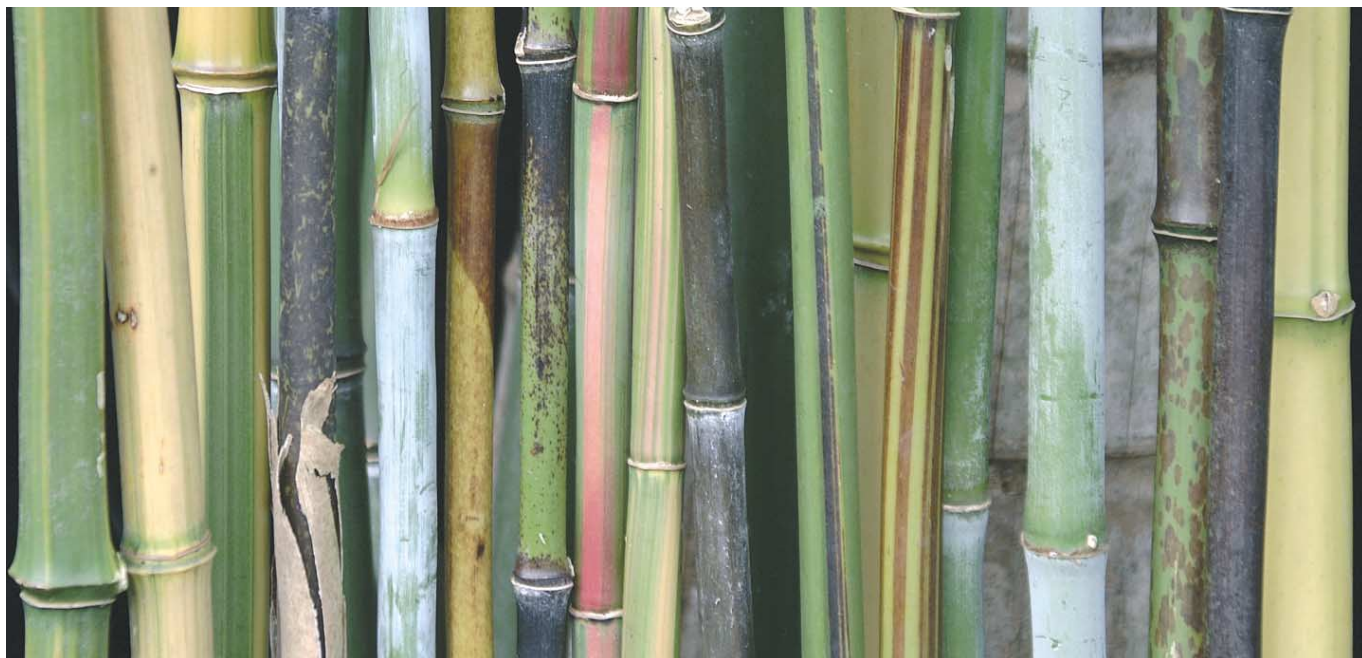


RAINBOW



PAUL WHITTAKER, PW PLANTS

CANES

Improved forms and colours of bamboo have opened up possibilities for garden designers. **Stephen Gower** thinks it is time to make better use of these hardy stalwarts, while **Mike Bell** summarises some of the very latest varieties currently under trial

