

# KINSHIP TO THE CANYON: HUALAPAI MONITORING & ETHNOBOTANY IN THE GRAND CANYON



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# BACKGROUND

## HUALAPAI DEPARTMENT OF CULTURAL RESOURCES 2017 RIVER MONITORING TRIP

This project is part of the 2017 Programmatic Agreement Monitoring provision.

HDCR has been monitoring river resources since 1989 and will hopefully continue to do so into the foreseeable future.

This project is funded through Reclamation's Programmatic Agreement program.

The results of this project can be used by Reclamation and the GCDAMP to trigger resource mitigation, policy refinements and many other resource-related treatments.

We refine our monitoring protocols and monitoring locations as appropriate based on resource condition and information needs.



# Hualapai Natural and Cultural Resource Monitoring in the Grand Canyon

- Botanical Studies
- Archaeological  
Monitoring
- Vegetation  
Restoration
- Cultural Activities
- Ethnobotany &  
TEK



# BOTANICAL STUDIES

-Studies and  
Methods

-4 Major  
Findings From  
Vegetation  
Studies



# Studies and Methods

- Studies at 5 Side Canyons: National, Mohawk, Diamond Creek, Bridge, Spencer
- 3 Transects Per Canyon Utilizing Line Intercept Method
- Over 20 years Years of Consistent Methods and Continuous Data

# 1. Increase in Riparian Vegetation Along Colorado River: Granite Park



## 2.Side Canyon Influences Over Vegetation: National Canyon



National Canyon Beach May 2012



National Canyon Beach  
August 2012

### 3. Establishment of Mesquite along NHWZ: Granite Park



# 4. New Study Monitoring Loss of Tamarisk and Establishment of Other Species: Mohawk Canyon



# ARCHAEOLOGICAL MONITORING

- Pictographs & Petroglyphs
- Roasting Features
- Artifact Scatters
- Anasazi Ruins
- Springs
- Traditional Cultural Properties
- Sacred Sites

