



**UK SEED COLLECTING  
ON BEHALF OF THE  
MILLENNIUM SEED BANK PARTNERSHIP,  
ROYAL BOTANIC GARDENS, KEW**

**PROTOCOL FOR SEED COLLECTION**

This protocol has been compiled to provide information and advice for those proposing to participate in seed collecting in the UK for the Royal Botanic Gardens Kew (RBG Kew) Millennium Seed Bank Partnership.

**1. AIM OF SEED COLLECTING**

To conserve verified and well documented wild species seed collections in the Millennium Seed Bank (MSB), each of which comprises a significant representation of the genetic variation within a sampled population. The collections are a vital resource for off-site conservation and, where appropriate, for introduction or recovery programmes. Material will also be available for research into seed biology, germination behaviour and other aspects of biological study, and may be more generally used to further RBG Kew's charitable and statutory purposes.

By working with partners and volunteer collectors across the UK, RBG Kew prioritises the collection and conservation of viable seed samples from at least one population of each UK native plant species that regularly sets storable seed. RBG Kew also aims to store samples from across the natural UK range of our native and archaeophyte species to capture greater diversity and support a wider range of future uses. These include restoration of native plant communities through the work of the UK Native Seed Hub (UKNSH) described in Annex 3.

**2. AUTHORISATION AND TRANSFER OF MATERIAL TO RBG KEW**

- **You must ensure that you have prior permission from the landowner or occupier to access and collect seed from their land.** It is important that landowners are aware of, and agree with, the potential uses of seed conserved in the MSB. Please ensure that they are supplied with a copy of the Landowner Consent & Information sheet (Annex 3), that consent is granted and the landowner is encouraged to complete and sign the sheet. Seed collectors should sign the field data sheet (Annex 1) to confirm the collection has been made with appropriate permissions.
- Collection from taxa included in Schedule 8 of the Wildlife and Countryside Act, 1981<sup>1</sup> (listed in Annex 2) requires a licence from the relevant statutory conservation agency. Please contact the UK Collections Coordinator at the MSB for advice<sup>2</sup>
- Collecting within Sites of Special Scientific Interest (England, Scotland, Wales) or Areas of Special Scientific Interest (Northern Ireland) require approval from the relevant statutory conservation agency. Although RBG Kew has general assent letters permitting seed collection from these areas under certain conditions for England, Wales and Scotland, **landowner permission and liaison with agency manager(s) remains a requirement.** Please contact the UK Collections Coordinator for advice and a copy of relevant assent letter.

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<sup>1</sup> For Northern Ireland: Schedule 8 of the Wildlife (Northern Ireland) Order, 1985

<sup>2</sup> See end of document for RBG Kew contact details

### 3. TARGETING POPULATIONS FOR COLLECTION

A preliminary visit to the site will usually be required to assess the population(s), to confirm the identification of the species whilst the plants are in flower, and to estimate the likely harvesting date and potential seed production.

Please consider the following points before harvesting takes place:

1. Collectors should ensure that the population is of wild origin, and neither planted nor cultivated.
2. Small populations (less than 50 individuals) or those that will yield less than 1000 viable seeds should only be targeted when larger, more productive populations are not easily available. An 'ideal' collection will be from a large number of individuals (>50) and will contain between 10,000 and 20,000 seeds. Depending on the species, these quantities can be achieved in less than two 'collector-hours'. However, this is only a guide and it may not be possible to harvest these numbers, especially from threatened or scarce species.
3. It is recommended that seed maturation is monitored if possible. Seeds should be harvested as close to natural dispersal as possible to achieve maximum longevity in storage. The extent of insect or other damage within the seeds can be checked prior to collection. A cut test is the best way to assess this (see 5. Seed Collecting Methodology).

### 4. IDENTIFICATION

Please identify to infra-specific level (sub-species, variety etc.) where appropriate. When there is any doubt about the field identification please supply the following:

- A close-up (and ideally scaled) photograph illustrating clearly the key identification features e.g. number of stamens, leaf venation, stipule shape, etc.
- Comprehensive identification notes entered on the field data form, with information about the presence of closely related species and any risk of hybridisation.
- A representative herbarium specimen (NB. Please do not collect specimens from taxa listed on Schedule 8 or categorised as threatened on a national Red List.) Ideally include flower, fruiting structure and vegetative parts. This specimen will be accessioned into RBG Kew's Herbarium. Please contact the UK Collections Coordinator if advice is required.

