

Trees and Shrubs Online

TOM CHRISTIAN, Assistant Editor for TSO, writes about how far this important project has come since its inception and some of the interesting facts that research, to update genera, has brought to light.

Over the past two to three years there have only been a few, brief updates to members on progress with *Trees and Shrubs Online*, the most recent in Giles Crisp's 'Chairman's Update' at the beginning of the 2018 yearbook, but a great deal of important and exciting progress has been made over the past 12 to 18 months and it seems an appropriate time now to give a more detailed overview of progress on this major project.

To recap, *Trees and Shrubs Online* is the IDS's ambitious project to create a truly modern reference to temperate trees and shrubs. It was born out of the enormous success of *New Trees* and it has made available, freely to all via the web, the entire content of *New Trees* together with the last edition of *Bean's Trees and Shrubs* which appeared in four volumes during the 1970s, along with the *Supplement* by Desmond Clarke, published in 1988.

All the earlier material is now being updated into *New Trees* format, to standardise information and to provide our audience with the very latest

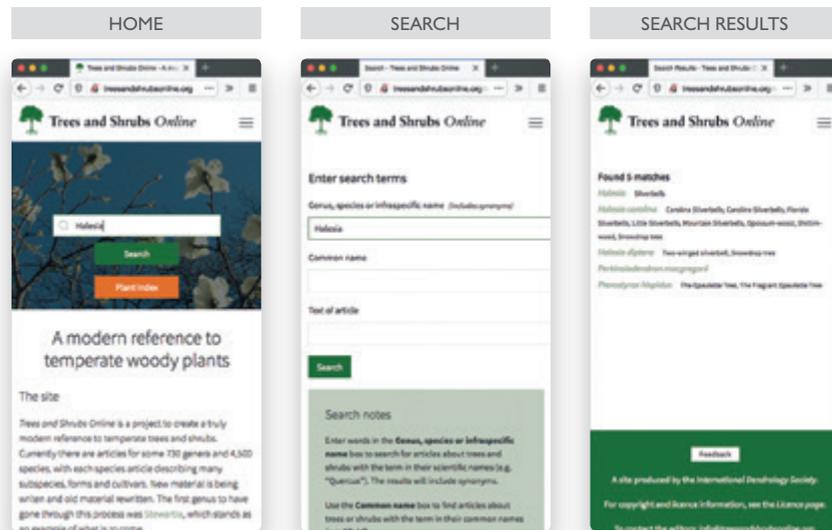
knowledge on trees and shrubs grown in temperate collections.

As a charity, the IDS must be able to demonstrate a public benefit, and there can be few better examples of the society's wider benefit than the support it gives to *Trees and Shrubs Online*, and this is in turn reflected by the popularity of the website.

Usage data over the past 12 months has shown a steady increase, and in March 2020 the site was visited over 35,000 times by over 13,000 unique visitors. We also know that it has truly global reach, with our audience spread across our nominated study area—the northern temperate zones—as well as many other parts of the world.

Much behind-the-scenes work has been going on with the website itself and

80



Searches made from the 'Home' page of treesandshrubsonline.org include synonyms. The site's more comprehensive, built-in 'Search' page can be accessed via the main menu. The screen shots (above) from the 'mobile-friendly' version of the website, show results for 'Halesia' which includes *Perkinsiodendron macgregorii* (formerly *Halesia macgregorii*).

Opposite, the search result for *Perkinsiodendron macgregorii* on the desktop version of the website.

81



Images on the site can be 'clicked' to see an expanded view, many having accompanying captions:

The abundant flowers of *Perkinsiodendron macgregorii* are produced in spring before the leaves appear, and are thus displayed to full effect, as here in the J. C. Raulston Arboretum, North Carolina.

visitors to treesandshrubsonline.org will notice improved search functionality, and a more user-friendly 'Plant Index' function on the homepage. Our web developer, Bill Hemsley of Arkesis is constantly responding to requests and suggestions to make the site better, and is currently working on a major task to re-engineer the data structure behind the site to enable complex plant names to be handled in a more logical way.

A great many genera have been fully revised and new, modern accounts published on the site in the past 18 months, including: *Araucaria*; *Davidia*; *Diervilla*; *Eucryphia*; *Fagus*; *Fitzroya*; *Heptacodium*; *Kolkwitzia*; the walnut family (Juglandaceae) in its entirety which includes the well-known genera *Carya*, *Juglans*, and *Pterocarya*; *Pilgerodendron*; *Staphylea*; the entire Styracaceae, including important ornamental genera such as *Halesia*, *Perkinsiodendron*, and *Styrax* itself; and *Weigela*.

