



HEALTH & SAFETY GUIDE FOR WILD PLANT SURVEYORS

To help ensure your wild flower survey goes smoothly, we've put together this guide to offer some practical advice and highlight some common hazards you may encounter. Please read this in conjunction with the separate guidance on permission to access land.

A few simple precautions can make a world of difference in both preventing accidents and aiding you and others if things do go wrong. If you are short on time, use the two handy checklists at the back of this guide before every visit:

- Safety Checklist
- Risk Assessment

PLANNING YOUR VISIT

We strongly encourage you to take time to plan your visit thoroughly in advance and take the following steps:

- Assess your survey site for hazards (more detailed advice on hazards is provided below). If you consider your survey area to be too remote or dangerous, request an alternative area from Plantlife (Email: enquiries@plantlife.org.uk or by telephone 01722 342730 (England), 01248 670691 (Wales), 01786 478509 (Scotland).
- Plan enough time to access your area, carry out the survey and return home within daylight hours.
- Plan your route, and consult land managers where appropriate. Avoid any high risk areas. If for any reason you have changed your planned route, then make sure you are aware of safe routes back.
- Ask a friend to join you, after all its much more fun with two.
- Let someone know what time you expect to return, and let them know what to do if you get into difficulties (see below).
- Carry a fully-charged mobile phone.
- The weather can be make surveying hazardous. Get a local weather forecast beforehand and keep an eye on the weather while out surveying. Be prepared to abandon the survey if the weather becomes inclement. If severe weather is forecast, such as heavy rain, strong winds or fog, postpone the survey to another day.
- Wear clothing and footwear that is comfortable for surveying but also appropriate for time of year and weather conditions. Remember to carry waterproofs, an extra layer of clothing and/or sun protection, as appropriate.
- Remember to take sufficient food and water for your trip.



- Cover minor skin cuts etc that will be exposed. Do not survey if you have a severe injury or illness.
- Carry a map and compass, check your route and ensure you can navigate to your destination and re-find your location if you become lost.
- Avoid meeting strangers alone in isolated situations. Before agreeing to meet someone about the survey, get their details (such as name, address, telephone no.) and check these by telephoning back to confirm arrangements. If you are at all suspicious of someone, it is best not to agree to meet them. Contact Plantlife if you have difficulties obtaining consent to do the survey.
- Carry a card listing emergency contact numbers, include your name and contact details of your next of kin and your doctor. Also give details of any medical conditions and medication you are taking.
- Other items we recommend you take along:
 - A handheld GPS, including spare batteries
 - A watch
 - A small first aid kit
 - A emergency whistle (the standard distress signal is three short blasts, followed by a minute's silence, then repeated)
 - A tide table for coastal surveys

STAYING IN TOUCH WHILE OUT IN THE FIELD

It is essential that you let someone (such as a partner, friend or relative) know where you are going, how you plan to travel, what time you expect to return, and what to do if you fail to return. This person is known as your **survey buddy**.

- If you are meeting someone, also pass their contact details to your buddy.
- Inform your buddy if you are going to be delayed and by how long so that an unnecessary search is avoided.
- Ensure your buddy knows the procedure should you fail to return. Your buddy should:
 - i. Try to contact you (make sure your mobile phone is charged and switched on).
 - ii. Try to contact someone who may know your whereabouts (e.g. anyone who you were due to meet).
 - iii. If several attempts to contact you have failed, **contact the police two hours after the agreed arrival time** and follow any advice given.
 - iv. Consider organising a search for you. Searches should be conducted by at least two people and in cooperation with the police.

STAYING HEALTHY IN THE FIELD

Follow these simple steps to minimise the chances of becoming ill as a result of the survey. More detailed information on specific diseases is provided at the end of the guide:

- **Wash your hands** in clean water before you eat, drink, smoke, or bite your nails.
- **Do not drink stream or pond water** or assume it is clean enough to wash your hands in.
- **Reduce exposure to sunlight** by wearing full-length trousers, a long-sleeved top and a sun hat; apply sun-block to remaining areas of bare skin.
- **Do not handle or eat wild fruits or fungi** unless you have identified them as not poisonous, and you have permission to collect them.
- **Reduce tick bites** by keeping to paths and low vegetation as far as possible. Avoid walking through lush or bushy vegetation. Wear a long-sleeved top and keep trousers tucked into socks.

