



**BOTANIC
GARDENS**
CONSERVATION
INTERNATIONAL



BGCI
Plant
Search

Guide to accessioning living collections

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Jardín Botánico de la Ciudad de Buenos Aires "Carlos Thays",
Argentina (credit: Patricia Malcolm)

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Why document living plant collections?

Botanic Gardens are institutions holding **documented collections** of **living plants** for the purposes of scientific research, conservation, display and education.
(Wyse Jackson, 1990)

The documentation associated with the living plant collections makes a garden a botanic garden. Living collections do not exist in isolation—they interact with seed banks, herbaria, tissue culture, cryopreservation, laboratories and education programmes. Documentation links these activities together, allowing plant material and information to be traced throughout its life cycle.

Effective documentation underpins all aspects of living plant collections management, enabling institutions to track specimens, analyse data, plan strategically, and assess the significance and quality of their collections, and the use of that specimen for research or ultimately restoration. The development of a documentation process that captures all required data is a challenging task. With this manual, we aim to provide a basic standardised framework for documentation that can be adapted to suit the needs of most institutions.

Key elements of the definition of a botanic garden

- **Living plants:** Plants maintained alive in cultivation, the defining feature of a botanic garden allowing for interaction with the public.
- **Documented:** Each plant must have traceable information. The recorded information associated with living plant collections defines their significance, quality, and value.
- **Collections:** Organised groups of plants in a botanic garden, maintained as structured, curated units for long-term purposes rather than temporary display.

The following page has a summarised AI generated visualisation of the main areas of a botanic garden based on the botanic garden definition. [See Appendix 1](#) for full schematic view of activities in a botanic garden.

Seed
bank

Living
Collection

Propagation
Nurseries

Tissue
culture
and pollen

Cryo
collection

Laboratory

Herbarium

Library

Threatened plants



What is an acquisition?

Acquisition: Plant material **prior to being accepted** into the plant collection and catalogued as an accession. The term can also denote the process of gathering plant material before its incorporation into the plant holdings of the botanic garden.

Botanic gardens are dynamic places where plants are constantly added and removed. Plant material can be acquired in various ways, including collection from natural habitats, exchange between botanic gardens and seedbanks, donations from private collections, or purchase from commercial sources. It is therefore important that selection should be based on agreed criteria to maintain the living collection aligned with the botanic garden's mission, while ensuring that the new plant material and its associated documentation demonstrate responsible and legal acquisition.

Not all plant material acquired by a botanic garden is accessioned into the collection. Examples include:

- **temporary displays** such as annuals bought from a commercial nursery.
- **propagated material for sale** to the public, which is generally not accessioned. If this material is derived from plants in the collection, careful consideration must be given to any material transfer agreements, including restrictions on commercial use.
- **propagated material in bulk** for reintroduction or restoration programmes. Many gardens maintain separate propagation facilities to produce such material, while others mark clearly that this material is then shared for restoration or reintroduction, depending on the scale of the programme.
- **self-seeding material** from nearby populations. Some self-seeding material might be incorporated into the collection but not all, having clear criteria to make these decisions is recommended.

What is an accession?

Accession: Plant material (individual or group) of a **single taxon** and **propagule type** with identical or closely similar **parentage** acquired from **one source** at the **same time**.

Accessioning is the registration process by which a plant acquisition becomes a permanent part of the living collection, and more precisely an 'accession'. The accessioning process is the beginning of an inventory of the botanic garden collection. The accession is given a number or code which is the unique identifier that connects living plants to their associated records, ensuring traceability and supporting the long-term value of the living collection.

Important standard rule:

Propagation does NOT automatically result in a new accession. When plant material is propagated asexually, the resulting plant is genetically identical (a clone) and therefore retains the same accession. However, it is assigned a new specimen code (i.e. suffix, qualifier, or item) to distinguish it from other individual plants within the same accession (see next page).

A new accession should only be created when:

- Biological origin changes.
- A new source event occurs (i.e. if new material is collected from the same population but at a different time).
- New generation event (for instance if seed is collected from cultivated material—when sexual reproduction occurs).

