

Background note on the formation of the national collection of *Buxus* in Cuba

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In the gardens of Europe and the Mediterranean regions, the cultivation of *Buxus* goes back to times of antiquity. Many of the most magnificent gardens in Europe incorporate *Buxus sempervirens* (boxwood), usually hard-clipped into immaculate hedges and formal architectural shapes of pyramids, cubes, spirals, globes, etc., creating impressive grandeur. In today's modern landscape and garden idiom *Buxus* is still in great demand to give an instant effect of elegance and permanence, despite its high market price. The box plant, with its strange winter fragrance, has superb winter colour, and is an excellent background for summer flowers. It is a highly valued plant in North America, where there is no native *Buxus*, but from where many interesting new cultivars now originate, thanks to the American Boxwood Society (ABS).

At Langley Boxwood Nursery in Hampshire, England, my aim was to cultivate a complete reference 'library' of the available species and cultivars of *Buxus*, accurately identified. This later became a National Buxus Collection of Scientific Status, with 13 species and many cultivars, which were mainly derivatives of *B. sempervirens*, *B. microphylla*, and the Korean *B. sinica* var. *insularis*. Much confusion existed over nomenclature; growers freely applying imaginative new names and pseudonyms to anything looking slightly different. This is now much improved under the direction of Mr. Lynn Batdorf, International Registrar of Buxus Cultivars, at the US National Arboretum,

Washington, DC, and following publication of his Boxwood Encyclopedia.

Having a special interest in *Buxus* species, I spent many hours studying herbarium specimens at the Royal Botanic Gardens, Kew, and realized the difficulty of seeing, in the wild, living examples of the more exotic species. Many of their locations were in remote or inaccessible sites, some in war or famine zones. But there was one area with a rich heritage of *Buxus* which was becoming more accessible, and that was Cuba. The tiny island of Cuba has a concentration of one third of the world's *Buxus* species, mainly endemic, thanks to its geological history and topography, and it is the centre of *Buxus* distribution in the Caribbean region.

After careful negotiations with the British and Cuban Embassies in Havana, we were finally put in touch with Dr. Angela Leiva Sánchez, Director of the Jardín Botánico Nacional de Cuba, La Habana

in 1994. The proposal we suggested to her was to attempt to collect propagation material of every Cuban species, and to establish *ex situ* a living National Collection of *Buxus* in Cuba. It would be a unique opportunity to form a conservation collection of its wide range of species in the safe location of the Jardín Botánico (HAJB) and to safeguard genetic resources. Dr. Leiva agreed to undertake the project with her small team of highly trained and dedicated staff, aided by Professor Egon Köhler of the Humboldt Universität



zu Berlin, who was already at work on a taxonomical revision of the *Buxus* species.

It was an ambitious project, never before attempted. Efficient use was made of the funding from Langley Boxwood Nursery and later from the ABS. Under Dr. Leiva's effective organization, and the previous experience in Cuba of Professor Köhler, particular areas were targeted for finding the species in their natural habitats. This was often difficult and adventurous, as some of the species occurred in tiny populations in remote, heavily vegetated areas or steeply contoured mountains. *B. jaucoensis*, for example, collected only once previously, has developed its population on nearly vertical limestone walls; the location of *B. rotundifolia* required hours of trekking, difficult climbing and several attempts. Some species were no longer to be found in their recorded locations, and may now be extinct.

The project has been exciting, but was not without hardship. Problems of keeping material cool for six days, packing, pressing and labelling specimens at the end of a long day, and with six people with plant presses, food and fuel supplies all crammed into one small truck on the rough, sometimes

flooded tracks, were cheerfully overcome. Learning the propagation techniques for the growing of cuttings and plantlets for their cultivation in the Jardín, extended the project team's understanding of *Buxus* further. Some of the specimens now growing are pleasingly ornamental. An attractive area has been designated for a display garden of the Collection in the Jardín with a separate dedicated shade house.

The National *Buxus* Collection of Cuba, now established in the Jardín Botánico Nacional, is of great botanical importance. For the first time a large number of the known, and some unknown, living species from a major centre of distribution are assembled in one place. This enables continuous observation of growth and development, and direct access for research. The Cuban boxwood team also recently made a collection of the Mexican *Buxus* species, now cultivated at the Jardín Botánico Clavijero, Xalapa, and is awaiting permission to collect the one missing species. Further research will gradually enlarge understanding of the global diaspora of *Buxus* species and their relationships and, more importantly, their conservation. It has been a privilege to be associated with this project.