

**School of Biological and Chemical Sciences**

***BIRKBECK COLLEGE***

**FIELDWORK CODE OF PRACTICE**

***(APPENDIX 1 OF THE SCHOOL SAFETY CODE)***

# CODE OF PRACTICE FOR STUDENTS ON FIELDWORK SAFETY AND BEHAVIOUR

## PART I

### 1. GENERAL

Fieldwork is an activity involving some inherent special risks and hazards, e.g. in salt-marshes, quarries, river-sections and mountains. Severe or dangerous weather conditions may also be encountered at any season, especially on mountains or on the coast.

In accordance with the Health and Safety at Work Act, course leaders will have been advised by their School to follow certain safety precautions and to take every reasonable care concerning the safety of members of their parties. However, **the potential dangers make it imperative that students should cooperate by behaving responsibly in order to reduce the risk of accidents.** Each individual is responsible for his or her own safety and for ensuring that any activity does not endanger others.

All fieldwork is subject to the process of risk assessment by the unit leader. This Code will cover the hazards associated with most aspects of field course work but certain identified hazards and activities will require a supplementary risk assessment.

In your own interest the Departments should be informed of any existing medical condition or injury that might affect you on a field excursion. Even modest hikes or climbs may be unsuitable if you suffer from certain heart conditions or, asthma, high blood pressure, epilepsy, vertigo etc. If in doubt consult your own doctor or the University Health Service; special diets can usually be arranged if adequate notice is given.

Specific requirements are:

### 2. DISCIPLINE

- Observe all safety instructions given by party leaders or responsible persons e.g. wardens of field centres. When staying in field centres etc. make sure you are familiar with the fire-drill.
- Whether working as part of a led group or on self-guided study, students must always work in pairs or larger groups
- Stay with the party, except by clear arrangement with the leader. Assemble where requested (e.g. outside a quarry) in order to receive specific instructions regarding work to be undertaken and likely hazards. Observe instructions for reporting after completion of work. In vehicles, seat-belts, where provided, must be used: this is the law.
- There will normally be a qualified first-aider in your party. Make sure you know who it is and report any injury or illness occurring during the field-trip.
- All persons employed by the College (full-time and part-time) have a duty to take reasonable care to avoid injury to themselves and/or others resulting from their acts or omissions.
- Students should make every effort to sustain the College's good name and reputation. In particular you should have consideration for others in the field, hotel and any other accommodation and should avoid actions that may compromise the safety, well-being or enjoyment of others. It should be clear that students not conforming to the standards required might be barred from participation in field courses. Leaders may also refuse to allow ill equipped students to engage in particular activities since they have a responsibility to the College to ensure that all students observe the provisions of Safety Codes etc.
- A student who fails to maintain a reasonable standard of behaviour, or who compromises safety, will be dismissed from the field course and referred to the College Authorities. We reserve the right to refuse admission to the field class if we consider that a student attending the course will compromise safety.

### 3. MEDICAL CONSIDERATIONS

- All persons planning to engage in fieldwork must be physically fit and able to cope with the conditions likely to be encountered. Most fieldwork involves some walking over rocks or other rough terrain.

- Even a modest amount of walking can be unsuitable for those suffering from certain conditions. If in doubt, students should consult their doctor in advance of agreeing to take part in fieldwork.
- Students must inform their lecturer of any medical condition that might affect their ability to undertake fieldwork. Medical conditions that require special diets need to be revealed to the responsible officer of the School in advance of any fieldwork in order that adequate provision can be made available.
- For fieldwork in the U.K. it is essential to have had a course of tetanus injections.
- For trips abroad there may be specific inoculation requirements. Birkbeck reserves the right to request medical confirmation of fitness to participate in a field trip (eg a letter from a GP).
- Weil's Disease (leptospirosis) constitutes a serious hazard. This disease is usually contracted from water in canals, stagnant pools, landfill sites and bodies of slow-moving water that have been contaminated with urine from infected rats. Domestic animals, cattle and pigs can also pass on this disease. Treat any still or slow moving water as suspect and ensure that all cuts and abrasions are adequately covered with waterproof dressings. Avoid contact with water known or suspected to be infested with rats.
- Over-exposure to natural sunlight can cause skin cancer (melanoma). Skin types are divided into six categories according to how they react to sunlight: 1. never tans, always burns 2. tans with difficulty, burns easily 3. tans easily, burns rarely 4. always tans, never burns 5. genetically brown skin 6. genetically black skin. The risk of skin cancer varies with skin type, being greatest for type 1 and least for type 6. If a student has skin types 1 or 2, **they must wear protective clothing or use sunscreen cream**. Cloud cover does not much diminish, while blue sky and reflection from snow or water greatly increases, exposure to UV radiation. The risk of developing skin cancer is a long-delayed hazard of sunburn.

