Recent protected area–Indigenous Peoples research articles in Canada and the USA: A meta-review

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INTRODUCTION

Particularly since 2012, when the parties to the United Nations’ Convention on Biological Diversity agreed to the Strategic Plan for Biodiversity 2011–2020, which includes the Aichi Biodiversity Targets, there has been increased attention to parks and protected areas across the globe. At the same time, there has been new research on Indigenous Peoples’ role in biodiversity conservation, particularly around Indigenous protected and conserved areas (IPCAs) and Indigenous guardian programs (e.g., ICE 2018; Reed et al. 2020). This is tied to settler–Indigenous reconciliation discourse, but also to the reality of the Anthropocene, a time when parks are becoming ever more important. Alongside these trends, critical Indigenous studies and scholarship around Indigenous research methods have continued to grow (Kovach 2010a; McGregor, Restoule, and Johnston 2018; Wilson, Breen, and DuPre 2019; Hokowhitu et al. 2020).

We use “park” and “protected area” interchangeably. The International Union for Conservation of Nature (IUCN) defines a protected area as a “clearly defined geographical space, recognised, dedicated and managed, through

ABSTRACT

We conducted a meta-review of 66 peer-reviewed articles published between 2008–2020 concerning Indigenous Peoples’ interactions with protected areas in the United States of America and Canada. Our meta-analysis centered on characterizing this literature’s response to the concerns of critical Indigenous studies by examining the topical, geographic, and disciplinary scope of the literature, as well as authors’ backgrounds and the journals where research is published. We additionally considered the presence of Indigenous persons as authors and participants. We found the literature is published widely, across many journals and disciplines. The research is concentrated in a handful of states and provinces. One article explicitly used Indigenous research methods, although Indigenous research participants were common in articles outside of the disciplines of history and law. Yet, those two disciplines dominate the current literature. We conclude that the community of scholars for whom relationships between parks and Indigenous Peoples are the central research question is smaller than those for whom it is one aspect of their research agenda.

Keywords: parks, protected areas, Indigenous, United States, Canada, review

INTRODUCTION

Particularly since 2012, when the parties to the United Nations’ Convention on Biological Diversity agreed to the Strategic Plan for Biodiversity 2011–2020, which includes the Aichi Biodiversity Targets, there has been increased attention to parks and protected areas across the globe. At the same time, there has been new research on Indigenous Peoples’ role in biodiversity conservation, particularly around Indigenous protected and conserved areas (IPCAs) and Indigenous guardian programs (e.g., ICE 2018; Reed et al. 2020). This is tied to settler–Indigenous reconciliation discourse, but also to the reality of the Anthropocene,

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legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (Borrini-Feyerabend et al. 2013:i). When evaluating if something is a “park,” we were concerned with type A (governance by government), type B (shared governance), and type D (governance by Indigenous Peoples and local communities) as per the IUCN governance matrix (Borrini-Feyerabend et al. 2013). These are broad categories, representing a diversity of management objectives, legal mandates, Indigenous involvement/consultation expectations, and so on. Yet, as we outline below, park and protected area managers in North America are necessarily bound up in processes of settler colonialism.

The meta-review characterizes the degree to which 66 recent peer-reviewed research articles regarding park–Indigenous relationships in Canada and the USA speak to critical Indigenous studies. Doing so is important to scholars of park conservation for several reasons. First, a central concern of critical Indigenous studies, which is to mobilize Indigenous Knowledge as part of a larger foundation of knowledge (Moreton-Robinson 2016: 4), is of growing relevance to protected area conservation. Considering the authorship of and methods used in recent studies is a proxy for developing an understanding of the literature’s relationship to critical Indigenous studies.

Second, highlighting publication venues can help the field understand its audience. We are mindful of Kovach’s (2010: 43–44) caution that Indigenous research should be “a way to interpret knowledge so as to give it back [to Indigenous communities] in a purposeful, helpful, and relevant manner.” There are, of course, many forms of returning research to and ensuring it benefits communities beyond peer-reviewed publications. Nevertheless, knowing where authors who write about parks and Indigenous Peoples tend to publish can be instructive.

Third, identifying the scope of existing literature has potential to assist future researchers as they are considering new work. If researchers are, in aggregate, working predominantly with a small handful of communities or in a small number of locales, this narrows the field’s contributions to Indigenous resurgence, broadly. Put another way, research can support settler–Indigenous reconciliation, but without a high-level overview of trends in the field, that support may unintentionally exclude certain communities.

We decided not to include books or book chapters in our meta-review because our primary focus is on how academics are engaging with critical Indigenous studies, and peer-reviewed articles are the most common form of academic labor. Admittedly, peer-reviewed articles are not the only, or necessarily the best, way to incorporate a critical Indigenous studies framework. We see similarities between our work and Andersen’s (2009: 95) comment that “whiteness in the academy shapes the boundaries of its knowledge production in ways which do not necessarily subscribe to the regimes under which community knowledges are produced.” So long as academics are writing peer-reviewed articles as their primary means of publishing scholarship, we believe it is appropriate to limit the our meta-review to those articles.

We write this paper as three settlers, working in academia, and writing for other academics. Hisey was born on Treaty 6 lands in Alberta, Finegan on traditional Cherokee lands in Tennessee, and Olive on Treaty 4 lands in Saskatchewan. Our approach to this work was informed primarily by Finegan’s background in Indigenous dimensions of protected area management.

As a meta-review of literature, this article is not concerned with any particular community. Indeed, beyond identifying which communities are represented in the literature, this research does not include communities as a unit of analysis or major focal point. This is not, for example, an article analyzing a particular First Nation’s relationship with Parks Canada. We know that Indigenous communities do not necessarily privilege academic ways of knowing. But we are also mindful that the academy does. Articles, for better or worse, remain the currency of an academic career. Despite the shortcomings (e.g., paywalled knowledge may be inaccessible to communities), we believe that studying academic ways of knowing is important to understand the state of the field of park conservation.

