

# EcoTours for Cures

Herbs of the Jamaican Rainforest & Bush  
medicine

Dr. Eugene R. Zampieron

*ND, MH(AHG)*

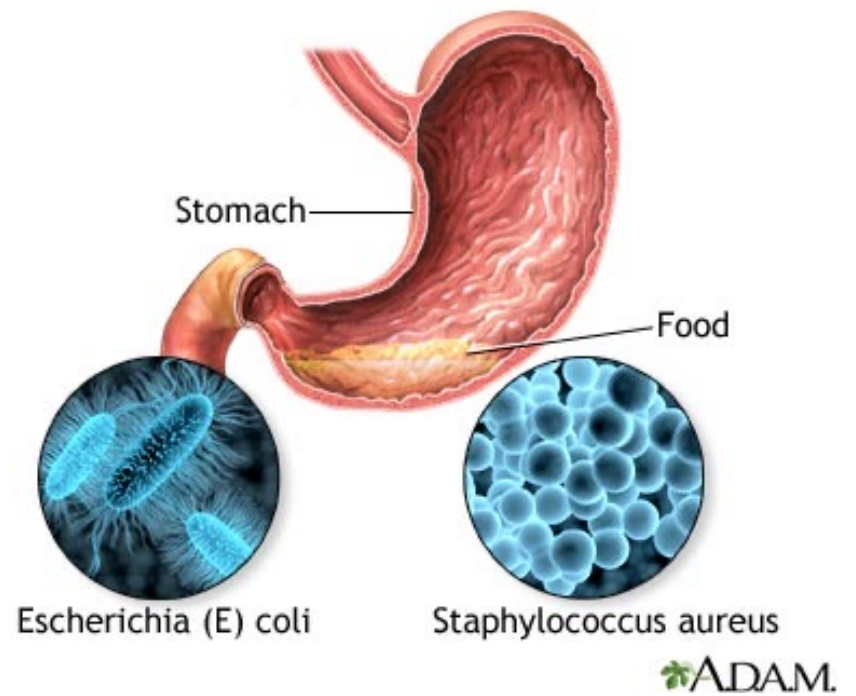
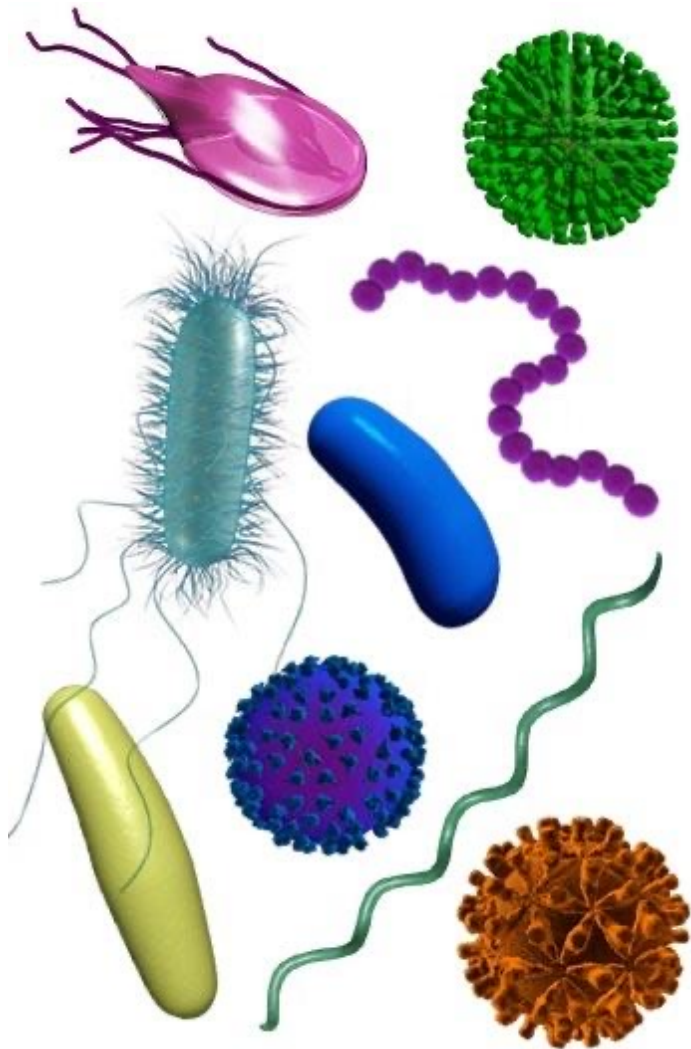
Doctor of Naturopathic Medicine \* Professional  
Herbalist, AHG registered \* Ethnobotanical researcher  
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Natural Products developer \* Multi-Media host  
Faculty member and Founding advisory Council  
member, Appointed by President emeritus Rubenstein  
The University of Bridgeport College of Naturopathic  
Medicine

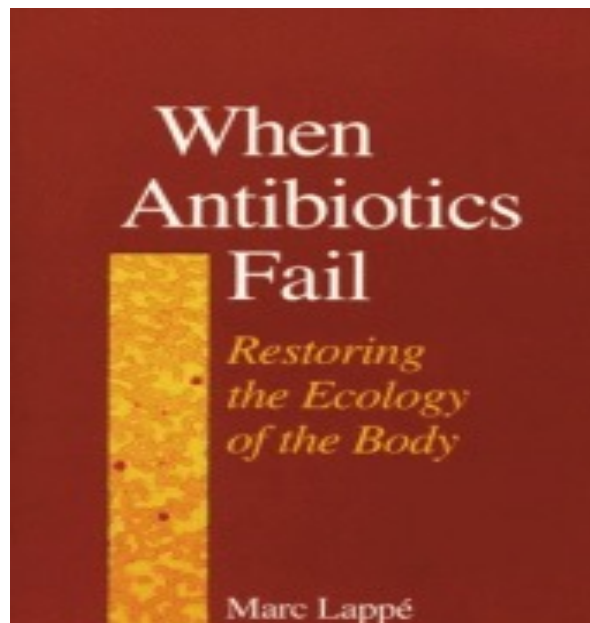
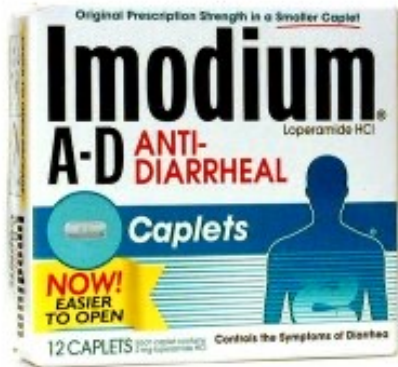
# Marine biology & the Coral reefs drew me to study in the West Indies



# Microbes causing dysentery and enteritis



# Allopathic medicine did nothing!



# JAMBA



- Jamba knew that Bush medicine could work where allopathic medicine would fail!

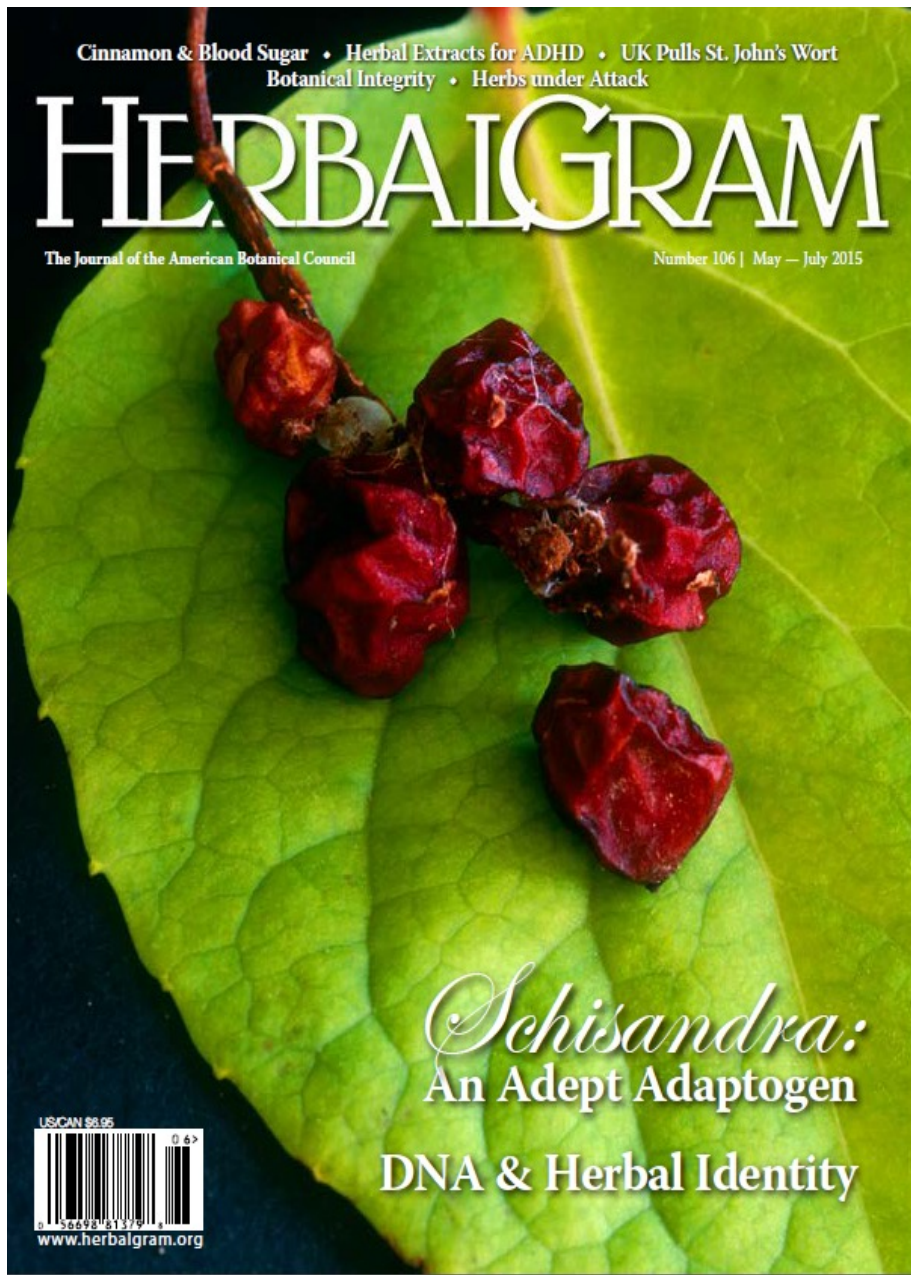


In memory of  
**Lloyd "Jamba" Scott**

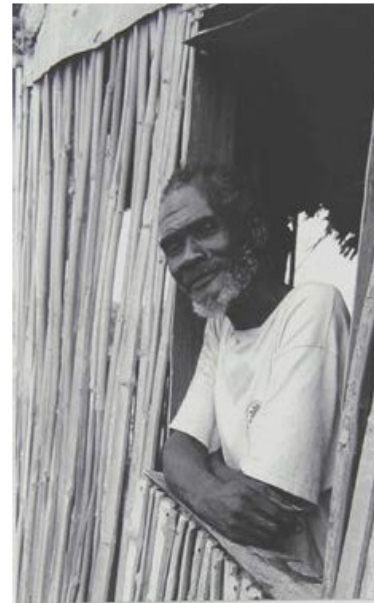
**Master Carver • Farmer • Bush Doctor  
Fisherman**

**A great spirit has passed...  
But is never far from our hearts  
Let it be known by all that this  
point will be called  
JAMBA POINT**

# Jamba was recently honored in HERBALGRAM a renowned international herbal Journal/magazine



## IN MEMORIAM



### Lloyd "Jamba" Scott 1937-2014

Lloyd "Jamba" Scott, a Jamaican herbalist of the Maroon tradition and educator of scores of naturopathic physicians and herbalists, died in Jamaica in November 2014 of natural causes. He was 77.

Lloyd Scott was born in Penn Hill, in the Jamaican parish of St. Mary. As a young man, he was a gifted athlete and excelled in boxing and cycling, winning many championship cycling events in Jamaica. He was a talented farmer on land inherited by his family in Islington, Jamaica, where he grew commercial smilax (*Smilax* spp., Smilacaceae), ginger (*Zingiber officinale*, Zingiberaceae), and turmeric (*Curcuma longa*, Zingiberaceae), as well as many other herbs, for the market in the United States.

He was also a master sculptor and carver, taking the name Chamba (later, Jamba), which means "chopping up of wood" in Patois, a creole language of Jamaica. A champion fisherman, his student Mike Daum documented on film Jamba's catching barracuda with only a hand line and his machete.

He studied herbal medicine by spending time with elder family members and friends and apprenticing in the Jamaican Cockpit country on the parish of Trelawny, learning the many

closely held herbal medicines used by the Maroons. Later, he served as the village bush doctor and elder in Islington, where he treated the villagers for many decades.

Jamaican Maroons are the descendants of indentured servants and slaves brought from Ghana, Ivory Coast, and Sierra Leone to Jamaica by the Spanish in the 1500s. (Maroon comes from the Spanish word *cimarrón* meaning "wild" or "untamed.") The Maroons kept alive their Ashanti and Coromantee languages and medicine customs from Africa, combining them with native Jamaican Arawak traditions. The Maroons were continuously joined by many other fugitive slaves, and the word Maroon became synonymous with the "untamed, fugitive slave people of the hills."

Following a 14-year struggle called the First Maroon War against British colonizers, the Maroons signed a peace treaty granting them total freedom. The Maroons of Jamaica still maintain their independence and identity as The Maroon Federation, and Maroon territory is considered a sovereign nation within the tiny island of Jamaica. One of their strongest tenets is the healing power of nature and their deep knowledge of the myriad Jamaican herbs and their uses.

As a young biology student, I (EZ) traveled with my high school classmates to the remote regions of Jamaica. There, I met and befriended Jamba Scott. While in Jamaica pursuing a graduate level course over winter recess, I fell ill with intestinal dysentery. I tried conventional medicine, which caused significant adverse effects and did not seem to be helping. Feeling weak and depleted, I approached Jamba and one of Jamba's herbal teachers, an elder bush doctor known as Pop-A-Top, for help and advice. They suggested that "Maroon science" and herborology would bring rapid, welcomed relief where "Babylon medicine" (Western medicine) would not.

For three days I received a steady diet of a strong decoction made from ferns, Jamaica allspice (*Pimenta dioica*, Myrtaceae), cloves (*Syzygium aromaticum*, Myrtaceae), guava (*Psidium guajava*, Myrtaceae), sea grape (*Coccoloba uvifera*, Polygonaceae), and many other Maroon herbs. The remedies were prepared by Jamba and Pop using their traditional "Maroon science."

The herbal treatment quickly produced positive results that the conventional medicines did not. This experience prompted a personal conversion in me, and I began researching ethnobotany — the cultural, medical, and spiritual aspects of plant healing. I asked Jamba if I could become his apprentice, even though I was a non-Maroon. Jamba agreed; he was advised by his grandmother's *duppy* (spirit) in a dream that he could trust me with this sacred knowledge and that I would be the right person to help pass his secrets on to the world as an "ethical ethnobotanist," giving back to the community and the local people.

