



HBCG
Training Programme

Trainee Handbook



ENGLISH HERITAGE



Contents

Introduction.....	4
1. Dates for the Diary.....	6
2. Training Structure.....	7
3. Roles & Support.....	9
4. Written Work.....	10
5. Trainee Seminar & Study Tour.....	20
6. Miscellaneous.....	21
Appendix 1 - Nomenclature.....	22
Appendix 2 - Useful Resources.....	25



Introduction

About

Welcome to The Historic and Botanic Garden Training Programme (HBGTP).

The programme is managed by English Heritage with additional funding from various charitable foundations. The HBGTP (previously the HBGBS), has provided gardens with the infrastructure and bursaries to support training placements since 2006.

Research conducted in 2006 indicated that the horticultural sector had a significant skills problem, with an ageing workforce and too few new entrants, resulting in a shortage of skilled professionals in the industry.

In response, English Heritage developed the HBG Training Programme, which offers one-year, practical placements in prestigious gardens around the UK.

As one of our trainees, the HBGTP helps ensure that you are amongst the best and most promising new horticulturalists coming into the industry.



Team Profiles

Elinor Davies | HBGTP Manager | **Homeworker**
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Elinor oversees the HBG Training Programme, co-ordinating placement gardens, programme staff, and freelance tutors. Elinor also acts as the first point of call for trainees, supervisors and mentors with any queries. She also leads the organisation of the annual Trainee Seminar and Study Tour.



Elinor started her career as a gardener in 2005, before moving on to attain a BSc in Horticulture from Reading University. Elinor has since gained experience in both the private and public landscape sectors. She developed her interest in historic landscapes during an internship with English Heritage's Gardens & Landscape Team. More recently Elinor completed an MA in Landscape Architecture at Sheffield University in 2013. After which, Elinor has worked as a Landscape Manager for The Environment Partnership.

Anna Jacka | HBGTP Administrator | **Address:** English Heritage, Wrest Park, Silsoe, MK45 4HR
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Anna provides administrative and financial support for the scheme. Anna is the person to talk to about reclaiming expenses, and also helps to organise training certificates. Anna is based at Wrest Park, Bedfordshire.



Anna studied History at Cambridge University, before going on to work in Academic Publishing roles at both Oxford and Cambridge University Press. She fell into the world of horticulture by accident, but has learnt a lot from 6 years in English Heritage's Gardens & Landscape department. Anna recently completed an MA in Conservation of the Historic Environment.

Emma Newey | Business Support Officer | **Homeworker**
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Emma is the first point of contact for any admin queries from both trainees and placement gardens.

As HBGTP Administrator, she supports the recruitment process, manages the HBGTP website and helps to organise events. She also manages the content across our various social media platforms such as Instagram and Facebook.



Emma previously worked as a Personal Assistant in the NHS and Internal Communications & Engagement Advisor at the BBC.

1. Dates for the Diary

September - December 31st		
Task	Action	Due Date
Induction to the gardens and organisation.	Section tours by garden Supervisor. Sign induction checklist	End of first week
Plant idents - No fewer than 10 plants.	Learn Family, Genus, species and 'Cultivar'	End of each week
Meeting with Supervisor	Meeting with supervisor to review progress on project, journal and idents.	Once a month
Complete ITP (Individual Training Plan).	Your Supervisor will book a date and time with you. This is a key time for you to assess any gaps in your skills that you are particularly keen to address.	30th September
Meet with Mentor.	One-to-one in quiet room. Notes optional.	
Trainee Seminar - 20th to 23rd October		
Complete technical journal, 1st garden project and learn plant idents.	Read handbook for guidance. Obtain verbal feedback from Supervisor before submitting to HBGTP using Dropbox.	31st December

January 1st - April 30th		
Task	Action	Due Date
Meeting with Supervisor	Meeting with supervisor to review progress on project, journal and idents.	Once a month
Complete technical journal, 2nd garden project and learn plant idents.	Read handbook for guidance. Obtain verbal feedback from Supervisor before submitting to HBGTP.	30th April
Meet with Mentor.	One-to-one in quiet room. Notes optional.	30th April

May 1st - August 31st		
Task	Action	Due Date
Study Tour - 7th to 9th July		
Meeting with Supervisor	Meeting with supervisor to review progress on project, journal and idents.	Once a month
Complete technical journal, 3rd garden project and learn plant idents.	Read handbook for guidance. Obtain verbal feedback from Supervisor before submitting to HBGTP.	31st August

2. Training Structure

The HBGTP is the over-arching title for the placement programme. In order to finish the programme, you need to complete your practical training, all HBGTP written submissions, and attend the trainee seminar and study tour.

