Research & Reviews: Journal of Botanical Sciences

ISSN: 2320-0189

Taxonomic review and typification of Narcissus syriacus and Narcissus corcyrensis (Amaryllidaceae) within the Narcissus tazetta complex

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Review Article

Received: 13-JUL-2025, Manuscript No. jbs-25-167836; **Editor assigned:** 17-JUL-2025, PreQC No. jbs-25-167836 (PQ); **Reviewed:** 12-SEP-2025, QC No. jbs-25-167836; **Revised:** 19-SEP-2025, Manuscript No. JBS-24-125166(R); **Published:** 21-SEP-2025, DOI: 10.4172/2320-0189.14.4.001.

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Citation: Stephen Mifsud, Taxonomic review and typification of Narcissus syriacus and Narcissus corcyrensis (Amaryllidaceae) within the Narcissus tazetta complex RRJ Botanical Sci. 2025.14.001.

ABSTRACT

Narcissus tazetta is a morphologically variable species encompassing numerous taxa historically described based on minor differences. Many of these were introduced in the 19th century, often lacking ecological context or robust comparative analysis. This study re-evaluates two such taxa - *Narcissus syriacus* and *Narcissus corcyrensis*, through combined analysis of their protologues, iconography, herbarium specimens and targeted field investigations in the Maltese Islands. Field observations of plants matching perfectly *N. syriacus* in Malta suggest that its reduced size, narrow leaves, and early flowering are phenotypic responses to shallow, nutrient-poor soils and seasonal aridity, rather than traits indicative of distinct genetic speciation. Likewise, the protologue of *N. corcyrensis,* based on a single plant cultivated out of its natural habitat, describes features resembling a stunted form of *N. tazetta* subsp. *italicus*, rather than a discrete, stable taxon, which was never substantiated again, and remained an issue of uncertainty and confusion. Findings support the conclusion that both N. syriacus and *N. corcyrensis* fall within the natural variation of *Narcissus tazetta* and do not merit species-level recognition. If taxonomic distinction is necessary, varietal rank is more appropriate. This work highlights the importance of integrating classical taxonomy with field-based evidence in resolving long-standing nomenclatural issues within polymorphic species complexes.

Keywords: Narcissus tazetta, new combination, morphotypes, typification, Comino, Flora of Malta, Mediterranean region.

INTRODUCTION

Narcissus tazetta L. is one of the most variable species within the genus, with about 50 taxa, most of which are classified as synonyms by recent classifications (EuroMed 2025; IPNI 2025; POWO 2025; WFO 2025). However, such treatments are not always backed with meticulous research, and sometimes they become synonymised in a general systematic way either due to insufficient data and specimen material, general neglect or misunderstanding of taxonomic boundaries. Two taxa – *N. syriacus* Boiss. & Gaill. and *N. corcyrensis* (Herb.) Nyman, which are currently treated as synonyms of *N. tazetta* in global classifications (op. cit.), are here re-examined in view of recent field observations in the Maltese Islands [1]. Small plants morphologically similar to these taxa has been observed from the Maltese Islands and consequently prompted a thourough reassessment of both.

Narcissus syriacus Boiss. & Gail. was described from collections by Gaillardott and Blanche from regions of Nahr el Kelb near Beirut and Sidon in Lebanon, occurring at rocky shores (in "*rupestribus syriae littoralis*") and published in [2]. Boisser did not collect any material of N. syriacus (as stipulated in the protologue) but he co-authored the description of this species with Gailerdott. A copy of its protologue is provided in Appendix 1. Lebanon was formerly considered part of Greater Syria in the 19th century, hence the epithet 'syriacus', yet the species was not described or recorded from today's Syria.

Narcissus corcyrensis (Herb.) Nyman was described by [3] as *Hermione corcyrensis* Herb. from specimens collected from north of Corfu. A copy of its protologue is provided in Appendix 2. About two decades later, it was combined to *Narcissus corcyrensis* (Herb.) [4] and then downranked to a subspecies of *N. tazetta* by [5]. Consequently, these species were surmounted with ambiguity,

leading to an avalanche of confusion and unfounded assumptions, until finally they were synonymised under *N. tazetta*. It is well known that the morphological variability of *N. tazetta* had allured and amused pioneer botanists in creating new taxa from minor differences. The focus of this study is to review these understudied and neglected taxa and diffuse more knowledge on their taxonomic validity and status, perhaps attributing populations in Malta to any of them.

