

## CHECKLIST OF AMANITA FOR AUSTRALIA & NEW ZEALAND

R. E. Tulloss

< ret@eticomm.net >

P. O. Box 57, Roosevelt, NJ 08555-0057, U. S. A.

This annotated checklist was developed for RET's personal use. It is a draft document and subject to re-evaluation and expansion. It is hoped that workers in Australia and New Zealand will continue describing their fascinating amanitas and that overseas workers (including myself) will have further opportunities to examine type material and other collections in future years.

In this regard, RET is aware of an extensive set of collections of partially undiagnosed material assignable to *Amanita* at BRIP (Department of Primary Industries, Indooroopilly, Queensland). Considering only this set of collections, it seems clear that the number of Australian taxa of *Amanita* may be extended by 50 or more. Collections, including many types, are also to be found in ADW, DAR, K, NY, PDD, PERTH, VPI.

The taxa known from New Zealand (presented in blue type) presently number 16 endemic taxa (one name applied without certainty, at least one unnamed taxon) and 2 to 3 introduced taxa.

The taxa known from Australia presently number 111 endemic taxa (some taxa not sufficiently known, some names invalid, some unnamed taxa) and 3 introduced taxa.

The introduced Eurasian taxa are as follows: *Amanita muscaria*, *A. phalloides*, and *A. rubescens*. *Amanita cf. manicata* may be an introduction to New Zealand, if the material is correctly determined. For the moment, we list *A. cf. manicata* as endemic.

Literature is referenced by way of five- or six-character codes in square brackets.

An asterisk next to a country or state name indicates that the type locality lies within that region.

Taxa in this list are numbered sequentially. A bullet (followed by a sequential counter) preceding a taxon entry indicates that RET has reviewed material of the taxon in question. This is true for a total of 22 taxa in this list, including all introduced or possibly introduced taxa. The number of New Zealand taxa is counted separately, and the counter follows the letters "NZ" in the initial "counter group" at the start of each New Zealand taxon list item. If the type of a species has been studied or all material cited in an informal description of an unnamed or invalidly named taxon has been studied, the "counter group" for the relevant entry will contain a counter preceded by the letter "t."

Table 1 illustrates the limited number of *Amanita* taxonomic groups shared between Australia outside of its remaining *Nothofagus* habitat and the extant ranges of *Nothofagus* in New Zealand and the southern Andes (Argentina and Chile). The lack of widely available information concerning *Amanita* in Tasmania is one limitation to biogeographic analysis of *Amanita* that is associated with the remaining *Nothofagus* forests. In the following table, sectional names are links to the sectional taxa lists.

Section of genus <i>Amanita</i>	Australia	New Zealand
[subgenus <i>Amanita</i> ] section <a href="#">Amanita</a>	13	3
section <a href="#">Caesareae</a>	7	0
section <a href="#">Vaginatae</a>	10	3
[subgenus <i>Lepidella</i> ] section <a href="#">Amidella</a>	5	0
section <a href="#">Lepidella</a>	54	6
section <a href="#">Phalloideae</a>	7	0
section <a href="#">Validae</a>	14	4
<a href="#">No section assigned</a>	1	0
<b>Total endemic</b>	111	16
<b>Introduced Taxa</b>		
<i>A. muscaria</i>	+	+
<i>A. phalloides</i>	+	+
<i>A. rubescens</i>	+	-
[included in above count for NZ -> <i>A. cf. manicata</i> ]	-	?
<b>Totals</b>	114	18

For information concerning taxa currently placed in the genera *Amarrendia* and *Torrendia*, see preliminary assessment for *Amanita* section *Caesareae* for the world at < [http://eticomm.net/~ret/amanita/key\\_dir/hemibkey.pdf](http://eticomm.net/~ret/amanita/key_dir/hemibkey.pdf) >.

I am very grateful to A. Bennett, I. Dodd, H. Lepp, K. Symes, M. Wallace, and Drs. J. E. C. Aberdeen, C. Bas, N. L. Bougher, E. Davison, E. H. C. McKenzie, D. N. Pegler, R. E. Halling, B. Paulus, G. S. Ridley, A. E. Wood, and A. M. Young for correspondence, gifts of publications, gifts of pictures, loans or gifts of dried material, and/or hosting me at various institutions. If one of RET's correspondents is missing from this list, notice of the omission will be received happily; and a correction will be made.

