

**國際樹木園聯盟認證網**

中英對照範本參考材料

Living Collections Policy, Example : 'University Arboretum'

活體植物引種政策：'高校植物園'範本

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**Introduction/Purpose簡介/目的**

為了更好指導植物園的發展建設，確保植物園不斷引種保存更多植物種類，及更好發揮植物園現有植物資源優勢，在現有植物園資源使用政策基礎上，1997年，植物園專家委員會和高校權威部分聯 ​​合頒布了以下的植物引種政策。

The purpose of this document is to guide the development and maintenance of the collections of the University Arboretum. The Collections Policy works with the existing approved Usage Policies to insure appropriate use of the Arboretum. This policy serves as a tool to achieve the goals of the following Mission Statement of the Arboretum, which was approved by the Arboretum Advisory Board and the University Administration in 1997.

***Mission Statement:***

***宗旨：***

作為一個名副其實的室外博物館，高校植物園收集保存了適宜太平洋西北當地氣候及土壤等生境條件的各類植物。作為主要的參考資料的收集，高校植物園以植物物種多樣性和遺傳多樣性資源為主。植物園最大的優勢是收集、引種、保育著有確切來源的豐富多彩的、千姿百態的、適應能力千差萬別的、用途極其廣泛的、形形色色的物種和品種。

The University Arboreta are outdoor museums maintained for the acquisition and proper curation of a living collection of native and introduced plants hardy to the Inland Pacific Northwest. As a primary reference collection, the arboreta will emphasize plant variation and genetic diversity. The highest priority of the arboreta is to develop, curate, and maintain a diverse collection of cultivars and species of known origin.

高校植物園的目標是：

As educational facilities, goals of the University Arboreta are to:

* 為植物學，園藝學，園林學，風景園林，環境科學，和其他相關學科的實習提供一個植物資源平台。
* Provide a site for instruction in botany, horticulture, forestry, landscape architecture, environmental sciences, and other fields related to the living collection.
* 有利於植物抗寒性，植物系統學，雜交育種等領域開展深入研究。
* Encourage authorized research in fields such as plant hardiness, systematics, and hybridization.
* 開展科普宣傳、中小學生科普參觀、公眾旅遊。
* Educate the public through field trips, lectures, and tours.
* 提供給公眾一個寧靜祥和，優美宜人空間，寓教於樂，增長植物學知識。
* Provide to the public a restful, beautiful environment for the purpose of gaining knowledge and appreciation of the importance of plants.

高校植物園通常是高校一個較為獨特的分支機構，園長和園藝師負責植物園的總體運營。來自高校的師生代表，教職員工代表和周邊社區居民代表組成的諮詢委員會簽發植物園發展方針政策。高校預算涵蓋植物園運營維護費用和兩類全職職工的工資；植物引種和設備更新等費用則來自高校基金會的捐贈。

The Arboretum is a separate division within the Facilities, Maintenance and Operations (FMO) Department of the University. The operation of the Arboretum is the responsibility of the Arboretum Director and the Arboretum Horticulturist (hereafter Director and Horticulturist). An Advisory Board, consisting of eleven members of the University faculty and staff, representatives from FMO, a student representative, and citizens of the community, evaluates and approves Arboretum policies. Funding for maintenance of the Arboretum and salaries for the two full-time staff members is provided through the general operating budget of the University. Funds for purchasing additions to the collections, as well as other assets within the Arboretum, are provided by private donations through the University Foundation, Inc.

植物引種方針政策包括以下六方面內容：

The Collections Policy is divided into six sections:

1. 引種政策Acquisitions
2. 植物記錄/登錄進冊Plant records/Accessions
3. 評估/盤查Evaluations/Inventory
4. 養護管理Maintenance
5. 清楚和處理De-accessioning/Disposal
6. 訪問和使用Access and Use

制定引種政策的目的是為植物園引種者提供有科學根據的行動指南。高校植物園的最終目標為得到美國博物館協會認證。在美國博物館協會包羅萬象的收藏體系中，高校植物園的主要收集方向為活體藏品，一倍收集的活體藏品將會定期更新。依據權威收藏標準制定的方針政策會因地制宜，與時俱進，部分與形勢不符合的條款會被園長和專家諮詢委員會授權調整。

