

# Evidence of Cannabis in Pre-Columbian Canada

Dr Konstantia Koutouki

June, 14, 2022

## Introduction

My name is Konstantia Koutouki and I am a full professor at the faculty of law of the Université de Montréal in Québec, Canada. I have conducted research for the past 20 years of issues impacting Indigenous Peoples rights. I mainly focus on the relationship between intellectual property law and Indigenous traditional knowledge, economic development of Indigenous nations and the impact of ecological disturbances on the economies of Indigenous nations. As part of my research in the aforementioned areas, I often considered aspects relating to Indigenous food production and Indigenous traditional medicine practices. This research made the link with cannabis initially in 2010 resulting from private conversations with members of Indigenous communities on the topic. In 2015, I presented a paper at the *University of Vanderbilt IP Scholars Roundtable* entitled *Plant Breeders' Rights, Traditional Knowledge, and Medical Marijuana*. The paper was very well received and one of the organizers put me in touch with a publisher as he felt this would make a very interesting book. Unfortunately, the

publisher felt the topic (IP, traditional knowledge, and Cannabis) was too limited to reach an audience necessary to make the book financially viable. With this perspective in mind, I widened the scope of my research on this topic and in 2018 submitted a co-authored paper to the *Alberta Law Review*. The Review had a call for papers for a special volume on *Law, Justice, and Reconciliation in Post-TRC Canada* and my co-author and I submitted a paper entitled *Cannabis, Reconciliation, and the Rights of Indigenous Peoples: Prospects and Challenges for Cannabis Legalization in Canada*.<sup>1</sup> The paper was very well received and has been used by community members, lawyers, academics, policy makers and others for various of purposes relating to Indigenous Peoples legal potential to regulate the grow, sales, and distribution of the plant on their national territories. I have also given interviews and conferences on the topic throughout the years. Finally, I have travelled extensively in the United States and Canada personally and professionally and have amassed significant knowledge on the various models used across the provinces and states to reconcile Indigenous autonomy, sovereignty, and cannabis regulation.

---

<sup>1</sup> K. Koutouki and K. Lofts, *Cannabis, Reconciliation, and the Rights of Indigenous Peoples: Prospects and Challenges for Cannabis Legalization in Canada*, (2019) *Alberta Law Review* <https://doi.org/10.29173/alr2519>

The principal issue addressed in this report is **there available evidence of access to cannabis by Indigenous nations before European contact?**

The easy answer to this question and one that is rampant on the internet and even many academic circles is that there was no cannabis in Canada or the United States pre contact. Easy answers however have done much harm to Indigenous Peoples worldwide. They are, to a large degree, based on somewhat biased notions of the capacities of the people inhabiting these territories before the arrival of the Europeans and, to a certain degree, misconceptions about the societal role of the cannabis plant. What is rarely admitted to is the limitations of archeology to evaluate the existence and use of plants as opposed to other artifacts such as bones. Paleoethnobotany, a relatively newcomer to the field of archeology attempts to fill in some of those gaps with its own admitted limitations.<sup>2</sup> In fact, all disciplines are fraught with unintentional bias and in this case the Indigenous people were not the ones writing their own history.<sup>3</sup> Lastly,

---

<sup>2</sup> Heather L. Pennington and Steven A. Weber, *Paleoethnobotany: Modern Research Connecting Ancient Plants and Ancient Peoples*, (2010) Critical Reviews in Plant Sciences, <https://doi.org/10.1080/07352680490273220>

<sup>3</sup> "However, when placed in its proper historical context, it is clear that the discipline of archaeology was built around and relies upon Western knowledge systems and methodologies, and its practice has a strongly colonial history.<sup>1</sup> Many archaeologists have come to recognize that archaeology is based on, and

there is an unavowed reticence to contextualize archeological findings within the socio-cultural devastation which occurred in the Americas over the past 500 years and certainly continues today.

With this background in mind, it is my opinion based on research available to me that there is enough evidence of the existence of cannabis in the Canada and the United States to fulfill the requirements for giving the benefit of a legal doubt to the nations claiming historical use. If we are looking for scientific certainty, like in most cases, we will not find it. However, there is enough

---

generally reflects, the values of Western cultures.<sup>2</sup> In privileging the material, scientific, observable world over the spiritual, experiential, and unquantifiable aspects of archaeological sites, ancient peoples, and artifacts, archaeological practice demonstrates that it is solidly grounded in Western ways of categorizing, knowing, and interpreting the world... While one of the most far-reaching acts of cultural, spiritual and physical genocide was being perpetuated on the Indigenous people of North America, archaeologists and anthropologists began to take on the role of cultural and historical stewards, using the methods of their own Western cultures to examine, analyze, write, and teach about Indigenous lifeways and heritage.<sup>5</sup> The colonization of North America involved actions and responses of many individuals and was part of a complex process. Native people responded to this disruption in their ability to control their cultural resources, history, and heritage in a variety of ways—some buried sacred items; others sold them in an effort to feed their families; still others gave up their traditional spiritual practices to embrace Christianity. However, through all of this, Indigenous people remained; their survivance demonstrates their ability to simultaneously both adapt to and change Western cultural practices, both in the past and the present.” Sonya Atalay, *Indigenous Archaeology as Decolonizing Practice*, (2006) *The American Indian Quarterly*, <https://muse.jhu.edu/article/202291>

evidence related directly to cannabis and evidence related to widespread historical oversights in research concerning Indigenous Peoples in general. This combination leads to the very plausible conclusion that cannabis was very well known by Indigenous Peoples before the 1500's. It would be an injustice should Indigenous Peoples be denied yet another benefit because scientific queries into this topic are either biased towards mainstream notions of Indigenous peoples' capacity to, for instance, carry out cross-Atlantic or trans-Pacific voyages, the value of cannabis for pre-Columbian societies or because science itself is presently incapable (or not developed enough) to provide scientific certainty of the existence of cannabis in this part of the world before the 1500's.

