10 years of photo-observations from Wundabiniring Brook

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CV

Allan Wills graduated from University of WA in 1985 with an Honours degree Botany.
Technical officer 1987-1991 for CALM on research into *Pinus radiata* nutrition and water use.
Technical officer 1992 to present with CALM and DEC assisting in a variety of forest entomological research projects including:

- Fire effects on Jarrah Leafminer
- The effects of rainfall gradients on canopy invertebrate faunas of jarrah and marri.
- Canopy invertebrate faunas of Tasmanian bluegum plantations as an early survey of potential pests.
- The FORESTCHECK project, monitoring invertebrate faunas of the jarrah forest to determine their responses to silviculture and as benchmark to detect future effects of climate change.
- Walpole small grain fire mosaic project looking at the effect of scale and frequency of fire within landscapes on invertebrate biodiversity.
- Other invertebrate research has been on earthworms of the Porongurup Range and Swan coastal plain.

ABSTRACT

Following concern of residents of the Talbot area west of York at the deterioration during the 1990's in health of local Wandoo, Wandoo at Wundabiniring Brook was inspected and samples and photographs taken of a series of Wandoo trees. Decline in Wandoo is not unprecedented as an episode of decline and recovery was known form elsewhere from the 1980's. To capture a visual record of the event, 3 trees and 2 stands of trees representing a range of crown conditions were photographed from 1999 until May 2008 every year mostly in late autumn.

Wandoo crowns showed a range of symptoms including: death of clusters of foliage (flagging), thinning or complete loss of terminal foliage, and initiation of epicormic shoots some way down branches. There was considerable variation in severity of symptoms between trees. Loss of both terminal and epicormic foliage due to flagging was greatest from 1999 to 2001 however some loss of foliage continued to 2004. As the severity of flagging abated and particularly from 2004 onward, dense epicormic foliage replaced lost foliage. Attributes of crown condition were estimated from the photographic series. These attributes are percent of crown dieback, present foliage density averaged across the former extent of the crown, and foliage transparency or the amount of light that penetrates the current extent of the crown. These vary in ways characteristic of the extent crown decline within a tree. Effects of an episode of crown decline on crown condition were long-term in effect.

October 2008
York, WA

5 Year review - wandoo crown decline

PROGRAM

8:30 am	Registration
	Attendees provided with information pack
	Publications on wandoo and other tree declines
8:50 am	*Video / slide show – wandoo decline across the landscape and presentation about sponsors*
9:00 am	**Welcome and introduction**
	Alan Sands, Department of Environment and Conservation (DEC)

Chair: Alan Sands (DEC)

9:05 am	Opening Address – *Alan Sands, DEC*
9:15 am	Setting the scene - *Liz Manning / Bruce McGregor, Wandoo Recovery Group*
9:30 am	Survey and mapping
	Community based surveys, 2006-2008 (Kim Whitford, DEC)
	Observations from Wundabiniring Brook (Allan Wills, DEC)
	Surveys of wandoo decline, 2002 & 2008 (Jack Mercer, consultant)
10:20 am	Panel discussion
10:30 am	**Morning tea**

Chair: Peter White (DEC)

10:50 am	Research projects
	Historical review of wandoo (Dr Andrea Gaynor, University of Western Australia)
	Water relations and genetic variability of wandoo (Dr Erik Veneklaas UWA)
	Insects and fungal pathogens (Ryan Hooper, PhD student UWA)
12.00 noon	Panel discussion