

HOW WORDS CAN FORM A LANDSCAPE: AN ANALYSIS OF 3 COMMUNITY  
GEOPOETIC PROJECTS OF THE AMERICAN SOUTHWEST AND THEIR EFFECTS ON  
PARTICIPANTS' SENSE OF PLACE

BY

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A thesis submitted to the Graduate School

in partial fulfillment of the requirements

for the degree

Master of Applied Geography

Major: Geography

Minor: Geographic Information Science & Technology

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## ABSTRACT

### HOW WORDS CAN FORM A LANDSCAPE: AN ANALYSIS OF 3 COMMUNITY GEOPOETIC PROJECTS OF THE AMERICAN SOUTHWEST AND THEIR EFFECTS ON PARTICIPANTS' SENSE OF PLACE

BY

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Public lands of Arizona, Colorado, and New Mexico have inspired the creation of 3 community geopoetic projects: Poetic Inventory of Saguaro National Park, Poetic Inventory of Rocky Mountain National Park, and Literary Inventory of Organ Mountains-Desert Peaks National Monument. Each of these projects has provided an outlet for writers to share their perceptions of the ecoregions in which the public lands are situated, the species that call these regions home, and the ecological relationships among them. In some cases, participation in the inventories has also led to the development of other projects and has allowed for community-building between contributors. However, current research on whether these specific projects have influenced contributors' perceptions of and relationships with lands of the national parks/monuments and resident species is limited and requires further investigation. The purpose of this research is to explore the role that community geopoetic projects play in

- engaging local communities in learning more about public lands and their human and non-human species,
- influencing contributors' 'sense of place' in relation to the national park/monument of interest,
- and shifting contributors' perceptions of the public lands and their species.

To assess the projects' role in these actions, web-based questionnaires and mobile methods such as walking interviews were used to collect contributors' stories of their participation in these community geopoetic projects. Responses from the contributors revealed many themes connected to sense of place. For this thesis, the following themes were chosen and discussed: *Relationships with place, relationships with species, changed perceptions and new knowledge of place and species*, and *Indigenous relationships and knowledge*.

After analysis and interpretation of the survey results, it was found that such projects do have an impact on many contributors' perception of the public lands and the species their works of poetry/prose are inspired by, with some reporting a greater feeling of 'sense of place' in relation to the public lands the projects centered on. This sense of place was strengthened not only by learning more about the lands and their non-human species, but of fellow *Homo sapiens* as well. For some, this provided a greater sense of understanding of fellow community members and their relationships with place and species. These results help build on existing research and inform future research in the geohumanities pertaining to sense of place, the use of mobile research methods, and the usefulness of creative geohumanities projects in the wider field of geography.

This thesis also discusses the epistemological tension between what constitutes scientific inquiry and art, and the issue of qualitative vs. quantitative research. This tension underlies the



content of this thesis, as it documents part of my journey in understanding geohumanities' role and the application of creative methods such as geopoetics in the wider field of geography.

*Keywords: Geohumanities, Geopoetics, Mobile Research Methods, Sense of Place.*

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## CHAPTER 1: INTRODUCTION

*Sitting upon a fallen log – its top worn smooth by the elements and those who’ve perched upon it before – I listen to the water rushing through crevasses and crashing into the ground below as runoff from late-winter snow and rainstorms lets gravity take it. This place now serves as a respite from the hot desert sun for me, my fiancé, and our dog, who lays down on the damp earth beside me. We’re not the only ones though – birds chirp and sing in the tree branches above us, and many other people and their four-legged companions have come to enjoy Soledad Canyon as cold winter days make way for the warmth of spring. This is my first time here, as I let low expectations of what the desert has to offer keep me from visiting for years. As we vacate our resting spot for others and leave the waterfall, the babbling of the runoff as it travels across well-worn stones makes it sound as though the canyon is whispering – voices of the desert reminding me to not be so quick to judge.*

I’d be lying if I said that I moved to Las Cruces, NM without preconceived notions of the Chihuahuan Desert and its non-human inhabitants. I carried a perception of desert landscapes as being desolate, dangerous, and lacking in biodiversity. It wasn’t until being introduced to the *Literary Inventory of Organ Mountains-Desert Peaks National Monument*, a community geopoetic project coordinated by Eric Magrane, and a few of its contributors that I truly began to gain an appreciation for desert environments and their resident species. As I read through the pieces, I found that a section of Jack Wright’s (2019) essay on the tarantula (*Aphonopelma chalcodes*) provided me with an understanding of my own malady:

Xerophobia is one of those fears: a dread of dry places. For the afflicted, the Chihuahuan Desert spreads out like a dying moon. The absence of green becomes the absence of virtue. For those burdened by humid expectations, the desert around Las Cruces is an ailment waiting to be cured by God, rainfall, and the survey stake.

Reading pieces such as this sparked a change in my perception of the Chihuahuan Desert and all that it holds. This shift in perception was encouraged further by two events: The 2<sup>nd</sup> Annual BioBlitz<sup>1</sup> at Organ Mountains-Desert Peaks National Monument and a celebratory reading in 2019. This brought me to wonder if literary inventory contributors' perceptions and senses of place had also been affected by their participation, leading to the focus of this research.

How does this research fit within the scope of geography? In terms of Pattison's Four Traditions, this research primarily fits into the Human-Environment Tradition of Geography, or what is also known as the Man-Land[sic] Tradition (Pattison 1964). More specifically, this research is primarily rooted in the practices of the geohumanities and the broader field of cultural geography, with a focus on the relationships that humans have formed with the environments around them and the human and non-human residents they share them with. It explores the relationships between the 'human' and the 'physical' of contributors from three community geopoetic projects: Poetic Inventory of Saguaro National Park (SNP), Poetic Inventory of Rocky Mountain National Park (RMNP), and Literary Inventory of Organ Mountains-Desert Peaks (OMDP) National Monument. In exploring these relationships, this research aims to demonstrate the role that community geopoetic projects play in

- engaging local communities in learning more about public lands and their human and non-human species,
- influencing contributors' 'sense of place' in relation to the national park/monument of interest,
- and shifting contributors' perceptions of the public lands and their species.

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<sup>1</sup> Bioblitzes are citizen-science events that aim to engage the general public in assisting with species counts within a designated region and time period.

The experiences contributors shared in their responses to an online questionnaire and the thoughts and interactions that were evoked by a walking interview with one of the contributors are used to demonstrate these points. Pieces of autoethnography and visual arts are also incorporated in this research, serving as artifacts of the changes in my own sense of place and the interactions with locations that OMDP contributors expressed connections to.

Why focus on people's 'sense of place' – in this case, their relationships with and perceptions of other species and the environments in which they reside? Sense of place is one of the building blocks of a person's geo-literacy, which provides them with the knowledge and means to help safeguard cultural and natural resources (Edelson 2011; as referenced in Brillante and Mankiw 2015). One's perceptions and level of understanding can dictate how they react to environmental issues and responsibilities (Vaske and Kobrin 2001). For instance, species that aren't generally viewed as being aesthetically pleasing and/or are feared do not often receive the same attention in terms of conservation or species protection efforts (Knight 2008; Gunnthorsdottir 2015). Similarly, desert environments are often seen as barren stretches of land that lack "' natural' charisma" (Lezak 2018, 3), with native species that are not as often perceived as visually appealing or receive the same level of human interest (Yu et al. 2013; Lezak 2018).

The use of creative/artistic methods such as community geopoetic projects may be effective in engaging communities to learn more about and shift perceptions of such environments and their human and non-human residents. However, more research is needed to determine the efficacy of using the arts to engage the public and disseminate environmental information (Jacobson, McDuff, and Monroe 2007). The three geopoetic projects of the

American Southwest focused on in this research may assist in understanding what the arts can do.

Anthropogenic climate change poses a serious threat to the ecological systems of regions such as the American Southwest. Threats to desert environments including those of the Sonoran Desert, Chihuahuan Desert, and Madrean Archipelago – in which the Saguaro National Park and Organ Mountains-Desert Peaks National Monument are located (see Figure 1) – are pronounced (Garfin et al. 2013; Gonzalez et al. 2018). These regions are more susceptible to extreme changes in air temperature, and the availability of water and energy sources (Stahlschmidt et al. 2011). Soil erosion is also a concern in these regions, with ground cover, soil texture, and precipitation being a few of the contributing factors (Blake et al. 2020).

Although not located in a desert environment per se, the flora and fauna of Rocky Mountain National Park (RMNP) located in the Southern Rockies Ecoregion are no less affected by climate change. Forested lands of the Southern Rockies Ecoregion including those of RMNP have been heavily affected by climate change and variability. For example, factors including increases in average annual temperature, changes in precipitation, and fire-management practices have led to severe outbreaks of bark beetle species. These insects damage and, in many instances, kill the trees that they infest (Sumner and Lockwood 2020). This not only affects the trees, but the species that rely on them to provide habitat. The potential of erosion and decreased water and soil quality may also be induced by severe wildfires, as increased fuel loads are created by dead plant matter left by the beetles (USDA Forest Service 2008).

The Organ Mountains-Deserts Peaks National Monument (see Figure 2) – which inspired the main inventory of interest in this research – is located in southwest New Mexico near Las Cruces and Mesilla, NM. This BLM-managed, multiple-use national monument was recently

established by President Barack Obama on May 21, 2014, and encompasses the Doña Ana, Organ, Potrillo, Robledo, and Sierra de las Uvas Mountains. Spanning 496,529 acres across the Chihuahuan Desert, the monument is home to a diverse collection of flora and fauna, including endemic species such as the Organ Mountains (OM) scale seed, OM figwort, OM paintbrush, OM evening primrose, OM pincushion cactus, OM giant hyssop, and OM talus snail (79 Fed. Reg. 9131, 2014).

Along with unique flora and fauna, the monument also holds a great deal of historical and cultural significance. Some of the oldest archaeological artifacts found there belonged to the Folsom and Clovis peoples, who resided in what we know as North America more than 10,000 years ago during the Late Pleistocene. (O'Brien et al. 2015) The area is home to archaeological remains of Indigenous peoples dating between 8,000 and 2,000 years ago such as dwellings, rock art, obsidian points, ceramic shards, and food remains. Among many historical events that happened in the region, the Organ Mountains played host to the first Civil War Engagements in New Mexico, with Baylor Pass Trail used by the Confederate soldiers to outflank the Union. For modern-day humans, the lands of the monument are used for scientific research, outdoor recreation such as hiking and mountain biking, livestock grazing, hunting, and other activities (79 Fed. Reg. 9131, 2014).

It should be mentioned that, while the monument was established with a great deal of support from local communities, there was and remains a great deal of tension over the utilization of OMDP lands and resources. The national monument came under review after President Donald Trump mandated the Review of Designations Under the Antiquities Act on April 26, 2017 (82 Fed. Reg. 13792, 2017). In response to Executive Order 13792, former Secretary of the Interior Ryan Zinke conducted a review and provided recommendations on



national monuments that were designated between January 1, 1996, and 2017. The national monuments under review included those where the designation covers or was expanded to more than 100,000 acres, or where Secretary Ryan Zinke determined “the designation or expansion was made without adequate public outreach and coordination with relevant stakeholders” (82 Fed. Reg. 13792, 2017, 20429).

In former Secretary Zinke’s review of the Organ Mountains-Desert Peaks, it was recommended that the intent and provision of the Antiquities Act be complied with, but balanced with “prioritizing public access; infrastructure upgrades, repair, and maintenance; traditional use; tribal cultural use; and hunting and fishing rights” (U.S. Department of the Interior 2017, 16). More specifically, some of the recommendations included to “request congressional authority to enable tribal co-management of designated cultural areas... address impediments to national security associated with the Potrillos[sic] Mountain Complex... assess risks to the operational readiness of nearby military installations...” and, “secure funding for adequate infrastructure and management needs to protect objects effectively” (U.S. Department of the Interior 2017, 16). Since Secretary Zinke’s review, the John D. Dingell, Jr. Conservation, Management, and Recreation Act was signed into public law on March 12, 2019, which may lead to changes in the management of the OMDP National Monument (Public Law 116-9, 2019).

Contestation over the politics and land-use practices of OMDP aside, the landscapes that this young national monument is composed of serve as symbols of Las Cruces and Mesilla, NM. For example, the Organ Mountains served as part of the inspiration for the creation of Organ Mountain Outfitters. The iconic silhouette of the Organ Mountains is emblazoned on the goods they produce, providing a constant reminder of the towering rocky spires located to the east.<sup>2</sup>

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<sup>2</sup> See <https://www.organmountainoutfitters.com/pages/our-story>.

The lands of the monument also play host to activities that allow for a socio-economically diverse community to enjoy getting outdoors, learn about the responsible enjoyment of natural lands and resident species, and form connections to other community members through such activities.<sup>3,4</sup> Aside from direct experiences that can be had in the monument, the Organ Mountains and Desert Peaks tower over Mesilla Valley, providing an omnipresent reminder of where one is. In the words of respondents who frequent the region or call Mesilla Valley *home*:

“...I was raised in the shadowing presence of the Organ Mountains.”

“As a site within Dona Ana County, the monument rests over Las Cruces defining the landscape but also the lore and popular memory of the community.”

“We were drawn to this wonderful community by the majesty and lure of the Organ Mountains and have spent many days hiking around them.”

