

A NOTE ON NARCISSUS HISPANICUS GOUAN
(N. MAJOR CURT.) IN THE SIERRA DE LAS NIEVES,
MALAGA

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Resumen. Se describe una población de *N. hispanicus* de la Sierra de las Nieves, y se discuten sus relaciones con *N. nevadensis* Pugsley y *N. confusus* Pugsley.

Summary. The population of *N. hispanicus* in the Sierra de las Nieves is described, and its relationship with *N. nevadensis* Pugsley and *N. confusus* Pugsley discussed.

WILLKOMM (1861: 52, 1896: 239) collected this species in the Sierra de Yunquera (now known as the Sierra de las Nieves) at 4500 ft. (c. 1350 m.): «im April erscheint der Boden der Pinsapowälder stellenweis häufig mit den goldgelben Blumen des Narcissus major Curt.». He separated it from *N. pseudonarcissus* L. as follows:

«Statura majore, foliis laticribus subtortuosis praeglaucis, flora (saepe suberecto) omnino flavissimo, laciniis perigonilibus corona ore recurvato-patente inciso-sexlobata et undulato-crenata subbrevioribus.»

No further information was published about this plant until STOCKEN's notes (1964: 16, 1966: 257, 1969: 71). He refers to it as «a form of *N. pseudonarcissus* with rather long stems — possibly *N. longispathus*».

Description. Bulb 9-17 cm. below ground level, ovoid, maximum horizontal diameter 20-27 mm. Leaves normally two, occasionally one or three, erect, twisted, tips well below base of spathe, deeply channelled, semi-circular in section to nearly flat in the smallest leaves, glaucous, 5-9 (-10) mm. broad when flattened. Scape 11-30 (-50) cm., much compressed, 2-edged. Flower solitary, nearly horizontal, occasionally inclined upwards or downwards, slightly sweet-scented, deep yellow in colour (R.H.S. Colour Chart Yellow

Group 12A), segments and corona either concolorous or segments tipped whitish, tube \pm strongly suffused with green. Spathe reaches to between base and tip of segments. Pedicel very variable in length, strongly curved. Segments 5-20 mm., broad, spirally twisted, shorter or longer than corona. Corona with margin widely spreading, curling outwards and backwards, with $6 \pm$ distinct crenate lobes. Anthers with a minute dark apical spot. Measurements from one flower: stamens inserted 5 mm. from base of tube, filaments 11 mm., anthers 11 mm., style 30 mm.

Hundreds of plants were examined. Size variation does not seem to be correlated with site conditions, but plants pushing their way through thick rushes (*Juncus* sp.) or a shrub tend to be abnormally tall (up to 50 cm.). Detailed measurements (in mm.) of 54 plants are summarised in the following table:

Length of pedicel	Tube excluding ovary	Length of corona	Length of flower tube excluding ovary plus corona
(5)-8-30(-41)	15-25	18-38	36-53(-63)

Distribution and habitat. FERNANDES (1968: 58) gives the range of *N. hispanicus* var. *hispanicus* as Iberian Peninsula and S. France. In S. Spain the only known locality is the Sierra de las Nieves, built of upper Triassic limestones with bedrock exposed over large areas, and mostly poor or shallow soils. On north-facing slopes at 1000-1800 m. (with isolated trees down to 800 m.) are found the largest remaining patches of the forest of *Abies pinsapo* Boiss.

The daffodil is associated with the lower edge of the pinsapo belt, and extends from the Cerro Abanto on the west to the Peñón de Ronda of the east. Two days (26-27 March 1972) were spent exploring the area further east, between the Peñón de Ronda and Yunquera; here there are extensive woods of *Pinus halepensis* Miller, with some pinsapo higher up, but no trace of the *Narcissus* was found, though the search extended from 800-1400 m.

Most colonies were found at 1300-1400 m., growing by streams or on marshy ground where springs and snow water draining from the limestone cliffs above come to the surface; a few plants were seen with their bulbs actually below running water, just as *N. nevadensis* grows in the Sierra Nevada, and many plants grow on well-drained slopes. The vegetation consists of scattered pinsapos and thickets, sometimes dense, of *Crataegus monogyna*

Jacq. and *Rosa* sp. with open grassy patches in between; there is full overhead light, and the soil is clay or clay-loam.

Some smaller colonies, including the ones mentioned by STOCKEN, grow in the valley of the Río Grande at 950-1000 m. in a rather dense scrub of *Quercus rotundifolia* Lam., *Cistus albidus* L., *C. crispus* L., *C. laurifolius* L., *Ulex parviflorus* Pourret, etc., with a few *Quercus suber* L. and young pin-sapos. Here the daffodil grows either in crevices of limestone rocks or in rocky soil nearby; the plants are living in shady and comparatively dry conditions, but do not appear to differ morphologically from the colonies living out in the open higher up.

Differentiation from allied species. The population of *N. hispanicus* in the Sierra de las Nieves represents a smaller taxon than the *N. hispanicus* defined by CLAPHAM, TUTIN & WARBURG (1962: 1001): «Bulb 4-5 cm., ovoid. Leaves 40-50 cm. x 10-12 mm. ... Scape 40-60 cm. ... Pedicels 25-35 mm. ... Perianth 50-60 mm. ... corona c. 45 mm. across.»

The key proposed by FERNANDES (1968) to separate *N. hispanicus* from its allies should be modified to accommodate the measurements given in this paper. The key, based on flower size and pedicel length, is based partly on the work of PUGSLEY (1933) who described Spanish species without ever visiting Spain and studying them in the field. With a variable genus like *Narcissus* the range of measurements in any species cannot be ascertained from a few herbarium specimens; it is essential to examine large populations in the field before any satisfactory key based on measurements can be worked out.

N. hispanicus and *N. nevadensis*. These are quite distinct species, but the character of dwarf/tall used to separate them in the key is misleading. Plants of the two species have been compared beside each other in pots and they differ little in height or leaf characters. *N. nevadensis* is best separated from *N. hispanicus* as follows: Spathe 1-3 flowered; flower smaller (40 mm. long), much paler yellow and bi-coloured, the segments 2 C/D and the corona 2A in the R.H.S. Colour Chart Yellow Group. Segments not twisted and not strongly patent. Corona not widely spreading. It should be removed from the «flower deep yellow, concolorous or nearly so» group in which it is at present placed in the key.

N. hispanicus and *N. confusus*. These may well prove to be conspecific, *N. confusus* being the representative of *N. hispanicus* in the Central Sierras. It was described from the Sierra de Majorreina, Extremadura, at 2300 m.

but what is almost certainly the same taxon grows in the Sierra de Gredos; RIVAS MARTÍNEZ (1963: 285) under the name *N. pseudonarcissus* writes: «No hemos podido precisar cuál es la subespecie de este «trompón», que en los prados montanos y en grietas umbrosas es localmente abundante.»

Reference material. Sierra de Gredos, 1700 m., 28.V.1969, *Smythies*, 353 (LTR); Sierra de las Nieves, 19.III.1972, *Smythies*, 631 (LTR); *ibid.*, 3.IV.1972, *Smythies*, 637 (LTR).

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