Samoan Medicinal Plants and Their Usage
ADAP 93-1 • Reprinted May 2001

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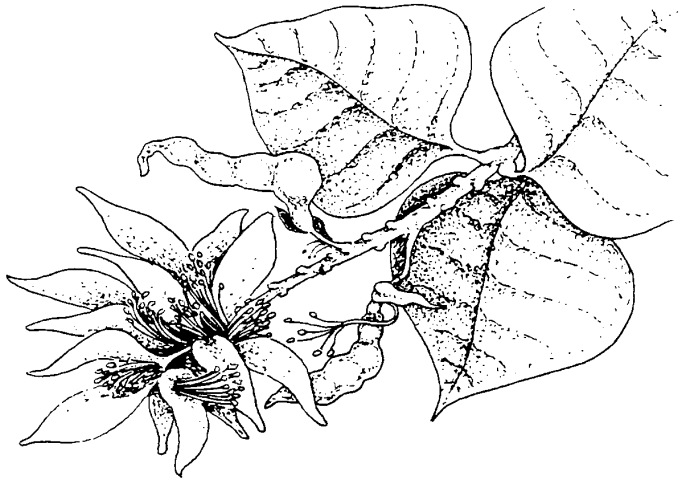

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Agricultural Development in
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Samoan Medicinal Plants and Their Usage

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DEFINITIONS

Names of Illness

Ate fefete – enlarged liver
Au pa – jaundice
Fa'a ifo aluga – nasal congestion and sinusitis
Fa'ai tiga – sore throat
Failele gau – post-partum illness
Fiva – fever
Fua fua 'ini – facial pimples, acne
Fua fua momono – furuncle in external ear canal or nostril
Fula maua – palpable deep abscess
Gutu malu – thrush, stomatitis
I'atolo – furunculosis of the scalp
Ila – general term for childhood diarrhea
Ila fa'au tama – birthmark
Ila mea – red spot on back of infant's head
Ila tatau – birthmark
Ila sa – birthmark
Lafa – ringworm
Lanuia – ingestion of mucus and amniotic fluid at birth
Lavea (naifi) – laceration (with a knife)
Lo poto – late arrival of first menstruation
Ma'i – general term for sickness
Ma'i afi – gonorrhea
Ma'i fulafula – boils
Ma'i gau – relapse fever
Ma'i mata – conjunctivitis
Ma'i Samoa – Samoan sickness, spirit caused
Ma'i tafafao – acute mental symptoms, shouting and talking to oneself, sleeplessness
Manava le mama – constipation
Manava mamau – constipation
Manava tata – diarrhea
Manava tiga tele – severe abdominal pain
Mata fa – stye
Mata pa'ia – eye trauma
Mata tuia – traumatic conjunctivitis
Mata tolu – children disease of the scalp, falling hair and scabbiness
Mu – burn
Moa lili – cataract
Mumu – general term for erythremia and cellulitis
Mumu afi – skin condition with pustules and peeling, leaving a reddened area
Mumu ai ivi – intense joint pain and inflammation
Mumu fau pue – localized cellulites with swelling
Mumu filogia – hard swelling on any part of the body
Mumu lele – advancing cellulites, (fatal septicemia)?
Mumu mageso – redness and itching of the skin, spreading
Mumu pae – spreading dark spot usually on buttocks of children
Mumu tatau – same
Mumu tuaula – cellulites and septicemia

Mumu tuaula – head feels swollen, eyes sore, cold sweat, dizziness, numbness of legs
Pala ga'au – enteritis, usually in children
Po'o sa – spreading skin sores forming a solid mass
Pua'i toto – vomiting, or coughing up of blood
Puna toto – vaginal bleeding
Sela – difficulty in breathing, labored breathing
Sila ilagi – carbuncle
Sila ilagi – deep abscess
Suka – diabetes
Tale – cough
Taliga tiga – ear ache
To'ala fanau – female reproductive organ problems
To'ala sulu – stomachache with sever lower back pain, hard stomach, possible numbness of legs
Tu – pterygium
Tuia – fish spine puncture wound
Tulita fasia – urinary tract infection
Ua ono – dysuria in babies
Ulu tiga – general term for headache
Ulu tiga tutui – stabbing or throbbing migraine headache
Umete – deep abscess with fever
Utu – mites, lice

General terms

Ai'ile – very young coconut, golf ball to baseball sized
Aitu – spirit of dead person, or general spirit
Fofo – directional message; also, person who specializes in this practice
Lapalapa – blunt end of the coconut frond
Milimili – gentle stroking of the skin
Niu – coconut
Niu'ui – green coconut
Nifoloa – spirit associated with Falelima village in Savai'i, Western Samoa
O'o – coconut that has sprouted; also, the white pithy ball inside same
Oloa – sickness caused by the spirit of Nifoloa
Pe'epe'e – coconut milk
Taulasea – indigenous Samoan healer
Tipolo – lime tree, or the fruit of the tree
To'ala – general term for female reproductive organs; also used to describe "life essence" felt to reside in upper abdomen
Vaila'au – general term for liquid plant medicine

2001 NOTE

Neither the publisher nor the authors accept responsibility for any effects that may arise from using the materials contained in this manual. The information supplied in this book is purely anecdotal and is intended to serve as a reference guide to the commonly used medicinal plants in Samoa. This reference guide is not meant to replace the care and information you receive from your doctor or health care professionals nor is it to be used for self-treatment of chronic or acute medical conditions.

FOREWARD

The following study of Samoan indigenous medicine was carried out by the Office of Comprehensive Health Planning, Department of Medical Services, American Samoa Government during Fiscal Year 1974. The study was funded, in part, by a grant from the South Pacific Commission. Sufficient material has been collected to afford a comprehensive overview, with some degree of specificity concerning the practice of 'bushmedicine' in American Samoa today.

This study could not have been accomplished without the cooperation and valuable assistance of: HC Mamea Tiapula, Mr. Molimau Savaiki, Mrs. Nu'u Atuatasi, and HC Aiono Magalei, who were the principle sources of first-hand knowledge of indigenous medicine.

Special recognition also goes to Mrs. Arieta Mulitauaopele, Associate Health Planner for her ability to act as the link between the Samoan **taulasea** (village healers) and the author of this report.

Many thanks to the Samoan Medical Officers at the Lyndon B. Johnson (LBJ) Tropical Medical Center for their valuable insight and participation, and finally to the CHP Office Staff; Mrs. Salaina Tulafono, and Miss Valisa Samuelu for their dedicated efforts and support in the typing of the report.

Charles R. McCuddin
Director, CHP

For more rigorous and up-to-date information regarding Pacific Island medicinal plants, please refer to the following publications.

Samoan Herbal Medicine: 'O La'Au Ma Vai Fofo O Samoa
by W. Arthur Whistler. Paperback - 128 pages (October 1996) Isle Botanica;
ISBN: 0964542625.

The Ethnobotany of Tonga: The Plants, Their Tongan Names, and Their Uses (Bishop Museum Bulletin in Botany, No. 2)
by W. Arthur Whistler. Paperback (October 1991) Bishop Museum Press;
ISBN: 0930897579.

Polynesian Herbal Medicine
by W. Arthur Whistler. Paperback (January 1994) Pacific Tropical Botanical;
ISBN: 0915809168.

Tongan Herbal Medicine
by W. Arthur Whistler. Paperback (January 1993) University of Hawaii Press;
ISBN: 0824815270.

PREFACE TO SECOND EDITION

Samoan Medicinal Plants and Their Usage was written based upon the expertise of a small group of well-respected traditional healers in American Samoa. It was originally published over twenty years ago, in 1974. From that time to the present the original text has been in demand, with requests coming to the author from many parts of the world. Even in Samoa, it has become rare to obtain a photo-reproduced copy. For that reason alone producing a second edition has been a worthwhile effort.

Additionally, the past two decades have seen a growing interest in natural plant compounds for treatment of lethal illnesses, including cancer and AIDS. The greatest global diversity of flora is found in the tropics, and island plants often only exist in their localized area. Yet studies of Pacific Island plant species and their uses have been limited until recently. At the same time tropical biotic communities are disappearing due to needs for land, timber, and other resources. It is hoped that texts such as *Samoan Medicinal Plants and Their Usage* will inspire a concern for preservation and wise use of our planet's genetic heritage.

The second edition of this text has been updated for multiple purposes. Most noticeable is the inclusion of illustrations for each of the 74 species in the study. Complimenting the new illustrations is the revision of names for many of the species. The Samoan and common names remain the same, yet scientific classification of many plants has changed since the first edition. This demonstrates the expansion of knowledge in the Pacific region as our natural world is studied in greater detail. Although little of the original text has been altered, a new Conclusions section has been added by the author. These additions should enhance the publication's use in the classroom, as a field guide, and a reference.

Many individuals and agencies have contributed to the availability of this second edition. The project was initiated by an interest from Mr. Abe Malae, Director of the American Samoa Power Authority. The American Samoa Power Authority provided the catalyst that was then continued through primary funding from the Agricultural Development of the American Pacific (ADAP) project.

The original author, Mr. Charles "Mick" McCuddin, ASG Health Planner; and ethnobotanist, Dr. Art Whistler, of the UH Manoa Botany Department; both played critical roles in maintaining the integrity of the publication. Petra Scotese demonstrated great perseverance as specimens were located and identified for her quality illustrations. Finally, Michael Harrington prepared the publication with great attention to detail assuring that any changes in the second edition were acceptable to all others involved. It is our hope that this second edition will be useful for another two decades and beyond.

Pemerika L. Tauili'ili, Dean and Director
ASCC Land Grant Programs

BACKGROUND AND HISTORICAL PERSPECTIVE

Little is known about indigenous Samoan medicine before contact with Europeans. At the time of first contact, the art of healing was practiced by the Samoan priests who attributed the symptoms of illness to possession by an **aitu** (spirit of departed person) or its influence, and treatment was directed toward driving out the aitu or counteracting its effect. This concept of illness was common throughout Polynesia, and is still widely adhered to in Samoa today.

The parts of various indigenous plants played an essential role in the treatment process, as did massage, and the recipes were closely guarded. Even to this day, it is often difficult to learn the true nature of the mixtures being used and the entire process accompanying their administration. It is believed that many of the medicinal preparations were learned originally from the Tongans, who in turn learned them from the Fijians, who were thought to be the most advanced in this art. Kramer, the eminent German author who visited Samoa in 1893, recorded some of the plants used for medicinal purposes at that time. Many of these are still being used.

The Samoan people have persevered in their desire to retain traditional values and customs. This is strikingly apparent in Samoa today in terms of reaction to illness, and its treatment. It is not surprising, since folk remedies and superstition still persist in the highly developed nations in the face of the dramatic scientific technological advances.

Traditional patterns are succumbing to the relentless pressures of progress, but when illness threatens village healers are often sought out for their local remedies. This is especially so when earlier contact with scientific medicine has not produced the expected degree of success. A similar phenomenon is seen in the United States, as well as other "developed" countries, where persons with incurable disease turn to faith healers, or other forms of "non-scientific" treatment, as a last resort.

In Samoa, where there is not yet a strong universal confidence in scientific medicine, the threshold for turning to alternative methods is much lower. For example, a patient may receive a prescribed medicine at the government hospital and take it home to try for one day, and if dramatic early results are not experienced, discard the medicine and seek treatment from one of the local **taulasea** or **fofo** (traditional healer).

People who have become dissatisfied with the "government medicine" for one reason or another, are often prompted to seek help from these "bush-doctors" by another member of the family, usually an older person; possibly an aunt, or grandmother, who knows someone who "specializes" in that particular condition. When ill many people also seek help from these bush doctors for themselves, or their children, as their first source of help.

Many feel that there are certain diseases that are unique to the Samoan people, and that these cannot be treated by **palagi** medicine (Western medicine). Such illnesses often involve the influence of aitu. Individuals with these illnesses frequently go to the bush-doctors for treatment.

For any of a variety of reasons, many Samoans continue to seek out the village bush-doctors in preference to, or as an alternative to, Western scientific medicine, as rendered by the government owned and operated LBJ Tropical Medical Center in Faga'alu. There is no use denying this fact, and there is little to be gained (and possibly much to be lost) by ignoring it. Past attempts to stamp out indigenous medicine have failed, and further attempts, if carried to extremes, may serve only to drive the practice underground. Thus, there are in effect, two medical care disciplines being utilized by the Samoan people: government medicine and indigenous village medicine. An understanding of the interaction of these two disciplines and the factors involved in the consumers choice of which "system" to patronize, should be considered by the Comprehensive Health Planning Advisory Council in its recommendations for the improvement of the health status of the Samoan people.

Recognizing this the Office of Comprehensive Health Planning, in February of 1973, asked for a complete study of Samoan indigenous medicine. The ultimate goal was to gather and evaluate sufficient information to make some rational decisions regarding the potential usefulness of indigenous medicine and its inherent dangers, toward the end of improving the health status of the people of American Samoa.

A secondary objective of the study was to record the present state-of-the-art of Samoan indigenous

medicine in order to preserve some knowledge of this aspect of the Samoan culture that might otherwise be lost. On May 1973, the Department of Medical Services received a grant from the South Pacific Commission to conduct a study of medicinal plants in the Territory.

OBJECTIVES

The objectives of this study were to:

1. Determine the existing extent of the practice of indigenous medicine in American Samoa.
2. Collect, identify, and preserve the plants presently being used in American Samoa for medicinal purposes.
3. Determine how the plant material is being used, including preparation of the medicine and the illness for which it is prescribed.
4. Assemble available knowledge of the pharmacological properties of the plants being utilized, and if feasible, arrange for chemical analysis of those plants that have not previously been investigated.
5. Attempt to ascertain the relative degree of usefulness of indigenous medicine in treating various illnesses, and the potential dangers.
6. Determine the role of indigenous medicine in the life of the Samoan people.
7. Investigate alternative methods of integrating useful aspects of indigenous medicine with the government system of Western medicine.

METHODOLOGY

Knowledge of Medicinal Plant Usage

Through the efforts of the Associate Health Planner of the Office of Comprehensive Health Planning, four well-known and respected taulasea agreed to cooperate in the initial phase of the study. These taulasea (two men and two women) met once a week with the Associate Health Planner and the Director of Comprehensive Health Planning to discuss the treatments and alternative treatments for every Samoan illness they could recall at that time.

A subsequent trip to Ta'u, Olosega, and Ofu islands of the Manu'a group brought the study group into contact with taulasea from that area, who furnished additional information.

Collection of Plants

Using the list of plant names compiled from the treatment information, several of the taulasea went with the research group into the field where the plants were located, and specimens collected, during which time photographs were taken of the plants in their natural habitat. At a later date, a botanist accompanied the researcher and a person familiar with the local plants into the field and collected additional specimens. Many specimens were sent to the herbarium at the Bishop Museum, where they have been preserved as voucher specimens for future reference.

Preservation of the Plants

Some of the plant specimens were press-dried in an air-conditioned room, while other specimens were press dried in an oven at 150º F. Wherever possible, the flowers, fruit and/or seeds of the plants were also preserved. Finally, the dried specimens were permanently mounted on a 10” x 14” white art-board, along with a photograph of the live plant and a brief description of the plant, including: Samoan name, scientific name, characteristics, and medicinal use.

Identification of the Plants

The American botanist, Dr. Art Whistler, who was working in Western Samoa on a research project, was engaged to come to American Samoa to identify and classify all of the plant species that were collected.

Dr. Whistler has been in the Samoan Islands conducting botanical studies for many years and is also familiar with the Samoan names of the plants in this area, which proved to be of great value in eliminating errors.

FINDINGS

Concept of Illness

The causes of illness, within the realm of present day "bush-medicine", fall roughly into three classes:

1. those caused by aitu;
2. those resulting from the adverse effects of the internal or external environment, i.e. parasites, diabetes, to'ala, effects of heat, etc.; and,
3. those caused by trauma.

In addition, many taulasea in Samoa today recognize to some degree, the germ causation of illnesses. Trauma-caused illnesses are the most straight-forward of the three, and are in most cases clearly identifiable with the causative injury.

Probably one of the most interesting, and least understood, concepts of illness is the idea of the displaced, or branching-out, of what is called the **to'ala**. The word to'ala in the Samoan language has two meanings; it means the female reproductive organs, and also refers to a nebulous kind of "life essence" residing in the upper abdomen when an individual is healthy. It is when this to'ala moves from its proper location that trouble arises. If for unknown reasons the to'ala is displaced or travels to some other part of the body; the eye, the head, an extremity, etc.; pain and other adverse symptoms result. The treatment is fofo, or directional massage, aimed at forcing the to'ala back through the body to its proper site in the upper abdomen, thereby hoping to relieve the symptoms.

Aitu-caused illnesses comprise a large group of maladies, ranging from symptoms of mental illness, to direct internal or external physical manifestations. In the case of an aitu-caused disease, it is believed that the spirit of a dead person enters the body of the affected person, causing him to become ill in mind or body. The spirit may be that of a deceased relative or village member, who is angry because of some wrong done to its former family, land, or village; or because of the breach of a social or religious taboo. Some aitu are well known by name and have continued to affect people down through the years, while others are believed to be incidental, i.e., that of a dead brother, aunt, etc.

The same aitu may be the cause of many cases of illness, and manifestations of the spirit's harm may be different in each case. The similarity seems to pertain more to the nature of the offense rather than to the type of illness.

One of the more well-known aitu is described here to illustrate the "epidemiology" of an aitu caused disease in Samoa. The following is an account of the history of the aitu, **Nifoloa,** related by Mrs. Opapo, age 100 years (since deceased) from the village of Falelima, Western Samoa.

> Approximately 50 years ago, fishermen from the Ellice Islands went ashore at the village of Falelima, on the island of Savaʻi, in Western Samoa. The village people treated the Ellice Islanders with great kindness and provided then with food and drink for their long journey home. Before leaving, one of the fishermen gave the villagers of Falelima his blessings for their kindness, saying that he had nothing worthy to repay the hospitality shown them. Instead, he gave the village a gift to protect everyone born and raised there.
>
> This gift (called **tupua** by Samoans) was a curse or aitu called **Nifoloa**, which could bring sickness and death to any person causing harm to, or feeling hatred for, the people of Falelima wherever they might travel. Only another person from the village of Falelima was supposed to be able to relieve the stricken offender, who would otherwise eventually die from the "spears" or teeth of Nifoloa.

Those who are stricken by Nifoloa suffer greatly from the very painful symptoms, called **Oloa** that can affect any part of the body, internally, or externally. The Oloa often begins as a small sore, or pimple, and grows rapidly causing much discomfort. Tropical sores may be attributed to Nifoloa, and are then treated with "bush-medicine" by a healer familiar with Oloa. The bush-medicine is used to wash away (**fa'alanu**) the curse of the tupua, after which modern medicine is quite effective in treating the sores. Tetanus (**oloa ona**) is also believed to be caused by Nifoloa. Symptoms of mental illness may also be attributed to Nifoloa. In these cases, aitu medicine is administered by a healer familiar with Nifoloa usually with dramatic effects.

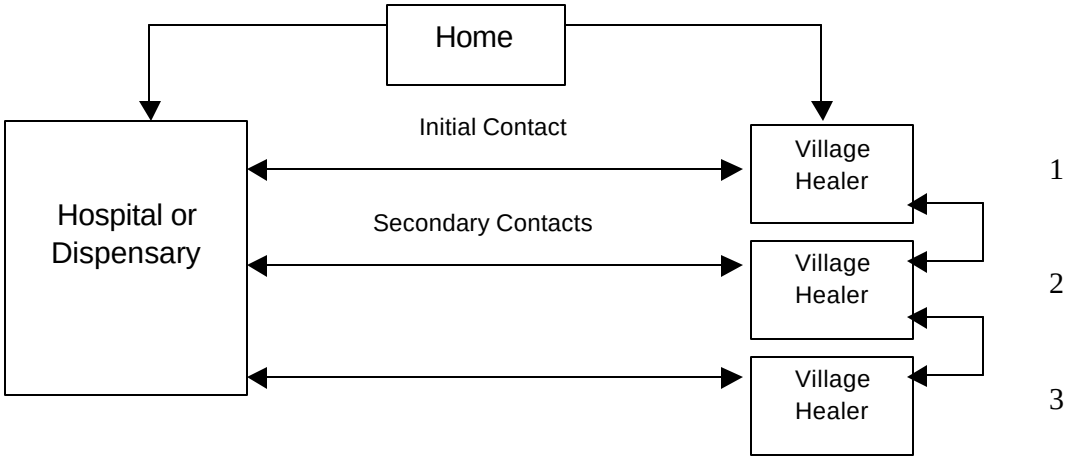
The treatment of aitu-caused diseases most often involves the use of Samoan plant preparations, as well as ritualistic actions and phrases. The medicine is not necessarily directed physically to the affected area, but may be used symbolically as part of the ritual, as in a certain treatment for **mata pa'ia** (eye injury), where the plant medicine is allowed to drip from a leaf cone onto the thumb nail of the patient in order to relieve the influence of the aitu on the eye.

Some of the most interesting effects of aitu on the human body are those that manifest mentally in behavioral changes. Informants have related that these conditions may be mimicked by persons wishing to accomplish an end otherwise unobtainable, or to voice a wrong that has been done to the person when there is no other socially acceptable way of making this known. The aitu may sometimes speak with its own voice, through the affected person, to answer questions as to who it is, and why it has inhabited the individual. Dramatic results are often effected by taulasea in cases of aitu caused mental symptoms; often violent and uncontrollable by other means. Many times, treatment for a specific physical symptom (e.g., certain abscesses) will be combined with another treatment, directed at the aitu that is thought to be preventing the medicine from healing the physical problem.

Seeking Sources of Help

The patterns people follow in seeking help for illnesses vary greatly with individuals and illnesses. Some people will go directly to the government hospital at the first sign of ill health; others will first try to treat themselves, or seek primary care from a taulasea or fofo. If the initial contact with a source of medical help does not prove satisfactory, the ill person may then try an alternative: from hospital to bush doctor; from bush doctor to hospital; or, from one bush doctor to another bush doctor. This complicated pattern is indicated diagrammatically in the following Figure. The advice of friends and relatives in the choice of the source of help has great influence on the patient's decision in these matters, since when ill, people often put their trust in someone else rather than rely on their own judgement, even though they themselves may be better qualified to make these decisions.

Figure. Arrows indicate patterns of seeking medical help.



Many taulasea will refer patients directly to the hospital when they realize that they are not able to help the person. If an initial brief period of trying their own medicine proves unsuccessful, most taulasea will admit that they do not have the right treatment and recommend visiting the hospital, or another taulasea. This researcher could verify no cases where hospital staff had referred patients to a taulasea, but informants have indicated that such referrals do occasionally occur.

A taulasea, after listening to the patient's description of his symptoms and the events leading up to the illness, will examine the patient. If it is felt that the particular treatment will work, the taulasea will tell the patient that he thinks he has the medicine that will help. He asks the patient to try it "one time" (which may mean for up to five days), and if it does not work, then to try a different healer or go to the hospital. There are some taulasea who have devised techniques used solely for the purpose of advising the patient as to which taulasea has the treatment that will work for the patient; a sort of referral system. These people may use the bible or a deck of playing cards for this decision-making process.

Types of Taulasea

Some taulasea specialize in the treatment of certain kinds of illnesses. One may treat mostly children's illnesses; another, broken bones or sprains; another may specialize in treating aitu problems. Some are experts in massage, while others specialize in the preparation of plant medicines. Those who possess the special knowledge and skills that make them successful "chasers-of-the-aitu" probably guard these processes with much more care than other taulasea, whose remedies may be general household knowledge. Almost every Samoan family has knowledge of many folk remedies that they use at home without the advice of a taulasea.

A few taulasea also claim knowledge of potions to gain the love of the opposite sex. These recipes are the most closely guarded of all and their misuse may bring great harm or even death to the initiator. These recipes often contain an ingredient of powdered bone from a dead person, thus hoping to gain the help of the dead persons' aitu to achieve the desired end.

Plant Medicine

The practice of indigenous medicine in Samoa, like its counterpart scientific medicine, has changed considerably over the years. Many of the treatments used today are different from those used in the 1800's. Some treatments, however, have changed very little from the ones used in olden times.

In addition to this historical difference, there is often great variety between individual taulasea in the

treatments used for the same illnesses. It appears as though some taulasea add their own favorite plant ingredients to the remedy, hoping to augment the effectiveness of the mixture.

A good example of the readiness of village healers to experiment with new remedies is the recent development of a new medicine that was compounded and first tried during the course of this study. This medicine was put together as a treatment for cancer. The medicine consists of the juice of the pounded roots of the 'aoa (*Ficus obliqua*), the leva (*Cerbera manghas*), the to'ito'i (*Scaevola taccada*), and the inner bark of the namulega (*Vitex trifolia*). The juices are left to stand until the solids settle to the bottom of the container. The clear fluid is then drained off, and a dosage of 1/2 glass, twice a day, is administered to the patient. The seeds of leva contain a poison used to stupefy fish. The healer who developed this medicine sees cancer as analogous to a moss growing on a tree that eventually kills the tree. The healer has tried this mixture on himself and also recommended it to a friend who tried it. Neither has suffered any observable ill effects! (Note: this is not an endorsement.)

Almost all parts of plants are used for medicine. Some remedies call for the use of leaves; others, the roots; others, the bark; etc. Often, plants are used in combination to prepare a compound medicine. Sometimes, special care is taken in the selection of the plant parts; i.e. only the young leaves, or only those leaves facing the sun. When the bark of a tree is used, it is almost invariably the live inner bark. The dead outer bark is scraped off, the inner bark is scraped, and the shavings are used to prepare a brew.

When an internal medicine is to be made for drinking, it is usually prepared in the following manner: leaves are pounded or finely chopped, placed in a cloth and wrung, or steeped in water (cold, warm, or boiling). The shavings of the inner bark of trunks, branches, stems, or roots are prepared in a like manner. When medicines are applied externally, the crushed leaves or the expressed juice is usually applied directly. In the past, many of these medicines were applied by chewing the plant part and allowing the juice to drip from the mouth or by spitting the pulp onto the affected area. These methods are still used to a limited extent today. The dosage is usually determined by the age of the patient, and the medicine is diluted to the satisfaction of the taulasea. Some medicines are prepared ahead of time and kept in jars in the refrigerator. The ingredients and instructions for medicinal preparations are given in the Appendix listed by Samoan illness name.