Accession

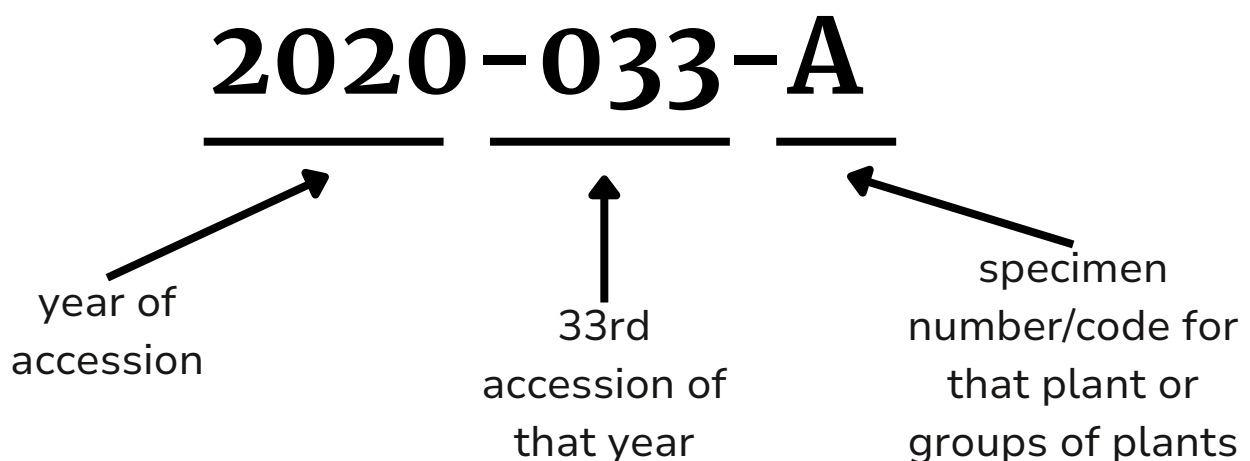
- one taxon
- one source
- one time
- one propagule type
- one (similar) parentage

How do accession numbers work?

Each individual or group of plants with the same parentage will be assigned a unique **accession number**. This number will stay with the plant material and its supporting documentation once it enters into the collection and is **never deleted, transferred or reassigned** to another plant.

Botanic gardens use varying forms of accession numbers with digits and letters. The numbering system used in this guide it is not universal, but it is one of the most widely used.

- The simplest is a **running serial number**: 1, 2, 3, 4 etc. However, this is not widely used as managing it may become challenging when there are a great many accessions and it conveys very little information.
- **4-digit year followed by a sequential number increment** is commonly used: the accession number 2020-033 will read as the plant material recorded in 2020 and received as the 33th accession in that year.
- A group of clones or material of same genetic line will be given the same accession number, and to distinguish between them as material is moved in the collection a **specimen number/code** is given (this is also known as qualifier, item, or planting and can be a letter or number). See Appendix 2.



