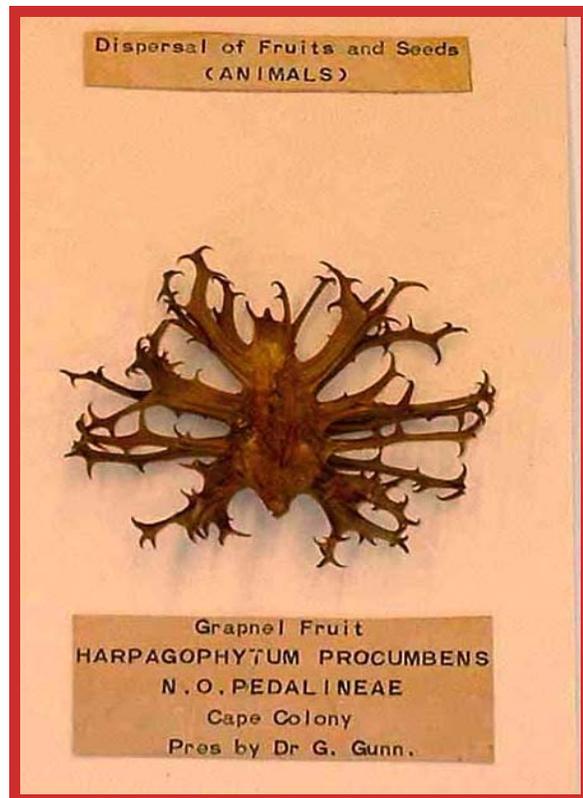


SEEDS IN A NUT SHELL

A display of Seeds at the
Visitors Centre,
National Botanic Gardens,
Glasnevin



WEIRD & WONDERFUL

1. The largest seed of any plant comes from the Coco de Mer palm (*Lodoicea maldivica*). It can weigh up to 23 kg. It takes seven years to mature. In the Orient it was considered a potent sexual symbol and was traded for its weight in gold.
2. The smallest seed belongs to the orchid family (*Gymnadenia conopsea*). These dust like seeds are dispersed by the wind.
3. The fruits of the African grapnel plant (*Harpagophytum procumbens*) as the name suggests are equipped with grapple hooks that attach onto the feet of large animals and are subsequently dispersed.
4. These rosary beads are made from the Jesuit nut or Water Chestnut (*Trapa natans*) whose seed is also dispersed by adhering to a large animal.
5. The seeds of *Banksia australis* will normally germinate following fire. This benefits the seedling by removing competition for space, light and moisture. The young plant is among the first to establish on the nutrient rich layer of ash.

HISTORICAL

6. Some seeds remain viable for hundreds or even thousands of years. Following the cessation of fighting in World War I, fields of poppies (*Papaver rhoeas*) appeared in areas surrounding the Western trenches. Every November, on Armistice Day in Britain, a poppy is worn to commemorate those who died in both World Wars.

7. Cotton (*Gossypium* spp.) was an extremely important crop in North America during the 19th century. The cheap harvesting of cotton was the driving force behind the slave trade from Africa to North America.
8. The chocolate pod (*Theobroma cacao*) comes from a small tree that originates in the western Amazon. The name '*Theobroma*' literally means 'food of the gods'. Chocolate derived from the beans contains the chemical, phenylethylamine, a natural amphetamine in the human brain, which induces a feeling of euphoria.
9. Cannabis or hemp (*Cannabis* spp.) is a traditional source of fibre for rope, fabric and paper. It was planted throughout the U.S with government support prior to 1920. Hemp paper was used for printing the earliest versions of the Bible from the Gutenberg to the King James version. The initial drafts of the Declaration of Independence were also written on it.

ECONOMIC

The agricultural plants listed below provide the bulk (90%) of the staple diet for the world human population.

10. Rice (*Oryza sativa*) has been cultivated for several thousand years in Asia. It has been estimated that 1.7 billion people depend on rice, more than any other crop.
11. Barley (*Hordeum vulgare*) appears to have been the first cereal domesticated, on the basis of archaeological evidence. Remains of domesticated barley have been found in Syria and Iraq that are about 9,000 years old.
12. Teosinte (*Zea mays* subsp. *mexicana*) is believed to be the ancestor of domesticated maize. Maize formed the basis of all the major new world civilisations (Maya, Inca, and Aztec).
13. Sorghum ranks as the fourth most important world food crop in terms of human nutrition. *Sorghum bicolor* is the major grain in many parts of Africa and India. Sorghum was first domesticated in the Sudan region 5,000 years ago.
14. Wheat (*Triticum*) became the dominant cereal in the Mediterranean region thousands of years ago. Current world production of wheat is estimated at around 564,000 million tonnes per year.
15. Wind dispersal: The fruits of sycamore (*Acer pseudoplatanus*) have wings containing seeds which allow them to be blown from place to place, whereas the thistle (*Cirsium vulgare*) has a plume-like fruit that is readily carried by the wind.
16. Animal dispersal: Acorns (*Quercus*) are often dispersed by birds such as the jay (*Garrulus glandarius*). The acorns may be carried from 100m to a few kilometres. Each is buried individually. When the birds rediscover the acorns, many have usually begun to germinate.
17. Water dispersal: The Sea bean (*Entada scandens*) is the most commonly collected of drift seeds on the Irish coast. It originates in the Americas and its seeds have been reported as far north as Norway. It was believed that a sea bean brought luck to its finder.
18. Seed discharge: Some plants shoot their seeds aloft. In witch hazel (*Hamamelis mollis*) pressure builds up in the fruit, shooting the seeds as much as 15m laterally with an initial speed of 100 km per hour.

SEED DISPERSAL

Seeds are dispersed from the parent plant by a number of methods. It generally involves passive movements (carriage by wind or water), but may also occur by other means.