BioOne COMPLETE

Med-Checklist Notulae, 30

Authors: Greuter, Werner, and Raus, Thomas

Source: Willdenowia, 41(2) : 311-328

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: https://doi.org/10.3372/wi.41.41213

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

WERNER GREUTER[1] & THOMAS RAUS (ed.)[1]

Med-Checklist Notulae, 30

Abstract

Greuter W. & Raus Th. (ed.): Med-Checklist Notulae, 30. – Willdenowia 41: 311–328. December 2011. – Online ISSN 1868-6397; © BGBM Berlin-Dahlem.
Stable URL: http://dx.doi.org/10.3372/wi.41.41213

Continuing a series of miscellaneous contributions, by various authors, where hitherto unpublished data relevant to the Med-Checklist project are presented, this instalment deals with the families *Bignoniaceae, Boraginaceae, Callitrichaceae, Capparaceae, Chenopodiaceae, Compositae, Euphorbiaceae, Fagaceae, Leguminosae, Malvaceae, Nyctaginaceae, Orobanchaceae, Plantaginaceae, Ranunculaceae, Resedaceae, Rosaceae, Scrophulariaceae; Commelinaceae, Cyperaceae* and *Gramineae*. It includes new country and area records, taxonomic and distributional considerations. New taxa are described in *Capparis, Eragrostis, Plantago* and *Ventenata;* new combinations and names at new rank are proposed in *Aegonychon, Alcea, Amelanchier, Anemonastrum, Centaurea, Cerinthe, Chamaecytisus, Cytisus, Digitalis, Iranecio, Malva, Mattiastrum, Paracynoglossum, Pilosella, Sorbus* and *Trigonella*.

Additional key words: Mediterranean area, vascular plants, distribution, taxonomy

Notice

The notations for geographical areas and status of occurrence are the same that have been used throughout the published volumes of Med-Checklist and are explained in the Introduction to that work (Greuter 2008: x–xi). For the previous instalment, see Greuter & Raus (2010).

The new names and combinations validated here were submitted by the authors to whom they are attributed and are included under their sole responsibility; their publication in these Notulae does not imply acceptance (or otherwise), for Med-Checklist purposes, of the taxonomic concepts they reflect.

Erratum

In the previous instalment (Med-Checklist Notulae 29, Greuter & Raus 2010), a regrettable printing error has spoiled the surname of the contributor Dr George Brofas, given three times as "Profas" on p. 201.

Bignoniaceae

Podranea ricasoliana (Tanfani) Sprague

N **Ag:** Algeria: Wilaya of Algier: Daïra of Hussein-Dey, 9. & 21.9.2011; ibid.: Kouba, 6.10.2011; ibid.: Ruisseau–Oasis 6.10.2011; ibid.: Bouzaréah–Baranès, 15.9.2011; ibid.: Beau Fraisier, 15.9.2011, ibid.: Daïra of Bir Mourad Raïs, Saoula, 7.10.2011; ibid.: Daïra of Bir Mourad Raïs, Birkhadem, 24.9.2011, all *Zeddam* (B & *obs.*). – A climber native to Malawi, Mozambique, Zimbabwe and eastern South Africa, widely cultivated in the tropics and subtropics (Gentry 1992; Germishuizen & Meyer 2003; Llamas 2003). It is planted as an ornamental vine in suburban areas of Algiers, but was hardly to be seen before this last decade. It recently developed an invasive behavior mainly through vegetative reproduction, but also by seeds. The vigorous, fully naturalised vine grows on road-

1 Botanischer Garten und Botanisches Museum Berlin-Dahlem, Freie Universität Berlin, Königin-Luise-Str. 6–8, 14195 Berlin, Germany; e-mail: w.greuter@bgbm.org, t.raus@bgbm.org

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

sides without being planted, climbing into trees, on electrical wires, etc. A. Zeddam

Boraginaceae

A revised generic concept in *Boraginaceae* as applied to the forthcoming treatment of the family for the Euro+Med Plant Base project (Valdés, in prep.) necessitates the following new combinations. B. Valdés

Aegonychon goulandriorum subsp. ***thessalicum*** (Aldén) Valdés, **comb. nov.** ≡ *Lithospermum goulandriorum* subsp. *thessalicum* Aldén in Bot. Not. 129: 305. 1976.

Cerinthe gymnandra subsp. ***oranensis*** (Batt.) Valdés, **comb. & stat. nov**. ≡ *Cerinthe oranensis* Batt. in Compt. Rend. Assoc. Franc. Avancem. Sci. 16(2): 572. 1888.

Mattiastrum artvinense (R. Mill) Valdés, **comb. nov.** ≡ *Paracaryum artvinense* R. R. Mill in Notes Roy. Bot. Gard. Edinburgh 35: 305. 1977.

Mattiastrum cristatum subsp. ***carduchorum*** (R. R. Mill) Valdés, **comb. nov.** ≡ *Paracaryum cristatum* subsp. *carduchorum* R. R. Mill in Notes Roy. Bot. Gard. Edinburgh 35: 306. 1977.

Mattiastrum lithospermifolium subsp. ***cariense*** (Boiss.) Valdés, **comb. nov.** ≡ *Omphalodes cariensis* Boiss., Diagn. Pl. Orient. 4: 41. 1844 ≡ *Paracaryum lithospermifolium* subsp. *cariense* (Boiss.) R. R. Mill in Notes Roy. Bot. Gard. Edinburgh 35: 307. 1977.

Mattiastrum shepardii (Post & Beauverd) Valdés, **comb. nov.** ≡ *Paracaryum shepardii* Post & Beauverd, Pl. Post. Dinsm. 1: 8. 1932.

Paracynoglossum glochidiatum (Benth.) Valdés, **comb. nov.** ≡ *Cynoglossum glochidiatum* Benth. in Royle, Ill. Bot. Himal. Mts. 1: 306. 1836.

Paramoltkia doerfleri (Wettst.) Greuter & Burdet

– Gr: *Paramoltkia doerfleri* was recorded from Greece based on only the following record: Greece, Epirus, Nomos of Ioannina, Eparchia of Konitsa: c. 1 km NW of Elefthero (40°04'N, 20°50'E), small river valley, in a pine forest, 900 m, 26.6.2005, *Snogerup & Snogerup 21294* (LD). The record was published by the collectors as a Med-Checklist notula (in Greuter & Raus (2006: 721) and, based on this, the species was included in the recent Red Data Book of the Rare and Threatened Plants of Greece (Foitos & al. 2010: 249–250). However, examination of the collection cited above revealed that it belongs to *Buglossoides purpurocaerulea* (L.) I. M. Johnst. (*Lithospermum purpurocaeruleum* L.), a common borage of open forests of the Euro-Mediterranean area. Revisiting the above Greek locality in July 2011 confirmed the local presence of the latter species, but not of *P. doerfleri,* which therefore still remains a remarkable serpentine endemic of N Albania and SW Serbia (Cecchi & Selvi 2009). F. Selvi

Callitrichaceae

Callitriche platycarpa Kuetz.

+ AE: Greece, East Aegean Islands, Nomos of Samos, Eparchia of Ikaria: Island of Ikaria, NE of Fradato, (37°36'N, 26°09'E), small wetland over schistose rocks, in slow-moving water, 500 m, 11.5.2008, *Strid 56449* (G, herb. Strid). – *Callitriche platycarpa* resembles *C. stagnalis* Scop., but tends to have more elongate, elliptic leaves, pollen that is bluntly triangular in outline and wing cell fibrils that are dendroid rather than spiralled. It is native in western Europe, from southern Sweden through the British Isles and France to northern Spain and east to the Czech Republic (Lansdown 2008); the nearest known population is in Cozenza Province in southern Italy (specimen in RNG). R. Lansdown & A. Strid

Capparaceae

Capparis ramonensis Danin, **sp. nov. –** Holotypus: Israel, Negev Highlands, Makhtesh Ramon, the Triassic gypsum outcrop 5 km SE of Mizpe Ramon, 29.6.2011, *N. Avni, Y. Avni & N. Taube* (HUJ; isotypi: B, PAL, UMH).

Frutex procumbens, serpens, ad 10(–40) cm altus, caulibus albo-viridibus ad 1–2 m longis, foliis ovatis, apice acutis mucronatis, basi rotundatis, 1–3.5 cm longis, 1.5–3 cm latis; a *Capparide zoharyi, C. aegyptia* et *C. sicula* differt caulibus ramisque velutinis, non erectis nec decumbentibus nec pendulis, foliis numquam cordatis, junioribus tomentosis vel arachnoideis (nec glabris vel glabrescentibus), apicibus foliorum acutis nunquam rotundato-obtusis; rupium gypsacearum incola eremophila (numquam substrati calcarei sive ruderalis).