Jamba continued to mentor me and my students, teaching them self-sufficiency and the benefits of living as he did, a Jamaican countryman close to the earth. Many people would accompany me to Jamaica, and Jamba's teachings radically changed the lives of many of these visitors. In addition, Jamba worked with the Jamaica Wholistic

CONTINUED on page 78

# The Botanical Roots







# DrZ apprenticing with JAMBA a Maroon Medicine Man



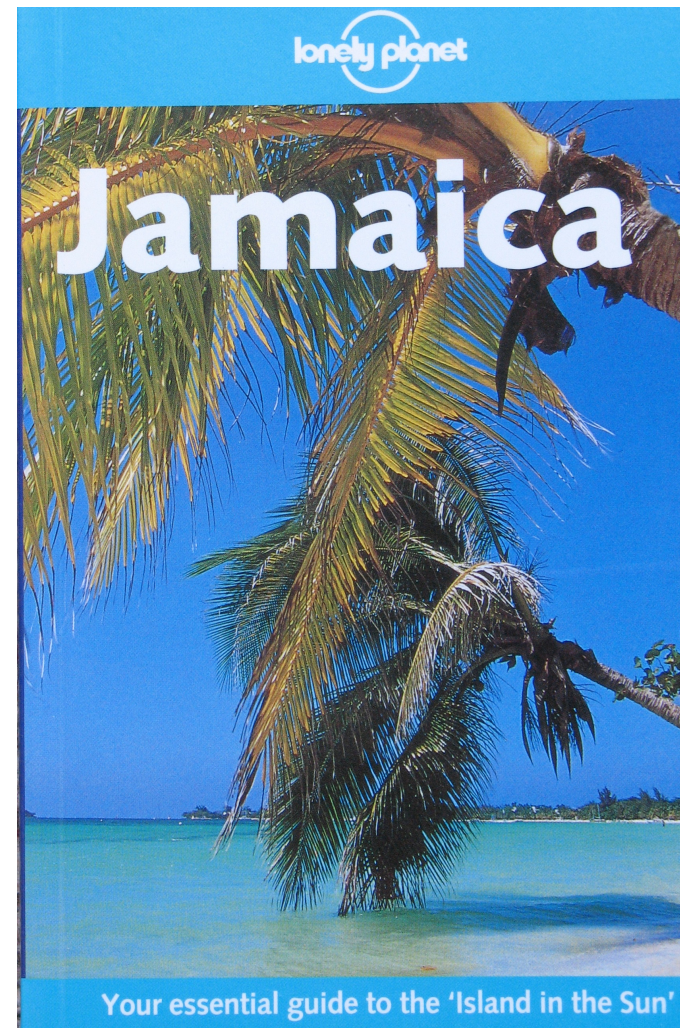
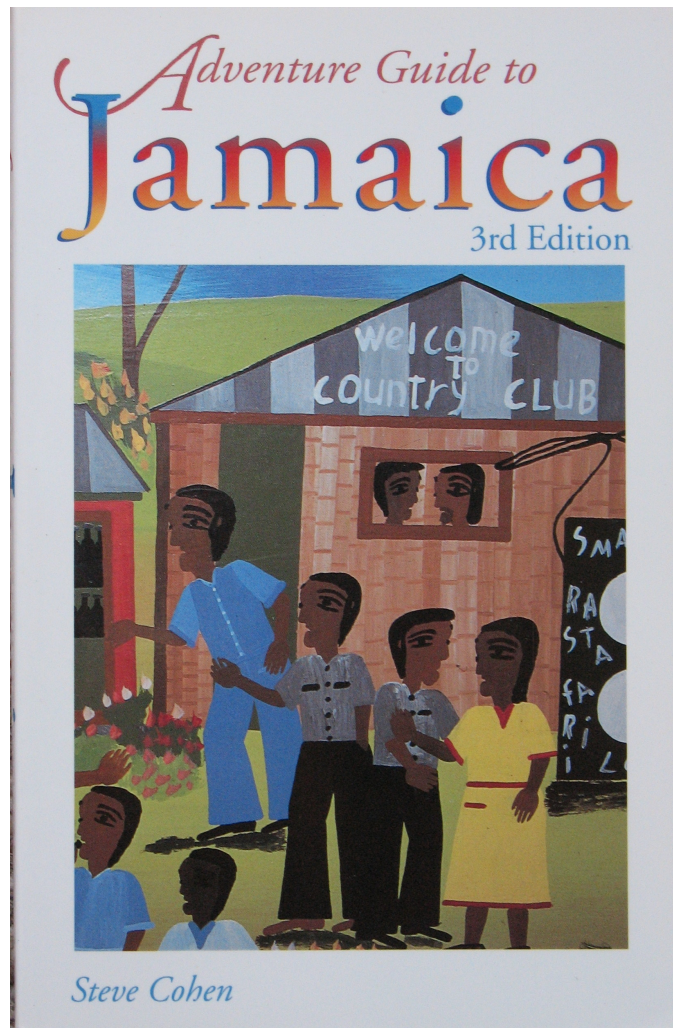
# The Blue Mountains



- The Blue Mountain Peak is 7,500 feet above sea level
- Jamaica is only 60 miles wide by 150 miles long
- This means that you can go from sea level to 7,500 Ft in 25 miles...pretty steep



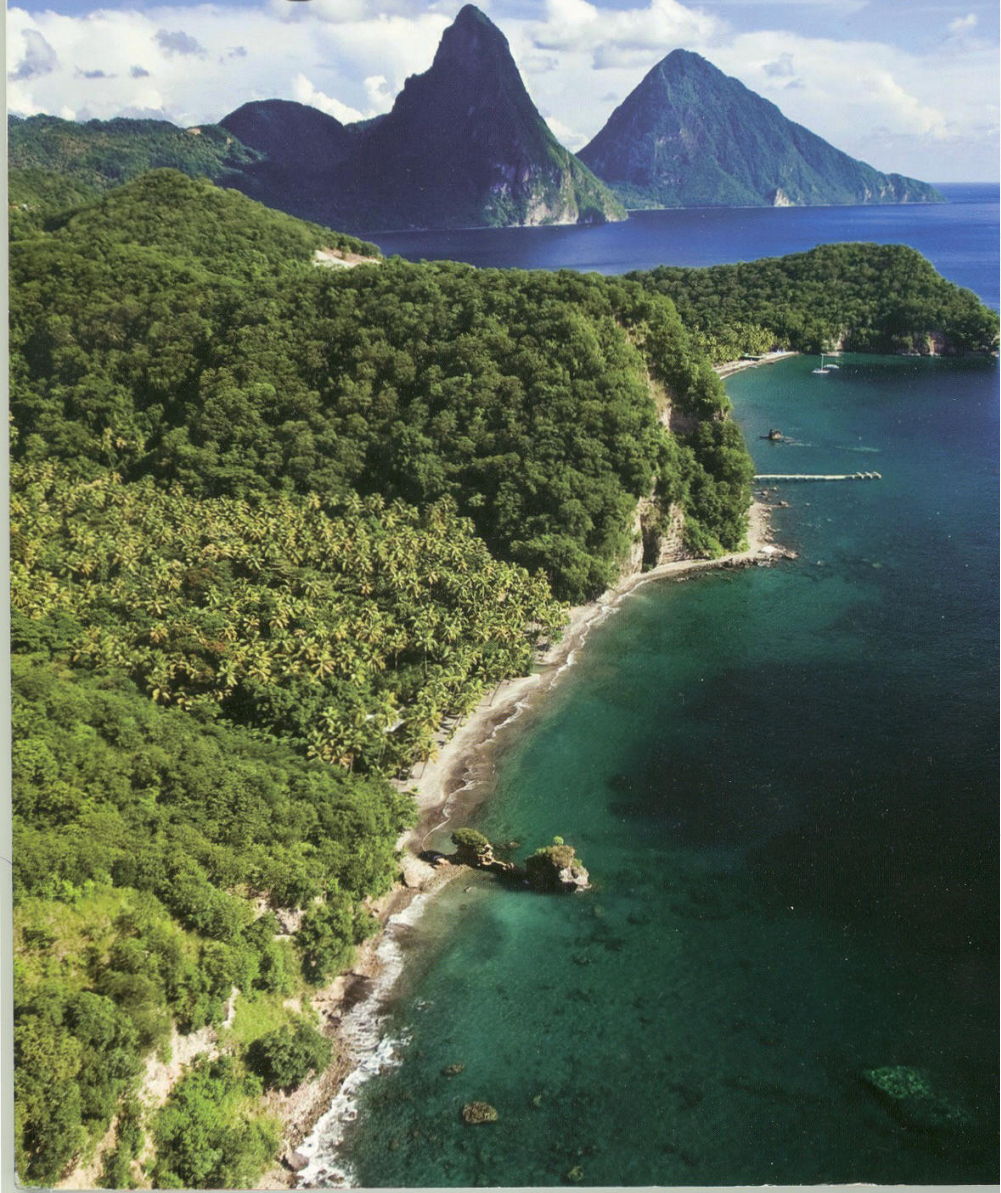
Dr Z's & Kamhi's EcoTour for Cures trip is featured in the biggest International eco-travel guides to Jamaica



# Sky Writings

INFLIGHT MAGAZINE

MAR - APR 2008



# the GREEN caribbean

## WHERE TO PLAY

BY OLIVIA LEIGH CAMPBELL

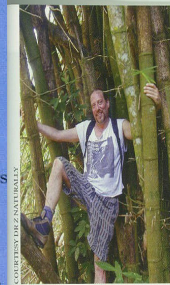
Besides the beaches, the islands of the Caribbean have so much more to offer. The region is blessed with magnificent mountains, colourful reefs and an abundance and diversity of flora and fauna for nature lovers and adventure seekers to enjoy. Even if you're not at the peak of your physical fitness, there's a way for you to experience the beauty and bounty of the islands, and to preserve and protect the natural environment at the same time!

### ECOTOURS FOR CURES, JAMAICA

For the past 20 years, US-based naturopathic physician and ethnobotanist Dr. Eugene Zampieron (known as Dr. Z) has been coming to Jamaica, seeking counsel with a wide assortment of "bush doctors", farmers, Maroon and Rastafarian healers and university-trained ethnobotanists in his quest to unlock the healing secrets held within the forests of the Blue and John Crow Mountains. In the 1990s, he began bringing small groups, and since then has led dozens of herbalists, photographers, pharmacists and nature lovers through forests, across streams and into ordinary people's yards to discover and concoct salves, tinctures and traditional cures for ailments modern medicine has yet to conquer.

#### **FITNESS FACTOR: MODERATE TO STRENUOUS**

You'll feel like a modern-day Columbus, as you pass areas that still have virgin forests, secluded beaches and hidden waterfalls. "It pays to be fit to do some of our hikes and really see the pristine sites up close," says Dr Z, but the not-so-fit can be a part of fishing boat trips, birdwatching, and a visit to the Green Castle Estate, a 1,600 acre organic farm. [www.46.pair.com/ecotours](http://www.46.pair.com/ecotours) 1-800-829-0918



COURTESY OF DR. ZAMPIERON



PHOTO: JIMMY HARRIS



COURTESY CURAÇAO ACTIEF

### CURAÇAO ACTIEF, CURAÇAO

Curacao Actief is a small outdoor activity tour company whose stated mission is to protect Curacao's unique ecosystem by making it economically important to the island's residents. In that vein, they've developed a number of land and sea tours that expose the island natural gems like the "Boca Tabla", a cave where sea water comes thundering in, the National Park Cristofel, where indigenous animals like iguanas and Caracara birds can be observed in their habitats, and the "Breath of Curacao", a cleft in the coral cliffs where the sea shoots water and foam 20 feet into the air. Partnering with the Stichting Uniek Curacao (Foundation Unique Curacao), a non-profit organization that offers the company access to protected areas normally closed to the general public, Curacao Actief also organizes regular clean-up campaigns to raise awareness of the environment among local Antilleans.

#### **FITNESS FACTOR: MILD TO MODERATE**

Most tours are conducted using open-air safari jeeps, with walking required only at sites of interest. For snorkel tours, you must be a strong swimmer. Still, says Curacao Actief's Claartje Visser, "Our tours are active—not passive—so you will get to look, hear, feel and see Curacao, and even get a little dirty." [www.curacaoactief.com](http://www.curacaoactief.com) 5-999-433-8858

### SPICE KAYAKING AND ECO-TOURS, GRENADA

Have you always dreamed of having an island—complete with a pristine white sand beach and clear turquoise water—all to yourself...even for a day? Well, if you're willing

to kayak the 20 minute journey from the nearby uninhabited Hog Island, you'll have just birds and iguanas keeping you company. The Spice Kayaking Tour isn't all just fun to loll about on the beach, you kayak through mangroves, learning about Grenada's mangroves and their relation to the island. "We started this tour initially to raise awareness of the importance of mangroves to the island's First Impressions, Spice's parent company has been offering whale and dolphin-watching in Grenada for nearly 30 years. Since then the government began, the mangrove have been declared protected areas, a company, and a great one for nature."

#### **FITNESS FACTOR: STRENUOUS**

True, you do paddle your own kayak, but you'll be having so much fun, you won't be expending energy! Choose between a full-day (4 hour) kayaking trip, with a picnic on open sea. Don't worry, everyone's pro for the entire journey. [www.spicekayaking.com](http://www.spicekayaking.com) 473-439-4942

### THE ST LUCIA FOREST RESERVE, ST LUCIA

If you've never seen a vervet monkey in the wild, carry your camera, and be prepared to home-boasting while you flip through it. With majestic forest-covered mountains directly from the sea, St. Lucia is a hike. The St. Lucia Forest Reserve covers almost 100,000 acres of the island's interior, protected rainforest in the island's interior by a seven trails maintained by the St. Lucia Department. Each trail is accessible to the general public, which also provides access to the island's interior. On some trails you'll come across thorns, but others will offer sightings of rare tropical birds which one you choose, chances won't run into throngs of tourists, as they are managed carefully, and tours wisely timed.

#### **FITNESS FACTOR: MILD TO STRENUOUS**

Some, like the Barre de l'Isle trail are untaxing jaunts, but others, like the De Cartiers Rainforest take considerable energy and time to complete. Call ahead to see if the trail is right for you. Call the St. Lucia Forest & Lands Dept. to request permission to use the trails and

THIS PAGE (CLOCKWISE) Hiking through virgin forest, Jamaica; searching for natural cures, Jamaica; kayaking off the coast of Hog Island, Grenada; the natural jacuzzi, Curacao. OPPOSITE PAGE: The "Breath of Curacao" on the island's rocky north coast.



# A Review of Medicinal Plant Research at the University of the West Indies, Jamaica, 1948–2001

SA Mitchell<sup>1</sup>, MH Ahmad<sup>1</sup>

<http://caribbean.scielo.org/pdf/wimj/v55n4/a08v55n4.pdf>

- *This review summarizes research carried out on Jamaican medicinal plants at the Faculty of Pure and Applied Science, The University of the West Indies (UWI), Mona, Jamaica, between 1948 and 2001.*
- *At least 334 plant species growing in Jamaica have been identified as having medicinal qualities, 193 of these have been tested for their bioactivity. Crude extracts from 80 of these plants have reasonable bioactivity and natural products (NP) have been identified from 44 plants.*
- *At least 29 of these NPs were found to be bioactive. Only 31 of the plants tested at UWI are endemic to Jamaica.*
- *these 23% were bioactive, as compared to 11% of the non-endemics. Based on these results, patents*
- *have been obtained and drugs have been developed.*

# DogBlood (*Rivina humilis*)

<http://home.hiroshima-u.ac.jp/shoyaku/photo/Thai/021203Phytolacca.jpg>

Photo reference

- Cousin to phytolacca
- KAKAMACHI in Ayurveda
- Not as toxic, but same cautions and minimal doses are indicated
- Treats ovarian and uterine pain, similar to how Western herbalists use phytolacca





# Photo of DogBlood by DrZ



- [PLoS One](#). 2012;7(5):e36369. Epub 2012 May 1.
- **Pokeweed antiviral protein increases HIV-1 particle infectivity by activating the cellular mitogen activated protein kinase pathway.**
- [Mansouri S](#), [Kutky M](#), [Hudak KA](#).

[J Biol Chem.](#) 2009 Nov 6;284(45):31453-62. Epub 2009 Sep 11.

- .
- **Suppression of human T-cell leukemia virus I gene expression by pokeweed antiviral protein.**
- [Mansouri S](#) et al.
- ....Therefore, PAP efficiently suppressed HTLV-I gene expression at both translational and transcriptional levels, resulting in substantially diminished virus production. Significantly, no changes in viability or rates of cellular transcription or translation were observed in cells expressing PAP, **indicating that this protein was not toxic**. Antiviral activity, together with the absence of cytotoxicity, supports further investigation of this enzyme as a novel therapeutic agent against the progression of HTLV-I infection...

