



Sick as cock

By DAVID JACK

FEATHERS were flying recently over Chalky, the crestfallen cockatoo who keeps moulting.

Chalky was not exactly the prettiest boy in the world when John Wilkes bought him from a pet shop for £205.

John claims he was told the bird's plumage would improve within months.

But after almost two years of loving care Chalky, remains in a sorry state.

He has been fed special vitamins and been bathed in medicinal shampoos.

Samples of Chalky's feathers were sent to a tropical bird expert, who diagnosed feather and beak rot.

John, of Sharo End, Birming-

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Nature Notes

The fearsome fungus

By J.S. Serrao

WITH the onset of the monsoon, telescopes, binoculars and cameras are stacked off, packed in silicagel. All this for fear of gathering fungus. Fungi, as a group, provide us with edible mushrooms, which form some of our delicious dishes when cooked. For their sudden appearance, odd shapes, colours and odours, and the poisonous qualities possessed by many of them, fungi are the most feared and consequently ignored group of the vegetable kingdom. Their popular names, both English and local, such as Bracket mushroom (*phanasamba* growing on jakfruit trees), toadstools, puffballs (*Bhodipod* or *Bhopod*, meaning 'soil cleaver'), fairy club, devil's or Stink horn to mention a few, are proof that fungi were once familiar to the old folk all over the world just the way wild flowers of the fields and meadows are known.

Common belief

The common belief that mushrooms and toadstools with bright colours, with peculiar odours, or the ones difficult to peel, or those which stain silver black when rubbed on are poisonous hence to be avoided, is without basis. It takes great learning to identify and recognize them. This experience is gained in the school of nature, and no distinguishing axioms could be laid down for the purpose.



Many of the toadstools and mushrooms appear with the first rains. Some readers with a countryside base, may recall the joy it evoked in children to mushroom-hunt on the mornings following a thunder shower only the night before. It is not a consistent rule that edible mushrooms emerge only following a night's thunder shower.

Fungi are the lowliest organisms of the plant world. They lack chlorophyll (the green colouring matter) which is present in higher plants. Due to lack of chlorophyll cells fungi are unable to produce their own food from water and carbon-dioxide plus the sun's energy. They therefore

depend on either living or dead plants or animals for feeding purposes. Those that live on living organisms are parasitic. To them belong the fungi which cause ringworm and athlete's foot, or the bracket fungi (*phanasamba* — which has its uses in ayurvedic medicines). Other fungi live on dead animal residues or attack fallen logs, leaf litter, timber structures and are called saprophytes.

'Spore' propagation

Fungi do not propagate by seed but by means of spores. Spores are extremely small and light and are carried in the gills on the underside of a mushroom or toadstool. Winds carry these

spores far and wide, thus helping in their dispersal. Reproduction by spores being indiscernible to the naked eye, fungi are included in the Linnean group known as Cryotogams, meaning plants whose 'marriage remains a secret'.

With the use of modern microscopes, the process of reproduction in the fungi could be followed. It takes place either asexually by division of cells, or sexually by the fusion of two separate cells. Yet, the Linnean name, Cryotogams, persists and continues.

Mushrooms, puffballs, toadstools and the rest seen growing out of logs, on forest beds, or on trees, as well as from animal droppings do not form the main body of the fungus. These are its fruiting parts. And the fruiting part appears only when the main fungus body, which is usually inside the material on which it feeds or below the ground is ready to reproduce.

These main fungus bodies are made up of a single or a collection of colourless microscopic threads, called the mycelium. The fruiting bodies carry some thousands of millions of spores in season, while the larger fungi, as the bracket fungus have their perennial fruiting bodies which produce spores at any time when the right conditions of temperature and humidity are available.

Main task

The economic importance of fungi is in the evil they do. Their main task in life is to break down dead plant or animal tissues into simple components. This is done by a succession of fungus species, the one foregoing preparing a place for the next that succeeds. Fallen leaf debris, branches and logs are first attacked by fungi which thrive on sugar. The removal of sugar and starches is more or less rapid. These are succeeded by fungi which use cellulose. When celluloses are taken away, the hard woody material of the plant tissues remains. This is ultimately destroyed by slow-growing fungi like toadstools, mushrooms and puffballs. Without fungi our forest would be a tangled mass of fallen debris, with no humus produced, and no place for fresh

seeding would be available, bringing about the ultimate doom of forests.

In our day fungi contribute life-saving cures — penicillin is one such. Perhaps it was a crude formula of producing penicillin which was practised by our great-grandmothers. A wheat or rice cake was wrapped in a clean white cloth and hung over the fireplace, and left there for years for the fungal mould to settle thereon. In most prolonged and incurable sicknesses a wee-bit of the moulded cake was administered to the patient with miraculous results.

Fungus in homes

I have often heard of a treasured fungus in ancient homes along our west coast which is cultured in coconut oil in earthen pots. A few drops of the oil surrounding this fungus is said to prevent festering of the most fatal cuts and wounds. I am unable to check up on the veracity of this report. Perhaps my friend Mr Pungal G. Nayak who heads his family's philanthropic, nearly 300 years old, Ayurvedashram and who is a regular reader of the SUNDAY MID-DAY, I hope would be able to confirm or refute this in the paper's feedback columns.

And one often hears of trees that are aglow after a shower of rain. The common belief is that such trees are haunts of ghosts. One such tree was reported from Karwar forests in the mid-fifties. The dead and dry standing tree was encrusted with a fungal growth, and the drizzle had set it aglow.

Luminiscence in fungus is not fully understood. However the general consensus happens to be that fruiting bodies of the fungus which often depend upon insects for dispersal of their spores emit this glow to attract insects for dispersal purposes.

The agarics among mushrooms also exhibit luminiscence. The ground they emerge on is often lit with a bluish green glow on dark nights. The countryside folk attribute this to the jewel a 'nagin' (a female cobra) is said to carry on her head. While fending for food, she is said to leave the jewel at a spot to light the area it works — an easy explanation for something incomprehensible.