

FAQ

Q1. What's the difference between a toadstool and a mushroom?

Fungi with their liking for dark, damp habitats, where decomposition is taking place, generated by association, in past times, a deep popular mistrust. Even today, when there is a revival of interest in natural history, traditional folklore persists. Early authors writing about the mythical associations of fungi with so-called undesirable creatures like snakes and toads generated the term 'toadstool'. Even some relatively modern authors have used 'toadstool' to refer to any mushroom that is poisonous. As both edible and toxic species sometimes occur within the same genera, the term is of no practical value and, indeed, can be positively dangerous. With the discovery that all fungi reproduce from spores the term 'mushroom' (Gr. mykes = mushroom) was applied to those fungi that form a typical mushroom type fruiting body with stem, cap and gills. Nowadays it is applied to all the larger fungi. All in all, the two terms have no precise meaning although 'mushroom' is used in the general popular literature.

Q2. How do you tell an edible mushroom from an inedible one?

There are many myths surrounding the edibility or otherwise of mushrooms e.g. if cats and dogs eat them then they are safe for humans also (NOT necessarily so!). There are no magic simple tests to tell an edible mushroom from an inedible one. The toxicity of fungi is a genetic characteristic of the species and the only way to distinguish poisonous and edible mushrooms is to have an exact identification of the fungus in question. The necessary task of identification will allow avoidance of the poisonous and enjoyment of the edible.

Q3. What are those glowing fungi in my back yard?

Omphalotus nidiformis is probably the most common and best known bioluminescent fungus in Australia. There are others, some *Armillaria* species produce luminous mycelia, while with *Mycena chlorophanos*, found in the tropical and sub-tropical rainforests of eastern Australia, both mycelia and fruit body are luminous. The luminescence of all these fungi is produced by the reaction of an enzyme, luciferase, with luciferin, altering the form of this phosphate-rich compound and in the process light is emitted. Interestingly, this same light producing reaction is found in the luminous bacteria, glow-worms, fireflies and fish.

Q4. Where do I go to get my fungi identified?

There are a number of books available to assist in this regard, while government agricultural departments, and the like, museums and universities usually have access to competent mycological resources and authorities for identifying questionable fungi. There are no shortcuts to reliably distinguish between edible and inedible mushrooms; the only foolproof way is to be able to identify them on the basis of biological characteristics.

Q5. The mushroom I found is exactly like the one I/grandma/ etc. used to collect back in the old country. Is it the same?

While there are many cosmopolitan species of fungi, being found both overseas and in Australia, we lack a general picture of our fungal flora and have very little information on the characteristics and distribution of individual species within Australia. So perhaps the best advice to avoid mushroom poisoning by eating 'look-a-likes' is never eat any mushroom unless you are sure of its identity and be able to identify the fungus in a careful and systematic way to the species rank.