Crown Fossils: Extractive Museums, Authorized Narratives, Institutional Critique, and the Artist-as-Museologist

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Abstract

This article explores how artists, by adopting the posture of an artist-museologist, can propose new understandings between museums, their collections, broader perceptions of knowledge, and the power of choosing what constitutes the museum, through a critical-historical account of the Royal Tyrrell Museum of Palaeontology's historical and ongoing relationship to resource extraction and Indigenous land dispossession. Applying institutional critique to the museum, we show how artistic practice can help to excavate buried power relations that condition the extractive museum, like the Royal Tyrrell, named after geologist, Joseph Burr Tyrrell, who 'discovered' the Albertosaurus during an expedition of the Geological Survey of Canada. By providing a critical history of the Museum's imbrication with extractive enterprise and the settler-colonial state while reflecting on two art pieces that directly respond to these conditions, this article proposes that the artist-museologist has an integral role to play in creating conditions for non-extractive museological practices by resisting settler-colonial epistemologies of discovery.

Keywords: palaeontology, fossils, settler colonialism, Geological Survey of Canada, contemporary art

As he was surveying coal seams along the Red Deer River in Southern Alberta's badlands region for the Geological Survey of Canada (GSC) in 1884, geologist Joseph Tyrrell (unmarked) made a unique find: a fossilized skull of unfamiliar origins. This skull was the first of its kind found by a settler in recorded history, later named the Albertosaurus, or Alberta lizard. Palaeontologist and geologist Henry Fairfield Osborn (unmarked)[1] in 1905 named his find to celebrate the province's confederation, which happened that same year. Containing key features of settler worldmaking playing out on the so-called frontier, Tyrrell's encounter with this fossil and this episode's subsequent place in Canadian national consciousness reveals the deep-seated relationships among the Crown, surveying, resource extraction, and the mythmaking of Canadian national identity. In 1985, the Tyrrell Museum of Palaeontology, a museum and research centre, opened its doors in Drumheller. Some five years later, the monarch Queen Elizabeth II (British) bestowed upon it the title of 'Royal', putting the Royal Tyrrell Museum in the same ranks as the Royal Alberta Museum (RAM) and Royal Ontario Museum (ROM). Situated near Midland Provincial Park (Treaty 7 territory, unceded homelands of the Tsuut'ina, Nêhiyaw and Niitsítapi),[2] the museum and research centre has played a significant role in the field of palaeontology since its inception, given its proximity to the Canadian badlands, which contains the Dinosaur Provincial Park and has since become a United Nations Educational, Scientific and Cultural Organization (UNESCO) heritage site. The badlands – now a popular tourist destination – consists of canyons, prehistoric bedrock, and the abandoned remains of coal mining.

In this article, we examine the Royal Tyrrell Museum as a stage to think through a set of problematics surrounding the role of natural history museums as institutions of cultural memory, knowledge preservation, and knowledge production. We also discuss how interventions by artists-as-museologists can serve as infrastructure for the possibilities of creating natural

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history museums. In the context of natural history museums, like the Royal Tyrrell, narratives of progress and linear time are often enforced through the museum's technologies of display (Macdonald 1998: 26). By drawing attention to how colonial visions are reified by these institutions, we suggest that artists can help to deconstruct the colonial propositions and organization of the world proposed within these cultural spaces. By artists-as-museologists, we refer to those whose art is concerned with or who work through museum institutions as a way to explore and establish a discourse on art, its governing power structures, display, and circulation. Their work branches out from institutional critique as their focus shifts from questioning the ideologies and power structure of the artworld. It relies instead on positioning the artist as the main nexus for generating new propositions in non-art institutions, focusing on heritage and scientific museums as opposed to offering a critique of the working of art institutions. This position adopted by artists-as-museologists fosters generative discourses which are based on critique but also have the potential to excavate and surface stories and relations which are not present in the institutions they are investigating. This kind of institutional critique is usually done by looking at the methods museums rely on to tell their stories, from artefact placements to public programming and, arguably most importantly, the use of text within their exhibitions. While such critique has tended to focus on and intervene in art museums and galleries, our contribution is to extend these interventions specifically into natural history museums in both theory and practice. We take cues from the emergent critical concept of Red Natural History and a related performative art intervention, the Natural History Museum, by the activist art collective Not an Alternative.[3] Geology and paleontology museums have generally been shielded or overlooked in such decolonizing efforts, likely due to the perceived neutrality and objectivity of the disciplines to which they are affiliated.

We centre our attention on how artists-as-museologists rely on creative tools at their disposal in their effort to make work around cultural spaces and the settler colonial, extractivist, and imperialist narratives they often put forth. In the second portion of the article, we explore Frédéric Bigras-Burrogano's (unmarked) series Hills of Home as he challenges dominant colonial values of the Royal Tyrrell by reinterpreting not only the authorized narratives but also artefact selection and exhibition designs.

We understand settler colonialism and settler-colonial relations following Yellowknives Dene political theorist Glen Coulthard. For Coulthard,

> [a] settler-colonial relationship is one characterized by a particular form of *domination* [...] where power […] has been structured into a relatively secure or sedimented set of hierarchical social relations that continue to facilitate the dispossession of Indigenous peoples of their lands and self-determining authority (Coulthard 2014: 6-7).

Such power, as Coulthard clarifies, is characterized by 'interrelated discursive and non discursive facets of economic, gendered, racial, and state power' (Coulthard 2014: 6-7). This is all to say that settler colonialism is a particular colonial project that seeks the elimination of Indigenous peoples through assimilationist and necropolitical agendas, which is achieved ideologically through narrative, aesthetic, and representational means. In Canada, settler colonialism was entrenched in the unification dream of John A. Macdonald (unmarked), Canada's first prime minister, which ideologically relied on myths of *terra nullius* underwritten by the Doctrine of Discovery and materialized in the Canadian Pacific Railway. This railway would link the coasts, stimulating confederation through land theft lubricated by treaty processes.

