

**Mitteilungen der Botanischen Staatssammlung München**

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**Band VI**

**Seite 1 – 251**

**15. 10. 1966**

**begründet von K. Suessenguth +  
fortgeführt von H. Merxmüller**

**TWO NEW SPECIES OF GNAPHALIUM  
FROM SOUTHERN AFRICA**

**by**

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In this paper are described two small annuals, which at present are best placed in the genus *Gnaphalium*. As pointed out several times before (cf. NORDENSTAM 1964), the only distinction between *Gnaphalium* and *Helichrysum*, viz. the ratio, female/perfect florets, is quite an unsatisfactory basis of classification. Awaiting a revised taxonomical treatment of this plant group, the two species will be put under *Gnaphalium*, since the number of female florets somewhat exceeds the number of perfect ones.

*Gnaphalium volkii* B. Nord. , spec. nova

Holotype: NORDENSTAM 2228, South West Africa, 2 m. W. of Schakalskuppe, low black kopje N. of the road, 15. IV. 1963 (LD).

Illustr.: Fig. 1 a - h. - Map: Fig. 2

Planta parva, annua, albo-canescens lanata, nunc caule simplici contracto (tota planta in globulo lanato cr. 1 cm diam. consistente), nunc caules paucos prostratos-decumbentes emittens, in apicibus aggregationes rotundatas foliorum capitulorumque formantes. Folia alterna, spatulata, 3 - 7 mm longa, apicibus obtusis-rotundatis. Capitula sessilia, a foliis et indumento dense involuta. Bracteae involucri subuniseriatae, 12 - 15, lineares, cr. 3 mm longae, glabrae, parte media crassiore, viridi, marginibus membranaceis pellucidis, apice albo impellucido, rotundo-truncato vel emarginato. Flores marginales feminei 20 - 30; corolla filiformis; setae pappi  $\pm$  uniseriatae, 10 - 20, albae, pro maxima parte glabrae, in parte basali pilis minutis patentibus provisae, in parte suprema serrulatae; ovarium oblongum, papillosum. Flores centrales hermaphroditi 12 - 20; corolla tubulosa, superne dilatata; pappus ut in floribus femineis; ovarium oblongum, glabrum, leve.

A small copiously woolly annual, forming rounded clusters cr. 1 cm in diam. or with few (1 - 6) prostrate-decumbent stems (up to 2 cm long), ending in rounded glomerules of leaves and capitula. Tomentum of stems and leaves white-greyish, 1 - 2 mm thick. Leaves alternate, spatulate, 3 - 7 mm long, from a narrow base (0.5 mm wide or less) widening to about 1 mm near the obtuse-rounded apex.

Capitula sessile (or nearly so) in the terminal glomerules, surrounded by several gradually smaller leaves and thick tomentum. Involucre cupshaped-campanulate, 2.5 - 3 mm long and wide. Involucral bracts subuniseriate, 12 - 15, linear, 2.5 - 3.5 mm long, 0.2 - 0.5 mm wide, glabrous, with a green median thicker portion in the lower half and with membranous pellucid margins, apically white, opaque, scarious; tips rounded-truncate or even somewhat emarginate. Receptacle convex, nude, alveolate. Marginal female florets 20 - 30. Corolla filiform, 1.5 - 2 mm long, minutely and irregularly 3 - 4-toothed at the apex. Style branches linear, flattened, 0.4 - 0.5 mm long, with truncate-rounded tips. Pappus bristles  $\pm$  uniseriate, 10 - 20, 1.5 - 2 mm long, caducous, white, smooth for their greater length, serrulate towards the tips, basally with some lax and spreading, delicate hairs. Ovary oblong, glabrous, papillate. Central perfect florets 15 - 20. Corolla tubular, 1.5 - 2 mm long, slightly widening above, 5-lobed; lobes triangular, 0.2 mm long, acute. Style terete; branches flattened, 0.3 - 0.4 mm long, with a truncate apical appendage. Anthers 1 mm long, with filiform tails and an ovate obtuse apical appen-

dage; filaments articulated. Pappus as in the female florets. Ovary oblong, glabrous, smooth.

South West Africa: Maltahöhe District: Farm Duwisib, 20. V. 1956, VOLK 12796 (M). - Lüderitz-Süd District: 2.5 m. E. of Asbospan, kopje N. of the road, stony ground on top, 14. IV. 1963, NORDENSTAM 2209 (LD); 2 m. W. of Schakalskuppe, low black kopje N. of the road, in sandy soil on stony S. slopes, 15. IV. 1963, NORDENSTAM 2228 (LD); Farm Swartpunt, 26. VIII. 1963, MERXMÜLLER & GIESS 3166 a (M). - Keetmanshoop District: Klein-Karas, 29. IX. 1923, DINTER 4997 (SAM).

