



Ref. AF CON 21/2

## **The Use of Plant Names**

### **1. Purpose**

1.1 This Practice Note serves to provide guidance to officers of government departments, biology teachers and students, horticulturists, plant workers and other interested persons for the proper use of plant names with special reference to scientific names.



### **2. Background**

2.1 Plant names are the basic element in communicating plant information. Before modern times some species might be repeatedly assigned with different names. The use of local or folk names, which may cause confusion, is therefore not suitable for scientific and other formal purposes which require accuracy (e.g. horticultural, pharmaceutical, agricultural, researches, etc.). “Common names” are those commonly used in an area and therefore often vary among different countries and places. Plants that are not common to laymen do not even have any common names at all.

2.2 To ensure accurate and unambiguous reference to plant names for all species, the botanical community adopted a common standard globally for scientific names of plants, detailed in the *International Code of Nomenclature for algae, fungi, and plants* (ICN, commonly referred as the *Code* or “the rules”; the current edition adopted in 2018 [Shenzhen Code] is available at <https://www.iapt-taxon.org/nomen/main.php> for further reference). Because of the established standard and code, scientific name of a plant species is the common global language. The same species of plants in different countries and languages has only one scientific name (e.g. *Rhododendron hongkongense*) which is unique to that particular species throughout the world.

2.3 This Practice Note serves as a brief introduction to scientific names and to promote

their proper use. Although there is no standard format for Chinese common names and English common names of plants, they have been generally used in Hong Kong and are therefore explained in this Note.

### 3. Scientific Names

#### 3.1 Standard Format

Binomial nomenclature and botanical Latin have been in use by botanists and adopted by the ICN and the standard format of a scientific name for a species consists of two words in botanical Latin.

**Scientific name = [Generic name] + [Specific epithet]**

For example, in the scientific name:

*Camellia hongkongensis* (香港茶)

- (i) The first word “*Camellia*” is the **generic name** (屬名) and the first letter should be capitalised.
- (ii) The second word “*hongkongensis*” is the **specific epithet** (種加詞) of the name and the first letter does not need to be capitalised. It sometimes provides as an adjective to describe the species. Table 1 illustrates some examples.



**Table 1. Examples of some specific epithets.**

Specific Epithet	Word Nature	Meaning
<i>fordii</i>	Name of person	To commemorate the collector of its type specimen, the former Superintendent of Government Gardens, Charles Ford, when naming <i>Ailanthus fordii</i> (常綠臭椿)
<i>salicifolia</i>	Adjective	Leaves shaped like willows ( <i>Salix</i> ) e.g. <i>Camellia salicifolia</i> (柳葉茶)
<i>sinica</i>	Place name	China ( <i>sino</i> ) e.g. <i>Zoysia sinica</i> (中華結縷草)

- (iii) Sometimes authority was cited after a scientific name, e.g. *Camellia hongkongensis* Seem.. The **authority** “Seem.” is a citation of the publishing author(s) of that scientific name. It is cited only in scientific publication (e.g. *Check List of Hong Kong Plants*) and could be omitted in general usage.

- (iv) Although ICN did not impose any binding standard, scientific names are commonly printed in *italic type* in scientific literature to be distinguishable from ordinary English words in the passage while the authority of scientific names is not printed in *italic type*. This practice is recommended in the interest of uniformity.
- (v) For scientific names and related taxonomic information, any abbreviation is followed by a period (the “.”). For instance, “*Camellia hongkongensis*” could be abbreviated as “*C. hongkongensis*” if the scientific name is mentioned the second time (or more) in the same paragraph or passage. However, the authority must not be arbitrarily abbreviated, for example “L.” (or previously “Linn.”) is an abbreviation of Carl Linnaeus while “Linn”, which stands for Manson Bruce Linn, must not be mixed up.

### 3.2 Intraspecific taxonomic units

Intraspecific taxonomic units are sometimes named under species with recognisable variations in some characters. “**Subspecies**”, “**variety**” and “**form**” are infraspecific ranks used for natural taxa. In contrast, **cultivar** is a category designating races of cultivated plants.

- (i) “Subspecies”, “variety” and “form” are formed by adding a rank-denoting term (i.e. subsp., var. or f., all with a period at the end which stand for abbreviations) followed by a final epithet in Latin. The ranks subspecies and variety are generally used to designate geographical races but subspecies is considered a higher rank than variety. The rank form, which used to designate an unusual mutant within a species, is seldom used nowadays. For examples:

*Vigna unguiculata* subsp. *sesquipedalis* (長豇豆，豆角)

*Cyperus malaccensis* var. *brevifolius* (短葉茳芏，鹹水草)

*Loropetalum chinense* f. *rubrum* (紅花檵木)