**Parks and settler colonialism**

Parks reflect the body politic. They are physical manifestations of choices made about which places, resources, and stories a country decides are most deserving of state-sanctioned protection. Canada and the USA both exist because of settler colonialism’s genocidal attempt to remove, assimilate, or exterminate Indigenous Peoples. If parks reflect a country’s body politic, then in Canada and the USA, they reflect settler colonialism. Park creation’s role in Indigenous dispossession is well-known (e.g., Sandlos 2008; Dowie 2011). As much as they are places of biodiversity conservation, parks also are places of heroic nation-building storytelling and heritage preservation (Runte 1997; Tyrrell 2012; Marras Tate et al. 2020). This contributes to settlers’ ongoing efforts to obscure Indigenous ties to Creation. Beyond this, parks have long been entangled in questions about how and whether the settler state will permit Indigenous Peoples to exercise their Treaty Rights (Craig, Yung, and Borrie 2012) and
how to manage Indigenous sacred sites (Tsosie 2014). To summarize a complex, multi-faceted area of inquiry, parks are places of direct settler-state control over land. This exists alongside the deep connection to Territory that tends to characterize Indigenous societies (Starblanket and Stark 2018). In places such as the USA and Canada, built on Indigenous dispossession, this dynamic can create conflict, and in many instances it has.

Scholars have increasingly turned their attention away from documenting park–Indigenous conflicts (e.g., Catton 1997; Spence 1999) to envisioning how such tension might be addressed in a manner that centers Indigenous visions for the future (e.g., Rist et al. 2019; Thompson et al. 2019; Reed et al. 2020). Park management research that directly seeks to serve Indigenous futures, rather than merely describe Indigenous Peoples, is a piece with critical Indigenous studies—that is, they both have the same broad goal.

Meanwhile, in Canada, there has been an increase in state-sanctioned Indigenous involvement in conservation. For example, in 2017, the Canadian government convened the Indigenous Circle of Experts to advise on Indigenous-led conservation (ICE 2018). Prime Minister Justin Trudeau’s first government announced a CAN$6.4 million investment in Indigenous guardian programs in 2019 (ECCC 2019); this was followed by a $54.8 million investment in Inuit-led marine protected areas (Frizzell 2019). Canada has also announced the Canada Nature Fund Target 1 Challenge to fund two dozen new Indigenous protected areas (ECCC 2019).

In the USA, recent achievements include: (1) a collaborative report on Indigenous cultural landscape management (Ball et al. 2015) authored by settler and Indigenous governments; (2) a cooperative stewardship agreement with the Diné at Canyon de Chelly National Monument (Northern Arizona University News 2018); and (3) the creation of the USA’s second tribal national park by the Iowa Tribe of Kansas and Nebraska (Hammel 2020).

Alongside this, recent work suggests that Indigenous Peoples’ Territories contain 80% of the world’s remaining forest biodiversity (IPMG 2019). Vertebrate biodiversity on Indigenous Territories is at least equal to that in protected areas (Corrigan et al. 2018; Schuster et al. 2019). Protected area managers have much to learn from Indigenous Peoples.

Protected areas have a role to play in settler–Indigenous reconciliation. Reconciliation suggests a continuous process of moving forward together in new relations, both between Indigenous and non-Indigenous persons and between humans and non-humans (McGregor 2018). The precise meaning of “reconciliation” is contested (Maddison, Clark, and de Costa 2016), but three of its broad characteristics are clear. Reconciliation first requires entering into ethical space: that is, a place characterized by “mutual respect, kindness, [and] generosity” (ICE 2018:7). Second, reconciliation threatens underlying power structures (Whyte 2018) and, in doing so, prevents “moves towards innocence” (Tuck and Yang 2012:1) that re-inscribe settler domination of Indigenous Peoples. Third, reconciliation is “inspired by and oriented around the question of land, a struggle not only for land in the material sense but also deeply informed by what the land [is] as a complex system of reciprocal relations and obligations…” (Coulthard 2014: 62). Thus, as places of state control over land and heritage, parks are plainly invested in processes of settler colonialism.

**Critical Indigenous studies: Key elements**

Because our meta-review is concerned with how recent research articles are responding to critical Indigenous studies, it is important to identify some of its key elements. First, the field of critical Indigenous studies explicitly centers Indigenous Knowledge as the foundation of scholarship. Thus, we would expect that both theoretical and empirical articles that purport to speak to critical Indigenous studies would similarly center, or at minimum acknowledge, Indigenous Knowledge. Johnston and Mason (2020) is a good example of such work.

Second, the field of critical Indigenous studies is attuned to the needs of communities. Debate exists within the field about the degree to which it should be applied and/or theoretical (see Moreton-Robinson 2016). Articles grounded in critical Indigenous studies thus have a political agenda—they are not research for research’s sake.

Similarly, Indigenous research methods require scholarship that “gives back to and benefits the [Indigenous] community [being researched] in some manner” (Kovach 2010b:48). Alongside this, Kovach writes, all research should “be in line with Indigenous values,” have “some form of community accountability,” and be conducted by one who “is an ally and will not do harm” (2010b: 48). These ethical practices can translate to the page in several ways. In addition to directly rooting one’s work in Indigenous epistemologies, explicit discussions of positionality, self-reflection, specific methods (such as ensuring participants review and approve their contributions), or broad frameworks—such as the First Nations Information Governance Centre’s OCAP Principles (ownership, control, access, and possession; FNIGC
2019)—are but some of the ways one can demonstrate that one’s work draws on Indigenous research methods. As a recent example, see Tran et al. (2020).

