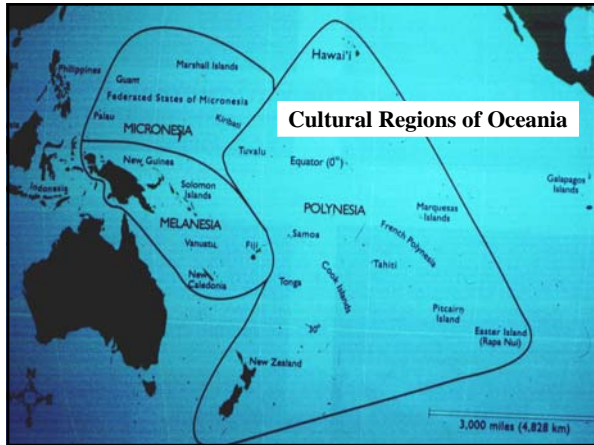


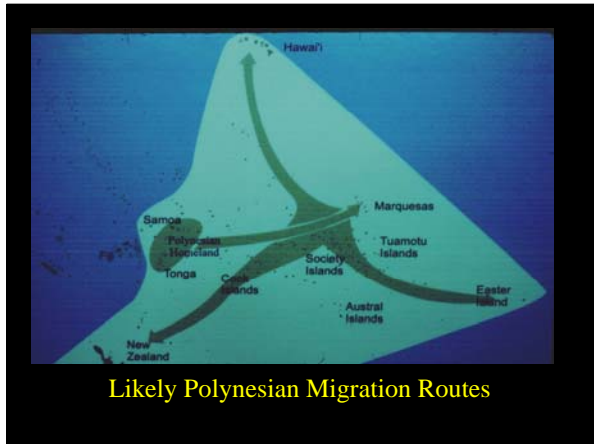


### Lecture Outline

- Introduction to Polynesia
- Traditional practices in the “Polynesian era”
- Changes occurring in the “European era”
- Contemporary herbal medicine in Polynesia
- The medicinal plants
- The efficacy & future of Polynesian medicine



The “proto-Polynesians” probably migrated from the S.E. Asia coast over 4000 years ago traveling eastward in voyaging canoes into inhabited Melanesia



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## Ancient Medical Problems

### Ailments with Obvious Causes

- Physical injuries
- Digestive tract ailments
- Ailments of babies
- Infections

### Ailments Lacking Obvious Causes

- Internal ailments
- Inflammation

## Physical Injuries

- Cuts, bone fractures, and other physical injuries were major problems, especially in times of warfare
- Broken bones healers specializing in bone setting
- Physical injuries & internal ailments were treated by traditional massage



## Digestive Tract Ailments

- Food poisoning was a common ailment
- Ciguatera, caused by the consumption of certain reef fish that have eaten poisonous algae, was probably a periodic phenomenon
- The treatment involved purges, such as *Ipomoea indica* or coconut oil



## Ailments of babies

- The treatment of babies' ailments, such as thrush and colic, is probably an ancient practice
- Virtually nothing was recorded about this by the early writers
- It may approximate today's practice, with non-professional women serving as the healers



## Infections

- Skin infections caused by bacteria were a major problem, especially boils
- Treatment was probably by folk medicine using simple leaf extracts



## Internal Ailments

- Internal ailments were thought to be caused by evil spirits
- Treatment was typically supernatural exorcising of the "demons"
- Medicines with strong odors believed to repel ghosts were applied to the body or taken as potions



## Inflammation

- Inflammations were common and often had no obvious causes
- They were often treated with supernatural remedies
- The worst one was probably filariasis, which can lead to elephantiasis, a debilitating disease



## The Types of Healing

### Folk medicine

- Practiced by anyone for simple ailments

### Pediatric and adult medicine

- Practiced by healers, mostly women

### Massage

- Practiced by anyone, but bone setters were mostly men

### Treatment of ailments caused by evil spirits

- Practiced by “witch doctors,” mostly men

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**Drastic changes were introduced into Polynesia during the “European era”**

