



Introduction to Special Section on Action Ethnobiology

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Introduction

Ethnobiologists often work with, or are from, communities that face imposed poverty, outright dispossession, and ongoing cultural genocide brought on by colonial structures of oppression, such as resource development and extraction, land grabs, and intellectual property theft (Escobar 2011; Holmes 2014; Huseman and Short 2012; Radcliffe and Laurie 2006). As a result, some ethnobiologists have taken various actions to support the communities they are from and/or work with. Such actions have included providing legal research and policy development (Posey 1990), undertaking applied research projects (Hunn et al. 2005; Sillitoe 2006; Wolverton et al. 2014), disseminating research in public formats (Baptista and El-Hani 2009; Hauyut 2019), and advocating with collaborators through organizing, direct actions, petitions, and letters of support (Nabhan et al. 2011). While much discussion has taken place surrounding non-exploitative ethical best practices in ethnobiology (e.g., Bannister et al. 2009; Fowler and Herron 2018; Hardison and Bannister 2011; Posey et al. 1996; Wolverton et al. 2016; Wyndham et al. 2011), the topic of an actively anti-oppressive ethnobiology that works to dismantle systems that marginalize the communities we work with or live in has been relatively less explored.

The origins of academic ethnobiology begin with the colonial encounters of the eighteenth and nineteenth centuries, which were a key arena for scientific inquiry, exploration, and extraction. Ethnobiology emerged as a discipline heavily focused on extracting biological knowledge from Indigenous Peoples, a dynamic that persists overtly in the form of biopiracy. One might argue that, in some cases, the collection of knowledge, songs, and stories for generating academic capital (in the form of publications, public presentations, etc.) can create outside benefits for the researcher. If not carefully managed, this could potentially reproduce subtle colonial dynamics of extractionism.

Cognitive ethnobiology in the 1960s and 1970s began transforming into a discipline that, by the 1990s, fused Indigenous environmental resource management with the values of biocultural diversity and conservation. An outgrowth of this development is that a surge of “IK” related acronyms (Indigenous knowledge, traditional knowledge, traditional ecological knowledge, traditional land use, etc.) have now made their way into popular development and bureaucratic discourse (Blaikie et al. 1997; Viergever 1999; Wyndham 2017). The initial excitement and promise of traditional knowledge for ethnobiologists in the 1990s and early 2000s was its ability to clearly

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document and protect important cultural and ecological sites for Indigenous communities—especially in the face of impending resource extraction and development. The idea that ethnobiologists could collectively thwart and lessen dispossession was perhaps naive, as Leanne Simpson (2017) notes, since dispossession does not occur by accident or out of not knowing; it is part of the strategic structure of colonialism.

Despite the best intentions of some researchers, there have been (un)anticipated negative impacts resulting from contemporary ethnobiological research. The appropriation, packaging, and re-purposing of Indigenous Knowledge for the benefit of bioprospectors, developers, and resource managers, for instance, is now well-known (Coulthard 2014; Joly et al. 2018; Nadasdy 2005; Stewart and Strathern 2005; Usher 2000). To be sure, negative impacts have not always overshadowed positive ones; for example, research supporting the conservation and management of biocultural diversity (e.g., Clayoquot Sound Scientific Panel 1994), especially when initiatives are designed by and for communities (Hunn et al. 2005; Pfeifer 2018), is an important positive outcome of ethnobiological research.

Given ethnobiology's colonial foundations and structures, many ethnobiologists are at a crossroads and, as a result, are in the thralls of deep self-reflection. We argue that reformist critiques of ethnobiology will likely not attenuate the tacitly oppressive forms that abound our research. Darrell Posey was one of the first ethnobiologists to express interest in advocacy for Indigenous intellectual property rights and, along with colleagues, led the development of ethics theory and practice in the discipline (Bannister et al. 2009; Laird 2002; Posey et al. 1996; Soldati and Albuquerque 2016). Wolverton and colleagues (2016) have more recently exposed the moral terrains that scholars and local/Indigenous collaborators may navigate during research. These

terrains (moral, just, ethical, and racial) have yet to be fully unpacked and their colonial underpinnings are still poorly understood or acknowledged. This is exemplified by the obfuscation and exploitation of Indigenous Knowledge in resource extraction and development projects and, to some extent, the commodification of IK for the benefit of our own careers.