AFTER THE SURVEY

- **Clean any cuts or wounds** (e.g. from thorns). If the area around the wound swells or becomes more painful, visit a doctor.
- **Check your body for ticks** after you have surveyed and seek medical advice if you feel unwell following a tick bite. Ticks should be removed as soon as possible to reduce the chances of infection.

HAZARDOUS PLACES

Plantlife tries hard to avoid allocating survey areas that may be dangerous. However, if you consider yours to be unsafe, for whatever reason, do not attempt the survey but contact us to arrange a safe alternative (Telephone 01722 342730 or email enquiries@plantlife.org.uk)

Some places are simply too dangerous and we would not want you to attempt to access or survey these sites. Examples of areas generally too dangerous to visit:

- Shooting ranges
- Ministry of Defence land
- Motorways and main roads
- Mines (working or disused)
- Quarries (working or disused)
- Islands
- Estuarine intertidal areas or mudflats
- Other hazardous shorelines (particularly in rough seas)

Similarly, there are some activities which we consider too dangerous to be an acceptable part of surveys, for example:

- Climbing



- Scrambling
- Boating
- Wading or swimming

Finally, you should only be out surveying in good weather during the spring, summer or autumn. Please postpone the survey during:

- Strong winds (especially in woodlands)
- Storms or heavy rain
- Sleet or snow
- Fog
- Very cold periods
- Very hot periods

To make your survey experience as trouble-free as possible, we strongly encourage you to undertake a simple risk assessment before each visit. Details of how to do this, along with a blank risk assessment form, can be found at the back of this guide. **Above all, do not take unnecessary risks.**

The remainder of this section details particular hazards you may meet and the precautions we advise you to take. Along with the risk assessment, this will help you assess whether the survey can be undertaken safely.

AGRICULTURAL LAND

Some fairly standard features of the farm scene may present a hazard such as the presence of cattle or livestock, machinery (moving or otherwise), barbed wire, electrical fences, stacks of hay or straw, unfenced slurry or silage pits, ponds, grain silos, and high voltage electricity supply cables.

Hazardous circumstances and occasionally dangerous circumstances may occur, such as working machinery, chemical applications, livestock, etc. It is not possible to anticipate all the hazards which may be encountered and therefore you must adopt a common sense approach and be vigilant.

A wide range of chemicals are used in agricultural practices, a number of which are toxic to humans. The greatest risks are through poisons, whether used legally or illegally, and spraying operations. Residual amounts of pesticides or other chemicals may be present for some time after spraying has been completed.

Remember to leave gates as you find them, and take care not to damage fences or gates.

ROADS

If your survey area includes the edge of a road please take extra care. Survey only if you are comfortable you can do so safely, make sure you are visible and that you only survey in daylight and good weather.

Only survey alongside quiet roads and where there is a verge or pavement. If your survey area includes a busy road or motorway, do not survey but please contact Plantlife.

Wear high visibility clothing so that you are visible to traffic. Take especial care at road



junctions, close to bends or hill tops. Do not enter road tunnels or survey in narrow cuttings. Avoid working in poor visibility, especially in fog, heavy rain, sleet and snow, high wind or if there is the likelihood of black ice.

Make sure that your vehicle is parked in a safe place where it causes no obstruction or hazard.

FORESTS AND WOODLANDS

It is easy to become lost in woodlands or forests. When walking through a wooded area, keep track of your position and direction. If you become lost, it is better to backtrack than go on in the hope of finding a familiar landmark.

Avoid areas of dense growth, or where the nature of the ground is obscured. If walking with others, beware of the whiplash from branches. Objects on the ground such as rocks, tree roots or fallen trees are frequently covered with moss and can be very slippery when wet. On slopes, support from vegetation should be used with caution since it may not be firmly fixed.