High quality photographs illustrating the plant and its habitat will be welcomed by RBG Kew as reference material. Copyright is retained by the photographer (or the photographer's employer) and material will not be used in publications without permission. Please indicate whether permission is granted if photographs are sent.

Please note when confirmation of field identification is needed and this will usually be carried out by either RBG Kew or the Botanical Society of Britain and Ireland (BSBI) Referee, and nomenclature will follow the *New Flora of the British Isles Fourth Edition (Stace, 2019)*. All material should be sent to RBG Kew in the first instance.

## 5. SEED COLLECTING

### METHODOLOGY

### RATIONALE

<p>1. <u>Quality Assessment</u> - if &gt;1000 seeds are estimated as available for collection, and seeds are large enough in size, carefully cut test a small sample (5-20) of randomly selected seeds by examining a cross section of each seed using small clippers and a hand-lens. The small clippers on some penknives work well.</p>	<p>To estimate the frequency of empty or damaged seeds and the percentage of seeds that are fully formed and mature.</p>
<p>2. <u>Availability Assessment</u> - estimate the seed production per fruit or capsule, per individual, and per population.</p>	<p>To assess the seed numbers available and inform safe collecting limits.</p>
<p>3. <u>Collecting Techniques</u> - collect <b>mature, dry</b> seeds into either cloth or brown paper bags (available from the MSB). Large collections can be made using plastic buckets and then transferred to bags.</p>	<p>Breathable bags will allow moisture to escape as seeds dry. This is important to ensure the highest possible post-harvest quality and will maximise the potential storage life of the collection.</p>
<p>4. Collect awned or hooked seeds/fruits into paper bags. Seed cleaning should be left to MSB staff.</p>	<p>To enable easy removal from bag. To make maximum use of available field time and allow cleaning &amp; assessment of seeds using specialised laboratory equipment.</p>
<p>5. Fleshy fruits should be collected directly into plastic bags and allowed to aerate. Contact RBG Kew as soon as possible for specific advice re. dispatch.</p>	<p>Fleshy fruits can decompose rapidly and delayed dispatch to the seed bank can be detrimental to the health of the seed.</p>
<p>6. <u>Genetic diversity</u> - <b>Sample equally and randomly</b> from as many plants as possible across the extent of the population, noting the number of individuals sampled on the data sheet (&gt;50 individuals if available; ideally 200+).  Tree seed collecting for specific projects may involve different sampling techniques. Please contact the relevant MSB Project Coordinator for advice.</p>	<p>To capture the widest possible genetic diversity from the population sampled.</p>
<p>7. <u>Safe Collecting Limits</u> - <b>Collect no more than 20%</b> of the viable seed available on the day of collection for populations of more than 50 seeding individuals.  <b>If sampling from a population that is threatened either locally, nationally or globally and there are <u>less than 50 seeding individuals</u></b>, extra care will be necessary when sampling. Consideration should be made to life history, seed production and favourability of habitat. For example, annual plants will be particularly sensitive to collection levels. In these cases, limit sampling to a maximum of 10% of available seed.  <b>For populations of threatened species with <u>less than 10 seeding individuals</u></b>, a decision on whether to sample or not will be made on a case by case basis by the UK Collections Coordinator and statutory agency plant specialists. Please contact the UK Collections Coordinator before sampling.</p>	<p>To ensure that the reproductive potential of the sampled population is not compromised by seed collecting.</p>
<p>8. <u>Collection size</u> - For non-threatened taxa with large populations - ideally collect 10-20,000 viable seeds.</p> <ul style="list-style-type: none"> <li>• Collections of between 1000 and 10,000 seeds are valuable, although distribution opportunities will be limited for smaller collections.</li> </ul>	<p>To maximise the value of the collection, ensuring: i) sufficient seed is available for initial germination and viability testing; ii) viability monitoring can be undertaken for many decades;</p>