## Few Communicable Diseases Were Present

### Present in ancient times

- Filariasis, yaws

### Never present

- Malaria, yellow fever

### European introductions

- Mumps, measles, tuberculosis, leprosy, dengue fever, venereal diseases, and possibly even the common cold

## Effects of the “European Era”

- Deadly diseases, to which the Polynesians were very susceptible, wreaked havoc on the defenseless Polynesians
- Traditional medical practices were incapable of treating the deadly new diseases
- Because the gods and their priest-healers were ineffective in healing, they lost power and were replaced by Christianity and modified “traditional” medicinal practices

## Changes in Medical Practices

### Folk medicine

- Many new medicinal plants were added

### Pediatric and adult medicine

- Remained basically the same, with some new herbal remedies

### Massage

- Remained basically the same

### Internal ailments (induced by evil spirits)

- Largely replaced by “western” medicine

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## Medicine: East meets West

- Traditional medicine is still strong, although highly modified, and many traditional plants have disappeared
- Western medicine is now commonly used, and the two systems coexist
- Traditional ailments tend to be treated by traditional methods, and modern ailments tend to be treated by western methods

## Polynesian Folk Medicine

- Folk medicine is practiced by anyone
- It is based on common cultural knowledge, with no “proprietary” medicine restraints (i.e., the remedies are not owned)
- Many plants now used are modern introductions, but the new ones differ from place to place and what they are used for



Medicinal leaves are collected, stacked in the palm of the hand, and then crushed into a juicy pulp by rubbing



Crushing the leaves produces a juicy pulp ready for application. The pulp is then squeezed and dripped onto the cut or skin ailment.

## Polynesian Healers

- *Fofo, taulasea, taula aitu* – Samoa
- *Kau faito'o* – Tonga
- *Ta'unga* – Cook Islands
- *Tahu'a* – Tahiti
- *Kahuna lapa'au la'au* – Hawai'i

## Contemporary Polynesian Healers

They are mostly middle-aged and elderly women

They are trained in healing by serving as apprentices



## Contemporary Polynesian Healers

They are not professionals, since most of the time they function as typical housewives

They do not typically receive payment for treatment, although gifts are commonly given



## Contemporary Polynesian Healers

They believe their healing art and herbal medicines are gifts from God

They believe their remedies will not work for others without their permission



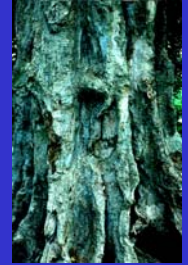
Step 1. The healer makes a diagnosis



Card diagnosis



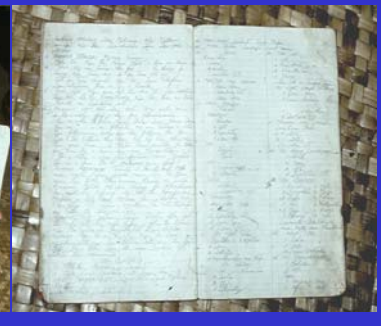
**Step 2: The medicinal plants are collected**



**Medicinal bark is typically scraped from the tree**



**It can also be cut from the tree and pounded back at the healer's house**



**Remedies are sometimes recorded in books**



**Step 3: The medicine is prepared, often still using traditional tools**



**Nowadays modern tools are often used**



Medicinal plants are usually employed immediately after collection, but are sometimes stored for later use



The fibrous mesh found at the base of a coconut frond is traditionally used as a strainer



The strainer is nowadays commonly made from commercial gauze or cloth



Step 4: Medicines for internal use are taken or are given to the patient



Some are administered as eye drops, others are rubbed into the mouth



External medicines are rubbed or massaged onto the body



Traditional western Polynesian treatment of burns involves coconut oil mixed with ashes



Three kinds of massage are often recognized, one a soft rubbing, another a kneading, and a third a vigorous pounding.



