

Paper prepared by Wm. A. Geiger in collaboration with Mr. Christian, of the Christian Nursery, Mr. Van der Lean, and Mr. George L. Peacock.

### Introduction:

There is probably no shrub used more in South Florida for landscaping, or as a tubbed plant for setting about porches, patios or in the interior of buildings for decorative purposes, than the so-called Croton.

Yet, in spite of the hundreds of thousands of Crotons planted in Florida, the number of varieties used is as a whole confined to a few varieties introduced into the state many years ago and but little effort has been made to use the many new, beautiful, more recent introductions, which are now available and many of the people residing here have but a slight conception of the almost endless beautiful varieties which can be just as easily grown as those now in use so universally here.

### Classification:

The so-called Croton is not the plant Botanically known as a Croton which is an entirely different plant.

The true name of the plants is Codiaeum and they belong to the family known as Euphorbiaceae. They are sometimes called Variegated Laurel. The leaves are alternate, simple, somewhat thick and leathery, primately veined and glabrous. The juice is somewhat milky and if it comes in contact with clothing it makes a brownish stain which is practically impossible to remove.

The wild form of the Croton is probably the variety known as the "Molluccanum". The almost endless variety of Crotons of today are probably all from this one botanical species greatly varied by constant crossing and selection. They do not come true from seed and hardly any two seedlings are exactly alike. Furthermore, the plants themselves have a tendency to throw out sprouts and some varieties have the characteristic of producing several totally different leaf forms on the same plant.

Many varieties have Latin Binomials but they intergrade so that it is often difficult to make a proper classification.

### Propagation:

Crotons can be easily propagated by either seed or through cuttings. The only way to reproduce a variety is through cuttings, as seedlings vary greatly and seldom are exactly like the parent plant. As it takes several years to grow a seedling to any size and the majority of the seedlings are either worthless or inferior to the parent plant, practically no one except experimenters or Croton specialists grow seedlings. If anyone, however, wishes to try growing seedlings we recommend that they use only seed of the most highly colored varieties as the others will produce plants, the

vast majority of which will show no color except green.

The best time to make cuttings of Crotons is in the spring, at which time almost every cutting will root and make good growth during the summer if properly handled.

Some people remove all leaves from the cutting while others allow a few of the top leaves to remain. We have personally seen no difference in the results obtained by either method but prefer leaving a few leaves unless the plant has thrips, in which case all leaves had better be removed.

The cuttings should be placed into flats or shallow trenches filled with coarse sand, or peat moss, and given plenty of water. As soon as they start to make growth it is safe to assume that they have rooted and they should be transplanted.

In the case of especially rare varieties or where it is desired to save all of the leaves, the plant can be rooted by "mossing" it. This consists in cutting the outer bark away where the roots are to form and then wrapping plenty of sphagnum moss around this portion of the stem. The moss should be kept moist and in about a month will be filled with roots. The plant can then be cut off just below the moss and potted.

It should continue to grow without dropping its leaves. Some growers claim that excessive mossing will ruin the parent plant.

Northern nursery men and some of our growers of rare varieties use bottom heat in making cutting. In this way it is possible to root a cutting without removing or loosing the leaves by tying up the leaves and then placing the cutting in the trench.

In propagating Croton cuttings, keep in mind that most Crotons have a tendency to produce some branches which are more highly colored than the normal variety and others which have less highly colored leaves. To produce fine plants select only cuttings which show the best characteristics of the variety in question.

Some people have successfully rooted them in water but this method is not often used.

#### Location:

Crotons can be planted in almost any location provided it is not subject to salt spray from the ocean. However, it must be remembered that the highly colored varieties such as Mortii, Aucubifolium etc., in whose leaves green is the predominating color and large leaved varieties such as Mmc. Ferd Kohl or Reedi will not stand strong winds nearly as well as small leaved varieties.

In order to get the best results some varieties such as Reedi should be grown in a shade house. Most of the so-called "Fancy Varieties" should be given a certain amount of shade and protection against strong winds.. However, too much shade is also undesirable and most varieties develop the best colored leaves in bright sun of our early autumn.

The fancy varieties do best, however, when grown in reflected light.

#### Soil:

Some years ago the writer planted some rooted cuttings, which were of the same varieties and same size in the various types of soil which we have in Dade County. Those planted in a mucky black sand grew better than any of the others and after about one year were about 50% larger than any of the cuttings. We, therefore, feel that Crotons prefer a loose, light soil with plenty of muck. The soil should also be well drained as Crotons are very impatient of soggy wet soils.

Recent experiments indicate that 25 to 30 percent of peat moss or peat humus mixed in the soil is beneficial.

However, while Crotons do best in the above type of soil they grow very successfully in all the soils of Dade County if given proper fertilizer and proper drainage.

#### Method of Planting:

It is advisable not to plant Crotons any deeper than they were grown in the nursery. Where the soil in the bed where they are to be planted is filled-in material or for some other reason is unsuited for them, dig out a hole at least as large as a butter tub and fill it with mucky soil to which some well rotted manure has been added. In growing tubbed specimens be sure that there is good drainage provided. If Crotons are grown in tin cans it is better to plunge them into the ground as otherwise the sun on the tins heats up the soil and indications are that Crotons, and for that matter, most plants dislike hot soil about their roots.