<ul style="list-style-type: none"> <li>• Collections of less than 1000 seeds, made using the above methods, are valuable when more productive populations are not available for sampling.</li> </ul>	iii) a substantial sample can be conserved as a long-term safeguard against loss of the wild population, and as a resource for ecological, genetic, botanical study or restoration.
9. Where a population is very small (less than 20 seeding individuals) seed from each maternal plant should be put in separate envelopes and labelled separately (e.g. <i>SM 3a, 3b, etc.</i> ). Please indicate on the field data form. NB. Collections from populations of this size will only usually be from threatened taxa; and/or when more productive populations are not available for sampling.	To ensure that: <ul style="list-style-type: none"> <li>i) the full genetic diversity of particularly vulnerable plant populations can be successfully released at a later date;</li> <li>ii) material is available for studies of genetic variation between individuals within a population.</li> </ul>

## 6. FIELD DOCUMENTATION

Record information for each collection using the field data form in Annex 1. The data fields in bold text are the priority for completion, and further data make the collection more valuable for conservation and subsequent use. Please assign collection numbers, using your initials and a number (consecutive for separate collections) and label your collection, herbarium specimen and any associated material with this number.

Please provide high precision grid references or GPS coordinates. It may be useful to sketch the location of particularly elusive populations and attach to the field data form.

In the case of rare, Schedule 8 or nationally scarce species, RBG Kew will ensure that the data is made available to the statutory conservation agencies.

## 7. COLLECTIONS FROM REGENERATED PLANTS

If collections are made from cultivated populations of native species, i.e. from an ex-situ collection or garden, please complete the details for the *cultivated* population on the reverse of the field data form and provide as much information about the original *wild* population as you can on the front of the sheet.

## 8. CARE OF SEED COLLECTIONS AFTER HARVESTING

**It is critical to the health and longevity of the seed** that it is dispatched to the MSB as soon as possible and certainly within a few days of collection. Please include the completed field data form and use the Freepost service for dispatch (please see below for address).

Herbarium specimens, photos and any additional information may be sent at the same time or at a later date quoting the collector's name and the number given to the seed collection.

In general, keep seed collections in a cool, dry place prior to dispatch but please do not refrigerate or freeze them. RBG Kew processing staff will clean the collections on arrival at the seed bank.

Damp collections should, as soon as possible after harvest, be spread out on newspaper to dry naturally, either outside in the shade or in a well-ventilated room before dispatch.

Fleshy fruits may require careful handling, partial cleaning and rapid dispatch to the MSB: contact the UK Collections Coordinator as soon as possible for advice.

Seed bags should be clearly labelled with the collection number and species name and then securely packaged for posting to RBG Kew. **Please contact the UK Coordinator for supplies** of bags, data

sheets, envelopes etc. Some delicate seed collections may need protection by a layer of cardboard or 'bubble plastic' to avoid the possibility of damage in transit.

## 9. CONTACT DETAILS:

For enquiries, correspondence & collecting supplies:

Stephanie Miles  
UK Collections Coordinator  
Millennium Seed Bank Partnership  
Royal Botanic Gardens, Kew  
Wakehurst Place, Ardingly,  
West Sussex  
RH17 6TN

Tel: (01444) 894129

Fax: (01444) 894110

Email: [s.miles@kew.org](mailto:s.miles@kew.org)

To dispatch seed collections, herbarium specimens, photos:

Freepost RSUS-AZAL-JSUH  
Millennium Seed Bank Partnership  
Wakehurst Place  
Selsfield Road  
Ardingly  
HAYWARDS HEATH  
RH17 6TN  
For the Attn of S.Miles/J.Peach

## ANNEXES TO PROTOCOL

- |         |   |
|---------|---|
| Annex 1 | UK Field Data Form  |
| Annex 2 | Seed bearing taxa listed in Schedule 8 of the Wildlife & Countryside Act, 1981 and the Wildlife (Northern Ireland) Order 1985 |
| Annex 3 | Landowner Consent & Information sheet   |
| Annex 4 | Health & Safety advice  |