## I. Subgenus *Amanita*

### A. Section *Amanita*

1. *armeniaca* A. E. Wood (Australia (NSW\*)) [WOO97] (Spores: (7.4-) 8.1 - 10.2 × 6.9 - 9.6 μm; **Q** = 1.02 - 1.14.)
2. *conicogrisea* A. E. Wood (Australia (NSW\*)) [WOO97] (Spores: 9.9 - 11.7 × 7.2 - 8.7 μm; **Q'** = 1.34.)
3. *crematelloides* A. E. Wood (Australia (NSW\*)) [WOO97] (Spores: (6.6-) 7.2 - 9.0 (-9.9) × (6.0-) 6.6 - 8.4 (-9.3) μm; **Q** = 1.10 - 1.19.)
4. *fibrilloses* O. K. Mill. (Australia (WA\*)) [MIL91] (Spores: 9 - 12 (-13) × 6 - 7 (-8.4) μm; **Q** = 1.70)
- 1 5 t-1. *murinoflammeum* Tulloss, A. M. Young & A. E. Wood [TYW95] [WOO97] (Australia (ACT, QLD\*)) (Conf. 4-sterig. I wonder if this is a taxonomic synonym of *A. umbrinella* (below). Universal veil incoherent. Spores [from holotype (BRIP), isotypes (RET, YOUNG), and paratype (NY)]: [121/6/2] (9.8-) 10.5 - 13.2 (-16.5) × (7.0-) 8.2 - 11.0 (-14.8) μm, (**L** = 11.4 - 12.6 μm; **L'** = 11.9 μm; **W** = 8.4 - 10.2 μm; **W'** = 9.3 μm; **Q** = (1.10-) 1.15 - 1.47 (-1.65); **Q** = 1.21 - 1.43; **Q'** = 1.29.)
- 2 6 . *muscaria* (L. : Fr.) Pers. var. *muscaria* (Australia (NSW, SA, TAS, VIC), New Zealand, widely distributed in Eurasia, occurring naturally in NW N. Amer., introduced in S. Amer. and Africa) [CLE34] [CLC24] [CFH84] [COO92] [GIL41] [MCA95] [REI80] [RID88] [SHT88] [RID91] [TAY81] [YOU86] [YOU94] [WOO97] (Neotype (TENN) apparently lost[?]. = *muscaria* f. *puella* (Pers.) E.-J. Gilbert = *muscaria* var. *sanguinea* Gillet = *muscaria* var. *tomentosa* Gillet = *muscaria* var. *vaginata* Velen. = *muscaria* subsp. *flavivolvata sensu* Neville & Poumarat. Spores: [435/22/18] (7.4-) 8.5 - 11.5 (-13.1) × (5.6-) 6.5 - 8.5 (-9.8) μm, (**L** = (8.7-) 9.1 - 11.2 (-11.4) μm; **L'** = 10.0 μm; **W** = (6.5-) 6.9 - 8.1 (-8.2) μm; **W'** = 7.5 μm; **Q** = (1.11-) 1.21 - 1.47 (-1.75) μm; **Q** = 1.26 - 1.41 (-1.42) μm; **Q'** = 1.34.)
- 7 NZ-1 . *nigrescens* G. Stev. [RID88] [RID91] [STE62] (New Zealand\*) (Spores: 8 - 13 × 8 - 13 μm diam; **Q** = 1.0)
- 3 8 NZ-2 . *nehuta* G. S. Ridl. [MKZ92] [RID88] [RID91] [STE62] [TAY81] (New Zealand\*) (= *A. farinosa sensu* Taylor; = *A. vaginata sensu* G. Stev. in part. Spores [from protologue]: 6.5 - 9 × 5.5 - 8 μm; **Q'** = 1.16. Spores [including from paratype]: [20/1/1] 6.5 - 7.6 (-8.4) × 5.6 - 6.7 μm, (**L** = 7.2 μm; **L'** = 7.2 μm; **W** = 6.2 μm; **W'** = 6.2 μm; **Q** = 1.08 - 1.25 (-1.28); **Q** = 1.16; **Q'** = 1.16.)
9. *pulchella* f. *ellipticospora* E.-J. Gilbert *nom. inval.* [GIL41] [REI80] (Australia (SA)) (Spores: 8.9 - 10.5 × 7 - 7.5 μm.)
10. *striatuloides* A. E. Wood (Australia (QLD\*)) [WOO97] (Spores: 8.7 - 10.2 × 7.5 - 9.3 μm; **Q** = 1.05 - 1.08.)
11. *subvaginata* (Cleland & Cheel) E.-J. Gilbert [CLC23] [GIL41] [REI80] (Australia (NSW\*)) (The original description of *subvaginata* (see under sect. *Amanita*, above) suggests *A. farinosa* [described from E N. Amer. & often claimed from E Asia]; but see also “*nehuta*” from New Zealand, above. Spores ([CLC23]): 7.5 - 9 μm. Spores (from drawings in [GIL41]): [6/3/3] (8.7-) 9.0 - 9.7 × (7.8-) 8.2 - 8.8 μm, (**L'** = 9.4 μm; **W'** = 8.6 μm; **Q** = 1.02 - 1.14 ; **Q'** = 1.09.)
- 4 12 NZ-3 . *taiepa* G. S. Ridl. [MKZ92] [RID88] [RID91] [STE62] (New Zealand\*) (= *A. umbrinolutea sensu* G. Stev. in part. Spores: 7.5 - 12 × 7.5 - 12 μm; **Q'** = 1.03. Spores: [20/1/1] (7.5-) 7.9 - 9.4 (-9.9) × (7.0-) 7.4 - 8.5 (-9.4) μm, (**L** = 8.9 μm; **W** = 8.1 μm; **Q** = 1.05 - 1.13 (-1.14); **Q** = 1.10.)
13. *umbrinella* E.-J. Gilbert & Cleland [CLC14] [CFH84] [FUH85] [GEN53] [GIL41] [GRG97] [MIL91] [REI80] (Australia (NSW, SA\*, TAS, VIC, WA)) (= *pantherina sensu* Cleland & Cheel = *A. bambra* Grgur. [GRG97]. Dark gray to grayish brown to umber, etc.; fugacious volval limb; gills become purple in exsiccatae; very variable spores. Spores [GIL41]: 11.5 - 13.0 × 9.0 - 11.5 μm; est. **Q'** = 1.20. Spores [GRG97]: 9.2 - 14.2 (-16.8) × 7.2 - 11.4 (-12.8) μm; **Q'** = 1.2.)

14. *umbrinella sensu* A. E. Wood (Australia (ACT, NSW, QLD)) [WOO97] (pallid gray-buff to pale mouse gray or mouse gray. An apparent misapplication. Spores: (10.5-) 11.4 - 13.5 (-14.7) × 8.7 - 10.5 (-11.4) μm; **Q** = 1.24 - 1.35 (-1.42).)
15. *umbrinelloides* A. E. Wood (Australia (NSW\*)) [WOO97] (Spores: (9.0-) 11.4 - 15.0 × (8.4-) 9.9 - 12.6 μm; **Q** = 1.07 - 1.15.)
16. *xanthocephala* (Berk.) D. A. Reid & Hilton f. *xanthocephala* [= *austro-pulchella* D. A. Reid = *Agaricus pulchellus* Cooke & Massee] [BER45] [CLC14] [CMA89] [COO92] [GEN53] [GIL41] [KUN98] [MCA95] [MIL91] [REI80] [SAC91] [SHT88] [WOO97] [YOU94] (Australia (NSW, QLD, SA, VIC, WA\*)) (Spores combined from several sets of measurement in [REI80]: 6.5 - 9.2 × 5.5 - 7.8 μm. Spores [WOO97]: (6.6-) 7.2 - 9.3 × 5.7 - 7.8 (-8.4) μm; **Q** = 1.08 - 1.28.)
17. *xanthocephala* f. *mcalpiniana* (Cleland & Cheel) D. A. Reid [CLC14] [GIL41] [REI80] [SAC87] (Australia (NSW\*)) (A yellower color form. Spores: 7.5 - 10.4 μm)

## B. Section *Caesareae*

- 5 18 t-2. *cinereoannulosa* Cleland [CLE33] [CLE34] [GIL41] [REI80] (Australia (SA\*)) (Spores: [114/6/1] (9.3-) 9.9 - 14.7 (-20.3) × (5.6-) 6.4 - 8.6 (-10.2) μm, (**L** = 11.2 - 12.3 (-13.7) μm; **L'** = 12.2 μm; **W** = 7.1 - 7.6 μm; **W'** = 7.4 μm; **Q** = (1.33-) 1.40 - 1.99 (-2.23); **Q** = 1.58 - 1.66 (-1.83); **Q'** = 1.66).)
- 6 19 t-3. *egregia* D. A. Reid [ABE79] [REI78] [REI80] [WOO97] (Australia (QLD\*)) (= *egregina* A. E. Wood) (Conf. 4-sterig. In [ABE79] as “*egregaria*” (sic). Spores [including from holotype in K]: [120/5/4] (7.0-) 9.1 - 11.2 (-13.0) × (6.5-) 7.7 - 9.5 (-11.6) μm, (**L** = 9.6 - 10.6 μm; **L'** = 10.1 μm; **W** = 8.2 - 9.1 μm; **W'** = 8.9 μm; **Q** = (1.05-) 1.09 - 1.24 (-1.55); **Q** = 1.14 - 1.17; **Q'** = 1.16. Spores [from protologue of *A. egregina*: 10.5 - 12.0 (-13.5) × (8.4-) 9.3 - 10.5 (-11.1) μm; **Q** = 1.16.)
20. *egregia sensu* A. E. Wood [WOO97] (Australia (NSW, QLD)) (A gross misapplication. Spores: (9.6-) 10.5 - 11.7 × (7.1-) 8.7 - 9.3 μm; **Q** = 1.19 - 1.36.)
21. *illudens* Sacc. [CMA87] [COO92] [MCA95] [REI80] [SAC91] (Australia (VIC\*)) (Small ochraceous yellow; volva darker to concolorous. Note that volva is slightly fragile. There are patches on the pileus of the lectotype. Spores [from lectotype (K)]: [27/1/1] (7.2-) 8.0 - 9.4 (-11.3) × (6.6-) 6.7 - 7.8 (-8.4) μm, (**L** = 8.9 μm; **W** = 7.0 μm; **Q** = (1.05-) 1.07 - 1.37 (-1.64); **Q** = 1.26).)
22. *pallidofumosa* A. E. Wood [WOO97] (Australia (NSW\*, QLD)) (Spores: 10.5 - 12.0 (-13.2) × 7.2 - 9.6 (-10.2) μm; **Q** = 1.27 - 1.52.)
23. *roseolamellata* A. E. Wood [WOO97] (Australia (NSW\*, QLD)) (Spores: (9.6-) 9.9 - 12.6 × 6.3 - 9.0 μm; **Q** = 1.49 - 1.56 (-1.71).)
- 7 24 . species AUS2 (Australia (QLD)) (Red and yellow cap; white stipe with yellow patches; spores: [20/1/1] (8.5-) 8.6 - 10.2 (-11.3) × (5.9-) 6.0 - 7.4 μm, (**L** = 9.3 μm; **L'** = ? μm; **W** = 6.5 μm; **W'** = ? μm; **Q** = (1.31-) 1.34 - 1.55 (-1.59); **Q** = 1.44; **Q'** = ?).
- 8 25 . species AUS3 (Australia (QLD)) (Almost entirely red cap; yellow stipe with orange patches; spores: ?.)

