

THE HSPR NEWSLETTER

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FROM YOUR BOARD

Following discussions by telephone rather than through a formal meeting, your Board has reached a consensus regarding two aspects of meeting arrangements. Specifically we have agreed that in future meetings, members and their guests will: 1) provide their own seats or chairs and 2) bring their own snacks or lunches if desired. The reasoning for this we feel is both logical and to the best interests of all concerned.

Regarding seating, this will alleviate some of the work and preparation incumbent on the host who should be relieved of as much of the burden as possible. Logic states that an unburdened host is a happy host -- and thus more likely to invite Society meetings in the future.

The reasoning behind the food issue is a bit more involved. At the founding of HSPR, it was decided that meal service is predictably detrimental to the Society -- too much planning and preparation activity which often becomes a competition to out do the previous culinary offering. And of course we wish to avoid the rather unwanted effect of the "Diner's Club" syndrome. Recognizing that the often long drive to a meeting often results in starting late, the Board suggests that those who so wish bring a sandwich or snack.

Please note that previous policy has been to have our December meetings as social events, complete with a Puerto Rican Christmas lunch supplied by the host and financially reimbursed by the Society. Future announcements will specify the needs of each meeting.

THE PRESIDENT'S CORNER

On Our Future Development

Among the several tasks usually assigned to the head of any organization, you are sure to find something that involves leading or directing the activities of the organization in order to ensure its well being. Leadership, however, requires a sense of direction -- a feeling of where the organization is going, or at least wants to go. So far, this is fairly obvious, maybe even a bit trite. As the President of the Heliconia Society of Puerto Rico, my major task is to direct the activities of HSPR along the paths out lined in the "purposes and goals" in our By Laws. It's simple and straight forward. Or is it? Or better stated, Are there any unanticipated problem areas or potholes in our path to the future? Are these problems real? Or do I only imagine them? Some may say that I worry too much. Perhaps I do but let me lay out my concerns.

I have been actively involved with HSPR since its initiation in February 1996, first as Vice President and later as President. During these three years, I have watched the dynamics of our Society membership with a great deal of interest and, lately with a sense of growing concern. Voila!! We have now come to the crux of this editorial.

The crux is like the MD's report, "There's some good news -- and there's some bad news!" First, the good news. New names are being added to our membership list at a rather satisfying rate -- some eighteen new members so far this year. The bad news is that our total paid membership remains in an approximate state of dynamic equilibrium -- neither growing nor shrinking. I see two probable explanations here. One is that some members just haven't gotten around to paying their 1999 dues thus their names do not appear on the roll of paid members. The other reason is that a significant number of previous members have simply disappeared from sight. It is this latter group, the group below the horizon, that is the source of my concern. In part, their absence is understandable -- enthusiasms fade -- aspirations change. But there is the unattractive alternative that HSPR simply is not meeting the needs or is worth the while of a significant number of people. This brings us to the question, Is this a problem to be dealt with? If the answer is negative, then my concerns have been for nothing. If the problem is real, then we should seriously consider it in detail, and deal with it.

It is for this reason that I have asked Jan Crespo to lead an open discussion, hopefully at our September meeting, which will consider the goals and pathways of our development and, most importantly, to identify rational solutions to any hindrance to progress and the well-being of our Society. I ask you all to begin thinking about this discussion and prepare for active participation.

Best wishes, Bob Lankford

HORTICULTURAL NOTES

Asexual Propagation of Calatheas.

The large Neotropical genus, Calathea (belonging to the family Marantaceae), is of rapidly growing popularity and commercial importance in horticulture. Your editor's somewhat limited experience indicates that many calatheas, perhaps most or all, may be successfully propagated asexually by: a) divisions of parent stock, b) stem propagation and c) tissue culture. The latter method usually is beyond the technical capacity of most growers and is not discussed here.