# Achyranthes (Devil's ass whip)

TCM name:Niu Xi

Photo: Dr. Eugene R. Zampieron,  
EcoTours for Cures 2007



# Radix *Achyranthes bidentatae*

TCM:Huai Niu Xi (Wei-niu-his) ) Amaranthaceae



- Contains steroidal saponins
- Used for the same thing in China and Jamaica
- aching back & Knees
- Weakness of the lower limbs caused by deficient Kidney and Liver
- Descends the flow of blood and liver fire
- Nourishes bones and sinews/ aids arthritis
- Dose 6-15 gms/day
- Available in Chinatown

[Chin J Integr Med.](#) 2012 Oct;18(10):761-8. Epub 2012 Jan 12.

- **Effect of Huogu II Formula (II) with medicinal guide Radix Achyranthis Bidentatae on bone marrow stem cells directional homing to necrosis area after osteonecrosis of the femoral head in rabbit.**
- [Kong XY](#), et al
- **ACTION: OBJECTIVE:**
- To investigate the effect of Huogu II Formula (II) with medicinal guide Radix Achyranthis Bidentatae (Ach) on bone marrow stem cells (BMSCs) homing to necrosis area after osteonecrosis of the femoral head (ONFH) frozen by liquid nitrogen in rabbit as well as to explore the mechanism of prevention and treatment for ONFH.
- Modulated Bone morphogenic proteins

- [Pharm Biol.](#) 2012 Jul;50(7):892-9. Epub 2012 Apr 6.
- **In vivo wound-healing efficacy and antioxidant activity of *Achyranthes aspera* in experimental burns.**
- [Barua CC](#), et al College of Veterinary Science, Khanapara, Guwahati, India.
- **CONTEXT:**
- The floral richness of the North-East Indian region cannot be neglected in context to its medicinal importance. *Achyranthes aspera* Linn. (Amaranthaceae; Prickly Chaff flower) is an indigenous plant species of this region. Although the local traditional healers have ethnomedical knowledge on the use of this plant, there is no scientific [study](#) on wound-healing activity of this plant.  
Objective:
- **MATERIALS AND METHODS:**
- Methanol extract of leaves of *A. aspera* was used for compounding 5% (w/w) ointment, which was applied topically twice daily. Healing potential was assessed by rate of wound contraction, antioxidant and biochemical assay which was supported by gelatin zymography and histopathology.
- **RESULTS:**
- In the present study, 5% ointment of *A. aspera* showed significant ( $p < 0.05$ ) wound healing, which was evident by wound contraction, elevation of various antioxidant enzymes viz. SOD, catalase, vitamin C and prohealing and biochemical parameters like hydroxyproline and protein content than the control animals. Up-regulated expression of matrix metalloproteinases (MMP-2 and 9) was also observed by gelatin zymography. Histopathological examination of the granulation tissues in the *A. aspera*-treated animals showed [collagen](#) deposition, fibroblast proliferation and formation of epidermis.
- IT WORKED!!!

# Coconut palm (*Cocos nucifera*)



- Coconut water (DISTINCT FROM THE MILK) was collected in a sterile pyrogen free manner with a hypodermic needle and was used DIRECTLY into the veins by the Viet Cong!
- The root is for STDs
- The Jamaican's say "Coconut water with lime ' **washes your heart**'"
- It has been documented to be anti-atherosclerotic and anti-hypertensive

[J Ethnopharmacol.](#)



[West Indian Med J.](#) 2005 Jan;54(1):3-8.

## **The control of hypertension by use of coconut water and mauby: two tropical food drinks.**

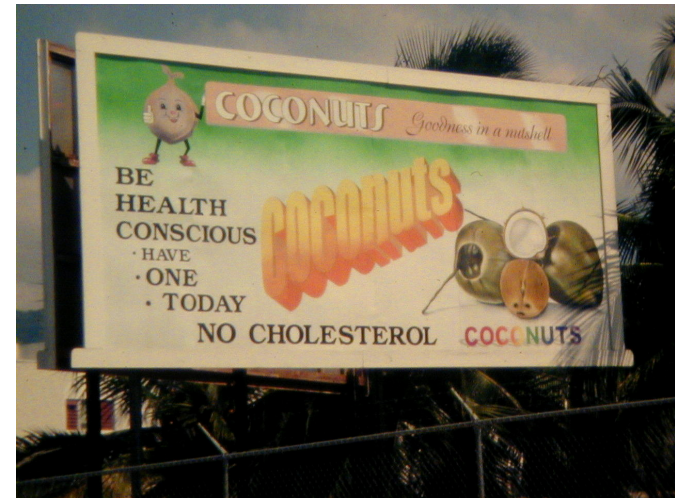
[Alleyne T](#) et al

The [University](#) of the West Indies, St Augustine, Trinidad and Tobago, West Indies. [trevnmar@tstt.net.tt](mailto:trevnmar@tstt.net.tt)

- **Abstract**

- In this [study](#), the authors investigated the effect of regular consumption of two tropical food drinks, coconut (*Cocos nucifera*) water and mauby (*Colubrina arborescens*), on the [control of hypertension](#). Twenty-eight hypertensive subjects were assigned to four equal groups and their systolic and diastolic blood pressures recorded for two weeks before and then for another two weeks while receiving one of four interventions. One group (the control) received bottled drinking water, the second group received coconut water, the third received mauby and the fourth group, a mixture of coconut water and mauby. Significant decreases in the mean systolic blood pressure were observed for 71%, 40% and 43% respectively of the groups receiving the coconut water, mauby and the mixture ( $p < \text{or} = 0.05$ ). For these groups, the respective proportions showing significant decreases in the mean diastolic pressure were 29%, 40% and 57%. For the group receiving the mixture, the largest decreases in mean systolic and mean diastolic pressure were 24 mmHg and 15 mmHg respectively; these were approximately double the largest values seen with the single interventions

# Coconuts (*Cocos nucifera*)



# ***Jamaican Dogwood (Piscidia erythrina)***

## ***Fish-Poison Tree***

***Photo by DrZ***



- Jamaican Dogwood was used by the ancient Arawaks & Maroons of Jamaica to stun fish prior to capturing; contains glycosides (Piscidin & Jamacin) & alkaloids (Erythraline)...
- Curanderos in the Amazon use a cousin, ***Erythrinia mulunga*** and the Chinese use Hai Tong Pi (***Erythrinia variegata***) for curariform action. It can numb and relax the striated musculature...
- Used by M.D.'s @ the turn of the century (Eclectic Physicians) when opium was indicated, but could not be tolerated...
- Use with sciatic,,neuralgia crushed extremities, toothaches menstrual cramps...

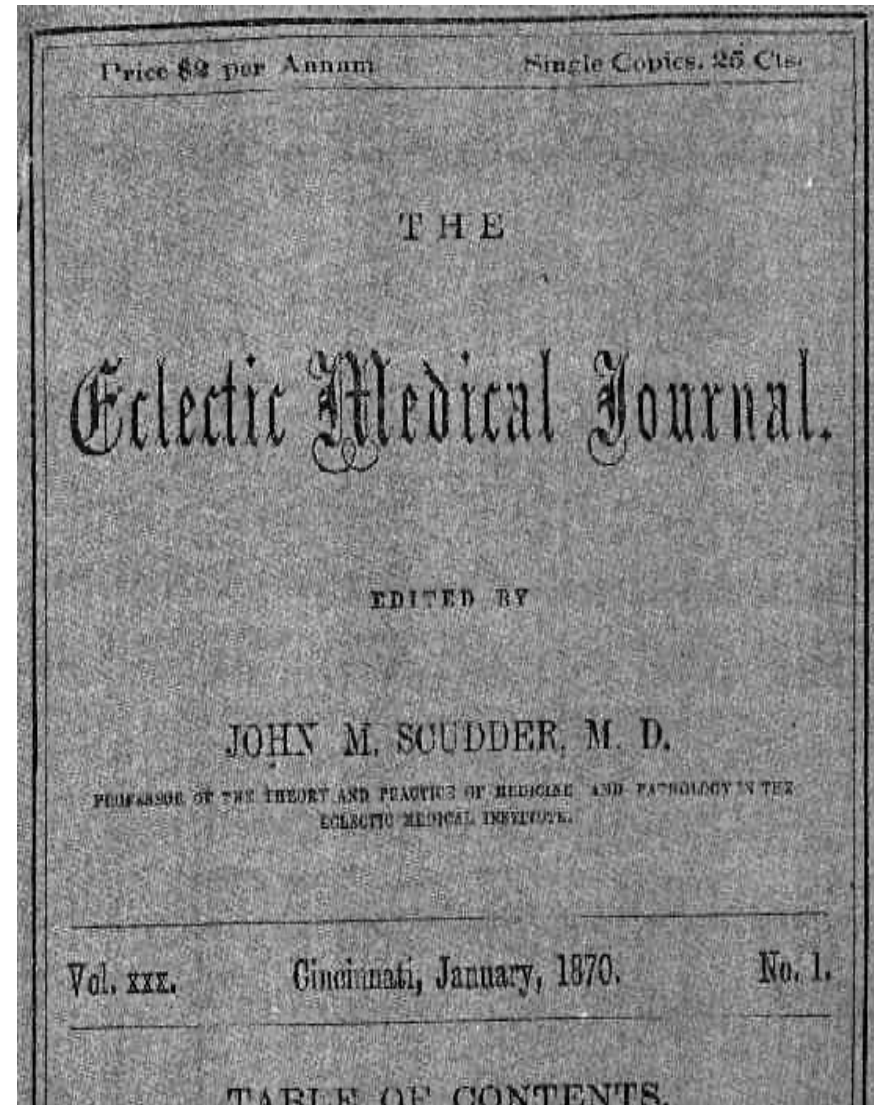
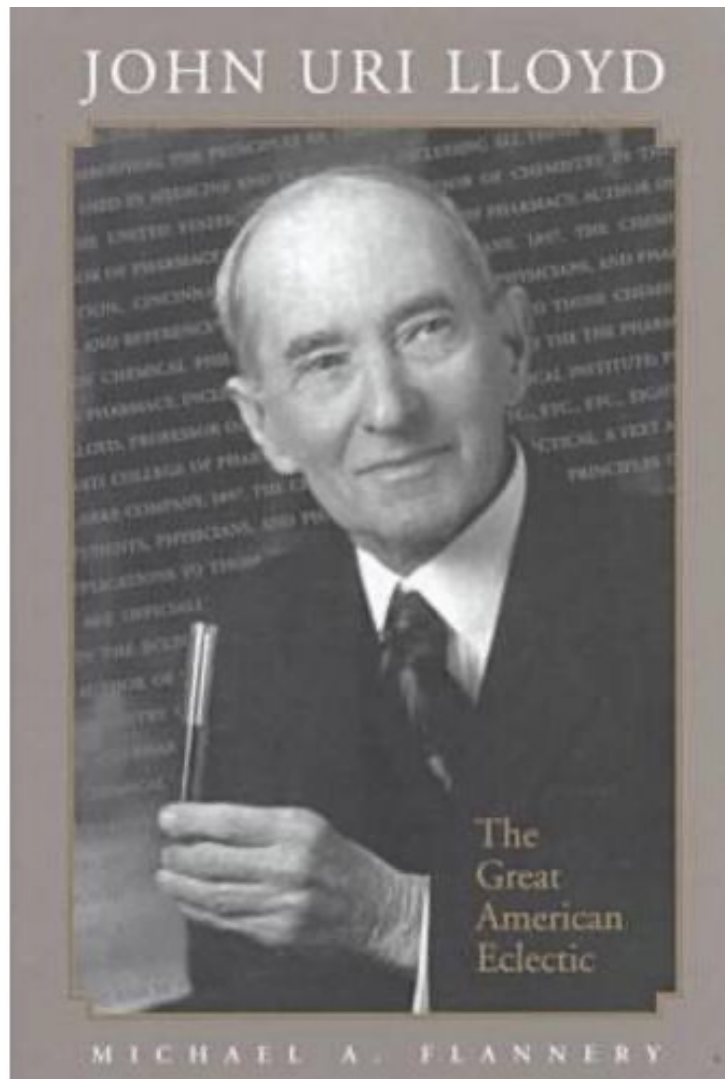
# *Piscidia erythrina* leaf & trunk

Photo by Dr. E Zampieron

- J Dog and Coral tree seem to work through GABA-A type receptors
- Modulate acetylcholine release, muscarinic receptor activation, augmentation of  $Ca^{2+}$  entry through L-type calcium channels, and calcium release from the intracellular stores.
- These findings provide further support for *Erythrina velutina* traditional uses



The Eclectic MD's knew of and used Jamaican Dogwood for pain clinically over 100 years ago



# *Erythrina mulunga*

*J Ethnopharmacol.* 2008 Jul 23;118(2):295-9. Epub 2008 Apr 24.  
*Anxiolytic-like effect of chronic treatment with Erythrina velutina extract*



# Allspice Pimento

*Pimenta dioica* Photo br DrZ

- Eugenol, the major constituent of clove oil, has been widely used for its anesthetic and analgesic action in [dentistry](#).
- Eugenol possesses significant antioxidant, anti-inflammatory and cardiovascular properties, in addition to analgesic and local anesthetic activity.
- The metabolism and pharmacokinetics of the compound in humans have been studied.
- Eugenol has also been used as a penetration enhancer. The compound is a very promising candidate for versatile applications, and the design of new drugs based on the pharmacological effects of eugenol could be beneficial



*Petiveria alliacea*  
**Guinea Hen weed**

*Petiveria alliacea*





## Implications of dibenzyl trisulphide for disease treatment based on its mode of action.

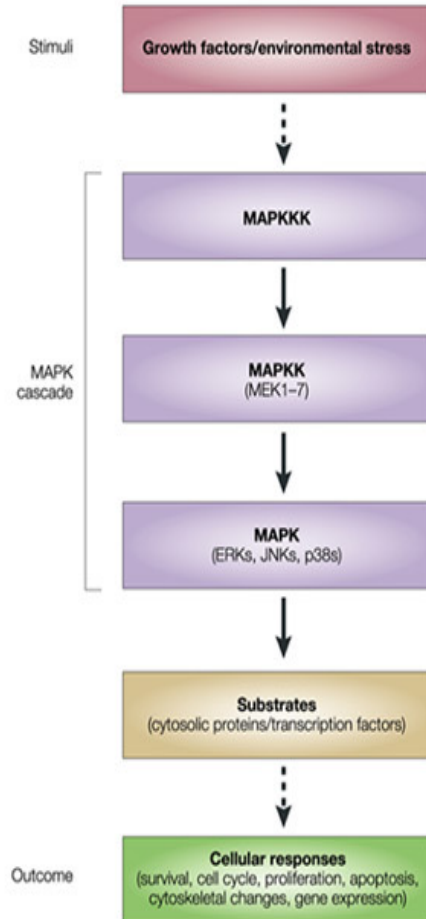
[Williams LA](#) et al

- The Natural Products Unit, Scientific Research Council, PO Box 350, Hope Gardens, Kingston 6, Jamaica, West Indies. [lawrencew@src-jamaica.org](mailto:lawrencew@src-jamaica.org)
- **Abstract** fluorapacin
- **Studies** conducted on the secondary metabolite (natural product), dibenzyl trisulphide (DTS), which was isolated from the sub-tropical shrub *Petiveria alliacea* (guinea hen weed, anamu) [Phytolaccaceae] have shown tremendous pharmaceutical promise as a drug prototype. This is now reflected in the development of the broad spectrum anti-**cancer** molecule, fluorapacin (bis(4-fluorobenzyl) trisulphide) which has an excellent safety profile. The mode of action elucidated for DTS is the mitogen activated protein extracellular regulated kinases 1 and 2 (MAPKinases ERK 1 and ERK 2). The MAPKinase signal transduction biochemical pathways are important in the regulation of a wide range of cellular processes which are important in disease establishment. These processes include: cancer cell proliferation, nerve repair, memory enhancement, autoimmune diseases, which are linked to thymic cell involution and bone marrow functions, cerebrovascular and cardiovascular diseases. In addition to the MAPkinase signal transduction mode of action, DTS also prevents the denaturation of serum albumin which is a feature of nonsteroidal anti-inflammatory drugs, thus supporting the molecule's possible role in the treatment of inflammatory ageing diseases

# Extracts of Guinea hen modulate MAPKK

[West Indian Med J.](#) 2007 Jan;56(1):17-21.

