

## ***LENTINELLUS* RECONSIDERED**

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Three years ago, we published a short article in this journal (Gates and Ratkowsky, 2003) on the fungal genus *Lentinellus* in Tasmania, identifying three species that occur widely in Tasmanian forests. We provided a key to the three species and descriptions of each of the species. The names that we gave to the species were based upon a review of the literature and an evaluation of the opinions of authors of previous papers. One of the species is usually found on soil, more rarely at the base of trees, and has a central or slightly eccentric stipe. We identified this one as *Lentinellus omphalodes* (Fr.) Karst. The other two species are always found on wood, are sessile or have a reduced, lateral stipe. From the literature, we decided that the species with a rather hairy pileus and very small spores was either *L. hepatotrichus* (Berk.) D.A. Reid or *L. ursinus* (Fr.) Kühner, and that the other species, with a more glabrous pileus and larger spores, was either *L. pulvinulus* (Berk.) Pegler or *L. flabelliformis* (Bolton: Fr.) Ito.

After publication, we sent a reprint of our paper to Prof. Ron Petersen of the University of Tennessee, and learned to our surprise that he and Karen Hughes, a molecular biologist, had just submitted a manuscript on the genus *Lentinellus* for publication. He suggested that some of the names we used in our article would have to be changed as a result of their study. Now that their work, a 270-page monograph comprising three separate papers, has appeared in print (Petersen and Hughes, 2004), we are able to note the following changes to the nomenclature of the Tasmanian species.

The species that we were calling *L. pulvinulus* does appear to be that species. Its known distribution is confined to the Southern Hemisphere, occurring in New Zealand and Argentina as well as in Tasmania. Phylogenetically, the species is closest to *L. perstrictifolius* (Speg.) Singer, also of Argentina, and suggests a Gondwanan origin (Petersen and Hughes, 2004). The second sessile or laterally stipitate species is *L. castoreus* (Fr.) Kühner & Maire, not *L. hepatotrichus*, which Petersen and Hughes (2004) consider to be a synonym of *L. pulvinulus*, nor *L. ursinus*, which is widespread in Europe, eastern Asia and North America, including temperate Mexico, but does not appear to extend south of the Equator. *Lentinellus castoreus*, on the other hand, is a very widespread species, whose worldwide distribution includes both temperate and tropical areas of both hemispheres. One feature that we had overlooked in our previ-

ous treatment of this taxon is the fact that the gills are much closer together than those of *L. pulvinulus*. Indeed, the crowded lamellae, in contrast to the rather distant gill spacing of *L. pulvinulus*, help make the two taxa easy to differentiate macroscopically. In terms of phylogeny, *L. castoreus* is closest to the *L. ursinus* clade (Petersen and Hughes, 2004). Both these broad species groups are noteworthy for their small spores.

The centrally stiptitate species that we had confidently called *L. omphalodes* is not that species, as that taxon is confined to the Northern Hemisphere. In any case, its name has been changed to *L. micheneri* (Berk. & M.A. Curtis) Pegler. Prof. Petersen (pers. comm.) suggested to us that our species might be *L. novae-zelandiae* (Berk.) R.H. Petersen or a new species, *L. tasmanica* R.H. Petersen, described in their monograph (Petersen and Hughes, 2004, pp. 128-131). *Lentinellus novae-zelandiae*, as the name suggests, was first described from New Zealand, but is also known from southern Argentina. This species has a lateral or absent stipe, however, in contrast to the well-developed, usually central, stipe of our Tasmanian collections, and perhaps more importantly, the pileus surface has pileicystidia, which our material lacks. Hence, the Tasmanian stipitate taxon is unlikely to be *L. novae-zelandiae*. On the other hand, our extensive collections of a soil-borne stipitate *Lentinellus* agree with Petersen's description of *L. tasmanica* in all important respects, including the absence of pileicystidia, with the exception of one very important character, viz. spore size. The protologue (Petersen and Hughes, 2004, p. 130) described the spore size as 3.6-5.2 x 3.2-4.0  $\mu\text{m}$ , with a mean spore length of 4.60  $\mu\text{m}$ . In another paper in the same monograph, devoted to type specimen studies, the spore size was given as slightly smaller, viz. 3.6-4.2 x 3.2-3.6  $\mu\text{m}$ , and subglobose in shape. Our own Tasmanian material generally has spores in the range 5-6 x 3.5-4  $\mu\text{m}$ , and is better described as elongate ellipsoidal rather than broadly ellipsoidal or subglobose. Are we to believe that there is a fourth widespread Tasmanian taxon of *Lentinellus*, or is it better to adopt a more conservative approach and conclude, for the moment at least, that the slightly larger spores of our collections do not suggest that the taxon is a different species from *L. tasmanica*? We opt for the latter alternative and conclude that our centrally stipitate species is *L. tasmanica*, despite the apparent discrepancy of spore size. A supporting macroscopic character is the observation by Petersen and Hughes (2004, p. 130) that basidiomata of *L. tasmanica* "seem prone to poor drying, and in the process turn dark brown with tissues hardening". All our collections of the stipitate species exhibit this characteristic.

An amended key to the three Tasmanian species is given below.

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**KEY TO THE TASMANIAN SPECIES OF *LENTINELLUS***

- 1.a) Stipe well developed, central or slightly eccentric.....*Lentinellus tasmanica*
- 1.b) Stipe absent or if present, short and lateral.....2
- 2.a) Pileus generally dark brown and densely hairy; lamellae crowded; spores small, 3-5 x 3-4  $\mu\text{m}$ .....*Lentinellus castoreus*
- 2.b) Pileus light-coloured and usually glabrous towards the margin; lamellae distant; spores larger than the above, 5-7 x 4-6  $\mu\text{m}$ .....*Lentinellus pulvinulus*

**REFERENCES**

- Gates, G. and Ratkowsky, D. 2003. The fungal genus *Lentinellus* in Tasmania. *The Tasmanian Naturalist* **125**: 9-13.
- Petersen, R.H. and Hughes, K.W. 2004. A preliminary monograph of *Lentinellus* (Russulales). *Bibliotheca Mycologica* Band **198**, J. Cramer (Gebr. Borntraeger Verlagsbuchhandlung), Berlin & Stuttgart.