

# *Huernia humpatana* (Apocynaceae), a new species from southern Angola

P.V. Bruyns

*Bolus Herbarium, University of Cape Town, Private Bag, 7701 Rondebosch, South Africa*

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## Abstract

A new species, *Huernia humpatana* Bruyns (Apocynaceae–Ceropegieae), closely related to *H. similis* N.E.Br., is described from the Chela Mountains of Huila Province in southern Angola. The two species are distinguished by the 5-angled and erect stems with more prominent tubercles up to 6 mm long joined into clear angles and separated by V-shaped grooves in *H. humpatana* as opposed to very obtusely 4-angled stems with tubercles only 2 mm long and only indistinct grooves between the angles in *H. similis*. Furthermore, in *H. similis* the nodding corolla is  $\pm 9$  mm in diameter with sepals  $\pm 2$  mm long, while in *H. humpatana* the horizontally facing corolla is 18–20 mm in diameter with sepals 4–6 mm long.

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## 1. Introduction

The genus *Huernia* R. Br. is widely distributed in sub-Saharan Africa, from Nigeria to South Africa and to the Horn of Africa. Six species are also found in the Arabian Peninsula, from Saudi Arabia to as far east as the former Peoples' Democratic Republic of Yemen (South Yemen). *Huernia* consisted of 49 species (Bruyns, 2005; Leach, 1988), until recent exploration in Angola brought to light several previously unrecorded species, of which two were first described in 2007 and 2008 respectively (Bruyns, 2007, 2008). *Huernia humpatana* Bruyns is the third new taxon from Angola and brings the total number of species in the genus to 52.

*Huernia* is the largest genus among the stapeliads in Angola, where it is represented by the eight species *H. calosticta* Bruyns, *H. humpatana*, *H. lophanthera* Bruyns, *H. oculata* N.E.Br., *H. similis* N.E.Br., *H. urceolata* L.C.Leach, *H. verekeri* Stent and *H. volkartii* Peitsch. ex Werderm. & Peitsch. Of these, *H. calosticta*, *H. humpatana*, *H. lophanthera* and *H. similis* are endemic to Angola. *H. oculata* and *H. urceolata* are found in both Angola and Namibia, while *H. verekeri* and *H. volkartii* are more widely distributed across southern Africa from Angola to

Moçambique (Bruyns, 2005). The new species described here is known only from the western edge of the Humpata plateau in the Chela Mountains, near Lubango, in Huila Province.

## 2. Species treatment

*H. humpatana* Bruyns, sp. nov., *H. similis* similissima sed a caulibus erectis pentagonalis cum tuberculis et angulis prominentibus, sepalis longioribus, corolla latiora non nutantis cum lobis brevioribus et latioribus differt. Type: Angola, Huila Province, Chela Mountains west of Humpata, 1700 m, January 2007, Bruyns 10418a (BOL, holo.; E, iso.).

Dwarf succulent forming clumps of tightly packed stems up to 200 mm diam. Stems 20–60 × 8–15 mm (excluding teeth), erect from very shortly spreading base, grey-green; tubercles 3–6 mm long, spreading, deltoid, slightly laterally flattened and joined into 5 angles along stem, with deeply V-shaped grooves between angles, tapering into short caducous tooth. Inflorescence with several flowers developing in gradual succession from short stout peduncle, with narrowly attenuate bracts 4–8 mm long at base; pedicel  $\pm 6 \times 1.5$  mm, spreading and holding flower facing horizontally, purplish green; sepals 4–6 mm long, 1 mm broad at base, acuminate, slightly spreading towards tips. Corolla bowl-shaped, 8–10 × 18–20 mm; outside purplish cream, with scattered low conical papillae, with 5 raised longitudinal veins running down each lobe; inside maroon,

E-mail address: [peter.bruyns@uct.ac.za](mailto:peter.bruyns@uct.ac.za).