MATERIALS AND METHODS

The original species descriptions were thoroughly analysed in their respective protologues: [2] for *Narcissus syriacus* and [3] for *N. corsyrensis*, here provided in Appendix 1 and Appendix 2, respectively. Diagnostic morphological features cited by the authors were carefully noted. Type specimens (if any) and original material, along with supplementary herbarium collections or published illustrations mentioned or collected by the original authors were examined, foremost to verify the congruence between the descriptive text and the physical specimens, but also to assess the necessity for typification, and more comprehensively interpret and understand in detail the original species concepts.

Field investigations were subsequently conducted across the Maltese Islands to locate extant populations conforming to these descriptions. This included the compilation of photographic records and the collection of voucher specimens deposited at [ARG]. Special attention was given to ecological settings, phenotypic expression, and variation under environmental stressors. An evaluative assessment was followed to determine whether the two taxa merited continued recognition as distinct species or if synonymization was warranted, thereby contributing to ongoing systematic studies and enhancing resolution within the genus Narcissus.

RESULTS

Narcissus syriacus

No illustration was provided in the protologue, but when herbarium material was searched for the collections mentioned in the protologue [2] nine specimens of *N. syriacus* were found in three French herbaria: [P], [LY], [MPU]. Eight specimens were deposited by Blanche, and one by Gaillardot all of which were collected from Greater Syria between 1853 and 1854, respectively. Of these, the specimen P00712818 was found labelled as the "TYPE" of *N. syriacus* (Fig. 1), collected by Blanche from Saida (=Sidon), Syria (now part of Lebanon) in 1853 and directly referenced in the protologue. Morphological details of these voucher specimens are given in [Table -1].

On examining these specimens, their morphological findings tally with the protologue. The species was described on collectons by Gaillardot and Blanche and while Boissier is included in the species citation there is no collection of *N. syriacus* by him (vis. [G]).

N. syriacus was claimed to be closely related to *N. tazetta*, but distinguished by being a smaller plant producing only two to three distinctly narrower leaves and the inflorescences were reduced to two to four flowers per scape. The corolla differs slightly by having tepals that are distinctly narrower at their base, and the corona is shallower than that of *N. tazetta*. [2]. The flowering time of Blanche's collections is not specified (only the year 1853 is given), however, Gaillardot recorded his collections on Christmas Day of 1854, indicating a rather early flowering period.

After examining the protologue and the original material of Gailardot and Blanche on which *N. syriacus* was described (one of the original material was labelled as the TYPE – [fig-1],

N. syriacus can be perceived as a small plant approximately 18–40 cm high, with only 2–3 leaves (rarely 4), reaching about half or two-thirds the length of the inflorescence and significantly narrower than leaves of *N. tazetta* s. str.., ranging only between 3–8 mm across. The scape produces few flowers (typically 3 to 4) with a slightly reduced corona compared to *N. tazetta* s. str. that varies in size between 6–12 mm in diameter and 3–7mm in depth.

Table 1. Tabulated details of the eight herbarium specimens of *N. syriacus* collected by Blanche and Gailardotte from Greater Syria in 1853-1854 on which the species was described.

No.	Herb	Accession No.	Coll. No.	Collector	Location	Date	Remarks	Leaves per plant	Flower per scape	Plant Height (cm)	Leaf Width (mm)	Corona Width (mm)	Corona height (mm)
1	P	712818	1723	Blanche	Sidon	1853	**TYPE**	2	2–3	21	4	6–12	4–7
2	P	1793898	1723	Blanche	Sidon	1853		2	2	n/a	n/a	n/a	n/a
3	P	1793899	1056	Gaillardotte	Damal?	25-Dec-1854	Without scale bar	n/a	2–3	n/a	n/a	n/a	n/a
4	LY	752671	1723	Blanche	Sidon	1853		3	4	24	4–5	6–8	4
5	LY	574460	1723	Blanche	Sidon	1853	Damaged	3	?	n/a	3–6	n/a	n/a
6	MPU	1389076	1723	Blanche	Sidon	1853		3	4	30.5	5–6	7–8	4–5
7	MPU	1389077	1723	Blanche	Sidon	1853		2	2	22	3–4	8–9	4
8	GAP	10221	1723	Blanche	Sidon	1853		4	2	33	4–5	6–7	3–4
9	MHNM	6791	1723	Blanche	Sidon	1853		3	3	40	5–8	7–9	3–4

ISSN: 2320-0189

Figure 1. The type specimen of *Narcissus syriacus* P00712818 corresponds to the original material collected by Blanche in 1853 from Saida, Syria.