**Links to Millennium Seed Bank UK Programme & Projects (nb. These pages are currently being updated):**

<https://www.kew.org/science/our-science/projects/banking-UK-seeds>

<https://www.kew.org/science/our-science/projects/uk-flora-project>

<https://www.kew.org/science/our-science/projects/uk-native-seed-hub>

<https://www.kew.org/science/our-science/projects/uk-national-tree-seed-project>

# ANNEX 1

V9 Mar 2016

## MSB UK FIELD DATA FORM

(Bold type = minimum information required)

Date Collected	<input type="text"/>	Collection no.	<input type="text"/>
Collector(s) Incl. organisation	<input type="text"/>		

Material Collected    SEED                       TISSUE SAMPLE                       HERBARIUM SPECIMEN

**SITE DATA**

County

Local Situation

Latitude

Longitude

Altitude (m)

*Please circle: GPS/Google Earth/map used?*

Landowner Name and contact details (if not provided on consent form):

HAS THE LANDOWNER/OCCUPIER RECEIVED THE CONSENT & INFORMATION SHEET?  YES

HOW HAS CONSENT BEEN PROVIDED BY LANDOWNER/OCCUPIER? (please tick):

VERBAL     BY EMAIL OR OTHER WRITTEN RECORD

**HABITAT DATA**

Habitat description & associated species (NVC if known)

Modifying Factors e.g. grazing, burnt:

Land form	<input type="text"/>	Slope° & Aspect	<input type="text"/>
Land use	<input type="text"/>	Soil texture, pH	<input type="text"/>
Geology	<input type="text"/>	Drainage	<input type="text"/>

### IDENTIFICATION DATA

Family	<input type="text"/>
Genus	<input type="text"/>
Species	<input type="text"/>
Infra-specific	<input type="text"/>
Identified by & Organisation	<input type="text"/>
Material identified & Date	<input type="text"/>

Schedule 8 species?    Y    N    If yes, in whose name is the licence held

## SAMPLING DATA

No. of Plants Sampled


Area sampled (sq.m):


No. of Plants Found:

% population producing seed:

Seed harvesting: (early, mid, late season)/ Seeds Collected from (plants, ground, both)/ State of seeds (moist, dry, both)

## DESCRIPTION

Plant Habit: Tree Shrub Erect herb Creeping herb Climbing herb Plant Height (m)

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Other descriptors (ie. characteristics used to ID the plant &amp; details that may be lost on a herbarium specimen, aroma, flower colour, etc):

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I, the seed collector, hereby donate this material and associated data to Kew. I confirm this plant material was collected in accordance with all applicable law, including securing consent from the landowner or occupier for collections to be used as outlined in the Landowner Consent & Information Sheet.

Signed: .....

Print Name: .....

Date: .....

Please complete for REGENERATED MATERIAL:

Progeny Collection No:	
Date first harvested:	
Date last harvested:	
Progeny collector & Organisation:	
Donor Organisation (if different from above):	
Where regenerated:	
Progeny habitat/conditions:	
Isolation technique (if any):	
Relation to wild population (ie. generation1)	
Number of plants regenerated:	
Number of plants harvested:	

## ANNEX 2

### Seed-bearing taxa listed in Schedule 8 of the Wildlife & Countryside Act 1981 (October 2011). Applicable in England, Scotland and Wales.