#### Cultivation:

The ground about Crotons should be kept loose and surface cultivation is beneficial. The amount of cultivation depends on the type of soil used. In sandy soil practically no cultivation is necessary but in case of marl the soil must be kept from "caking" and be kept loose and clear of weeds, etc.

#### Fertilizing:

To secure best results Crotons, especially when potted or tubbed, should be fertilized with commercial fertilizer using a good grade with mostly organic ingredients and ample potash and phosphates. The amount of fertilizer required depends on the soil used. It should be remembered, however, that a small amount of fertilizer applied frequently is better than a large quantity applied at rare intervals.

#### Pruning:

Crotons require judicious pruning in order to train them into compact bushes. If left to themselves many varieties are inclined to make long spindly straggly stems which are quite unsightly when they have dropped their lower leaves. The stems should be cut off so that they will send out side shoots and be further disbudded if

necessary until they have made a bushy plant. The bushes can be kept at almost any height by trimming them annually. The best time to do this pruning is during May or early June. This allows ample time for the bushes to complete the new growth and the leaves to become fully colored before the winter season.

#### Insects:

The worst pest on Crotons is the Thrip. They are also subject to attack by Red Spider. These can both be eradicated by spraying. The attack of Thrip can easily be recognized by the leaf; generally the lower side turning a greyish color and getting covered with purplish spots. If viewed through a magnifying glass the leaf will be found to be covered with a multitude of Thrip which can easily be seen.

A good spray consists of an oil emulsion mixed with Black Leaf 40 mixed with the proper amount of water and soap as a spreader.

In about a week examine the leaves and if the Thrips are not entirely eradicated give an additional spraying. Spray for Red Spider in the same manner.

Occasionally where plants have been kept under porches, etc., and neglected they become infested with mealy bug; generally at the end of the branches. They can be eradicated by spraying or better still cut back the plant below the infested part and allow it to make new growth.

#### Diseases:

The Croton has but few diseases. The worst is fungus, generally most noticeable at the end of the winter season. When attacked the plant makes a short runty growth, the new leaves soon drop, and the branch swells out larger than the portion below which is not effected. Under a powerful magnifying glass the bark appears as if covered with numerous fine hairs. Cut off the affected parts and spray with Bordeaux.

Plants that are runts or stunted are not effected by a specific disease but in 90 percent of the cases if the plant is pulled up and the roots examined something will be found wrong with the root system. Often the trouble is due to sour soggy soil or some other condition which prevents the development of healthy roots. As a rule the plants are too far gone to be worth trying to save but in case of a fine variety, take it up, remove all soil and replant in good soil with ample drainage.

#### USES IN LANDSCAPING ( by Wm. Van Derlaan )

In the Associations' recent paper on Roses it was pointed out that a thorough knowledge of the requirements and physical characteristics of the available plant material is necessary before any planting scheme can be designed.

Obviously this knowledge alone does not create a planting plan and many aspects need to be studied before a plan can be outlined, which

answers the various problems under consideration.

It is therefore necessary that the designer acquaint himself with as much information as he can gather, which should include not only such items as the type and style of the building, the location of various rooms, from windows of which vistas or points of interest may be created, and a number of other established conditions pertaining to the building, but he should be thoroughly familiar with the likes and dislikes of his client, his personal habit, since it may make considerable difference if the garden is mostly used during the morning, afternoon or evening.

If the client desires flowers for cutting, rose and flower beds should be provided for this purpose. One must consider whether there are children for whom a playground must be reserved, or perhaps the client is a lover of animals or birds, for whom provision must be made. Sometimes the garden is purely for ornamentation to the building.

Always remember that improper planting may ruin the appearance of a building, however well the building itself may be designed. It will always remain a mystery why so many people are satisfied with the hit and miss planting so often seen around buildings especially since no intelligent person in this day and age would expect to build without the advice of a recognized architect. Great care is taken that the building is in the right style and proportions are in balance. Furniture is usually chosen with the utmost care with the help of professional advice. Bathrooms, kitchenets, dens, and bars are gems of harmony, but the landscaping which is seen by everybody passing by or coming to the building is left to anybody, (often the yardman, without any attempts to secure services or advice of anyone having any knowledge of landscaping or even the type of planting which the style and setting of the building demands). When amateurs attempt to landscape, they often give every consideration to a proposed color scheme of flowers, to the utter neglect of the real important factor "the mass foliage".

It seems to be little realized that the flowers are incidental compared to the foliage, which is with us the year around.

We hereby do not intimate that no attention should be paid to the color of the flowers. Naturally this should be considered but this writer has yet to see the home garden, planted primarily with a view to certain color combinations which is 100% successful. Moreover, they are often tiresome and dull looking affairs. In his experience the prettiest, gayest and homiest gardens are those with abundance of color.

Crotons are grown for the high color and brilliance of their foliage which is the result of painstaking selection by hybridizers. Their use in landscape design is limited to the amount of color which can be used.

In a general planting the designer must try to make a restful composition, which makes his planting resemble the work of nature and he is in harmony with the surrounding landscape. He must therefore make his choice from the natural color of the leaves, making his

variation with the different shades of green.