The purpose of the Collections Policy is to provide clear guidelines for Arboretum staff to work toward the goals of the Mission Statement. Ultimately, we seek to become accredited by the American Association of Museums, the national organization that writes the standards for quality assurance and public accountability in the field of museums and collections, including arboreta and botanical gardens. The Collections Policy is intended to be a 'living' document and will be updated periodically. Changes to the policy can be initiated through the Director and approved by the Arboretum Advisory Board .

**Acquisitions Policy引種政策**

引種政策規定收集植物材料的原由，一切不符合植物園發展方向的贈品會被拒收。

The goal of the Acquisitions Policy shall be to fulfill the Mission Statement of the Arboretum. Plants may be acquired for any of the following reasons:

1. 為了評價物種或品種於本氣候帶的經濟價值和觀賞性。

To evaluate species and cultivars for ornamental or economic use in this climate.

1. 為豐富當地景觀目的而需要引種鄉土植物和外來植物。

To enhance the beauty of the landscape using native and introduced plants.

1. 研究和科普需要的植物。

To provide research and/or educational opportunities.

1. 進行瀕危或稀有等植物保育，如引入北洛基山脈的本土群落中的稀有植物以進行保育工作。

To preserve rare or unusual plants with an emphasis on populations native to the northern Rocky Mountains.

植物園有權拒絕接收需要付出極大代價或採取極端措施才能在植物園良好生長的植物。

Any plant acquisitions should show promise of being able to survive somewhere within the Arboretum without extreme measures taken for their protection.

植物引種應該量力而行，不應該為植物園人力及財物資源帶來負面影響。

Plants shall be acquired only if they can be properly maintained within the current structure of the Arboretum, in terms of water, space, budget, and personnel.

一切對植物園或當地環境有可能造成不利影響的植物不能引種。如：

Plants that could harm existing collections or cause harm to the local environment will not be acquired. These potentially harmful qualities might include, but are not limited to, any of the following:

1. 極易染病的或有毀滅性病蟲害寄主植物。

susceptible to or hosts and alternate hosts of damaging pathogens, insects, or other pests;

1. 已知或潛在的入侵性植物；

known and/or likely invasive plants; and

1. 致敏性強等有毒植物（如：葛藤）。
2. highly allergenic/toxic plants (eg, poison ivy).

植物園將嚴格遵守所有有關植物材料引種貿易的法律法規。如:

The Arboretum will strictly adhere to all laws and regulations regarding trade or collection of plant material. These laws will include, but are not limited to, the following:

1. 美國專利法 US patents
2. 美國商標法 US trademarks
3. 國際貿易協定：International trade agreements/policies:
4. 植物品種保護法 Plant Variety Protection Act
5. 國際植物新品種保護公約International Convention for the Protection of New Varieties of Plants
6. 美國農業部植物檢疫法規US Department of Agriculture Plant Quarantine Regulations
7. 加拿大觀賞植物基金會法規(COPF)Canadian Ornamental Plant Foundation (COPF)
8. 有毒植物的法規（聯邦、州和地方）Noxious Plant Laws, (Federal, State, and Local)
9. 稀有和瀕危物種的條約和規定Any treaties or laws dealing with rare and endangered species
10. 國際瀕危野生動植物貿易公約(CITES)Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
11. 美國瀕危物種法案US Endangered Species Act
12. 生物多樣性保護公約 Convention on Biological Diversity.

所有植物被引入接收時，必須有一個確切的來源，無論直接或間接來自野外還是園藝品種，必須保證名實相符（如果是品種，必須是有效的名稱）。如果可能，盡可能記錄物種原產地或品種的培育地。

All plant acquisitions must have a known origin, either from documented wild sources or from reliable horticultural sources that guarantee their material is true-to-name (eg, valid cultivars). Whenever possible the geographical origin of their stock should be documented.