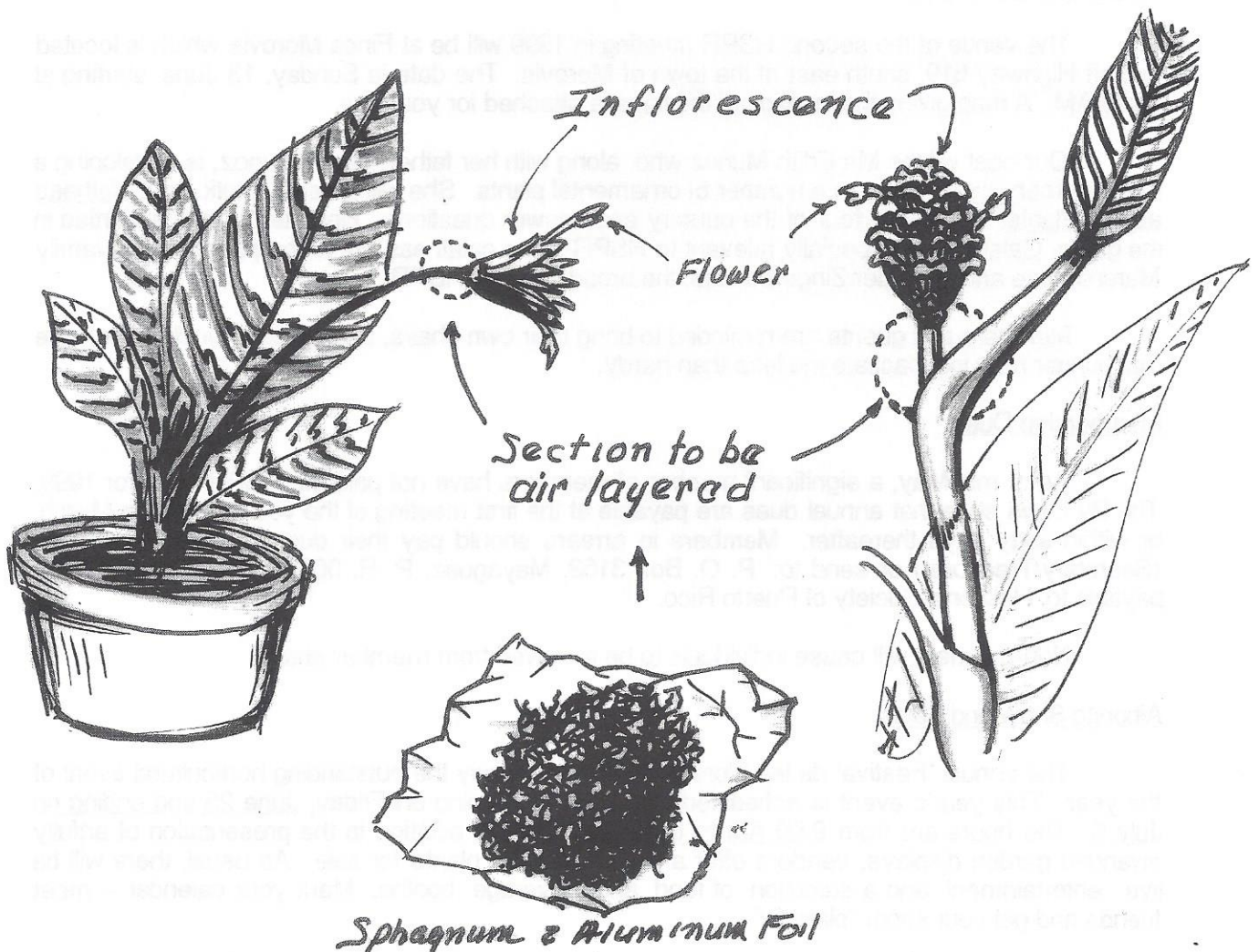
a. Division. Mature, strong potted plants may be divided simply by separation into appropriately sized subsets. Note that "appropriate size" implies that the fewer connected rhizomes there are in a subset, the less likely the division will survive or grow well. Single rhizome divisions all too often die after separation. Plant the divisions in loosely packed, organic-rich potting medium, and place in a shaded locality. Keep the medium moist -- not wet. New roots should appear in 2 - 3 weeks. Alternatively divisions may be started in moist sphagnum moss. The advantage of this is that rhizomes can be easily inspected for new root growth. Sprouted rhizomes can then be potted; rhizomes which do not sprout can be discarded, thus a saving in pots and medium.