What science has demonstrated with great certainty is the beneficial uses of cannabis that span the history of humankind.<sup>4</sup> Governments all over the world are coming to the realization that this is a fact and are taking steps to reclassify the plant away from a Schedule 1 drug (one with no currently accepted medical use and a significant potential for abuse). Interestingly enough, cannabis was used very widely in medicine in Canada, the United States and Europe until the 1950's when, for reasons beyond the scope of this report, the plant was

removed from the list of approved medicines and was made illicit and very much stigmatized. The illegalization of cannabis however did not change the fact that the medicinal, nutritive and fibre properties of the plant were known as for many thousands of years throughout many parts of the world.

### A brief history of cannabis

Andrew Lawler states in his article in *Science* that, "cannabis, also known as hemp or marijuana, evolved about 28 million years ago on the eastern Tibetan Plateau, according to a pollen study published in May. A close relative of the common hop found in beer, the plant still grows wild across Central Asia. More than 4000 years ago, Chinese farmers began to grow it for oil and for fiber to make rope, clothing, and paper."<sup>5</sup> The study Lawler refers to was published in 2019 in *Vegetation History and Archaeobotany* (another world for paleoethnobotany) by John M. McPartland, William Hegman and Tengwen Long. These authors attest that, "cannabis holds significance in human history

---

<sup>4</sup> Charles W Webb, MD and Sandra M Webb, RN, BSN, *Therapeutic Benefits of Cannabis: A Patient Survey* (2014) Hawaii J Med Public Health, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3998228/>

<sup>5</sup> Andrew Lawler, *Oldest evidence of marijuana use discovered in 2500-year-old cemetery in peaks of western China*, (2019) American Association for the Advancement of Science, <https://www.science.org/content/article/oldest-evidence-marijuana-use-discovered-2500-year-old-cemetery-peaks-western-china>

and life today as a triple-use crop. First, its fruits (seeds) provide valuable protein and essential fatty acids. Archaeological evidence in a food context dates back to 10,000 bp, in Japan.<sup>6</sup> Its bast cells supply fibres, for cordage and textiles. Carbonized hemp fibres, found with silk and spinning wheels, date to 5,600 bp, in Henan Province, China.<sup>7</sup> Its flowering tops produce cannabinoids, which have been used for medicinal, shamanic, and recreational purposes. Archaeological evidence of drug use dates to 2,700 bp<sup>8</sup>, in Xinjiang region.”<sup>9</sup> There is evidence that cannabis was present in India 32,000 years ago.<sup>10</sup> According to Gumbiner, “cannabis has been popular in India since the beginning of recorded history and is often taken as a drink. Nuts and spices, like almonds, pistachios, poppy seeds,

---

<sup>6</sup> Kobayashi M, Momohara A, Okitsu S et al, *Fossil hemp fruits in the earliest Jomon period from the Okinoshima site, Chiba Prefecture*, (2008) *Shokuseishi kenkyū* 16:11–18

<sup>7</sup> Zhang SL, Gao HY, *荥阳青台遗址出土的丝麻品观察与研究 (Observation and study of silk and hemp recovered from Qingtai archaeological site*, (1999) *Xingyang, Zhōngyuán Wénwù* 3:10–16

<sup>8</sup> Russo EB, Jiang HE, Li X et al, *Phytochemical and genetic analyses of ancient cannabis from Central Asia*, (2008) *J Exper Bot* 59:4,171–4,182, see also: Jiang HE, Wang L, Merlin MD, et al, *Ancient Cannabis burial shroud in a Central Eurasian cemetery* (2016) *Econ Bot* 70:213–221

<sup>9</sup> John M. McPartland, William Hegman and Tengwen Long, *Cannabis in Asia: its center of origin and early cultivation, based on a synthesis of subfossil pollen and archaeobotanical studies*, (2019) *Vegetation History and Archaeobotany*, <https://link.springer.com/article/10.1007/s00334-019-00731-8>

<sup>10</sup> Ibid.

pepper, ginger, and sugar are combined with cannabis and boiled with milk. Yogurt is also used instead of milk.”<sup>11</sup>

The amount of research that has been done on cannabis in Asia is very extensive given the interconnected relationship that most Asian cultures have with cannabis.<sup>12</sup> For instance, it is an integral part of Chinese traditional medicine with “the use of cannabis for purposes of healing predat[ing] recorded history. The earliest written reference is found in the 15th century BC Chinese Pharmacopeia, the Rh-Ya”<sup>13</sup> and in India, “according to The Vedas, cannabis was one of five sacred plants and a guardian angel lived in its leaves.”<sup>14</sup> Another reason for the large amount of research in this part of the world is that breeders are constantly

---

<sup>11</sup> Jann Gumbiner Ph.D., *History of Cannabis in India*, Psychology, <https://www.psychologytoday.com/ca/blog/the-teenage-mind/201106/history-cannabis-in-india>