# Pictographs & Petroglyphs



# Roasting Features



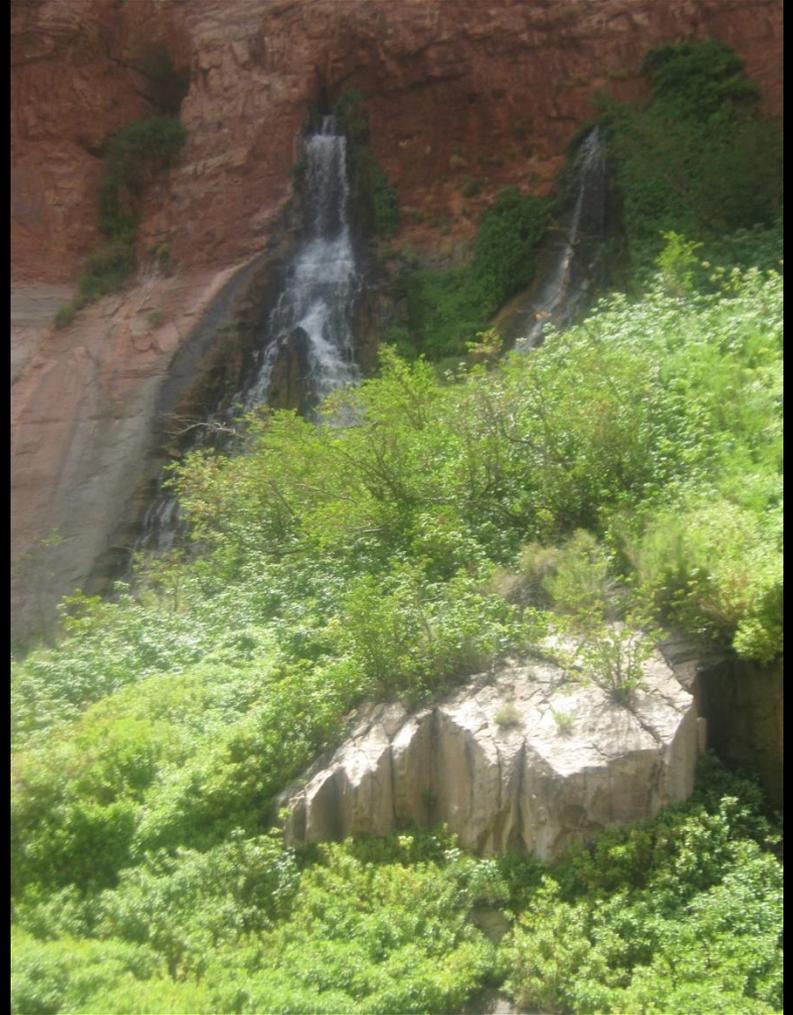
# Artifact Scatters



# Anasazi Ruins



# Springs



# Traditional Cultural Properties



# Sacred Sites



# VEGETATION RESTORATION



Restoration Trainings



Collecting Native Plant  
Cuttings to Rear







# CULTURAL ACTIVITIES



# ETHNOBOTANICAL & TRADITIONAL ECOLOGICAL KNOWLEDGE WORK

1. Intergenerational Harvesting and  
Processing Activities

2. Ethnographic Interviews and Oral History  
Approach

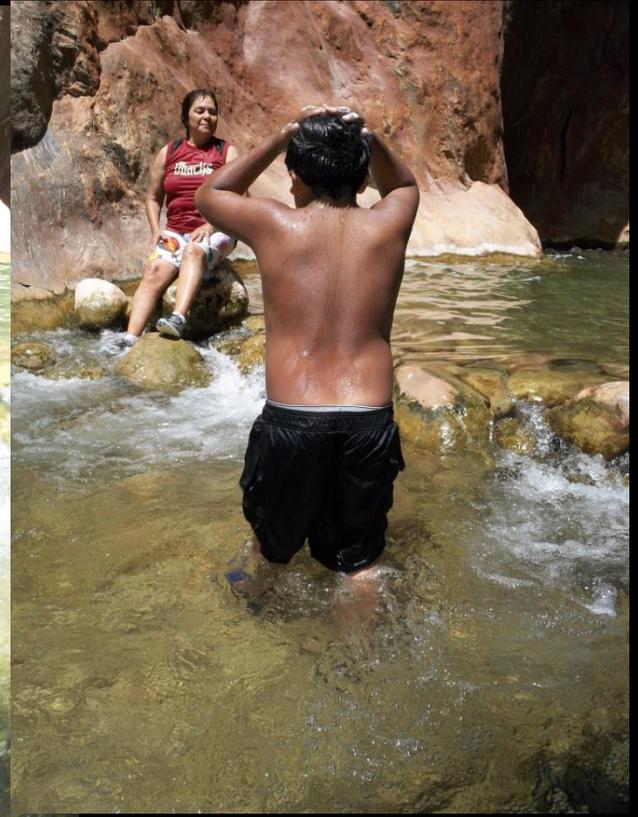
3. Ethnobotany in the Hualapai Community

# 1. Intergenerational Harvesting and Processing Activities:

## Indian Tea: Jumway



# Banana Yucca: Manad



# Prickly Pear Cactus: Alav



# Agave/Yucca Rope Twining



# Red Berry Sumac Juice & Yucca Fiber



# Wild Tobacco Harvest: Uv



## 2. Ethnographic Interviews and Oral History Approach



# Formalized Interviews



# Oral History Approach



# Oral History; Showing By Doing, Hands on Knowledge Transmission



Pinon Butter



Red Berry Sumac Juice

The Hualapai names for the many different species of prickly pear cactus correlate to the animals that have been observed to feed on them. During ethnographic interviews, elders have translated some of the Hualapai prickly pear cacti names into English. These different species' names in the Hualapai language directly reference the primary animal species which feed on the cacti fruits as shown in the list below:

- a) *quaq h'de* (deer fruit),
- b) *de g'se h'de* (buzzard fruit).
- c) *gul h'de* (jack rabbit fruit),
- d) *hlo h'de* (cottontail rabbit fruit), and
- e) *g'squala* (chicken hawk fruit).



The name for cattail is *hams'iv*, which means “star” in Hualapai, and refers to the star shape of the cattail fluff when it goes to seed. Although this detail may be esoteric to an English speaker, its significance in the Hualapai language is that the name teaches the speaker something about the plant. The Hualapai name for cottonwood is *A'ha*, “ha” meaning water; the name for this plant derives from the fact that it grows near the water.

Although lists of Hualapai plant names translated into common and scientific forms have been acquired already through traditional Linear means, and are available in multiple texts, there has not been sufficient inquiry into Hualapai folk taxonomic classification systems. Hualapai folk plant classification systems have not been examined and provide only one example of the type of further inquiry that is needed in documenting and disseminating Hualapai TEK as we continue to add to our knowledge base.



“Languages aren't different words for the same thing, languages are different words for entirely different ways of seeing and conceptualizing the world. The words we use largely determine how we perceive the world, but the words we use also determine how we perceive each other.”

# Mescal Agave



# Harvesting









# Processing





# Barrel Cactus





# Roasting



# Consuming



# Preserving







# Agave Stalk Quiver



Hankyu: Thank you