A population of *Narcissus tazetta* s.l. having exactly these characteristics of reduced leaves, number of flowers and size was found on the archipelago of Comino on the 12th of January 2025 [Fig-2].

A few hundred plants were growing on an arid rocky ground not far from the coast and were found at the later stage of their flowering period or flowered already. Flowering is assumed to have started three weeks earlier, and many plants were in the initial stages of fruiting. The population was homogenous (small plants), and measurements of a representative sample of 20 specimens were taken and provided in [Table -2].

On comparison, they are similar to the description and original material of *N. syriacus* (refer to Fig. 1, Table1, and Appendix 1). However, nearby populations of *N. tazetta* growing in better ephadic conditions (namely deeper soil) consisted of plants with four larger leaves and more flowers per scape - typically of *N. tazetta* s. str. Three voucher specimens of these *N. tazetta morphotypes*

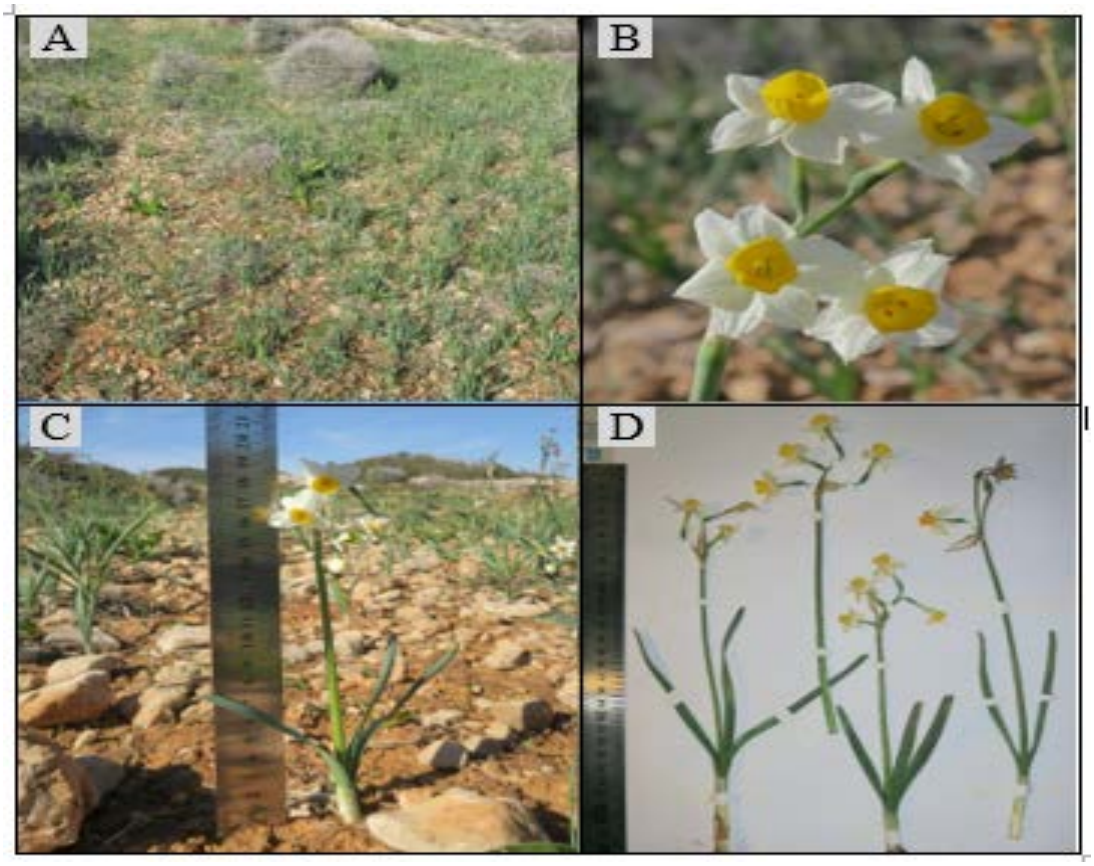

Figure 2. Basic measurements of 15 plants from a population matching the description of *N. syriacus* found on Comino Island of the Maltese archipelago. They consist of short plants with 2–3 narrow leaves and 3–4 flowers, mostly bearing a wide (6–11 mm) but shallow (4–7mm) corona.