<sup>12</sup> The government of Thailand recently announced that it will give away 1 million cannabis plants to be planted around the country. Cannabis is even part of Thai cuisine with boat noodle soup being the most famous of cannabis containing recipes. <https://www.forbes.com/sites/dariosabaghi/2022/05/23/thailand-to-give-away-one-million-cannabis-plants-to-households-across-the-country/?sh=5f8f328d6dc1>

<sup>13</sup> Robert C Patterson, *Marijuana Research Findings: 1976, (1977)* National Institute on Drug Abuse (NIDA) <https://books.google.ca/books?id=GjNhNIXDzfYC&pg=PA196&lpg=PA196&dq=#v=onepage&q&f=false>

<sup>14</sup> Anisha Dhiman, *Does your religion prohibit cannabis use?*, (2019) National Post, <https://nationalpost.com/cannabis-culture/cannabis-religion-use/wcm/2c9cb893-1989-4322-8eb0-87a705d69303/amp/>



looking for landrace seeds for their breeding operations.<sup>15</sup> However, notwithstanding this widespread research, we are still in a situation where, “despite a voluminous literature emerging in the last three decades, the classification of *Cannabis* and its centre of origin remains under debate.”<sup>16</sup> If key questions such as its centre of origin is under debate in a place where tremendous amount of research on the plant has been carried out, it is no surprising that in Canada and the US where little research on the topic has been done, that there would be some scientific uncertainty.

Essentially, when we move away from the Asian continent, the historical evidence regarding cannabis use becomes harder to quantify as there is less cultural connection to the plant and fewer landrace seeds, hence less interest in researching its use or origins. Also impacting to quantity of research and information made available to researchers is the social stigmatization for the plant from one place to another. We know that it has been used in various parts of Europe for 6,000 years.<sup>17</sup> However, if we look at the amount of research in

---

<sup>15</sup> John M. McPartland and Ernest Small, *A classification of endangered high-THC cannabis (Cannabis sativa subsp. indica) domesticates and their wild relatives* (2020) PhytoKeys doi: 10.3897/phytokeys.144.46700

<sup>16</sup> McPartland, *supra* at note 9

<sup>17</sup> Robert Clarke and Mark Merlin, *Evolution and Ethnobotany*, (2013) University of California Press <https://doi.org/10.1525/9780520954571>

Europe dedicated to the origin and ancient use of grapes and wine versus cannabis, it is clear where the interest lies. This is not to say that cannabis was not a critical medicine in Europe, it was just not as intertwined into European culture as it was in Asia and the stigma associated with cannabis and use of cannabis is exponentially higher than that of wine or scotch etc.

We also know that it has been in the African continent for at least 1000-2000 years from cannabis residues found in mummies.<sup>18</sup> If we look at the historical use of cannabis in Africa, we will notice that it almost exclusively starts with colonization, even though we know it historically dates much, much further back. In 2019 Chris Duval published a book called *The African Roots of Marijuana* which explores the importance of Africa in creating the knowledge we have about the plant today and documents its movement across the continent after its arrival over 1000 years ago via Egypt and Ethiopia. In reviewing the book, David M Gordon from *International Journal of African Historical Studies* states that, "rumors that become published facts in high-end publications and prestigious medical journals are the mainstay of histories of marijuana. Chris S. Duvall, in a magnificently researched and clearly written book, sets right this

historiography...Duvall does a brilliant job in consulting available archaeological evidence, carefully studying the spread of words, and, most of all, drawing on sometimes little-studied European observers, especially Portuguese expeditions into the Central African interior. His judicious combination of all of these sources, combined with critical judgement, is convincing and a pleasure to read."<sup>19</sup> Indeed, one of the most interesting parts of the book is tracing the movement of cannabis throughout the continent via the appearance of words associated with the plant rather than simply relying on colonial writings on the topic. The African experience with documentation of the movement and use of cannabis is relevant to the US and Canadian context in that it provides a pattern of how European colonizers documented (or not) the plant's role in the everyday life of local communities. What is different however between North America and Africa is that socially, in Africa, the colonial morality codes, had less of an impact.

The absence of a true cultural connection between Europeans and cannabis, the difficulty in finding archeological evidence concerning plants given how easily

---

<sup>18</sup> Franz Parsche and Andreas Nerlich, *Presence of drugs in different tissues of an Egyptian mummy*, (1995) *Fresenius' Journal of Analytical Chemistry* <https://link.springer.com/article/10.1007/BF00322236>

<sup>19</sup> <https://www.dukeupress.edu/the-african-roots-of-marijuana>

they decompose, the stigmatization and illegalization of the plant, the prejudicial views regarding Indigenous capacities for long distance sea travel, and, as the former Supreme Court Chief Justice Beverley McLachlin put it, the cultural genocide<sup>20</sup> of Indigenous Peoples in Canada and the United States, has meant that constructing the history of the cultural importance of cannabis in Pre-Columbian North America is incredibly difficult.