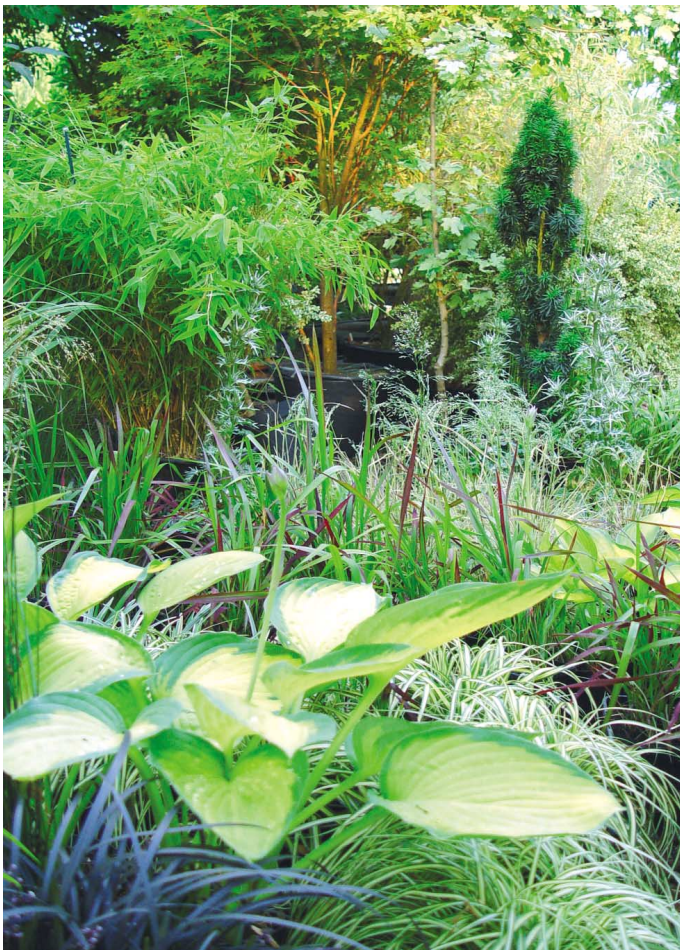
Bamboos deserve a place in any garden as they fulfil many design uses, such as creating focal points, giving height, structure and year-round interest to the garden, or providing sound and movement in the wind. Added to this is a great opportunity for the unique attributes of bamboo colour to make a contribution to garden design. Red, orange, yellow, green, blue, purple, black, pink, white, striped and blotchy — these are all colours and variations that occur in bamboo canes (more correctly called culms — the term 'cane' that most people associate with bamboos is normally reserved for dried, dead culms). Here are a few ideas of how to make good use of bamboo culm colour.

Colour combinations

Greater effect can be given to coloured culms by underplanting with sympathetic ground cover. Culm colour, for example, can be reinforced by combining with a similarly coloured neighbour — the yellow canes of *Phyllostachys aureosulcata* f. *spectabilis* with *Euonymus fortunei* 'Emerald 'n' Gold' or *Phyllostachys nigra* and *Ophiopogon planiscapus* 'Nigrescens' (and even *Tulipa* 'Queen of the Night' as additional seasonal planting). Additional emphasis of the culms can result if the ground cover is planted in enough quantity to create a balance, so that each of these two plant combinations can be kept in scale with each other, one in the vertical plane, the other in the horizontal.

Above: Bamboo culms are available in a myriad of colours and patterns, opening up vast opportunity for planting plans.

IMAGES THIS PAGE AND OPPOSITE: PAUL WHITTAKER, PVA PLANTS



Above left : Bamboos associate well in most planting plans. Here *Phyllostachys* and *Fargesia* spp. tower over hostas and grasses to give an interplay of textures and colours.

Above right: Yellow stems of *Phyllostachys bambusoides* 'Castillonii' stand out against darker foliage.

Opposite page top:

Phyllostachys nigra culms

Opposite page bottom:

Thamnocalamus crassinodus

'Kew Beauty'.

Using complementary colours within a planting scheme also serves to emphasise the colour of each plant. Yellow and purple are complementary colours but are also the lightest and darkest colours on the colour wheel, giving a strong tonal contrast. Make use of this principle by planting yellow-culmed bamboos (for example, *Phyllostachys bambusoides* 'Holochrysa') alongside such plants as *Cotinus coggygria* 'Royal Purple', *Heuchera* 'Plum Pudding' or *Prunus serrula*. The darker stems of *Fargesia nitida* would also be a good foil, in dappled shade locations, to yellow-leaved plants such as *Sambucus racemosa* 'Sutherland Gold', *Corylus avellana* 'Aurea' and *Acer shirasawanum* 'Aureum'.

With the range of culm colour available bamboos can fit into many traditional colour-themed garden schemes. Yellow-culmed species fit superbly into gold colour schemes whilst *Phyllostachys nigra* could be used in a hot border, as could *Phyllostachys aureosulcata* f. *aureocaulis* or *Semiarundinaria fastuosa*. *P. nigra* is an essential plant in a black and white garden, especially when combined with white-stemmed birch. Of course, the green-stemmed bamboos are there to be used in a monotone green garden where foliage shapes and textures play a key role. The addition of glossy green stems, which can shine like emeralds, gives added form and interest.

