A deadwoodologist’s digest: an A-to-Z of learnings from a decade of research in Tasmania
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### Airspace

![Observed profile of rotten log]

- Likely original extent of heartwood
- Likely original extent of log including sapwood and bark
- Internal airspace ASP
- External airspace EXA
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**Brown rot**
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- *Coripera deplanata*
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- Deadwoodology (136 Google results)
- Necroxylophilia??
- [Hypochronia]...
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- **Eucalyptus obliqua**
Fungi

Fig 2 – Randomized species accumulation curves for the four categories of wood, with data pooled over four plots (1 ha area).
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• Giant velvet-worm
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- **Heartwood**
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• **Integrated harvesting of biomass**

![Graphs showing integrated harvesting of biomass](image)

![Photographs of integrated harvesting](image)
• **Jelly surface rot**

Characterised by large (> 50 mm) irregular pockets which may be empty or filled with white, soft, very wet, gelatinous or crystalline material. Black ‘zone’ lines demarcate the pockets. Rhizomorphs also present.
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- **K** – the decay-rate constant
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• *Lissotes menalcas* – the Mount Mangana stag-beetle
Mudguts
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- **New species**
  - Flies x 18
  - Beetles x 4
  - Wood-sawflies x 1
  - Snow-scorpionflies x 1
  - Millipedes x 7
  - Earthworms x 2
  - Fungi x 3
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• Old-growth
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• *Prostomis atkinsoni*
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- **Quadrats**

![Graph showing proportion of CWD volume captured and pieces measured vs. diameter threshold](image)
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• Retention
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• **Saproxylic** (Google lists 3280 web-pages with ‘saproxylic’ and ‘Tasmania’)


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- **TFIC – the Tasmanian Forest Insect Collection**

[Image of TFIC collection]

[Graph showing yearly number of beetles species recorded at Warra]

[Website link: www.tfic.net.au]
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- **Undescribed species**

  ![Image of Warra beetle species]

  **Identification status of Warra beetle species**
  - Assigned to described species: 459, 37%
  - Not assigned to described species: 771, 63%
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• **Variable retention silviculture**

(b) Multiple 100 year CBS cycles; no FW harvesting

(d) Multiple cycles of ARN (30% of the coupe under 200 year WF cycles and 70% under multiple 100 year CBS cycles); no FW harvesting
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- Warra Long Term Ecological Research (LTER) site
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• **Xylophagous beetles**

![Images of Xylophagous beetles with percentage charts]

**Species**
- Pr: 36%
- Fu: 22%
- Ot: 9%
- Wo: 27%

**Individuals**
- Pr: 37%
- Fu: 36%
- Ot: 19%
- Wo: 17%

- De: 6%
• **Yellow dry slatey rot**

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**Yellow dry slatey rot – YDS**
Characterised by wood that superficially appears intact, but is dry, lightweight, brittle, and inclined to break along the growth rings. The grain of the wood often has a sheen. It occurs mostly in the outer heartwood.
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• **Zeadolopus TFIC sp 02**

![Image of Zeadolopus TFIC sp 02 with L = 2 mm]

*Tasmanian Forest Insect Collection - copyrighted image by Lynne Forster*
Summary

• The more you learn, the less you realise you know, but...
• The ecological importance of dead wood is undeniable, as is its contribution to carbon dynamics
• Eucalypt trees take a long time to mature, and eucalypt dead wood takes a long time to decompose
• Large logs are ecologically special, which adds to the significance of mature forest
• We need to find ways of maintaining mature forest to keep supplying large logs and other dead wood at the right spatial and temporal scales
• Intensive forestry can only achieve this through reservation, but extensive forestry can do it through variable retention silviculture
• If only our society would listen, understand and respect!
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• Thank you for listening!