

## Key to described species of Inocybaceae from Australia

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- 1a. Fruitbodies sequestrate with a partial stipe-columella, peridium pallid mixed with brownish areas, gleba loculate, dark brown; basidia necropigmented, spores smooth, ovate-elliptic,  $9.0\text{-}10.5 \times 5.5\text{-}6.0 \mu\text{m}$  .....  
..... *Auritella geoaustralis* Matheny & Bougher (see Matheny & Bougher 2006a)
- 1b. Fruitbodies agaricoid and basidia necropigmented or hyaline .....2
- 2a. Fruitbodies often short and squat in sand or sandy soil, pale brown to dark brown; spores narrowly oblong-cylindric or oblong-reniform,  $10\text{-}14 \times 4.0\text{-}5.5 \mu\text{m}$ , very pale brown or warm buff under a light microscope, pleurocystidia absent, cheilocystidia often elongated and cylindric,  $49\text{-}92 \times 6\text{-}13 \mu\text{m}$  .....  
..... *Auritella arenicolens* (Cleland) Matheny & Bougher (see Matheny & Bougher 2006a)
- 2b. Fruitbodies not short and squat, spores not narrowly oblong, spores generally yellowish brown or darker than above, habitat various, color various; pleurocystidia absent or present but cheilocystidia not elongated and cylindric .....3
- 3a. Basidia necropigmented and pleurocystidia absent; partial veil absent, lacking marginate bulb .....4
- 3b. Basidia hyaline and pleurocystidia present as metuloids; partial veil present as a cortina, or absent if possessing a marginate bulb .....6
- 4a. Pileus fulvous to hazel, surface minutely velvety; cheilocystidia narrowly flexuous with obtuse apices,  $35\text{-}72 \times 5\text{-}10 \mu\text{m}$ , spores  $8.0\text{-}9.5 \times 5.0\text{-}5.5 \mu\text{m}$ , subphaseoliform, subamygdaliform to elliptic .....  
..... *Auritella serpentinocystis* Matheny, Trappe & Bougher (see Matheny & Bougher 2006a)
- 4b. Pileus some other color and not minutely velvety; cheilocystidia subfusiform, sublageniform to slenderly clavate with swollen or subcapitate apices .....5
- 5a. Known from New South Wales, spores normally pigmented or ochraceous-tawny under a light microscope,  $7.5\text{-}10.5 \times 4.0\text{-}5.5 \mu\text{m}$ , elliptic, pileus light yellowish brown to light brown, stipe pallid to pale brown or colored like pileus.....  
..... *Auritella dolichocystis* Matheny, Trappe & Bougher (see Matheny & Bougher 2006a)
- 5b. Known from Western Australia, spores lighter than above or ochraceous-buff under a light microscope, morphologically similar to above but differing in nLSU-rRNA and *rpb2* nucleotide

sequences .....	
..... <i>Auritella chamaecephala</i> Matheny, O.K. Mill. & Bougher (see Matheny & Bougher 2006a)	
6a. Spores smooth or entire in outline .....	7
6b. Spores angular or nodulose in outline .....	13
7a. Stipe violet, pileus with violet covering at first, later cinnamon-brown to umbrinous, odour strongly spermatic; spores elliptic and caulocystidia and caulocystidioid hairs absent .....	
..... <i>Inocybe violaceocaulis</i> Matheny & Bougher (see Matheny & Bougher 2005)	
7b. Violet pigments absent, odour not strongly spermatic; spores not elliptic, caulocystidia or caulocystidioid hairs present .....	8
8a. Pileus brown or umbrinous, matted fibrillose-squamulose, stipe coarsely pubescent with tufts of minute fibrils, not pruinose; pleurocystidia quite long between 70-110 $\mu\text{m}$ , spores 8.5-10.5 $\mu\text{m}$ $\times$ 5.0-6.0 $\mu\text{m}$ .....	<i>Inocybe fibrillosibrunnea</i> Miller & Hilton
8b. Pileus color various, surface texture various, stipe pruinose entire length or at apex; pleurocystidia <80 $\mu\text{m}$ long, spores of various dimensions .....	9
9a. Center of pileus squarrose-scaly to imbricate-scaly, dark brown to almost black, at least upper half of stipe pruinose; spores elliptic to ovate, short, 6.5-7.5 $\times$ 4.0-5.0 $\mu\text{m}$ .....	
..... <i>Inocybe australiensis</i> Cleland & Cheel	
9b. Pileus not squarrose-scaly, color and stipe covering various; spores as above or larger .....	10
10a. Pileus brown or tawny-olive, stipe with pink or pinkish-cinnamon tones; spores 6.5-7.5 $\times$ 4.0-5.0 $\mu\text{m}$ .....	<i>Inocybe fulvo-olivacea</i> Cleland
10b. Pileus reddish brown to dark umbrinous, cinnamon brown, or yellowish brown to dark yellowish brown, stipe warm buff or lacking pink tones, or spores larger than above .....	11
11a. Spores 10.0-11.0 $\times$ 5.0-5.0 $\mu\text{m}$ , pileus cinnamon brown to umber brown, stipe similarly colored to pileus .....	<i>Inocybe murrayana</i> Cleland
11b. Spores <10.0 $\mu\text{m}$ long, pileus and stipe variously colored .....	12
12a. Pileus dark brown to brown or umbrinous .....	<i>Inocybe granulospes</i> Cleland
12b. Pileus pale brown .....	<i>Inocybe serrata</i> Cleland
13a. Base of stipe marginate or weakly so .....	14
13b. Stipe even or swollen at base, but not with a marginate bulb .....	15

14a. Pileus reddish brown, rimose, lamellae almost free, stipe longer than pileus diameter; spores 9.0-10.5 × 6.5-7.5 μm with 9-10 prominent nodules, stipe long in relation to pileus diameter .....

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*Inocybe calopedes* Matheny & Bougher (= *I. discissa* (Cleland) Grgurnovic, non *discissa* (Fr.) Quél.)

14b. Pileus pale yellowish brown, not rimose, lamellae attached, stipe short in relation to pileus diameter; spores 8.5-10 × 5.0-6.0 μm with 7-9 indistinct nodules or corners about an angular outline, the ventral side of which is often concave ..... *Inocybe emergens* (Cleland) Grgurinovic

15a. Caulocystidia descending entire length of stipe; pileus cinnamon-brown, stipe white; spores 8.0-10.5 × 6.0-7.0 μm with 9-13 moderate to prominently size nodules .....

..... *Inocybe exigua* (Cleland) Grgurinovic

15b. Caulocystidia restricted to stipe apex or not observed ..... 16

16a. Pileus dark brown, shaggy squamulose; stipe pale brown, not stout, fibrillose; spores 9.5-11.0 × 5.5-6.5 μm, oblong-angular with 5-8 inconspicuous nodules or corners; metuloid caulocystidia not observed .....

..... *Inocybe imbricata* (Cleland) Garrido

16b. Pileus golden brown, rimose; stipe stout, striate, with pale brown tint; spores 9.0-11.5 × 6.5-8.0 μm, gibbous with 9-12 small nodules but others irregularly angular to subelliptic in outline with 7-9 indistinct nodules or corners; metuloid caulocystidia present at stipe apex.....

..... *Inocybe dewrangia* Grgurinovic