In formal plantings it is admissable and desirable that colored foliage is used. The choice of color gives the designer an opportunity of contrasting masses within his design. In such plantings the brilliant color of the Croton should be used much like the colors of flowers and set off against more restful foliage. The best use of the Croton is therefore in beds, as specimen plants at definite points or as a spot of color against a more subdued background.

Since Crotons adapt themselves well to be grown as hedges they can be used as such where the coloring allows and the varieties with small leaves are used with great success to outline the beds in formal gardens.

When a foundation planting is designed, two effects are usually aimed at. First, attention is given to the important and outstanding designs of the building such as an entrance, or ornamental window. Second, the planting must make the connection between the vertical surface of the building and the horizontal lines of the ground and serve as a decoration and foreground for the facade. It is therefore necessary that the style of the building, the color and texture of the facade be carefully studied. Often a few plants, a clipped hedge, or a vine grown on a trellis serving as a panel are all that are necessary. The appearance of a house may be greatly improved by a simple foundation planting but too often, especially, on smaller places this planting is considerably over done. It is usually a mistake to completely surround the base of a building with an indiscriminate planting of shrubs.

If skill is employed Crotons may be used to great advantage in foundation planting.

Where Crotons are planted one must keep in mind that individually they are highly colored gems and they are like expensive jewelry that when worn by the well dressed lady wearing a few well chosen specimens they are outstandingly attractive but, when covering the noreau riche from head to foot they are outstandingly in bad taste and ruin the effect of the most exquisite gown.

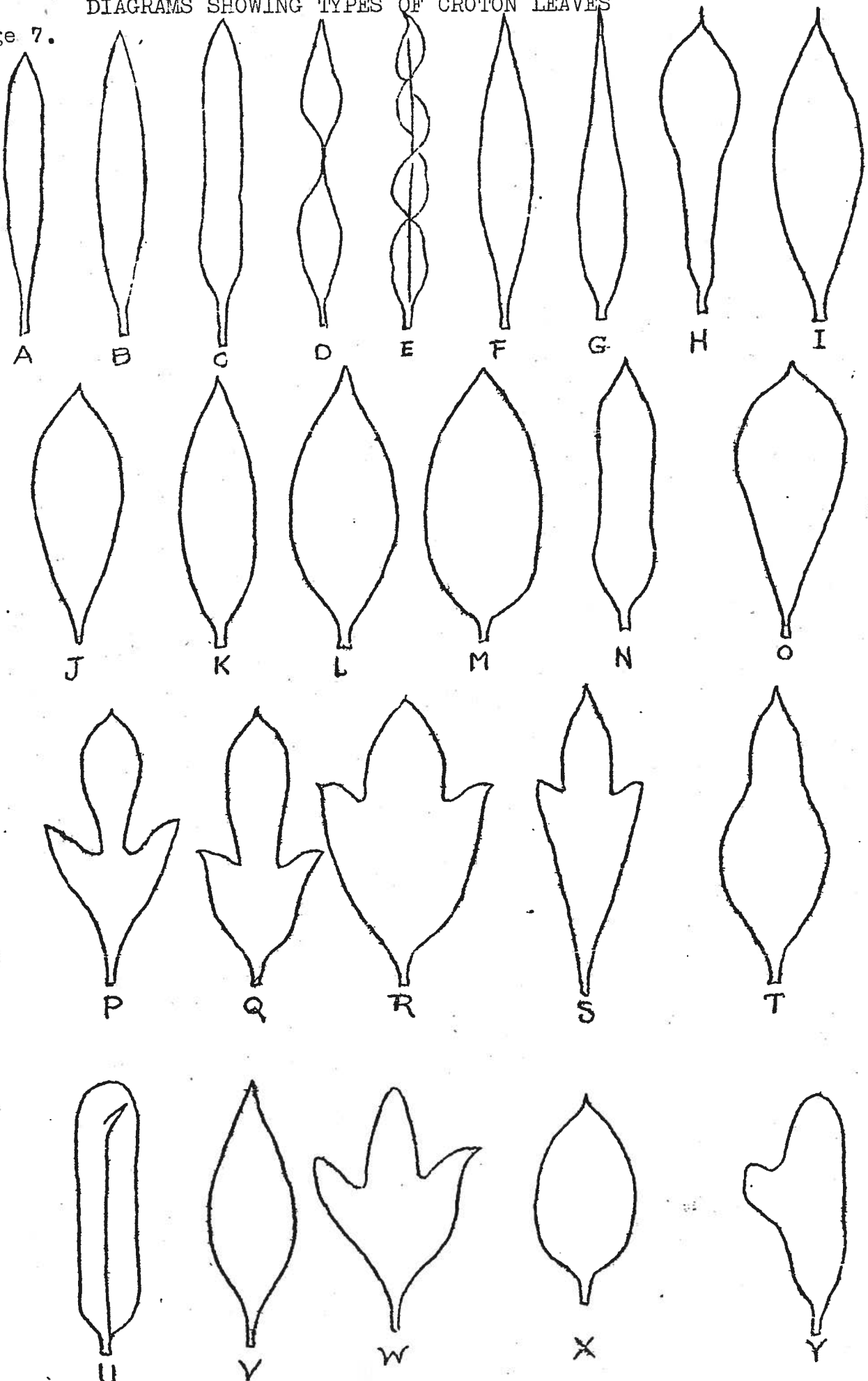
Thus with Crotons; properly used they are one of the most valuable landscape materials we have in southern Florida, but improperly used and they may ruin the effect of a perfectly designed building.