This little plant is in habit so strikingly similar to the *Lasiopogon* species (viz., *L. muscoides* and *L. micropoides*, both of which occur in the same area, see NORDENSTAM 1964) as to be indistinguishable without a closer examination. The most reliable character is offered by the pappus, which in *Lasiopogon* consists of distinctly plumose bristles. *Gnaphalium volkii* also resembles the species of *Comptonanthus*, esp. *C. molluginoides*, which is readily distinguished, however, by its mucronate leaves, acute involucre bracts, and especially by its pappus bristles, which are amply feathered in the upper half. The closest relatives of our new species appear to be *Gnaphalium glomerulatum* Sond. ex Harv. and *G. parvulum* Harv. Also here the pappus offers distinguishing characters, being serrate throughout in the latter two species (in *G. volkii* only apically serrate). *G. volkii* further differs from *G. glomerulatum* by the spatulate to obovate leaves and distinctly white-tipped involucre scales, and from *G. parvulum* in its *Lasiopogon*-like habit with rounded clusters of capitula and its obtuse (not mucronate) leaves.

*G. volkii* is hitherto only known from five collections from the southern part of South West Africa. I have pleasure in naming the species after Prof. O. H. VOLK, who has collected it on the Farm Duwisib.

*Gnaphalium minutum* B. Nord., spec. nova

Holotype: NORDENSTAM 1031, South Africa, Vanrhynsdorp Division, quartzite area 4 m. N. N. E. of Koekenaap, 25. VIII. 1962 (LD).

Illustr.: Fig. 1 i - l. - Map: Fig. 2

Planta parva, annua, caule simplici vel a basi ramosa, + erecto, laxe albo-lanato. Folia alterna, sessilia, linearia-oblan-ceolata, 1 - 2 cm longa, sparse tomentosa vel araneosa, apicibus rotundatis vel obtusis. Capitula in racemo brevi, denso aggregata, breviter pedunculata. Bracteae involucri imbricatae, membranaceae, semi-pellucidae, exteriores ovatae, subacutae, interiores anguste oblongae-lanceolatae apice albo, impellucido, rotundato-truncato. Flores feminei marginales 15 - 20; corolla filiformis; setae pappi uniseriatae, 10 - 15, albae, per totam longitudinem serrulatae, ad basin in structuram squamoides, infima parte in anulum conjunctas, applanatae; ovarium anguste elliptico-oblongum, papillis crassis, in humore mucosum. Flores centrales hermaphroditi cr. 15; corolla tubulosa, superne dilatata; pappus et ovarium ut in floribus femineis.

A small annual, 1 - 4 cm high. Stems simple or branching from the base, + erect, loosely white-woolly. Leaves alternate, sessile, linear-oblan-ceolate, tapering towards the base, 1 - 2 cm long (uppermost shorter), 1 - 2 mm wide, thinly tomentose or araneose, with obtuse or rounded tips.

Capitula + aggregated in short and dense racemes, shortly peduncled, broadly oblong or subglobose, 2 - 3 mm long and wide. Involucral bracts imbricated, membranous, semi-transparent; outer ovate, greenish, subacute; inner narrowly oblong-lanceolate with white, opaque, rounded or truncate tips. Receptacle slightly convex, nude. Marginal female florets 15 - 20. Corolla filiform, 1.5 mm long, minutely toothed at the apex. Pappus bristles uniseriate, 10 - 15, 1.5 mm long, + persistent, white, serrulate throughout, basally with a dilated flat (scale-like) portion, at the very base connate to an annulus. Ovary narrowly elliptic-oblong, light brown, with coarse papillae, that in water swell and become mucilaginous. Central perfect florets cr. 15 (10 - 18). Corolla tubular, widening above, 1.5 mm long, 4- or 5-lobed, at the base swollen (nectary). Style branches linear, 1/4 mm long, truncate. Anthers 0.8 mm long incl. the ovate obtuse appendage and the filiform tails. Pappus and ovary as in the female florets.

South Africa: Vanrhynsdorp Division: Quartzite area 4 m. N. N. E. of Noekenaap, 25. VIII. 1962, NORDENSTAM 1031 (LD).

This distinct little species is known to me only from this single collection. Like the former species it is easily overlooked

in the field, so it would be premature to conclude that it is endemic to the quartzite areas in Vanrhynsdorp Division. These areas, part of which is known as Kners Vlakte, have a high percentage of local endemics from various families. Many species, however, have a wider distribution, occurring also in other karroid areas.