This special section is dedicated to learning from mentors, colleagues, and Elders, and combining decades of ethnobiological method and theory with the exquisite body of activist theory and practice (Cohen et al. 2018), and Indigenous resurgence literature and experiences (e.g., Coulthard and Simpson 2016), in order to foster growth and movement towards actively anti-oppressive research. Indigenous environmental justice, which we seek to emulate, is influenced and designed by decolonizing thought and praxis (Rodríguez and Inturias 2018). We propose a re-configuration of ethnobiological research that may allow us to transform some of our research by moving from a state of self-reflection and culpability to a state of action. We argue that activism, allyship, and advocacy (collectively, action) are one avenue for addressing injustices within our own research and within the communities we are from and/or work in.

Is Action (Un)scientific?

While we chose not to define the very personal and individual nature of action ethnobiology, in coordinating this special section, we jointly pondered what action-oriented ethnobiology might look like. Action-oriented research constitutes the meeting place or interface of social justice and anti-oppressive paradigm shifts in scientific research and decolonization (e.g., Carruthers 2008; Hock and Mackenthun 2012). Anthropologists and other social scientists have engaged in constructive discussions surrounding the benefits, difficulties, and ethics of action-oriented

and activist research (e.g., Atalay et al. 2014; Escobar 1998, 2001; Hale 2001, 2006; Harnish et al. 2016; Low 2011; Low and Merry 2010; Sanford and Angel-Ajani 2006). Hale (2006:97) specifically defines activist research as “a method through which we affirm a political alignment with an organized group of people in struggle and allow dialogue with them to shape each phase of the process, from conception of the research topic to data collection to verification and dissemination of the results.” Angelbeck and Jones (2018), for example, contemplate how direct actions can foster non-colonial relationships between archaeologists, Indigenous communities, and the practice of heritage management. Mihaylov and Perkins (2015) promote grassroots activism as the object of their research in psychology and sociology. By synthesizing and reviewing localized grassroots social movements, they legitimize and authenticate the movement while demonstrating how environmental discourse (conservation, public health) can emerge as a kind of cultural adhesive.

It is no secret that there is angst among some scholars about whether or not to involve themselves in “local issues.” For example, there is a question of whether or not outside researchers who join solidarity actions are quietly invoking dimensions of privilege when politicizing their scientific position. The real anathema to action-oriented research is that in the process of supporting a community, we fall from the upper echelons of objectivity and subsequently compromise our scholarship. For example, during one of the largest Indigenous title claims in Canadian history, *Delgamuukw v British Columbia*, the testimony of academic expert witnesses was disregarded as biased because the American Anthropological Society code of ethics states that “in research, an anthropologist’s paramount responsibility is to those he studies” (Cruikshank 1992); another anthropologist was accused of bias for “going Indian” (Daly 2007).

For decades, feminist, Indigenous, and racialized scholars have challenged the myth of scholarly objectivity (Collins 1990; Grande 2000; Gumbs 2014; Maracle 1996). Biologists and ethnobiologists often offend objectivity when they invariably “fall in love” with their research subjects (Hunn 2014). Askins (2009) further considers the role of emotion in academic activism. As scientists, we are capable of committing to scientific rigor when challenging oppression—we are still held to the same ethical standards of our institutions and colleagues, the rigor of peer-review, and the scrutiny of granting agencies. But perhaps, most convincingly, there are no scientific studies that demonstrate action-oriented research is unscientific.