+ IJ: Negev Highlands, Makhtesh Ramon, the Triassic gypsum outcrop near Shen Ramon, 22.6.2011, *Danin & Taube* (HUJ); ibid, 11.6.2011, *Avni & Avni* (HUJ). – A creeping hemicryptophyte (Fig. 1A–B); *twigs* straight, whitish light green or whitish green when young, adult ones becoming woody remaining light green; twigs die in winter. *Stems* usually creeping, 5–10 cm of height, sometimes ascending, rarely to 30–40(–70) cm; *first order twigs* 1–2 m long (Fig. 1A), 7–10 mm in diam. with internodes 5–15 cm long; *second order twigs* 50–70 cm long, 1–2 mm in diam. with internodes 0.5–3 cm. *Stipules* curved, retrorse, not decurrent, persistent even in winter

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

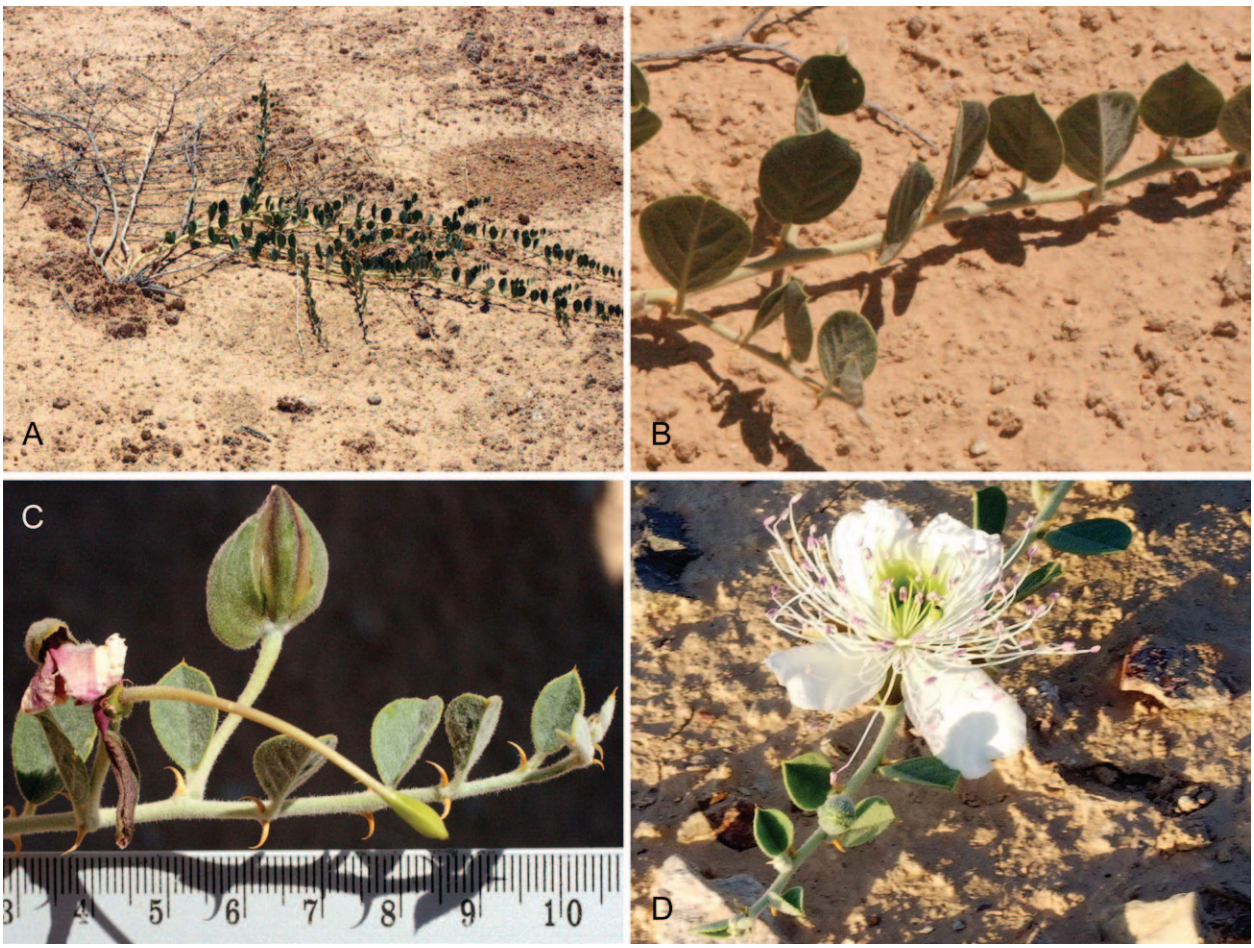


Fig. 1. *Capparis ramonensis* – A: plant with the typical creeping hemicryptophytic habit, with present year twig and dry twigs of the previous years; B: creeping stem showing vertical leaves at 11:00 a.m.; C: twig with a zygomorphic flower bud with abaxial sepal larger than the three others and a faded flower with one day old fruit developing on a 35 mm long gynophore; D: opened zygomorphic flower at the late afternoon hours (6:45 p.m., 11.6.2011), the anthers are still closed. – Photographs by A. Danin.

when leaves fall, yellow, 4– 6 mm long, up to 2 mm wide at the base. *Leaves* usually ovate, when young ovate to ovate-lanceolate, 1–3.5 × 1.5–3 cm, herbaceous; indumentum dense, trichomes on twigs thick and long (30–40 × 200–250 µm); veins on the adaxial side of the leaf not prominent; veins of the abaxial side prominent although being covered by arachnoid indumentum; leaf base rounded, apex mucronate, mucro 1–1.5 mm long, slightly curved; petioles 6–7 mm long; leaf position vertical, at least in midday hours, reminding of compass plants (Fig. 1A–B). *Flower buds* acute; floral pedicels 1.5–2.5 cm long. *Flowers* (Fig. 1C–D) zygomorphic; abaxial (odd) sepal slightly galeate, 1.5–1.7 cm long, 0.7–0.9 cm deep; *stamens* 40 to 60, anthers light pink, 2–2.5 mm long, with round apices; *pollen* white. *Fruit* ovoid, pulp red; ripe seeds dark brown, 2.9–3 × 2.1–2.5 × 1.5 mm. Flowering from May to July. – Endemic to the rare Triassic gypsum outcrop in Makhtesh Ramon (3.35 km^2), isolated in the Saharo-Arabian territory of Israel at elevations from 400 to 650 m, far away from human dwellings or human disturbance.

Capparis ramonensis has a small distribution area and very specific habitat. It differs from the other members of *C.* sect. *Capparis* in Israel in its hemicryptophytic growth form; rejuvenation buds are placed close to or little below the soil surface. Most of the individuals in the area have one creeping first order stem 1–2 m long with many branches (2nd order twigs). Towards the end of summer and beginning of winter the above-ground parts die and no green leaves or stems may be seen during December and January. Each year the canopy resembles much that of the previous year in size and shape. Due to low micro-organismic activity in this dry area organic deterioration of the dead parts proceeds slowly (Fig. 1A). In contrast, *C. zoharyi* Inocencio & al. is a hemicryptophyte, chamaephyte, or rarely a phanerophyte. Its canopy is ascending in most places, but pendulous individuals are common on natural cliffs and old walls. Its life

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

form is highly influenced by the mode of disturbance in the specific site. The canopy of the last year dies in winter as that of *C. ramonensis* and the new year's canopy develops among the ascending last year's dead twigs. In comparison, *C. sicula* Duhamel resembles the hemicryptophytic form of *C. zoharyi* in its life cycle. It is restricted to disturbed habitats and rarely has any lignified parts above the ground. Finally, *C. aegyptia* Lam. is evergreen. Thin green leaves develop in winter and in summer become succulent and covered by wax (Danin 2006+). In winter new branches sprout from the axils of last year's leaves. Later the previous year's leaves fall.

Capparis ramonensis is strictly confined to undisturbed Triasic gypsum outcrops of Makhtesh Ramon, whereas *C. sicula* grows in disturbed habitats such as roadsides, *C. aegyptia* in crevices of natural limestone cliffs and in naturally disturbed terrain of large wadis in deserts, *C. zoharyi* on limestone cliffs, in crevices of nari rocks (soft chalky rock covered with a hard crust), in disturbed or built-up habitats such as sides of newly constructed roads, old quarries, and ancient walls. Plant habit and natural or disturbed habitats were also used by Inocencio & al. (2006) to differentiate the taxa in *C.* sect. *Capparis.* [Thanks are due to the Dead Sea and Arava Science Center, Tamar, Israel, for the support in preparing this note.]