所有野生植物的引種需要遵守相關野生植物採集有關的法律和法規，不得造成生態系統、或瀕危物種、稀有物種、特有植物的損壞。

Any collections of plants from the wild shall follow all applicable laws and regulations and shall not knowingly cause the destruction of any ecosystem, or endangered, threatened, rare, or unique populations.

捐贈的資源，如不符合植物園收集政策的將不能被接收，引種部主任有最高權力拒絕任何不符合植物園發展方向的植物材料等的捐贈。

Gifts (plants or otherwise) can only be accepted if they meet the conditions of this collections policy, are given without unacceptable restrictions, and if proper maintenance can be assured (either within current practices or by additional resources sufficient to pay for required maintenance). Any gifts shall be directed through the University Foundation, Inc. and accepted in accordance with their gift acceptance policies. The Director shall have the final authority to decline any gift that is not consistent with the mission and purpose of this collections policy.

園藝師將鑑定引種的植物，引種部主任有最終的權力決定被引物種的接收。

The Horticulturist shall review all plant acquisitions and final approval of all acquisitions is the responsibility of the Director.

**Plant Records/Accessions Policy植物記錄/登記入冊政策**

詳細精準地保存所有植物的檔案是植物園的主要職責之一，在引種部主任指導下園藝師有責任和義務完成好該項任務。

Accurate and detailed records of all plant material in the Arboretum are necessary to fulfill the mission of the Arboretum of providing a properly curated living collection of native and introduced plants. The maintenance of these records shall be the responsibility of the Horticulturist under the direction of the Director.

接收的植物會配有一個永久的編號。前四位數字為引種的年份，接下來三位數字為當年接收材料的順序。如果多個數量，則分別按字母順序標註。如：2003年，從一個來源引種三株美洲山楊時，如果是當年引種的 第243個植物種類，那麼它們的登記號碼是：2003243A，2003243B，和2003243C。這些信息會以紙質版和電子版同時保存，並且備份和更新。

Every plant acquired for permanent installation will be assigned an accession number as soon as it is received. The first four digits of this number shall be the year of acquisition, followed by three-digits referring to the numerical order of that acquisition within that year. The first specimen of any accession will be assigned the letter code A. If more than one specimen of a particular accession is acquired at the same time, from the same source, they will be assigned a letter code in sequence starting with A. For example , if three quaking aspens are acquired from one source in the year 2003, and they are the 243rd plants acquired that year, their numbers would be—2003243A, 2003243B, and 2003243C. These accession numbers will be assigned and kept in a handwritten log and entered into a computerized database as soon as possible. Back-up copies of the database shall be maintained frequently enough to insure that all the data are preserved.

目前通用的數據庫軟件有BG-BASE™等；它是專門為植物園保存植物所涉及的管理軟件。存儲以下信息：

The database software currently in use is BG-BASE™, a collections management software package designed specifically for keeping records in botanical gardens and arboreta. The following information must be recorded within the database for each accession:

1. 完整的學名，包括專利號和品種登錄等。Complete scientific name, including patent numbers and cultivar registrations
2. 登記號碼Accession number
3. 科名Family
4. 名稱Common name
5. 接收類型（種子、插穗、整株等）How received (seed, cutting, entire plant, etc.)
6. 接收日期Date received
7. 來源的名稱和詳細地址Name and complete address of the source
8. 栽植的地點Location where planted
9. 花費Cost.

直接從野外收集的材料，還包括：

Further information will be required for material collected from the wild, including:

1. 採集者的名字Collector's name
2. 採集的日期Date of the collection
3. 採集地坐標，包括生境描述和海拔等信息。Geographic location of the collection, including habitat description and elevation whenever possible and any other appropriate collection data.

該軟件功能強大，除上述基本信息外 ​​，還可以記載其它重要信息。如識別特徵、原產地栽植編號，繁殖方法，甚至嫁接及砧木信息等。

The software also provides space for recording other significant information which will be included whenever possible. Some examples would include: identity verifications, previous accession numbers when plants are acquired from other gardens or arboreta, and propagation methods including graft compositions.