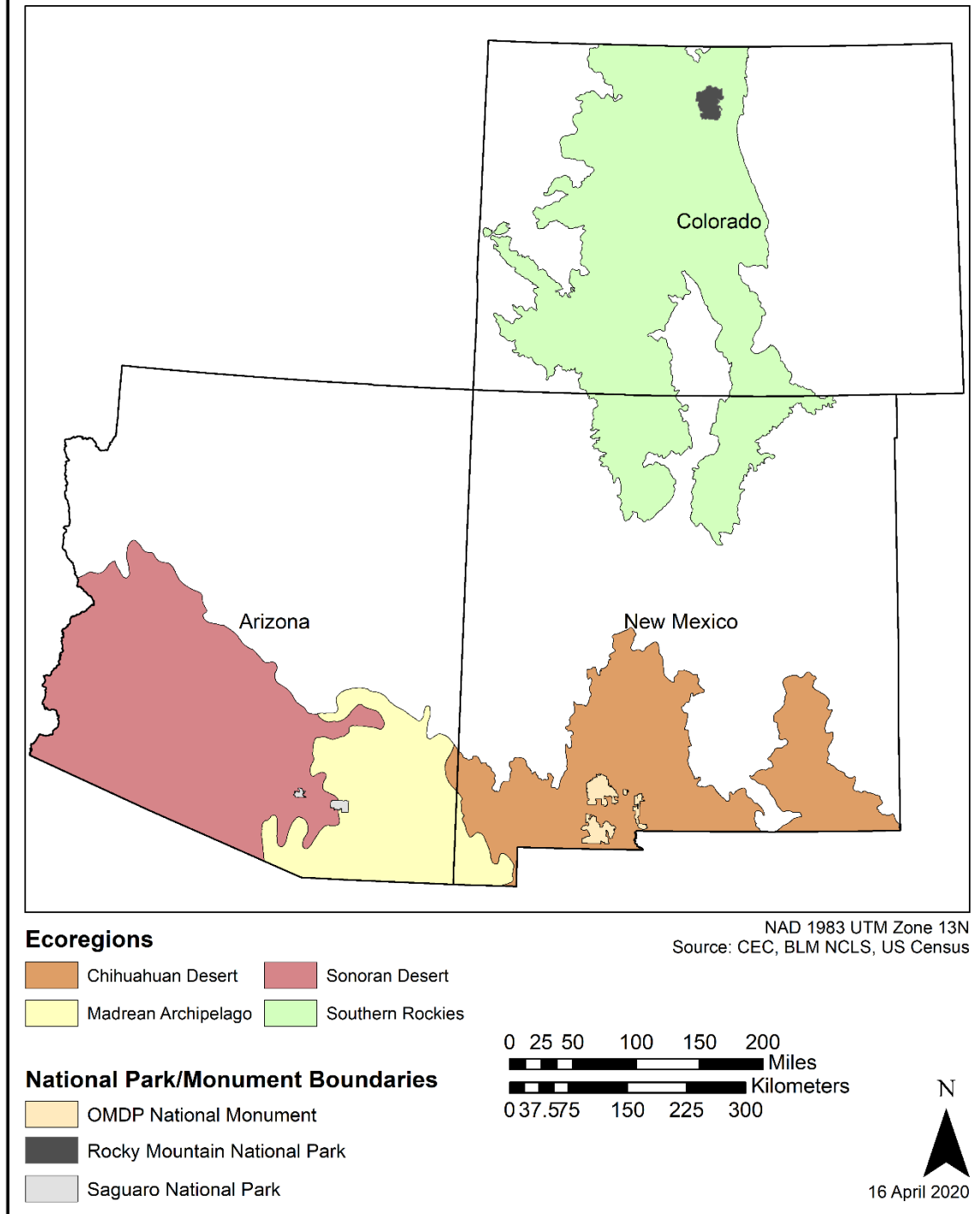
In this thesis, the Organ Mountains-Desert Peaks National Monument serves as the inspiration of inquiry into people’s sense of place in relation to public lands and the species that call them home.

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<sup>3</sup> See <https://organmountainsdesertpeaks.org/about-us-3/>.

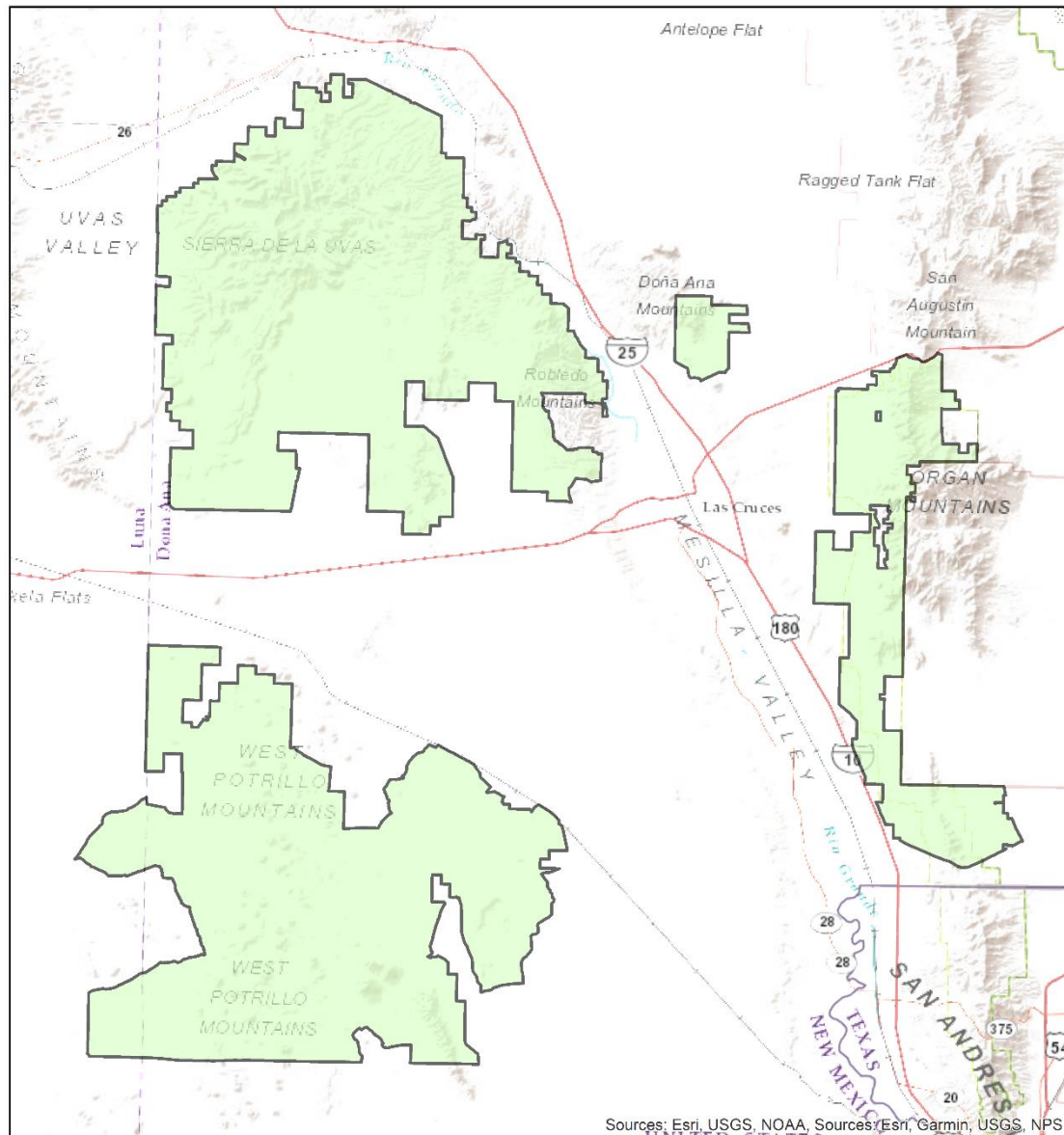
<sup>4</sup> See <https://snmta.org/mission-and-goals/>.

## National Parks/Monument & Ecoregions of the Inventories



**Figure 1: Map of the three public lands of interest and the ecoregions in which they're situated, located in Arizona, Colorado, and New Mexico. (Created using ESRI's ArcGIS 10.6.1)**

# Organ Mountains-Desert Peaks National Monument



NAD 1983 UTM Zone 13N

Source: BLM NLCS

OMDP Boundaries

0 2.5 5 10 15 20 Miles  
0 3.5 7 14 21 28 Kilometers

N

15 April 2020

**Figure 2: Map of Organ Mountain-Desert Peaks National Monument, located in southwest New Mexico. (Created using ESRI's ArcGIS 10.6.1)**

## CHAPTER 2: LITERATURE REVIEW

This literature review provides an introduction to each of the creative geohumanities projects that this research explores; a brief explanation of where the practice of geohumanities is situated in relation to applied geography, as well as issues of art vs. science and the ‘physical’ vs. ‘human’; and provides an explanation of the use of creative approaches to geography.

### 2.1 Creative Geohumanities Projects

This thesis focuses on three community geopoetic projects that were inspired by public lands of the American Southwest: Poetic Inventory of Saguaro National Park (SNP), Poetic Inventory of Rocky Mountain National Park (RMNP), and Literary Inventory of Organ Mountains-Desert Peaks (OMDP) National Monument.

The “Poetic Inventory of Saguaro National Park” took place in 2011 and was coordinated by Eric Magrane. This project was part of the National Park Service and National Geographic Society BioBlitz that took place at Saguaro National Park, AZ. This event was designed to engage both scientists and the public to produce an inventory of species in the park, while the Poetic Inventory served to explore the relationships between *Homo sapiens* and other species. Each contributor to the inventory wrote about a species of Saguaro National Park. These pieces were shared via public readings and 80 of them were published in a fifth issue of the *Spiral Orb* online poetry journal<sup>5</sup> (Magrane 2012).

The “Poetic Inventory of Rocky Mountain National Park” was coordinated by Charles Malone and created in conjunction with the BioBlitz Festival held at Rocky Mountain National Park in August 2012. The project was modeled after the Poetic Inventory of Saguaro National Park and includes works of poetry, fiction, and nonfiction by 61 Colorado writers, each with a

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<sup>5</sup> See <https://spiralorb.net/poeticinventory.html>.

focus on a resident species of the park. This project resulted in a book titled *The Poetic Inventory of Rocky Mountain National Park* edited by Charles Malone, Mandy Rose, and published by a local 501(c)3 non-profit literary and arts organization, Wolverine Farm Publishing (Malone and Rose 2013).

The “Literary Inventory of Organ Mountains-Desert Peaks” centers on the species in the region of the OMDP National Monument, established on May 21, 2014. This project was coordinated by Eric Magrane and served as part of a local bioblitz – the 2<sup>nd</sup> Annual OMDP BioBlitz that took place on May 4, 2019. More than 50 writers and poets contributed their work to the inventory, each focusing on an assigned or chosen species that resides within the region of the monument. The poetry and prose pieces that were contributed have been shared via public readings and the fifteenth issue of *Spiral Orb*<sup>6</sup> (Magrane 2019).

## **2.2 Geohumanities**

It may be useful to, first, provide a brief explanation of what the geohumanities are as a field of research. Though there’s not a single definition that can encapsulate all that the geohumanities are, in the simplest terms, they are the result of a recent (re)engagement between the field of geography and the humanities (Hawkins 2019; Magrane 2019). They represent the compilation of transdisciplinary research – that which breaks down the barriers between fields of knowledge and creates something new (Dear 2015).

In the context of applied geography, what might the geohumanities do? Harriet Hawkins et al. (2015) discuss this in their article “What Might GeoHumanities Do? Possibilities, Practices, Publics, and Politics.” The authors share their experiences with collaborative works within the geohumanities, ones in which method and practice are joined “to make strange, to bring to the

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<sup>6</sup> See <https://spiralorb.net/omdp.html>.

fore the over-looked, and to challenge the settled (Hawkins et al. 2015, 214). Four of the themes that their experiences present are discussed: possibilities, practices, publics, and politics (2015).

In discussing ‘possibilities,’ Hawkins et al. (2015) do not wish to provide an advanced determination of what geohumanities work might produce or achieve. Instead, the authors invite collaborative interdisciplinarity to work towards pressing issues of our day such as climate change and, perhaps, craft something new in the process. For example, Noel Castree discusses the need for the geohumanities and the wider field of environmental humanities to closely engage with global change science (GCS).

Global change scientists are increasingly looking to the humanities and social sciences as the “missing ingredients” (Belmont Challenge 2009; as referenced in Hawkins et al. 2015, 221) in helping to illuminate the human aspect of global climate change. This interdisciplinarity often carries the expectation that the humanities and social sciences will provide a ‘one world’ knowledgebase, around which scientists can then shape their efforts. However, Castree states that the geohumanities and environmental humanities have more to offer GSC, as they work to understand what it means to be ‘human’ and how people determine meaning in their own and others’ lives. This lends itself to a very diverse collection of research that may allow for greater involvement by geo- and environmental humanists in GCS (Hawkins et al. 2015).

Geohumanists’ practices are diverse and interdisciplinary collaborations often bring together methods that one might not expect. One of the authors, Lou Cabeen, looks to maps as the inspiration for their artwork. Part of their work is spatial, identifying the locations associated with “apparitions of the Virgin Mary” (Hawkins et al. 2015, 217) on USGS topographic maps for instance. The other half is artistic, with these locations being indicated by circles of transparent gold text that emanate from the location, representing the prayers or chants that pilgrims to these

sites have used. This applies the “lived experience of place” to the maps (Hawkins et al. 2015, 218). The maps become illuminated cartographic manuscripts, the joining of two venerable artforms.

The ‘publics’ of and for the geohumanities are those who may be considered as the “end users of academic knowledge and practices” (Hawkins et al. 2015, 214). They are not separate from the works of geohumanities. Instead, the publics may serve as the mainspring of knowledge and serve as project collaborators. For example, DeLyser and Neely’s work that lead to the rediscovery of *Ramona*, a silent film adaptation of Helen Hunt Jackson’s novel of the same name published in 1884, was made a success by the coming-together of publics. It was thought that the third version of the film released in 1928 had been lost forever. However, an English and film studies researcher, a geographer, and a silent-film historian-practitioner worked together to find the last remaining print of the film. Multiple figures from various backgrounds worked together to produce an English script of the film, restore it, and re-release it to the public on DVD. The project was “an achievement of public and participatory GeoHumanities that transcends typical scholarly outputs” (Hawkins et al. 2015, 226). The publics of and for the geohumanities made an unthinkable task become reality.

The ‘politics’ of the geohumanities refer to the politics of knowledge-making in the cases of the projects mentioned by Hawkins et al. (2015). The diverse backgrounds of expertise, disciplines, and methodologies “unsettle relations among theory, praxis, scholarship, practice, and application, and undo the privilege of academic expertise” (Hawkins et al. 2015, 216). To better understand the politics of the geohumanities, reflection and the actual ‘doing’ of geohumanities research is needed (2015).



## *Tensions*

The field of geohumanities is a fairly new one but its practices are not, being deeply rooted in the histories of modern geography. The more creative methods that are used in the geohumanities may seem novel or unusual, but many of the early geographic works fused the creative and technical aspects of the field. In the 18<sup>th</sup> and 19<sup>th</sup> centuries, prominent figures such as Alexander von Humboldt (1769-1859), a Prussian polymath who is seen as one of the founders of modern geography (James 1972, 147), produced works that integrated scientific inquiry with the creation of art (Hawkins 2019). Examples of his works that framed the rigor of scientific inquiry with the imaginings of art include *Essay on the Geography of Plants*, *Views of Nature*, and *Cosmos: A Sketch of the Physical Description of the Universe* (Wulf 2018).