The table below breaks down your workload:

Task	Assessment Method	Assessed By	Section
Practical training at your placement garden	Feedback to HBGTP from Supervisor	Supervisor*	3
Plant identification tests at your placement garden	Verbal & written feedback	Supervisor & HBGTP	4
Written garden project (one every four months)	Verbal & written feedback	Supervisor & HBGTP	4
Technical journal	Verbal & written feedback	Supervisor & HBGTP	4
Trainee Seminar	Attendance	HBGTP	5
Study Tour	Attendance	HBGTP	5

*Refers to assigned Supervisor in placement garden. Verbal feedback will be provided by your Supervisor and written feedback from an external tutor.

2. Training Structure (cont.)

You are employed and line managed by your placement garden and need to adhere to the garden's staff rules and procedures. Your placement garden will provide you with induction training (covering all aspects of health and safety), personal protective equipment, and an employment contract. In addition, your placement garden will ensure that you have access to a computer and the internet whilst on site.



Trainee pruning roses at Audley End

You will be required to complete garden projects, a technical journal and plant identifications at your placement garden. This is discussed in more detail in Section 4.

The Individual Training Plan (ITP)

When you begin your placement, you will complete an Individual Training Plan (ITP) with your Supervisor. The ITP is based on an initial assessment of your skills and training needs and will guide and record your learning through the duration of the placement.

The ITP will also include the initial structure for your HBGTP project work, technical journals and practical training programme. The ITP is subject to change if opportunities arise for you to undertake additional learning via exchanges, conference attendance, etc.



3. Roles & Support

When you first start work in your placement garden you will be assigned a Supervisor and a Mentor.

Supervisor

Your Supervisor is required to meet regularly with you to discuss your work programme. On a 4 monthly basis (every tertile), your Supervisor is tasked to read your technical journal and garden project work before you hand this in to the scheme. They will then complete a Feedback Form on your progress which they submit to the HBGTP. The HBGTP Administrator in turn then provides feedback from an external tutor, a copy of which is given to your Supervisor. This cyclical process ensures connectivity between you, the scheme and your Supervisor.

Mentor

Your Mentor is expected to have periodic meetings with you to discuss, in confidence, your progress. The Mentor is looking particularly at skills gaps, career objectives and any concerns you may have. Your Mentor will provide professional insight, careers advice and guidance, and will discuss and agree suitable objectives to support your professional development

Support

Your ITP will help keep your practical training on track. Your work will be reviewed and feedback provided by your Supervisor and an external tutor. Pastoral care is provided in the workplace by your Mentor, supported by the HBGTP Manager (see below).

You will benefit from half a day's study leave per week. This is to be taken on site with the day and time agreed between you and your Supervisor. This time is for dedicated study only (i.e. project work, technical journal or revision).

You will be allocated funding from the HBGTP to spend on training certificates or exchanges with other placement gardens. You will be expected to submit an application form in order for this money to be released. Please contact Elinor, the HBGTP Manager, if you have any questions.

Elinor will visit you at your placement garden near the start of your placement, enabling potential difficulties to be spotted early and appropriate interventions made. For example, an insufficiently informed or inappropriate project brief can be corrected at this stage.

It is important that you feel you can discuss any concerns with the HBGTP Manager in confidence. It is up to you to speak up and not to bury your worries.

4. Written Work

The HBGTP certificate is the over-arching award for the programme. In order to graduate from the programme, your practical work and HBGTP submissions must be completed on time.

Each 4 monthly submission includes:

- Garden Project
- Technical Journal
- Plant Identification Tests



Learning
in the garden
at Rousham

HBGTP Projects

You will do 3 projects during your 1 year placement. These are submitted every 4 months via Dropbox. Topics can be many and varied. You will design and agree your projects with your Supervisor when completing your ITP, ensuring that they suit your garden's requirements and specialisms, as well as your own areas of expertise and interest. One of your projects will focus on your future career (see below).

