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# Lost fungi

# Help us find our uncommon Victorian fungi



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# Help us record our Lost fungi

Some fungi naturally occur infrequently, or in low numbers or from only a single site or just a few. These uncommon fungi are at greater risk than common fungi. So to help conservation efforts we need to record both when they are seen but also when we have been to likely habitat or a known site where they have occurred in the past and record their absence.

Because our 'Lost fungi' are uncommon or rare we know less about these fungi because we have seen them less often. This also means we know less about their habitat, substrate preferences.

When you don't see 'Lost fungi' in places that they have been found before, so called "Absence data" is important to record.

For more information about the kind of details that are important to share check out our 'Example of rich survey data' on our website or the Resources tab in the biocollect 'lost fungi' Project.

You can help two ways – either send us:

Chatty emails with details of when and where you have been out looking for fungi and saw or did not see the list of our lost fungi list at the end of this booklet.

OR

Record them using our 'Lost fungi' project in Biocollect in the Atlas of Living Australia for more details turn the page.

Lost Fungi are rarely seen so please record what you can about them when you are lucky enough to see them.

# Share your data



You need to have registered with the Atlas of Living Australia to add data to our project but anyone can see the data.

Below the LOGIN button choose "Don't have an account? Sign up now." Note the user name you choose is public so you may want to choose a "public" name.

https://biocollect.ala.org.au/ala-cs

Once you are logged in got to Citizen Science Project Finder and in the search box look for Fungi, then choose Seeking lost fungi Victoria.

Please read the **About** tab and click the green **Get Started** button. This should join you up and take you to the Surveys section where you can **Add a record** 

There is useful information under **Resources** tab including this and the Tea-tree Fingers identification booklets.

## Rich Survey Data Helps Conservation

To help conservation efforts we need to record more information about search effort, location, habitat details, site disturbance and fungi observed so please fill in as much of this information that you can:

#### Location

- If you add a geocoded image in first in the Fungal Fruiting Bodies section – it will autofill where you are.
- If you are at a specific patch that you can describe

   is the 'name' of this at the start of the Location
   notes.
- Locations can be saved so you can easily add data again.

#### **Site Visit Information**

 Search efforts based on the number of people and time in a habitat are important to record.

#### **Environmental Information**

This includes vegetation type, habitat condition, evidence of last disturbance. Particularly note any disturbances that may threaten fungal populations like fire, drying out, altered disturbances like increased fire frequency.

#### **General observations & comments**

Images and descriptions of the Fungal Fruiting Bodies themselves, their substrate and any host organisms like plants or invertebrates.

#### Images are the basis for recording data

Photo-monitoring is important for longer lived species.

#### Zero or absence data

When you don't see 'Lost fungi' in places that they have been found before, so called "Absence data" is important to record. We hope you will record the lost fungi from your region that you don't see every fungi survey or at least from sites where they have been recorded before. And of course we always want you to share your "found" sightings.

### Please Take Care

- Please be aware that locations where it could be found may have high conservation value. In order to prevent the spread of weeds and pathogens, good hygiene is essential. Before carrying out any searches, please make sure to clean any equipment, including footwear and hats. Ideally Phytoclean or methylated spirits should also be used to clean boots and equipment between any sites you visit.
- Land holders permission
- Permit for collections and if collections are made ideally written proof like an email of land holders permission for the Nagoya Protocol)
- Be mindful of rarity
  - do not collect all fruit bodies, leave some for spores
  - Be careful about not disturbing or removing substrate
- So please do NOT collect Tea-tree Fingers (Hypocreopsis amplectens) or Hymenochaete species. At this point, we have not learned enough about the biology to know if collecting is detrimental to populations.
- Tea-tree Fingers (Hypocreopsis amplectens) and lichens Black-beard Lichen (Neuropogon acromelanus), Xanthoparmelia suberadicata and Xanthoparmelia victoriana are a listed species in Victoria so a specific collection permit is needed.

#### **Truffle like (Sequestrate)**



# Arid *Agaricus* Truffles

There are two named Arid *Agaricus* Truffles so far these are *A. erythrosarx* and *A. melanosporus,* there are likely more species than this to be discovered. Microscopic examination are needed for identification.