While his diverse collection of research includes the objectivity of ‘Humboldtian Science,’ it also incorporates Johann Wolfgang von Goethe’s (1749-1832) way of conducting scientific inquiry. ‘Goethe’s Way of Science’ does not do away with objectivity altogether but emphasizes the need for the observer to recognize that they are not completely separate or isolated from what they are studying (Buttimer 2001, 105). In other words, “As thought comes alive in nature, and nature comes alive in the activity of thinking, knowledge of the world and knowledge of self unite at a higher level” (Buttimer 2001, 111). Whether it was intended or not, early works such as those of Humboldt that built the foundation of modern geography melded creativity/art and science. Like the works of Alexander von Humboldt and others, writers who contributed to the community geopoetic projects of focus in this research relied on personal observation and discovery, research, analysis, and, last but certainly not least, imagination. As such, geohumanities does not necessarily represent a new ‘turn’ in geography, but a (re)turn (Hawkins 2019).

Despite this (re)turn, the histories from which GeoHumanities has sprouted also include the epistemological tensions that result from the struggle between ‘science’ and ‘art.’ Donald W. Meinig (1983) discusses the field of modern geography’s quandary over whether to identify itself as an art or a science. While it was and continues to be considered a social science and accepts the inclusion of human geography, Meinig argues that the field lacks in its inclusion of ‘humanistic geography.’ In other words, practitioners of geography tend to cling to scientific tradition rather than explore human experience and expression as inhabitants of this earth. To rectify this, Meinig calls for a more ‘humanistic’ approach to geography as an art, in the form of viewing literary works as not only scientific tools but as glimpses into the writer’s perception of the world around them. He also emphasizes the need for more geographers to produce creative literary works that delve deeply into the realm of landscape and human experience (Meinig 1983).

“Geography as Art” by Meinig (1983) serves as part of the foundation upon which subfields such as literary geography and, more specifically, geopoetics have been built. The works of these subfields do not confine themselves to the objective but wander into the very subjective and individualistic ‘human experience’ of geography. While these features of creative geohumanities have become more accepted and have experienced a surge in attention as journals such as *GeoHumanities* and *Geography Compass* have brought creative works to the forefront (Hawkins 2015), there is still contestation over what many physical geographers might consider as the “touchy feely” (Rhoads 2004, 749) side of human geography. This contestation is the result of the continuation of geography’s divide between the human and the physical, as well as art and science. (Rhoads 1999; Gober 2000; Turner 2002; as referenced in Rhoads 2004) It’s argued that this divide must be resolved and that interdisciplinary/collaborative works are

becoming increasingly important “as the global environmental crisis intensifies” (Price and Lewis 1993, 13) Since the publication of the articles mentioned here, there is a growing body of work being produced by interdisciplinary collaboration between human and physical fields of study, and the collaboration between artists and scientists. One such example comes from the field of ecology.

In the humanities, employing the arts to communicate issues such as anthropogenic climate change and influence and educate people about such issues is not new (Belfiore and Bennet 2006; as referenced in Curtis, Reid, and Ballard 2012); However, use of the arts is not as widely used in disseminating scientific research. With continued environmental degradation being partly attributed to a failure in the dissemination of information to community members and in sparking change in people’s consumption and land-use habits (Curtis 2011, 181), the arts may play a crucial role. Curtis, Reid, and Ballard (2012) discuss the use of visual and performing arts to communicate the importance of environmental issues and scientific information.

Curtis, Reid, and Ballard conducted a survey at the 2003 Ecological Society (ESA) of Australia Annual Conference. At the conference, various artistic methods included 6 theatrical performances, Indigenous performance, art galleries, and artworks posted throughout the conference center. 239 anonymous questionnaire responses were gathered from research students and professionals in attendance who served as participant observers (Ballard 2004; as referenced in Curtis, Reid, and Ballard 2012), out of a total of 500 attendees. The authors report that about 80% of the respondents were members of the ESA, with the group split almost evenly between students and professionals. 86% reported that they were entertained by aspects of the arts program, while 50% reported that the arts programs led them to reflect on how science might be communicated. 50% also noted that they were convinced that art has a role in “helping people

understand complex scientific information” (2012, under ‘Results’) However, 76% of the respondents indicated that they would not consider incorporating the arts in their work (Curtis, Reid, and Ballard 2012). This may be partly because of the tendency to view the sciences as objective, with the arts being more subjective. Additionally, it might be feared that incorporating the arts in or using them to disseminate research might cause such research to lose credibility. However, the use of a more creative approach (e.g., narrative) to share research often creates stronger connections between publics and the works of the scientific community, bringing about more change than ‘traditional’ or purely ‘academic’ methods might (Saffran et al. 2020). In the words of Hagan and Redmond (2019), “By cultivating artistic and ecological thinking, educators across disciplines can grow opportunities for stewardship and encourage social engagement and active cognitive *reassociation* with our environments” (under “Introduction”).

### ***Creative Methods or ‘Doings’ in Geography***

The use of creative methods in the humanities is well-established by current literature and collaborations between those who specialize in the arts and the sciences have become more common. (Januchowski-Hartley et al. 2018) The use of methods such as poetry is discussed in articles such as Eric Magrane’s “Applying the Geohumanities” (2019) and Harriet Hawkins’ “Dialogues and Doings: Sketching the relationships between geography and art” (2011).

Hawkins (2011) provides examples of how creative geography collaborations have been used to explore people’s perceptions of ‘landscape,’ which isn’t necessarily seen as a fixed entity but a mobile or ‘living’ one that connects the space, audience, and artist. For example, *Caravanserai*<sup>7</sup> by Annie Lovejoy and Mac Dunlop is described as a public art piece but isn’t what one might expect in terms of art. The project served as a semi-permanent artists’ residence

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<sup>7</sup> See <http://www.annielovejoy.net/cgi-bin/showproject.pl?title=Caravanserai>.

for writers, artists, and geographers such as Hawkins to share their work and create relations within a local community in Cornwall, England. They provided events for members of the local community to learn how to build boats, learn about local history, take wild-herb walks, and partake in other unique activities. Lovejoy and Hawkins used their experiences with this project to produce a limited-edition artists' book titled *Insites: a notebook*, which explores the relationships between their project and the concept of 'place.' Creative geographies such as this may provide greater insight into concepts such as regional politics and economics, as well as encourage the participation of the general public in the field of geography (Hawkins 2011).

While arts or creative methods are generally viewed as useful and appreciated in engaging the public's interest in science, there is still a divide between the practices of artists and scientists within the interdisciplinary dialogue. In other words, the view that "scientists do science and artists do art" is prevalent (Januchowski-Hartley et al. 2018, 905) However, Januchowski-Hartley et al. (2018) argues that scientists such as those in conservation studies can also benefit from integrating their research with creative methods such as poetry. Creating poetry may allow for scientists to enter an "incubation period" (2018, 906), or a time during which they step away from their scientific problem and allow their ideas to 'brew.' During this 'incubation period,' the conservation scientist may come to new realizations about relationships that they didn't notice before, allowing their research to take on other viewpoints (Aslan et al. 2016; as referenced in Januchowski-Hartley et al. 2018). This same concept could be applied by practitioners of geography in what might be considered the 'doings' of geography (Hawkins 2011).

Harriet Hawkins (2011) discusses 'dialogues' and 'doings' as two different forms of relationship between art and geography. The first is the geographer's interpretation of art, such as

the works of poetry/prose that compose literary inventories. The latter is the geographer's act of creating or participating in art, such as the production of creative geographies that are shared in this thesis document. Hawkins mentions that geographers should not view the artistic products that are being analyzed or created as finished or static, but as embodiments or representations of experience, performance, artifacts, and practices. She presents four points to consider when producing creative geographies: Embodiments, politics, collaboration, and practice.

'Embodiment' refers to the experiences and emotions that we have as we move through space and landscape. An example of embodiments would be the autoethnographic pieces I wrote and have been shared in this document (e.g., the first paragraph of the introduction). 'Politics' refer to the political and ethical outcomes of art and geography collaborations. For instance, a collaboration could serve as a demonstration of resistance against environmental pollution, which carries political and ethical implications. Lastly, collaboration and practice refer to the need to understand and reflect on what one brings to geographer-artistic collaborations in terms of skill set and disciplinary background (Hawkins 2011).

Tim Cresswell (2014) discusses what can be considered as the 'doings' of geography, sharing his experience as a geographer who is delving into the serious creation and sharing of his poetry. He mentions that he once felt a sense of embarrassment in mentioning that he is a poet, as 'creative' literary works may not be taken as seriously in the social sciences. However, Cresswell states that utilizing poetry in his research has led him to no longer be embarrassed and has opened up opportunities to write pieces that fall between the forms of academic and poetic writing. However, while articles such as these encourage the use of creative writing, he does mention that people may feel that they can form creative works without a great deal of forethought, discipline, or training (Cresswell 2014). It's understandable how this could be seen

as an issue and, as Hawkins (2011) mentions, one should consider their skill set and disciplinary background, as well as the personal biases one may ‘bring to the table’ in creating such works (Magrane 2015). However, perhaps the view that works of creativity do not require training is what encourages so many to partake, regardless of one’s level of education, social status, etc. Perhaps creative works provide people with a format that allows them to share their thoughts and feelings more freely. This may allow for a more diverse population to lend its voice to academic fields such as human geography, anthropology, etc., potentially making the use of poetry and other creative formats incredibly informative, such as those by contributors of poetic/literary inventories. This viewpoint is part of the foundation upon which this research is built.

## CHAPTER 3: METHODS

### 3.1 Web-based Questionnaires

Questionnaires can serve as a useful tool in the social sciences. They can obtain both qualitative and quantitative data about people's experiences and interpretations of the world they inhabit. Strengths of using questionnaires include cost-effectiveness, the flexibility of use, and the ability to gather deeper insight into people's thoughts, depending on the questions that are used. However, multiple factors must be considered before utilizing questionnaires.

First and foremost, it must be determined if it is necessary and ethical to request time and effort from the participants to complete a questionnaire. What the questionnaire asks serves as one of the determinants of this concern. The questions must be ethical and closely pertain to the scope of the research being completed. Factors such as region, race, age, cultural background, religion, race, etc. must be considered when determining what will be asked of the participants and whether it ensures their 'cultural safety' (Matthews et al. 1998, 316; as referenced in McGuirk and O'Neill 2010).

Questions are either open or closed and the nature of their content generally falls into one of the following categories: Attributes, Behaviors, Attitudes, and Beliefs. McGuirk and O'Neill (2010) define these categories as the following:

- **Attributes:** Attribute questions are used to establish the characteristics of respondents such as level of education, age, ethnicity, etc.
- **Behavior:** Behavior questions are used to find out what people do and what their habits are such as food consumption, methods of transportation, level of physical activity, etc.



- Attitudes: Attitude questions are used to find out what respondents perceive as “desirable or undesirable” (2010, 194) such as their willingness to switch from the use of single-use plastic bags to reusable bags.
- Beliefs: Belief questions are used to discover what respondents perceive as true, false, or preferred such as their beliefs on the importance of ‘social distancing’ during pandemics, or the importance of reducing the burning of fossil fuels to combat anthropogenic climate change.

Attribute and behavior questions are generally closed, with respondents being asked to answer multiple-choice, ranking, fill-in-the-blank, or scale questions. For example, a closed question may ask the participant to use a sliding scale to indicate their age or rank their favorite national parks from ‘least favorite’ to ‘most favorite.’ Attitude and belief questions are generally open, with questions requiring responses that are less structured than their closed counterparts. While closed questions are useful, especially for the obtainment of qualitative data, open questions allow respondents to provide information that is in-depth and in a form of their choosing. As McGuirk and O’Neill (2010) put it, “Open questions also ‘give voice’ to respondents and allow them to question the terms and structure of the questionnaire itself, demonstrate an alternative interpretation, and add qualifications and justifications” (195).

Once questions are developed, there is also the issue of who the questionnaire will be sent to, or who will be the sampling frame, and how it will be delivered. Questionnaires may be sent to respondents who fit a certain category such as, in the case of this thesis, contributors of the Literary Inventory of the Organ Mountains-Desert Peaks. This is known as purposive sampling. Another form of sampling that is useful for qualitative research is non-probability sampling, which includes respondents who are part of a broader population and don’t all belong to a single

category. To obtain an adequate response rate from the sample population, the researcher must determine which method of questionnaire delivery is most appropriate for the intended population (McGuirk and O'Neill 2010).

The primary forms of delivery are via telephone, face-to-face, mail, and online or web-based. While telephone and face-to-face delivery allow for greater interaction between the researcher and the respondent, online and mail questionnaires come with advantages of their own. These two methods are generally cost- and time-efficient, as they can reach a large and/or widespread population in a comparatively short amount of time. They also allow for respondents to take more time to consider and respond to questions and allow them to complete the questionnaire in a location of their choosing. These factors can increase the response rate of the questionnaire (McGuirk and O'Neill 2010).

The questionnaire made for this research (see Appendix A) was created using Qualtrics XM (Qualtrics 2020, Version March 2020). The use of this platform allowed me to easily create an online questionnaire that could be accessed via PC or smartphone, and provided instantaneous access to responses once they'd been submitted. Most of the questions included in the questionnaire are open-ended and focus on the attitudes and beliefs of respondents concerning place and species, as well as the process they went through to complete their pieces of poetry/prose.

My choice to form the questionnaire primarily with open-ended questions was motivated by the desire to allow respondents greater choice in how they answered. For instance, it would have been marginally helpful to use a scale or other apparatus to collect data on the length of respondents' relationship with the places of interest; however, such a method wouldn't have allowed for respondents to discuss how or why they formed such relationships in a manner of

their choosing. Open-ended questions also resulted in answers that I did not expect and were much richer in detail than I'd anticipated. This led to the collection of a great deal of information, more than could be covered in this thesis.

The questionnaire was first sent to a few contributors of each inventory. This served as a trial run of the questionnaire to determine if any changes needed to be made or if technical issues arose. In response to feedback from those who participated in the first version of the questionnaire, some questions were reworded, and a couple of new questions were added. Once the final version had been finalized, it was emailed to contributors of the three inventories.

