

# Friends of Lake Gwelup Newsletter

## Winter 2006

<http://home.vicnet.net.au/~folg/> Ph Betty: (08)9444 5640

*This is the first year that Lake Gwelup has not dried out since 2000 and for the second half of last century, records indicate that the lake effectively dried out three times. Prior to clearing and land development, records indicate that the wetland "was much wider and it is thought that that the region would have been a non-permanent swamp land and generally dried out completely at times".*

### **Some Brief Notes:**

*Few may be aware that the City of Stirling has presented its latest **Lake Gwelup Management Plan**, which is valid for the next 5 years. Copies should still be available through the City. If you live in the area you should acquire a copy and see what the City has proposed. Even though it is now closed for comment you should feel welcome to air recommendations.*

*Spring is somewhere around the corner (though we may have missed winter!) and the Rainbow Bee Eaters will arrive for a six month breeding season starting about October. These birds are a local spectacle and nest in burrows, open areas or earthen banks. One should be careful of where one treads or exercises their inquisitive animals.*

*Our monthly meetings occur on the third Monday of every month. We normally discuss strategies for the future and present situations at the lake, its environs and naturalist activities on a broader scale. Anyone members or future members are welcome.*

*Coming up in the next few months we have two Bush Care Days, evening and days walks. For the bush care days the aim is to further reduce weeds such as Lupin and Pellargonium. This is a lovely way to spend an hour or so on a Sunday morning in the bushland.*

- From the Presidents desk.

### **Fungi**

Occurring in nearly every environment on the planet, fungi have very important roles in every

ecosystem and have been used extensively by humans for thousands of years. To name a few, the smallest of yeasts are utilised for fermenting alcoholic beverages, bread making and cheese production. While other larger species are cultivated and harvested for culinary purposes.

The great decomposer, fungi are primary in recycling organic materials such as plant and animal matter in the bush and your backyard. Having a fondness for moist places and digesting their food externally may have led public appeal to see them as not being a very charismatic organism.

Naturalists often see the fruiting bodies of fungi (mushrooms, moulds and their kind) as the "winter wildflower" as their displays at this time can be brilliant when conditions are right. Although the fruiting bodies are the most conspicuous part of the organism, they may make up only a very small portion of the entire fungal body. This less conspicuous part - that often lies beneath the surface - is called mycelia.



*Paxillus: mycorrhizal fungi*

Mycelia (*pl.* mycelium) are effectively the roots of the fungi and this multicellular body is composed of long networks of hollow tubes called hyphae. The hyphae often aggregate in a dense network and grow through the medium in which the fungus eats. You will have seen mycelium if you ever owned a mushroom kit.

Many Australian species of fungi are yet to be discovered and named, and there is no modern comprehensive guide to them, although there are extensive catalogues for most groups. Over the past few years' interested groups (consisting mainly of volunteers) have been taking part in mapping and recording fungi species in conjunction with the [WA Herbarium](#).

"It is estimated that there may be 250,000 species of fungi in Australia, including about 5000 mushrooms and similar types. About 660 Australian species of ectomycorrhizal fungi

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(most of which produce large fruiting bodies) have been named. Perhaps only 5-10% of Australian fungi have been named and another 10% are known, but not named" – Dr Neale Bougher.

The largest organism in the world is purported to be a single *Armillaria ostoyae* individual growing in the forest in eastern Oregon US, which covers as much as 2200 acres.

### ***Fungi and their relationship to plants***

Most ecosystems would probably continue to function should the larger animals suddenly disappear, but if the fungi or insects disappeared these ecosystems would inarguably soon collapse. Largely unseen, fungi have a crucial role interacting with seed germination, plant development, decomposition of wood, dung and plant litter. Many fungi have an inseparable union or symbiotic relationship. This relationship is well known in the case of lichen where the plant component provides sugars from and the fungi provide dissolved nutrients to the plant. This partnership is useful where conditions or soil nutrients are poor. In fact the roots of most vascular plants have evolved in association with soil fungi.

Many larger plants and trees benefit from this type of symbiosis (known as *mycorrhiza*) where the fungi mycelium link with the plant roots exchanging dissolved nutrients and provide a fungal coating and create a protection against parasitic fungi in the soil. The root system and the fungus mycelia create a sphere in which living conditions differ from that of the surrounding soil. The root systems of neighbouring trees of the same or different species are often connected by shared mycelium.

Orchid seeds are tiny and lack the built-in nutrition of bigger seeds, they can germinate but not develop further than into a few celled state without the interaction of specialised fungi in the soil which provide the necessary nutrient substratum. Accordingly, orchids are parasites, if only in the first phase of their life. Later in their life, orchids have no further need of the fungus and the orchids may absorb it - if this action does not take place the fungus spreads and becomes parasitic. This is why only a small percentage of seedlings develop in many orchid species.

Fungi are a crucial component of ecosystems, because they transport store, release and recycle nutrients. In doing so, they interact in many ways with other organisms. They're largely unseen but crucial roles are achieved in

many ways as indicated by the great variety and types of fungi. Some fungi types obtain their energy from nutrients of living organisms and parasitic fungi of this type invade and commonly kill trees, insects and other organisms, including other fungi.

The continuity of quality soil and water levels are vitally important for all growing things - small or large. One organisms associations with another organism sustains an ecosystem and maintains a healthy environment. Breaking these associations is a cause for environmental deterioration. Foxes and cats have assisted in the elimination of marsupials such as potterroos, bandicoots and woylies which help to spread some fungi about and soil acidification will further cause changes in the local ecosystem.

### **Coming Events**

#### **Bush Care Days**

Sunday, August the 20<sup>th</sup>  
Sunday, September 17<sup>th</sup> starting at 9 a.m. through to 12 noon.  
See our website or the Stirling Times Coming Events for details.

#### **Guided Morning Walk**

Sat 19 Aug 8:00am

#### **Guided Night Walk**

Fri 15 Sept 7:30pm

For all walks meet at the Scout Hall off Huntriss Rd. Karrinyup

#### **Interesting web sites**

Perth Urban Fungi Project

<http://www.wanats.iinet.net.au/fungigroup.html>

Florabase

<http://florabase.calm.wa.gov.au/>

Tony's Orchid Page

<http://members.iinet.net.au/~emntee>

#### **Welcome new members:**

Liz Ledger

Robert Willis

Tina Baldwin

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# Friends of Lake Gwelup Membership Form.

Receive the *Friends of Lake Gwelup* newsletter, which has special feature articles on flora, fauna and what's happening as well as dates for guided nature walks.

*Friends of Lake Gwelup* is a non-profit community group and receives funding from membership fees alone. Your membership fee helps with postage and stationary required to continue the work *The Friends* provide.

## Membership Type (Please Circle)

### Membership Fees

**Single/Family**      **\$5.00**

**Concession**      **\$3.00**

|                              |                   |
|------------------------------|-------------------|
| Name                         |                   |
| House number and street name | Suburb & Postcode |
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