For clarity, this meta-review is concerned with the degree to which research about parks and protected areas’ interactions with Indigenous Peoples explicitly draws on Indigenous Knowledge. It is additionally concerned with the degree to which such research rests on Indigenous research methods. “Critical Indigenous studies” means different things to different people. But at the field’s core, we believe, is a respect for Indigenous research methods and Indigenous Knowledge.

Parks and Indigenous Peoples in North America are deeply intertwined. Scholarly considerations of this relationship may not only support improved conservation outcomes, but steps towards reconciliation as well. Research informed by critical Indigenous studies and Indigenous research methods is best positioned to do so. Thus, we seek to characterize how recent park research articles have engaged with this field.

**METHODS**

We examined peer-reviewed articles focused on Indigenous Peoples and parks in the USA and Canada, published on or after January 1, 2008, through November 20, 2020. We initially planned to review the past decade of literature, but extended our search back to 2008, an inflection point in both American and Canadian politics. In the USA, Barack Obama was elected president. In Canada, the Truth and Reconciliation Commission began its work.

From 2001–2009, the presidency of George W. Bush was focused on war, energy politics, and the slow erosion of environmental protections (Harris 2009; Goldenberg 2009). While not necessarily a low-point for Indigenous–USA relations, the country’s refusal to sign the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007 was certainly indicative of the relationship. Similarly, in Canada, another one of only four countries to reject UNDRIP, Stephen Harper’s agenda of neoliberalism, militarization of the North, natural resource extraction, and climate denial left Indigenous Peoples in Canada frustrated and alienated (Jull 2006; Palmer 2015). The creation or even maintenance of existing parks was not high on the agenda for either President Bush or Prime Minister Harper. But 2008 set Canada and US down a potentially new path—one in which Indigenous Peoples might be respected, treaties honored, and reconciliation taken seriously. While this potential has yet to be realized in many respects (e.g., the slow implementation of the recommendations of Canada’s Missing and Murdered Indigenous Women and Girls Inquiry), we believe 2008 does mark a shift in the broad tenor of state–Indigenous relations in North America. Thus, from this time onward we anticipate parks literature might increasingly intersect with Indigenous studies.

We conducted searches of the following databases from May 5–15, 2020: GEOBASE, GeoRef, Web of Science, Project MUSE, Hein Online, CAB Abstracts, and ProQuest (see supplementary online material/SOM Item 1). These databases encompass a wide spectrum of journals across the humanities, law, and the social and natural sciences. As per Charrois (2015), we additionally conducted a limited hand-search of reference lists in relevant articles, books, and our own personal reference databases. Like other recent systematic reviews in the field (e.g., Ban and Frid 2018; Reed et al. 2020; Tran, Ban, and Bhattacharyya 2020) we did not search books or dissertations. As noted earlier, we recognize that searching only articles means that our search excludes books (e.g. Stevens 2014; Daehnke 2017) book chapters, and dissertations that discuss parks and Indigenous Peoples in Canada and the USA.

Our search string for each database was slightly different (owing to the peculiarities of the individual databases; Hein Online, for example, does not index abstracts). Generally, we searched for articles where the abstract mentioned parks and at least one of the following terms: Canada, USA, Parks Canada, National Park Service, and/or provincial, territorial, or state parks. Articles’ full text must have additionally mentioned Indigenous Peoples. For this, we searched by broad, top-level categories (e.g., Inuit, Métis, Indigenous, Native American, etc.) rather than by specific names of communities (e.g., Chinook). Our search strings are included in SOM Item 2.

From this, we identified 3,028 articles. We imported these references into Covidence. After removing duplicates, we were left with 2,789 articles. Of these, we deemed 2,669 to be irrelevant at the title and abstract screening stage. We screened the full text of 120 articles. Of these, we deemed 56 to be irrelevant. This left us with 64 articles in our pool for coding and analysis. This is summarized in SOM Item 3. Our secondary search, described below, added two articles to our final pool.

At each include/exclude decision point, we were guided by a simple question: is this article largely about park–Indigenous interactions in Canada and/or the USA? This is a necessarily subjective question. Regarding geography, we did not, for example, require that the research be located solely within one of these two countries. For articles that had clear, specific geographic scopes, we
required that articles discuss either Canada or the USA in more than three paragraphs. A simple mention of one of the countries or a digressional paragraph was insufficient for inclusion. For articles that had no specific geographic scope, we included articles with clear implications for Canada and/or the USA. A good example of this is Jonas et al. (2017), which discusses Indigenous community-conserved areas and uses a Canadian case study.

Regarding the requirement that the article be “largely about” park–Indigenous interactions, this too is a subjective test. For example, Hanna (2018) discusses the Dasiqox Tribal Park, but this is a law review article focused on analyzing the Supreme Court of Canada’s decision in Tsilhqot’in Nation v British Columbia. Meanwhile, Manning and Reed (2019) may appear to address issues of Indigenous land management, but a close read revealed that its primary concern is not Indigenous protected area management; rather, it is “the possibilities of using the sale of carbon offsets for assertions of Indigenous traditional knowledge, self governance, and self-determination” (Manning and Reed 2019: 70–71). As mentioned above, when determining whether the article concerned a “park” we used the IUCN governance matrix (Borrini-Feyerabend et al. 2013). When evaluating articles for inclusion, we endeavored to err on the side of being too inclusive, rather than hastily exclusive.