A. Danin, Y. Avni, N. Avni & N. Taube

Chenopodiaceae

Polycnemum heuffelii Láng

P It: Italy, Lazio: Roma, lungo la via Appia Pignatelli (41°50'N, 12°32'E), 50 m, 6.8.1966, *Cacciato* (RO). – This species, not previously recorded from Italy (Conti & al. 2005: 14; 2007), is known to occur in SE Europe from Poland and Ukraine to central Greece (Ball in Tutin & al. 1993: 110; Jalas & Suominen 1980: 11). The cited collection, incorrectly identified by A. Cacciato as *Polycnemum arvense* in the sense of Fiori (1923: 425), shows linear-filiform, densely glandular-pubescent leaves (5–12 × 0.1–0.3 mm), features that distinguish *P. heuffelii* from other European species of the genus. The Italian gathering extends the distribution area of *P. heuffelii* in Europe far to the west (see Jalas & Suominen, 1980) and may represent an alien population the status of which is unknown so far. D. Iamonico

Compositae

Centaurea oscensis (E. López & Devesa) Raab-Straube & Greuter, **comb. & stat. nov.** ≡ *Centaurea paniculata* subsp. *oscensis* E. López & Devesa in Anales Jard. Bot. Madrid 67: 119. 2010. – In the Euro+Med and the Med-Checklist treatment of the genus *Centaurea, C. paniculata* L. and *C. leucophaea* Jord. are accepted at species level, both with a number of subspecies, whereas López & Devesa (2010) are treating *C. leucophaea* as a subspecies of *C. paniculata*. For a consistent treatment within Euro+Med, it is necessary to raise their new subspecies to species rank. E. Raab-Straube & W. Greuter

Hieracium ferdinandi-coburgii J. Wagner & Zahn

+ Gr: Greece, W Macedonia, Nomos & Eparchia of Pieria: Mt. Olympos, surroundings of the Hellenic Alpine Club refuge A, *Pinus heldreichii* woodland, 2000–2150 m, 17.8.1975, *Strid 9467 & Hansen* (herb. Strid; det. H. Merxmüller & W. Lippert, rev. K. P. Buttler). – Greuter (2008: 485) treats this species as a subspeies of *Hieracium waldsteinii* Tausch. However, because of the lacking stellate hairs on the phyllaries, it shows greater similarity with *H. gymnocephalum* Pant.

G. Gottschlich, W. Lippert & A. Strid

Hieracium krischtimanum Mattf. & Zahn [*"kritschimanum"*]

+ Gr: Greece, E Macedonia, Nomos & Eparchia of Drama: Rhodope mountains, Frakto area, Tsaki Rema, on granite, 1330–1500 m, 5.8.1997, *Bergmeier-9-97* (herb. Bergmeier, herb. Gottschlich 36178). – The plant has notably long simple hairs on the stem. Together with the subdense stellate hairs on the phyllaries this would indicate an introgression of *Hieracium olympicum* Boiss. All other characters correspond with a species of *H.* sect. *Pannosa*. *H. krischtimanum* was described from Krischtima valley (Bulgarian Central Rhodope Mountains). However, the type (*Mattfeld*, B, destroyed) must have been an atypical plant (secondary flowering after cropping?), because Zahn noted in the protologue a height of only 6–12 cm and a pseudo-rosette bearing 0–5 branches with one capitulum.

G. Gottschlich & E. Bergmeier

Hieracium lachenalii Suter

+ Gr: Greece, Thrace, Nomos of Rhodopi, Eparchia of Komotini: NE Komotoni (41°14'33"N, 25°31'45"E), *Fagus* forest, 580 m, 28.6.1996, *Tsiripidis 114* (herb. Tsiripidis, herb. Gottschlich 33955); id., Nomos & Eparchia of Xanthi: SW Echinos (41°15'09"N, 24°55'55"E), *Fagus sylvatica-Quercus frainetto* forest, 540 m, *Tsiripidis 119* (herb. Tsiripidis, herb. Gottschlich 33956); id., W Macedonia, Nomos of Kilkis, Eparchia of Almopia: Mt. Paiko, between Archangelos and Skra, *Quercus frainetto* woodland,

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

micaceous schist, 900 m, 20.6.2001, *Bergmeier 01-336* (herb. Bergmeier); id., E Macedonia, Nomos & Eparchia of Drama: Nestophor, Nestos valley, NE exposed slopes with *Carpinus orientalis,* 360 m, 27.6.1989, *Petermann 1789* (herb. Petermann, herb. Gottschlich 33986); id., Thessaly, Nomos of Trikala, Eparchia of Kalambaka: Pertouli, University Fir Forest of Pertouli, 1250 m, 6.7.1993, *Minoglou* (herb. Minoglou, herb. Gottschlich 29481). – First records from Greece to be substantiated by herbarium material. G. Gottschlich, E. Bergmeier, D. Minoglou, J. Petermann & I. Tsiripidis

Hieracium mattfeldianum subsp. ***poliophorum*** O. Behr & al.

+ Gr: Greece, Thrace, Nomos & Eparchia of Xanthi: 2 km W of Komnina (41°10'N, 24°43'E), along the road to Ano Livera, rocky limestone hillslopes with mixed deciduous scrub, 30.7.2002, *Strid & al. 54266* (herb. Strid). – Previously only known to occur in what is today F.Y.R. of Makedonija (Behr & al. 1939).
G. Gottschlich & A. Strid

Hieracium neoplatyphyllum Gottschl. (*H. platyphyllum* auct. non Arv.-Touv.)

+ Gr: Greece, E Macedonia, Nomos & Eparchia of Drama: Nestophor, Nestos valley, S exposed slopes with *Quercus frainetto* wood, 270 m, 12.8.1989, *Petermann 2304* (herb. Petermann). – New to Greece. Foliation of the stem (leaves ± crowded in the lower part, length of internodes increasing upwards) and ramification do not argue for *Hieracium sabaudum* L. but rather for the present species, intermediate between *H. sabaudum-racemosum* and *H. racemosum*.
G. Gottschlich & J. Petermann

Hieracium pirinicola T. Georgiev & Zahn

+ Gr: Greece, E Macedonia, Nomos & Eparchia of Drama: Mt. Falakron, northern slopes between Volakas and Mesovounion, meadows and remnants of beech forest, 1100 m, 18.7.1970, *Strid 988* (herb. Strid; det. H. Merxmüller & W. Lippert). – Described from adjacent Bulgaria and hitherto only known to occur there.
G. Gottschlich, W. Lippert & A. Strid

Hieracium prenanthoides Vill.

+ Gr: Greece, Peloponnes, Nomos of Achaia, Eparchia of Kalavrita: Mt. Chelmos, Rizanorema-Tal oberhalb Zarouchla, 1100–1200 m, 3.10.2011, *Raabe* (MSTR). – Widespread in Europe and adjacent W Asia, but not previously recorded from Greece (Greuter 2008: 419).
G. Gottschlich & U. Raabe

Hieracium retyezatense Degen & Zahn

+ Gr: Greece, W Macedonia, Nomos & Eparchia of Florina: Aufstieg zur Kiwaniza (östl. Vorgipfel des Kalo Nero / Bela Voda) vom Kataphygion des Alpine Club Florina bei Pissoderi, 1800–2130 m, 8.7.1982, *Lippert 18416* (herb. Strid). – Hitherto only known from the Balkan countries north of Greece (Greuter 2008: 434).
G. Gottschlich, W. Lippert & A. Strid

Hieracium thapsiformoides Gus. Schneid. ex K. Malý

+ Gr: Greece, W Macedonia, Nomos & Eparchia of Florina: Mt. Smolikas, great SE ravine, c. 2 km SW of Samarina, SW facing steep, rocky slopes, serpentine, 1550–1800 m, 31.8.1975, *Hartvig & Seberg* (herb. Strid 5035); id., Nomos of Kozani, Eparchia of Voios: Mt. Voion, S part 5 km WNW of Pentalofon, N of the road to Eptachori, rocks, substr. sandstone and conglomerates, 1550 m, 28.7.1979, *Hartvig & Christiansen* (herb. Strid 8572). – A W Balkan endemic, irradiating from Albania and former Jugoslavia to NW Greece (Greuter 2008: 466).
G. Gottschlich & A. Strid

Hieracium tommasinianum K. Malý

+ Gr: Greece, W Macedonia, Nomos & Eparchia of Pieria: N side of Mt. Olympos, E side of Papa Rema ravine, 20–150 m above the river; steep, partly rocky slope facing W with a mixture of deciduous forest (mainly *Fagus*), *Pinus nigra* woodland, and evergreen scrub, 700–800 m, 12.8.1975, *Strid & Hansen 9192, 9200* (herb. Strid). – Hitherto only known from the Balkan countries north of Greece (Greuter 2008: 468).
G. Gottschlich & A. Strid