A critical review of the therapeutic potential of dibenzyl trisulphide isolated from *Petiveria alliacea* L (guinea hen weed, anamu).

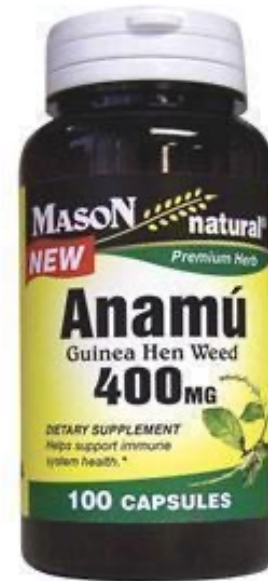


Nature Reviews | Drug Discovery

- dibenzyl trisulphide (DTS) isolated from *Petiveria alliacea*
- Dibenzyl trisulphide and its derivatives exhibited potent anti-proliferation/cytotoxic activity on a wide range of cancer cell lines.

- [Mol Cancer Ther.](#) 2009 Dec;8(12):3318-30.
- **Natural product derivative Bis(4-fluorobenzyl)trisulfide inhibits tumor growth by modification of beta-tubulin at Cys 12 and suppression of microtubule dynamics.**
- [Xu W](#), [Xi B](#), [Wu J](#), [An H](#), [Zhu J](#), [Abassi Y](#), [Feinstein SC](#), [Gaylord M](#), [Geng B](#), [Yan H](#), [Fan W](#), [Sui M](#), [Wang X](#), [Xu X](#).
- **Source**
- Hangzhou High Throughput Drug Screening Center, ACEA Biosciences, Inc., 6779 Mesa Ridge Road, Suite 100, San Diego, CA 92121, USA.
- **Abstract**
- Bis(4-fluorobenzyl)trisulfide (BFBTS) is a synthetic molecule derived from a bioactive natural product, dibenzyltrisulfide, found in a subtropical shrub, *Petiveria alliacea*. BFBTS has potent anticancer activities to a broad spectrum of tumor cell lines
- **BFBTS inhibited microtubule polymerization dynamics in MCF7 cells**, at a low nanomolar concentration of 54 nmol/L, while disrupting microtubule filaments in cells at low micromolar concentration of 1 micromol/L.
- Tumor cells treated with BFBTS were arrested at G2-M phase, conceivably resulting from BFBTS-mediated antimicrotubule activities. Mass spectrometry studies revealed that BFBTS bound and modified beta-tubulin at residue Cys12, forming beta-tubulin-SS-fluorobenzyl.
- The binding site differs from known antimicrotubule agents, suggesting that BFBTS **functions as a novel antimicrotubule agent.. Notably, BFBTS was more potent against MDR1-overexpressing MCF7/adr breast cancer xenografts with a relative tumor growth rate of 12.3% than paclitaxel with a rate of 43.0%.**
- BFBTS displays a novel antimicrotubule agent with potentials for cancer therapeutics

# Dr Williams, lead researcher in Jamaica on Guinea hen weed extract



# Amaranthus spinosis

## Callaloo



- Amaranth green common in Jamaican cooking
- Useful to stop mild GI bleeding
- High in iron, vitamin A, and micronutrients

# Duppy Gun Shot

## *Ruellia tuberosa*



# Duppy basil



- Same properties as Holy Basil
- Treats a variety of medical conditions including heart problems, asthma, bronchitis, arthritis and eye disorders.

# Duppy (Holy) Basil

- In the past decade, a number of scientific studies have looked at Basil for various treatment purposes.
- Findings from these various investigations have suggested that Holy Basil might be useful as a stress-reducer, painkiller, anti-inflammatory agent, an antioxidant, and as a treatment for bacterial, fungal and even viral infections.
- Holy Basil is also taken for reducing both stress and elevated levels of the stress hormone cortisol, and to promote physical and emotional endurance.



# Cow Tongue as an epiphytic fern (*Polypodium*)



- Used as a cure for colds in Jamaica

- [Cutis](#). 2012 Apr;89(4):183-4.
- **Subacute cutaneous lupus erythematosus: a case report of Polypodium leucotomos as an adjuvant therapy.**
- [Breithaupt AD](#), [Jacob SE](#).
- **Source**
- Department of Dermatology and Cutaneous Surgery, [University](#) of California, San Diego, Rady Children's Hospital, 92123, USA.
- **Abstract**
- Subacute cutaneous lupus erythematosus (SCLE) is an uncommon autoimmune disease that results in substantial photosensitivity of affected patients. Eruptions often are triggered or exacerbated by UV light (UVL) exposure. We present a case of a patient with SCLE who was moderately controlled with hydroxychloroquine sulfate but achieved near total remission of disease after the addition of oral Polypodium leucotomos supplement which has photoprotective effects on human keratinocytes. We report sustained clinical response with the use of P leucotomos in lupus and suggest that it may have future [application](#) in photosensitizing dermatoses

**Fernblock, a nutraceutical with photoprotective properties and potential preventive agent for skin photoaging and photoinduced skin cancers.**

- [Gonzalez S,](#)
- Dermatology Service, [Memorial Sloan-Kettering Cancer Center,](#)
- Many phytochemicals are endowed with photoprotective properties, i.e., the capability to prevent the harmful effects of excessive exposure to ultraviolet (UV) light. These effects include photoaging and [skin cancer](#), and immunosuppression. Photoprotection is endowed through two major modes of action: UV absorption or reflection/scattering; and tissue repair post-exposure.
- **We and others have uncovered the photoprotective properties of an extract of the fern *Polypodium leucotomos* (commercial name Fernblock). Fernblock is an all-natural antioxidant extract, administered both topically (on the skin) or orally. It inhibits generation of reactive oxygen species (ROS) production induced by UV including superoxide anion. It also prevents damage to the DNA, inhibits UV-induced AP1 and NF- $\kappa$ B, and protects endogenous skin natural antioxidant systems, i.e., CAT, GSH, and GSSR. Its photoprotective effects at a cellular level include a marked decrease of UV-mediated cellular apoptosis and necrosis and a profound inhibition of extracellular matrix remodeling. These molecular and cellular effects translate into long-term inhibition of photoaging and carcinogenesis that, together with its lack of toxicity, postulate its use as a novel-generation photoprotective nutraceutical of phytochemical origin**

# Guava (*Psidium guajava*)

Photo by DrZ '06

- Guava is in the same family as allspice, tea tree, clove, and also contains appreciable levels of Eugenol (11%)
- Excellent to prevent diarrhea, dysentery and death, esp. in kids
- One of the botanicals used in the tea used by the Maroon medicine man to help DrZ



## Anticough and antimicrobial activities of *Psidium guajava* Linn. leaf extract.

- J Ethnopharmacol. 1999 Nov 1;67(2):203-12. [\\_ Links](#)
  - **Anticough and antimicrobial activities of *Psidium guajava* Linn. leaf extract.**
  - [Jaiarj P](#), [Khoohaswan P](#), [Wongkrajang Y](#), [Peungvicha P](#), [Suriyawong P](#), [Saraya ML](#), [Ruangsomboon O](#).
  - Department of Physiology, Faculty of Pharmacy, Mahidol University, Bangkok, Thailand. [pypja@mahidol.ac.th](mailto:pypja@mahidol.ac.th)
  - The anticough activity of *Psidium guajava* Linn. (guava) leaf extract was evaluated in rats and guinea pigs. **The results showed that water extract of the plant at doses of 2 and 5 g/kg, p.o. decreased the frequency of cough induced by capsaicin aerosol by 35 and 54%, respectively, as compared to the control,** within 10 min after injection of the extract, ( $P < 0.01$ ). However, the anticough activity is less potent than that of 3 mg/kg dextromethorphan which decreased frequency of cough by 78% ( $P < 0.01$ ). An experiment on isolated rat tracheal muscle showed that the extract directly stimulated muscle contraction and also synergized with the stimulatory effect of pilocarpine. This effect was antagonized by an atropine. Moreover, growth of *Staphylococcus aureus* and beta-streptococcus group A, as determined by the disc diffusion method, was inhibited by water, methanol and chloroform extract of dry guava leaves ( $P < 0.001$ ). The LD50 of guava leaf extract was more than 5 g/kg, p.o. These results suggest that guava leaf extract is recommended as a cough remedy.

# Guava juice and Diabetes

- Am J Chin Med. 1983;11(1-4):74-6. [Links](#)
  - **Hypoglycemic effect of guava juice in mice and human subjects.**
  - [Cheng JT](#), [Yang RS](#).
  - Guava is a plentiful fruit in Taiwan and it was taken from the plants of *Psidium guajava* Linn. (Myrtaceae). According to the folklore in Chinese Medicine, guava was useful in the treatment of diabetes mellitus. In the present study, acute i.p. treatment with 1 g/kg guava juice produced a marked hypoglycemic action in normal and alloxan-treated diabetic mice. Although effective duration of guava is more transient and it is less potent than chlorpropamide and metformin, **blood glucose lowering effect of guava also can be obtained by oral administration in maturity-onset diabetic and healthy volunteers**. Thus, it is suggested that guava may be employed to improve and/or prevent the disease of diabetes mellitus.
  - PMID: 6660217 [PubMed - indexed for MEDLINE]

**Antibacterial activity of guava (*Psidium guajava* L.) and Neem (*Azadirachta indica* A. Juss.) extracts against foodborne pathogens and spoilage bacteria.**

**[Mahfuzul Hoque MD](#), [Bari ML](#), [Inatsu Y](#), [Juneja VK](#), [Kawamoto S](#).**

Department of Microbiology, University of Dhaka, Dhaka, Bangladesh.

- The antibacterial activity of guava (*Psidium guajava*) and neem (*Azadirachta indica*) extracts against 21 strains of foodborne pathogens were determined--*Listeria monocytogenes* (five strains), *Staphylococcus aureus* (four strains), *Escherichia coli* O157:H7 (six strains), *Salmonella* Enteritidis (four strains), *Vibrio parahaemolyticus*, and *Bacillus cereus*, and five food spoilage bacteria: *Pseudomonas aeruginosa*, *P. putida*, *Alcaligenes faecalis*, and *Aeromonas hydrophila* (two strains). Guava and neem extracts showed higher antimicrobial activity against Gram-positive bacteria compared to Gram-negative bacteria except for *V. parahaemolyticus*, *P. aeruginosa*, and *A. hydrophila*. None of the extracts showed antimicrobial activity against *E. coli* O157:H7 and *Salmonella* Enteritidis. The minimum inhibitory concentration (MIC) of ethanol extracts of guava showed the highest inhibition for *L. monocytogenes* JCM 7676 (0.1 mg/mL), *S. aureus* JCM 2151 (0.1 mg/mL), *S. aureus* JCM 2179 (0.1 mg/mL), and *V. parahaemolyticus* IFO 12711 (0.1 mg/mL) and the lowest inhibition for *Alcaligenes faecalis* IFO 12669, *Aeromonas hydrophila* NFRI 8282 (4.0 mg/mL), and *A. hydrophila* NFRI 8283 (4.0 mg/mL). The MIC of chloroform extracts of neem showed similar inhibition for *L. monocytogenes* ATCC 43256 (4.0 mg/mL) and *L. monocytogenes* ATCC 49594 (5.0 mg/mL). However, ethanol extracts of neem showed higher inhibition for *S. aureus* JCM 2151 (4.5 mg/mL) and *S. aureus* IFO 13276 (4.5 mg/mL) and the lower inhibition for other microorganisms (6.5 mg/mL). No significant effects of temperature and pH were found on guava and neem extracts against cocktails of *L. monocytogenes* and *S. aureus*. The results of the present study suggest that guava and neem extracts possess compounds containing antibacterial properties that can potentially be useful to control foodborne pathogens and spoilage organisms.
- PMID: 18041957 [PubMed - in process]

# Guava

- It's activity in vitro on many food borne pathogens may explain its ability to kill enteric pathogens in vivo. This is in part due to it's moderate level of Eugenol (much lower than Cloves or allspice, which is 85% Eugenol)
- It's tannin content can have an astringent effect on the GI or oral mucosa



# Cleary/Scorpion weed

Photo: Dr. E Zampieron

- Scorpion weed; named for its scorpioid inflorescence and its doctrine of signatures use in scorpion bites
- Maroon use is to put juice in eye for healing of early cataracts and eye afflictions due to antiinflammatory alkaloid content
- Not for internal use  
Pyrrolizidines, which mirrors ethnobotanical knowledge of Jamaicans, yet used internally by Amazonians for short periods of time



# Akee

(*Blighia sapida*)



- Myriah Hinchey, ND, dissects an akee fruit

Photo: Dr. E. Zampieron



- The ackee tree is indigenous to West Africa, where it is called ankye or ishin. Thomas Clarke, Jamaica's first botanist, introduced the plant to the island in 1778. However, the ackee tree, *Blighia sapida*, was named after the infamous Captain Bligh who took the breadfruit tree to the West Indies. The tree also grows in other West Indian Islands, in Central America, and in Southern Florida.



- Ackee, the national fruit of Jamaica, is a food staple in many Jamaican diets.
- The ackee tree is a tropical evergreen tree that can grow as tall as 40 feet. Its leaves are broad and pinnate; its approximately 10-cm-wide, 100-g fruit may be colored anywhere from straw to bright red. The fruit splits open while still on the tree to reveal 3 glassy black seeds surrounded by a thick, oily, yellow aril.

# Ackee toxicity

## Source/Ref: eMedicine

- An association between ackee poisoning and Jamaican vomiting sickness was first noted in 1875 and documented in 1904. In 1937, Jordan and Burrows found a water-soluble toxic material in the seed and pods of the ackee fruit.
- In 1954, Hass et al were the first to isolate 2 toxic compounds in their crystalline form.
- These compounds were called hypoglycin A and hypoglycin B because of their hypoglycemic activity.

# Ackee: Mechanism of toxicity

- Hypoglycin A, which is now simply called hypoglycin, is metabolized by means of transamination and oxidative decarboxylation to methylene cyclopropyl acetic acid (MCPA). **MCPA forms nonmetabolizable carnitine and coenzyme A (CoA) esters, thereby depressing tissue levels of these cofactors and making them less available for other biochemical reactions. Hypoglycemia results because both CoA and carnitine are necessary cofactors for long-chain fatty acid oxidation** and because oxidation is a requisite for active gluconeogenesis. MCPA also inhibits the dehydrogenation of several acyl-CoA dehydrogenases, including butyryl CoA, glutaryl CoA, and isovaleryl CoA. As a result of the inhibition of butyryl CoA dehydrogenase, the oxidation of long-chain fatty acids stops at the level of hexanoyl CoA and butyryl CoA. This effect leads to the decreased production of nicotinamide adenine dinucleotide (NADH) and acetyl CoA.

# DrZ the mad scientist...

- In a bold experiment, DrZ succussed the mother tincture of unripe ackee to 12 X potency
- With an understanding of how raw ackee affects the healthy human (induction of severe hypoglycemia), he wondered if it could be a homeopathic remedy for hypoglycemics, normalizing their blood sugar
  - (like cures like)
- Along with Gary Gruber, ND, he administered it to himself and Dr. Gruber after fasting for an entire day (inducing a hypoglycemic state)
- The homeopathic subjectively stabilized their hypoglycemia/blood sugar
- This remedy should be 'proved' in a larger setting as a treatment for hypoglycemia, nausea, vomiting, shakiness between meals



# Granny Weed

Photo: Dr. E. Zampieron

- This remedy is mixed with Kerosene oil as a powerful bush wound dressing and antibiotic
- It is applied over scabies tunnels, boils, carbuncles, whitlows
- \* It dries like a bandage and can hold the wound together like surgical glue



# Jack fruit

(*Artocarpus heterophyllus*)

Photo: Dr. E. Zampieron

- This large, watermelon size fruit is enjoyed by many
- It grows right out of the side of the tree
- The fruit has a strange odor, but tastes good
- This is a cousin to the fig & breadfruit
- Sap and leaves are used Medicinally for pain & fungus



[Med Mycol.](#) 2010 Sep;48(6):792-9.

