

## HYACINTHACEAE

### A NEW SPECIES OF *ORNITHOGALUM* FROM THE RICHTERSVELD, SOUTH AFRICA

#### INTRODUCTION

Obermeyer (1978) recognised 54 species of *Ornithogalum* L. from southern Africa of which about 15 species, including the newly described species, occur

within the Richtersveld. In a recent publication U. & D. Müller-Doblies (1996) have extended the number of recognised species to 123 of which about 30 are recorded as occurring in the Richtersveld. These plants survive in all evolutionary niches from the highest mountains to the

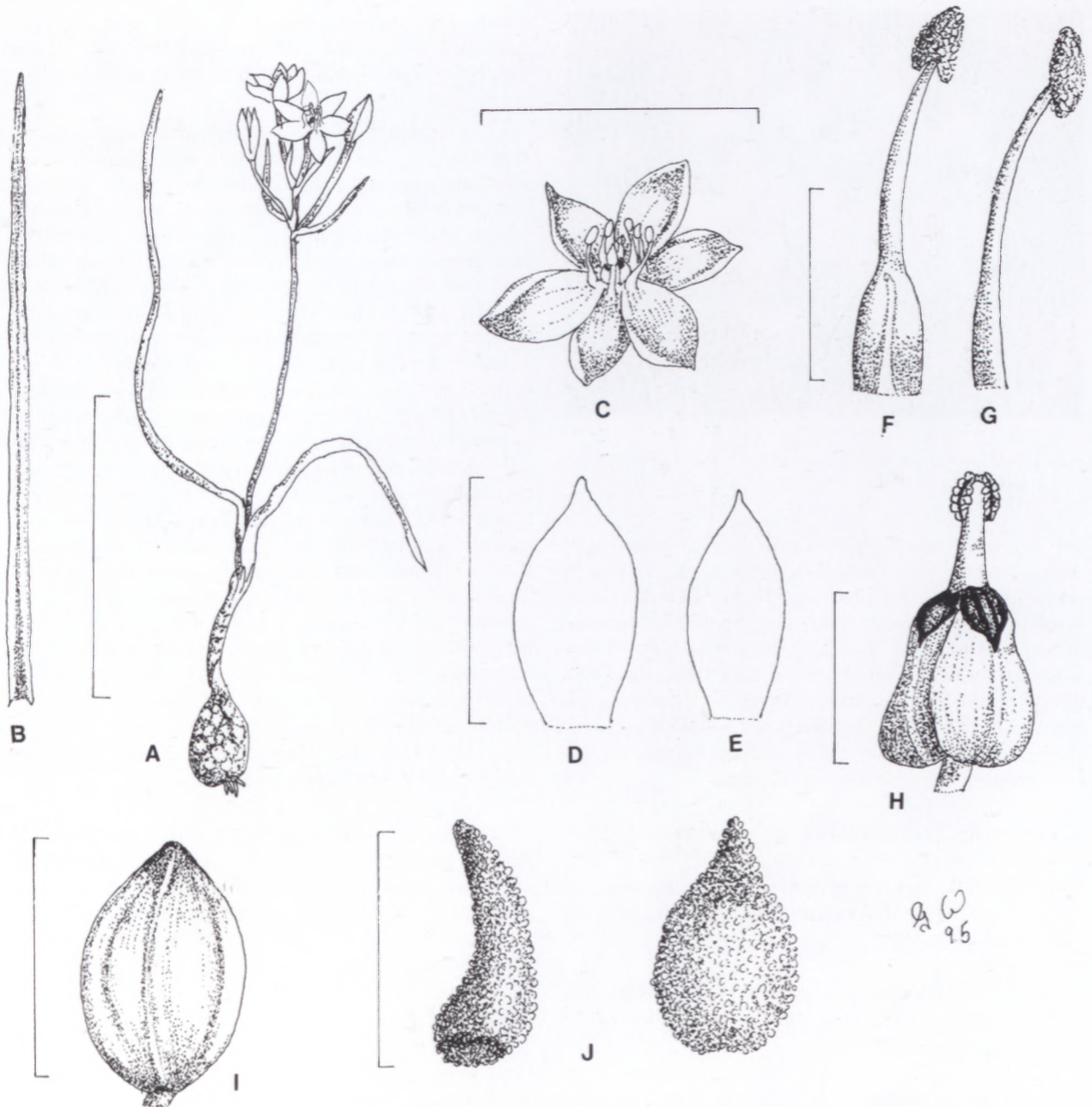


FIGURE 24.—*Ornithogalum decus-montium*, G. & F. Williamson 5803 (NBG). A, plant; B, leaf flattened (including basal sheathing portion); C, flower; D, inner and E, outer tepal; F, inner and G, outer stamen; H, ovary, style and stigma; I, capsule; J, seeds, side and front views. Scale bars: A, B, 45 mm; C, 16 mm; D, E, 7 mm; F, G, 2.25 mm; H, 2.5 mm; I, 4 mm; J, 1.5 mm. Drawn by G. Williamson.

low, more arid sandy plains. *O. decus-montium* appears to be restricted to the northern Richtersveld mountains.

***Ornithogalum decus-montium* G. Will., sp. nov.** ad subgenus *Aspasiam* et turmam *Aspasiae* pertinet. Species insignis apice ovarii nigrovirenti, a speciebus nobis notis bene distincta. *O. geniculatum* Oberm. primo ad aspectu simile, sed non-geniculato pedunculo satim diagnoscenda.

Planta bulbosa 40–100 mm alta (bulbo incluso); foliis 2, coaetaneis, anguste linearibus, subacutis, 60–100 mm longis (vagina inclusa); scapo 60–100 mm alto, racemo ad 30 × 25 mm; seminibus commaformibus.

TYPE.—Northern Cape, 2816 (Oranjemund): Richtersveld National Park, ± 20 km E of Sendelingsdrift, (–BB), Sept. 1995, G. & F. Williamson 5803 (NBG, holo.).

