

# *Euphorbia ohiva* Swanepoel: a novelty from the Kaokoveld Centre of Endemism (Namibia & Angola)

by Joachim Thiede

The Kaokoveld is situated in North-west Namibia, but excludes the coastal Namib Desert. Succulent *Euphorbia* species of the Kaokoveld were dealt with by Leach (1976) and Jacobsen (1994). Due to its remoteness, the Kaokoveld is one of the least explored succulent regions in southern Africa. However, during the last couple of years, exploration has intensified, leading to the discovery of new species (e.g., van Jaarsveld, 2008), including new species of *Euphorbia* (Archer, 1998, Swanepoel, 2009a, 2009b).

Climatically, the Kaokoveld belongs to the tropical summer rainfall region and exhibits a rainfall of about 400 mm in its east diminishing continuously to 75 mm in the west, with rainfall mainly between December and March. Topographically, it is a rugged terrain with low mountain ranges mostly between 1000 and 1500 m high, dissected by plains and washes. The vegetation is a dry savannah dominated by mopane trees (*Colophospermum mopane*) which becomes lower and more open westwards and is gradually replaced by the grassy plains of the Pre-Namib, the transitional zone to the Namib Desert (Becker, 2007). Due to its peculiar flora with many endemic species, including about 70 succulents, the Kaokoveld forms a separate floristic region "Kaokoveld Centre of Endemism" which also includes adjacent southwest Angola and the Damaraland and adjacent parts of the Namib Desert (van Wyk & Smith, 2001).

The most recent novelty amongst the Kaokoveld euphorbias is *Euphorbia ohiva* Swanepoel (2009a), a shrub or small tree up to 5 m tall previously misidentified with *Euphorbia guerichiana* or *E. matabelensis*. From *E. guerichiana* (figs. in Jacobsen, 1988: 64, Jacobsen, 1994: 156,



Fig. 1: *Euphorbia ohiva*: a shrub of about 3 m height, showing the typical habit with reddish-brown, peeling bark and irregular crown (Okandjondo, March 16, 1996)



Fig. 2: *Euphorbia ohiva*: branches with reddish-brown bark; cyathia are produced towards the apex directly on the branches or on dwarf lateral branchlets. The narrow, deciduous leaves are produced spirally on the shoots or, together with the cyathia, on the lateral branchlets as shown here.

157), *E. ohiva* is distinguishable by its uniform dark reddish brown stems, its usually more rounded, irregular crown with branches almost touching the ground, and its longer leaves (30-60 x 3-9 mm), whereas *E. guerichiana* in the Kaokoveld has pale yellowish brown or yellowish cream trunks and stems and is generally a much taller tree with an open canopy and shorter leaves (to 10 x 4 mm). From *Euphorbia matabelensis* (figs. in Hargreaves, 1994: 182), its putative closest relative, *E. ohiva* differs by the lack of the trichotomous branching, the lack of spines at the branch tips, and the much narrower leaves (Swanepoel, 2009a).

*Euphorbia ohiva* is widespread in the arid western parts of the "Kaokoveld Centre of Endemism" and occurs between 16° in Angola and 21° S in Namibia at altitudes between 250 and 950 m, in distances of 40 to 150 km from the coast, and an annual rainfall between 100 and 250 mm (Swanepoel, 2009a). Phytogeographically, the western Kaokoveld and species such as *Euphorbia ohiva* or *Euphorbia eduardoi* belong to the "Nama-Karoo Region" which encompasses the western, arid part of the tropical summer rainfall region of southern Africa with a rainfall between 60 and 400 mm. In the Kaokoveld, the Nama-Karoo Region forms a narrow belt between the hyperarid Namib Desert along the coast and the summer rainfall of the Sudano-Zambesian region (Becker, 2002). It is exactly between these two phytogeographical regions with very low

rainfall to the west and higher summer rainfall to the east where arid adapted succulents such as *Euphorbia ohiva* occur.

In southern Africa, *Euphorbia ohiva* is, after *Euphorbia guerichiana*, *E. espinosa* (figs. in Hargreaves 1994: 178) and *E. matabelensis*, the fourth species of "woody non-succulent Euphorbia" (Swanepoel, 2009a). However, the "classics" White, Dyer & Sloane (1941) as well as Carter (2002) included the latter three species in their treatments of succulent euphorbias.

Interestingly, the plant now named *Euphorbia ohiva* was already recognized as new by Jacobsen back in 1987: In a paper on plants from the northern Namib region (Jacobsen & Moss, 1987), he mentioned a "*Euphorbia* sp. 1 aff. *E. guerichiana*" growing together with that species on "a granite outcrop along the western range of the Hartmann's mountains", but differing in its longer, narrowly lanceolate leaves (Jacobsen & Moss, 1987). His black and white photograph on p. 68 represents the first published illustration of the plant now described as *Euphorbia ohiva*. In a paper on Namibian succulent euphorbias published the following year (Jacobsen, 1988), he published the same photograph in colour and became more precise: he mentioned the plant as "another woody but undescribed *Euphorbia*" similar to *Euphorbia guerichiana* and pointed out the major differences in habit, bark colour, and leaf shape between both plants – 20 years earlier! And his her-

barium specimens from the above locality were cited by Swanepoel (2009a) when describing *Euphorbia ohiva*.

*Euphorbia ohiva* was encountered during fieldwork in the central Kaokoveld (Thiede, submitted) in March 1996, i.e., during the rainy period, in vegetation of open mopane savanna (Fig. 3). The shrubs and trees were still green, whereas the grasses were already dried. A few *Euphorbia ohiva* individuals were observed on the footslopes of a hill amongst rocks (Fig. 1). The plants bore leaves and were in bloom (Fig. 2). *Euphorbia ohiva* is a rare exception, in that it produces cyathia throughout the year, so that cyathia and capsules in various stages can be found on plants at any given time (Swanepoel, 2009a).

Further succulents at the same locality were a possibly new species of *Aloe*, *Ceraria longipedunculata*, *Euphorbia* spec. aff. *otjingandu*, *Hoodia currorii* ssp. *currorii*, *Moringa ovalifolia*, and *Pachypodium lealii* (Fig. 3). The arborescent *Euphorbia eduardoi* Leach, one of the largest euphorbias and the “giant of the Kaokoveld”, occurs further west (Thiede, submitted).

## Collection

Namibia, Kunene Region, Okandjondo region, 770-825m, Wilke & Thiede 104379, 16.iii.1996 (WIND). This collection was cited by Swanepoel (2009a).

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Fig. 3: Habitat of *Euphorbia ohiva*: hillslope with *Pachypodium lealii*, valley with open mopane savanna and riverine “forests” along the dry riverbeds, and low mountains in the background. *Euphorbia ohiva* was found on the footslopes of the opposite side of the hill in the foreground.

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