

# FLORA OF NEPAL

## GUIDELINES FOR CONTRIBUTORS

Version 9.0

October 2023

### 1 Introduction

1.1 The purpose of the *Flora of Nepal* project is to produce the first comprehensive account of all the estimated 6500\* species of vascular plants of Nepal. One of the outputs is a series of ten printed volumes, written in English, intended for a mixed audience of specialists and non-specialists. The main use for the printed Flora is plant identification, although other information (e.g. geographical distribution) are included to enhance its value for other purposes such as conservation, forestry, etc. Underpinning the printed Flora is an Internet accessible electronic resource including pdfs of published and finalised accounts awaiting publication, more detailed specialist data (e.g. full nomenclatural references and typification), distribution maps generated from cited specimens, images, etc. Much of this additional information is normally recorded as part of the Flora process, but usually lost to a wider audience as it is not included in the traditional printed Flora. The Flora of Nepal sets out to produce a new approach to specimen-based Flora writing, producing a new style 'online Flora' making full use of developments in information technology.

\*The *Annotated Checklist of Flowering Plants of Nepal* (2000) enumerates 5814 species, but it is estimated that at least a further 10% await discovery.

1.2 These guidelines are to help the contributors, editors, and reviewers to prepare taxonomic treatments that are as consistent as possible both within and between volumes of the Flora. The project is carried out under the supervision of the Editorial Committee, which makes all policy decisions concerning the Flora. Once the first volume of the Flora of Nepal is published this can be consulted for examples of content and layout. However, because of inevitable minor changes in policy through time, the most recent Guidelines adopted by the Editorial Committee, rather than previously published volumes, should be used for guidance. Subsequent versions of the Guidelines and supporting documents will be available via the Flora of Nepal website ([www.floraofnepal.org](http://www.floraofnepal.org)).

## 2 Coverage

The taxa treated include all native and fully naturalised vascular plants. Aliens and casuals will be excluded, along with any agricultural or horticultural plants which do not persist after the human management regime has stopped. Cultivated species may be included in keys and additional species may be described if the author considers them likely to occur in Nepal, even if they have not yet been collected there.

## 3 Order of Taxa

The arrangement of families in the *Flora of Nepal* follows a modified Englerian sequence. This differs from the precursor publications *Enumeration of the Flowering Plants of Nepal* and *Annotated Checklist of the Flowering Plants of Nepal*, which follow Bentham and Hooker's classification. The change to the Englerian system was made to increase comparability between contemporary Floras of Bhutan and China. As in these other Sino-Himalayan Floras monocots will follow the dicots, and genera and species will be treated in taxonomic order, or if there is disagreement over taxonomic order morphologically similar species will be grouped together.

The circumscription of families follows the APGIV system, though other arrangements may be followed at the discretion of the Editorial Committee.

## 4 Organization and Timetables

4.1 *Flora of Nepal* will be published in ten volumes. Preparation of manuscripts and electronic capture of plant data will take place concurrently. The stages of advancement of a manuscript through to publication are discussed in Appendix 2.

**Volume 1**    **Introduction: Pteridophytes & Gymnosperms**

**Volume 2**    **Saururaceae to Menispermaceae**

(Moraceae, Urticaceae, Polygonaceae, Caryophyllaceae, Ranunculaceae)

**Volume 3 Magnoliaceae to Rosaceae**

(Lauraceae, Papaveraceae, Cruciferae, Crassulaceae, Saxifragaceae)

**Volume 4 Leguminosae to Sapindaceae**

(Rutaceae, Euphorbiaceae)

**Volume 5 Sabiaceae to Toricelliaceae**

(Balsaminaceae, Malvaceae, Cucurbitaceae, Umbelliferae)

**Volume 6 Diapensiaceae to Hydrophyllaceae**

(Ericaceae, Primulaceae, Gentianaceae, Asclepiadaceae, Solanaceae, Convolvulaceae)

**Volume 7 Boraginaceae to Carlemmaniaceae**

(Verbenaceae, Labiatae, Scrophulariaceae, Gesneriaceae, Acanthaceae)

**Volume 8 Rubiaceae to Compositae**

(Caprifoliaceae, Campanulaceae)

**Volume 9 Alismataceae to Gramineae**

(Cyperaceae, Juncaceae)

**Volume 10 Acoraceae to Orchidaceae**

(Araceae, Liliaceae, Ruscaceae, Commelinaceae, Zingiberaceae)

## 5 Authorship

5.1 The names of the 6 Editors (2 Nepalese, 2 British and 2 Japanese) are printed on the first front page as authors under the title *Flora of Nepal*. The order of names will be Watson, M.F., Akiyama, S., Ikeda, H., Pendry, C.A., Rajbhandari, K.R. & Shrestha, K.K., reflecting RBGE's role as lead organisation and then alphabetic order. Other major contributors will be listed on the facing front page, including Co-chairs, Regional Advisors, etc.