## C. Section *Vaginatae*

26. *albovolvata* A. E. Wood (Australia (NSW\*, QLD)) [WOO97] Conf. 4-sterig. (Spores: 9.3 - 12.6 × 8.1 - 10.8 μm; **Q** = 1.11 - 1.20 (-1.30).)
27. *pallidobrunnea* A. E. Wood [WOO97] (Australia (NSW\*, QLD)) (Spores: (8.6-) 10.0 - 12.5 × (7.1-) 7.7 - 9.6 (-11.1) μm; **Q** = 1.20 - 1.35 (-1.45).)
28. *pallidochracea* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores: (8.3-) 9.7 - 10.8 × 5.1 - 6.6 μm; **Q** = 1.81.)
- 9 29 NZ-4 t-4. *pekeoides* G. S. Ridl. *sensu stricto* [MKZ92] [RID88] [RID91] [STE62] (New Zealand\*) (= *A. umbrinolutea sensu* G. Stev. in part; = *A. vaginata sensu* G. Stev. in part. Conf. 4-sterig. Spores (from holotype and paratypes in PDD and K): [200/10/7] (8.4-) 10.2 - 13.5 (-17.5) × (7.5-) 9.5 - 12.6 (-17.0) μm, (**L** = (10.9-) 11.5 - 12.8 μm; **L'** = 12.0 μm; **W** = (10.0-) 10.2 - 11.8 μm; **W'** = 11.1 μm; **Q** = (1.03-) 1.04 - 1.15 (-1.58); **Q** =

- 1.06 - 1.10 (-1.13); **Q'** = 1.09.)
- 10 30 NZ-5 t-5. *pekeoides* G. S. Ridl. “friable volva individuals” [RID88] [RID91] [STE62] (New Zealand\*) (= *punctata sensu* G. Stev. Conf. 4-sterig. Universal veil incoherent. Spores: [80/3/2] (10.5-) 11.0 - 14.0 (-21.2) × (10.0-) 10.2 - 13.5 (-20.0) μm, (**L** = 12.2 - 12.3 μm; **L'** = 12.3 μm; **W** = 11.6 - 11.8 μm; **W'** = 11.7 μm; **Q** = (1.0-) 1.02 - 1.09 (-1.13); **Q** = 1.04 - 1.06; **Q'** = 1.05.)
  - 11 31 NZ-6 t-6. *pekeoides* G. S. Ridl. “white individuals” [RID88] [RID91] (New Zealand\*) (Spores: [78/4/3] (9.5-) 11.3 - 13.9 (-22) × (8.6-) 10.0 - 13.0 (-17.5) μm, (**L** = 12.0 - 13.1 μm; **L'** = 12.4 μm; **W** = 11.0 - 11.8 μm; **W'** = 11.3 μm; **Q** = (1.04-) 1.05 - 1.16 (-1.37); **Q** = 1.09 - 1.11; **Q'** = 1.10).)
  - 12 32 t-7. *punctata* (Cleland & Cheel) D. A. Reid [CLC19] [FUH85] [GIL41] [REI80] [YOU94] (Australia (NSW\*, QLD, VIC, WA)) (Conf. 4-sterig. This name is commonly misapplied to one or more species with, among other things, smaller spores. Spores (from lectotype and syntypes in AD & BPI): [96/5/5] (10.5-) 11.7 - 15.6 (-21) × (9.9-) 11.4 - 14.7 (-20) μm, (**L** = 12.8 - 14.2 μm; **L'** = 13.5 μm; **W** = 11.9 - 13.4 μm; **W'** = 12.7 μm; **Q** = (1.01-) 1.02 - 1.09 (-1.12); **Q** = 1.04 - 1.07; **Q'** = 1.06).)
  - 33. *punctata sensu* A. E. Wood [WOO97] (Australia (NSW)) (Apparently a misapplication. Spores: 10.0 - 12.0 (-13.8) × 9.7 - 11.6 μm; **Q** = 1.02 - 1.03.)
  - 34. *subvaginata sensu* A. E. Wood [WOO97] (Australia (NSW, QLD)) (Clearly a misapplication; the true *A. subvaginata* belongs in section *Amanita* (above). Possibly, multiple taxa are treated under this name by Wood. Spores: 7.8 - 10.5 × 6.7 - 9.0 (-10.5) μm; **Q** = 1.08 - 1.11.)
  - 35. *sordidobubalina* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores: 10.0 - 12.6 (-13.5) × (9.6-) 10.0 - 12.6 μm; **Q** = 1.01 - 1.09.)
  - 36. *vaginata sensu* A. E. Wood [WOO97] (Australia (NSW, QLD)) (Lacks lamellulae for the most part. Spores: (9.1-) 10.2 - 13.5 × (8.6-) 9.9 - 12.3 μm; **Q** = 1.02 - 1.14.)
  - 37. *sp.* [SHT88] (No data given, only a photo.)

## II. Subgenus *Lepidella*

### A. Section *Amidella*

- 13 38 t-8. *curta* (Cooke & Masee) E.-J. Gilbert [CMA88] [COO92] [GIL41] [KUN98] [MCA95] [REI80] [SAC91] (Australia (VIC\*)) (Spores (from holotype in K): [22/1/1] 10.8 - 14.5 (-17.7) × (5.0-) 5.2 - 7.5 (-8.4) μm; (**L** = 12.7 μm; **W** = 6.3 μm; **Q** = (1.44-) 1.78 - 2.66 (-3.04); **Q** = 2.05).)
- 14 39 t-9. *grisea* Masee & Rodway [CLE34] [GIL41] [MRO01] [REI80] [WOO97] (Australia (TAS\*)) (Spores (from holotype in K): [40/1/1] (8.5-) 9.0 - 12.5 (-14.2) × (7.0-) 7.3 - 9.9 (-10.9) μm, (**L** = 10.8 μm; **W** = 8.4 μm; **Q** = (.105-) 1.06 - 1.49 (-1.53); **Q** = 1.29).)
- 40. *pallidogrisea* A. E. Wood [WOO97] (Australia (NSW\*)) (Wood placed this and *A. grisea* in section *Validae* despite being volvate and exannulate! Spores [WOO97]: 9.3 - 11.4 (-12.0) × 7.2 - 8.7 (-9.6) μm. (**Q** = 1.29 - 1.32; est. **Q'** = 1.3).)
- 41. *persicina* Bas *ined.* (Australia (WA)). (Spores (Bas' notes): [20/2/?] 9.8 - 11.2 (-11.5) × (5.9-) 6.2 - 7.3 μm, (**L** = 10.3 - 10.6 μm; **L'** = 10.5 μm; **W** = 6.6 - 6.7 μm; **W'** = 6.6 μm; **Q** = (1.40-) 1.44 - 1.77 (-1.86); **Q** = 1.54 - 1.63; **Q'** = 1.58).)
- 42. species “Gentilli 8” (Australia (WA)) Spores (Bas' notes): 9 - 11 × 7 - 8 μm; est. **Q'** = 1.35.)

