

Nest'án

The Traditional Western Apache Diet Project







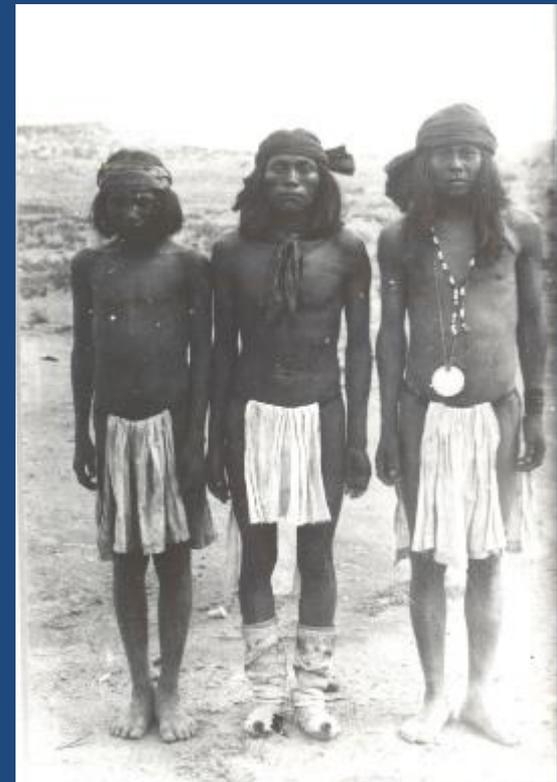






“If the People ate their Apache foods and exercised, there would be none of these new sicknesses. If the People respected themselves, respect this land, this country would be beautiful again.”

- the late Wallace Johnson



The purpose of this project is to:

- Analyze and describe in detail the pre-Reservation Western Apache diet;
- Represent this diet in meaningful ways for use by community members and Tribal programs, and education and health professionals;
- Determine readily-obtainable equivalents to hard-to-access wild foods to replicate today- as close as possible – the pre-Reservation diet; and
- Use this information to develop policies and programs which support adopting healthy, traditionally-based diets and lifestyles on the Arizona Apache Reservations.



Need for This Project

- Epidemic of physical health problems
- Modern diet based on dangerous amounts of processed fat, processed sugar, and processed starch.
- Diet, lack of exercise, and social issues has led to most of the physical illnesses and diseases on the Apache Reservations.



History



Today's Diet

- Low in fiber
- High in saturated fat/Low in healthy fats
- High in cholesterol
- High in sodium and added sugars
- High in processed foods



Reservation Health Rates

- 18% of our population has been diagnosed with Diabetes Mellitus Type 2, and the actual rate is probably much higher
- Hypertension and cardiovascular disease is much higher than the national average - a complete shift from the 1950s.
- Over half of our population is overweight or obese, including 49% of our children



Diseases related to obesity are:

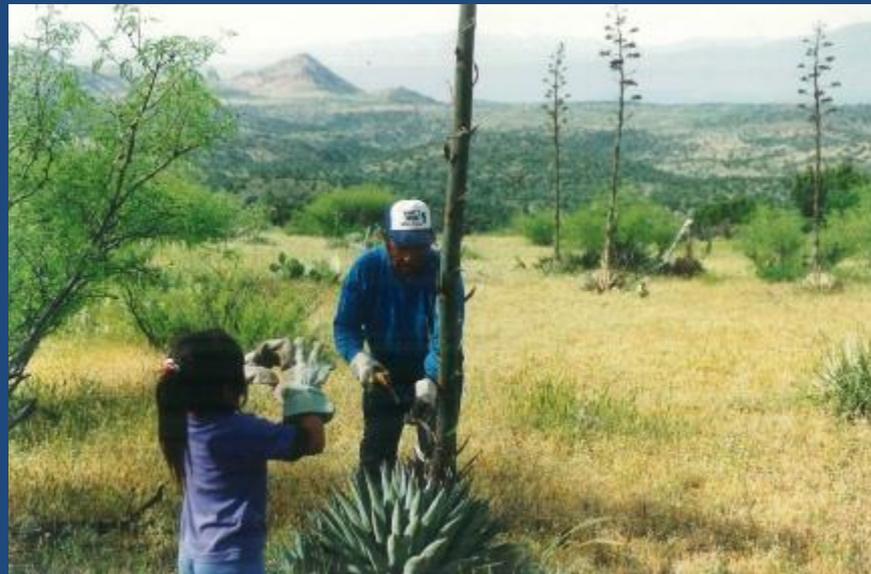
- Coronary/Heart Disease
- Stroke
- Pulmonary Embolism
- Enlarged Heart
- High Cholesterol
- Diabetes
- Chronic Renal Failure
- Hypertension
- Osteoporosis
- Sleep Apnea
- Gastro-Esophogal Reflux
- Osteo Arthritis
- Fatty Liver Disease
- Erectile Dysfunction
- Lymph Edema
- Urinary Incontinence
- Depression
- Cellulitis
- Gall Bladder Disease
- Gout
- Hernia
- Dementia

