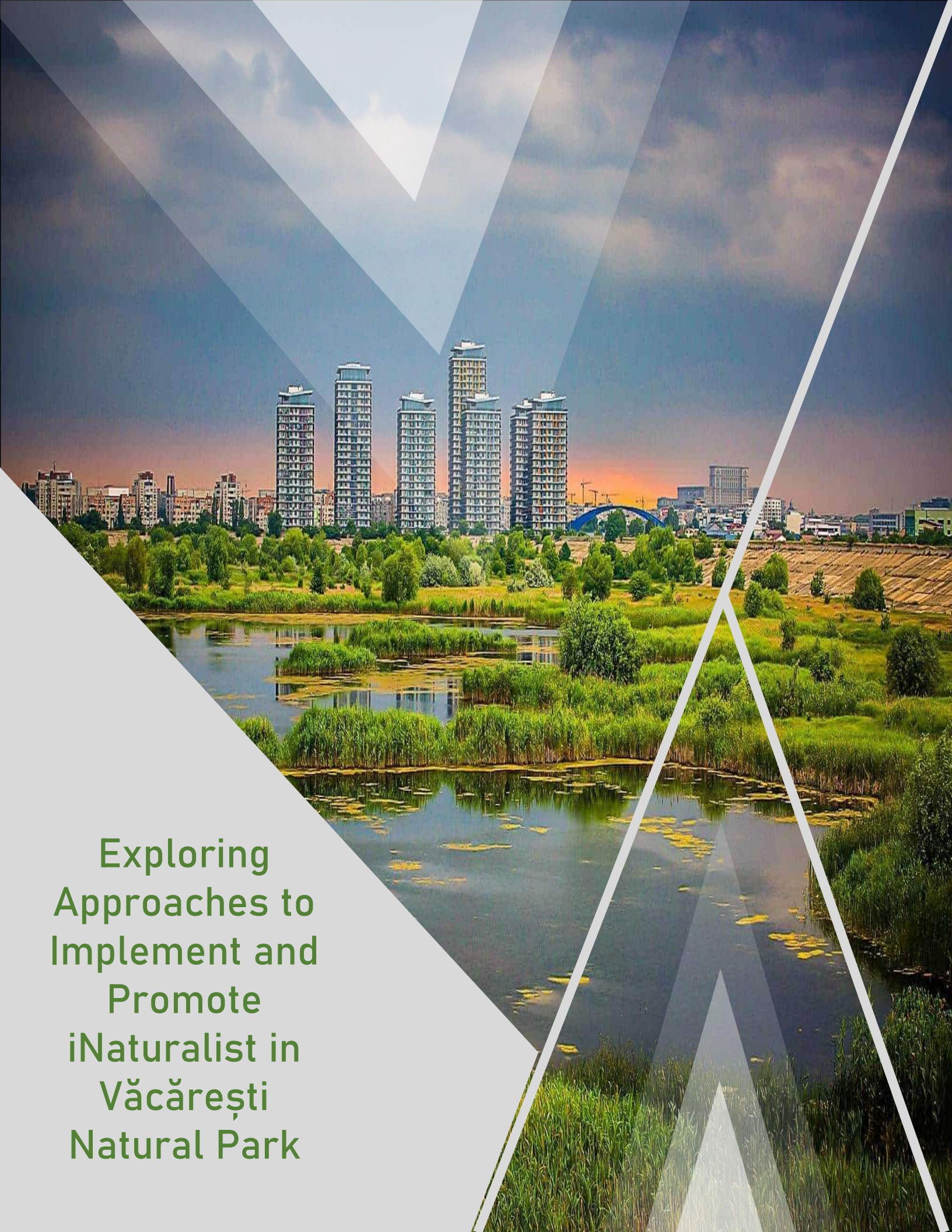

Exploring Approaches to Implement and Promote iNaturalist in Văcărești Natural Park

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An Interactive Qualifying Project
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Abstract

In collaboration with the Văcărești Nature Park Association (VNPA) located in Bucharest, Romania, this project evaluated options for improving the experience when using citizen science digitials tools for Văcărești Nature Park's by exploring approaches to implement and promote iNaturalist at Văcărești Natural Park. The team completed VNPA staff and park visitor interviews, created and sent out an online survey to park visitors, and completed comparative analysis of past IQP projects and a case study of VNP. Ultimately, the team provided recommendations on engaging visitors of the park with iNaturalist while maintaining a balance between community engagement and biodiversity.

Executive Summary

Motivation and Background

Văcărești Natural Park (VNP), located 5 kilometers from the capital's center, is a biodiverse urban wetland that grew from abandonment (Parcul natural Văcărești, n.d.).

Figure E.1: View of Văcărești Natural Park (Parcul Natural Văcărești, n.d.)

Urban communities rely on in-person engagement, but the COVID-19 pandemic forced a shift towards more digital engagement. Though an increase in online communities draws people away from parks, researchers have found that the combination of both in-person events and digital tools have increased engagement by making events more accessible, diverse, and cheap (McKinley et al. 2021).

Citizen science initiatives can get community members to interact with parks; citizen science volunteers act as "field assistants in scientific studies," (Cohn, 2008, p. 193) collecting data in individuals or groups, which leads to more open science. iNaturalist, a citizen science platform hosted by the National Geographic Society and the California Academy of Sciences (Mesaglio and Callaghan, 2021, p. 290), is used for citizens to make observations in nature for a worldwide database. Users can make standalone observations or contribute to collaborative projects with other users. Through this data, ecological patterns of species migration and habitation for urban parks and natural areas alike can be understood effortlessly on a global scale.

Methods/Objectives

The goal of this project was to advance the awareness of urban biodiversity throughout Bucharest with community engagement by exploring and recommending approaches to promote iNaturalist at VNP. To accomplish this goal, the team devised the following four objectives:

1. To examine the community's perspective of and current level of engagement with VNP.
2. To determine the level of interest visitors and volunteers have in using iNaturalist while in VNP.
3. To establish what makes a successful iNaturalist project.
4. To provide a strategy for Văcărești Natural Park Association (VNPA) to engage the community with urban biodiversity through the implementation of iNaturalist.

To examine the community's perspective on the park, the team surveyed 80 community members in Bucharest and conducted seven interviews (three parkgoers and four members of the VNPA staff) about their experiences in the park. Survey questions focused on different aspects of the park such as volunteering opportunities, what they use the park for, and things they would like to see changed. The survey also included questions about app use in the park and whether visitors enjoy taking pictures of flora and fauna, which helped the team determine the level of interest that parkgoers have in using iNaturalist.

A project is an iNaturalist app feature that allows for group observations. Ultimately, the team found that projects with over 5000 observations from at least 100

different species are successful. The projects that the team analyzed included *The Vermont Center for Eco Studies* in the USA, *The Elmer W. Oliver Nature Park* in the USA, *Where the Wild Things Are* in the USA, *BC Parks* in Canada, and both S*idewalk Botany* and *Pollinator Association* which take place worldwide.

To get the staff and a few close volunteers more familiar with iNaturalist, the team hosted a small-scale pilot workshop on April 12th, 2023, that consisted of participants coming to VNP to set up an iNaturalist account and begin uploading observations of the species they saw in the park.

Findings

Voices from the Ground: Perspectives on VNP

Visitors have a positive perspective of the park, rating their level of enjoyment of it an 8 out of 10; parkgoers often enjoy activities such as walking, nature observation, and getting away from the city noise. The team identified a concern over lack of security in the park. Although, visitors with a more intimate relationship with the park and the community trusted the safety level and often felt comfortable enough to bring children to the park.

The Importance of Community Engagement

Survey respondents expressed that they were slightly interested in community activities (7 out of 10), which included both VNPA events and volunteering opportunities. Although the community shows interest in engaging with the park, there is an issue of keeping people engaged and getting new people to the park. One way to tackle this problem is to appeal to a younger audience; the VNPA communications officer, Victor Marin, expressed that once children start coming to the park, they will encourage their parents to come as well, leading to a trickle-down effect.

Figure E.2: Volunteers at Văcărești Natural Park (Parcul Natural Văcărești, 2023.)

Visitor Engagement Through Photography Use

The team found that 75% of parkgoers take pictures of flora and fauna and have an interest in identifying the species in the photograph. This is the audience that the team recommends the VNPA promote the use of iNaturalist to since they are already taking pictures; they can easily upload the pictures they have already captured to the application.

App Use in the Park

Data from the visitor survey shows that there is an even split on the use of mobile apps in VNP. Regardless of whether visitors currently use apps in the park, about half of survey respondents were somewhat interested in attending an iNaturalist workshop. This means that the VNPA can successfully promote a workshop to all parkgoers.

VNPA Staff Perspectives on App Use

Half of staff members felt the use of citizen science apps in the park would immerse visitors in nature more, others were concerned that parkgoers might spend more time looking at their phones than paying

attention to the park. Mr. Bărbulescu had a more neutral view on the use of technology in the park, acknowledging the potential for "synergy between the need for going in the park and keeping your phone in your pocket for at least one hour" (D. Bărbulescu, Personal Communication, March 29, 2023). The team found during the pilot iNaturalist workshop that the participants were not on their phones the entire time, even though the event was centered around iNaturalist use, and were still able to pay attention to the nature around them; this led the team to agree with Mr. Bărbulescu.

Creating a Successful iNaturalist Project

The team found that a successful iNaturalist project consisted of 5000 or more observations of at least 100 species. The team found, through a comparative analysis of successful and unsuccessful projects, that there were several features successful projects use that helped them to be successful, and these features are outlined below.

Project Journal/About Feature

The journal feature in iNaturalist allows project creators to update users on key findings from the project and to advertise project related events. Successful project creators have also used this feature to share their motivations for starting their iNaturalist project, to provide example observations to guide users, and to congratulate users on their best observations and findings from the project so far.

Project Leaderboard Feature

The 'Leaderboard' feature is another helpful tool in creating successful iNaturalist projects. The 'Leaderboard' is a table that showcases users with the most observations and species recorded, encouraging users to collect more data to compete for a higher ranking.

Project Specific Theme/Location Feature

Successful projects also utilized the specific 'Theme/Location' feature. This feature allows users to centralize one specific theme, grouping observations together for analysis. Themes can be presented as fun challenges for users such as the 'Sidewalk Botanist Scavenger Hunt,' which allowed users to post flora and fauna observed on sidewalks.

Recommendations

The VNPA should host iNaturalist events and they should model their iNaturalist projects after successful ones such as the *Vermont Center for Eco Studies* and the *Elmer W. Oliver Nature Park* projects. They both host a large database of plant and animal species to increase conservation efforts in Vermont and nearby areas. This is a similar goal of our collaborator, Dan Bărbulescu, who wants to generate a large database of the biodiversity in VNP.

The VNPA should add a direct link from their website to the iNaturalist project. The VNPA should update the 'Journal' section weekly in the iNaturalist project by making entries about the users' contributions to projects and any key findings. Lastly, the VNPA should advertise. iNaturalist events through the 'Journal' feature so that they can advertise use of the park to a larger user base.

Conclusions

Based on the results of this project, the team concluded that initiating citizen science projects, such as iNaturalist, significantly increases the level of community engagement and overall interaction in parks. The team also concluded that the overall current perspective of the park is predominantly positive, with some exceptions due to the concerns about the lack of security presence.

Visitors expressed a desire to be more actively engaged with the park but struggled to identify the appropriate opportunities to do so. Additionally, the team discovered a divide regarding the promotion of technology use in the park; however, iNaturalist has the potential to increase the number of people in the park and help build upon a global database.

A unified effort to preserve VNP's natural and cultural heritage by engaging the community with the park through iNaturalist can yield significant benefits for community members and the ecosystem alike. In the future, the VNPA hopes to broaden to other areas throughout Romania and continue conserving biodiversity in an ever-advancing country.

Figure E.3: Văcărești Natural Park at sunset (Parcul Natural Văcărești, n.d.)

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1.0 Introduction

For the first time in human history, the urban population exceeds the rural population causing an increase in roads, highways, and building construction and displacing green spaces. Urbanization is linked to an increase in urban green space degradation and fragmentation, causing green spaces to decrease in many regions of the world (Liu et al., 2017). A multi-city study across Europe found that people travel surprisingly high distances (1.4-1.9 km) to their most frequently used urban green spaces, in contrast to the few hundred meters set by policy targets (Schindler et al., 2022). Protecting these areas not only creates social, environmental, and economic benefits, but also improves the mental and physical health of community members (Liu et al. 2017).