Museums as we know them today came to be in the nineteenth and twentieth centuries when the 'dominant ideology was colonialism' (Lee 2022: 91-2); they helped to, and continue to help, shape public cultural memory and national identity in these terms through authorized narratives and histories. 'That museums are today seen by many as "neutral"',' Shimrit Lee (unmarked) (2022: 17) writes in *Decolonize Museums*, 'is a testament to the extent that the histories of museum spaces have been buried by their modern operators'. In the spirit of pursuing the kinds of decolonization at the museum that Lee advocates, which involves surfacing these histories, through our focus on the Royal Tyrrell Museum, we surface the ways in which resource extraction and settler colonialism underwrite natural history museums today, not as a kind of accusatory call out, but as an invitation for natural history museums and

their attendant fields and disciplines to grapple with these complex histories that challenge dominant understandings of their scientific neutrality.

First, we describe how Tyrrell's work with the GSC served settler-colonial epistemologies of discovery and reveal how this extractive tendency shapes the politics of fossil acquisition, as fossils have and continue to be understood as resources. Then, we look at how these legacies are continued at the Royal Tyrrell Museum through its relationships with extractive industries. These relationships are highlighted in the permanent exhibit *Ground for Discovery*. Following this historical and institutional analysis, we provide an account of contemporary artistic practice as a political intervention challenging authorized narratives through institutional critique. We provide an example of the artists-as-museologist in Frédéric's artistic work. Finally, we meditate on the role the artist-as-museologist might play in disrupting extractive legacies present in natural history museums – and museums more broadly – today.

Extractive Impulses, White Geology, and Settler-Colonial Epistemologies of Discovery

'The first time a white man had found coal at that place': Dinosaurs and Coal in the GSC

W.J. Loudon's (unmarked) 1930 biography of Tyrrell, *A Canadian Geologist*, contains a chapter dedicated to Tyrrell's accidental palaeontology – accidental, since acquiring dinosaur fossils was not a goal of the GSC. Appropriately titled 'Dinosaurs and Coal', the chapter details Tyrrell's careful work following coal seams along Red Deer Valley for the GSC. Describing the vast coal mines alongside the burgeoning fossil expeditions, Loudon draws a parallel between coal and dinosaur fossils as resources for extraction. Loudon reminds readers that while coal is an economic powerhouse that distinguishes the Red Deer Valley at the time of his writing in 1930, dinosaurs, too, attracted outside attention to the region. 'In all probability coal is now the most important product of this district, especially to people living on the plains', Loudon writes, 'but the valley of the Red Deer is as well known to-day throughout the scientific world for its *Dinosaurs* as for its great deposits of coal' (Loudon 1930: 50).

Loudon was not the first to establish such a parallel between coal and fossils as resources; nor was this parallel created out of thin air. Historically, scientific practices, like those of geology, and economic pursuits were intimately bound through empire. This relationship between science and economy was sharply established in Britain when the Industrial Revolution required unprecedented levels of materials. Coal fuelled this revolution, while iron and other metallic ores provided its bedrocks. Historian of science Suzanne Zeller (unmarked) identifies the emergence of what she calls geology's 'extractive impulse', which was 'cemented in place during the nineteenth century by the rise of modern science – especially in the case of geology – in a Victorian context that sharpened exploration's focus, purpose, and significance' (Zeller 2017: 235). Zeller's account offers three key periods through which the extractive impulse took shape in tandem with British North America's political development: 'as explorations moved inland along developing transatlantic scientific networks after 1815; institutionalized colonial government surveys during the 1830s and 40s; and consolidating its transcontinental foothold from the 1850s' (Zeller 2017: 236).

The formation of the GSC and its subsequent expeditions institutionalized attempts to know the land through an extractive impulse that similarly exhibits a kind of extractive reasoning. The GSC, including its accidental palaeontology, ultimately served, and arguably continues to serve, the means and ends of empire. Zeller notes that in the later nineteenth century, the new director of the GSC, A.R.C. Selwyn (unmarked), 'shrewdly appointed to his senior staff a remarkable new generation of geologists' which included figures like George Mercer Dawson (unmarked) and Tyrrell himself. This 'remarkable new generation' would carry the survey westward as far as British Columbia and northward to the high Arctic (Zeller 2017: 245). As Zeller highlights, the GSC not only served the means and ends of empire through its cartographies of extraction and territorialization; the survey also provided pseudo-ethnographic accounts of Indigenous peoples. Tyrrell's journal entries reprinted in *A Canadian Geologist* contain numerous observations about Indigenous peoples, including those who served as

companions during Tyrrell's expeditions. According to Zeller, Dawson in particular 'infused his geological surveys with systematic ethnological inventories intended to advise governments in their formulation of policy toward Indigenous peoples' all while 'he cast their declining numbers in the harsh light of apparent inevitability' (Zeller 2017: 245).