### B. Section *Lepidella*

- 43. *albidannulata* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [W0097]: (7.2-) 8.1 - 9.6 (-10.2) × (5.7-) 6.3 - 7.8 (-8.4) μm, (**Q** = 1.16 - 1.33; est. **Q'** = 1.25).)
- 44. *albidoides* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: 9.6 - 11.4 × (5.7-) 6.0 - 7.2 μm, (**Q** = 1.55 - 1.65; est. **Q'** = 1.6).)
- 45. *albifimbriata* O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: 7.6 - 10.5 × (5.4-) 6.3 - 7.6 (-8) μm, **Q** = 1.32)

46. *albosquamosa* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: (8.7-) 9.0 - 11.1 (-12.0) × 6/9 - 8.4 (-9.0) μm, (Q = 1.25 - 1.38; est. **Q'** = 1.3).)
47. *alboverrucosa* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: (8.7-) 9.6 - 11.7 × (6.4-) 7.1 - 9.3 μm, (Q = 1.21 - 1.28; est. **Q'** = 1.3).)
48. *allostraminea* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: 9.9 - 11.4 (-13.5) × 8.4 - 10.5 (-11.1) μm, (Q = 1.17; est. **Q'** = 1.1).)
49. *ananaecephs* (Berk.) Sacc. [BAS69] [BER48] [COO92] [FUH85] [GIL41] [MCA95] [MIL91] [REI80] [SAC87] [YOU86] (Australia (NSW, SA, TAS\*, VIC, WA)) (Also appears in lit. as "*ananiceps*." Spores: (9-) 9.5 - 11.5 × (6.5-) 7 - 8 (-8.5) μm; **Q** = 1.35)
50. *ananaecephitoides* A. E. Wood [WOO97] (Solitariae/Grossa?) (Australia (NSW\*, SA, TAS, VIC, WA)) (Spores [WOO97]: 8.7 - 11.1 (-11.7) × 5.1 - 6.9 (-7.5) μm, (?Q = 1.33 - 1.58 [must be typo in original?]; est. **Q'** = 1.65).)
51. *angustispora* Cleland [CLE27] [CLE34] [GIL41] [REI80] (Australia (NSW, SA\*, WA)) (Spores: 8.8 - 13.2 × (4.5-) 5 - 6.6 μm; est. **Q'** = 1.9)
52. *annulalbida* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: 8.7 - 10.5 (-11.4) × (5.5-) 6.0 - 7.5 (-8.4) μm, (Q = 1.36 - 1.58; est. **Q'** = 1.4).)
53. *austrostraminea* D. A. Reid [BAS69] [CLE27] [CLE34] [HP84] [REI78] [REI80] (Australia (SA\*)) (= *A. straminea* Cleland, non *A. straminea* Secr. nom. inval. Spores BAS69: 10.5 - 12 (-13.5) × (6-) 6.5 - 8 μm; **Q** = 1.5 - 1.7)
54. *austroviridis* O. K. Mill. [MIL92] (Australia (WA\*)) (Spores: (9.2-) 10.0 - 12.6 × 5.0 - 6.7 μm; **Q** = 1.88)
55. *basibulbosa* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: (7.1-) 8.4 - 9.6 (-10.6) × (6.8-) 7.4 - 9.6 μm, (Q = 1.15 - 1.19; est. **Q'** = 1.05).)
56. *brunneiphylla* O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: (8-) 9 - 10.8 × 4.1 - 5 μm; **Q** = 2.13)
57. *carneiphylla* O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: 10 - 12 × 5 - 6 μm; **Q** = 2.17)
58. *chlorophylla* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: 9.3 - 11.4 (-11.7) × 5.4 - 6.6 (-6.9) μm, (Q = 1.65 - 1.87; est. **Q'** = 1.7).)
59. *cinerascens* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: (7.8-) 9.6 - 12.3 × (5.2-) 6.0 - 8.1 μm, (Q = 1.39 - 1.52 (-1.66); est. **Q'** = 1.55).)
60. *clelandii* E.-J. Gilbert [GIL41] [REI80] (Australia (SA\*)) (Perhaps this should be considered to be in either Section *Phalloideae* or Section *Lepidella*; however, E.-J. Gilbert and D. A. Reid both felt it was close to *A. angustispora*; and it is collected in the same region as the latter species. Spores: According to Reid (1980): "9.0 - 16.0 × 4.5 - 6.0, amyloid; est. **Q'** = 2.4." According to Cleland's note (Reid, 1980): "11.2 - 16.8 × 5.0 - 5.6 μm; est. **Q'** = 2.6." According to Gilbert (1941): "13 - 16 × 5.5 - 6.8 μm; est. **Q'** = 2.35.")
61. *conicobulbosa* Cleland [BAS69] [CLE31] [CLE34] [GEN53] [GIL41] [REI80] (Australia (SA\*)) (Spores: 10 - 13 (-14.5) × (5-) 6 - 7.5 μm; **Q** = 1.7 - 2.1)
62. *conicoverrucosa* A. E. Wood [WOO97] (Solitariae/Ravenelii?) (Australia (NSW\*)) (Spores [Woo97]: (8.7-) 9.0 - 10.5 × 7.5 - 9.9 (-10.5) μm, (Q = 1.05 - 1.22; est. **Q'** = 1.1).)
63. *dumosorum* D. A. Reid [REI78] [REI80] (Australia (WA\*)) (Spores: 7.0 - 8.75 × 6.0 - 6.75 μm; est. **Q** = 1.25.)
64. *effusa* (Kalchbr.) D. A. Reid [KAL81] [REI78] [REI80] [SAC88] (Australia (??Daylesford?\*)) (Possibly conspecific with *A. strobilacea*, below. Spores: 8 - 12 × 6.75 - 9 μm; est. **Q** = 1.25)
65. *elongatispora* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: 9.0 - 11.1 × 4.4 - 5.8 μm, (Q = 1.95 - 1.98; est. **Q'** = 1.95).)
66. *farinacea* (Cooke) Cleland & Cheel [BAS69] [CMA89] [CLE34] [CLC14] [CFH84] [COO92] [GIL41] [KUN98] [MCA95] [REI80] [SAC91a] [YOU94] (Australia (QLD\*)) (Spores: 9 - 10.5 × (6.5-) 7 - 9 μm; **Q** = 1.3)