Projects allow you to undertake independent research into specialist areas, encouraging in-depth understanding. Compiling a project also reinforces a key skill which you may have learned in the past: how to structure a report in a coherent and succinct way. This is a vital ability for any senior staff member, whether they are reporting to a management committee or making a funding application.

The projects do not have to be huge. Ask yourself at the start: given you have just four months to complete it, what can you realistically produce? 10 pages, 20? Photos, diagrams, graphs, plans? Have an idea of what the project will look like at the end.

There is no mark at the end – you don't pass or fail. The journey is all – like the placement itself, it's what you learn from doing it that matters.

Example Projects

History

Develop an in-depth timeline for:

- your garden's history
- a special collection held by your garden
- a broader period, person or style relevant to your placement garden

In each case, relate the events of your focus study area to the wider world, such as political events, movements in architecture, art and fashion more widely, scientific advances, etc.

Submission

Complete document, with appendices and supporting documents (if relevant) uploaded to the HBGTP Dropbox. There will be a folder with your name for you to save into.

Interpretation

Design an interpretation panel, leaflet (e.g. for a trail) or drop-in live interpretation event relating to your placement garden.

You should:

- Tailor the piece to your placement garden
- Clearly identify user groups/target audience
- Emphasise one or more aspects from the following: plantsmanship, heritage gardening, conservation (plants and landscapes), sustainable horticulture

Submission

- Handout, teaching outline or leaflet should be uploaded to Dropbox.

Planting

Develop and draw up a planting plan appropriate for a thematic collection in the placement garden.

This should incorporate:

- a clearly identified theme
- considerations of best practice in terms of sustainability and climate resilience
- an annual maintenance plan for the bed

Submission

- Planting plan, uploaded to Dropbox.
- Short (1000 word) illustrated report, uploaded to Dropbox.
- Survey in placement garden of collections - plant family profiles/database management (IrisBG). Requires MS Excel or similar spreadsheet package

Project Structure

Broadly speaking, your project should be structured as follows:

Title	▶	Include your name, the project title and date.
Contents	▶	Include page numbers and a table of figures.
Summary	▶	A short summary - just half a page or so.
Aims & Objectives	▶	The aim of the project defines what you want to achieve and the objectives set out the steps you will take to achieve the aim.
Introduction	▶	Background to the project: what is your starting position?
Methodology	▶	How are you going to go about doing your project? For example, collecting information.
Findings	▶	These should directly relate to your objectives.
Conclusion	▶	Were you successful? Could the project have been done differently in hindsight? What were the barriers or unexpectedly useful things you got out of it?
References	▶	This is a whole subject in itself (see Project Bibliography), but essentially you need to be able to back up anything you say with evidence – what book, website, or person gave you the facts you have referred to?
Additional Items	▶	Place these as an appendix. For example, things you found interesting but not directly relevant. Appendices might also include lengthy lists such as plant names.

Project Checklist

Presentation & Layout

Is the work tidily & neatly presented?

Is the information readily accessible (contents, introduction, page numbering)?

Labels, Names and References

Is the work properly referenced with sources/help acknowledged?

Are photographs/diagrams properly titled/captioned?

Is the type font large enough to read easily?

Is the work laid out in a logical sequence?

Is the text divided into sub-headings and short paragraphs, rather than long blocks of text?

Have plant names/family names been spelt correctly and italicised/underlined as appropriate? Does the text flow easily with minimal spelling mistakes and grammatical errors?

Use of tables, charts, graphs, photographs, diagrams and drawings

How effective is the use of illustrative material?

Does it enhance or detract from the text?

Could more use have been made of illustrative material or is it over-used at the expense of factual material?

Are photographs and other illustrative material dated and labelled correctly (with sources acknowledged)?