Regarding critical Indigenous studies, when coding for Indigenous Knowledge incorporation and/or Indigenous research methods (IRMs), we did not require that the article specifically use that term for it to be coded as “yes.” Instead, we evaluated each article against our understanding of IRMs (drawn from Smith 2009; Kovach 2010; Lambert 2014). This is, on some level, a necessarily subjective process. Yet, if one is conversant with the work of the scholars just mentioned, it is readily apparent if an article ignores, gestures towards, or wholeheartedly engages with Indigenous Knowledge and/or IRMs. An article needed to do more than merely acknowledge the existence of IRMs. It needed to explicitly, beyond any doubt, engage directly with IRMs rather than dominant research methods. For example, Pinel and Pecos (2012) use historical research, participatory action, textual analysis, and interviews to investigate the legal barriers of co-management. Other papers (e.g., Ban et al 2008; Bennett et al 2010)\textsuperscript{2} approach but do not actually deploy IRMs. When coding for Indigenous authorship, we ran Google searches for each author’s name. We reviewed university, employer, and personal websites, LinkedIn profiles, and author biographies in research and popular press articles to determine if an author self-identified as Indigenous.

Given that (1) Indigenous communities may not necessarily value peer-reviewed research articles as a useful means of knowledge mobilization, and (2) authors may continue their relationship with a community after writing about parks, but change topical focus (e.g., compare Daehnke 2017 to Daehnke 2012), we conducted a second round of searching and coding for the complete publication record—including books, book chapters, and non-peer-reviewed articles—of all authors in our final pool of 64 peer-reviewed articles. We did this so we might gain insight as to if the authors who only appeared once in our review are truly “one-and-done” authors, or if they merely appeared to be because of the narrow nature of our initial search. We reviewed university websites and Google scholar profiles to identify those authors’ other publications. For authors without such profiles, we reviewed the top 10 Google search results to determine if they have left academia.

In this second round of coding, we compiled demographic data (country of residence and whether the author was still an academic) as well as lists of publications for each author. To be included on the list of publications, an item had to (a) be either a book, book chapter, or article, (b) concern Canada or the USA, and (c) be in one of the following three categories: (1) be about parks, as defined above, and Indigenous Peoples; or, (2) be about Indigenous Peoples, but not about parks; or (3) be about parks, but not Indigenous Peoples. We refer to the numbered categories within item C as the “secondary search categories.” For Category 1 items, we extracted full demographic and bibliographic information. For Category 2 and Category 3 items, we tallied the number of such publications without extracting further details. For clarity, in our results, we will refer to this second round of coding as the “secondary search.” Any result not qualified as “secondary” is derived from the main review search, not the secondary search. The secondary search located an additional two articles in Category 1, which we added to our pool of 64 for a total of 66 articles.

During the coding process, we tested for reliability by independently coding three articles. We then met to discuss our codes before coding the remaining articles. During final coding, we met on an as-needed basis to resolve any uncertainties.

We mapped articles according to the state, province, or territory they discussed. To visualize the density of articles, we mapped articles per 100 km$^2$ of public land within these jurisdictions. In the USA, “public land” is calculated as the sum of Department of Interior, US Forest Service, and state park land. In Canada, we summed national and provincial parks. Of course, this does not capture all public land in either country, but it
is a conservative proxy. Public land area was calculated using ArcGIS layers available on state/provincial/territorial websites and/or by summing the acreage reported on individual park and/or agency websites. In Nunavut, Prince Edward Island, and the Northwest Territories, we additionally used the Canadian Protected and Conserved Areas Database (CPCAD; Government of Canada 2020), but noted discrepancies in it versus local governments’ lists of territorial/provincial parks in Nunavut and Prince Edward Island. Base layers of subnational boundaries are from the US Census Bureau cartographic boundary files (2018 state boundaries, 500k version) and Government of Canada provinces/territories, cartographic boundary file, 2016 census. These maps are included in SOM Item 4.

RESULTS

We coded all 66 articles in our meta-review. We examined these articles using the codes noted above. Here we present our results in six thematic sections: Journals; Authors; Paper types, methods, and participants; Topical scope; Geographical scope; and Secondary search results.

Journals
Articles in the review were widely dispersed across journals. We identified 54 journals, 43 of which appear once; 11 appear more than once. See SOM Item 5 for complete references.

Regarding journal disciplines, we identified 14 disciplines (see SOM Item 6). Seven percent of articles about Canada were published in law journals or by law scholars, while 37% of American articles were. Two of the 16 law articles were written by first authors who self-identified as Indigenous. All 16 of the law articles dealt with colonial, rather than Indigenous, law.

Authors
Journal disciplines are somewhat mirrored in lead author disciplines. Again, law was the most common (n=13). Just over half of all papers were single-authored (see SOM Item 7).

Across the 66 papers, we identified 57 unique first authors, meaning there are relatively few repeated first authors. Of the 57 first authors, five are Indigenous. Of the 30 unique second authors, three are Indigenous. If considering articles rather than unique authors, there are five papers with Indigenous lead authors (Carroll 2014; Wolfley 2016; Kikiloi et al. 2017; Anderson 2019; Reed et al. 2020;) and three with Indigenous second authors (Pinel and Pecos 2012; Jonas et al. 2017; Youdelis et al. 2020). Of the 66 articles, five had an Indigenous community member or representative as a co-author (Ban et al. 2008; Pinel and Pecos 2012; Kikiloi et al. 2017; Ban and Frid 2018; Cruickshank et al. 2019). These five include people who may not be Indigenous but are employed by an Indigenous community. Some papers had Indigenous authors who were not writing in their capacity as a community member (e.g., Carroll 2014). One paper listed a First Nation as a co-author (Holmes et al. 2016).

Paper types, methods, and participants
The most common paper type in our review was research (40), followed by law review (13), perspective essays (8), and systematic reviews (3). Of the 66 articles, 63 used qualitative methods. While no paper explicitly used IRMs, four did discuss IRMs or ethics in some manner (Ban et al. 2008; Bennett et al. 2010; Johansson and Manseau 2012; Holmes et al. 2016). An additional paper (Youdelis et al. 2020) appears to have drawn on IRMs for one of its three case studies, noting that “An initial analysis of these interviews was ... reviewed by CAFN’s [Champagne and Aishihik First Nations] Director of Heritage, Lands & Resources and KFN's [Kluane First Nations] Heritage Manager.”

