

## *Othonna rechingeri* B. NORD. spec. nova, a hexaploid succulent from South Africa

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Mit 1 Textabbildung

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### Abstract

*Othonna rechingeri* B. NORD. (*Compositae*—*Senecioneae*—*Othonninae*) is described from Calvinia Division, Cape Province, South Africa. The new species is hexaploid with the chromosome number  $2n = 60$ . The closely related species *O. patula* SCHLTR. is diploid with  $2n = 20$ .

### Introduction

In connection with the Kirstenbosch Golden Jubilee celebrations in 1963, my highly esteemed friend, Professor KARL-HEINZ RECHINGER, paid a visit to South Africa. In addition to the official excursion program we made a private collecting tour together, i. a. to some of the most interesting parts of the Vanrhynsdorp and Calvinia Divisions. Among the many rare plants found, was a remarkable, undescribed species of *Othonna*, which I have great pleasure in naming after my fellow traveller on that memorable excursion.

*Othonna rechingeri* B. Nord., sp. nov.

Orig. coll.: NORDENSTAM 765, Cape Province, Calvinia Division, Klip Koppies, c. 2 miles E. of Nieuwoudtville, 27. VII. 1962 (S holotype; isotypes distributed to BOL, K, PRE and W).

Illustr.: Fig. 1.

*O. patulae* SCHLTR. affinis, sed foliis angustioribus longioribus, capitulis discoideis differt.

*Herba* perennis glabra; *caulis* foliatus erectus brevis e caudice tuberoso basali exiens, apice stolones elongatos et pedunculum scapiformen emittens. *Tuber* parvum partim subterraneum crassum viride vel brunneolum. *Stolones* pauci horizontales sensim arcuati graciles elongati foliati. *Folia* alterna sparsa, in apice caulis valde conferta, erecta sessilia linearia teretia carnosae laevia viridia apice rotundata mucronulata. *Pedunculus* erectus (repetite) bifurcatus scapiformis nudus sed bracteis reductis et interdum 1—2 foliis basalibus instructus, ramis capituliferis arcuatim nutantibus. *Capitula* hemi-

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sphaerica lutiflora discoidea heterogama. *Involucri bracteae* 8 basi connatae oblongae—anguste ovatae. *Flores marginales* 15—20 hermaphroditi; corolla basi tubulosa, superne campanulata; stylus bilobatus; pappi setae copiosae caducae albae; *achenium* oblongo-obovatum—anguste oblongum apice albo-annulatum, indumento corticate appresso argenteo-cinereo vel brunneolo, humido mucoso. *Flores centrales* 30—50 feminei-steriles; corolla basi tubulosa, superne campanulata; stylus simplex sterilis apice appendice