SUMMARY OF SAMOAN MEDICINAL PLANTS AND THEIR USAGE

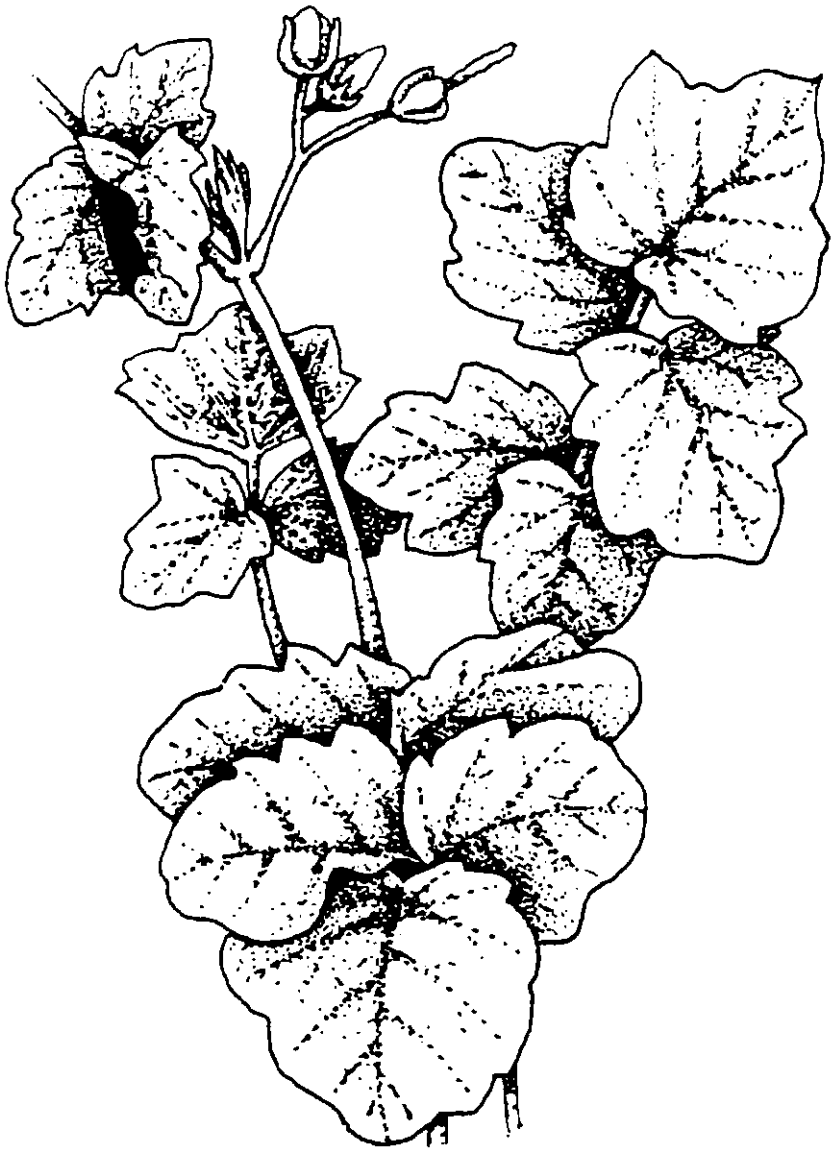
A summary of Samoan medicinal plants and their usage can be found in the following pages arranged in alpha order by Samoan name. Each species is represented by an illustration and descriptive table as shown below.

<table>
<tr><td>Samoan Name</td><td>Growth Habit
Plant description and physiology</td></tr>
<tr><td>Common Name (if any)</td><td rowspan="3">Medicinal Use
Plant part used
Illness treated
Means of treatment</td></tr>
<tr><td>Scientific Name</td></tr>
</table>

Note the following:

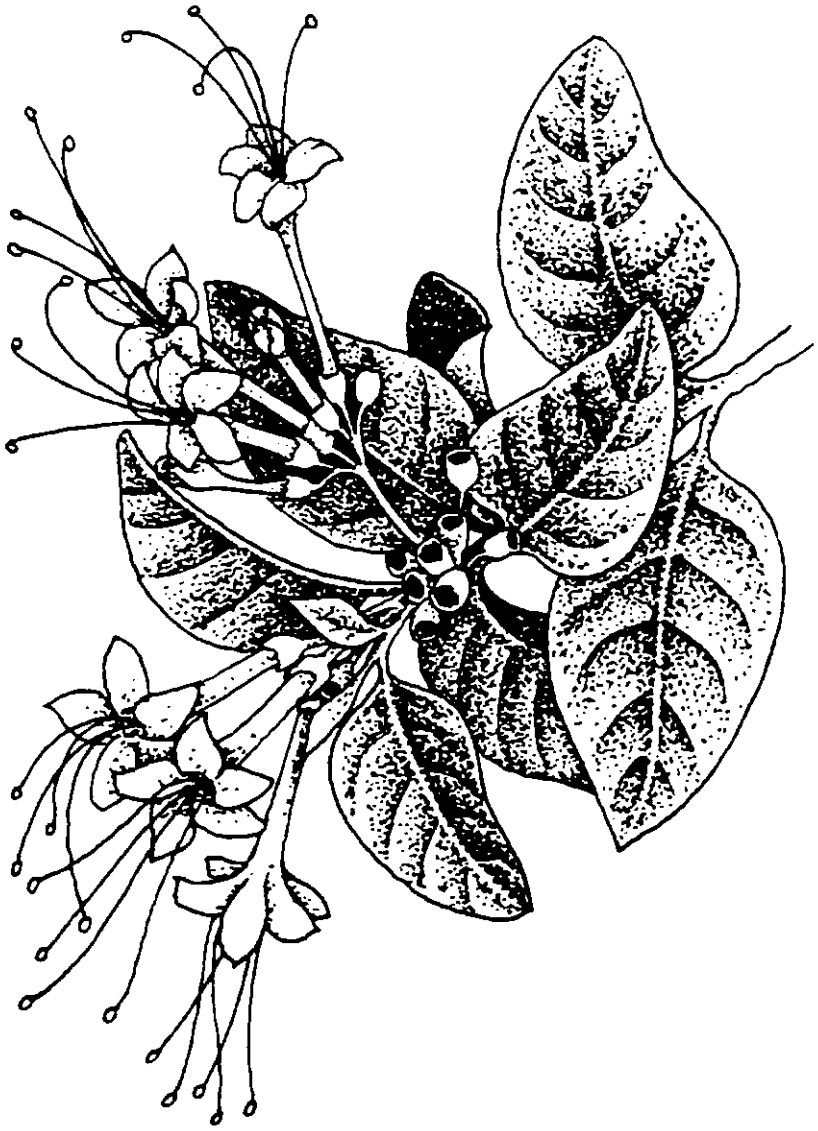
1) Scientific names of the plants are italicized. Information following the scientific name refers to the author of the name.

2) Many of the Samoan illness are followed by page numbers in parentheses (e.g., p. A10) that refer the reader to the Appendix. The Common names for equivalent illnesses are found under definitions beginning on page 6.



Samoan Name A'atasi	**Growth Habit** Common herbaceous weed found growing around houses on bare ground.
Scientific Name *Rorippa sarmentosa* (DC.) Macbr.	**Medicinal Uses** • Leaves for carbuncle to promote healing of wounds (p. A10) • Juice instilled into eyes to get rid of aitu (p. A9) • Root juice to treat pterygium (p. A12) • Root juice, together with ti and niu, taken internally for ila (p. A2)

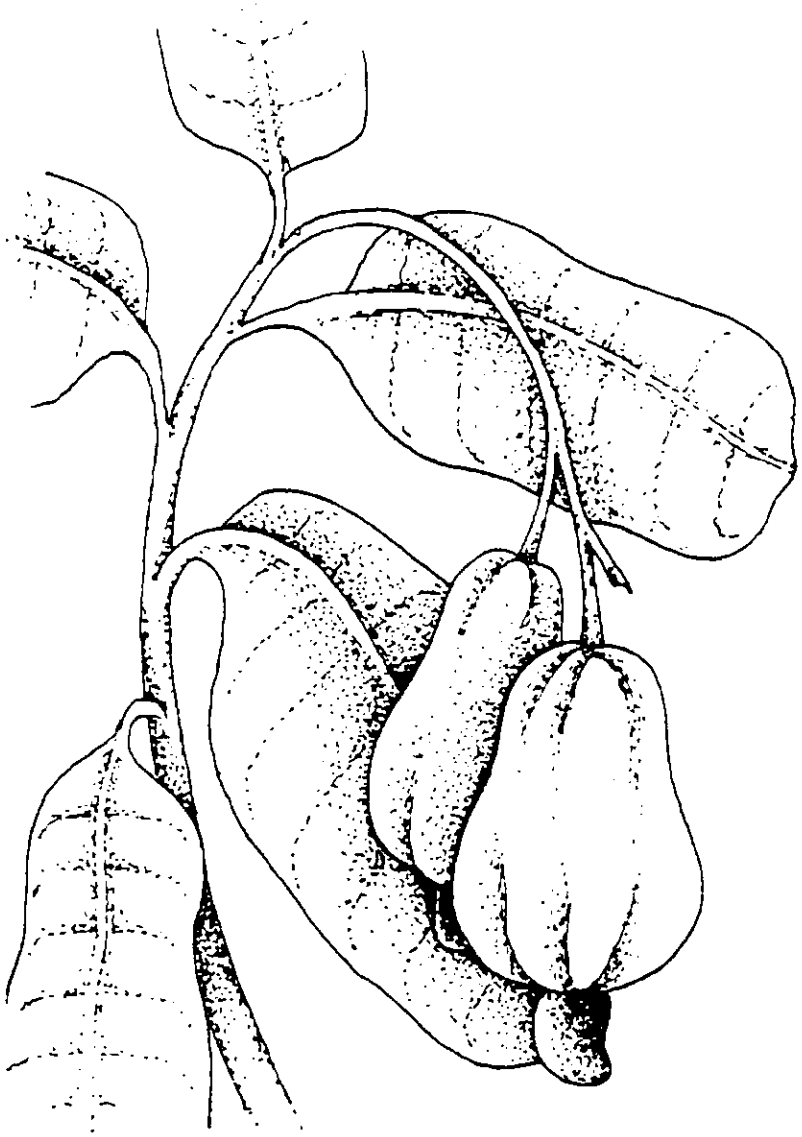
Samoan Name Aloalo	**Growth Habit** Shrub of the lowlands and foothills; flowers greenish-white; fruit small, globose.
Scientific Name *Premna serratifolia* L.	**Medicinal Uses** • Bark or leaves taken internally for mumu, and used externally as a poultice for sores and wounds (p. A6)



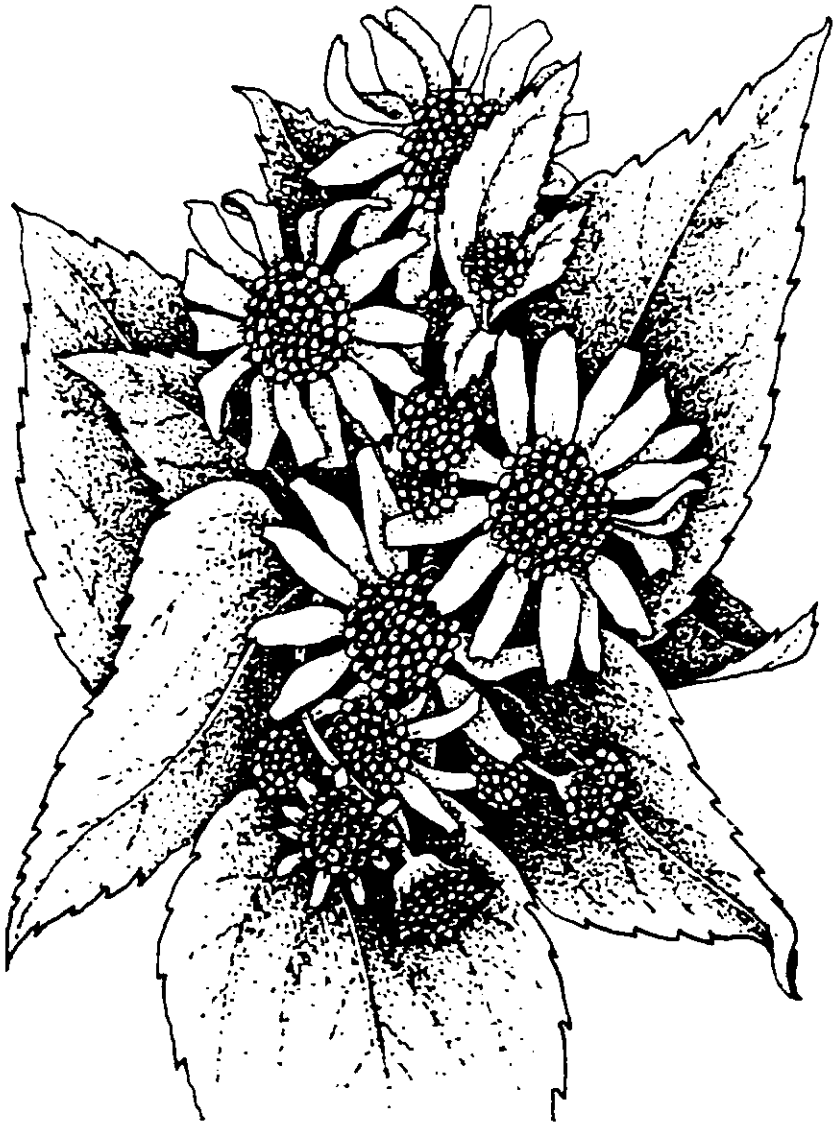
Samoan Name Aloalo tai	**Growth Habit** Scrambling or erect and drooping shrub. Usually near the sea.
Scientific Name *Clerodendrum inerme* (L.) Gaertn.	**Medicinal Uses** • Leaves applied together with sap of the ma'ali and Samoan oil, used externally for po'o sa (p. A9)

Samoan Name Aloalo vao	**Growth Habit** Shrub or small tree distinguished by a large, white, ovate, leafy calyx-lobe.
Scientific Name *Mussaenda raiateensis* J.W. Moore	**Medicinal Uses** • Leaves used externally for mumu afi (p. A7) • Leaves used externally for mumu tatau (p. A8) • Inner bark of stem taken internally for mumu tuaula (p. A8)

Samoan Name 'Aoa	**Growth Habit** A large spreading tree with small orange fruits.
Common Name Banyan	**Medicinal Use** • Leaves used externally for carbuncle (p. A10)
Scientific Name *Ficus obliqua* Forst. f.	



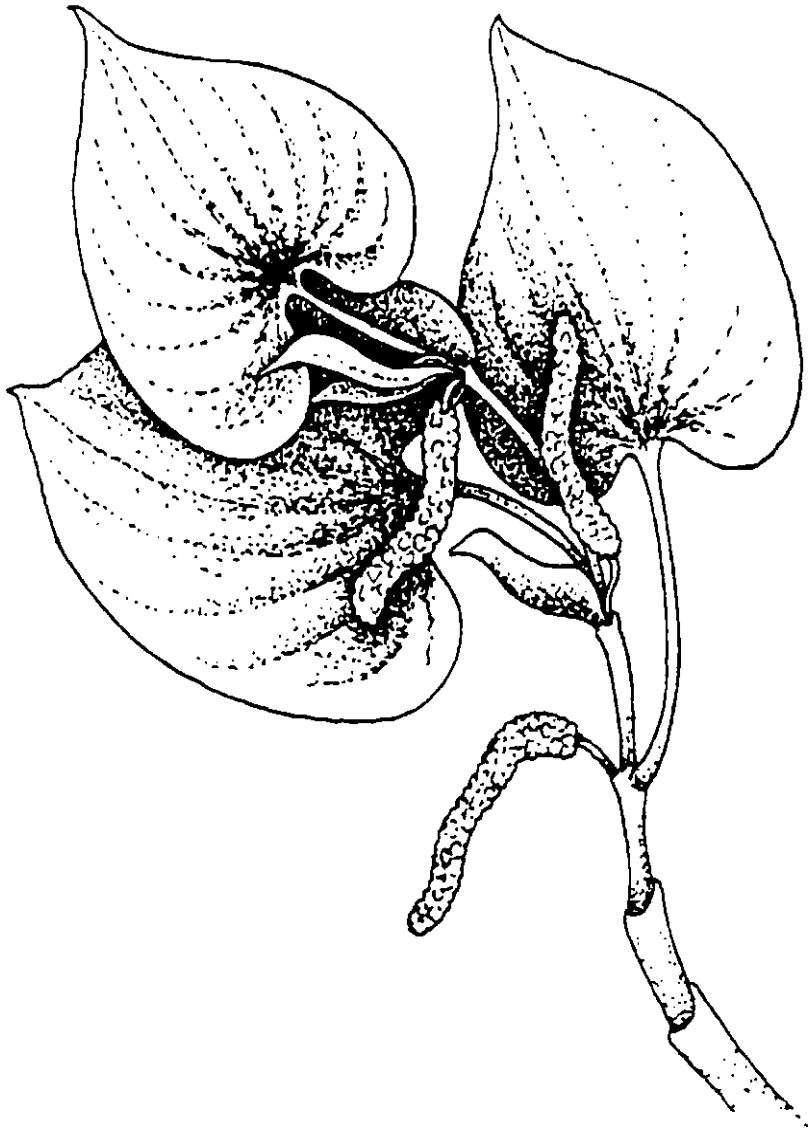
Samoan Name 'Apu initia	**Growth Habit** Spreading tree; sap an irritant; kidney-shaped nuts edible when roasted.
Common Name Cashew tree	**Medicinal Uses** • Fruit taken internally for sore throat and difficulty in swallowing (p. A1)
Scientific Name *Anacardium occidentale* L.	



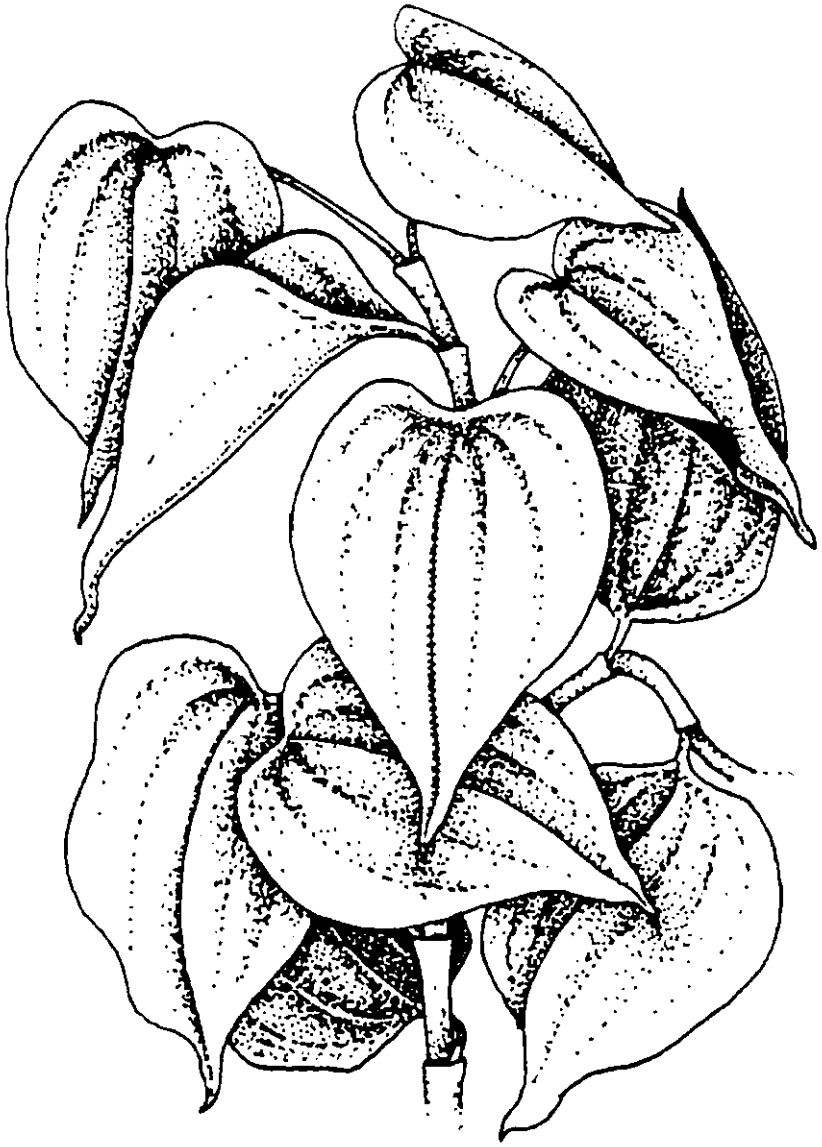
Samoan Name Ateate	**Growth Habit** Perennial shrub; flowers yellow and small; very common near beaches.
Common Name Beach sunflower	**Medicinal Uses** • Leaves taken internally for ate fefete (p. Al) • Inner bark taken internally for tulita fasia (p. A12) • Inner bark taken internally for ma'i afi (p. A4)
Scientific Name *Wollastonia biflora* (L.) DC.	

Samoan Name Au'auli	**Growth Habit** Small tree; fruit yellow; said to be very poisonous.
Scientific Name *Diospyros samoensis* A. Gray	**Medicinal Uses** • Leaves taken internally for hypertension (p. A13)

Samoan Name 'Aute Samoa	**Growth Habit** Shrub or small tree, flowers red.
Common Name Cultivated red hibiscus	**Medicinal Uses** • Inner bark passed to infant through breastfmilk against mumu (p. A7) • Leaves used externally for mumu afi (p. A7)
Scientific Name *Hibiscus rosa-sinesis* L.	



Samoan Name 'Ava	**Growth Habit** Cultivated shrub; stems dark green, jointed and swollen at joints; leaves heart shaped. Source of ceremonial drink.
Common Name Kava	**Medicinal Uses** • Roots, together with fruit of polo feu, leaves of fisoa, and inner bark of moli aina, taken internally for gonorrhea (p. A4) • Leaves taken internally for mumu tuaula uli (p. A9) • Inner bark, together with juice of fasa, taken internally for tulita fasia (p. A12)
Scientific Name *Piper methysticum* Forst.	

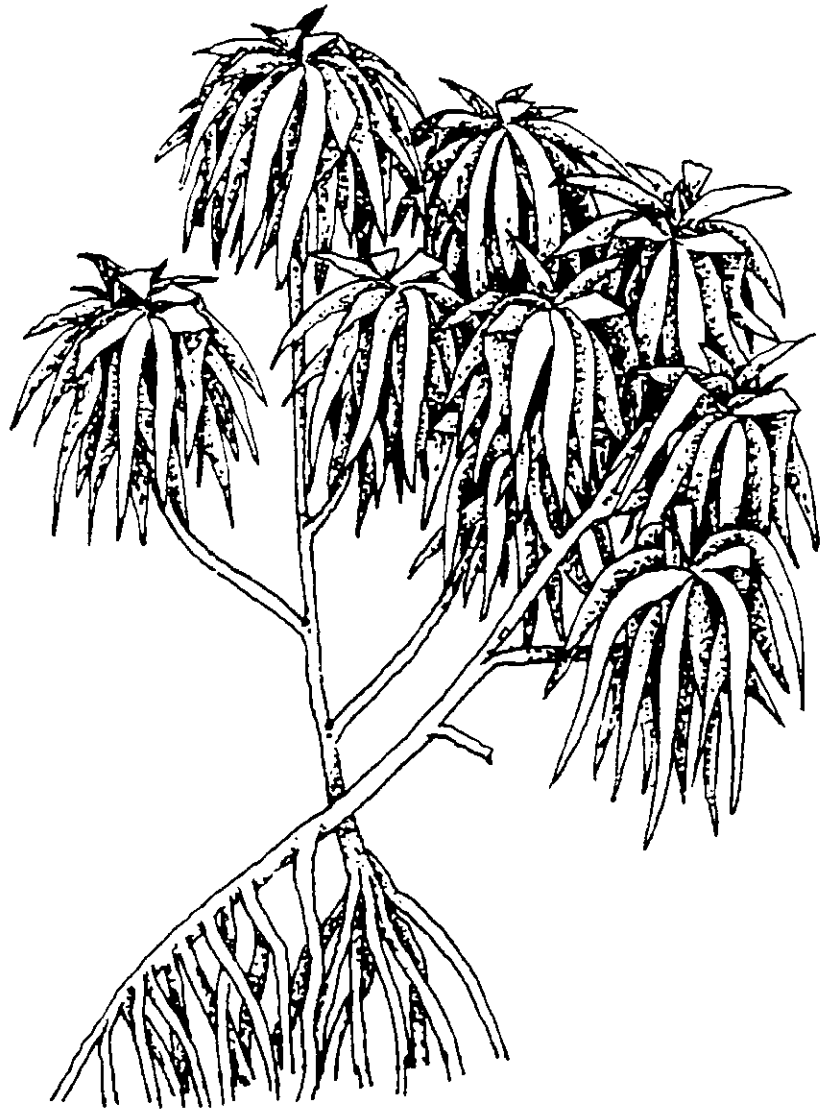


Samoan Name 'Ava'ava aitu	**Growth Habit** Standing shrub, leaves ovate and pointed.
Scientific Name *Macropiper puberlum* (Benth.) Benth.	**Medicinal Uses** • Leaves and inner bark taken internally for mumu (p. A7)

Samoan Name 'Ava niukini	**Growth Habit** Large woody creeper; roots yield rotenone, a useful insecticide.
Scientific Name *Derris malaccensis* (L.) Prain	**Medicinal Uses** • Pounded root used as a poultice for lafa (p. A3) • Pounded root used as a poultice for utu (p. A13)

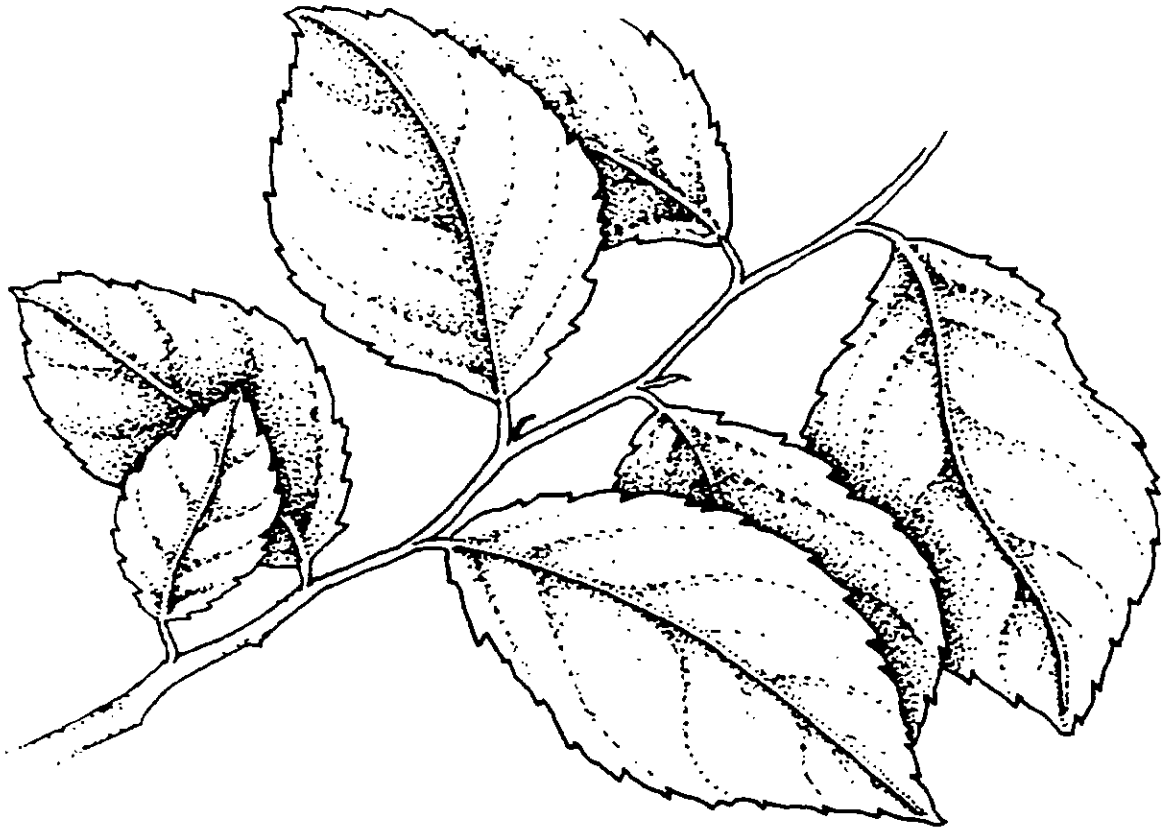
Samoan Name 'Ava pui vao	**Growth Habit** Perennial herb with tuberous aromatic rhizomes; flowers white.
Common Name Wild ginger	**Medicinal Uses** • Roots, together with roots of lau magamaga and aloalo, and leaves of tipolo, taken internally for lanu fia and fa'a ifo aluga (p. A3) • Flowers with roots of lau magamaga taken internally for stomach ache (p. A3)
Scientific Name *Zingiber zerumbet* (L.) Smith	

Samoan Name Esi	**Growth Habit** Small tree with hollow septate trunk, sap milky, fruit large and edible.
Common Name Papaya	**Medicinal Uses** • Young root taken internally for diarrhea (p. A5)
Scientific Name *Carica papaya* L.	



