

Aristocratic *Arisaema*

Elegant woodlanders for garden and greenhouse

by Christopher Grey-Wilson

The common arum of our European woods and hedgerows, with its curious flowers enveloped in a large flashy spathe, is well known to many as the cuckoo-pint, lords-and-ladies or Jack-in-the-pulpit. It belongs to the genus *Arum*, which has some 20 species throughout Europe and western Asia, several being grown in our gardens. However, in Asia and North America and a few other regions there is a more exciting genus, *Arisaema*, whose species number more than 120. Of all the hardy genera in the arum family, the Araceae, none can match *Arisaema* for grace of foliage or for the elegance and bizarre beauty of their inflorescences.

Arisaema are aristocratic plants, but it would be wrong to think of them as solely for the connoisseur or for the collector of quaint or unusual plants, for some are very easy to grow. Although some are undoubtedly tender, a large number of those available have proved very hardy in our temperate gardens, not so surprising, perhaps, as many come from the cooler regions or the Himalaya China, Japan and North America. A few species come from distinctly warmer, subtropical climes--Sri Lanka, southern India, and east and north-east Africa.

Unlike arums, most *Arisaema* flowers do not possess an unpleasant smell, which makes them more acceptable subjects for the garden. Even when the plant is not in flower, the striking foliage, which differs markedly from one species to another, can be attractive. The inflorescence, however, is more likely to excite comment. As in *Arum*, the outer part of the inflorescence, the spathe, encircles the flowers, which are borne at the base of a fleshy spadix. The spathe itself varies enormously in shape and coloration from one species to another; greens, browns and purples predominate, but white, yellow and pink also occur. It is the subtle gradations of colour and the patterns, often in the form of stripes, that make them so eye-catching. Whereas the lower part of the spathe forms a tube around the basal, fertile part of the spadix, the upper portion usually flares out, often forming a protective hood, which is sometimes drawn out into a long, slender appendage like a snake's tongue.

In most species of *Arisaema*, the inflorescence is either male or female. The small flowers can be seen only by carefully prying the spathe apart along its overlapping margins. The florets (flowers) have no petals or sepals and cling closely to the swollen spadix; male florets consist of between one and five stamens, females of a single-celled ovary. In a few species, notably the North American *A. dracontium*, male florets occur above the female on the same spadix. This has implications in cultivation for the majority of species for, in order to get seed, one must have at least one male and one female plant of the same species. The situation is further complicated by the fact that, in some of the species that have been investigated, plants have been shown to change sex from one year to another. Growing conditions may be the cause of this phenomenon; what is known is that female plants are often larger and, having exhausted themselves producing fruit one year, recover for the next year or so by either not flowering at all, or by becoming male.

A curious feature of the inflorescence is the upper, sterile part of the spadix which can be club-shaped, and in some species extends into an immensely long thread-like trailing appendage sometimes caught by the unfurling leaves. This appendage is a scent-producing organ involved in pollination, but its shape is an important feature in helping to distinguish the various species.

Arisaema have swollen underground corms or rhizomes which, like many bulbous plants, remain dormant below ground until conditions are right for growth. The corm can grow quite large--*A. griffithii*, for instance, up to 15 cm (6 in) diameter. In many species the corms multiply by producing on their 'shoulders' daughter corms or offsets, which eventually become separate new plants. In *A. appendiculata*, plants produce stolons under the soil, so that new plants arise some distance from the parent plant. The autumn fruit heads are an added bonus, essentially like those of the cuckoo-pint, *Arum maculatum*, but larger and bolder in many instances, consisting of a tight mass of brilliant scarlet fleshy berries. The berries normally contain between one and five seeds, making separation from the pulp a very messy business.

In the wild, most species of *Arisaema* are forest plants, reveling in ever moist leafy soils and dappled shade. In the garden they thrive best in a loamy or leafy soil and will tolerate a sunny position,

providing the soil is moist (though never waterlogged) and the position is not too hot or exposed. The ideal position is among shrubs, in either a woodland or a peat garden. Most of the Himalayan species and many of the Chinese ones do not start into growth until late May or June and so escape spring frosts. The Japanese and southern Indian species, however, need some protection in spring, as they start into growth earlier. Even the dormant tubers of some species can be damaged in a severe winter, which is why they should be planted deeply, 20-25 cm (8-10 in) being an ideal depth for the more vigorous species like *A. costatum* and *A. tortuosum*.

