

of Sarracenia. However, there are more--more parasites and commensals and opportunists which I have observed and read about. Perhaps your field studies will be equally rewarding. After all, the Sarracenias themselves are but one part of the well-cliched and now proverbial web of bog and savannah life, a web that grows more fascinating and complex the deeper we probe.

SELECTED REFERENCES. (The first six articles, available in any good biological library, are "musts" with their excellent narrative and descriptions coupled with fine drawings. The last is in a limited edition folio book which may be hard to find, is summary of the first six articles, but lacks the details and drawings.)

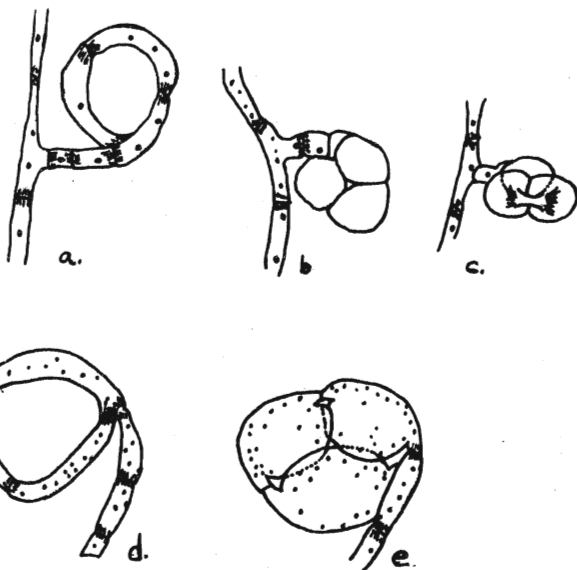
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CARNIVOROUS FUNGI  
 by Jacques Haldé

In the vegetal world which surrounds us, we are surprised by the variety of the carnivorous aquatic, terrestrial or epiphytic plants. We are much more surprised to know that some fungi, indeed microscopic, as for instance Arthrobotrys, Dactylella (which forms collars), and Dactylaria (which forms adhesives) are all carnivorous. They are specialized in the capture of nematodes which constitute the obligatory element of their food.

There are two types of snares: one by adhesives and the other by collars. The fungi which capture with adhesive catch the worms by contact, similar to the Pinguiculas, the sticky glands fixed on peduncles which if lightly rubbed by the worms quickly secretes an acid liquid which goes quickly through the worms. The other fungi have a more crafty and efficient system with the collars that possess the digestive glands composed of three parts as in Fig. 1.

The fungus forms a ring with a sensitive surface on the inside which on contact makes a reaction as in Fig. 2. The three parts of the ring increase in volume very quickly (around three times their initial volume) so that the worm finds itself squeezed in and finally in complete immobility in a few tenths of a second. I don't know if the collars return to the initial shape after digestion. By compression, these three parts go very strongly through the nematode emptying it of its contents. We can vary the number of collars in culture by adding or reducing the number of nematodes in solution. The culture is composed of a number of nutritive elements in a gelatinous substance. So in nature, it is the number of victims which determines the number of snares.



a, b, c = ARTHROBOTRYS DACTYLOIDES a & d: Fig 1  
 d & e = DACTYLELLA DOEDYCOIDES b, c & e: Fig 2.