A. melanosporus Fruit-body Description <sup>1</sup>: Sporocarps solitary to gregarious, hypogeous to emergent. Pileus 25–45 mm high x 35–72 mm diam, subglobose to turbinate, planoconvex with somewhat squarish edges, sometimes with depressed center, pale tan to cinnamon drab or warm brown, smooth to very finely fibrillose with slightly darker fibrils scattered over surface; margin incurved to stipe with fibrillose veil remnants appendiculate, pale concolorous with pileus, enclosing hymenophore. Context fleshy, white turning pale brownish with pale reddish tint on exposure. Hymenophore initially pallid olive brown then dark brown to purple brown, sublamellate to labyrinthine loculate; becoming slightly powdery. Stipe 50–120 mm long 36–16 diam, percurrent, robust, equal, pale tan with dingy brown tints, particularly toward base, silky. Odor and flavor not recorded.

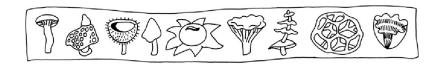
Microscopic Features¹: Spores 8.0–10.0 x36–7.5 mm, mean 8.936.8 mm, Q51.2–1.4, subglobose to broadly ellipsoid or obovate, many asymmetric, pale yellowish brown to brown in KOH, weakly dextrinoid. Basidia 17–2835–9mm, cylindrical to clavate; sterigmata four. Pileipellis a cutis of subparallel, interwoven, hyaline hyphae 2–7 mm diam and scattered inflated elements 10–18 x 37–12 mm, overlying a broad context, 170–350 mm wide, of loosely interwoven hyaline hyphae, 3–6 mm diam. Clamps at base of basidia, but not observed in pileal or hymenophoral trama.

Text from<sup>1</sup>: Lebel, T. and Syme, A. (2012). Sequestrate species of *Agaricus* and *Macrolepiota* from Australia: new combinations and species, and their position in a calibrated phylogeny. *Mycologia* **104**, 496–520.



#### Look-alikes continued1:

Agaricus erythrosarx above resembles A. melanosporus below both macro- and microscopically. Both species have large pale sporocarps with scattered vinaceous fibrils on the surface, a sublamellate hymenophore that becomes pulverant, reddening pileal flesh and small spores. Differences include the red-orange staining reaction of the hymenophoral trama and reddening of the stipe context in A. erythrosarx and lack of color changes in A. melanosporus (some dingy brown stains at base of stipe), and narrower basidia (5–9 mm vs. 9.5–14mm) and slightly larger spores in A. melanosporus.



#### Gilled fungi



# Green-gilled Amanitas *Amanita austroviridis* group

There are two named green spored and gilled Amanita in Australia *Amanita austroviridis* and *A. chlorophylla*, it is not yet known if these are the same or similar species.

**Notes**<sup>1</sup>: This mycorrhizal basidiomycete; found growing singly or in small groups on sandy soils in coastal scrubland, usually in association with *Casuarina* trees.

Fruit-body Description¹: Pileus (Cap) Diameter to 90 mm or more; at first convex, then flat convex or centrally depressed; covered with pale olive-green velar remnants; margin appendiculate. Lamellae (Gills) Attachment adnexed, becoming free; closely spaced; colour deep olive-green; margins paler to almost white. Stipe (Stem) Central; generally up to 120 mm long and 20 mm thick; with fine fibrillose hairs and a bulbous base; colour off-white to pale green. Annulus fragile, membranous, often present as fragments; buff to pale green. Volva absent. Spore Print green.

Microscopic Features¹: Basidiospores 9–11 × 5–7  $\mu$ m, elongate, smooth. Basidia four-spored, 45–55 × 11–15  $\mu$ m, clavate. Clamp connections present.

#### **References:**

Bougher NL and Syme K 1998 Fungi of Southern Australia. University of Western Australia Press: Nedlands. p. 158

Grey P and Grey E 2005 Fungi down under: the Fungimap guide to Australian fungi. Fungimap: South Yarra, Victoria. p. 18

Text from: Hubregtse<sup>1</sup>, J CC-BY-NC-SA 2018 Fungi in Australia, Revision 2.1. Field Naturalists Club of Victoria Inc. E-published at http://www.fncv.org.au/fungi-in-australia/



### **Green-gilled Amanitas**

Look-alike: Chlorophyllum molybdites on the right is another large Agaric that has a green spore print but the gills are more a leaden, grey-green and stem is tall and skinny.



