

PUFFBALLS AND 'POISONINGS'

A.M. Young

'Bee Cottage', Blackbutt, Qld 4306

The recent floods and heavy rains in parts of central Queensland have produced some very interesting members of the specialised group within the 'puffballs' that is mostly confined to arid (or at least drier) regions of Australia. Recently, three separate collections of fungi from these drier areas were forwarded to me for identification: two of these collections were implicated in possible poisonings by reports to the Queensland State Poisons Centre, while the third was forwarded purely because the specimen was so unusual to the collector.

The unusual specimen forwarded was *Phellorinia strobilina* Kalchbrenner (Figure 1) which resembles the spiky mace of a medieval knight. Fortunately, the material was packaged very carefully and arrived in an absolutely perfect state thanks to Robin Cowley of the Department of Natural Resources in Charleville, Queensland. Robin forwarded the material after residents at 'South Riversleigh' (a property near Charleville) found the specimen which they thought was unusual and requested further information as to its identity. As is common with the species, only a solitary specimen was found. The collected specimen measured 13 cm in height with the stem measuring 6 × 2 cm. The mace-like head measured 9 cm in diameter and is of some interest due to the extremely large spikes or scales. These are pyramidal in form and measure 1.5–2.0 cm in height and up to 1.5 cm in base diameter; they are more or less rectangular at their bases. These spikes or scales are the main distinguishing character which separates *P. strobilina* from the second Australian species *Phellorinia inquinans* Berkeley. *Phellorinia inquinans* is also club-shaped but its scales are more or less overlapping and do not project outwards as in *P. strobilina*. The scales or spikes of *P. strobilina* also exhibit layers or zones which are very easily seen as a series of wrinkles on the surface of the spike. Excellent photographs of both species can be found in Bottomley (1948) while Cunningham (1944) has a good photograph of a partially dehisced *P. inquinans*. Luckily, the material forwarded by Robin Cowley had not yet begun to dehisce and the all important scales/spikes were very prominent as shown in Figure 1 which is drawn directly from the specimen. The overall colour is light cream with the stem more brownish and darkening towards the bottom. As the fungus matures, the top of the 'mace' disintegrates to leave a wine glass-shaped receptacle full of a powdery, reddish brown spore mass which disperses in clouds of spores at the slightest touch. *Phellorinia strobilina* has been collected from Victoria and South Australia as well as the type locality of Rockhampton in Queensland and is therefore quite widespread. To my knowledge, reports of this species are uncommon, but this is probably because it is not often found or recognised by collectors.

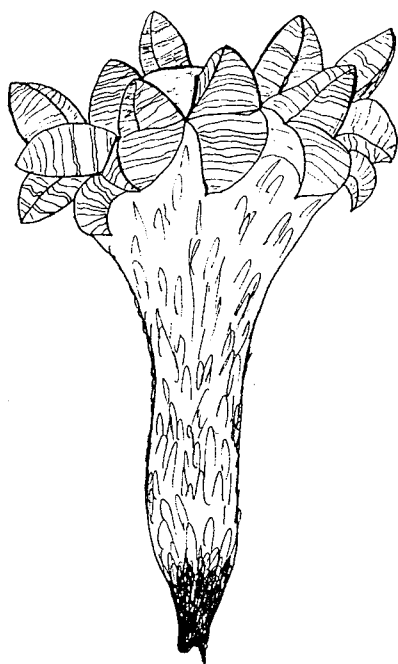


Figure 1



Figure 2

The second material forwarded to me involved a call to the Queensland State Poisons Centre with respect to a possible poisoning case. From experience, it is often simpler for the caller to speak directly to me in order to describe the fungus involved, rather than go through the intermediary of the Poison Centre staff and on numerous occasions the Poison Centre has referred the caller directly to my telephone number. On this occasion I was able to speak to the mother concerned: a 21 month old girl in Dalby had been playing with clothes pegs in the garden, found the fungus, pushed the pegs around in the powdery mass and had then placed the pegs in her mouth. The mother was only able to provide the information that the fungus was very 'dusty' which immediately suggested to me that the material was in the 'puffball tribe'. At the time, my advice was that although I could not be sure, I believed that there was unlikely to be any reaction other than the faint possibility that the girl might have an adverse respiratory reaction to the dusty spore mass, however, I requested that the material be forwarded and this was done. The fungus was quite fragmented, but investigation showed that the reddish brown spore mass was extremely powdery and that the stem (although reduced to shredded fragments), was quite fibrous; there was however, the faint suggestion of a wine glass cup structure for the spore mass and there is no doubt that the material is a species of *Phellorinia* but without any fragments of the peridial surface to check on the presence/absence of spines it is impossible to be certain which of the two species is present. Based on the appearance of the Charleville material, the most probable species is *P. strobilina*. The mother did not indicate that any adverse reactions had occurred in the child.

Neither Cunningham (1944) nor Bottomley (1948) include any details on the edibility of *Phellorinia* spp. However, Kalotas (1996) cites information that *P. inquinans* is regularly used as an edible species in northern India. Although Kalotas indicates that Aborigines in arid areas knew of and used this fungus for body paint purposes, no evidence is given of its use by them for food. Based on the Indian information, it is probable that our species of *Phellorinia* are equally edible, but this is yet to be tested.

The last puffball species to be implicated in a 'poisoning' call to the Queensland Poisons Centre came from Clermont in central Queensland. Again this is in the more arid interior of the State and in this case a two year old boy had tried a 'taste test' on a 'dead fungus' that was also described as 'dusty'. Questions to the mother elicited the facts that the fungus looked more or less like a drumstick and that the stem was thin, hard and woody. I suggested its identity and requested the fungus be forwarded to me for identification. Again the material arrived in excellent condition and I was pleased to see confirmation of my diagnosis of *Podaxis pistillaris* (L.: Pers.) Morse. I had suggested that on the basis of the description it was unlikely that any symptoms would develop and the letter included with the material stated that this was in fact the case.

Podaxis pistillaris (Figure 2) is widespread and common, but like *Phellorinia* spp., there are no records in either Cunningham (1944) or in Bottomley (1948) as to its edibility. Again, Kalotas (1996) provides extensive information on its use as a body paint by Aborigines and also its use as food in northern India.

Both these Queensland State Poison Centre records are interesting as they have produced some information on the likely toxicity of some of the more unusual puffball members, even if in the dry, dusty, ripe stage. Even more gratifying was the reaction by all three members of the public who took some care in transmitting the material for identification. One of the most difficult things I have found during my association with the Poisons Centre, is to get my hands on material implicated in fungal poisonings. Perhaps my relatively good experiences recently are the start of a new era...or maybe I've spoken too soon.

References

- Bottomley, A.M. (1948). Gasteromycetes of South Africa. *Bothalia* 4, 473-810.
Cunningham, G.H. (1944). *The Gasteromycetes of Australia and New Zealand*. John McIndoe, Dunedin, New Zealand.
Kalotas, A.C. (1996). Aboriginal knowledge and use of fungi. *Fungi of Australia* 1B, 268-295.