

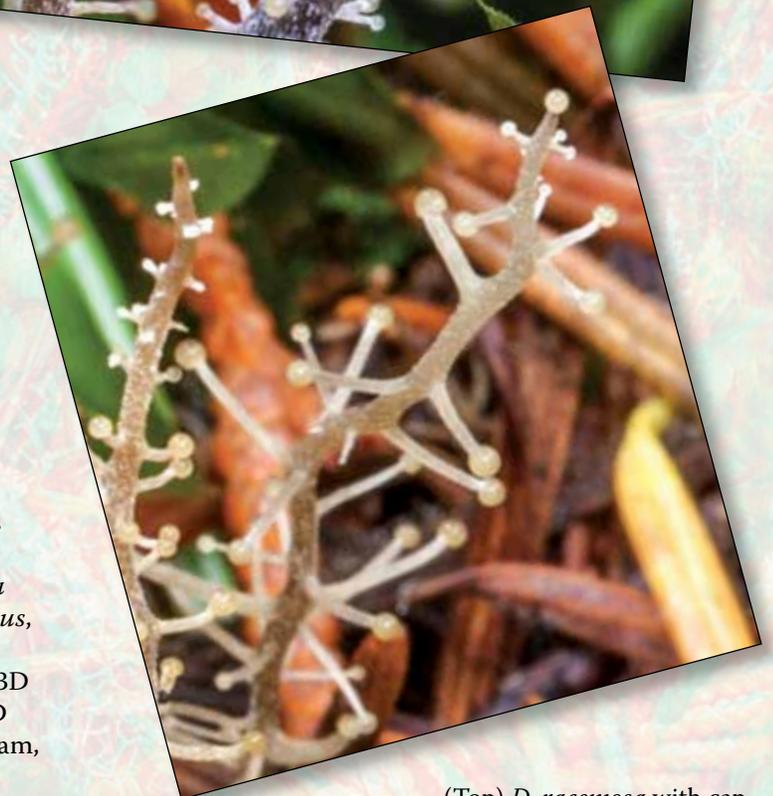
Unusual Sightings

Fred Rhoades

Dendrocollybia racemosa (Pers.:Fr) R. H. Petersen & Redhead

D*endrocollybia racemosa* occurs relatively rarely along the West Coast of North America from southern California to British Columbia, and elsewhere in the north temperate zones around the world. Here in NW Washington State we usually see it once a year from here or there. The photos in this issue were all taken from a collection of fruitings in a local Bellingham park during a visit by Britt Bunyard. *Dendrocollybia racemosa* produces conidia (cloning spores that used to have the asexual state name *Tilachlidiopsis racemosa*). Uniquely among agarics, these are produced on bottle-brush-like side branches on the stipes of fruiting bodies (below, left). The conidia ball up into slimy balls at the ends of the side branches, perfectly placed to glom onto the feet of visiting insects. Since these conidia will grow into genetically identical individuals, this is a good adaptation for a species that specifically decays other old mushrooms, particularly old *Russulas*. When there is one substrate there are likely to be others nearby and with these conidia, a given individual can rapidly colonize other nearby substrates without going through the normal conniptions of the sexual cycle. The importance of this way of life is illustrated by the common occurrence of cap-less stipes that only produce the conidia (below right). Unlike the true *Collybias* which also share this habitat type, and also produce conidia (but on the cap surfaces), the host material is so far decayed by *D. racemosa* that the true host is unrecognizable. *Dendrocollybia racemosa* also produces tuber-like growths (sclerotia) at the bases of the stipes but they are round and black, not brown and elongate as in *Collybia*. Perhaps these may provide a long-term survival strategy, but then why don't all mushrooms produce sclerotia? Another difference is the presence of a gray pigment in the fruiting bodies that is missing from *Collybia*. Genetic analysis by Karen Hughes et al. in 2001 showed that *D. racemosa* is not closely related to *Collybia*, being more closely aligned to *Clitocybe connata* and *Lepista nuda*. Other former *Collybias* (now in *Gymnopus*, *Rhodocollybia*, etc.) are much more distantly related.

Bonus! Go find your pair of 3D glasses (they came in the 3D issue of FUNGI, vol. 7 no. 4) and take a look at this great 3D image produced by Fred Rhoades. This is a stereo phantogram, AKA popup anaglyph stereo photo. View it by placing in a horizontal position and viewing with red/cyan stereo glasses from about a 45 degree angle from the base. ¶



(Top) *D. racemosa* with cap

(Bottom) *D. racemosa* without caps