## **Protection against *Paracoccidioides brasiliensis* infection conferred by the prophylactic administration of native and recombinant ArtinM**

- [Coltri KC](#), et al Brazil.
- **Abstract**
- We determined the prophylactic effect of both the d-mannose-binding lectin ArtinM extracted from the seeds of *Artocarpus integrifolia* (jackfruit) and its recombinant counterpart during the course of experimental paracoccidioidomycosis induced in BALB/c mice. Four experimental protocols of prophylaxis were employed to evaluate the most protective regimen of ArtinM administration. It was demonstrated that the best effect was obtained by administration of two ArtinM doses on days 10 and 3 before the challenge with *Paracoccidioides brasiliensis*. By following this protocol, the lungs of mice that received native or recombinant ArtinM exhibited reduced fungal burden and granuloma incidence. In addition, the protocol augmented contents of IL-12, IFN-gamma, TNF-alpha and NO. On the other hand, the control group consisting of untreated infected mice had higher pulmonary levels of IL-4 and IL-10. In conclusion, prophylaxis with ArtinM significantly reproduces the effect of its therapeutic administration, i.e, it confers resistance to *P. brasiliensis* infection in mouse models by promoting IL-12 production and favours Th1-immunity

# Jamaican 'Kava'

*Piper syn. Lepianthes syn. Pothomorphe umbellatum*

Photo: Dr. E Zampieron

- This herb is highly respected for its ability to relieve muscle aches and pain, headaches, stomach aches, and eye injury
- Brazilian researchers have documented its anti-inflammatory effect on the eyes
- (Braz J Med Biol Res. 2007 Aug;40(8):1129-32)



# Leaf of Life



- The use of this plant in Jamaica as an application for headaches and pains, including sprains, is confirmed.
- Similar uses to those already recorded are made of the species in Cuba and in Maya medicine.
- The Maya also considered it of value in the treatment of dysentery and failure of menstruation.
- REF:  
**MEDICINAL PLANTS OF JAMAICA. PARTS 1 & 11.** By G. F. Asprey, M.Sc., Ph.D. (B'ham.), Professor of Botany, U.C.W.I. and Phyllis Thornton, B.Sc. (Liverpool), Botanist

# *Bryophyllum pinnatum*



- Shamans say it has a high life energy
- Individual leafs can survive without food water light nutrients for months, One leaf roots easily underwater



- [Fitoterapia](#). 2012 Jul;83(5):853-8. Epub 2012 Mar 21.
- **Anti-inflammatory and analgesic potential of a novel steroidal derivative from Bryophyllum pinnatum.**
- [Afzal M](#), [Gupta G](#), [Kazmi I](#), [Rahman M](#), [Afzal O](#), [Alam J](#), [Hakeem KR](#), [Pravez M](#), [Gupta R](#), [Anwar F](#).
- **Source**
- Siddhartha Institute of [Pharmacy](#), Dehra Dun, Uttarakhand, India.
- **Abstract**
- A new steroidal derivative, urs Stigmast-4, 20 (21), 23-trien-3-one and other four compounds were isolated from the leaves of Bryophyllum pinnatum. The structure of this new steroid was elucidated and established by standard spectroscopic methods. Carrageenan induced paw edema model was used for anti-inflammatory and acetic acid induced model used for analgesic activity. This new steroidal compound was found to be active in reducing inflammation (% inhibition 87.29 and 84.45 respectively) when compared with diclofenac. Further, it showed 75.72% protection in analgesic activity in acetic acid induced writhing test in mice. In conclusion the % inhibition against carrageenan induced rat paw edema and % protection against acetic acid induced writhings showed by new compound revealed that the anti-inflammatory and analgesic activity of aqueous extract B. pinnatum are mainly due to the presence of this steroidal compound

[Phytomedicine](#). 2012 Jul 15;19(10):947-51. Epub 2012 Jul 21.

**Bryophyllum pinnatum inhibits detrusor contractility in porcine bladder strips--a pharmacological study towards a new treatment option of overactive bladder.**

[Schuler V](#)



- [Urol Res.](#) 2011 Oct;39(5):345-50. Epub 2011 Jun 4.
- **Effect of indigenous plant extracts on calcium oxalate crystallization having a role in urolithiasis.**
- [Yasir F, Waqar MA.](#)
- **Source**
- Crystallization process has a major role in urolithiasis. In the present [study](#), effect of two indigenous plants extracts namely Boerhavia diffusa and Bryophyllum pinnatum extract was determined on the crystallization of calcium oxalate crystals. Effect on the number, size and type of calcium oxalate crystals was observed. Results showed significant activity of both extracts against calcium oxalate crystallization at different concentrations ( $P < 0.05$ ). Size of the crystals gradually reduced with the increasing concentration of both extracts. The number of calcium oxalate monohydrate crystals which are injurious to epithelial cells gradually reduced and at the highest concentration of extracts (100 mg/ml) completely disappeared ( $P < 0.05$ ).
- These results [confirm](#) that B. diffusa and B. pinnatum extracts have antiurolithic activity and have the ability to reduce crystal size as well as to promote the formation of calcium oxalate dihydrate (COD) crystals rather than monohydrate (COM) crystals. Control of crystal size and formation of COD rather than COM crystals, in combination with the diuretic action of extracts is an important way to control urolithiasis

- [Pharm Pharmacol.](#) 1999 Mar;51(3):313-8.
- **Neuropsychopharmacological profile of the methanolic fraction of Bryophyllum pinnatum leaf extract.**
- [Pal S](#), [Sen T](#), [Chaudhuri AK](#).
- **Source**
- Department of Pharmaceutical Technology, Jadavpur [University](#), Calcutta, India.
- **Abstract**
- Neuropharmacological [studies](#) were conducted in experimental animals (rats and mice) with the methanolic fraction of Bryophyllum pinnatum [leaf extract](#). The fraction produced alteration of behaviour pattern, caused dose-dependent potentiation of pentobarbitone sleeping time **and had significant analgesic activity**. Significant reduction of exploratory behaviour and loss of residual curiosity were among the effects observed with the fraction. The observations suggest that the methanolic fraction of Bryophyllum pinnatum possesses a potent CNS depressant action

# McCathy

Photo: Dr. E Zampieron



# Jamaican periwinkle

PHOTOS: Dr. E. Zampieron



# Madam fate

Photo: Dr. E Zampieron



# Mango and flower



# Male papaya plant



# Medina





# Jamaican Noni/Duppy Soursop



# EcoTour Guide 'Natty' Grant with *Annona muratica*(Soursop/Guanabana)



# Pepper Elder (*Piper amalago*)

- Used in the past to enbalm the deceased before formaldehyde
- Carminitive  
Diaphoretic  
Pharyngeal analgesic like Kava
- Jamaican folk use:** Put in shoes when walking great distance to cushion and foot anodyne

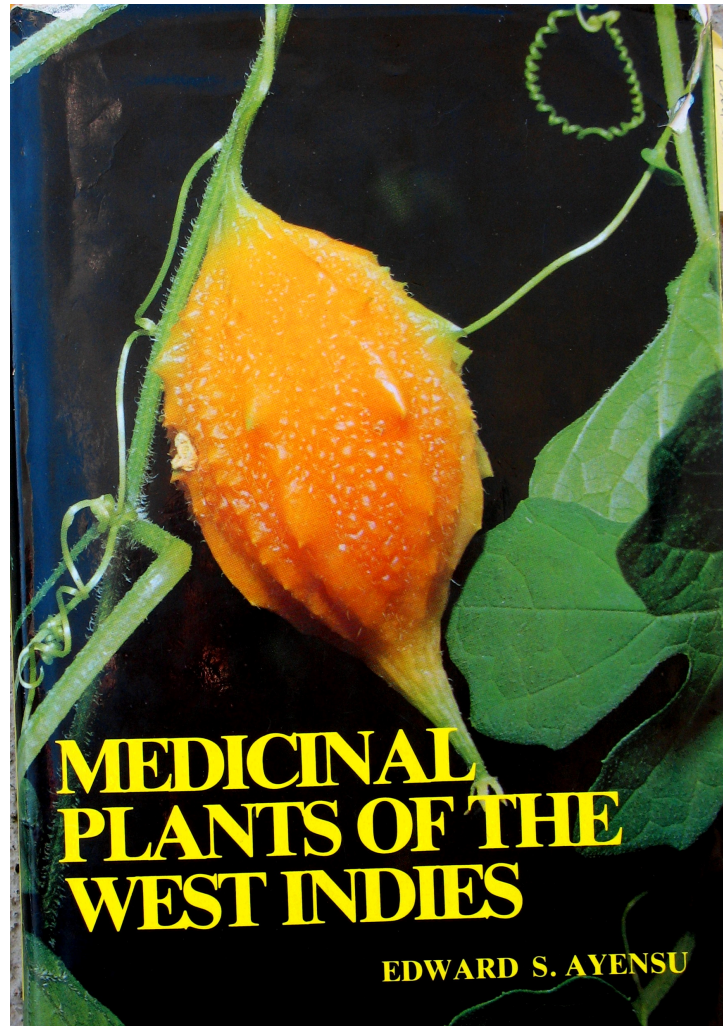


# Physalis (winter cherry)

- Used as a food
- Roots tonic like Ashwaghandha
- Steroidal glycosides
- Adrenal tonic

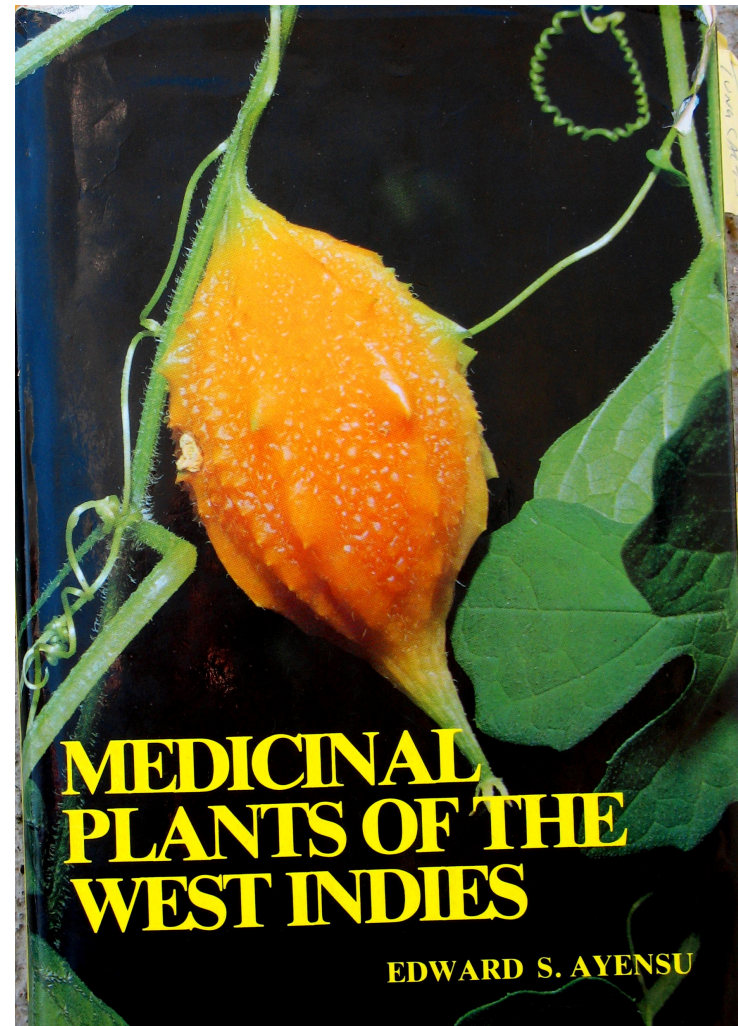


# Cerassee (Momordica charantia) Bitter melon

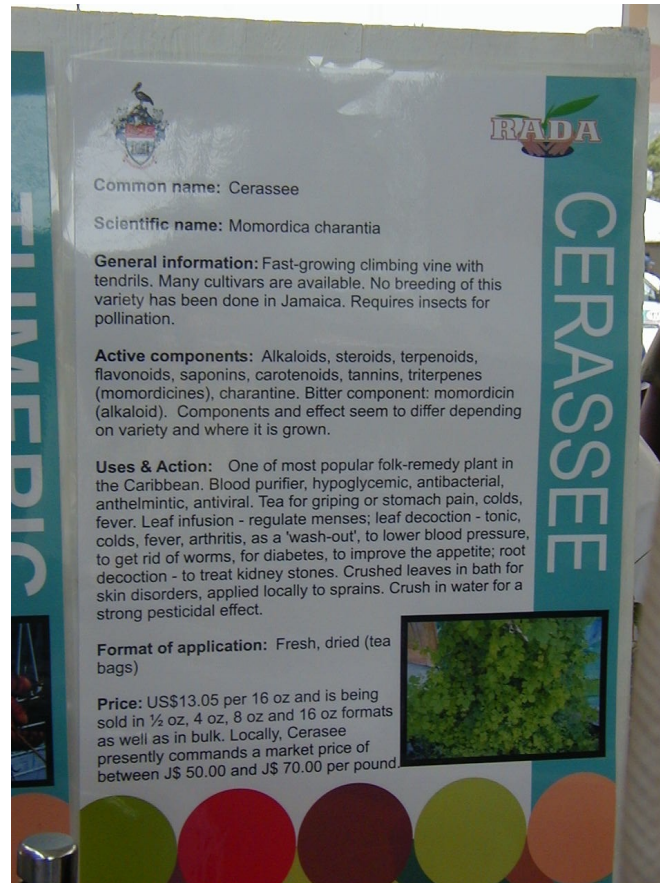


# Bitter melon constituents

- (P)-Insulin discovered in plant, which is close to human insulin
- Used to clean the blood & bowels
- Antihelminthic (charantin)
- Inhibits cGMP in psoriasis
- Anti-cancer?
- Toxic if used continuously at high dose
- Maroons used it for only 9 days duration, twice a year



The national government of Jamaica is slowly embracing the folk medicine of its people



**Common name:** Cerassee

**Scientific name:** Momordica charantia

**General information:** Fast-growing climbing vine with tendrils. Many cultivars are available. No breeding of this variety has been done in Jamaica. Requires insects for pollination.

**Active components:** Alkaloids, steroids, terpenoids, flavonoids, saponins, carotenoids, tannins, triterpenes (momordicines), charantine. Bitter component: momordicin (alkaloid). Components and effect seem to differ depending on variety and where it is grown.


**Uses & Action:** One of most popular folk-remedy plant in the Caribbean. Blood purifier, hypoglycemic, antibacterial, anthelmintic, antiviral. Tea for griping or stomach pain, colds, fever. Leaf infusion - regulate menses; leaf decoction - tonic, colds, fever, arthritis, as a 'wash-out', to lower blood pressure, to get rid of worms, for diabetes, to improve the appetite; root decoction - to treat kidney stones. Crushed leaves in bath for skin disorders, applied locally to sprains. Crush in water for a strong pesticidal effect.

**Format of application:** Fresh, dried (tea bags)

**Price:** US\$13.05 per 16 oz and is being sold in ½ oz, 4 oz, 8 oz and 16 oz formats as well as in bulk. Locally, Cerassee presently commands a market price of between J\$ 50.00 and J\$ 70.00 per pound.