Careers Project

Aim

The aim of this project is to clarify your ideas about your career in horticulture

Objectives

- Produce a well-crafted CV
- Demonstrate an understanding of how to find the right job
- Be prepared for a horticultural job interview
- Create a bursary fund application

Methodology

- Identify at least one career path that you would consider with a 10-year trajectory. To achieve this, you should be in communication with 3 or more other horticulture professionals.
- Locate guidance on contemporary formats for a CV from at least two different sources (not necessarily in horticulture)
- Produce a CV for yourself with your career trajectory in mind
- Identify 3 online job sites and 2 other avenues from which you can find out about new posts
- Produce 10 questions that you would expect to come across in an interview for a Gardener post and write your answers to them. Answers should be both succinct and comprehensive.
- Complete a draft application for either an RHS bursary for travel OR a Professional Gardeners Trust bursary for training/placements.
- Application forms can be found here:
<https://www.rhs.org.uk/education-learning/bursaries-grants/rhs-bursaries/Apply-for-an-RHS-Bursary>
<https://pgtrust.org/apply/>

Project Bibliography

We suggest that you cite references using the Harvard Referencing Style. Examples and guidelines can be found here:

- <https://www.citethisforme.com/harvard-referencing>
<https://www.mendeley.com/guides/harvard-citation-guide>

Plant Identification

You are required to undertake regular plant identification tests. The plant list will be set by your placement garden, and a nominated member of staff will deliver it.

As a minimum, 10 plants a week or 20 plants a fortnight will be set for you to learn and be tested on. It is expected that you will follow up this initial introduction with your own research, looking at the plant list in more detail.

The basic identification test record that you must keep will include the following: Family, Genus, Species. You must also submit your scores from each test via dropbox on a 4 monthly basis.

You may record plants learned as a typed list or as a table. Additional information is recommended (e.g. where the plant originates from, where it likes to grow in the garden, key identification features and perhaps some historical detail such as when it was introduced). You may include photographs, but this is not a requirement. Beware of spending too much of your time formatting pictures. Devise a quick and easy format to add to on a weekly basis. **Submit your plant identification lists and score sheets** along with your technical journal and garden project at the end of every 4 months.

Plant identification opportunities galore!



Recommended websites for verifying the correct names of garden plants:

There are several primary resources used by botanical horticulturists for finding out the correct spelling of a name. These include TROPICOS, an online database of the Missouri Botanical Garden. Another is the International Plant Name Index (IPNI) maintained by the Royal Botanic Gardens, Kew.

However, professional gardeners are more likely to look at the Royal Horticultural Society database (<https://www.rhs.org.uk/plants/search-form>) in order to clarify the correct spelling or nomenclature when they are unsure of a particular plant's details.

Technical Journal

You are required to keep a daily record of your horticultural activities. The objective is to encourage you to develop the habit of professional observation and reflection.

The technical journal is an opportunity to record horticultural tasks and techniques that are undertaken during your placement, including any tasks that are of particular significance to the specific garden.

The technical journal should not be elaborate and the length of entries should vary according to the day's activities; some days may be longer when particular skills may be detailed, whereas other days may be more mundane.

Structure

At the beginning of the document, state your name, the name of the garden, and the period covered.

For each day, describe and explain the practical tasks undertaken (what, where, how, why, who with?) – be analytical, not chatty.

Your technical journal must be illustrated with photographs/sketches/plans and tables which relate to the text.

Content Checklist

What to Include

Details on your daily routines and areas of responsibility

Notes made on any additional duties (if applicable) that you undertook

Any machinery that you used and the reason for its use

Descriptions of visits to places of horticultural interest

Any additional training you may have received on or off site

The weather conditions that you were working in

Additional Items (Optional)

General observations regarding plant health/flowering times/fruiting.

Other interesting horticultural activities taking place elsewhere in the garden e.g. tree inspection/topiary clipping/demo to the public.

Presentation & Layout

Make the information readily accessible by including a contents section, a brief introduction and page numbers. Ensure that the work is properly referenced with sources of help acknowledged.

Load digital photographs or diagrams in a sensible format (not too large/high res) and ensure that they are titled.

Ensure that the type font is large enough to be read easily.

Lay the work out in a logical sequence.

Divide long blocks of text into smaller sub-headings, paragraphs or bullet points.

Check the spelling of plant names and ensure that they are italicised/underlined as appropriate.

Check for spelling mistakes and grammatical errors.

Tables, charts, graphs, photographs, diagrams, and drawings

Use plenty of illustrative material, but not to the detriment of detailed information.

Check that all photographs and other illustrative materials are dated and labelled correctly, with sources acknowledged.

Level of Detail

Try to avoid long gaps or missing out days.

Describe practical tasks and techniques in some detail, as this is useful evidence of learning. You may find it useful to include a record of the temperature and weather conditions for each day.