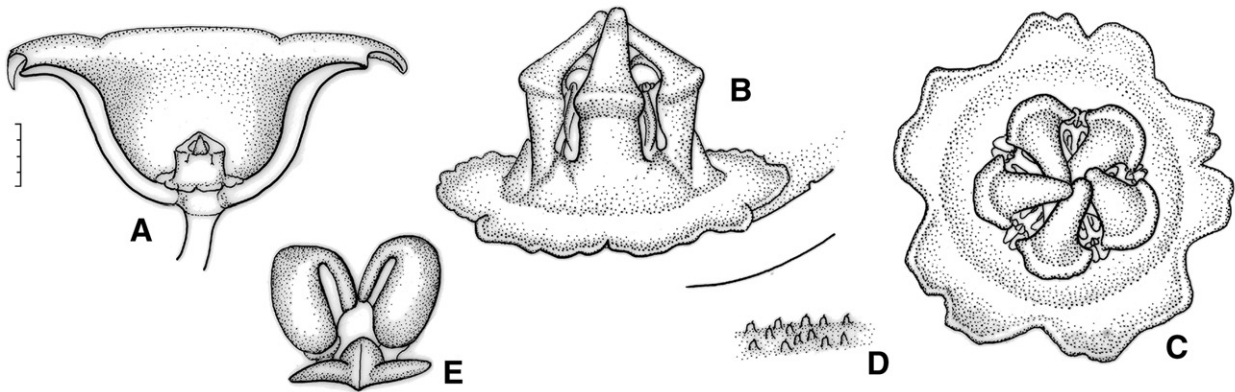


Fig. 1. *Huernia humpatana*, Bruyns 10418a. A, side view of dissected flower; B, side view of gynostegium; C, face view of gynostegium; D, papillae inside corolla from near mouth of tube; E, pollinarium. Scale bars: A, 5 mm; B, C, 1 mm (at C); D, 0.5 mm (at C); E, 0.25 mm (at C). Drawn by the author.

covered with minute papillae usually each tipped with small point, papillae same colour as background of corolla; tube bowl-shaped with almost flat base, 8 mm deep and 8 mm diam. at mouth; lobes broadly ovate-deltate, 3–5 mm long, 9–12 mm broad at base, shortly acute, spreading and reflexed towards tips. *Corona* 3×4–4.5 mm; outer lobes adpressed to base of corolla, ±1 mm long, cream, finely papillate especially towards

edges, continuous around gynostegium but with five broadly rectangular entire to emarginate lobes opposite guide-rails; inner lobes adpressed to backs of anthers and exceeding them to meet in centre, ±1 mm long, bright yellow, dorsiventrally flattened, linear above rounded transverse dorsal gibbosity ±0.7 mm wide at base, ascending slightly towards obtuse slightly papillate tips. *Follicles* and *seed* unknown.

