

Principes, 33(3), 1989, pp. 129-139

Rhapis Palms—Cultivated Species and Varieties: Culture and Care of the Ladies

LYNN MCKAMEY

Rhapis Gardens, P.O. Box 287, Gregory, TX 78359

Rhapis, known as Lady Palms, can be found in homes and gardens throughout the world. The widespread popularity of these multi-cane fan palms can be attributed to their adaptability to a wide range of soils, climates, and environments. Uniquely, they are the only ornamental palms to have named varieties (cultivars) in green and variegated forms. While four species are well known as elegant landscape accents or indoor ornamentals, others remain unknown to cultivation, awaiting collection in remote areas of Southeast Asia.

The genus can be divided into two basic groups: the robust Chinese subtropicals which are native to Taiwan and mainland China, and the smaller Indochinese tropicals indigenous to regions in and around Thailand and Laos.

Rhapis excelsa and *Rhapis humilis* are the oldest cultivated Chinese species, recorded as prized ornamentals in the Far East as early as the 17th Century. These are characterized by having large thick leaves on sturdy canes $\frac{3}{4}$ to $1\frac{1}{4}$ " (2 to 3 cm) in diameter which grow more than 8' (2.5 m) tall. *Rhapis subtilis* from Thailand and *Rhapis laosensis* are "20th century" species, being discovered and named by Odoardo Beccari in 1910 and brought into cultivation during the last two decades. These have thinner, smaller leaves on narrow canes less than $\frac{3}{4}$ " (2 cm) in diameter and seldom exceed 8' (2.5 m) in height. Other species were named and described by Beccari and Max Burret during the first half of this century, but remain unknown

to the modern world of cultivated plants. However, several of these may be grown by Japanese horticulturists as "misnamed varieties" of *R. excelsa* and *R. humilis*. Obviously, the genus needs further study to establish complete order. This difficult project is being undertaken by Dr. John Dransfield and Laura Fitt of the Royal Botanic Garden, Kew.

Cultivated Species of Rhapis

Rhapis are some of the easiest palms to grow, but each species has its own particular environment and culture requirements; no two can be cultivated alike. This idiosyncrasy provides versatility to the genus; wherever you may live, at least one of the species will thrive in your house or landscape.

Lady palms can be propagated by division or seed, depending on species. *Rhapis* are dioecious, requiring both male and female plants for successful pollination. *R. excelsa* and *R. subtilis* seed are being commercially produced; however, female *R. humilis* and male *R. laosensis* are unknown in cultivation; as a result these species must be propagated by division.

Rhapis subtilis "Thailand Lady Palm"

Rhapis subtilis was introduced into cultivation by Watana Sumawong of Bangkok during the late 1960s. At that time, Thailand Lady Palm was thought to be a miniature form of *R. humilis* and was distributed under that name until 1984 when it



1. Two forms of *Rhapsis subtilis* 3' tall in Miami display the wide variation of leaf shapes in this species.

was recognized by Dr. Dransfield and Ms. Fitt to be Beccari's *Rhapsis subtilis*.

Thailand Lady Palm is a small species, seldom exceeding 6' (2 m) of height. Canes are narrow with neat smooth fiber, brown in color. Offshoots have stiff, brittle roots and sucker close to the main cane, making division almost impossible. Since males and females flower prolifically, abundant amounts of seed are available.

At least two, if not three forms of *R. subtilis* exist (Fig. 1). The tallest type has leaves with broad segments which slightly resemble *R. excelsa*. A second form has tiny canes, small leaves with finely divided segments, and slowly grows 2' to 3' (1 m) tall (see *Principes*, 17(1)). A third type appears to be a combination of the others. Cross pollination of these different forms may cause the wide variation in seedlings and mature plants. Unlike the blunt tipped *R. excelsa*, all *R. subtilis* have pointed leaf tips.

