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Biologists unveil plant DNA barcode - November 10, 2009

Plant biologists today announced the winning genetic sequences that will be used as a unique species identifier to 'barcode' ever land plant on the planet.

"Everyone has been waiting for this decision for ages," says David Schindel, executive secretary of the Consortium for the Barcode of Life (CBOL). "Now, the horses can finally leave the gate, and the analysis can proceed."

Earlier this year, CBOL's plant working group published a report comparing seven different DNA regions for their ability to reliably discriminate between plant species. The 52-member panel, led by Peter Hollingsworth of the Royal Botanic Garden in Edinburgh, UK, concluded that a combination of two gene regions, known as *rbcL* and *matK*, was probably the best species identifier.

These sequences could accurately pinpoint the correct species 72% of the time, and match the remaining plants to the right species group with 100% success. But some members of the working group maintained that there were better options. Some argued for a three-gene barcode, while others wanted to combine the core two-gene barcode with a short-list of 'insurance' regions. (See 'DNA barcodes for plants a step closer')

Broad consensus has won out. At the Third International Barcode of Life Conference in Mexico City today, Hollingsworth declared that the *rbcL–matK* doubleshot will go ahead as the barcode of choice for land plants, although the plant working group plans to reassess the decision in 18 months.

"This will not be a 'hallelujah' moment in the sense that we'll have 99% ability to detect plants," says Schindel. "But I'm absolutely convinced that this is the best decision we can make at this moment."

Yesterday in Mexico City, the steering committee of the International Barcode of Life Project — "the supercollider of biodiversity", as Schindel called it — also met formally for the first time, ahead of the group's scheduled launch in July 2010. This US$150 million 25-nation initiative aims to barcode 5 million specimens representing 500,000 species over the next 5 years. "This is the largest biodiversity genomics project ever undertaken," says Paul Hebert of the University of Guelph in Ontario, Canada, who first formally proposed the idea of DNA barcoding in 2003.

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