

## Health and Safety around Honeybees

Health and Safety in Beekeeping should be approached, like any other activity, by using your common sense to think about what's involved in the job before starting. In Health & Safety terms this is known as carrying out a Risk Assessment, the purpose of which is to identify any hazards and the likelihood of something or someone being injured by those hazards. Once these have been identified a plan of action can be devised for minimising the risk of accident or injury, and what action should be taken in the event of such an occurrence.

The most common hazards connected with beekeeping are from procedures and products used in normal hive manipulations such as slips trips and falls, stings, back strains, fire, burning, poisoning and asphyxiation. It all sounds very dangerous when put like this but in reality accidents don't happen very often, all you have to do is apply just a little common sense!

### Where Risks Occur

- Apiary Location – proximity to other people, animals and property
- Access in and out of the apiary
- Opening & Examination of Stocks
- Transporting Hives
- Use of Potentially Harmful Substances
- Visitors to the Apiary
- Health Concerns
- Sting Reactions
- Honey Extraction and Preparation
- Collection of Swarms & Observation Hives

### Risks from Bees

Honeybees like bumblebees, wasps and hornets have a stinger at the posterior end of their abdomen. The sting which is connected to a venom sac, is a modified egg-laying tube. So if you are stung, it was a female insect that did it. In general wasps are involved in about 70% of the stings to humans and they are often mistaken for bees because of their yellow and black bodies.

Most stinging insects can sting more than once, the exception is the honeybee (the female worker bee) which has a barbed sting. When the worker bee escapes after stinging a person, the sting and attached venom sac are ripped out of the bee and stay in the victim's skin; the bee will die shortly afterwards.

### Hazards of being stung

Generally, most stings only result in a temporary injury - pain, swelling, redness and itching around the sting site. However, sometimes the effects can be much more severe – and can even be life-threatening, depending on where you are stung and whether the injured person has allergies. Summon medical help if the sting is near the eyes, nose or throat.

**Normal Reaction** - Most people experience local effects like pain, swelling, itching, and redness around the sting site. Painful stings in the mouth and throat can result if you accidentally swallowed a wasp or bee (e.g., drinking a soft drink from a can that a wasp had entered).

**Mild Allergic Reaction** - Some people will experience swelling in a larger area, not just immediately around the sting site. They may develop hives but no systemic effects (effects in the body away from sting site like effects on breathing and blood flow). This mild allergic reaction can last a few days. The area will be sore and uncomfortable but one should not give in to the temptation to scratch the stung area. Scratching may cause a break in the skin which could lead to an infection.

**Severe Allergic Reaction** - In rare cases, a **severe allergic reaction** can occur. This situation is serious and can cause "**anaphylaxis**" or anaphylactic shock. Symptoms of anaphylaxis may appear immediately or within the first 30 minutes. The symptoms include:

- hives, itching and swelling in areas other than the sting site,
- swollen eyes and eyelids,
- wheezing,
- tightness in the chest and difficulty breathing,
- hoarse voice or swelling of the tongue,
- dizziness or sharp drop in blood pressure,
- shock,
- unconsciousness or cardiac arrest.

The "**anaphylactic reaction**" can occur the first time someone is stung or with subsequent stings. Death can occur within 30 - 45 minutes of being stung. If you see any signs of this reaction, or even if you are not sure, get medical help immediately.

People, who have had severe allergic reactions to insect stings in the past, will probably have a similar or worse reaction if stung again. Bee sting kits may be available to allergic people through their Doctor.

## The Risks

**To You The Beekeeper** - There is always a risk of being stung when working around honeybees, for beekeepers it is an occupational hazard. In general honeybees, bumblebees, wasps and hornets will not attack and sting unless provoked or physically attacked (or think they are being attacked). Normal hive manipulations creates a great disturbance in the colony making the bees tetchy and prone to sting anyone in close proximity.

Honeybee colonies differ in temperament some are well behaved and will tolerate fair amounts of disturbance, while others are ready to meet the beekeeper at the apiary gate, will harass them all the time they are there, and then escort them out to the car!

**To Other People** – As well as the risks to the beekeeper in the apiary, there are risks to other people and property in the vicinity of the apiary. Flight paths are often quite direct and may take bees straight into areas where people are going about their normal business. Stinging occurs when individuals try to wave away bees in a manner that looks threatening.

There is always a risk to humans when apiaries are sited near to public areas such as pathways where adults, children and animals pass. The latter two are often inquisitive and may get closer than is safe.

**To Property** - Honeybees must void their bowels the same as any other living creature. They do this mostly in the relative vicinity of the apiary (up to 50 metres or more) and can cause soiling of laundry, windows and vehicles.

**Note:** Any sting to a member of the public will be from your bees, even if it was a wasp!!

## Risk Management

The risks involved in beekeeping can be minimised to an acceptable level by following a few simple rules.

- Bee Prepared!
- Site apiaries well away from areas where people and animals will be in close proximity.
- Keep the apiary tidy and free from debris, and maintain clear access ways.
- Lift only what you are comfortable lifting, get assistance if necessary.
- Always wear the correct PPE (Personal Protective Equipment) such as hat, veil, suit, gloves and footwear when working in the apiary. Make sure you maintain them in good condition and ensure you are completely bee-proof before entering the apiary.
- Ensure there are barriers to lift bee flight paths above areas where people and animals will be.
- Avoid working on hives when bees are not likely to be in good humour e.g. too cold, colony structure upset, wrong time of day, recent disturbance.
- Avoid working on hives when there is a risk of members of the public being in the vicinity
- Exercise care when using a lighted smoker particularly during long dry spells.
- Always follow manufacturer's instructions and approved codes of practice when using chemicals and products for disease control and hygiene, and only use approved products.
- Know what you need to do in the event of an accident, and Bee Prepared!

Be prepared for all eventualities and assess the risks before working with honeybees. If in doubt please contact the EMBA for advice. Website: <http://www.edinburghbeekeepers.org.uk>