### Cannabis in Canada and the United States Pre-Columbus

The starting point for discussing the existence of cannabis in this part of the world is to examine when it was populated. For many Indigenous nations the answer is simple, they have always lived on turtle island.<sup>21</sup> Basically, most Indigenous nations content that they have always been here, it is where the Creator created them. For non-Indigenous people, particularly settlers, the need to find where Indigenous people came from is overwhelming. This has a scientific basis (scientific curiosity) and a sociological basis (a certain comfort that we are all immigrants to this land). The science on this question is everchanging. For most of the modern era, the Beringia bridge theory was the considered the only plausible one. This is what most of us were taught in school and it is still the

---

<sup>20</sup><https://www.theglobeandmail.com/news/national/chief-justice-says-canada-attempted-cultural-genocide-on-aboriginals/article24688854/>

most prominent one among the public. The theory states that people from Asia crossed the land bridge between Asia and the Arctic and slowly populated the continent. For a very long time scientists did not look for any other explanation as this was deemed to be the gold standard. In the 1980s, however, evidence of a 14,500-year-old human at Monte Verde, Chile was discovered. In 2000 a 15,500-year-old presence was discovered in central Texas.<sup>22</sup> Finds in the Chiquihuite Cave in Mexico date back 33,000 years. In 2018, a PlosOne publication revealed the finding of “at least 29 footprints...on Calvert Island in British Columbia and confirmed as the earliest known of their kind on the continent. Researchers at the University of Victoria's Hakai Institute published their findings... corroborating earlier indications of the age of the prints at about 13,000 years old.”<sup>23</sup> The revolutionary aspect of this particular find is that they had to have made it there by boat. This challenges to a large degree that notion

---

<sup>21</sup> <https://www.thecanadianencyclopedia.ca/en/article/turtle-island>

<sup>22</sup> Tom D. Dillehay, Carlos Ocampo, José Saavedra, Andre Oliveira Sawakuchi, Rodrigo M. Vega, Mario Pino, Michael B. Collins, Linda Scott Cummings, Iván Arregui, Ximena S. Villagran, Gelvam A. Hartmann, Mauricio Mella, Andrea González, George Dix, *New Archaeological Evidence for an Early Human Presence at Monte Verde, Chile*, (2015) PLOS ONE <https://doi.org/10.1371/journal.pone.0145471>

<sup>23</sup> Duncan McLaren, Daryl Fedje, Angela Dyck, Quentin Mackie, Alisha Gauvreau, Jenny Cohen, *Terminal Pleistocene epoch human footprints from the Pacific coast of Canada*, (2018) <https://doi.org/10.1371/journal.pone.0193522>

that Indigenous Peoples did not know how to navigate the ocean. Collectively what does all this mean? Well as the Smithsonian puts it:

The traditional story of human migration in the Americas goes like this: A group of stone-age people moved from the area of modern-day Siberia to Alaska when receding ocean waters created a land bridge between the two continents across the Bering Strait. Once across, the giant Laurentide and Cordilleran ice sheets, which blocked southern Alaska and the Yukon Territory in western Canada, halted the migrants' progress. But about 13,000 years ago, the ice sheets began retreating, opening a 900-mile-long ice-free corridor following the Canadian Rockies. This, many researchers believe, is how the Clovis culture moved south and colonized other parts of the Americas. But new evidence has made that timeline hazy over the last decade. Research shows that humans were living south of the ice sheets before the ice-free corridor opened up. A settlement in Monte Verde, Chile, shows people had made it all the way down South America 15,000 years ago and a more recent discovery indicates that humans hunted mammoth in Florida 14,500 years ago. Now, a new study by an international team of researchers may finally rip the ice corridor hypothesis out of the textbooks once and for all. Using sediment cores and DNA analysis, the scientists reconstructed the corridor's environment. This research shows that there just weren't enough resources in the pass for the earliest human migrants to successfully make the crossing. "The bottom line is that even though the physical corridor was open by 13,000 years ago, it was several hundred years before it was possible to use it," project leader Eske Willerslev, an evolutionary geneticist from the University of Copenhagen and Cambridge University, says in a press release. "That means that the first people entering what is now the US, Central and South America must have taken a different route. Whether you believe these people were Clovis, or someone else, they simply could not have come through the corridor, as long claimed." ... Instead, early humans probably followed the Pacific Coast around the ice

sheets when colonizing the Americas. The study echoes another paper that came out in June. In that study, researchers looked at the DNA of northern and southern populations of bison concluding they did not intermingle until 13,000 years ago, meaning the corridor was blocked till then. Now, to complete the story of human migration in the Americas researchers need to focus on evidence along the coast. That's tricky since erosion, tides and now the effects of climate change make coastal archeological sites very rare.<sup>24</sup>

There is even controversial evidence that there were people in North America 130,000 years ago.<sup>25</sup> As controversial as the findings of this research are, scholars such as Paulette Steeves, associate professor of sociology at Algoma University, argues that, "this was an area that was an academic violence against Indigenous people." In her book *The Indigenous Paleolithic of the Western Hemisphere* she assembles evidence and arguments pointing towards human presence in North America for at least many tens of thousands of years. She states "We're supposed to believe that early hominids got to northern Asia 2.1 million years ago and then for some reason didn't go any farther north...a few thousand more kilometres, they would have been in North America. So it does not make any sense whatsoever."<sup>26</sup> This is where science is just unable to give a

---

<sup>24</sup> <https://www.smithsonianmag.com/smart-news/humans-colonized-americas-along-coast-not-through-ice-180960103/>

<sup>25</sup> <https://www.theatlantic.com/science/archive/2017/04/new-study-puts-humans-in-america-100000-years-earlier-than-expected/524301/>

<sup>26</sup> <https://www.cbc.ca/radio/ideas/indigenous-archaeologist-argues-humans-may-have-arrived-here-130-000-years-ago-1.6313892>

decisive answer. As Professor Steeves says, if we go by what we know from other human migrations, it is almost inconceivable that it took 2.1 million years to explore a few thousand kilometres further. The point being is that science continually evolves and in this situation we see that in the last 20 years it clearly points to human habitation of Canada for much longer than our history books tell us. For our purposes, where the people came from is just as important as when they came. Both these pieces of information are important because given what we know about the varied levels of importance cannabis had on many Asian, African and European cultures for food, medicine and as building material, it would seem improbable that such a versatile and everyday use plant would be left behind. As it turns out in 2020 a study published *Nature* reveals:

...the possibility of voyaging contact between prehistoric Polynesian and Native American populations has long intrigued researchers. Proponents have pointed to the existence of New World crops, such as the sweet potato and bottle gourd, in the Polynesian archaeological record, but nowhere else outside the pre-Columbian Americas while critics have argued that these botanical dispersals need not have been human mediated. The Norwegian explorer Thor Heyerdahl controversially suggested that prehistoric South American populations had an important role in the settlement of east Polynesia and particularly of Easter Island (Rapa Nui). Several limited molecular genetic studies have reached opposing conclusions, and the possibility continues to be as hotly contested today as it was when first suggested. Here we analyse genome-wide variation in individuals from islands across Polynesia for signs of Native American admixture, analysing 807 individuals from 17 island populations and 15 Pacific



coast Native American groups. We find conclusive evidence for prehistoric contact of Polynesian individuals with Native American individuals (around ad 1200) contemporaneous with the settlement of remote Oceania.<sup>27</sup>

There are in fact hundreds, if not thousands, of references in various studies to pre-Columbian trans-Atlantic and Pacific contact. One of the most encompassing is *Ancient Ocean Crossings: Reconsidering the Case for Contacts with the Pre-Columbian Americas* by Stephen Jett. In the book the author:

...encourages readers to reevaluate the common belief that there was no significant interchange between the chiefdoms and civilizations of Eurasia and Africa and peoples who occupied the alleged terra incognita beyond the great oceans. More than a hundred centuries separate the time that Ice Age hunters are conventionally thought to have crossed a land bridge from Asia into North America and the arrival of Columbus in the Bahamas in 1492. Traditional belief has long held that earth's two hemispheres were essentially cut off from one another as a result of the post-Pleistocene meltwater-fed rising oceans that covered that bridge. The oceans, along with arctic climates and daunting terrestrial distances, formed impermeable barriers to interhemispheric communication. This viewpoint implies

---

<sup>27</sup> Alexander G. Ioannidis, Javier Blanco-Portillo, Karla Sandoval, Erika Hagelberg, Juan Francisco Miquel-Poblete, J. Víctor Moreno-Mayar, Juan Esteban Rodríguez-Rodríguez, Consuelo D. Quinto-Cortés, Kathryn Auckland, Tom Parks, Kathryn Robson, Adrian V. S. Hill, María C. Avila-Arcos, Alexandra Sockell, Julian R. Homburger, Genevieve L. Wojcik, Kathleen C. Barnes, Luisa Herrera, Soledad Berríos, Mónica Acuña, Elena Llop, Celeste Eng, Scott Huntsman, Esteban G. Burchard, Christopher R. Gignoux, Lucía Cifuentes, Ricardo A. Verdugo, Mauricio Moraga, Alexander J. Mentzer, Carlos D. Bustamante & Andrés Moreno-Estrada, *Native American gene flow into Polynesia predating Easter Island settlement*, (2020) *Nature*, <https://www.nature.com/articles/s41586-020-2487-2>

that the cultures of the Old World and those of the Americas developed independently. Drawing on abundant and concrete evidence to support his theory for significant pre-Columbian contacts, Jett suggests that many ancient peoples had both the seafaring capabilities and the motives to cross the oceans and, in fact, did so repeatedly and with great impact. His deep and broad work synthesizes information and ideas from archaeology, geography, linguistics, climatology, oceanography, ethnobotany, genetics, medicine, and the history of navigation and seafaring, making an innovative and persuasive multidisciplinary case for a new understanding of human societies and their diffuse but interconnected development.<sup>28</sup>

The coastal route theory discussed above which is replacing the land bridge theory, is of course based to a large degree on the idea that these people navigated by boat from Asia and used their boats to descent the coast. There is multifaceted evidence of pre-Columbian contact with people from all over the world via sea routes and hence sea navigation between the “New World” and the “Old World” remains controversial but not nearly as much as it once was.

One such contact that is not disputed or at least the divergence is not nearly as polarized is the presence of Vikings in Canada nearly 500 years before Columbus. In an article published in 2022 entitled *Evidence for European presence in the Americas in ad 1021* in *Nature*, the authors state that,

---

<sup>28</sup> <https://muse.jhu.edu/book/51953>

“transatlantic exploration took place centuries before the crossing of Columbus. Physical evidence for early European presence in the Americas can be found in Newfoundland, Canada. However, it has thus far not been possible to determine when this activity took place. Here we provide evidence that the Vikings were present in Newfoundland in ad 1021. We overcome the imprecision of previous age estimates by making use of the cosmic-ray-induced upsurge in atmospheric radiocarbon concentrations in ad 993 (ref. 6). Our new date lays down a marker for European cognisance of the Americas, and represents the first known point at which humans encircled the globe. It also provides a definitive tie point for future research into the initial consequences of transatlantic activity, such as the transference of knowledge, and the potential exchange of genetic information, biota and pathologies.”<sup>29</sup> The site, L’Anse aux Meadows, was named a UNESCO heritage site in 1978.<sup>30</sup>

The use of the word “biota” is interesting in the above context. The reason for this is that in 2019 in a bog near this site, scientists found cannabis pollen among

