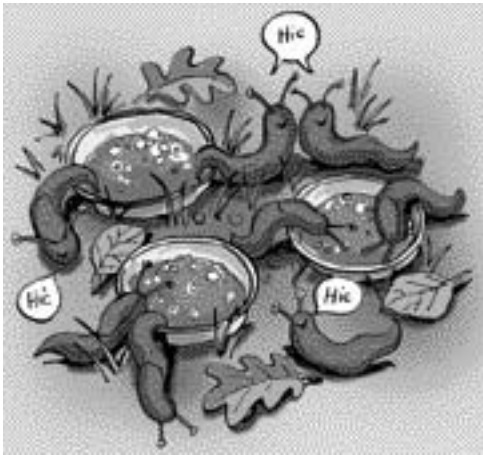


## “Sweet slug-a-bed”

Slugs have been much in the news lately, with Radio 4's *Today* programme and the national press showing great interest in a report in *Nature* for 27 June of research showing that caffeine is an effective slug repellent.

There is also an interesting commentary on slugs in the June issue of *Chemistry in Britain*, by Nina Morgan. It points out that the strategies resorted to by gardeners seeking to control the slugs and snails that show a predilection for the tender new shoots of cultivated plants have been greatly varied over the years. The temptation to scatter chemical deterrents over slug habitats shows some signs of giving way to a more enlightened and more environment-friendly attitude.

Until recently metaldehyde, formulated in those blue pellets, was a widely popular slug killer. It produces death by dehydrating the slugs via their slime. Today it is recognised that metaldehyde is a menace to dogs in its vicinity, and that birds that naturally feed upon disabled slugs will suffer poisoning, which may proceed further along the food chain and cause havoc.



It is possible to deter slugs and snails by surrounding tender plants with a barrier of soot, ashes, pepper, spices or other domestic products. Alternatively, one classical method is to set up sunken containers with a little beer in the bottom, which lures the molluscs into a trap that drowns them.

But, as Morgan reports, copper can also be a highly effective deterrent. In the form of Bordeaux mixture, which contains copper sulphate, this element has been used successfully since the 1880s to protect vineyards against the organisms causing mildew, and it also seems to repel slugs. It is claimed that the use of copper tools in place of steel ones provides sufficient of the element in the garden soil to improve its fertility. It is certain that a screen of copper mesh round a young plant will deter slugs from attacking it. How exactly is not clear, though, but it is claimed that contact of slug mucus with copper metal generates a

current that causes the animal discomfort. Whether the sensitivity is in any way connected with the fact that the mollusc's circulating respiratory pigment contains the copper complex haemocyanin, and not, as happens with other creatures, haemoglobin, is an intriguing question, but some connection is postulated.

## Strange condition

In the queries section of *New Scientist* for 18 May are a couple of comments on one of those conditions that never was — cellulite. It is an intriguing topic, not least because there is no definition or explanation in any of the major medical dictionaries, so that we have little except rumour to help us to an explanation of the origin or purpose of the name. The nearest term a dictionary offers is cellulitis, a distressing complaint involving inflammation; this is real enough, but appears to have no connection whatever with the word cellulite.

One of the answers given to the question of what this strange entity is talks of “miraculous claims” that are “characteristic of quackery”. The writer talks of a parasitic industry “ranking with politics, recreational drugs and bad-faith litigation”. He obviously regards cellulite as a name for an invention that will encourage people to buy products claiming to overcome it.

What actually happens in the formation of “cellulite” is that subcutaneous fatty tissue accumulates until it impinges on strands of connective tissue to produce a grid of patterns like those seen in the skin of an orange. It must be concluded that fatty accumulation is the real problem, nothing more nor less, and that if not corrected by suitable dietary restriction it tends to become more and obvious with the advance of ageing. “Cellulite” becomes a disfigurement because it forms in skin areas where consumption of fat through exercise does not occur. These include thighs, stomach and rump, areas that are normally covered by clothing.

Another respondent attributes such fatty deposition to genes, gender, age and thickness of skin, and remarks that they cannot be removed by fancy miracle treatments. Liposuction, an obvious remedy, is expensive and not without risk. The real solution involves consumption of fewer calories in the diet, particularly a reduction of fatty food, and more physical exercise — in short, healthier living.

Meanwhile, a sound move would be to cease using the word as if it had precise significance, and avoid looking for cosmetic trouble in a world where much worse things lurk on every doorstep. Otherwise, we might have to train more psychotherapy experts to counteract the apprehension and depression that dwelling upon ourselves brings into our lives.

## Hazard on the street

The craze for taking so-called “recreational” drugs has led to many complications, and since they are distributed on the street and quite illicit, there can be no possibility of controlling their quality, quantity or even identity. A prospective buyer can be told all manner of lies, and will not be in the happy position of being able to check on what it is or she may be proposing to take in the hope of a surge of energy and enlightenment.

Some Philadelphia doctors have described a curious instance of false identity in the *New England Journal of Medicine* for 30 May. They treated six patients in hospital who were suffering from acute dystonia. They had ingested tablets of what street sellers had told them was alprazolam. In five patients the drug taken was in fact haloperidol.

Three teenage boys showed symptoms of torticollis, oculogyric crisis and opisthotonos after taking one or two tablets 12 to 16 hours before hospital admission. The tablets contained haloperidol 10mg. After intravenous treatment with diphenhydramine their symptoms resolved.

Of three more patients, a child presented with mouth puckering and sedation, followed by torticollis and involuntary mouth movements, a woman aged 32 showed mild intermittent bruxism, and a teenage boy presented with weakness, spasm in the back and a sensation of tongue swelling, followed by dysarthria, mouth spasm and diaphoresis. Intravenous diphenhydramine resolved these symptoms too. Samples of the tablets they had taken showed them to be of haloperidol, not alprazolam.

Previous substitution of haloperidol for the benzodiazepine diazepam was common in the United States in the 1970s and 1980s, tablets of each being blue with a central hole. Today, despite the fact that the tablets have different shapes and colours, haloperidol is being passed off as alprazolam in the illicit market. This evil habit is exceedingly worrying, since it is almost impossible to take precautions against it, bearing in mind the naivety of those who seek drug-induced bliss.

## Hopeful note

Public perceptions can take a long time to change, but no longer is it true to say that the United Kingdom is good at scientific research but poor at innovation. We are now increasing our rate of innovation so that our science base produces increased benefits for our citizens in terms of both wealth creation and improvements in the quality of our lives. — Lord Sainsbury: “A cultural change in UK universities” (editorial), *Science*, 14 June 2002.