Hieracium waldsteinii subsp. ***suborieni*** Zahn

+ Gr: Greece, Epirus, Nomos of Ioannina, Eparchia of Dodoni: Mt. Timfi, between Katafigio and Konitsa, shady side of dry ravine, cliff base and ledges, limestone, 1520 m, 20.8.2007, *Bergmeier 07–431* (herb. Bergmeier). – New to Greece; known from adjacent Albania and F.Y.R. Makedonija (Zahn in Ascherson & Graebner 1936: 62). G. Gottschlich & E. Bergmeier

Iranecio munzurdaglarensis (Yıld.) Raab-Straube & Greuter, **comb. nov.** ≡ *Senecio munzurdaglarensis* Yıld. in Ot Sist. Bot. Dergisi 17(2): 36. 2010. – This recently described species is a member of the "quadridentate group" (or former subtribe *Adenostylinae*) within the subtribe *Senecioninae* (Nordenstam & al. 2009). According to its author it is most similar to *Iranecio pandurifolius* (K. Koch) C. Jeffrey [≡ *Senecio pandurifolius* K. Koch] and to *Iranecio lorentii* (Hochst.) C. Jeffrey [≡ *Senecio lorentii* Hochst.], both recently transferred to

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

a new genus, *Turanecio,* on the basis of a morphological study and taxonomic revision (Hamzaoğlu & al. 2011). However, as long as molecular data from this particular group are still incomplete and ambiguous (Pelser & al. 2007), it appears to be premature to accept that genus.

E. Raab-Straube & W. Greuter

Picris kotschyi Boiss.

– **Eg:** The alleged presence of this taxon in Egypt relies on a single specimen cited by the first author (Lack 1975) with two question marks and not mapped. It has been annotated by Reno Muschler, a botanist known for his falsifications (Schweinfurth 1915; Anon. 1915a, b). Täckholm & Boulos (1977) included that record in their additions to the Students' Flora of Egypt, and from there it made its way into Med-Checklist (Greuter 2008). However, the presence of this taxon in Egypt was never confirmed and consequently Boulos did not include it in his latest works dealing with the Egyptian flora (Boulos 2003, 2008). By contrast, he explicitly regarded the occurrence of *Picris strigosa* M. Bieb. in Egypt as probably based on erroneous identification (Boulos 2002) and did not list it subsequently (Boulos 2008). *P. kotschyi* must be definitely excluded from the flora of Egypt. H. W. Lack & E. von Raab-Straube

Pilosella acutifolia (Vill.) Arv.-Touv. (*Hieracium acutifolium* Vill.; *H. brachiatum* DC.)

+ **Gr:** Greece, E Macedonia, Nomos of Kilkis, Eparchia of Almopia: Mt. Paiko, between Livadi and Archangelos, margin of *Fagus* forest, schist, 1000 m, 16.6.2001, *Bergmeier 01-273* (herb. Bergmeier). – New to Greece; given from adjacent F.Y.R. Makedonija (Behr & al. 1937). Gottschlich (in Greuter & Raus 2010: 194–195) presents reasons why the name *Pilosella brachiata* (DC.) F. W. Schultz & Sch. Bip., previously used for this taxon, is to be replaced.

G. Gottschlich & E. Bergmeier

Pilosella arnoserioides (Nägeli & Peter) Soják (*Hieracium arnoserioides* Nägeli & Peter)

+ **Gr:** Greece, E Macedonia, Nomos & Eparchia of Drama: Nestophor, Nestos valley, SW exposed slopes with *Quercus frainetto* wood, 250 m, 16.7.1992, *Petermann 3019* (herb. Petermann, herb. Gottschlich 33979). – New to Greece; given for adjacent Bulgaria by Bräutigam & Greuter (in Greuter 2008: 657).

G. Gottschlich & J. Petermann

Pilosella bauhinii (Schult.) Arv.-Touv. ≡ *Hieracium bauhinii* Schult.

The author prefers to treat *P. bauhinii* and *P. piloselloides* (Vill.) Soják as separate species. Under that view, a new combination for the following subspecies is required.

G. Gottschlich

Pilosella bauhinii subsp. ***graeca*** (Nägeli & Peter) Gottschl., **comb. nov.** ≡ *Hieracium magyaricum* subsp. *graecum* Nägeli & Peter, Hierac. Mitt.-Eur. 1: 579. 1885 [= *H. bauhinii* subsp. *stenoleucum* (Nägeli & Peter) Zahn in Engler, Pflanzenr. 82: 1422. 1923].

Pilosella brzovecensis (Horvat & Pawł.) Soják (*Hieracium brzovecense* Horvat & Pawł.)

+ **Gr:** Greece, E Aegean Islands, Nomos & Eparchia of Samos: Island of Samos, *Pinus brutia* wood, 980 m, 7.6.1995, *Ulrich* (herb. Gottschlich 27460). – New to Greece. G. Gottschlich

Pilosella caespitosa (Dumort.) P. D. Sell & C. West

– **Gr:** This taxon is reported for Greece by Bräutigam & Greuter (in Greuter 2008: 580). Although they accepted the division of *P. caespitosa* s.l. into *P. caespitosa* and *P. onegensis* Norrl., they cited both for Greece in their list. However, only *P. onegensis* occurs in Greece. G. Gottschlich

Pilosella cymosa subsp. ***heldreichiana*** (Nägeli & Peter) Gottschl., **comb. nov.** ≡ *Hieracium cymosum* subsp. *heldreichianum* Nägeli & Peter, Hierac. Mitt.-Eur. 1: 408. 1885.

Pilosella fuscoatra (Nägeli & Peter) Soják

– **Gr:** This species, a hybrid derivative from *Pilosella caespitosa* (Dumort.) P. D. Sell & C. West and *P. aurantiaca* (L.) F. W. Schultz & Sch. Bip., is given for Greece by Bräutigam & Greuter (in Greuter 2008: 602). However, neither parental species occurs in Greece, hence that record is to be deleted. G. Gottschlich

Pilosella hypeurya (Peter) Soják

+ **Gr:** Greece, W Macedonia, Nomos of Pella, Eparchia of Almopia: Mt. Tzena, summit area, subalpine pastures, 2000 m, 18.7.1999, *Schuler 99/1000* (herb. Schuler, herb. Gottschlich 40442); ibid., Nomos & Eparchia of Florina: Melitti, Mt. Kajmakcalan, alpine pastures near summit, 2200–2300 m, 11.7.2002, *Schuler 1844* (herb. Gottschlich 45878). – *Pilosella officinarum* Vaill. and *P. pilisquama* (for the latter name see below) are not rare in Greece. The intermediate taxon *P. hypeurya* had not been detected until now, due to the lack of adequate knowledge of the genera *Hieracium* and *Pilosella* in Greece.

G. Gottschlich & A. Schuler

Pilosella leptophyton (Nägeli & Peter) S. Bräut. & Greuter

+ **Gr:** Greece, E Macedonia, Nomos & Eparchia of Chalkidiki: Mt. Cholomon, 720 m, 5.6.1986, *Theodoropoulos 29* (TAUF). – New to Greece;

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

given for adjacent Bulgaria and F.Y.R. Makedonija by Bräutigam & Greuter (in Greuter 2008: 576). G. Gottschlich & K. Theodoropoulos

Pilosella leucopsilon (Arv.-Touv.) Gottschl., **comb. nov.** ≡ *Hieracium leucopsilon* Arv.-Touv. in Maire & Petitmengin, Etude Pl. Vasc. Grèce: 137; & in Bull. Soc. Sci. Nancy, ser. 3, 9: 378. 1908: 137. 1908 [= *Pilosella pilisquama* (Nägeli & Peter) Dostál in Folia Mus. Rer. Nat. Bohem. Occid., Bot. 21: 14. 1984; *"Hieracium macranthum"* auct. (non (Ten.) Ten., Fl. Napol. 5: 190. 1835–38); *"Pilosella hoppeana* subsp. *macrantha"* auct. (non (Ten.) S. Bräut. & Greuter in Willdenowia 37: 134. 2007)].

As pointed out by Gottschlich (2009), the type of *Hieracium macranthum* Ten. belongs to *H. hoppeanum* Schult. s.str. Because of the distinct area and ecology it is proposed to recognise *Pilosella hoppeana* subsp. *macrantha* sensu S. Bräut. & Greuter as a separate species, to be named *P. leucopsilon.* It shows great variability in the indumentum of the capitula: plants with few to numerous simple hairs on the involucral bracts deserve recognition as a separate subspecies, as follows.