Topical scope
We identified 38 papers about federal agencies, five about state or provincial agencies (Clapperton 2012; Stronghill et al. 2015; Shultis and Heffner 2016; Berkey and Williams 2018; Isaki 2013), and two about Indigenous-led park agencies (Watson et al. 2011; Carroll 2014). Of the 36 papers about federal agencies, Parks Canada and the US National Park Service account for 31.

Articles’ topics were widely dispersed and these results are summarized in SOM Item 8. Indigenous protected and conserved areas (IPCAs; also referred to as “tribal parks” in the USA) was the most common main topic; the articles generally considered either IPCA design or IPCAs’ implications for Indigenous resurgence. Only 31% of articles about IPCAs have direct research participants (e.g., interviews with community members); the remaining articles either analyzed existing data or were primarily theoretical in their approach.

The prevalence of papers directly including research participants is somewhat harder to discern in the co-management (n=6) group. We can say with confidence two papers (Pinel and Pecos 2012; Thomlinson and Crouch 2012) do so. Three additional papers (Wilson 2015; Kikiloi et al. 2017; Ore 2017) were written by authors...
who were directly involved in the events the papers describe. In general, while the papers may not necessarily all involve direct research participants, we observed that the co-management literature is less theoretical than the IPCA literature. Authors who do not directly interview informants, such as Thornton (2010), draw on archives and presenting primary sources. We tentatively hypothesize that this reflects the relative age of co-management as a paradigm within park management, compared to the still-emerging IPCA structure.

The history of Indigenous–park relations was also a main topic for nine papers, of which five were centered on the USA. This group contained two law reviews. Interestingly, only two of the lead authors in the group are historians. Of the nine papers, six presented case studies; that is, most articles about the history of Indigenous–park relations considered the topic at a micro, rather than macro, scale.

Indigenous dispossession for park creation was the main topic for seven articles. These articles were also strongly rooted in case studies; only one paper (Bergeron 2018) was not. Some papers described expulsion from parks (e.g., Sandlos 2008), while others discussed efforts to address dispossession (e.g., Upton 2014). We noted crossover between considering how to provide for redress in cases of dispossession and discussing new management structures (e.g., Robinson et al. 2012).

No other main topic accounted for more than 10% of articles. Notably, no article primarily discussed sacred site management within parks. Given the numerous high-profile examples of conflicts around Indigenous sacred sites within parks (e.g., Uluru–Kata Tjuta National Park in Australia and Devils Tower National Monument in USA), this was surprising.

Geographical scope
Overall, we identified 31 papers as focusing on Canada and 30 on the USA. Some papers were coded as having multiple foci. For example, some papers include the USA and Australia (e.g., Goldstein 2013; Lemelin et al. 2013) or Canada and the USA (e.g., Carroll 2014). There were also eight papers that had no specific country-focus but were directly relevant to the USA and/or Canada (e.g., Jonas et al. 2017; Ban and Frid 2018).

For papers regarding the USA and/or Canada, we coded 80 state- or provincial-level geographies where possible. Of these, the majority were west of the Rocky Mountains. Of the 44 states and provinces east of the Rockies, 32 are unrepresented in the literature. The American Southeast’s cluster results from four articles (Black 2009; Benton 2011; Kosiorek 2012; Schrack 2018) over a twelve-year period covered by this meta-review. Some papers contained multiple geographies (e.g., Murray et al. 2009). We note that some American states, such as Iowa or Rhode Island, have relatively few parks.

These data are summarized in SOM Item 4. The rightmost map differentiates jurisdictions by number of articles per hundred square kilometers of public land, showing that simple counts can be misleading. Notice how British Columbia now seems under-represented in the literature relative to its amount of public land, while Alabama suddenly appears over-represented. The map underscores how places such as New Mexico, Washington, and the Yukon have been the subject of relatively little scholarly attention despite having large swaths of public land.

Our review found 52 papers concerned with one or more parks in detail. These papers discussed 57 parks, of which eight were discussed in more than one paper. The most studied parks were Gwaii Haanas National Park Reserve (NPR; three articles) and Kluane National Park (NP; three articles). The other repeated parks, with two articles each, include Pacific Rim NPR, Thaidene Nêné NPR, Tla-o-qui-aht Tribal Park, Torngat Mountains NP, Jasper NP, and Fort Vancouver National Historic Site. Except for Torngat Mountains, all these parks are in western North America.

With respect to specific Indigenous communities, we identified 58 Indigenous communities discussed in depth across the 66 articles. We recognize the important distinctions that exist among various communities within broad groupings such as “Anishinaabe,” but we believe larger groupings are the most meaningful way to present these data to a wide range of readers. We observed that the literature focuses on communities in the west, with the notable exception of the Anishinaabe. Only two papers, by the same author, discussed a Métis community (Youldes 2016; Youldes et al. 2020), three papers discussed an Inuit community (LeBlanc and LeBlanc 2010; Johansson and Manseau 2012; Bennett et al. 2012), and two considered Native Hawaiians (Isaki 2013; Kikiloi et al. 2017). This is summarized in SOM Item 9.

Secondary search results
Our secondary search was an effort to determine if our original search was, by exclusively focusing on articles about both parks and Indigenous Peoples, too narrow. Our secondary search located an additional two articles (Timko and Satterfield 2008; Youldes et al. 2020) that were missed by our main review. We coded these additional articles into the main review.

The secondary search revealed that articles are, overwhelmingly, the primary means of knowledge mobiliza-
tion for the authors in our review. Moreover, we found that authors are much more likely to write about only Indigenous Peoples rather than only about parks or, even more so, than about both Indigenous Peoples and parks. This is summarized in SOM Item 10.