#### Varieties:

There follows a list of varieties which we have been able to identify. There is attached a key plate showing the various shapes of Croton leaves and each variety has been referenced to one of the types by a key letter. The type will not always exactly fit the variety, but is fairly approximate. Some varieties have several types of leaves on the same bush. In the following list the name is first shown, then the type reference to the key plate and of the numbers which follow the first show the width of the leaf at it widest point and the second the length of the leaf including the stem. These measurements were taken from the compiler and it is probable that other specimens raised under ideal conditions may exceed sizes shown here.

# DIAGRAMS SHOWING TYPES OF CROTON LEAVES

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tapering

ALBICANS;- Type G,  $2\frac{1}{2}$ " x 12", - Leaf broad at base gradually <sup>tapering</sup> to point at tip. A sort of Vettchii. Ground color is light green, Midrib and veins outlined white or cream with margin heavily splashed white or cream. One of the best of "White" varieties.

X AMABILE;- Type C & N,  $1\frac{1}{2}$ " x 11", (roosters tail) - Leaves usually curved to one side. Variegated cream pink and red. Slow grower. Showy.

X ANDREANUM;- Type L, 4" x 14", (canned sunshine) - Large leaves green ground deepening with age. Midrib and veining outlined bright yellow which shades to red in the mature leaves. A popular showy variety.

ANITUMENCE;- Type F,  $1\frac{1}{4}$ " x 14", - Midribs and veins golden yellow, balance green. Gives idea of intricate pattern in golden yellow which predominates. Good grower. Colors up consistently. One of the best of its type. (SUNRAY ?)

APPENDICULATUM;- Type D,  $3\frac{1}{4}$ " x 7", - Small plain green leaves, divided with the small part of leaves joined only by the Midrib. Interesting mostly as a curiosity.

AUCUBAEFOLIUM;- Type J,  $2\frac{1}{2}$ " x 10", - Ground color deep green heavily spotted bright yellow. Reverse of leaf is reddish with red Midrib.

AUREO MACULATUM;- Type I,  $1\frac{1}{2}$ " x  $3\frac{1}{2}$ ", - Rather small myrtle shaped green leaves heavily spotted and marbled golden yellow. Very showy and makes nice compact bush.

† BARON LE COMPTE;- Type O, 4" x 12", - When at its best is probably the most gorgeously colored of all Crotons. In the new leaf the ground color is green with yellow marbling but as the leaf matures the green turns to nearly jet black and the yellow marbling turns to intense orange red. In fine specimens the orange red covers a good portion of the leaf. The marbling is very irregular. This Croton has a tendency to revert to a dark colored type with very little of the orange red coloring. Such specimens should never be used for propagating purposes but for prize plants, only the most highly colored branches should be used.

† BARONES DE ROTHSCHILD;- Type J,  $3\frac{1}{2}$ " x 14", - Ground color dark green, Midrib deep red. In young leaves veins are outlined and leaf splashed yellow. In mature leaf veins become red and yellow splashing hennas overlaid deep rose underside of leaf is deep red.

BRILLIANTISSIMA;- Type G,  $1\frac{1}{4}$ " x 10", - New growth green and yellow which in the mature leaves turns to ground color of bronzy red with bright red Midrib dotted and splashed orange and red.

CARDINAL;- Type F,  $1\frac{3}{4}$ " x 10", - Deep blackish maroon leaf with deep red Midrib and veins more or less outlined in red and somewhat marbled with red.

C. VAN;- Types I & J,  $3\frac{1}{2}$ " x 11", - Ground color dark waxy green, Midrib outlined deep red. In young leaves veins outlined and leaf splashed yellow which turns red as leaf matures. Underside of leaf solid dark red.



CARL HARTLIEB;- Type S,  $3\frac{1}{2}$ " x 10", - Ground color of leaf is deep green. Midrib generally margined orange. The leaf is then irregularly but heavily marbled orange, yellow, and red. A good robust grower and very effectively colored.

CHARMER;- Type J,  $3\frac{1}{2}$ " x 17", - Ground color of leaf is black and Midrib and veins bright carmine. Leaf is heavily marbled with orange. An extra fine Croton.

CHARTIERI MAJOR;- Types J & K,  $2\frac{1}{2}$ " x 9", - Ground color is green which later turns to purplish black, Midrib is carmine margined by a wide irregular splash of deep yellow suffused carmine and extending about  $2/3$  of length of leaf. Fine variety.

COMPTE DE CASTELAINE;- Type K,  $1\frac{1}{2}$ " x 8", - The Midrib and a large zone on each side of it sometimes spreading over nearly the entire leaf a rich pinkish crimson; the margins a dark bronze green almost black spotted with light crimson.

COMPTE DE GERMANY;- Types N & L,  $2\frac{1}{2}$ " x 8", - Leaves dark green, Midrib and veins bright red margined somewhat lighter red or rose.