所有記錄都應遵循最新命名法規：

All records will follow two current codes for nomenclature:

1. 國際植物命名法規The International Code of Botanical Nomenclature
2. 國際栽培植物命名法規The International Code of Nomenclature for Cultivated Plants.

除了將植物信息存儲在電腦之外，被引入的植物還需要一個鋼印標籤掛牌標記。標牌上包括學名、名稱、科名，植物地理或園藝來源和編號。標籤通常會標記在樹木北側顯眼位置，往往用鋼絲連在主枝上而不能標在樹幹上。實在不便當連在主幹上時，一定要連接上彈簧方便樹幹增粗。如果這一永久標籤不便連接在植物上，如宿根植物，可以立標牌記載。

In addition to the computerized records, an embossed metal accession label shall be attached to each plant. The accession labels will include the scientific name, the common name, the family name, the origin of the plant (either geographical or horticultural) and the accession number. The labels will be wired to the plant as close to eye-level as practical on the north side of the plant. Care must be taken to avoid girdling trunks or branches; so, preferably the wires will be wrapped around a secondary limb rather than the main trunk. Occasionally, when labels cannot be wired to a branch, the labels will be attached directly to the trunk of the plant, using stainless steel nails or screws and springs to allow for trunk growth. If a permanent label cannot be attached to the plant (herbaceous plants, etc.), a label on a stake will be used.

**Evaluations/Inventory Policy評估和盤查政策**

保持被引種植物名冊是植物園的核心任務之一。如果種類繁多，每年需要清查1/3的數量，園藝部主任和園藝師負責安排清查任務，配備足夠人手，最好在三週完成。主要盤 ​​查以下三方面狀況：

An accurate inventory of what is growing in the Arboretum is necessary to fulfill the mission of curating our collections. One-third of the collection should be inventoried annually. The inventory shall be the responsibility of the Horticulturist under the direction of the Director. Adequate staff must be provided to accomplish the inventory in a timely manner, ideally within a three-week period. The inventory shall consist of three components:

1. 評估植物生長狀況。Evaluating the condition of the plants
2. 根據核對栽植地點。Confirming the location of the plants according to the records system
3. 確認標牌狀況。Confirming that the plants are correctly labeled and monitoring the condition of the label.

所有盤查的紙質記錄需要錄入電腦，可以作為植物栽培養護，植物移除和植物替換的參考依據。

Written records of all the evaluations shall be maintained with the appropriate information entered into the Arboretum records database. These records shall be used to make recommendations regarding plant maintenance, de-accessioning, and plant replacements.

植物資源盤查的最目的是精確定位，準確定名。可以利用GIS或GPS技術以及標本訂正，也可製作出標本。

The ultimate goal of the Arboretum inventory shall be to have every accessioned plant mapped (recorded using GIS/GPS technology), verified, and vouchered with herbarium specimens.

**Maintenance Policy養護管理政策**

植物栽培養護是植物園工作者最神聖的職責，園藝部主任和園藝師具有不可推卸的責任，栽培養護應遵循病蟲害綜合防治基本規律，以預防為主，注重生物防治，物理防治措施；監測到病蟲危害較為嚴重時，選用環境友好型農藥、慎用低毒農藥。並準確記錄農藥使用情況。

Maintenance of the existing collections in the Arboretum will be the highest priority for the Arboretum staff. The Horticulturist will be directly responsible for the maintenance of the collections under the direction of the Director. Maintenance operations shall follow the general philosophy of integrated pest management for control of weeds, pathogens (fungi, bacteria, viruses, etc.) vertebrates, insects and other arthropods. Pest control efforts will combine alternatives to conventional pesticides (eg, bio-controls, physical methods, and horticultural controls) with the responsible use of pesticides . Pesticides shall be used only when regular monitoring of the collection indicates that pest levels have risen to a point that could cause damage to the collection. Accurate records shall be maintained for all pesticide applications.

栽培養護管理主要包括：

Maintenance operations shall include, but not be limited to:

1. 灌溉—盡可能使用已被處理的污水。

Irrigation.—Using treated effluent water whenever possible.