#### 4. PROTECTIVE CLOTHING AND EQUIPMENT

- Wear adequate clothing and footwear for the type of weather and terrain likely to be encountered.
- Shirt, loose-fitting trousers, warm sweater, brightly coloured anorak/cagoule with hood, are normally desirable in the U.K. A woollen hat (in addition to hood of an anorak/cagoule) is useful in winter or on high ground. Cagoule and waterproof over-trousers are desirable for wet weather. Beware of sunstroke/heatstroke on sunny days; keep your head and neck covered and ideally wear a loose-fitting long-sleeved shirt.
- Jeans are generally unsuitable because they give insufficient protection if you get wet and are then subjected to a cold wind, but can be adequate if waterproof over-trousers are carried. In upland or coastal situations always carry additional clothing e.g. jumper and socks in addition to that being worn.
- Walking boots with rubber mountaineering soles are normally essential. Sports shoes are unsuitable for mountains, quarries and rough country. Wellington's are generally best reserved for walking through shallow water, peat bogs and the like.
- An adequate rucksack that leaves both arms free should be carried (duffel bags etc. are totally unsuitable). A thermos or equivalent may be useful.

#### 5. THE NATURAL ENVIRONMENT

- Do not climb trees, cliffs, rocks or crags, unless this has been approved as an essential part of the work.
- Take special care near edges of cliffs and quarries, particularly in gusting winds. Avoid working under unstable overhangs.
- Avoid loosening rocks on steep slopes and do not rely on vegetation for support when ascending slopes. Do not work or climb directly above or below another person (If you accidentally dislodge a rock, however small, shout **'BELOW!'**).
- Do not run down steep slopes (or screes) or roll rocks down slopes or over cliffs for amusement.
- Beware of landslips and mudflows occurring on clay cliffs and in clay-pits or rock-falls from any cliff. Take particular care in areas of land-fill, spoil tips etc. Beware of overgrown shafts in mining areas.

- Take great care when walking or climbing over slippery rocks below high water mark on rocky shores, particularly where there is growth of seaweed (more accidents, including fatalities, occur along rocky shores than anywhere else).
- Take care in crossing drainage channels on salt marshes etc. where deep mud may be encountered. Beware of sludge lagoons e.g. smelter wastes (mudflats and sludge lagoons are often thixotropic i.e. you may start to sink and become trapped if you stand still).
- Working in rivers and lakes is usually hazardous because of currents and variations in the substratum. try to avoid crossing bogs of any type, especially if alone, or frozen lakes, streams etc. unless approved as an essential part of the work.
- Avoid touching machinery or equipment in quarries, building sites and similar places and also on farmland (accidents occur every year as a result of the misuse of agricultural machinery). Avoid walking through plantations of young trees or growing crops because of the damage caused.

## 6. BIOLOGICAL HAZARDS

- Wear safety goggles (or safety glasses with plastic lenses) for protection against flying splinters when hammering rocks, for example, to obtain lichen specimens (don't use geological hammer as a chisel and hammer it with another; use only a soft steel chisel). Avoid hammering near another person or looking towards another person hammering.
- Fresh waters may contain pathogenic bacteria, as a result of pollution, so that any cuts should be promptly treated with antiseptic ointment. Carcasses of drowned animals should be handled only when absolutely necessary and with appropriate precautions.
- Organisms considered to be poisonous, whether plant or animal, should be handled only when wearing appropriate protection e.g. rubber gloves. **It is also recommended that thick gloves are worn when live animals are being handled, as a protection against bites and scratches.**

## 7. AREAS WHERE SPECIAL CARE IS REQUIRED

- Certain biological field-work, notably in palaeobotany or palaeozoology, will require special safeguards because of the localities visited.
- Wear a safety helmet (preferably with chin strap) when visiting old quarries, cliffs, scree slopes etc. or wherever there is a risk from falling objects (it is obligatory to do so when visiting working quarries, mines and building sites).
- Never pick up explosives or detonators from rock piles (if found, inform the management immediately) or on military ranges.
- Comply with safety rules, blast warning procedures and any instructions given by responsible officials (also keep a sharp look-out for moving vehicles etc.).
- Railway cuttings and motorways are not open to biologists unless special permission has been obtained from the appropriate authorities. Beware of traffic when examining verges or cuttings on other roads.
- Forest observation towers should not be climbed without permission.

## 8. CONSERVATION

- It is important that biologists observe the Country Code at all times. It is particularly important not to smoke or light fires in areas of high fire risk.
- The protection of animals and plants is included in the Wildlife and countryside Act 1981. It should be noted that:
  - a) It is an offence to disturb breeding birds, particularly those on Schedule 1.
  - b) It is illegal to uproot any wild plant without the permission of the landowner (some plants are specifically protected from any damage).