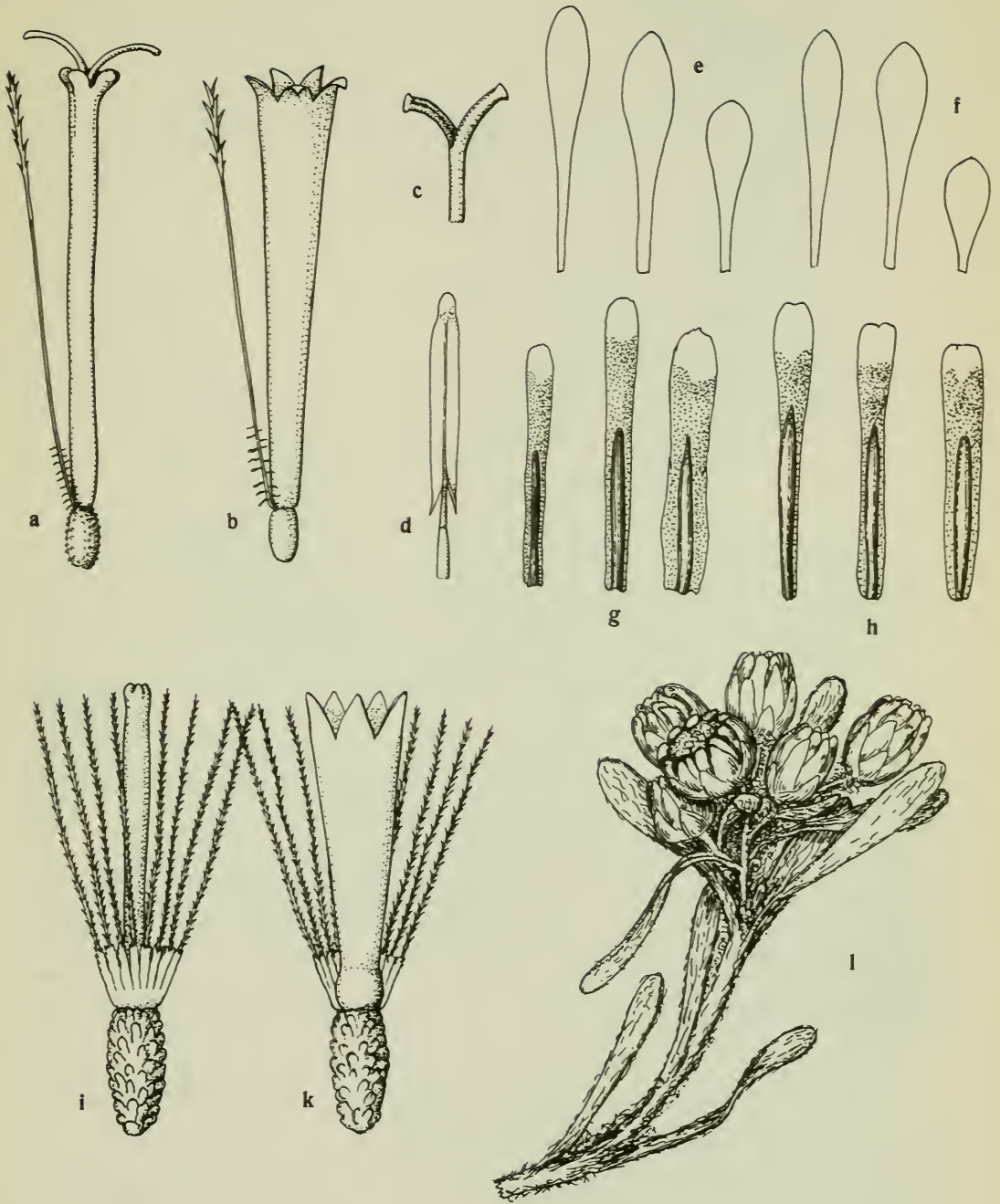
*Gnaphalium minutum* is similar in aspect to, i. a., *G. glomerulatum* and *Helichrysum filagineum*, and to a lesser degree also the species of *Comptonanthus* and *Lasiopogon*. The most characteristic features are the white-tipped obtuse involucrel bracts and the peculiar pappus.

For revision of the Latin diagnoses I am indebted to Dr. H. HJELMQVIST and Dr. E. WIKEN. My special thanks are due to Prof. H. MERXMÜLLER for drawing my attention to the collections of *Gnaphalium volkii* in the Munich herbarium.

#### Literature

NORDENSTAM, B.: *Comptonanthus*, a new Genus of the Compositae with Notes on *Lasiopogon* in South Africa. Journ. South Afr. Bot. 30:2, 1964.