- **Cancers Associated with Obesity:**

- Lung
- Breast
- Colon/Rectal
- Pancreatic
- Stomach
- Esophogal
- Uterine
- Prostate
- Kidney
- Cervical
- Gall Bladder
- Liver
- Multiple Myeloma
- Ovarian
- Non-Hodgkin Lymphoma

Traditional Apache Solutions

- Elders tell us that most of our physical health problems would disappear or diminish if we ate our traditional Apache foods, and exercised as much as we did in pre-Reservation times.
- Elders tell us that most of our social problems including depression, suicide, substance abuse, and sexual violence, are tied to our forced break from traditional practices – especially food production; and that solutions to these problems must begin with physically reconnecting with the land and these practices, and giving our people something meaningful to do all day, every day.





Since 2011, we have:

- Created a database of information on the traditional Apache diet compiled from over twenty years of interviews with Apache elders from the four Arizona Apache reservations, and from extensive literature searches of published and unpublished sources.
- Conducted and analyzed information on traditional Apache foods from over 100 interviews with Apache elders and traditional cultural authorities.
- Detailed information regarding close to 300 food species.
- Compiled 96 (8 per month) sample, pre-Reservation Apache daily menus for nutritional analysis.

Project Progress Contd. . .

The Project Nutritionist is:

- Creating a detailed database of the nutritional content and value of over 150 traditional plant species from academic sources.
- Noting values for Calories, Protein, Total Fat, Saturated Fat, Monounsaturated Fat, Polyunsaturated Fat, Cholesterol, Carbohydrate, Fiber, Sugar, Calcium, Iron, Magnesium, Phosphorous, Potassium, sodium, Zinc, Vitamin C, Thiamin, Riboflavin, Niacin, VitaminB-6, Folate, Vitamin B-12, Vitamin A, Vitamin E, Vitamin D, and Vitamin K.
- Compiling nutritional information on macronutrients and micronutrients found in Apache foods.

Project Findings: Key Aspects, Contd. . .

Food Item		<u>Calories</u> (kcal)	<u>Protein</u> (g)	<u>Total Fat</u> (g)	<u>Saturated Fat</u> (g)	<u>Monounsaturated</u> <u>Fat (g)</u>	<u>Polyunsaturated</u> <u>Fat (g)</u>	<u>Cholesterol</u> (mg)	<u>Carbohydrate</u> (g)	<u>Fiber</u> (g)	<u>Sugar</u> (g)	<u>Sodium</u> (mg)
Amaranth greens – boiled	1 cup	28	2.79	0.24	0.066	0.054	0.106	0	5.43	-	-	28
Century plant – roasted	1 cup	135	0.99	0.29	-	-	-	0	32	10.6	20.87	13
Mesquite flour	3 Tbsp	84	3.5	0.76	-	-	-	-	24	8		2.6
Hackberry	.5 cup	56	0.7	0.21	-	-	-	-	12.81	2		-
Sunflower/mustard seed mush	.5 cup	263.25	9.52	18.86	1.73	6.76	8.47	0	17.78	3	0.92	20.25
Quail	1 bird	227	25.1	14.1	3.955	4.891	3.487	86	0	0	0	52
Chenopodium greens – boiled	1 cup	58	5.76	1.26	0.094	0.236	0.553	0	9	3.8	1.12	52
Wild onions - bluedicks	7	183	2.7	0.3	-	-	-	-	44.4	1.5		-
Parched corn	.5 cup	301.5	7.95	3.6	-	-	-	-	59.33	2.1		84.75
Deer jerky	3 oz	134	25.68	2.71	1.062	0.748	0.527	95	0	0	-	46
Acorn stew	2 cups											
Water	1.5 cups											
Meat - deer	3 oz	162	30.84	3.36	1.665	0.666	0.196	96	0	0	0	44
Ground acorn	2 Tbsp	142	2.12	8.55	1.112	5.418	1.648	0	15.49	-	-	0
Totals:		1773.75	117.65	54.24	9.684	18.773	14.987	277	220.24	28	22.91	342.6*
			27%	28%	5%*	10%*	8%*		50%		5%*	

Project Findings: Overview of Diet

- In pre-Reservation times, Apaches were highly mobile, seasonally following traditional food sources within our home territories throughout the year. We harvested wild foods from a wide range of ecosystems at elevations from 2,000 ft. to 10,000 ft., and maintained agricultural fields at prescribed locations. Our diet was highly diversified, and so we were able to withstand widely-varying climatic conditions.



Project Findings: Overview of Diet, Contd. . .