Discovery, which is a motivation of the GSC, is an epistemological weapon wielded by colonizers to gain ideological legitimacy and make claims over lands deemed uninhabited. The Doctrine of Discovery employed the metric of Christianity to delimit who counts as inhabitants of a territory and what counts as habitation, as the Crown was deemed sovereign over Indigenous peoples and Indigenous territory. Through documentation from figures like Dawson, the GSC simultaneously rendered land and territory as resources through the 'discovery' of mineral deposits, even though it required overlooking, downplaying, or eliminating existing Indigenous relations to land and territory. That Loudon describes the fateful episode when Tyrrell stumbled onto the Albertosaurus skull as 'the first time a white man had found coal at that place' (Loudon 1930: 50) is revealing, since the qualifier of 'white' implicitly acknowledges that Indigenous peoples were aware of the geological makeup of the region. These historical episodes evidence what Kathryn Yusoff (unmarked) describes as White Geology, through which she understands 'geology as a racial formation from the onset' (Yusoff 2018: xiv). 'Geology,' Yusoff elaborates, 'is a mode of accumulation, on one hand, and of dispossession, on the other, depending on which side of the geologic color line you end up on' (Yusoff 2018: 3).

Through the racialized epistemologies of discovery that underwrite accumulation and dispossession in these ways, an act of erasure is performed. Historian Jean M. O'Brien (White Earth Band of Ojibwe) influentially terms this settler-colonial dialectic of discovery and erasure as 'firsting and lasting', where settlers make claims of discovery (firsting) while also insisting on the disappearance or even extinction of Indigenous peoples, effectively writing Indigenous peoples out of the present (lasting). O'Brien studied narratives of settlers and Indigenous peoples of New England in particular, 'challenging the collective claim that modern New Englanders had replaced ancient Indians on the landscape' by 'show[ing] the ways in which non-Indians actively produced their own modernity by denying modernity to Indians' (O'Brien 2010: xxiii). Settler stories about dinosaurs and the ancient world often also serve both purposes: to establish an authoritative settler narrative about the ancient world that, at times, selectively includes Indigenous peoples and, at others, writes Indigenous peoples out of existence entirely. In a recent critique of natural history from a web series in *Social Text* on Red Natural History, Andrew Curley (Diné) observes that 'the ancient world was carved out in languages foreign to Indigenous nations and repeated the West's own mythology about itself as the source of knowledge and civilization'. His answer to the colonial tendencies of natural history is to decolonize the field, where '[t]o decolonize natural history is to fundamentally challenge and expand upon what we consider "natural" and "historical"'. For Curley, '[o]ne approach is to center Indigenous narratives and recognize Western mythologies when we see them'.[4]

Following what historian of science Adrienne Mayor (unmarked) details in *Fossil Legends of the First Americans*, we recognize that Indigenous knowledge of fossils in the Americas preceded that of settler-science. Mayor cites Edward Kindle's 1935 observations that,

> these early records of the First Nations fossil finds preceded Joseph Tyrrell's first scientific dinosaur discoveries in the Red Deer Valley, Alberta, in 1884 – and it turns out that those Cretaceous fossils were also well known to local tribes long before Europeans arrived (Mayor 2005: 291).

Given this account, there is a palpable serendipity in the marriage between Tyrrell and the British monarchy embodied in the naming of the Royal Tyrrell Museum that, in turn, permeates the institution. Just as Tyrrell would come to be viewed as a sort of grandfather of westward colonial expansionism in his hunt for coal to fuel the British Empire, so, too, would the Albertosaurus become a privileged object in Canada's official origin stories in ways that serve the settler-colonial project. As part of a celebration of the 175th anniversary of the Geological Survey of Canada, the Albertosaurus was enshrined as object number 37 in the Government of Canada's 'The History of the Geological Survey of Canada in 175 Objects'. As the write-up

rationalizing its place in the collection points out, Tyrrell's 'milestone discovery marked the beginning of a grand age of dinosaur exploration and research in this now famous area'.[5] This grand age extended well into the latter half of the twentieth century with the release of the film *Jurassic Park* in 1993 bringing it to new heights, ushering in what Stephen Jay Gould (unmarked) famously described as 'dinomania'.[6]

The Extractive Impulse in the Present: Dinosaurs and Oil at the Grounds for Discovery *Exhibit*

Dinomania as a pop culture phenomenon spanning the 1990s and beyond carved out a privileged place for dinosaurs and, indeed, for the practice of palaeontology in the broader cultural imaginary. The scale of this phenomenon was captured and mapped in media, visual art, and literature theorist W.J.T. Mitchell's (unmarked) *The Last Dinosaur Book*, published in 1998. Mitchell's book is about the cultural imagination of dinosaurs as represented in visual media rather than dinosaurs and fossils as material objects. He develops an extended meditation on how, like dinosaurs themselves, these images will become extinct or fossilized (alongside humans themselves). In framing this approach, Mitchell pinpoints the almost incomprehensible temporal scale upon which understanding fossils and dinosaurs relies: 'deep time' (Mitchell 1998). This extended temporality is, in part, what makes dinosaurs malleable signifiers; they have been mobilized as a material floating signifier through or against which histories can be defined. In this capacity, fossil discoveries like Tyrrell's served the settler-colonial, nation-building project of Canada, and in the ongoing age of dinomania, private extractive enterprise now carries this torch. What remains important here is that Canada's official paleontological history began as an accident in a search for coal; this legacy carries on as extractive industry continues to dig underground for resources, find fossils, and donate them to places like the Tyrrell. It is further telling that the preferred institutional nomenclature identifies fossils as fossil *resources*, a phrase that institutionalizes the parallels between coal and dinosaurs that Loudon detailed and draws attention to the economic value of fossils today as exoticized cultural objects. The Albertosaurus remains a mythological figure at the Tyrrell, displayed in multiple exhibits including *Cretaceous Alberta* and the Learning Lounge.

