

# LANE COVE BUSHLAND PARK

by Ray and Elma Kearney  
The first Australian Fungal Heritage site

In November, 2000, the first fungal heritage site for Australia, located at Lane Cove Bushland Park (LCBP), was listed on the Register of the National Estate, under the Australian Heritage Commission Act, 1975.

Ray and Elma Kearney, members of and on behalf of the Sydney Fungal Studies Group Inc. (SFSGI) prepared the application submitted for the listing for Lane Cove Council (the owner and manager of LCBP). The submission was based primarily upon the total number of species of *Hygrocybe* found there, known unofficially to exceed 25, easily ranking the site as one of heritage value.



Previously, in January 1999, two applications under the New South Wales Threatened Species Conservation Act, 1995 were submitted by Ray and Elma Kearney, on behalf of the SFSGI to the Scientific Committee established under the Act. The Determination resulted in the *Hygrocybe* Community at LCBP being legislated as an Endangered Ecological Community. A Final Determination is currently being considered on the second application that seeks to list at least six holotypes of *Hygrocybe* as Rare Native Species.



## Lane Cove Bushland Park (LCBP)

LCBP is a site in the middle of a high-density residential area about 4 km from the Sydney G.P.O. Centred about a tributary of Gore Creek, the warm temperate gallery forest has an assemblage of at least 25 species of the family Hygrophoraceae (Fungi, Basidiomycota, Agaricales, Hygrophoraceae).

The species in the community were formally identified and classified by Dr A. M. Young (1999).

The following species have been recorded in the community :

*Camarophyllopsis kearneyi*

*Hygrocybe astatogala*

*Hygrocybe aurantipes*

*Hygrocybe cantharellus*

*Hygrocybe chromolimonea*

*Hygrocybe graminicolor*

*Hygrocybe involutus*

*Hygrocybe kula*

*Hygrocybe anomala* var.

*ianthinomarginata*

*Hygrocybe aurantiopallens*

*Hygrocybe austropratensis*

*Hygrocybe cheelii*

*Hygrocybe erythrocala*

*Hygrocybe helicoides*

*Hygrocybe irrigata*

*Hygrocybe lanecovensisi*

<u><i>Hygrocybe lewellinae</i></u>	<i>Hygrocybe mavis</i>
<u><i>Hygrocybe miniata</i></u>	<u><i>Hygrocybe reesiaae</i></u>
<i>Hygrocybe sanguinocrenulata</i>	<u><i>Hygrocybe stevensoniae</i></u>
<u><i>Hygrocybe taekeri</i></u>	<u><i>Hygrocybe virginea</i></u>

Three other new species ( *H. griseoramosa*, *H. collucera* and *H. rubronivea* ) have been added to the list. Other species in the Community have been collected but remain undescribed and unclassified while other species or variants of *Hygrocybe* may still be present.



In addition to the above three new species, LCBP is the holotype site for *Hygrocybe aurantipes*, *Hygrocybe austropratensis*, *Hygrocybe lanecovensensis*, *Hygrocybe anomala* var. *ianthinomarginata*, *Hygrocybe reesiaae* and *Camarophyllopsis kearneyi*.

LCBP may best be described as a warm-temperate wet sclerophyll forest. It is evergreen, hygrophilous in character in the upper portion and rich in thick-stemmed lianas. Vegetation is a mixture of open forest and rain-forest species, but not luxuriant. The water course is the location of a "gallery rainforest" surrounded by often steep-sided ridges and gullies which carry run-off rainwater, eventually emptying into Sydney Harbour.

The area records a rainfall of more than 1200 mm, the wettest months being January to July. Extremes of temperature are infrequent: average maximum summer temperature is around 24°C and the average minimum 18°C . Average winter temperatures are: maximum 16°C, minimum 7°C.

Two major rock types are present: Wianamatta shale and Hawkesbury sandstone. The shale produces deeper and more fertile clay soils, which also retain more water. The sandstone produces sandy, stony soils, which dry out readily and tend to be associated with steep slopes and rock outcrops over which drip water into leaf litter below - ideal conditions for certain species of *Hygrocybe*.

The unusual combination of both soil types, coupled with the topography of the site, has created a range of unique habitats and ecosystems, which support the different colourful species in the family of Hygrophoraceae.



For more than a decade, members of the SFSGI had recorded at the site a diverse range of fungal species, including many of the genus *Hygrocybe*. However, most of the latter species were unclassified, although photographic and field records were made. By 1997, more than 20 different species of *Hygrocybe* had been documented photographically by the amateur mycologists Ray and Elma Kearney to add to previous records kept by Mr Van Klaphake, Bush Regenerator of Lane Cove Council and also a member of the SFSGI.

These successful prototype initiatives, culminating in the Lane Cove Bushland Park being listed as a National Heritage site, has depended

upon the collaborative efforts between amateur mycology enthusiasts and a professional mycologist to synergise initiative, analytical insight and expertise to bring about landmark decisions for mycology and conservation of fungi.

## **Bibliography**

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