ENGAGING
COMMUNITY:

EMPOWERING HEALTH
THROUGH INDIGENOUS
FOODS

A seminar on Indigenous perspectives of health and the role traditional foods play in and mental, physical, and environmental health.

Brown Lounge

Washington University in St. Louis

George Warren Brown School of Social Work

April 20, 2017

Attendees: 47
Presenters

Lora Iannotti, PhD

Lora Iannotti’s current research focuses on program evaluation and impact modeling of undernutrition, infectious diseases, and poverty. She is studying the combined efforts of interventions designed to prevent undernutrition, improve water and sanitation, and foster economic development. Dr. Iannotti has expertise in the wares of infant and young child nutrition and micronutrient deficiencies (zinc, iron, Vitamin A) affecting resources-poor populations. She is actively involved in developing the global health components of the Master of Public Health (MPH) at Washington University’s Brown School and within the Institute for Public Health.

Carlos Andres Gallegos

Carlos Andres Gallegos is a PhD candidate at the Brown School of Social Work with an interest in mental health regarding the well-being and addiction of the social action among Indigenous populations in the United States and Ecuador. Carlos is a Research Associate of the Institute for Research in Health and Nutrition at the Universidad San Francisco de Quito in Ecuador. He has worked with Dr. Iannotti on many research projects, particularly on the “Lulun Egg Project – Improving Young Child Nutrition in Ecuador.” With working with Indigenous communities, he notably is seeking to understand the socio-environmental impacts of communities historically in modern society and how these interactions affect the people in the systems.

Chef Nephi Craig (White Mountain Apache)

Nephi is White Mountain Apache and Navajo. He works as a Nutritional Recovery Program Coordinator and Executive Chef at the Rainbow Treatment Center in Arizona. He has extensive experience as a Chef, travelling nationally and internationally to the UK, Germany and Japan. He is the founder of the Native American Culinary Association, an organization dedicated to the research, refinement and development of Native American cuisine. Nephi has also published pieces about the current state and evolution of Native American culinary traditions affected by hunting, fishing and agricultural rights, as well as United States and Indian relations in Native history. In his current position Nephi connects Native cuisine knowledge to the process of recovery for his clients, focusing on culture and food as a way to heal.
Presenter Summaries

*Lora Iannotti, PhD*

**Global Nutrition and Indigenous Peoples**

*Impact of Undernutrition:*

- 45% of child deaths due to malnutrition
- 165 million children by chronic malnutrition
- Indigenous groups a higher percentage of stunting among population

*Lulun Egg Project- Ecuador:*

- Test efficacy of introducing eggs early on growth and nutrient
- Large growth effect
  - Reduced stunting by 45%
- Eggs have increased amount of colium and impacts the hippocampus (memory)
  - Community already had knowledge of impact of eggs on memory

*Carlos Andres Gallegos*

**A reverse transition to the traditional diet and foods of Indigenous populations of Central Highlands of Ecuador**

*The Nutrition Transition*

- Societies impacted by modernization, diets change→ increased obesity and Increased health problems
- Indigenous communities have moved toward modern (western) diets and it is a Eurocentric (dominant) system
- Historically, Indigenous communities have been passive subjects, propelled toward modernity
- Examining Indigenous people you have to explore power
- The choice between traditional foods or modern foods, means they (Indigenous peoples/communities) can decide which direction they will go

Ecuador has approximately 6 million people 10% Indigenous, an intercultural, multinational state
Chronology

1st Conquest
- Inca enter Ecuador territory and implemented nation state for ~150 years
  - Established an agricultural society

2nd Conquest:
- European arrival
- Brought foods and different techniques for agriculture
- Took advantage of Indigenous agricultural methods

Indigenous Push Back (1990-Present)
- Resistance and Change
  - Movements (social/political) that changed the country
  - Indigenous movement

Regulatory Framework
- Constitution 2008
- National Plans of development
- Organic Law of Rural Lands and Ancestral Domain
- Constitution mentions food sovereignty
- Eg. La Chakrita
  - Culturally done/influenced agricultural space

Reintroduction and use of traditional food practices and a return in discourse of Indigeneity
- Indigenous people have ability to return to traditional food practices
Chef Nephi Craig (White Mountain Apache)

The Culinary Art of Dignified Resurgence - Clinical Practice: Recovery from historical trauma and colonialism

Reference Article: Restoring Heritage Cuisine begins with native crops and how we grow them
Returning to Amaranth to its rightful place in the three sisters-plus complex by Devon G. Pena

3 Sister Salad with amaranth demonstration

- Cooking is building a relationship
- Corn is missing two amino acids to form a protein, so the squash and beans complete it.
- How Three Sisters is Grown:
  - Make 3 sisters by ratio: 1:1:1 ratio
  - Can be made multiple ways:
    - Eg. Corn, beans, squash, sunflower seeds, tomatoes, chopped chives, amaranth leaves, a little olive oil, amaranth seeds, indigenous paprika.