1. 除草—主要工作放在控制有害雜草和不良外來植物上，如：加拿大薊、田旋花、山柳菊等。綜合防治結合化學、生物、和物理方法重點防控並重。

Weed control.—Primary efforts will focus on controlling noxious weeds and undesirable introduced plants, eg, canada thistle (*Cirsium arvense),* fieldbindweed (*Convolvulus arvensis*), and yellow hawkweed (*Hieracium pratense*). Available legal and prudent methods of control may be employed, including chemical, biological, and physical methods.

1. 草坪修剪—重點景區草坪的養護管理。

Mowing.—To maintain turf, especially in high profile areas.

1. 病蟲害防治——稍微影響景觀但不妨礙植物健康生長的輕微病蟲可以暫不處理，預防失效時，可選用環境友好型農藥。病蟲害防治工作應與大學內其他部門和適當的外部機構協調

Insects and other arthropods, pathogens, and vertebrate control.—Limited to insuring the survival of the collections, appropriate use of the arboretum, and the health and safety of patrons and employees. Pathogens causing only aesthetic problems will be left alone. Chemical usage will be limited to the least toxic available alternative. Control efforts shall be coordinated with other departments within the University and appropriate outside agencies.

1. 修剪—植物園較為註重樹木自然樹形，當密度過大，枝條過密妨礙其它植物生長時，需要適當修剪；絕大多數修剪以促進樹木健壯生長為前提，部分特殊要求的需要經常修剪，如造型修剪（西方規則式園林、模紋花壇、盆景樹樁、樹木雕塑等）、綠籬等。

Pruning.—The goal of pruning in the Arboretum shall be to promote healthy growth within the collection, emphasizing natural shapes and growth habits. Some pruning will be required to allow access to and maintenance of other parts of the collection. Specialty collections will require intensive pruning, eg, topiary or hedge collections.

1. 施肥—改善植物營養不足問題，在適當時候使用有機和緩釋肥料。

Fertilizing.—To correct nutrient deficiencies, using organic and slow release materials when appropriate.

1. 保護樁欄設置—促進新栽植物定居，提供防護，並且保護植物免受冬季運動愛好者的無意損壞。

Staking.—To promote establishment of newly planted trees, to provide protection (especially during the winter months), and to protect individual plants from winter sports enthusiasts.

1. 防寒保護—主要適用於植物苗期。樹幹塗白或樹幹包裹可以預防光滑樹皮的日灼，幼苗安裝護網防止動物的啃食，邊坡上安裝木樁和柵欄阻擋積雪滑落。綁紮和護欄緩解積雪擠壓的損壞。

Winter protection.—Primarily used to help establish young plants. Measures will include sunscald protection on smooth-barked trees and shrubs, wire rodent screens on young shrubs, and stakes and snow fence installation on vulnerable slopes to prevent sledding and skiing. Some tying and caging of individual plants may be used to reduce breakage from snow loads.

1. 標籤—更換損壞的標籤，將標籤移動到最明顯位置，鬆動彈簧以免刈割樹木。

Labeling.—Replacing damaged labels and moving labels to maximize visibility and to prevent girdling.

**De-accessioning/Disposal移除與處理**

樹木移除是植物園的一項正常管理措施。移除需要園藝部主管決定，重要樹木還需要專家委員會決定。

De-accessioning is the act of formally removing an item from a managed collection. The decision to de-accession shall be the responsibility of the Director, working with the Arboretum Advisory Board in cases of de-accessioning significant specimens or collections.

樹木被移除的主要原因有：

A plant may be removed from the collections for any of the following reasons:

1. 已經枯死或掙扎在死亡邊緣的植物可以移除。盡可能找出死亡原因，並記錄數據庫保存。

The plant is dead or dying or in poor condition and unlikely to survive. Whenever possible the cause of death should be ascertained and noted in the collections database.

1. 當有關植物將會對遊客、員工、或財產造成了一定危害時，它需要被移除。

The plant poses a hazard to patrons, employees, or property.