**CERASSEE**

**IRVADA**







# Physic nut

- Purgative during fasting
- Talismanic properties



# Rock fern

Photo: Dr. E Zampieron

- Strong antiparasitic compounds, like other ferns
- Fixed oils, resins tannins, filicin and filicic acid
- Effective against tape worm
- Dr. Brett says don't purge with castor oil after using ferns, as it could cause **DEATH** by respiratory paralysis



# Shame A lady/maca

Sensitive *Mimosa pudica*

Photo: DrZ



- Similar to the use of Albizzia (mimosa) in TCM & Ayurveda
- Disturbed shen
- Heart fire
- Muscle tension
- Bhakuni et al 1969 reported that when smoked (in India), it is a powerful sedative

# Selenicereus grandiflorus

Photo: DrZ & <http://www.eLENAS-vieques.com/spring/cacb.jpg>

- This cactus is a classic tonic for the heart muscle, brought into popularity by the Eclectics
- It is devoid of cardiac glycosides, yet has cardioactive amines and flavonoids
- Used for arrhythmias, CHF, etc.



EcoTourists croiss a stream on one of the great hikes to Kwaaman Falls (Go Dr. Hubscher!!)



Approaching  
Kwaaman Falls,  
ST Mary, JA, WI



# Black Sand Beach



DrZ with a great tan..  
Is he working' or playing?  
St Patricks Day, '07





# Sousoumba

Photo: DrZ

- Used as a favorite food by Jamaicans, called Run down



# Spanish needle (*Biden pilosa*)



- Bidens is a powerful antiviral in the TCM materia medica

# Jamaican Vervain

- Sedative like our vervain, but not related



# Aloe barbadensis

Over 350 species Identified

Aloe Means 'Bitter clear shiny substance'

Jamaican vernacular: Sinkle bible



Photo credit:  
DrZ, 2006

- Used for burns
- Green part high in anthraquinone glycosides;
- used seasonally for a 'wash out'
- Eutropic for skin regeneration; many studies
- Immunomodulating glyconutrient acemannan  
Common cosmetic agent today

# Cashew (*Anacardium occidentale*)



- <http://diary.00ff00.com/wp-content/photos/cashew-fruit.jpg>

# Cashew apples and nutmeg

Photo by DrZ, Kingston, JA

in their native state. What botanical family are they in?

- The cashew nut is defined botanically as the fruit. It grows externally in its own kidney-shaped hard shell at the end of this pseudo-fruit, or peduncle.
- The nut kernel inside is covered with an inner shell, and between the two shells is a thick, caustic, and toxic oil called cardol.
- Cashew nuts must be cleaned to remove the cardol and then roasted or boiled to remove the toxins before they can be eaten.
- Reference:
- [www.Rain-tree.com](http://www.Rain-tree.com)



# Cashew

- Tribes in Suriname use the toxic seed oil as an external worm medicine to kill botfly larvae under the skin.
- In Brazil, a bark tea is used as a douche for vaginal discharge and as an astringent to stop bleeding after a tooth extraction.
- A wine made from the fruit is used for dysentery in other parts of the Amazon rainforest.
- The fruit juice (high in Vit C) and a bark tea are very common diarrhea remedies throughout the Amazon today, used by *curanderos* and local people alike.
- Maroon's of Jamaica use the caustic oil as a vesicant to remove warts & Corns; use the leaves for diarrhea d/t tannin content (Ayensu; pg 37)
- SOURCE: Rain-tree.com

Photo by DrZ, Kingston, JA



# Ram Goat Dash a long

## *Turnera ulmifolia*

a close botanical cousin to Damiana (*Turnera aphrodesiaca*)



- Used as a sexual tonic
- The name refers to a surge in sexual energy in the Ram goat (male) generated upon gorging himself



Jamaicans are marketing their indigenous herbs to a wider audience

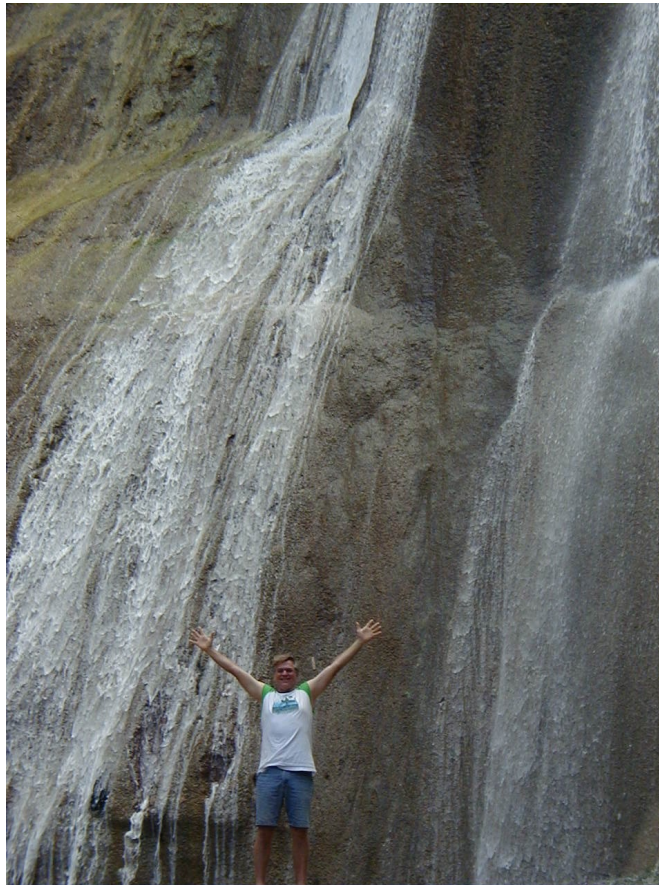


# Cecropia (Trumpet tree)

- Trumpet to scale with EcoTour Guide, Jan



# Upper Tacky falls





# The Blue Mahoe

(*Hibiscus elatus*)

<http://www.arbolesornamentales.com/Hibiscuselatus.jpg>



- National tree of Jamaica
- Used as a demulcent
- A giant Hibiscus tree



# *Coccolobos uvifera*

[http://www.biologie.uni-regensburg.de/Botanik/Schoenfelder/kanaren/images/Coccoloba\\_uvifera\\_fruit.jpg](http://www.biologie.uni-regensburg.de/Botanik/Schoenfelder/kanaren/images/Coccoloba_uvifera_fruit.jpg)

- Nutritious grapes
- Excellent for diarrhea d/t high tannins

Used by the Bush Dr. In DrZ's dysentery tea



© P. Schönfelder

# The view of Robins Bay on one of EcoTours for Cures hikes





# Private Cove for EcoTours Travelers



# Dr. Diane Robertson, Jamaica's premier natural pharmacist, author & herbalist



# Dr. Hubscher (left), Feeling IRIE after the tough hike to stunning Tacky Falls



# Upper Tacky Falls, Tallest in Jamaica



# Lower Tacky Falls and EcoTourist

(DrZ's Youngest Brother John)



# Beginning the tough hike back from Tacky falls, Islington, St.Mary Parish, Jamaica, WI











# Arrowroot (Maranta arundinacea)

<http://www.thesage.com/images/prod/5024305.jpg>



<http://www.dkimages.com/discover/previews/920/50282258.JPG>



# Musa spp.



- Banana root is used for the urinary tract system, although no scientific research supports this
- Green banana skins have documented ant-microbial properties
- Radix has stiptic and hemostatic properties

Photo: DrZ



# Bananas & Plantain Plantation, high in the Jamaican Bush country

Photo: Dr. E Zampieron '07



# Bananas (*Musa Bajoo*) @ Dr.Z's Home Garden, Woodbury, CT



- Yes, you can grow bananas in Cold CT!!
- These are grown with winter protection, just like any perennial bulb (i.e. a tulip)
- These are summer and winter shots for comparison
- We don't get fruit on these, though...they are grown for their tropical flair and as a natural shade for the Southern part of the house in summer

DrZ's Bananas  
In Early Spring  
& Summer '07 (My daughter  
Caitlin (12)& Friend as models)





# From Medicinal Plants of Jamaica

By

G. F. Asprey, M.Sc., Ph.D. (B'ham.), Professor of Botany,  
U.C.W.I. and Phyllis Thornton, B.Sc. (Liverpool), Botanist

- MUSA PARADISIACA L. Plantain.
- M. SAPIENTUM L. Banana.
- The "bark" and "trash" of these two common species find some use in Jamaica domestic medicine. Tea
- made in the usual way is thought to be of some use for "stoppage of urine" and "sourness of the stomach".
- Browne reported that the juice is a rough but cooling astringent and according to Boussingault's analysis it
- contains tannin, gallic acid and perhaps salts of acetic acid. The Jamaican uses find parallels in Maya medical
- practice; for "stoppage of urine" the juice of young shoots is recommended and this is also considered of use in
- constipation: for sudden diarrhoea the plant is boiled with calabash. In the Gold Coast the astringent sap is also
- used for diarrhoea and the sap and leaves are used in various ways as dressings for ulcers, cuts and burns. In
- Jamaica the juice of the plant is often drunk for "internal strains". Among uses mentioned by Barham are that of
- leaf juice for burns and of jam made with the fruit for coughs, hoarseness and to "allay the heat of urine".
- Thomson recommends roast plantain sucker as a poultice to be applied over a burn dressing of spirits, olive oil,
- lime water and turpentine.

# Acerola cherry (Malpighia glabra)

PHOTO:[http://upload.wikimedia.org/wikipedia/commons/thumb/e/ec/Malpighia\\_glabra3.jpg/800px-Malpighia\\_glabra3.jpg](http://upload.wikimedia.org/wikipedia/commons/thumb/e/ec/Malpighia_glabra3.jpg/800px-Malpighia_glabra3.jpg)



- Highest source of Vitamin C
- (although some claim Camu-camu to be highest)

# Breadfruit

- gum of this tree makes an effective dressing for the contagious skin disease Tinea versicolor or liver spot





- Brought from Tahiti by Captain Bligh as a cheap starch to feed the slaves
- High levels of flavonoids in the leaves
- Sap contains cardenolides
- Strengthens heart, regulates Cardiac output

# Cashew (*Anacardium occidentale*)



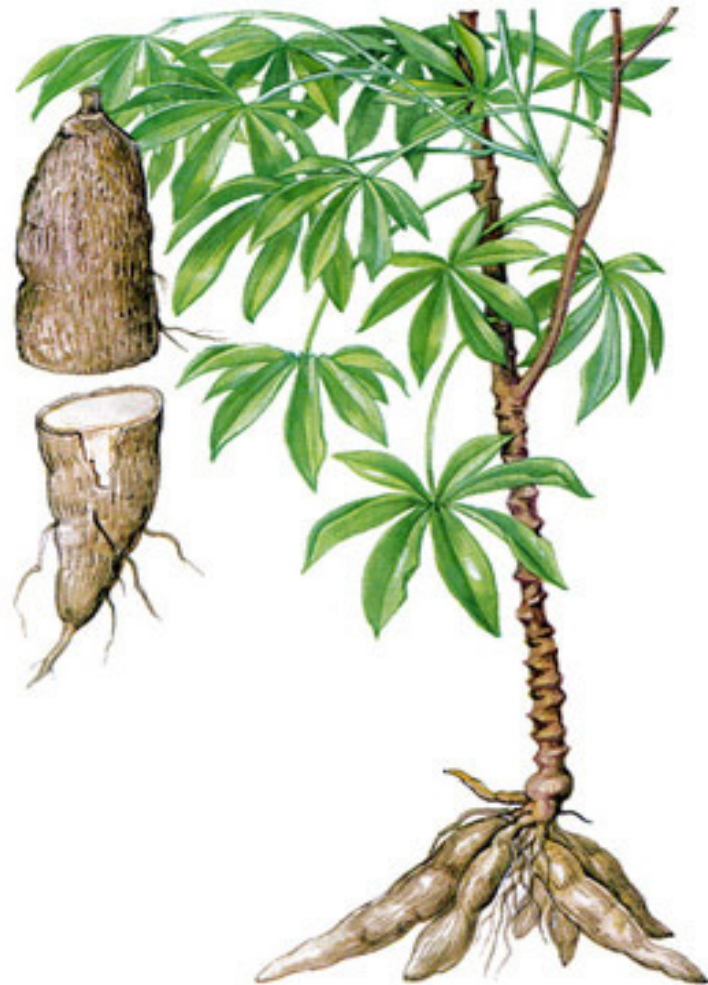
- <http://diary.00ff00.com/wp-content/photos/cashew-fruit.jpg>

# Cassava

(*Manihot esculenta*)

[i76.photobucket.com/albums/j14/biopact/biopac...](http://i76.photobucket.com/albums/j14/biopact/biopac...)

- Cassava (*Manihot esculenta*)—more widely known as manioc in Europe—is one of the most important agricultural crops.
- Its root represents the staple food of over 800 million people It contains cyanogenic glycosides until well cooked
- It is native to the Americas



DrZ holding Cassava root from Jamba's farm,  
Islington, St. Mary, Jamaica, WI







# *Theobroma cacao*

*Photo: Dr. Z*

- **Chocolate comes from the roasted pits of this unusual fruit**
- **Xocoatal is the Aztec word for chocolate, meaning 'bitter water'**
- **Although brought to the new world by the conquistadors, it wasn't until the late 1800's that it became popular as a candy**
- **The first commercially prepared dark chocolate was produced in about 1847. Milk chocolate, made with the addition of dried milk solids, was developed by the Swiss in about 1876.**
- **The fat derived from the cocoa bean is extensively used in cosmetics**
- **Allopathic drug Theophylline was modeled after alkaloid found in Theobroma**



# Moderation is always best.....

- Try ***dark chocolate***, which is richer in antioxidants and stearic acid than milk chocolate.
- Use chocolate products that are lower in calories and fat, such as chocolate-flavored syrup and cocoa power, which have most of the cocoa butter removed.
- ***Avoid chocolate products that say "hydrogenated oils" on the label.*** The hydrogenation process (turning oils into a solid) creates trans fats, a fatty acid linked to heart disease. Total fat content is also listed on the label.
- You only need a little chocolate to get the job done. Eat a small amount of miniature size candies instead of big bars.

# Chocolate: A Legal Cannabinoid?

- *Anandamide*, a compound found in chocolate, has been recently discovered to bind to the brain's cannabinoid receptors...
- This acts like a mild cannabinoid to *promote relaxation...but not hallucination...*
- Christian Felder at the National Institute of Mental Health would point out that a 130-pound person would have to eat **25 pounds of chocolate all at once to get a marijuana-like effect!!!**
- chocolate is a natural analgesic...
- chocolate foods trigger the brain's production of natural opiates → like the runner's high

# Chocolate Affects the Brain, Adrenal & Thyroid Gland

- Chocolate is loaded with Phenylethylamine (PEA), which is similar in structure to the important amino acids Tyrosine & Phenylalanine
- These amino acids are the building blocks of *catacholamines*, (Dopamine, Epinephrine (adrenaline) & NE
- They also build thyroid hormone, as well as certain adrenal hormones
- **Bupropion's (Wellbutrin) chemical structure is similar to PEA...**
  - Hence, good quality chocolate can theoretically help people stop smoking and acts as an antidepressive...