In the secondary search, of the 40 authors who published a book, book chapter, or article not identified by our original search, only four continued to publish about parks and Indigenous Peoples. Another 26 went on to write about Indigenous Peoples but not in the context of parks, and four continued in the field of parks, but did not write about Indigenous Peoples or issues again. We suggest our secondary search indicates that articles are the primary means for authors to mobilize research focused on parks’ interactions with Indigenous Peoples.

**DISCUSSION**

The motivating questions guiding this meta-review are twofold. First, what is the state of the Indigenous–parks literature? Second, does this field speak to critical Indigenous studies? We organize our discussion around the thematic topics presented above.

To the extent that academics are interested in the topic, it is mainly in the purview of legal journals, particularly in the USA. Overall, law was both the most common first-author discipline and journal discipline. There is nothing particularly problematic with legal scholars intervening in the field, insofar as such writing serves, rather than harms, Indigenous interests. Indeed, writing grounded in law (most especially Indigenous legal scholarship) can be an important part of the overall, interdisciplinary field; while not in our review, Tsosie (2003) is one good example of such contributions. Yet, if reconciliation is to be realized we cannot relegate it to technical discussions of colonial law. State institutions and structures that reify settler power (such as the USA’s consultation processes of colonial law. State institutions and structures that reify settler power (such as the USA’s consultation processes under Section 106 of the National Historic Preservation Act, an issue that Ore (2017) takes up) cannot bring about reconciliation. Instead, reconciliation requires foregrounding Indigenous sovereignty.

Research topics were narrowly focused on IPCAs, co-management, and history. Of course, historiography is useful as a tool to understand park–Indigenous relations; the field would suffer if it were absent. Yet, given that historiography represents only half of the articles, we believe there may be an over-reliance on it. Regarding co-management, scholars (e.g., Nadasdy 2003) have long observed that it may support, rather than threaten, settler power. In other words, aside from situations in which it is a community’s desired outcome, co-management is not inherently responsive to critical Indigenous studies.

Meanwhile, IPCAs’ salience is limited with respect to pre-existing parks, but most especially in flagship parks with vocal political supporters and deep economic interests (e.g., multi-million-dollar concession contracts). We are not dismissing IPCAs, but rather suggesting that improving park–Indigenous relations at places such as Grand Canyon or Banff will require research that is not primarily rooted in IPCAs. Youdelis et al. (2020) is a recent example of such work. We suggest that more research like this is necessary, alongside the growing body of work focused on IPCAs.

Beyond this, our meta-review—particularly the general lack of repeat first authorship—suggests the community of inquiry specific to the intersection of park management, Indigenous Peoples, and critical Indigenous studies is thin. Our secondary search revealed that authors are overwhelmingly concerned not with Indigenous Peoples and protected areas nor only protected area management, but instead with Indigenous Peoples and Indigeneity more generally. We believe this suggests a research community for whom park–Indigenous relationships are an area of interest that occasionally intersects with, but does not necessarily form the basis of, central research questions. In other words, the number of scholars for whom this is the core research concern appears to be small.

Our meta-review additionally reinforces the interdisciplinarity inherent to studying park–Indigenous relationships. To reiterate, in the main meta-review, we located 54 journals and 57 first authors. Certainly, there are many journals within any given field, and investigating issues that transcend narrow disciplinary boundaries is a worthwhile endeavor, but the ratio of journals-to-authors points us towards, again, a community of inquiry that is fragmented.

Of direct interest to critical Indigenous studies scholarship, our meta-review points towards trouble regarding research methods. To reiterate, just one of the articles (Youdelis et al. 2020) in this field published since 2008 used IRMs (and that for only one-third of its case studies) and only four more (Ban et al. 2008; Bennett et al. 2010; Johansson and Manseau 2012; Holmes et al. 2016) mention IRMs at all. While Indigenous-focused research does not always have to use IRMs as a matter of course, the fact remains that IRMs, grounded in Indigenous epistemologies, is best suited to consider many pressing research questions about Indigenous Peoples. As Dayle John writes, “interventions from Indigenous and decolonizing methodologies centre Indigenous worldviews and connect education, policy, research, and Native communities” (2019: 51). Indigenous-focused research that does not mention IRMs may inadvertently
reinforce dominant knowledge systems. A primary goal of our meta-review was to characterize the recent research articles’ responsiveness to critical Indigenous studies. Given the low level of IRMs observed, we believe there is room for improvement in this regard.

Our analysis points towards four gaps for future research efforts to consider: geography, agencies, communities, and research participants. Regarding the first, recall that the literature is strongly associated with locales west of the Rocky Mountains and in the north. We suggest future authors consider other locales for their research.

Second, our analysis indicates future researchers may wish to consider studying park–Indigenous interactions that do not involve federal agencies. Subnational and Indigenous agencies were represented in only seven articles (Watson et al. 2011; Clapperton 2012; Isaki 2013; Carroll 2014; Stronghill, Rutherford, and Haider 2015; Shultis and Heffner 2016; Berkey and Williams 2018). Such agencies are worthy of study. Doing so may provide new challenges, opportunities, and information surrounding little-studied interactions between protected areas and Indigenous Peoples. We readily admit that many state parks are largely recreational in purpose; this may explain their relative absence from the literature. Yet, there are many large state, provincial, and territorial parks with obvious ties to Indigenous Peoples (for example, Ontario’s Quetico Provincial Park; Moola and Roth 2018), to say nothing of those with less apparent connections. We believe state, provincial, and territorial parks offer a rich vein of inquiry for future scholarship and may shine a light on unknown relationships.

Third, we would encourage future researchers to consider that many Indigenous Peoples are under-represented within the current literature. For example, we located only one lead author whose papers discuss the Métis (Youdelis 2016; Youdelis et al. 2020). Additionally, many First Nations/Native American communities are entirely unrepresented in the literature (e.g., Mi’kmaq, Seminole, etc.; see supplementary online material). While one community is no more worthy of study than another, we note the literature under-represents or ignores many communities.