Urbanization is highly relevant in Bucharest, Romania where a lack of organized urban planning has diminished green spaces (Ianoș et al., 2016). Văcărești Natural Park (VNP), is an urban wetlands park located in Bucharest. The Văcărești Natural Park Association (VNPA) was created to "promote and preserve the largest green area in the center of the capital city" (Parcul Natural Vacaresti, 2023). Previously they had resident volunteers who planted trees, cleared trails, and cleaned the park. However, volunteer numbers have steadily declined due to the Covid-19 pandemic, leading to difficulties getting people engaged in the park (D. Bărbulescu, Personal Communication, February 2023).

VNPA is concerned about lower levels of community engagement within the park and is hoping to spark more engagement through citizen science initiatives such as iNaturalist, an interactive citizen science tool that collects data on ecosystems. This tool would allow VNPA to assess changes in biodiversity in the park, bring the community together in a beautiful, diverse, natural environment, and increase park visitors' awareness and appreciation of urban biodiversity.

After conducting extensive research, the team was able to provide VNPA with a plan of action for promoting and using iNaturalist through community events, partnerships with local schools, and workshops park visitors. Additionally, the team provided a tutorial video on the use of iNaturalist to be posted on the VNPA website and Facebook page so that new users can more easily set up an account and start using the app.

In the literature review, the team discusses the origins of Văcărești Natural Park, the effects of urbanization on green spaces, using community engagement and volunteer efforts to aid parks, the benefits of using citizen science, and the usefulness of iNaturalist as a citizen science tool. Following the literature review, the team details the objectives that guided this project, along with the methods used to complete them. Lastly, the team provided their findings from their research; the team found that hosting events targeted towards children as well as a composition of the analysis and a set of recommendations for future events with iNaturalist.

2.0 Emergence of Văcărești Natural Park

Throughout the 1970s and 1980s, Romania's communist ruler, Nicolae Ceaușescu, significantly industrialized the country (Constantin, D., & Goschin). He confiscated private land and aggressively developed urban neighborhoods with soviet-style apartment towers (Ioja, Patroescu). The construction of Văcărești Lake began in 1988 when the communist regime expropriated landowners' houses in the Văcărești borough to begin building a reservoir; the Dâmboviţa River filled the basin, but the government eventually abandoned the project area (ISTORIC – Parcul Natural Văcărești, n.d.). In the absence of human intervention, biodiversity

flourished in the Văcărești area, located 5 kilometers from the capital's center, covering 452 acres. The rich biodiversity that emerged out of the failed Văcărești Lake project drew the attention of National Geographic, which published "The Delta Among the Blocks" in the magazine's May issue in 2012 (Parcul natural Văcărești, n.d). Dan Bărbulescu then founded the Văcărești Natural Park Association (VNPA) with a group of environmental activists and experts to advocate for the protection of the Văcărești area, and in 2016, the Romanian government established the Văcărești Natural Park (VNP).

2.1 Effects of Urbanization

As urbanization continues to spread throughout the world, the need for green spaces and natural protected areas within cities becomes increasingly important. Urban green spaces provide numerous benefits to both residents of a city and the environment by preserving biodiversity, reducing urban sprawl, maintaining ecological connections within urban areas, and enhancing the overall livability of cities (O'Reilly, 2019). However, creating and maintaining urban green spaces can be challenging if there is a lack of governmental control and community assistance (Brueste et al., 2023). Despite the challenge presented by a lack of control and assistance, it is crucial that cities prioritize the creation and maintenance of urban green spaces, which in turn can serve as both a green space for humans and wildlife.

2.1.1 Benefits of Green Spaces

Green spaces play an essential role in protecting the environment and “sustainability of cities through beneficial ecosystem services including carbon capture, reduction of air pollution, aquifer recharging, and climate regulation” (Ayala-Azcárraga et al., 2019, 1). They also provide habitats for wildlife, help to preserve natural resources, and promote biodiversity, ultimately making the city a healthier place to live. Urban nature parks, which contain green spaces but include a more biodiverse ecosystem, have a significant positive impact on the economy of a city; businesses and residents are attracted to the area, and in turn lead to overall increased economic growth. Given that “globally, 40-60% of all tourists are nature tourists,” (The International Ecotourism Society, 2000), nature parks aid in the growth of tourism-related businesses such as hotels, restaurants, and retail shops. Nature parks also play an essential role in their ability to improve the physical health of nearby residents; the presence of a park within 500 meters of homes encouraged physical activity, which has been shown to “restore visitors' moods and energy levels and brought mental health benefits such as relaxation and self-perceived confidence” (Liu et al. 2017). Urban green spaces and nature parks are a fundamental part of any society, providing a wide range of benefits for both individuals and the community.

In post-communist countries, parks have played a vital role in the transition from a state-controlled economy to one which is market driven. Kampinos National Park, located in central Poland and established during the communist era, is home to a wide variety of plant and animal species, allowing the park to flourish while also emphasizing conservation and sustainable developments. Not only does the park serve as an area to preserve biodiversity, but it is also known for its wide range of recreational opportunities. The park is popular among hikers, cyclists, and even horseback riders, all while maintaining a well-developed network of trails and paths (Piniewski et al., 2012). Kampinos Park illustrates how urban nature parks can be successful in post-communist areas by revitalizing underutilized spaces, thus promoting social inclusion, protecting biodiversity, and encouraging community engagement.

2.2 Community Engagement in Parks

People use urban nature spaces for individual recreational activities such as biking, running, or walking, as well as for the appeal of being in nature, the benefits of increased mental and physical wellbeing, and "escaping noise and pollution" of cities (Wasilewski et al. 2019). Some also use the park for more community-oriented events, such as volunteering, educational activities, or social gatherings *(Events in London's … 2021).* The versatility of urban nature parks can be incredibly important in building a support system of regular patrons from which comes the possibility of a volunteer community. Community engagement – the bringing together of people who live close in proximity, share common interests, or face similar challenges to collaborate towards a common goal – encourages the development of community networks and provides opportunities to forge deeper personal connections among visitors (Principles of Community..., 1997). Through such efforts, communities can establish trust and communication, laying the foundation for successful projects and long-term collaborations (Principles of Community..., 1997).

2.2.1 Promoting Community Engagement Through Volunteering

Volunteering is an incredibly beneficial type of community engagement, often called "the glue that holds a community together" *(Community Engagement... n.d.*, p. 1); it harnesses the community's emotional investment, which can be used in aid of parks. Parks often have volunteer programs built into their management structure to allow for a more integrated volunteer experience, where volunteers work alongside paid workers to complete tasks set by the park. For example, in the United States' Volunteer-in-Park program, there is a volunteer base nearly 14-times the number of paid employees (Kirkwood 2019). Volunteers perform administrative and park-related tasks for free allowing parks to use funds for other park needs (Kirkwood 2019; Bremer & Graeff 2006). Volunteerism in parks is strongest when volunteers are already park community members because "volunteers feel more motivated to participate in a program if they feel a connection to the … area," an idea called place attachment (Fischer & Wentz 2021). Place attachment is often associated with a high level of volunteerism because community members "feel at home" (Petrova et al. 2011, p. 1) in the park they volunteer with, and that influences their perspective on the park.

Volunteerism stems from an increase in community engagement and can also directly encourage more community engagement. The projects that volunteers engage in directly impact the surrounding community by allowing for a higher level of interaction with parks. Volunteer projects that offer opportunities for underrepresented groups to engage with parks bolster community engagement. For example, in the Victorian Park system in Australia, volunteer projects allow for increased engagement from underrepresented communities in parks such as persons with disabilities, older or younger members, and culturally diverse members (*Community engagement and volunteerism* n.d.). Rather than just bringing people to the parks, volunteerism can make it easier for community members to interact with the park.

2.2.2 Increasing Engagement through Digital Tools

Urban communities rely on in-person engagement, but the COVID-19 pandemic forced a shift towards more digital engagement. Though an increase in online communities drawing people away from parks posed a concern for urban parks, researchers have found that the

combination of both in-person events and digital tools have increased engagement by making events more accessible, diverse, and cheap (McKinley et al. 2021). The combination of in-person and online interactions, known as "hybrid community engagement," can bring a community together in "[…] a constant back and forth between online and face-to-face interactions," resulting in an increase in engagement both in the digital world, but more importantly, within the community (Mosconi et al. 2017, para. 10).

2.3 Benefits of Incorporating Citizen Scientists in Communities

Citizen science initiatives can be a great way to get community members to interact with parks. Citizen science volunteers act as "field assistants in scientific studies," (Cohn, 2008, p. 193) collecting data as individuals or groups, which leads to more open science. As researchers find effective ways to communicate results of citizen science projects to non-participants, citizen science initiatives can spark more interest in the community, therefore getting more people involved in such projects.

Citizen science projects are more commonly used in local communities, however, "[r]ecent studies show that citizen science offers great potential to address data gaps for global initiatives such as the United Nations (UN) Sustainable Development Goals (SDGs)" (Wehn et al., 2021, p. 1). Using citizen science for SDGs provides many benefits, including but not limited to gathering data from remote locations, more abundant data, and data that gets frequently updated (Fritz et al., 2019).

Due to the idea of 'power in numbers,' scientists have the potential to leverage citizen scientists to collect more data than they could individually, leading to greater efficiency. For example, the Big Bumblebee Discovery Project, a citizen science project used to identify how often different species of bumblebees visited lavender plants, required only five minutes for participants to observe the plants and was able to recruit 400 schools to complete its data collection (Roy et al., 2016). This made it easier for scientists to notice trends because "[b]y engaging tens, thousands, and even millions of participants, citizen science can offer both human and statistical power" ("Citizen Science" 2018, p. 1). In contrast, "[t]he longest standing citizen science project in the United States is the Cooperative Observer Program operated by the National Weather Service (NWS) of the National Oceanic and Atmospheric Administration" which has been using volunteers to document weather since its launch in 1890 (Eisen & Eisen, 2020, p. 1).

Society benefits from citizen science initiatives because citizen scientists can inform policy makers and contribute to the changes that they want to see in their community. One study, focused on the use of storytelling as an effective means to communicate the impacts of citizen science to policy makers, found that the telling of real-life stories and examples positively impacted policy makers' decisions by leaving them better informed (Wehn et al., 2021). Through these positive impacts on policy makers, citizen science has the potential to inspire other community members "[to] create change and policy through advocacy with data or working in collaboration with decision makers" (Wehn et al., 2021, p. 1). Citizen science "contributes to open science by involving citizens in research, opening the process of creating new knowledge through participation. In turn, this produces greater understanding of science through open information and communication" ("Citizen Science" 2018, p. 1).

2.3.1 Limitations of Citizen Science

A major limitation of citizen science, however, is getting volunteers to consistently participate in data collection. Citizen scientists recruited to observe an invasive species of Burmese Pythons in Florida did not follow through on their observations, "with less than 1 python observed for every 40 [hours] of searching during 3 months of the year," (Falk, 2016, p. 98). The fact that pythons are difficult to find could have been the discouraging factor that made volunteers discontinue their search efforts. In these scenarios, scientists must evaluate the risk that is associated with asking volunteers to collect data. To combat low participant motivation, the Authorized Agent Program (AAP) suggests incentives for citizen scientists, including but not limited to rewards such as a title on an app or monetary compensation for reaching certain data collection goals (Falk, 2016, pp. 99).

A lack of expertise can also be a limitation of citizen science initiatives. Although the Big Bumblebee Discovery Project recruited thousands of primary school children for its data collection, the study found that "[t]he overall precision of identification to the colour group was [only] 44% for field observations and 57% for the photo quiz," (Roy et al., 2016, p. 1). Even though this project offered statistical power due to the sheer number of volunteers recruited, the volunteers were not always correct in their identifications. Instead of having volunteers attempt to identify species on their own, using experts can induce a much higher species identification accuracy. In a similar study that saw citizen scientist participants help identify tick species, a higher accuracy rate resulted when images were submitted to be examined by a professional. In this study, the accuracy rate was 95% (Eisen & Eisen, 2020), and although this method could be potentially costly, this would reduce the number of misidentifications in a study. Although misidentification is a potential downfall of citizen science, using phone applications that automatically identify species or help users with the identification process reduces errors.

