

DEVIL'S CLAW

Harpagophytum procumbens,
H. zeyheri

Common Names

German:	Teufelskralle
Oshiwambo:	Omakakata
Otjiherero:	Otjihangatene
Damara:	Gamaku
English:	Grapple plant

Introduction



Devil's claw is a prostrate, sprawling plant with a stout, perennial rootstock that has a group of secondary storage tubers arising from it. Trailing annual stems bear opposite greyish green leaves. The flowers are trumpet-shaped and range from dark velvety red or purple to pink. The very distinctive spiny fruits are woody, oval and flattened capsules with many dark brown or black seeds (National Botanical Research Institute, 2017).

Used Plant Parts



▲ Secondary root tubers

Status Namibia: protected

Distribution

- 1: *H. procumbens* ssp. *procumbens* ▶
- 5: *H. zeyheri* ssp. *sublobatum*



Traditional use

The San of the Kalahari have used devil's claw as a medicinal plant for centuries. The tuber was used as a bitter-tasting medicine especially for stomach complaints and an infusion for relief of all fevers, for blood diseases, and as an anti-inflammatory and analgesic agent. The use for horses (especially racing horses) is well known. Devil's claw has one of the oldest histories in the commercialisation of wild plants in Namibia (Cole, 2014). It was first exported to Germany in the 1950s and when the treatment of arthritis and rheumatism by devil's claw gained recognition, a small industry based on plant material mainly from Namibia and Botswana developed (National Botanical Research Institute, 2017).



Wild Harvesting and sustainable use

Devil's claw occurs widely in Namibia and many rural households earn an additional income through its harvesting and trade. The policy of the Government of Namibia is to manage the harvesting and sale of Devil's Claw products in a way that recognises the rights and development needs of local communities while also recognising the need to promote biodiversity conservation.

In order to achieve this, Government has created a policy framework which enables harvesters to benefit from these plant resources as well as encouraging and supporting responsible management of the resource (Ministry of Environment and Tourism, 2010).



Since the revised policy on the utilisation of devil's claw in Namibia was ratified in 2010, all stages of harvesting, processing, trading and export are part of a permit system that is tied to a fixed harvest time (Cole, 2014) (National Botanical Research Institute, 2017). Since then the complex supply chain has been improved by the introduction of the sustainably harvested devil's claw model (SHDC) which established different harvesting and trade organisations. These focus on fair compensation along the supply chain as well as sustainable harvest techniques and quality issues (Cole, 2014).



Composition and use

Iridoid Glycosides at 0.5-3% found mainly in secondary tubers: harpagosides and harpagides.

- Phenolic Glycosides: Soacteoside, Acteoside and 6-Acetylacteoside.
- Sugars at about 51%: tetrasaccharide stachyose

Other compounds in small amounts:

- Phytosterols: mainly β -sitosterol, stigmasterol and their glucosides,
- Aromatic Acids: caffeic, cinnamic and chlorogenic acids,
- Flavonoids: kaempferol and luteolin,
- Triterpenes: mainly oleanolic acid, 3 β -acetyl-oleanolic acid and ursolic acid,
- Harpagoquinone (EMA, 2015). (Qi, et al., 2006).



Listings and certification

- Ecoso, sole processing company in Namibia: TDS, ECOCERT, EOS & NOP compliant
- The European Pharmacopoeia
- The German Commission E

- The European Scientific Cooperative on Phytotherapy (ESCOP)
- The EU Directive on Traditional Herbal Medicinal Products 2004/24/EC

Potential for further development

Further potential exists in the diversification of target markets such as supplements, tea, skin care and cosmetics and the pet market (MCA, 2012).

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