

The Noni Plant – A Hawaiian Gift of Healing

Today, ancient Hawaiian medical knowledge is coming under the scrutiny of renewed interest spurred on by researchers in the fields of ethnobotany and ethnopharmacology. The call has gone out for systematic studies to determine pharmacologically active compounds among the Hawaiian medicinal plants. The need for these studies is underscored by the fact that today, in Western medicine, 60 per cent of written prescriptions are for substances that are naturally occurring in nature. The paucity of studies to date on Hawaiian medicinal herbs means that the “knowledge of the pharmacological properties of the majority of Hawaiian herbs is still incomplete” says Dr. Isabella Abbott of the University of Hawaii.

Noni, whose scientific name is *Morinda Citrifolia*, also called Indian Mulberry, was one of the important plants that were brought to Hawaii by the first Polynesians. Although there are 317 species of plants that were documented by Kaaiakamanu and Akina in 1922 to have been used by pre-20th century Hawaiian herbalists, only a very small number were commonly used for known physical conditions of illnesses. Of the 12 most commonly mentioned plants (8 of which were brought from Southeast Asia) Noni was the second most popular plant mentioned for use in herbal remedies. Ethnobotanical studies from Indonesia verify many of the same uses for Noni as those reported by the Hawaiians.

The Noni plant is a small evergreen tree found growing in open coastal regions at sea level and in forest areas up to about 1,300 feet above sea level. The plant is often found growing along lava flows. It's identifiable by its straight trunk, large, bright green and cone-shape leaves, white tubular flowers and its distinctive, “grenade-like” yellow fruit. The fruit can grow to 12 cm or more and has a lumpy surface covered by polygonal-shaped sections. The seeds, which are triangular shaped and reddish brown, have an air-sac attached at one end which makes the seeds buoyant, (this could explain, in part, the wide distribution of the plant throughout the Hawaiian Islands). The Noni fruit, when mature, has a foul taste and odor. The smell and taste of the fruit pulp is so foul that one researcher pronounced it akin to “vomitus”! Although well known and popular in the islands, (the University of Hawaii's Botany department receives about 10 calls a week from people trying to locate a source of Noni) this characteristic, until now, has been a definite barrier to its widespread use on the mainland.

The medical knowledge and pharmacopoeia of the ancient Hawaiians is now believed to have been fairly complex and specific, and the modern day scientific and medical communities are beginning to study the plants that were used by the Hawaiian Kahunas. The importance of these studies is underscored in a quote from a 1987 report in the *Journal of Ethnopharmacology*: “In the past, the pharmaceutical industry has often relied on tropical plants as sources of new drugs (e.g. quinine, vincristine, tubocurine, reserpine, cocaine and many others). If the industry is to continue to use plants to develop new products, there is an urgent need for the collection of basic ethnobotanical data...”

In a report to the 83rd Annual meeting of the American Association for Cancer Research in May of 1992 (Hirazumi, A., Furusawa, E., Chou, S.C., Okano, C. and Ching, C., University of Hawaii, Dept. of Pharmacology and Dept. of Medicine) the juice of the fruit of the Noni plant was shown to significantly prolong the life of mice with implanted Lewis lung carcinoma. Their conclusion was that it seemed to suppress tumor growth indirectly by stimulating the immune system. The mechanism of stimulation is still unknown and is under further study.

In a paper published in 1949 in the Pacific Science, a quarterly devoted to the biological and physical sciences of the Pacific Region, the fruit of the Noni exhibited moderate antibacterial properties against the bacteria *M. pyrogenes*, *E. coli* and *Ps. Aeruginosa*.

Most recently, in an article published in the Honolulu Advertiser on Fe. 9, 1992, Professor of Botany at the University of Hawaii, Isabella Abbott, was quoted as saying "People are crazy about this plant. They use it for diabetes, high blood pressure, cancer and many other illnesses." Also, former U of H researchers, Dr. Ralph M. Heinicke, states that the fruit of Noni contains a natural alkaloid xeronine, as well as a chemical that is converted to xeronine in the digestive tract. The ailments he believes may possibly be helped by Noni are: high blood pressure, menstrual cramps, arthritis, gastric ulcers, sprains, injuries, mental depression, senility, poor digestion, arteriosclerosis, blood vessel problems, drug addiction and pain. In addition, locally, people have reported success using Noni to treat breast cancer, and eye problems. Dr. Joseph Betz, a research chemist with the FDA's Division of Natural Products Center for Food Safety and Applied Nutrition states, "Morinda citrifolia has been tested for a number of biological activities in animal and anti-microbial studies." He reports that the dried fruit has a smooth muscle stimulatory activity and a histaminergic effect.

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