5.2 Authorship of accounts are accredited at the start of the corresponding family or genus. Where there is more than one author the order of names reflects personal contribution. In cases of equal contribution alphabetic order is used. Wherever possible both Nepalese and non-Nepalese co-authors are involved in preparing accounts.

## 6 Keys

6.1 Dichotomous, bracketed keys are included for all taxa treated in the *Flora of Nepal*. Keys to genera, species and infraspecific taxa are given directly after the descriptions of family, genus and species respectively.

6.2 Keys are primarily designed for specimen identification, and so in most cases are artificial. The halves of each couplet should be unambiguous and contrasting. The order of characters in each couplet is the same, and should be from most diagnostically important to least important. Whenever possible, keys should include characters from both flowering and fruiting plants. Some taxa may be keyed out more than once.

6.3 Keys that contradict the descriptions are not allowed. To avoid this it is recommended that authors write keys after the descriptions have been written, and base the keys on the descriptions. If the two leads of a key have an unequal number of taxa, the lead with the fewer taxa is first.

## 7 Taxonomic Treatments

7.1 Treatments are from the rank of family down to species or infraspecific taxon. Intrafamilial (subfamily, tribe, subtribe) and infrageneric taxa (subgenus, section, subsection, series, subseries) should be used sparingly and only for large families (e.g., Compositae, Leguminosae and Orchidaceae) or genera (e.g., *Carex*).

Printed volumes or pdfs (see [www.floraofnepal.org](http://www.floraofnepal.org)) should be consulted for style and format.

7.2 The treatments at each level are parallel, but characters always present at a higher rank are not repeated for the subordinate taxa. As the printed Flora is intended to be a concise documentation of the plants of Nepal, primarily used for identification, much of the technical nomenclatural data gathered during the preparation of accounts will not be included in the printed volumes. In general, treatments in the printed Flora are as follows:

**Families** - The family name is given without an author, bibliographic citation, or synonyms, followed by a concise description, number of genera and distribution worldwide, and the number of genera in Nepal.

**Genera** - The genus name is followed by the authority, bibliographic citation, and primary synonyms (but see section 9). This is followed by the description, number of species and distribution worldwide, and number of species in Nepal.

**Species** - The species name is followed by the authority, bibliographic citation, and primary synonymy. This is followed by the description, flowering and fruiting time, chromosome number (if published from Nepalese material), habitats, altitudinal range, and distribution. Any necessary commentary is in a separate paragraph (see section 19).

**Infraspecific Taxa** - Subspecies and varieties are treated in essentially the same way as species. Quadrimorphs will not be used. Forms (*forma*), cultivars, nothovars, etc., are not formally treated, but may be briefly mentioned in the notes under the appropriate taxon.

**7.3 Literature Citations** - Titles of publications follow *Botanicum Periodicum Huntianum* (BPH) and the *Supplement* (BPH/S) and *Taxonomic Literature, ed. 2* (TL2) and supplements (but following BPH format for capitalization of titles).

**7.4 Authority Citations** - Authorities of plant names follow Brummitt & Powell, *Authors of Plant Names* (1992). The symbol "&" is used rather than the Latin *et* to separate the names of multiple authors. The term "ex" is used in authorities, but the term "in" is only used when a complete bibliographic citation is given.

**7.5 Technical data**, e.g. nomenclature (original place of publication and type material [including herbarium]) and full synonymy (also with nomenclatural data), should be submitted with the accounts and will be made available in electronic versions of the Flora (e.g. the on-line *Flora of Nepal*).

## 8 New Taxon Names

No new taxa are to be described and published in the *Flora of Nepal*. These must be published elsewhere in an appropriate widely distributed international journal (preferably the *Edinburgh Journal of Botany* or *Japanese Journal of Botany*) prior to their use in the *Flora of Nepal*, and should be included in a series of papers entitled "*Flora Nepal Notulae* [series number]: [paper subject]". Papers will be assigned a sequential series number and authors should contact the Editor-in-Chief at RBGE to be allocated a number. New

combinations and *nomina nova*, etc. may be published in a Nomenclatural Novelties section which closely follows the Introduction to the Volume.

## 9 Synonymy

9.1 Synonyms are listed alphabetically in a separate paragraph (but see paragraph 9.3 for basionyms of recognized taxa). If more than one synonym is included, they are separated by semicolons.

9.2 All names at generic, specific and infraspecific levels accepted in major Nepalese publications (see section 24) and major Floras of areas surrounding Nepal are included in synonymy when they are not recognized in the *Flora of Nepal*. Basionyms of all names cited in synonymy must also be included. However, names included in these floras due to misidentification will not be treated as synonyms, but will be referred to in the Notes (see section 19).