2.4 iNaturalist: A Citizen Science Platform for Biodiversity Research

There are many digital citizen science platforms that enable users to upload pictures of clouds, trees, plants, and animals to make environmental observations. Often, these platforms have GPS capabilities that allow users to identify the precise location of the data collection. iNaturalist is a citizen science platform hosted by the National Geographic Society and the California Academy of Sciences (Mesaglio and Callaghan, 2021, p. 290); its primary use is for citizens to add observations through photos, videos, and sound recordings, which generates mass quantities of data. Through this data, ecological patterns of species migration and habitation for urban parks and natural areas alike can be understood in an effortless way on a global scale. It is vital to have a high quantity of data because it can increase the diversity range for species identification and the land range for the search of plant and animal species. The first use case for biodiversity data is participatory, where participants collect data and observations to contribute to an existing overarching project (Mesaglio and Callaghan, 2021). Another use case is a more collaborative approach where the participants define the project's scope, parameters, and what to do with the biodiversity data (Mesaglio and Callaghan, 2021).

Dating back to 2008, iNaturalist has 306,000 identified species and over 1.4 million observations from 54 million users spanning across 252 countries (Mesaglio and Callaghan, 2021). Some reservations people have about iNaturalist is the potential for bias of the data. However, since millions of people contribute to mass quantities of data from a large geographic range and temporal coverage, scientists have implemented statistical techniques such as

hierarchical modeling and spatial subsampling to increase the accuracy and reliability of the data (Mesaglio and Callaghan, 2021, p. 289). iNaturalist has also implemented a 'Research Grade' category to identify credible observations (Mesaglio and Callaghan, 2021, p. 290).

The 'Project' feature in iNaturalist is one of the primary features of the platform; it allows users to pool their observations with other users to keep tabs of species in the area. One of the most successful projects on iNaturalist is 'Australasian Fishes.' This project focused on identifying fishes, sharks, and rays across Australia and New Zealand. Consisting of over 211,000 observations and 3300 identified species, this project helped to gain knowledge of underrepresented species and areas (Mesaglio and Callaghan, 2021, p. 291).

2.5 Văcărești Natural Park Association

The team collaborated with the Văcărești Natural Park Association to understand and increase the level of community engagement within the park using iNaturalist. The team worked with Dan Bărbulescu, the executive director of the VNPA, Vlad Cioflec, the lead biologist at the VNPA, and with other members of the VNPA, who collectively share the goal of conserving biodiversity in Bucharest. The team provided a strategy for the VNPA to promote iNaturalist and biodiversity awareness in VNP and Bucharest. In the future, the VNPA hopes to broaden to other areas throughout Romania and continue conserving biodiversity in an ever-advancing country.

3.0 Methodology

The goal of this project was to advance the awareness of urban biodiversity throughout Bucharest by developing approaches to promote iNaturalist at Văcărești Natural Park. To accomplish this goal, the team devised the following four objectives:

1. To examine the community's perspective of and current level of engagement with Văcărești Natural Park.
2. To determine the level of interest visitors and volunteers have in using iNaturalist in Văcărești Natural Park.
3. To compare the use of iNaturalist projects in various locations around the world.
4. To promote a strategy for Văcărești Natural Park Association to engage the community about urban biodiversity through the implementation of iNaturalist.

3.1 Objective One: Examine Current Perspective of and Engagement with VNP

The team's first objective was to understand how residents perceived VNP and their amount of engagement with the park. To accomplish this objective, the team examined data obtained from past reports and surveyed VNP visitors to gain better insight into resident views of the park.

3.1.1 Data Review

The team compared data from previous WPI student projects, Interactive Qualifying Projects (IQPs) such as *Increasing Public Awareness of the Văcărești Natural Park Association's Role in Managing the Văcărești* (Gopalan et al. 2022) and *Utilizing Volunteers to Save the Văcărești Wetlands* (Yatsuhashi et al. 2021). The team went through the results, findings, discussion, and future work for both reports and compared what previous teams had evaluated about VNP. In these sections, the team was looking for data and analysis regarding

how residents view the park, how active they are with the VNPA, and what they might expect in the future from the park.

The team also compared data that was given by the VNPA's executive director Dan Bărbulescu, *Making Green Cities Concepts, Challenges and Practice (*Brueste et al. 2023). This text discussed various green spaces and how they impact cities in which they are located. In this text, pages 297 through 307 all focus on VNP, which aided the team in learning a base understanding of how the community viewed VNP in previous years and helped to inform the team's comparative research and development of park visitor surveys.

3.1.2 Survey for VNP Community

The team used Qualtrics to develop an anonymous, confidential, 10-minute, 13-question survey in English and Romanian to gauge the perspective that community members of the park had regarding VNP (see Appendix A and B). Victor Marin, the communication officer for the VNPA, shared the survey link to the VNPA Facebook page while Dan Bărbulescu provided the Romanian translation and edited it to match the English translation. The team received 93 survey results in the 3 weeks after publishing the survey. Out of the 97 results, the team determined that 80 were usable for data analysis.

The team used the first nine questions and their respective follow-up questions to create a demographic of the park users and to gauge the perspective that the visitors have of the park. The team wanted to learn about the residents' level of recreation with VNP and its features, as well as their level of interest in volunteering. The team used this data to inform themselves of the least and most favorable parts of the park.

3.2 Objective Two: Determine the Level of Interest in Visitors and Volunteers Using iNaturalist

To accomplish the second objective, the team determined how deep of an understanding of the value of Văcărești to the local community by additional follow-up questions in the survey, and interviews with park visitors and volunteers.

3.2.1 Survey for VNP Community

The team used the same survey as mentioned in objective one to also gauge the interest that visitors and volunteers of the park had in using iNaturalist. Questions 10 through 13 and their respective follow-up questions asked respondents about their general app usage in the park and their personal level of interest in the use of iNaturalist, as well as their level of interest in the idea of promoting iNaturalist by the VNPA. The survey results informed the team on the experience that visitors have with digital tools such as iNaturalist and provided information on ways that visitors want to see iNaturalist promoted by the VNPA in the park.

3.2.2 Interviews with Park Community

Of the 93 survey responses, the team received eight respondents that stated they would be interested in an interview, but only three respondents followed up. The team asked questions that focused on their experience in be park and with iNaturalist (see Appendix D). The interviews were semi-structured to allow for specific follow-up questions and elaboration that may not have come out of anticipated interview questions. They lasted about 20 minutes on average. The team recorded virtual interviews on Zoom and the in-person interview using a voice recorder and transcribed them using the Dovetail tool, a transcription software. These interviews provided the

team with elaborations on ideas for promotion of iNaturalist in the park and with visitors' experiences with digital tools in the park.

3.2.3 Interviews with VNPA Employees

The team was able to conduct interviews with four out of six of the full-time staff at the VNPA. The interviews were semi-structured and lasted about 25 minutes on average. The interviews with Victor Marin, Bogdan Michalache, and Vlad Cioflec had two team members present, while the interview with Dan had one. The team conducted all interviews in English. The team recorded all interviews on team members' phones through a voice recording application and transcribed them using Dovetail. These interviews provided the team with insight into the community engagement the VNPA has experienced and with iNaturalist promotion. The interviews also provided ideas on how the two can feasibly be combined from the perspective of the association.

Table 3.1: Interview Dates and Format with the VNPA Staff

VNPA Interviewee	VNPA Staff Title	Date	Format
Victor Marin	Communication Officer	28 March 2023	In-Person
Vlad Cioflec	Herpetologist/ Consultant	28 March 2023	In-Person
Dan Bărbulescu	Executive Director	29 March 2023	In-Person
Bogdan Michalache	Landscape Engineer	4 April 2023	In-Person

3.3 Objective Three: Comparing the Use of iNaturalist Projects in Various Locations.

The team conducted a comparative analysis focused on projects in the iNaturalist application to provide the VNPA with the best recommendations to get the community active and engaged with the app. The team identified key features that contribute to a project's success.

3.3.1 Comparative Analysis of iNaturalist Projects

The project feature in iNaturalist is where users can pool their observations together with a specific theme. The team initially reviewed 25 different iNaturalist projects from different locations/themes and ultimately found that projects with over 5,000 observations from at least 100 different species had the most comprehensive journal/about sections. Projects that were from other biodiversity organizations and nature parks were also given more preference. The team chose a total of six different iNaturalist projects located around the world to compare with one another. The team chose these six projects by defining a successful project as having at least 5,000 observations from 100 or more species, and then cross-analyzed successful projects using this distinction to identify common features that led to their success. The team chose a benchmark value of 5,000 because most projects with less than 5,000 observations did not have a substantial number of participants and thus not taking full advantage of the iNaturalist project features. The common features from successful projects included the journal and about, leaderboards, and specific location and theme features. The projects that the team chose to analyze included The Vermont Center for Eco Studies in the USA, The Elmer W. Oliver Nature Park in the USA, Where the Wild Things in the USA, BC Parks in Canada, and both Sidewalk

Botany and Pollinator Association which take place worldwide. The findings from this section will be used for the promotion strategies discussed below.

3.4 Objective Four: Promoting a Strategy to Engage the Community about Urban Biodiversity with iNaturalist

The team coordinated one pilot community event with the VNPA to form a base-level understanding of how to develop an effective strategy to get the community to use iNaturalist in the park.

3.4.1 Pilot iNaturalist Event with the VNPA

The VNPA currently hosts volunteer events such as guided tours, flower, and tree plantings, along with informational events for schools directed at a youth audience, but nothing for iNaturalist (D. Bărbulescu, Personal Communication, March 16, 2023). To get the staff and a few close volunteers more familiar with the application, the team decided to host a small-scale pilot event on April 12, 2023, that consisted of participants coming to VNP to set up an iNaturalist account and begin using it on a walk around the park. The team also evaluated the aspects of the app that new users found confusing to provide the VNPA with a plan to promote and conduct iNaturalist workshops in the future. The team organized a 'bio blitz' project for VNP on the iNaturalist app, in which participants were asked to photograph any plants or animals they wished to upload during the two-hour event; the team also created a flyer of how to create an account on iNaturalist and nature observations which was handed out at the beginning of the event (see Appendix E).

4.0 Findings and Analysis

This chapter discusses the team's findings and analysis from the methods described previously. The following three major themes emerged: The Intersection of Visitors' Perspectives, Safety, and Community Engagement; Examining the Potential of Technology Use in the Park; and Creating a Successful iNaturalist Project. These themes informed the team's approach to strategize and assist in recommendations to successfully implement iNaturalist use in the park.

4.1 The Intersection of Visitors' Perspectives, Safety, and Community Engagement

Through surveys with park visitors and review of previous scientific reports conducted at the park, the team determined that the park visitor community feels a strong connection to the park; the community appreciates the natural setting and wants to be involved with the park. However, they feel discouraged by the perceived lack of security.

4.1.1 Voices from the Ground: Perspectives on VNP

The visitor survey results revealed the park is highly enjoyable for many community members, on average rating their enjoyment of the park an 8 out of 10. Visitors further expressed their interest in different activities and aspects of the park, such as walking in the park (average of 9 out of 10), nature observation (average of 8 out of 10), and sitting and enjoying nature away from city noise (average of 8 out of 10), with the bird-watching towers and placards identifying species in the park being notably good aspects. To determine if perceptions of the park have

changed over time, the team compared the findings above to a case study published in *Making Green Cities: Concepts, Challenges, and Practices* (MGC) from 2017, which included a section focused on VNP. According to the study, people visit VNP for its calm environment, diverse birdlife, and beautiful wetland scenery. Half of the visitors used the park for walking, 40% for recreation, 38% for wildlife watching and 19% for cycling (Breuste et al., *Making Green Cities: Concepts, Challenges, and Practice* 2023). As a result of this enjoyment in the park, over 60% of respondents were interested in volunteering, specifically because they wanted to help the park and nature.