Themed gardens

A large number of people will immediately associate bamboos with jungle-style planting and they are certainly very useful plants in this context, providing essential screening, a sense of wildness and mystery, and a feel of the exotic. However, it is more the general attributes of the bamboo plant rather than its culm colour that makes it a first choice for jungle gardens.

Bamboos may not be first on the list when it comes to winter twig displays but they provide as much colour as traditional contenders such as cornus, rubus and salix. Bamboos also have the advantage of being evergreen and can contribute an additional colour to the scheme through their leaves.



Of course, a garden in the Japanese or Chinese style wouldn't be complete without a bamboo. Not only are many bamboo species natives of these countries but they also play an important part in the gardens of those countries,

symbolising dependability and upright character. In our interpretations of Japanese or Chinese gardens the range of culm colours, as well as habit, gives us scope to select a bamboo that fits in with other factors, such as space available, colours of surrounding hard and soft landscape materials or the colour preferences of clients. There are not many species of plants that allow such a range of size and colour.

Recent years have seen a rise in the popularity of bamboo, with *Phyllostachys nigra* becoming the trendy plant in this country due to its black culms. It is often used in modern and minimalist gardens. Its black stems work well with the simple colour palettes frequently favoured in modern gardens, and for the minimalist garden it provides many attributes within just one plant.

Against a backdrop

Bamboo culms take on an architectural quality when set against a solid backdrop. An evergreen hedge such as *Taxus baccata* makes a great foil for yellow-culmed species, as would purple hedges such as *Fagus sylvatica* Atropurpurea Group or *Prunus x cistena*. A reverse combination of a light backdrop to a dark culm could be *Ligustrum ovalifolium* 'Aureum' as a backdrop to the black of *Phyllostachys nigra*.

Culm growth

Bamboo culms grow from below ground to their full height every year. Each year the new culms are taller and thicker than the previous year's growth until the ultimate height of the plant for that climatic location is reached. A plant that is not receiving its optimum growing conditions will attain less height than is expected for a mature specimen.

For best effect, some of the lower branches should be removed from the culms, allowing extra light in at the base so that the brightest colours can be produced to make more of a focal point of the culms. Some thinning of culms to prevent overcrowding can also be beneficial. *Phyllostachys* species tends to be one of the most useful selections for the garden; there are several colours and striped forms to choose from, they are easily thinned to create a more open effect and there are more garden-worthy forms that are readily available.

The Science

Why do culms vary in colour from one species/cultivar to the next and how do you bring out the best in colour? Why do some have stripes or different patterns/shapes within the culm?

Bamboos are unusual in that chlorophyll is formed in the culms which can lead to colourful and patterned effects as striking as those that occur in the leaves of other plants.

Bamboo variegation is the result of a chimera (two genetically different tissues, the result of a mutation). The mutant tissue has lost its chlorophyll and appears white or yellow, while the normal green tissue provides the nutrients.

In addition to the basic green culm colour some bamboos have an overlaying pigmentation, such as the dark shading that can be seen on many green bamboos when they are exposed to the sun. Over the yellow of a variegated culm this pigmentation can produce the bright red effect as seen on *Phyllostachys aureosulcata* f. *spectabilis* or the pink of *Himalayacalamus falconeri* 'Damarapa'. In addition, the pigmentation can produce brown marks or the solid black culm of *P. nigra* (actually very dark purple). These can be natural or the result of a virus within the plant.

Some plants have culms of a grey-blue colour as a result of a glaucous thick wax coat (such as *Yushania maculata* or *Thamnocalamus crassinodus* 'Kew Beauty'). This wax coating also disappears as the plant ages but it is possible to prune out older stems to maintain a majority of these glaucous stems. Older culms may be of a completely different colouring from new stems, for example *T. crassinodus* 'Kew Beauty' ages to red.