Being a tropical, *R. subtilis* requires high humidity and abundant moisture. While all *Rhapsis* can attract scale insects, this is the only species severely affected by spider mites. It has a temperature range of 32° to 90° F (0° to 32° C), but prefers 60° to 80° F. Thailand Lady Palm thrives in humid, tropical climates, but seldom adapts to hot dry regions or cool subtropical areas. It can be difficult as a house-plant.

***Rhapsis laosensis* "Laos Lady Palm"**

First discovered and named by Beccari more than 70 years ago, this small Lady Palm was brought into cultivation during the 1960s by the late David Barry of California. The few specimens in America are all female divisions of his plants and they have not yet been critically identified as *R. laosensis*.



2. A fine specimen of *Rhapsis laosensis*, 6' tall and 18 years old. Photo courtesy of Fairchild Tropical Garden.

Canes are pencil thin and as with *R. subtilis*, have slick neat fiber. Thin leaves with wide segments curve downward providing a very graceful effect. One of the oldest cultivated specimens is displayed at Fairchild Tropical Gardens in Miami and

stands almost 6' (2 m) tall (Fig. 2). Laos Lady Palm is relatively easy to divide, but remains scarce in supply. Culture is not difficult—thoroughly water when slightly dry and keep temperatures between 30° and 90° F (−1° to 32° C). *R. laosensis*



3. *Rhaps humilis* at The Huntington Botanical Garden, San Marino, California. These are more than 60 years old.

grows best in humid tropical areas, but will adapt to warm subtropical climates.

Rhaps humilis
“Slender Lady Palm”

Native to China, this subtropical is the tallest of all *Rhaps*, often exceeding 18' (6 m) in height. Large leaves with many narrow segments envelop slender canes, creating the name “Slender Lady Palm.”

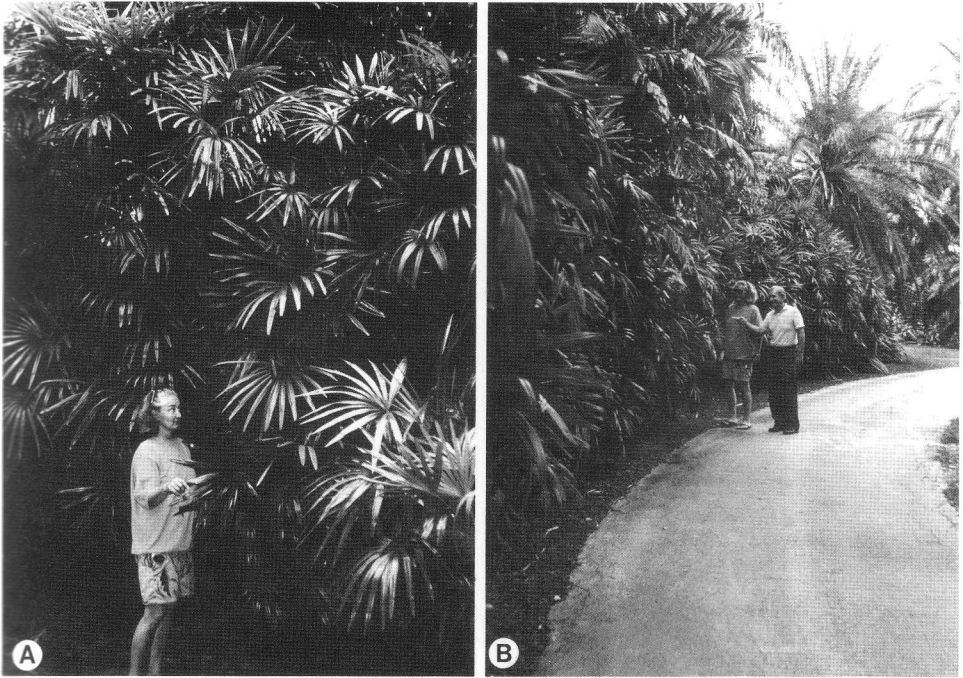
Some of the first imported into America in the early 1900s are still majestically growing at The Huntington Botanical Garden in San Marino, California (Fig. 3). Primarily used as towering landscape specimens on the American west coast, *R. humilis* thrives in cool subtropical climates with temperatures from 18° to 90° F (−7° to 32° C). Those grown in tropical regions suffer in hot summer heat and can exhibit slow growth and loss of vigor.