**Wild
Collection**

**Exchange
(botanic gardens)**

**Purchase or
Donor**



Accession

2020-033

- one taxon
- one source
- one time

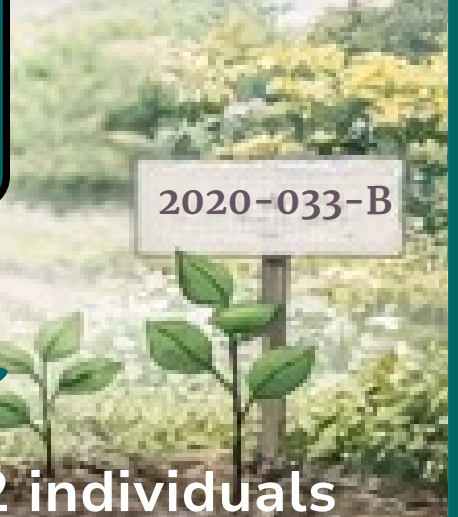
**Specimen A
in nursery**



1 individual

2020-033-A

**Specimen B
in beds**



2020-033-B

2 individuals

Botanic Garden Collection = many accessions

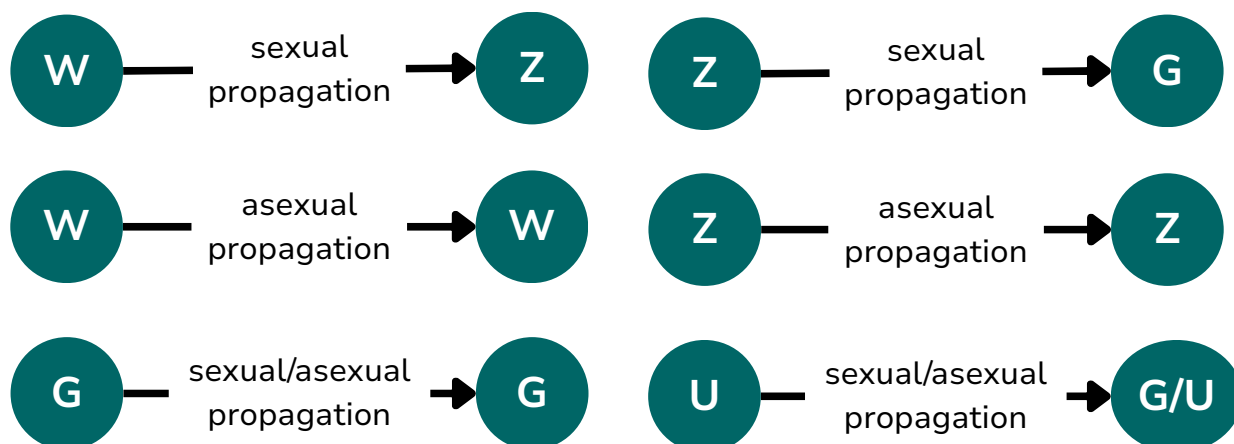
How to code provenance

Provenance: The original source of the plant material. The term is used both to **denote a location** (wild population or nursery grown) and **a concept** (wild-collected or cultivated stock).

Knowing the provenance of plant material is essential for conservation. Material of known wild origin often has the highest conservation value because it represents naturally occurring genetic diversity. It is also useful for researchers conducting studies in genetics, ecology, and evolution. Provenance tracking ensures that material was acquired legally and that any restrictions on its use (e.g. commercial bans) are documented and honoured.

Different codes are used when accessioning material (see Appendix 3):

- **W (Wild):** material known to be sourced from a wild population, usually through collecting expeditions or from another botanic garden. If this material is vegetatively reproduced in a garden it still remains as wild because it is the same parentage (same genetic material). Sexually derived material from a Wild material (W) will be Wild-Derived (Z) origin in all circumstances, including when crossed under controlled pollination given that in most cases there will be some inbreeding and human bias going on (e.g. what to cross with that, selecting only largest seedlings, selecting the quickest-growing seedlings, etc.).
- **Z (Wild-Derived or Indirect Wild Origin):** material descended directly from known Wild. Sexually derived propagated material from Wild origin will be given a new accession and marked as Z. Sexually derived material from a Wild-Derived material will be Garden Origin (G).
- **G (Garden Origin):** material derived from plant material in cultivation.
- **U (Unknown):** plant material without known associated provenance data.



How to check the status of the collection

Stocktaking: An inventory check to confirm that the plant and its label are **still present**, as well as to assess the general health of the plant (status checks).

Regular stocktaking (also known as auditing, inventory check or status check) should be undertaken to ensure that the accessioned collections are traceable and tracked. The information gathered during regular stock checks ensures that the information held about the collection reflects the current status of the living collection (for instance, because of the life cycle of living plants, your database might indicate that an accession is still in the garden when, in fact, the individual plant or group of plants has died).



Members of the horticulture and curation teams at Cambridge University Botanic Garden, UK, auditing the collection (credit: Howard Rice)

What is de-accessioning?

De-accessioning: The process of **removal** of all of the accession from the botanic garden's collection, while related plant information is retained in the database.

In summary, a plant is de-accessioned if it is:

- Dead, and no seed or clone is remaining.
- No longer relevant to the objectives of the botanic garden (as part of an evaluation).
- To be replaced by an accession of higher value (such as accessions of U provenance replaced for W provenance accessions of the same taxon).
- Missing.
- Very toxic or dangerous in other ways.
- A potential weed or an invasive.

However, it is critical to maintain the record on a de-accessioned plant, as this information may prove relevant in the future and could answer questions such as:

- Why did it die?
- Was it given away or stolen?
- Who was the recipient organisation?
- Where can more stock be obtained if needed?
- Had it been propagated in the botanic garden?

PlantSearch

PlantSearch is BGCI's global database of **documented living plant collections**, bringing together information from botanic gardens around the world to support conservation, research and collaboration. Together with GardenSearch, it forms part of BGCI's databases for *ex situ* plant conservation, helping institutions share knowledge and work together to safeguard plant diversity.