G. Gottschlich

Pilosella leucopsilon subsp. ***pilisquama*** (Nägeli & Peter) Gottschl., **comb. nov.** ≡ *Hieracium hoppeanum* subsp. *pilisquamum* Nägeli & Peter, Hierac. Mitt.-Eur. 1: 124. 1885 ≡ *Pilosella pilisquama* (Nägeli & Peter) Dostál in Folia Mus. Rer. Nat. Bohem. Occid., Bot. 21: 14. 1984 [= *Hieracium hoppeanum* subsp. *leucolepium* Nägeli & Peter, Hierac. Mitt.-Eur. 1: 124. 1885; = *H. hoppeanum* subsp. *vulpinum* Rehmann in Verh. K. K. Zool.-Bot. Ges. Wien 46: 330. 1896; = *H. hoppeanum* subsp. *przybyslawskii* Rehmann in Verh. K. K. Zool.-Bot. Ges. Wien 46: 330. 1896; = *H. hoppeanum* subsp. *leucolepioides* Degen & Zahn in Ann. Hist.-Nat. Mus. Natl. Hung. 8: 35. 1910; = *H. hoppeanum* subsp. *antennarioidiforme* Zahn in Věstn. Tiflissk. Bot. Sada 21: 1. 1912; = *H. hoppeanum* subsp. *macrolepioides* Zahn in Repert. Spec. Nov. Regni Veg. 16: 178. 1919; = *H. hoppeanum* subsp. *pseudosmanicum* Zahn in Repert. Spec. Nov. Regni Veg. 16: 178. 1919; = *H. hoppeanum* subsp. *macranthopsis* Zahn in Ascherson & Graebner, Syn. Mitteleur. Fl. 12: 19. 1922; = *H. hoppeanum* subsp. *lydium* Bornm. & Zahn in Engler, Pflanzenr. 82: 1154. 1923; = *H. hoppeanum* subsp. *csepelense* Lengyel & Zahn in Magyar Bot. Lapok 25: 283. 1927].

Pilosella ruprechtii (Boiss.) P. D. Sell & C. West

+ Gr: Greece, Peloponnes, Nomos of Achaia, Eparchia of Kalavrita: Mt. Chelmos, ascent to the Styx canyon, 1400 m, 29.6.2002, *Meierott 02/GR320* (herb. Meierott, herb. Gottschlich 45138). – Total range from Italy to Transcaucasia, but not given for Greece by Bräutigam & Greuter (in Greuter 2008: 658).

G. Gottschlich & L. Meierott

Pilosella tephrocephala (Vuk.) Soják

+ Gr: Greece, E Macedonia, Nomos of Kilkis, Eparchia of Almopia: Mt. Paiko, between Livadi and Archangelos, dry grassland, schist, 1000 m, 16.6.2001, *Bergmeier 01-267* (herb. Bergmeier); id., Peloponnisos, Nomos of Achaia, Eparchia of Egialia: SE Seliana, W Kopelea, Profitis Ilias S Karkaia, 1400 m, 25.5.2007, *Raabe* (B, herb. Raabe, herb. Gottschlich 51996). – Total range from the Alps to the Caucasus including Asia Minor, but not given for Greece by Bräutigam und Greuter (2008: 659).

G. Gottschlich, E. Bergmeier & U. Raabe

Euphorbiaceae

Euphorbia davidii Subils

A **RK:** Ukraine, the Crimea: Sevastopol, near Inkerman railway station (44°35'31.4"N, 33°36'24.4"E), on the embankment, 25.9.2011, *Yena* (CSAU). – A few plants were first found for the Crimea by the amateur botanist P. Y. Yevseyenkov in 2010 (as *E. dentata* Michx.). After proper examination of this population with ca. 120 individuals on the same place in 2011, I came to the conclusion that they belong to *E. davidii,* a species closely related to *E. dentata* (both of American origin). Mark H. Mayfield (Kansas State University, U.S.A.), a specialist in taxonomy of New World spurges, kindly checked close-up photographs from the Crimea and confirmed my identification. According to his monograph (Mayfield 1997), *E. davidii* differs from *E. dentata* by clearly tapering trichomes on the lower leaf surface and being unevenly tuberculate seeds that are angular in transverse section. In the continental part of Ukraine, only *E. dentata* has been reported since the first finding in Odessa in 1989 (Guzik & al. 1997), the identification of these plants is to be reconsidered because they refer to *E. dentata* s.l. In adjacent European regions, *E. davidii* was recorded from Bulgaria (Vladimirov & Petrova 2009). After *E. maculata* L. (Yena in Greuter & Raus 2006: 723), *E. davidii* is the second American *Euphorbia* found in the Crimea since the beginning of the 21st century. A. V. Yena

Fagaceae

Quercus ithaburensis subsp. ***macrolepis*** (Kotschy) Hedge & Yalt.

+ Bu: Bulgaria: Eastern Rhodopes, Ivailovgrad Municipality, Gorno Lukovo, near the village in a gutter by a meadow, 200 m, 1.5.2001, *Vassilev* (SO 1006, as *Quercus macrolepis* Kotschy). – No previous records exist in Bulgarian standard floras (see, e.g. Andreev & al. 1992); the species

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

is distributed in the southern Balkan Peninsula from Albania to European Turkey (Jalas & Suominen 1976: 70, map 292; Tutin & al. 1993: 74) and its widespread occurrence in adjacent Greek Thrace is mapped in Strid & Tan (1997: map 65).
D. Dimitrov

Leguminosae

Chamaecytisus Link – The new combinations here proposed will be used in the account of the genus in the forthcoming volume 3 of "Flora Hellenica".
K. I. Christensen

Chamaecytisus austriacus subsp. ***heuffelii*** (Wierzb. ex Griseb. & Schenk) K. I. Chr., **comb. nov.** ≡ *Cytisus heuffelii* Wierzb. ex Griseb. & Schenk in Arch. Naturgesch. 18(1): 292. 1852 ≡ *Cytisus austriacus* subsp. *heuffelii* (Wierzb. ex Griseb. & Schenk) Aschers. & Graebn., Syn. Mitteleur. Fl. 6(2): 332. 1907 ≡ *Chamaecytisus heuffelii* (Wierzb. ex Griseb. & Schenk) Rothm. in Feddes Repert. Spec. Nov. Regni Veg. 53: 144. 1944.

Chamaecytisus spinescens subsp. ***creticus*** (Boiss. & Heldr.) K. I. Chr., **comb. & stat. nov.** ≡ *Cytisus creticus* Boiss. & Heldr. in Boissier, Diagn. Pl. Orient. 9: 5. 1849 ≡ *Chamaecytisus creticus* (Boiss. & Heldr.) Rothm. in Feddes Repert. 53: 143. 1944 [= *Cytisus subidaeus* Gand., Fl. Cret.: 25. 1916 ≡ *Chamaecytisus subidaeus* (Gand.) Rothm. in Feddes Repert. Spec. Nov. Regni Veg. 53: 143. 1944 ≡ *Cytisus creticus* var. *subidaeus* (Gand.) Cristof. in Webbia 45: 202. 1991].

Cytisus decumbens subsp. ***pindicola*** (Bald.) K. I. Chr. **comb. & stat. nov.** ≡ *Cytisus diffusus* var. *pindicola* Bald. in Nouvo Giorn. Bot. Ital., ser. 2, 6: 153. 1899 [= *Cytisus medius* Halácsy, Consp. Fl. Graec. 1: 339. 1901 ≡ *Corothamnus medius* (Halácsy) Skalická in Preslia 39: 26. 1967; = *Cytisus pseudoprocumbens* Markgr. in Ber. Deutsch. Bot. Ges. 44: 423. 1926 ≡ *Corothamnus pseudoprocumbens* (Markgr.) Skalická in Preslia 39: 20. 1967].

