

#### **British Winters**

The British weather is predictably unpredictable, so in some years the garden pond may only have thin ice for a few days, whilst in others, thick ice and snow can blanket ponds for weeks at a time. For this reason there is no guaranteed best approach for winter preparations. They may be unhelpfully over-the-top in a mild winter, or insufficient in a harsh winter.

#### **Not always a problem**

If the pond entered the winter in a generally healthy state, without an excessive build up of decaying leaves and debris on the base, and with moderate stocks of fish, there should be few problems. Make sure that any submersed pumps are kept deeper than possible ice levels (but above debris on the pool base).

Cold water usually has a good amount of oxygen dissolved in it, and any fish and wildlife, sluggish in the cold, will be using up less oxygen. In these cases the pond inhabitants should be able to cope with the surface being sealed by ice for a few days without coming to any serious harm.

#### **Fountains and features**

If icy weather is forecast, it is usually best to turn off fountains and pumped ornaments. Check any instructions with self-contained water features, as very shallow features and those in materials that might be damaged by ice may need to be drained and the pump stored inside. In general, as long as submersed pumps are below the level of any ice, they should come to no harm.

#### **Pumps and filters**

During short spells of freezing, if you have a pump or filter still running, leave them on. The water movement will help to keep an area free of ice and will also maintain biological filters.

#### **Prolonged cold**

Pumps, filters and UV units are less likely to suffer frost damage when kept running. However, in those cases where prolonged freezing ices up waterfalls, causing water loss, you may be forced to turn pumps off.

If you have to turn off externally mounted pumps, filters or UV units, drain them down, otherwise water inside the units will freeze and could split the casings. Note that biological filters that are turned off or drained in the winter can take three to six weeks to become active again when restarted in the spring.

If you have no pump running, and the surface stays completely sealed for more than a few days, problems might arise for wildlife in the pond. The oxygen levels may start to fall, and dissolved waste gases may start to build up in the water. This is especially a problem where the pond is heavily stocked with fish; has a lot of debris on the base; or has snow lying on the ice, stopping light from reaching underwater plants.

Keeping a hole open in the ice can reduce this problem. Don't smash the ice, as the shock waves can upset fish. Melt a hole by pouring on boiling water from a kettle at least twice a day. Or, better still, use one of the small floating pond-heating units or a small air-bubbler to keep an area ice-free. The open water will also be valued by birds and other garden wildlife.

If the pond smells stale after the ice has melted, carry out a partial water change using tap water conditioner if necessary. Contact us if you would like a post-winter check-up on your fish and equipment.