Before the Reservation:

- Wild plant foods made up 40%-60% of our total diet;
- Agricultural foods made up 25%-50% of our total diet;



- And wild meat made up 20%-40% of our total diet.
- The most important individual foods by volume in the traditional diet were roasted agave hearts, Emory oak acorns, wild seeds (primarily sunflower family, mustards, and grasses), corn, and meat.



Project Findings: Overview of Diet, Contd. . .



- There are over 200 documented Apache edible wild plant species comprising greens, seeds, nuts, fruits, roots and tubers, stalks, flowers, fungi, and minerals.
- Our traditional agriculture centered on several varieties of corn, a few varieties of squash, and (rarely) beans.



- We ate about 30 species of mammals, mostly rodents by volume, and 9 main species of birds, supplemented by several species of songbirds.

Project Findings:

Key Aspects of the Traditional Apache Diet

1. The pre-Reservation Apache diet was extremely healthy:

- High in fiber (2X USDA Recommended)
- Low in saturated fat (1/2 Avg. US)
- High in healthy fats
- Low in cholesterol
- Low in sodium (1/10 Avg. US) and added sugars
- Rich in a wide variety of whole foods
- Filling, with little volume



Project Findings: Key Aspects, Contd. . .

2. The Traditional Apache Diet is Seasonal in Nature

The diet varied according to the seasons, tying individuals and the whole community to the natural order of seasons in terms of nutrition, activity, and ceremony.



Project Findings: Key Aspects, Contd. . .

3. Food Production Was The Basis of Traditional Apache Activity and Movement, Economy, Ceremony, and Political Structure

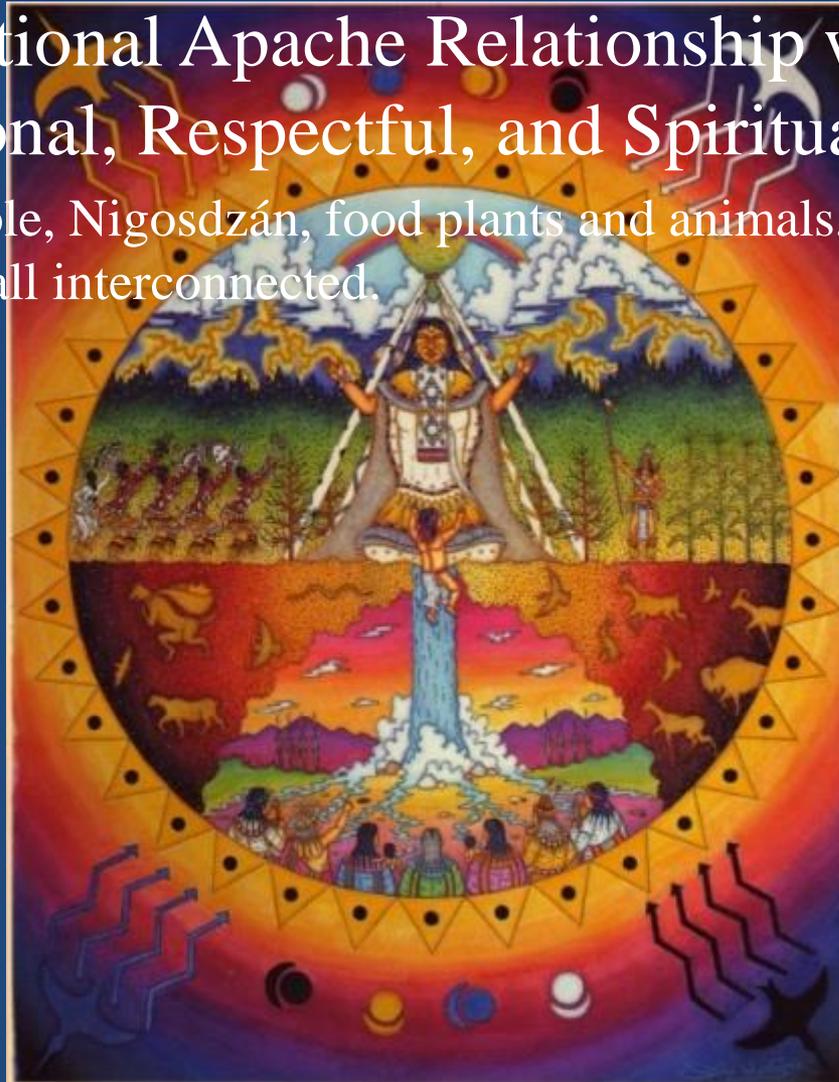
- Following wild plant harvests drove the community's movement throughout the year and consumed most day-to-day activity.
- Food and food-gathering was the basis of the traditional economy.
- The origins and timing of foods is the basis or key component of most ceremonies.
- Political leaders were chosen largely by their ability to anticipate, organize, and administer food production systems and activities.