Background on the institutional and operational dynamics of the museum highlights its relationship to the state, private enterprise, and the public. As a provincial museum, the Tyrrell is owned and operated by the Government of Alberta, and it receives its larger share of funding from the provincial and federal governments alongside individual and corporate contributions. The building spans 12,500 square metres after a 2003 expansion designed by the Calgary-based firm BCW Architects and a 2019 addition by the Edmonton-based firm Kasian (Figure 1).[7] The museum was originally planned as a scientific research facility, but this plan was revised to include a large public gallery space, which 'displays one of the world's largest collections of dinosaurs'.[8] Throughout its operating history, the museum's relationship to the lands on which it sits (and on or under which much of its collection was acquired) has been underacknowledged. Based on the Internet Archive's backups of the Royal Tyrrell Museum homepage, it was not until March or April of 2024 that a land acknowledgement appeared on its homepage, done so in the spirit of 'reconciliation' perhaps in response to the Truth and Reconciliation Committee of Canada's *Calls to Action*.[9] Instead, the museum has long understood itself in terms of settler-colonial epistemologies of discovery.

Carrying on the legacy partnership between science, technology, and extraction that informed the creation of the GSC and established the conditions for Tyrrell's discovery of the Albertosaurus, the Royal Tyrrell Museum has acquired important fossils discovered by the oil and gas industry in Alberta. Syncrude, the world's largest Alberta oil sands synthetic crude producer, has discovered at least ten dinosaur fossils.[10] In 1994, for instance, a marine reptile was found at the Syncrude Canada Base Mine (Royal Tyrrell Museum 2017: 2). And in 2011, two significant discoveries were made in the oil sands. In March, a worker at another oil sand giant's operation – Suncor Millennium Mine – found an over 110-million-year-old nodosaur, 'a new genus and species of armoured dinosaur' (Royal Tyrrell Museum 2017: 1). This find was featured in a 2017 *National Geographic* article by Michael Greshko (unmarked) titled 'The Amazing Dinosaur Found (Accidentally) by Miners in Canada'. Its impeccable condition, which has been described as mummified, and status as the 'oldest Albertan dinosaur ever

found' were celebrated. As Greshko put it, the nodosaur specimen was 'an ambassador from Canada's distant past, found in a moonscape by a man with an excavator'.[11] Figures 2 and 3 show how the nodosaur is physically displayed alongside its authorized narrative. Then, in November 2011, a Syncrude heavy equipment operator found an almost-complete plesiosaur fossil.[12] Most recently in 2023 at Syncrude's Mildred Lake mine, a shovel operator stumbled onto the fossil of Alberta's oldest plesiosaur.[13]

Figure 1: Exterior facade of the museum building from the east, by Ymblanter - own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=87124980

Figure 2: Nodosaur on display at the Royal Tyrrell Museum. Photo by Geoff Martin and used with permission.

Some of these discoveries and others were prepared for public consumption at the Royal Tyrrell Museum *Grounds for Discovery* exhibit. Opening in 2017 and slated to run for three years, it is still on display as of this writing. The exhibit gathered and displayed fossils found by industries ranging from oil and gas to coal and Ammolite mining. Figure 4 shows how these fossils are presented and the significance afforded to specific oil, gas, and other extractive corporations. In an interview with *Fossil Realm* magazine, the Director of Preservation and Research, Dr Don Brinkman (unmarked), described part of the exhibition's purpose – to 'acknowledge some of the support we've got from industry that has resulted in preserving these specimens'.[14]

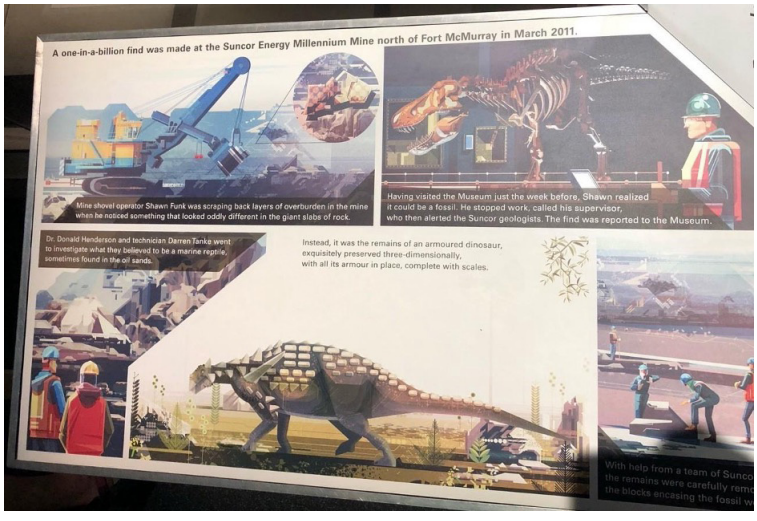

Figure 3: Plaque showing the authorized narrative of discovery. Photo by Geoff Martin and used with permission.

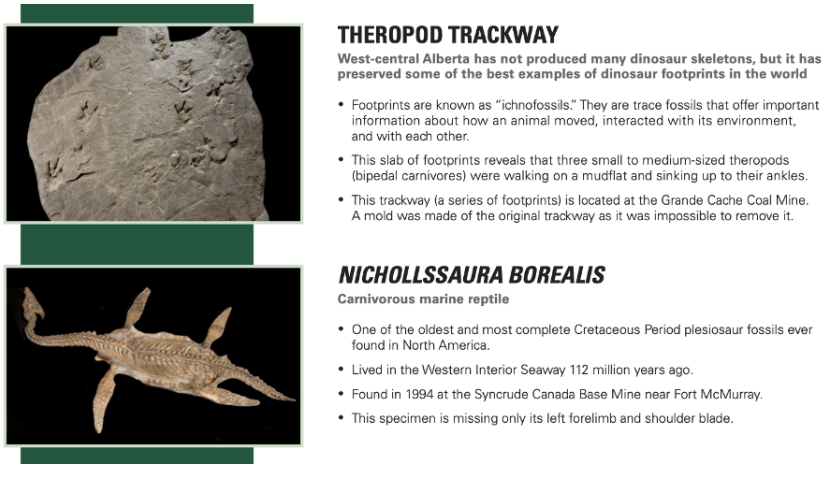

Figure 4: Fossils on display at the Grounds for Discovery exhibit as seen in the exhibit's Fact Sheet.