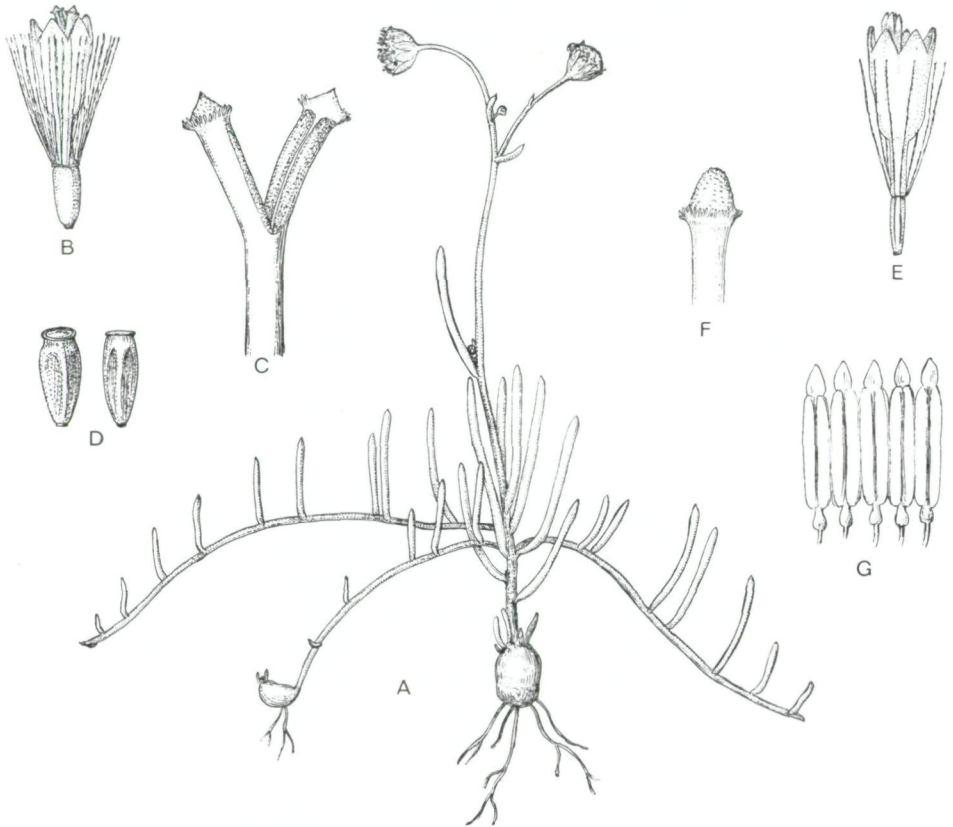


Fig. 1. *Othonna rechingeri* B. NORD. (NORDENSTAM 765). — A: Habit,  $\times \frac{1}{2}$ . — B: Marginal floret,  $\times 5$ . — C: Style apex, from marginal floret,  $\times 20$ . — D: Achenes,  $\times 5$ . — E: Central floret,  $\times 5$ . — F: Style apex, from central floret,  $\times 20$ . — G: Stamens, from central floret,  $\times 10$ . — Del. auct.

conica instructus; ovarium anguste oblongum glabrum abortivum; pappi setae paucae caducae albae.

A glabrous *perennial herb* with erect flowering stems from a basal tuber, emitting long, leafy stolons. *Tuber* rounded, partly underground and with fibrous roots from the base, 1—2 cm in diam., firm, green or brownish. *Stem* with an erect or decumbent, short (up to a few cm long), leafy portion and an elongated erect peduncle, terete, fleshy. *Stolons* 1—5 (seldom more) from the apex of the leafy stem, spreading horizontally, gently arching, slender, up

to 20 cm long (rarely longer), ending in rooting tubers developing new stems and leaves. *Leaves* alternate, laxly set or somewhat crowded at the stem apex, erect, sessile, linear, terete, fleshy, smooth, light green, 1–10 cm long, 1,5–4 mm thick (shortest on the stolons, longest and thickest near the stem apex), apically rounded and mucronulate. *Peduncle* 10–30 cm long, forking once or 2–3 times, with leaf-like bracts at the ramifications, otherwise leafless or with 1–2 distant leaves, with arching-nodding capituliferous branches. *Capitula* hemispherical, 1–1,5 cm in diam., yellow-flowered, discoid, heterogamous with tubular perfect marginal florets and tubular male (♀-sterile) central florets. *Receptacle* slightly convex, shallowly alveolate. *Involucral bracts* uniseriate, 8, basally connate, oblong–narrowly ovate, 6–8 mm long, 2–4 mm wide, ± herbaceous, many with broad, membranous margins, acute or obtuse, indistinctly manyveined or with 3–5 purplish lines, sometimes purplish tipped. *Marginal florets* c. 15–20. Corolla c. 4 mm long; tube 1,5 mm long, basally slightly inflated; limb narrowly campanulate, 2,5 mm long; lobes ovate-deltoid, 0,6–0,7 mm long, the tips somewhat cucullate, acute, with minutely papillate exteriors. Style slightly flattened, with swollen base; style branches c. 1 mm long, flattened, apically tipped with an acute, triangular appendage surrounded by short sweeping-hairs. Anthers 1,6–1,8 mm long incl. the ovate, obtuse appendage. Pappus bristles copious (c. 100–150), 3–4 mm long, caducous, erect, straight, white. *Achene* oblong-obovate – narrowly oblong, 2,5–3 mm long, 1 mm wide, faintly ribbed or subterete, coated with a densely appressed, silvery grey – brownish hair-coat, becoming mucilaginous when soaked, apically with a distinct white annulus. *Central florets* c. 30–50. Corolla 4,5 mm long; tube 1,5 mm long, cylindrical; limb narrowly campanulate, 3 mm long; lobes deltoid, 0,7–0,8 mm long. Anthers 1,8–2 mm long incl. the ovate, obtuse appendage; filaments distinctly swollen apically. Style simple, sterile, tipped with a blunt conical appendage; cone 0,3 mm long, with short sweeping-hairs at the base. Ovary narrowly oblong, 1,5 mm long, glabrous, c. 5-veined, abortive. Pappus bristles few (c. 5–15), erect, straight, white, caducous.