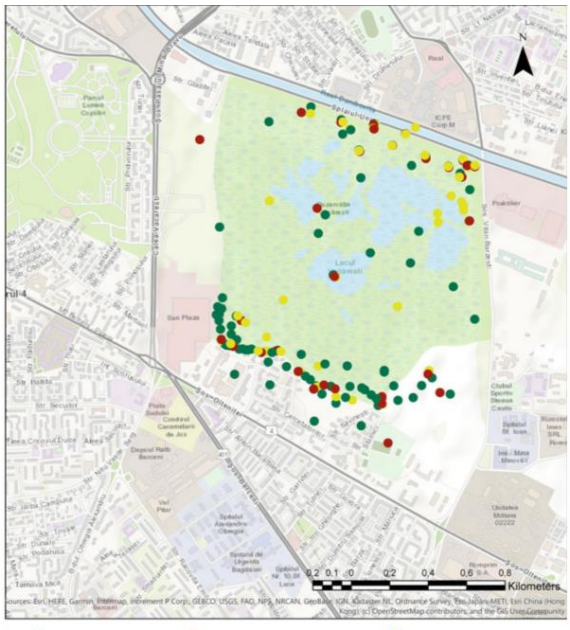
Another reason for the enjoyment of the park is its untamed landscape, which sets it apart from typicalcity parks that are well-manicured. The team interviewed one park visitor and asked what she loved about VNP to which she replied, "I like it because it's wild," (Park Goer, Personal Communication, April 5, 2023). However, not everyone shares this sentiment. Bogdan Mihalache, a landscape architect for the VNPA, stated that while some members of the community appreciate the natural beauty of the park, others see it as an eyesore and want it to be like other urban parks in Bucharest (B. Mihalache, Personal Communication, April 2023). According to Mr. Mihalache, some visitors have even suggested the addition of amenities such as pavement, evening lights, and playgrounds to improve the park's appearance and perceived safety. While not everyone appreciates VNP's natural landscape, it remains a unique and treasured aspect of the park for many visitors seeking a natural refuge within the city.

4.1.2 Areas of Improvement of VNP's Safety

Various forms of security are present within VNP such as private security, park rangers, and even local police officers. However, the park community is unaware of this presence and listed the apparent lack of security as a concern.

In the *Making Green Cities: Concepts, Challenges and Practices* study, the team used a social survey and online camera monitoring tools and discovered that safety issues were a concern within the park; 79% of survey responses indicated a reason for "limited attractiveness in the area" was due to poor security. The online monitoring tool identified 160 separate issues related to waste disposal, human health, and societal safety (Brueste et al., *Making Green Cities: Concepts, Challenges, and Practices*, 2023). Most of the respondents noted lack of waste disposal points in the southern area of VNP as their main concern, while threats to human health were more diverse and safety points were clustered on the concrete embankment surrounding VNP (See Figure 4.1).

Figure 4.1: Spatial Distribution of Signaled Threats from Public Online Platform PPGIS



(Breuste et al., Making Green Cities: Concepts, Challenges, and Practice 2023, 302)

In one of the team's interviews, a park visitor agreed with this perception of weakened safety and security and noted that while he has seen guard booths in the park, the booths are never occupied. The low presence of security, in addition to not having seen any of the patrolling officers or administration rangers, made the visitor unaware of the existence of security at all, leading him to note that an increased security presence should be a top priority for the park. Additionally, after conducting interviews the team found that several of the VNPA staff members recognized these concerns of security; the staff explained that the community does not recognize positive improvements that have been made in the park regarding safety and still views it as a problem (B. Mihalache, Personal Communication, April 2023; V. Cioflec, Personal Communication, March 2023).

However, one VNPA employee stated that the park is "[…] safer than it used to be" (V. Marin, Personal Communication, April 2023). Respondents rated the apparent lack of security as only slightly more of a concern than things like the location of garbage cans and bathrooms, the presence of invasive species, and the general cleanliness of the park. Two visitors' testaments echoed this statement; one said that he felt safe taking his wife and kids in the park. The other, a visitor that is frequently in the park, said he felt safe taking middle school classes in for nature tours. After seeing these contradictory statements, the team concluded that the outside perspective of the park shows a perceived lack of security and an unsafe environment, but a more intimate relationship with the park may lead to feeling safer, even to the level of bringing children into the park. By continuing to bring children into the park for nature tours, guided walks, and stewardship activities, VNPA can foster a stronger feeling of safety and community in the park.

4.1.3 The Importance of Community Engagement

While respondents expressed high levels of enjoyment in different aspects and solo activities in the park, many expressed lower levels of interest in community activities. Among these were guided events (average of 7 out of 10), guided nature walks (average of 7 out of 10), National Bird Day - an opportunity to take pictures of birds in the park - (average of 6.5 out of 10), and volunteering (average of 6.5 out of 10); the team concluded that respondents are interested in community events, just not to the same extent that they are interested in solo events. In addition to this, most people (83%) said that they had never volunteered at the park before, and over half of those that do only volunteer about once a year. There is a level of interest in engaging in the park, but there is not as high of community involvement. This may be due to individual time commitment issues, individual work schedule related issues, or unknown knowledge stemming from the lack of advertisement of community events by the VNPA.

After conducting research, the team concluded that one way to boost community engagement in the park is to appeal to a younger audience. Victor Marin, VNPA Communication's Officer stated that, "[…] if the children start coming, we know that at some point their parents will come [….] [In] the past years, the children came and after they simply nagged at home [….] [eventually] the parents came along as well…" (V. Marin, Personal Communication, March 28, 2023). By encouraging children and teenagers to spend time in nature, a trickledown effect will follow, and the community will begin to engage with the park more. To reintroduce the community to the park, the VNPA may need to begin with a younger audience. To engage children in the park, iNaturalist can be introduced as a game to encourage children to competitively use the app. When a park visitor with a young daughter was asked if

she was interested in different iNaturalist events in the park she responded, “It’ll be interesting for me and for children” (Park Goer, Personal Communication, April 5, 2023).

4.2 Examining the Potential of Technology Use in the Park: Viewpoints on its Strengths and Weaknesses

To address application use in the park and the best way to incorporate iNaturalist into visitors’ park experiences, the team compiled data on park visitors and VNPA staff perspectives on app use and their familiarity with iNaturalist.

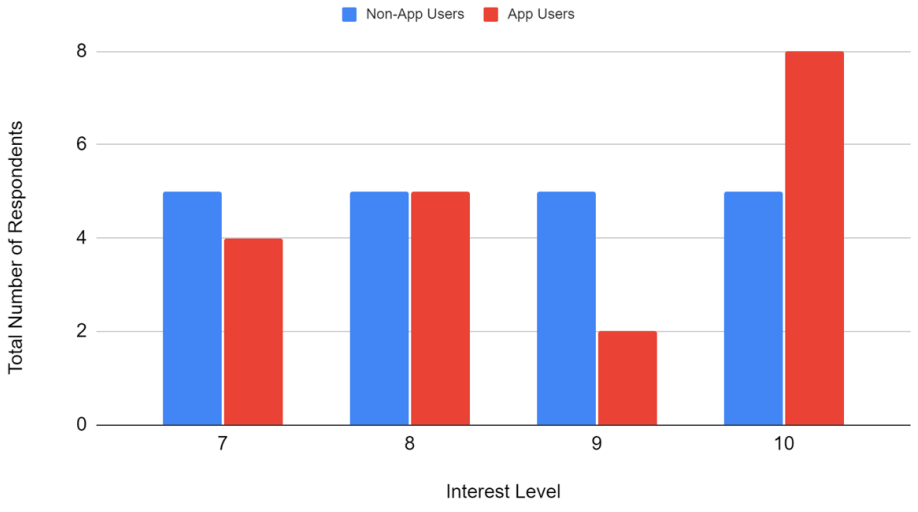
4.2.1 Technology Use in the Park

Data from the visitor survey shows that there is an even split on park visitors that use mobile apps within VNP and those that do not, with 48% of respondents saying that they do use apps. The team found that many of those that use apps in the park use them for reasons other than citizen science, with less than half of app users (7 out of 19 respondents) using citizen science apps. Other apps used by respondents most often included Google Maps, the VNPA mobile app, and various running apps.

Although a majority of respondents (85%) did not know about iNaturalist, the team found that 75% regularly take pictures of plants and animals and ranked their average level of interest in identifying the species captured in these photos an 8 out of 10. Given this strong desire to identify species in pictures already taken, the team feels that this audience would enjoy using iNaturalist if it was promoted to them.

The team found that although some respondents are not currently using apps in the park, they are just as interested in attending an iNaturalist workshop with those that do use apps in the park. According to the survey, 52% of app users and 50% of non-app users expressed an interest level of 7 or higher out of 10 in attending an iNaturalist workshop (see Figure 4.2). This means that the VNPA does not have to focus their efforts towards either app or non-app users, and instead can promote using the app to anyone in the park because many respondents are interested in learning how to use iNaturalist.

Figure 4.2: Survey Respondents Interested in iNaturalist Workshop



This figure shows the number of non-app and app users that rated their interest level at a 7 or higher in attending an iNaturalist event hosted by the VNPA.

4.2.2 VNPA Staff Perspectives on App Use

The team's research suggests that VNPA staff members are divided over the use of digital devices in the park. Vlad Cioflec, the primary biologist for the VNPA, was an advocate indicating that the use of technology could allow park visitors to connect with nature in a way that is more compatible with the habits of a generation accustomed to using such devices in their daily routines. According to Mr. Cioflec, using technology to get connected with nature allows for visitors to "care less about material things" (V. Cioflec, Personal Communication, March 28, 2023) and instead immerse themselves in the natural world around them.

However, Victor Marin, the communications director for VNPA, does not agree. Mr. Marin argues that "one of the basic ideas [is] to get the kids [off] the phones and laptops, and into nature" (V. Marin, Personal Communication, March 28, 2023). He believes that by promoting the use of digital devices, the VNPA would be doing the opposite, and instead would be advocating for a generation already maintaining high smart phone usage to continue using them even when they should be paying attention to the world around them.

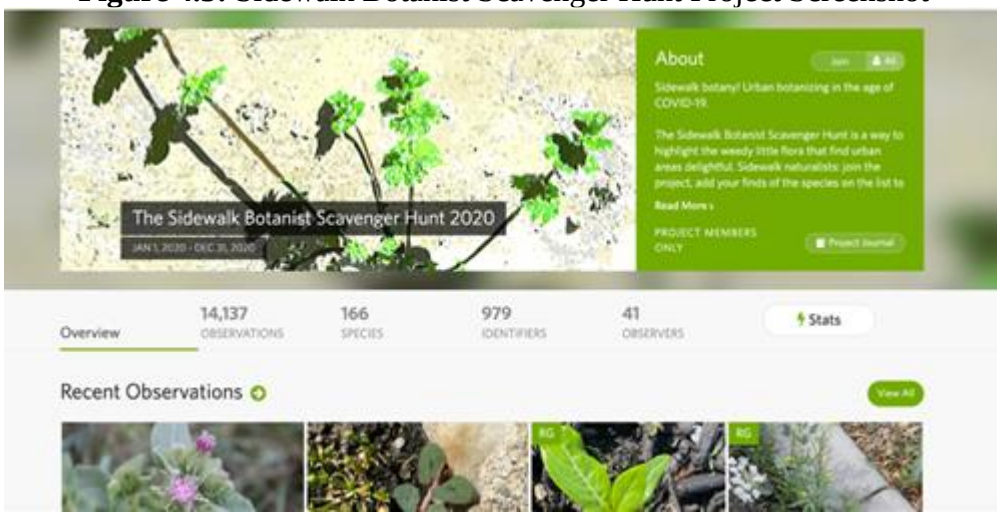
The VNPA executive director, Dan Bărbulescu had a more neutral view on the use of technology in the park. Although he agreed that visitors should not look at their phones all the time, and that it is a good idea to "[go] in the park and keep your phone in [your] pocket for one hour at least" (D. Bărbulescu, Personal Communication, March 29, 2023), he also thought that there was a need for technology in the park. Mr. Bărbulescu thought that there could be a synergy created between the use of technology in the park and keeping technology away while parkgoers pay attention to the world around them, but that there is a necessary balance involved.

The team hosted an iNaturalist event in the park where the VNPA and a few volunteers were shown how to use the app. Through observation at the event, the team found that they, along with others using the app, were actively looking for bugs and animals to photograph. In doing so, they were not only discovering the names of different species they normally would not even notice but were also contributing scientific data that could then be used on a much larger scale. The team also noticed that once staff and volunteer members were comfortable using the app, it did not take long to upload observations. As a result, the team found that they agreed with Mr. Bărbulescu; despite being on the app, users were not glued to their screens the entire time and were still able to pay attention to the nature around them.

4.3 Creating a Successful iNaturalist Project

The team conducted a comparison of iNaturalist projects from other organizations and parks to research methods to improve iNaturalist user traction with parkgoers in the VNP. To do this, the team compared six different iNaturalist projects including British Columbia Parks, Vermont Center for Eco Studies, Sidewalk Botany!, Elmer W. Oliver Nature Park, Pollinator Associations, and Where the Wild Things Are, all organized by either individual users or organizations. Figure 4.3 illustrates a project where users can pool their sidewalk flora observations together. The number of observations and species recorded for each user in the project are tracked along with their location. The criteria the team used to define a successful project is if the project contained at least 5000 observations from 100 or more species. The team found that successful projects took advantage of the journal, about, leaderboard, and specific theme/location features.