Food ways: Techniques and skills

1. Understanding violence
2. Vocabulary of violence and affection
   - “We are fluent in violence toward ourselves through behavior, how do we learn to understand affection toward ourselves?”
3. Colonialism as a disease
   - Symptomatic?, Progressive?, Fatal?
   - How do I heal from this?
   - How do we health from this?
   - How to we socialize Indigenous health
   - Are western concepts and methods appropriate?
4. Recovery is Resistance
   - “Protecting and planting heirloom seeds is an act of resistance, a political act. A humble act.”

A dignified pathway in resurgence. Connection between past, present, and future.
5. Landscape is Destiny

a. “We are a reflection of the landscape of food ways/”

b. “Reconnecting with landscape is the root of decolonization.”

Compost Program

- Compost is a circle of life. Transform pain, not transmit it.

- “People come in emotional, spiritually drained, they come in to decompose to grow.”

Indigenous foods as a way to grow people, not businesses and restaurants

Mental health is not what I think personally, it is about the environment, and how we see our reality.

“Food is a beautiful form of resistance.” Apache word Gozhoo- love, respect, balance, humility, responsibility, compassion, love, courage, Indigeneity.

“Transform pain, not transmit it.”
Selected CINE Food Systems Programs

Awajún communities of the Cenepa River

The Awajún people live in communities in the department of Amazonas in the northeast of Peru, along the Upper Maranon River and its tributaries. The Awajún rely greatly on farming, hunting, and fishing for sustenance. The environment, the rivers and land, support the communities through providing the main source of their livelihood. Resource extraction by mining and petroleum companies threaten their livelihood. Amongst the Awajún, studies have “found high prevalence of infant and childhood malnutrition (stunting), and anemia in women and children. The major nutritional and health problems of this population include high rates of childhood stunting, anemia and heavy intestinal parasitic infection”. The CINE project worked closely with the Organization for Development of the Frontier Communities of Cenepa (ODECOFROC) Women’s Program to implement a program for the Awajún people. The program consisted of an educational curriculum for mothers that aimed to increase the health and nutrition of the Awajún women and children by promoting the use of traditional foods, education about traditional foods, with the goal of increasing accessibility and use of traditional foods from their environments. At the end of the project, mothers were found to have increased knowledge on the impact of
traditional foods on health, as well as an increase in cultivation of traditional crops, and increase in having or expressing interest in having a fish pond. There was an increase in healthier feeding habits and dietary intake for Awajún children.

**Nuxalk Nation of Canada**

The Nuxalk Nation community is located in the central coast region of British Columbia. They are situated in an area with “a network of deepwater inlets, channels, islands, river estuaries, floodplains and valleys, and rugged mountainous terrain”. The areas around their community is where they historically hunted and gathered traditional foods such as, fish, shellfish, berries, roots, and animals like deer. By the 1980’s the Nuxalk people were using approximately 20 species of plant and animal foods from their “traditional diet – a huge decline from the 70 or so traditional food species used earlier in the twentieth century”. The Nuxalk Food and Nutrition Program was implemented in the 1980’s as a way to document and increase the use of traditional Nuxalk foods and food practices. As a result of the program, families increased their traditional food intake of both fish and plants. The communities’ food processing equipment also increased. Other spinoff programs were implemented later, such as a community garden and fitness programs. Despite the increase of traditional foods, environmental challenges are impacting the availability of traditional foods, such as the ooligan fish, which is of great cultural importance to the Nuxalk.

Indigenous and tribal peoples’ health: a population study

**FOCAL POINTS:** Indigenous vs benchmark populations

- **USA:** Infant mortality rate is increased over 7 times.
- **Bolivia:** Maternal mortality ratio is increased over 3-6 times.
- **Brazil:** Low birthweight (children born under 2500g) in Aboriginals is increased 2 times.
- **Canada:** Child malnutrition in Asia is increased 4-5 times.
- **Canada:** Child obesity in Canada is increased 2 times.
- **Australia:** Aboriginals (BMI > 30-40) in (USA) increased 2 times.
- **New Zealand:** Educational attainment: Literacy rate in Nigeria (Fulani) 5 is almost 0.
- **US:** Individuals earning less than China’s poverty line increased 2.75 times (Tibetan).