9.3 At the specific and infraspecific levels the complete bibliographic citation of synonyms in the printed Flora is to be given only for basionyms of recognized taxa, and the authority alone is given for other synonyms (see also 7.4 for inclusion of full data in the electronic format). All synonyms are kept together in the same paragraph in alphabetical order (in the electronic version with full bibliographic citation, followed by type citation). Synonyms will be listed chronologically, except that the basionym, combinations of that, and other homotypic synonyms of the name accepted for the taxon come first, followed by type citation.

## 10. Citations of Literature

10.1 Original literature citation for the place of publication of taxonomic names is included. Auxiliary literature is not cited in the printed Flora (i.e., publications that cite or use a particular taxonomic name but are not the place of publication for that name). Records of this Auxiliary literature can be included with the accounts, and these will be included in electronic Flora outputs (e.g. the online Flora).

10.2 Recent (e.g. post 1960) revisions or monographic treatments should be cited where relevant. For example, the account of *Corydalis* should cite the recent monograph by Liden [Liden M. 1989. *Corydalis* (Papaveraceae : Fumarioideae) in Nepal. Bull. Brit. Mus. (Nat. Hist.) Bot. 18(6): 479-538] which provides a more complete account of the genus than that included in the Flora.

## 11 Nepalese Vernacular Names of Plants

11.1 For each recognized taxon only the most common/widespread Nepalese vernacular name is cited. Final decision on which Nepalese name will be cited are made by the Nepal National Coordination and Steering Committee. Nepalese vernacular names are written in both Nepali (Devanagiri) script and English, and indices to these names are included at the back of each volume.

## 12 Measurements, Dimensions, Quantities and Ranges

12.1 All **measurements are metric**, but the unit decimetre (dm) is not to be used. For most structures, millimetres are the smallest units to be used (e.g., "anthers 1.2--2 mm"), but for some structures, such as pollen or spores, it may be appropriate to use micrometers (e.g., "pollen 5--10 mm in diam.").

12.2 For **single measurements** "ca." or "to" precede the measurement (e.g., "trees ca. 10 m tall" and "ovary to 2 mm"). Single numbers for quantitative characters are often exact so usually will not use "ca." (e.g., "stamens 10").

12.3 When a single measurement is used, the measurement indicates **length**, unless some other dimension is explicitly stated, and the word "long" will not be added (e.g., "filaments ca. 3 mm" rather than "filaments ca. 3 mm long" but use "stem ca. 5 mm in diam."). In the case of tree diameter use "d.b.h." for diameter at breast height, which is measured at 1.4 m above the base, rather than "diam."

12.4 If a **range** of measurements is found for a taxon, a double dash separates the measurements which is changed to an en dash (–) during formatting (e.g., "leaf blade 3--5 cm"). However, a single dash (hyphen) is used to separate a numbers from the words they describe (e.g. "style 3--5-lobed").

12.5 **Exceptional measurements** are given in parentheses (e.g., "petiole 3--5(--7) cm"). However, do not use parentheses to indicate exceptional conditions for descriptive terms (e.g., do not use "leaf blade lanceolate (to ovate)" but use "leaf blade lanceolate to rarely ovate").

12.6 If two discontinuous **alternate states** are commonly found in a taxon, the states are separated by the word "or" rather than a double dash (see also paragraphs 12.6 and 12.7) (e.g., "stamens 5 or 10" and

"petals 4 or 5"). Parentheses can also be used to express alternate states where such states are exceptional (e.g., "stamens 5(or 10)" and "style (3 or)4-lobed").

12.7 If both **length and width** are used, the measurements are given as length times width, and the same units are generally used for both (but see paragraph 12.8). For a times sign use a capital X with a space before and after the X (e.g., "leaf blade 4--6 X 1--3 cm" and "sepals ca. 4 X 1 mm"). During formatting, the capital X will be changed to a multiplication sign (×).

12.8 Use **units appropriate** to the scale of the measurements. If a measurement would be an integer or an integer plus a decimal fraction at the next higher or lower unit, then the next higher or lower unit should be normally be used (e.g. 30 mm becomes 3 cm). Millimetres would normally be used for measurements up to 20 mm. Round off to the first decimal place (e.g., "3.53 cm" becomes "3.5 cm" and "4.15 mm" becomes "4.2 mm"). When a range includes a value above 20 mm then cm should be used as the units for all values (e.g., "8--25 mm" becomes "0.8--2.5 cm"; "1.8--1.9 cm" becomes "18--19 mm"; "7--12 mm" does not change).

This should only apply when both sides of an X statement include values above 20 mm (e.g., "8--12 X 9--12 mm" does not change, "0.8--2.5 cm X 9--12 mm" becomes "8--25 X 9--12 mm"; "8--25 X 9--22 mm" becomes "0.8--2.5 X 0.9--2.2 cm"). However, when X is used and the length and width are more than two orders of magnitude different, use different measurements for the length and width (e.g., use "20--30 cm X 0.5--1 mm" rather than "200--300 X 0.5--1 mm").