Plants grown in pots, where growth is restricted, seldom do well. They are best repotted annually, using a moist compost of equal parts loam, peat, leaf mould and coarse grit and will respond to regular feeds of a standard liquid fertilizer.

In recent years new species have been introduced from the wild, especially from the Himalaya and China, some as tubers, most as wild-collected seed. Seed appears to be viable for at least a year, although it is always wise to sow it at the earliest opportunity, in a standard soilless seed compost. Most species require chilling before germination normally this occurs in the spring or early summer after an autumn sowing. Great patience is needed, for most species take four or more years to reach flowering size. (Several of mine have taken as many as eight years.) Young plants are best left in their pots until the end of the second season, when the small corms can be carefully separated and potted on singly or several to a pot. If they are to be planted out in the garden, the third or fourth year is a good time. Plants seem to thrive equally well in an acid or alkaline potting compost, although several species show nutrient deficiency symptoms when grown in highly alkaline garden soil.

Perhaps the earliest and hardiest species brought into cultivation as *A. triphyllum* from the eastern side of North America, grown in our gardens for more than 300 years. Plants bear one or two leaves, each with three oval or oblong leaflets. The inflorescence is held at leaf height or somewhat below the leaves, the spathe green or purplish, generally striped with purple on the inside. The spadix is club-shaped and held just beneath the hood, rather like a Jack-in-the-pulpit.

Arisaema amurense is also readily available in the horticultural trade

and is similar in some ways, although readily distinguished by its leaves, which usually have five leaflets. The dark green or purplish spathes are striped with white and held just below the leaves. This is probably the most northerly growing species in the genus, being found in northern China., the neighboring part of the USSR, Korea and Japan. Both *A. triphyllum* and *A. amurense* grow to about 50 cm (20 in) tall, rarely more and are well suited to the front of a peat border where their subtle, intriguing beauty can be best appreciated at close range, and where given time, they will form a sizeable colony.

Arisaema sikokianum is perhaps the most striking of any in cultivation and so has gained a certain exclusivity. But this does not justify its excessive cost, for it is not particularly difficult to cultivate and can be readily raised from seed, which is sometimes available. This wonderful plant comes from the islands of Honshu and Shikoku in Japan and has been cultivated since about 1938. The leaves bear five elliptical leaflets, often toothed along the margin and sometimes variegated above. The spathe is a deep purple-brown outside, with an elegant pointed hood, purplish green with whitish stripes on the inside. The inside of the spathe-tube and the club-shaped spadix is dazzling white, a unique contrast of unparalleled beauty in the genus. In spring the shoots of *A. sikokianum* need protection from frost.

In complete contrast is the extraordinary, wholly bizarre inflorescence of *A. griffithii*, which is a common species in the central and eastern Himalaya. The spathe, which is large with an evil cobra-like appearance, is greenish or chocolate-purple, heavily veined with a network of greenish white. The tube is rather narrow but, in contrast, the hood is enormously expanded, arching forwards and downwards. The slender spadix trails from the mouth of the spathe, often held by the tip of the spathe itself. This is a hard species but very slow to increase in most gardens.

Arisaema costatum has become a firm favorite in some gardens, despite not having been in cultivation for more than 25 years. It is a native of the Himalaya, where it inhabits wet, cool woodlands and cliffs, often forming large colonies. Its three-parted leaves can grow enormous - I have seen natives in Nepal using them as umbrellas. The shiny green leaflets have many closely parallel veins; in autumn the leaves turn an attractive yellow, a fine contrast to the brilliant red fruit-heads. The shiny spathe is a dark purple or purple-brown

with contrasting, white stripes, the tip drawn out into a long appendage. As in *A. griffithii*, the spadix is long and thread-like, trailing from the mouth of the spathe, but not caught by its tip. *Arisaema costatum* has thrived in a number of gardens (there are some fine specimens at Kew Gardens and Wakehurst Place in Sussex) and it multiplies quickly once established.