The technical journal is a prime opportunity for personal comments and musings. It is of value to see your ideas develop and your understanding increase.

Submitting Work and receiving feedback

The process is as follows:

Step 1 – Supervisor reviews work in person with trainee

You are expected to submit your technical journal, one completed garden project, and a list of your plant ident, once every 4 months.

It is important that your Supervisor reviews your work before it is submitted to the HBGTP. It is your responsibility to ensure that this appointment is made and that the Supervisor is given good notice of the date.

Step 2 – Trainee uploads work onto HBGTP Dropbox

You will be alerted when it is time to submit your work and it is critical that you do this on time. Failure to do so means that you will not get feedback and that your work will not be acknowledged by the HBGTP. You need to upload your work to the HBGTP Dropbox (a link will be sent to you).

Step 3 – Feedback is given to trainee by HBGTP

Your work will be reviewed by an expert external tutor and you will be given feedback by email.

Ensure that your name, placement garden, and dates of placement are clearly marked on the electronic attachment that you submit. Trainees may be asked by the HBGTP Manager to share items or photographs from their technical journal for the scheme website.

Written Work FAQs

Q. How extensive is a garden project?

This depends on what your research produces. Quality, not length, should be the aim. A well-planned garden project will naturally come to an end. A poorly planned garden project ends up with you having lots of information and no write-up.

You may have a project that is practical with limited written text, or it may be a desk-top study that has plenty of information to record. You may have a project with lots of data: if it is, for example, a propagation study, you may need to record temperatures, compost mixes and germination rates. The use of appendices is important: if your project involves a lengthy list, then place it in the appendices and reference it in the main body of the text.

However big or small the project, you will always need to write a structure: Summary, Aims and Objectives, Methodology, Findings, Conclusion and Bibliography.

Q. If my garden project covers the whole year/6 months, how can I hand it in on a 4 monthly basis?

Upload the Introduction, Methodology and Aims and Objectives after the first 4 months. These should all be in place at the start of your garden project. After that, you should upload your project at whatever stage you have reached, in order to allow the HBGTP to provide you with feedback on your progress.

Q. Do you need the originals of my design/plans?

No – just send copies or upload a high-resolution photo to Dropbox.

Q. Do you want a list of my plant ident results?

Not really, although it is great to see if you are doing well. What is required is a list that shows how many plants you are learning each quarter and what information you learn alongside that (e.g. family, distribution, cultivation or propagation). If you are doing plant profiles, then include those too.

Q. Can I email this submission to the HBGTP Administrator or Manager?

We would prefer you to upload your work to Dropbox so that it can be accessed from there by the scheme staff and your external tutor. If you have any problems, please contact Anna, the HBGTP Administrator. In exceptional circumstances, projects can be submitted by email, although larger files will need to be sent by WeTransfer.



Trainees
at Sezincote,
Moreton-in-
Marsh

5. Trainee Seminar & Study Tour

Trainee Seminar

The Trainee Seminar will take place during Autumn 2022, probably in the South Downs area. This event will allow you to meet and interact with other trainees on other schemes, including the Professional Gardeners Guild (PGG). We hope that the seminar should provide you with a chance to network and exchange ideas. You will also receive guidance on your future career development and how to make the most of your time as a trainee.

Study Tour

The Study Tour will take place in Summer 2023. This event is usually based in the Midlands, and incorporates visits to a wide range of gardens in the area. There will also be group sessions on career development and optimising your CV.

Robert Jacobs
talking to trainees
at Waterperry



Study Tour & Trainee Seminar FAQ

Q: Do I have to attend the Trainee Seminar and Study Tour?

Yes, unless you are unable to attend due to agreed special circumstances. These events are a key part of your year's training.

Q: Will accommodation, meals and transport be provided?

Yes. Accommodation will be provided, and there will be a minibus or coach to take you on garden visits. All meals will be provided, with a range of dietary options.

Q: Will my transport be paid for to get to the Study Tour/Seminar?

Yes. All reasonable expenses incurred in travelling to the Study Tour or Seminar can be claimed back from the HBGTP. When booking train tickets, please try to book advance for a standard fare only. If travelling by car, please co-ordinate travel with other trainees as much as possible to save on unnecessary expenses.