<i>Ajuga chamaepitys</i>	<i>Gentianella ciliata</i>	<i>Saxifraga cernua</i>
<i>Alisma gramineum</i>	<i>Gentianella uliginosa</i>	<i>Saxifraga cespitosa</i>
<i>Allium sphaerocephalon</i>	<i>Gladiolus illyricus</i>	<i>Saxifraga hirculus</i>
<i>Althaea hirsuta</i>	<i>Gnaphalium luteoalbum</i>	<i>Schoenoplectus triquetrum</i>
<i>Alyssum alyssoides</i>	<i>Hieracium attenuatifolium</i>	<i>Scleranthus perennis</i>
<i>Apium repens</i>	<i>Hieracium northroense</i>	<i>Scorzonera humilis</i>
<i>Arabis alpina</i>	<i>Hieracium zetlandicum</i>	<i>Selinum carvifolia</i>
<i>Arabis scabra</i>	<i>Himantoglossum hircinum</i>	<i>Senecio paludosus</i>
<i>Arenaria norvegica</i>	<i>Homogyne alpina</i>	<i>Stachys alpina</i>
<i>Artemisia campestris</i>	<i>Hyacinthoides non-scripta</i>	<i>Stachys germanica</i>
<i>Atriplex pedunculata</i>	<i>Lactuca saligna</i>	<i>Tephrosia integrifolia</i> subsp. <i>maritima</i>
<i>Bupleurum baldense</i>	<i>Leersia oryzoides</i>	<i>Teucrium botrys</i>
<i>Bupleurum falcatum</i>	<i>Limosella australis</i>	<i>Teucrium scordium</i>
<i>Carex depauperata</i>	<i>Liparis loeselii</i>	<i>Veronica spicata</i>
<i>Centaureum tenuiflorum</i>	<i>Lloydia serotina</i>	<i>Veronica triphyllos</i>
<i>Cephalanthera rubra</i>	<i>Luronium natans</i>	<i>Viola persicifolia</i>
<i>Chenopodium vulvaria</i>	<i>Lychnis alpina</i>	
<i>Cicerbita alpina</i>	<i>Lythrum hyssopifolia</i>	
<i>Clinopodium menthifolium</i>	<i>Melampyrum arvense</i>	
<i>Coincya wrightii</i>	<i>Mentha pulegium</i>	
<i>Corrigiola litoralis</i>	<i>Microthlaspi perfoliatum</i>	
<i>Cotoneaster cambricus</i>	<i>Minuartia stricta</i>	
<i>Crassula aquatica</i>	<i>Najas flexilis</i>	
<i>Crepis foetida</i>	<i>Najas marina</i>	
<i>Cynoglossum germanicum</i>	<i>Ononis reclinata</i>	
<i>Cyperus fuscus</i>	<i>Ophrys fuciflora</i>	
<i>Cypripedium calceolus</i>	<i>Ophrys sphegodes</i>	
<i>Dactylorhiza traunsteinerioides</i> subsp. <i>lapponica</i>	<i>Orchis militaris</i>	
<i>Damasonium alisma</i>	<i>Orchis simia</i>	
<i>Dianthus armeria</i>	<i>Orobanche caryophyllacea</i>	
<i>Dianthus gratianopolitanus</i>	<i>Orobanche picridis</i>	
<i>Diapensia lapponica</i>	<i>Orobanche reticulata</i>	
<i>Eleocharis parvula</i>	<i>Petrorhagia nanteuillii</i>	
<i>Epipactis youngiana</i>	<i>Phyllodoce caerulea</i>	
<i>Epipogium aphyllum</i>	<i>Phyteuma spicatum</i>	
<i>Erigeron borealis</i>	<i>Polygonatum verticillatum</i>	
<i>Eriophorum gracile</i>	<i>Polygonum maritimum</i>	
<i>Eryngium campestre</i>	<i>Potentilla rupestris</i>	
<i>Filago lutescens</i>	<i>Pulicaria vulgaris</i>	
<i>Filago pyramidata</i>	<i>Pyrus cordata</i>	
<i>Fumaria reuteri</i>	<i>Ranunculus ophioglossifolius</i>	
<i>Gagea bohemica</i>	<i>Rhinanthus angustifolius</i>	
<i>Gentiana nivalis</i>	<i>Romulea columnae</i>	
<i>Gentiana verna</i>	<i>Rumex rupestris</i>	
<i>Gentianella anglica</i>	<i>Salvia pratensis</i>	



**Seed-bearing taxa listed in Schedule 8 of the Wildlife (Northern Ireland) Order 1985 (March 2012)**

Adoxa moschatellina
Ajuga pyramidalis
Andromeda polifolia
Calamagrostis epigejos
Calamagrostis stricta
Carex bigelowii
Carex magellanica
Carex pauciflora
Centaurium littorale
Ceratophyllum submersum
Cirsium heterophyllum
Cirsium heterophyllum
Crambe maritima
Cuscuta epithymum
Dactylorhiza lapponica
Dactylorhiza traunsteineri
Dryas octopetala
Eleocharis parvula
Epipactis palustris
Epipactis phyllanthes
Erica vagans
Erigeron acer
Frangula alnus
Gentianella amarella
Geranium pratense
Geranium sylvaticum
Hammarbya paludosa
Hierochloe odorata
Hottonia palustris
Hyacinthoides non-scripta
Hyoscyamus niger
Hypericum hirsutum
Hypochaeris glabra