The colouration of individual plants also varies depending on the levels of light exposure; *Phyllostachys nigra* for instance will not become fully black if it is not getting adequate light. *P. nigra* is also an example of a species where culm colour develops over time. The culm emerges green and then over a period of up to three years develops dark blotches that eventually merge to form a solid black culm.

Extract taken from The gardener's guide to growing temperate bamboos (David and Charles, 2000), by Mike Bell.



One very effective way of enhancing bamboo culm colour is to set them against a wall. You can explore the world of paint colours to create vibrant or subtle effects. Textured surfaces can also be great



HUGH PALMER

Above: Slender culms of *Phyllostachys iridescens* burst forth from a limestone cube mulch in Christopher Bradley-Hole's gold medal-winning garden 'In the grove' at RHS Chelsea Flower Show 2005. A similar effect can be had by using *P. vivax* or *P. dulcis* in place of *P. iridescens*.

partners to bamboo culms, making the most of their contrasting smoothness. A mirror would also make a useful backdrop, effectively doubling the number of culms on show. This is particularly useful if you only have a small clump or want to increase the impact of the coloured culms without having to take up too much space.

Showing off

There is now a wide variety of decorative mulches available which can be used to great effect around bamboo culms. Larger-sized aggregates such as cobbles and pabblestones are more in scale with the size of the plant than smaller aggregates. For a more artistic effect, the shafts of the cylindrical culms emerging through cubed stone cobbles create contrasts in shape, texture and colour. One drawback of mulches, though, is that as bamboos shed leaves and sheaths, maintenance needs must be considered. Use of smaller aggregates, such as recycled glass and shells, while opening up even more possibilities does compound the maintenance

problem. (It is worth noting that it is good practice to leave fallen leaves and sheaths around the base of bamboos for the good health of the plants as they are unable to store silicon.)

Bamboo culms make excellent subjects for uplighting, or to cast interesting shadows against a wall. Plants can also be positioned to ensure that sunlight creates shadows against walls or across hard surfaces. When combined with the leaves and a slight breeze, a dancing shadow is achieved. Pools of still water can be used for their reflective quality — yellow culms would be particularly good for this.

As any good designer will know, being aware of the height, spread, habit and growing requirements of individual species is an important consideration in the selection of plants within a design. Many bamboos can become very tall and may end up out of scale with their surroundings. It is also important to ensure that you buy clump-forming species (or at least plants that behave like clump-formers in our cooler climates). And a word of warning: *Sasa palmata* is widely sold in this country but it is an extremely invasive plant — in warmer climates it has been known to kill forests within 25 years!

As you can see, the potential for exploiting culm colour in bamboo is much wider than you may have first thought. The colouring is interesting in itself, and the fact that it can contribute in so many ways makes bamboos invaluable plants — not just confined to the jungle garden. Next time you are looking to fill a spot in a design, don't forget the possibilities a bamboo can give. *Phyllostachys nigra* may lead the way, but it is only the beginning in the rainbow world of bamboo canes.

Stephen Gower runs *Garden Development*, a garden and landscape design company based in Wiltshire, and lectures on a part-time professional garden design course at Wiltshire College. Website: www.gardendevlopment.co.uk

Further information

- ➔ Bell, M. *The gardener's guide to growing temperate bamboos*, David and Charles, 2000
- ➔ Whittaker, P. *Hardy bamboos — taming the dragon*, Timber Press, 2005
- ➔ Meredith, T. *Bamboo for gardens*, Timber Press, 2001
- ➔ Crouzet, Y and Starosta, P. *Bamboos*, Evergreen, 1998

The Bamboo Society: www.bamboo-society.org.uk
For details of new introductions contact Treraven Plants, Beecroft, 3 Clarence Terrace, Wadebridge, Cornwall PL27 7NG. Tel: 01208 812892
An extensive range of hardy bamboos can be found at PW Plants: www.hardybamboo.com

Bamboo trial

Mike Bell, president of the Bamboo Society, offers pointers on bamboo growth habits and summarises some new introductions to the UK which are or may soon be available

Bamboos are very adaptable plants that can modify their growth pattern to suit different growing conditions. A brief understanding of their requirements is useful if we are to obtain the desired effects.