b. Stem Propagation. Like the pink ginger, Alpinia purpurata, some species of calatheas spontaneously produce plantlets from the basal suture of the inflorescence; some other species may be encouraged or stimulated to produce plantlets. In the case of spontaneous production, Calathea warscewiczii is an example, when the tall inflorescence matures, and grows large and heavy, two things can be expected: a plantlet and tiny roots will appear and, like the pink ginger, the weighted stem will bend down to the ground. The plantlet often will root and grow and the old

stem will drop off. In time, this new plant may be dug up and moved or potted. You may short-cut the natural process by air layering the still-erect inflorescence by wrapping a pad of moist sphagnum moss around the base of the inflorescence and hold it in place with aluminum foil. Make sure the sphagnum pad stays moist within the foil envelope. When the plantlet is strong, remove the foil, and pot the plantlet with the moss in place; trim off the dead inflorescence and stem. Ergo: a new plant for the collection.

Some species, however, require some encouragement to produce plantlets. The "Blue Ice", *Calathea burle-marshii* for example, usually can be stimulated into production by using the air layering technique described above. As an added incentive, moisten the sphagnum pad with a root growing hormone such as "Hormex". As the inflorescence begins to die, occasionally open the aluminum envelope to check on root growth. When a small leaf from the air layer appears, the new plant will be ready to remove from the parent and potted up. Trim off the old inflorescence and dry stem.

The following diagrams illustrate the techniques describe above.



TECHNICAL CONTRIBUTIONS

Informative articles, whether original or reprinted copy, are published in HSPR Newsletter on an ad hoc basis. The present contribution is a somewhat modified version of an article presented in the Newsletter two years ago. It contains a brief explanation of the botanical classification of plants and a general description of the eight families which comprise the order Zingiberales, the plant group which is the focus of interest for HSPR. The article is appended for the information of new members.

ANNOUNCEMENTS

Next Meeting of HSPR.

The venue of the second HSPR meeting in 1999 will be at Finca Morovis which is located just off Highway 619, south east of the town of Morovis. The date is Sunday, 13 June, starting at 10:00 AM. A map giving the location of the finca is attached for your use.

Our host will be Ms Edith Munoz who, along with her father, Omar Munoz, is developing a major nursery specializing in a number of ornamental plants. She will present a talk on "Calatheas as Pot Plants," and lead a tour of the nursery and answer questions. Her interest and expertise in the genus Calathea is especially relevant to HSPR since calatheas are a component of the family Marantaceae and the order Zingiberales, the broad focus of HSPR.

Members and guests are reminded to bring their own chairs, and a snack lunch in the case that hunger may incapacitate the less-than-hardy.

Membership Dues.

As of mid-May, a significant number of members have not paid the HSPR dues for 1999. The By Laws state that annual dues are payable at the first meeting of the year, usually in March, or within sixty days thereafter. Members in arrears should pay their dues to Martha Lankford (Secretary/Treasurer) or send to: P. O. Box 3162, Mayaguez, P. R. 00681. Checks should be payable to: Heliconia Society of Puerto Rico.

Non-payment will cause individuals to be removed from member status.

Aibonito Show and Sales.

The annual "Festival de las Flores" in Aibonito is truly the outstanding horticultural event of the year. This year's event is scheduled for 11 days, opening on Friday, June 25 and ending on July 5. The hours are from 9:00 AM to 6:00 PM daily. In addition to the presentation of artfully arranged garden displays, vendors offer a wide variety of plants for sale. As usual, there will be live entertainment and a selection of food and beverage booths. Mark your calendar -- meet friends and get your super "plant fix".

Plant Raffle, Sale and Exchange.

We initiated at our last meeting (14 March) the HSPR plant raffle, sale and exchange which hopefully will become a regular part of our meeting program. Sherry Ballester is in charge of the activity and suggests the following procedures:

- a. Members are requested to donate identified plants for the raffle.
- b. Raffle tickets will be sold for \$ 1.00. Members may buy as many tickets as they wish.
- c. Ticket numbers will be drawn in succession for each plant and each winner, in succession, will have their choice of the plants to be raffled -- first winner, first choice; and so on.
- d. In addition to the raffle, there will be an opportunity for member's to sell and/or exchange plants. Persons wishing to sell plants must contribute at least with one plant to the raffle.