67. *flaviphylla* O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: 11 - 13 × 5 - 6 μm; **Q** = 2.3)
68. *gracilenta* A. E. Wood [WOO97] {*Solitariae*/Straminea?} (Australia (NSW\*)) (Spores [WOO97]: 8.1 - 9.9 (-11.0) × 4.5 - 6.1 (-6.6) μm, (**Q** = 1.65 - 1.69; est. **Q'** = 1.7).)
69. *gossypinoannulata* D. A. Reid [MIL91] [REI78] [REI80] (Australia (VIC\*)) (Volva somewhat felt-like; don't know if cap margin is appendiculate; annulus is thick and cottony. Spores: 7.0 - 10.0 × 6.2 - 9.0 μm; est. **Q** = 1.2)
70. *griseibrunnea* O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: (9-) 10 - 14 × 5 - 6 (-7) μm; **Q** = 2.17)
71. *griseoconia* D. A. Reid [REI78] [REI80] [WOO97] (Australia (VIC\*)) (Spores: 7.75 - 11 × 6.75 - 9 μm; est. **Q** = 1.2)
72. *griseovelata* D. A. Reid [REI78] [REI80] [WOO97] (Australia (VIC\*)) (Bas feels this belongs in the *Validae* according to marginalia in his copy of [REI78]. Wood also places this in the *Validae*. Spores: 7 - 10 (-11.5) × 6.75 - 8.5 (-10.5) μm; est. **Q'** = 1.15.)
73. *grossa* (Berk.) Sacc. [BAS69] [BER60] [CLE24] [CLE34] [CLC19] [COO92] [GIL41] [MCA95] [REI80] [SAC87] (Australia (TAS\*)) (Spores: 11 - 12.5 (-13.5) × (6.5-) 7 - 8.5 μm; **Q** = 1.6)
74. *grossa sensu* Aberdeen [ABE79] [BAS69] (Australia (QLD)) (Spores: 9 - 12 × 6.5 - 7.5 μm; **Q** = 1.45)
75. *hiltonii* D. A. Reid [REI78] [REI80] (Australia (NSW, WA\*)) (Spores: 7 - 9.5 (-10) × 4.75 - 6.2 μm; est. **Q** = 1.51)
76. *ingwa* Grgur. [GRG97] (Australia (SA\*).) (Spores per protologue: [50/1] 8.4 - 12.0 × 5.7 - 7.9 μm, (**L'** = 10.2 μm; **W'** = 6.9 μm; **Q'** = 1.5).)
- 15 77 NZ-7 . *inopinata* D. A. Reid & Bas [REI87] {*Vittadiniaceae*/"Inopinata"} (Netherlands, New Zealand, UK\*. ) (This species is apparently not obligately mycorrhizal. It is presently thought to have been exported from New Zealand to Europe. Spores *per* D. A. Reid: 8 - 9 × 6 - 7 μm; est. **Q'** = 1.3. Spores *per* Bas: (8.7-) 9.2 - 10.2 (-10.8) × 6 - 8.8 (-9.2) μm; est. **Q'** = 1.35).
78. *kammala* Grgur. [GRG97] (Australia (SA\*)) (Spores [*per* protologue]: (9.6-) 10.8 - 14.6 × 5.4 - 7.8 μm, (**L'** = 12.1 μm; **W'** = 6.2 μm; **Q'** = 1.95).)
79. *loricata* Gentilli *nom. inval.* [BAS69] [GEN53] [MIL91] [REI80] (Australia (?WA)) (insufficiently known. Proposed type apparently lost.)
80. *luteivolvata* O. K. Mill. [MIL92] (Australia (WA\*)) (Spores: (9.0-) 10.0 - 13.0 (-14.0) × (5.0-) 5.5 - 7.5 (-8.6) μm; **Q** = 1.62)
- 16 81 NZ-8 . *cf. manicata* (Berk. & Broome) Pegler [PEG86] (Sri Lanka\*, ?New Zealand, ?USA (Hawaii)) (This species is apparently not obligately mycorrhizal. Spores [PEG86]: 7.3 - 8.7 × 5.7 - 8.0 μm; **Q** = 1.28. Spores of New Zealand material: [138/7/2] (7.0-) 8.0 - 11.9 (-14.3) × (5.0-) 6.6 - 10.2 (-12.4) μm, (**L** = 8.6 - 9.5 (-10.6) μm; **L'** = 9.3 μm; **W** = 7.4 - 8.9 (-9.3) μm; **W'** = 8.1 μm; **Q** = (1.02-) 1.05 - 1.33 (-1.83); **Q** = 1.10 - 1.20 (-1.23); **Q'** = 1.16).)
- 82 NZ-9 . *mumura* G. S. Ridl. [MKZ92] [RID88] [RID91] (New Zealand\*) (Spores: (8-) 9 - 12 × (6-) 6.5 - 8.5 μm; **Q** = 1.40)
- 17 83 t-10. [*cf.?*] *nauseosa* (Wakefield) D. A. Reid [BAS69] [GUZ75] [YOU82] [YOU86] [YOU94] (Australia (NSW, WA)) (The species is known from several botanical gardens and occurs in nature in the Caribbean region—insular and mainland locations—most northern collection in N. Amer. is an isolated occurrence in Baltimore, Maryland, USA. The status in Australia is not clear to me. This species is not obligately mycorrhizal. First report from Australia in [YOU82]. Spores [including holotypes of all synonymized taxa, mat'l. from botanical gardens and Caribbean region]: [560/27/17] (6.0-) 7.0 - 10.0 (-13.5) × (4.9-) 6.1 - 8.3 (-11.1) μm, (**L** = 7.4 - 9.4 (-9.6) μm; **L'** = 8.4 μm; **W** = (6.3-) 6.5 - 7.7 (-7.9) μm; **W'** = 7.1 μm; **Q** = (1.0-) 1.05 - 1.40 (-1.86); **Q** = (1.08-) 1.09 - 1.33 (-1.34); **Q'** = 1.19).)
84. *ochraceobulbosa* A. E. Wood [WOO97] (Australia (NSW\*, QLD)) (Spores [WOO97]: 9.3 - 11.7 × (7.3-) 8.1 - 9.6 (-10.2) μm, (**Q** = 1.09 - 1.30; est. **Q'** = 1.2).)
85. *ochrophylla* (Cooke & Masee) Cleland [ABE79] [BAS69] [CLE24] [CLE34] [CLC14] [CFH84] [CMA89] [FUH85]