Only male plants are known in cultivation; therefore, propagation must be by division. Small container specimens under 6' tall are scarce since roots are brittle and slow to establish; as a result, clump divisions are more successful than single cane separations.

Rhaps excelsa
“Large Lady Palm” and
“Miniature Lady Palms”

Rhaps excelsa is the most well-known and widely cultivated species, easily adapting to most interiors and tropical or subtropical landscapes throughout the world. It has a multitude of named varieties in green and variegated forms.

Historically, *R. excelsa* have been used as classic ornamental palms for more than 300 years. They were cultivated by the Japanese elite in the early 1600s, intro-



4. A. Lynn McKamey at one end of the serpentine hedge of *Rhaps excelsa* (Large Lady Palm) at Fairchild Tropical Gardens in Miami. B. Lynn McKamey and Paul Drummond at the other end of the same hedge.

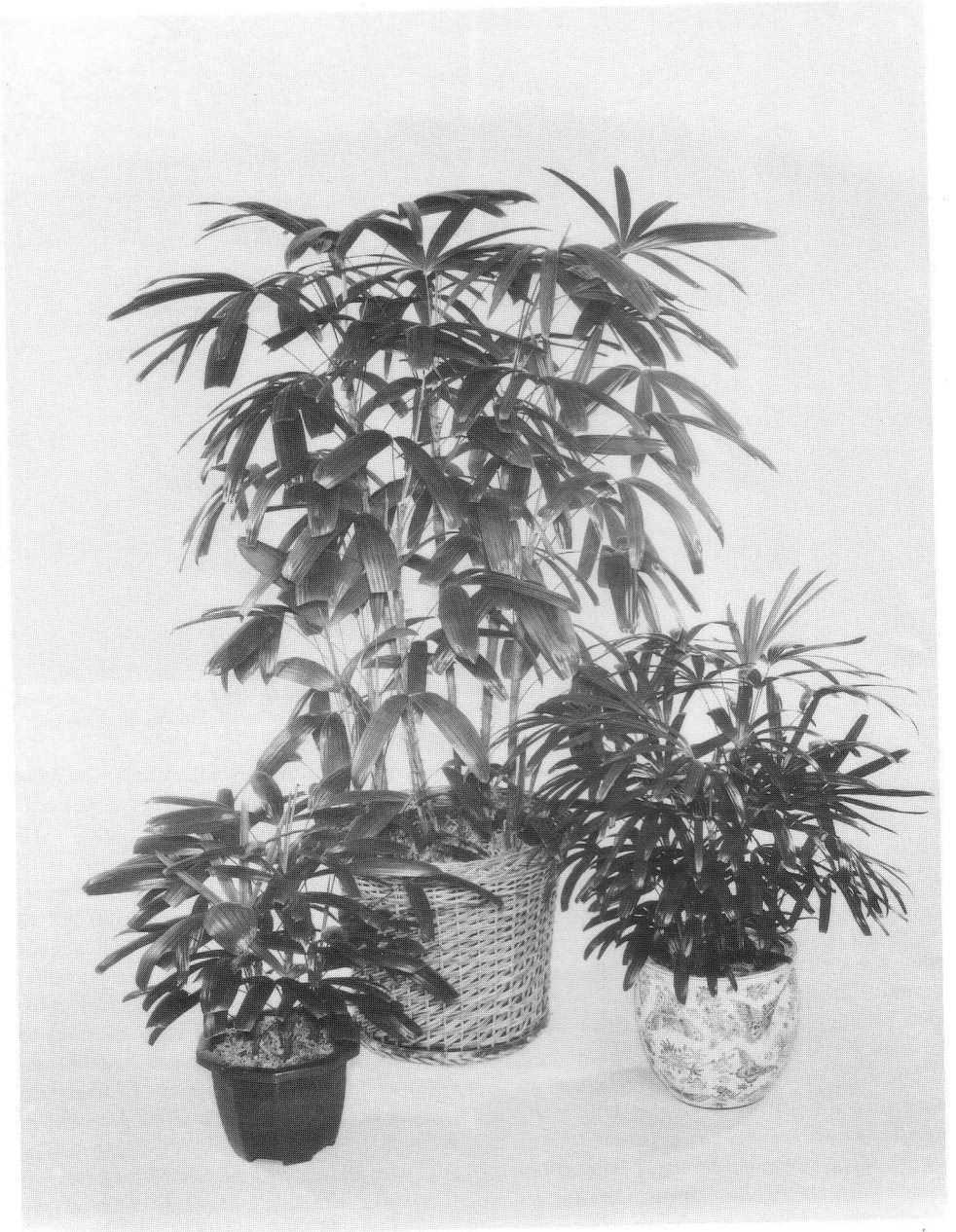
duced to Europe in 1774, and became prized American "parlor palms" during the 1850s. The popularity of this species can be attributed to its ease of care, durability, insect resistance, and long life.