As resources belonging by law to the province after their discovery, the fossils remain promotional devices for oil and gas companies as well as other extractive industries. While these fossils belong to the Crown, they perform cultural outreach for extractive industries in ways that cast corporations as responsible in terms of its relationship to the environment and Indigenous communities. TC Energy, for instance, detailed a recent find that was sent to the Royal Tyrrell Museum, using the opportunity to plug the robustness of its 'Cultural Resource Discovery Contingency Plan'. In this blog post, TC included team members from the Aboriginal Construction Participation Program during the excavation.[15] An *Edmonton Journal* article covering the 2023 find of Alberta's oldest plesiosaur aptly captures the sentiment on offer in a comment: 'Maybe IF NOT for the industry this find would never have happened'.[16]

At the Royal Tyrrell Museum and in descriptions of its holdings, then, the relationship between scientific discovery, resource extraction, and the constitution of provincial and national identity is reified historically through figures like Tyrrell and in the present through exhibits like *Grounds for Discovery*. What interventions must be staged to unsettle these dominant relationships? Philip Currie (unmarked), who helped found the Royal Tyrrell Museum, discussed challenges surrounding the museum's palaeontological work in the late 1970s as UNESCO was considering Alberta Parks' proposal to make Dinosaur Provincial Park a World Heritage Site, including that 'the attitude toward not changing anything in the Park was so strong, [he] was told by one naturalist that it was better to leave the specimens to disintegrate naturally in the field' (Currie 2005: 19). In recounting this exchange, the implication is that the naturalist's idea to leave fossils in the ground is absurd; but when considering that these fossils exist on and under stolen land, there is nothing absurd about this line of questioning. Extractive relationships here become an authorized narrative of sorts, where authorized narratives are those communicated in texts that accompany objects on display in exhibitions. In the case of the Tyrrell Museum, a form of settler-colonial firsting is reproduced through discovery epistemologies. For the rest of this article, we explore how artists might disrupt the authorized narratives of the mineral museum that reify settler colonialism and extractivism.

Artists-as-Museologists: or, Addressing the Past to Activate New Futurities

Conceptual Art and Political Intervention

Conceptual art pushed the boundaries of aesthetics through an exploration of languages, new artistic forms, and what constitutes knowledge production. The movement is characterized by artists who created unconventional artworks relying on text such as manuscripts, bibliographies, written instructions and performances (Morris and Brooklyn Museum 2012: xix). David Tomas (unmarked) reminds us that text and print forms became predominant in the knowledge transfer economy of the university where art training now rests, having fled the European-style vocational school in the mid-nineteenth century (Tomas 2004: 15).

Art emerging from this period was shaped by other major cultural events of the 1960s in movements such as feminism, civil rights, opposition to war, student activism, environmentalism, and LGBTQ+ rights. This relationship between art and politics paved the way for the ideas that were explored in the art world and which influenced the Western understanding of aesthetics. 'If Conceptual art effectively – if temporarily – erased the traditional art object from at least part of the discourse about art, in its place it produced a performative field into which all subsequent discussions about contemporary art must enter' (Morris and Brooklyn Museum 2012: xix). This challenge to traditional art objects not only laid the foundation for artists to produce artworks in genres outside this tradition, which included paintings and sculptures, but also opened up space for artists to adopt discursive elements of other disciplines (Tomas 2004: 14). From that point on, a new generation of hybrid artists was recognized in the west: artists-as-curators, artists-as-activists, artists-as-historians, artists-as-archivists, and artists-as-museologists. This hybridity of practice altered the spaces where art was presented and the means by which it was transmitted (Morris and Brooklyn Museum 2012: xx).

Artists-as-museologists in particular began the process of interrogating the power institutions wield while investigating the cultural dimension of knowledge production.

Practitioners blurred the boundaries among authorship, artistic autonomy, and artistic oeuvre (Filipovic 2017), which led to the emergence of different practices. These artists call attention to these cultural institutions, disrupt our assumptions about museums, and 'innovate curatorially when their practice exceeds the capacity of existing curatorial structures' (Muller and Seck Langill 2021: 7). Their interventions include legendary African, American Indian, European, and Amerindian artist Fred Wilson's *Mining the Museum* (1992-1993). Born in 1954, Wilson is widely known for installations challenging the dynamic of race, power, and class in museums and in hegemonic culture. His collaborative approach is characterized by long-term commitment to spaces where he familiarizes himself with the institution's histories, policies, collections, and personnel (Sandell and Nightingale 2012: 84). We can also think of the meta-museological approach of American artist Mark Dion (unmarked). Similar to Wilson, Dion thinks of the scenography of museum exhibition as an artform (Corrin et al. 1997: 17) where he can present his artworks/artefacts gathered by three primary methods: fieldwork, excavation, and cultivation (Erickson et al. 2017: 23). Dion's interdisciplinary work enables him to create rich dialogue with a multitude of ways of interpreting the binaries of history/time and precious artefacts/vernacular objects through the filter of today. He imitates a museum's way of presenting an exhibit by drawing attention to both taxonomic ordering and ideas around what is worthy of preserving, deploying irony to subvert these systems with vernacular objects (Buchhart and Gamper 2008: 29). More recently, the collective of researchers, writers, artists, and activists Beyond Extraction developed *Mining at the Museum*, an audiovisual counter-tour of the Royal Ontario Museum's mineral exhibition sponsored by Teck Resources Limited.[17]