### **3.2 Qualitative Data Analysis**

#### ***Sense of Place***

As this research explores respondents' sense of place through their answers to the online questionnaire and the single walking interview, it was necessary to first determine what 'sense of place' is. It's a concept that pops up in several articles that were reviewed for this research, but it was rarely defined. That may be because it is often vaguely described and can be a difficult concept to pin down (Najafi and Shariff 2011). To avoid some of this 'vagueness' and provide a structure around which I could analyze the qualitative data, I chose to categorize the building of 'sense of place' into 4 main components: *Relationships with place*, *relationships with species*, *changed perceptions and new knowledge of place and species*, and *Indigenous relationships and knowledge*. These components are useful in categorizing the themes or codes that were revealed, but they should be viewed as interconnected rather than separate. Of course, there are many ways in which 'sense of place' may be studied, but these 4 main themes made sense in terms of my research. As mentioned in the *Encyclopedia of Geography*, "sense of place can be viewed from many different entry points from which individuals can enter into or continue previous

intellectual journeys in their studies of place” (Wilkie and Roberson 2010, 2533). For example, sense of place is typically broken down into concepts such as place attachment and place meaning (Kudryavtsev, Stedman, and Krasny 2011).

Broadly speaking, ‘place attachment’ refers to the importance that a place holds for people, or “the bond between people and places” (Low and Altman 1992; Jorgensen and Stedman 2001; Stedman 2003b; as referenced in Kudryavtsev, Stedman, and Krasny 2011, 231). For example, a person might attribute importance to a place because it provides them with a means to make a living, or it allows them to partake in an activity. Place attachment results from ‘space’ evolving into ‘place’ as people build experiences in it and endow it with sentiment (Tuan 1974, 33; as referenced in Manzo and Perkins 2006, 337). ‘Place meaning’ refers to what a place means to people or the symbology they’ve attached to it (Stedman 2000b, 2002, 2008; Davenport and Anderson 2005; Smaldone, Harris, and Sanyal 2005, 2008; Jacobs and Buijs 2011; as referenced in Kudryavtsev, Stedman, and Krasny 2011). The use of these terms is not without debate by scholars but their general meanings are fairly agreed upon, with place attachment indicating peoples’ level of attraction to a place and place meaning providing reasons why people are attracted (Kudryavtsev, Stedman, and Krasny 2011).

While I did experiment with separating the themes or codes into these two categories (‘place meaning’ and ‘place attachment’), I found them to be too rigid and felt that they removed the interconnectedness of the themes. Concepts such as place attachment and place meaning also tend to emphasize the slow development of one’s sense of place (Raymond, Kytä, and Stedman 2017), whereas my research also places interest in the quick or sudden changes in people’s perceptions of place in response to just having moved to the area or participating in events related to the inventories.

So far, this thesis has focused on ‘place’ as a physical, tangible location, and the contributors’ works as representations of or reflections on three specific areas. However, it is recognized that the contributors’ articles of poetry and prose may also be considered as places or the makers of places. It was found that this was the case for some of the contributions made to the inventories, with a couple of respondents stating:

“For my contribution, the place and space of my piece considers the vertical space, geology, and ecological community one enters into, becomes a part of, as one climbs, lives in the landscape.”

“It was fun to consider how a collection of poems can become a national park of their own, bound in a book.”

They may also be considered the embodiments of places that are “unmappable” (Cresswell 2020, 183), those which are in a constant state of flux and are without fixed boundaries. The inventories are based on the places and residents of public lands, areas that modern humans typically have a habit of demarcating and viewing as ‘set’ geographically. I fall into this habit, as demonstrated in the map I created to portray the boundaries of the national parks/monument and the ecoregions in which they reside (Figure 2). However, nature does not subscribe to boundaries laid down on land; it finds its way through the cracks and wears at the Western notion of place. It might be said that the contributors’ written works do this as well, challenging the perception of place as being temporally and spatially fixed.

### ***Qualitative Data Analysis Software***

I first approached this research by manually processing questionnaire responses and the transcript produced by the walking interview, with printouts and highlighters in-hand. This allowed me to become more acquainted with the data and begin the process of identifying common themes. However, I eventually learned that my initial approach to analyzing the data was extremely time consuming and wasn’t without a great deal of disorganization, as I flipped

between responses and searched for notes I'd scribbled on one of the many pages. In response to this, I used NVivo (Version 1.2), a qualitative data analysis software by QSR International (2020), as an organizational tool.

To start using NVivo for analysis, I had to export the questionnaire data from Qualtrics in the form of a CSV. Since the text within this file is comma-delimited, and many of the responses include commas, I had to check each response and make sure those that include commas were enclosed by quotation marks. I also had to 'clean' the text file, removing any paragraph breaks or extraneous symbols that made their way in during export, for the file to be properly imported into NVivo. It is possible to import data into NVivo directly from Qualtrics. However, technical difficulties between the software and my Qualtrics account did not allow for this.

### **3.3 Mobile Methods**

Two mobile methods are used in this research: the walking interview and my solo-hike on one of the trails mentioned by a contributor. In both instances, the action of walking leads the researcher and the interviewee to partake in what may simply be called the "the walking experience" (Wylie 2005, 234), allowing for "moments, movements, and events" (236) to be recognized and provide insight into the relationship between self and the landscape. While these components of walking are important in solitary walks completed for research such as this, they are of even more importance in walking interviews.

#### ***Walking Interview***

The 'walking interview' was chosen as a method because of its ability to directly engage with people's relationships to the landscape. While traditional face-to-face methods are useful in some instances, walking interviews are described as being more flexible, less awkward, and more revealing of a participant's relationship to their surroundings (Palmgren 2018). In the words of O'Neill and Roberts (2020):

A strength of the ‘walking interview’ is that the social conditions are laid bare and their relevance in the research process: the orality, landscape, the sense-scape (sound, smell, touch, visual), perceptions, and emotions are based within context, within which both interviewer and interviewee interact (7).

Despite the proposed strengths of walking interviews in their ability to reveal deeper thoughts and meaning concerning space, their use in the social sciences is relatively new (O’Neill and Roberts 2020). However, the lived or active experiences such as ‘sense-scape’ that they reveal are emphasized in the work of geographers such as Yi-Fu Tuan (2011).

Yi-Fu Tuan’s *Space and Place: The Perspective of Experience* (2011) serves as one of the main publications that led to my using the walking interview as a methodology. In this book, Tuan mentions that experience is generally viewed as being passive, with individuals having experience built by events that happened to the person – in the conquering of past trials. However, it might be more fitting to see ‘experience’ as an entity that is built by a combination of thought and feeling. These – thought and feeling – are generally seen as being opposite, with one being objective and the other being subjective, respectively. Despite this division of the two, both serve as important ‘building blocks’ of individual experience. Each individual brings their own emotions, thoughts, and physical characteristics into how they conceptualize spaces (Tuan 2011). This factor – each individual’s unique ‘baggage’ with which they experience the world – is part of what makes the walking interview an interesting and in-depth method, as the interviewer and interviewee experience space together.

It should be mentioned that this research did experience a change of course as it progressed. Originally, I’d planned on completing 5-10 walking interviews with contributors of the OMDP inventory. These interviews were to be used in conjunction with the contributor’s questionnaire responses to gain a better understanding of their answers and find out more about their relationship with the area and species that their piece focused on. Unexpectedly, this

method required careful consideration as the number of COVID-19 cases in New Mexico increased, and the city, state, and federal governments urged people to practice social-distancing and remain at home, if possible. I'd considered inviting a few contributors to participate in a walking interview to stick with the original plan of my research and to provide people with an opportunity to enjoy socializing and exercising in an environment that would allow for social distancing. However, as the first case of COVID-19 was found in Doña Ana County the week of March 16<sup>th</sup>, 2020, I chose to shift my tactics and find a different way of engaging with the contributors' works of prose/poetry and questionnaire responses.

With walking interviews on hold, I chose to solo-hike some of the trails that contributors had mentioned in their responses to this question:

Is there a specific trail and/or location(s) within the national park/monument that served as inspiration for your prose/poetry piece, or that you feel connected to as a result of your participation in the inventory?

This question was added to the questionnaire in the interest of inquiring about the spatial aspect of their work, to incorporate as a facet of 'place meaning,' and as an additional question to spark conversation during walking interviews. However, it turned out that this question allowed for my research to progress for a short while longer and I was able to visit one more trail before a "stay-at-home" order was put in place for New Mexico residents and multiple trails of interest were closed off.

### ***Autoethnography***

In scholarly fields such as that of geography, the desire to produce knowledge from an objective standpoint is common. However, in the 1980s, the epistemological issues of research tending to have an omniscient viewpoint of knowledge-making came under fire. The use of autoethnography was one of the results of attempting to solve an issue not only on the



epistemological level, but on the political, ontological, and methodological level as well. (Butz and Besio 2009) Such forms of writing utilize “the emotions and experiences of the researcher as a way to acknowledge the inevitably subjective nature of knowledge, and to use subjectivity deliberately as an epistemological resource” (Butz and Besio 2009, 1662). While the term *autoethnography* is often viewed as a single method, Butz and Besio (2009) discuss multiple forms of autoethnography: Personal experience narrative, reflexive or narrative ethnography, insider research, and ‘Indigenous’ ethnography (1665-1670). The research presented here primarily contains ‘personal experience narrative’ and ‘narrative ethnography,’ as my viewpoint as a researcher began as one of an ‘agent of signification’ and transitioned to being an ‘object of signification’ (2009, 1665).

My solo-hike resulted in short autoethnographic self-narratives – pieces of writing that tie my own experiences and perceptions to the research presented here by describing my interactions with and perceptions of place. The autoethnographic pieces in this research serve an important role: to remind both me and the reader that I, as the writer or researcher, am also a part of this research just as the respondents are. They serve as part of a process that geographer Jerome Dobson (2006) might describe as ‘writing my own story.’ My initial view of this research was that there is me (the ‘researcher’) and then there are participants (the ‘contributors’ or ‘respondents’). However, this mindset is deeply rooted in what I’d been taught about research since grade school and leading up into college as a former engineering student. Initially, I yearned for the purely ‘objective’ stance as a researcher – the way research was *meant* to be conducted. While some research undoubtedly should be conducted from an objective standpoint, research such as this may be better served by understanding how my own perceptions of place

‘fit’ in the larger puzzle of how people form relationships with place and how these relationships change over time.

### **3.4 Creative Mapping**

In conducting this research, my initial response to creating ‘geographies’ was to incorporate the use of geographic information systems (GIS) in recreating the patterns of walking interviews, as my GoPro allows for the collection of Global Positioning System (GPS) telemetry data as it records video. Using graduated color symbology in a program like Esri’s ArcMap, these data can represent the changes in pace of walking interviews in response to discussion and/or topography. This concept is similar to research methods mentioned by Cooper and Gregory (2011) in their creation of a literary GIS following in the footsteps of two English poets’ exploration of the English Lake District in Cumbria. They mention the issue of the paths representing the poets’ movements as being too linear and not representing the actual experience of their interactions within place (2011). I aimed to avoid this issue by recording the walking interviews and collecting GPS telemetry data to match them, thus capturing the ‘lived experience’ of the interviews. However, as I should have expected, the GoPro collected data that were wildly inaccurate during the walking interview and were unusable, despite having worked fine in test runs conducted on hikes the previous day.

In retrospect, I found that my initial desire to use GIS for all visual representations shared in this thesis stemmed from the desire for my methods to be taken seriously – by myself, colleagues, and whoever finds this document. This desire is a result of the ‘tension’ between qualitative and quantitative research, between science and art, as discussed earlier in this thesis. However, as this research progressed, I became more accepting of the role that ‘creative’ or ‘artistic’ works might play in a thesis such as this. I managed to cling to the use of GIS in the few cartographic documents produced by ArcMap and ArcPro that are included here, but I was

inspired to use a more ‘hands-on’ approach to cartography in reading an article by Tyra Olstad (2018).

Tyra Olstad (2018) describes her experience as a cartographer of the Misty Fiords National Monument. Designated as a ‘Wilderness’ area as part of the Alaska National Interest Lands Conservation Act, Misty Fiords is meant to be largely untouched by human activity such as the use of motorized vehicles, the building of permanent structures, and the creations of trails. The USFS works to promote ethical treatment of the area such as Leave No Trace practices. However, the USFS cannot prevent aircraft or watercraft from entering the fjords. This has caused a great deal of tension in terms of protecting Misty Fiords’ resources and maintaining the solitude of its human and non-human occupants, while also increasing peoples’ appreciation of the area. For instance, airplanes allow for spectacular views of the national monument and boat companies promise a luxurious experience, but both create noise pollution and damage flora. Noise pollution and damage to plant life not only detracts from the enjoyment had by visitors but serves as a threat to wildlife (Olstad 2018).

In response to the hazards posed to the national monument, artists were invited to join the Alaska Regions USFS to learn more about the area and raise awareness of what the Misty Fiords ‘mean.’ Olstad was selected by the USFS to be a cartographer, meant to create a map of the national monument and convey its importance. While she offered to create a document that could be used by local kayaking companies and USFS informational products, placing focus on place names, topography, ecological features, etc., she and the rangers decided that this information would not adequately describe the ‘meaning’ of the place. Instead, she recalled experiences that she and the rangers had in the Misty Fiords and emphasized features that they felt were of importance. They chose to break away from the assumption that the ‘wilderness’ could only be

accessed and experienced by boat or plane. Olstad and the rangers created a map that tells a story, portraying the Misty Fiords as “a true *place*, rich with natural and cultural history and ripe for unconfined exploration” (Olstad 2018, 259). With the sharing of this map, they hope to increase public awareness and “engender a sense of responsibility for and stewardship of the monument” (259).

## CHAPTER 4: RESULTS

### 4.1 Introduction

Eighty-three contributors responded to the web-based questionnaires. Of these 83 individuals, 16 contributed to the Poetic Inventory of Rocky Mountain National Park (RMNP), 27 to the Poetic Inventory of Saguaro National Park (SNP), and 40 to the Literary Inventory of Organ Mountains-Desert Peaks (OMDP) National Monument. It's possible that the comparative recency of the three projects plays a part in the varied response rate from contributors. The OMDP inventory is the most recent, having taken place in 2019, while the SNP and RMNP inventories took place in 2011 and 2012 respectively. It was found that the comparative recency of the inventories did have a slight influence on what a few contributors could recall about their experiences. This did not affect the responses significantly but it is good to keep in mind for future research.