Members' Forum.

The HSPR Members' Forum is a function which is designed to encourage active participation of the entire membership. Much of the action so far has centered on an end-of-meeting session where individuals may show something interesting, or request information or assistance in matters of cultivation, pest control, commercial trends, fertilizers, etc. -- just about anything of interest or concern. In addition, written opinions or ideas are most welcome and will be published in the Newsletter. An example of editorial contribution was Paul Yoshioka's well reasoned observations and views on heliconia cultivars which was printed in the last Newsletter. All in HSPR are urged to participate and support the Members' Forum. Make it a good show!!

HSPR Logo Competition.

Our last Newsletter announced the Board's intent to proceed with a competition for the design of a logo which would serve both to reflect the goals and objectives of HSPR and to provide a symbol which would visually identify our Society. In view of the number of new members and also to remind the rest of the membership of this competition, the Rules and Guidelines are repeated here.

The Rules:

- a. Competition will be open to HSPR members, and non-members alike.
- b. Judging and selection of the winning design and not more than two honorable mentions will be done by the Society members at the last HSPR meeting in 1999.
- c. The Society reserves the right to reject any or all entries; in the case that none are acceptable, a new competition will be organized.
- d. All entries must be in the hands of the President on or before the beginning of the meeting where selection is to take place.

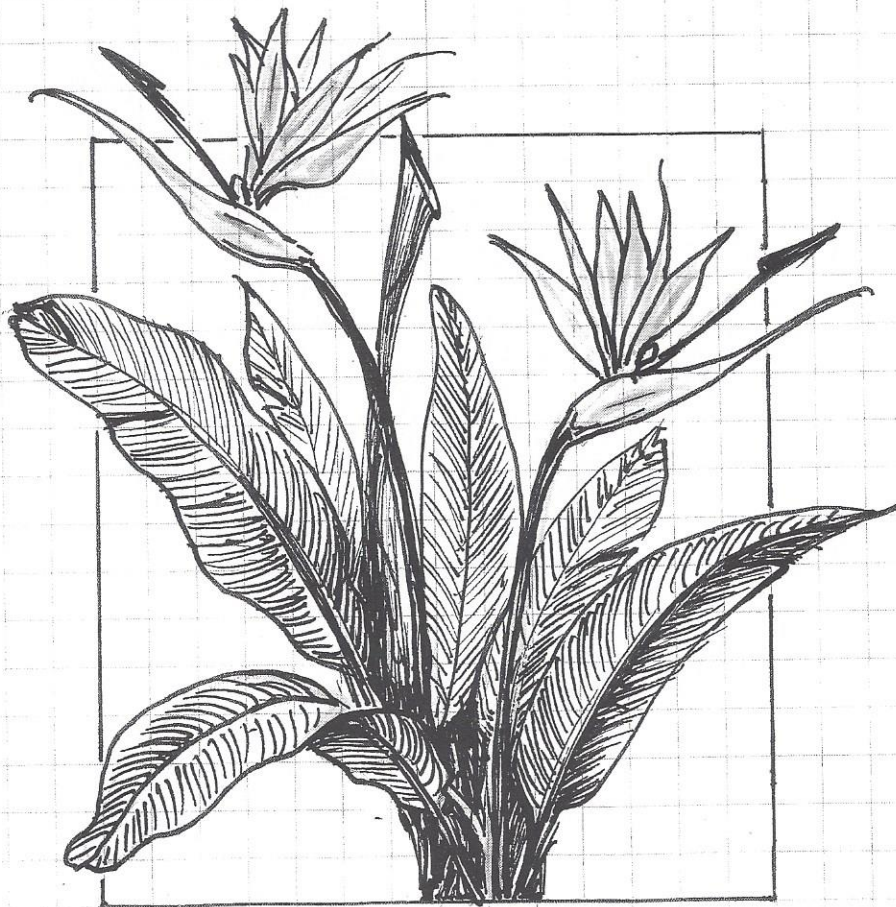
Guidelines:

- a. Designs must be adaptable to both color and black-and-white reproduction.
- b. Designs shall reflect the interests, focus and/or goals of the Society.
- c. All entries will be on white 8½" x 11" stock.
- d. The design shall be compatible to reasonable reduction and enlargement.
- e. Entries must be identified on the back with the name, address and telephone number of the designer.