CONNECTICUT;- Type I,  $2\frac{1}{2}$ " x 8", - Young leaves dark green splashed and marbled deep yellow somewhat like Ethel Craig but as the leaves mature the green turns to deep mahogany red and the yellow to orange and brilliant red.

CONRAD'S BRONZE;- Type C,  $1\frac{1}{2}$ " x 11", - An interesting variety obtained by Mr. Conrad in Cuba. Midrib reddish bronze, balance a dark reddish bronzy green throughout.

CONSTATI;- Type E,  $3/4$ " x 12", - One of the most popular of the Cork-screw varieties. Long slender leaf which curves downward. The center rib is margined pure yellow and the balance of the leaf is more or less marbled and dashed golden yellow with dashes of rose on reverse of leaf. Very striking variety.

CORNUTUM;- Type Y,  $1\frac{1}{2}$ " x 5", - Compact bush with irregular leaves with rounded ends. Many of the leaves have a hook or prong on one side. Ground color is deep green with Midrib margined golden yellow and margin of leaf similarly bordered irregularly with golden yellow.

CRAIG'S SUPREME;- Type Q, 3" x  $7\frac{1}{2}$ ", - Oak leaf, center section spatulate at the end. Ground color rich deep green Midrib and main veins heavily outlined rich golden yellow and margin outlined yellow.

CZAR ALEXANDER III;- Type T, 3" x 10", - A very striking variety. Ground color is black red with a deep red midrib. Veins are outlined rosey red and balance of leaf is marbled and splashed pink, rose and red. Very fine.

DAYSRING;- Type N,  $2\frac{1}{2}$ " x 11", - Ground color is clear green on new leaves with rich yellow marbling. In the mature leaves the ground color turns to blackish red with the leaf irregularly splashed and marbled intense red. Very effective but rather straggly in growth.

DISRAELI;- Types P & Q, 4" x 12", - Large oak leaved variety. One of the best colored of this type. Deep green leaves suffused black. All ribs of leaf are margined red and yellow which predominates in tips of leaves. Vigorous grower.

DOCTOR ALIX;- Type P, 4" x 12", - Midrib section very long. Ground color green later turning to purplish black, veined and blotched yellow and splashed crimson.

DORMANNIANUM;- Types L & T, 1½" x 4", - Small curved leaves. New leaves have green ground with dark red midrib and veins are outlined deep yellow and balance of leaf dotted yellow. Later the green changes to reddish black and markings practically disappear.

EARLSCOURT;- Type Combination of J & K, 3½" x 12", - An especially fine Croton. Large crumpled leaf. Ground color rich black green. Midrib and veins red heavily margined rich golden yellow.

EDMONTONIENSIS; - Type E, 5/8" x 8", - The most brightly colored of the corkscrew varieties but a rather weak grower. The leaves are marbled and mottled yellow, pink, red and green.

EDNA;- Type O, 3" x 9", - Markings of leaves vary. In some the leaf is almost entirely greenish black but in good colored specimens the ground color is greenish black with carmine midrib the entire leaf heavily splashed, marbled and margined orange red.

EDWIN LONSDALE;- Type N, 2 3/4" x 8", - Ground color dark bronze green midrib and veins outlined and margined deep colored crimson and leaf marbled crimson and orange. Very showy.  
Edwin Meredith.....see page 16.

ELAINE;- Type T, 2" x 6", - A fine distinct variety. The ground color is dark green and the midribs and veins are outlined rich deep rose.

ELIZABETH ANDRE;- Type Q, with short center lobe, 2½" x 7", - Ground color dark blackish red midrib and veins deep carmine and entire leaf splashed carmine. A very fine variety.

ELVIRA;- Type G, ¼" x 7", - Very narrow slender leaves of bright green with the midrib outlined golden yellow. A distinct and interesting variety.

ETHEL CRAIG;- Type J, 1 3/4" x 7", - Very handsome Croton. Ground color deep green irregularly overlaid by a rich golden yellow, generally near the base of the leaf.

EVANSIANUM;- Type P (lower lobes long and pointed), 3½" x 8", - Color bright green midrib and veins outlined and entire leaf heavily marbled brilliant yellow. One of showiest of yellow oakleaves.

EXCURRENS;- Type U, 2" x 7", Markings of leaves vary. In some leaves the group color is dark green with dark red midrib. In some leaves the midrib and margins of leaves are outlined bright yellow and occasionally marbled and splashed rich yellow.

FACATUM:- Type M, 3" x 9", - Broad large leaf. Midrib margined bright yellow, veins similarly outlined and leaf irregularly marbled yellow. Ground color deep green. One of best of its type.

✓ GEN. PAGET;- Types J & L, 5" x 15½", - One of the largest leaved Crotons. Ground color is a deep green. The midribs and veins are margined rich butter colored yellow and entire leaf more or less dotted and marbled yellow. Strong grower.

GLORIOSUM;- Type C, 1½" x 12", - New growth green and yellow which turns to a ground color of bronze red with a vivid red midrib with irregular mottling of red.

HARWOOD HALL;- Type I, 2" x 8", - Ground color deep rich green. Midrib and veins have a wide margin of rich bright yellow.