What follows are some of the themes that were revealed as I analyzed the contributors' responses to the questionnaire, the walking interview, and my solo hike: Relationships with place; interest in/relationships with species; changed perceptions & new knowledge of place and species; and ancestral relationships and knowledge. Not all responses pertaining to each theme are mentioned here for the sake of conciseness, but the ones that are serve as stronger representatives of prevalent themes. Nestled amongst these results are autoethnographic pieces formed during a solo hike done in response to one of the works of prose contributed to the Literary Inventory of OMDP. These results also include images of two 'creative maps.' The first was created using Esri's ArcPro in response to the single walking interview, while the other is hand-drawn and represents a few of the questionnaire respondents' answers to locations/trails to which their works of poetry/prose relate.

## 4.2 Relationships with Place

This section serves as a stepping stone to understanding respondents' relationship with the monument/park and surrounding regions that the inventories focused on. Inquiring about this component helps to reveal how 'space' has been transformed into 'place,' with the former being a more abstract and open concept than the latter. In the words of Yi-Fu Tuan (2011), "What begins as undifferentiated space becomes place as we get to know it better and endow it with value" (6). In discussing their relationships with the lands that their contributions (works of poetry or prose) are dedicated to, the respondents provided an indication of the 'sense of place' they'd already established leading up to the geopoetic projects.

### *Long Relationships*

Among the respondents of all three inventories, the vast majority have had well-established relationships with the lands that their contributions (works of poetry or prose) were dedicated to. In many instances, the lands of OMDPNM, RMNP, and SNP have served as neighbors and as important figures in their lives and those of other community members:

"My original birthplace in [month and year]<sup>8</sup> is Las Cruces, and I was raised in the shadowing presence of the Organ Mountains."

"As a site within Dona Ana County the monument rests over Las Cruces defining the landscape but also the lore and popular memory of the community."

"I lived on land adjacent to the monument off Baylor Canyon Drive, and had my daughter while living there.... The wildlife, including the native plants were my daughter's first neighbors."

"I have explored the land of what is now OMDP National Monument my entire life. My parents frequently took us for hikes and camping on these lands.... I had spent about 8 years painting and drawing the mountains and natural features of our area. This was in

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<sup>8</sup> Information that is directly identifiable has been removed to help maintain participants' anonymity. Some typos have been resolved for clarity.

part triggered by the death of friend in the Organ Mountains in 2006. The mountains are a very important place for me, and I'd be nothing without them.”

In these accounts of the respondents’ long relationships with the lands that are now designated as OMDP National Monument, it is worth noting that the most visually prominent landforms (the Organ Mountains and Desert Peaks) are mentioned frequently. These landforms almost seem like sentinels of Mesilla Valley, serving as constant neighbors and protectors. It was also mentioned that part of the relationship respondents formed with these mountains was in response to their usefulness as indicators of positionality:

“The OMDP is visible from most of Las Cruces, and when I first moved there for graduate school in 2016 it provided a geographic baseline for navigating around town.”

While this is one of the only responses that mentions the mountains’ ability to serve as navigational assistants, they may do the same for other newcomers to the area. This may be especially true for new students; this was true for me as I began my undergraduate career in 2012, as the mountains are visible from the main campus of NMSU. In comparing/contrasting the responses that discussed relationships to OMDP, with those of RMNP and SNP, an interesting theme was revealed: the difference proximity might make in people’s view of public lands being places they live among vs. places they visit.

“I was born in Tucson when it was still more desert than real estate. I have visited the national park/monument since I was a child. Any visitors...provided an excuse to visit Saguaro West, Mt. Lemon, and, not so often, Saguaro East.”

“I lived about 45 minutes from RMNP for almost 20 years, and have many wonderful memories of visiting with family and friends during that time. We would go up to see the elk rut almost every fall, and I also loved Estes Park, the town at the park entrance. So it's been special to me for a long time.”

There may be little significance in the differences among the ways in which respondents described their relationships with place. However, the dichotomy between ‘living amongst’ and

‘visiting’ public lands might be a result of the proximity of the OMDP monument to Las Cruces and Mesilla. This brings to question whether stronger connections between such lands and communities are formed by being in proximity with one another. However, frequenting the parks/monuments also tends to create strong relationships, whether these frequents are in addition to or regardless of residential proximity.

Whether it be in discussion of RMNP, OMDPNM, or SNP, overall, the most mentioned methods of respondents building relationships with place were hiking, camping, and other outdoor recreation activities:

“My relationship with this ecosystem came with three years of climbing 100 days a year in this and surrounding ecosystems. As a biologist/educator artist and poet there was no way these / this experience(s) could not influence me or how I value the landscape and its organisms.”

“I have rather unsystematically browsed the Southwest’s deserts canyons and mountains for the past 35 years. My earliest recollection of the area what is now OMDPNM was camping at Aguirre Springs and being kept awake all night by a Ring-Tailed Cat who was determined to find some food scraps. Despite all the development and road paving, I continued to return.”

“I live nearby (Fort Collins) and have hiked many times there over the years--snowshoed, Nordic skied, etc.”

Taking part in these activities often reflected a desire to get away from day-to-day life and find solitude and/or fulfill spiritual needs:

“I have hiked in what is now the Monument since 1990.... The trails in the Monument are my solace away from crowds - each walk is a return to Nature and my quiet soul.”

“My first walk into the Organ mountains years ago was an extension of the pilgrimage from Tortugas Pueblo to Tortugas Mountain ('A' mountain) for the Fiesta de la Virgen de Guadalupe. I consider the Sierra de Órganos a sacred landscape. As a Burqueño (from ABQ), my most regular and lifelong mountain visits are to the Sandía and Jemez areas. Whenever I'm in Las Cruces, I make time for a walk.”



“I have always spent much of my time outdoors. I find peace and contentment in bird watching. I also like to exercise outdoors so hiking, climbing, bird watching, draw me outdoors, wherever I live. I first met the OMDP when it was 'just public land'. I began hiking and exploring when I arrived in SW New Mexico in 2000.”

“The ‘Park’ has been a kind of sanctuary for me for decades before this project came about....”

This overall theme of outdoor recreational activities isn’t surprising, but it does help to reveal the close relationships that have been formed by people’s direct interactions with place. In some of these accounts, respondents also mentioned interactions/encounters with other species. Such accounts provide a sense of the relationships respondents have formed with both place and species. These accounts help support how people’s perceptions may be changed, despite long-established relationships, by partaking in creative methods and/or inventory-related events. However, this theme of outdoor recreation in the building of relationships brings to question how those who cannot partake in these activities build relationships with such places. In this thesis, the voices that are largely missing are from those who may not be able to physically visit public lands and/or explore as extensively:

“I have walked several of the trails in the Organ Mountains, but my artist husband, who is older than I am, is not as mobile so we often go and sit at the round stone structure on the way to La Cueva Rock Shelter where we will spend several hours, him drawing and me writing.”

The issue of mobility is especially prevalent during very unexpected times such as these, as a pandemic challenges many peoples’ ability to simply be ‘out and about.’ The devastating outcomes of COVID-19 and the changes it brought to many people’s mobility make this knowledge gap more extensive. The majority of the questionnaire responses were submitted before many of the “stay-at-home” or “shelter-in-place” orders were established. However, one response brought to light some of the difficulties faced in being able to connect with place

directly in noting their age and the caution exercised in deciding whether or not to go on hikes and partake in a walking interview. Future research would be needed to determine if and how people have connected with ‘natural’ places and their human and non-human residents during times such as these. Of course, this topic is a political one, as socioeconomic factors heavily affect people’s ability to interact with places, such as public lands. While this research does not focus on peoples’ relationship to place amid such crises, I share in the hope of one of the respondents:

“One benefit that I hope will arise as a result of this strange virus is that people will be encouraged to spend more time outdoors by themselves, and there is no better place to do that than in the Organ Mountains!”

### *New to Place or Never Visited*

The accounts previously mentioned indicate that many have had long relationships with place. Only a few respondents indicated that they were new to the region at the time calls had been sent out for people to contribute to the inventories. A couple also mentioned having visited infrequently or never at all. This indicates that creating pieces centered around a place and its residents, whether it be public lands or not, may allow people to connect with place and build a relationship with it, despite lacking strong physical connections:

“I have never visited OMDP National Mon but became engaged while writing the poem that was published; am very familiar with habitats of southwestern NM and southeastern AZ from grassland bird research.”

“I had never visited, but I often write about nature, and I am a volunteer in Albuquerque at the Open Space Visitor Center. Though I don't live near the Organ Mountains, I feel connected to them nonetheless, as I do to most lands and parks.”

“I contributed while still living in Northern California with the intention of moving to Las Cruces. The Organ Mountains called out to me in spirit. I began to follow writers and artists from the area. My story came to me seemingly out of nowhere.”

For those who were new to a region and/or hadn't explored a great deal, participating in the literary/poetic inventories led them to engage with the public lands of focus, physically and/or emotionally:

"I had just moved to Colorado 6 months before I participated in the inventory. I thought participating would be a great way to connect to the landscape of my new home. I have since been to the park many times and have done many incredible hikes there!"

"I have hiked Saguaro National Park a few times in the past but came to know it more thoroughly through the focused participation in the inventory."

"I've lived in El Paso most of my life and never set foot in the OMDP National Monument, sadly. This project helped provide the push I needed to learn and explore."

Some had already lived in regions with similar characteristics, providing them with a level of familiarity:

"I was a recent transplant to the Las Cruces area when the call for submissions went out, but knowing the lands around me and getting out into wilderness is an integral part of my life. I had lived in desert environments before (in Arizona) and so some features were already familiar."

"I moved to Las Cruces from Tucson 25 years ago and immediately fell in love with the Organ Mountains. As an avid hiker in Arizona I continued my love of the desert and outdoors in New Mexico. The bird I wrote about...lives in both states so I continued my love affair with that beautiful vivacious black bird."

However, there are times when people find themselves transplanted in an unusual and, in some instances, uncomfortable environment. A feeling of apprehension or a lack of connection was noted in the experience of moving to the Las Cruces/Mesilla region of the Chihuahuan Desert from regions with vastly different characteristics. Participating in the inventory and exploring the region as a setting of their writing helped to quell unfamiliarity and provide a positive sense of place:

“I gained a deeper appreciation for the area as well as a connection between my poetry and the landscape, which is something I had lost when we moved here from the midwest. Our previous landscape, culture, and region was so vastly different from here, so I was gratified to find this new connection.”

“When I originally went to the Organ Mountains, I was somewhat apprehensive about the wildlife that I might run into there. Being from the East Coast, I imagined everywhere I stepped I would find a scorpion or rattlesnake. Spending time sitting quietly, while I write about the beauty around me, has changed my perception and has allowed me to relax and be at one with nature.”

While statements such as these are few, with most respondents having had long relationships with the public lands, they indicate the possibility that new residents’ engagement in projects such as these may help in developing their sense of place.

#### **4.3 Relationships with Species**

In enquiring as to why participants wrote about the species that they did, there were numerous reasons mentioned in response. Some were as simple as, “I like lizards,” or, “Bats in New Mexico interest me,” indicating a general interest in the species they chose. However, most had formed relationships with the species they wrote about. Many of these relationships were revealed in response to being asked what their initial interest in the species was, if any at all. While the conditions in which these relationships had formed are unique to each respondent, two of the main themes that emerged in response to their interest in the species include *connections/encounters*, and *misunderstood/overlooked/illusive*.

##### ***Connections/Encounters***

*Walking up to the shelters, I spot a wren hopping from rock to rock, singing as it goes. I can't help but stop and listen to its singing, hoping that it doesn't notice me and continues in song. Keeping an eye on me as I arc my path away from it, the little bird ceases its singing and gradually hops away. Still, I'm happy to have heard its voice.*

Connections/encounters between the respondents and the species that inhabit their contributions to the inventories are prevalent. Like my first encounter with a rock wren, many of the respondents' encounters with the species of their writing fueled the creations they contributed to the inventories. Frequently, the encounters mentioned in response to the questionnaire occurred within what are now designated as boundaries of national monuments/parks:

“[Species]<sup>9</sup> are one of my favorite birds. My first encounter with them was in the Organs, and I've been following them ever since in all my travels in Arizona, Chihuahua, and Sonora.”

However, as hinted at in this response, relationships with these species aren't necessarily tied to a single location or restricted to human-set boundaries. In this case, the encounter was in the Organ Mountains, but the species they wrote about is widespread in their travels of the Southwest. Just as the creatures written about do not limit themselves to the unnatural demarcation of land, nor do the relationships that writers have formed with them and the sense of place those relationships carry. This is especially true of the species that people wrote about with memories of childhood, family, and/or friends in mind.

For some of the respondents, emotions and memories are what connect them to the species they wrote about. Some of these connections/encounters serve as reminders of cherished past experiences – childhood memories, time spent with friends and family, fleeting moments:

“As soon as I received the assignment, I remembered a childhood encounter with two [species] which I hadn't thought about in a long time. That encounter became the heart of the poem I wrote. If I hadn't received that particular assignment, I might have forgotten the experience entirely!”

In this instance, the respondent not only shared one of their encounters with the species of their writing, but hinted to one of the possible 'doings' of geopoetic projects. In participating in the

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<sup>9</sup> Most references to specific species have been removed to help maintain participants' anonymity.

project and writing about their encounter, the respondent recalled a childhood memory and mentioned that they might have forgotten about it if not for their participation. Such childhood memories are important in the process of one's turning 'space' into 'place', as they provide the person with a sense of belonging (Brillant and Mankiw 2015). With this in mind, perhaps creative projects such as geo-literary/poetic inventories might be effective in strengthening writers' sense of place by summoning buried memories, whether they be of the specific region of interest or not.

In the following two instances, the species written about create emotional/spiritual connections between the writers' pieces and cherished relationships with a friend and a family member. Such instances represent deep connections with the species that inhabit their poems:

"She [an old friend] and I would go out walking around her property and she loved the [species]. So, I had [name of friend] and how she had talked about it, and I had my own experiences seeing them, you know, *everywhere*."