# ***Cocoa as an antiinflammatory***

- ★ In a double-blind crossover study, 20 individuals at risk for cardiovascular diseases received cocoa beverages with high or low contents of flavan-3-ols.
- ★ NO-dependent, flow-mediated dilation of the brachial artery and concentrations of nitroso compounds in plasma were measured...
- ★ It was shown that ingestion of the high-flavanol cocoa drink but not the low-flavanol cocoa drink significantly increased plasma concentrations of nitroso compounds and flow-mediated dilation of the brachial artery.
- ★ Therefore, ingested flavonoids may reverse endothelial dysfunction through enhancement of NO bioactivity.
- ★ You can get this product from Life extension ([Lef.org](http://Lef.org))





# Coffee

- Used to treat scorpion bites in its raw form





# Dasheen/Taro/Elephant

ear<http://www.survivaliq.com/survival/PIC/img086.jpg>  
<http://www.ddbstock.com/jpegndx/stlucia/saintluciadk07005.jpg>



# Mango (*Mangifera indica*)

## Fruit, Leaf and flower

Photo: Dr. E Zampieron & [mgonline.com/mango04.jpg](http://mgonline.com/mango04.jpg)  
& <http://www.hort.purdue.edu/ext/senior/fruits/images/large/mango3.jpg>



# Passionflower (*Passiflora* spp.)

Photo Credit :<http://www.cambridge2000.com/gallery/images/P7167613.jpg>



# Passiflora incarnata

## ***Passionflower***

*Photo: Dr. Z at UBCNM*

- Considered an herbal sedative or hypnotic
- Excellent for tension or anxiety based muscle spasms
- Contains harmine alkaloids & serotonin
- Recommend solid extract (6:1) for most therapeutic efficacy



# Papaya

<http://www003.upp.so-net.ne.jp/beech-forest/plant/papaya1.jpg>

- Powerful digestive tonic
- Dissolves keratinized tissue
- “Never plant papaya very near your house as it will draw negative vibes” states Jamba



# Northern Papaya/Paw paw(*Asima* spp.)

actually a cousin of the Soursop ANNONA, but also called paw-paw

<http://www.kitchengardeners.org/pics/pawpaw01.23.06.JPG>

- You can grow this fruit in CT! Tastes like a mango/Banana mix
- Some call it *Indiana banana*



# Sorrel (*Hibiscus sabdariffa*)

<http://www.hort.purdue.edu/newcrop/morton/images/Plate37.jpg>



- High in Ascorbic acid
- Refrigerant
- Fermented with honey into a lovely wine for the holidays

# Tamarind (*Tamarindus indica*)

- <http://www.pacificworlds.com/kawaihae/land/images/tamarind.jpg>
- <http://cache.eb.com/eb/image?id=4569&rendTypeld=4>





# Tamarind

- One of the best eye washes in Jamaica
- Antimicrobial for 'Cold affecting eyes'
- High in Vitamin c
- High in Tannins and Flavonoids
- Used as a spice in PickaPepper sauce and Angostura bitters



# Castor (*Ricinus communis*)

<http://www.askitsdone.co.uk/~angocho/Castor%20Oil2.jpg>



# Bissy nut

- <http://www.naturezadivina.com.br/loja/imagens/cola%20nitida1.jpg>
- Used as a stimulant
- Antidote for poisoning
- High Theobromine content



# Smilax



# Smilax spp.

- The name *sarsaparilla* or *zarzaparilla* comes from the Spanish word *zarza* (bramble or bush), *parra* (vine), and *illa* (small)—a small, brambled vine
  - (Source [www.Rain-tree.com](http://www.Rain-tree.com))
- Many species of *Smilax* around the world share the name *sarsaparilla*; these are very similar in appearance, uses, and even chemical structure.
- These include:
  - *S. officinalis*, *S. japicanga*, and *S. febrifuga* from South America (Brazil, Ecuador and Colombia);
  - *S. regelii*, *S. aristolochiaefolia*, and *S. ornata* from Mexico, and Latin America;
  - *S. laurifolia*, *Smilax regelii* and *S. balbisiana* (know as Chainy root) from Jamaica
  - *S. glabra* from China
    - (this is the species studied the most for its anti-spirochete properties)

Our species (even here on UB campus is *Smilax rotundifolia* (green briar)

# Smilax (Lilly family)

- Included in the USP until 1950 to treat secondary and tertiary syphilis

Documented blood and lymphatic purifiers, especially in reducing endotoxins found in psoriasis

(NEJM 1942)

Detoxifies heavy metals

DMARD activity in RA reducing TNF-alpha

# Actions of Smilax spp.

From [www.Rain-tree.com](http://www.Rain-tree.com)

- detoxifies organs
- relieves pain
- cleanses blood
- kills fungi
- aids absorption
- reduces inflammation
- kills bacteria
- kills germs
- stimulates digestion
- reduces fever
- increases urination
- immunomodulator
- protects liver
- fights free radicals
- promotes perspiration
- relieves rheumatism

**Decoction: 1/2 to 1 cup 2-3**

**Capsules: 1-2 g twice daily**

**Tincture: 5ml twice daily**

- “Sarsaparilla contains the plant steroids sarsasapogenin, smilagenin, sitosterol, stigmasterol, and pollinastanol; and the saponins sarsasaponin, smilasaponin, sarsaparilloside, and sitosterol glucoside, among others. The majority of sarsaparilla's pharmacological properties and actions have been attributed to these steroids and saponins.
- The saponins have been reported to facilitate the body's absorption of other drugs and phytochemicals, which accounts for its history of use in herbal formulas as an agent for bioavailability and to enhancement the power and effect of other herbs “
- Source: [www. Rain-tree.com](http://www.Rain-tree.com)



# Jamaican Tonics



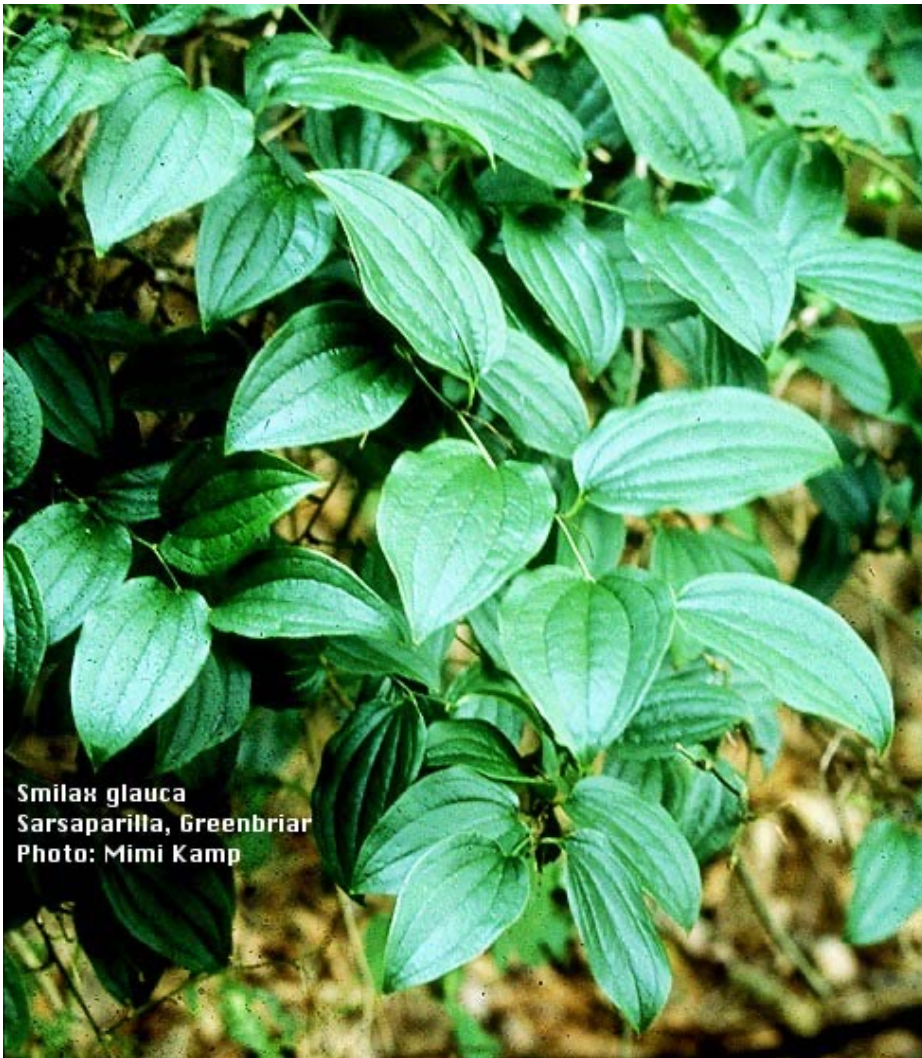
- Smilax is one of the main ingredients in 'Roots', tonics that were once only made by Bush Doctors, but are now available commercially
- **INGREDIENTS**  
Filtered Water, Chainy Roots (Smilax Balbisiana), Sasaparilla (Smilax Regelii), Tan Pan Rock (Male Fern-Dryopteris Filix Moss), Strong Back (Morinda Royoc), Search-Mi-Heart (Rytidophyllum Tomentosum), Hug-Mi-Tight (Polypodium Exiguum, Filicineae Fam), Blood Wiss (Vitis Tiliafolia), Raw Moon (Trophis Race Mosa), Medina (Alysicartus vaginalis), Coconut Roots (Coconueifera), Mountain Coco, bread Nut, Mountain Spice, Green Wiss, Donkey Weed, Sibble Jack, Five Fingers, Jamaican Brown Sugar, Molasses, Honey, Mint (Mentha)

# Roots tonic ingredients explained...

- **INGREDIENTS**
- **Chainy Roots** Is high in iron content. This makes it excellent for building up the blood, especially in cases of anemia or low blood count. Persons suffering from pain can gain relief. It is useful for skin problems. It is a well-known aphrodisiac and persons with low sex drive or impotence are benefited.
- **Mentha** It helps stimulate the stomach and liver, cools indigestion by combating gas, relieves flatulence, strengthens and soothes the bowels and helps with cramping.
- **Sarsaparilla** It serves as a tonic to promote good circulation (tones, balances, strengthens overall body functions). It works as a blood purifier and general detoxification aid. It alleviates rheumatism, skin disorders and physical weakness and stimulates metabolism and male sexual potency (to increase vitality and virility).
- **Hug-Mi-Tight** (Polypodium Exiguum, Filicineae Fam) Protects brain cells, protects skin cells (anti-aging); for coughs, bronchitis, chest colds and other upper respiratory problems; reduces phlegm, fights free radicals, serves as a natural sunscreen.
- **Dandelion** Protects and detoxifies the liver, kills bacteria, fungi, parasites, viruses; cleanses blood and detoxifies; cellular protectors and preventative to cell damage (immune, liver, kidney, cancer preventative); promotes perspiration and serves as a mild laxative.
- **Strong Back** Used to nourish the nerves and strengthen the male and female reproductive system. Also beneficial for persons suffering from sore throat.
- **Blood Wiss** Used to purge the blood and alleviate pain.
- **Raw Moon** Used to build the body; and increase fertility through enhanced sperm count.
- **Coconut Roots** Useful for toothache, fevers, menstruation, stops menstrual hemorrhaging.
- **Search-Mi-Heart** Popular treatment for colds and stomach ailments.

# Smilax spp.

<http://www.allnatural.net/herbimages/Sarsaparilla2.jpg>



# Cleaning the Smilax roots for

## “The Roots Tonic”

Chainey root on far left  
Smilax Lower



*Radix Morinda royac*  
*Strong Back*



# Opuntia tuna (Tuna cactus)

with *EcoTours for Cures* Maroon Bush Doctor Jonboo

- Used by the Bush Doctors like Aloe spp.
- Tea used internally as demulcent
- Apply after salt rundown for lameness
- Draw out boils with topical applications
- Fruit high in Ascorbic acid
- Polysaccharides and high calcium levels noted



# Tuna cactus



# *Ananas comosus*

- High in Bromelain; destroyed in the irradiation process
- Enzyme that f(x) in a wide range of PH's
- Anti-inflammatory
- Anti-thrombotic
- Mucolytic
- Enhances absorption of many substances





# Okra (*Abelmoschus* spp.)



- Used internally as a demulcent for ulcers
- Used externally warmed as a poultice base for rashes, bites
- Emollient
- Used to thicken soups and stews



# Nerium oleander

- Cardiac glycosides cause diuresis and help regulate heart in CHF
- Activates actinomyosin by freeing it from troponin
- 'Digitalis' of the tropics

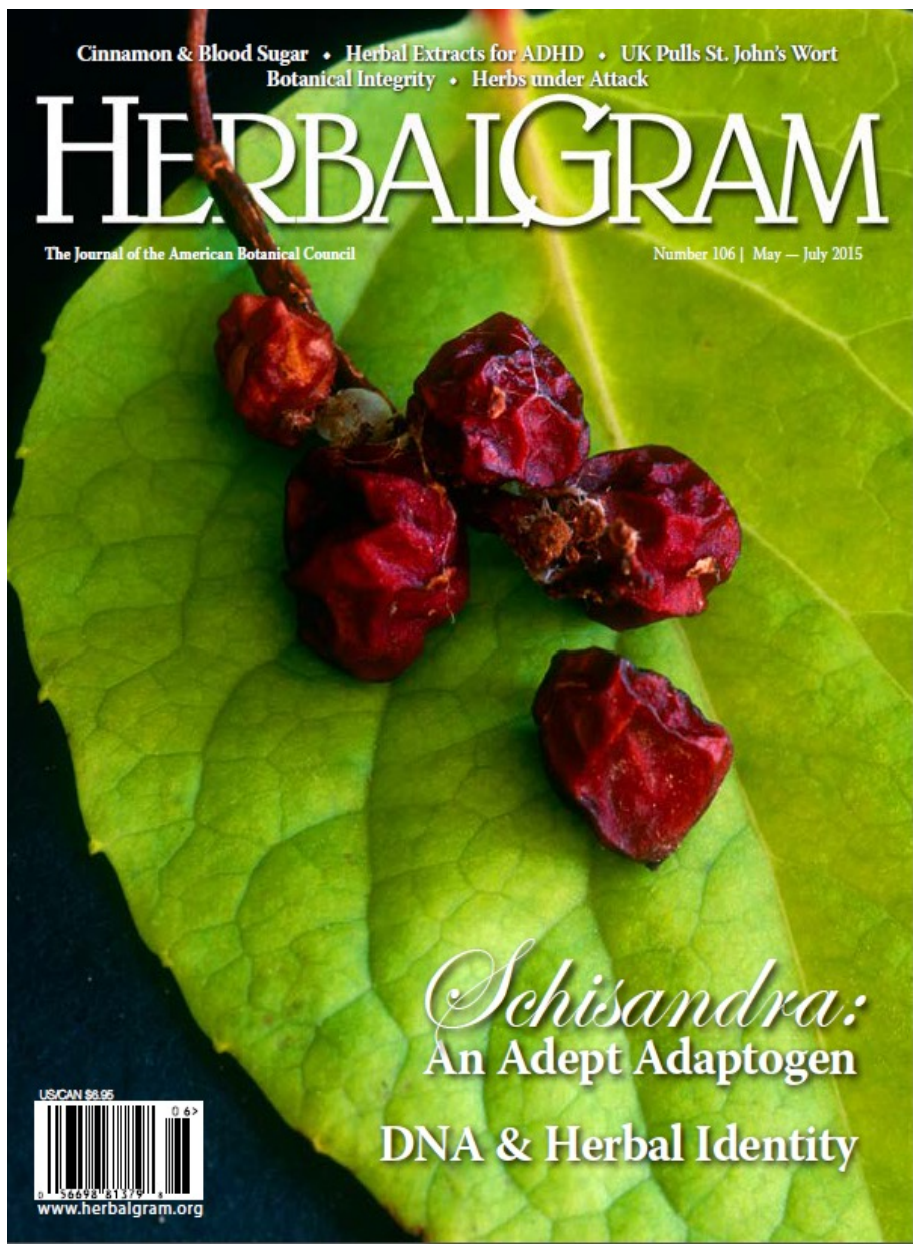


# Search Me Heart

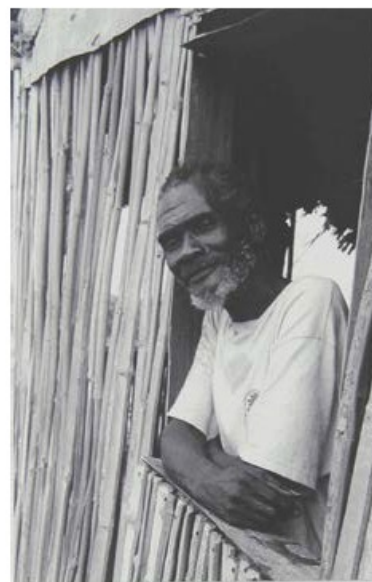
Photo: Dr. E. Zampieron



# Jamba was recently honored in HERBALGRAM



## IN MEMORIAM



### Lloyd "Jamba" Scott 1937-2014

Lloyd "Jamba" Scott, a Jamaican herbalist of the Maroon tradition and educator of scores of naturopathic physicians and herbalists, died in Jamaica in November 2014 of natural causes. He was 77.