**INDICATORS:**
- IMR = Infant mortality rate
- MNMR = Maternal mortality ratio
- BW = Birthweight
- CM = Child main nutrition
- EA = Educational attainment
- CO = Child obesity
- AD = Adult obesity

**KEY:**
- Low BW
- High BW
- Low CO
- High CO

For example: If low BW has ratio of 3, low BW in Indigenous populations is 2 times higher than benchmark.
Traditional Food in the United States by Region

Southwest

Mutton Stew

<table>
<thead>
<tr>
<th>Ingredients</th>
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<tbody>
<tr>
<td>4 cups of (1.5 lbs.) diced mutton</td>
<td>6-8 cups water</td>
</tr>
<tr>
<td>1 cup of cut vegetables</td>
<td>spices</td>
</tr>
<tr>
<td>(Potatoes, carrots, &amp; celery)</td>
<td>(optional)</td>
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</tbody>
</table>

Steps:
1. The meat is boiled in the water for at least 30 minutes.
2. Vegetables are added.
3. Spices can be added to taste.
4. The stew cooks until the vegetables are done.

Pacific Northwest

Salmon & Nettle Soup

<table>
<thead>
<tr>
<th>Ingredients</th>
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<tbody>
<tr>
<td>5 - 6 cups water of fish stock</td>
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<tr>
<td>1 lb. wild salmon deboned, skinned, and cut into bite sized pieces</td>
</tr>
<tr>
<td>1 medium onion diced</td>
</tr>
<tr>
<td>1 stalk celery diced</td>
</tr>
<tr>
<td>1 medium carrot peeled and diced</td>
</tr>
<tr>
<td>1 - 2 cups blanched young nettles chopped</td>
</tr>
<tr>
<td>2 - 3 tablespoons olive oil</td>
</tr>
<tr>
<td>Garlic powder, salt &amp; pepper to taste</td>
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Steps:
1. In large pot bring stock to a simmer.

2. Sauté onion, carrot and celery over medium heat for 3 minutes, then add chopped nettles and continue to cook for another 3 minutes.

3. Add vegetable mixture to simmering stock. Reduce heat to low and cook 15 minutes.

4. Add salmon, put lid on pan and turn off heat. Let sit for 5 minutes or until salmon is cooked. Serve and enjoy!

Venision Roast with Juniper Berry Rub

<table>
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<th>Ingredients</th>
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<tbody>
<tr>
<td>1 teaspoon dried juniper berries</td>
</tr>
<tr>
<td>1 teaspoon onion flakes</td>
</tr>
<tr>
<td>1 clove of garlic</td>
</tr>
<tr>
<td>1 lb (445 g) vension rump roast</td>
</tr>
<tr>
<td>1 teaspoon cayenne pepper</td>
</tr>
<tr>
<td>1 teaspoon grapeseed oil</td>
</tr>
<tr>
<td>1 teaspoon cumin seeds</td>
</tr>
<tr>
<td>1 cup boiling water</td>
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</tbody>
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Steps:
1. Preheat oven to 350°F (180° C).

2. Crush the berries, garlic, cayenne pepper, cumin seeds, and onion flakes in a mortar.

3. Rub the crushed spices onto the roast and then pan-sear the roast in a hot frying pan with the oil to lock in the juices.

4. Put roast in a roasting pan and add the boiling water, then roast for 1 hour, basting at least 4 times. Makes 3 servings.

Retrieved from:
**Pinion Cakes**

**Ingredients**

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<table>
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<tbody>
<tr>
<td>3 cups pinion nuts</td>
<td>1 cup and 2 tablespoon water</td>
</tr>
<tr>
<td>½ teaspoon salt</td>
<td>3 tablespoon oil</td>
</tr>
</tbody>
</table>

**Steps:**

1. Puree the nuts or chop them and then roll them with a rolling pin to make a course meal consistency.

2. Add water and salt and blend.

3. Let the batter sit for an hour at room temperature.


5. Drop batter into oil and form each into a little cake about 3 inches across.

6. Lower the heat slightly.

5. Brown on each side.


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**Plains**

**On^’Stase Ohneka’keli (Green Corn Soup)**

Recipe by Randy Cornelius, Submitted by the Oneida Community Integrated Food Systems

**Ingredients**

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<table>
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<tbody>
<tr>
<td>1 large smoked pork hock</td>
<td>1 smoked turkey leg</td>
</tr>
<tr>
<td>1 medium rutabaga</td>
<td>½ lb snow peas</td>
</tr>
<tr>
<td>1 package of salt pork</td>
<td>1 bunch green beans</td>
</tr>
<tr>
<td>1 large onion</td>
<td>1 lb baby lima beans</td>
</tr>
<tr>
<td>4 quarts white corn</td>
<td>½ lb green/wax beans</td>
</tr>
<tr>
<td>2 yellow zucchini</td>
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</tbody>
</table>

**Steps:**

1. In slow cooker add one big hunk of smoked pork hock, a smoked turkey leg, a diced up chunk of salt pork and one great big smackin onion cover completely with water and set on low. Trim off any fat from meat. Cook for 24 hours. Keep covered.