Leucaena leucocephala subsp. ***glabrata*** (Rose) Zárate
N **IJ,** N **Tn:** Tunisia: Tunis city, Place d'Afrique, naturalised alien, 25.4.2010, *Domina* (PAL); Israel: Beit-Shean Valley (Jordan Valley), Kibbutz Kfar-Ruppin, naturalised alien in palm plantation, 4.12.2005, *Domina & Joel* (PAL). – A Central American taxon widely introduced in the Mediterranean only in the last few decades (Hughes 1998), already recorded from Sicily by Raimondo & Domina (2007) and from Algeria by Raus & Zeddam (in Greuter & Raus 2010: 196–197). The identification of the cited specimens was done by comparison with the material collected in Sicily and verified by C. Hughes.
G. Domina

Medicago disciformis L.
+ **RK:** Ukraine, Crimea: Sevastopol, Kazachya harbour (44°34'35.4"N, 33°24'26.6"E), area of semiruderal herbaceous vegetation near the coast, 1 m, 8.5.2011, Yena (CSAU). – The species has not been reported previously from the Crimea. It was first found by the amateur botanist T. A. Karpenko in 2009 who identified it tentatively as *M. disciformis* using data from floristic Internet forums. Later I confirmed his identification. *M. disciformi*s was found in the same localities and habitats as the recently reported *Beta vulgaris* subsp. *maritima* (L.) Arcang. (Yena & Evseenkov 2010) and *Sagina maritima* G. Don (Yena & al. 2011), all of coastal Atlantic-Mediterranean distribution. Hence I consider *M. disciformis* indigenous to the Crimea, or a long established archaeophyte. In the highly transformed urban area of Sevastopol, the coastal zone by the Kazachya harbour remains comparatively little modified.
A. V. Yena

Trigonella corniculata subsp. ***balansae*** (Boiss. & Reut.) Lassen, **comb. nov.** ≡ *Trigonella balansae* Boiss. & Reut. in Boiss., Diagn. Pl. Orient. 5: 79. 1856 ≡ *Trigonella balansae* Boiss. & Reut. subsp. *balansae* [per Vierh. in Verh. Zool.-Bot. Ges. Wien 69: 199. 1919].

Trigonella corniculata subsp. ***rechingeri*** (Širj.) Lassen, **comb. & stat. nov.** ≡ *Trigonella rechingeri* Širj. in Österr. Bot. Z. 85: 58. 1936. – Unpublished studies for "Flora Hellenica" have shown that *Trigonella balansae,* widespread in the Aegean area, W Anatolia and Cyprus and *Trigonella rechingeri* Širj., almost exclusively found in the Aegean on small islets from the Kriti-Karpathos area to the Northern Sporades, are geographical races of *T. corniculata* (L.) L., hence subspecific rank is appropriate.
P. Lassen

Trigonella rotundifolia (Sm.) Strid, **comb. nov.** ≡ *Trifolium rotundifolium* Sm., Fl. Graec. Prodr. 2: 96. 1813. – *Trifolium rotundifolium* has long remained enigmatic, being listed as species dubia by Boissier (1872: 155) and Halácsy (1900: 392) and omitted in most recent Floras and checklists. However, the plate in Flora Graeca (Sibthorp 1832: t. 747) clearly shows that it is conspecific with *T. coerulescens* M. Bieb., the basionym of *Trigonella coerulescens* (M. Bieb.) Halácsy, although the flower colour in the plate is atypically pale. This species is scattered in Greece and widespread in Anatolia. It is locally common on rocky coastal flats in Attica where it was probably collected by Sibthorp.
A. Strid

Malvaceae

In the fortcoming treatment of *Malvaceae* in Euro+Med Plant Base project (Valdés, in prep.), revised taxonomic

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

concepts will be applied, requiring the following new combinations. B. Valdés

Alcea biennis subsp. ***cretica*** (Weinm.) Valdés, **comb. nov.** ≡ *Alcea pallida* subsp. *cretica* (Weinm.) D. A. Webb in Feddes Repert. 74: 27. 1967 ≡ *Althaea cretica* Weinm., Syll. Pl. Nov. Ratisb. 2: 171. 1828 ≡ *Alcea cretica* (Weinm.) Greuter in Willdenowia 8: 558. 1979.

Malva L. – Molecular data by Ray (1995) and Escobar & al. (2009) suggest that the traditional separation of *Malva* and *Lavatera* L., based mainly on the degree of fusion of the epicalyx bracts, is artificial and cannot be maintained. While some groups of species appear to be natural and might eventually become recognised as distinct genera, as indicated by Molero & Montserrat (2007) and Escobar & al. (2009), the overall evolution within the complex appears to be reticulate. Until an in-depth taxonomic study of *Malveae* is available, the traditional genera *Malva* and *Lavatera* (and even perhaps *Althaea* L.) are best merged into a single genus, *Malva* L., presumed to be monophyletic (Tate & al. 2005).

Several *Lavatera* taxa have already been transferred to *Malva* by Alefeld (1862) or recent authors, particularly Ray (1998), Molero & Montserrat (2005, 2006), Banfi & al. (2005) and Iamonico (2010), but the following new combinations and names are still needed for Euro-Mediterranean taxa. B. Valdés

Malva davaei (Cout.) Valdés, **comb. nov.** ≡ *Lavatera davaei* Cout. in Bol. Soc. Brot. 11: 122. 1893 ≡ *Lavatera mauritanica* subsp. *davaei* (Cout.) Cout., Fl. Portugal: 402. 1913.

This is the correct name when *Lavatera mauritanica* Durieu is transferred to *Malva,* its epithet being unavailable in that genus due to the existence of *M. mauritanica* Spreng., an illegitimate renaming of *M. mauritiana* L. and taxonomic synonym of *M. sylvestris* L. Two subspecies are recognised, *M. davaei* subsp. *davaei* in the Iberian Peninsula (Fernandes in Tutin & al. 1968: 252; Greuter & al. 1989: 236; Castroviejo 1993a: 243) and subsp. *mauritanica* Valdés (see below) in NW Africa and on the Canary Islands (Greuter & al. 1989: 236; Acebes & al. in Izquierdo & al. 2001: 125; Valdés & al. 2002: 193; Fennane & Ibn Tattou 2005: 289). B. Valdés

Malva davaei subsp. ***mauritanica*** (Durieu) Valdés, **comb. nov.** ≡ *Lavatera mauritanica* Durieu in Rev. Bot. Recueil Mens. 2: 436. 1847 (non *M. mauritanica* Spreng., Syst. Veg., ed. 16, 3: 90. 1826).

Malva lusitanica (L.) Valdés, **comb. & stat. nov.** ≡ *Lavatera lusitanica* L., Sp. Pl.: 691. 1753 [= *Lavatera triloba* L., Sp. Pl.: 691. 1753 (non *Malva triloba* Thunb., Prodr. Pl. Cap. 118. 1800); = *Lavatera micans* L., Sp. Pl.: 690. 1753 ≡ *Malva micans* (L.) Alef. in Österr. Bot. Z. 12: 258. 1862].

The epithet of *Lavatera triloba* L. cannot be transferred to *Malv*a because of the existence of *M. triloba* Thunb., designating a southern African plant. Fernandes (1968) demonstrated that *L. lusitanica* L. and *L. micans* L., both of the same date as *L. triloba,* are synonymous with it. Even though for *L. micans* the combination under *Malva* already exists, I give preference to *L. lusitanica* when uniting all three in *Malva,* because interpretation of *L. micans* is fraught with uncertainty (see also Jarvis 2007: 617): no type has been designated, and the name might also apply to *L. maritima* Gouan. According to Escobar & al. (2010: 79-86), three subspecies can be recognised, and the two following combinations are required. B. Valdés

Malva lusitanica subsp. ***minoricensis*** (Cambess.) Valdés, **comb. & stat. nov.** ≡ *Lavatera minoricensis* Cambess. in Mem. Mus. Hist. Nat. 14: 334. 1827 ≡ *Malva minoricensis* (Cambess.) J. J. Rodr. in Anal. Soc. Esp. Hist. Nat. 3: 13. 1874.

Malva lusitanica subsp. ***pallescens*** (Moris) Valdés, **comb. nov.** ≡ *Lavatera pallescens* Moris, Fl. Sardoa 1: 301. 1837 ≡ *Lavatera triloba* subsp. *pallescens* (Moris) Nyman, Consp. Fl. Eur.: 128, 1878.

Malva maroccana (Batt. & Trab.) Valdés, **comb. nov.** ≡ *Lavatera punctata* var. *maroccana* Batt. & Trab. in Bull. Soc. Hist. Nat. Afrique N. 9: 14. 1918 ≡ *Lavatera maroccana* (Batt. & Trab.) Maire in Bull. Soc. Hist. Nat. Afrique N. 17: 107. 1926.

Malva oblongifolia (Boiss.) Valdés, **comb. nov.** ≡ *Lavatera oblongifolia* Boiss., Notice Abies Pinsapo: 9. Feb 1838 [& in Bibl. Universelle Genève, ser. 2, 13: 406. Apr 1838].

Malva stenopetala (Batt.) Valdés, **comb. nov.** ≡ *Lavatera stenopetala* Batt. in Battandier & Trabut, Fl. Algérie 1: 113. 1888.

Malva thuringiaca subsp. ***ambigua*** (DC.) Valdés, **comb. nov.** ≡ *Lavatera ambigua* DC., Prodr. 1: 440. 1824 ≡ *Lavatera thuringiaca* subsp. *ambigua* (DC.) Nyman, Consp. Fl. Eur.: 128, 1878.

Malva valdesii (Molero & J. M. Monts.) Valdés, **comb. nov.** ≡ *Lavatera valdesii* Molero & J. M. Monts. in Bot. J. Linn. Soc. 153: 446. 2007.