PlantSearch enables botanic gardens to **share information** about the taxa held in their living collections, making it possible to identify where species are conserved, assess global and regional conservation capacity, locate plant material for research or conservation, and support collaborative initiatives such as metacollections. As more gardens contribute data, PlantSearch becomes an increasingly valuable resource for understanding the collective contribution of botanic gardens to plant conservation.

The recent addition of **PlantSearch Accessions** expands this capability by allowing gardens to record accession and specimen level information. Rather than simply recording which species are held, gardens can now document which accession they hold, where the material originated, how it entered the collection, how many specimens exist, where they are located, and how they change over time. This richer information provides greater confidence for conservation planning, genetic management, research and collaboration between institutions.

PlantSearch complements local collections management systems by providing a shared global platform where gardens can contribute key information while continuing to manage their collections using their preferred software. Scientific names are aligned with the World Flora Online **taxonomic backbone**, and **integrated communication tools** enable gardens to request plant material or information directly from one another.

As highlighted in BGCI's **Living Collections and Data special issue of BGjournal**, well-documented and shared living collections are fundamental to effective plant conservation. By contributing data to PlantSearch, botanic gardens become part of a global knowledge network that supports evidence-based conservation, research and international collaboration.

PlantSearch fields



Plant Name Information (uploaded as taxa lists or with accessions) - WHAT?

Name	If a complete scientific name is specified, PlantSearch will automatically parse the name into the appropriate fields below.
Genus	Genus name.
Specific Epithet	Species name.
Rank	Possible Values: f., sf., nothof., var., subvar., nothovar., subgen., subsp., nothosubsp.
Infraspecific Epithet	Name of variety, subspecies, or forma.
Author	Author can be either included as part of the Name or in a separate Author column.
Grex	Grex name for orchids.
Cultivar	Name of cultivar.
Hybrid Specific Symbol	"x" is acceptable, and will be converted to the cross symbol "×".
Family	(Automatically generated on upload).

Accessions Overview - ID Information for the Accession

Accession Number	The unique ID given to material when it is registered and labelled on entry to the collection of the garden. This may represent one or more specimens.
Accessioned Date	Date the accession entered the collection. For estimated dates, leave month and/or day field blank.
IPEN Number	Unique ID number assigned by the International Plant Exchange Network, if applicable.
Accessioned Notes	Text field for further information on this accession.
Taxonomic Verification	The type of verification recorded for a previous identification or taxon name assigned for this accession. Possible Values: Comparison, Taxonomist, Taxonomic Specialist, Breeder, Not verified.

Origin - Source Information - FROM WHOM?	
Provenance Type	The original source of the plant material. Garden Origin (G): transferred from another garden, nursery, or commercial outfit. Wild Origin (W): obtained directly from a wild population. Wild-Derived (Z): derived from wild-origin, second generation or more. Unknown (U): unknown origin.
External Source	Name of donor organisation or individual; or additional information about the original source of this accession.
External Number	If germplasm has been donated provide the Unique ID (accession number) provided by the donating garden.
Restrictions - HOW can it be shared?	
Subject to ABS Regulations	Country-level regulations on access and benefit-sharing of plant genetic resources in relation to this accession. Possible Values: true, false, t, f, yes, no, y, n, 1, 0.
Subject to Biosecurity Regulations	Regulations to reduce the risk of introducing or spreading harmful organisms in relation this accession. Possible Values: true, false, t, f, yes, no, y, n, 1, 0.
Subject to CITES Regulations	National laws which ensure trade in CITES protected species is legal, sustainable, and traceable, in relation to this accession. Possible Values: true, false, t, f, yes, no, y, n, 1, 0.
Share Publicly	Share accession details publicly in PlantSearch. For publicly-shared data, latitude and longitude values are always approximated, and location details are limited to country and state/province. Defaults to 'true' if omitted. Possible Values: true, false, t, f, yes, no, y, n, 1, 0.