Samoan Name Fasa	**Growth Habit** Small coastal tree with long sharp-edged leaves; aerial roots.
Common Name Screwpine	**Medicinal Uses** • Aerial root pounded together with the lapa lapa, the juice then taken internally for to'ala sulu (p. A12) • Root, together with inner bark of the ava, taken internally for tulita fasia (p. A12)
Scientific Name *Pandanus tectorius* Park.	

Samoan Name Fetau	**Growth Habit** Large, crooked, thick tree common near beaches; flowers have white petals and sepals with yellow stamens.
Common Name Alexandrian laurel	**Medicinal Uses** • Leaves broken in container of sea water to bathe skin rash or infections (p. A14)
Scientific Name *Calophyllum inophyllum* L.	

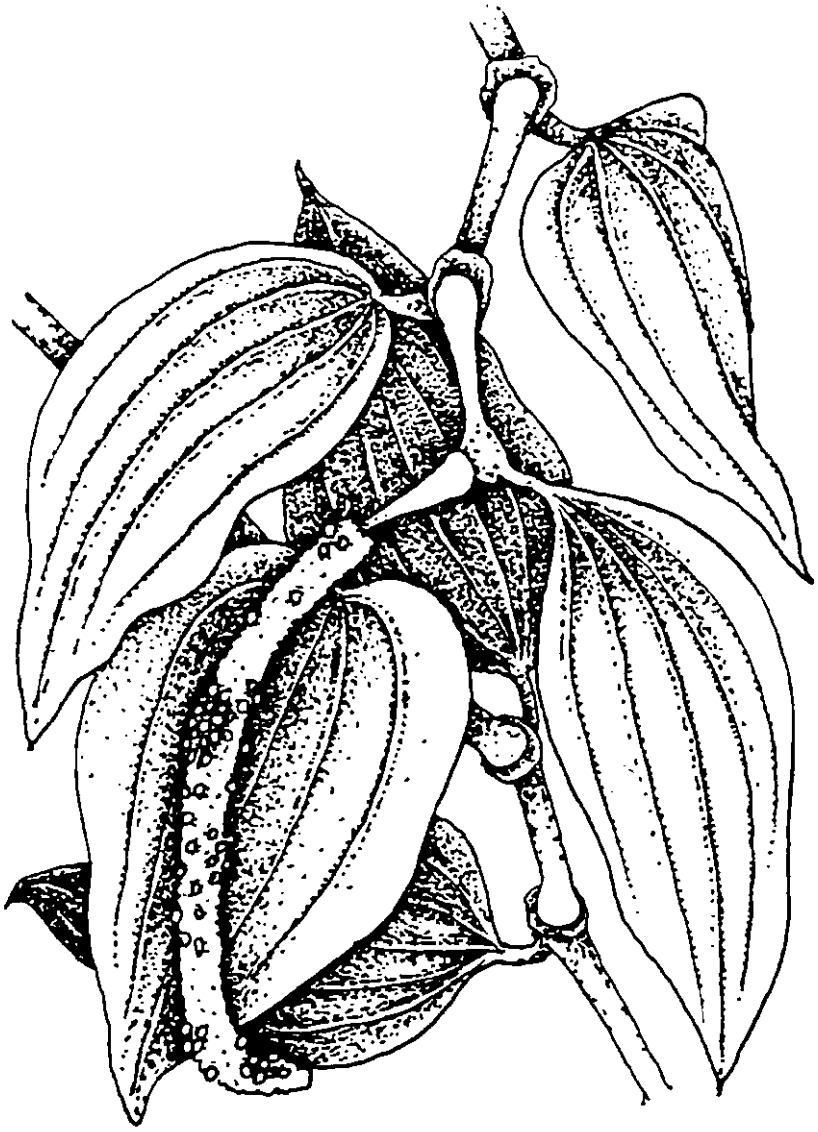


Samoan Name Filimoto	**Growth Habit** Small to medium tree; yellow flowers; fruit is globose; wood heavy.
Scientific Name *Flacourtia rukam* Zoll. & Morr.	**Medicinal Uses** • Inner bark with same from moli'aina taken internally for mumu tuaula uli (p. A9)

Samoan Name Fisoa	**Growth Habit** Many-branched shrub; flowers yellow; always near beaches; leaves formerly used as soap.
Common Name Soap bush	**Medicinal Uses** • Leaves together with polo vao, 'ava and moli'aina taken internally for gonorrhea (p. A4) • Inner bark for failele gau (p. A1) • Inner bark, together with fue sina, for fulamaua (p. A2) • Inner bark for mumu lele (p. A8)
Scientific Name *Colubrina asiatica* (L.) Brongn.	

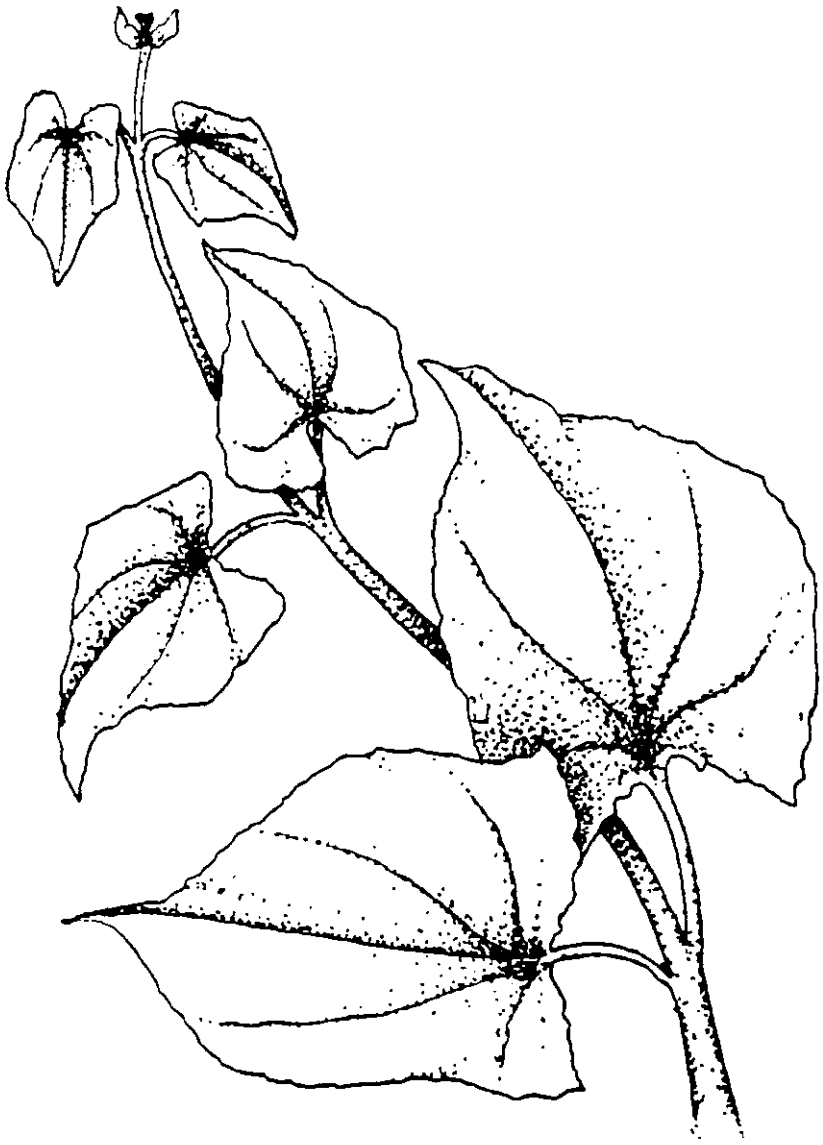
Samoan Name Fu'afu'a	**Growth Habit** Large tree; tough bark; pink flowers; fruit papery and bladder-like; very common in clearings.
Common Name Guest tree	**Medicinal Uses** • Inner bark for bloody stool in children (p. A13)
Scientific Name *Kleinhovia hospita* L.	

Samoan Name Fue lau fao	**Growth Habit** Large epiphytic climber.
Scientific Name *Epipremnum pinnatum* (L.) Engler	**Medicinal Uses** • Leaves used externally for mumu mageso (p. A8)

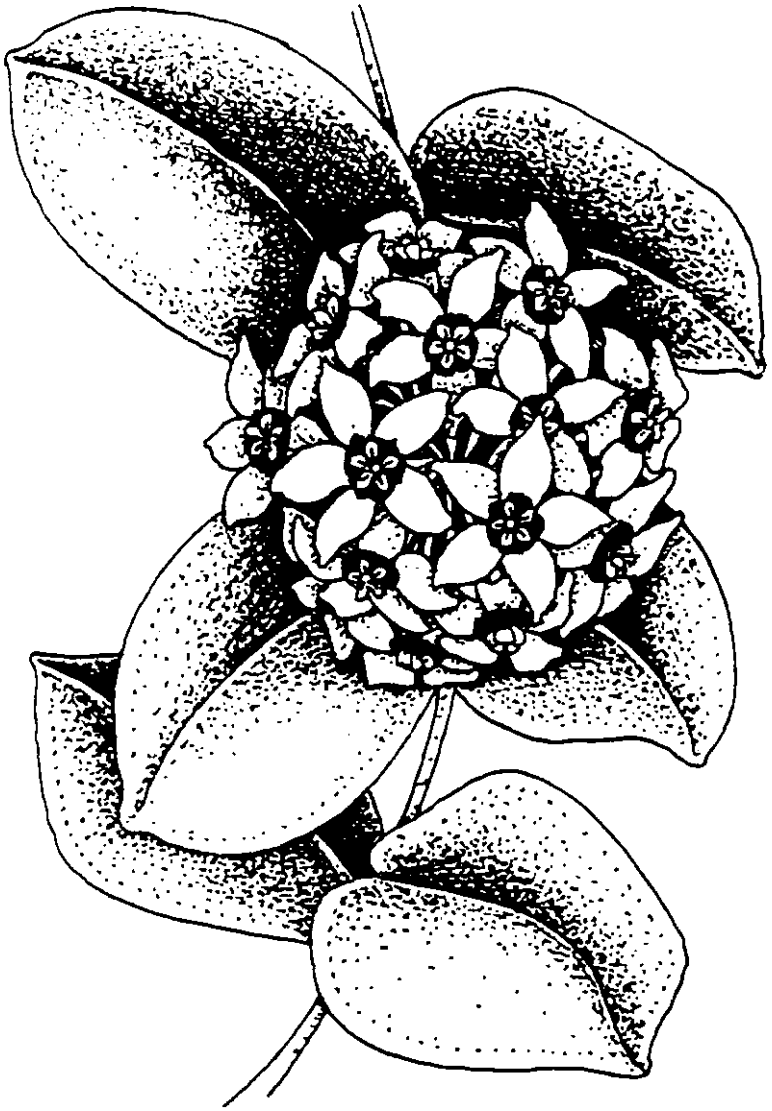


Samoan Name Fue manogi	**Growth Habit** Epiphytic shrub, climbing by ivy-like roots; leaves large and heart shaped, aromatic; fruit in spikes, bright red.
Scientific Name *Piper graeffei* Warb.	**Medicinal Uses** • Inner bark taken internally as a general childhood tonic (p. A13) • Inner bark taken internally for pala ga'au (p. A9) • Leaves taken internally for ma'i gau (p. A4)

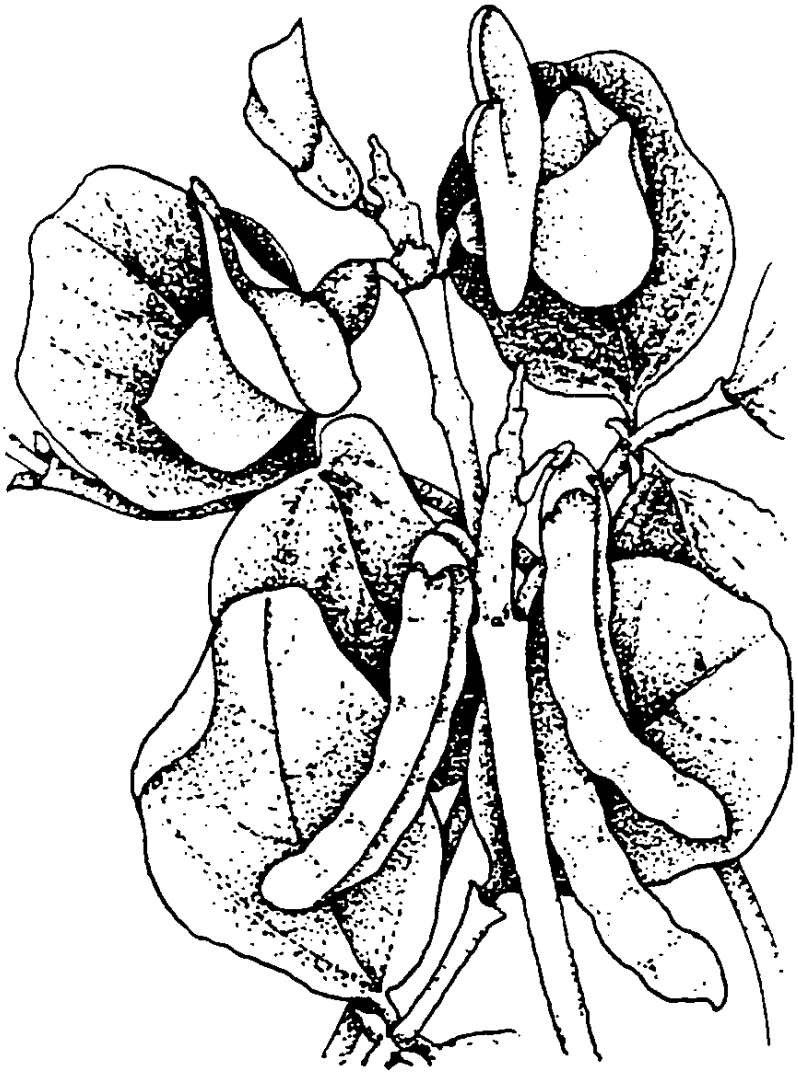
Samoan Name Fue moa	**Growth Habit** Seaside creeper; thick, bi-lobed leaves; mauve flowers.
Common Name Beach morning glory	**Medicinal Uses** • Leaves used externally to treat chicken pox.
Scientific Name *Ipomoea pes-caprae* (L.) R. Br.	



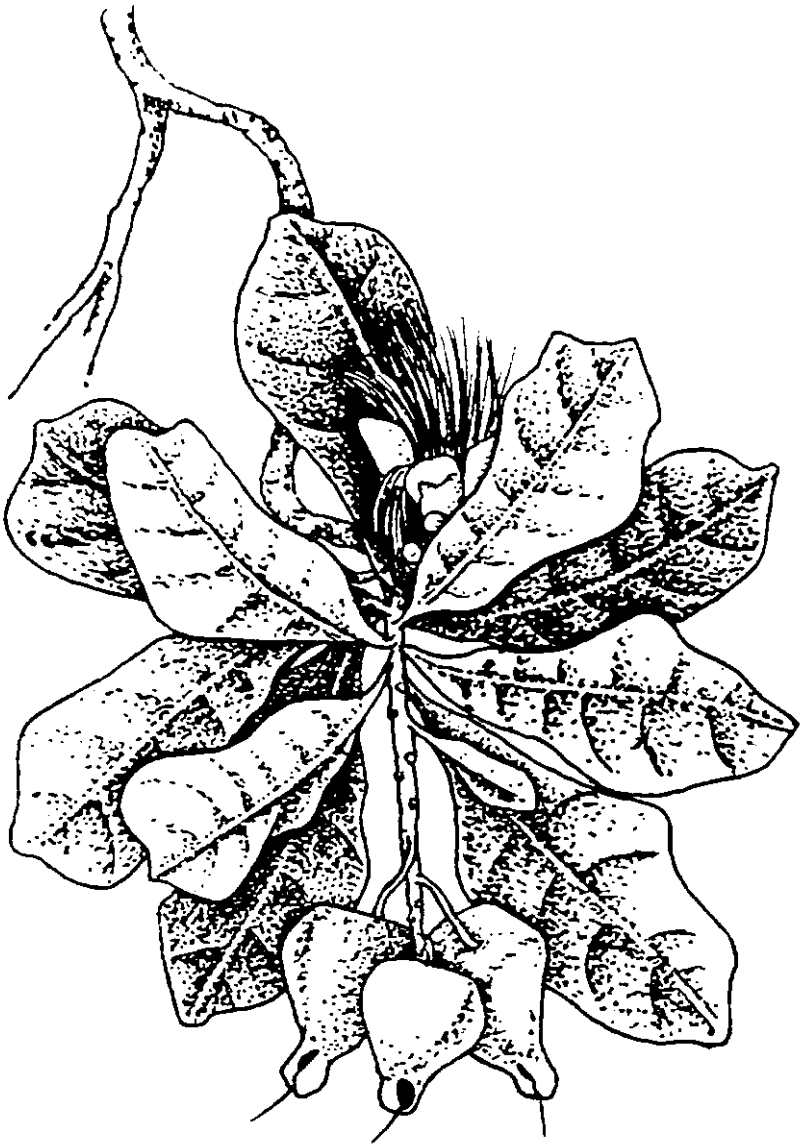
Samoan Name Fue saina	**Growth Habit** Vigorous climber and creeper; leaves triangular ovate; clusters of small white flowers; very common ground cover throughout.
Common Name Mile-a-minute vine	**Medicinal Uses** • Crushed leaves used externally for hornet stings and to stop bleeding (p. A3)
Scientific Name *Mikania micrantha* H.B.K.	



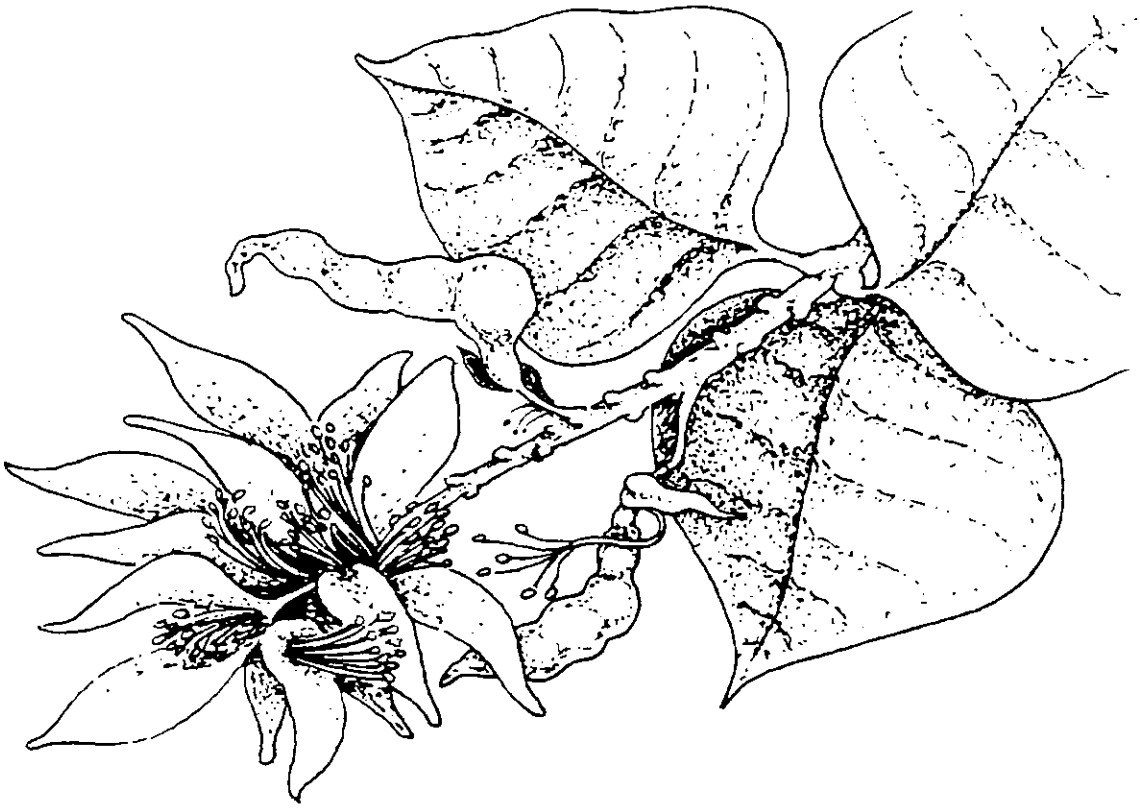
Samoan Name Fue sele la	**Growth Habit** Epiphytic, climbing vine; leaves opposite and fleshy.
Common Name Wax flower	**Medicinal Uses** • Leaves, with tausuni, taken internally for manava mamau (p. A5)
Scientific Name *Hoya australis* R. Br.	



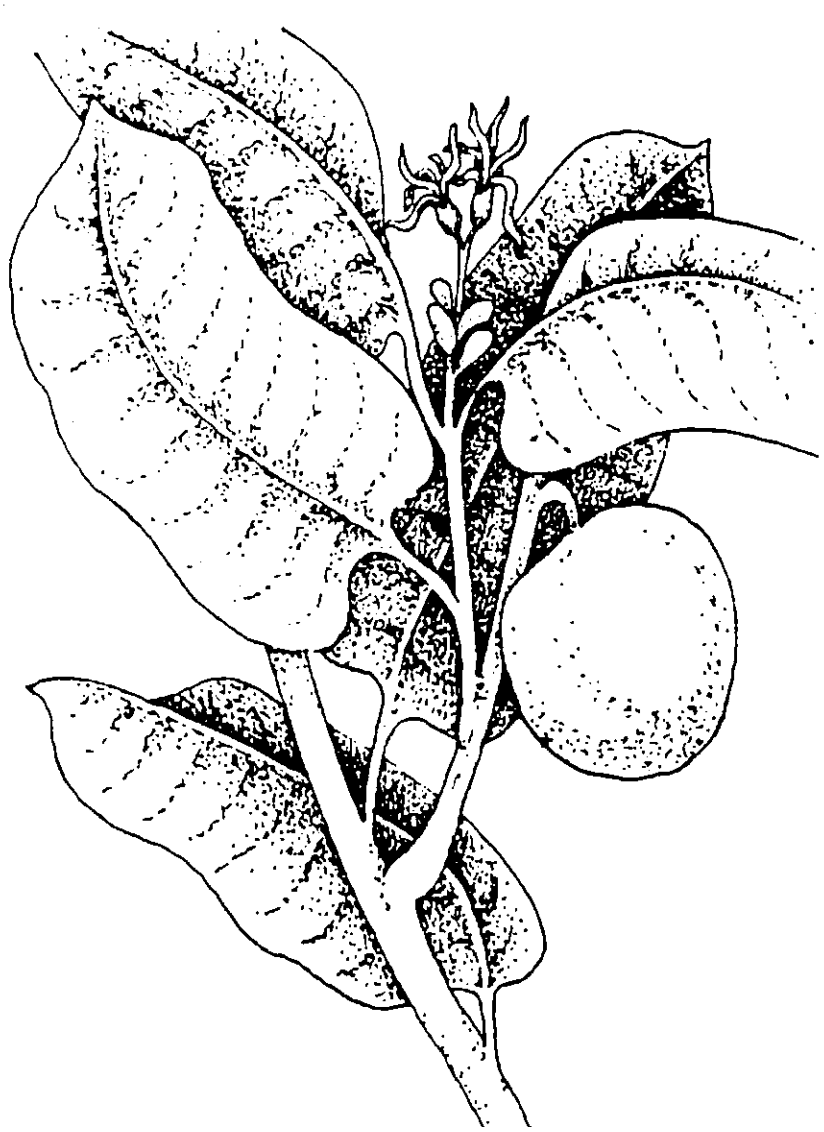
Samoan Name Fue sina	**Growth Habit** Trailing vine; leaves trifoliate; flowers yellow; pods small, slender; very common on sandy beaches and open ground.
Common Name Beach pea	**Medicinal Uses** • Leaves, with fisoa, taken internally for fulamaua (p. A2) • Leaves used externally for ma'i tafafao (p. A5) • Leaves taken internally with togo for pua'i toto (p. A10) • Leaves taken internally and used externally for tulita fasia (p. A12) • Roots, with lapa lapa, taken internally for sila'ilagi se (p. A10)
Scientific Name *Vigna marina* (Burm.) Merr.	