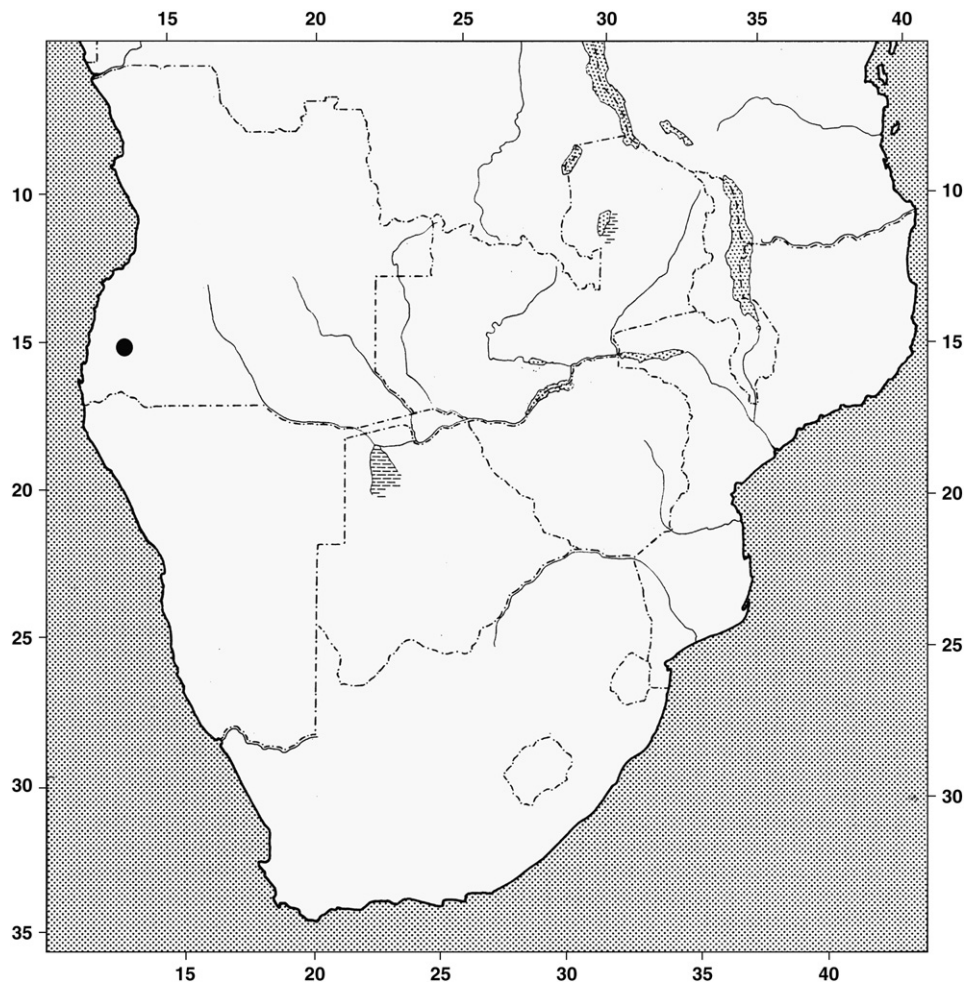


Fig. 2. Known distribution of *Huernia humpatana* in Angola.

### 3. Distribution and habitat

*H. humpatana* is known from the edge of the high plateau of the Chela Mountains near Humpata, west of the large town of Lubango (Fig. 2).

Plants occur in shallow, pale brown, sandy soils among and derived from sandstone outcrops, with a scanty cover of short trees, often with a few other smaller succulents such as *Aloe scorpioides* L.C.Leach, several species of *Ceropegia* L., *Crassula lanceolata* (Eckl. & Zeyh.) Endl. ex Walp., *Kalanchoe lanceolata* (Forssk.) Pers. and several species of *Plectranthus* L.'Her., with larger succulents like *Euphorbia vallis* L.C.Leach and other species of *Aloe* L. on and below the cliffs nearby. Also growing in the same habitat (i.e. in shallow sandy soils among rocks) and together with *H. humpatana* was *Huernia volkartii* var. *volkartii*, while *H. verekeri* subsp. *angolensis* (L.C.Leach) Bruyns was also observed in the same area, but in a different habitat, namely in leaf-litter overlying shallow soils in deep shade under low trees, also among outcrops of rock.

### 4. Diagnostic features and relationships

*H. humpatana* is closely allied to *H. similis* and shares with it the maroon colour of the inside of the corolla. At present *H. similis* is only known from some 600 km further to the north in Angola around Pungo Andongo (Luanda distr., Cuanza Norte Prov., north of the Cuanza River). The two species are clearly distinguished vegetatively, as the stems are very obtusely 4-angled (with only indistinct grooves between the angles) in *H. similis*, with a distinctly spreading and sprawling habit and with very small tubercles only 2 mm long (Leach, 1988), whereas in *H. humpatana* they are 5-angled and erect, tightly packed into clumps, with more

prominent tubercles up to 6 mm long that are joined into clear angles separated by V-shaped grooves.

Florally the two species differ in that in *H. similis* the corolla is nodding while in *H. humpatana* it faces horizontally. The sepals in *H. humpatana* are 4–6 mm long, but they are around 2 mm long in *H. similis*. The corolla in *H. humpatana* is 18–20 mm diam., while it is much smaller, at  $\pm 9$  mm diam., in *H. similis*. Furthermore, in *H. humpatana* the ovate–deltate lobes are much shorter than broad and spread back alongside the corolla, but in *H. similis* they are deltate,  $\pm 3 \times 5$  mm and only slightly spreading to erect around the mouth of the tube. Both species are similar in the colour of the corolla, both inside and outside, except that in *H. humpatana* the inside is uniformly maroon, whereas in *H. similis* it is maroon becoming pale, nearly white at the base. Similarly the texture of the inside, with its very tiny papillae (Fig. 1), is similar in both, though the outside is smooth in *H. similis* and sparsely papillate in *H. humpatana*.

In features of the corona, the two species differ mainly in that the outer corona (terminology as in Bruyns, 2005; Fig. 2) consists of five obtuse lobes in *H. similis*, while it consists of five shortly and broadly rectangular lobes in *H. humpatana* (Fig. 1).

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