The figure of the artist-as-museologist evolved alongside that of the artist-as-curator and artist-as-archivist, since all address the categories of the collection and display. Yet, artists-as-curators and artists-as-archivists are often not as concerned with critiques of representational totality and institutional integrity: 'that the museum has been ruined as a coherent system in a public sphere is generally assumed, not triumphally proclaimed or melancholically pondered, and some of these artists suggest other kinds of ordering – within the museum and without' (Foster 2002: 5). Artists-as-museologists can be understood to go beyond confronting the institution's claim to a commitment to all publics and other radical 'promises' of the enlightenment (Alberro and Stimson 2011: 3). We argue that their concern coincides more with Sámi professor Rauna Kuokkanen's question: 'if it is acceptable for a site of learning to be so ignorant' (Kuokkanen 2007: 5). Through their practice, artists-as-museologists have the potential to excavate and surface stories and relations that have slipped between cracks or have been written out altogether. They differentiate themselves by working primarily not within art institutions, as did artists working through institutional critique, but by exploring historical societies, natural history museums, and industrial heritage sites. By doing so, artists-as-museologists have the potential to critique these museums' structures and methodologies and how they aim at shaping progressive, civilized citizenry (meaning colonial) of the type British museologist Tony Bennett (unmarked) describes (Bennett 1995: 47). Artists-as-museologists further this conversation by addressing how certain modes of knowing or epistemologies have been privileged, and this centres specific stories about knowledge production and dissemination (Loveless 2019: 41). This critique becomes clear in the Canadian settler colonial context where Canadian nationhood is tied to the modernist idea of transforming 'Wilderness' into 'Civilization' (Mackey 2008: 29). Such transformation caused First Nations, Inuit, and Métis stories to be systematically erased or overlooked in favour of white settler narratives, such as those that perform the settler-colonial process of firsting and lasting outlined earlier in this article. These settler stories seem normative because they are maintained through cultural institutions, immigration policies, and extractivism (Mackey 2008). Telling stories differently thus becomes a powerful way to question why we believe certain narratives over others and how narratives shape which futures are possible and which are concealed (Loveless 2019: 20).

Artists-as-museologist and the Museum

With the advent of conceptual art, artists have entered various professions in order to create a dialogue between art and other fields, transposing methodologies and enabling new forms of

art-based criticism. Artists-as-museologist use their role as a way to make visible modernist constructs, such as linear time and the notion of progress, and how museums rely on them to maintain colonial legacies. By manipulating exhibition elements, artists-as-museologists bring forth stories, relations, and perspectives that have been written out altogether or minimized by white stories which foster normative attitudes that are extractive, colonialist, and capitalist.

Artists-as-museologists often rely on a key term that needs to be understood: the concept of the authorized narrative,[18] coined by French art historian Jean-Marc Poinsot (unmarked) in his 2008 book *Les Récits Autorisés*. Poinsot describes authorized narratives as the texts accompanying artworks. These narrative devices include the artwork's description, found either on the wall or in a gallery pamphlet; the map legend; the project proposal; the artwork's label; signatures; and any interview or declaration made by the artist (Poinsot 2008: 40). Poinsot understood that these narratives convey both the artist's vision and their interpretations (Poinsot 2008: 41). This becomes a powerful device which, when controlled by the artist-as-museologist, can explore how museums shape our understanding of the 'order of things', where an authorized Truth is put forth (Gil 2015: 84). *Vertebrae; or photographic matters no longer sleeping alongside fossils* (hereafter called simply *Vertebrae)* (2018) – a piece from the series *Hills of Home* by Frédéric – illustrates how artists-as-museologists engage with authorized narratives and produce new ones (Figure 5). The artwork is composed of four pieces that are part of a larger ongoing series which started as a response to Canada's 150th anniversary celebration. The project sheds light on the tensions between the Canadian settler colonial state's use of natural imagery to constitute national identity, and its extractivist economy.

Figure 5: Vertebrae; or photographic matters no longer sleeping alongside fossils. *Bronze - gold - plastic - fossil - pewter, 2in X 2in X 3in, from the series Hills of Home, 2019, by Frédéric Bigras-Burrogano.*

This first chapter of the project, which this piece is from, consists of two series of sculptures, *Vertebrae* (2018) and *Femur* (2018). It also includes up to ten large scale landscape documentary photographs and a handful of reproductions of archival materials, some of which were altered to highlight extractivist narratives. The individual sculptural pieces are presented in the gallery space wall to act as a punctuation between the large photographs. The artefacts are presented together alongside a small library proposing different books related to the project, blurring the line between artwork and artefact. The series takes a deep dive into the extraction economies of the Drumheller Valley, particularly coal and fossil mining and the heritage tourism that followed. A central player in both features of the local economy, the Tyrrell Museum is at the heart of this exploration. An interest was spurred from photography's reliance on silver mining and its use in documenting landscape, explored through the concept of the double bind:[19] firstly, in terms of its historical use in the region through geological surveys done by Tyrrell himself; how photography is utilized in touristic infrastructure through personal photo albums, postcards, touristic guides, and publicity within the same territory. Frédéric set out to understand the role it played within the local area and how the medium is connected with the emergence of new institutions such as the nation state and the museum (Tagg 2002: 5), and their modernist heritage. Secondly, the work meditates on how photography is an extractivist self-fulfilling prophecy as it relied on silver ore extracted from unceded Canadian land and was used in surveying and mining operations (Angus et al. 2022: 139).