Lloyd Scott was born in Penn Hill, in the Jamaican parish of St. Mary. As a young man, he was a gifted athlete and excelled in boxing and cycling, winning many championship cycling events in Jamaica. He was a talented farmer on land inherited by his family in Idlington, Jamaica, where he grew commercial smlax (*Smilax* spp., Smilacaceae), ginger (*Zingiber officinale*, Zingiberaceae), and turmeric (*Curcuma longa*, Zingiberaceae), as well as many other herbs, for the market in the United States.

He was also a master sculptor and carver, taking the name Chamba (later, Jamba), which means "chopping up of wood" in Patois, a creole language of Jamaica. A champion fisherman, his student Mike Daum documented on film Jamba's catching barracuda with only a hand line and his machete.

He studied herbal medicine by spending time with elder family members and friends and apprenticing in the Jamaican Cockpit country on the parish of Trelawny, learning the many

closely held herbal medicines used by the Maroons. Later, he served as the village bush doctor and elder in Idlington, where he treated the villagers for many decades.

Jamaican Maroons are the descendants of indentured servants and slaves brought from Ghana, Ivory Coast, and Sierra Leone to Jamaica by the Spanish in the 1500s. (Maroon comes from the Spanish word *cimarrón* meaning "wild" or "untamed.") The Maroons kept alive their Ashanti and Coromantee languages and medicine customs from Africa, combining them with native Jamaican Arawak traditions. The Maroons were continuously joined by many other fugitive slaves, and the word Maroon became synonymous with the "untamed, fugitive slave people of the hills."

Following a 14-year struggle called the First Maroon War against British colonizers, the Maroons signed a peace treaty granting them total freedom. The Maroons of Jamaica still maintain their independence and identity as The Maroon Federation, and Maroon territory is considered a sovereign nation within the tiny island of Jamaica. One of their strongest tenets is the healing power of nature and their deep knowledge of the myriad Jamaican herbs and their uses.

As a young biology student, I (EZ) traveled with my high school classmates to the remote regions of Jamaica. There, I met and befriended Jamba Scott. While in Jamaica pursuing a graduate level course over winter recess, I fell ill with intestinal dysentery. I tried conventional medicine, which caused significant adverse effects and did not seem to be helping. Feeling weak and depleted, I approached Jamba and one of Jamba's herbal teachers, an elder bush doctor known as Pop-A-Top, for help and advice. They suggested that "Maroon science" and herbolgy would bring rapid, welcomed relief where "Babylon medicine" (Western medicine) would not.

For three days I received a steady diet of a strong decoction made from ferns, Jamaica allspice (*Pimenta dioica*, Myrtaceae), cloves (*Syzygium aromaticum*, Myrtaceae), guava (*Psidium guajava*, Myrtaceae), sea grape (*Coccoloba uvifera*, Polygonaceae), and many other Maroon herbs. The remedies were prepared by Jamba and Pop using their traditional "Maroon science."

The herbal treatment quickly produced positive results that the conventional medicines did not. This experience prompted a personal conversion in me, and I began researching ethnobotany — the cultural, medical, and spiritual aspects of plant healing. I asked Jamba if I could become his apprentice, even though I was a non-Maroon. Jamba agreed; he was advised by his grandmother's *duppy* (spirit) in a dream that he could trust me with this sacred knowledge and that I would be the right person to help pass his secrets on to the world as an "ethical ethnobotanist," giving back to the community and the local people.

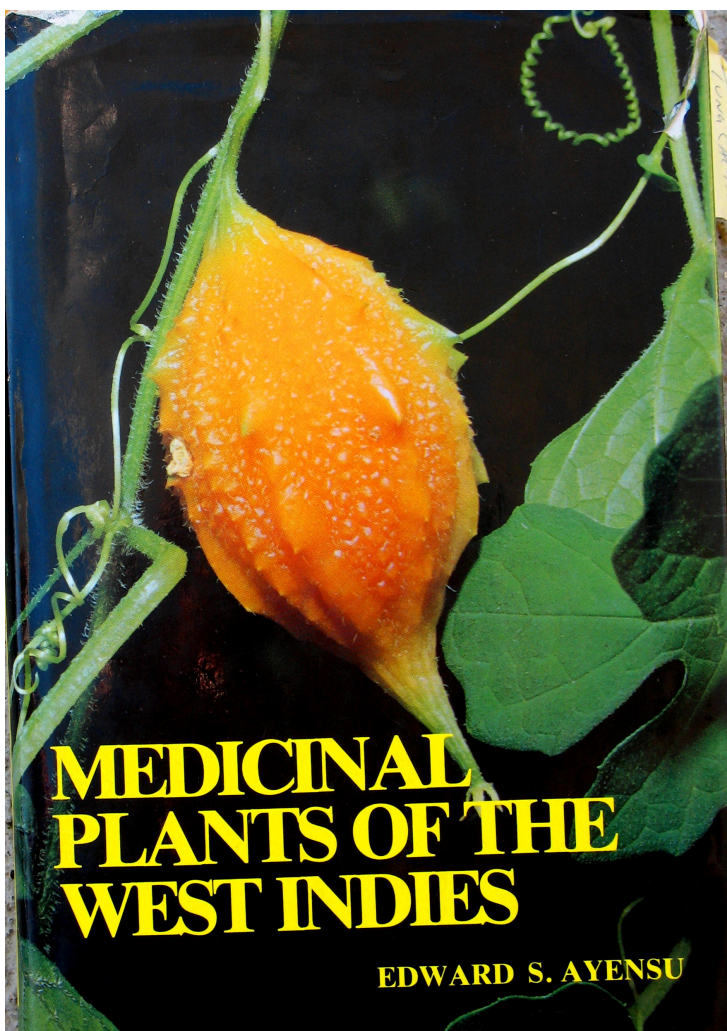
Jamba continued to mentor me and my students, teaching them self-sufficiency and the benefits of living as he did, a Jamaican countryman close to the earth. Many people would accompany me to Jamaica, and Jamba's teachings radically changed the lives of many of these visitors. In addition, Jamba worked with the Jamaica Wholistic

CONTINUED on page 78

# GREAT RESOURCES

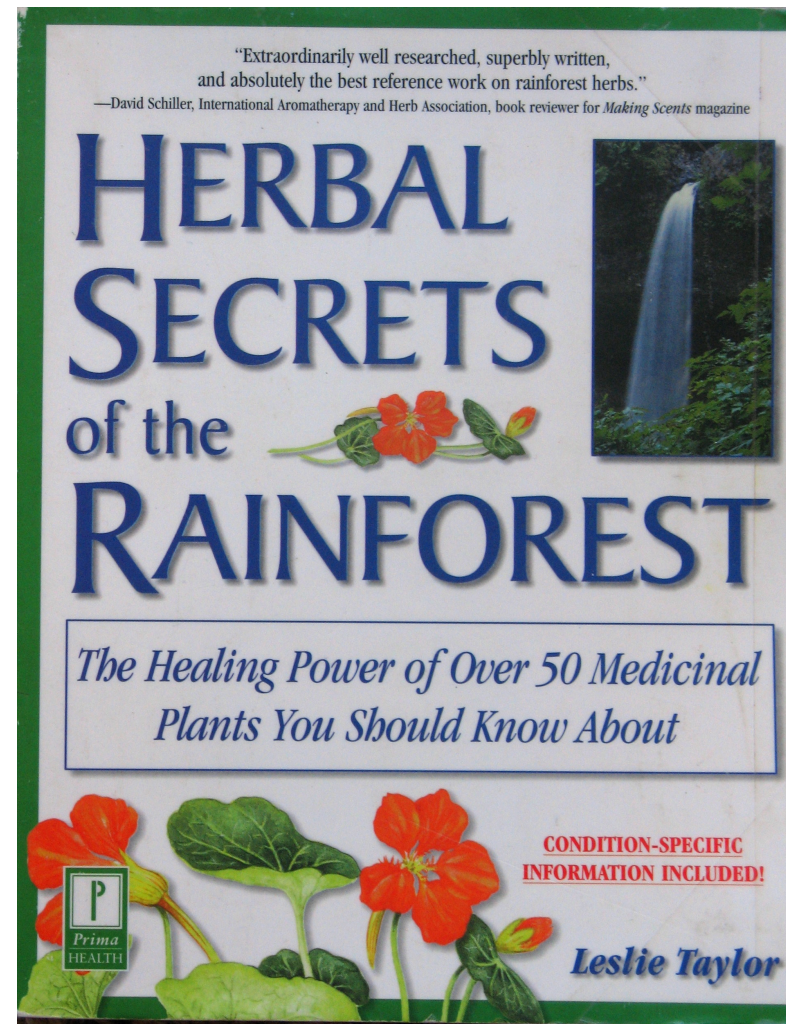
- I used these following books and websites for my presentation

# Excellent Reference Books



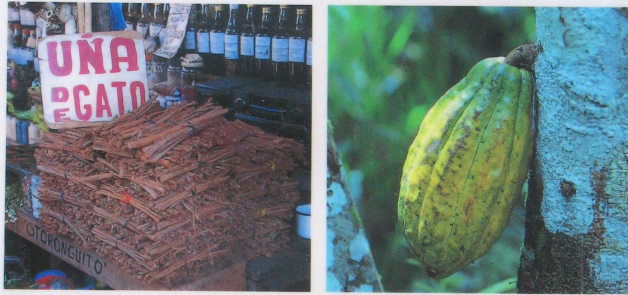
- The Bible of tropical plants
- Good chemistry review
- Nice illustrations
- 25 years old now, but still indispensable!

- Awesome website  
[www.rain-tree.com](http://www.rain-tree.com)
- Use rainforest botanicals in your practice





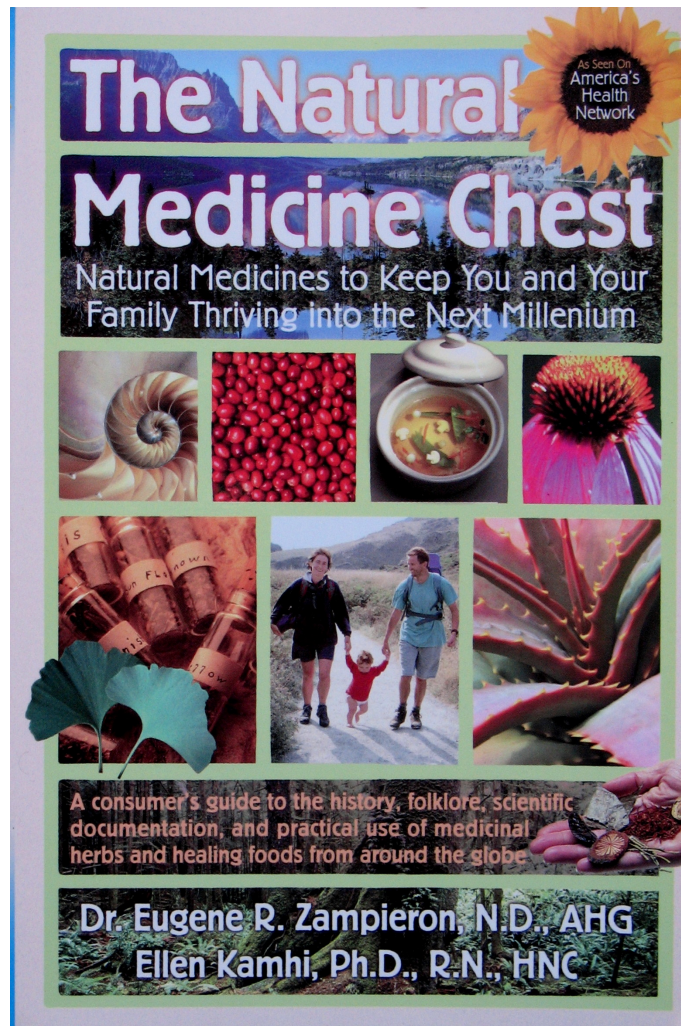
A Field Guide To  
**Medicinal and Useful Plants**  
of the  
Upper Amazon



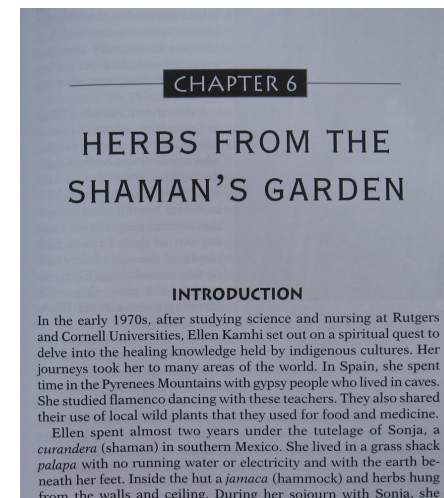
**J.L. Castner, S.L. Timme and J.A. Duke**

- Awesome book with great color pictures

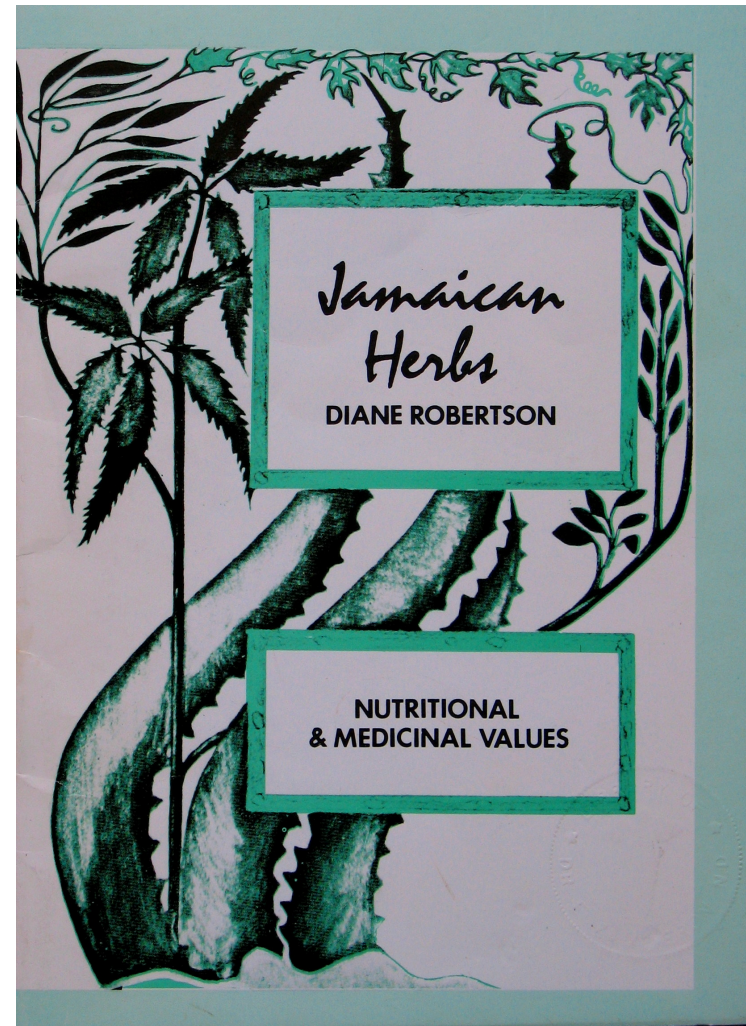
# DrZ's and Kamhi's book *The Natural Medicine Chest*



- Chapter 6
- The Shaman's Garden, has extensive info on tropical, medicinal plants
- Awesome authors



# Jamaican Herbs by Dr. Diane Robertson, Pharm Doc.



[www.rain-tree.com](http://www.rain-tree.com)



# **Jamba, late Maroon Medicine Man** contemplating at Tacky Falls, St. Mary JA



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