12.9 The following shows additional examples of the style that will be used and will not be used:

ovary (1--)3--5(--6) mm	<b>not</b>	ovary (1--) 3--5 (--6) mm
leaf blade ca. 5 X 1--2 cm	<b>not</b>	leaf blade 5 X 1--2 cm
leaf blade ca. 5 X 2 cm	<b>not</b>	leaf blade ca. 5 X ca. 2 cm
leaf blade 2--5 X ca. 2 cm	<b>not</b>	leaf blade ca. 2--5 X 2 cm
petiole 3.5--7 mm	<b>not</b>	petiole 3.5--7 mm long
trees 10--15 m	<b>not</b>	trees 10--15 m tall
shrubs 30--70 cm	<b>not</b>	shrubs 3--7 dm
2-lobed	<b>not</b>	bilobed
2-cleft	<b>not</b>	bifid



nutlets 2 or 3	<b>not</b>	nutlets 2--3
(3 or)4(or 5)-carpellate	<b>not</b>	(3 or) 4 (or 5)carpellate
3--6(or 7)-hooked	<b>not</b>	3--6 (or 7)-hooked
5(--7)-parted	<b>not</b>	5--(--7)parted
2(or 3)-lobed	<b>or</b>	lobes 2(or 3)
(5 or)6-veined	<b>or</b>	veins (5 or)6
4- or 5-valved	<b>or</b>	valves 4 or 5
4--6-valved	<b>or</b>	valves 4--6
(5--7)-ribbed	<b>or</b>	ribs (5--7)
3(--5)-sided	<b>or</b>	sides 3(--5)

### 13 Descriptions

13.1 Descriptions of families, genera, species, and infraspecific taxa are each **limited to 150 words**, and **should emphasize the characters important for identification**. Descriptions at any level must be parallel for the taxa at that level (i.e., an attribute mentioned for one species should be mentioned for the other species within the same genus).

13.2 Descriptions must be based on first hand observations of actual specimens from Nepal examined by the contributors. Generic and family descriptions therefore do not include information relating to species only found outside Nepal. Descriptions must not be taken from the literature.

13.3 If a species includes more than one **infraspecific taxon** in Nepal, there is a full description of the species as whole, and the descriptions of the infraspecific taxa (including the autonym) are diagnostic for each taxon. This procedure is different from many floras where the autonym infraspecific taxon is described in detail and diagnostic characters are given for the other infraspecific taxa.

13.4 If only one infraspecific taxon of a species occurs in Nepal, there is no description under the species but a full description under the infraspecific taxon. However, an indication of the overall distribution of the species should be given.

13.5 Descriptions are in **botanical English**, which is mostly composed of nouns, adjectives, and conjunctions. For the *Flora of Nepal*, descriptive botanical English does not contain verbs and has few articles (e.g. "the" is not used and "a" is used only when necessary).

13.6 Descriptions follow the **conventional order** (i.e., habit, duration, sex, roots, stems, leaves, inflorescences, flowers, fruit, seeds). The general order for describing specific structures is:

**Below ground parts:** roots, underground stems

**Stems:** primary stems, trunks, bark, wood, branches, twigs

**Leaves:** general arrangement, stipules, petiole, leaf blade, lobes, compound leaf axes, leaflets (segments in ferns), modified leaflets

**Inflorescences:** general, position, type, branches (i.e., description of axes), peduncle, bracts

**Flowers:** general features, pedicel, receptacle and hypanthium, calyx, corolla, corona, androecium (flowering), glands or disk, gynoecium (flowering)

**Fruit:** general, aggregation of or division within fruit, fruit or mericarp structure, accessory structures, multiple fruit structure

**Seeds:** external structures, internal structures as appropriate.

The **general order** that a structure should be described is: **colour, shape, dimensions, base, apex, margin, texture, surface characteristics, venation**.

13.7 Descriptions are composed of short sentences each describing a separate structure. If it is necessary to break the sentence into clauses they will be separated by semicolons. At the beginning of each sentence and after each semicolon there must be a noun, and all the description (until the end of the sentence or until a semicolon) must refer back to that noun. Commas are used to separate the various components within the sentence. When characters are given in series, a comma will separate each component of the series and before the final "and" (e.g., "branchlets, petioles, and peduncles tomentose").

In the submitted account each sentence in the Description should begin on a new line to assist the Editors in checking descriptions to ensure that they are fully parallel.

13.8 If two **alternate states** of a structure exist, they are separated by the word "or," and when several alternate states exist, each state is separated by a comma with the final state preceded by a comma followed by "or" (e.g., "petals white or pink" and "petals white, pink, or blue").

13.9 If a **range of shapes** is found in a structure the word "to" is used (e.g., "leaf blade oblong to ovate"). If a structure is meant to be described as intermediate in shape rather than a range between two extremes, a dash "-" is used (e.g., "leaf blade lanceolate-ovate"). When describing colours the dash is used to indicate intermediates e.g. blue-black, pink-white, but should not be used for qualifying statements such as bluish black, pinkish white, etc.