Nyctaginaceae

Mirabilis jalapa L.

N **Ag:** Algeria:, Wilaya of Algier: Daïra of Hussein-Dey, Vieux Kouba, 12.6.2010; ibid.; Kouba-Oasis, 25.6.2011; ibid.: Hussein-Dey, 4. & 19.9.2011; id.: Daïra of Bab El Oued, Oued Ko-

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

riche, El Kettar cemetery, 28.10.2010; id.: Daïra of Draria, Khraïcia, 23.10.2010; id.: Wilaya of Tipaza, Daïra of Fouka, Fouka, 45 km W of Algiers, 10.9.2011; ibid.: Douaouda, c. 40 km W of Algiers, roadside, 10.9.2011; id.: Daïra of Bouzaréah, Beau Fraisier, 15.9.2011; ibid.: Bouzaréah–Baranès, 15.9.2011; id.: Daïra of Bir Mourad Raïs, Saoula, 7.10.2011, all *Zeddam* (B & *obs.*). – Native to South America. In Algeria it has been cultivated since 3 to 4 decades as an ornamental plant for its perfumed and variously coloured flowers, frequently so in private gardens of Algiers but also in Muslim cemeteries where it became an invader very hard to eradicate from graves. Recently, *Mirabilis jalapa* escaped from cultivation and is fully naturalised, appearing now in places where it is not planted at all such as roadsides in suburban and abandoned areas, new building sites or irrigated plantations. A. Zeddam

Orobanchaceae

Orobanche rosmarina Beck

+ **Tn:** Tunisia: Jebel Sidi Abderrahman (36°40'15"N, 10°40'15"E), open cork oak woods on brown acid soil, on *Rosmarinus officinalis* L., 250 m, 25.4.2010, *Domina & Smaoui* (PAL). – A species of W Mediterranean distribution (see Pujadas Salvà & Muñoz Garmendia 2010), parasitic exclusively on *Rosmarinus officinalis*.
G. Domina

Plantaginaceae

Plantago sabulosa Danin & Raus, **sp. nov. –** Holotypus: Israel, Western Negev, Mash'abbe Sade, semi-stable fine-grained sand, 5.3.2010, *Danin* (HUJ; isotypi: B, G, K, PAL).

A *Plantagine crypsoidi* differt pedunculis folia valde superantibus ad summum 1 mm in diam. (nec 1.5–3 mm in diam., foliis brevioribus); spicis maturis in sicco 2–2.5 mm in diam. (nec 3–5 mm), madefactis 4–5 mm in diam. (nec 7.5–9.5 mm); bracteis acutis (nec rostratis); seminibus 1 × 0.5 mm (nec 1.1–1.2 × 0.8 mm). Arenas eremicas mobiles (nec terras loessicas stabiles vel petrosas) incolens.

+ **IJ:** Israel: Northern Negev, Nahal Secher, 15 km S of Beer Sheva, 9.6.2010, *Danin* (HUJ); ibid., plants from Nahal Secher raised in a pot with coarse sand, grown on rain water alone, harvested 17.4.2011, *Danin* (B, HUJ).

Feinbrun (1978: 223), in the Flora Palaestina area, recognises two varieties within *Plantago coronopus* subsp. *commutata* (Guss.) Pilger: var. *commutata* (Guss.) Bég. and var. *crassipes* Coss. & Daveau. Zohary (1938: 228), in his monograph of the genus *Plantago* in the Near East, mentions the presence of a single taxon from this group, namely *P. coronopus* var. *crassipes.* Greuter & al. (1989: 298-299) again recognise but one taxon of the group in the area, to which they refer as *P. weldenii* Rchb. subsp. *weldenii,* an older name for *P. coronopus* subsp. *commutata.* Hence, Greuter & al. (1989) follow Feinbrun in assigning the Mediterranean taxon (her *P. coronopus* var. *commutata*) and the desert taxon (her var. *crassipes*) to the same subspecies. Boulos (2002) considers the *P. coronopus* group as represented in Egypt by three species: *P. coronopus* L., *P. crypsoides* Boiss. and *P. commutata* Guss. Our (mainly A.D.) field observations also lead us to consider the latter two taxa at the rank of species, from an ecological and chorological point of view. The holotype of *P. crypsoides* (G-BOIS, examined by A.D.) agrees well with the desert taxon that used to be called *"P. coronopus"* in Israel (Danin 1983: 32); the name *P. weldenii* (which has priority over *P. commutata*) we use here for the taxon of the Mediterranean coastal territory of the Levant. Field work for a book on sandy desert habitats (Danin 1996) triggered observations on an unnamed, psammophytic desert member of the *P. coronopus* group in the Negev. *P. crypsoides* and the unnamed taxon may occur on one and the same hill, the former growing on loessial-stony lithosol and



Fig. 2. Diagnostic spike shape and peduncle width in three species of *Plantago* in Israel: *P. weldenii* (left), *P. crypsoides* (centre), *P. sabulosa* (right); for details, see text. – Scale bar = 1 cm; photograph: A. Danin.

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

Table 1. Diagnostic features of scapes and spikes of three species of *Plantago* in Israel, studied on 23 scapes of each of the following populations: *P. commutata* from Neot Kedumim, 16.7.2011; *P. crypsoides* from loessial serozem with a well-developed cyanobacterial crust near Mashabbe Sade, 10.6.2010; *P. sabulosa* from semistable fine-grained sand near Mashabbe Sade, 10.6.2010 (all HUJ, leg. Danin).

	P. weldenii	***P. sabulosa***	***P. crypsoides***
Habitat	Mediterranean	desert	desert
Soil	clay or sandy clay	fine-grained semistable sand	loessial lithosol and loessial serozem
Mean annual rainfall [mm]	300–1000	100–150	50–200
Peduncle : spike length ratio	0.5–0.8	2–2.5	0.5–1
Scape : leaves length ratio	2	1–2	1–1.5
Scape length [cm]	6.6 ± 2	6.3 ± 1.6	2.8 ± 0.6
Peduncle diameter [mm]	1.5–2	≤ 1	1.5–3
Bract apex	cuspidate, mucro 1 mm long	acute	rostrate
Bract length [mm]	2.5–3	2	3
Keel of anterior calyx lobes	with 1 mm high hyaline crest	with 0.3 mm high hyaline crest	without a crest
Dry spike diameter [mm]	3.5 ± 0.7	2.1 ± 0.3	4.5 ± 0.5
Wet spike diameter [mm]	6.7 ± 0.8	4.7 ± 0.7	8.6 ± 1.1
Dry infructescence shape (Fig. 2)	vermicular, flowers densely packed, without depressions in-between	moniliform, with clear depressions between the flowers	moniliform, with clear depressions between the flowers
Seed size [mm]	1.2 × 0.8	1 × 0.5	1.1 × 0.8

the latter, at perhaps 10 m distance, on shallow sandy soil. This situation is found identically in many places in the northern Negev, so that it would be inappropriate to consider the two taxa as mere subspecies of one species. Similarly, in areas where *P. weldenii* and *P. crypsoides* coexist, each is confined to its peculiar microhabitat. When raising the three taxa in pots they keep their diagnostic characters. Morphological differences (see Table 1 & Fig. 2) lend support to the treatment of the psammophytic taxon as an independent species new to science: our *P. sabulosa*. Its mature infructescence is strongly necklace-shaped (moniliform): the anterior pair of calyx lobes is keeled, with a 0.3 mm high hyaline dorsal crest that does not overlap the sepal margins of neighbouring flowers, all flowers being well distinct and prominent (Fig. 2). *P. crypsoides,* while differing in spike dimensions, shares that feature to a certain extent, whereas *P. weldenii* deviates markedly, exhibiting a worm-shaped mature infructescence of densely packed flowers without depressions in-between (Fig. 2). These morphological traits, added to differences in habitat, distribution and biology, make it easy to recognise the three species in the field. *P. weldenii* is a Mediterranean plant confined to open habitats in locally harsh environment (compact clayey soil of paths, roadsides, parking lots, sea-shore, outer belts of coastal salt-marshes), found in most of the Mediterranean districts (sensu Danin & Plitmann 1987). *P. crypsoides* grows in all desert and semi-desert areas of Israel (mean annual rainfall < 200 mm) on loessial lithosol and loessial serozem, rarely on loessial sandy soil, sometimes dominant on slightly saline substrate with well developed microbiotic crust (Dor & Danin 1996, 2001), or as single individuals in naturally disturbed habitats such as wadi beds. *P. sabulosa* grows exclusively on semistable sands of the northern and western Negev, avoiding Mediterranean territories as well as loessial soils and lithosols in the desert. When covered with sand while growing, either in nature or experimentally, it is capable to elongate the peduncles and raise the spikes above the sand. Thus, scape length may vary greatly, even in one individual, depending on the presence and depth of mobile sand cover during development. Also, scapes in mature plants may be erect, ascending or decumbent: when wetted they ascend. The year in which the holotype

