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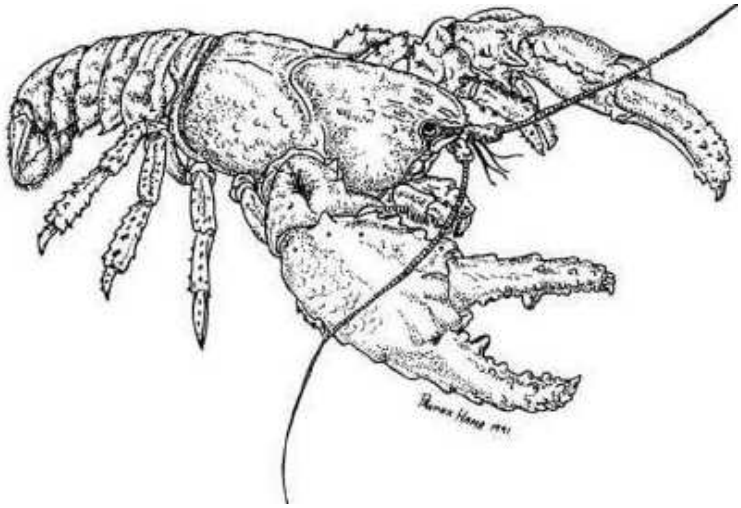


Is five times more than coincidence? – A possible fungus/ant association

by **Sarah Lloyd**

Bullant (*Myrmecia forficata*)

Soaking rains and late October sultry weather created perfect conditions for fungal growth. Around home at Black Sugarloaf (central north Tasmania), several species have appeared in the past week including *Marasmius elegans, Mycena viscidocruenta, Morchella elataa, Hygrocybe graminicolour* and *Amanita xanthocephala*.

Unlike some fungi, such as the Purple turnover (*Leucopaxillus lilacinus*) or the bright yellow *Dermocybe canaria*, which reliably appear in exactly the same place in consecutive years, fruit bodies of *A. xanthocephala* turn up just about anywhere in the eucalypt forest around home. Interestingly, of the six fruit bodies that have appeared in the past week, three are within 20 cm of the pile of small stones, twigs and other material that constitute a jack jumper's (*Myrmecia* sp.) nest and one is adjacent to a rock which covers the nest of the ground dwelling bull ant (or bulldog ant) *Myrmecia forficata*.

(Jack jumpers and bull ants belong to the genus *Myrmecia* in the family Myrmeciinae and, apart from one species that lives in New Caledonia, are only found in Australia, predominantly in the southern regions. They are among our most distinctive ants; most are over 8mm long and although some are placid

and camera shy, many have a ferocious disposition and a very painful sting. Fortunately, unlike some people who are extremely allergic to their sting, my reactions have lessened over the years and although cautious rather than complacent, I do venture close to their nests to observe their behaviour and photograph any nearby fungi.)

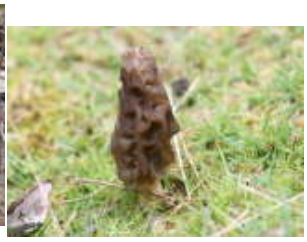
This is not the first time I have observed *A. xanthocephala* close to the nests of *Myrmecia* sp. My first record was in April 2003, when I saw 5 fruits emerging at the edge of the mound of tiny stones of a jack jumper's nests. In April the following year, *A. xanthocephala* grew within the heaped stones of another jack jumper's nest, this one about one kilometre from the first. In May this year, a fruit pushed through the soil adjacent to the home of the ground nesting bulldog ant *M. forficata*. And, as noted above, the current crop of fruits are near either a jack jumper's or bull ant's nest.

It may be that the fungus seeks out the nutrient rich zones of the ants' nests. If so, why don't other species of fungi seek out this resource?

Amanita xanthocephala

Hygrocybe graminicolour

Leucopaxillus lilacinus



Morchella elataa

References:
- Personal communication: Dr Peter McQuillan
- Shattuck, S.O. (1999) *Australian Ants, their biology and identification*. CSIRO Publishing, Melbourne

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