- [GIL41] [GUZ75] [REI80] [RIC37] [SAC91] [SHT88] [YOU86] [YOU94] (Australia (NSW, QLD\*, SA, VIC)) (Illus. in [SHT88] seems swapped with that of *A. preissii*. Spores [BAS69]: 9.0 - 11.0 × 5.5 - 7.0 μm; **Q** = 1.5 - 1.8.)
86. *ochrophyloides* D. A. Reid [REI78] [REI80] (Australia (VIC\*)) (Something unreliable in the spore measurements? Spores in print: 7 - 9 × 6.5 - 8.5 μm; est. **Q** = 1.05. Spores from gill: 7 - 10 × 5 - 8 μm; est. **Q** = 1.3)
87. *ochroterrea* Gentili *ex* Bas [BAS69] [GEN53] [MIL91] [REI80] (Australia (WA\*)) (Spores [BAS69]: (10-) 11 - 13 (-13.5) × 5 - 6.5 μm; **Q** = 2.1)
88. *pagetodes* D. A. Reid [REI78] [REI80] (Australia (VIC\*)) (Spores: 7 - 10.2 × 7.2 - 8.75 (-10) μm; est. **Q** = 1.1)
- 89 NZ-10 . *pareparina* G. S. Ridl. [MKZ92] [RID88] [RID91] (New Zealand\*) (Spores: 8 - 12 × (6.5-) 8 - 10.5 μm; **Q** = 1.09)
90. *preissii* (Fries) Saccardo f. *preissii* [BAS69] [COO92] [GEN53] [MCA95] [MIL91] [REI80] [SAC87] [SHT88] [YOU94] (Australia (NSW, WA\*)) (Illus. in [SHT88] seems to be switched with that of *A. ochrophylla*. Spores: (9.5-) 10 - 12 (-12.5) × 5.5 - 6 μm; **Q** = 1.9 - 2.0)
91. *preissii* f. *levis* Gentili *nom. inval.* [BAS69] [GEN53] [MIL91] [REI80] (Australia (WA)) (Insufficiently known. Proposed type apparently lost.)
- 92 NZ-11 . *pumatona* G. S. Ridl. [MKZ92] [RID88] [RID91] (New Zealand\*) (Spores: 9 - 12 × 5.5 - 9 μm; **Q** = 1.55)
93. *pyramidifera* D. A. Reid [REI78] [REI80] (Australia (VIC\*)) (Spores: 8 - 13.5 × 7 - 9 μm; est. **Q** = 1.35)
94. *pyramidiferina* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: (7.2-) 10.5 - 12.6 × (5.1-) 6.9 - 9.0 μm, (**Q** = 1.33 - 1.71; est. **Q'** = 1.45).)
- 18 95 t-11. *rosea* D. A. Reid [REI78] [REI80] (Australia (VIC\*)) (Spores (type): [25/1/1] (9.5-) 11.2 - 15.8 × 6.1 - 8.5 μm, (**L** = 12.9 μm; **W** = 7.4 μm; **Q** = (1.45-) 1.49 - 2.08 (-2.21); **Q** = 1.74).)
96. *strobilacea* (Cooke) Sacc. [BAS69] [COO91] [COO92] [GIL41] [MCA95] [REI80] [SAC95] (Australia (VIC\*)) (Cf. *A. effusa*, above. Spores [BAS69]: (7.5-) 8 - 10 × 6.5 - 9 μm; **Q** = 1.2)
97. *subalbida* Cleland [BAS69] [CLE31] [CLE34] [GIL41] [REI80] (Australia (QLD, SA, WA\*)) (Spores [BAS69]: 10 - 12.5 (-13.5) × 5.5 - 7 (-8) μm; **Q** = 1.65 - 1.8)
98. *sublutea* (Cleland) E.-J. Gilbert [BAS69] [CLE31] [GIL41] [REI80] (Australia (SA\*)) (Spores [BAS69]: (11-) 11.5 - 13 (-13.5) × 6.5 - 7.5 (-8) μm; **Q** = 1.8)
99. species indet. 1 of Bas (= *Amanitopsis sublutea* Cleland pro parte.) [BAS69] (Australia (SA)) (Spores [BAS69]: 11.5 - 13.5 (-14.5) × 5.5 - 6.5 μm; **Q** = 2.15)
100. species indet. 2 of Bas (= *Amanitopsis straminea* Cleland pro parte.) [BAS69] (Australia (SA)) (Spores [BAS69]: 9.5 - 12 × 5 - 6.5 μm; **Q** = 1.8)
- 101 NZ-12 . species 2 of G. S. Ridl. [RID88] [RID91] (New Zealand) (Spores: 9 - 12 × 9 - 12 μm; **Q** = 1.00)
102. species AUS1 [my notes] (Australia (QLD)) (Spores: [20/1/1] 9.0 - 11.0 (-11.5) × (6.0-) 6.2 - 7.0 (-7.5) μm, (**L** = 10.0 μm; **W** = 6.6 μm; **Q** = (1.31-) 1.32 - 1.62 (-1.81); **Q** = 1.52).)

### C. Section *Phalloideae*

103. *austrophalloides* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: 6.2 - 8.9 × 5.5 - 8.3 μm, (**Q** = 1.08; est. **Q'** = 1.1).)
104. *brunneibulbosa* O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: 8 - 10 × 5 - 6.5 μm; **Q** = 1.47)
105. *eucalypti* O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: 8 - 12 × 6 - 7.5 (-8.5) μm; **Q** = 1.66)
- 19 106 . *marmorata* Cleland & E.-J. Gilbert [GIL41] [REI80] (Australia (NSW\*)) (Spores [REI80]: 7.0 - 9.5 × 5.0 - 7.5 (-8.0) μm; est. **Q** = 1.3. Spores: [80/4/1] (6.8-) 7.5 - 10.0 (-11.8) × (5.8-) 6.2 - 8.0 (-9.5) μm, (**L** = 8.1 - 9.1 μm; **L'** = 8.6 μm; **W** = 6.8 - 7.2 μm; **W'** = 7.0 μm; **Q** = (1.06-) 1.11 - 1.40 (-1.67); **Q** = 1.17 - 1.29; **Q'** = 1.22).)

107. *murina* (Cooke & Masee) Sacc. *nom. inval.* [ABE79] [CLC14] [CMA89] [COO92] [GIL41] [MCA95] [REI80] [SAC91] [SHT88] (Australia (QLD\*)) (This name is a later homonym of *Amanita murina* Roques *ex* Gillet. The basionym was also invalid as a later homonym of *Agaricus murinus* Batsch. Gilbert [GIL41] thought this might be the same as *Amanita marmorata*. Cleland & Cheel made the same combination in 1914 and misapplied the name to *A. grisella fide* E.-J. Gilbert [GIL41: 41]. Spores: 7.0 - 10.0 × 6.2 - 8.0 μm; est. **Q** = 1.2)
108. *murinaster* A. E. Wood [WOO97] (Australia (ACT, NSW\*)) (Spores [WOO97]: 7.5 - 9.6 × 6.3 - 8.4 μm, (**Q** = 1.12 - 1.17; est. **Q'** = 1.15).)
109. *peltigera* D. A. Reid [REI78] [REI80] (Australia (WA\*)) (Spores (type): [20/1] (7.6-) 7.9 - 10.1 (-11.9) × (6.3-) 6.7 - 8.5 (-9.1) μm; **Q** = 1.23)
- 20 110. *phalloides* (Fr.) Link *in* Willd. [GIL41] [REI80] [RID88] [SHT88] [RID91] [STE62] [TAY81] [YOU86] [YOU94] (Australia (NSW, VIC), New Zealand) (Spores from Europe and W. Hemisphere introductions: [296/15/14] (7.5-) 8.0 - 10.1 (-13.5) × (5.5-) 6.1 - 8.0 (-10.5) μm, (**L** = 8.3 - 9.3 (-9.5) μm; **L'** = 8.9 μm; **W** = (6.4-) 6.8 - 7.4 μm; **W'** = 7.1 μm; **Q** = (1.03-) 1.12 - 1.47 (-1.70); **Q** = 1.20 - 1.33 (-1.40); **Q'** = 1.26).)

