

A WORD OR TWO ABOUT GARDENING

Heliconias: Much more than just Parrots and Lobster Claws

As revealed in two previous columns, the order **Zingiberales** includes some of the most important accent plants for use in the tropical garden, providing both bold lush foliage and/or uniquely showy inflorescences. These two earlier articles dealt with gingers, ornamental bananas, bird-of-paradise and travelers tree. This, the third and final article of the series is devoted to the **heliconias**, the most widely grown of the ornamental Zingiberales.

Most heliconias in cultivation originated in humid tropical areas of the Americas, with a few lesser known species from islands in the western South Pacific. The name *Heliconia* indirectly acknowledges the resemblance the taxon bears to bananas being a play on the latter's botanical name, *Musa*. *Heliconia* derives from Mt. Helikon, home of the nine muses (Latin = *musa*) in Greek mythology.

Based upon growth habit **heliconias** have been grouped into **three types**, with most of those of ornamental interest being of the **musoid** (banana like) type. The other two groups are **cannoid** (canna-like) and **zingiberoid** (ginger like). Both musoid and cannoid types have spirally arranged leaves on long and short petioles respectively. The leaves of zingiberoid heliconias are arranged in the same plane on opposite sides of the stem (distichous). *Heliconia* leaves are oblong to elliptic, the base unequal (relates to attachment of petiole) with a prominent mid-rib having parallel, closely spaced secondary veins. Although primarily grown for their inflorescence, the luxuriant foliage is an added asset and in a few species (e.g., *Heliconia metallica* and *H. indica*) of principal interest.

Heliconias are medium to large (up to 20') **herbaceous, clump forming plants** with an underground rhizome from which a series of erect stems arise. As in bananas these are not true stems but **pseudostems** made up of concentrically arranged sheathing leaf bases. Each stem bears a **terminal inflorescence** and after flowering, dies back to be replaced by new stems, which develop from suckers that emerge from the rhizome. A few species also produce basal flowering stems (c.f. spiral gingers). **Flowering** occurs at various times of the year, most often from spring through summer, though fall into winter for some species. There is evidence that at least three species, *H. stricta*, *H. rostrata* and *H. wagneriana* are short day plants – flowering stems initiated as days shorten. The time from the emergence of a new stem to its flowering can vary from as little as 6 months for *H. stricta* 'Dwarf Jamaican' to 28 months for *H. mariae* (beefsteak heliconia).

The **heliconia inflorescence** is striking both in its elaborate design and contrasting hues and tints, consisting of a series of outsized, colorful, carinate (keeled) bracts, each enclosing several to many individual flowers. The flowers are usually of passing interest, often hidden within the large bracts. In some instances prominent somewhat showy sepals become visible as the inflorescence opens to complement the brightly colored waxy or hirsute bracts, the heliconia's principal ornamental member. Each inflorescence is either upright (e.g., the familiar lobster claw,

Heliconia bihai) or pendent (the hanging lobster claw, *H. rostrata*). For both types of inflorescence the bracts and associated flowers are arranged about a central axis (rachis) either in a single plane (distichous) or spirally.

Heliconias rely on **birds** for both **pollination** (humming birds, though some South Pacific species are bat pollinated) and **seed dispersal** (birds consume fruit). In Miami-Dade landscapes heliconias rarely produce fruit, however in tropical gardens where pollinators are common (e.g., Puerto Rico) plants do produce fruit from which seeds can be extracted and used to propagate new plants. Interestingly although hybrids are rarely found in the wild, there is circumstantial evidence from Puerto Rico of an increased potential for hybridization between cultivated plants. It has been suggested that this is the result of large numbers of different species being grown in relatively close proximity. If you wish to **grow from seed**, germination can be unpredictable taking from 3 months to more than a year – seeds should be first soaked for 2-3 days, then sown (about ¾' deep) in a germinating soil mix and placed in bright light at 70-75°F. The usual method of propagation involves division of rhizomes – see below.