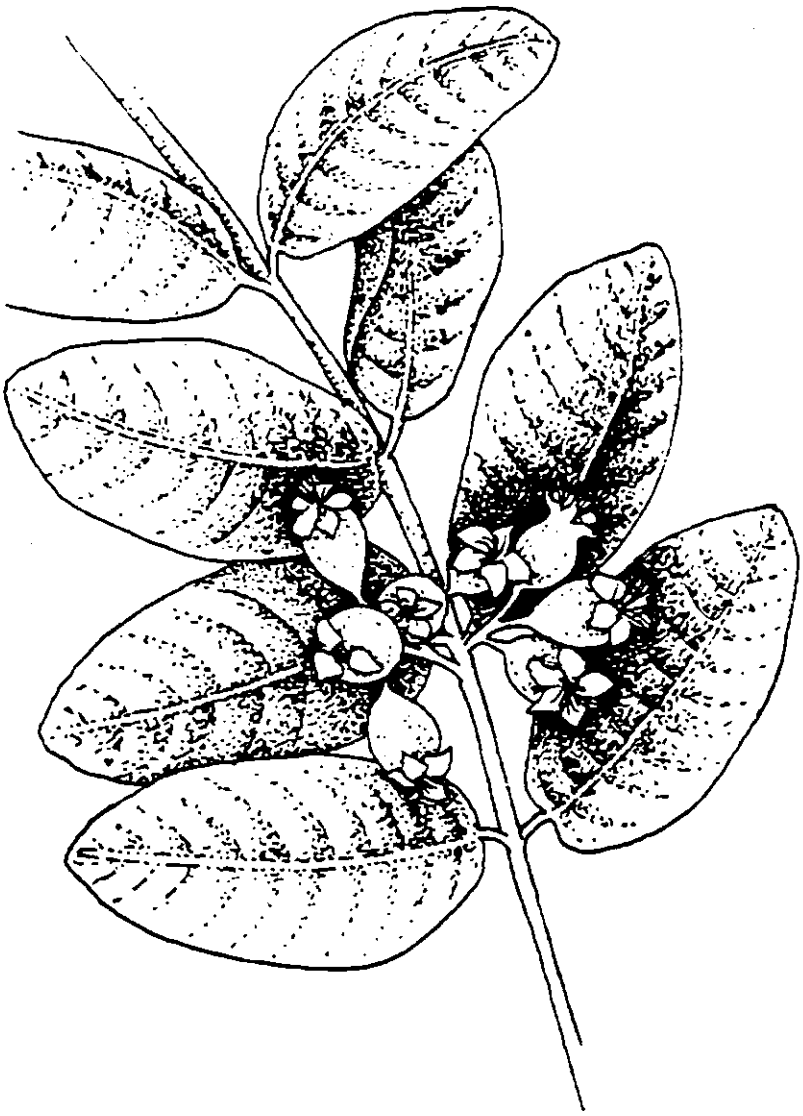
Samoan Name Futu	**Growth Habit** Spreading seaside tree; large pink and white flowers large 4-angled woody fruits; kernels poisonous to fish.
Common Name Fish poison tree	**Medicinal Uses** • Leaves and sea water used externally for mumu lele (p. A8)
Scientific Name *Barringtonia asiatica* (L.) Kurz	



Samoan Name Gatae	**Growth Habit** Large tree; trunk often thorny; flowers red; leaves turn yellow and fall in July to August.
Common Name Coral tree	**Medicinal Uses** • Inner bark taken internally for umete (fulamaua) (p. A13)
Scientific Name *Erythrina variegata* L.	

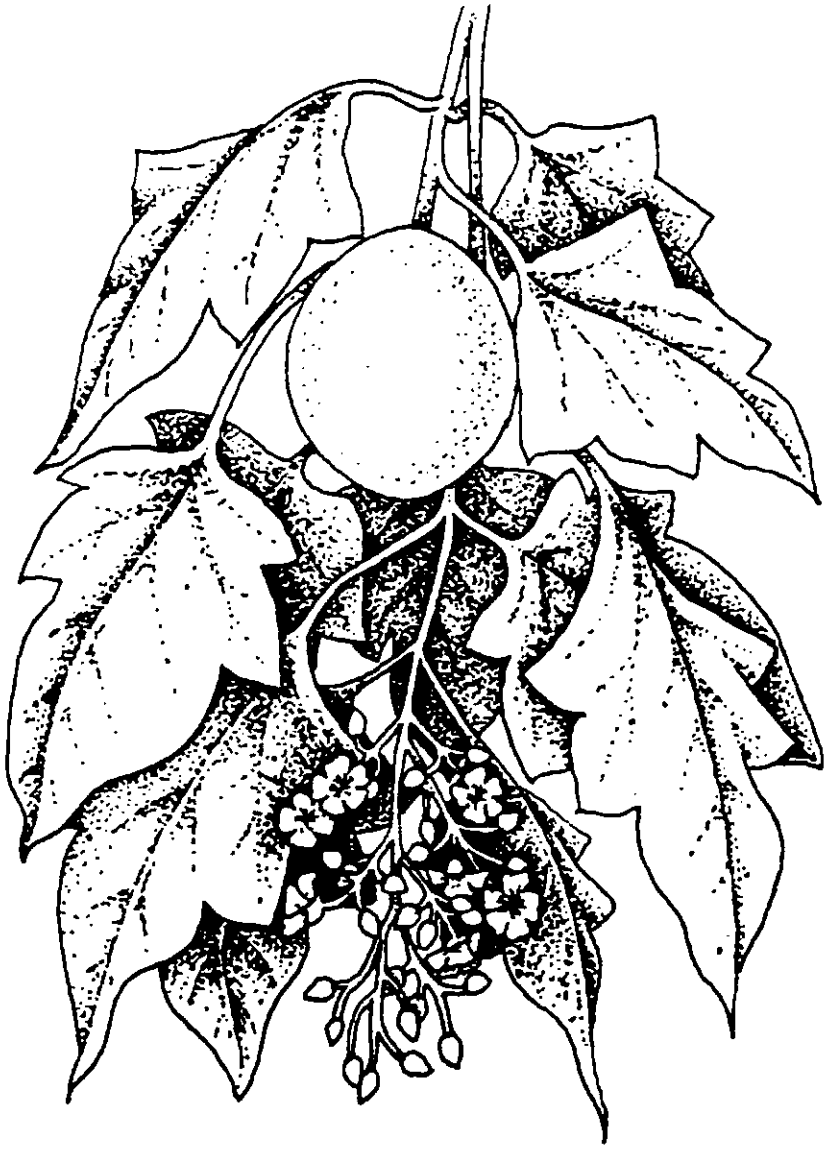


Samoan Name Ifi	**Growth Habit** Medium sized tree; buttressed trunk; leaves oblong and leathery; oval fruit; kernel edible when cooked.
Common Name Tahitian chestnut	**Medicinal Uses** • Used in action to rid patient of aitu in mata pa'ia (p. A6)
Scientific Name *Inocarpus fagifer* (Park.) Fosb.	



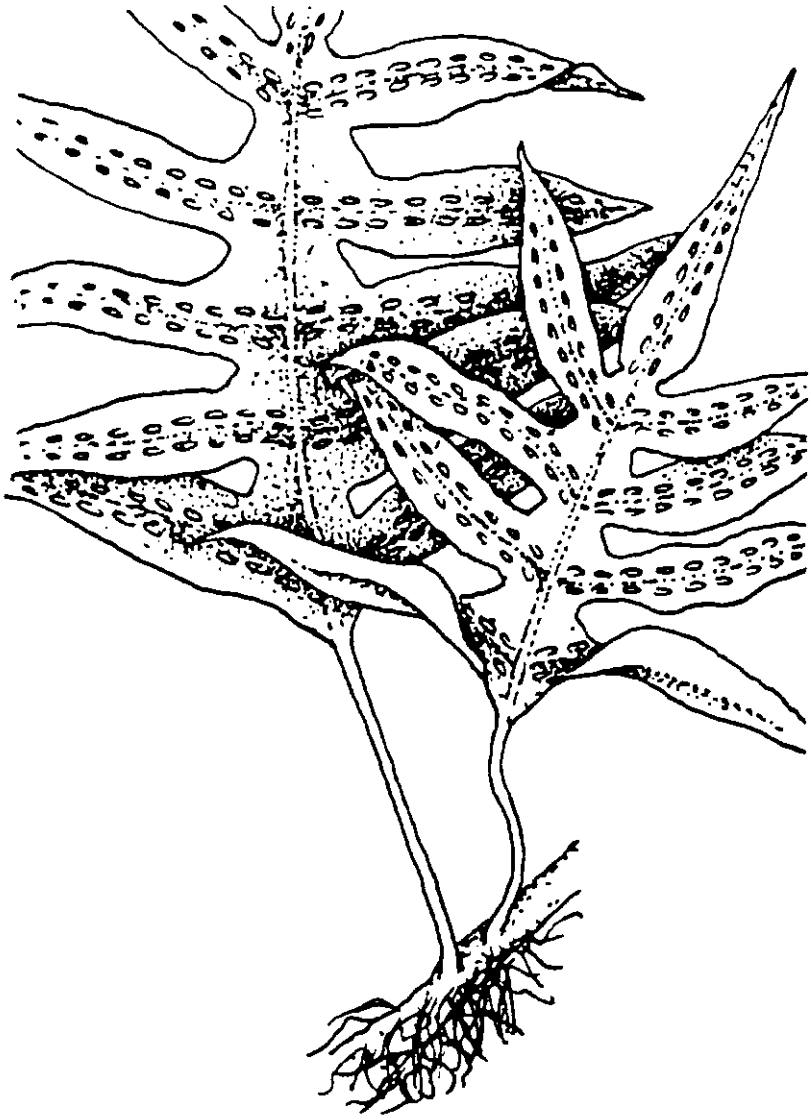
Samoan Name Ku'ava	**Growth Habit** Tree; smooth copper colored bark; white flowers; fruit yellow, when ripe, many seeds in pink pulp, edible.
Common Name Guava	**Medicinal Uses** • Inner bark taken internally for intestinal tract diseases of children, diphtheria, and sore throat (p. A1)
Scientific Name *Psidium guajava* L.	

Samoan Name La'au failafa	**Growth Habit** Large shrub; strong smelling foliage; leaves pinnately compound; orange-yellow flowers in long candelabra-like inflorescences.
Common Name Candelabra bush	**Medicinal Uses** • Leaves crushed and used externally for ringworm (p. A3)
Scientific Name *Senna alata* (L.) Roxb.	



Samoan Name Lama	**Growth Habit** Tree; leaves light green, lower surface covered with scales; flowers small, greenish-yellow, in large clusters; very hard nut-like seeds.
Common Name Candlenut	**Medicinal Uses** • Young leaves taken internally for children's fever and convulsions (p. A1)
Scientific Name *Aleurites moluccana* (L.) Willd.	

Samoan Name Lau gasese	**Growth Habit** Creeping terrestrial or epiphytic fern. Fronds from up to 20 inches (50 cm) long, triangular shape, pinnately divided; rhizome covered with scales.
Common Name Leather fern	**Medicinal Uses** • Leaves used externally as poultice for arthritis (p. A8)
Scientific Name *Davallia solida* (Forst. f.) Sw.	



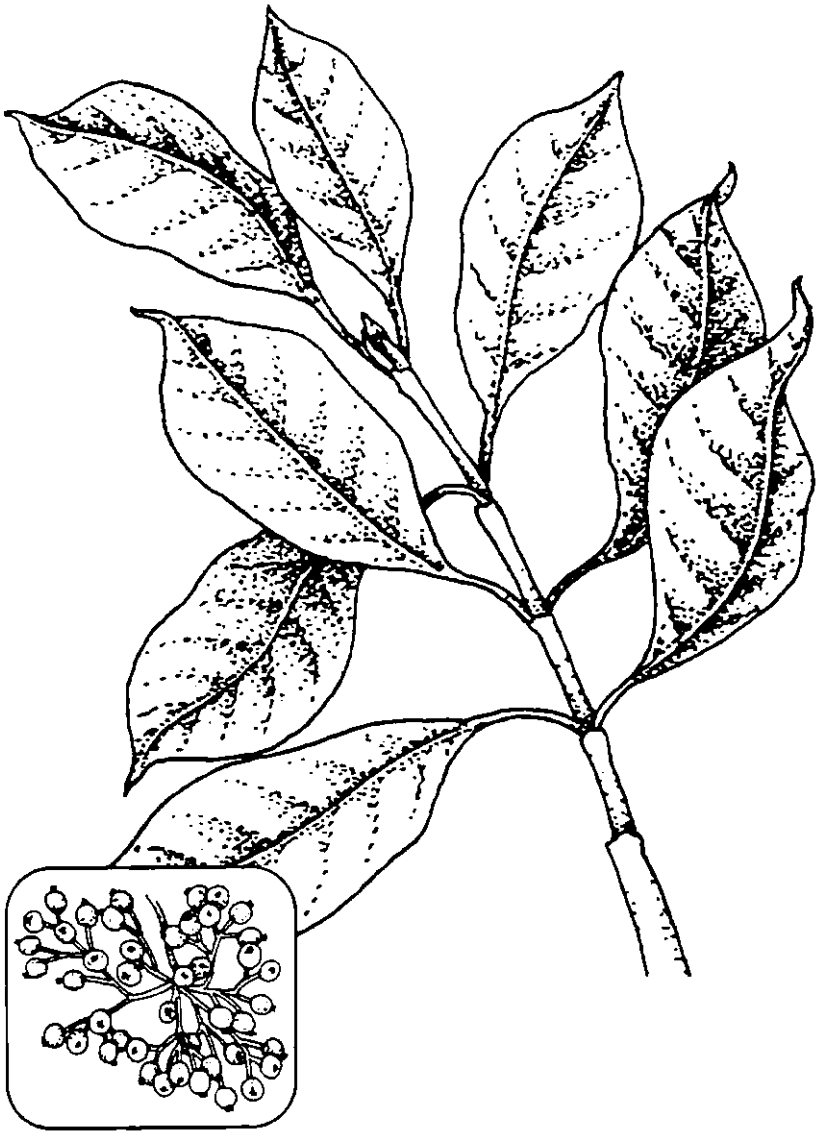
Samoan Name Lau magamaga	**Growth Habit** Fern; terrestrial and epiphytic; leaf deeply lobed; common on coconut and breadfruit tree trunks.
Scientific Name *Phymatosorus grossus (Langsd. & Fisch.) Brownlie*	**Medicinal Uses** • Leaves used externally as massage for aitu (p. A5) • Leaves as a poultice for mumu ai ivi (p. A8) • Roots with ava pui vao, aloalo manogi, and tipolo taken internally for lanuia and ifo aluga (p. A3) • Roots with ava pui vao taken internally for manava tiga tele (p. A5)

Samoan Name Lau tamatama	**Growth Habit** Erect herb; gray-green leaves; flowers in terminal spikes; seeds barbed; a weed in coastal places.
Scientific Name *Achyranthes aspera* L.	**Medicinal Uses** • Leaves used as a poultice for carbuncles and abscesses (p. A10) • Leaves used to promote healing of wounds (p. A10) • Leaves taken internally as a general childhood tonic (p. A13)

Samoan Name Lau tasi	**Growth Habit** Epiphytic fern; creeping; fronds simple, entire, dull green; common on coconut and breadfruit trunks.
Scientific Name *Pyrossia lanceolata* (L.) Farwell	**Medicinal Uses** • Leaves used as a poultice for abscess or deep abscess of mumu tuaula (p. A9)

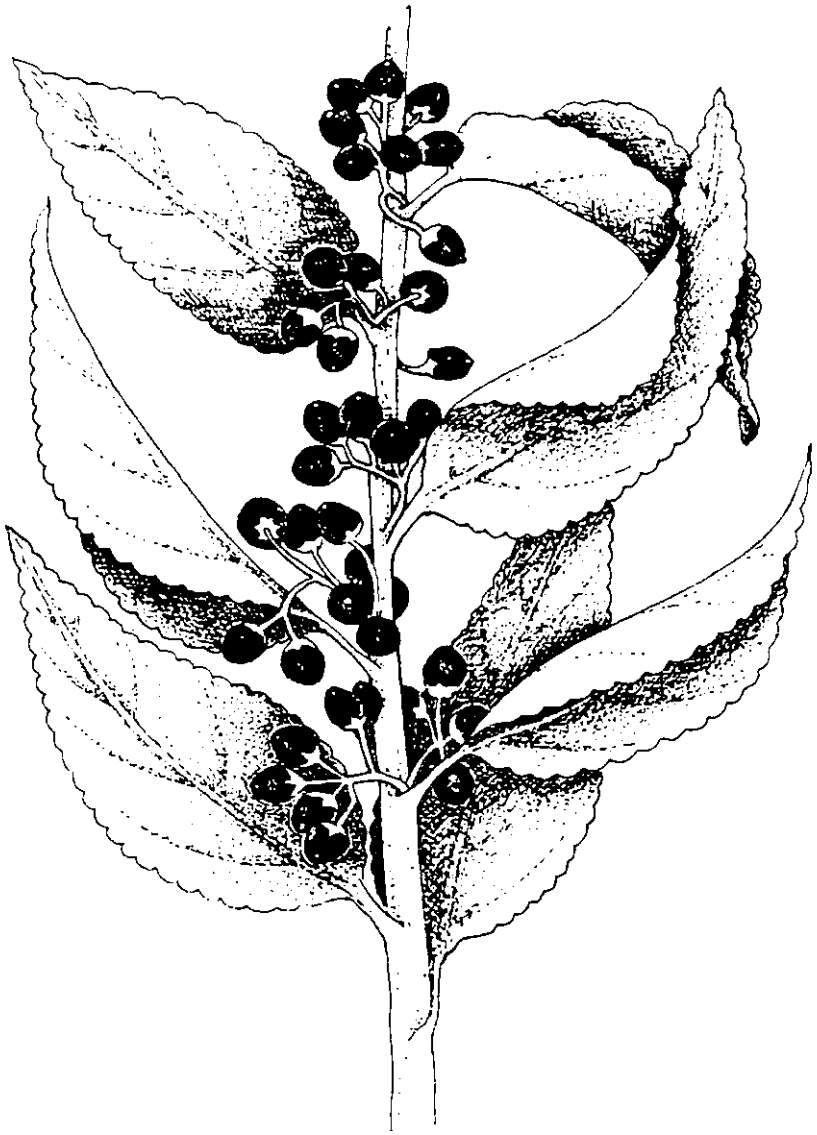
Samoan Name Leva	**Growth Habit** Medium-sized tree; white sap; leaves dark green, glossy; flowers white; fruit red when ripe; seed poisonous.
Scientific Name *Cerbera manghas* L.	**Medicinal Uses** • Roots used together with to'ito'i, aoa, and namulega, taken internally as a treatment for cancer.

Samoan Name Ma'ali	**Growth Habit** Large forest tree, gum exudates fragrant; fruit a bluish-black drupe; common at low and medium elevations.
Scientific Name *Canarium vitiense* A. Gray	**Medicinal Uses** • Sap, together with Samoan oil and aloaloa tai, used externally for po'o sa (p. A9)

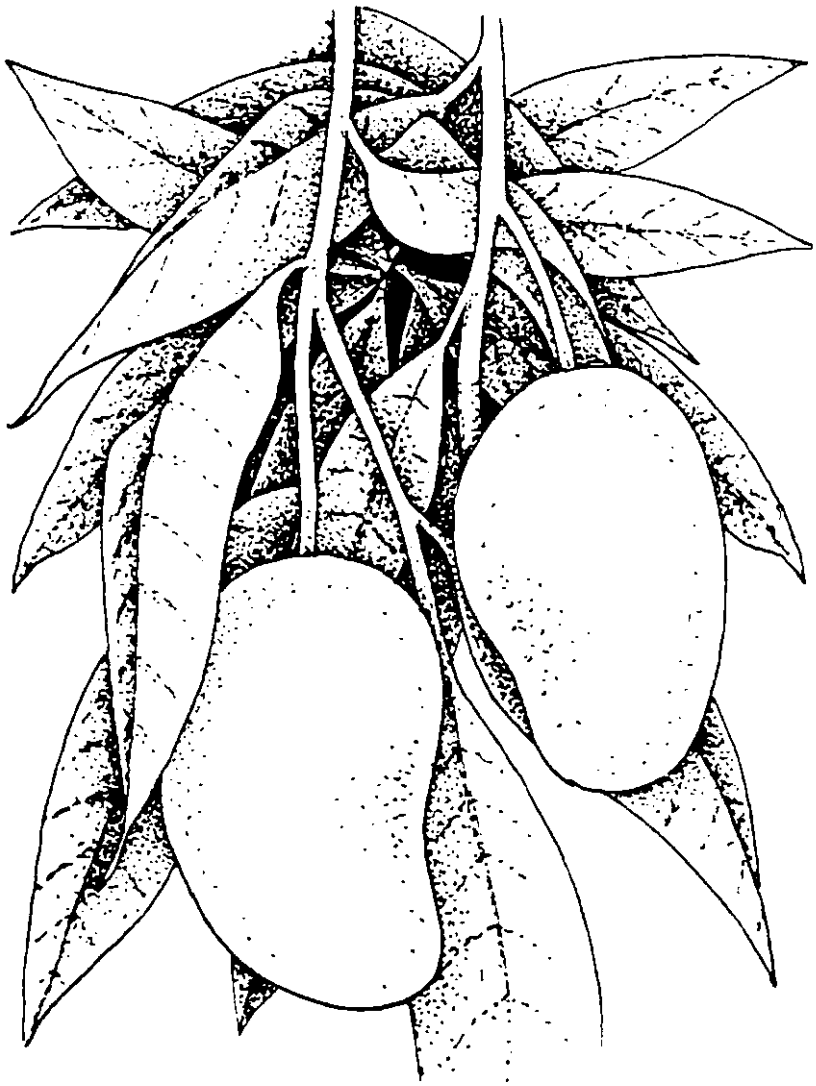


Samoan Name Ma'anunu	**Growth Habit** Medium-sized tree, with 4-angled branches; leaves turn black when dry; flowers white; berry the size of a pea.
Scientific Name *Tarenna sambucina* (Forst. f.) Dur. ex Drake	**Medicinal Uses** • Inner bark used to make a tea for mumu tuaula (p. A9) • Inner bark used together with toi for asthma (p. A10)

Samoan Name Magalo (vi vao)	**Growth Habit** Pubescent, annual herb; flowers pale yellow; fruit a fleshy berry surrounded by a bladder-like calyx.
Scientific Name *Physalis angulata* L.	**Medicinal Uses** • Flowers, stem, and leaves taken internally for mumu tuaula (p. A9)

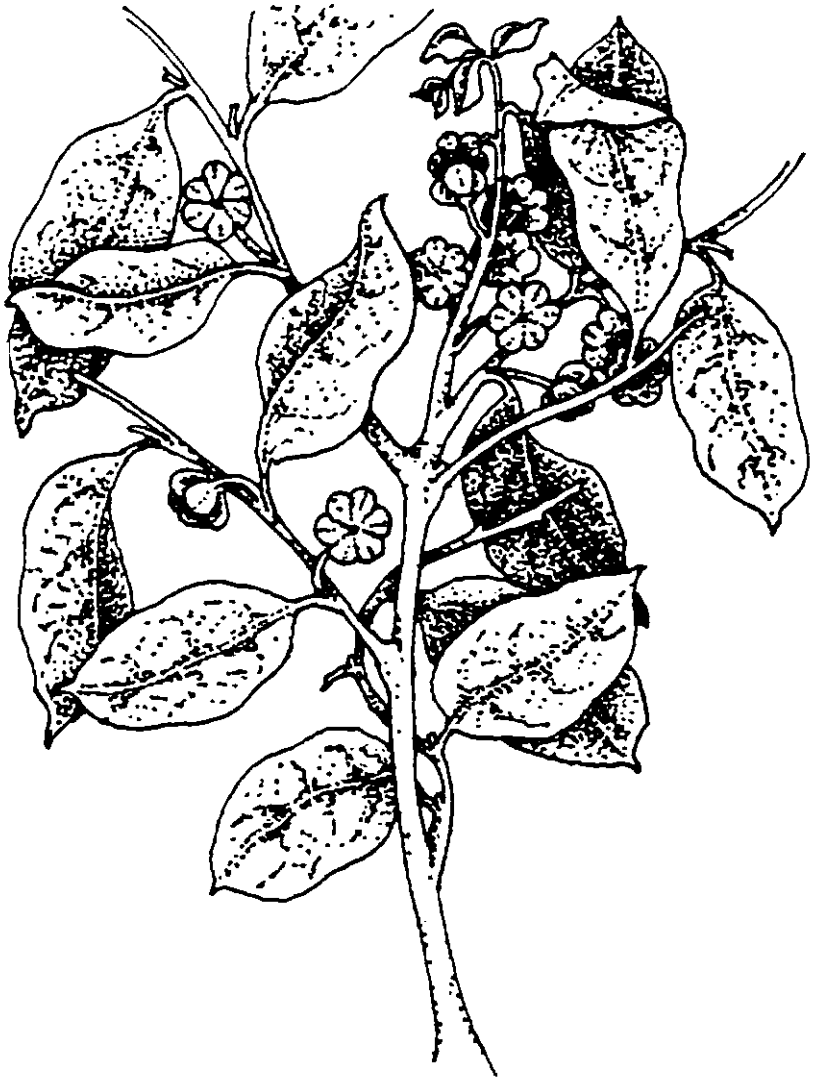


Samoan Name Magele	**Growth Habit** Tree with gray bark; common in forests and openings in forests and lowlands.
Scientific Name *Trema cannabina* Lour.	**Medicinal Uses** • Roots taken internally for diarrhea (p. A5) • Roots taken internally for skin rash (p. A14) • Roots taken internally for hypertension and as a laxative (p. A13)

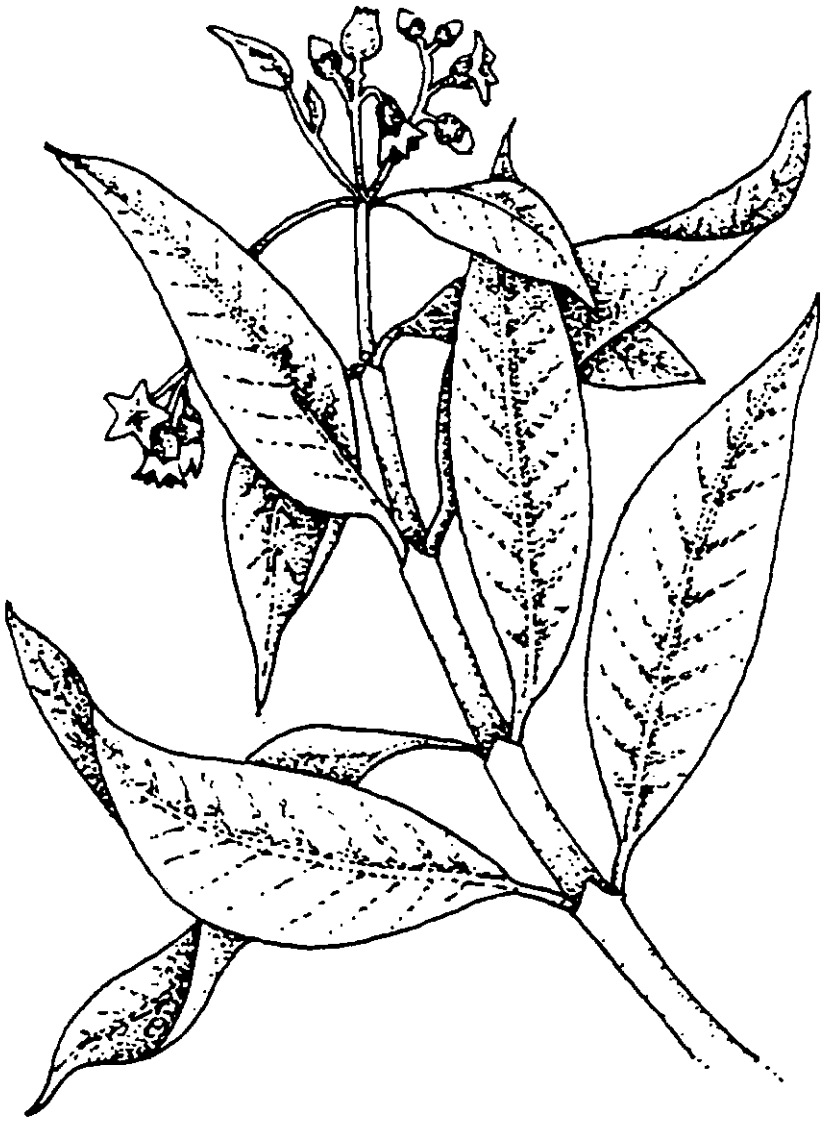


Samoan Name Mago	**Growth Habit** Large tree; ovoid, baseball-sized fruit, yellow or red when ripe, edible.
Common Name Mango	**Medicinal Uses** • Inner bark, taken internally for ma'i gau (p. A4)
Scientific Name *Mangifera indica* L.	