#### D. Section *Validae*

- 21 111 NZ-13. *australis* G. Stev. [RID88] [RID91] [RID93] [STE62] [TAY81] (New Zealand\*) (= *A. excelsa sensu* G. Stev. *p.p.* = *Limacella macrospora* G. Stev. = *Oudemansiella macrospora* (G. Stev.) Horak. Spores per protologue: 9 - 12 × 8 - 9 μm; est. **Q'** = 1.12. Spores (per Ridley thesis): (8.0-) 9.0 - 12.0 (-14.5) × (7.0-) 8.0 - 10.5 μm; **Q** = 1.0 - 1.33 (-1.60); est. **Q'** = 1.17. Spores: [40/2/1] (8.8-) 9.0 - 11.0 (-12.8) × (8.0-) 8.2 - 10.2 (-11.5) μm, (**L** = 9.8 - 10.2 μm; **L'** = 10.0 μm; **W** = 9.2 - 9.5 μm; **W'** = 9.3 μm; **Q** = 1.02 - 1.15 (-1.17); **Q** = 1.07 - 1.08; **Q'** = 1.07).)
112. *basiorubra* O. K. Mill. [MIL92] (Australia (WA\*)) (Spores: 7.6 - 9.0 × 5.5 - 6.7 μm; **Q** = 1.39.)
113. *flavella* E.-J. Gilbert & Cleland [GIL41] [REI80] (Australia (NSW\*)) (Spores: 8.0 - 8.5 × 5.0 - 6.5 μm; est. **Q** = 1.45)
114. *fuscobrunnea* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: (5.7-) 6.6 - 7.5 × 5.4 - 6.6 μm, (**Q** = 1.13; est. **Q'** = 1.2).)
115. *fuscosquamosa* A. E. Wood [WOO97] (Australia ((NSW\*)) (Spores [WOO97]: 7.2 - 8.4 (-8.7) × 5.4 - 7.2 μm, (**Q** = 1.20; est. **Q'** = 1.25).)
116. *grisella* E.-J. Gilbert & Cleland var. *grisella* [GIL41] [REI80] [WOO97] (Australia (NSW\*)) (Wood may have misapplied the name; see *A. grisella sensu* Wood, below. Spores from drawings of [GIL41]: [3/1/1] 8.5 - 9.8 × 7.0 - 8.5 μm, (**L** = 9.0 μm; **W** = 7.6 μm; **Q** = 1.15 - 1.26; **Q** = 1.20). Spores [REI80]: 6.9 - 9.5 × 6 - 8 μm; est. **Q'** = 1.17.)
117. *grisella sensu* Wood [WOO97] (Australia (NSW, QLD)) (Seems to be a misapplication. Spores: (7.5-) 8.4 - 9.9 (-12.3) × (5.4-) 6.0 - 7.5 (-9.9) μm, (?**Q** = 1.19 - 1.35; est. **Q'** = 1.35).)
118. *griselloides* D. A. Reid [MIL91] [REI78] [REI80] (Australia (WA\*)) (Proper placement to section is difficult. The cap margin is not reported as appendiculate; however the spores and the felted, layered volval patch on the pileus definitely suggests section *Lepidella*. Spores: 8.2 - 12.5 × 6.0 - 7.0 (-8.5) μm; est. **Q** = 1.6)
119. *kalamundae* [as “*kalamundi*”] O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: 8.4 - 11 (-12) × (5-) 6.5 - 8.4 μm; **Q** = 1.45)
- 120 NZ-14. *karea* G. S. Ridl. [MKZ92] [RID88] [RID91] [STE62] (New Zealand\*) (= *A. excelsa sensu* G. Stev. in part. Spores: 6.5 - 9 × 5.5 - 6.5 (-8) μm; **Q** = 1.32)
121. *luteofusca* Cleland & E.-J. Gilbert [GIL41] [REI80] (Australia (SA\*)) (Volva similar to that of *A. griselloides*, above. Spores: 7.0 - 11.0 × 7.0 - 10.0 μm; est. **Q** = 1.05)
122. *luteolovelata* D. A. Reid [REI78] [REI80] [WOO97] (Australia (NSW, VIC\*)) (= *A. grisella* var. *luteolovelata* (D. A. Reid) D. A. Reid. Spores [REI80]: 7.0 - 9.2 × 5.0 - 7.2 μm; est. **Q** = 1.3. Spores [WOO97]: 7.5 - 10.5 × (5.6-) 6.0 - 7.8 μm, (?**Q** = 1.28 - 1.43; est. **Q** = 1.3).)
- 123 NZ-15. *nothofagi* G. Stev. [RID88] [RID91] [STE62] [TAY81] (New Zealand\*) (= *A. excelsa sensu* G. Stev. in part.



Spores: (6.5-) 7.5 - 9 (-13) × (6.5-) 7.5 - 9 (-13) μm; **Q** = 1.05)

•-22 124. *rubescens* Pers. : Fr. [CLE24] [CLE34] [GIL41] [REI80] (Australia (SA)) (Spores [from northern European collections]: [290/12/7] (7.0-) 8.0 - 10.6 (-12.5) × (5.2-) 5.5 - 7.0 (-8.0) μm, (**L** = (8.4-) 8.6 - 10.1 μm; **L'** = 9.2 μm; **W** = 6.0 - 6.6 (-6.7) μm; **W'** = 6.3 μm; **Q** = (1.20-) 1.31 - 1.67 (-1.87); **Q** = 1.37 - 1.56 (-1.58); **Q'** = 1.48). Spores (Australia): 7.2 - 9.0 × 5.0 - 5.5 (-6.5) μm; est. **Q'** = 1.55. Spores [GB85] (Chile): (8-) 9 - 11 × 6 - 7 μm; est. **Q'** = 1.55.)

125. *sordidogrisea* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: (6.6-) 7.5 - 9.0 × (4.2-) 4.8 - 5.4 μm, (**Q** = 1.73; est. **Q'** = 1.6.)

126. *strobilaceoides* A. E. Wood [WOO97] (Australia (NSW\*)) (Spores [WOO97]: 7.2 - 10.2 × (4.8-) 5.1 - 7.5 (-8.1) μm, (**Q** = 1.28 - 1.51; est. **Q'** = 1.4.)

127. *variabilis* E.-J. Gilbert & Cleland [GIL41] [REI80] (Australia (SA\*)) (Spores: 6.5 - 9.0 × 4.75 - 6.0 μm; est. **Q** = 1.45)

128. *walpolei* O. K. Mill. [MIL91] (Australia (WA\*)) (Spores: 9 - 11 × 6 - 6.8 μm; **Q** = 1.58)

129 NZ-16. species 1 of Ridley [RID88] [RID91] [TAY81] (New Zealand) (Spores: (7.5-) 8 - 9 (-10) × (5.5-) 6 - 7.5 (-8) μm; **Q** = 1.31.)

### III. Species Unassignable to Section

130. *Amanita forrestiae* (Kalchbr.) McAlpine [KAL83] [MCA95] [REI80] (Australia (?)) (Spores: .)

### IV. Species Named in the Literature, but Unsubstantiated [per D. A. Reid and G. S. Ridley]

\*. *citrina sensu* Masee [RID88] [RID91] [STE62] (New Zealand) (Probable misidentification says G. S. Ridley.)

\*. *mappa* (Batsch ex Lasch) Quél. [COO92] [MCA95] [REI80]

\*. *ovoidea* (Bull. : Fr.) Quél. [COO92] [MCA95] [REI80]

\*. *spissa* (Fr.) Kummer [COO92] [MCA95] [REI80]

\*. *vaginata* (Bull. : Fr.) Vitt. [CLC14] [COO92] [MCA95] [REI80]

\*. *verna* (Bull. : Fr.) Vitt. [CLC14] [COO92] [MCA95] [REI80]