Massage is often used by outsiders, although not everyone finds it a pleasurable experience



Strong-smelling medicines or ti leaves are often used in traditional massage



Sprains and broken bones are still treated using traditional medicine by binding and splinting



Step 5. Medicinal baths were traditionally used as a "closing" ceremony, mostly as a formality to finish major treatment.





Steam baths were used, usually made with hot stones put into a wooden bowl of medicine



Smoke is sometimes used in healing in western Polynesia for treating anal thrush

### “Ghost Sickness”

Supernatural ailments are still recognized and treated in Polynesia. There are two main types:

- “Possession” and bizarre behavior, often with the patient talking in the voice of a dead person (*aumakua*, *tupapaku*, *tupapa‘u*, *tevolo*, *aitu*)
- Retarded healing believed to be caused by the action of ghosts or evil spirits

Treatment typically involves the use of strong-smelling plants or, in the case of possession, talking to the offending (or offended) spirit

### “Ghost Sickness”

- Ma‘i aitu – Samoa
- Avanga (*tevolo*) – Tonga
- Maki tupapaku – Cook Islands
- Ma‘i tupapa‘u –Tahiti
- Ma‘i ‘aumakua – Hawai‘i



Medicinal plants used to treat “ghost sickness”:  
*Vigna marina* (beach pea), *Euodia hortensis* (island rue), and *Cordyline fruticosa* (ti plant)



Other kinds of supernatural and superstitious treatment are still used in Polynesia

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## Medicinal Plants

Nearly all herbal medicines are made from fresh plants (very few animals or their parts are used). Exceptions: sea salt, sugar.

Leaves and bark are the most commonly used parts; roots and fruits are less common.

Special rules are sometimes used for medicinal plants, such as time of collection, who may collect them, or their “valence”



Some plants are thought to have “valence,” male and female plants, but this is not actually based on botanical definitions

## Medicinal Plant Origins

### Native

Naturally occurring in a place (i.e., arriving there by means other than human transport)

### Alien (Introduced)

Not of natural occurrence in a place (i. e., arriving by human transport)

Polynesian introduction—brought in by Polynesians prior to ca. 1770

Modern introduction—brought in during the European era (after ca. 1770)



*Geophila repens*, *Hibiscus tiliaceus* (beach hibiscus), and *Ficus prolixa* (Polynesian banyan)



*Oxalis corniculata* (wood sorrel), *Solanum americanum* (black nightshade), and *Hibiscus rosa-sinensis* (red hibiscus)



*Morinda citrifolia* (Indian mulberry, *noni*, *nonu*, *nono*) is the most widely used medicinal plant



Turmeric is another traditional medicinal plant



*Psidium guajava* (guava), *Senna alata* (candelabra plant), and *Mikania micrantha* (mile-a-minute vine) are widely used modern introductions

*Aloe vera*, used even in biblical times, is the most commonly used medicinal plant in Hawai'i and is increasing in popularity in the rest of Polynesia.



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Local herbal medicines are now sometimes sold in Polynesia, such as "Maui Miracle oil" from the Cooks and *vai kahi* from Tonga



“Noni” is now made into a number of products, but of questionable value. Few of the current uses are the same as traditional Polynesia uses.

The kava plant, *Piper methysticum* in the pepper family Piperaceae, is currently prepared into medicines used to induce sleep, as a pain-killer, and as a tranquilizer



A native Samoan tree, *Omalanthus nutans* is currently being tested for the treatment of HIV. This, however, is not a traditional use for the plant.



### Summary

- Not really “traditional” since it has changed
- Alive and well over much of Polynesia
- Dynamic with new medicinal plants constantly being added
- Use of some medicinal plants is disappearing as these species become more difficult to find
- Few if any of the plants will find use outside their current range of usage