---

<sup>29</sup> Margot Kuitens, Birgitta L. Wallace, Charles Lindsay, Andrea Scifo, Petra Doeve, Kevin Jenkins, Susanne Lindauer, Pinar Erdil, Paul M. Ledger, Véronique Forbes, Caroline Vermeeren, Ronny Friedrich and Michael W. Dee, *Evidence for European presence in the Americas in ad 1021*, (2022) *Nature*, <https://www.nature.com/articles/s41586-021-03972-8#citeas>

<sup>30</sup> <https://whc.unesco.org/en/list/4/>

other ecofacts. The findings were published in an article called, *New horizons at L'Anse aux Meadows* in *The Proceedings of the National Academy of Sciences USA*.<sup>31</sup> The discoveries raised more questions than they answered. Did the Vikings bring the cannabis or was it already present from Indigenous nations such as the Beothuk that occupied the territory? A few years earlier evidence emerged that Vikings in Norway cultivated cannabis. The interesting aspect here is that the samples were originally collected in the 1940's but were not tested until 2012.<sup>32</sup> This shows how sometimes information about a topic is present, we just did not pursue the knowledge of it.

The question as to whether it was there from Indigenous nations is also valid. In a 2002 Canadian Senate report, Leah Spicer notes that archeologists found "resin scrapings of 500-year-old pipes in Morriston, Ontario containing traces of hemp and tobacco."<sup>33</sup> A study published in the *Lancet* in 1993 called *Drugs in Ancient Populations*, clearly demonstrates the presence of cannabis in Peruvian

---

<sup>31</sup> Paul M. Ledger, Linus Girdland-Flink, and Véronique Forbes, *New horizons at L'Anse aux Meadows*, (2019) PNAS, <https://doi.org/10.1073/pnas.1907986116>

<sup>32</sup> Asle Rønning, *Norwegian Vikings grew hemp: Cannabis was cultivated 1,300 years ago at a farm in Southern Norway*, (2012) Sciencenorway.no, <https://sciencenorway.no/forskningno-hemp-marijuana/norwegian-vikings-grew-hemp/1380340>

<sup>33</sup> <https://sencanada.ca/content/sen/committee/371/ille/library/spicer-e.htm>

mummies dating back to 200-1500 AD.<sup>34</sup> Going back to 1200 AD in present day Ohio, Rowan Robinson notes that, "some of the earliest evidence of hemp in North America is associated with the ancient Mound Builders of the Great Lakes and Mississippi valley. Hundreds of clay pipes, some containing cannabis residue and wrapped in hemp cloth, were found in the so-called Death Mask Mound of the Hopewell Mound Builders, who lived about 400 BCE in modern Ohio. In his 1891 study, *Prehistoric Textile Art of Eastern United States*, Smithsonian Institute ethnologist W.H. Holmes describes the recovery of large pieces of hemp fabric at one site in Morgan County, Tennessee: the "friends of the dead deposited with the body not only the fabrics worn during life but a number of skeins of fibre from which the fabrics were probably made. This fibre has been identified as that of the *Cannabis sativa*, or wild hemp."<sup>35</sup>

Early settlers to North America also documented cannabis use by the Indigenous Peoples. Florentine explorer, Giovanni da Verrazzano, "wrote thoughtfully of the natives encountered during a French expedition to Virginia in

---

<sup>34</sup> Franz Parsche, Svetlana Balabanova, Wolfgang Pirsig, *Drugs in ancient populations*, (1993) The Lancet, DOI:[https://doi.org/10.1016/0140-6736\(93\)90267-K](https://doi.org/10.1016/0140-6736(93)90267-K)

<sup>35</sup> Rowan Robinson, *The Great Book of Hemp: The Complete Guide to the Environmental, Commercial, and Medicinal Uses of the World's Most Extraordinary Plant*, (1995) Park Street Press pg 124.

1524: "We found those folkes to be more white than those that we found before, being clad with certain leaves that hang on boughs of trees, which they sewe together with threds of wilde hemp."<sup>36</sup> In the 1600's, Samuel de Champlain recorded Indigenous people using wild hemp in all 3 voyages: on fishing lines, as clothes and as rope.<sup>37</sup> Jacques Cartier mentions the existence of hemp and its use by Indigenous Peoples several times as well. Some examples are, "because there is hemp four men were making rope", "beneath these grows as good hemp as that of *France*", "with nets they use for fishing, which are made of hemp thread, that grows in the country where they ordinarily reside", "they have wooden mortars, like those used in France for braying hemp, and in these with wooden pestles they pound corn into flour."<sup>38</sup> In his journal Robert Juet (sailed with Henry Hudson) wrote, "This day [September 5, 1609] many of the people came aboard, some in mantles of feathers, and some in skins of divers sorts of good furs. Some women also came to us with hemp. They had red copper tobacco pipes and other things of copper they did wear

---

<sup>36</sup> Ibid.

