

# An Account of the Genus *Croton* L. in Saudi Arabia With A New Record of *C. bonplandianus* Baill

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**Abstract.** A taxonomic study of the genus *Croton* L. (Euphorbiaceae) found in Saudi Arabia has been carried out. Detailed description with illustration and a key to species are provided to facilitate their identification. *Croton bonplandianus* Baill. is reported here for the first time from Arabian peninsula, based on a specimen from Jizan region in Saudi Arabia.

**Key Words:** Taxonomy, *Croton*, Euphorbiaceae, Distribution, Jizan region.

## Introduction

*Croton* L. is a very large pantropical genus of about 800 species, mostly belonging to the New World. It is poorly represented in Arabian Peninsula. Two species have been reported (Wood, 1997) from Yemen (*Croton lobatus* L. and *C. macrostachyus* Hochst. Del.) and one from Oman (i.e. *Croton confertus* Baker: Ghazanfar, 1992). Among the adjacent floristic regions, this genus is represented by 5 species from Sudan (Andrews, 1952) and 8 species each from Somalia (Thulin, 1993) and Ethiopia & Eritrea (Edwards *et al.*, 1995).

*Croton* L. is closely related to *Chrozophora*. However, it is distinguished from the latter by the presence of free, incurved filaments and seeds with distinct caruncle.

During a floristic exploration in Wadi Dahan (Jizan), the author came across a

member of the family Euphorbiaceae which, after thorough examination, is identified as *Croton bonplandianus* Baill. The specimen collected from Wadi Dahan differs from all known *Croton* species from Arabian Peninsula and East and North Africa by its subshrub habit (not more than 1 m) and ovate-lanceolate leaves. To the best of our knowledge it is so far not reported from any part of Arabian Peninsula. A review of existing literature (Abulfatih, 1984; Collette, 1999; Heemstra *et al.*, 1990; Mandaville, 1990; Migahid, 1988) shows that this taxon is a new addition to the Flora of Saudi Arabia. The locality, from where the plant was collected, is close to the Yemen border. Although this South American weed has been reported from Indian subcontinent and other east Asian countries (Chakrabarty, 1983) in the second half of the 19th century itself, the presence of *C. bonplandianus* in the subtropical or subarid regions has been



Fig. 2. *Croton bonplandianus* Baill. A. Habit x1, B. Male flower x20, C. Female flower x24, D. Fruit x8, E. Seed x8.

Inflorescence axillary, long pedunculate, spicate, up to 10 cm long, lower half with solitary female flowers, upper half with clusters of male flowers. Male flowers very small, pedicel up to 2 mm long; stamens 10-13. Female flowers: pedicels up to 2 mm in fruit; sepals linear-oblongate, up to 3 x 1 mm in fruit; styles free, 6 lobed to about middle. Capsule 4x3 mm, stellate hairy. Seeds 3x2 mm, rugulose, dark brown with whitish coating; caruncle small, terminal.

A weed of cultivation. Apparently an ancient introduction from the New World.

**Type:** From Mexico (not seen).

**Dist.:** Saudi Arabia: South-western region, East Africa, Yemen

**Specimen examined:** Jabal Fayfa - 100 km N.E. of Jizan, *Collenette* 3705 (E,RIY).

Doshak, 24-6-1988, *S. Chaudhary*, 14408 (RIY).

Note: *Dalechampia scandens* var. *cordofana* (Hochst. ex Webb.) Muell-Arg., also present in the same locality as that of *Croton* spp., resembles *C. lobatus* in many vegetative characters. However the former can be easily differentiated by the presence of two large, foliaceous bracts and simple hairs.

2. *Croton bonplandianus* Baill., *Adansonia* 4: 339. 1863 (Fig. 2).

*Croton sparsiflorus* Morong in Ann. N.Y. Acad. Sci., 7: 221. 1892.

Monoecious woody herb or shrub, erect, up to 1m tall. Young shoots and petioles evenly stellate-lepidote. Leaves alternate, ovate-lanceolate, 2-3.5X0.5-1.3 cm, rounded at base, finely serrate-repand, acute-acuminate, with 2 small sessile discoid basal glands beneath. Flowers many in terminal paniculate racemes; female flowers

at base and males towards top of the racemes; bracts green, ovate-lanceolate, 1 mm long, hairy on both surfaces. Male flowers: pedicels 2 mm long, glabrous; calyx 5 lobed, the lobes elliptic-ovate, greenish yellow; petals 5, thin, white, oblanceolate, 1.2x0.5 mm; stamens 12, filaments 1.5 mm long, anthers 0.2 mm long. Female flowers: sepals green, linear ovate, subacute, petals absent; disc annular; ovary ellipsoid-subtrilobate, densely stellate lepidote; styles 3, 1 mm long, spreading, bifid. Fruit green, ellipsoid-trigonal, 4-5 mm long, stellate hairy. Seeds compressed-ellipsoid, 2.5x1.3 mm, grey, caruncle bilobate.

Fls. & Frts. - Almost throughout the year.

**Types:** Argentina, Corrientes, 1833, *Bonpland* s.n. (P- Holo & Iso); Paraguay, April- May 1845, *Weddell* 3207 (P- Para & Isopara).

**Dist.:** S. Bolivia, Paraguay, S.W. Brazil, N. Argentina, now widespread in the palaeotropics.

Specimen examined: Wadi Dahan, Near Jizan, 10-6-99, *Alfarhan, AL-Turki, Basahy & J. Thomas*, 11827 (KSU).

### Acknowledgement

The author is thankful to Dr. Mathew Varghese and Mr. M.Y. Saleem for overall help and for illustrations.

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دراسة تصنيفية على الجنس *Croton L.* في المملكة العربية السعودية  
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يقدم البحث دراسة تصنيفية للجنس *Croton L.* في المملكة العربية السعودية تتضمن وصف تصنيفي ومفتاح للأنواع. كما يقدم البحث تسجيل جديد للنوع *Croton bonplandianus* في الجزيرة العربية بناء على عينات قام بجمعها المؤلف من منطقة جازان.