Be aware of fire hazards especially during dry conditions. Modern forestry operations are often hazardous and complex and workers may be unaware of your presence. In particular keep away from felling operations, heavy machinery and vehicles and aerial rope-ways.

FRESHWATER

Never survey beside water unless you are a good swimmer. If you think the survey will require you to work beside water, please contact Plantlife in advance.

When working by rivers, always take note of the current. The stillest waters are often deepest and have the softest substrate. Take extra care on crumbling and slippery waterside banks. Avoid working in soaking rain and beware of ice.

BOGS, MIRES AND SWAMPS

Do not attempt to cross a bog/mire/swamp, especially if working alone. If you think the survey will require you to cross a bog/mire/swamp, please contact Plantlife in advance.

There are several types of wet unstable ground to be wary of. The most dangerous is known as "quaking bog" because of the swaying motion of the surface when walked on. Stay clear of areas of pure sphagnum moss which is normally light green in colour as this could be floating. If you encounter a quaking bog it is best to retrace your steps to firmer ground.

Bare peat in certain circumstances can be very liquid and could be a danger to the unsuspecting.

If you find yourself sinking:

- Try to reach firm ground as fast as possible, but without struggling such that you sink deeper.
- If wearing a rucksack, take it off.



- Stay calm and do not panic. Shout for help.
- Try to get your legs free and keep them horizontal.
- Try to get some support by lying flat on your back or front and trying to grab hold of some tussocks of vegetation for support.

CLIFFS AND CRAGS

Do not attempt to climb or scramble. If you think the survey will require you to do either, please contact Plantlife in advance.

Working in this terrain may often involve no more than a steep walk requiring ordinary outdoor wear and properly fitting walking boots with suitable (e.g. Vibram type) soles. However, these areas are invariably subject to extreme weather conditions and therefore extra precautions may be necessary:

- Do not lean over or stand close to cliff edges;
- Beware of slippery vegetation or bare rock near cliff edges;
- Beware of undercut cliffs, cracks, or loose rock or soil;
- Be prepared for a change in the weather (consult local information sources, e.g. Coast Guard);

MOUNTAINS AND UPLANDS

Uplands can be defined as any land over 600m but this guidance may also be useful for other remote hilly areas.

When surveying in the uplands it is important to be aware of additional risks and be properly equipped to deal with them. Recognise your limits and do not attempt to overstretch yourself. Cut short your visit if you are tiring, or the weather is worsening.

All surveying should take place in the spring or summer months to reduce the risks. In winter the uplands and mountains are particularly dangerous and you should not attempt to visit sites at this time.

Mountains and uplands contain a range of hazards of varying severity. For example, areas with steep or loose rock, or a layer of snow or ice, are particularly hazardous. Plan your route well to minimise the risks, keeping to recognised routes as far as possible. Above all, avoid putting yourself or others in danger.

It is important to leave a note of your destination and route with a responsible person, along with an estimated time of return, and to notify them of your return. The note should also include details of who to contact if you do not return within a reasonable time of your expected return.

It is vital that you carry a map of the area and a compass, and know how to use them to navigate in bad weather. In addition, hand-held GPS devices can be useful, but it is advisable to carry spare batteries.

We recommend you wear and/or carry warm and waterproof clothing. Wearing a few layers is often more comfortable than one thick layer as you can more easily adjust to changing air temperature by removing or adding layers. Waterproof walking shoes or boots



are strongly recommended, as is a small waterproof rucksack for carrying essential equipment (see below).

Clothing should be made of a heat retaining material. Waterproof garments need to cover your upper and lower body, such as anorak and over-trousers; a hat and gloves are also advisable. Also carry extra items of warm clothing - e.g. a woollen sweater. Only use walking boots and socks suitable for mountain terrain.