6. Miscellaneous

Contracts

Your main employment contract is with your employer - the placement garden. The employment contract outlines terms and conditions including annual leave and pay.

You will also sign a Learning Agreement with the HBGTP. This outlines your agreement to work within the structure of the scheme and to commit to the learning objectives set out at the start of your placement.

Equipment

As a trainee, you will be expected to provide your own stationery, including notebooks. Trainees are encouraged to access local and national library resources including the Lindley Library in London.

All placement gardens will provide the basic personal protective equipment (PPE) required to undertake the daily work. This will include steel toe-capped boots, gloves, ear protectors and other items required for specific machinery.

Failure to complete

Very few of our trainees have failed to complete their placements and those that have left the scheme have usually done so because of personal circumstances, rather than because of any dispute with their placement garden.

However, a breach of your learning agreement with the HBGTP, or of your employment contract with your placement garden may result in a failure to complete.

Further Funding

If you are considering a field trip (in addition to the potential exchanges mentioned above) or are struggling to support yourself through the programme, it is worth investigating the grants and bursaries offered by the following:

Professional Gardener's Trust:

www.pgtrust.org/ (e.g. certificate training fees)

RHS Bursaries:

www.rhs.org.uk/education-learning/bursaries-grants (e.g. travel bursaries)

Merlin Trust:

www.merlin-trust.org.uk/ (e.g. travel or exchange funding)

Perennial, The Gardeners' Benevolent Society:

www.perennial.org.uk/ (e.g. help in the event of economic hardship)

Appendix 1 - Nomenclature

The scientific name of a plant normally consists of two parts: its generic name (the name of the genus; plural: 'genera') and its specific epithet. This forms the name of a species. These names should always be printed in italics (underlined if handwritten or if an italic font is not available). The generic name always has a capital initial letter.

Note: the word 'specie' has no validity in botany. 'Species' is both singular and plural.

Examples: *Primula*; *Pimelea*; *Sarcococca*

The specific epithet should always have a lower case initial letter, even when derived from a person's name or when a noun.

Examples: *Primula vulgaris*; *Pimelea prostrata*; *Sarcococca hookeriana*

In some cases, the epithet of a subspecies, botanical variety ('varietas'), or forma is also given. Subspecific and varietal epithets and those of formae are treated in the same way as specific epithets but the abbreviations subsp., var. and f. are printed in Roman, not italics. Where known, the appropriate abbreviation should always be included to avoid any ambiguity.

Examples: *Primula vulgaris* subsp. *sibthorpii*; *Pimelea prostrata* f. *parvifolia*; *Sarcococca hookeriana* var. *digyna*

Note: The term subspecies is sometimes abbreviated to ssp., but this is liable to be confused with sp., the abbreviation for species (singular) or spp., the abbreviation for species (plural). Therefore, subsp. is the preferred abbreviation for subspecies.

Where the genus is quite clear from the context, it may be abbreviated to a single letter (eg: in a paragraph about roses, repetitions of *Rosa* may be shortened to *R.*); it is not good practice to abbreviate any other parts of a plant name, or to indicate the plural use of a generic name by doubling the initial letter (eg: *RR.* or *Rr.* for several species of *Rosa*).

Authorities

For precision when using plant names, it is helpful to include the authority for a name. This is the name of the person who gave the name to the plant. The author's name may be written out in full or abbreviated according to a standard list of abbreviations, and should be in Roman. When a name is changed, the author of the original name is placed in parenthesis and the new author added:

Examples: *Fragaria vesca* L. (named by Linnaeus), *Scilla socialis* Bak. (named by Baker) was changed to *Ledebouria socialis* (Bak.) Jessop (changed by Jessop!).

Hybrids

When plants of two species or more are crossed, the resultant seedlings are known as hybrids. A hybrid can be indicated by writing the names of the parents, in alphabetical order, linked by a multiplication sign (or a lower case 'x' in Roman if a multiplication sign is not available). This is a hybrid formula.

Examples: *Hebe elliptica* × *H. speciosa*;

Many plants known to be hybrids are given new names. In hybrids between species of the same genus, the specific epithet is separated from the generic name by a multiplication sign (or 'x').

Example: *Hebe* × *franciscana* (*H. elliptica* × *H. speciosa*)

In hybrids between species of different genera, the hybrid generic name is preceded by a multiplication sign.