13.10 In descriptions and keys nouns must be used as **singular or plural** depending on the condition found in the plant being described (e.g., "style 2--4 mm" is used when the flower has a single style but "styles 2--4 mm" is used when the flower has more than one style).

The following example shows how the general rule for singular and/or plural would be applied for a particular shrubby species:

The species is composed of many **shrubs**.

The shrubs have many **branches**, many **leaves**, several **inflorescences**, many **flowers**, and many **fruit** (note that the plural of fruit is also fruit if they are all of one type).

The inflorescences have one **peduncle** and several **bracts**.

The leaves have one **petiole**, one **leaf blade**, one **upper surface**, one **lower surface**, one **base**, one **margin**, one **apex**, and several **veins** (not nerves).

The flowers have one **calyx**, one **corolla**, several **sepals** several **petals**, several **stamens**, one **ovary**, and one **style**.

The fruit have several **seeds**.

13.11 **Potentially ambiguous terms** such as above, back, below, beneath, bottom, front, lower, top, and upper can be used in cases where there is no ambiguity. Where there may be confusion the terms adaxial, abaxial, apical, basal, proximal, or distal (or their adverbial forms adaxially, abaxially, apically, basally, proximally, or distally) should be used.

13.12 For **zygomorphic flowers** the terms upper and lower are to be used in describing the calyx and corolla lips (e.g., "upper lip" and "lower lip").

13.13 The terms apical or basal or upper and lower rather than proximal and distal should be used when describing structures on the main stem of a plant because proximal and distal are meaningless in this

context. However, proximal and distal can be used when describing structures along a side branch because in this context distal means farther from the stem and proximal means closer to the stem.

## 14 Terminology

14.1 The botanical terminology is kept as concise and accurate as possible. To promote comparability between accounts contributors should use terms as defined in J.G. Harris & M. Woolf Harris 2001 *Plant Identification Terminology*, Spring Lake Publishing, Utah or H. Beentje 2016 *The Kew Plant Glossary*, Kew Publishing, London. If new terms or particular definitions deviating from these standard references are used they should be explained in a comment.

## 15 Distribution

15.1 Distribution of each species and infraspecific taxon within Nepal is indicated by a small distribution map, in which each District where it occurs is shaded. Occurrence of each taxon must therefore be recorded to at least the district level as given in Appendix 1 (see Voucher specimens, paragraph 16).

15.2 The distribution range of each species and infraspecific taxon outside Nepal is indicated using the following *geographic areas*:

<i>W Himalaya</i>	India (Jammu & Kashmir, Himachal Pradesh, Uttarakhand), northern Pakistan (Khyber Pakhtunkhwa, previously known as North West Frontier Province).
<i>E Himalaya</i>	Sikkim, Darjeeling, Bhutan, NE India (Arunachal Pradesh).
<i>Tibetan Plateau</i>	China (Xizang, Qinghai).
<i>Assam-Burma</i>	Assam, Nagaland, Manipur, Myanmar.
<i>S Asia</i>	Eastern Pakistan (Punjab, Sind, Islamabad), Peninsular India, Sri Lanka, Bangladesh, Maldives.
<i>E Asia</i>	China (excluding Xizang, Xinjiang, Qinghai), Korea, Japan, Taiwan.
<i>SE Asia</i>	Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia, Philippines, New Guinea.
<i>N Asia</i>	China (Xinjiang), Russia, Mongolia.

<i>C Asia</i>	Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, Kyrgyzstan.
<i>SW Asia</i>	Afghanistan, western Pakistan (Baluchistan, Federally Administered Tribal Areas), Iran, Middle East, Arabian Peninsula, Turkey, Azerbaijan, Armenia, Georgia.
<i>Asia</i>	collective term for all above areas of Asia.
<i>Europe</i>	includes Ukraine, Belarus, Baltic republics.
<i>Africa</i>	includes Madagascar.
<i>N America</i>	includes C America south to Panama.
<i>S America</i>	south of Panama.
<i>Australasia</i>	Australia, New Zealand, Pacific Islands.
<i>Cosmopolitan</i>	collective term for a generally worldwide distribution.

15.3 The distribution of taxa **endemic** to Nepal is given as 'Endemic to Nepal.'

15.4 The native range of **introduced taxa** is discussed in the Notes paragraph at the end of species descriptions (see Paragraph 19).

15.5 Spellings of **Nepalese place names** should follow the Flora of Nepal gazetteer ([www.floraofnepal.org](http://www.floraofnepal.org))

15.6 Spellings of **foreign countries and place names** should follow the latest edition of the *Times Atlas of the World*. In the Notes section the terms New World and Old World can be used, as can N Hemisphere or S Hemisphere (not Northern Hemisphere or Southern Hemisphere)

## 16 Voucher Specimens

16.1 The *Flora of Nepal* does not include cited specimens but lists of specimens seen must be submitted along with the Flora accounts. These data are used for electronic presentation of the data, generation of distribution maps, etc., and give some idea of the taxon concepts followed. A comprehensive archive of named herbarium specimens also enhances curation of distributed duplicates in other herbaria.