"My mom and I have always loved [species], both of us since childhood. They are smart, funny, clever, and (to us) beautiful. Right before mom died I asked her to come back to me as a [species]. Now when I see them I love them even more!"

The connections to a friend and family member mentioned by the respondents might not only represent relationships with the species, but also some sense of belonging wherever they may be encountered. 'Place' may be anywhere that the species is found, regardless of whether writers have had a long relationship with a particular space. Along the same lines, some species are omnipresent and provide a far-reaching sense of place. This was hinted at in response to whether a particular location served as part of the inspiration for their contribution:

"No, [species] are everywhere!"

In many of these encounters between *Homo sapiens* and other species, the 'other' often becomes a participant, or the living embodiment of the piece of poetry/prose. Despite the human

demarcation of public lands, these encounters take place in the habitat of the non-human species, turning the tables and making *Homo sapiens* the ‘other’ – the foreign and unknown creature that has wandered out of its own habitat and into another. However, there are moments when the contributors never had to leave home to find the species they wrote about:

“I saw the [species] in my backyard! This happened right after I moved to Las Cruces. I was awakened at 4:00 a.m., made a cup of tea, looked out my porch door and there sat the [species].”

“When I lived in California and would sleep outside, a [species] would come buzz in my ear to wake me up (telling me I was in his / her yard).”

In these accounts, the respondents’ own yards served as representations of encounters with species in ‘place.’ These accounts, again, bring to light the ways in which people might engage with or be reminded of ‘natural’ lands and resident species as they’re limited in their mobility, whether it be due to financial status, physical ability, or the occurrence of a pandemic.

### ***Misunderstood, Overlooked, or Elusive***

*I see your amazing black claws and strange whip-like tail, tucked into the corner of a small glass habitat. It’s strange to think this is the first time I’ve seen you. You’ve practically been my neighbor for the better part of 4 years, but I didn’t know it. It’s also strange to think that I’m excited to meet you and can’t help but see you as a friend. Had I crossed your path just a few months ago, I would have seen you as menacing and scary; but the most harm you can really do is cause annoyance with your vinegary defense. Unfortunately, your shiny black exoskeleton and strange looking body, a combination of spider and ‘true scorpion,’ does little to encourage understanding of you, Uropygi. You’re a reminder of how quick we humans are to judge.*

The vinegaroon, also known as the whip scorpion (*Uropygi*), is one of many creatures found among the works of poetry/prose that is often met with fear and misunderstanding.

Unfortunately, I would likely have greeted the vinegaroon with some trepidation if I'd not read this poem by Peter Goodman (2019) before seeing it for the first time:

Men say,  
“anyone so ugly is scary!”  
And I am, to your pal the scorpion.  
Our battles beat mixed-martial-arts all hollow.  
No rules, no quarter, but  
a damned good supper for me.

I try to keep out of your way,  
emerge rarely, except after rains  
grace the desert. I hunt  
while you dream.

You say I look like a black crab, but  
I've never seen the sea. You say  
I act like a skunk, though my vinegar fumes  
can't harm  
you paunchy apes. Like  
Coyote, the Trickster, I do you  
more good than harm, and yet  
you attack me on sight.

The vinegaroon is not the only species that is often met with misunderstanding and fear. Other creatures from the inventories such as the western diamondback rattlesnake, tarantula, turkey vulture and the coyote, as mentioned in Goodman's poem, often share in the dislike that the vinegaroon receives. For such species, humans' fear or hatred of them may lead to efforts to kill and remove them on sight. (Christoffel 2007) However, to my pleasant surprise, many of the writers felt a connection and/or a liking of such species. In response to the questionnaire's inquiry of why they had chosen the species that they did, a contributor stated this about the species they wrote about: “My essay covers this. Mostly because [species] are misunderstood and feared, just like the desert for some people.” Even though one of the encounters they



remembered having with the species included a bite, the desire to provide people with a better understanding of the creatures was not hindered.

One of the ways that authors who wrote about such species chose to approach their pieces was to research their unique characteristics and behaviors, but write from that species' point of view or point out shared characteristics between them and *Homo sapiens*:

"I chose to write a bio of the snake in the first person, as told by the snake...."

"I immersed myself into studying the biology and as best as anyone can perceive reptilian behavior or projection of behavior, personifying snake thoughts."

"I wanted to express the connections, however remote, between humans and other life forms, lizards in this case, by pointing out the similarities we share."

In 'giving voice' to species such as these, perhaps written works centered on spiders, scorpions, snakes and other 'icky' or 'creepy' organisms might bring more awareness and understanding of them. While other species may not be categorized as being unpleasant or feared, they may be viewed as mysterious or elusive by nature. As noted by a few respondents, certain species' air of mystery or elusiveness was attractive in researching/writing about them:

"I gained a personal interest just in finding out its rarity, and in that it holds so much mystery."

"The [species] is a sturdy, elegant & often elusive bird that is delightful to watch in flight. I wanted to explore its nature while finding some essence of it in myself."

"I once found a [species] skull in the Pajarita mountains, a few miles from the Mexico border.... And as much as I've been around the S. Arizona desert, I've yet to see a live one."

The creatures discussed in these accounts may not be 'creepy' or necessarily misunderstood like spiders or reptiles. However, their elusiveness may cause them to be viewed as mysterious or

unknown, and they may generally go unnoticed by humans. In writing and reading poetry and prose on such species, perhaps more attention and understanding is paid to them as well.

#### **4.4 Changed Perceptions & New Knowledge of Place and Species**

It wouldn't be unreasonable to think that most respondent's perceptions and knowledge of the regions and their resident species would be largely unchanged by the inventories or the process of creating written works, with many having had long relationships with place. However, 59 out of a total 83 participants responded 'yes' to whether or not their perception of the national parks/monument had changed. 68 out of 83 respondents responded 'yes' to having personal perceptions changed or learning more about the species. The responses to the questionnaire and discussion that was had during the walking interview hint at a multitude of ways in which perceptions were changed. The ones mentioned in this section are primarily concerned with learning about regions' biodiversity, connecting and building relationships with fellow writers and community members, and gaining a greater understanding and appreciation of the species/lands they wrote about.

##### ***(Bio)diversity and Community Building***

In relation to changed perceptions and increased knowledge of place, one of the main themes that emerged was the learning of a region's biodiversity:

"I saw the diversity of people (and animals) that connect with the Monument."

"I've hiked in the area for years, but participating in the OMDP inventory gave me a new feeling of relationships, with the flora and fauna but also the other people involved and the subjects of their poems."

"I learned more about the multiple species that live there and how other people relate to them."

".... I also enjoyed being with a community of writers who care about a place and its nonhuman and human inhabitants enough to explore their lives through poetry and prose."

Along with learning more about the diversity of species, one respondent also mentioned gaining a greater understanding of its vastness and the diversity of its lands:

“Rather than experience it necessarily as a human-impacted area, I began to sense the multitude of life and the amazing variety of that life within the monument. I had previously thought of it as mainly the Dripping Springs area but of course the monument thankfully covers many more diverse and amazing areas.”

The change in perception mentioned in this particular account echoes that of the contributor who joined me in a walking interview, as they discussed how they tend to forget just how vast OMDP is. I can relate in forgetting how expansive and diverse the mountains and the land from which they rise are, as my first introduction to them was during a hike to Dripping Springs.

By realizing the diversity among species and land, people may gain a greater appreciation of the regions and build a stronger sense of place in relation to them. They may also feel a calling to participate in conservation efforts and protect the lands that sustain such diversity. This may be especially true of desert environments such as those of the Chihuahuan and Sonoran Deserts. As mentioned by a few of the respondents, they were apprehensive of desert environments and were unsure of the species they associated with them. My past view of such environments echoes their sentiments. However, it's possible that a realization of biodiversity might help allay such feelings of apprehension and increase understanding of the region.

In these responses that mention biodiversity, increased knowledge of the vast collection of non-human species is not the only building block of sense of place mentioned. The respondents also hint at creating connections or relationships with fellow writers. In each of the quotes, the writers mention that they learned more about other people, both in the sense of their relationships with non-human species and, in one instance, their own diversity. With this in

mind, perhaps community geopoetic projects provide a sense of community in the collective learning about place, species, and how people relate to them. The projects seem to not only accomplish this by the compilation of written geopoetic works, but by writers' participation in events that are associated with inventories as well. These findings echo what has been discussed by some of the authors reviewed in this thesis, with Harriet Hawkins et al. (2015) and Eric Magrane (2019) mentioning the coming together of "multiple publics" (2019, 31) in response to the 'doings' of the geohumanities.

Among the inventories, there were at least a few reading events, in which writers shared their works with fellow contributors to the inventories and community members. In relation to the OMDP inventory, two community reading events were held. One took place on May 4, 2019, during the 2<sup>nd</sup> annual Bioblitz in OMDP National Monument and was held in what is known as 'Ice Canyon.' The other took place at the Museum of Nature and Science in Las Cruces, NM on November 16, 2019. During the walking interview on March 10, 2020, the contributor mentioned that the poetry reading in 'Ice Canyon' served to further connect the written pieces with the species and land, as writers read their pieces in the presence of the Organ Mountains. Respondents mentioned that the inventories led to their participation in events including readings like the one in Ice Canyon and in unrelated events. In response to the questionnaire inquiring whether their participation led to their attending events or participating in other projects related to the OMDPNM, RMNP, or SNP, respondents said this:

"Yes, the inventory led to me giving readings and participating in a number of events in the park including the BioBlitz and a ranger sponsored program at the campground."

"I did attend more events at the National Park as a result of the inventory, both the BioBlitz events and other public events. Also, I visited the National Park more frequently, I think. I felt like I was a little more a part of the National Park, or connected to it a little more deeply, by taking part in the literary inventory--like it was more of 'my

place' because I had contributed to it in a small way, through my writing. A sense of deeper investment.”

“Yes. Both in spontaneous projects as well as general conversations that should be more visible, which is part of the participation here.”

Though they are in the minority, responses such as these indicate what the inventories might do in providing an opportunity for contributors to learn more and gain a greater sense of community in relationship to the public lands. However, this brings to question what these projects do for the audiences of geopoetic inventories. Answering this question is not within the ability of this thesis and would require additional research.

### ***Knowledge and Changed Perceptions of Species***

In terms of species, many of the respondents reported having learned more about them or gaining a greater appreciation of them in response to their participation in the inventories. Many indicated that they’d learned about the species’ unique characteristics, habits, or vulnerabilities:

“I learned about the movement of [species name] and their unique style of running....”

“I realized how perilous the habitat can be, how dependent the [species name] is on the regular cycles of nature not being interrupted.”

“I learned the etymology of the name as well as alternative names, Indigenous uses of/for it, and propagation history.”

Statements such as these and the information that respondents shared in writing them indicate that the inventories provide an opportunity for contributors to learn information about their species. This is true for both those who were new to the species or had previous experience with/knowledge of them. A few respondents specifically mentioned that they’d never heard of the species they were assigned and/or were not initially interested in it. In response to being asked whether they held an interest in the species before it’d been chosen or assigned for their pieces, a few respondents said:

“No, I had virtually no knowledge of this species prior to it being assigned to me for this project.”

“No, but as I researched the species I developed a stronger interest in it.”

“When I was assigned the [species name] I knew nothing about it.”

“I learned everything I could about the plant! I knew absolutely nothing about it when I started. I had to check my field guides and do a Google image search just to see what it looked like.”

In choosing or being assigned species that were initially unknown to them or of little interest, participation in the inventories serves to introduce respondents to new species. In doing so, as mentioned in one of the aforementioned responses, the inventories are useful in engaging participants to learn more about other species. In learning more about species, they may also gain a better understanding of and stronger relationship with the lands in which they reside. This was not only true for those who did not initially know about their species, but those who have interacted with them (or similar species) regularly:

“Before I learned about [species name], they seemed more ordinary and insignificant. Understanding their habits and predilections, researching their history and the knowledge, learning that they rarely took flight brought me closer to them, provided me a springboard for writing about human behavior.”

“I learned about how they burrow, how they mate, how they survive . . . all very eye-opening. I grew about[sic] around [species name] that nested in trees, so it was interesting to learn how [species name] have adapted to tree-less areas.”

Responses such as these may indicate that the inventories not only provide an opportunity for those who are new to a species/place to learn more and create relationships with them. They may do the same for those who have experienced previous encounters with them and/or already knew a great deal about the species. The first quote listed above indicates that this may be especially true of the species that are not as flashy and/or are more elusive by nature. Perhaps poetic/literary inventories might provide an opportunity for writers to shine the spotlight on

species that are elusive, overlooked, or misunderstood and provide others with a greater understanding of them.

While respondents mentioned changed perceptions/learning more about species that aren't as visually appealing and/or interesting, one of the respondents brought to light an interesting subject: Humans' misunderstanding or judgement of the actions' species take to survive, especially if that species is deemed as 'cute' or aesthetically pleasing. In the section titled "Misunderstood, Overlooked, or Elusive," I placed a focus on creatures that might be misunderstood or overlooked because of their 'creepy' characteristics. However, what about the creatures that tend to appeal to humans' perceptions of cuteness, but survive in ways that aren't so cute? In discussing how their perception of the species they wrote about changed or what they learned, one respondent stated this:

"I thought a lot about how we see animals as cute, yet judge the activities necessary to their survival. Cute animals often need to kill cute animals to live. Our language around this is rife with judgement."

This statement brings to light the question of how perceptions and relationships with 'cute and cuddly' species might be changed in response to the inventories. People tend to hold an affinity for such creatures. However, the natural survival instincts of these species might cause them to be misunderstood and no longer viewed as 'cute' in their demonstration of such instincts.

### *Climate Change*

Though not mentioned frequently in responses to the questionnaire, the topic of climate change was brought to light by a few of the writers. In response to how their perception of place had been changed by their participation in the inventory, a couple of respondents wrote:

"[It] gave me a deeper understanding of the depth of the beetle-kill problem and its relationship to climate change, which is not a simple one-to-one issue. That is, climate change, specifically the lack of occasional extremely cold snaps that have in the past

suppressed the spread of the pine bark beetles, is one of several explanations of the beetles' recent tsunami of destruction.”

“The inventory and reflection on others like it caused me to see the activity and its/their products as essential and excellent places to build authentic webs of relationship, perspective, and connection in a world so constantly at the mercy/whim of humankind.”

