

A Kirstenbosch curiosity

Observations on an interesting fungus that breaks down plant litter to humus



The fruiting body of the fungus *Aseroë rubra* (star stinkhorn) emerging from the 'egg' or volva in leaf litter. The spore-mass emits a strong, foetid odour that attracts flies and other insects. Note that this specimen has seven arms.

by Mike Howell

Most of the articles about Kirstenbosch appearing in *Veld & Flora* are about flowers but how many visitors to our unique indigenous garden have observed the wonderful variety of mushrooms and related fungi that are particularly prevalent in autumn and spring?

One that should not be overlooked is *Aseroë rubra* (the star stinkhorn or, in Afrikaans, sterstinkhoring) which appears to have become more abundant in recent years and occurs, particularly, but not exclusively, in those beds in the garden heavily mulched with wood shavings. This curious organism has more than a passing interest to me. In June 1957, I collected and successfully preserved, from the edge of a pine plantation in KwaMbonambi, KwaZulu-Natal, what was considered at the time, to be the only specimen of this fungus following its initial discovery and recording by South African mycologists in the early 1900s. To the best of my knowledge this specimen, shown opposite, is still in the collection of the National Botanical Institute in Pretoria.

In the earlier fieldguide on South African mushrooms by Hilda Levin *et al.* (1985) it is not even mentioned although they do describe the closely related and more common *Clathrus archeri* (red stinkhorn) and the more rarely encountered *Lysurus corallocephala*. These three fungi are all related, but very different in appearance.

In the more recent publication by van der Westhuizen and Eicker (1994) a very adequate and well-illustrated description of the star stinkhorn is provided. They mention that it has been reported from the Western Cape, KwaZulu-Natal and the Johannesburg area and suggested that it belongs to the group of soil fungi responsible for the breakdown of plant litter to humus. This accords with my observations at Kirstenbosch over a number of years where I have usually found it to be associated with wood shaving mulch, as shown in the photograph. I have also recorded it on bare soil, leaf litter and even emerging from rotting wood on the soil surface.

The very fragile fruiting body is very distinctive and usually consists of a short, columnar stalk which emerges from an egg-like sack or volva ending in a flat, disk-like platform. From this disk, five or more arms or tentacles emerge horizontally, each of which forks towards the tip, and are bright red to orange in colour. Around the central opening or pore the disk supports a ring of greenish-brown mucilaginous material containing the minute, bean-shaped spores by which the fungus reproduces. What makes this fungus and its relatives so notorious, however, is that the spore-mass emits a strong, foetid odour that attracts flies and other insects, which then assist in spreading the fungus to other localities. This odour is often so strong that the presence of the fruiting bodies can

be detected before they are observed. It is, unfortunately, a very short-lived species and usually withers and disappears within forty-eight hours.

A final point of interest is that the photographs published by van der Westhuizen and Eicker, as well as the earlier KwaZulu-Natal specimen, all show the characteristic five arms. However, after more than six years of observation at Kirstenbosch, I have seen specimens with six, seven, eight and nine arms, but never one with five arms! An intriguing puzzle that, one day, some enterprising botany student may wish to unravel. 🍄

Further reading

Levin, H., Branch, M., Rappoport, S. and Mitchell, D. 1985. *A field guide to the mushrooms of South Africa*. Struik, Cape Town.
Van der Westhuizen, G. and Eicker, A. 1994. *Field guide: Mushrooms of Southern Africa*. Struik, Cape Town.

The author

Mike Howell has been a member of BotSoc for more than thirty years and, now that he has retired, is a frequent visitor to Kirstenbosch. This has given him the opportunity to combine his two hobbies of photography and botanizing, but with a particular interest in the macro and micro-fungi that are so prevalent in the Cape. He is a qualified microbiologist and plant pathologist.



LEFT: A preserved specimen of *Aseroë rubra* (star stinkhorn) collected from the edge of a pine plantation in KwaZulu-Natal in June 1957.

BOTTOM RIGHT: A nine-armed specimen of *Aseroë rubra* emerging from a mulch of wood shavings at Kirstenbosch.

BOTTOM LEFT: An eight-armed *Aseroë rubra* fruiting-body showing a very marked split or forking towards the tips of the arms.