16.2 Ideally all specimens seen should be recorded, but a minimum of one voucher specimen must be recorded for each district.

16.3 How specimen data is recorded and submitted by authors will change during the project as the database management tools are developed. In the short term authors are requested to submit their specimen data in spreadsheet format with the following data columns:

Genus, species, species author, infraspecies, infraspecies author

Collector, collector number

Date (or date range)

Country

Zone in Nepal, District in Nepal (when known see Appendix 1)

Precise locality (free text as appears on the herbarium label)

Altitude (or altitude range with units as on label)

Latitude and longitude: degrees, minutes, seconds (as appears on the herbarium label, with range)

Herbarium acronym

Herbarium barcode, Herbarium accession number

Plant morphology notes (as given on label - optional)

Ecology notes (as given on label - optional)

Notes (free text comments by author- optional)

## 17 Altitude

Altitudes are given as a range based on the specimens collected in Nepal, with the upper limit rounded up to the nearest 100 m and the lower limit rounded down to the nearest 100 m. Unusually low or high altitude records are indicated in brackets before or after the range. If the taxon is particularly poorly collected in Nepal but is well collected in neighbouring countries the information from these additional specimens may be used to generate the range. The use of information from outside Nepal should be referred to in the Notes paragraph.

## **18 Flowering and Fruiting Time**

Flowering and/or fruiting times are indicated as ranges, with the names of the months spelled out in full and separated by an en dash and no spaces. If the taxon is particularly poorly collected in Nepal but is well collected in neighbouring countries the information from these additional specimens may be used to generate the ranges. The use of information from outside Nepal should be referred to in the Notes paragraph.

## **19 Critical Notes and Comments**

19.1 Comments can be added at the end of each family, generic, specific, or infraspecific entry, but should be concise. Discussion normally concerns problems of nomenclature, taxonomy, distribution, or biology that highlight further research needs. If a taxon is considered to be threatened or endangered, special attention should be drawn to this. Unlike descriptions, discussions must be in grammatically correct English sentences.

19.2 Authors are particularly encouraged to include a short supplementary paragraph after each species description to clarify differences between closely related species and highlight characters which are particularly useful in identifications.

## **20. Uses**

Uses should be included when known, but must be kept brief. This should include the parts of the plant used. Examples of descriptive terms for uses could include: fibre, ornamental, medicinal, oil, starch, or timber. These are stated as "Uses: fibre, ornament, medicine, oil" etc., rather than a mixture or nouns and adverbs

## **21. Illustrations**

Wherever possible line drawing illustrations of representatives of each family are included in both printed Volumes and the online accounts. These show habit and relevant details of vegetative and floral parts in order to aid identification. Authors are asked to nominate species (and features) for illustration on the following priority basis:

1. Nepalese endemics
2. 'Typical' taxa representing the majority of the variation of the genus/family
3. 'Atypical' taxa representing marked deviation from the majority of the variation of the genus/family
4. 'Difficult' taxa where an illustration greatly enhances the user's understanding of features which are exceptionally difficult to describe in words.

Illustrations take the form of composite plates depicting several taxa. Where possible, authors should consider selecting one species for full illustration and representing some if not most of the remaining taxa only by those parts which differ significantly from the full illustration or which offer the greatest diagnostic value. Figures showing diagnostic features such as leaf or corolla shapes may also be included as text figures.

## 22 Miscellaneous Abbreviations and Symbols

The following table gives the abbreviations and symbols that are to be used in the manuscripts. All Latin abbreviations are italicized.

*	endemic to Nepal	C	Central
±	plus or minus, more or less	<i>ca.</i>	circa, about, approximately
??	missing data to be added before publication	cm	centimeter(s)
[ ]	indicates distribution or morphological character outside of Nepal	<i>cv.</i>	cultivar
		d.b.h.	diameter at breast height
		diam.	diameter
µm	micrometers	E	East
X	times		



EC	East Central	<i>s.l.</i>	<i>sensu lato</i>
ed.	edition	<i>s.s.</i>	<i>sensu stricto</i>
<i>e.g.</i>	for example	sp., spp.	Species
<i>et al.</i>	and others	subfam.	subfamily
fig.	figure	subgen.	subgenus
fl.	flowering	subsp.,	subssp. subspecies
fr.	fruiting	SW	Southwest
<i>i.e.</i>	that is	t.	table
km	kilometer(s)	var.	variety
m	meter(s)	vol.	volume
mm	millimeter(s)	W	West
N	North	WC	West Central
NC	North Central		
NE	Northeast		
<i>nom. cons.</i>	<i>nomen conservandum</i>		
<i>nom. nov.</i>	<i>nomen novum</i>		
<i>nom. nud.</i>	<i>nomen nudum</i>		
n.s.	new series		
NW	Northwest		
p.	page		
pl.	plate		
pp.	pages		
<i>p.p.</i>	<i>pro parte</i>		
S	South		
SC	South Central		
SE	Southeast		
sect.	section		
ser.	series		