Figure 4.3: Sidewalk Botanist Scavenger Hunt Project Screenshot



4.3.1 iNaturalist Journal Feature

Among the successful projects, there was a heavy focus on utilizing the journal feature, the about section, and specific project theme. This can be seen in Figure 4.4. The journal feature allows the project admin to share their goals and motivations for the project, example photos to guide the audience, and promote iNaturalist related webinars/events. Some projects also used the journal to update the users on the progress of the project and to congratulate specific users on photos they posted. For example, in Figure 4.4, it shows the Elmer Oiler Park used the journal feature to advertise their events in the park and thanked the users for contributing to the project.

Figure 4.4: Table of Information About Various iNaturalist Projects

Project Name	Organization	Journal Use	Project Type	Locations	About Section	# Observations	# Species	# People
Sidewalk Botany!	Individual	Utilized Journal Feature to explain the motivations for starting the project and also updated the users by sharing posts they created	Collection	USA, Georgia, Armenia, Turkey, Azerbaijan, Syria, Ukraine, Japan	Briefly tells the project users about the project motivations and encourages naturalists to add observations/species	14,137	166	234
Vermont Center for Ecostudies (Vermont Atlas of Life)	Vermont Atlas of Life	Posted examples of conservation efforts the park is working on and explained how the public can help. Shares photo observation of the month. Also advertises events/presentations the organization is conducting	Collection	Vermont, New Hampshire, Maine	Provided links to the organization web page, even provides links to Events, and Photo Observations of the Month	986,462	11,587	22,533
Elmer W. Oliver Nature Park	Elmer Nature Park Texas.gov	Advertised events in the park such as Rock Art, Painting at the Park, and Nature Night	Collection	Mansfield, Texas	Mentions the ongoing Citizen Science project and encourages people to contribute findings.	16,535	1,629	321
Where the Wild Things Are At GRCP	GRCP, Individual	Provided a summary of the GRCP and the motivations for creating the iNaturalist project	Collection	Georgetown, Texas	Encourages users to post and tells the users to keep track of flowering/migration trends	9	6	3
BC Parks	BC Parks	Gave updates about the state of the project and recognized the top 25 observations.	Umbrella	British Columbia Area	Links the users to the iNaturalist project information on their website	674,973	11,120	969
Pollinator Association	Individual Research	Stated the main goal of the project and mentioned new species maps/identifications	Collection	Europe, Africa, North America, Asia, Oceania	Tells participants about the kinds of observations that are wanted and also provides reference to other pollinator projects.	58,947	4,366	4,395

Elmer Park also advertised a ‘Nature at Night’ event where families and children can participate in arts and crafts and record observations on iNaturalist as seen in Figure 4.5. This not only gives the community a chance to come together and gather valuable data, but also can build a sense of community.According to the article *How Cities Use Parks for Community Engagement*, Eugene, Oregon had a park with drug dealers and homeless people and in a few

months of organizing restoration events, the park now hosts a Saturday market which brings people for shopping as well as for community celebrations and late-night basketball games. These events were promoted through iNaturalist, which demonstrated the versatility of iNaturalist and its ability to increase community engagement.

Figure 4.5: Elmer W. Oliver Nature Park Journal Post on Advertising Park Events

It can also be seen in Figure 4.4 that the *Where the Wild Things Are* at *GRCP* gave a summary about the GRCP and the motivations for the project, but they did not provide information about example posts and what type of organization GRCP was. To further inform the visitors about the organization they should have linked their social media page/website. Having an underdeveloped project journal and about section is a possible reason why the project did not gain more user traction.

4.3.2 iNaturalist About Feature

Successful projects contained fully developed about sections. An about section in iNaturalist is where the project admin can briefly state what the project is about and link the organization's website/social media, so the users know what they are contributing to. The about section serves as a pitch to encourage users to join the project and the journal gives periodic updates. For example, Figure 4.4, the *British Columbia Par*ks and the *Vermont Atlas of Life* projects used the about section to provide links to their organization page and encouraged users to contribute to the project. The *British Columbia Parks* project also provided links to their iNaturalist information page which contains further information about their iNaturalist related aspirations for the parks.

4.3.3 iNaturalist Leaderboard and Theme Feature

Successful projects used the leaderboard feature and specific locations/themes. The leaderboard feature allows the users to keep track of the number of observations and species recorded. Users are awarded medals through iNaturalist which keeps them motivated to keep posting their findings which can engage the visitors and encourage them to come back to the park. It can also be noted that the *Sidewalk Botany!* And *Elmer W.Oliver Nature Park* projects contained specific themes. The *Sidewalk Botany!* encouraged users to post urban area flora and the *Elmer W. Oliver* project encouraged users to post observations from the park.

5.0 Limitations

The VNPA posted the survey on their Facebook page, meaning that there may have been bias in the survey responses from park-goers as the people that responded already followed the VNP social media and therefore enjoy the park content that they post. This is reflected where the team had some personal conversations with Bucharest residents that indicated a negative view of the park while the survey responses indicated a positive view of the park. While the team collected seventy-eight usable responses, several of the questions had a response rate of less than a third of respondents. Several of the multiple-choice questions included an "Other" option with a text box for respondents to elaborate; many did not.

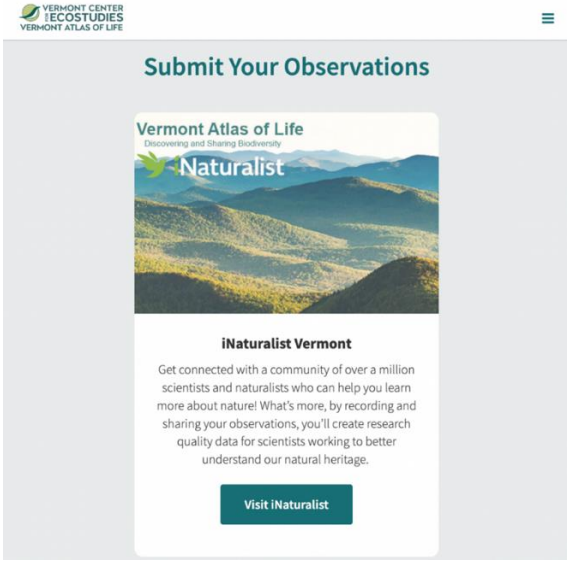
The team's interviews with VNPA staff and with park-goers may also have been biased. There was little direct criticism of the park in staff interviews. Many complaints were directed at the Bucharest Municipality and their lack of control. There were only three park-goer interviews out of the seventy-eight survey responses. The interviewees understood English relatively well, but not as well as the VNPA members did, meaning that a lot was lost in translation. Although the interviewers were able to speak slowly and attempted to speak clearly to not confuse the interviewees, it seemed as though there was still a bit of confusion. The team was unable to interpret some of their responses due to the language barrier and had to use context clues and transcription software (Dovetail).

6.0 Recommendations

The team recommends that the VNPA implements iNaturalist in VNP. *Vermont Center for Eco Studies* and the *Elmer W. Oliver Nature Park* projects both host a large database of plant and animal species to increase conservation efforts in Vermont and nearby areas. The VNPA should model after these projects since they align with a similar goal of Mr. Bărbulescu, who wants to generate a large database of the biodiversity in VNP. The team also recommends promoting iNaturalist to children. Since the app would be seen as a game to them, they would be excited to make observations in the park and get involved with nature. To get children into the park, the VNPA should create partnerships with local schools for stewardship events; this should include guided nature walks and an opportunity for children and their parents to be in nature to use iNaturalist together. To help new users begin using iNaturalist, the team made a short YouTube video (see Appendix G) that highlights the main features such as making an observation and joining a project.

As outlined in Figure 6.1, the VNPA should add a direct link from their website to the iNaturalist project. The VNPA should update the 'Journal' section weekly in the iNaturalist project by making entries about the users' contributions to projects and any key findings from the project so far. Lastly, the VNPA should advertise iNaturalist events through the 'Journal' feature so that they can advertise use of the park to a larger user base.

Figure 6.1: iNaturalist Promotion Section on the Vermont Center for Eco Studies Website



The team provided the VNPA with a step-by-step guide on creating, maintaining, and promoting iNaturalist projects from an administrative standpoint (see Appendix F). This document includes the definition of what makes a successful project, instruction on creating a project and what features to include and utilize, how to utilize these features, other helpful tips on the administration of these projects, how to promote the projects, how to use projects to host events, and a list of events that can be hosted by the VNPA to promote iNaturalist and its use in the park.

Events that the VNPA should conduct a BioBlitz event for National Insect Day where project members can record insect observations during a 24-hour period. Another event that the VNPA should conduct is a Childrens Nature Day where children can be taught about nature in the park and record observations. Lastly, the VNPA should conduct an event where iNaturalist users can come to the park and record observations of species of the same color, for example if the theme is red, users will have to collect observations of red color plant/animal species (Appendix F).

7.0 Conclusion

Based on the results of this project, the team concluded that initiating citizen science projects, such as iNaturalist, significantly increases the level of community engagement and overall interaction in parks. With the already disconnected relationship between the Bucharest Municipality and VNP, moving towards small-scale strategies that get the community involved would help the VNPA. The team also concluded that the overall current perspective of the park is predominantly positive, with some exceptions due to the concerns about the lack of security presence. The neighboring community views VNP as their home and a place to escape from the stressful city environment. They expressed a desire to be more actively engaged with the park, but struggle in identifying the appropriate opportunities to do so. Additionally, the team discovered a small divide in the VNPA staff regarding the use of iNaturalist, or more specifically technology, in the park. Finding a way to navigate this divide is essential for the future of developing citizen science projects in the park.

The use of iNaturalist could have the ability to both increase the number of people in the park as well as provide beneficial research that could be used in a global database. The team recommends that the VNPA should build an iNaturalist collection project with a focus on creating an interactive 'About' section. This strategy supports the VNPA's ongoing action of fostering an active community and maintaining a prosperous level of biodiversity in the park. Citizen science is a useful tool and would aid in the advancement of VNP regarding biodiversity and community engagement. The team's analysis of using iNaturalist in VNP will serve as the foundation for future work related to the park or other urban green areas around Bucharest. Ultimately, VNP is not an easy territory to study or protect, due to the many peculiarities surrounding it, but by maintaining a balance between conservation requirements and public use of the area, VNPA can help safeguard VNP's unique ecosystem for future generations. While the road ahead may be challenging, a unified effort to preserve VNP's natural and cultural heritage can yield significant benefits, not just for the park but also for the broader ecosystem and society as a whole.

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Appendices

Appendix A: Survey for Park Community (English)

Preamble: We are a group of students from Worcester Polytechnic Institute, Massachusetts, USA working with the Văcărești Natural Park Association to gain more knowledge about the park community. This anonymous, voluntary survey asks visitors about their experiences within the park and their use of mobile apps. It will take approximately 5-10 minutes to complete. Your participation is greatly appreciated. Should you have any questions or concerns, we can be reached at gr-Vacaresti-D23@wpi.edu. For more information about this research or about the rights of research participants, please contact irb@wpi.edu.

Question 1) How long have you lived in Bucharest for?

A. Less than one year
B. 1 to 5 years
C. 5+ years
D. I do not live in Bucharest

Question 2) Have you visited Văcărești Natural Park before?

A. Yes
B. No

[If Yes]
Question 2b) About how many times do you visit the park in an average week?

A. 0 times
B. 1-3 times
C. 4-6 times
D. 7 or more times

Question 3) Where do you get your information about the park? (select all that apply)

A. The Văcărești Natural Park's Instagram
B. The Văcărești Natural Park's Facebook page
C. The Văcărești Natural Park YouTube channel
D. The Park Administration's Facebook page
E. Other: (text box)
F.* I do not receive information about the park

Question 4) What are your interest levels in the following activities at Văcărești Natural Park (0 being not at all interested, 10 being the most interested)

1. Guided Nature Walks
2. National Bird Day (opportunity to take pictures of birds in the park)
3. Biking
4. Running
5. Walking
6. Nature Observation
7. Other: (text box)

Question 5) What is your level of enjoyment with the park? (0 being no enjoyment, 10 being the most enjoyment)

1. What is your level of enjoyment with the park?

Question 6) To what extent do you like these aspects of Văcărești Natural Park? (0 being neutral, 10 being like it the most)

1. The walking/running trails
2. The bird watching towers
3. The animal and plant placards
4. Trail length
5. Just being in nature/a green space
6. Location of the park
7. Guided activities
8. Other: (text box)

Question 7) To what extent do you think these aspects of Văcărești Natural Park could be improved? (0 being not at all, 10 being it greatly needs to be improved)

1. The garbage can and bathroom placements
2. Cleanliness of the park
3. Overgrown plants
4. Invasive species (ambrosia)
5. Lack of private security presence
6. Lack of accessibility
7. Other: (text box)

Question 8) Have you ever volunteered with the park before?