Figure 6: Mimic*. self-adhesive vinyl, 24x30, from the series Hills of Home, 2018, by Frédéric Bigras-Burrogano.*

For Frédéric, working with the material history of photography was a crucial step in exploring the relationship between the extracted matter and its utilization in photography. The piece started when Frédéric bought fossils from one of many local mineral and fossil merchants in Dinosaur Valley; this became the original matrix of *Vertebrae*. Frédéric was interested in thinking photographically through fossils, inspired by British artist Victor Burgin's (unmarked) *Voyage to Italy,* in which the artist presents a series of black and white photographs of Pompeiian ruins, with a special interest in columns. Burgin's aim is to draw a parallel between the ruins of Pompeii and the photographic plate and archive, as he explores the dual meaning of the word 'impression', both in terms of a material imprint and more affective notions of impression, since the volcanic ash created a simulacrum (Amelunxen and von Zander 2006: 79). Starting with the original vertebrae fossil fragment, Frédéric created a digital rendering by 3D scanning the object, which was subsequently printed using a PLA printer and plastic microfilament. Originally intended as a play on the relationship between petroleum and fossils, Frédéric created a mould of the new object to be able to cast it in various metals that were found in the area but also used in photographic technology, such as bronze, gold, and pewter. His aim was to further a dialogue between the different minerals found in the area and their connection to the photographic and the extractive. Not being allowed to exhibit in the Royal Tyrrell Museum, Frédéric recreates the museum hang and didactic material in new exhibition spaces. The many sculptures of *Vertebrae* are systematically hung on walls, relying on the same 'L' shape nails that the Royal Tyrrell Museum uses for artefacts of a similar size. Reproducing the museum hang connects the object to the Tyrrell and makes apparent the stratification of the qualities added by 3D printing. Furthermore, *Vertebrae* mimics the natural environment around Drumheller, which is composed of layers of different mineral deposits and rock formations. Thus, Frédéric creates an echo between the artworks and the maps presented in the gallery, which remind visitors of topographical maps. Showing the original artefact alongside the 3D printed metal reproduction offers a clue to how the new objects

were made. The individual sculptures are scattered around the exhibition space, acting as punctuation and reminders of the connection between photography, materiality and extraction, between large scale photographic prints, archives, maps of Dinosaur Valley, and smaller touristic artefacts and interventions. Touristic vernacular is present throughout the pieces and texts, further anchoring the work with the Tyrrell and thus highlighting, through their presence, the stories absent from Tyrrell exhibitions. Deciphering the clues found in recurring imagery and textual motifs of the exhibition, the viewer can become familiar with these new narratives that propose a different understanding of the Canadian settler colonial state, its use of natural imagery, and how cultural institutions like the Tyrrell Museum are complicit in establishing an authorized narrative of national heritage (Gil 2015: 84). Ultimately, we can see these images integrating themselves into official documents, such as the commemorative coins shown in Figure 7. Indeed, state sanctioned imagery in the Canadian settler colonial state dates back to 1851 – pre-confederation – when the beaver was used for its first postage stamp.

Figure 7: Dinosaur of Canada 25-Cent commemorative three coin set, *2019, copyright Royal Canadian Mint, reproduced under fair dealing principles, https://www.mint.ca/en/shop/coins/2019/dinosaurs-of-canada-25-cent-3-coin-set*

Authorized narratives are re-used in this series in two ways. First, they are used in a list of the materials on the exhibition label, followed by the title of the piece: *Vertebrae; or photographic matters no longer sleeping alongside fossils*. The decision to include the complete list of minerals used within the piece and not an encompassing title such as 'mixed material' draws attention to their uniqueness and at the same time groups them in such a way as to propose a connection amongst them. It also recalls the longer exhibition plaques accompanying mineral collections which list every specimen with detailed accuracy. The full title suggests the minerals used within photographic technology as an added layer of meaning and emphasizes photography's connection to settlers' desires to extract for profit. Second, the authorized

narrative helps situate the artist's intent in establishing a dialogue between photography, materialism, and extraction, stories that are not emphasized at the Royal Tyrrell Museum. This label avoids the polysemous quality of the image and its multiple meanings, which depend on the viewer's knowledge. Instead, it presents a title that directs the message of the piece (Stylianou-Lambert and Bounia 2012: 188).

Even though the Western academy produces grammars which can be understood as discursive forces that enforce dominance (Gilmore 2022), we believe that academics and artists coming from those communities do engage in these important conversations. Artwork such as *Vertebrae* challenges these structures of dominance by reinterpreting artefacts in opposition to the traditional narratives established by institutions like the Royal Tyrrell, narratives that hinge upon settler epistemologies of discovery. By taking on the role of artist-as-museologist, Frédéric examines the underlying values conveyed through their exhibitions. By expanding their work beyond art museums to natural history museums like the Royal Tyrrell, artists-as-museologists incorporate cultural contexts and unceded spaces, shedding light on how certain ways of understanding and knowledge have been historically privileged. This approach aims to centre marginalized stories and challenge established power structures.

Conclusion: Against Crown Fossils

Museums act as a site for hybridization of experience and as a machine for sifting which stories are told and from which perspective (Edwards and Mead 2013: 19; Davis and Turpin 2015: 73). Unmarked art historian Vincent Normal suggests that the identity of the museum is inscribed in the same anthropological determinations that are shared by modernity (Davis and Turpin 2015: 67). In a Canadian context, this identity goes hand in hand with stories that foster normative attitudes that are extractive, colonialist, and capitalist. What museums professionals decide to put on, and, in turn, how they themselves are perceived by audiences as neutral (Lee 2022: 17) reveals how these cultural institutions maintain a certain vision of the world and obscure narratives that could contradict their institutional identity and the nation they are supporting.