Juniperus communis
Limonium binervosum
Limosella aquatica
Melampyrum sylvaticum
Mentha pulegium
Mertensia maritima
Monotropa hypopitys
Neotinea maculata
Ophrys apifera
Orchis morio
Ornithopus perpusillus
Orobanche hederæ
Orthilia secunda
Primula veris
Primula vulgaris
Pseudorchis albida
Ranunculus fluitans
Rhynchospora fusca
Rubus chamaemorus
Sanguisorba officinalis
Saussurea alpina
Saxifraga aizoides
Saxifraga hirculus
Saxifraga oppositifolia
Scrophularia umbrosa
Seriphidium maritimum
Silene acaulis
Sisyrinchium bermudiana
Spiranthes romanzoffiana
Teesdalia nudicaulis
Thalictrum alpinum
Trollius europæus
Vicia orobus
Viola persicifolia

**ANNEX 3**



**UK LANDOWNER'S/OCCUPIER'S CONSENT TO THE COLLECTION AND USE OF PLANT MATERIAL  
AND DATA BY THE ROYAL BOTANIC GARDENS, KEW**

The Royal Botanic Gardens, Kew (RBG Kew) is seeking your permission to enter land in order to collect seed and other related plant material (including data and images).

This document explains the uses that may be made of such plant material and data. If the landowner does not place any express restrictions on these uses, then access to the plant material and data shall have been granted on the basis that RBG Kew may use it as set out below.

Plant material shall be accessioned into the RBG Kew collections at Wakehurst Place, Ardingly, West Sussex, or at Kew, Richmond, Surrey, as appropriate, and associated collections data (including site name and location) will be processed and stored securely in accordance with RBG Kew's data handling policies.

RBG Kew shall access, use and share the plant material and data to further its charitable purposes.

Plant material and collections data may be:

- (a) Made available for scientific study to RBG Kew staff and authorised visitors; and/or
- (b) Used for the common good in the areas of education, conservation and public display; and/or
- (c) Sampled for pollen, spores, DNA, anatomical or cytological preparations and/or chemicals for scientific research purposes; and/or
- (d) Sent on loan, supplied, or further distributed for the purposes of scientific research, conservation or horticulture; and/or
- (e) Published in botanical databases including digital images which are freely available on the internet.

We will use your personal data to seek your consent regarding any uses of your seed that fall outside the terms of this Landowner Consent Form. RBG Kew will process your data as necessary to fulfil our public task, retaining it for the lifetime of seed and then as a scientific and historical record. Further information on your rights is available on our website at [www.kew.org/privacy](http://www.kew.org/privacy). We will not sell your data under any circumstances and will not pass data to third parties without your permission.

For further information please see overleaf.

**CONSENT:** I consent to the collection of plant material and data from the site specified and its transfer to the Royal Botanic Gardens, Kew for use/supply as outlined above.

I have the authority to give this consent, being either the owner/occupier or person authorised on their behalf.

Signed..... Date.....

Name.....

Site name and address: .....

Organisation (if appropriate): .....

Contact details: .....

.....

## Information for Landowners and Occupiers

### Use of Plant Material and Data by the Royal Botanic Gardens, Kew

Species rich habitats in the UK have been destroyed, degraded and fragmented at an alarming rate. Many also now face pressures from climate change and invasive pests and diseases. In response, the government and conservation agencies are working together to expand and link surviving habitats and create a resilient ecological network. Achieving this vision will depend on the availability of a diverse range of high quality, UK native-origin seed for research and conservation activities.

With the co-operation and support of landowners the RBG Kew is working to increase the diversity of UK native plant species that are collected, seed banked and made available for wider use. Seed is collected by RBG Kew staff, volunteers and by partner organisations. It is processed and stored at RBG Kew's Millennium Seed Bank (MSB), which already stores seed from over 30,000 plant species from across the globe.

This priceless collection will serve as a back-up in case these species are lost in the landscape. It will also provide seed material for current research needs such as testing for disease resistance and increasing our understanding of the biology and ecology of UK plant species.

