

Ancient and modern uses for castor oil

A large, leather-clad, middle-aged, apparently “born-again” motorcyclist was recently overheard in the pharmacy asking for a largish quantity of castor oil. A gentle question from the puzzled pharmacy assistant concerning his general health and well-being drew us into a discussion about the development and use of lubricating oils.

Many years ago, it seems, someone dared to pour castor oil into the engine of his motor cycle and he found it was an excellent lubricant. Apparently this is due to its slippery nature combined with an ability to cling to very hot moving surfaces. It was also used for the same reasons in aeroplane engines during the 1914–18 war. Castor oil is still an ingredient of oils used for high performance racing two-stroke motor cycles and the smell of the exhausts of these



machines is likely to induce rapturous nostalgia from those who follow the sport.

Indeed it seems the brand name, Castrol, was derived from the words castor and oil.

The castor oil plant, *Ricinus communis*, gives us one of the world's most useful and economically important natural plant oils. The oil is an ingredient in paints, varnishes and polishes, has been used to make nylon and other synthetic fibres, electrical condensers and carbon paper in addition to its purgative use (not so usual these days).

It has also been found in Egyptian tombs from 3000BC, when it may have been used medicinally and for lighting. The poison ricin, also obtained from the plant, has been shown to have antitumour properties.

This friendly, knowledgeable and interesting chap entertained us for quite some time and my young colleague somewhat mischievously suggested that when next he calls in we ask him about greases!

We must never take fresh water for granted

In many parts of the world fresh pure drinking water is still difficult to obtain and that was also the case in Britain quite recently. In the 1800s people moving into towns and cities to work in expanding industries caused springs, streams and pumps to become polluted with sewage.

Punch magazine, referring to the Great Exhibition of 1851, reported: “The contractor is bound to supply, gratis, pure water in glasses to all visitors demanding it; but the committee must have forgotten that whoever can produce in London a glass of water fit to drink will contribute the rarest and most universally useful article in the whole exhibition”.

Many rivers were in a dreadful state and during the summer of 1858 “the Great Stink” came to the attention of Parliament. Hansard noted “the pestilential stench which comes every evening into every window on the river front of the Houses of Commons”. Disraeli introduced a government bill to

clean up the rivers. Yet years later Winston Churchill was moved to write: “I see little glory in an empire which can rule the waves and is unable to flush its sewers.”

There has been serious flooding in parts of Britain this summer, coastal villages are threatened all round the world by rising sea levels and there of news of flooding as well as drought in Africa. And yet we still take water for granted. We even send empty plastic bottles half way around the world to fill with Fiji water and bring them back to sell in our restaurants.

And, almost to top that, engineers at the Massachusetts Institute of Technology have designed a building made of water to be erected at the Expo Saragosa in Spain next year. Apparently the digitally controlled walls of water can feature gaps at specified points so patterns can form or messages scroll by. Sensors detecting the approach of people will cause the water walls to open to let them pass so granting everyone a Moses moment.

Friendly bacteria

We are advised to eat two portions of fish each week including oily fish such as mackerel, herring, sardine, pilchard or fresh tuna. These are particularly rich in omega-3. Shellfish are also an excellent source of selenium, zinc, iodine and copper.

However the Food and Agriculture Organization of the UN reports that nearly 70 per cent of the world's fish stocks are now fully fished, over-fished or depleted. Also, 7.3 million tonnes of by-catch (fish caught in error) are thrown back into the sea, dead, each year.

The Marine Conservation Society publishes a “Good fish guide” listing those fish we should or should not buy. The “should” ones tend to be those caught by traditional methods like hand-lining or farmed (preferably organically).

Abalone or ormer (*Haliotis tuberculata* and *H. discus hannai*) is an example. Wild stocks of abalone, a delicacy in huge demand in Japanese and Chinese restaurants, are seriously in decline and farming them involves using large amounts of antibiotics and collecting lots of seaweed.

Abalone are grazers and need bacteria in their digestive tracts to break down and digest kelp and other seaweeds. Researchers at the University of Cape Town extracted these useful intestinal bacteria and experimented with kelp strips impregnated with various cocktails of probiotics, whereupon they found the need for antibiotics was reduced (good news all round) while growth rates increased by up to 40 per cent.

Probiotics may help us to conserve our wild stocks while keeping up our recommended intake of fish.

Forgotten world of the tinkling tinctures

In the past most pharmacies held stocks of the powders, concentrates, oils, extracts and tinctures needed to make all those odd ointments, lotions and mixtures we now order from “specials” manufacturers. I particularly like the word tincture. It has a pleasing sound to it, a tinkling sort of sound, like ice-cubes hitting the bottom of a glass (after work of course).

The word comes via Middle English from tinctus the past participle of the Latin verb

tingere meaning to moisten or dip. In the 14th century tincture referred to colouring material or dye. Tint and tinge derive from the same root. Many of the plants used for dyes have suitably descriptive names: *Rubia tinctorum* (madder red), *Indigofera tinctoria* (indigo blue), *Isatis tinctoria* (woad) and so on. By the 17th century the word became used for a “slight infusion of something” particularly of herbal or medicinal solutions but is now almost forgotten in everyday pharmacy.