<sup>37</sup> Samuel de Champlain, *The Voyages and Explorations of Samuel de Champlain, 1604-1616, Volume 1*, (1904) Allerton Book Co. New York, <https://books.google.ca/books?id=gQMOAAAAIAAJ&pg>

<sup>38</sup> Ramsay Cook ed, *The Voyages of Jacques Cartier*, (1993) University of Toronto Press.

about their necks. At night they went on land again, so we rode very quite, but durst not trust them."<sup>39</sup>

There are also authors who have presented evidence that Asians, particularly Chinese, had contacted American Natives before the Columbian period.<sup>40</sup>

Charles Godfrey Leland wrote a book, "first published in 1875 and reissued in 1973, [which] analyses the limited evidence from the works of early Chinese historians that explorers from China had discovered a country they called Fusang – possibly western America, and in all probability Mexico. The original document on which Chinese historians based their accounts of Fusang was the report of a Buddhist monk called Hwei-shin, who, in the year 499 AD, returned from a long journey to the east."<sup>41</sup> In 1885 Edward P. Vining published *An Inglorious Columbus: Evidence that Hui Shan and a Party of Buddhist Monks from*

---

<sup>39</sup> Thomas Wentworth Higginson, *A book of American explorers*, (1877) Lee and Shephard,

<https://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A2001.05.0226%3Achapter%3D13%3Apage%3D283>

<sup>40</sup> Zhang (Charlie) Minhua, *A Review of Theories and Evidences on Pre-Columbian Contact between Chinese and Americans* (2000) <http://hussle.harvard.edu/-zhang/>

<sup>41</sup> Charles G. Leland, *Fusang or the discovery of America by Chinese Buddhist Priests in the Fifth Century*, (2019) Routledge, London.

*Afghanistan Discovered America in the Fifth Century A.D.*<sup>42</sup> In 1971, M. Joseph De Guignes published *Recherches sur les Navigations des Chinois du Cote de l' Amerique*.<sup>43</sup> Gavin Menzies in his book "1421: The Year China Discovered America" published in 2003, provides much supporting evidence for pre-Columbian Chinese contact and settlement in North, South and Central America.<sup>44</sup>

Cannabis was incredibly important to the Chinese and other Asian cultures for fiber, wood, oil, medicine and relaxation. Many researchers question the plausibility that they would not have taken such a versatile and useful plant with them. In addition to all these practical reasons to bring cannabis (or cannabis seeds) on such a long voyage, there was also strong links between cannabis and spirituality in Asia. Heide confirms that, "like many mind-altering plants, cannabis has been part of spiritual practices for thousands of years. It has deep roots in Hinduism, Islam, Rastafarianism, and indigenous traditions in Asia,

---

42

[https://books.google.ca/books/about/An\\_inglorious\\_Columbus.html?id=h29BAAAIAAJ&redir\\_esc=y](https://books.google.ca/books/about/An_inglorious_Columbus.html?id=h29BAAAIAAJ&redir_esc=y)

<sup>43</sup>[https://books.google.ca/books/about/Recherches\\_sur\\_les\\_navigations\\_des\\_Chino.html?id=jl2tHAAACAAJ&redir\\_esc=y](https://books.google.ca/books/about/Recherches_sur_les_navigations_des_Chino.html?id=jl2tHAAACAAJ&redir_esc=y)

<sup>44</sup> <https://www.penguinrandomhouse.ca/books/113324/1421-the-year-china-discovered-the-world-by-gavin-menzies/9780553815221>



Africa, and elsewhere.”<sup>45</sup> It cannot be stressed enough the large space that cannabis held in so many societies. For so many things it was critical and irreplicable. The spiritual aspect of cannabis was known in North America as well.

In Mexico, several Indigenous Peoples consider cannabis as a sacred gift from Rosa Maria or Santa Rosa. Particularly in Veracruz, Hidalgo and Puebla, ceremonies are performed using cannabis sativa. In North America however much of the ceremonial aspects of cannabis use was more or less eliminated due to the “cultural genocide” that followed the migration of Europeans to Canada and the United States. According to Bennett, “unfortunately much of the religion and culture of the aboriginal peoples of the western hemisphere was destroyed or driven underground by the European invaders.”<sup>46</sup> In some Indigenous nations however, the spiritual aspect of cannabis is part of their legends such is the case with the Cherokee and certainly the Tuscarora. Many of the Tuscarora nation explain their creation story which is based on Skywoman as follows:

---

<sup>45</sup> Frederick J Heide, Tai Chang, Natalie Porter, Eric Edelson, and Joseph C Walloch, *Spiritual Benefit from Cannabis*, (2021) J Psychoactive Drugs doi: 10.1080/02791072.2021.1941443

Before Europeans ever set foot in New World soil, America already had the Hemp Gatherers. Our story starts at the very beginning with a version of a 'Tuscarora' creation story. Before they lived in this world, the Tuscarora lived in the Sky World. In the middle of this Sky World was a great Tree of Life. At the base of this Tree of Life was a great hole. A pregnant girl named 'Sky Mother' looked into the hole and started to fall through. As she was falling, she grabbed at the sky world earth. She fell through the hole into this world but was able to grab seeds and plant roots from the sky world soil. The Tuscarora believe Sky Mother gave to them the gift of the Hemp Seed.<sup>47</sup>

According to Crandy Johnson from the nation, "as Tuscarora, we were deemed protectors of the seed, we have an inherent right to own it and use it."<sup>48</sup>

In explaining the long relationship between the Tuscarora and cannabis Alysa Landry interviews nation member Tracy Johnson and states, "the plateau of land overlooking Niagara Falls and nestled among the Finger Lakes of northwestern New York once was covered in fields of hemp. The natural herb, interspersed with rows of corn, was evidence of centuries of inhabitation by the Tuscarora, now a dwindling tribe on a tiny sliver of land. The Tuscarora, or Ska-ru-ren, are the "people of the hemp," "hemp gatherers" or "shirt-wearers," so-named because they traditionally wore shirts made of woven hemp, said Tracy, who is

---

<sup>46</sup> Chris Bennett, Lynn Osburn and Judith Osburn, *Green Gold: Marijuana in Magic & Religion*, (2001) Frazier Park, CA: Access Unlimited, p. 267.