HUGH DILIMAN;- Type K, 2" x 9", - Deep green ground with midrib of leaf heavily marbled white and pale yellow. (seedling of Mr. Christian) Quite distinct.

ILLUSTRIS;- Type Y, 2" x 2½", - Three lobed leaves. Ground color is deep green marbled yellow, midrib protruding. Quite distinct.

† INTERRUPTUM;- Type D, 1" x 14", - Practically similar to Johannis. Ground color bright green heavily marbled yellow.

IRREGULARIS;- Type H, 2" x 11", - Hardly any two leaves are exactly alike in shape or coloring. The ground color is green and the contrasting color is yellow with sometimes a sprinkling of red. A very satisfactory variety.

JOHANNIS.....SEE PAGE 16.

JULIETTE DELARUYE;- Type P, 3" x 8", - Somewhat like Evansianum. Lower right lobe pointed and generally much longer than lower left lobe which is sometimes rounded at end. Midrib and veins outlined and entire leaf heavily marbled deep rich yellow.

LILLIAN STOFFREGEN;- Types J & M, 3" x 8", - Somewhat like Andreanum with margins undulate in large waves. Ground color deep green. Midrib and veins outlined yellow.

+ LORD HOPE;- Type J, 3½" x 12", - Ground color deep green. Midrib and veins red margined rich orange and leaf dotted and splashed with orange.

LORD RANDALL;- Type J, 2½" x 9", - Ground color deep green. Midrib and veins outlined bright yellow and irregularly splashed same color. Similar to Prince of Orange but smaller leaf and lighter yellow.

LORD BELEHAVEN and LOUIS DUPUY.....SEE PAGE 16.

LUCY;- Type C, 5/8" x 12", - Long slender leaves of the "Pheasants Tail type". The new leaves are dark green heavily dotted yellow. In the mature leaves the ground color becomes reddish purple and the yellow spots become bright red.

LYRATUM;- Types combination of P & T, 1½" x 9", - Ground color deep green. Midrib and some of veins outlined rich yellow and tip of leaves splashed yellow.

MACULATUM KATONII;- Type Q, 3" x 10", - One of the most commonly grown of the Oak Leaf varieties. Ground color bright green heavily spotted white and cream.

MADAME BLANCHE;- Types combination of B & C, 1 $\frac{1}{4}$ " x 14", - Ground color is bright. Midrib outlined white or cream and balance of leaf heavily marbled white or light cream.

MADAME ERNESTINE;- Type T, 4" x 13", -Ground color green changing to reddish bronze in mature leaf. Midrib and veins carmine outlined in orange. The end of leaf heavily suffused orange. A very showy plant.

MARYLAND;-Types composite of N & J, 3" x 8", -A very fine Croton greatly resembling Baron Le Compte except for slight difference in shape of leaf. While it holds to its colors much better than LeCompte it is however a rather weak grower and rather difficult to grow outside of greenhouses. The colors can be found in description of Baron Le Compte.

MAJESTICUM;- Type C, 1 $\frac{1}{4}$ " x 28", -Commonly known as Pheasants Tail. The ground color of the long narrow leaves is a dark green spotted & marbled red and yellow. This is the finest variety of this type and very popular.

MONS. FLORIN;- Type W, 4" x 11", -Fine variety. Ground color rich bright yellow. The midribs and veining is all outlined bright yellow. Always well colored.

MONS MAYNE;- Types Q & T, 4" x 10", - Ground color dark green midrib & veins irregularly margined yellow and leaf more or less splashed yellow. A fine semi oak leaf type. Contains no red tints.

\* MORTII;- Type K, 2  $\frac{3}{4}$ " x 14", -Ground color deep green with midrib and veining outlined deep yellow in normal leaf. In some leaves the yellow is so heavy that it becomes the predominating color. Tall.

MORTIMER;- Type I, 2" x 10", -Lanceolate leaves undulate on margins. At its best the ground color is a deep maroon heavily mottled bright red and yellow but in the older leaves the yellow all gradually turns red. A fine Croton, extensively used at the Breakers Hotel in Palm Beach. This variety has a tendency to revert to solid dark maroon leaves and only well colored stock should be used for propagating.

MRS. DUNCAN MACAW;- Type T, 4" x 10", -Immense black leaf in which the midrib and veins are outlined in flaming scarlet and narrow scarlet margins along edge of leaf. One of most striking of Crotons.

MRS. FRANCIS SPA.....SEE PAGE 16.

\* MRS FERD KOHL;- Type R, 6 $\frac{1}{2}$ " x 14", -One of largest leaves and most popular Crotons. Ground color deep rich green midribs and veins are bright yellow and leaves are irregularly marbled yellow.

MRS. FRED SANDER;-Type Q, 4" x 10", - Large oak leaf variety. Same colors as "Philadelphia" but much larger leaf. Ground color rich clear green. Midrib zone of lower part of leaf overlaid a deep rich clear yellow sometimes spreading over most of the leaf.

Mrs. J.J. COOK;- Type I, 2" x 7½", - One of the most showy Crotons. New leaves are green and yellow. In the mature leaf the ground color is black red. Midrib and veins deep crimson widely margined with rosy crimson.