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TECHNICAL CONTRIBUTION
Number 3

HELICONIAS AND THEIR RELATIVES



HELICONIAS AND THEIR RELATIVES

By: Robert R. Lankford

At the organizational meeting of our Society, it was decided to focus our attention not on a single genus, Heliconia, but on a broader spectrum of ornamental plants which are close botanical relatives of the heliconias. In this respect, we closely parallel both the purpose and the scope of interest of the Heliconia Society International.

Since our organizational meeting in February, 1996, a number of members have expressed interest in a better understanding and more specific identity of these relatives. This quite simply is the purpose of this article. To accomplish this purpose, however, requires a short journey into the plant classification system and the use of some botanical nomenclature. Starting at the top, we will first consider the category which includes all the things we usually think of as plants.

THE PLANT KINGDOM

Without exaggeration, this is a truly huge group of living organisms, numbered in the hundreds of thousands. In view of its large membership, it is necessary to divide the Plant Kingdom into progressively smaller and more manageable groupings. Each group or subcategory has a formal title and prescribed characteristics required for membership. Accordingly, each titled category is given a formal latinized botanical name, each with distinctive characteristics which distinguishes or identifies the group.

The following illustration shows how a native Puerto Rican species, Heliconia caribea, fits into the scheme of things.

CLASSIFICATION HIERARCHY

<u>CATEGORY TITLE</u>	<u>BOTANICAL NAME</u>
Kingdom	Plantae
Division	Angiospermae
Class	Monocotyledoneae
Order	Zingiberales
Family	Heliconiaceae
Tribe ±	(None)
Genus	<u>Heliconia</u>
Species	<u>Heliconia caribea</u>

The purpose of this classification is to show or imply biologic relationship within and between groups of plants. For example, the species belonging to one genus are more closely related to each other than to species of another genus. The same principle applies to genera (the plural of genus) belonging to families, or families belonging to orders, etc., on up the ladder. Another purpose of a classification, extremely important but often not stated clearly, is that it helps to insure (but not guarantee) that we understand what each other is talking about.

But as our knowledge grows and new plants are discovered, and as categories become large, it may become necessary to establish intergrades between the principal categories. For example, we may have subclasses, or suborders, superfamilies or subfamilies, even tribes and subtribes. And below the species level, and especially so in horticulture, we may find such terms as subspecies (= ssp.), variety (= var.), cultivated variety (= c/v), meristem, clone, form and sport. But for now, back to the subject at hand.

HELICONIAS AND FRIENDS

Referring to the classification scheme above, the Puerto Rican native *Heliconia caribea* is a species belonging to the genus *Heliconia*. This genus and its species constitute the Family Heliconiaceae, which in turn forms a part of the Order Zingiberales. It is this order that comprises the botanic relatives or "friends" of the heliconias.

The following figure from "Heliconias: An Identification Guide", by Fred Berry and John Kress, shows the relationships of the Family Heliconiaceae to seven other families, all belonging to the Order Zingiberales, the broad focus of our Society.