Table 2. Basic measurements of 15 plants from a population matching the description of *N. syriacus* found on Comino Island of the Maltese archipelago. They consist of short plants with 2–3 narrow leaves and 3–4 flowers, mostly bearing a wide (6–11 mm) but shallow (4–7mm) corona.

Specimen	No. of Leaves	No. of Flowers	Plant Height (cm)	Leaf Width (mm)	Corona Width (mm)	Corona height (mm)
1	3	3	22	6–7	10	6
2	2	4	18	6–7	8	4
3	3	4	23	4–5	9	5
4	3	3	12	5–6	6	4
5	3	4	24	5–6	10	5
6	3	3	19	6–7	8	4.5
7	3	3	26	4–6	6	4
8	3	3	14	6–7	7	4
9	3	3	24	5–6	11	7
10	3	4	22	4–5	6	4
11	2	3	21	5–6	9	4
12	2	2	17	4–5	7	4
13	3	4	30	6–7	8	5
14	4	4	20	6–8	11	7
15	3	4	18	4–5	10	6
Range:	2-3(4)	(2)3-4	12-24(30)	4-7(8)	06-Nov	04-Jul

labelled as SM161, SM162, SM163 have been deposited at the herbarium of [ARG] and bear the accession numbers ARG-SM-006, ARG-SM-007 and ARG-SM-008.

Narcissus corsyrensis

Herbert [3] described a taxon distinguished by its diminutive stature (6–7 inches in height), the presence of four leaves approximately half an inch in width, and a solitary flower characterized by narrow, deflexed perianth segments of pale sulphur coloration and a trifid, golden corona. These diagnostic traits were faithfully represented in the colour illustration accompanying the protologue [Fig-3],

Figure 3. Iconotype of *Narcissus* corcyrensis (plant 1) from the protologue (Herbert, 1837).

which served as the sole visual reference, as no type specimen was formally designated for the species. The illustration depicts a rather aberrant plant with four wide and well-developed leaves and a short scape bearing a single flower. Another slightly enlarged depiction of the flower was also included, portraying a corolla with conspicuously narrow tepals reflexed sharply backward, pale yellow in hue with undulating margins. Its corona is rather deep, well-defined and prominent like that of *N. tazetta*, but trifid and with parallel margins as mentioned in the description.

Subsequent herbarium collections attributed to *Narcissus corsyrensis* [6], as designated by various authors, represented specimens more closely aligned with the typical morphology of *N. tazetta sensu* lato. These specimens generally exhibited four to seven flowers borne on elongated scapes and possessed broad tepals, all of which are traits that are inconsistent with the original description of *N. corsyrensis* and thus not attributable to this taxon. Wild daffodils exhibiting the distinctive morphology, *N. corsyrensis* namely, solitary flowers, narrow tepals with pale yellow colour, and coronas with uneven margins have not been observed, collected, or otherwise documented from the Maltese Islands. Furthermore, no verified records of *N. corsyrensis* were found in either [7] or [8]. Given the current synonymization of this name under *N. tazetta*, it is improbable that citizen scientists or contributors would annotate observations under the deprecated name *N. corsyrensis*, thereby limiting its visibility in contemporary biodiversity datasets

DISCUSSION

Narcissus syriacus

As the protologue [2] does not specify any type material, this account formally establishes a lectotypification in accordance with the guidelines outlined in the International Code of Nomenclature for algae, fungi, and plants [9]. The voucher specimen P00712818, deposited at [P] and labelled as TYPE (Fig. 1), is here designated as the lectotype for *Narcissus syriacus* (≡ *N. tazetta var. syriacus*), being judged as the most representative specimen in line with the description. This specimen comprises a complete plant along with five additional inflorescences from the same collection in a good preserved state.