A. No
B. Yes

[If Yes]
Question 8b) How often do you volunteer at the park?

A. About once a week
B. About once a month
C. A few times a year
D. About once a year

[If Yes]
Question 8c) When was the last time you volunteered?

A. This week
B. This month
C. This year
D. Over a year

Question 9) What is your interest in volunteering at the park? (0 being not at all interested, 10 being very interested)

1. What is your interest in volunteering at the park?

[If Less Than or Equal to 5]
Question 9b) You have indicated that your interest is at a 5 or below, what is the main reason for this?

A. Not enough time
B. Not interested
C. I have already volunteered this week
D. I don't know where to go to find out about volunteer opportunities at the park
E. Other: (text box)

[If Greater Than 5]
Question 9c) You have indicated that your interest is a 6 or above, what is the main reason for this?

A. I have volunteered at the park before
B. I am interested in volunteer opportunities in general
C. I want to help the park/nature
D. Other: (text box)

Question 10) Do you regularly take pictures of flora/fauna?

A. No
B. Yes

[If Yes]
Question 10b) How interested would you be in identifying the flora/fauna in these pictures? (0 being not at all interested, 10 being the most interested)

1. How interested would you be in identifying the flora/fauna in these pictures?

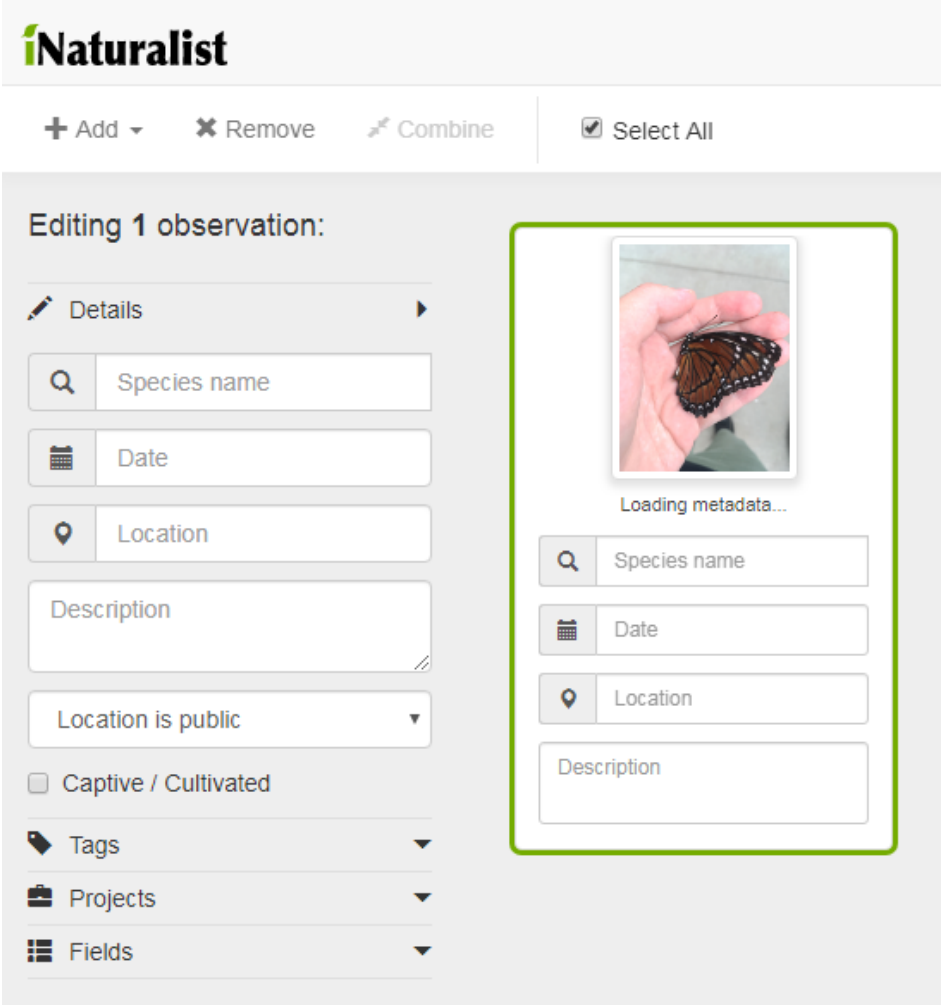
[If Yes]
Questions 10c) Which of these methods would you be most likely to use to identify flora/fauna? (select all that apply)

A. iNaturalist
B. Other digital identification tools (Search Engines, Online Databases, Nature Forums, etc.)
C. Plant/Animal Identification placards in the park
D. Other (text box)
E. *None of the above

Question 11) Have you heard of the iNaturalist platform before?

A. No
B. Yes

Information about iNaturalist:
iNaturalist is a citizen science platform where users can take pictures/audio recordings of plants and animals to share observations of biodiversity across the globe.



[If Yes]
Question 11b) Do you think the Văcărești Natural Park Association could promote the use of iNaturalist better?

A. Definitely not
B. Probably not
C. Might or might not
D. Probably yes
E. Definitely yes

Question 12) Have you used mobile apps in the park?

A. No
B. Yes

[If Yes]
Question 12b) What apps have you used? (select all that apply)

1. INaturalist
2. BirdWatcher or EBird

3. VNPA Mobile App
4. Other: (text box)
5. *None of the above

[If Yes]
Question 12c) How much do you enjoy using apps in the park? (0 being no enjoyment, 10 being the most enjoyment)

1. How much do you enjoy using apps in the park?

Question 13) What level of interest would you have in attending a workshop or information session on how to use iNaturalist hosted at Văcărești Natural Park? (0 being not interested at all, 10 being the most interested)

1. What level of interest would you have in attending a workshop or information session on how to use iNaturalist hosted at Văcărești Natural Park?

[If Great Than or Equal to 5]
Question 13b) What would you like to see in the workshop? (select all that apply)

A. General app use
B. Demonstration in the park
C. Examples of previous implications
D. Special event related to the application
E. Other: (text box)
F. *None of the above

Interview: We would like to ask if you would be interested in a confidential, voluntary follow-up interview (~20 minutes either in person or over video call) regarding your personal perspective about the park and any stories you may have regarding the park. If you would be willing to help us by allowing us to interview you, please leave your name and contact information below. If you would not like to participate, and would like to stay anonymous, you may skip this question.

Appendix B: Survey for Park Community (Romanian)

Preamble: Suntem un grup de studenți de la Worcester Polytehnic Institute, Massachusetts, USA și lucrăm alături de Asociația Parcul Natural Văcărești ca să cunoaștem mai bine comunitatea din jurul Parcului Natural Văcărești. Prin acest sondaj anonim și voluntar vrem să îi intrebăm pe vizitatorii parcului, și pe vecinii acestuia, despre experiența pe care o au in Văcărești și despre cum se folosesc de aplicații mobile pentru aceasta. Completarea întrebărilor durează aproximativ 10 minute. Vă mulțumim pentru participare! Pentru orice întrebări sau detalii despre cercetare vă rugăm să ne contactați la adresa Vacaresti-D23@wpi.edu. Pentru mai multe informații despre cercetare și despre drepturile participanților la aceasta, vă rugăm să contactați irb@wpi.edu.

Question 1) De cât timp locuiți în București?

A. Mai puțin de un an
B. Între unu și cinci ani
C. Peste cinci ani
D. Nu locuiesc în București

Question 2) Ați mai vizitat Parcul Natural Văcărești înainte?

A. Da
B. Nu

[If Da]
Question 2b) De câte ori vizitați parcul pe săptămână?

A. 0 ori
B. 1- 3 ori
C. 4-6 ori
D. Peste 7

Question 3) De unde aflați informații despre parc?

A. Parcul Natural Văcărești/Instagram
B. Parcul Natural Văcărești/Facebook
C. Parcul Natural Văcărești/Youtube
D. Administrația Parcului Natural Văcărești/Facebook
E. Alte surse: (text box)
F.* Nu ma informez cu privire la parc

Question 4) Care este nivelul dumneavoastră de interes pentru următoarele activități legate de parc (0, nu sunt intresat de loc, 10, sunt foarte interesat).

1. Tururi ghidate
2. Ziua Internațională a Păsărilor
3. Mers cu bicicleta
4. Alergare
5. Plimbare
6. Observarea / Fotografierea naturii
7. Altele: (text box)

Question 5) Care este nivelul dumneavoastră de satisfacție cu privire la parc? (0, satisfacție foarte mica, 10, satisfacție foarte mare)

1. Care este nivelul dumneavoastră de satisfacție cu privire la parc?

Question 6) În ce măsură apreciați aceste aspecte ale Parcului Natural Văcărești?

1. Traseele tematice/potecile
2. Turnurile de observatii ornitologice
3. Panourile de informare
4. Lungimea potecilor
5. Oportunitatea de a fi în natură
6. Locația parcului
7. Activități ghidate
8. Altele: (text box)

Question 7) Considerați că următoarele aspecte sunt probleme ale Parcului Natural Văcărești? (0, nu sunt probleme, 10 sunt probleme foarte importante)

1. Situația toaletelor și a coșurilor de gunoi
2. Curățenia parcului
3. Extinderea stufului
4. Specii invazive (ambrozie)
5. Paza parcului
6. Accesibilitatea parcului
7. Altele: (text box)

Question 8) Ați făcut vreodată voluntariat pentru Parcul Natural Văcărești?

A. Nu
B. Da

[If Da]
Question 8b) Cât de des voluntariați pentru parc?

A. O dată pe săptămână
B. O dată pe lună
C. De câteva ori pe an
D. O dată pe an

[If Da]
Question 8c) Când ați fost ultima oară voluntar în Parcul Natural Văcărești?

A. În această săptămână
B. Luna aceasta
C. Anul acesta
D. Mai putin de-atât

Question 9) Care este interesul dumneavoastră față de activitățile de voluntariat în parc? (0 deloc interesat, 10 foarte interesat)

1. Care este interesul dumneavoastră față de activitățile de voluntariat în parc?

[If Less Than or Equal to 5]
Question 9b) Dacă ați indicat nivelul nr. 5 sau mai jos, care este principalul motiv?

A. Nu am destul timp
B. Nu sunt interesat
C. Am fost deja voluntar
D. Nu stiu de unde sa aflu informatii despre activitatile de voluntariat de la parc
E. Altele: (text box)

[If Greater Than 5]
Question 9c) Daca ați indicat nivelul 6 sau mai mare, care este principalul motiv?

A. Am fost deja voluntar parc
B. Sunt interesat de oportunitatile de voluntariat in general
C. Vreau sa ma implic in proiecte pentru natură sau pentru parc
D. Altele: (text box)

Question 10) Faceți fotografii plantelor si animalelorcând mergeți?