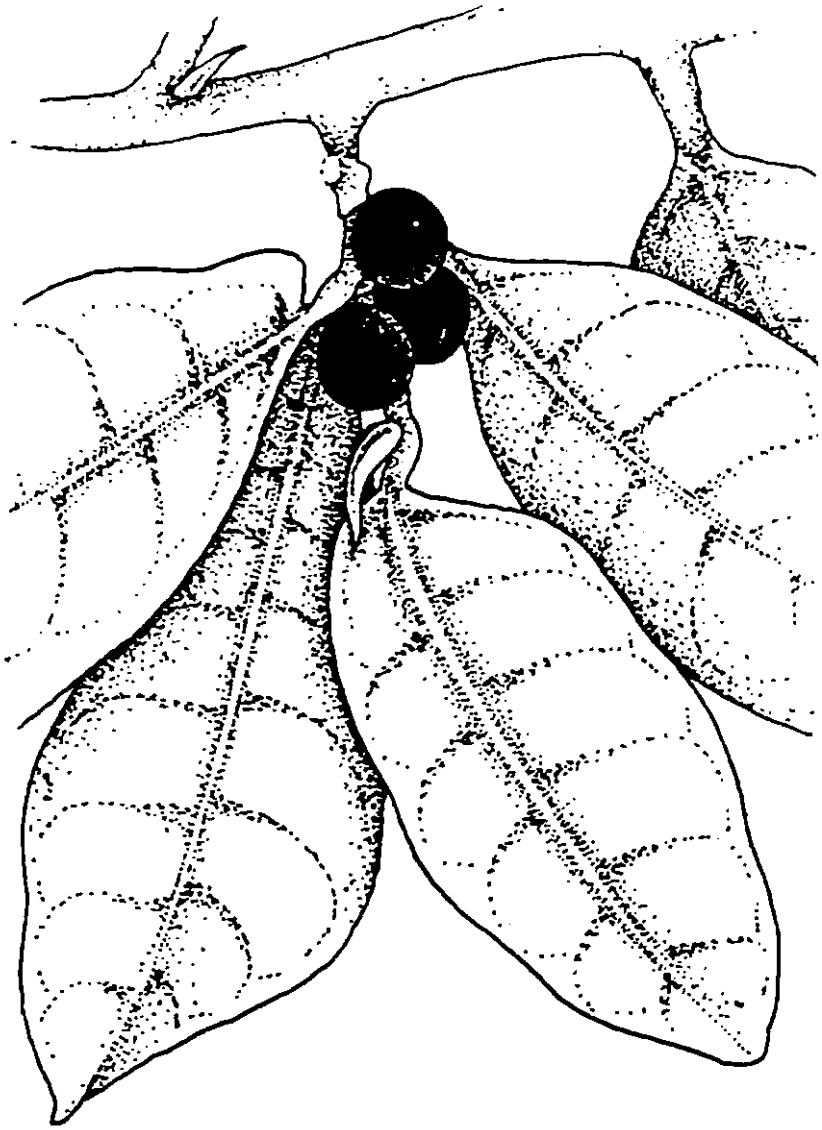
Samoan Name Maota (maota mamala)	**Growth Habit** Large tree; trunk thick; bark smooth; wood pale, with garlic-like smell; very common in lowlands.
Scientific Name *Dysoxylum samoense* A. Gray	**Medicinal Uses** • Leaves, flowers and other plant parts, taken internally for aitu medicine (p. A5)



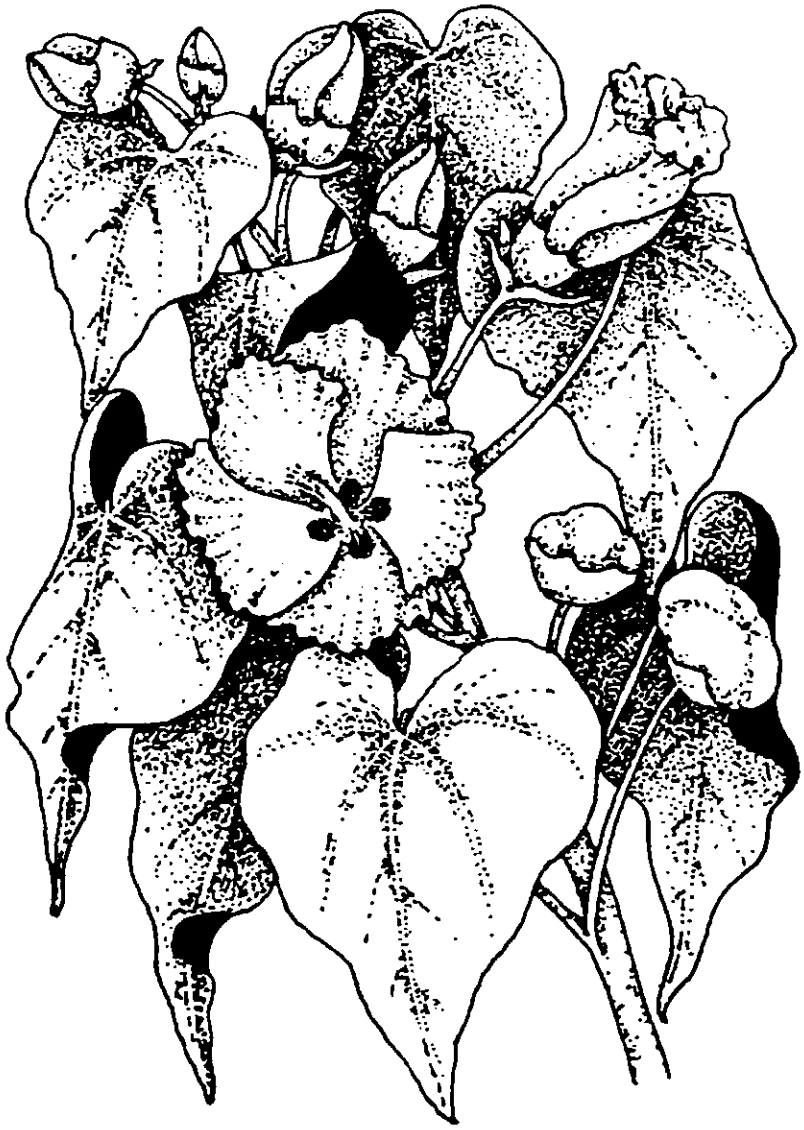
Samoan Name Masame	**Growth Habit** Small tree; flowers yellow-green; fruit flattened, globose; seeds red; common in disturbed areas.
Scientific Name *Glochidion ramiflorum* Forst. f.	**Medicinal Uses** • Inner bark taken internally to induce late menstrual flow (p. A4)



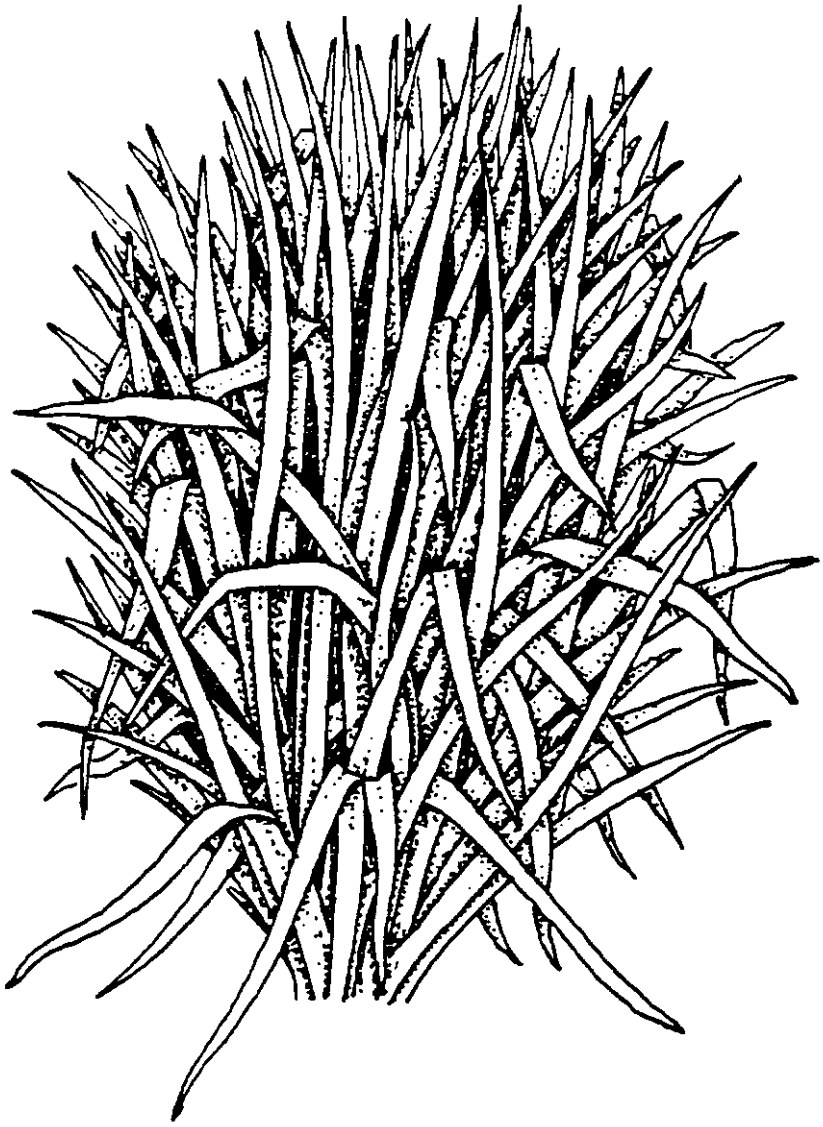
Samoan Name Matalafi	**Growth Habit** Shrub about 6 feet (1.8 m) high; leaves opposite, elliptical, acute at both ends; flowers white.
Scientific Name *Psychotria insularum* A. Gray	**Medicinal Uses** • Leaves, together with nonu, as a poultice for mumu fau pu'e (p. A8) • Leaves used as poultice for mumu filogia (p. A8) • Leaves, together with fue sina, taken internally and used externally for pu'ai toto (p. A10)



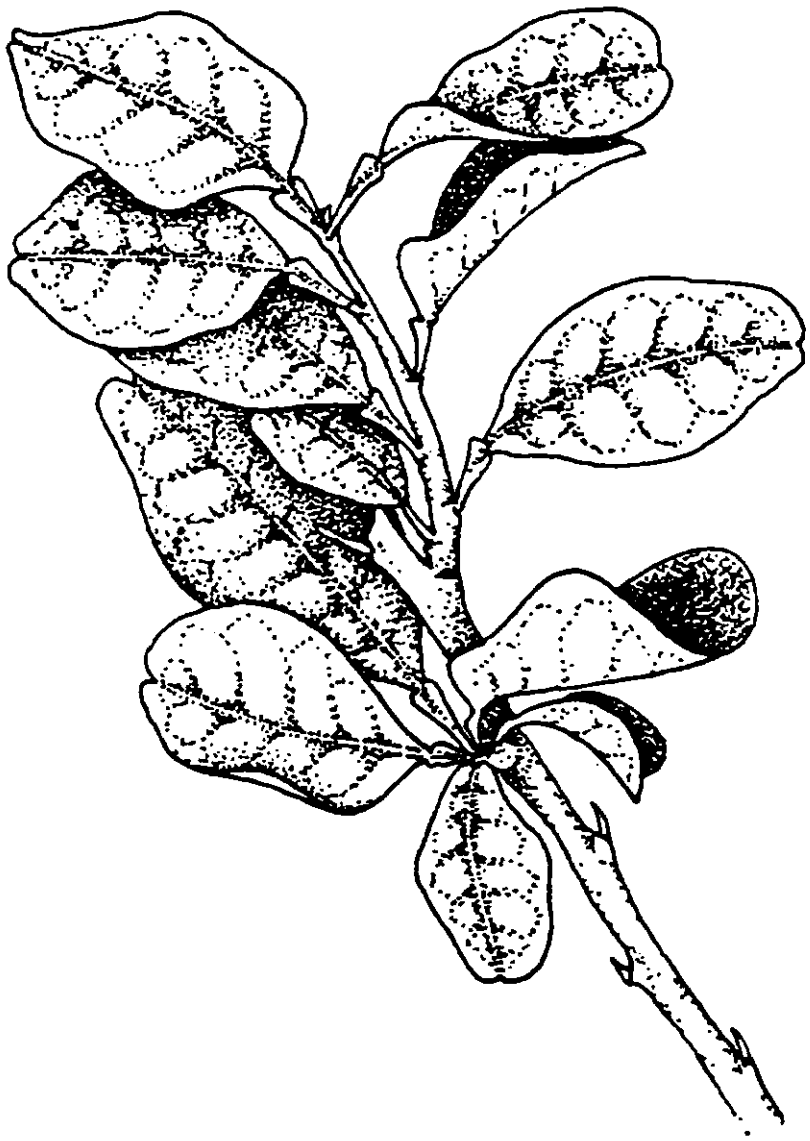
Samoan Name Mati	**Growth Habit** Slender shrub or small tree; leaves alternate; fruit round, yellow or orange; common in coastal and hill forests.
Common Name Wild fig	**Medicinal Uses** • Juice of inner bark instilled into eye for ma'i mata (p. A4)
Scientific Name *Ficus tinctoria* Forst. f.	



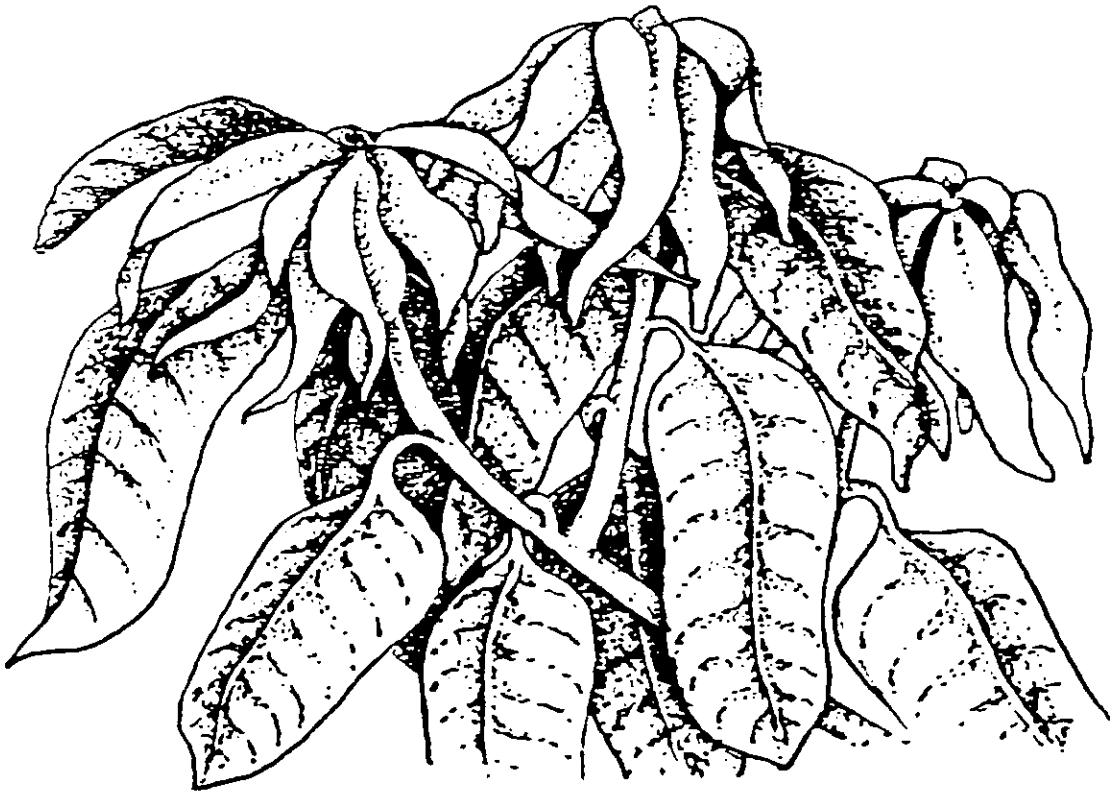
Samoan Name Milo	**Growth Habit** Common seashore tree; yellow cup-shaped flowers; seed capsule hard and round.
Common Name Pacific rosewood	**Medicinal Uses** • Juice of the leaves instilled into eye for eye injury (p. A6) • Inner bark taken internally for general malaise, numbness of legs.
Scientific Name *Thespesia populnea* (L.) Sol. ex Cor.	



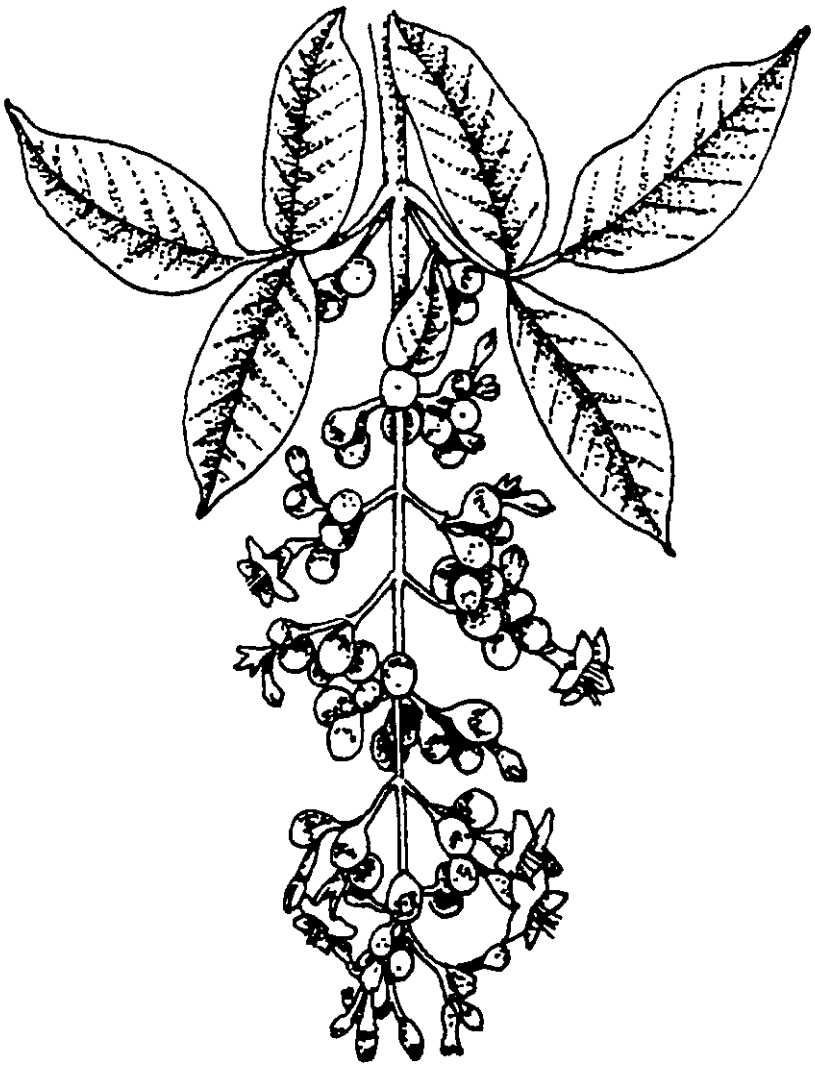
Samoan Name Moegalo	**Growth Habit** Perennial grass; grow in clumps about 2 feet (0.61 m) high; blades bent down; leaves and roots lemon scented.
Common Name Lemon grass	**Medicinal Uses** • Leaves chewed and juice swallowed for sore throat and common colds (p. A1)
Scientific Name *Cymbopogon citratus* Stapf	



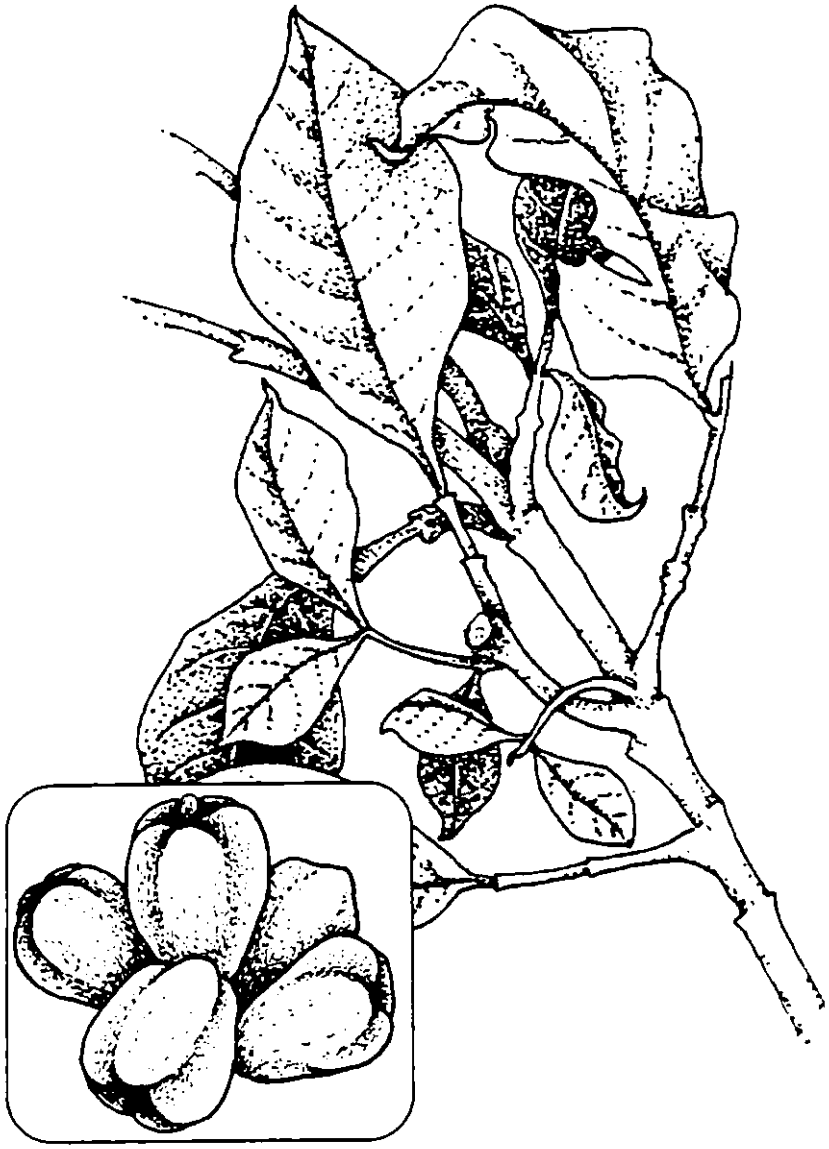
Samoan Name Moli'aina	**Growth Habit** Medium-sized orange tree with few thorns.
Common Name Orange	**Medicinal Uses** • Inner bark together with polo feu, 'ava, and fisoa, taken internally for mumu tuaula uli (p. A9)
Scientific Name *Citrus sinensis* (L.) Osb.	