- Fig. 1 a - h: Gnaphalium volkii B. Nord.: a) female floret, with one pappus bristle, x 25; b) perfect floret, with one pappus bristle, x 25; c) style branches of perfect floret, x 25; d) anther, x 25; e, f) leaf outlines (without tomentum), x 5; g, h) involucre bracts, x 10. -- a-d: MERXMÜLLER & GIESS 3166 a; e, g: NORDENSTAM 2209; f, h: NORDENSTAM 2228;
- i - l: Gnaphalium minutum B. Nord.: i) female floret, with cr.  $1/2$  the number of pappus bristles, x 25; k) perfect floret, with cr.  $1/2$  the number of pappus bristles, x 25; portion of plant, x 4. -- i-l: NORDENSTAM 1031.



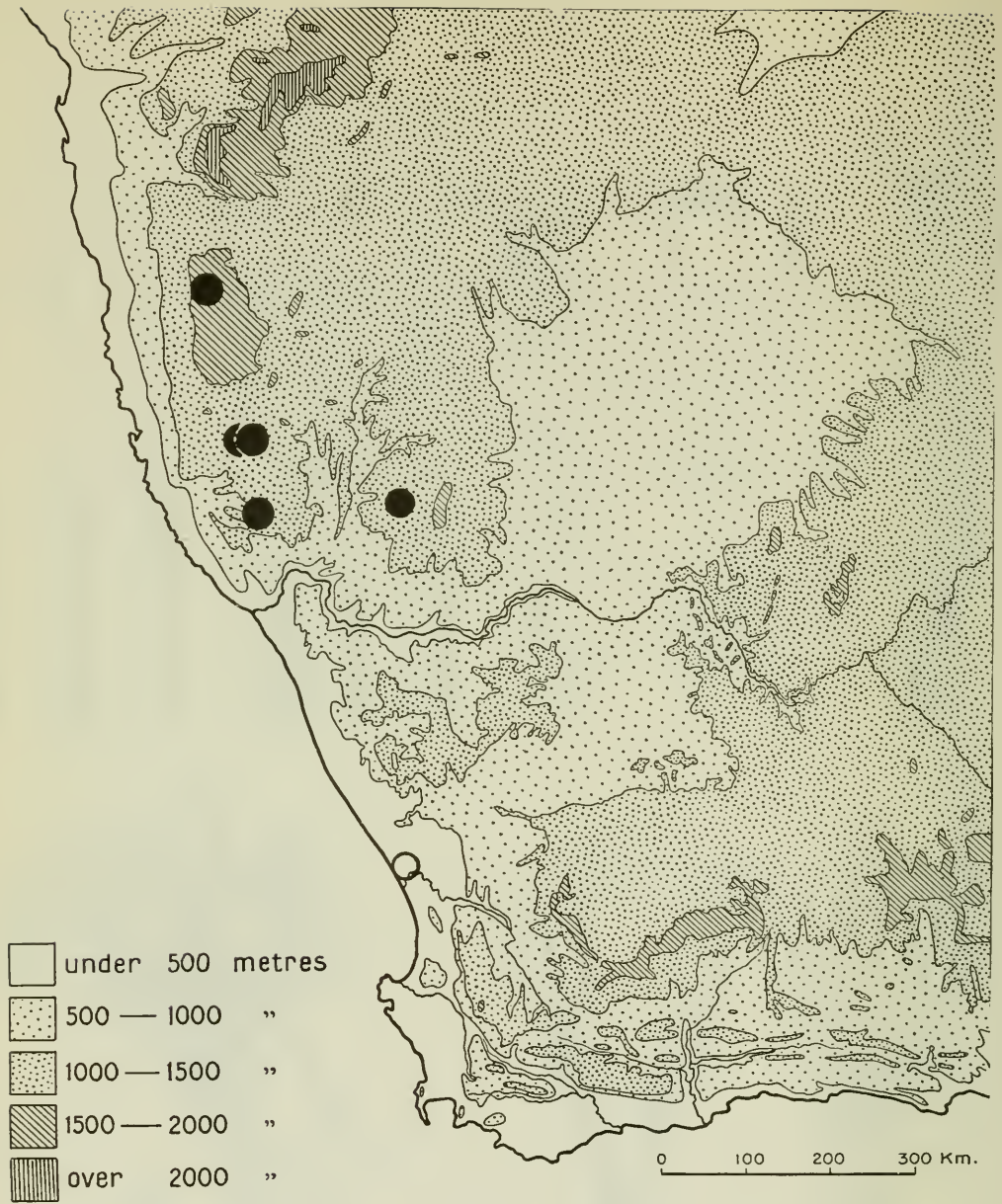


Fig. 2: Distribution of *Gnaphalium volkii* B. Nord. (dots) and *G. minutum* B. Nord. (ring)



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Zeitschrift/Journal: [Mitteilungen der Botanischen Staatssammlung München](#)

Jahr/Year: 1966

Band/Volume: [6](#)

Autor(en)/Author(s): Nordenstam Bertil

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