Another writer stated this in response to being asked whether they’d learned more or experienced a change in perception of the species:

“I learned that this species only grows in a certain area of the OMDP during August. I also learned about how humans have been interacting with that species over time. The Herbarium has dried specimens and drawings of the species dating back to the late 1800s. The last specimen was donated in the 1970s, so I am curious to know whether humans have forgotten about it, or whether due to climate change or other issues it is no longer growing there.”

As already mentioned in this thesis, artistic/creative projects have been widely used in the social sciences to communicate information on endangered habitats and loss of biodiversity. (Belfiore and Bennet 2006; as referenced in Curtis, Reid, and Ballard 2012) The inventories on which I focus in this thesis do not explicitly address global climate change and/or its effects. However, statements such as these support related projects that aim to address environmental challenges such as *Species in Peril Along the Rio Grande* <sup>10</sup>, an exhibition curated by Subhankar Banerjee and Josie Lopez. Perhaps the community geopoetic projects of focus in this research also serve as an opportunity for both writers and audiences to learn more about such issues.

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<sup>10</sup> See <https://speciesinperil.unm.edu/wp/>.



#### 4.5 Indigenous Relationships & Knowledge

*I've come across cave paintings, faint red lines on worn limestone....*

Among the long-standing relationships with the lands of the national parks and recently established national monument, a few respondents mentioned relationships that are rooted far deeper:

“I am a member of the Tohono O'odham Nation. Saguaro National Park is part of our ancestral homeland. Our relationship with the land was initiated long before the park came into being--it began when the Earth was created.”

This was the only response that mentioned tribal relationship specifically to the lands of what are now national parks/monuments. However, respondents also mentioned personal cultural connections to place in relation to the species they wrote about:

“The [species name] story I submitted was inspired by cultural knowledge about the Tohono (Desert) passed to my generation by prior O'odham generations.”

“The [species name] is a significant medicinal plant for the Tohono O'odham and so I wrote from that perspective...I took from my personal and cultural knowledge when creating the poem.”

“The [species name] is intimate to my tribal cultural upbringing.”

While it's uncertain whether additional respondents are tribal members, they alluded to either personal cultural ties or an interest in the cultures of Indigenous peoples in their responses to their interest in certain species and what they learned:

“[Species name] has been used religiously and ceremonially and has likely co-evolved with humans. So it represents to me how all life is interrelated, even at deep spiritual levels.”

“I learned more about how American Indians connect with the [species name].”

“I researched a little bit about the Apache folklore surrounding the [species name].”

Statements such as these make up the minority of responses, however, and indicate a gap in the knowledge of this thesis. It's uncertain whether this gap in my research reflects voices that are not as prevalent in the literary/poetic inventories as well. What is certain is that responses such as these bring to light another source of tension – the establishment of 'public lands' and 'wilderness areas.' While it is normal to associate these areas with recreation, natural resources, and the economic benefits that come with each, it is often forgotten or ignored that they are Indigenous cultural landscapes (Tsosie 2003).

In visiting a location near OMDP mentioned by one of the respondents for the first time, the issue of visitors not being mindful of these landscapes and their stories became more apparent to me. Shards of glass from bottles that had been thrown against a stone planted upright like a target, half-charred briquettes lying beneath rock overhangs, and the remnants of chalk left on the rock were in abundance. These traces represent disregard and/or disrespect of the Indigenous ancestral importance of the area, and bring to question what is being protected in such areas. This is not to claim that people shouldn't be allowed to *responsibly* enjoy these places, but to show recognition that the lands serving as inspiration for the inventories are more than federally and state-recognized 'public lands' – they are Indigenous homelands (2003). This thesis cannot claim whether writing or reading the works created for the inventories might assist in bringing about greater respect for such places and awareness of our impacts on them. However, it's worth mentioning that a few of the respondents hoped to do so:

"I tried to put a face on the humans who have passed time here, and show how we interact with the environment as fauna, often in much more dramatic ways than other fauna.... I also thought a lot about the vandalism I saw and realized much of it came from ignorance, so I hope my essay helped put a face on the past."

#### 4.6 ‘Creative Cartographies’

In interpreting the survey data and the themes they revealed, I realized that the flora and fauna were not just written about in the pieces of poetry or prose created by the contributors. Instead, the organisms are living, dynamic inhabitants of many of the pieces. It could also be said that, in a sense, the pieces perform as ‘their own animals’ (Magrane 2016). This inspired me to reflect on my own view of the cartographic documents that could be created in response to this thesis research, resulting in the creation of two artistic maps.

The map produced using ArcGIS Pro (ESRI 2020, Version 2.5.0) shown in Figure 3 was created to represent the walking interview that was had with one of the contributors to the OMDP literary inventory. The map incorporates what you’d normally find in a cartographic document (i.e., north arrow, scale bar, neat line, etc.) with items that are more unusual (i.e., quotes from the contributor and illustrations of ‘real’ and ‘imagined’ landmarks along the trail).

The drawn map shown in Figure 4 was made in an attempt to break away from the confines of using a GIS and allow for ‘play’ in depicting Baylor Canyon Trail. The map does not portray all the species that respondents mentioned in relation to the trail. Instead, it serves as the first in what, I hope, becomes a series of maps made in response to the respondents’ questionnaire responses and their written works contributed to the Literary Inventory of the OMDP.

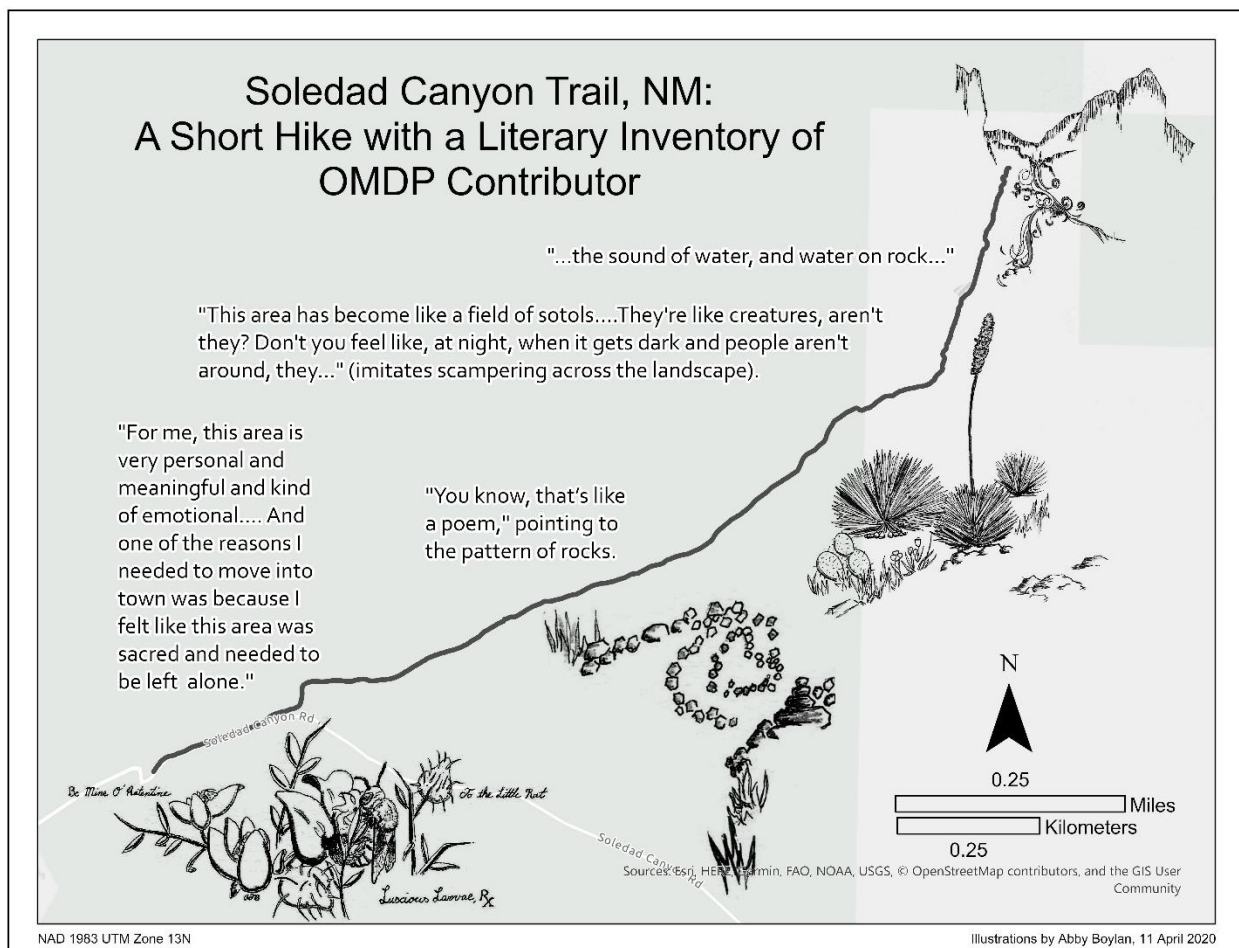
Both maps might cause those who have experience with GIS and/or follow proper cartographic design principles to cringe. Originally, I was uncertain of whether I should include either of them in this thesis. This is primarily due to their limitations, and the fact that they don’t necessarily reflect ‘reality.’ However, an opening line from Mark Monmonier’s *How to Lie with Maps* (2018) came to mind as I created them:

“To portray meaningful relationships for a complex, three-dimensional world on a flat sheet of paper or a video screen, a map must distort reality” (1).

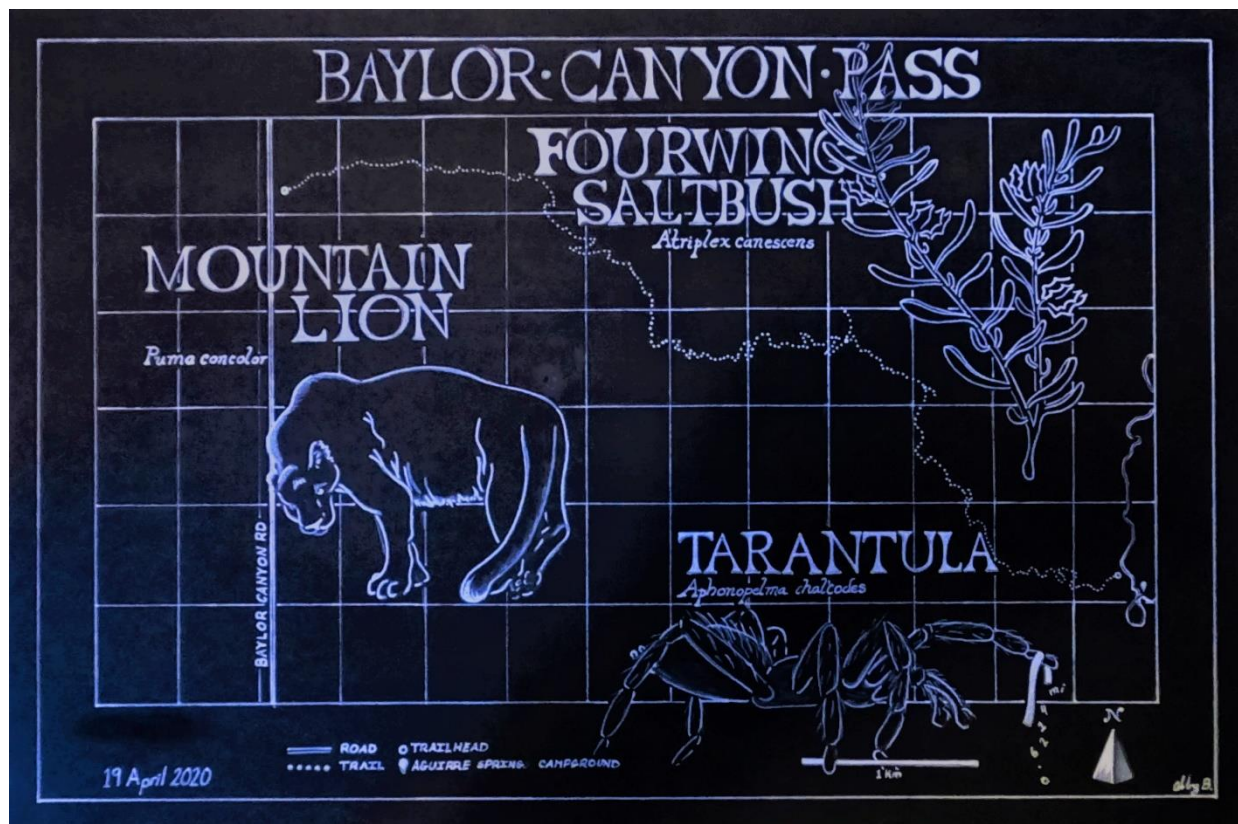
Neither of the maps may be useful for navigation or in studying characteristics of the landscape. I’ve been taught to be mindful of limitations such as these, as well as the role that maps play as “model[s] of reality” (DeMers 2009, 29). However, the creative cartographies shared in this thesis, and those that I plan to create after the completion of this thesis, are useful in portraying their own forms of ‘reality.’ The map in Figure 3 serves as a representation of the reality that was experienced during the walking interview – one of imagining species that were not seen along the trail but were constantly in mind, of scurrying sotol creatures and rocks arranged into stanzas. The map in Figure 4 aims to represent a few species in relation to place in a dynamic manner. Of course, two-dimensional lines on a piece of paper would not serve as a scratching post for a mountain lion, a plant wouldn’t wind its way and interfere with lines and lettering, and a tarantula wouldn’t be dragging along a scale bar. However, these interactions between the illustrated species and cartographic product serve to represent the species as ‘living’ within the document. In this way, the maps I’ve created join a vast collection of artistic maps including those of Denis Wood’s *Everything Sings* (2010), and *The Map as Art* (2009) by Gayle Clemans and Katharine Harmon. Regardless of what might be perceived as cartographic faults, the maps included here serve as artifacts of my perception of place-making during the walking interview and acceptance of creative works in my research.

In summary, the ‘creative cartographies’ (Figure 3 & 4) serve as artifacts of my own ‘sense of place’ shifting in response to this research. They also aim to provide a more ‘lively’ or ‘dynamic’ representation of the relationships people have formed with place and resident species. While creating each map in response to what was said during the interview and in response to the questionnaire, I kept in mind the call for ‘more-than-representational’ views of

cartographic products. A call for literary maps to serve as tools with which to express the journey that a reader envisioned in response to a literary text, to explore different spatial representations depicted in literary texts, and to guide cognitive and emotional development of self-consciousness and subjectivity, among other purposes (Luchetta and Ridanpää 2019). I hope that these maps build on the growing collection of creative cartographies and inspire other geographers to allow themselves a moment to ‘play’ with maps.