Samoan Name Moso'oi	**Growth Habit** Medium-sized forest tree; flowers in umbels, very fragrant and yellow.
Common Name Perfume tree	**Medicinal Uses** • Inner bark as a laxative (p. A5) • Inner bark as aitu medicine to ease difficult childbirth (p. A5)
Scientific Name *Cananga odorata* (Lam.) Hook. f. and Thoms.	



Samoan Name Namulega	**Growth Habit** Small tree; leaves 3–5 lobed; flowers small, light purple; fruit a small black drupe.
Scientific Name *Vitex trifolia* L.	**Medicinal Uses** • Inner bark taken internally for sela (p. A10) • Inner bark taken internally to produce sweating. • Inner bark in paste form used externally for skin ulcers.



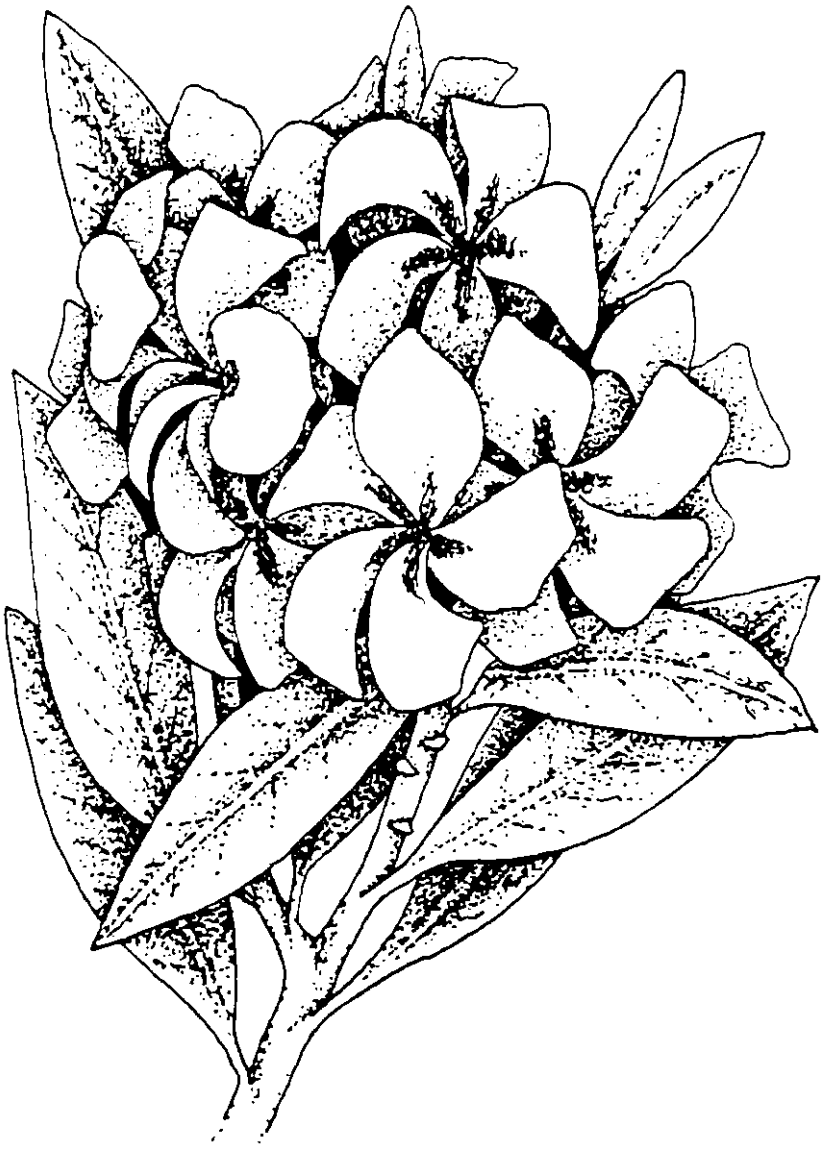
Samoan Name Nonu fi'afi'a	**Growth Habit** Medium-sized tree; flowers few, dark red (rarely white); fruit red or white; one seeded, juicy and edible.
Common Name Malay apple	**Medicinal Uses** • Inner bark together with vi and 'o'a, taken internally for gastrointestinal disease (p. A9)
Scientific Name *Syzygium malaccensis* (L.) Merr. and Perry	

Samoan Name Nonu vao	**Growth Habit** Small tree; branches 4-angled; leaves opposite; flowers white on a fleshy, round, head-like cluster; fruit globose to ovoid, strong smelling.
Common Name Indian mulberry	**Medicinal Uses** • Fruit, together with ufi, taken internally for diarrhea (p. A5) • Leaves chewed for sore throat (p. A1) • Leaves, together with matalafi, used externally for mumu fau pu'e (p. A8) • Leaves, together with ulu manu'a, used externally for mumu lele (p. A8) • Inner bark, together with ti, used externally for mumu tatau (p. A8)
Scientific Name *Morinda citriflolia* L.	

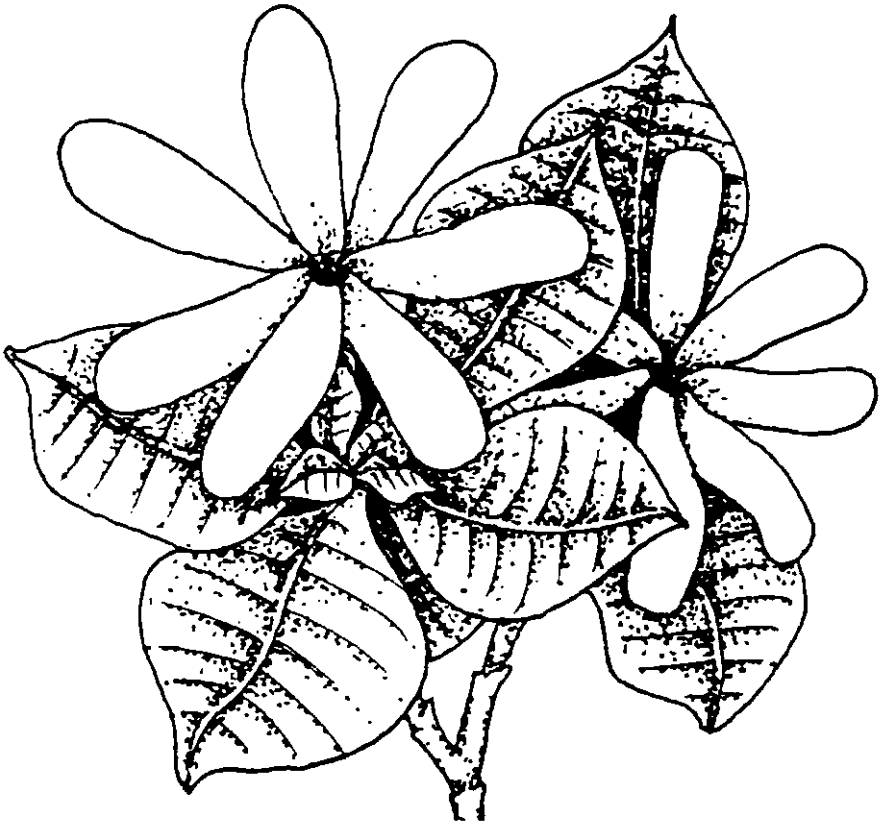
Samoan Name 'O'a	**Growth Habit** Large tree; leaves alternate; trifoliate; common in lowlands and plantations.
Scientific Name *Bischofia javanica* Bl.	**Medicinal Uses** • Inner bark, together with vi and nonu, taken internally for gastrointestinal disease (p. A9) • Bark for pala ga'au (p. A9) • Leaves for tu (p. A12) • Leaves used externally for ila fa'au (p. A2) • Leaves used externally for mata pa'ia (p. A6)

Samoan Name 'Ofe Samoa	**Growth Habit** Cultivated Polynesian bamboo different from the 'ofe fiti.
Common Name Samoan bamboo	**Medicinal Uses** • Leaf ash mixed with Samoan oil for burns (p. A7)
Scientific Name *Schizostachyum glaucifolium* (Rupr.) Munro.	

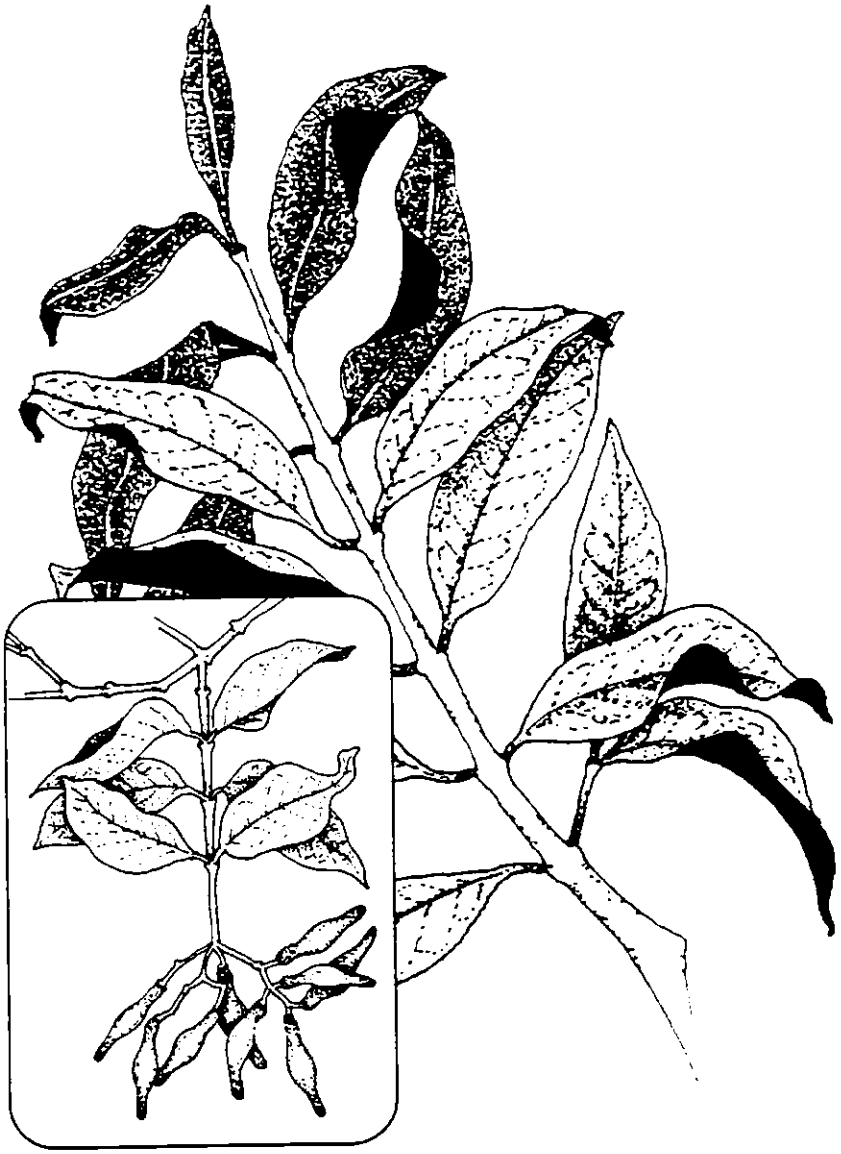
Samoan Name Polo fe'u	**Growth Habit** Erect, branching shrub; small fruits bright red and very pungent when ripe.
Common Name Chili pepper	**Medicinal Uses** • Chewed leaves used externally for carbuncle and abscesses (p. A10) • Leaf pulp applied to wounds to stop bleeding • Fruit, together with 'ava, fisoa, and moli 'aiga, taken internally for gonorrhea (p. A4)
Scientific Name *Capsicum annuum* L.	



Samoan Name Pua	**Growth Habit** Spreading shrub or tree; thick, glabrous branches; leaves long, clustered near ends of the branches; flowers pink or yellow and white, very fragrant.
Common Name Frangipani, plumeria	**Medicinal Uses** • As aitu medicine for mata fa (p. A6)
Scientific Name *Plumeria rubra* L.	

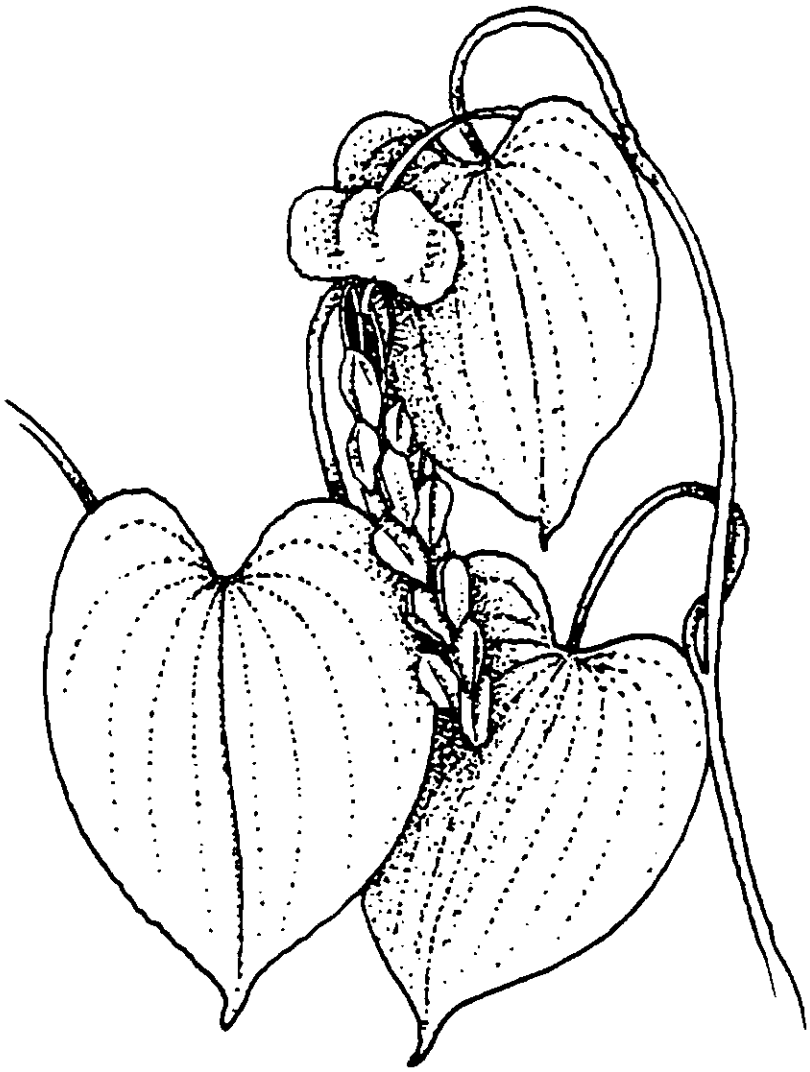


Samoan Name Pua Samoa	**Growth Habit** Shrub; leaves opposite, long dark green and glossy; flowers white, very fragrant.
Common Name Tahitian gardenia	**Medicinal Uses** • Leaves taken internally for diabetes (p. A11); generally used for "cleansing the blood" in prenatal care.
Scientific Name *Gardenia taitensis* DC.	

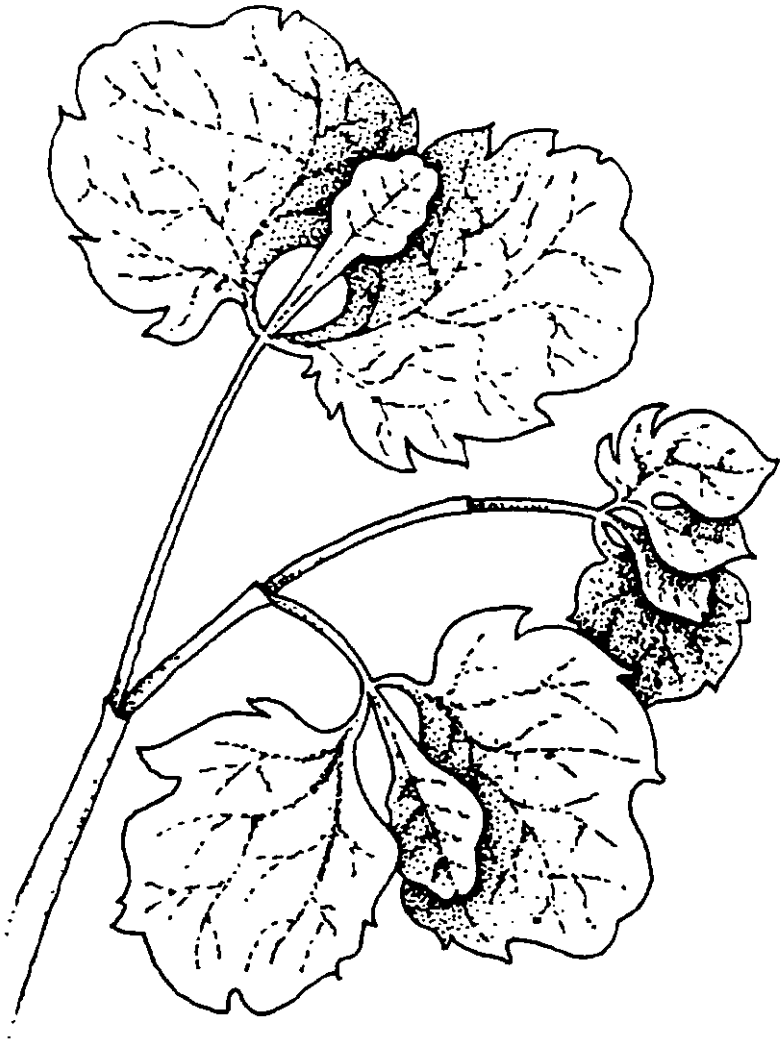


Samoan Name Seasea	**Growth Habit** Shrub or small tree; leaves elliptic, oblong; flowers small, sweet perfumed.
Scientific Name *Syzygium corynocarpum* (A. Gray) C. Muell.	**Medicinal Uses** • Leaves taken internally for fever (p. A1) • Leaves used topically for relief of inflammation of mumu (p. A7)

Samoan Name Sefa	**Growth Habit** Perennial grass; common in shady moist places, becoming a weed in plantations.
Scientific Name *Centotheca lappacea* (L.) Desv.	**Medicinal Uses** • Entire plant taken internally for puna toto (p. A10)

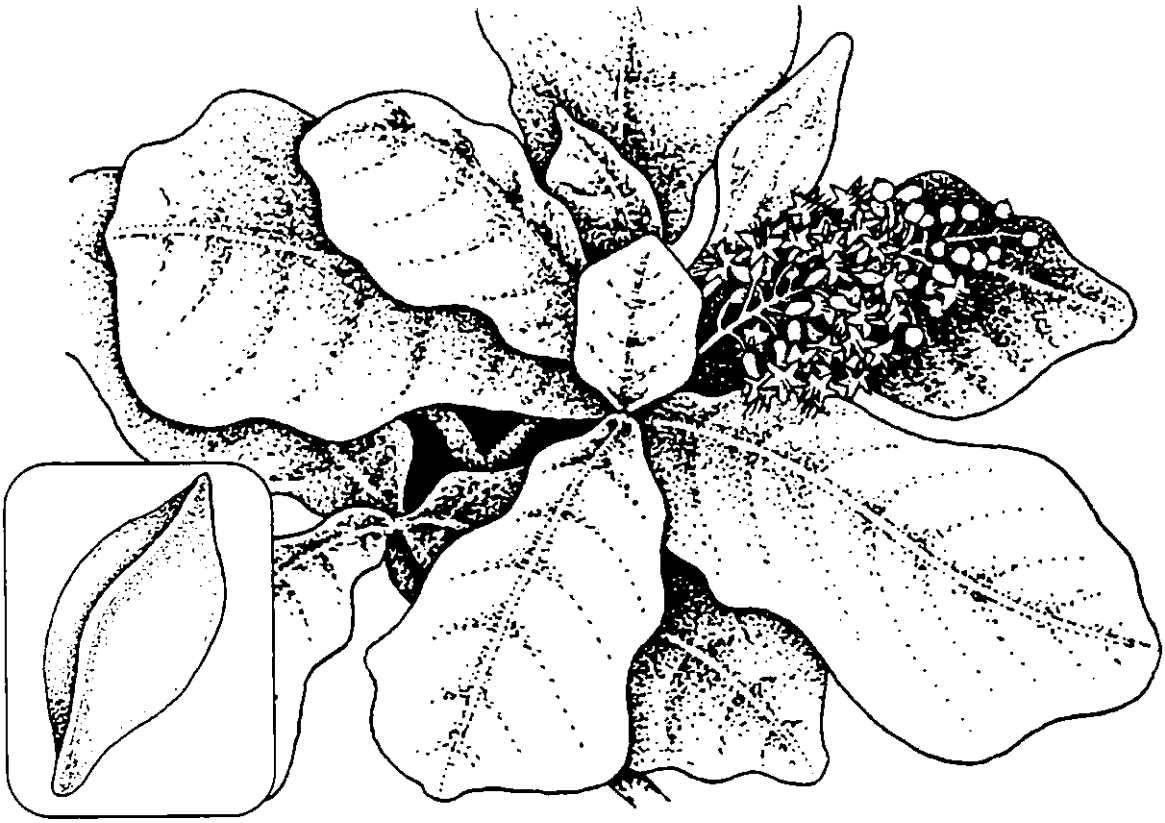


Samoan Name Soi	**Growth Habit** High climbing vine; stems twining; leaves heart shaped alternate; aerial tubers green or purplish, round, acrid. Common in thickets.
Common Name Bitter yam	**Medicinal Uses** • Aerial tubers and leaves used externally for boils or abscesses (p. A4)
Scientific Name *Dioscorea bulbifera* L.	

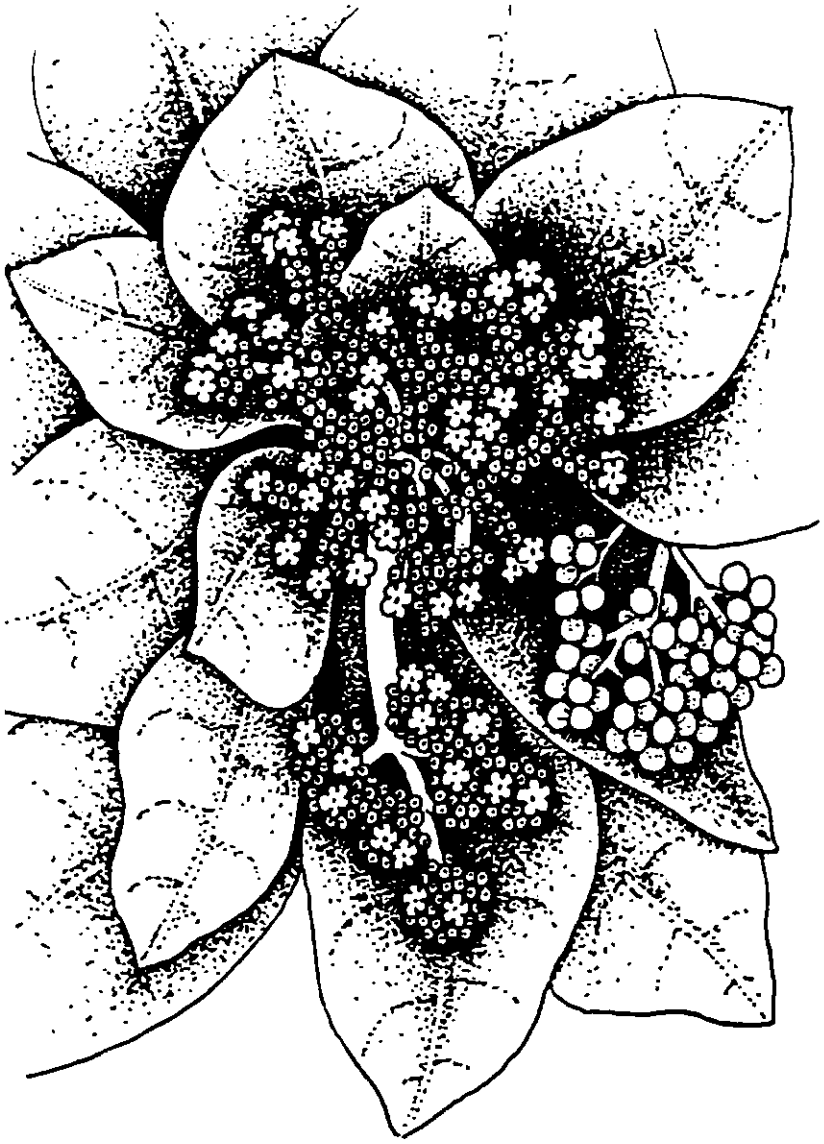


Samoan Name Tagitagi	**Growth Habit** Small cultivated shrub.
Scientific Name *Polyscias spp.*	**Medicinal Uses** • Juice of leaves used externally to promote healing of fulamauau (p. A2)

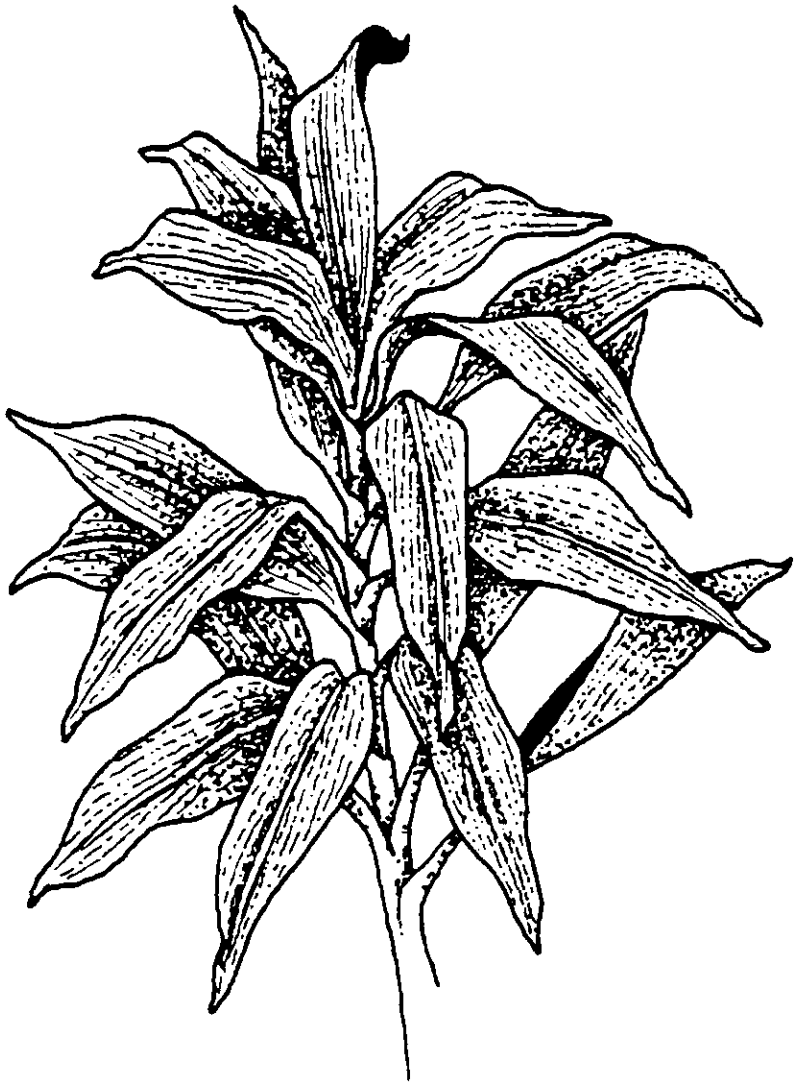
Samoan Name Talafalu	**Growth Habit** Small tree; flowers small, white, in clusters; leaves with oil glands; common in open forests and foothills.
Scientific Name *Micromelum minutum* (Forst. f.) Seem.	**Medicinal Uses** • Leaves used externally for headaches (p. A12) • Inner bark taken internally for stomach gas (p. A5)



Samoan Name Talie	**Growth Habit** Large broad tree; common on beaches; leaves large, turning red shortly before falling; small flowers; fruit flat and angular, kernel edible.
Common Name Tropical almond	**Medicinal Uses** • Inner bark taken internally for childhood diseases of the intestinal tract, and diphtheria.
Scientific Name *Terminalia catappa* L.	