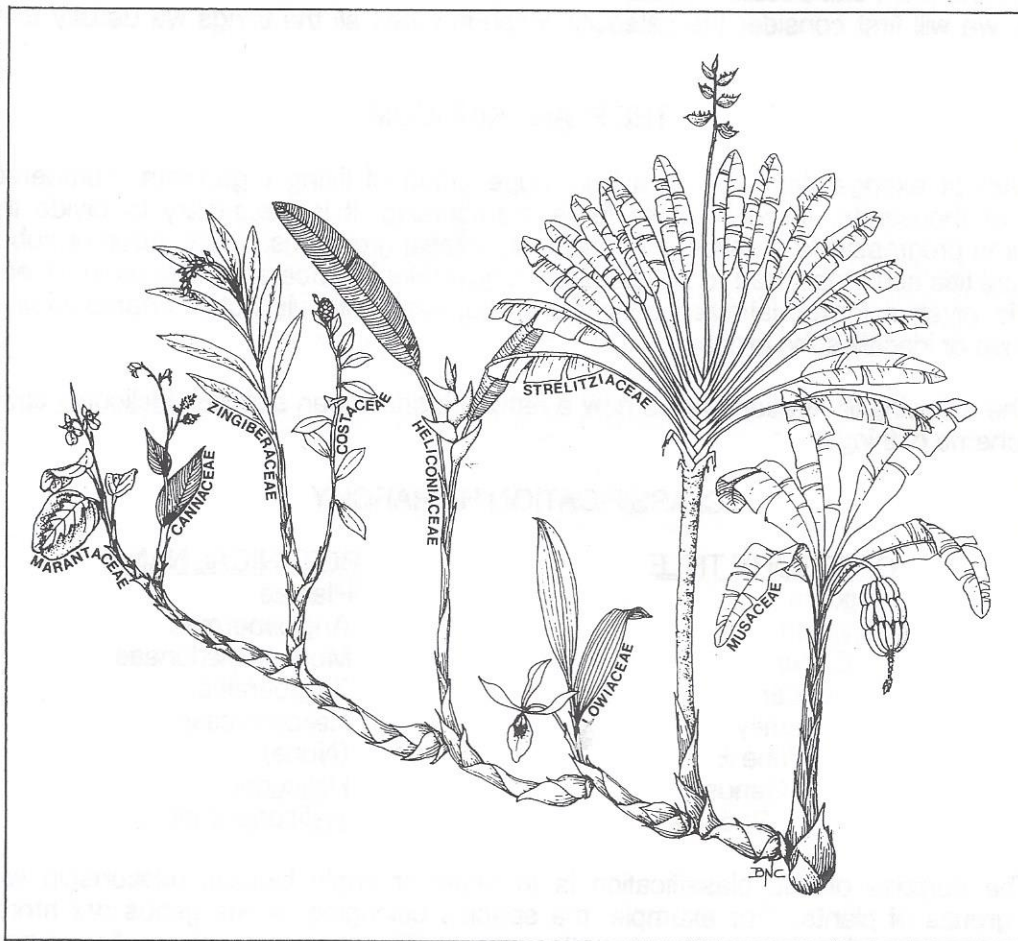


Figure 12. Diagrammatic representation of the relationship of heliconias (*Heliconiaceae*) to their relatives in the Order Zingiberales. (After Berry and Kress, 1991, page 31; with permission).

THE ZINGIBERALES

The following sections contain very brief profiles of the eight families of the Zingiberales, including information about diversity, origins and distribution as well as some comments and observations about uses and relative importance. I have also included a table indicating the occurrence of these families in Puerto Rico.

1. Family Musaceae (the Bananas).

Diversity: there are only two genera: Musa with 35 species; and Ensete with 2 species.

Origins/Distribution: originally restricted to Africa, eastern Asia, Australia, and the South Pacific; today widely cultivated throughout the world in the tropics and sub-tropics; Ensete typically grows in cooler conditions than most species of Musa.

Uses/Importance: the most commercially important family of the entire order, especially the edible hybrids and varieties (eg: Musa x paradisiaca); also a number of species of both Musa and Ensete are increasingly being cultivated as ornamentals.

2. Family Strelitziaceae (Birds of Paradise, Traveler's Palm).

Diversity: a relatively small family with three genera: Strelitzia with 5 species, Ravenala with 1 species, and Phenakospermum with 1 species.

Origin/Distribution originally restricted to Africa (Strelitzia), Madagascar (Ravenala) and South America (Phenakospermum); some species now are widely cultivated in the tropical and warm-temperate zones of the world.

Uses/Importance: Strelitzia reginae, the common bird of paradise, is widely cultivated for the cut flower industry; the "giant bird of paradise" and the "traveler's palm" are increasingly used in landscaping.

3. Family Lowiaceae (no common name).

Diversity: There is one genus, Orchidantha, with 5, possibly 8 species.