Examples: × *Mahoberberis* (*Mahonia* × *Berberis*); × *Citrofortunella* (*Citrus* × *Fortunella*); × *Potinnara* (*Brassavola* × *Cattleya* × *Laelia* × *Sophranitis*)

Graft-chimaeras involving two genera are treated as cultivars but denoted by an addition sign preceding the new generic name.

Examples: + *Laburnocytisus* 'Adamii' (*Laburnum* + *Cytisus*);
+ *Crataegomespilus* 'Bronvaux' (*Crataegus* + *Mespilus*)

Graft-chimaeras between species in the same genus can only be indicated by adding a hybrid formula after the name.

Example: *Aesculus* 'Dallimorei' (*A. flava* + *A. hippocastanum*)

Orchid hybrids are often referred to by their parentage. To avoid writing out several long generic names, these are often reduced to a standard abbreviation.

Examples: × *Lc.* (× *Laeliocattleya*); *Paph.* (*Paphiopedilum*); × *Smbep.* (× *Schombopendrum*)

Note: Although there are many hybrid genera in the orchid family, it is common practice among orchid growers and in orchid literature to omit the multiplication sign. This can, unfortunately, cause confusion for those not familiar with orchid nomenclature.

Cultivars - Garden Varieties

New cultivar names must be coined in a modern language such as English, but many older ones are latinised and are therefore not always easily distinguished from botanical names. However, the style of writing cultivar names is quite different.

Cultivar names should always be printed in Roman type, each word with a capital initial letter (except for conjunctions, particles and prepositions) – even when latinised. They should be enclosed in single quotation marks (never double). Cultivar names consisting of a person's name with initials should include stops and a space between the initials and the surname. Hyphenated names are treated as one word. Abbreviations require a full stop; contractions do not.

Examples: *Potentilla fruticosa* 'Daydawn'; *Clematis* 'Belle Nantaise';
Crocsmia 'Jenny Bloom'; *Mahonia repens* 'Rotundifolia';
Tulipa 'Queen of Sheba'; *Erica* × *darleyensis* 'J.W. Porter'

Trade Designations

When plants are registered for Plant Breeders' Rights (PBR) under a code-name or have a cultivar name in a foreign language, they are often sold using an alternative name or a translation, both of which are termed trade designations. These are not regarded as direct equivalents of the cultivar name and should not be printed in the same way. A trade designation should always be quoted in tandem with the cultivar name (except where this is not known) and styled in a different font (capital letters are often used but need not be), without single quotation marks. Translation of cultivar names is to be discouraged and there is no necessity to use translations when the original is known.

Examples: PBR: *Rosa* RADIO TIMES 'Aussal' *Rosa* MEMENTO *Fragaria* Pink Panda 'Frel'
Translation: *Potentilla fruticosa* MOONLIGHT 'Maanelys' *Hydrangea macrophylla* Blue Prince 'Blauer Prinz'

Trademarks

Increasingly, plants are being sold using trademarks as alternatives to or in addition to cultivar names. Strictly speaking, trademarks should not be quoted without permission from the trademark holder, but in some cases there is no alternative name to use. Trademarks are not cultivar names or trade designations but are best treated in the same way as trade designations with the addition of TM or ® as appropriate.

Examples: *Rosa* LA SEVILLANA® 'Meigekanu'; *Rosmarinus* SILVER SPIRESTM; *Petunia* Surfina® Hot Pink 'Marrose'

Grexes and Cultivar Groups

For cultivated orchids, use is made of grex names for plants sharing the same parentage, as well as cultivar names for individual clones. In other cases, assemblages of related or similar plants are placed in cultivar-groups. Both grex and group names are printed in Roman, with capital initial letters. The word 'Group' is always part of group names, but the word 'grex' or the abbreviation gx is optional and may be used.

Examples: grex: *Cymbidium* Strathdon; × *Vuylstekeara* Cambria 'Plush'
group: *Hosta* Tardiana Group
Rhododendron (PJM Group) 'Rim Checkmate'

Families

The names of plant families should be printed in italics (or underlined) with a capital initial letter.