Plant a dwarf geophyte 40–100(–120) mm high including bulb (Figure 24A). *Bulb* ovoid, 7 × 7 mm, outer tunic thin and brittle, pinkish brown with aerenchymatous layer ± 1 mm thick. *Leaves* 2, emerging from basal sheathing papyraceous cataphylls 3 mm long, synanthous, longest as long as scape, sheathing at base for 20–30 × 4 mm at widest, free portion light green, of soft texture, drooping to suberect, linear narrowing towards apex, subacute, 30–70 × 1.5–3.0 mm, glaucous with a smooth margin. *Scape* fine, wire-like, up to 100 mm; raceme up to 30 × 25 mm, 2–8-flowered, flowers subcorimbosely clustered and mostly facing skywards (Figures 24A, C; 25), bracts very narrowly linear, membranous, acute, 4–14 mm long; pedicels ± 10 mm long, suberect to erect, thin, wire-like, elongating up to 14 mm when capsule fully developed. *Tepals* shiny satin-white, outer narrowly elliptic, acute, 7 × 3 mm, inner elliptic, acute, 7 × 4 mm (Figure 24D, E). *Stamens*: filaments ±



FIGURE 25.—*Ornithogalum decus-montium*. Flower photographed east of Sendelingsdrift.

4.5 mm long, narrowing towards anthers, terete; inner with an oblong base; anthers rounded oblong, yellowish, all facing stigma, 0.8 mm long (Figure 24F, G). *Ovary* green, ovoid with apex very distinctly coloured luminous dark greenish black,  $2.5 \times 2.0$  mm; style terete,  $\pm 1$  mm long; stigma with 3 decurrent, papillate lobes,  $\pm 0.5$  mm long (Figure 24H). *Capsule* ellipsoid, green with longitudinal white stripes and darkened apex,  $4.0 \times 2.8$  mm wide (Figure 24I); seeds coal black, comma-shaped, densely tuberculate,  $1.5 \times 0.5-0.8$  mm (Figure 24J).

*Flowering time:* in abundance in September.

*Etymology:* the specific epithet describes the scattered decorative carpets of flowering plants which cover the lower mountain slopes.

*Distribution:* The species is known only from the type locality and a second dense colony some 10 km to the west of this (Figure 26).

*Habitat:* open, exposed, undisturbed, arid mountain slopes at about 200 m altitude, in soils derived from sur-

rounding decomposing orange-brown igneous rocks. The main geological formation is the Vioolsdrif Suite. Plants only occur on the southwest aspect in full sun.