Rhaps excelsa consists of two groups: the common "Large Lady Palm" grown from seed or divisions, and the highly refined "Miniature Lady Palms" developed by Japanese enthusiasts into named varieties by selective cloning.

The "Large Lady Palm" can grow to more than 14' (4 m) of height. Unlike *R. humilis* which has tall, slender clusters of stems, *R. excelsa* clumps can gain enormous width, often having a diameter as wide as their height (see back cover). In 1939, Fairchild Tropical Gardens of Miami planted twelve single cane divisions 6' (2 m) apart; today, these multi-cane palms stand in a 10' to 12' (3 to 4 m) tall hedge which is more than 9' (3 m) wide and 80' (26 m) long (Fig. 4).

Large thick leaves with blunt tips have wide segments, giving *R. excelsa* its occasional name "broadleaf lady palm." Its sturdy canes are covered with coarse, dark brown fiber. This species tolerates tropical and subtropical temperatures from 20° to 100° F (-5° to 38° C) and will accept both humid and dry climates. It is a prolific producer of rhizome offshoots which adds fullness and provides an easy method to increase numbers by division. In addition, seed is often available from Taiwan and should be available soon from growers in Florida.

The green and variegated Japanese cultivars of *Rhaps excelsa*, collectively known as Miniature Lady Palms, were developed through selective cloning of choice, unusual specimens from Taiwan. Each named variety has a unique leaf shape and growth habit (see *Principes* 18(3) and 27(4)). Because of a preference for miniature plants, the Japanese propagate the



5. Named varieties of *Rhaps excelsa*. Left to right: *R. excelsa* 'Koban' 2½' tall, *R. excelsa* 'Tenzan' 6' tall, and *R. excelsa* 'Daruma' 3' tall. Photo by Rhaps Gardens.



7. Two examples of Miniature Lady Palms which stay very compact and bushy: on the left is *R. excelsa* 'Kodaruma' more than eight years old and only 18" tall in a 7" pot; on the right is *R. excelsa* 'Gyokuho' which is five years old and 12" tall in a 5" pot. Photo by Rhaps Gardens.

lowest growing strains and further "dwarf" the palms by restricting root systems in tiny pots, using coarse sand or small gravel, and limiting fertilizer applications. However, if these cultivars are given unrestricted growth conditions, some "miniatures" such as 'Koban,' 'Daruma,' and 'Tenzan' can eventually exceed 6' (2 m) in height (Fig. 5). When I wrote the book *Secret of the Orient* (McKamey 1983), the estimated maximum height of Japanese cultivars was 4'; we now have many specimens 8' (2.5 m) tall. This interesting discovery has led to the nickname "Texas-sized dwarfs," although I am sure others can grow them just as large! However, some cultivars such as 'Kodaruma' and 'Gyokuho' are true dwarf Ladies by staying relatively short and reaching only 4' of height after 30 years (Fig. 6).