A. Nu
B. Da

[If Da]
Question 10b) Cât de interesat ați fi să contribuiți la cunoașterea și identificarea florei și faunei parcului? (0 deloc interest, 10 foarte interesat)

1. Cât de interesat ați fi să contribuiți la cunoașterea și identificarea florei și faunei parcului?

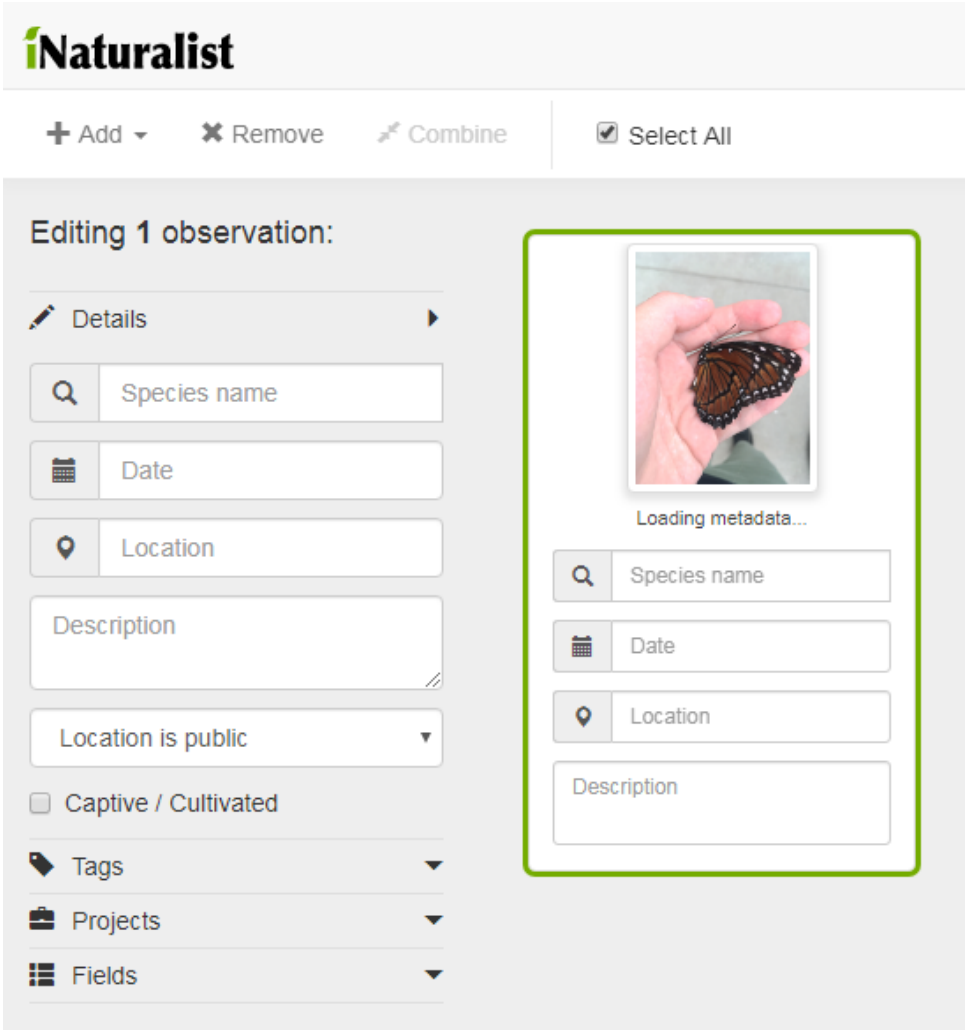
[If Da]
Questions 10c) Care dintre aceste metode ar fi mai ușor de folosit pentru a identifica flora și fauna parcului?

A. iNaturalist
B. Alte instrumente digitale (motoare de cautare, baze de date on line, grupuri de facebook, forumuri de natura)
C. Panourile de informare ale parcului
D. Altele (text box)
E. * Niciuna dintre cele de mai sus

Question 11) Ați auzit până acum de platforma INaturalist?

A. Nu
B. Da

Informații despre Inaturalist:
Este o platformă de citizens science care facilitează strângerea de observații despre specii de floră și fauna. Utilizatorii pot încărca fotografii, înregistrări audio sau pot discuta despre diverse observații cu privire la biodiversitate.



[If Da]
Question 11b) Credeți că Asociația Parcul natural Văcărești poate promova folosirea într-un mod efficient a acestui instrument (INaturalist)?

A. În niciun caz
B. Probabil nu
C. Nu am o opinie
D. Probabil da
E. Cu siguranță da

Question 12) Ați folosit până acum vreo aplicație de mobil în parc?

A. Nu
B. Da

[If Da]
Question 12b) Ce aplicație ați folosit?

1. INaturalist

2. Birdwatcher or eBird
3. Aplicația Asociației Parcul Natural Văcărești
4. Altele: (text box)
5. *Niciuna de mai sus

[If Da]
Question 12c) V-ar fi ușor să folosiți o astfel de aplicație când vizitați Parcul Natural Văcărești? (0 dificil, 10 foarte ușor)

1. V-ar fi ușor să folosiți o astfel de aplicație când vizitați Parcul Natural Văcărești?

Question 13) Ati fi interest să participați la un workshop sau la o sesiune de informare despre cum să folosiți aplicația INaturalist în Parcul Natural Văcărești? (0 deloc interestat, 10 foarte interesat)

1. Ati fi interest să participați la un workshop sau la o sesiune de informare despre cum să folosiți aplicația INaturalist în Parcul Natural Văcărești

[If Great Than or Equal to 5]
Question 13b) Ce ați dori să primiți în cadrul acestui workshop?

A. Informații generale
B. Aplicații practice în parc
C. Exemple de bune practici
D. Un eveniment special dedicat aplicației
E. Alt: (text box)
F. *Nimic din cele de mai sus

Interview: Ați fi interest să participați la un interviu de aprox 20 de minute, live sau prin video call, despre experiența dumneavoastra cu Parcul Natural Văcărești? Dacă există acest interes, vă rugăm să ne lăsați mai jos numele și datele de contact. Dacă nu doriți să participați, treceți peste această secțiune.

Appendix C: Interview Questions VNPA

Question 1) Do you consent to this interview?

Question 2) Do you consent to having this interview recorded?

Question 3) What did you do before working with VNPA?

Question 4) How long have you been working with VNPA?

Question 4b) Specific experiences

Question 5) What is your favorite part about working with VNPA?

Question 6) If you had the opportunity to change things about the park, what would those changes be?

Question 7) What do you think the community would like to see change about the park?

Question 8) What does community engagement mean to you?

Question 9) What does community engagement in the park look like right now?

Question 10) Do you think the level of community engagement currently happening in the park could be improved?

Question 10a) (If yes community engagement can be improved) Ignoring iNaturalist, what advances in the park do you think could improve community engagement?

Question 10b) If no, could you elaborate on why you don't think this is the case?

Question 11) Do you have any experience with iNaturalist? If so, could you explain that?

Question 11a) If not, have you heard of it?

Question 11b) If yes, where do you use iNaturalist most often?

Question 11c) How often do you find yourself using iNaturalist?

Question 11d) How do you currently promote the use of iNaturalist?

Question 11e) What are your thoughts/ideas about getting visitors to use iNaturalist in the park?

Question 11f) Are there any project ideas that you and the team have that you hope to eventually promote in the park?

Question 11g) What is the goal you wish to accomplish with the iNaturalist app?

Question 12) What do you think of the current state of the VNP mobile app?

Question 13) Where do you hope to see the park in 5 years?

Question 14) Is there anything else about the park or your experience here that you would like to talk about that I may not yet have given you the opportunity to?

Appendix D: Interview Questions Park Community

follow-ups that are not directly included below can be things like “Please explain that more” or “Could you give an example of what you think that may look like” to get their individual perspective on the questions.

Do you consent to this interview?
Do you consent to having this interview recorded?

Question 1) How long have you lived in Bucharest?

Question 2) What do you like about VNP? (e.g., activities, aspects, etc.)

Question 3) What would you change about VNP if you could?

Question 4) What do you know, if anything, about the iNaturalist platform? (Are you familiar?)
Question 4a) If yes, have you used it before?
Question 4b) If yes, what parts of the app were easy/difficult to use?

Question 5) Aside from the workshop that was mentioned in the survey, what event(s) do you think the VNPA could put on to promote iNaturalist?

Question 6) What can the VNPA do that you think could encourage you to use iNaturalist more while in the park? (i.e. nature observation competition, “bioblitz,” rewards for data collection, etc.)
Question 6a) What about outside the park?

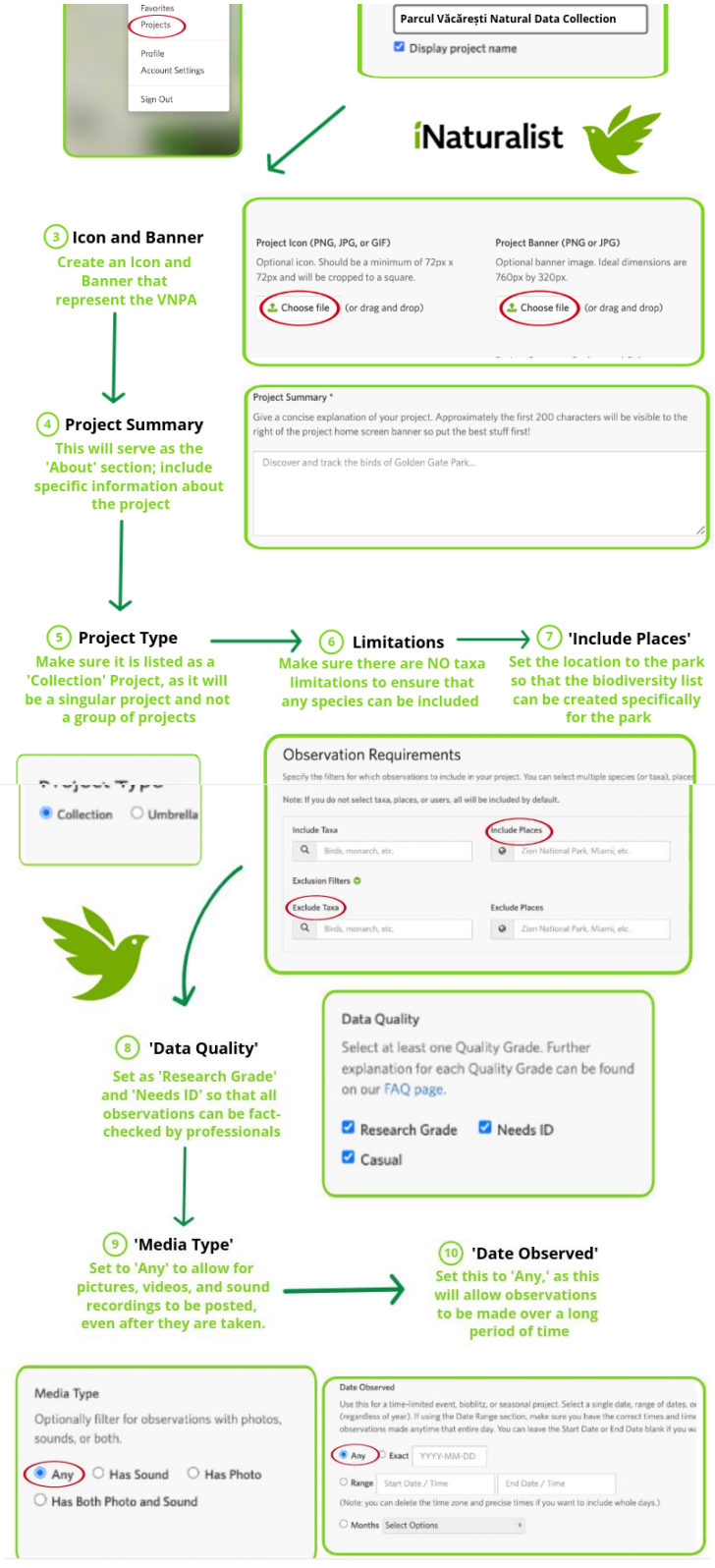
Question 7) Do you think it is important for the public to contribute to ecological and biological data?
Question 7a) Why/why not?

Question 8) Do you have any experience with biology or ecology?
Question 8a) How do you think this experience/lack of experience affects your perspective of iNaturalist?

Question 9) Is there anything else about the park or your experience here that you would like to talk about that I may not yet have given you the opportunity to?

