Doryanthes excelsa

Scientific Name

***Doryanthes excelsa* Corrêa**

Synonyms

Agave australis (Haworth) Steudel, *Furcraea australis* Haworth

Family

Doryanthaceae also place in Agavaceae

Common/English Names

Flame Lily, Giant Lily, Globe Spear Lily, Guinea Lily, Gymea Lily, Illawara Lily, Spear Lily

Vernacular Names

None recorded

Origin/Distribution

The Gymea Lily is indigenous to the coastal areas of New South Wales near Sydney, Australia.

Agroecology

The Gymea Lily grows in open dry sclerophyll forests and woodlands in the coastal areas of New South Wales on sandy soils derived from sandstone containing some clay. It thrives in dry climate but prefers well-drained, deep soil and full sun. It is a pyrogenic flowering species and rely on post-bush fire flowering and the production of nondormant seeds to exploit favourable post-fire establishment and growth conditions. Germination of seedlings occurs some 2.5–3 years after the passage of the fire.

Edible Plant Parts and Uses

The Gymea Lily provides a traditional bush food for the aborigines in the coastal areas of New South Wales (Cribb and Cribb 1976; Low 1989). The root, stem and flower spike are edible after some preparation. The stems and roots can be harvested, roasted and eaten or made into a cake. The young flower spikes (about 0.5 m high) can be roasted and eaten. The flowers are soaked in water to produce a sweet, high energy drink.

Botany

A large perennial rosette, clumping plant with a bulbous rhizome and a tussock of long thick, bright green linear, swordlike, glabrous, fibrous,

T.K. Lim, *Edible Medicinal And Non-Medicinal Plants: Volume 7, Flowers*,
DOI 10.1007/978-94-007-7395-0_56, © Springer Science+Business Media Dordrecht 2014

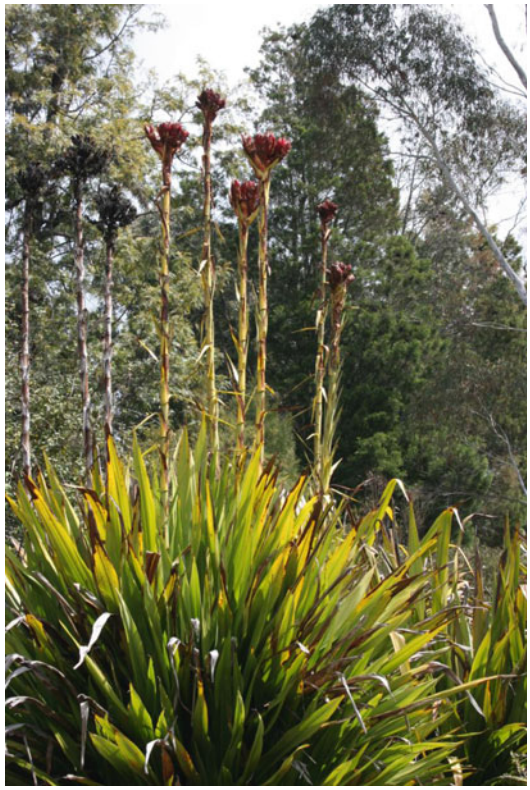

Plate 1 Large clumping plant habit

Plate 2 Flowering spikes with very long peduncles

ensiform leaves up to 1.5 m long and 10 cm wide (Plate 1). It produces a flower spike 2–5 m high, which at its apex bears a large compact terminal head of bright red trumpetlike flowers, each 10 cm across (Plates 2 and 3). Each flower has 6 narrow, lanceolate-oblong tepals 6–12 cm long by 0.6–0.9 cm wide fused at the base and surrounded by deep red bracts; anthers 27–38 mm long, green-yellow; filaments to twice as long as anthers; ovary inferior with 3-locules, style furrowed with 3-angled stigmas. Within the central well formed by the tepals, septal nectaries are formed at the base of the tepals at the top of the ovary. These nectaries exude a sweet viscous jellylike fluid that attracts honey eaters and ensures fertilization. Fruit is a dry woody capsule, ellipsoid to ovoid 7–10 cm long, red-brown at maturity containing numerous reddish-brown seeds 15–23 mm long.

Nutritive/Medicinal Properties

No information on the nutrient composition of the edible parts, and medicinal uses or properties of the plant have been published.

Other Uses

A good rockery landscape plant. The massive flower spikes that reach up to 8 m are highly sought after for cut-flowers and foliage in the floriculture industry. The commercial value of cut-flower and foliage of *Doryanthes*, currently all cut from harvested from wild natural bush areas, is steadily increasing, as is the export demand for these unique flowers.

Plate 3 Close-up of terminal flower head

The leaves contain fibres and are split and fibres used for brush and string making, and bag and mat weaving.

Comments

The plant is propagated by division of established plants or from seeds.

Selected References

Cribb AB, Cribb JW (1976) Wild food in Australia. Fontana/Collins, Sydney, 240 pp

Denham AJ, Auld TD (2002) Flowering, seed dispersal, seed predation and seedling recruitment in two pyrogenic flowering resprouters. Aust J Bot 50(5):545–557

Fairley A, Moore P (1989) Native plants of the Sydney district. Kangaroo Press, Sydney

Low T (1989) Bush tucker – Australia's wild food harvest. Angus & Robertson, Sydney, 233 pp

Pedley L (1986) *Doryanthes*. In: Bureau of Flora and Fauna, Canberra (ed) Flora of Australia, vol 46. Australian Government Publishing Service, Canberra

Smith J (2000) Micropropagation of the Gymea lily, RIRDC publication no. 00/36. Rural Industries Research and Development Corporation, Barton

Wrigley JW, Fagg MA (1979) Australian native plants. Collins, Sydney/London