Growth rates of *Rhapis excelsa* vary

with culture and environment. In commercial production with 80% shade and subtropical temperatures, the slow growing Miniature varieties can add 3" to 6" (7 to 15 cm) of height each year, whereas Large Lady Palms usually increase 8" to 12" (20 to 30 cm). If *Rhapis* are grown indoors as houseplants, these rates decrease considerably.

Although some young seedlings of common *R. excelsa* may first resemble certain named varieties, most will eventually develop the same basic "standard" appearance and leaf shape. In contrast, the named varieties will maintain their distinctive characteristics, a result of long-term selective cloning.

Variegated *Rhapis* are seedling sports. Within a random group of 10,000 seedlings, perhaps only five will sprout striped leaves, and of these just one may remain



7. *Rhapsis excelsa* 'Zuikonishiki,' a variegated cultivar shown in a 6" pot. This specimen is 15" tall and eight years old. Photo by Rhapsis Gardens.

a stable plant and retain a good striping pattern. This is then propagated by division to provide the basis of a new variegated cultivar. In Japan, only a few named varieties display perfect stripes on every leaf; most have random striping patterns—no two are exactly alike. Usually, new offsets will carry the striping habit of the leaf directly above on the "mother" cane. *Rhapsis excelsa* 'Zuikonishiki' is one of the most popular variegateds, being easy to grow and a prolific producer of offshoots (Fig. 7). However, it generally yields less than 40% choice pups with the other 60% being an interesting assortment of those having more green than white stripes or more white than green. The rare, very finest variegated pups are classified 'Ayanishiki' whereas those with mostly white leaves are renamed 'Zuiko-Lutino.' The creamy-white stripes in these cultivars contain "golden chlorophyll" which can support growth and sustain the plant. Other varieties such as 'Kotobuki' have stripes with albino cells which are extremely sensitive to strong light or extreme heat.

On a stable plant, a variegated pattern cannot be experimentally controlled or changed, but brightness of stripes can be enhanced with proper culture. An example is 'Chiyodazuru,' one of the most popular in Japan, which has narrow stripes on green leaves. Intense sunlight and heat can fade leaves, or strong fertilizer can mask, but not delete, the stripes. For best color, this variety needs cool temperatures, medium light, and medium fertilizer rates—easily accomplished by growing indoors or in dense shade.

Other Japanese Cultivars of Rhapsis

Japanese horticulturists have developed more than 100 named cultivars. While most of these are varieties of *R. excelsa*, called KANNONCHIKU, others are green and variegated cultivars of SHURO-CHIKU, translated "*Rhapsis humilis*." Although these will eventually reach 6' (2 m) in height and do resemble a delicate, dwarf form of the towering *R. humilis* grown in California, they may prove to be an Indochinese species more closely related to *R. subtilis*. Several inflorescences await inspection by Dr. Dransfield and Ms. Fitt, so the mystery may soon be solved.

Those familiar with Japanese cultivars may have noticed or obtained Ladies such as *Rhapsis* 'Himedaruma' classified as a KANNONCHIKU (*R. excelsa*); however, it is noted in the book *The Miniature Palms of Japan* to be of the "imported group" (i.e., from places other than Taiwan and southern China). On inspection, 'Himedaruma' appears to be *R. laosensis* as is another variety 'Otohime.' I suspect, therefore, that some of the curious cultivars of KANNONCHIKU could be identified as some of the lost species of Beccari and Burret. Time and taxonomy will tell.

Rhapsis are a fascinating group of palms, having captured the love and admiration of plant collectors for centuries. The charm and elegance of this diverse family of Ladies



8. An interesting group of *Rhapsis excelsa* in Riverside, California.

provide unlimited choices for everyone . . . anywhere.