Examples: *Rosaceae*; *Berberidaceae*; *Compositae*

Common Names of Plants

Unlike botanical and cultivar names, common names are governed by no international rules. However, our recommendation is to print them always in Roman type, with lower case initial letters except when the word is a geographical or personal name. This applies also when the scientific name is used as the common name and if the scientific name is turned into a plural. Examples: potato; good King Henry; rhododendrons; camellia; Jersey lily; proteas.

Appendix 2 - Useful Resources

PlantNetwork

As a horticultural student, you are entitled to free membership of PlantNetwork: <https://plantnetwork.org/>

This gives you access to a weekly newsletter, job vacancies, and discounted conferences, workshops and training days.

General Botany Resources: Online Databases

Royal Botanic Gardens Kew: World Checklist of Selected Plant Families

www.kew.org/wcsp/

The checklist includes 173 Seed Plant families ('View list of included families'). Different families are in different stages of review, as indicated in the family list.

Royal Horticultural Society: RHS Plant Finder

www.rhs.org.uk/plants/search-form

The RHS Plant Finder can give expert help and advice on growing, feeding, pruning, pest and diseases. Search by plant name, attribute, or both to find plant details and a list of suppliers. The website also highlights certain trends, such as a list each year of the most stocked new plants. When a specialist nursery goes out of business, there is a "Last Listed" section which tells you when a plant was last there. Sometimes you can track down the nurseryman and some of their remaining collection. Wholesale nurseries are excluded.

The RHS Plant Selector, based on the Plant Finder, is a hugely popular, free tool from the RHS that enables you to enter a wide range of conditions such as damp soil, shade or ground cover into a database.

TROPICOS - The Missouri Botanical Garden vascular plant database: <http://www.tropicos.org/>

International Plant Name Index (IPNI) <http://www.ipni.org/>

Alternative resources:

Internet Directory for Botany: www.ou.edu/cas/botany-micro/idb-alpha/botany.html

Index Herbariorum: <http://sweetgum.nybg.org/science/ih/>

Angiosperm Phylogeny Website: www.mobot.org/MOBOT/Research/APweb/welcome.html

Global Biodiversity Information Facility: <https://www.gbif.org/>

USDA PLANTS: <https://plants.sc.egov.usda.gov/java/>

Index Nominum Genericorum: <http://botany.si.edu/ing/>

Regional Floras and Individual Plant Groups

Trees and Shrubs Online: <https://treesandshrubsonline.org/>

Checklist of World Ferns: <http://worldplants.webarchiv.kit.edu/ferns/>

World List of Cycads: <https://cycadlist.org/>

The Gymnosperm Database: <http://www.conifers.org/>

Catalogue of New World Grasses: <http://www.tropicos.org/Project/CNWG>

Flora Europaea: <http://ww2.bgbm.org/EuroPlusMed/query.asp>

Flora of China Checklist: http://www.efloras.org/flora_page.aspx?flora_id=2

LegumeWeb (pea family): <http://www.legumes-online.net/ildis/aweb/database.htm>

CalFlora (California flora on-line): <http://www.calflora.org/>

Botanical Society of Britain and Ireland (BSBI): <https://bsbi.org/>

Recommended apps

LEAFSNAP

Used by The Natural History Museum, Leafsnap helps you with identification. The app contains lovely high-resolution images of leaves, flowers, fruits, petioles, seeds, and bark. As the app's name suggests, the plant species are identified by their leaves.

GARDEN ANSWERS

Garden Answers is an easy-to-use and incredibly popular identification app that can instantly define over 20,000 plants, coming with some very useful information. Take a snap of the plant you want to identify, press 'submit' and you'll have the answer

MYSOIL

mySoil is a free app from the British Geological Survey and the Centre for Ecology & Hydrology. Find out your soil properties - type, organic matter, texture and pH - based on your area of the country. See bgs.ac.uk/mysoil/ for more information.

NATIONAL GARDENS SCHEME (NGS)

Search through the 3,800+ gardens that open under the scheme, and automatically find any that are open close to your location or by postcode. Includes opening times, prices, info about the garden and directions.

iRECORD

iRecord App enables you to get involved with biological recording. Contribute native plant sightings with GPS acquired coordinates, descriptions and other information, thus providing scientists with important new biodiversity information that contributes to nature conservation, planning, research and education.

GARDEN PLAN PRO

Draw on an extensive library of veg to scale-plan your patch through the seasons, with sowing and harvesting reminders based on local weather station data.

Notes



