Decline and Recovery of a Wandoo Tree at Wundabiniring Brook 1999-2009: A Photohistory

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- Wandoo trees have been monitored at Wundabiniring Brook using photography to track changes in tree crowns since 1999.
- The photohistory of a single tree is presented.
- Initial sign of decline in crown condition was foliage loss through death of clusters of leaves initially at the ends of branches (photos for 1999 and 2000).
- Branches died back along their length and epicormic shoots were initiated (photo for 2000).
- As epicormic shoots and leaves were produced, these also died to a greater or lesser extent (photos for 2000, 2001).
- Where foliage production was greater than the loss, overall foliage in the tree canopy increased (photo for 2004 and thereafter).

June 1999

2000

2001

2002

2004

2005

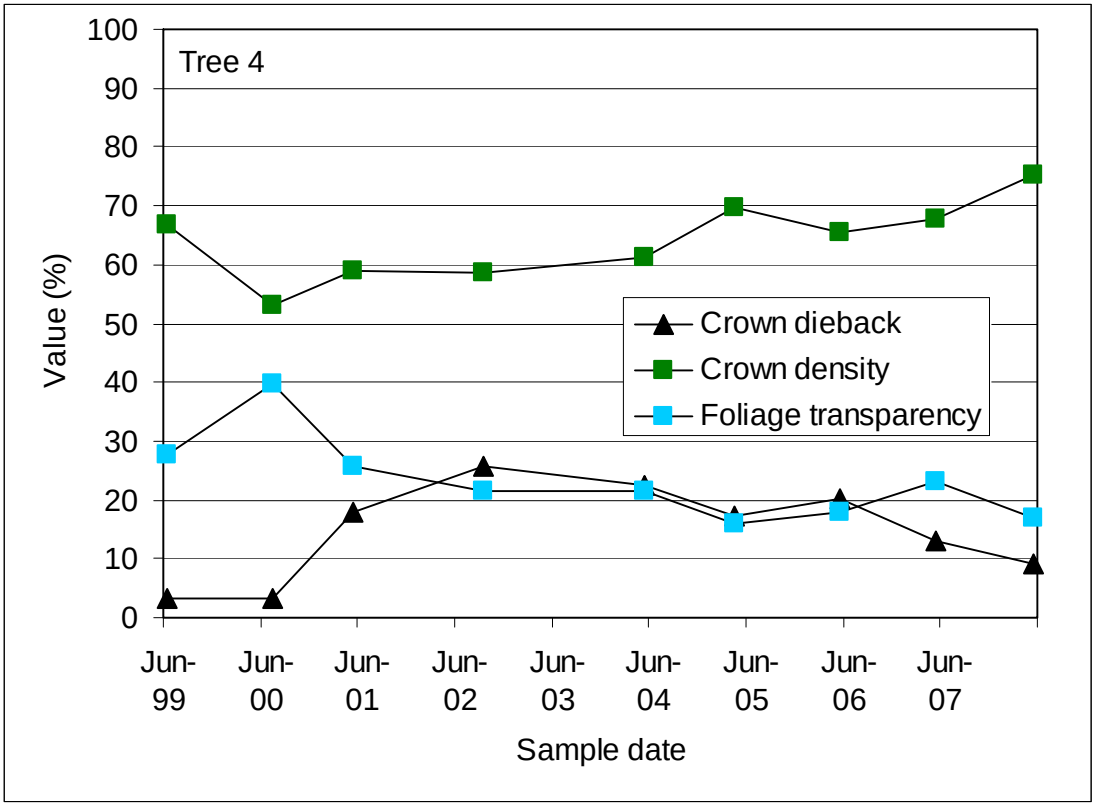
2006

2007

2008

2009

Three measures of crown condition over time



Crown dieback: How much volume the crown occupies compared to the initial value. This is sensitive to branch dieback.

- Crown dieback changes little until after 2000
- Crown dieback reaches a maximum by mid-2002 then begins to recover as crown volume re-expands.

Crown density: The density of foliage within the outline of the tree at its former extent (ie including areas where foliage has been lost). This is sensitive to both loss and recovery of the amount of foliage.

- Crown density falls rapidly by 2000 but recovers to equal former density by 2005.

Crown transparency: The transparency of foliage within the current outline of the crown (how much light gets through the foliage). Most sensitive to localized changes in foliage density.

- Transparency increases as density decreases in 2000.
- Transparency decreases to slightly less than initial transparency as foliage density increases and from 2001