Culture Tips for All Rhapsis

Light. In landscapes, all species of *Rhapsis* prefer filtered light or partial shade. Locate in east, south, and north exposures or under a canopy of trees. Placement in full sun without protection will cause unattractive yellow-green leaves, stress, and slow growth. Indoors, all *Rhapsis* grow best in bright, indirect light near a window or skylight. *R. excelsa* is the most adaptable to low light areas.

Watering. *Rhapsis* should be thoroughly watered by soaking or drenching the entire root system. *R. subtilis* must be kept constantly moist; if it dries, it will decline or die. *R. excelsa*, *R. humilis*, and *R. laosensis* should be allowed to become almost dry between thorough irrigations. Twice each year, potted *Rhapsis* should be

drenched several times (leached) to flush impurities and excess soluble salts.

Soil. *Rhapsis* will grow in almost any well-drained soil, but prefer a mixture rich in humus (pH 5.5 to 7.0). Pot in African violet type mix or plant slightly above ground level, amending your garden soil as needed. All roots and the base of canes should be covered to retain moisture and stimulate the addition of new offshoots.

Potting. Lady Palms prefer to be slightly root-bound. Soil density should be firm—not loose, not packed—and allow water to slowly filter through.

Fertilizer. All *Rhapsis* are relatively slow-growing plants and need very little fertilizer. As a guideline, apply only ½ the recommended rate required by other plants in your home or landscape. Let leaf color be a guide: rich green indicates that fertilizer levels are adequate; apply nutrients when a slight overall yellowish color is detected.

Rhapis can suffer from trace element deficiencies which produce yellowing leaves, distorted new growth, or general decline. Since the exact cause of a deficiency can often be hard to determine without laboratory tests, use fish emulsion whenever a problem is suspected.

A Warning for Excesses. *Rhapis* and many other palms can be highly sensitive to excessive boron, fluoride, and chlorine in water supplies, which will cause fast spreading black tip burn. Use the purest water available until the problem is corrected.

Brown Tips. Slight brown tip fringe is common on all *Rhapis*. Black tip burn is not typical and can be caused from improper watering, overfertilizing, and other excesses.

Damaged leaf tips can be trimmed with serrated scissors (pinking shears). Cut in line with the leaf tip, move the scissors slightly sideways and cut again. Single cuts result in too large a zig-zig; double cuts resemble the natural leaf tip.

Dried and Brown Leaves. Leaf damage is usually caused from extreme heat, allowing the palm to dry out, or not thoroughly watering the entire root system.

Pests. Scale is the enemy of all *Rhapis*; spider mites are a major problem for *R. subtilis*. Since scale can hide in the fibrous leaf bases, contact sprays such as malathion are seldom effective. A systemic insecticide which is absorbed into the plant system provides the best protection or control. Since spraying *Rhapis* in hot summer weather can cause leaf burn, use a systemic insecticide labeled for soil application.

Root Rots. *Rhapis* are very resistant to pathogens; however, *Fusarium oxysporum*, *Pythium*, *Rhizoctonia*, and *Penicillium* (pink rot) can periodically infect *Rhapis*. Use a "broad-spectrum" root fungicide labeled as a soil drench to provide prevention or control.

Lethal Yellowing. *Rhapis* palms are not known to be susceptible to this fatal disease. During the severe outbreak of L.Y.

in Miami, Florida, all species of *Rhapis* grown in the area remained completely unaffected.

Freeze Damage. Protected Lady Palms can often survive temperatures below their recommended low. The tallest canes may be damaged or frozen, but provide protection for lower, younger offshoots. In extreme lows, all visible canes will die, but new offshoots may sprout by summer.

Division. The best time to divide *Rhapis* is during spring or early summer when the palms are actively growing. Single cane divisions should have at least six leaves and several roots before being separated. Pot into well-drained soil using containers just slightly larger than the root system. Remove several lower leaves on each cane to reduce stress. Place in a humid area or mist daily until the palms resume active growth.