The conceptual and utilitarian value of ethnobiology is not diminished when we challenge its colonial structures—it is merely transformed and sometimes enriched. While action-oriented ethnobiology is built on the premise that ethnobiology is historically and structurally colonial, we take seriously the presumption that new waves of action-oriented research will reject our scholarly predecessors as illegitimate or corrupt (Hunn 2002). Action-oriented ethnobiologists should not reject early ethnobiological research—but learn from and, when possible, build upon it. Ethnobiology is built around knowledge extraction, but, when co-created and shared in anti-oppressive ways, it can transform the research dynamics between oppressor and oppressed. Indeed, without these tenets, the discipline would not exist. Many ethnobiologists have developed solidarity with communities first as intellectual pursuits (through ethnography, participant observation) and relationships, which sometimes evolved into positions of support and advocacy (e.g., Posey and Dutfield 1996; Sault 2018). In this sense, action ethnobiology may be a new term, but it is not necessarily a new concept.

Action is Activism, Allyship, and Advocacy

The papers presented in this special section demonstrate that doing nothing is not superior to or more ethical than doing something. However, there are a number of ways to fuse activism, allyship, and advocacy with ethnobiological research. A useful distinction is that action ethnobiology is not necessarily interchangeable with applied ethnobiology. Applying ethnobiological data to issues of activism is certainly one way to conceive of action; however, we propose a transformation of how ethnobiology is theoretically grounded and practiced. We acknowledge and borrow some of the theoretical underpinnings of participatory action research (PAR) explored by philosopher Paulo Freire (1970), sociologist/political activist Orlando Fals Borda (1979, 2013), decolonizing anthropologist Marja-Liisa Swantz (1985; Swantz et al. 2001), and others who transformed and challenged academic knowledge production and traditional educational models, particularly between the oppressors and the oppressed. In particular, we argue that issues of social justice cannot be disembodied, ignored, or removed from research and education (Kincheloe and Steinberg 2007), and that grassroots movements led by the communities we are from/work in are a strategic response to colonialism, through which we can align our research (e.g., Figueroa and Waitt 2010; Zavala 2013).

Challenging oppression broadly in ethnobiology and education requires deep theoretical and methodological tinkering so that action ethnobiology is not reproduced as yet another intellectual fad. Castañeda (2014:68) has pondered this same fate for activist archaeology: that advocates work to ensure that it does not end up as a careerist movement or another brand of academic commodity. We suggest that the 3As (activism, allyship, and advocacy) will raise the possibility of repositioning research from the context of inquiry to injustice, resulting in an appreciably less oppressive ethnobiology.

Allyship is an avenue for transforming how to practice ethnobiology in the communities where researchers are from or work with (see Reo, this volume). In the context of activism, non-Indigenous activists seeking allyship with Indigenous Peoples requires the activist to confront how white supremacy, imperialism, and colonialism shape the daily lives of Indigenous/localized communities. Indigenous and racialized scholars and activists have painstakingly deconstructed “what is an ally?” (e.g., as a non-marginalized/non-Indigenous person) and “how can you be a good ally?” in endless forums, blogs, podcasts, peer-review articles, and zines (Mihsuah 2003; Sakai 2014; Swift-wolfe et al. 2018; Xhopakelxhit 2014). Such resources are grossly underutilized in academic contexts, despite parallels between the experience of an activist ally working with a community and an ethnobiologist working with a community. Allyship codes of conduct include tenets such as:

- Do not expect to be taught or shown. Take it upon yourself to use the tools around you to learn and answer your own questions.
- Never show up empty-handed. Use your labor, resources, and skills to help out.
- Moral support (and peer-review studies) might not be enough.
- Do not behave as though you know best.
- Do the inner work to figure out a way to acknowledge how you participate in oppressive systems and do the outer work to figure out how to change oppressive systems.
- Be open to listening and be aware of your implicit biases.
- Amplify (online, in your research, and when physically present) the voices of those without your privilege.
- Do not expect your behavior to be policed. Be reflective and

challenge yourself to question how your actions/behavior affect others.