### BIBLIOGRAPHY

- [ABE79] Aberdeen, J. E. C. 1979. *Introduction to the mushrooms, Toadstools and larger fungi of Queensland*. The Queensland Naturalists' Club, Handbook no. 1. 120 pp.
- [ART89] \_\_\_\_\_, D. J. Ross & C. H. Thompson. 1989. *Studies in landscape dynamics in the Cooloola-Noosa River Area, Queensland. 7. Larger fungi*. CSIRO Australia, Division of Soils, Divisional Report No. 100. 38 pp.
- [BAS69] Bas. C. 1969. Morphology and subdivision of *Amanita* and a monograph of its section *Lepidella*. *Persoonia* 5(4): 285-579.
- [BER45] Berkeley, M. J. 1845. ?. *Hooker's London Journal of Botany* 4: ca. 45.
- [BER48] \_\_\_\_\_. 1848. ?. *Hooker's London Journal of Botany* 7: ca. 572.
- [BER60] \_\_\_\_\_. 1860. ?. *Flora Tasman*. (Hooker ed.) 2: c. 242.
- [CLE24] Cleland, J. B. 1924. Australian fungi: notes and descriptions—No. 5. *Trans. Roy. Soc. S. Austral.* 48: 236-252.
- [CLE27] \_\_\_\_\_. 1927. Australian fungi: notes and descriptions—No. 6. *Trans. Roy. Soc. S. Austral.* 51: 298-306.
- [CLE31] \_\_\_\_\_. 1931. Australian fungi: notes and descriptions—No. 8. *Trans. Roy. Soc. S. Austral.* 55: 152-160.
- [CLE33] \_\_\_\_\_. 1933. Australian fungi: notes and descriptions—No. 9. *Trans. Roy. Soc. S. Austral.* 57: 187-194.
- [CLE34] \_\_\_\_\_. 1934. *Toadstools and mushrooms and other larger fungi of South Australia*. Harrison Weir, Adelaide. 178 pp.
- [CLC14] \_\_\_\_\_ & E. Cheel. 1914. The hymenomycetes of New South Wales. *Agric. Gaz. New South Wales* 25: 885-888, 1045-1049.
- [CLC19] \_\_\_\_\_ & \_\_\_\_\_. 1919. Australian fungi: notes and descriptions—No. 3. *Trans. Roy. Soc. S. Austral.* 43: 262-315, pl. xxviii-xxix.

- [CLC23] \_\_\_\_ & \_\_\_\_\_. 1923. Australian fungi: notes and descriptions—No. 4. *Trans. Roy. Soc. S. Austral.* 47: 58-78, 2 pl.
- [CFH84] Cole, M., B. Fuhrer & A. Holland. 1984. *A field guide to the common genera of gilled fungi in Australia*. Inkata Press, Melbourne. revised edition. 11 pp. & pl.
- [C0089] Cooke, M. C. 1889. New Australian fungi. *Grevillea* 18: 1f., 30-31, 72f., 113f.
- [COO91] \_\_\_\_\_. 1891. ? *Grevillea* 19: c. 82.
- [COO92] \_\_\_\_\_. 1892. *Handbook of Australian fungi*. (Williams & Norgate, London). xxxii+457+[i] pp., 36 pl.
- [CMA87] \_\_\_\_ &? G. E. Masee. 1887. ? *Grevillea* 16: c. 30.
- [CMA88] \_\_\_\_ &? \_\_\_\_\_. 1888. ? *Grevillea* 16: c. 72.
- [FUH85] Fuhrer, B. 1985. *A field companion to Australian fungi*. The Five Mile Press, Hawthorn. 162 pp.
- [GEN53] Gentilli, J. 1953. Amanitas from King's Park, Perth. *The Western Australian Naturalist* 4(2-3): 25-34, 59-63.
- [GIL41] Gilbert, E.-J. 1940-41. *Amanitaceae. Iconographia Mycologia* 26: viii+427 pp. & pl. [Reissued, 1982 as *Iconographia Mycologia* 6.]
- [GRG97] Grgurinovic, C. A. 1997. *Larger fungi of South Australia*. (Bot. Gard. Adelaide St. Herb., Fl. Fauna S. Austral. Handb. Comm.). vi+725 pp.
- [GUZ75] Guzmán, G. 1975. New and interesting species of Agaricales from Mexico. *Studies on Higher Fungi*. H. E. Bigelow & H. D. Thiers, eds. *Beihefte zur Nova Hedwigia* 54: 99-118 & pl. 24=30.
- [KAL81] Kalchbrenner, ?. 1881. ? *Grevillea* 9: c. 147.
- [KAL83] \_\_\_\_\_. 1883. ? *Proceedings of the Linnean Society of New South Wales* 7(3-4): c. 638.
- [KUN98] Kuntze, O. 1898. *Rev. Gen. Plant.* 3(2): c. 539.
- [MRO01] Masee, G. E. 1901. ? *Bull. Misc. Inform. Roy. Bot. Gard. Kew* ? : 156.
- [MCA95] McAlpine, D. 1895. *Systematic Arrangement of Australian Fungi*. Government Printer, Melbourne. ? pp.
- [MKZ92] McKenzie, Eric. 1992. A list of type specimens of New Zealand fungi held in DSIR Plant Protection herbarium (PDD). *Mycotaxon* 43: 77-156.
- [MIL91] Miller, O. K., Jr. 1992 ["1991"]. New species of *Amanita* from Western Australia. *Canad. J. Bot.* 69: 2692-2703.
- [MIL92] \_\_\_\_\_. 1992. Three new species of *Amanita* from Western Australia. *Mycologia* 84(5): 679-686.
- [REI78] Reid, D. A. 1978. New species of *Amanita* (fungi) from Australia. *Victorian Naturalist* 95: 47-49.
- [REI80] \_\_\_\_\_. 1980. A monograph of the Australian species of *Amanita* Pers. ex Hook. (Fungi). *Austral. J. Bot. Suppl. Ser.* 8: 1-97.
- [RIC37] Rick, J. 1937. *Agarici riograndenses I. Lilloa* 1: 3307-346.
- [RID88] Ridley, G. S. 1988. *Studies in white spored Agarics, the genera, Amanita, Squamanita, and Russula*. Ph. D. thesis, Victoria University of Wellington, New Zealand.
- [RID91] \_\_\_\_\_. 1991. The New Zealand species of *Amanita* (Fungi: Agaricales). *Aust. Sys. Bot.* 4: 325-354.
- [RID93] \_\_\_\_\_. 1993 *Limacella macrospora* S and *L. wheroparaonea*, a new species, from New Zealand (Fungi, Agaricales, Amanitaceae). *Aust. Sys. Bot.* 6: 155-159.
- [SAC87] Saccardo, P. A. 1887. *Syll. fung.* 5: cf. 8ff.
- [SAC88] \_\_\_\_\_. 1888. *Syll. fung.* 5: c. 752.
- [SAC91] \_\_\_\_\_. 1891. *Syll. fung.* 7: ?.
- [SAC91a] \_\_\_\_\_. 1891a. *Syll. fung.* 9: cf. 1-3.
- [SAC95] \_\_\_\_\_. 1895. *Syll. fung.* 11: cf. 1-2.
- [SHT88] Shepherd, C. J. and C. J. Totterdell. 1988. *Mushrooms and toadstools of Australia*. (Inkata Press, Sydney). [vi]+162 pp.
- [STE62] Stevenson, G. 1962. The Agaricales of New Zealand 2. *Amanitaceae. Kew Bulletin* 16: 65-74.
- [TAY81] Taylor, M. 1981. *Mushrooms and toadstools*. Reed, Christchurch. 79 pp.
- [TYW95] Tulloss, R. E., A. M. Young and A. E. Wood. 1995. *Amanita murinoflammeum*—a new species from dry forests of eastern Australia. *Mycotaxon* 56: 295-302.
- [WOO97] Wood, A. E. 1997. Studies in the genus *Amanita* (Agaricales) in Australia. *Austral. Sys. Bot.* 10: 723-854.

[YOU82] Young, A. M. 1982. *Amanita nauseosa*: an Australian species? *Bull. Brit. Mycol. Soc.* 16: 144.

[YOU86] \_\_\_\_\_. 1986. *Common Australian fungi*, rev. ed. (New South Wales University Press, Kensington). 157 pp. & pl.

[YOU94] \_\_\_\_\_. 1994. *Common Australian fungi. A naturalist's guide*, 2nd. ed. (New South Wales University Press, Kensington).  
iv+154 pp. & 32 pl.