Fourth, we encourage future research to directly involve Indigenous persons as participants and co-authors. While removing historical/archival articles from consideration points towards an almost-even split between papers that include Indigenous Peoples and those that do not, we suggest that this reiterates the current dominance of historical/archival work in the literature. Importantly, as Tran, Ban, and Bhattacharyya note, “supplementing information with additional research, such as site-based research by Indigenous persons and co-research with non-Indigenous researcher partners can provide critical insights and more context-appropriate recommendations for specific places and peoples” (2020: 11). Increasing Indigenous participation in and authorship of research will support efforts to view park–Indigenous interactions through a critical Indigenous studies lens.

CONCLUSION

Our meta-review of articles published since 2008 about parks and Indigenous Peoples in the USA and Canada suggests those articles are largely not engaging with critical Indigenous studies. Our meta-review also suggests that the community of scholars for whom relationships between parks and Indigenous Peoples are the central research question is smaller than those for whom it is one aspect of their research agenda. Taken together, there is a considerable (and exciting) opportunity for future parks scholarship to increase the depth and breadth of engagement with critical Indigenous studies and Indigenous Peoples, as well as a substantial opportunity for growth within the community focused on park–Indigenous research.

Good Indigenous-focused research requires time and permanent, rather than precarious, academic positions. Building relationships with communities can take a researcher many years. Given the time required to do Indigenous-centered research, we believe it is inappropriate, or at least too soon, to criticize the field for not covering more geographies or Indigenous communities. This simply is not possible given the field’s capacity.

Yet, we believe extant park–Indigenous research is overly reliant on historical/archival research and legal studies. This is problematic in two ways. First, it constrains the research to particular ways of producing knowledge. Second, as our analysis indicates, it is excluding Indigenous persons from participating in the research (i.e., law and history articles in our review generally did not involve Indigenous persons as research participants). These two issues call for urgent attention. We encourage future research efforts grounded in other methods.

We wonder if 66 articles in 12 years is an appropriate number, too few, or more than expected given the complexity and saliency of park–Indigenous interactions. We are uncertain. Particularly given the wide disciplinary scope, determining the total number of “possible” articles is a challenge. A rough count of articles in The Journal of Park and Recreation Administration (JRPA) and PARKS: The International Journal of Protected Area Management identified 592 articles since 2008. If one takes this as a
very conservative proxy for the total number of protected area-related articles—for there are surely others, such as in Conservation and Society and/or Society and Natural Resources—then Indigenous-related research is roughly 11% of others. Is this sufficient? Each reader may have their own answer. Is it sufficient for 3% of articles in JRPA and PARKS to discuss Indigenous protected areas or 0.8% to consider the interpretation of Indigenous heritage? Here, the answer seems to be more clearly “no.” We suggest that park management—which is a discrete, yet interdisciplinary, field—needs to engage more with Indigenous Peoples. Doing so may open space for the community of inquiry to grow.

National parks in the USA and Canada are, traditionally, iconic examples of state-led land-use policy. Crucially, these spaces are situated on Indigenous Lands, seated within a settler colonial framework of state governance, and fraught with conflicting management schemas. This meta-review is an attempt to “take the temperature” of scholarship about parks’ interactions with Indigenous Peoples, with specific regard to academic community size, composition, and methodological approach. Our analysis showcases pitfalls and potentials alongside highlighting opportunities for future scholarship to explore this subdiscipline.

ENDNOTES

1. In Canada, 11 numbered treaties, covering the area between the Lake of the Woods to the Rocky Mountains to the Beaufort Sea, were negotiated between 1871 and 1921.

2. These authors emphasized research as a collaboration, which is an important step towards—indeed a part of—IRM, but collaboration alone does not constitute an IRM.

REFERENCES


Parks Stewardship Forum explores innovative thinking and offers enduring perspectives on critical issues of place-based heritage management and stewardship. Interdisciplinary in nature, the journal gathers insights from all fields related to parks, protected/conserved areas, cultural sites, and other place-based forms of conservation. The scope of the journal is international. It is dedicated to the legacy of George Meléndez Wright, a graduate of UC Berkeley and pioneer in conservation of national parks.

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Climate change creates conditions conducive to larger, more frequent fires, particularly in the American West. As a result, historic structures and artifacts are at greater risk of fire damage. The Bent’s Fort Fire started on the morning of April 12, 2022. Approximately 85% of the national historic site’s 800 acres burned. Thanks to the efforts of fire crews, the reconstructed adobe fort was undamaged. | NATIONAL PARK SERVICE

Citation for this article
Supplementary Material for:

Recent protected area–Indigenous Peoples research articles in Canada and the USA: A meta-review

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1. List of ProQuest databases to which the University of Toronto subscribes

Note: To conserve space, we have omitted below the names of obviously irrelevant databases (e.g., those only including newspapers and/or those in a foreign language), as our search was restricted to English peer-reviewed publications 2008-2020 concerning parks and Indigenous peoples in the USA and Canada. For the full list, contact the corresponding author.

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<tr>
<td>AFI Catalog</td>
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<td>APA PsycInfo</td>
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<td>Sociological Abstracts</td>
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<td>Sports Medicine &amp; Education Index</td>
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<tr>
<td>Worldwide Political Science Abstracts</td>
<td>(1975 - current)</td>
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2. Search Strings for Primary/Original Search

In each database, results were restricted to peer-reviewed articles published after 12/31/2007.