## 23 Related Literature

The following major floristic works should be consulted in preparing treatments for the *Flora of Nepal*. Synonymy is expected to reflect the usage in these floras. Authors are also expected to be responsible for the recent literature related to their groups

- *A Handbook of the Flowering Plants of Nepal* - Rajbhandari, K. R., Rai, S. K. and Chhetri, R. (2017-2022). Department of Plant Resources, Kathmandu.
- *Plants of Nepal (Gymnosperms and Angiosperms)* - Shrestha, K., Bhandari, P. and Bhattarai, S. (2022). Heritage, Kathmandu.
- *Annotated Checklist of the Flowering Plants of Nepal* - Press, J.R., Shrestha, K.K. & Sutton, D.A. (2000). The Natural History Museum: London. Also available online through [www.efloras.org](http://www.efloras.org).
- *Catalogue of Type Specimens from Nepal* - Shrestha, K.K. & Press, J.R. (2000). The Natural History Museum: London.
- *An Enumeration of the Flowering Plants of Nepal* - Hara, H., et al. (1978-1982). The Natural History Museum: London.
- *Prodromus Florae Nepalensis* - Don, D. (1825). London.
- *Flora of China* - Wu, Z.Y. & Raven, P.R. (eds) (1994-2013) Science Press, Beijing. Also available online through [www.efloras.org](http://www.efloras.org).
- *Flora of Bhutan* - Grierson, A.J.C. & Long, D.G. [et al.] (1983-2002). Royal Botanic Garden, Edinburgh: Edinburgh.
- *The Flora of British India* - Hooker, J. D. (1872-1897). London.
- *Flora of India* - Hajra, P.K. et al. (eds) (1995-). Botanical Survey of India: Calcutta.
- *Flora of Pakistan* - Nasir, E. & Ali, S.J. (1971, and later fascicles). Karachi.
- *Flora Eastern Himalaya* - Hara, H. (Vol 1, 1966; Vol. 2, 1971), Ohashi, H. (Vol 3, 1975). University of Tokyo: Japan.

## 24 Submission of accounts for publication

24.1 Accounts should be submitted as a Word document including all sections as they appear in printed volumes of the Flora. Descriptions must be formatted as described in Sections 12 and 13 of these Guidelines.

24.2 Descriptions should also be submitted in an Excel spreadsheet with each species in a separate row and each character in a different column. This makes it easier to check that the descriptions are parallel. It is recommended that authors compile their descriptions in a spreadsheet from the start.

24.3 Before submitting the account the author should carry out the following checks:

- Check the word order of each character follows the standard FoN order of colour, shape, dimensions, base, apex, margin, texture, surface characteristics, venation.
- Ensure that all descriptions are fully parallel with all character states for all species.
- Check that all dimensions and units are properly formatted (see Section 12).
- Check that the keys are formatted with each character in a separate sentence.
- Ensure there are no double spaces.

24.4 Do not use right justification, nor centre any words or lines.

24.5 Do not hyphenate words when they are too long to fit on a line.

24.6 Use only one space after any punctuation mark and between any words or abbreviations.

24.7 Keys should not be indented in the manuscripts. There should be a hard return before the beginning of each lead of a key, and alternate leads are to be labelled "a" and "b" after the number of the lead.

24.8 Paragraphs are not indented. There should be two hard carriage returns (i.e. one blank line) at the end of each paragraph.

24.9 Two question marks "??" should be placed in the manuscript wherever data are missing if these data are expected to be added to the manuscript before publication (i.e., page numbers for manuscripts that are in press).

24.10 -ize is used in place of -ise.

24.11 The combination of adverb + adjective usually has no hyphen, eg densely tufted, not densely-tufted, but if there is any ambiguity the hyphen will be kept.

24.12 Do not use 'ca. as long as...' etc., change to 'about as long as'.

24.13 Disk refers to the floral structure and disc refers to shape of organ

24.14 The words in the following list are to use the first spelling or formatting

Equalling, not equaling

Midvein, not mid-vein

Leaf lobes, not leaf-lobes

Short-shoot, not short shoot

Broad-leaved, not broadleaved

Monothecal, not mono-thecal

centre, not center

foetid, not fetid

Leaf tips, not leaf-tips

Rootstock, not root stock

Drupelet, not drupelet

Length:width ratio, not length : width ratio

24.15 In the Taxon statistics and Notes paragraph numbers up to ten should be in words, above that in figures, and both can appear in a sentence.