Seed. Be aware that *R. subtilis* seed looks exactly like *R. excelsa* which matches *Guihaia argyrata*, a recently discovered Chinese relative which sprouts grass-like leaves with silvery undersides (see page 00 and *Principes*, 29(1)). To avoid surprises and a possible mixture of potluck palm seed, commercial growers should know their seed sources.

Rhapis usually flower during spring, need hand-pollination for best crop, and are harvested in late winter. After cleaning the seed, lightly press into well-drained soil and keep moist. Seed should sprout within 50 to 120 days. Immature seedlings of *R. excelsa* and *R. subtilis* look alike until about two years of age when character leaves distinguish one from another.

Airlayering. Yes, *Rhapis excelsa* can be airlayered.

Varietateds. Easy to grow, but require excellent culture and good quality water for best appearance and growth. They prefer 70–90% shade or indirect interior light, and temperatures between 60° to 80° F (15° to 26° C) to maintain growth and vigor. Striped *Rhapis* are slower growing than green forms and require less fertilizer—too little is far better than too much

which can cause leaf burn and root damage.

Landscape Use. *Rhapis excelsa* adapts to most tropical and subtropical landscapes. *R. subtilis* thrives in warm, humid regions. *R. humilis* prefers subtropical landscapes with cool summer nights.

Indoor Use. *Rhapis excelsa* is the most adaptable of all species to interior conditions.

Acknowledgments

My thanks to Richard Douglas for proofreading this article and for his helpful comments, and to my husband Kenneth McKamey, who never complains of taking yet another photo of *Rhapis* for me.

Extensive Collections of *Rhapis*

Fairchild Tropical Gardens in Miami, Florida: *Rhapis excelsa* including green and variegated cultivars, *R. subtilis*, *R. humilis*, *R. laosensis*, and *Rhapis* sp.

The Huntington Botanical Garden in San Marino, California: *Rhapis humilis*, *R.*

excelsa and cultivars, *Rhapis laosensis*, and *Rhapis* sp.

Opryland Hotel Conservatory in Nashville, Tennessee: *Rhapis excelsa* including rare variegated and green cultivars and *R. subtilis*.

LITERATURE CITED AND FURTHER READING

- BARRY, DAVID. 1973. Two *Rhapis* palms from Thailand. *Principes* 17: 30-32.
- DRANSFIELD, JOHN, LEE SHU-KANG, AND WEI FA-NAN. 1985. *Guihaia*, a new coryphoid genus from China and Vietnam. *Principes* 29: 1-12.
- MCKAMEY, LYNN. 1983. Secret of the Orient, *Rhapis* palms. *Rhapis Gardens Publications*.
- . 1983. The Americanization of dwarf *Rhapis Excelsa*. *Principes* 27: 99-104.
- OKITA, YOSHIHIRO AND LELAND HOLLENBERG. 1981. The miniature palms of Japan. *Weatherhill*.
- YAMAGUCHI, KIYO-O AND DAVID BARRY. 1974. The culture of *Rhapis* in Japan. *Principes* 18: 75-83.

Note: The back issues of *Principes* listed above are available at \$6 each (postpaid) from The International Palm Society Business Office, P.O. Box 368, Lawrence, KS 66044.

Principes, 33(3), 1989, pp. 139-140

Millions of Alleged *Rhapis excelsa* Seed Sprout into *Guihaia argyrata*

LYNN MCKAMEY

Rhapis Gardens, P.O. Box 287, Gregory, TX 78359

Rhapis excelsa is a versatile ornamental species, extensively used as houseplants, landscape specimens, and patio accents. However, supply of this popular palm seldom exceeds demand since seed is scarce and propagation is primarily by division, a slow process of increasing numbers.

During 1985, so-called *Rhapis excelsa* seed from mainland China suddenly became available from Far Eastern dealers. While some growers were suspicious that the seed might be the tropical *Rhapis subtilis* from Thailand, many nurseries quickly obtained seed before the supply ran out. After the buying frenzy was over, more than 10