Similar, and often confused with the previous species, is *A. speciosum*, which comes from the eastern Himalaya and south-west China. The two are readily distinguished in leaf, for instead of the close parallel veins of the former, *A. speciosum* has fewer veins forming more of a network over the leaf surface. The spathe is a similar colour but with a broader hood and the spadix has a swollen white base which suddenly contracts into the trailing, thread-like appendages. This is another vigorous species, which has proved to be hardy outdoors in the milder parts of this country.

Two of the tallest species are *A. consanguineum* and *A. tortuosum*. Both have a wide distribution from northern India to Xizang (Tibet) and southwest China, the former extending eastwards as far as Taiwan. As might be expected they are very variable over this range and a number of different forms are in cultivation. *Arisaema consanguineum* can be a very stout plant, reaching 1 m (3 ft.) Or more in height, each large leaf having 10-20 narrow radiating leaflets, giving a parasol appearance. The inflorescence is held just below the leaf, the spathe is a uniform greenish or greenish purple, the hood drawn out into a long, drooping tip. In contrast the spadix is club-shaped and scarcely reaches the mouth of the spathe. *Arisaema tortuosum* gets its name from its extraordinary spadix which is green or purplish and s-shaped, the tip held high and erect above the green or purplish spathe. Both species very greatly in height in cultivation, particularly robust specimens in deeper, richer soiled.

Another species is *A. candidissimum*. Once established, it multiplies quite readily in most gardens, and is more tolerant of drier conditions than most of its cousins. The leaves bear three fleshy, rather bright green leaflets and are only partly unfurled at flowering time. The spathe has a pale green, whitish-striped tube and an attractive pink, white-striped hood. The short spadix is a contrasting yellowish green. I feel that this species, together with *A. sikokianum*, deserves to be far more widely grown, despite the high price in catalogues.

One of the greatest joys of a spring trek in the Nepalese Himalaya is to come across colonies of the charming *A. nepenthoides* in flower, surrounded by rhododendrons and other glories. Although it never looks as good in our gardens as it, nonetheless, well worth acquiring. The inflorescences often appear before the leaves and are a pale brownish purple, speckled, and with white stripes. Most striking are the two rounded, ear-like flaps at the base of the hood. The spadix is short and club-like and the leaves usually have five leaflets. This species is rather uncommon in cultivation. It tends to flower very early, usually in April or May, and so may be damaged by frost. It thrives reasonably well in an unheated greenhouse.

The smallest inflorescence in the genus is owned by the charming *A. flavum* which has an unusual distribution from Arabia to the drier regions of the Himalaya and west China. In cultivation it is the most drought resistant and hardy species appearing in a tall and a dwarf form, the latter reaching only 10 cm (4 in) in height. This species has a bright yellowish green spathe only 3-6.7 cm (1 1/4-2 1/2 in). The leaves are generally half unfurled at flowering time and have 5-11 leaflets.

Several exciting species have been collected in China in recent years. These include the lovely *A. ciliatum* with its gloriously white-striped, greenish purple spathes, which have distinguishing hairs along the margin, and *A. wilsonii*, discovered by the great plant collector Ernest Henry Wilson in south-west China in the 1930s. This handsome plant recalls *A. costatum* in flower but the dark purplish spadix rears up s-shaped in the manner of *A. tortuosum*; it is, however, a far smaller plant. Of similar persuasion is *A. handelii* (= *A. elephas*), although in this species the predominant colour of the inflorescence is a pale greenish yellow. Another, currently sold under the name of *A. ciliatum* by Washfield, is a recent introduction and certainly does well in the garden. Although superficially similar to the above-mentioned *A. ciliatum*, it differs in a number of important respects, not the least of which is the absence of cilia along the margin of the spathe, which gives the true species its name.

There are many other species in this intriguing genus to whet the appetite: the alpine *A. Jacquemontii*, from the high meadows of the Himalaya, the elegant *A. utile* and *A. propinquum* from the forests of

the same region and the Japanese *A. ringens* with its hooded spathes resembling a helmet. These and several others, as well as all those previously mentioned, are in cultivation. And there are many more fascinating kinds as yet uncultivated.

Arisaema deserve a wider public and certainly, in my garden, few plants intrigue the visitor more than these elegant woodlanders.

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