Flowering period: July–Sept.

Chromosome number:  $2n = 60$  (in sections of root-tips from NORDENSTAM 765 and 3017, modified Navashin's fixative, paraffin method, stain crystal violet).

Collections: Cape Province, Calvinia Division: Papelfontein, 2200 ft., VIII. 1897, SCHLECHTER 10908 (COI, G in herb. Barbey-Boissier, S) – Flats below Klip Koppies, c. 2 miles E. of Nieuwoudtville, VII. 1962, NORDENSTAM 765 (BOL, K, PRE, S, W) – Same locality, IX. 1963, NORDENSTAM 3017 (S).

*Othonna rechingeri* B. NORD. belongs to sect. *Carnosae* HARV. and is no doubt closely related to *O. patula* SCHLTR. These two species deviate from all others by their peculiar, rooting stolons. The runners evidently serve as an effective means of vegetative propagation. I have had both species in cultivation for

several years, and I found that they easily spread to other pots. When the stolon tip comes into contact with soil, a small tuber is formed, which rapidly roots and develops to a new individual.

*O. rechingeri* and *O. patula* are very similar in their vegetative parts, the former, however, having slightly longer and narrower leaves. The chief difference is found in the flowerheads, which are radiate in *O. patula*, but discoid in *O. rechingeri*. In other words, the two species have quite different types of marginal florets. These are normal, ligulate, female ray-florets in *O. patula*, but in *O. rechingeri* their place is taken by perfect tubular florets. The latter type is rare in the genus, occurring only in a few taxa of sect. *Carnosae*, viz., *O. rechingeri*, *O. carnosa* var. *discoidea*, and *O. sparsiflora* (cf. NORDENSTAM 1961, p. 125). Most discoid taxa of the genus (formerly recognized as the genus *Doria* LESS.) have reduced, more or less tubular, female marginal florets, which are clearly derived from normal ray-florets.

The chromosome number obtained,  $2n = 60$ , indicates that the species is a hexaploid. Recent studies have shown that the basic number in the genus is invariably  $x = 10$ , and that polyploidy has played a considerable role in the intrageneric evolution (NORDENSTAM 1967 and 1969). The allied species *O. patula* SCHLTR was found to be diploid ( $2n = 20$ , counted on NORDENSTAM 2976 from Cape Province, Vanrhynsdorp Division, 15 miles E. of Vanrhynsdorp on road to Van Rhyns Pass, 1963). Another obvious ally, viz. *O. protecta* DTR., is also a diploid (NORDENSTAM 1967 and 1969). The latter is a widespread karroo species, lacking runners, but otherwise very similar to *O. patula*.

*O. rechingeri* is only known from the vicinity of Nieuwoudtville in Calvinia Division. SCHLECHTER's collection was distributed under the MS. name *O. "gracilis"*, which if published would have become a later homonym of *O. gracilis* HIERN. SCHLECHTER's locality "Papelfontein" is according to JESSOP (1964, p. 140) probably the same as Papekuilsfontein, a place situated only about 13 miles south of my locality.

#### Literature cited

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