For the UK's most rare and threatened flora, we work closely with government agencies and partners on bona fide conservation and reintroduction projects.

RBG Kew's UK Native Seed Hub can provide seed and plants of native species to organisations and projects wishing to grow and use native species where the aim is to make an effective and genuine contribution to the conservation and restoration of biodiversity in the UK. Material is supplied under licence on a cost recovery basis, with use restricted to sites where there is a high probability that the material will be able to form sustainable reintroduced populations whilst posing minimal risks to local habitats, species or ecotypes.

Our expertise in collecting, storage, germination and propagation of the UK native flora is shared through publications, partnership working and training events.

In order to complete such ambitious work, RBG Kew welcomes and acknowledges the support of landowners in providing access to collection sites and plant material.

RBG Kew is incorporated in the United Kingdom by the National Heritage Act 1983 and is an exempt charity whose scientific vision is to document and understand global plant and fungal diversity and its uses, bringing authoritative expertise to bear on the critical challenges facing humanity today. RBG Kew is supported by the United Kingdom Department for Environment, Food and Rural Affairs ("Defra"), which is ultimately responsible to Parliament for RBG Kew's key aims and activities.

Further information is available from the UK Collections Coordinator; Stephanie Miles ([s.miles@kew.org](mailto:s.miles@kew.org))

On the web via <https://www.kew.org/science/our-science/projects/banking-UK-seeds>



## **Health and Safety Guidance notes for MSB field work in the UK**

Most people undertaking seed collecting work for the MSB will be familiar with the hazards of working outdoors, many of which can be avoided with common sense. It is, however, perhaps worth highlighting the following risks which may affect seed collectors.

Ensure that you wear appropriate clothing (including suitable footwear for the terrain, waterproofs and a hat). Maps, a GPS receiver (incl. spare batteries), compass and altimeter can help you navigate safely in your collecting area.

Take a mobile phone (in areas without signal, a two-way radio), appropriate first aid kit, sun protection, insect repellent, water bottles (for cold locations a hot water flask) and where applicable a spare set of vehicle keys with you.

During the planning of your collecting trip, check whether you have comprehensive insurance cover and what the local conditions are likely to be (weather forecast – e.g. floods, thunderstorms). Is the terrain likely to present any specific risks (e.g. walking on steep slopes or along cliff edges)?

If you are collecting as a group, it is advisable to check whether any of the group members has any underlying health issues (such as a history of angina, severe allergies or diabetes) and whether any of the group members is a trained first aider.

We recommend that collectors identify potential risks and how these will be managed in a written risk assessment, reviewed on arrival at the site.

### **Lone Working**

Lone working in the field is highly inadvisable. If this cannot be avoided, take a mobile phone with you and be sure to let someone know exactly where you are going and when you expect to be back.

### **Phytophotodermatitis**

Some species of plant, particularly within the Apiaceae family, contain sap which may be irritating to the skin. If you are particularly prone to skin problems, or if you are unsure about the effects of a particular species, it is advisable to wear gloves and prevent exposure to skin when collecting.

### **Lyme Disease**

<http://www.nhs.uk/conditions/lyme-disease/pages/introduction.aspx>

This infection can be transmitted to humans by the bite of a female tick. Although the majority of tick bites will be completely harmless, it is worth taking precautions in areas where the disease is known to occur. To minimise the chance of bites, wear long trousers tucked into socks or wellingtons, and shirts or jackets with long sleeves and cuffs.

### **Leptospirosis (Weil's Disease)**

<http://www.nhs.uk/conditions/Leptospirosis/Pages/Introduction.aspx>

This disease is spread in the urine of rats and cattle and therefore is most common in areas where these animals are found. The infection enters the body through cuts and abrasions or through the mucus membranes of the nose and mouth. It is common in rivers, ditches, canals and on farms. The risk of infection can be greatly reduced by covering skin abrasions, avoiding touching the eyes, nose or mouth and taking particular care to wash the hands with soap and water.

***Please note: RBG Kew does not provide insurance cover for any of the activities of non-staff or non-registered volunteers and RBG Kew is not and shall not be responsible or liable for any injury or damage to property arising out of or in connection with collecting-related activities.***