MRS. WM. F. DREER;- Type J, 1 3/4" x 7", - In new growth the ground color is green and yellow. In the mature leaf the midrib and margin of leaves outlined bright crimson margined orange yellow.

NESTOR;- Types I & K, 2½" x 10", - Ground color is rich deep green. The midrib is colored bright red and it and some of its veins are irregularly margined light yellow and leaf dotted yellow. Reverse of leaf flushed dark red.

NOBILIS;- Type I, 2" x 6", - Ground color is deep green turning to blackish red as leaf matures. Center rib and veins bright carmine margined orange. Leaf dotted and splashed orange.

NOBILISSIMA;- Type I, 2" x 6", - A sport of Nobilis originated on grounds of Royal Palm Nurseries. Leaf like parent but whole center entirely yellow shading to brilliant crimson in mature leaves.

NORWOOD BEAUTY;- Type S with long center lobe, 2" x 8", - Ground Color is light green with red midrib and veins margined yellow, ultimately the green turns to deep red and the markings become bright crimson

ORANGE SUPREME;- Type P, 2½" x 8", - Ground color bright green with midrib and veins margined yellow. The end of the leaves broadens out just before the tip in a similar manner to irregulars.

ORVILLE.....SEE PAGE 16.

PAUL WEBER;- Type K, 2" x 8", - Ground color green. Midrib and veins rose and marbled cream yellow.

PHILADELPHIA;- Type Q, 2½" x 7", - Generally one side lobe is pointed and other rounded. Ground color is bright green. Generally the midrib is irregularly margined yellow and leaf dotted and splashed yellow. A very effective oak leaf. Never shows any red traits.

PHILIP CEDULDIG.....SEE PAGE 16.

PICTURATUM;- Type C, ½" x 12", - Long very narrow leaves. The new leaves are green which becomes dark red as leaves mature. The midrib is first outlined with yellow which becomes bright red as the leaves mature.

PIERRE CHAUVOIN;- Type J, 3" x 8", - Reddish black ground with intense scarlet midrib and veins and similar narrow margin on edge and irregularly marbled scarlet. Very fine Croton, somewhat similar to Baron Le Comte.

PITCAIRN;- Type O, 3½" x 8", - Leaves somewhat curled. Ground color green veined with red the center and lower portions splashed and marbled with yellow and orange, shading into red. A very showy variety.

PRINCE OF ORANGE;- Type J, 4½" x 12", - Large leaves with green ground. Midrib and veins outlined golden yellow and irregularly splashed golden yellow always shows plenty of color. an improvement on general Paget.

PUNCTATUM.....SEE PAGE 15.

PRINCE OF WALES;- Type N,  $1\frac{1}{4}$ " x 11", - Long irregular leaf. Ground color is bright green, Midrib and veins light yellow and leaf irregularly marbled yellow.

† PUCCINI;- Type T, 3" x 6", - Midrib carmine, veins carmine margined with brilliant orange red and edge similarly margined balance of leaf is black. Very striking.

† QUEEN VICTORIA;- Type K, 2" x 14", - The new leaves greatly resemble Mortii. In the mature leaf the ground color becomes a rich deep maroon with the midribs and veining outlined bright red. Some leaves are also irregularly splashed red. One of the best of the commoner varieties.

R.L. FARQUHAR;- Type L,  $2\frac{1}{2}$ " x 8", - Ground color deep green in the young leaves turning to black green. The midrib and veins are yellow at first later becoming rich deep red. Leaf often reverts underside dark bronze.

† REASONER'S NO. 8;- Type C & G, 1" x 14", - Very showy Croton, name unknown. Leaves generally widest at base, rich deep green, midrib has wide margin of rich bright yellow and leaf splashed and marbled yellow.

REEDI.....SEE PAGE 16.

REX;- Type C, 1" x 9", - Leaves somewhat spiraled. Ground color yellow orange with carmine midrib and veins which turn brilliant red with age. The leaf is marbled with deep green. One of the most colorful of the type and good grower.

† ROBERT CRAIG;- Type J, 3" x 9", - Leaf dark rich green suffused and marbled rich copper color. A very effective variety.

ROBERT LAVALLOIS;- Type I, 2" x 7", - Ground color bright green, midrib and veins margined golden yellow. Entire leaves heavily spotted golden yellow.

ROSEA PICTA;- Type O, 3" x 8", - Ground color of leaf rich rose with deep rose midrib and veins, marbled deep green. A very beautiful highly colored Croton.

† SENOR GONZALAS;- Type J,  $1\frac{1}{2}$ " x 6", - Body of leaf is black-green irregularly splashed and mottled pink and salmon pink. Reverse of leaf has dark red ground with deep rose markings. (Original name unknown but brought from collection of Senor Gonzallas of Porto Rico.)

SPLENDENS;- Type T,  $2\frac{1}{2}$ " x  $10\frac{1}{2}$ ", - Ground color dark green. In the young leaves the midrib and veins are outlined yellow with irregular yellow marbling. As the leaf matures the yellow turns to red.

STEWARTII;- Type W,  $3\frac{1}{2}$ " x 10", - Marking vary considerably. In many specimens green predominates but in highly colored specimens the predominating color is golden yellow, marbled rich deep green. The leaf is margined rose.