Other essential equipment we advise you to take along:

- a heavy-duty survival bag;
- a torch and spare batteries;
- a whistle;
- a watch;
- some high-energy food supplies like chocolate or dried fruit;
- a basic first aid kit.
- a mobile phone but be aware that in many hilly areas the signal can be weak or non-existent. It is not a substitute for the sensible safety precautions outlined above.

When working in upland areas be aware that weather conditions can change dramatically, even in summer, becoming cold and windy at short notice. Wind chill is the combined effect of high winds and low air temperature; it is dangerous and potentially fatal. Hill fog can also arise quickly and can be disorienting, especially if there are few landscape features to follow.

In snow, navigation is difficult and movement requires greater stamina and skill. Avoid crossing frozen or snow-covered rivers. If caught in a blizzard or lost, find shelter and use a survival bag until conditions improve. Be constantly on the lookout for symptoms of hypothermia. Abandon the survey and return home as soon as weather conditions allow.

Learn the international distress code. This is **SIX** long flashes, blasts, shouts or waves in succession, repeated at one minute intervals.

SEASHORE AND INTERTIDAL AREAS AND WATER

Rocky shores are always hazardous. Take care on uneven surfaces, slippery weed-covered rocks and fissures. Exposed headlands liable to violent wave action are dangerous and should be completely avoided. Shores can be additionally hazardous due to rapid tidal flow if they are large in extent, or if quicksand occurs.

All shores can be dangerous in rough seas. Please postpone your survey until calmer weather returns.

Do not attempt to survey or cross estuaries, or shores with quicksand. If you think the survey will require you to do so, please contact Plantlife in advance.

Always check local tide times and local weather forecast. Check maps to identify dangerous areas - e.g. quicksand - and consult other local sources of knowledge - e.g. the Coastguard.

Stay clear of any strange looking objects which may be dangerous, e.g. cartridges, shells, mortars or canisters of dangerous chemicals washed ashore. Do not touch anything that



may be suspicious. Report them at once to the Police or Coastguard. If you see another person such as a yachtsman, boatman, diver or fisherman in distress, act at once by calling for assistance from the Coastguard. Do not take risks yourself.

ILLNESSES ASSOCIATED WITH WORKING OUTDOORS

The following illnesses are rare, but if you notice any symptoms after conducting outdoor work or have reason to believe you are affected, seek medical advice from your doctor immediately.

Lyme disease

An infection caused by a bacterium and transmitted by the bite of a tiny tick. Ticks are found on vegetation and animals in grassland, marshland and woodland habitats. The tick is most active and feeding between April and October. Pets are at risk too.

Prevention

Wear appropriate clothing to cover the legs, e.g. high boots, Wellington boots, gaiters or long trousers tucked into socks. Arm covering should include a cuff to help exclude ticks, insect repellents will help. Ticks should be removed immediately - wash hands first with soap or a disposable cleansing wipe.

Inspect your skin for ticks when bathing or showering after surveying and remove any promptly using a medical wipe to raise the body of the tick so that it is in line with the mouth parts. The tick should be carefully extracted and the skin cleansed with a medical wipe. Keep the tick for identification purposes.

How to remove ticks safely:

Use fine tweezers or a specialist removal tool. If using tweezers, grip the tick as close to the skin as possible. Pull straight up, trying not to jerk it. Don't squeeze the tick or leave any of the mouthparts in the skin. It's best to physically remove the tick, do not smother it in fluid or grease, or try to burn it off.

Symptoms

- Flu-like symptoms.
- Meningitis-like symptoms (i.e. stiff neck, difficulty in concentrating, fatigue).

Diagnosis and Treatment

Check for rashes/red patches (can be 1-18" across and may be ring-shaped) or unhealed bite.

Lyme disease is treatable with antibiotics at any stage. However, the earlier it is diagnosed the easier it is to treat.

Blue-Green Algal Blooms

These are naturally occurring in many inland waters, and in still water they can multiply in the summer and discolour the water green, blue/green or green/brown.

During calm weather, the algae can rise to the surface forming a scum like green paint and this can be blown around on the surface. Sometimes they can release toxins into the water.

