Introduction

Hello, and welcome to the June 2011 issue of DNA Tribes® Digest. This month’s feature article explores relationships of the North Amerindian genetic region that characterizes populations near the Great Plains and Mississippi River of North America. This includes tribal nations of the United States and First Nations living in neighboring parts of Canada.

Best regards,
Lucas Martin
DNA Tribes
Genetic Analysis of the North Amerindian World Region

Historical Background

The North Amerindian characterizes indigenous populations near the Great Plains and Mississippi River of North America. Based on available tribal samples, this includes Native Minnesotan (Sioux and Chippewa) populations as well as Cree populations of Saskatchewan, Canada (see map in Figure 1). These tribal populations live near the contact point between two indigenous lifeways rooted in the geography of eastern and central North America: maize growing “Mound Builder” societies settled along the Mississippi River Valley; and nomadic buffalo hunting societies roaming the expansive landscape of the Great Plains (see map in Figure 2).

![Figure 1](image1.png)

Figure 1: Map of some tribal samples affiliated with the North Amerindian genetic region.

Geographically, the North Amerindian genetic region includes populations of the Great Plains of North America, also known as the “Interior Plains” physiographic region. These flatlands encompass a vast area between Canada and Texas, marked by the Black Hills of South Dakota. This area is also known for spokeed circular monuments known as Sacred Hoops (sometimes known as “Medicine Wheels”). Some smaller stone circles identify spots once used for tipi shelters; in other cases, larger circles mark sacred sites related to native religious traditions.

Indigenous societies living here developed nomadic lifeways based on hunting herds of buffalo (American bison) throughout the Great Plains (see Figure 2). An enduring icon of these mobile cultures is the conical tipi or animal hide tent (similar to lavvu and chum tents used by indigenous Uralic peoples of Europe and Siberia). Originally, dogs were used to help in the hunt and to carry supplies with each band. However, after contact with Spanish settlers near the Desert Southwest and Mexico, indigenous Plains nomads swiftly developed a dynamic horse based culture. This unique way of life was described in the memoirs of Black Elk (Heȟáka Sápa), a traditional Oglala Sioux who told his story to the writer John Neihardt (author of Black Elk Speaks).
Between approximately 900 and 1450 CE, the mound building Mississippian Culture (including the northerly Oneota culture listed in Figure 2) flourished, linked by an extensive trade network in a wide area of eastern North America. Mississippian people also shared traditional iconography known as the Southeastern Ceremonial Complex (S.E.C.C.). However, these Mound Builder societies were disrupted near the time of European contact, possibly by climate changes of the Little Ice Age and later by new diseases introduced by early explorers.

These indigenous cultures (both nomadic and settled) continue to the present day as modern tribal nations of the United States and First Nation of Canada (see Figure 3). These include indigenous peoples such as the modern Sioux\(^1\), Chippewa, Blackfoot, and Osage nations; as well as the Cherokee, Choctaw, Creek, Seminole, and Chickasaw nations whose traditional lands are in the Southeastern United States.

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\(^1\) Less well known is that Siouan or Siouan-Catawban languages were spoken not only in the Great Plains, but also in Virginia (the Catawba and Woccon languages), Ohio and Louisiana (the Biloxi and Ofo languages), suggesting a possible migration or expansion from the Eastern or Midwestern United States.
Figure 3: Map listing some (of many) tribal nations with historical and cultural links to the North Amerindian genetic region.

Genetic Analysis of the North Amerindian World Region

Genetic contributions to the North Amerindian world region were identified based on autosomal STR data.\(^2\) Results are summarized in Table 1 and illustrated in Figure 4.

<table>
<thead>
<tr>
<th>World Region</th>
<th>Genetic Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ojibwa</td>
<td>41.4%</td>
</tr>
<tr>
<td>Athabaskan</td>
<td>25.4%</td>
</tr>
<tr>
<td>Mayan</td>
<td>16.0%</td>
</tr>
<tr>
<td>Arctic</td>
<td>11.1%</td>
</tr>
<tr>
<td>Gran Chaco</td>
<td>5.3%</td>
</tr>
<tr>
<td>Other</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

Table 1: Genetic contributions to the North Amerindian world region.

\(^2\) A map illustrating the genetic world regions presently identified by DNA Tribes® analysis can be viewed at: [http://dnatribes.com/populations.html](http://dnatribes.com/populations.html).
Figure 4: Genetic contributions to the North Amerindian genetic region.

**Discussion:** Results in Table 1 indicate genetic links with several neighboring regions. The largest contributions identified were from two adjacent regions of North America: Ojibwa (41.4%) and Athabaskan (25.4%). The Ojibwa contribution (41.4%) suggests substantial contacts with populations living in the northeastern part of North America, including populations living near the Great Lakes.

The Athabaskan contribution (25.4%) suggests links with the Desert Southwest, not necessarily limited to populations speaking Athabaskan languages. For instance, genetic similarity to modern Athabaskan speaking peoples (such as Apache and Navajo) could express links related to the spread of maize agriculture, as well as nomadic contacts with cultures near the southern part of the Great Plains (near present day Texas).

Results also indicate another North American contribution from the Arctic region (11.1%). This might express contacts with northerly indigenous populations of present day Canada.

In addition, results also indicated genetic links with two regions of Central and South America: Mayan (16.0%) and Gran Chaco (5.3%). The Mayan link (16.0%) might express contacts with Mesoamerican populations involved in the early development of maize (corn) agriculture. These genetic links suggest the possibility of some direct population contacts with maize growing civilizations of Mesoamerica (perhaps via the Gulf of Mexico and mediated by Mound Builder cultures of the Mississippi River Valley).

Lastly, the Gran Chaco link (5.3%) might express a relationship with contact routes related to modern tribal peoples of South America.

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New Populations for June 2011

New Populations: DNA Tribes is pleased to announce the addition of several new populations to our global database:

African:
- Herero (Windhoek, Namibia) (13)
- Khoe (Windhoek, Namibia) (26)
- San (Southern Africa) (138)
- Southeastern Bantu (South Africa) (50)
- Sudan (485)

East Asian:
- Hui (Qinghai, China) (2975)
- Kadazan-Dusun (East Malaysia) (154)
- Manchu (Liaoning, China) (377)

South Asian:
- Ansari (Bhadohi, India) (117)
- Hazara (Afghanistan) (63)
- Pashtun (Afghanistan) (77)
- Qureshi (Lucknow, India) (74)
- Tajik (Afghanistan) (127)
- Turkmen (Afghanistan) (70)
- Uzbek (Afghanistan) (119)
- Yusufzai Pathan (Rampur, India) (104)

European:
- Austria (219)
- Hungarian (Cluj, Romania) (146)
- Szekler (Covasna, Romania) (278)

Global Diaspora Communities:
- Afro-Caribbean (Abaco, Bahamas) (111)
- Afro-Caribbean (Eleuthera, Bahamas) (112)
- Afro-Caribbean (Exuma, Bahamas) (92)
- Afro-Caribbean (Grand Bahama, Bahamas) (133)
- Afro-Caribbean (Long Island, Bahamas) (87)
- Araraquara, Brazil (403)
- Mixed (South Africa) (97)

Updates: Updates to incorporate these new populations are available for order through our secure checkout system at http://dnatribes.com/order_addons.html.