24.16 Numbers at the start of a sentence in the Taxon statistics and Notes paragraph are spelled out in full.

24.17 Question marks before a word or number indicate uncertainty.

24.18 There is no space between the title of a subheading and the colon which separates it from the information.

24.19 En dashes between number ranges and months have no space before or after them.

24.20 A hyphen is not used in 'reddish green' etc.

24.21 There is no hyphen between sub and adjective (ie subacute, subopposite etc).

24.22 Words ending in '-like' always have a hyphen (eg scale-like).

24.23 The names of doubtful taxa in taxonomic notes are in italics but not in bold.

24.24 Specimens cited in taxonomic notes are in italics.

## **25 Acknowledgements**

The Editors gratefully acknowledge the Flora of China Editorial Board for the use of an electronic version of the *Flora of China Guidelines for Contributors*.

**APPENDIX 1: PROVINCES AND DISTRICTS OF NEPAL**

**Koshi Pradesh**

Bhojpur  
Dhankuta  
Ilam  
Jhapa  
Khotang  
Morang  
Okhaldhunga  
Panchthar  
Sankhuwasabha  
Solukhumbu  
Sunsari  
Taplejung  
Terathum  
Udayapur

**Madhesh Pradesh**

Bara  
Dhanusa  
Mahottari  
Parsa  
Rautahat  
Saptari  
Sarlahi  
Siraha

**Bagmati Pradesh**

Bhaktapur  
Chitwan  
Dhading  
Dolakha  
Kathmandu  
Kavrepalanchok  
Lalitpur  
Makwanpur  
Nuwakot  
Ramechhap  
Rasuwa  
Sindhuli  
Sindhupalchok

**Gandaki Pradesh**

Baglung  
Gorkha  
Kaski

Lamjung  
Manang  
Mustang  
Myagdi  
Nawalpur  
Parvat  
Syangja  
Tanahu

**Lumbini Pradesh**

Arghakhachi  
Banke  
Bardia  
Dang  
Eastern Rukum  
Gulmi  
Kapilvastu  
Parasi  
Palpa  
Pyuthan  
Rolpa  
Rupandehi

**Karnali Pradesh**

Dailekh  
Dolpa  
Humla  
Jajarkot  
Jumla  
Kalikot  
Mugu  
Salyan  
Surkhet  
Western Rukum

**Sudurpashchim Pradesh**

Achham  
Baitadi  
Bajhang  
Bajura  
Dadeldhura  
Darchula  
Doti  
Kailali  
Kanchanpur



## APPENDIX 2: FLORA OF NEPAL MANUSCRIPT PROGRESSION

Stage	Summary	Landmarks
0	<i>not worked on</i>	Volume assigned with indicative timescale
I	<i>editorial process started</i>	Editor assigned Potential authors listed
II	<i>manuscript delivery established</i>	Lead Author contracted with deadline Co-authors contacted
III	<i>first draft</i>	Lead Author delivers an acceptable first draft checked by Editor
IV	<i>revised draft</i>	Revised draft produced by Co-authors and Lead Author, checked by Editor
V	<i>ready for publication</i>	Comments from Reviewers incorporated Local names and uses added Final formatting by Administrative Centre Ready for publication

### Roles

**FoN Administrative Centre** - RBGE staff responsible for:

- assignment of *Editors* and provision of suggested author lists
- liaison with *Editors* on the progress of manuscripts through to Stage IV
- recording manuscript tracking and filing important correspondence
- posting of manuscripts on the project ftp site
- liaison with *Reviewers* and incorporation of feedback in to manuscript
- incorporation of Local Names and uses into manuscript
- final editorial check and production of Stage V manuscript to agreed deadline



**Editor** - responsible for all aspects of progressing manuscripts through to Stage IV, including:

- contacting and signing-up of *Lead Authors* and *Co-authors*
- provision of Flora of Nepal Guidelines to authors
- supporting authors with advice and help in obtaining requested literature
- deadline enforcement with authors
- checking and editing of manuscripts and supporting data to confirm to Guidelines
- liaison with the *Administrative Centre* on manuscript progress
- copying of important correspondence to the *Administrative Centre*
- sending manuscripts to *Administrative Centre* for posting on the project ftp site

**Lead Author** - may be Nepalese or non-Nepalese, responsible for:

- producing the Stage III (first draft) manuscript and supporting data in the format stipulated in the Flora of Nepal Guidelines to the agreed deadline
- collaborating with *Editor* and *Co-author(s)* on revising manuscript to the agreed deadline

**Co-author(s)** - responsible for:

- collaborating with *Lead Author* and *Editor* to revise Stage III manuscripts
- production of the Stage IV manuscript to an agreed deadline

**Reviewers** - specialists on the floras of surrounding regions or the taxonomic group, responsible for:

- commenting on Stage IV manuscripts to an agreed deadline.

**Nepalese Editor** - designated member of the Nepal Chapter, responsible for:

- providing local vernacular names in Devanagari and transliteration
- providing data for local uses, all to agreed deadline

## Flora of Nepal Manuscript Progression Flow Chart