Prevention

Avoid contact with the scum and the water close to it.



Symptoms

The Department of Health has stated;

"Illnesses including skin rashes, eye irritation, vomiting, diarrhoea, fever and pains in muscles and joints have occurred in some recreational users of water who swallowed or swam through algal scum. There have been no reports of long-term effects or deaths in humans, but in some cases the illnesses were severe. Although algal scum is not always harmful, it is a sensible precaution to avoid contact with the scum and the water close to it."

Pets

Ideally, you should leave your pets at home when undertaking survey work. In contrast to humans, animals may eat or swallow large quantities of algal scum. The Chief Veterinary Officer of the Ministry of Agriculture, Fisheries and Food has stated:

"The toxin which may be produced by the algae is also poisonous to animals and can cause severe illness and even death. Livestock and pet owners should therefore ensure that their animals do not have access to infected water."

Weil's Disease (Leptospirosis)

There are two varieties of Leptospirosis which cause most concern.

- a) Cattle Associated Leptospirosis (CAL) which can be contracted by working in close contact with cattle. Symptoms associated with this in man are: flu-like illness, severe headache and meningitis.
- b) Weil's Disease or Leptospiral Jaundice. Most commonly associated with rodents, particularly rats. The symptoms associated with this form are jaundice, meningitis, conjunctivitis and renal failure.

The disease, which is notifiable, requires hospital treatment, and one in nineteen people die following infection from kidney or liver failure. Statistically however, the disease is rare.

Prevention

Cover all cuts and abrasions of the skin with a good quality water tight dressing and do not touch with wet hands or get water in the eyes, nose or mouth.

Do not bite your nails.

Observe high standards of personal hygiene at all times. After working with dirty water, or contact with cattle or rodents or anything contaminated by them, wash hands and forearms with soap and water, particularly before eating and drinking or smoking. Any equipment used should also be rinsed and dried as soon as possible.

Symptoms

These start 3-19 days after exposure to contaminated water. Similar to flu, they include a temperature, and muscle pains. Other symptoms may include conjunctivitis and/or jaundice.

Diagnosis and Treatment

If you believe you are developing Weil's disease you should contact your doctor and ask

for an 'Elisa' blood test. Early diagnosis and treatment are vital for recovery.

Toxocariasis

Toxocariasis is a condition contracted from *Toxocara canis*, common dog roundworm. Eggs may be ingested by anyone handling the animals or eating soil or vegetables contaminated by canine faeces. Contact with dog faeces is possible if you survey in a dog-walking area or urban area.

Prevention

Wash hands thoroughly after surveying before eating, smoking, drinking or biting your nails. You may want to wear gloves whilst surveying (in which case these too must be washed afterwards).

Symptoms

These include fever, coughing and / or wheeziness and pallor. Some children have also developed ocular toxocariasis, with damage to the retina ensuing.

Tetanus

Tetanus may affect quite minor wounds where the skin is broken but is easily prevented by regular inoculation. Your doctor can recommend whether or not you are in need of a booster.

Dermatitis

Dermatitis is an inflammation of the skin following contact with irritant substances and plants. Many solvents and substances cause dermatitis and first aid treatment should therefore be obtained at once for every injury associated with chemical or plant contact no matter how trivial. Consult a doctor if irritation persists.

Hazardous plants

Many plants, or parts of plants and fungi, found in the countryside are known to be poisonous. However, the amounts that have to be ingested to produce adverse effect on health range from the relatively small (as in the case of yew leaves) to much greater quantities over prolonged periods (as in bracken and ragwort poisoning). There are simple, precautionary measures that can be taken when working with these plants and fungi to reduce risks to your health. Prevent all contact by covering up bare skin, wear long sleeves and, if appropriate, wear protective gloves. Always wash hands, arms and areas of exposed skin before eating, drinking or smoking.