Morphological observations from populations on Comino island shows that ecotypic variants of *N. tazetta* shaped by edaphic and hydrological stress, particularly shallow (ca. 8-10 cm), stony, calcarous soils with limited water retention result in stunted morphotypes with precocious flowering - likely a phenological response to autum aridity. Both these morphotypes and *N. syriacus* are characterised by being short plants with fewer and narrower leaves the remain short, fewer flower per scape and slightly reduced flower dimensions. In contrast, populations of N. tazetta occurring in nearby sites on Comino with deeper and more fertile soils exhibit markedly more vigorous growth, including taller scapes, broader leaf development (almosy all with four leaves), and a higher number of flowers per inflorescence, typical of *N. tazetta*. These patterns suggest a degree of phenotypic plasticity

driven by environmental modulation rather than genetic distinctiveness. This leads to the conclusion that ecotypes of *N. tazetta* in poor soil conditions produces plants with very similar morphology to that of N. syriacus (compare Table 1 and Table 2 or Figure 1 and Figure 2).

Indeed, [10] further revealed that the original collections by Gaillardot were from the Anti-Lebanon mountain range and the vicinity of Damascus. These rocky terrains, characterized by shallow soils, likely present suboptimal conditions for *Narcissus tazetta* s. l., which typically favors meadow habitats with deeper soils at lower elevations. Hence similar to the stunted population found on Comino, these unfavourable mounatanious rocky environments with shallow soil lead to the formation of reduced morpholotypes on which *N. syriacus* was considered distinct from *N. tazetta* s.str. and descrived.

Eventually, [10] had realised that *N. syriacus* is not a very divergent species from N. tazetta because he subsequently reclassified the taxon as *N. tazetta* var. *syriacus* (Boiss. & Gaill.) Boiss., acknowledging a limited morphological divergence from N. tazetta. Nonetheless, [10] maintained that *N. tazetta* var. syriacus is differentiated by its oblong, narrow tepals and a shallow-lobed corona; features not consistently evident in the original/type material collected by Blnchet and Gaillardtot [Fig-1], and not mentioned in the protologue, hence they cannot be considered as strictly diagnostic.

This broad plasticity of *N. tazetta* has historically complicated the delimitation of infraspecific taxa and *N. syriacus* is an example that reflects this ambiguity. This may warrant further assessment from other regions, including the *locus classicus*, as this taxon is an example where differing views exist between those who favour splitting and those who prefer lumping taxa. Observations from Malta, however, clearly show that *Narcissus tazetta* exhibits considerable morphological plasticity, particularly in response to atypical arid environmental conditions, resulting in reduced plant morphotypes similar to N. syriacus. The present work supports the synonymization of *N. syriacus* under *N. tazetta*, aligning with current taxonomic consensus as reflected in major databases, including [11], [12], [8], [13], [14], and [15], reinforcing the view that its distinguishing features fall within the species' natural morphological spectrum.

On the other hand, if *N. syriacus* is at some point considered to be a valid taxon, then the variety ranking should be adopted and the population reported here from the island of Comino would correspond to the first recorded occurrence on the Maltese Islands.

Narcissus corcyrensis

Since the protologue [3] does not specify any type material, a formal lectotypification in accordance with the guidelines outlined in the International Code of Nomenclature for algae, fungi, and plants [9] is here proposed. Lectotype of *Narcissus corcyrensis* is designated here from illustration Plate 37, plant labelled No.1 (f.1.) of the protologue of *Hermione corsyrensis* Amaryllidaceae : 323 (1837) [3]. This designation is also carried out because, Herbert [3] made a mistake leading to ambiguity in referring to the plant labelled no.2 of Plate 37 "Pl.37. f.2. ", which corresponds to *H. verbanensis*, instead to plant no.1, which is the actual illustration of *H. corsyrensis* (Fig.3).