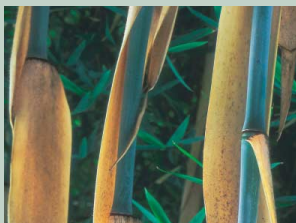
The running species, which includes the genus *Phyllostachys* noted for their monumental and coloured culms, can be considered to comprise two independent plant sections — top growth and rhizomes. Top growth is stimulated by air temperature and good fertility, and rhizomes by soil temperature and moisture. So if the desired effect is well-spaced large culms, a warm, moist, fertile site is required with sun on the roots. Similarly, if a large clumping specimen suits the location the soil should be relatively dry and shaded by surrounding planting. This is modified by the vigour of the species selected and a talk with a knowledgeable supplier is invaluable.

Clumping species, which include the genera *Chusquea*, *Fargesia*, *Borinda* and *Himalaycalamus*, enjoy cooler conditions than the *Phyllostachys* and have no such problems. They are mountain dwellers and vary from species originating from warm temperate valleys (*Himalaycalamus*) to very hardy, high elevation species.

Great Britain is one of the best places in the world for growing temperate bamboos. Most running species would enjoy hotter and wetter summers than we get and this often reduces their vigour, which is no great disadvantage in the average garden. Our cool, humid weather suits the clumping mountain species perfectly and none of the higher elevation species have any problem anywhere in the UK. All bamboos must be well watered until established, at least for 12 months. If this simple requirement is satisfied the plants will repay you many times over with very rapid growth rates.

With the opening up of access in recent years to the eastern Himalayas through Vietnam, Tibet and China, many new introductions have been made. Clumping species up to now have been limited to small-leaved elegant species growing to between three and four metres tall. These new introductions have been taken from a wide range of plant material with heights varying from 1.5m to 13m tall, and with cascading to upright form, or delicate to robust and large leaves. Over 50 new introductions are being grown at the author's trial grounds near Wadebridge, Cornwall. Many are now offered for sale but all are small plants in limited quantity until time allows us to do otherwise. Many have been collected between 3,500m and 4,000m elevation and are among the toughest of garden plants. Some have not been named or have unreliable names, but all have great potential.

Mike Bell is president of the Bamboo Society and is based in Cornwall. Website: www.bamboo-society.org.uk



Borinda papyrifera Bold, upright species with grey culms, grows to 8m high. Moderately hardy. Clumping.



Borinda maccluriana Similar to *B. papyrifera*, but larger and with green culms. Very hardy and clumping.



Chimonobambusa tumidissinoda Highly elegant but invasive. Moderately hardy, grows to 3m high.



***Borinda albocera* (clone Yunnan 2)** Striking blue-grey culms to 3.5m. Should prove hardy. Clumping.



***Borinda albocera* (clone Yunnan 3)** Similar to Yunnan 2 but smaller in growth and leaf size. Clumping.



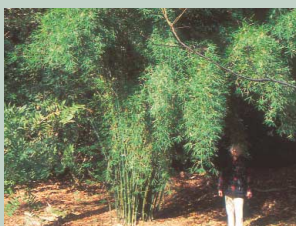
Borinda perlonga Hardy and vigorous, with culms to 5m in wild. Clumping. Photo shows a young plant.



Borinda frigida Very hardy but tends to be deciduous. Masses of tiny leaves form a ball about 2m high. Clumping.



Fargesia scabrata Upright brown culms and orange/red branch bases. Probably up to 4m, hardy and clumping.



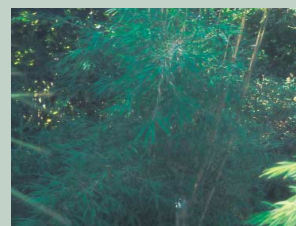
***Fargesia* sp. (Yunnan 4)** Sea-green culms, chocolate brown sheaths and an elegant, upright form. Clumping.



Borinda yulongshanensis Forms a ball of bright green leaves to about 3m high. Very hardy and clumping.



Borinda grossa Grows to 8m in the wild and has proved to be vigorous in cultivation. Very hardy and clumping.



***Borinda* sp. Cangshan 3** Our young specimen is 3m tall and very elegant. Moderately hardy and clumping.

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