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# Lost Fungi

Scientific Name	Vernacular Name	<b>Synonyms</b> <i>Hypocreopsis</i> sp A, Clasping	Glenelg Hopkins	Mallee	Wimmera	Corangamite	Goulburn Broken	Port Phillip and Westernport	North Central	East Gippsland	West Gippsland	North East
Hypocreopsis amplectens	Tea-tree Fingers							Υ				
Xanthoparmelia suberadicata								Υ	Υ		Υ	
Xanthoparmelia victoriana									Υ			
Neuropogon acromelanus	Black-beard Lichen											Υ
Morchella esculenta	Common Morel		Υ		Υ	Υ		Υ	Υ	Υ		
Chlorovibrissea bicolor	Two-tone Vibrissea					Υ		Υ			Υ	
Chlorovibrissea melanochlora						Υ	Υ	Υ			Υ	
Ramaria abietina	Green-staining Coral					Υ		Υ				
Ramaria ochracea	Delicate Coral					Υ		Υ				
Chromocyphella muscicola						Υ	Υ	Υ		Υ		
Ionomidotis australis		Claussenomyces australis									Υ	
Laccocephalum hartmannii			Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	Υ	
Beenakia dacostae						Υ	Υ	Υ			Υ	
Sarcodon spp.							Υ	Υ				
Agaricus erythrosarx									?			
Agaricus melanosporus		Endoptychum melanosporum							Υ			

# Lost Gilled Fungi

Scientific Name	Vernacular Name	Synonyms	Glenelg Hopkins	Mallee	Wimmera	Corangamite	Goulburn Broken	Port Phillip and Westernport	North Central	East Gippsland	West Gippsland	North East
Amanita austroviridis group	Green-gilled Amanita					Υ				Υ	Υ	
Arrhenia aff. chlorocyanea	Blue-grey Navel		Υ	Υ		Υ	Υ	Υ				
cinorocyanea	Dide grey ivaver	Nyctalis		•			•	•				
Asterophora mirabilis	Grey Jockey	mirabilis				Υ	Υ	Υ				
Cortinarius canarius	Dermocybe canaria					Υ		Υ	?			
Cortinarius cramesinus	Dermocybe cramesina											
Cortinarius metallicus		Rozites metallica					Υ		Υ	Υ		
Cortinarius perfoetens		Rozites foetens					Υ	Υ	?	Υ		
Cortinarius perjoeteris		Rozites					ĭ	T	ŗ	ĭ		
roseolilacinus		roseolilacina	Υ		Υ							
Cortinarius symeae		Rozites symea								Υ		
Cortinarus canarius	Canary Dermocybe											
Cortinarius austrocinnabarinus group	Orange Dermocybe	Cortinarus cramesinus, Dermocybe cramesina										
Entoloma austroroseum								Υ				
Hygrocybe saltorivula								Υ				
Hygrocybe sp. 'Warrandyte JCR1'								Υ				
Hygrocybe sp. 'Warrandyte JCR2'								Y				
Mycena leaiana var. australis	Orange-gilled Bonnet					Υ	Υ	Υ		Υ		
Mycena roseoflavida			Υ				?	Υ				

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   Network, Trust for Nature and Wombat Forestcare.
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- Royal Botanic Gardens Victoria particularly Teresa Lebel, Tom May and Val Stajsic.













# **Contact Fungimap**

Fungimap actively seeks records and images of fungi. We recommend you start with the more easily recognisable, distinctive **recognisable** species which are pictured in the online field guide found on our website https://fungimap.org.au/fungi-down-under-100-target-species/, or in our published field guide *Fungi Down Under*. Or share with our iNaturalist project Fungimap Australia https://www.inaturalist.org/projects/fungimap -australia



For information about 'Lost fungi' contact us by email to fungimapconservation@gmail.com

#### **General enquires:**

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