The taxonomic ambiguity surrounding this species had also perplexed its own author. [3] speculated whether the plant might produce additional flowers under "*more congenial*" environmental conditions, implying he described the species from a solitary, atypical specimen cultivated outside its natural habitat, specifically within the author's private residence in England. It is not known whether he collected the sample himself from Corfu or if it was donated to him; however, since no date or reference is given for the original collection, and no herbarium was deposited, it is plausible to assume that the description was based on ex-situ material. Subsequently, Baker [5] reclassified the taxon as *Narcissus tazetta* subsp. corcyrensis (Herb.) Baker, noting that it possessed smaller and narrower, non-imbricating tepals compared to *N. tazetta* sensu stricto. This reclassification appears to have relied solely on the illustrated figure provided in [3] as Baker did not indicate having examined live material or herbarium specimens to support his interpretation.

Subsequent confusion and taxonomic neglect arose following the inability to locate wild populations that matched [3] original description of *N. corcyrensis*. Surprisingly, several contemporary classifications now treat N. corcyrensis as a hybrid, specifically between *N. obsoletus* and *N. tazetta* subsp. italicus, and designate it as *N.* ×*corcyrensis* [14,12]. However, it is important to emphasise that neither [3] nor later authorities such as Nyman [5] or Baker [4], considered this taxon to represent a hybrid. The hybrid hypothesis was first suggested by [16], who proposed, without presenting supporting evidence or formally validating the name, that *N. corcyrensis* might be "a hybrid between 2 [*N. serotinus*] and 3(b) [*N. tazetta subsp. italicus*]". Webb's interpretation seems to have been based solely on morphological inference, particularly the cream-coloured tepals (from *N. tazetta* subsp. *italicus*), trifid corona, and narrow perianth segments (from *N. serotinus*), rather than any empirical data derived from field observations or herbarium specimens. N. ×corcyrensis is hence an undescribed/invalid taxon that cannot be used interchangeably for N. corcyrensis.

Moreover, Webb's assumption that *N. corcyrensis* is of hybrid origin can be discarded because the recently described hybrid between a *N. tazetta* (precisely subsp. *aequilimbus*) and an autumnal *Narcissus* (precisely N. *deficiens*), produces F1 plants that are multi-flowered, have wide perianth segments, and possess a corona that is not distinctly trifid [1]. More importantly, this hybrid forms two to three leaves (never four), measuring only between 3–6 mm in width, which represents an intermediate character between the four broad leaves of *N. tazetta* and the one cylindrical and narrow leaf of *N. deficiens* [1]. An alleged hybrid between *N. tazetta* subsp. *italicus* and N. *serotinus* or *N. deficiens* hybrid is expected to form a similar morphology.

The interpretation of *N. corcyrensis* remains somewhat ambiguous, but sticking with the protologue's description and illustration

[3], it seems to correspond to a diminutive morphotype of *N. tazetta*, most plausibly referable to subsp. *italicus*, for its pale sulphur-coloured perianth. This subspecies is native to and frequemtly found in Greece and southeastern Europe [11,14,12]. So it seems likely that Herbert described *N. corcyrensis* from an aberrant plant in his greenhouse in England (from bulbs collected from Corfu), which is not replicated as a stable, homogeneous population in the wild. Fresh material with these characteristics are hard to find in Corfu and Greece.

Several herbarium specimens assigned to *Hermione corsyrensis*, including [K]: KEW002462972 from Corfu (February 1852) and [LY]: LY0574569 from Tripoli, Syria (present-day Lebanon; date unknown), do not correspond to the diagnostic morphology originally described for *Narcissus tazetta* var. *corsyrensis*. These specimens consistently exhibit traits uncharacteristic of the protologue, including plant heights exceeding 30 cm, inflorescences bearing multiple flowers per scape, and broadly imbricated tepals. Moreover, the coronas in these specimens lack the trifid structure described by [3], further diverging from the original concept of the taxon. Instead, the morphology observed in these collections is more congruent with typical representatives of *N. tazetta* subsp. *tazetta* or subsp. *italicus*, which are known for their larger stature, multiple-flowered inflorescences, and non-trifid, prominent coronas.

The recognition of these smaller morphotypes as taxonomically distinct from *Narcissus tazetta* sensu stricto remains a subjective matter. In this research, they are treated within the plasticity of *N. tazetta*, where ecotypes in stressed or adverse environmental conditions deviate from the typical form. At most, their distinction should be treated at the taxonomical ranking of a variety; therefore, in line with Stuessy (2009), who recommends assigning subspecies status to taxa that are differentiated by allopatric distribution, distinct ecological niches, temporal separation, or other forms of isolation from the nominal species, whereas, the varietal rank is reserved for morphologically minor variants that occur within or overlap the main population of the species and do not exhibit significant reproductive or ecological separation.