SUPERBA;- Type E,  $3/8$ " x 15", - Very long narrow leaves slightly "Corkscrew". Ground color deep green with midrib and margin of leaf outlined bright yellow.

SUPERBISSIMA;- Type E, 1" x 12", - Very long "corkscrew". Ground color dark green splashed and marbled with some red in the mature leaves.

SUNBURST;- Type N, 2" x 10", - Long leaves the margins being somewhat undulate. Ground color green in new leaves which turns to dark red in the older leaves. The leaf is heavily spotted orange crimson and the area about the midrib is more or less heavily suffused with the same color. A somewhat slow grower but one of the most satisfactory of the highly colored varieties for general planting.

THOMAS ROLAND and TORTILIS.....SEE PAGE 16.

VAN HOUTTI;- Type T,  $3\frac{1}{2}$ " x 11", - In new leaves the main color is green with midrib and veins more or less margined orange and yellow. In the mature leaf the ground color is deep rich blackish red and the markings become a flaming crimson.

VEITCHII;- Type I,  $2\frac{1}{2}$ " x 11", - Ground color is bright green in new leaves with midrib and veins heavily outlined and margined yellow which shades to pink and rose in the older leaves. One of the best of the standard varieties.

VIRGINIA;- Type Q, 3" x 10", - Large oak leaf variety. Ground color deep olive green with carmine midrib and zone in vicinity of midrib in center and lower portion of leaf is overlaid a rich deep orange. Resembles Mrs. Fred Sander except that colors are much deeper.

✓ VICTOR LEMOINE;- Type M, 5" x 12", - Black red ground with midrib and veins outlined brilliant scarlet, under surface of leaf marbled dark red lightened with orange. A very fine variety.

VOLUTUM;- (Ram's Horn) Type K, (very much recurved), 2" x 5", - Deep green ground with bright yellow midrib and veins. Some leaves heavily overlaid yellow.

W.C. WALLACE;- Type Modified T with tendency to oak leaf,  $2\frac{1}{2}$ " x 7", Ground color bright green. The veins are widely margined yellow resembling markings of a zebra. An effective variety.

W.W. COLES;- Type T,  $2\frac{1}{2}$ " x 10", - Leaves show considerable variation brown color bronze green midrib and veins carmine, margined deep orange and irregularly margined orange.

WILLIE STOFFEREGEN;- Types O & J, 3" x 8", - A very fine variety. The new leaves are green with the midrib and veins outlined in yellow. In the mature leaf the ground color becomes almost black and the yellow turns to a brilliant red.

WEISMANII.....SEE PAGE 16.

✓ WOOTEN BEAUTY;- Type L,  $3\frac{1}{2}$ " x 10", - Deep olive green with reddish orange midrib heavily marbled yellow and orange.

YULETIDE;- Type T,  $1\frac{1}{2}$ " x 8", - Ground color reddish bronze, midrib and part of veins outlined and margined brilliant scarlet and leaf irregularly marbled scarlet and orange. Very fine.

PUNCTATUM;- Type A,  $\frac{3}{8}$ " x 6", - Small very narrow green leaves profusely spotted golden yellow. Makes fine bushy specimens.

JOHANNIS; - Type C,  $\frac{1}{2}$ " x 12", - Long narrow green leaves, its midrib and margin light yellow.

TORTILIS; - Type E, 1" x 10", - This is the well known "Red Corkscrew" one of the most popular of this type. Ground black green midrib carmine, margined brilliant rich red and dotted brilliant red. Reverse of leaf has rich red ground color.

LOUIS DUPUY; - Type P, 4" x 10", - An irregular oak leaf variety, the side lobes varying in size. Ground color rich green veins and midrib carmine margined and spotted yellow overlaid bright red.

EDWIN MERIDITH; - Type B,  $1\frac{1}{2}$ " x 12", - Long narrow leaves, veins and midrib long outlined brilliant yellow and leaf more or less splashed yellow. An improvement on Weismanni, the leaves being longer and plant more vigorous grower.

WEISMANII; - Type B, 1" x 10", - Narrow leaves of bright green veined brilliant yellow especially in bright sun. Dwarf grower. Quite similar to Edwin Meredith but smaller.

PHILIP GEDULDIG; - Type T,  $3\frac{1}{2}$ " x 9", - Ground color of mature leaves is maroon covered with spots of light pink and maroon. Sometimes the leaf has large splashes of color.

THOMAS ROLAND; - Type J, 4" x 12", - A very fine variety. Ground color is red-black and the veins are outlined flaming scarlet.

LORD BELHAVEN; - Type N, 3" x 12", - Ground color is green with scarlet midrib. The midrib and veins are margined deep yellow.

ORVILLA; - Type V, 1" x 5", - Medium sized rounded leaves the ends rounded, and veined and blotched yellow.

MRS FRANCIS SPAE; - Type J,  $2\frac{3}{4}$ " x 8", - Green ground with deep rose midribs and veins which are heavily margined and flushed light yellow which turns crimson on mature leaf.

REEDII; - Type M, 5" x 12", - Very large leaf, heavily veined. Generally the ground color is a bronze red with rose or purple markings. Sometimes the ground color is heavily overlaid cream and pink. A very popular variety.