- Do not take credit for the labor of those who are marginalized and did the work before you stepped into the picture.
- Do your own research to learn more about the history of the struggle in which you are participating.

Some of these tenets align with the International Society of Ethnobiology codes of ethics (ISE 2006). Some of the above tenets are even taught as foundational research methods in anthropology, for example, to seek consent and permission, and to listen and to take cues from the community. Readers may recognize tenets that they have internalized through years of experience and participant observation in communities—be aware of biases and do not behave as though you know best. Some tenets, like not taking credit for the labor of others, doing more research on the struggle of collaborators, and amplifying the voices of those without privilege, may be new paths towards less oppressive research.

Broadly, these tenets are about being a better ally, but, more purposefully, they are about how we live, how we organize, and about personal growth and transformation within deeply entrenched colonial structures. But it is not only about checking off a series of laws or teachings, as Leanne Simpson (2017:24) explores in Nishnaabeg-grounded normativity. Simpson contemplates ethical intelligence as ongoing practices that reject and analyze colonialism, and that are adaptable and, to some degree, fluid (see also Coulthard and Simpson 2016). Similarly, action ethnobiology must embody allyship tenets and codes of conduct but ultimately transform how we conceive of and execute our research, which has also been formed by colonial structures.

Communities who are directly affected by injustices are best positioned to determine appropriate strategies and offer

visionary solutions to those injustices, and so it is from them that allies take their cues (Weis et al. 2014). Likewise, those who are affected by ethnobiological research should help theorize and conceptualize what twenty-first-century ethnobiology will look like. Allyship codes of conduct are designed, re-designed, and reiterated by decolonizing communities. As such, ethnobiologists are necessarily challenged to reflect upon research assumptions and how these may reproduce oppressive structures. While we have paraphrased and selected allyship codes of ethics/conduct from various sources, we encourage readers to do their own exploration—take cues from the people whose land you are on, talk to action-oriented people, and seek out materials relevant to the struggle/cause and the context of your own research (Kovach 2010; Patel 2011; Simpson 2004; Smith et al. 2016; Targ 2015). A promising start for researchers writing about Indigenous Peoples is to use publishing principles outlined by and for Indigenous Peoples (see Younging 2018).

While some of the contributions ethnobiologists have made to the conservation of biocultural diversity have been effective, Indigenous Peoples worldwide are leading environmental movements fight through resurgence, anti-colonial organizing, and direct actions (Thomas-Muller 2014). Indeed, we reject the conservationist approach that views fossil fuel expansion and climate change as issues that can be resolved solely within existing power structures (see Black et al. 2014). Activist organizing and direct actions are often the most effective methods of overcoming wildly expensive and oppressive justice systems (Belanger and Lackenbauer 2014). In these contexts, we challenge ethnobiologists to move towards more collaboration and solidarity with communities who are already actively fighting to save their biocultural legacies. This requires researchers to “bring something

to the table.” Some examples of advocacy work might include conducting pro-bono archaeological surveys that might be used in land-rights cases, testifying as an expert witness to support resource access, or using research to inform policy that is supportive of human rights. Activism is not merely about joining the frontlines but should be regarded as a long and rich social contract. As such, the commitment to action should be just as important as the research that is undertaken.

Our call for action-oriented ethnobiology does not come without risk. Colonial violence runs deep and joining actions against it might not always be safe or prudent for researchers. Ethnobiologists, for example, who are not citizens of the country they are working in may be at higher risk for arrest, deportation, or physical harm (e.g., McRae 1989). People of color, women, and people with low income are also generally overrepresented and at disproportionately higher risks in social/environmental justice movements (Bell and Braun 2010). “Activist security culture” provides a framework for research and actions in potentially unsafe environments; it represents a collection of practices and customs that aim to reduce the risks and maximize the effectiveness of action (e.g., Bell and Spaulding n.d.). This includes measures to minimize public exposure of activists’ personal data and information, to address conflicts within the activist group, and to respect diversity for activist tactics (see Conway 2003). A foundation of activist security culture is first identifying the risks associated with involvement in action. While joining the frontlines to challenge the status quo or colonial superstructures may expose researchers to certain risks, it has the potential to contribute an outsize amount to social and environmental justice in a way that non-engaged research cannot.

