Acacia senegal

[Synonyms : *Acacia verek, Mimosa senegal*]

GUM ARABIC is a deciduous shrub or tree. Native to east and west tropical Africa, to Arabia and western India, but particularly the Sudan, it has red buds which mature to fragrant creamy-yellowish flowers.

It is also known as Acacia, Acacia gum, Cape gum, Egyptian thorn, Ghezirah gum, Gray-backed acacia, Gum acacia, Gummi acaciae, Gum Senegal, Gum turick, *Hashab* (Arabic), Kordofan, Picked turkey, Prickly turkey, Senegal gum, Sudan gum arabic, *Svetakhadira* (Sanskrit), and White senaar.

In the 17th Century BC the ancient Egyptians were using the gum (brought from the Gulf of Aden and known as Kami) for painting and as a glue – especially to stick lapis lazuli or coloured glass. Its use gradually spread further afield through to the present day. When in the 18th Century lithography was invented gum arabic was as important as in more recent times it was in the preparation of the plates for the printed image. Although expensive it is sometimes used today in sizing material as its subsequent removal is much easier than it would be with a cheaper size, and it can also be responsible for giving fabric both a lustre and an even surface for printing. Gum arabic can often be used as the thickener in cosmetics and shampoos, and it can also be the suspending agent for rouge. The glue on the back of postage stamps was until relatively recently made from gum arabic. In painting and decorating it can be an ingredient in vinyl emulsions, in artists' water-colours and pottery pigments, it is used as a binder, and it can be included in printing inks too. Gum arabic is used as a tablet binder and an ingredient in the pill's coating as well as acting as a thickener for many pharmaceutical products, including mouth lozenges, cough mixtures and emulsions. And in the food industry it plays a role as a thickener, not least in many convenience foods. In addition the food industry uses it as a stabiliser and as an emulsion to fix flavour, particularly in chewing gum, marshmallow and liquorice (*Glycyrrhiza glabra*) The drinks industry cannot be omitted either as in some beers it can be used to help prevent a head of foam collapsing in the glass..

Gum arabic is highly nutritious and it is claimed that the Hottentots could survive on it for days during periods of hardship. Certainly even into the 20th Century it was said that the desert Moors who harvested the resin lived off it (as nomadic African tribes do today) and virtually nothing else while they were bringing in the crop. Before World War II it had been proved by orthodox western research that 6 oz. of the resin could support an adult for a day.

The gum first arrived in London from Venice in 1521 while the tree itself is believed to have been introduced to Britain in 1823.

Today crops such as watermelon (*Citrullus lanatus*) or millet (*Panicum miliaceum*) are grown in the shade of gum arabic trees, and the trees are also planted to prevent soil erosion.

As fodder the feathery pale green leaves and flat hairy, brown fruit pods are a source of protein for camels, sheep and goats.

The hard and heavy, black wood yields a high quality charcoal and is also valuable as fuel that is often preferred beyond that offered by other closely related species. It is also used to make agricultural implements and poles, and it has been made into shuttles for weaving

as well.

Root fibre is used to line wells and is also made into fishing nets and cordage.

For the environmental lobby gum arabic offers contradictory qualities. For example as with black wattle (*Acacia mearnsii*) it is another acacia that can be invasive outside its natural habitat – and both Australia and South Africa now frown on its cultivation for this reason. On the other hand one of its positive qualities is its ability (if given the opportunity) to regenerate soil. This was harnessed in the mid-20th Century by Sudanese farmers. In areas of reclaimed scrubland they cultivated gum arabic successfully in the very poor soil as part of a crop cycle with sorghum (*Sorghum bicolor*), millet (*Panicum miliaceum*) and sesame (*Sesamum indicum*). When the latter three had exhausted the ground gum arabic not only offered a lucrative crop (in the form of its gum) but also, perhaps of greater importance, revitalized the earth it had been planted in. In recent years however in order to meet population demands this cycle has not only been broken by extended cultivation of the sorghum or millet etc., but the regenerative properties of gum arabic have been thwarted by over-grazing immature plants and cutting down more mature shrubs for firewood.

Medicinally, gum arabic has made its mark over many centuries. In Medieval times records show that the Arabian physicians at the school in Salerno used the resin, and it is still an ingredient in the pharmaceutical industry's repertoire in the West today.