In the wild heliconias are found growing as understory plants in tropical wet lowlands and mid-elevation rain and cloud forests. They favor areas bordering streams and forest clearings and on occasion even occur as pioneer species in areas abandoned after deforestation. With this in mind, conditions for growing heliconias **in the landscape** should provide partial shade to full sun (depends on species, *H. angusta* and *H. stricta* require more shade, *H. psittacorum* fullsun). An area sheltered from direct wind will help maintain humidity, especially during winter when cold winds can rapidly desiccate plants, as well as protect the leaves from excessive shredding.

Heliconias become increasingly **susceptible to cold damage** as temperatures fall below 55°F, more likely the further one moves inland from Biscayne Bay into Miami-Dade's far western suburbs. Growing under a tree canopy (avoid dense shade) will help reduce heat loss, as will watering late in the day immediately before cold weather is expected (temperatures below 40°F). Temperatures experienced in Miami-Dade are unlikely to kill heliconias, however damage to stems will reduce flowering, especially for species/cultivars that require more than a year before flowering. The following species are among those reported to be **cold tolerant** - temperatures into the 30's: *H. impudica* (bracts, yellow/red); *H. scheidiana* (reddish pink bracts, yellow flowers); *H. subulata* (cannoid, bracts red with green hue, yellow prominent yellow sepals); *H. latispatha* (erect, spirally arranged, bracts red fading to yellow at base); *H. pseudoaemygdiana* (Birdiana – erect, bracts slender, golden yellow suffused orange). There are other cold tolerant species, most found growing on tropical Andean slopes at elevations of 3000 – 6000', of particular interest to those in areas more marginal for growing heliconias than Miami-Dade.

Before planting make sure to choose a site with ready access to water – it is important to avoid fluctuating soil moisture, especially where there is full exposure to hot afternoon sun. Many heliconias are **fast growing** and require plenty of room for lateral expansion of the clump. Some species can rapidly spread and become **invasive if not controlled** (e.g., *H. psittacorum* and *H. latispatha* and cultivars) and

certainly cannot be recommended for a small yard. If there is sufficient depth of soil (uncommon in Miami-Dade), consider installation of a root barrier to restrict rhizome spread of especially vigorous species. **Where space is an issue** large pots (at least 20 gallon) or planters can be used for some species and their cultivars (e.g., *H. angusta*, *H. aurantica*, *H. psittacorum* and *H. stricta*). Use a good quality potting mix adding extra Perlite and coarse sand to ensure a free draining soil. Containers are also advisable for especially tender heliconias such as *H. chartacea*, and should be mounted on a dolly for ease of movement.

Heliconias can be purchased locally as **container plants** or by mail order as **sections of rhizome**. Container plants are, for a given selection, more expensive, but are easier to establish and will take less time to bear flowers. Mail order growers, especially those specializing in zingiberales, will offer a better selection and are usually the only source for most of the newer and rarer selections. Since you can expect to pay \$25 and up for choice rhizome sections care in planting and rooting is essential in order to realize the benefits of your investment.

Rhizome sections will usually possess at least one cut pseudo stem, and sometimes visible roots - new pseudo stems developing from bud eyes on the rhizome. It is recommended that rhizome sections be first potted up and not planted directly in the ground. This should be done immediately on receipt using a good quality potting soil with added Perlite/coarse sand to prevent the soil from becoming excessively wet. Avoid planting too deep (about 1" or deep enough to cover any white tissue visible on the cut stem). The pot containing the rhizome section should be placed outdoors in bright light, protected from direct sun. Do not over water as this predisposes the rhizome to rotting, watering only as the soil surface dries out. Once shoots appear the pot can be gradually moved into more direct sunlight until exposure is similar to what it will receive in the landscape.

Container plants, those purchased as such or those you have grown from rhizome sections, are **best planted in late spring** when higher temperatures and the start of the rainy season will help them become established. Use a rich but free draining soil as back fill and where there is tillable soil (rare in the southern end of the county) enrich the top 4-6" of surrounding native sandy/rock soils with fully cured garden compost or peat moss – most of a heliconias roots are in the top 6" of soil. Application of a 2" layer of organic mulch such as pine bark nuggets will aid in conserving soil moisture as well as helping to suppress weeds. As with bananas, heliconias respond well to **regular applications of fertilizer**: provide 1½ lbs per 100 sq ft of plant bed of a slow release complete palm special (8-2-12, N/P/K) every three months from early March to November. Heliconias, akin to bananas and gingers require plenty of potassium (the K in the fore mentioned fertilizer). In addition they prefer more acidic soils than those found locally; growing on Miami limestone can result in pale foliage due to a lack of available iron and/or manganese as well as magnesium. Where deficiency symptoms appear these elements can be supplied as nutritional sprays (manganese and magnesium) or soil drench (chelated iron suitable for pH≥7.5).

