

WHY COLLECTION NUMBERS ARE A GOOD THING

Matt H. Buys

Collection numbers (personal collection numbers applied by collectors, ideally incrementally increasing, and not accession or barcode numbers assigned to a specimen by a herbarium) have not been used for the majority of specimens housed in the National Forestry Herbarium (NZFRI). Only 20% of the 27341 specimens currently databased have collection numbers.

Some examples to put the above statistic in perspective:

- 84% of the more than 1 million collections currently in the National Herbarium of the Netherlands (consisting of the Leiden (L), Utrecht (U) and Wageningen (WAG) herbaria) database have collection numbers (*pers. comm.*)
- At the George Safford Torrey Herbarium (CONN), University of Connecticut, while only 15% of pre-1850 specimens have collection numbers, from 1950 onwards this increases to 75% and has been greater than 90% since 1975 (*pers. comm.*)
- 80% of specimens in the Falkland Islands database have collection numbers (herbaria.plants.ox.ac.uk/bol/brahms/Websites).
- 99% of specimens in the Gabon database have collection numbers (herbaria.plants.ox.ac.uk/bol/brahms/Websites).

Of course, most pre-20th century collectors never employed collection numbers, and so herbaria with an oversupply of old collections will tend to have a large proportion of their specimens without collection numbers. The NZFRI was founded in the mid-1940s and does not possess any of these historical records. The above selected

examples emphasise the international common practice of collectors using collection numbers. Supplying collection numbers is good practice because:

1. It enables easy identification of duplicate specimens. Databases are forever becoming more and more connected and the easiest way to identify duplicates of the same specimen housed at different herbaria is using a combination of collector, collection number and collection date as reference points. If I want to know whether a particular collection is housed in another herbarium as well then the easiest way to search online for such a specimen is via collector and number, and not accession number, for this is not always known.
2. Similar to point 1, it enables better quality control when entering new data. The NZFRI database, which now runs on a software package called Botanical Research and Herbarium Management System (BRAHMS), can check whether there are any erroneous duplicate entries of a single specimen in a database. In the same vein, with collection numbers present, one can easily distinguish between collections comprising more than one sheet or representing different gatherings.
3. It enables more compact specimen citation lists. Taxonomic accounts and checklists of scientific merit must be based on voucher specimens. In most plant taxonomic journals (e.g. *Taxon*, *Phytotaxa*, *Systematic Botany*, *Telopea*, etc.) specimen or voucher citations take the following form: Locality, Collection date (sometimes), Collector, Collection number, Herbaria where duplicates are housed. A hypothetical example—the collection Miller 123, collected in Rotorua on 1 April 2012 and housed in three herbaria—will look more or less like:

Rotorua, 1 April 2012, *Miller, E.M. 123* (AK, NZFRI, WELT).

In the absence of collection numbers, authors are forced to use Accession or Barcode numbers to clearly indicate which specimen they saw, and the aforementioned hypothetical collection will then usually be cited as:

Rotorua, 1 April 2012, *Miller, E.M. s.n.*¹ (AK 456123, NZFRI 890123, WELT 123456).

Clearly, the former is less cumbersome than the latter. Interestingly, the *New Zealand Journal of Botany* bucks the trend with its unique format, where both collection and accession numbers are provided when known.

4. It assists in compiling collection itineraries. Assuming that collection numbers were applied consistently and incrementally (which they should be), it then becomes possible in a database like BRAHMS to automatically compile collection itineraries—even for plants collected on the same day. And so for example, I can determine that Peter de Lange started the 13th of March 2006 at 27 Clyde Street, Rotorua (*de Lange, P.J. 6816* (NZFRI)) and directly thereafter went to Hinehopu Mire, Lake Rotoiti (*de Lange, P.J. 6817* (NZFRI), *de Lange, P.J. 6818* (NZFRI)). In other words, a collection number can provide clues to collection date and locality for a particular specimen if these are missing from field notes or the specimen label, and you have date and locality data for preceding and following collections.

If you have not yet done so, I would like to encourage all collectors, whether affiliated to the Rotorua Botanical Society or not, to use collection numbers from this time forth, especially if you plan to lodge specimens at the NZFRI herbarium.

¹ s.n. = *sine numero*, which means without number.