 world

Looking forward, future plans for joint activities between the Human Ecology and Applied Ecology sections are to propose joint multi-section organized oral sessions. Topics that these sessions might explore include our new virtual realities and how community connections can be developed and maintained as part of the Applied Ecology and Human Ecology section activities. Topics that can be jointly pooled across sections could help create multi-input presentations on challenges, such as determining the vital connections in ecology from a human dimensions perspective; engaging with communities and leaving a legacy; determining the challenges and opportunities of advising non-tokenistic inclusion; prospecting online access and connection for open democratic access to knowledge and research globally; and networking and mentoring beyond knowledge silos.



Fig. 6. Human Collaborative Chart showing its focus variables to build a framework for progress moving forward. Photo credit: K. Gentner for Human Ecology section.

At the time of this writing, COVID-19 concerns continue to grow, and the future of large face-to-face gatherings is uncertain. However, the need for dialogue on the human dimensions within ecology could not be more urgent. The Human Ecology and Applied Ecology sections each approach issues, such as sustainability or climate change, through different lenses, but our long-term partnership allows section members to benefit through joint activities and creative, collaborative platforms. Given the uncertainty of large meetings in the near term, key visions were outlined as a way forward into an uncertain future.

1. *Collaboration with SEEDS and other sections and chapters.* The Applied Ecology and Human Ecology sections hope to engage with and recruit students into our sections at future meetings. Joint events (such as BioBlitzes) can help recruit, train, and retain students within ecology while also providing them with a human dimensions experience during the conference.
2. *Engagement with local communities during meetings.* Applied Ecology hopes it can re-engage the host community of each annual meeting of ESA in BioBlitzes and other related activities in partnership with the Human Ecology section, SEEDS, the Environmental Justice section, and other human dimension sections.
3. *Citizen Science and Ecological Learning.* Applied Ecology is tightly integrated with expanding technological tools, multidisciplinary projects, and various audiences. As a result, this section

intends to engage more of ESA in conversations, projects, and opportunities surrounding citizen science and ecological learning.

4. *Workshops, Inspires, and other visions*: Combining oral, Inspire, and other sessions with the realities of a post-COVID-19 world would lead to creative presentations that may include citizen science databases in real time, which would connect virtual and in-person activities through hybrid spaces. For example, a future workshop, building on the 2019 workshop in Louisville, Kentucky, would include topics such as “Building the Future Together: Extending ecology’s human dimensions.” The recognized imperative to embrace inclusion and diversity extends not only to including professional ecologists from different backgrounds, but also to building bridges between ecologists and the diverse communities with whom they must partner to develop relevant solutions. Designing future collaborative workshops will help ESA in its commitment to benefit broader society. Activities that are intended to bring the scientists to the community and meet them, quite literally, on their own ground are a critical way to move forward with incorporating human dimensions into ESA’s professional discourse. Not without potential for contention, these activities aligned with the Human Dimension Collaborative’s commitment to foster genuine and meaningful community engagement.

Collaborating and moving past COVID-19 will require ESA to rethink activities associated with the annual conference and how sections serve their membership. Hands-on activities that include field trips to communities may be less popular, especially as issues of personal health and well-being during a pandemic will outweigh any membership benefits of a field activity. Such decisions will be difficult as at the time of this writing, vaccines are just appearing, and the pandemic continues to restrict public gatherings. What a future conference will look like post-COVID-19 is hard to say. The future vision of sections such as the Applied Ecology and Human Ecology needs to include how to incorporate human dimensions into ecological research, scholarship, and community while operating in virtual spaces.

<https://www.esa.org/applied/>
<https://www.esa.org/human-ecology/>
Twitter @HumanEcology

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