Remove spent stems (after flowering) immediately they start yellowing as well as any stems that are damaged. Avoid removing individual leaves, especially on stems

that have not flowered, as this can weaken the pseudo stem and cause it to collapse. Dig up mature clumps that appear exhausted (often signified by a reduction in flower production). After removing diseased rhizomes or those with few stems, replenish the soil and re-set.

Several fungal leaf-spotting diseases can affect heliconias, however of more importance are **rhizome and/or root rots** due to infection with *Calonectria*, *Fusarium* or *Pythium*, especially when establishing new plants from rhizome sections. Such problems can be avoided by not over watering and avoiding the use of overly heavy soil (e.g., black top soil – muck soils). Insect pests are less of a problem (more so for commercial growers) though mealybugs, scale insects and mites are occasionally found. Removing spent stems before leaves yellow is claimed to help reduce spider mite problems. The red palm mite, which is known to infest *Musa* and *Heliconia* is now well established in the Caribbean basin and is of potential concern to growers in south Florida.

In addition to the species types grown commercially, many more cultivars/hybrids have been developed of which 160 are currently recognized by the Heliconia Society. The highly ornamental, long lasting nature of the heliconia inflorescence has caught the attention of the cut flower trade, where it is a premium product, and spurred development of new cultivars. With so much choice, I have restricted the descriptions below to presently recognized cultivars currently available from local South Florida growers (all container specimens, 3 – 25 gallon). For rhizome sections several mail order growers have extensive on-line catalogs from which selections can be made. Unless otherwise indicated all of the heliconias listed below are musoid types with an erect inflorescence – sepal colors only mentioned if they contribute significant color. Measures in feet (‘) refer to maximum height for a given species type/cultivar – depending on growing conditions it may well be less. Selections requiring full sun or extra shade are indicated otherwise grow with partial shade – bright light.

H. angusta - winter flowering, to 9’: **‘Holiday’**, 2-3’, bracts scarlet to rosy pink, sepals white, winter; **‘Orange Christmas’**, 3-4’, bright orange bracts, butter yellow sepals, late fall through winter; **‘Yellow Christmas’**, as previous, but yellow bracts.

H. bihai – wild plantain, flowers spring/summer, to 16’: **‘Lobster Claw One’**, up to 16’, bracts red with green margin; **‘Lobster Claw Two’**, up to 14’ bracts orangey red with green tip; **‘Giant Lobster Claw’** to 16’, bracts deep pinkish red fading to pale yellow at base (swollen) with green margin.

H. bihae x *caribaea*: **‘Hot Rio Nights’**, spring to summer, 14’, bright red bracts, stems and lower leaf surface glaucous.; **‘Jacquini’**, summer through fall, 14’, bracts red blush with broad golden margin and green tip; **‘Richmond Red’**, winter through spring, to 15’, bracts maroon to red with narrow yellow margin.

H. collinsiana - flowering spring/summer, to 18’, pendent spiral inflorescence - flexuous (zigzags), bracts acuminate and red, sepals yellow

H. collinsiana x *H. bourgeana*: **‘Pedro Ortiz’**, 6-8’, winter through spring, semi-pendent flexuous inflorescence, bracts red.

H. hirsuta – zingiberoid, to 15’, flowering warm months, inflorescence erect and hirsute (hairy), bracts slender orange to red (some cultivars also flower from the

base on leafless stems): **'Peru'**, to 15', bracts green at base becoming yellow then red toward tip, sepals orange.

H. latispatha – spring to summer, to 10': **'Orange Gyro'**, up to 12', spiraling inflorescence, bracts yellowy orange, sepals pale yellow to green; **'Red-Yellow Gyro'** similar to previous cultivar, bracts orangey red with yellow base.

H. lingulata – spring to early fall, to 12', bracts slender yellow with blunt reddish tip, sepals pale yellow to green: **'Southern Cross'**, bracts bright yellow suffused orange at tips, sepals yellow.