Appendix E: Pilot iNaturalist Event Flyer

Appendix F: iNaturalist Guide for the VNPA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Sign Out
Parcul Văcărești Natural Data Collection
Display project name
iNaturalist
3 Icon and Banner
Create an Icon and Banner that represent the VNPA
Project Icon (PNG, JPG, or GIF)
Optional icon. Should be a minimum of 72px x 72px and will be cropped to a square.
Choose file
(or drag and drop)
Project Banner (PNG or JPG)
Optional banner image. Ideal dimensions are 760px by 320px.
Choose file
(or drag and drop)
4 Project Summary
This will serve as the 'About' section; include specific information about the project
Project Summary *
Give a concise explanation of your project. Approximately the first 200 characters will be visible to the right of the project home screen banner so put the best stuff first!
Discover and track the birds of Golden Gate Park...
5 Project Type
Make sure it is listed as a 'Collection' Project, as it will be a singular project and not a group of projects
6 Limitations
Make sure there are NO taxa limitations to ensure that any species can be included
7 'Include Places'
Set the location to the park so that the biodiversity list can be created specifically for the park
Collection
Umbrella
Observation Requirements
Specify the filters for which observations to include in your project. You can select multiple species (or taxa), place
Note: If you do not select taxa, places, or users, all will be included by default.
Include Taxa
Birds, monarch, etc.
Include Places
Zion National Park, Miami, etc.
Exclusion Filters
Exclude Taxa
Birds, monarch, etc.
Exclude Places
Zion National Park, Miami, etc.
8 'Data Quality'
Set as 'Research Grade' and 'Needs ID' so that all observations can be fact-checked by professionals
Data Quality
Select at least one Quality Grade. Further explanation for each Quality Grade can be found on our FAQ page.
Research Grade
Needs ID
Casual
9 'Media Type'
Set to 'Any' to allow for pictures, videos, and sound recordings to be posted, even after they are taken.
10 'Date Observed'
Set this to 'Any,' as this will allow observations to be made over a long period of time
Media Type
Optionally filter for observations with photos, sounds, or both.
Any
Has Sound
Has Photo
Has Both Photo and Sound
Date Observed
Use this for a time-limited event, bioblitz, or seasonal project. Select a single date, range of dates, or
(regardless of year). If using the Date Range section, make sure you have the correct times and time
observations made anytime that entire day. You can leave the Start Date or End Date blank if you wa
Any
Exact
YYYY-MM-DD
Range
Start Date / Time
End Date / Time
(Note: you can delete the time zone and precise times if you want to include whole days.)
Months
Select Options

iNaturalist

Aspects to Include

1. Up-to-Date Journal

Add **weekly updates** about the project to keep users **engaged**

Updates should include:

- the **progress** of the project
- highlighted **observations**
- other related **park events** and **iNaturalist projects**

2. Example Observations

Add **specific examples** to the Journal of what users should post to ensure that users make ~~**accurate** and **helpful** posts~~

Examples should include:

- images of the **correct species**
- **information** about these species
- correct posts from **other users**

3. Leaderboard Updates

Post **screenshots** or **results** of the Leaderboard for **Most Observations** and **Most Species** to keep users active

Posts should include:

- the full list of the **top scoring users**
- a **shout out** for the users in **1st place**
- a **repost** of one of their posts

4. Theme/Location Specifics

For many projects, there will be a **post theme** and/or **location** that will apply, so include specifics to

will apply, so include specifics to let users know what to post

Specifics should include:

- using the **'Exclude Taxa'** to filter species
- a **note** in the '**Journal**' to inform users
- using the **'Include Places'** to target the park
- to include the **location** of the park, **register** the park as an **iNaturalist location**:

https://www.inaturalist.org/places

search for **Parcul Natural Văcărești**

it will not be there, so **select 'Add a New Place'**

this **requires 50 observations**, so a frequent user must do this

select the area of the park and label it as **Parcul Natural Văcărești** so users can post observations directly to the park

iNaturalist

Helpful Advice to Maintain Your Project at the Park

Journal

- make sure to keep a **thorough** and up-to-date **Journal** and **About** section
  - it can be hard for users to start interacting with a project, so make it as easy as possible for users to join the project and start posting!
  - include conservation efforts, volunteer projects, and events happening in the park to continue to engage visitors
- below are some **examples** of the Journal section of **successful projects**:

March 27, 2023

Vermonters Invited to Help Search for Butterflies

Vermonters now have another excuse to get outside on sunny days: to join a statewide survey of the most angelic insects—butterflies. The Vermont Center for Ecostudies (VCE) is recruiting volunteers to help search fields and fens, mountains and meadows, and even their own backyards to help document the status of Vermont's butterflies.

Butterflies were largely a mystery in Vermont before hundreds of volunteer community scientists helped complete the first Vermont Butterfly Atlas (2002-2007), heralding a new era for their conservation. Twenty years later, the second atlas is poised to detect changes in butterfly populations and provide essential information for environmental management and policy.

"The 2nd Vermont Butterfly Atlas is a rare opportunity for us to understand long-term trends in butterfly populations and prescribe conservation actions to both keep common species common and reverse the trends for those in trouble," said Kent McFarland, VCE biologist and director of the atlas.

The Vermont Butterfly Atlas is a five-year survey completed every 20 years to document the abundance, distribution, and conservation status of butterflies across Vermont with the help of volunteer community scientists. It is part of a network of atlases across the Northeast, spanning from Connecticut through the Canadian Maritimes, and gives a landscape view of the butterfly fauna invaluable for conservation and a priceless snapshot for future comparisons. Vermont is poised to be the first state or province in the region to repeat a butterfly atlas 20 years later.

Most anyone with a sharp eye can contribute. Everyone knows what a butterfly looks like, and many carry a digital camera at all times—their smartphones. With a bit of training, it's easy to watch butterflies and report results to the Vermont Butterfly Atlas at e-Butterfly.org, a worldwide butterfly reporting system built by VCE, the Montreal Space for Life, and other partners. There is even a built-in computer vision system to help users identify the butterflies in their images.

"We're excited to offer training sessions for new participants at butterfly hotspots across the state as well as online workshops on butterfly atlasing," said Nathaniel Sharp, VCE biologist and atlas coordinator. "While there are tons of great field guides and online resources listed on our website, getting outside searching for butterflies is the best way to meet other butterfly lovers, learn how to identify our local species, and get motivated to document the butterflies in your neighborhood and beyond."

Vermont is home to over 100 butterfly species, with several new species discovered by butterfly watchers since the last butterfly atlas, including North America's largest butterfly, the Eastern Giant Swallowtail.

"Name a color, and you'll find it on a butterfly's wing," McFarland said. "Yet butterflies can also tell us a lot about the state of Vermont's environment under the forces of changing land use practices, climate change, and other human-induced pressures."

Financial support for the atlas is provided by the Vermont Department of Fish & Wildlife – State Wildlife Grant, Charles E. & Edna T. Brundage Foundation, Davis Conservation Foundation, the Park Foundation, and individual supporters and donors of the Vermont Center for Ecostudies.

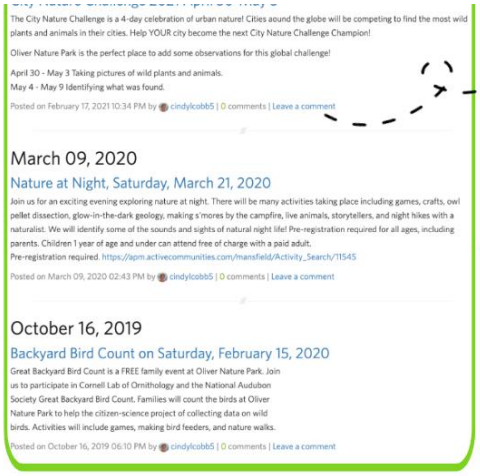
To learn more and join the survey, visit https://val.vtecostudies.org/projects/vermont-butterfly-atlas/.

Posted on March 27, 2023 02:35 PM by kpmcfarland | 0 comments | Leave a comment

February 17, 2021

To the left is a Journal Entry about a search for a specific species along with its conservation project

This is an example of a Journal entry that can also serve as an About section


The City Nature Challenge is a 4-day celebration of urban nature! Cities aound the globe will be competing to find the most wild plants and animals in their cities. Help YOUR city become the next City Nature Challenge Champion!

Oliver Nature Park is the perfect place to add some observations for this global challenge!

April 30 - May 3 Taking pictures of wild plants and animals.
May 4 - May 9 Identifying what was found.

Posted on February 17, 2021 10:34 PM by cindylcobb5 | 0 comments | Leave a comment

March 09, 2020

Nature at Night, Saturday, March 21, 2020

Join us for an exciting evening exploring nature at night. There will be many activities taking place including games, crafts, owl pellet dissection, glow-in-the-dark geology, making s'mores by the campfire, live animals, storytellers, and night hikes with a naturalist. We will identify some of the sounds and sights of natural night life! Pre-registration required for all ages, including parents. Children 1 year of age and under can attend free of charge with a paid adult.
Pre-registration required. https://apm.activecommunities.com/mansfield/Activity_Search/11545

Posted on March 09, 2020 02:43 PM by cindylcobb5 | 0 comments | Leave a comment

October 16, 2019

Backyard Bird Count on Saturday, February 15, 2020

Great Backyard Bird Count is a FREE family event at Oliver Nature Park. Join us to participate in Cornell Lab of Ornithology and the National Audubon Society Great Backyard Bird Count. Families will count the birds at Oliver Nature Park to help the citizen-science project of collecting data on wild birds. Activities will include games, making bird feeders, and nature walks.

Posted on October 16, 2019 06:10 PM by cindylcobb5 | 0 comments | Leave a comment

To the left is a Journal Entry to advertise Park related events

These events should be advertised on Facebook as well


April 16, 2020

The Sidewalk Botanist Scavenger Hunt 2020

Join Project

Urban botanizing in the age of COVID-19

Since most of my botanizing these days is while walking the woofer in a heavily urbanized part of Chicago, I thought I would see how many of these common urban plants I could observe in 2020. Want to join along?

Many of the species on the project list can actually be commonly found in urban areas around the world (urban species homogenization is a whole academic subfield!), but the ones on this list are particularly common in the Chicago region.

Here's a guide that shows a photo, snippet from Wikipedia, and map of observations:
https://www.inaturalist.org/guides/11608?view=card

happy botanizing, fellow sidewalk naturalists!
—cassi

Posted on April 16, 2020 10:18 PM by bouteloua | 29 comments | Leave a comment

Above is a Journal Entry to post Example Observations so the Users know what types of Data are acceptable.

Promotion

- to **increase** iNaturalist **users** in the park and to **engage visitors** in iNaturalist events, the VNPA should promote on **Facebook** and their **website**
  - most park visitors and community members use Facebook as their main source of information from the park
  - the VNPA should include a link to each of their projects on their website

    (This can be done in the 'Project' tab that is already on the website)
  - the VNPA should include a brief section in the website that explains the importance of each iNaturalist project and provides an overall summary of why they are using iNaturalist

Other iNaturalist Events

- when hosting **iNaturalist events**, create a **project** that can **go along** with the event
  - for these events, make sure to create a unique name, a specific date distinction, and include or exclude taxa depending on the theme *(i.e. 'Include birds' if the event is Bird Day)*
  - you should also promote these events on the master collection

project journal page, the VNPA Facebook, and the VNPA website

- below are **specific examples** of iNaturalist-related events that the VNPA can host and create a project for in the park based on other successful projects:

these events can be adapted for other themes, too

- a monthly iNaturalist workshop that follows the pilot workshop conducted with the WPI team, where the VNPA can create a project and show users how to join and post
  - *this project should have no limitations to allow any observation to be made*
- a Children's Nature Day event where children can be taught about nature in the park and record observations
  - *this project should have no limitations to allow any observation to be made*
- a Color Theme Day (*i.e. Blue Day*) where participants come to the park and record observations of species of the same color
  - *this project should have specific taxa limitations to include only the desired taxa, this should be accompanied by a note in the journal section to remind participants about the theme*

- a collaboration with local schools where students will come to the park on a day trip and interact with the park and with iNaturalist; this can be done multiple times throughout the year with different schools and should be open to parent participation
  - *this project should have no limitations to allow any observation to be made*

- a BioBlitz event for National [insert animal] Day where project members can record observations during a 24-hour period
  - *this project should have a taxa inclusion filter so that only the specific animal can be observed, this should be accompanied by a note in the journal section to remind participants about the theme; the project should also include a guided walking tour and a presentation about the specified animal and the presence of it in the park (i.e. butterflies, birds, insects, etc.)*

- a BioBlitz event for Earth Week where project members can record observations during Earth Week
  - *this project should have no taxa limitations to allow any observation to be made; the project should also include a guided walking tour on Earth Day and a presentation about Earth Week-specific information from the park (i.e. conservation efforts and projects, VNP history and importance, etc.)*

- a BioBlitz event for City Nature Challenge where project members can record observations in the park
  - *this project should have no taxa limitations to allow any observation to be made; the project should also include an About section explaining the importance of urban biodiversity and should encourage participants to help Bucharest compete in finding the most wild plants and animals in the city, and specifically in the park*

Thank you for your help with this project! We hope you can use this information to guide your future iNaturalist usage and help engage Bucharest with nature!

- Jan, Emma, Cristina, Amos, and Ben

Appendix G: iNaturalist Tutorial Video for New Users

https://youtu.be/SCsaZUMuWGU

This is a short tutorial to help new users get started on iNaturalist. After watching the video, users will understand how to make observations, ID their observations, and join projects in iNaturalist.