Several major genera have been 'works in progress' for some time and will remain so for a little while yet due to their complexity. These include *Magnolia* and *Quercus*, but at the time of writing, in early April 2020, several others are going through the editorial process and by the time this yearbook is with you these should also have been published online. Dan Crowley has written an excellent account of the snakebark maples (*Acer* Section *Macrantha*), Owen Johnson and Julian Sutton have co-authored *Tilia*, a large and complex genus with more than its fair share of horticultural muddles, and I myself have recently completed *Cedrus*.

With these groups 'in the bag' Dan Crowley is now working on new groups of maples, including sections *Acer* and *Platanioidea*, and when these are complete he will tackle the muddle that is Series *Sinensia* (*Acer campbellii* and its allies). Julian Sutton has now started *Malus*, *Nothofagus* is about to be commissioned, and I have begun to tackle *Abies*.

Alnus, *Arbutus*, *Cercidiphyllum*, *Dipelta*, and *Oxydendrum* are all in progress, and *Buddleja* is nearing completion. Everyone involved in TSO, not least of all our audience, is enormously grateful to the many individuals and organisations who have generously made these revisions possible by sponsoring a favourite genus or family. While the lists above are very impressive, a great deal more remains to be done, so do contact the editorial team if you are interested in sponsoring a favourite group!

Subjecting plant groups to the intense scrutiny that comes with a modern, investigative revision provides an opportunity to resolve some long-standing puzzles. Almost inevitably, it also sets in motion events that prove the law of unintended consequences applies as much to TSO as it does to any other undertaking!

A good example of this, depending on your point of view, can be found in the recent revision of *Fagus*. We were lacking good images of *F. crenata* so I wrote to some former colleagues from Dawyck Botanic Garden in Scotland where the UK and Ireland Champion Tree was reported by *The Tree Register*.

photographs © Glyn Church. Inset © Chris Sanders



Perkinsiodendron macgregorii (*Halesia macgregorii*) in full autumn glory in New Zealand. Inset are the fruit at Tregrehan in Cornwall.

Happy to help, the team at Dawyck soon supplied photos of foliage and fruits of their champion tree, but on receiving these and examining them carefully it soon became clear that this tree isn't *F. crenata* at all, but the very similar *F. orientalis*. The same scenario occurred with regard to several trees growing at the Yorkshire Arboretum, and the identity of another group in Ireland has



Screen shot of the entry for *Fagus × taurica* written by Tom Christian. In it he highlights the challenges of identifying hybrid plants and how important it is to have known-origin specimens by which to compare and verify plant material particularly in the case of hybrids. Each entry also has a recommended citation so that the work can be accurately referred to by other authors.

also been called into question.

The Royal Botanic Garden Edinburgh didn't fare much better. Generations of students there, myself included, have been taught the American *Fagus grandifolia* based on a remarkable tree growing near the western end of the famous herbaceous border. This is a beautiful tree of ca.20 m height, with leaves larger than is typical for *F. sylvatica* and, in many years, lovely autumn colour, but after consulting literature on *Fagus* it soon became clear that this tree must be wrongly named. Its size was an obvious alarm bell: *F. grandifolia* simply doesn't reach this size in cultivation in maritime regions of Europe! Scrutiny of images sent from Edinburgh revealed this to be *F. × taurica*, the hybrid between *F. sylvatica* and *F. orientalis*.

Elsewhere, and of less irritation to Botanic Garden curators, there has been doubt as to the legitimacy of the name *Acer pectinatum* for some time. The *Acer pectinatum* complex is already a contentious flashpoint in maple taxonomy, and many would no doubt have groaned were the existing confusion to have been compounded by an enforced name change at that level. Fortunately, in his revision of the snakebarks, Dan Crowley had the opportunity to consult with the nomenclatural expert John McNeil at the Royal Botanic Garden Edinburgh and determine, at last, the validity of the name under appropriate authorship: *A. pectinatum* Wall. ex Brandis. It is invaluable that TSO provides a platform on which such issues can be addressed, and their resolution disseminated to a wider audience.

Examples such as this serve to prove that in addition to being a valuable resource for anybody interested in the simple pleasures of growing plants, TSO is also a useful, scholarly reference work. That is why when viewing articles on the site you will now see a 'recommended citation' for all newly revised articles so that anybody using the site in an academic capacity is able to properly reference their source, and to ensure that due credit is given to our excellent team of authors.