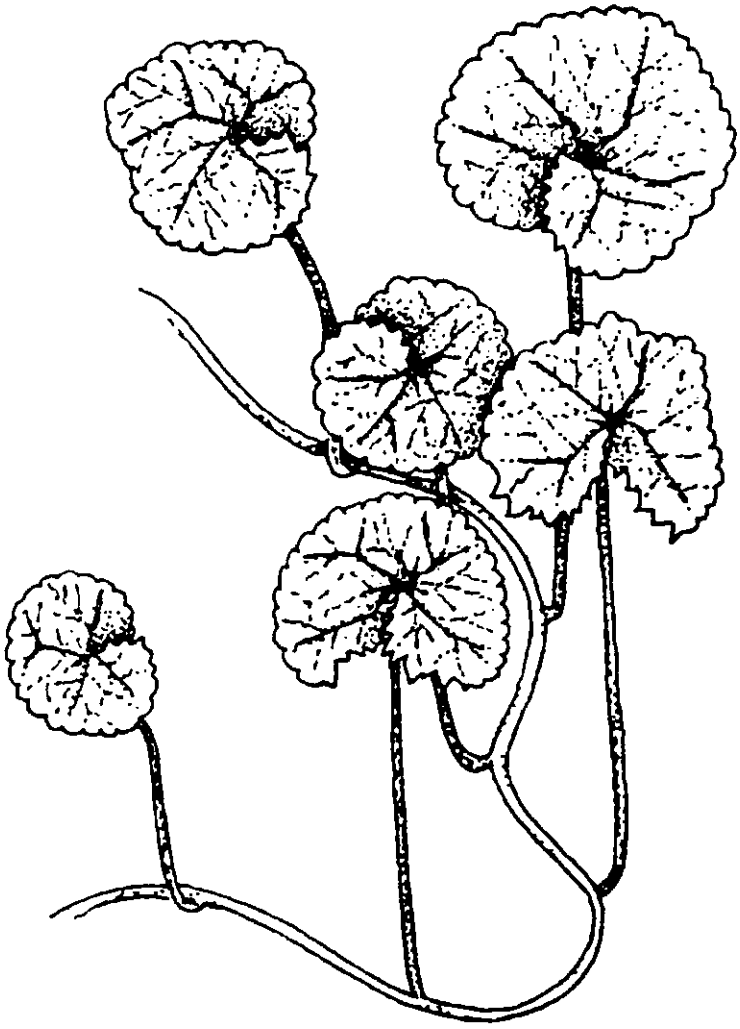


Samoan Name Tausuni	**Growth Habit** Small tree; leaves densely silk-hairy; alternate, fleshy, appearing silvery; flowers small in branched cymes; near seashore.
Common Name Beach heliotrope	**Medicinal Uses** • Young leaf dripped into ear for fuafua momono (p. A2) • Leaves, together with pue sele la, for manava mamau (p. A5)
Scientific Name *Tornefortia argentea* L. f.	



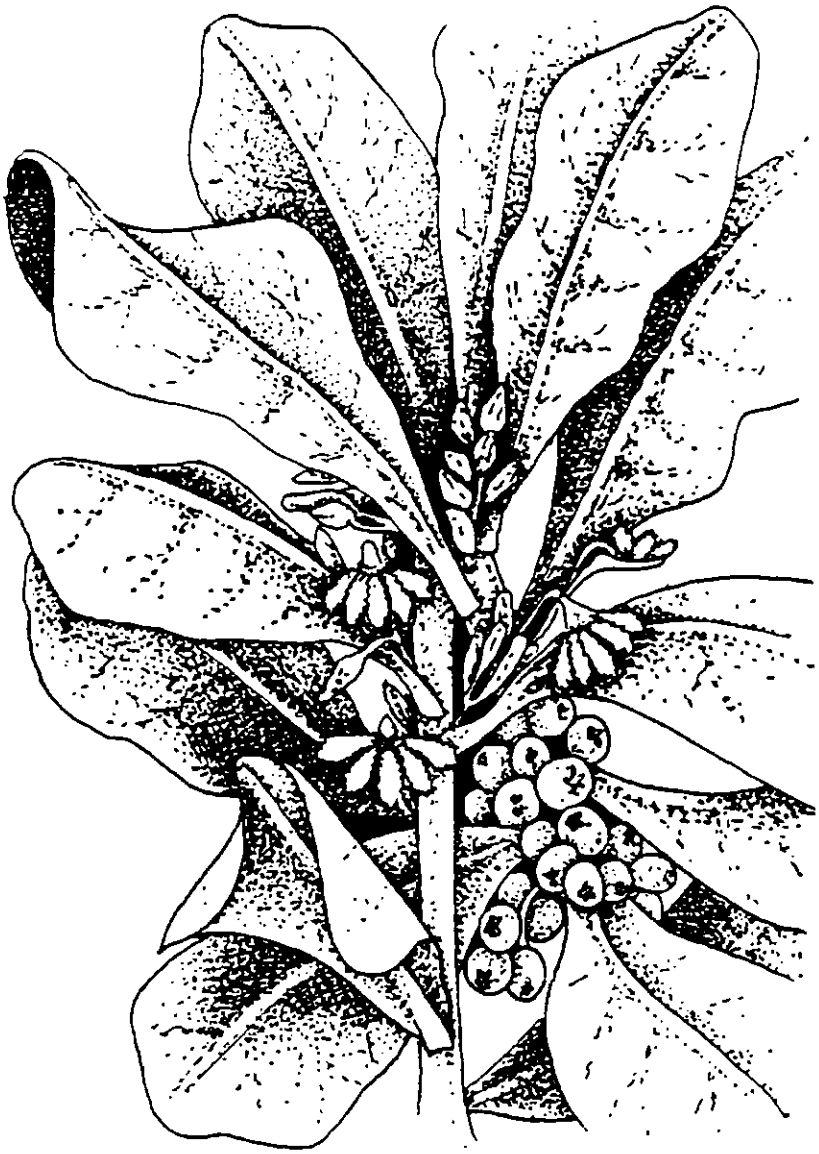
Samoan Name Ti	**Growth Habit** Erect shrub, 6–8 feet (1.8–2.4 m) high; stem often unbranched; leaves smooth, lanceolate; flowers, white or pink in large, branching clusters; berries globose and red; root tuberous, edible after cooking.
Common Name Ti plant	
Scientific Name *Cordyline fruticosa* (L.) Chev.	**Medicinal Uses** • Leaves together with a'atasi and niu ui, internally for ila (p. A2) • Leaves externally for ma'i mata (p. A4) • Leaves externally for mumu filogia (p A8) • Leaves with nonu for mumu tatau (p. A8)

Samoan Name Toa	**Growth Habit** Tall leafless tree, bearing green needle-like stems; wood hard and red; cultivated in coastal areas.
Common Name Ironwood	**Medicinal Uses** • Inner bark taken internally for cough (p. A11) • Inner bark taken internally for hypertension (p. A13) • Inner bark taken internally for asthma (p. A10) • Inner bark taken internally for diabetes (p. A10)
Scientific Name *Casuarina equisetifolia* L.	



Samoan Name Togo	**Growth Habit** Perennial herb, aromatic, stemless; long runners; leaves in a rosette and dentate; sunny to shady places, gardens, near base of coconut palms.
Common Name Asiatic pennywort	**Medicinal Uses** • Leaves used internally and externally for mumu afi (p. A7) • Leaves used together with fue sina internally and externally for pua'i toto (p. A10) • Leaves used dripped into nostrils for ulu tiga tuitui (p. A13)
Scientific Name *Centella asiatica* (L.) Urb.	

Samoan Name Toi	**Growth Habit** Medium to large tree; leaves alternate, bright green above, whitish below; flowers small, white, numerous, in branching clusters; fruit purple; bark is fragrant (similar to sasaparilla).
Scientific Name *Alphitonia zizyphoides* (Spreng.) A. Gray	**Medicinal Uses** • Inner bark taken internally for cough (p. A11) • Inner bark taken internally for lopoto (p. A4) • Inner bark taken internally together with ma'a nunu, for sela (p. A10)

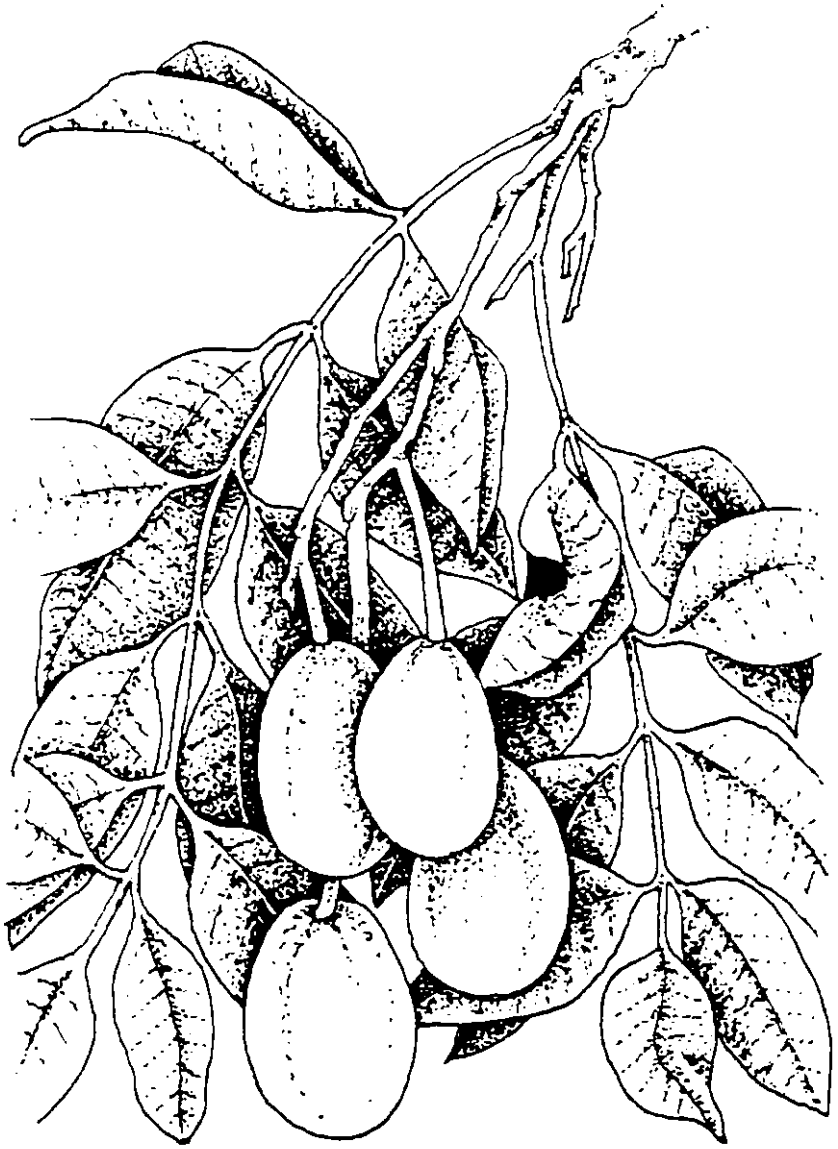


Samoan Name To'i to'i	**Growth Habit** Short shrub; pith large; leaves alternate, with hairy tufts, somewhat fleshy white fruits; common in coastal areas.
Scientific Name *Scaevola taccada* (Gaertn.) Roxb.	**Medicinal Uses** • Inner bark together with juice of aʻile, used externally for fulamaua (p. A2) • Leaves used externally for utu (p. A13)

Samoan Name U	**Growth Habit** Grass; stems tall, reed like; long bent leaves; tall plumes. Stems used as roofing material.
Common Name Reed	**Medicinal Uses** • Juice from stem instilled into eye for mata pa'ia (p. A6) • Juice from stem instilled into eye for moa lili (p. A7)
Scientific Name *Miscanthus floridulus* (Labill.) Warb.	

Samoan Name Usi	**Growth Habit** Shrub about 3 feet (0.9 m) high; leaves opposite, 3-lobed; flowers small; whole plant pungently aromatic.
Scientific Name *Euodia hortensis* Forst. f.	**Medicinal Uses** • Leaves crushed in hot water for bathing a person for aitu (p. A5)

Samoan Name Vao lima	**Growth Habit** Perennial, stoloniferous grass; very common and dominant as a lawn grass.
Common Name T-grass	**Medicinal Uses** • Flower heads chewed to use as a poultice for facial pimples (p. A1)
Scientific Name *Paspalum conjugatum* Berg.	



Samoan Name Vi	**Growth Habit** Large tree; leaves alternate, pinnately compound; flowers in crowded clusters; fruit large, fleshy, edible; one bony, spiked seed.
Common Name Otaheite apple	**Medicinal Uses** • Inner bark, together with nonu fi'afi'a and 'o'a, taken internally for gastrointestinal disease (p. A9) • Leaves taken internally for failele gau (p. A1)
Scientific Name *Spondias dulcis* Park.	

REASONS FOR VILLAGE HEALER PREFERENCE

Medical professionals find it difficult to understand; in this age of scientific reasoning, improved education, and general public enlightenment; why many people still prefer to seek the services of a taulasea rather than avail themselves of high quality scientific medical care as delivered at the LBJ Tropical Medical Center. The truth is, that in many instances the village healer is more capable of producing consumer satisfaction than the hospital. This stems in part from the various reasons why people seek help, and the "felt needs" of people when ill. It also has much to do with what people have come to expect from scientific medicine in terms of cures. The latter is influenced by the changing nature of illness and a misunderstanding of the capabilities of modern medicine.

Studies have shown that between 60–80 percent of the people who seek primary medical care have nothing physically wrong with them, or have symptoms of a minor nature such as a common cold, which would not benefit from medical intervention. For these people, what is really needed is sympathy and understanding; a feeling that someone cares that they feel bad and is willing to listen to their complaints and perhaps give them some reassurance that nothing seriously is wrong, plus some "token" medicine or lomi lomi to justify their feelings of illness. The Samoan village healer is vastly better able to provide this kind of care than the hospital outpatient department of the LBJ Tropical Medical Center.

This detail is not to be taken lightly since a significant aspect of medicine is the early return of people to a productive role in society and much of the time lost from work is due to people who just plain "don't feel well". The taulasea has few patients and has enough time to talk with each one, listen to all their complaints, possibly give the patient a drink of some soothing herb medicine, and apply lomi lomi if needed.

The doctor/patient relationship between the village healer and his client in these situations is the significant factor; not the medicine itself, which may have no pharmacological activity whatsoever. This is in sharp contrast to the environment of the outpatient clinics that are invariably crowded with patients, (many of whom are those who only "feel ill"), forcing the doctors there to spend only a brief time with each patient, thus contributing to the inevitable feeling that "the doctor doesn't really care about how the people feel". This environment, in turn, injures the doctor's feelings of accomplishment and negates feelings of personal commitment to the patient. It makes the doctor feel as though he or she is not practicing medicine on a person-to-person level, but is only a part of the institutional practice of medicine. This is contrary to the Samoan culture, and the feeling is carried psychologically to the patient. The emphasis in this setting is on the prescription of medicine rather than on a personal relationship between the doctor and the patient.

A great deal is to be said also for the lomi lomi associated with much of the village healers' treatments. This "laying on-of-hands", so to speak, is a significant part of the treatment since it has much to do with imparting a feeling of reassurance to the patient, hence assisting a rapid recovery to a productive role.

The factor of patient expectations is also important. People have been led to expect medical miracles from scientific medicine, and its "magic pills". Earlier successes in the treatment and/or eradication of infectious diseases like yaws, T.B., diphtheria, filariasis, acute infections, etc., have led people to expect instant cures for all illnesses by pills, or shots. The truth is a large proportion of serious illnesses are due to chronic illness; illness that in most cases cannot be cured, and can only be controlled through prolonged management of the patient's diet and activities.

Through education, people need to become aware that scientific medicine does not have a medical cure for every illness and that the control of many illnesses takes time, including the cooperation of both patient and doctor. To try to sell modern medicine as a "cure-all" while denigrating all village treatment as completely useless does great injury to the confidence of the local people in the Medical Centers' ability to meet their health and medical needs, particularly when these same people can recount personal instances when they were not satisfied with the results of hospital medicine. In the final analysis, the consumers' evaluation of the quality of medical care can be reduced to the simple question of "does it work?"

On the other hand, one cannot deny that there are grave dangers associated with the indiscriminate use of bush medicines in treating illness. The bush-doctor, lacking the sophisticated diagnostic tools available to medical doctors, is ill equipped to recognize serious disease. Using traditional skills, the 'bush-doctor' may prolong ineffective treatment in such serious conditions as cancer, diabetes, eye diseases, serious infections, tetanus, etc.; that can lead to conditions that are much more difficult to treat, and even to untimely death, or disability. Some way of dealing with this unnecessary danger to peoples' health must be worked out between the hospital and the taulasea.

Evidence of this very real danger is frequently seen at the pediatric clinic of the LBJ Tropical Medical Center. Many children are encountered there who have been treated ineffectively in the village with 'bush-medicine' for gastrointestinal disease and other conditions. When finally brought to the hospital, many of these children, some only infants, are dehydrated, acidotic and suffering from electrolyte imbalance. Sometimes they are so gravely ill when seen by the medical doctor that nothing can be done to help them, and they become another unnecessary death statistic. Other children have been admitted to the hospital with symptoms suspected of being the direct result of the ingestion of bush-medicine.

Few, if any, cases of actual acute bush-medicine poisoning, however, are seen. This is possible because of the way in which indigenous medicines have evolved. The medicines being used are the results of a trial and error process, which over many years, has enabled the taulasea to identify and discard those treatments that produced easily recognizable adverse reactions. No information is available on the long term, or insidious effects of bush-medicine ingestion.

Potential danger is also associated with the use of fofo and lomi lomi as a treatment process. The rupture of internal abscesses is a possible result of over vigorous massage. Also, the use of fofo for broken bones, which have not been properly set, can result in a person being crippled for life, or in the eventual loss of the limb.

CONCLUSION

Indigenous village medicine has been, is being, and will continue to be practiced in American Samoa so long as the village healer continues to meet those "felt needs" of the population that cannot be effectively addressed by the government health services system.

Much can be learned from examining the reasons why people continue to seek the help of the village healer. This knowledge could aid in the development of a more culturally acceptable mode of delivering government health services without sacrificing high quality, and scientifically sound medical care.

Admittedly, constraints such as small numbers of medical staff, limited patient care time, high staff turnover, and general resistance to innovation in the delivery of institutional government medicine make such change difficult to achieve.

Perhaps some degree of integration of the natural and humanistic qualities of traditional medicine with the scientific knowledge and technology of modern medicine can eventually be attained within the ultimate result of improved care for the people. This will be difficult because of the pioneering nature of such an endeavor and the lack of any previous body of evidence to support the idea of a potentially successful marriage of the old and the new. To be successful it would take the full commitment of the highest government authority, as well as a willingness of government medical staff to cooperate in such a social experiment, as well as a massive coordinated public education program.

The obstacles may be insurmountable, and only a marginal degree of success might be expected in any event. Nevertheless, the apparent benefits to be derived from the preservation and utilization of the best elements of the traditional healing art argue strongly for continued research and experimentation in this potentially fruitful and extremely interesting area.

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APPENDIX

Samoan Illnesses and Treatment

NAME:	**Ate fefete (Au pa)**
DESCRIPTION:	Enlarged liver; (jaundice) yellow eyes and skin; constipation; yellow urine; very serious; many patients die who have this. Occurs mostly in adults, very unusual in children. Thought that liver and gall bladder juice spread all over in body.
TREATMENT:	Chop 10 leaves of the ateate very fine. Mix six cups of water with leaves and drink a glassful four times a day. Do not eat sweets for a week.

NAME:	**Fa'ai tiga**
DESCRIPTION:	Sore throat, pharyngitis
TREATMENT:	Chew the leaves of the nonu and swallow the juice.
ALT:	Chew the ripe fruit of the 'apu initia and swallow the juice.
ALT:	Scrape the inner bark from the ku'ava and drink the expressed juices.
ALT:	Chew leaves of the moegalo, two or three times a day and swallow the juices. For children, pound the leaves and dilute the juice with a little water for them to drink.

NAME:	**Failele gau (To'ala fanau)**
DESCRIPTION:	Postpartum illness; stomach pains, numbness of the feet, chills, malaise, fever. This is caused because the ave (branches) of the to'ala are out of place due to the delivery of the baby.
TREATMENT:	Fofo and mili mili (massage and gently stroke) the body to put the to'ala branches back in place.
ALT:	Take the inside bark of the fisoa tree, pound very fine. Mix with a little hot water and drink until symptoms stop.
ALT:	Take 20 leaves of the vi tree and chop them very fine; put in a clean cloth and mix with water; drink.
NOTE:	Treatment for failele fasia. This has the same symptoms as failele gau except that it is caused by the aitu.

NAME:	**Fiva**
DESCRIPTION:	Fever
TREATMENT:	Pound young leaves of the seasea. Squeeze the juice into water and drink.
ALT:	Inner bark of the namulega. Squeeze into water and drink.
ALT:	Pound leaves of the lama; squeeze out 1 to 2 teaspoonfuls of the juice and give undiluted (for childhood fever and convulsions).

NAME:	**Fua fua 'ini**
DESCRIPTION:	Facial pimples, acne
TREATMENT:	Chew several of the mature flowers of the vao lima grass and apply the chewed pulp and juice to the pimple.

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NAME: **Fua fua momono**
DESCRIPTION: Very painful ear; throbbing; no drainage; furuncle in ear canal, or nostril.
TREATMENT: Take the leaves of the fasa (laufala), dried banana, or any common leaf. Make a cone from it (momono). Poke with the momono very lightly around the outside of the ear several times. Repeat twice a day, 10 times.
ALT: Make a horn from a leaf, blow very gently three times into the ear. Then take young leaves of the tausuni tree; chop them very fine; put in a clean cloth; squeeze some juice into the ear; and massage the head with the juice.

NAME: **Fulamaua**
DESCRIPTION: Palpable deep abscess; when one goes away another appears.
TREATMENT: Crush together 12–20 leaves of the fisoa tree and the vine, fue sina. Mix with water and give 1/2 glass for adults and about two tablespoons for a child. Use twice a day. Also apply the juice from the crushed leaves directly to the abscesses.
ALT: Scrape the immature meat from a very young ai'ile. Express the juice into water from the scraped inner bark of to'ito'i. Boil the ai'ile and to'ito'i together and place the liquid on the affected body part while the liquid is still warm.

NAME: **Gutu malu**
DESCRIPTION: Thrush, stomatitis, sores inside the mouth and lips, white ulcers.
TREATMENT: Pound the central root of the very young niu and apply to the sores.

NAME: **I'atolo**
DESCRIPTION: Furunculosis of scalp; small pimples (pustules) starting on the scalp and extending sometimes to the face, back, chest, and shoulders. Occurs in infants 6–12 months in age.
TREATMENT: First rub Samoan oil onto the affected area. Then pass 10 leaves of the vine called lau i'atolo (*Stephania forsteri*) over the area counting 1, 2, 3, 4, 5. This is called "talo" and serves to wash away symptoms.

NAMES: **Ila**
DESCRIPTION: Intestinal diseases affecting children. Loose greenish stool. Child makes a face like trying to force a bowel movement. Red, sore anus.
TREATMENT: Pound leaves of the a'atasi and very small leaves of the ti vine. Mix the juice of these with the juice of the pounded husk of the niu'ui, and give to child to drink.

NAMES: **Ila fa'au tama (Ila sa)**
DESCRIPTION: Black spots on the baby coming from birth.
TREATMENT: Take leaves from the 'o'a tree and pound them together with about a cup of water. Strain and give to the baby three times a day. Massage the baby with the remains of the plant.

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NAME: **Ila mea**
DESCRIPTION: The back of the head has a red spot. It is not present at birth but develops after three to six months. It is presumably caused by an aitu.
TREATMENT: Lay the baby on a mat. Carefully drag the mat and the baby around the floor of a genuine Samoan fale. Then lomi lomi the lower abdomen of the baby and the ila mea will go away.
NOTE: Informed that ila mea occurs in babies up to five months of age. Ila fale similar but without the red spot occurs in babies six months older. If the baby is between five and seven months it could also be a mumu so care should be taken in observing the symptoms.

NAME: **Ila tatau**
DESCRIPTION: Birthmark
TREATMENT: May be removed by bringing the person with the birthmark to someone who has a tatoo and performing the following: take a tattooing tool and lightly tap the tatoo, then the birth mark. Repeat three or four times.

NAME: **Lafa**
DESCRIPTION: Ringworm-like rashes (tinea circenata)
TREATMENT: Macerate leaves of the la'au failafa and rub the juice from the pulp onto the affected area. Continue several times a day until cured.
ALT: Pound the root of the ava niu kini. Take the pulp and bandage it to the affected area for 30 minutes only. Remove and wash the affected area well with warm water.