Phytophotodermatitis (PPD) is a type of dermatitis contracted as a result of skin contact with certain species of plant, the most notable being Giant Hogweed (*Heracleum mantegazzianum*). PPD can result in conspicuous blistering, darkening and reddening of the skin. It occurs when skin, which has made contact with certain plants (such as Giant Hogweed), is also exposed to ultra violet radiation, which is significant in bright sunlight. The table below lists plants of the Umbelliferae family and a few others that could be responsible for PPD in the British Isles:

Angelica archangelica
Angelica sylvestris

Garden Angelica
Wild Angelica

<i>Apium graveolens</i>	Wild Celery
<i>Bupleurum tenuissimum</i>	Slender Hare's-ear
<i>Heracleum mantegazzianum</i>	Giant Hogweed
<i>Heracleum sphondylium</i>	Hogweed
<i>Ligusticum scoticum</i>	Scots Lovage
<i>Levisticum officinalis</i>	Lovage
<i>Pastinaca sativa</i>	Wild parsnip
<i>Petroselinium spp.</i>	Garden Parsnip
<i>Peucedanum palustre</i>	Milk Parsley
<i>Peucedanum officinale</i>	Hog's Fennel
<i>Peucedanum ostruthium</i>	Masterwort
<i>Pimpinella major</i>	Greater Burnet-saxifrage
<i>Pimpinella saxifraga</i>	Burnet saxifrage
<i>Senecio jacobaea</i>	Common Ragwort
<i>Seseli libanotis</i>	Moon Carrot

Bites and stings

Anaphylactic shock: - is a major allergic reaction of the whole body and can be recognised by widespread red blotchy skin, swelling of the face and neck, impaired breathing and rapid pulse. It is caused by rapid dilation of the body's blood vessels and constriction of airways and is potentially fatal. Immediate hospitalisation is required.

Snake bites: The adder is Britain's only native poisonous snake, but there is always the remote risk of bites from escaped exotic breeds. If bitten, go to hospital urgently. Try to get a good look at the snake in order to help doctors to identify it. Keep the affected part of the body below the level of the heart.



SAFETY CHECKLIST

There are always some risks associated with enjoying the outdoors. By completing the checklist below you will help ensure your safety. Please take a moment to do this before each visit.

Be aware that the checklist only covers basic aspects of safety and cannot cover every eventuality.

Only attempt the survey if you are feeling fit and well enough to do so and if you believe the conditions at the survey site are safe.

Above all do not take unnecessary risks.

VISITS >>	1	2	3
1. Survey site or area isn't dangerous (check route on map)			
2. Weather forecast is satisfactory on day of survey			
3. Friend/family member is accompanying me or knows where I am going and when I'll be back.			
4. Outdoor clothing and sturdy footwear suitable to the weather conditions and terrain. Rucksack with additional items - e.g. waterproofs, sun block			
5. Charged mobile phone			
6. Large scale map and, if available, a compass and a handheld GPS unit			
7. Sufficient food and drink			
8. Valuables not left on show in your car			
9. Read the 'health and safety guide for wild plant surveyors'			



HOW TO ASSESS RISK

Risk Assessment has three stages:

- 1) Identifying hazards;
- 2) Evaluating what could happen to you and/or others as a result of each hazard; and
- 3) Adopting safety procedures that reduce the risk of each hazard to a low level.

YOU SHOULD NOT ATTEMPT THE SURVEY IF ALL RISKS CANNOT BE REDUCED TO A SAFE LEVEL

Use the blank form at the end of this document to complete your risk assessment.

Continue on further sheets as required.

If you have any questions about how to do the Risk Assessment, contact Plantlife:
Telephone 01722 342730 or email enquiries@plantlife.org.uk

RISK ASSESSMENT FORM

If you are unable to mitigate the risks associated with your survey area, you should not proceed with the survey. Plantlife will happily allocate you a new survey area.

1. DESCRIPTION OF HAZARD	2. TYPICAL UNCONTROLLED OUTCOME	3. MITIGATION: SAFETY MEASURES TAKEN

Contact Plantlife if you have any queries: telephone 01722 342 730; email enquiries@plantlife.org.uk