**Hunting for Medicinal Rhodiola Rosea on the Tibetan plateau**

February’s meeting featured a presentation by Professor Tony Brooker, who is a senior lecturer in Ethnopharmacology at the University of Westminster, honorary lecturer at University College London, and has been visiting professor at China Medical University in Taiwan. He lives in Storrington, and is a member of Storrington Horticultural Society.

Ethnopharmacology is the scientific study of substances and practices used medicinally, especially folk remedies, by different ethnic or cultural groups – into their quality, safety, traditional uses, and the potential for development of new drugs. Today, 50-70% of pharmaceutical drugs are derived from plants.

Rhodiola Rosea (now classified as Sedum Roseum) has a history of medicinal use in the Northern Hemisphere, and first appeared in European medical documentation in 1748. It has been used for treating stress-induced anxiety and fatigue, and also for sports performance, body-building, and as an aphrodisiac. There are over 200 Rhodiola species documented, found across the world, in Russia, the USA, but most significantly, in China.

Professor Brooker found 50 products sold as Rhodiola Rosea easily available in the UK, on the internet or in health food stores, and analysis showed that 25% of these were adulterated, mainly with Rhodiola Crenulata, although those with government registration (normally those with Braille on the packaging) were found to be OK. He initiated a study to determine why and how it is being adulterated, and to do this, decided to visit a place where both grow – Sichuan Province, South West China.

The team travelled from Taiwan to Shunxiang, at 3000m, and from there, on a mule, up on to the Tibetan plateau, to a base camp at 4500m. This is where the Yi people (who are not Han Chinese) collect the roots of Rhodiola Crenulata, which grows between 4000m and 6000m – Rhodiola Rosea grows at lower altitudes. The group they accompanied collects about 100 tonnes per year, which represents about a third of their income, and move it to market by mule. They travelled and lived with this group as they went about their work, experiencing extreme cold, very simple living conditions, and altitude sickness.

Returning to lower altitudes, they visited a large market trading in many plants and herbs - at the market, roots are sold as simply ‘Rhodiola’, with no differentiation. In the samples brought back from the market to London for analysis, five different species were found. Tests found that Rosea and Crenulata are very different chemically, but also, that there is quite a lot of variation within species, so trials and research could have variable results.

In conclusion, the study found that confusion between species is unlikely at the point of collection, but that once dried, the roots can be easily mixed-up. It is also clear that wild collection is not sustainable in the long term, as it is the whole root that is harvested.

Both Rosea and Crenulata have now been added to the CITES list, which limits the trade of endangered species in the wild, and guidelines on collection have been issued, for example, only part of each root should be taken, leaving part in the ground to continue growing. It is however permitted to cultivate, and this has been started in Alberta, Canada.

The next meeting of the Society is 15th March, at 7:30pm, with a presentation about Arundel Castle Gardens.

Jo Myland.