Therefore, for splitters who want to maintain these ecotypes as distinct taxa, it is proposed to use *N. tazetta* var. *syriacus* (Boiss. & Gaill.). Boiss. and combine *N. corsyrensis* to the infraspecific ranking of a variety as follows:

Narcissus tazetta var. *corsyrensis* (Herb.) Mifsud, *comb. nov*.
Basionym: *Hermione corsyrensis* Herb., *Amaryllidaceae* : 323 (1837)

These inconsistencies and misinterpretations, underscore the need for critical reevaluation of many herbaria that may have inadvertently treated distinct ecotypes as different taxa from the nominal species or subspecies.

CONSLUSION

Numerous infraspecific or synonymous taxa have historically been described within the *Narcissus tazetta* complex, often based on minor morphological deviations or aberrant forms. While many of these morphotypes fall within the natural phenotypic variability of *N. tazetta*, each requires a critical evaluation: from protologue to field or/and herbarium observations, in order to clarify its taxonomic status. Unfortunately, since the locus classicus is very inconvenient to reach due to conflicts (e.g. Lebanon, Syria) or the lack of typical populations in the wild (*N. corcyrensis*), it is very difficult to conduct further morphological or cytological analysis, and at present taxonomic status relies on the classical approaches. For the sake of nomenclatural consistency, splitting approaches (if deemed necessary), must make use of varietal rank in cases where ecotypic forms exhibit morphological divergence that remains within the species' diagnostic boundaries and whose distribution is sympatric or overlapping with that of *N. tazetta*. Furthermore, when designating types, it is essential to preserve the original circumscription and diagnostic features as outlined in the protologue, thereby maintaining historical and taxonomic continuity rather than taking opportunistic approaches to deviate from the original descriptions or define new species that may not exist or are taxonomic exaggerations. Yet, from current review and available data, both *N. syriacus* and *N. corcyrensis* should be treated conspecific with the wide morphological variability of *N. tazetta*.

REFERENCES

1. Mifsud S, Lanfranco S, et al. (2024) An Updated Taxonomic Appraisal of Narcissus (Amaryllidaceae) in the Maltese Islands. Diversity 16: 397 (24pp).
2. Boissier E (1859) Diagnoses Plantarum Orientalium Novarum, Series 2, No.4. Leipzig & Paris.
3. Herbert W (1837) Amaryllidaceae: preceded by an attempt to arrange the monocotyledonous orders, and followed by a treatise on cross-bred vegetables, and supplement. James Ridgway and Sons, London, UK.
4. Nyman CF (1855) Sylloge Florae Europaeae - seu plantarum vascularium Europae indigenarum enumeratio adjectis synonymis gravioribus et indicata singularum distributione geographica. Oerebroae
5. Baker JG (1888) Handbook of the Amaryllideae including the Alstroemerieae and Agaveae. London.
6. GBIF (2025b) Narcissus ×corcyrensis (Herb.) Nyman in GBIF Secretariat (2023). GBIF Backbone Taxonomy. Dataset
7. GBIF (2025) Global Biodiversity Information Facility.
8. iNaturalist (2025) iNaturalist.
9. Turland NJ, Wiersema JH, Barrie FR, et al. (2018) International Code of Nomenclature for algae, fungi, and plants (Shenzhen

Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. Regnum Vegetabile 159. Glashütten: Koeltz Botanical Books.

10. Boissier E (1881-2) Flora Orientalis sive enumeratio plantarum in Oriente a Graecia et Aegypto ad Indiae, Vol. 5. Geneve & Basil.
11. EuroMed (2025) Euro+Med Plantbase.
12. GBIF (2025) Global Biodiversity Information Facility.
13. IPNI (2025) International Plants Names Index.
14. POWO (2025) Plants of the World Online.
15. WFO (2025) World Flora Online.
16. Webb DA (1980) Narcissus. In: Tutin TG, Heywood VH, Burges VH, Valentine DH, Walters SM, Webb DA (Eds) Flora Europaea: Volume 5. Alismataceae to Orchidaceae (Monocotyledones) (pp. 78–84) Cambridge University Press.