

## Marine algae

In general, the collection of marine algae (seaweeds) requires specialist diving skills. However, the collection of littoral algae can be undertaken by most people, with due awareness of the risks inherent within the marine environment. Algae that occur in deeper waters can only be collected by snorkelling and/or scuba diving. Although many collections can be made by hand, tools are generally essential. Collected specimens of different seaweeds should be kept separate while collecting. The specimens need to be fertile (with reproductive structures) because these features are required for identification. These reproductive structures are sometimes visible without a hand lens, because they have different coloration on the seaweeds, either on the surface or on special branches of the thalli (body of the alga) (National Taiwan Museum 2006). In addition, knowing the lifecycle of seaweeds can help with the identification of the species (Millar 1999–) and can assist the collector when selecting appropriate specimens. Hence, it is important to observe and record all details about the form, colours, numbers, substrate, location, and the surrounding environment.

As for freshwater algae, storage and preservation of marine algae require specialized treatment. Therefore, advice from experts should be sought on how to manage the specimens of different algal groups. Freshly collected algae should be kept cool after they are placed in plastic bags or plastic bottles (National Taiwan Museum 2006).

### (iii) Fungi.

When collecting fungi, it is important to place the specimens in a flat-bottomed basket or open box to minimize the amount of damage that may be caused to these delicate specimens. Each collection should be carefully wrapped in newspaper or, especially for the smaller and more delicate species and microfungi, placed in individual containers. Never use polythene bags. For agarics, it is essential to collect the entire 'fruiting body' (what most people think of as a mushroom, puffball, or toadstool), the base of the stipe ('stem'), and the remains (if any) of the cup- or sac-like structure (volva) occurring at the base of the stipe of agarics. A spore-print from at least one specimen of each collection is useful for larger fungi (see Bridson and Forman 1998; Major 1975).

## 11.2.2 Collecting plant disease specimens

When collecting plant material that appears to be affected by diseases, such as rusts, smuts, leaf spot, galls, cankers, and other diseases, these collections can be pressed and dried (see §11.5). It is important to include a collection of the diseased (host) plant that is adequate for identification. Make sure that as many identifiable stages of the disease are represented by the collection. Since it is important to have some understanding of the possible type of disease affecting the plant, further detailed information should be sought (e.g. Schubert et al. 1999 and literature cited therein).