

## Norm's Notes "Fairies In Your Garden"

by Norm DeNeal

Many gardeners have found fairies in their garden. These fairies, which mostly live underground, transform the garden. Yet gardeners apply solutions of vinegar, baking soda, or ordinary fungicides to kill off their fairies.

Well, before you think I'm daft, the fairies to which I refer are commonly called "fairy rings". The rings appear in lawns as outwardly growing brown rings that persist for years. Actually, the rings are a fungus *Maramius spp.* (usually *M. lepiota* or *M. agaricus*), a basidiomycete pathogen that expands outward in its search for nutrients. If you were to dig up the ring you would find that the "root" system, actually mycellia looking like soap flakes, which can be over a foot deep and within the entirety of the inside of the ring.

The reason one sees a ring in the lawn is that the most active part of the fungus is out-competing the grass for water. The grass consequently temporarily dries out leaving the telltale brown ring. The simple solution is to heavily water the ring so that the grass and fungus both have enough water to co-exist. A careful observer will notice that the grass just inside the ring is a richer green than the grass just outside the ring. That is because the fungus is metabolizing nutrients that the grass was not able to, and in its wake the fungus is leaving broken down organics that are now available to the grass. This is a common process that fungus provides: breaking down complex organic material on and in the soil to simpler compounds that green plants can use. Mushrooms in a flower bed provide the same valuable service. Yet some gardeners go to great lengths to destroy the mushrooms that are not only making new nutrients available by their presence, but also nutrients that will result in their death and decay.

But for those who insist in killing off their fairy rings there is a fungicide that the EPA approved about eight years ago that will indeed kill the fungus. It is commercially called "Prostar" and is applied twice, the second time about 21 to 38 days after the first application. About 2.2 ounces of the white soluble powder makes 3 to 5 gallons of solution. This fungicide is available in most nurseries.

Nevertheless, I think it better to value these fungi. They do far more good than harm. And they should be respected not only because they have adapted and survived far longer than green plants this planet, but also surprisingly can be the largest living organisms on earth often being several square miles in size.