Special Section

The research articles in this special section of the *Journal of Ethnobiology* inves-

tigate how advocacy, activism, and allyship can bring more transformative, ethical, and anti-oppressive approaches to ethnobiology now and into an uncertain future. The goal of this section is not to defend or define action, but, through embodying the term itself, to illustrate how action-oriented scholars have transformed their research to expose their challenges and lessons, and to contemplate the roles of scientific research outcomes.

Three cases are presented in which ethnobiology is employed to oppose neocolonial extraction and development projects affecting Indigenous communities. Armstrong and Brown reflect on their roles as Indigenous scholars and allies in the occupation of Lelu Island (British Columbia, Canada) to oppose a liquid natural gas (LNG) development project. They emphasize the productive interface of activism and ethnobiology in producing rigorous scientific and galvanizing traditional knowledge conservation efforts. Blair’s contribution interrogates the roles of public anthropology and ethnoecology in disputes over policy and ownership of natural resources. Blair compares the efforts of the Natural Resource Defense Council (NRDC) to oppose hydroelectric damming in southern Chile and industrial logging in northeastern Canada. These campaigns involve partnerships between activists, lawyers, scientists, Indigenous leaders, and local residents, and leveraged ethnoecology and ethnozoology to strengthen environmental protections. Caron-Beaudoin and Armstrong’s contribution reviews the premise and promise of combining ethnobiological and biomonitoring research. They focus on how Indigenous Peoples in northeastern British Columbia (Canada) experience contamination from unconventional oil and gas development (fracking). The authors note that observations of contaminated environments (e.g., tumors in hunted deer and moose) are ignored by policy-makers and developers, and they thus challenge researchers to engage with local Indige-

nous communities, so that their voices are heard and their experiences are taken seriously.

The partnerships between ethnobiologists and the communities they work with is a focus of the contributions by Reo and Fowler. Nicholas Reo, an Anishinaabe ecologist, introduces the idea of relational accountability, an ethical guideline for carrying out research with Indigenous collaborators and their more-than-human relations. Reo's conception of relational accountability is built on the kin-based concept of Anishnaabe *inawendiwin* and implores researchers to cultivate close relationships with local collaborators, involve youth in projects, and honor local conceptions of accountability. Fowler's contribution provides an overview of her research role in the cooperative management of Death Valley National Park (between the Timbisha Shoshone Tribe and the National Park Service/Bureau of Land Management). Fowler presents her work with Timbisha collaborators to try to secure traditional plant management rights and provides a series of useful recommendations regarding applied research partnerships: be flexible, know when to step back, do not lead but advise and support, and so forth. Fowler's decades of experience are distilled into "do's and don'ts" that reflect many allyship principles and codes of conduct. Finally, Golan and colleagues revisit the calls to action made by advocate-ethnobiologist Darrell Posey nearly 30 years prior, in order to protect traditional knowledge and the intellectual property of Indigenous communities. The authors outline developments in national and international policies related to these issues and highlight remaining shortcomings.

This special section recognizes that publishing research papers on these topics can be theoretically and methodologically rich, while addressing greater injustices in our lives and those of the people we work for and with. Collectively, action-oriented research constitutes the joining of social

justice and anti-oppressive movements in scientific research. The institutional privilege and biocultural expertise of ethnobiologists can uniquely situate ethnobiologists to be effective allies, advocates, and activists. We hope that placing greater importance on action-oriented contributions and the sharing of personal experiences of advocacy and engagement helps transform how ethnobiology is practiced, and that it encourages, normalizes, and inspires such work and further dialogue in an uncertain future.

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