2. Boil up who knows how much white corn, enough cobs to make four quarts when cut off the cob. When the meat is done take it out of the slow pot and refrigerate. Add the green corn to the juice in the slow cooker and cook on low for 8-10 hours. Add more water if needed. Keep covered, add some pepper.

3. When corn in done pour into kettle and add 1 medium rutabaga, ½ pound snow peas, some diced up green onions, 1 pound baby lima beans, ½ pound of diced up green and wax beans. When rutabaga and beans are almost done add two sliced up yellow zucchini and two green zucchini’s. Trim the fat from the 1 pound of side pork and cook. Dice it up and add to the soup. Sort through the pork hock for the meat and feed the rest to your dog. Remove the meat from the turkey leg and discard the bones. Cut meat up into small chunks of burning love and add to soup.

**Subarctic**

**Akutaq – Eskimo Ice Cream**

<table>
<thead>
<tr>
<th>Ingredients</th>
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<tbody>
<tr>
<td>1 cup reindeer, caribou, or moose fat (back fat)*</td>
<td>1 cup animal oil (seal, walrus, or whale), divided</td>
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<tr>
<td>1/2 cup water or 2 cups loose snow</td>
<td>4 1/2 cups fresh berries (blueberries, cloudberrys, cranberries, salmonberries, or blackberries)</td>
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**Steps:**

1. Grate or grind fat into small pieces. In a large pot over low heat, add fat and stir until it becomes a liquid (the fat should never get hotter than it is comfortable to your hand).

2. Add 1/3 cup seal oil, mixing until it is all liquid. Remove from heat and continue stirring the fat in big circles.

3. While continuing to stir at a steady rate, add 1/4 cup water or 1 cup snow and another 1/3 cup seal oil. As fat slowly cools and starts to get fluffy and white, add remaining 1/4 cup water or 1 cup snow and remaining 1/3 cup seal oil, continuing to stir.

4. When the Akutaq is as white and fluffy as you can make it, fold in berries. Form into desired shape. Cover and freeze to firm up.

**Aged Herring**

Morris Kiyutelluk, Shishmaref

<table>
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<tr>
<th>Ingredients</th>
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<tr>
<td>Enough herring (fish) to fill seal poke</td>
<td>Seal Poke</td>
</tr>
</tbody>
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**Steps:**

1. Remove scales from herring (they come off easily in water using fingernails or by stirring when in water)

2. Wash and place in bags or seal poke (whole, not gutted). Alternatively, can dig hole and line with dried grass and place herring on grass with another layer of grass on top, with sticks or logs on top to prevent foxes or bears from eating them.

3. Leave for month or two during winter.

4. In spring (March/April) return and remove to eat.

Retrieved by: [https://whatscookingamerica.net/History/Akutaq_EskimoIceCream.html](https://whatscookingamerica.net/History/Akutaq_EskimoIceCream.html)
**Pemmican**

*By: Patricia Rowland*

<table>
<thead>
<tr>
<th>Ingredients</th>
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<tbody>
<tr>
<td>Dried meat (buffalo, game or beef)</td>
</tr>
<tr>
<td>Sugar to taste</td>
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**Steps:**

1. Pound meat very thin and dry in the oven. Grind the dried meat in a food processor. Add the chokecherries and blend together. The consistency should be dry and loose with fruit broken up.

2. Add melted lard slowly while mixing. Two tablespoons of fat are used for each 4-5 ounces of meat plus 1/3 cup of fruit. Fat changes the consistency and makes it appear semi-moist instead of dry and improves the flavor and texture. Store in paper bags.

**Southeast**

**Taal-holelke (Boiled Swamp Cabbage)**

**Steps:**

1. Cut out the heart of the cabbage palm.

2. Strip off the outer hard tough fronds to reach the actual white heart. This is the most tender part and should be cut into 1/2-inch strips or cubes.

3. Cook slowly in very little water for 20-30 minutes, adding two tablespoons of cane syrup or sugar and salt to taste.

4. Stir frequently to prevent sticking. (Swamp cabbage appears on your grocery shelves as "Hearts of Palm.")

Northeast

Corn Mush
Makes 1 serving

<table>
<thead>
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<tbody>
<tr>
<td>1 Cup Iroquois Roasted Corn Flour or</td>
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<tr>
<td>Iroquois White Corn Flour</td>
</tr>
<tr>
<td>2 Cups Water (add more Maple Syrup if</td>
</tr>
<tr>
<td>you like it sweet)</td>
</tr>
</tbody>
</table>

Steps:

1. In a saucepan, whisk Roasted Corn Flour into water.
2. Bring to a boil, and then reduce the heat.
3. Simmer for 5-7 minutes.
4. Serve with fruit, nuts, or brown sugar.

Retrieved from:
http://www.iroquoiswhitecorn.org/tags/entries/breakfast-2