**Project Muse Search String 1**

Content: park, "protected area", parks AND
Content: Canada, "United States" America, USA AND
Content: "National Park Service" "Parks Canada" "Provincial Parks" "Provincial Park" "Territorial Park" "Territorial Parks" "State Park" "State Parks"

**Project Muse Search String 2**

Content: “Indigenous protected area” AND
Content: Canada OR United States

**Project Muse Search String 3**

Content: “tribal park” AND
Content: Canada OR United States

**Engineering Village (GeoBASE and Geo Ref) Search String**

(park* OR protected area*) abstract

(Canada* OR United States OR USA OR America OR National Park Service OR Parks Canada OR Provincial Park OR Provincial Parks OR Territorial Park OR Territorial Parks OR State Park OR State Parks) abstract
(Indigenous OR "american indian" OR "american indians" OR "Tribe" OR Tribes OR "native american" OR "native americans" OR "alaska native" OR "alaska natives" OR "native hawaiian" OR "native hawaiians" OR Inuit OR Métis OR Eskimo OR Aboriginal OR Aboriginals OR "first nation" OR "first nations") controlled term

**ProQuest Search String**

ab(park* OR ("protected area" OR "protected areas")) AND ft(Indigenous OR ("american indian" OR "american indians") OR "Tribe*" OR ("native america" OR "native american" OR "native americans") OR ("alaska native" OR "alaska natives") OR ("native hawaiian" OR "native hawaiians") OR Inuit OR Métis OR Eskimo OR Aboriginal* OR ("first nation" OR "first nations").ab) AND ab(Canada* OR "United States" OR USA OR America OR "National Park Service" OR "Parks Canada" OR "Provincial" OR "State")

**CAB Abstracts Search String**

(park or protected area*).ab AND (Indigenous or American Indian* or Tribe or Native America* or Alaska Native* or Native Hawaii* or Inuit or Metis or Eskimo or Aboriginal or first nation or first nations).ab AND (Canada or United States or USA or National Park Service or Parks Canada or Provincial or State).ab

**HeinOnline Search String 1**

((((park* OR ("protected area" OR "protected areas")) AND (Indigenous OR ("american indian" OR "american indians") OR "Tribe*" OR ("native america" OR "native american" OR "native americans") OR ("alaska native" OR "alaska natives") OR ("native hawaiian" OR "native hawaiians") OR Inuit OR MÃƒÂ©tis OR Eskimo OR Aboriginal* OR ("first nation" OR "first nations")) AND ((Canada* OR "United States" OR USA OR America)) AND ("National Park Service"^4 OR "Parks Canada"^4 OR "Provincial Park*"^4 OR ("first nation" OR "first nations")) AND (Canada or United States or USA or National Park Service or Parks Canada or Provincial or State).ab)
OR "State Park*'^4)))

HeinOnline Search String 2
for ((((Canada) OR (United States)) AND ("Indigenous Protected Area")))

HeinOnline Search String 3
for ((((Canada) OR (United States)) AND ("tribal park")))

Web of Science Search String
TS=(park* OR "protected area") AND TS=(Indigenous OR "american indian*" OR "Tribe*" OR "native america*" OR "alaska native*" OR "native hawaii*" OR Inuit OR Metis OR Eskimo OR Aboriginal* OR "first nation" OR "first nations") AND TS=(Canada* OR "United States" OR USA OR America OR "National Park Service" OR "Parks Canada" OR "Provincial Park" OR "State Park" OR "Territorial Park"
3. PRISMA Flow Diagram for Primary/Original Search

Records identified through GeoBASE and GeoRef  
(n = 99)

Records identified through ProjectMuse  
(n = 270)

Records identified through HeinOnline  
(n = 1014)

Records identified through CAB Abstracts  
(n = 129)

Records identified through ProQuest  
(n = 492)

Records identified through Web of Science  
(n = 1019)

Additional records identified through hand-searching of personal databases and reference lists  
(n = 18)

Records after duplicates removed  
(n = 2789)

Irrelevant records excluded  
(n = 2669)

Full-text articles assessed for eligibility  
(n = 120)

Irrelevant full-text articles excluded  
(n = 56)

Is this article about park/indigenous interactions?

Does it concern the USA and/or Canada?

If the article lacks a specific geographic scope, are there clear implications for the USA and/or Canada?

Studies included in analysis  
(n = 64)
4. Maps

Base layers of state/provincial/territorial boundaries are from the U.S. Census Bureau cartographic boundary files (2018 state boundaries, 500k version) and Government of Canada provinces/territories, cartographic boundary file, 2016 Census. See last paragraph of methods section for acreage data sources.
5. List of 66 References Included in Review


Lemelin, Raynard, Kyle Powys Whyte, Kelsey Johansen, Freya Higgins Desbiolles, Christopher


6. Table of Journal Disciplines

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<td>History</td>
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<td>6%</td>
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<tr>
<td>Indigenous Studies</td>
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### 7. Table of Number of Authors Per Paper

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## 8. Paper Topics

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<td>Existing data or theoretical</td>
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<td>USA-focused</td>
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<tr>
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<td>Heritage interpretation</td>
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<tr>
<td>Subsistence/treaty rights within parks</td>
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<td>4</td>
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<tr>
<td>Reconciliation/decolonization</td>
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9. List of Indigenous Communities Included in Review

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<td>Paiute</td>
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<td>Dené</td>
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<tr>
<td>Pueblo</td>
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<td>Tsimshian</td>
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<td>Niisitapi/Blackfoot</td>
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<tr>
<td>Haida</td>
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<td>Inuit</td>
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<tr>
<td>Iyarhe Nakoda/Stoney Nakoda</td>
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<tr>
<td>Lù’an Män Ku Dän/Kluane</td>
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</tr>
<tr>
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<tr>
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<tr>
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<tr>
<td>Cowlitz</td>
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<tr>
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<td>Métis</td>
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<tr>
<td>Očhéthi Šakówiŋ/Sioux</td>
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## 10. Secondary Search Results by Publication Type and Category

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