- (ii) “Cultivar” is the basic category for plants in cultivation. Its nomenclature is governed by the *International Code of Nomenclature for Cultivated Plants* (ICNCP). The current edition adopted in 2016 is available at <https://www.ishs.org/scripta-horticulturae/international-code-nomenclature-cultivated-plants-ninth-edition> for future reference. “Cultivar” is formed by adding a cultivar epithet (usually in English) in single quotes and capitalised after the scientific name of its respective species, for example:

*Lantana camara* ‘Snow White’ (雪白馬纓丹)

Previously, it was formed by adding a term “cv.” followed by a description (usually in English). However, this is no longer permitted under ICNCP. For example,

*Lantana camara* cv. Snow White (雪白馬纓丹)

Please note that although Latin phrases could be used as cultivar epithet, especially those long-standing ones, the cultivar epithet should be distinguished typographically from the scientific name under ICNCP and thus should not be italicised, for example:

*Lantana camara* ‘Varia’

### 3.3 Botanical nomenclature

Each scientific name uniquely represents one species that is known to science. It serves to represent the same species worldwide. A scientific name is effected only by its formal (valid and effective) publication in scientific journals following the rules and standards of ICN. The following items serve to clarify several commonly encountered aspects of botanical nomenclature:

- (i) **Priority and legitimacy of names:** When referring to the same species, a name published earlier generally holds the priority. However, only names that are in accordance with the rules of ICN are legitimate and only validly published names have status in the ICN.
- (ii) **Synonyms:** Although several validly published names may apply to a species, there can only be one correct name for that species except in specific cases; the other names are synonyms. Synonyms are usually cited in parenthesis after the correct names:

*Bombax ceiba* L. (*Bombax malabaricum* DC.) (木棉)

- (iii) **Misapplied names:** A name incorrectly applied in earlier literature (e.g. due to wrong identification) to a certain species is called a misapplied name. To indicate a misapplied name after mentioning its correct name, the abbreviation “auct. non” is inserted between the specific epithet and the authority. For example, for the plant *Celtis timorensis* Span.(假玉桂), the misapplied name “*Celtis philippensis* Blanco” (大葉朴) is cited in full as:

*Celtis timorensis* Span. (*C. philippensis* auct. non Blanco)

Please note that *C. timorensis* and *C. philippensis* are not synonyms but are both correct names referring to two different species.

## 4. Chinese Common Names

4.1 Chinese plant names have originated from the long history of Chinese herbal medicine, Chinese literature, as well as the folk use of common morphological phrases referring to plants. No formally-published standard for Chinese plant names is in use. However, all modern Chinese plant literature provides Chinese names and scientific names to plant species for reference.

4.2 The Chinese names adopted by *Flora Reipublicae Popularis Sinicae* (FRPS) and its revised international version, *Flora of China* (FOC), are the most commonly recognised. Widely accepted and preferred Chinese names are listed first in each entry in the FRPS, whereas only one Chinese name is provided in each entry in FOC. Chinese common names applied locally in Hong Kong are available from the *Check List of Hong Kong Plants*. Similarly, the preferred Chinese names are listed first while others are put in brackets for reference.

## 5. English Common Names

5.1 Similarly, there is no universal standard governing the use of common names in English. Because English common names are by nature vernacular and could bring much confusion and duplication, they should not be casually used in formal and technical documents. In such cases, the correct scientific name should be provided as far as possible after the English common name when it is mentioned the first time in the article. Each word of an English common name should be **first-capitalised**. For example, the recommended format for *Croton hancei* is: Hong Kong Croton (*Croton hancei*).

## 6. Proper Use of Plant Names

6.1 For the sake of consistency for scientific and educational purposes, the scientific names and the preferred Chinese and English common names listed in the *Check List of Hong Kong Plants* (latest version) or *Hong Kong Plant Database* (<https://www.herbarium.gov.hk>) should be adopted as a general rule.



6.2 The following formats of plants names are suggested in different usages:

	Usage	Format
(i)	Scientific documents (e.g. text books, field survey reports and EIA reports)	Scientific name
(ii)	Name tags and plaques of plants	Common name (Chinese and/or English), scientific name and the plant family name (Chinese and/or English)
(iii)	Legislation	Scientific name (common name)
(iv)	General usages (e.g. education leaflets, newspapers)	Common name (scientific name)

## **7. Enquiries**

Enquiries on this Practice Note should be addressed to the Senior Conservation Officer (Technical Services) at Tel. 2150 6903 or the Conservation Officer (Flora) at Tel. 2150 6912.

## **8. Further References**

The following are useful resources for looking up scientific names and synonyms of plants:

- Hong Kong Plant Database, Hong Kong Herbarium (<https://www.herbarium.gov.hk>)
- Index Kewensis
- Plant of the World Online, Royal Botanic Gardens, Kew (<https://powo.science.kew.org/>)
- Tropicos, Missouri Botanical Garden (<https://www.tropicos.org>)
- The International Plant Names Index (<https://www.ipni.org>)

Agriculture, Fisheries and Conservation Department  
November 2022