Origins/Distribution: native to southeast Asia and some Pacific islands; relatively rare and still poorly known.

Uses/Importance: no known commercial use other than for collections; a few species cultivated in several botanic gardens; attractive flowers resemble orchids.

4. Family Heliconiaceae (Heliconias, Lobster Claws).

Diversity: only 1 genus, Heliconia, with approximately 180 described species, and a rapidly growing number of recognized subspecies, natural hybrids, varieties and c/v's.

Origins/Distribution: mainly from the New World tropics, from Mexico and the Caribbean to Argentina; a few unique species are from the South Pacific and southeast Asia.

Uses/Importance: of relatively small but rapidly growing importance as landscape ornamentals, pot plants, and cut flowers.

5. Family Zingiberaceae (Gingers, Ginger Lilies).

Diversity: the largest family of the order, consisting of 50 genera and approximately 1000 species; there is a rapidly expanding body of horticultural varieties.

Origins/Distribution: occurring originally in all tropical regions; most abundant and diverse in the Old World tropics, especially in southeast Asia; widely cultivated.

Uses/Importance: several genera and species of the "gingers" are used as spices and food additives; some are of medicinal value; of rapidly growing interest/economic importance as cut flowers, landscape/foliage plants and potted house plants; second only to the Musaceae in economic value.

6. Family Costaceae (Crepe Gingers, Spiral Gingers; originally included in the Zingiberaceae; now a distinct family).
Diversity: consists of 4 genera and about 150 species; Costus with 100+ species, Monocostus with 1 species, Dimerocostus with 2 species, and Tapinochilus with 20+ species.
Origins/Distribution: pan-tropical but with distinctions: Costus mainly in the Neotropics, also in Africa, Asia, and Australia; Monocostus and Dimerocostus restricted to the Americas; Tapinochilus occurs only in Indonesia, New Guinea and Australia.
Uses/Importance: relatively little used; a few species of Costus and Tapinochilus are increasingly cultivated as ornamentals and for cut flowers.
7. Family Cannaceae (Cannas).
Diversity: consists of 1 genus, Canna, with from 9 to 50 species; relatively poorly known botanically except for the large number of horticultural hybrids of Canna generalis.
Origins/Distribution: originally restricted to the New World tropics and sub-tropics; colorful hybrids now widely cultivated throughout the world; cold-hardy varieties grow in Europe and the central U. S.
Uses/Importance: cultivated hybrids are widely used in landscaping; minor use as cut foliage.
8. Family Marantaceae (Prayer Plants, Peacock Plants).
Diversity: the second largest family of the Zingiberales (after the gingers), consists of 30 genera and 450 to 500 species; parts of the family are under taxonomic revision.
Origins/Distribution: occurs throughout the world's tropics; greatest abundance and diversity is in the Neotropics, especially the large genus, Calathea.
Uses/Importance: despite the large size, the family is relatively poorly known and little used; there is small but increasing economic importance as ornamentals for landscaping and pot plants; potentially good and growing future.

THE ZINGIBERALES IN PUERTO RICO

The table below is compiled from information in "Flora of Puerto Rico and Adjacent Islands", 1982, by Liogier and Martorel, UPR Press. It indicates the diversity (numbers of genera and species) of the 8 families in Puerto Rico in two plant categories: Indigenous (native, naturally occurring; not introduced), and Naturalized (non-indigenous, introduced, escaped from cultivation).
Note: Information about cultivated collections of exotic Zingiberales is very incomplete and therefore not included in the table.

FAMILY	PLANTS	INDIGENOUS	NATURALIZED
		# Gen. / # Spp.	# Gen. / # Spp.
1. Musaceae		0 / 0	1 / hybrs.
2. Strelitziaceae		0 / 0	1 / 1
3. Lowiaceae		0 / 0	0 / 0
4. Heliconiaceae		1 / 1	1 / 2+
5. Costaceae		1 / 2	1 / 1
6. Zingiberaceae		1 / 3	6 / 9
7. Cannaceae		1 / 4	1 / hybrs.
8. Marantaceae		2 / 4	3 / 3
	TOTALS	6 / 14	14 / 16+hybrs.