Within this context, artists-as-museologists shed light on the stories that have been obscured or written out altogether, positioning themselves against the narratives put forth by mineral and paleontology museums to propose new generative discourse. This in turn has the potential to excavate and surface stories and relations which are not present in the institutions they are investigating and directly address these lacunae in the process. In the context of the Royal Tyrrell Museum, where exhibits are formulated around settler mythmaking, a linear timeline, and a 'great man' version of history that privileges epistemologies of discovery, artists-as-museologists disrupt authorized narratives that reify settler colonialism and extractivism. In her article on museum sponsorship by oil and gas companies, Camille-Mary Sharp (unmarked) concludes that 'there is an urgent need for museum communities – scholars, professionals, artists, and publics alike – to imagine alternative structures and futures for our institutions' (Sharp 2022: 31). Through our meditation on the possibilities of artists-as-museologists to intervene in these conservative politics through a focus on the piece *Vertebrae; or photographic matters no longer sleeping alongside fossils,* we have contributed to imagining alternative structures and futures. New stories are told to highlight the gaps, now visible, in settler narratives concerning photography's extractive tendency and the role tourism plays in perpetuating what is increasingly called 'maplewashing', attempts to whitewash the settler history of what is now Canada. Natural history museums like the Royal Tyrrell have an opportunity to push back against such tendencies by disrupting settler-colonial discovery narratives at an institutional level.

Notes

[1] We follow Max Liboiron's (Red River Métis/Michif and settler) practice of (un) marking authors as a way to highlight how settlers and whiteness are often reified as unexceptional norms in academic writing, which they adapt from Marisa Duarte's (Yaqui) process in *Network Sovereignty.* Such reification as the 'norm' occurs

when, for instance, Indigenous authors are introduced with their affiliation/nations while settlers and white scholars are not (Liboiron 2021: 3-4n10). As Liboiron (2021: 4n10) puts it, 'Introducing yourself is part of ethics and obligation, not punishment'. We employ this practice in the same spirit with the same goals by identifying authors and artists at their first mention in the terms they identify themselves, which is determined based on publicly available information of self-identification. Where self-identification is not able to be determined, we use 'unmarked', which leads to situations where a person can be, for example, born in France, but not marked as French since they do not self-identify as French. We adhere to this imperfect process to highlight the relationships among whiteness, settlement, reconciliation, and responsibility.

[2] Based on Indigenous oral histories and methodologies, Krasowski (unmarked) explores the exclusion clause of the numbered treaties one through seven and demonstrates how First Nations agreed to share their land in exchange for benefits granted by the Canadian settler-colonial state such as gifts, education, and support when transitioning to agriculture. His research, which relied primarily on oral histories from Indigenous Elders, emphasizes that the Crown downplayed the surrender clause as a deliberate strategy to occupy the land (Krasowski 2019).

[3] The Natural History Museum, 'About NHM'. https://thenaturalhistorymuseum.org/about/, accessed 16 July 2024.

[4] Andrew Curley, 'Dinosaurs, Eugenics, and Collapse: Indigenous Erasure in Natural History', *Social Text*, 28 February 2023. https://socialtextjournal.org/periscope_article/dinosaurs-eugenics-and-collapse-indigenous-erasure-in-natural-history/, accessed 27 August 2024.

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[6] Stephen Jay Gould, 'Dinomania', *The New York Review of Books,* 12 August 1993. https://www.nybooks.com/articles/1993/08/12/dinomania/, accessed 27 August 2024.

[7] BCW Architects, 'Royal Tyrell Museum'. https://bcw-arch.com/projects/civic-cultural-care-faculties/royal-tyrell-museum/, accessed 9 July 2024; Pat Kolafa, 'Tyrrell $9 Million Expansion Breaks Ground in New Year,' *The Drumheller Mail,* 23 December 2016. https://www.drumhellermail.com/news/29289-tyrrell-9-million-expansion-breaks-ground-in-new-year, accessed 27 August 2024.

[8] Royal Tyrrell Museum, 'Museum History', 2024. https://tyrrellmuseum.com/about/museum_history, accessed 9 July 2024.

[9] Royal Tyrrell Museum, 'Home', 5 April 2024. https://web.archive.org/web/20240405234402/https://tyrrellmuseum.com/, accessed 27 August 2024.

[10] The Canadian Press, 'Fossil Treasure Trove Found at Oilsands', *CBC*, 24 November 2011. https://www.cbc.ca/news/canada/edmonton/fossil-treasure-trove-found-at-oilsands-1.1076896, accessed 27 August 2024.

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[13] Vincent McDermott, 'Alberta's Oldest Plesiosaur Fossil Found at Mildred Lake Oilsands Site', *Edmonton Journal,* 7 April 2023. https://edmontonjournal.com/news/local-news/albertas-oldest-plesiosaur-fossil-found-at-mildred-lake-oilsands-site, accessed 27 August 2024.

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[16] McDermott, 'Alberta's Oldest Plesiosaur Fossil Found at Mildred Lake Oilsands Site'.

[17] Beyond Extraction, 'Mining at the Museum'. https://www.beyondextraction.ca/mining-at-the-museum, accessed 16 July 2024.

[18] Translation by the authors of Récit Autorisées.

[19] The Double Bind is a concept put forth by Deleuze and Guattari which in this context can be understood as two articulations which respectively bind form and substance (Deleuze and Guattari 1987).

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