**Figure 3: Creative map representing the walking interview that was had with a contributor to the Literary Inventory of Organ Mountains-Desert Peaks National Monument. (Created using ESRI's ArcGIS Pro 2.5.0)**



**Figure 4: Hand-drawn map representing a few species mentioned by participants in relation to Baylor Canon Pass Trail/Aguirre Spring Campground. (Acrylic paint on mixed media paper)**

## CHAPTER 5: FUTURE RESEARCH & CONCLUSION

### 5.1 Future Research

There is much that can be learned from the literary/poetic inventories of OMDP, SNP, and RMNP. This thesis discusses only a few of the numerous lessons they may provide in helping individuals become more aware of public lands and resident species, in serving as an outlet to disseminate environmental/ecological information, form connections with fellow contributors, and gain a greater sense of place in doing so. This thesis also touches on only a few of the themes that were revealed during the walking interview, in responses to the questionnaire, and in the process of experimenting with ‘creative cartographies.’ For instance, other themes that were hinted at relate to interest in or concerns with the management of public lands, the concept of ‘establishing’ lands that are Indigenous homelands, and possible changes in perception and sense of place caused by an area’s recent designation as ‘public land.’ The overwhelming issue of COVID-19 and its effects on peoples’ mobility, safety, and health also introduced unexpected themes that are only touched on in this thesis.

Moments of isolation caused by COVID-19 may provide insight into other ‘themes’ and how people connect with place during times of crisis. Such themes may pertain to changes in mobility, the concept of the ‘lived’ vs. the ‘imagined’ place as some limit physical interaction with natural space and place, and the role that reading/writing geopoetic pieces might play during moments of isolation. In exploring such themes, it’s possible that one would find unique ways in which people connect with the places and species that they are having to distance themselves from.

This research focuses on the perceptions of contributors, but not audiences who have read their work or attended the BioBlitz events or other readings. Focusing on such audiences would provide more information on how community geopoetic projects impact the public’s ecological



and environmental knowledge/perceptions and sense of place. It's possible that the inventories led them to feel more connected to or changed their perceptions of the locations of interest and resident species. However, this research did not aim to explore this and cannot make any claims on how readers/listeners of the pieces were affected.

Future research on the three projects mentioned in this thesis may benefit from a revised/new edition of the questionnaire. While the responses it yielded were helpful in addressing the purpose of my research, there are aspects it could have approached in a different manner or explored more deeply. In terms of the questions asked, I am happy with the responses they yielded. However, in the interest of learning about community-building or collaborations, including a specific question about if/how the species they wrote about connected them to other people might have been useful. For instance, one of the writers mentioned that they spoke to others in the Las Cruces community who also experienced encounters with a particular species as a method of researching it. It was also shared during the interview that one of the pieces focused on a plant of the OMDP had been inspired by a dear friend of the writer, who also shared a love of the plant. These inter- and intra-species relationships inspire each other, and the questionnaire could have done more to explore how shared interests in species and their habitats can lead to connections between community members.

## 5.2 Conclusion

In this thesis, I focused on three community geopoetic projects of the American Southwest: The Literary Inventory of Organ Mountains-Desert Peaks National Monument, The Literary Inventory of Saguaro National Park, and The Poetic Inventory of Rocky Mountain National Park. A focus was placed on these projects to answer what community geopoetics might do in

- engaging local communities in learning more about public lands and their human and non-human species,
- influencing contributors' 'sense of place' in relation to the national park/monument of interest,
- and shifting contributors' perceptions of the public lands and their species.

To accomplish this goal, the methods I employed included online questionnaires and a walking interview with one of the contributors of the Literary Inventory of OMDP. As my perception of place and species was shifted by the contributors' works and in completing this thesis, short autoethnographic pieces and a couple of examples of my own 'creative cartographies' are included in this document as artifacts.

Many themes or topics were revealed in the questionnaire responses and during the single walking interview. To gain an understanding of contributors' sense of place, the themes discussed in more detail include: *Relationships with place, relationships with species, changed perceptions and new knowledge of place and species*, and *Indigenous relationships and knowledge*. Other themes that were hinted at relate to the management of public lands, the concept of 'establishing' lands that are Indigenous homelands, and possible changes in perception and sense of place caused by an area's recent designation as a national monument.

This thesis demonstrates that, for those who participated in this research, many experienced shifts in their perceptions or learned more about the public lands and resident species as a result of taking part in the inventories. Considering the long relationships that many had formed with such places and species, the reported shifts in perception and/or gaining of new knowledge are significant. Long-held perceptions tend to be stronger and harder to shift, but participation in creative projects like the inventories might be effective in doing so. Based on the respondents' accounts, projects such as these may also allow for newcomers to gain a stronger sense of belonging. This is especially true for those who find themselves in unfamiliar surroundings, as was the case for a few who mentioned leaving behind rainy and humid environments and found themselves in what seemed like an arid wasteland.

This thesis was successful in exploring what community geopoetic projects might do in terms of engaging people to learn more about and shift their perceptions of public lands and the species that reside within them. Unexpectedly, it was also successful in demonstrating that one might find their sense of place through the progression of their research. The poetry and prose of the inventory contributors, the responses of research participants, and the 'lived experiences' had during a walking interview invited me to reflect on my sense of place. I hope this thesis serves as an inspiration to explore what 'makes place' for you.

Finally, how does this research fit in applied geography?

*As we play fetch with our dog in the backyard, a tiny missile whistles through the air above our heads. We catch a glimpse of metallic green against white, glossy black banded by a brilliant gorget of purple – a black-chinned hummingbird. We pull out a couple of camping chairs and spectate as the little missile battles others for dominance over rigid petals of bright yellow plastic. While amusing, these tiny, feathered projectiles*

*remind us of the places we came from and connect us to the mountains that have helped  
make this place our home.*

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## APPENDIX A: WEB-BASED QUESTIONNAIRE WITH DISPLAY LOGIC

### **Literary Inventory Research - Boylan, Abby**

#### **Consent to Participate in Research Study**

You are being invited to take part in the following research study: Community Geopoetics: Sense-of-Place and Environmental Awareness in Public Lands of the U.S. Southwest

Researchers:

The person conducting this study is: Abby Boylan

What are the purposes and procedures of this study?

The purpose of this study is to explore contributors' engagement with community geopoetics projects. The information collected by this online survey will be used for a master's thesis and presentation at the American Association of Geographers Annual Meeting in April 2020.

Why are we asking you to participate in this study?

You are being asked to participate in this study because you have contributed to the Poetic Inventory of Organ Mountains-Desert Peaks National Monument, Rocky Mountain National Park, or Saguaro National Park.

What is the duration of this study?

This online survey is expected to take roughly 15 minutes.

What are the benefits and risks of participation?

The potential benefits of participating are that the research may help promote these place-based literary inventories and your literary contributions. There are no known potential risks of participating.

Confidentiality:

We will take careful steps to keep your information confidential. Any quotes or insights gained from the feedback you provide on the survey that are used in publications or presentations will be shared anonymously. If we find that we would like to quote something that you have written in your response directly as a contributor, and attribute it to you, we will not do so unless we have direct consent from you.

If you have questions or concerns or want to withdraw:

Participation in this study is strictly voluntary. If you decide to take part in the study, you may withdraw from the study at any time without penalty.

The Principal Investigator (PI) at New Mexico State University, Department of Geography in charge of this study is Abby Boylan who may be reached at [abby12@nmsu.edu](mailto:abby12@nmsu.edu). The faculty supervisor is Eric Magrane, PhD.

If you have any questions, suggestions or concerns about your rights as a participant in this research, contact the office of Research Integrity and Compliance at the New Mexico State University 575-646-7177 ovpr@nmsu.edu.

☐ Accept

☐ Decline

*Skip To: End of Survey If You are being invited to take part in the following research study: Community Geopoetics: Sense-o... = Decline*

Q1 Which project did you contribute to?

☐ Poetic Inventory of Rocky Mountain National Park

☐ Literary Inventory of Organ Mountains-Desert Peaks National Monument

☐ Poetic Inventory of Saguaro National Park

*Display This Question:*

*If Which project did you contribute to? = Literary Inventory of Organ Mountains-Desert Peaks National Monument*

Q2 As part of this study, I am conducting 'walking interviews' -- semi-structured interviews conducted in the field on the trails of OMDP. Would you be willing to participate in a walking interview and share your experience as a contributor to the literary inventory, while exploring the trails of OMDP? If you select **Yes**, you may be contacted to schedule an interview.

The audio/visual information gained from the interviews will serve as part of a master's thesis and may be shared as part of a presentation at the American Association of Geographers Annual Meeting in April of 2020.

☐ Yes (please provide a good email address to reach you)

☐ No

Q3 How did you come to know and build a relationship with the national park/monument that the inventory focused on? Feel free to mention if you have a long history with the national park/monument, or never visited it before and first came to know it through your participation in the inventory.

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Q4 Has your participation in the inventory led you to take part in other events at the national park/monument? Alternatively, were there events/projects that led you to participate in the inventory?

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Q5 Did the work you contributed to the inventory lead to your participation in new collaborations or projects such as other poetic/literary inventories? (If so, you'll have an opportunity to discuss this further.)

☐ Yes

☐ No

*Display This Question:*

*If Did the work you contributed to the inventory lead to your participation in new collaborations or... = Yes*

Q6 What collaborations and/or projects did your participation lead to?

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Q25 Is there a specific trail and/or location(s) within the national park/monument that served as inspiration for your prose/poetry piece, or that you feel connected to as a result of your participation in the inventory?

Be as specific as you like here---If you happen to know the coordinates of the location and are willing to share them, please do! If there's a location that you imagine in relation to your prose/poetry piece, feel free to describe it!

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Q7 Do you feel that participating in the inventory changed your perception of the national monument/park?

☐ Yes

☐ No

*Display This Question:*

*If Do you feel that participating in the inventory changed your perception of the national monument/... = Yes*

Q8 How did participating in the inventory change your perception of the national monument/park?

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Q9 Which species did you write about? (provide the common and/or scientific name)

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Q22 Was this species chosen by you or assigned? (You'll have an opportunity to discuss this further.)

- ☐ Chosen by me
- ☐ Assigned

*Display This Question:*

*If Was this species chosen by you or assigned? (You'll have an opportunity to discuss this further.) = Assigned*

Q20 Although the species was assigned to you, were you inspired to write about it due to a personal interest in or experience with the species?

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*Display This Question:*

*If Was this species chosen by you or assigned? (You'll have an opportunity to discuss this further.) = Chosen by me*

Q23 I'm interested to learn why you chose this species. Are there specific reasons, or an experience with the species that compelled you to choose it?

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Q12 Do you feel that participating in the inventory changed your perception of the species and/or led you to learn more about it?

- ☐ Yes
- ☐ No

*Display This Question:*

*If Do you feel that participating in the inventory changed your perception of the species and/or led... = Yes*

Q13 How did your perception change and/or what is something you learned? Feel free to discuss as much or as little as you like here.

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Q14 Which resources did you use in researching the species? (Select all that apply)

- ☐ Academic research articles
- ☐ Websites (e.g., National Geographic, etc.)

☐ Information provided by government agencies (e.g., U.S. National Park Service, Bureau of Land Management, etc.)

☐ Books

☐ Documentaries

☐ Field research

☐ Other (please specify) \_\_\_\_\_

Q15 How did you go about creating your work of prose or poetry? I'd like to know if you visited the national parka total/monument for inspiration, drew from personal experience with the area and/or species, conducted research, etc.

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## APPENDIX B: AUTOETHNOGRAPHIC PIECE FROM SOLO HIKE

*Walking up to the shelters, I spot a wren hopping from rock to rock, singing as it goes. I can't help but stop and listen to its singing, hoping that it doesn't notice me and continues in song. Keeping an eye on me as I arc my path away from it, the little bird ceases its singing and gradually hops away. Still, I'm happy to have heard its voice.*

*I sit cross-legged beneath an overhang, seeking shelter from the cold wind---unfitting for the first day of spring.*

*Taking a small Tupperware container out of my bag, filled with pumpkin seeds and cacao wafers, I begin to notice the traces left by those who have explored here before me---white chalk coating the rough edges of rock deemed suitable as holds, and black streaks of rubber left behind from feet seeking purchase on vertical faces. Behind me, charcoal and burnt stone left from the flame of a human's fire.*

*Glancing below to grab another handful of pumpkin seeds, I notice a piece of well-worn aluminum laying upon the ground---the tab of someone's soda can. As I continue to retrieve pumpkin seeds from the small plastic container, I feel quite pleased in myself for not leaving anything behind like others have done; but I begin to realize that I leave my own traces on this place, and places like it. My hiking shoes leave marks behind---the unnatural pawprints of humans, identified by the geometric shapes of tread... I wish I could say that I'm leaving this place undisturbed, but I know I'm not.*

*Picking up my bag and rising from my resting spot, I leave behind an altered patch of earth – rocks and sand pushed aside to accommodate my presence...*



*I make my way to another shelter – this one better sheltered from the wind. I sit down and feel a sense of wonder – who sat here before me? But I also feel a sense of not belonging, of trespass and violation. “At least I don’t see the remnants of chalk, rubber, and trash,” I think to myself.*

*I can’t help but reach out to the creosote bush and release its fragrance, a trick that I learned only a week before – Is this something the original keepers of these shelters did?*

*Scratch the “no trash” thought – I spot the gleam of green plastic as I enjoy the scent of creosote. It turns out we can’t get away from our own species’ reach.*

*The wind is threatening to carry my paper away, to leave proof that I was here. I get up, leaving yet another subtle trace on this sacred ground – I didn’t need the wind’s help.*

*I’ve come across cave paintings, faint red lines on worn limestone. I can’t help but feel excited by this find, something I’d never seen before; but I also feel disgust, as I notice that other members of my species have clawed their names into the stone as well.*

*Wells have been dug into the stone – the ones from her story, I think. I feel a connection to this place, but feel the need to leave it be. As I say goodbye, I hear shards of glass – green and brown – mixed with rock and sand, crunch beneath my shoes.*