NAME: **Lanuia, Fa'a ifo aluga**
DESCRIPTION: Lanuia in newborn babies is fluid and congestion in the nasal sinuses. Lanuia is the early and more minor nasal and sinus congestion while Fa'a ifo aluga is the more pronounced and later stages of the same, also involving infection of nasopharynx; sinusitis.
TREATMENT FOR ADULTS: Pound together four roots of the ava pui vao, four roots of the lau magamaga, two roots of aloalo, and two leaves of the tipolo (citron). Express the juice through a clean cloth into warm water. Give 1/2 glass of the liquid to the patient and 1/2 glass to the taulasea.
TREATMENT FOR CHILDREN: Pound together two roots ava pui vao, two roots lau magamaga, two roots aloalo, and two tipolo. Give only one teaspoon twice a day to children.
ALT: Squeeze the juice from the husk of a green coconut. Give a teaspoonful, orally every four hours. Note: the coconut must not be thrown down, but instead, be carried down from the tree.

NAME: **Lavea naifi, Lavea ma fo'ifo'i, etc.**
DESCRIPTION: New wounds or infected wounds
TREATMENT: To stop bleeding, pounded fue saina; apply juice of pounded tagitagi leaves. Crush 10–20 leaves of the cucumber and apply to the wound. Good for very large or infected wounds.

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NAME:	**Lopoto**
DESCRIPTION:	Condition of late menstrual period in a young unmarried woman (who is not pregnant). Also in the case of a young girl whose first menstrual flow has not occurred.
TREATMENT:	To start flow, scrape the inside bark from the masame tree; pound; mix with water; drink. Repeat daily until flow starts.
ALT:	Scrape the inner bark of the toi. Express the juice of the bark through a clean cloth into water and have the girl drink it.

NAME:	**Ma'i afi**
DESCRIPTION:	Gonorrhea
TREATMENT:	Pound together 12 fruit of the polo feu, 4 small underground roots of the ava, 24 leaves of the fisoa and the scraped inner bark of the moli 'aina. Squeeze out the juices and drink.
ALT:	Scrape the inner bark from the ateate; steep in water and drink the liquid. Do not eat sweets for three days.

NAME:	**Ma'i fulafula**
DESCRIPTION:	Boils
TREATMENT:	Scrape the skin from the fruit of the soi and apply to the boil. The leaves may also be pounded and used in the same way.

NAME:	**Ma'i gau**
DESCRIPTION:	Exhaustion and burning eyes with hot flushed feeling similar to working hard all day in the hot sun. Relapse fever.
TREATMENT:	Take 18 leaves of the fue manogi; pound them up; squeeze the juice into water through a clean cloth; and have the patient drink the liquid. Also pound leaves, mix them with water and bathe the patient's body with this.
ALT:	Scrape the inner bark of the mago and put in a clean cloth: place in boiling water; cool and have the patient drink the liquid.
ALT:	Scrape the inner bark of the namulega; wrap the shavings in a clean cloth and boil in water; cool and have the patient drink the liquid.

NAME:	**Ma'i mata**
DESCRIPTION:	Redness or soreness of the eye, conjunctivitis.
TREATMENT:	First consult a doctor in a hospital. If their treatment is not effective in two days, try the following remedy. Take skin off the young mati tree. Squeeze juice from the inner bark through a clean cloth and put one drop in each eye.
ALT:	Take 1 leaf of the vavae (Kapok tree), one side smooth, one rough. Fold in half and massage the eye, and the inside of the eyelid with the smooth side. Then massage outside of the eye with ti leaves.

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NAME: **Ma'i samoa**
DESCRIPTION: Symptoms caused by aitu, or aitu is impeding the healing process.
ALT: Scrape inner bark of the moso'o'i tree. Give the expressed juice to women during difficult childbirth to ease the delivery. Pound leaves of the a'atasi and instill juice into the eyes. Used after treatment of a disease by other medicine, designed to act on the disease by removing the associated aitu. Crush leaves of the maota in water with flowers and any other parts of the plant laying around. Have the patient drink the liquid. Chop leaves of the lau magamaga, mix with water and massage the entire body. Smash many leaves of the usi in hot water and bathe the patient's entire body.

NAME: **Ma'i tafafao**
DESCRIPTION: Patient shouting all day and night, very talkative, cannot sleep, red bloodshot eyes. Sleeping pills do not work. Caused by aitu.
TREATMENT: Take 10–40 leaves of the fue sina pound and mix in a glass of water. Rub the mixture all over the patient's body. Patient will calm down and sleep.

NAME: **Manava mamau (manava le mama)**
DESCRIPTION: Constipation; stomach ache, sweating. Stomach feels full and hard. Thought by one informant to be caused by bad circulation of the blood to the intestines thereby causing constipation. Also, temperature elevated in children.
TREATMENT: Pound five leaves of tausuni and fue sele la (one leaf for children to reduce fever) and strain through a cloth into 1/2 cup of water. For children, give one teaspoonful of the liquid. Also in children, administer a massage beginning at the head and working downward, using one fue sele la leaf.
ALT: Scrape the root of magele; squeeze juice into water; drink.
ALT: Inner bark of the moso'oi and drink.

NAME: **Manava tata**
DESCRIPTION: Diarrhea
TREATMENT: Pound root of very young esi, mix the juice with water and drink.
ALT: Scrape root of magele and pound very fine. Express juice into glass of water through clean cloth and drink.
ALT: Scrape the inner bark from the ku'ava and drink the expressed juice.
ALT: Scrape the inner bark from the talie and give two tablespoonfuls of the expressed juice undiluted to the child, once or twice daily.

NAME: **Manava tiga tele**
DESCRIPTION: Severe abdominal pain, difficultly in breathing, nausea, intestinal gas.
TREATMENT: Pound together four flowers (white) of the ava pui vao and four small roots of lau magamaga. Squeeze the juices through a clean cloth into water and have the patient drink. Scrape inner bark of the talafalu tree trunk. Squeeze into water and have the patient drink.

NAME: **Mata fa**

DESCRIPTION: Stye; abscess on the lower eyelid, or on the inside corner of the eye, accompanied by swelling, headaches and impaired vision. This is supposed to be a Samoan disease caused by the aitu and is therefore treated with a ritual. Some fofo add a medicine along with the ritual. Presumably the disease will be healed with a Samoan medicine but it is not clear whether a palagi medicine can be used with it.

TREATMENT: Take three leaves of a dried coconut frond. Point each leaf at the patient's eye (like a knife) then wave past his face. Do this four times (i.e., two days, once in the morning and once in the evening) and the abscess will be gone. This is why it is called mata fa.

ALT: The u'a was used before, but now diapers are used. Cover head and eyes and massage the eye very lightly through the diaper. Then fan the abscess with the diaper. Repeat twice a day for four days.

ALT: Take four leaves of pua, break each one separately in front of the eye. Take two young leaves of the nonu, mash or chew and put it in a clean cloth and drip it into the eye. Rinse in sea water a couple of hours later. Repeat procedure for two to three days.

NAME: **Mata pa'ia**

DESCRIPTION: An injured eye; one that has been cut or damaged in some way by a foreign object. The eye itself has been torn and must heal back together. The Samoans feel that aitu often prevent the eye from healing cleanly, so their medicines usually combine treatment for the injury (cleansing or rinsing) and an action for the aitu. This is a difficult condition to cure.

TREATMENT: If the eye injury is dirty, rinse it in sea water. Take two leaves of the tipolo tree; chew them and then blow into the eye. This is to soothe the membranes so they may heal together. Then drip some juice into the injured eye, to seal the membranes together. (No dosage obtained). Apparently this is repeated as necessary, or may be followed by another treatment.

ALT: Take stem of the 'u plant. Squeeze the juice from it and drip it into the eye.

ALT: To get rid of the aitu, take two leaves from a branch of the ifi tree. Hold leaf in front of the injured eye and tear it in half in front of the patient. Then tear each half again in the same manner and lay them down in front of the patient. Pick up the other leaf and roll into a funnel. Scoop up one cup of water with the funnel and drip it onto the patient’s thumb (right thumb for the right eye, left thumb for the left eye) until all the water is gone.

NOTE: This is very difficult treatment to do and also very difficult to effect a cure with. It only works on certain people in certain families. The treatment is to be repeated every day.

ALT: To get rid of the aitu that may prevent the eye from healing properly, the following procedure is also used. Take an empty coconut shell and fill it with the ashes from firewood. Hold the filled shell in front of the patient's face, then tap the opposite side of the shell at the injured eye. This will get rid of the aitu.

ALT: Use the central root of a o'o. Pound the root and squeeze a few drops of the juice into the injured eye.

ALT: Pound the young leaves of the 'o'a and instill drops of the juice into the eye daily.

ALT: Pound leaves of the milo and instill drops of the juice into eye twice a day.

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NAME: **Mata tuia**
DESCRIPTION: A person has been in the bush and feels like he has sticks in his eyes. (Eyes are tired and dirty). (Traumatic conjunctivitis).
TREATMENT: Rub pe'epe'e (coconut milk) into the affected area.

NAME: **Moa lili**
DESCRIPTION: Cataract
TREATMENT: Use young (stick-like) leaves of the 'u. Pull out the center part of four to eight leaves. Pound and squeeze the juice into the eye.

NAME: **Mu**
DESCRIPTION: Burns
TREATMENT: Burn the leaves of the ofe samoa (green bamboo) mix the ashes with Samoan oil and apply it to the burned area.

NAME: **Mumu**
DESCRIPTION: General term for erythremia and cellulitis, previously most often from filarial worm. There are six or more kinds of mumu. The term also covers a wide category of symptoms of fever, swellings and discolorations. These remedies were recited by one informant and are ones which the group of informants agreed with.
TREATMENT: Take the leaves and trunk from the ava'ava aitu plant, scrape two pieces of stem and pick 20–30 leaves. Pound all together, mix with water and strain. Dosage is one teaspoon for an infant patient, three tablespoons for adult patients, administered twice a day. Bandage swelling with the pulp of leaves.
ALT: Apply the crushed young leaves of the seasea to the inflamed area.
INDIRECT ALT: Scrape the inner bark of the 'aute samoa. Express the juices of the bark through a clean cloth into water and have the mother of the child affected by mumu (any type) drink the liquid so that the benefits of the medicine can be transferred via the mother's milk.

NAME: **Mumu afi**
DESCRIPTION: The skin breaks out in pustules, similar to a cross between impetigo and a pimple, usually starting on the arms or legs and spreading when a sore is popped or broken. The patient is irritable and doesn't want to be touched. This is an illness affecting both infants and adults and is accompanied by a light fever. The skin peels and leaves a reddened area. (Cellulitis with lymphangitis and fever).
TREATMENT: Give the patient a cold bath. Take leaves of the togotogo vine, pound them and do not mix with anything. Give the juice to the patient; one teaspoon for a baby, and two tablespoons for an adult. Dosages may vary from patient to patient. Rub remaining part of the leaves into the pustules.
ALT: Take 30–40 leaves of the aloalo vao, pound, mix with water and rub it on affected areas. Massage (fofo) the whole body with ti leaves.
ALT: Pound 10–20 leaves of the 'aute samoa and pat onto the affected area of the skin.

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NAME: **Mumu ai ivi**
DESCRIPTION: Intense joint pain (Periostitis)
TREATMENT: Pound two to three leaves of the fern lau gasese. Place pulp in a clean cloth and dip in glass of water. Take a dose. Also use the pulp for a poultice and apply to the affected joints.
ALT: Pound coconut meat with lau magamaga, wrap in a piece of cloth, warm at the edge of the fire and put on joints as a poultice.

NAME: **Mumu fau pu'e**
DESCRIPTION: Fula (abscess) with no eye (localized cellulites with swelling)
TREATMENT: Pound together 10 leaves of nonu vao, 10 leaves of the matalafi, and 10 leaves of the moemoe (plant name recorded mid 1800's apparently for *Phyllanthus virgatus*). Add Samoan oil and make a poultice. Bind over the fula.

NAME: **Mumu filogia**
DESCRIPTION: A hard swelling on any part of the body, a red lump.
TREATMENT: Put ti leaves with water on the swelling.
ALT: Use matalafi leaves; pound and mix with water; apply to the swelling.
ALT: Pound 6–8 leaves of the lau mafiafia and apply as a poultice to the inflamed area.

NAME: **Mumu lele**
DESCRIPTION: This is a disease that can affect adults or children over 8 months; fast spreading, and the most severe form of mumu. It must be treated rapidly or the patient will die very quickly. It starts out as a red spot usually on the arm or leg and then travels through the body until it reaches the neck and brain and then the patient dies. For example, in the morning a patient may have the mumu on his ankle, then by evening it is on his thigh and the next morning it is on his stomach and by evening it reaches his neck and he dies. The mumu lele is accompanied by fever. As this is a Samoan disease the Samoan treatment is best. (Possibly fatal septicemia).
TREATMENT: External: Take ten young leaves of the ulu manu and then young leaves of the nonu. Pound them together and rub on the reddened area.
Internal: Take ten leaves of the fisoa tree, pound them up and mix with water. Give one teaspoon twice a day for two days to children; three tablespoons to adults.
ALT: Crush the leaves of the futu in sea water and bathe the patient's entire body.

NAME: **Mumu mageso**
DESCRIPTION: Itching; hot and feverish; may spread all over the body and cause redness from the heat.
TREATMENT: Take the leaves of the fue lau fao vine; pound and rub on the body.

NAME: **Mumu tatau (mumu pae)**
DESCRIPTION: The body turns black, like charcoal or a tatoo. This disease starts at the buttocks and spreads. Affects mostly children, but also occurs in adults.
TREATMENT: Use 60–80 flowers, or the fruit of the nonu. Pound and strain. Drink the juice, one teaspoon for children, and three to four teaspoons for adults.
External: Use the inner bark of the trunk of the nonu as a compress on the buttocks, along with ti leaves.
ALT: Pound leaves of the aloalo vao, mix with water and apply and bandage to the affected area.

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NAME:	**Mumu tuaula**
DESCRIPTION:	The patient has fever, feels hot inside but does not sweat, is unable to sleep and often has a headache. It affects both children and infants. (Cellulitis with septicemia).
TREATMENT:	Use the magalo (vi vao). Take 10 leaves, some scraping from the stem, and 10 flowers. Pound them all together and strain. Give juice to patient twice a day; one teaspoon for children, three tablespoons for adults. Also massage patient with the remains of the leaves and flowers.
ALT:	Scrape the inner bark of the trunk of the ma'anunu tree and dry the scrapings. Use these to make a tea.
ALT:	Scrape the inner bark of the trunk of the aloalo vao. Express the juice into water through clean cloth and drink.

NAME:	**Mumu tuaula uli**
DESCRIPTION:	Sore eyes (the patient can hardly open them), the head feels swollen (fefete). Also cold sweat, dizziness, and numbness in the legs. Affects both children and adults.
TREATMENT:	Scrape the trunk of the filimoto tree and the trunk of the moli 'aina tree. Pound together and mix with water and strain. Take one teaspoon for children, and three tablespoons for adults, twice a day until cured. Massage the skin with the leftover plants.
ALT:	Pound eight leaves of the 'ava (a'ano a tamali'i), place in a clean cloth and steep in a glass of water, then drink.

NAME:	**Pala ga'au**
DESCRIPTION:	Bad breath, loose stool, usually in children. Intestinal tract disease (Enteritis).
TREATMENT:	Scrape the inner bark of the fue manogi. Express the juice of the bark through a clean cloth into water, and have the patient drink.
ALT:	Scrape the inner bark from the trunk of the 'o'a tree. Express the juice through a clean cloth into water and drink.
ALT:	Scrape inner bark of the nonu fi'afi'a, vi, and 'o'a trees. Place in a clean cloth and into boiling water. Cool and drink.

NAME:	**Po'o sa**
DESCRIPTION:	Occurs in both children and adults. Appearance similar to impetigo; solid covering of sores in the affected area; may occur on any part of the body, but most often the legs; starts as one sore and spreads; is difficult to treat; most prevalent during the breadfruit season.
TREATMENT:	First, bathe in the ocean. Then pat on a mixture of Samoan oil and the following: 2–5 leaves of the aloalo tai crushed together with the white sap of the ma'ali tree. Treatment is very effective, but takes time. To get the sap of the ma'ali, cut the bark off the tree. After four or five hours a white scented sap oozes out. Collect it.
NOTE:	People with po'o sa who are taken to the Medical Center for treatment are not able to obtain relief. Po'o sa leaves permanent white splotches on the skin.

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NAME:	**Pua'i toto**
DESCRIPTION:	Vomiting of blood, coughing up blood (but not from T.B. or from the stomach) malaise, chills, loss of appetite, coughing up blood. This is a Samoan disease. (Hematemesis/Hemoptysis).
TREATMENT:	Take 20 leaves of the togotogo vine and 10 leaves of fue sina. Pound them together; put in clean cloth; squeeze into 1/2 glass water. Drink half of the liquid and massage the neck, throat, and chest with the other half.
ALT:	Use 20 leaves matalafi and 20 leaves fue sina. Same procedure. [If this doesn't work send patient to a doctor.]

NAME:	**Puna toto**
DESCRIPTION:	Vaginal bleeding
TREATMENT:	Massage (fofo) stomach and back. Cut a whole handful of the grass sefa. Cut into pieces and place in a cloth and boil in water. Have patient drink 1/2 cup of the liquid three times a day. If after two days the condition is better, continue as above for one week.
NOTE:	One informant cared for one woman who was treated at the hospital one week but was still bleeding. The patient was alright after one week. He has treated approximately 20 cases: most successfully, he claims. Most of his cases have come from the village of Poloa.

NAME:	**Sela**
DESCRIPTION:	Asthma, labored breathing
TREATMENT:	Scrape off the inner bark of the ma'anunu and toi trees and pound together with a small amount of water. Squeeze into glass of water and have patient drink. For young children.
ALT:	Scrape inner bark of the toa, steep in water and have patient drink the expressed liquid.
ALT:	Scrape the inner bark of the namulega; mix with a little water and have patient drink a couple of ounces every four hours.

NAME:	**Sila 'ilagi (Sila i lagi se)**
DESCRIPTION:	A carbuncle, before it has started to drain. Sila ilagi se is a perianal carbuncle.
TREATMENT:	Chew about 20 'aoa leaves and spit the juice on the carbuncle. Repeat three times a day until the carbuncle breaks and drains. Then bathe in the sea and put Samoan oil on the carbuncle.
ALT:	Chew leaves of the polo fe'u and spit the pulp onto the abscess as a poultice.
ALT:	Crush 10–20 leaves of the cucumber and apply to the abscess. Chew leaves of the lau tamatama and spit the pulp onto the abscess as a poultice. Pound root and leaves of the a'atasi and apply to the carbuncle.

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NAME:	**Sila ilagi tatanu**
DESCRIPTION:	Deep abscess usually on the side of the abdomen or back. Pain experienced is like being jabbed with a sharp object. High fever, may be intermittent. Also profuse sweating. People who go to hospital get only temporary relief with sedatives. Patient may die from this.
TREATMENT:	A combination of massage and plant medicine. Massage (fofo) consists of gently stroking the skin with Samoan oil toward the locus of the pain, completed by placing the hand on the site 1, 2, 3 times. Massage in the morning and evening for two to three days.
ALT:	Prepare medicine as follows; cut approximately two feet (0.61 m) off the blunt end of a coconut frond lapa lapa. Scrape off the skin. Get three white roots of the vine fue sina. Pound lapa lapa scrapings and the roots together, tie in clean cloth and let set in a pitcher of water approximately 10 minutes. Remove the cloth; the water should be a wine color. Strain through a clean cloth and store in the refrigerator. Drink at will, but, so as to finish the entire pitcher in one day. Repeat two to three days. Should be well after two days. Claimed to be usually successful.

NAME:	**Ma'i suka (Diabetes)**
DESCRIPTION:	Edema of the arms and legs. Constipation and “funny feeling” in the stomach. Felt to be the result of diabetes.
TREATMENT:	Crush to'i to'i leaves and massage the arms and legs with the juice. Pound 12 leaves of the pua Samoa, strain into 1/2 glass of water and drink. Most edema is reduced within a week.
ALT:	Scrape the inner bark of the toa. Express the juice of the bark through a clean cloth into water and drink.

NAME:	**Tale**
DESCRIPTION:	Cough
TREATMENT:	Scrape root of magele and drink the juice. Scrape the inner bark of the trunk of the toi. Express the juice through a clean cloth into a glass of water and drink.
ALT:	Scrape inner bark of the toa. Express the juice through a clean cloth into a glass of water and drink.

NAME:	**Taliga tiga**
DESCRIPTION:	Ear ache
TREATMENT:	Pound leaves of the lala tai (*Desmodium umbellatum*) finely and let a few drops of juice drip into ear.

NAME:	**To'ala sisili**
DESCRIPTION:	Very painful upper abdominal pain extending up under the ribs. Nausea, sweating and hard to breathe. May have sore back. Feel like vomiting but cannot.
TREATMENT:	Same as to'ala sulu.

NAME: **To'ala sulu**
DESCRIPTION: Stomach ache and severe pain in the lower part of the back. Patient usually walks in a slightly bent position.
TREATMENT: Massage (fofo) starting with the lower back and around to the lower abdomen. Administer the following: scrape the lapalapa of the niu'ui and pound the scrapings together with a piece of the fasa root. Strain through a cloth into 1/2 cup of water. Drink 1/2 cup for adults and one teaspoon for children, twice daily. Pain is said to be gone in one day but sometimes takes two days.

NAME: **Tu**
DESCRIPTION: Pterygium
TREATMENT: Pound the root of the a'atasi and let juice drip into the eye.
ALT: Pound young leaves of the 'o'a tree. Instill drops of the juice into the eye daily.

NAME: **Tuia**
DESCRIPTION: Puncture wound from fish spine.
TREATMENT: Burn a dry 'ava root and place a dry coconut shell over the hot coals so that the smoke comes out of the ‘eye’. Place the wound over the hole and let the smoke bathe it. The pain can be controlled by using rotten banana stalk and coconut water placed warm on the wound as a poultice.

NAME: **Tulita fasia**
DESCRIPTION: Urinary tract infection; distended bladder, very little urine passes, very painful urination. Supposed to be caused by aitu.
TREATMENT: First dose: 20 mature fue sina leaves; second dose 40 mature fue sina leaves pounded and mixed with water. Drink half of the mixture and rub the remainder into abdomen and back.
ALT: Scrape the inner bark from the 'ava trunk. Squeeze, and combine the juice with the juice expressed from the dried root of the fasa. Mix with a quantity of water and drink.
ALT: Scrape the inner bark from the trunk of the ateate tree. Express the juice into water through a clean cloth, and drink. Also press some onto the lower abdominal area.

NAME: **Ua ono**
DESCRIPTION: In babies; dysuria believed to be caused by "lanuia" which is the ingestion of amniotic fluid and mucous during birth.
TREATMENT: Pound leaves of the a'atasi and small red leaves of the ti. Mix the juice of these with the juice of the pounded husk of the niu'ui and drink.

NAME: **Ulu tiga**
DESCRIPTION: Headache
TREATMENT: Pound or chop very fine the leaves of the talafalu. Wet with water and apply to locus of headache. Bind with leaves of talafalu.
ALT: Leaves of the namulega are crushed and juice instilled into nostrils and ears.

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NAME: **Ulu tiga tutui**
DESCRIPTION: Stabbing, or throbbing migraine headache.
TREATMENT: Use eight stems of the togo. Pound into a clean cloth and instill into both nostrils. Give twice a day.

NAME: **Umete (fulamaua)**
DESCRIPTION: Swelling (deep abscesses) in the tissues, painful and accompanied by fever. Occurs in young children as well as adults.
TREATMENT: Each individual swelling is to be gently stroked (milimili) accompanied by the words "tulou, tulouga a le malaga a umete." Also treat with bark of the gatae Samoa. First scrape away the outer bark of the tree. Then scrape the exposed inner bark, pound the scrapings and place in a clean cloth. Dip into a cup. Give 1/2 glass of the liquid to adults and one teaspoon to small children.

NAME: **Utu**
DESCRIPTION: Looks like ringworm. Mostly occurs on the palms but also on the feet, thighs, etc.
TREATMENT: Take eight to ten leaves of the to'ito'i; those that are just starting to open. Pound until soft and mix with Samoan oil. Squeeze into the oil. Rub into affected part. Also bring a burning fire brand and blow the fire onto the utu. Continue for a week or even month. Difficult to affect a cure.
ALT: Pound the root of the 'ava niu kini. Bandage the pulp to the affected area for 30 minutes only. Remove and wash thoroughly with warm water.

ADDITIONAL GENERAL TREATMENTS

NAME: Fish poisoning
TREATMENT: Induce vomiting: Mix the coconut cream (pe'epe'e) obtained by scraping two coconuts, with cocoa and sugar until the consistency of molasses. Drink one cup.

GENERAL TONIC FOR CHILDHOOD ILLNESSES: Scrape bark of fue manogi and drink the juice expressed from the bark. Pound leaves of the lau tamatama. Mix the juice with water and drink.

BLOODY STOOL IN CHILDREN: Scrape inner bark of fu'afu'a and drink juice.

HYPERTENSION: Scrape the root of the magele. Express the juice of the root through a clean cloth into water and drink. Leaves of the au'auli pounded, in water and juice drunk. Inner bark of the toa.

SWOLLEN SCROTUM: Pound leaves of the lala tai (*Desmodium umbellatum*). Place in ti leaves and warm over a fire. Bandage the scrotum with this. Scrape inner bark of the lala tai. Express juice through clean cloth into water and drink. Massage lower abdomen and press up on bladder area.

SKIN RASH, SORES INFECTIONS, OR ULCERS:

Break leaves of the fetau in container of sea water and bathe the patient in the milky liquid. Scrape root of the magele, drink juice. Inner bark of namulega scraped, mixed with water; allow to stand one or two days. Apply the sediment to the sore.

Treatment of external infections and to place on new tatoos to stop bleeding: Pound the underground nut of the ago (turmeric, *Curcuma longa*), place the mixture (Lena) in a coconut shell cup and allow evaporation to occur. If a paste is left, apply it to the affected area. Belief: if a palagi vessel is used, or there is any fighting or discord within the family, no paste will occur.

GENERAL MALAISE AND NUMBNESS OF THE LEGS:

Scrape the inner bark from the milo; express the juice into water and drink.