1. 當植物成為對其他資源有潛在危害病蟲寄主時，它需要被及時移除。

The plant harbors a pathogen, insect or other arthropod that threatens other plants within the collections;

1. 植物被發現名實不符，或植物的身份不能確定，或植物不再符合植物園收集方向。

The plant is determined to be not true-to-name, or the plant's identity cannot be determined, and the plant no longer fits other criteria for retention in the collection.

1. 當植物的生長地可以栽植更有價值樹木或需要更新時。

The plant is occupying space required by other plants or for new plantings that are deemed more valuable to the mission of the Arboretum.

植物處理—依照園藝實際，通常所有移除的材料最好是銷毀和處理掉。有時一些健壯被移除的植物在植物園發揮最大利益前提下，也會被拿來出售、交換、捐贈出去。但無論如何，收入需要存入植物園的基金。樹木死亡原因、移除、移植記錄需要存入數據庫。Disposal.—Generally, all de-accessioned material shall be destroyed and disposed of according to good horticultural practices. Occasionally living, healthy plants might be de-accessioned. In those cases, the plants can be sold, donated, or exchanged by whatever means is determined to be in the best interests of the Arboretum by the Director. Any proceeds from the sale of de-accessioned plants shall be deposited in an appropriate Arboretum fund. Records of dead, de-accessioned, and removed plants will be maintained in the Arboretum's database.

**Access and Use Policy**訪問和使用政策

植物園資源應該在教育和研究中被廣泛使用。植物園的資源使用應該被記錄。如果在活動中有些材料需要被借出或消耗掉，園主任應該以書面方式批示。Educational and research use is strongly encouraged. As it is in the best interests of the Arboretum to document such usage, written documentation from the instructor is required. If any material is to be removed or consumed by the activities, the Director must grant written permission .

植物資源引種--植物引種受相關法律和法規保護。這些法律法規主要有：植物專利法、商標法和國際公約。植物園必須嚴格遵守這些規定，可能會限制未經授權個人的引種申請。因此，部分材料需要主任開具許可證在遵守法律法規的前提下方能引種；尤其基於商業開髮用途的引種更是如此。任何活體材料引種必需有領導或者園藝家監督下進行，部分材料會收取合理成本費用。

Plant material collection.—Laws and regulations regarding plant propagation govern a large part of the Arboretum's collections. These laws and regulations include plant patents, trademarks, and international treaties and regulations. The Arboretum will strictly adhere to these regulations, which may restrict the distribution of propagation material to unlicensed individuals. Therefore, written permission from the Director shall be required to take any material for propagation or other living material from the collections, especially when that material is intended for commercial use. Any collection of living material must be done in the presence of either the Director or the Horticulturist. An appropriate fee may be charged to cover the cost of staff time and materials.

植物或動物的引種—嚴禁植物園職工之外的人員在植物園從事植物或動物的引種。

Introduction of plants or animals.—The introduction of any plant or animal by anyone other than Arboretum staff is strictly prohibited.

公共使用權--引種政策不妨礙已經批准的政策。參觀者可以自由出入植物園開放區域，大眾可以進行體育項目之外的絕大多數娛樂活動。由於植物園不是體育場，園內禁止任何形式的體育項目。通常禁止任何可能會損害引種植物的活動。除非有全職職工陪同，方可進入養護工作場地。植物園的數據庫和其他不對公眾開放的資料（如：書籍，資料，文件等等）僅限於符合植物園發展目標的部分人群和機構出於需要方可訪問。應當限於機構和個人訪問這些數據的原因。而且需要主管領導批准和有關人員全程陪同下才可訪問。

Public access.—The collections policy works with existing approved usage policies. Visitors have open access to the developed areas of the Arboretum. Passive recreational activities are encouraged. The Arboretum is not a sports venue and organized athletic activities of any kind are prohibited. In general, if an activity is likely to harm the collections it is prohibited. Access to maintenance areas is prohibited unless accompanied by a full-time staff member. Access to the records database and other non-public resources of the Arboretum (eg, books, catalogs, written records, etc.) shall be limited to individuals or institutions having reasons for access consistent with the mission and purpose of the collections. Access shall be granted by the Director and may require his/her presence for any such access.