## 9. INSURANCE

- Although the College has appropriate statutory insurance cover for employers' liability and for public/products liability, this does not extend to health, travel or property insurance for yourself as a course participant.
- **The College insurance does not cover you for death, injury, illness or disease, or for loss or damage to your property. Thus, personal insurance is recommended for fieldwork in the U.K. (e.g. personal risk insurance)** and is considered essential when going abroad (travel and health).

## 10. IN CASE OF ACCIDENT

- Don't panic. Assess the situation without endangering your own life or that of others. Don't move the victim. Identify the conditions which might cause immediate death (breathing stopped, heart stopped) or danger (severe internal bleeding, head injury, spinal injury, chest injury, severe shock, unconsciousness). If first aid qualified, give immediate appropriate and adequate treatment. Never leave victim unattended.
- If first aid is not available, use the international distress signal. Give six blasts of a whistle, six shouts, six flashes of a torch, six flashes of a mirror, or six waves of a brightly coloured cloth. Pause for one minute. Repeat.
- If you are in a party of 3 or more, send at least 2 members for help. You should have the following information when going for help (write it down): location of accident, such as map reference, local landmarks, whether in open or on cliffs, gullies, etc time of accident how many are injured name(s) and sex of victim(s) nature of injuries whether victims are conscious or unconscious whether victim has specific problems (eg diabetes) first aid action taken

## PART II

For all students undertaking fieldwork alone (exceptionally), **in pairs or small groups (e.g. under-graduates doing independent projects or post-graduate students)**.

ALL the provisions in Part I also apply to independent fieldwork.

However, since the nature of the training involves an important element of self-reliance and the ability to cope alone, students in this category are necessarily responsible for their own safety in the field, and the following further advice is offered:

1. Discuss likely safety problems or risks and check equipment, with the Supervisor, before departure or commencement of work.

Rock-climbing, caving and underwater swimming may be useful in research activities, but are dangerous for the untrained or ill-equipped. They should only be undertaken with the prior approval of the Supervisor and Head of Department.

2. Plan work carefully, bearing in mind experience and training, the nature of the terrain and the weather. Be careful not to overestimate what can be achieved.

3. Learn the mountain safety code, and in particular the effects of exposure.

4. Don't go into the field without leaving a note and preferably a map showing expected location and time of return. Never carelessly break arrangements to report your return to local people.

5. Check weather forecasts. Keep a constant lookout for weather changes. Do not hesitate to turn back if the weather deteriorates. Local weather forecasts are more useful than general forecasts (see local telephone directory for the correct number to ring).

6. Know what to do in an emergency (e.g. accident, illness, bad weather, darkness). Camp near habitation, if possible.

7. Carry at all times a small first-aid kit and some emergency food (chocolate, biscuits, mint cake, glucose tablets). A survival bag (or large plastic bag), a whistle, torch map, compass and watch will be required when in remote areas.

8. Avoid getting trapped by the tide on inter-tidal banks or below sea cliffs. Consult tidal charts prior to any shoreline work and identify headlands and promontories that may cut off an exit with incoming tides. Beware of rip tides and undertow. Take care not to get stranded on salt marshes (remember drainage channels fill before the general marsh is covered). Obtain local information about tides and currents. Pay particular attention to tidal range. For sea cliff study, local advice can be obtained from HM Coastguards. Avoid quicksands.
9. If sampling regularly in fresh water or in soil a valid anti-tetanus vaccination is required.
10. Know the international distress signal: 6 whistle blasts, torch flashes, shouts or waves of a bright-coloured cloth. Leave one minute pause before repeating.
11. Always try to obtain permission to enter private property, and follow the recognised procedure for visits to quarries etc. Be careful to report after completion of work.
12. Especial care must be taken in wetland habitats or when working offshore. After wet and stormy weather sea cliffs become more unstable and prone to landslides. Water is not to be ventured upon unless appropriate buoyancy aids such as lifejackets are worn. Small boats should only be operated by experienced/qualified and authorised persons.
13. If using a vehicle, make sure appropriate insurance cover is in operation.
14. Ensure you are conversant with the particular safety and health requirements if you work in a new environment, such as a research vessel or abroad in tropical, desert or arctic conditions. In addition, special codes of practice exist for working in forests, for electric fishing and for use of traps and other catching devices for animals.

***Further advice on safety is given in the following:***

Mountain Safety: Basic precautions, publ. Climber and Rambler, Perth. PH1 5TT or 56 Fleet Street, London EC4.

Safety On Mountains (1975) publ. British Mountaineering Council, Crawford House, Precinct Centre, Manchester University, Manchester M13 9RZ, distributed by Cordee, 249 Knighton Road, Leicester.

Guidance Notebook on Safety in Fieldwork (NERC)

Safety in Biological Fieldwork - Guidance Notes for Codes of Practice (2nd rev. ed. 1983) publ. Institute of Biology.