<sup>47</sup> *America's Native Hemp Gatherers, 1400*, (2017) <https://www.thecannachronicles.com/americas-native-hemp-gatherers-1400/>

one of about 660 enrolled members of the tribe...A hunter/gatherer tribe, the Tuscarora also planted a wide variety of crops, Tracy said. The area once was covered in rich farmland and orchards. "Everything that grew in the Garden of Eden grew here," he said. "At one point all this was solid hemp. They planted it as far as the eye could see." Yet as the original land base has shifted and diminished, so have the traditions, including the rich but often controversial history of hemp."<sup>49</sup>

As with most research on this topic, even quotes clearly mentioning cannabis from Cartier, Champlain and others are controversial. For some researchers when historical figures mention cannabis or hemp, they are actually talking about another plant, dogbane. This is difficult for many Indigenous people to accept and many of us in the academic field. There is a clear visual difference between cannabis and dogbane and it would seem to me at least that seasoned sailors and explorers such as Cartier whose ships were held together by hemp, would not see that this was a very different plant. Cartier often compared hemp in Canada to hemp in France and said that they were very much the same. This

---

<sup>48</sup> Ibid.

<sup>49</sup> Alysa Landry, *People of the Hemp, Part 1: Losing Land, Culture, Tradition*, (2018) <https://indiancountrytoday.com/archive/people-of-the-hemp-part-1-losing-land-culture-tradition>

controversy is not without consequences, many scholars refer to dogbane as Indian Hemp and others use the term Indian Hemp to discuss hemp that was present in North America. It is in fact very interesting to note how often and how quickly researchers will default to saying "it was probably dogbane" or "most likely dogbane" when there is very little evidence, if any, to support that the settlers confused dogbane for hemp.

### Conclusion

Research on pre-Columbian Canada has come a long way in the past 30 years. It is clear now that long held truths about Indigenous Peoples of this country were inaccurate at best and outright wrong at worse. The inaccuracies and mistakes do not stop with questions concerning the origins of Indigenous Peoples and their technological advancements, but they are pervasive in what we know about how they lived, their worldviews and cosmologies and their contact with others around the world at that time. In fact, there is some preliminary evidence that perhaps it was the Inuit that found the Vikings first and not vice versa. Creating an accurate register of where and how cannabis was used in pre-Columbian Canada is impossible due to the build in inaccuracies about Indigenous Peoples before (and many would argue after) contact with the Europeans that decided to stay here permanently. There is little doubt in my mind given the evidence we

have that cannabis was present and used in Canada a long time before the arrival of the settlers. The probable origins of Indigenous Peoples being from Asia; the clear contact of Indigenous Peoples with others from various parts of the world; the Indigenous creation stories; the archeological evidence of cannabis resin and fabric; the observation of cannabis by explorers when they arrived to this land; and the incredibly ability of cannabis to grow pretty much anywhere, are enough to cast a very reasonable doubt on those that say cannabis simply did not exist in North America before the settlers. If we take all this evidence and put in in the context of “cultural genocide” as Supreme Court of Canada Chief Justice Beverley McLachlin very eloquently mentioned when discussing the annihilation of Indigenous culture in Canada using a myriad of institutions, methods, and techniques, the absence of cannabis as a principle cultural icon in Canadian Indigenous nations should not be a surprise. At the time when Indigenous nations began to politically organize themselves and reclaim their history, their culture, the education of their children and so many other social aspects, cannabis became an illegal, incredibly stigmatized Schedule 1 drug which carried significant criminal penalties. As David Gordon mentioned earlier in this report “rumors that become published facts in high-end publications and prestigious medical journals are the mainstay of histories of marijuana.” Much of modern research into cannabis had to rely on rumours

because no wanted to discuss this topic given the consequences for doing so. In related research that I conducted on the intellectual property rights of breeders who developed so many strains while the plant was illegal, anecdotal stories of Indigenous involvement in the creation on some of the more famous strains exist. For example, the most famous Indica strain called Northern Lights, "is believed that it was created on the 70's by a breeder known as "The Indian" on an island near Seattle, WA."<sup>50</sup>

In assessing the evidence of cannabis use as food, medicine, building material, for spiritual purposes etc in pre-Columbian Canada, we absolutely must do so with all the above factors in mind. To simply treat the history of an illicit plant, in the context of "cultural genocide", based solely on what we know to be problematic archeological findings and interpretations of those findings would not be just given how the law operates in society today. Colonization has had a significant impact on the capacity of Indigenous people to transfer their culture from generation to generation as well as how many Indigenous feel about aspects of their pre-Columbian culture due to the imposition, via very violent means, of a moral code that was not their own but a reflection of what settlers thought was right, proper, important and virtuous. In addition, European

---

<sup>50</sup> <https://www.alchimiaweb.com/blogen/origins-northern-lights/>

researchers themselves have much difficulty looking at cannabis use from the perspective of a society where cannabis was not illicit, stigmatized, dangerous and immoral but a life-saving medication, a nutritious food that can make all the difference in the winter months, very strong fibre for ropes and budling, a means of social interaction and even divine anointment. This diametrically opposing experience with cannabis between researchers of today and cannabis users of yesteryear has a significant impact on how or even whether researchers consider this plant that has followed humanity, often on its own via natural ecosystems.



Dr Konstantia Koutouki  
Professeure titulaire/Full Professor  
Faculté de droit, Université de Montréal  
CESCO co-titulaire/Chair co-holder  
McGill University  
Présidente/President  
ILA-Canada