Project Findings: Key Aspects, Contd. . .

4. The Traditional Apache Relationship with Food is Deeply Personal, Respectful, and Spiritual

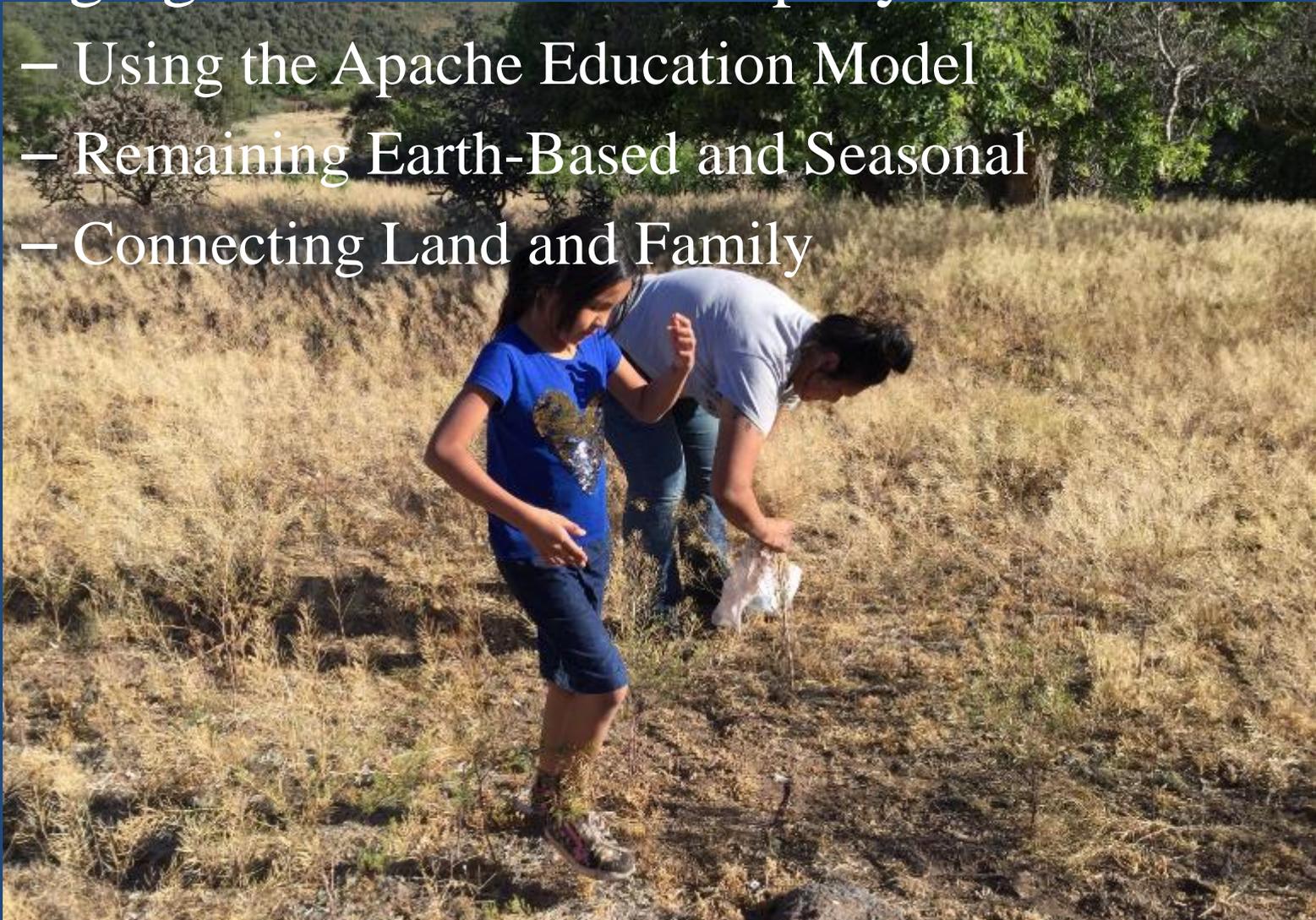
- The Holy People, Nigosdzán, food plants and animals, and attaining a state of Gozhó' are all interconnected.



Strategy

Bridging the Information Gap By:

- Using the Apache Education Model
- Remaining Earth-Based and Seasonal
- Connecting Land and Family



Current Activities

- Completing Nutritional Analysis
- Preparing for Field Trips
- Natural World Information
- Calendars
- Dahitaa
- Foodbook/Recipes/Foodbook/Posts
- Seeds/Seed Plot
- History Presentation
- Parenting and College Curriculum
- Museum Exhibit
- Meth – Rainbow Treatment
- Clinical Projects
- **Apache Curriculum**

Rats are Gross! Gluscho is Beautiful