H. marginata - to 8', blooms spring to summer with pendent flexuous inflorescence, bracts pale yellow

H. x nickeriensis (probably *H. marginata* x *H. psittacorum*, sometimes listed as **'Nickeriensis'**), 4-5', vigorous year round flowering, bracts peach orange fading to yellow at margin, sepals yellowish orange .

H. marginata x *H. bihai*: **'Rauliniana'**, to 7', blooms summer, inflorescence becomes flexuous and semi-pendent, bracts red with yellow margin

H. orthotricha - to 8', full sun moist soil, requires protection from cold, blooms spring to early fall, bracts acuminate and pink with feint yellow keel: **'Imperial'**, bracts vivid pink with white base and dark green margin

H. psittacorum (parrot flower) – to 5', wet to moist soil and full sun, inflorescence highly variable with many hundreds of color variations noted: **'Andromeda'**, 2-3', bracts pinkish red becoming orangey yellow toward rachis, waxy coating; **'Sassy'** (aka Kaleidoscope), 2-3', bracts bright magenta becoming pale green at base, sepals orangey yellow with base chartreuse; **'Lady Di'** 2-3', red becoming pale pink toward rachis, flowers pale yellow tipped dark green, **'St. Vincent Red'**, bracts orangey red, sepals orange, **'Choconiana'**, bracts orange with yellow base, sepals orange with dark green tip.

H. psittacorum x *H. spathocircinata*: **'Golden Torch'**, to 9', apricot to gold bracts and sepals; **'Alan Carle'**, to 5', bracts blushed red below becoming yellow toward upper margin and rachis, sepals yellow with green tip; **'Tropica'**, to 8', bracts pale orange to peach shading to pale red at tips, sepals pale orange with green tip.

H. rostrata (hanging lobster claw) – to 8', popular choice but foliage especially prone to shredding in wind, large pendent inflorescence, bracts scarlet with yellow tips: **'Dwarf'**, similar to species type but not as large with shorter inflorescence (ideal for container culture).

H. scheideana, to 8', shade from full sun, notably cold tolerant, inflorescence becoming flexuous, bracts spirally arranged often hirsute spiraling and orangey red to red, sepals yellow: **'Fire and Ice'**, to 4', bracts red, sepals yellow.

H. stricta – susceptible to cold damage, variable in appearance with cultivars including some with strikingly ornamental foliage, to 12': **'Dorado Gold'**, 3-4', spring/summer, yellow with pale orange center and dark green margin; **'Dwarf Jamaican'**, 1-2', flowers year round but locally best in winter – foliage liable to burn as temperatures fall below 50°F; **'Firebird'**, 3-5', bracts bright red with green keel and tip; **'Iris'**, 5-10', bracts brick red with yellowish green margin; **'Sharonii'**, more shade than other cultivars (no direct sun), 3 -5', ornamental leaves have purplish undersides and maroon mid-rib, bracts brick orange; **'Carli's Sharonii'**, same as

previous but bracts red with yellow keel, margin and base; '**Tagami**', to 11', bracts deep red with yellow to orange base, keel and margin fading to green toward tip.

H. wagneriana (Easter Heliconia) - to 12', protect from cold, bracts broad becoming acuminate at tips pinkish red to crimson with base and keel yellow and margin dark green.

Choose one of the above heliconias that best suits your landscape and enjoy both outdoors as tropical accents and indoors as the center piece of a cut flower arrangement. As a cut flower remove stems and immediately place in tepid fresh water (about 95°F), placing the arrangement in an area of bright light. Change the water every 5 days re-cutting the stem end. Expect a vase life of at least 14 days, up to 30 days if you use a cut flower preservative. Choose inflorescences that have not opened – the open bracts hold rain water and offer a breeding site for mosquito larvae (a familiar problem with bromeliads).

In the landscape heliconias can be used with gingers, aroids and understory palms (such as chamaedoreas and licualas), and are ideal bordering a partly shaded ornamental pool. Along with the other members of the Zingiberales that were discussed in previous articles we have at our disposal a rich source of landscaping material that could be used far more widely in Miami-Dade.

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December 18, 2006