*O. decus-montium* falls into subgenus *Aspasia* group *Aspasiae* by possessing narrowly boat-shaped bracts with a smooth margin and as long as the pedicels, broad perianth segments with no dark rib and the style shorter than the ovary. It is synanthous with narrow leaves. The new species shows some similarities with *O. diphyllum* Baker but *O. diphyllum* has up to 3 leaves with inrolled margins and an inflorescence which usually has more flowers (up to 10), the perianth segments are more rounded-ovate and the stamens are usually longer (5 mm). Furthermore *O. decus-montium* has the unique feature of a luminous greenish black ovary apex. *O. diphyllum* is restricted to the Drakensberg range in the summer rainfall region of southern Africa, whereas the new species is endemic to the arid mountains of the northern Richtersveld just south of the Orange River. This area receives about 25–50 mm winter precipitation per year. Rainfall figures were obtained from the nearby Rosh Pinah Mine in Namibia and from the recently established weather station at Sendelingsdrift. The lower Orange River valley and adjacent mountains are bathed by sea fogs (mainly in winter) moving up the river in a northeasterly direction. The fogs tend to dissipate in the region of Lorelei where the river gorges wind towards the southeast. The new species occurs in the area where the fogs almost cease to have any marked effect.

*O. decus-montium* shares some characters with *O. multifolium* Baker which also occurs in the Richtersveld, viz. narrow leaves, long flower bracts, broad perianth segments and the style shorter than the ovary. However *O. decus-montium* occurs in a completely different habitat niche, is synanthous not hysteranthous, always produces only two leaves (*O. multifolium* has up to 6 leaves) and the flowers are white as opposed to yellow.

The new taxon also bears a superficial resemblance to *O. geniculatum* Oberm. but is immediately separated from this species by the sharp-angled peduncle where it

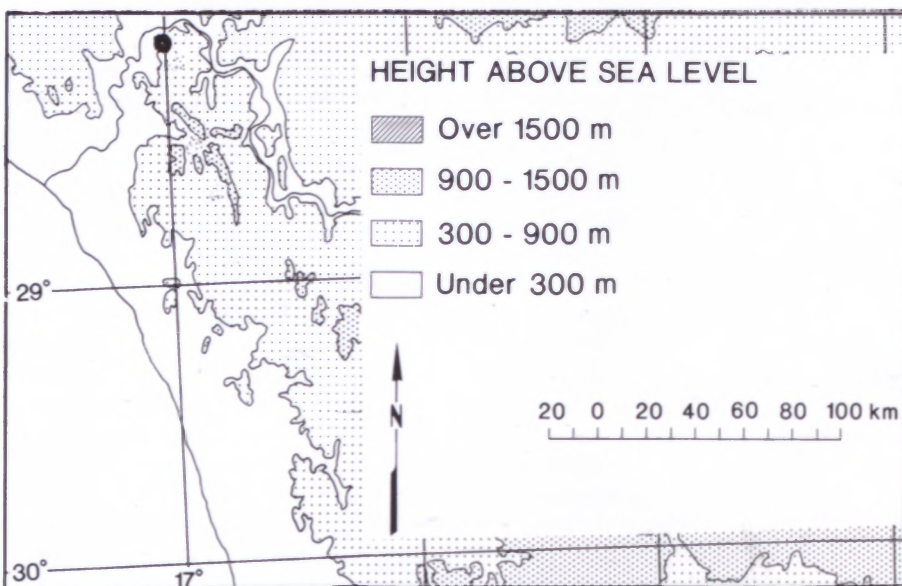


FIGURE 26.—Known distribution of *Ornithogalum decus-montium*.

emerges from the uppermost leaf. Furthermore *O. geniculatum* is found in the Richtersveld only under moist, fog dependent conditions in shady places.

Plants associated with *O. decus-montium* include several species which occur mainly in the arid eastern lower Orange River floristic zone, viz. *Tylecodon hallii*, *Schwantesia herrei*, *Conophytum loeschianum*, *Stoerberia carpii* and *Astridia hallii*. Arid associates which have distributions beyond the lower Orange River valley also occur nearby: *Pachypodium namaquanum*, *Euphorbia virosa*, *Sarcocaulon flavescens*, *Hoodia gordonii*, *H. alstonii*, *Crassula garibina*, the asclepiad *Pentarrhinum abyssinicum* subsp. *angolense* and the trees *Maerua schinzii* and *M. gilgii*.

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G. WILLIAMSON\*

\* Bolus Herbarium, University of Cape Town, 7700 Rondebosch.  
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