Wild Collection Origin - WHERE?	
Collection Date	Date this accession was collected in the wild. For estimated dates, leave month and/or day blank.
Collector	A list of names of people, groups, or organisations responsible for collecting this accession.
Collector Number	Identifier(s) assigned by the collector(s) at the time this accession was originally collected.
Country	The name of the country or major administrative unit of the location where this accession originated. Country name, 2-digit, or 3-digit ISO country codes are acceptable.
State/Province	The name of the next smaller administrative region than country (state, province, canton, department, region, etc.) of the location where this accession originated.
County	The name of the next smaller administrative region than State/Province (county, shire, department, etc.) of the location where this accession originated.
Municipality	The name of the next smaller administrative region than county (city, municipality, etc.) of the location where this accession originated.
Locality	Details of the specific location of the original wild collection of this accession.
Latitude	The geographic latitude of the location where this accession originated. Acceptable Formats: decimal degrees, degrees/minutes.
Longitude	The geographic longitude of the location where this accession originated. Acceptable Formats: decimal degrees, degrees/minutes.
Sampling Protocol Used	The method used for collecting this accession from the wild, whether propagules were separated by individual maternal lines, or collected by combining more than one maternal lines together (bulking). Possible values: bulk collection, maternal lines, unknown.

Specimen Level - Status Information - WHEN checked?	
Specimen Number	A unique number/letter to indicate the number of specimens (sometimes called qualifiers, items, plantings) under one accession number. Specimens have same or similar parentage. Note: If omitted, number 1 will be assigned automatically.
Germplasm Type	Example categories: Seed, Plant, Explant, Pollen.
Number of Individuals	Number of living individual plants or seeds in this Specimen. The default is 1. Tick MASS for a group of individuals such as a mass planting or seed lot where you are not able to count individuals.
Specimen Notes	General information about this specimen.
Last Status Check - Date	Date when the specimen was last checked (stockchecking).
Condition	Overall health and status of specimens. Possible values: alive, dead, dormant, stolen, deaccessioned.
Garden Location	Where in the garden is this specimen. Possible Values: Outdoors (in ground), Outdoors (in container), Outdoors (epiphytic), Display greenhouse, Nursery, Other.
Other Garden Location	Specific name of the garden, for instance bed number.
Cause of Death	Text field to specify why the specimen died.
Metacollection	Network or consortium that this accession is part of. Possible values: BGCI GCC, APGA Plant Collection Network, National Collection.



[Login to PlantSearch](#)



[PlantSearch Accessions Overview](#)

Better documentation Better decisions

Each accession record begins as a tool for managing a single plant or group of plants within a botanic garden. It helps staff know where material came from, how it entered the collection, where it is located, and how it changes over time.

However, the value of accession records extends beyond the individual garden. When accession data are documented consistently and shared (either through PlantSearch or with other researchers), it becomes possible to understand not only what species are conserved, but also the quality, origin and conservation value of the material held.

Sharing accession data helps botanic gardens to:

- **Improve conservation planning:** Identify where genetically valuable plant material is held and where important conservation gaps remain.
- **Strengthen collaboration:** Locate suitable material for research, conservation collections, restoration programmes and exchange between institutions.
- **Support global analyses:** Understand the collective contribution of botanic gardens to conserving plant diversity and monitor progress towards international conservation targets.
- **Improve collection management:** Encourage regular documentation, stocktaking and data quality while making living collections more accessible and useful.
- **Increase research value:** Provide richer information on provenance, propagation history and specimen management that supports scientific research.

Documenting plants consistently is not simply an administrative exercise—it is fundamental to understanding, managing and conserving plant diversity. Every accession entered into PlantSearch strengthens not only your own collection records, but also the collective knowledge of the global botanic garden community.

High-quality conservation depends on high-quality data

The living collections knowledge cycle



Better data → Better knowledge → Better conservation
Every accession contributes to a more connected global conservation network.

Further reading

Much of this guide was based on conversations with curators and conservation horticulturists, analysis of resources and literature review. Here are some resources and further reading.

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BGCI is a membership organisation representing botanic gardens in more than 100 countries worldwide. We are an independent UK charity, established in 1987, that connects botanic gardens and conservation practitioners through a global network for plant conservation. Our mission is to mobilise botanic gardens and engage partners to secure plant diversity for the well-being of people and the planet. Our global office is based in London, United Kingdom, and we work through separately registered entities, and regional networks to achieve a truly global reach.

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- [African Botanic Gardens Network \(ABGN\)](#)
- [Central America and Caribbean Botanic Gardens \(CCABG\) Network](#)
- [European Botanic Gardens Consortium \(EBGC\)](#)
- [Red Sudamericana de Jardines Botánicos \(RSAJB\)](#)
- [Southeast Asia Botanic Gardens \(SEABG\) Network](#)