

Two New *Ornithogalum* Species from South West Africa

by

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***Ornithogalum candidum* Oberm.**, sp. nov., *O. rautanenii* Schinz affinis, sed plantae robustiores, foliis latioribus, perianthio majore staminum filamentis ex appendiculatis differt.

Bulbus angustus in collo longo productus. *Folia* 2 (raro 3) linearia ad late linearia ad basin vaginata, apice acuminata, 6-15 cm longa, 6-12 mm lata patentia glauca glabra striata margine saepe undulata. *Racemus* simplex ad 20-florus; scapus validus teres; bractee minora membranaceae; pedicelli filiformes patentes. *Perianthium* candidum circa 2 cm diam., segmentis anguste oblongis. *Staminum filamenta* anguste lanceolato-subulata. *Ovarium* ovoideum sessile, ovulus in quoque locula 8. *Capsula* late obovoidea chartacea; semina applanata oblanceolata nigra.

SOUTH WEST AFRICA. — 2317 Rehoboth: Büllspöter Fläche, *Giess* 388 (PRE, holo.; M; WIND); Form Vrede, REH 433, *Giess* 9110. 2417 Mariental: between Mariental and Aris, *Werdermann & Oberdieck* 2268; farm Witvley near Mariental, *Giess* 3878; Swartrand, \pm 30 miles W. of Mariental, *Basson* 146. 2115 Karibib: farm Nudis (Altenbrunn), *Seydel* 245.

Bulb narrowly ovoid, 2-4 cm in diam., produced into a neck 8-10 cm long, outer covering papery, rough, greyish- or light brown. *Leaves* 2, rarely 3, linear to broadly linear, up to 15 cm long and 1.2 (-2) cm broad, clasping below, spreading, apex acuminate often laxly curled upwards, the margins usually wavy and involute, glaucous, glabrous, striate. *Raceme* simple, up to 15 cm high and up to 20-flowered; scape terete, firm, bracts small, ovate-acuminate, clasping, membranous; pedicels filiform, 1-3 cm long, patent, becoming firm in fruit. *Flowers* with a white shiny star-shaped perianth about 2 cm in diam., segments broadly linear, 1 cm long and 4 mm broad, apex obtuse, with a broad 5-nerved midrib. *Stamens* somewhat shorter than the perianth-segments; filaments linear, anthers versatile, introrse. *Ovary* narrowly ovoid, sessile, with about 8 ovules per locule, style terete, stigma apical, papillate. *Capsule* broadly obovoid, 3-angled, about 1 cm long, chartaceous; seeds flattened, oblanceolate in outline, about 6 mm long, tapering to the funiculus, with a blackish-brown shiny loose skin (uncertain if seeds were mature).

Apparently confined to the Rehoboth-Mariental region although there is one record from Karibib. Found in open stands and covering extensive areas. According to collectors the flowers appear in their thousands after the first rains and cover the ground with a white, shiny carpet and on the ridges the flower masses resemble snowdrifts. Mr. W. Giess, who collected the species in



PLATE 1. — *Ornithogalum candidum*, Farm Vrede, Rehoboth, South West Africa
(Giess 9110). (Photos by W. Giess).

several localities, noted that they preferred coarse quartzite gravel with underlying limestone but were absent from pure limestone or in red sand. They were eaten by animals which is surprising since species of *Ornithogalum* are known to be very poisonous.

var. **tubiforme** *Oberm.*, var. nov. Perianthii segmentis ad basin connati.

SOUTH WEST AFRICA. — 2317 (Rehoboth): farm Buellspoor, *Strey* 2624 (PRE, holo.).

The fusion of the bases of the perianth-segments to form a short tube about 3 mm long is very unusual for this genus. The stamens are fused to the tube at the base but exserted above it. The leaves are narrow and folded, c.2 mm wide.

Ornithogalum recurvum *Oberm.*, sp. nov., *O. rautanenii* Schinz affinis, sed plantis majoribus, foliis latioribus, racemis elongatis, perianthii segmentis recurvis differt.

Planta ad 55 cm alta. *Bulbus* oblongo-globosus 10 cm longus, 5 cm diam., tunicis tenuibus brunneis transverse striatis. *Folia* c. 7 lineari-lanceolata ad 27 cm longa, 3 cm lata, ad basin vaginata apice attenuata, glabra glauca nitida. *Racemus* elongatus c. 35 cm longus; scapus teretus, bracteis minutis subulatis; pedicelli filiformes patentes ad 18 mm longi. *Perianthii segmenta* recurvata late linearia alba. *Staminum* filamenta in dimidio inferiore abrupte expansa in squamam latam, parte superiore erecta stylos cingentia. *Ovarium* disco basali leviter 6-lobato, infra in stipite brevi contractum. *Capsula* late triangularis; semina discoidea nigra.

SOUTH WEST AFRICA. — 1712 (Posto Velo): Kaokoveld, banks of the Kunene River at long. 1226, lat. 1715, among rocks in mountains, *Story* 5848 (PRE, holo., bulb cultivated at PRE). 1812 (Sanitatas): flats near waterhole at Orupembe, gravelly calcareous soil, *De Winter & Leistner* 5732 (fruiting).

Bulb oblong, 10 cm long and 5 cm in diam. covered by thin shiny brown transversely striate scales; neck absent. *Leaves* rosulate, erect, about 7, linear-lanceolate, up to 27 cm long and 3.5 cm broad, clasping at the base, apex attenuate, glabrous, dark glaucous green, shiny. *Raceme* overtopping leaf-rosette (in the cultivated type-specimen the scape is up to 30 cm long and straight) or about equal to the scape, which is bent outwards near the middle; with a few minute sterile subulate bracts above; fertile bracts similar. *Flowers* up to 40, on patent filiform pedicels up to 2 cm long, which become wiry in fruit. *Perianth* with the segments recurved, their tips touching the apex of the pedicel, broadly linear, 8 mm long and 1.5 mm broad, white with a broad green 3-5 nerved central band, apex obtuse cucullate, barbate. *Stamens* erect, filaments expanded in lower half to form a square base which folds inwards above around the ovary from where the filiform upper part then forms a connivent tube around the style; anthers versatile, introrse. *Ovary* expanded below in a shallowly 6-lobed disc from a shortly stipitate base, turbinate above, with about 18 biseriate ovules in each chamber; style filiform, about as long as the stamens, stigma apical, shortly 3-lobed, papillate, exserted when stamens shrivel. *Capsule* broadly triangular, c. 18 mm long and broad, depressed in the centre, walls thin, greenish; seeds discoid, 7 mm in diam., black, shiny.

The perianth, with its recurved segments, resembles a *Drimia* flower but in all other respects it conforms to *Ornithogalum*. The segments, after anthesis, return to the bud position closing over the ovary. In the type-plant the recurving was very characteristic, as can be seen in the photographs, but in the other



PLATE 2. — *Ornithogalum recurvum*, Kaokoveld, South West Africa (*Story* 5848).
(Whole plant at left, $\times \frac{1}{4}$; inflorescence at right, $\times 1$).

cited specimen, which was in the fruiting stage (*De Winter & Leistner* 5732), this could not be observed as no flowers were present. A few staminal filaments, that had persisted below the capsule, showed the typical broadened bases and it matched the type in all other respects. The species is very near *O. stapfii* but the plant is larger, with the larger and broader leaves forming a distinct upright rosette, and the recurved perianth especially distinguishes it from that species.