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

was collected, 2010, was relatively rainy, but in 2011, when the winter was much drier, several of the known populations had vanished. In a new site, 10 km west of Revivim, dwarf specimens with 1–2 cm long scapes were collected on 5.8.2011, their minuteness reflecting the high adaptive size-thinning under drought conditions. [Thanks are due to the Dead Sea and Arava Science Center, Tamar, Israel, for support in preparing this note]. A. Danin & Th. Raus

Ranunculaceae

Anemonastrum narcissiflorum subsp. ***chrysanthum*** (Ulbr.) Raus, **comb. nov.** ≡ *Anemone narcissiflora* subsp. *chrysantha* Ulbr. in Bot. Jahrb. Syst. 37: 266. 1906 ≡ *Anemone chrysantha* (Ulbr.) Grossh., Fl. Kavkaza 2: 105. 1930 [= *Anemone fasciculata* L., Sp. Pl.: 542. 1753 ≡ *Anemonastrum fasciculatum* (L.) Holub in Folia Geobot. Phytotax. 8: 165. 1973 ≡ *Anemone narcissiflora* subsp. *fasciculata* (L.) Ziman & Fedor. in Ziman & al., Taxon. & Evol. Anemone narcissiflora Compl.: 34. 1997 ≡ *Anemonastrum narcissiflorum* subsp. *fasciculatum* (L.) Raus in Willdenowia 41: 134. 2011; = *Anemone umbellata* Willd., Sp. Pl. 2: 1284. 1799; = *Anemone speciosa* Adams ex Pritz. in Linnaea 15: 685. 1841 ≡ *Anemonastrum speciosum* (Pritz.) Galushko, Fl. Severn. Kavkaza Vopr. Ist. 3: 56. 1979; = *Anemone narcissiflora* var. *willdenowii* Boiss., Fl. Orient. 1: 14. 1867 ≡ *Anemone narcissiflora* subsp. *willdenowii* (Boiss.) P. H. Davis in Notes Roy. Bot. Gard. Edinburgh 26: 175. 1965; = *Anemone impexa* Juz. in Komarov, Fl. SSSR 7: 737. 1937 ≡ *Anemonastrum impexum* (Juz.) Holub in Folia Geobot. Phytotax. 8: 165. 1973].

When the Anatolian populations of the *Anemone narcissiflora* L. complex are treated as a subspecies of *Anemonastrum narcissiflorum* (L.) Holub, their correct name is the combination here proposed. The taxon occurs in N and E Asia Minor (see Davis 1965: 135, under *Anemone narcissiflora* subsp. *willdenowii* (Boiss.) P. H. Davis) and Caucasia (Russia, Georgia and Armenia: in Grossgejm 1950: maps 39 & 40, as *Anemone fasciculata, A. impexa* and *A. speciosa*). The adopted subspecies concept follows Ziman & al. (2005), the generic placement is that of Fischer & al. (2008) and Buttler & Hand (2008), based on Ehrendorfer & Samuel (2001). When one accepts the generic segregation of *Hepatica* Mill. and *Pulsatilla* Mill. from *Anemone* L., as is commonly done (Komarov 1937; Greuter & al. 1989; Tutin & al. 1993), taxonomic consistency also demands acceptance of *Anemonastrum* Holub. Th. Raus

Resedaceae

Reseda inodora Rchb.

+ Gr: Greece, W Makedonia, Nomos & Eparchia of Grevena: Fluss-Tal des Aliakmonas, c. 3 km E Grevena, an der Strasse Grevena-Knidi (40°03'04"N, 21°33'27"E), 18.6.2001, *Tillich* (MSB); ibid.: c. 30 km SE Grevena, Fahrweg am Hang hoch über dem Flussbett des Aliakmonas, c. 10 km SE Paleohori, (40°01'44"N, 21°47'38"E), 20.6.2001, *Tillich* (MSB); id., Nomos & Eparchia of Thessaloniki, N of Evangelistria (40°38'N, 22°56'E), former stone quarry, some waste-dumping, 18.5.1993, *Snogerup 9726* (LD). – *Reseda inodora,* a member of *R.* sect. *Phyteuma* Lange, is distributed in SE Europe. It has been cited as a casual alien in some European countries (Germany, the Netherlands), and its status in regions adjacent to its native range has been regarded as questionable (in Italy, Austria, Slovakia, Poland; Martín-Bravo 2011). It is a calcicolous species usually found on slopes over various kinds of substrates (limestones, loess, dolomites). The N Greek specimens cited here extend the southern limit of the species range. They were misidentified as *R. anatolica* (Boiss.) Snogerup & B. Snogerup (in Strid & Tan 2002: 300 & map 1243), a taxon that was included in the closely related *R. tymphaea* Hausskn. by Martín-Bravo (2011). S. Martín-Bravo

Reseda stricta Pers.

+ Li: Libya: Gebel Nefoussa, at Ain Zarga, near Giado, plateau above escarpment, 750 m, 17.3.1970, *Davis 49692* (E, RNG). – *R. stricta* is an Ibero-Maghrebine endemic of *R.* sect. *Reseda,* of which the hitherto known distribution was Spain, Morocco, Algeria and Tunisia. It grows exclusively on dry soils over gypsum or gypsaceous marls. The new population is located in NE Libya, at the easternmost limit of the species range. Two subspecies or varieties have been distinguished within *R. stricta* (Abdallah & De Wit 1978; Valdés-Bermejo in Castroviejo 1993b: 466), based on capsule shape and seed size (*R. stricta* subsp. or var. *stricta* and subsp. *funkii* (Willk.) Losa & Rivas Goday [*R. erecta* var. *funkii* Willk.]), but they should probably be united due to inconsistency of the supposed diagnostic features (Martín-Bravo in Blanca & al. 2009), a view supported by molecular data (Martín-Bravo & al. 2007). The Libyan specimens are immature. S. Martín-Bravo

Sesamoides purpurascens subsp. ***spathulata*** (Moris) Lambinon & Kerguélen

+ Hs: Spain, Cádiz: Vejer de la Frontera, 21.4.1968, *Strandhede* (GB); ibid.: Chiclana, pinares, suelo arenoso, 9.3.1978, *Pastor & al.* (SEV); ibid.: Conil, El Puntalejo, 1.4.1980, *Amor & Barroso* (SEV); ibid.: Conil, Cabo Roche, pinares, 1.5.1980, *Romero* (SEV); ibid.: Conil, Cabo Roche, calas, entre los aparcamientos y el pi-

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

nar, pastizales sobre arenas, 1.5.2010, *Jiménez-Mejías 6PJM10* (UPOS); ibid.: Chiclana, Cabo Roche, pinares, 25.5.1981, *Cambó & al.* (SEV); ibid.: Chiclana, pinares de *Pinus pinea* L., suelo arenoso, 6.5.1982, *Talavera* (SEV); ibid.: Barbate, La Breña, pinares, 27.3.1977, *Silvestre* (SEV); id.: Palmones, près Algeciras, dans les sables, 18.5.1887, *Reverchon 32* (E). – The genus *Sesamoides*, endemic to the W Mediterranean basin, has a highly controversial taxonomy and nomenclature, especially with regard to the species complex of *S. purpurascens* (L.) G. López. The number of recognised species varies considerably from one (Müller Argoviensis 1868; Abdallah & De Wit 1978) to five or six in analytical treatments (Greuter & al. 1989; López González in Castroviejo 1993b). In view of the scarce morphological and molecular differentiation, ecological, geographical and cytogenetic features have been used to differentiate *Sesamoides* taxa (López González 1986, 1990, & in Castroviejo 1993b; Martín-Bravo & al. 2007). In conclusion, we have given preference to subspecific rank for the taxa of the *S. purpurascens* group, which we name *S. purpurascens* subsp. *purpurascens,* subsp. *spathulata,* subsp. *prostrata* (Boiss.) Martín-Bravo and subsp. *suffruticosa* (Lange) Mateo & Figuerola (see Martín-Bravo 2011). Nonetheless, further studies are needed to elucidate the systematics of this complex genus. *S. purpurascens* subsp. *spathulata* can be distinguished from the other subspecies mainly by its spathulate leaves; it grows on coastal sands in Portugal, Corsica, and Sardinia (see Martín-Bravo 2011). Its presence has also been indicated in Algeria, Morocco, Tunisia and Italy, although in our opinion these records need confirmation and probably correspond to the type subspecies. Likewise, the taxonomic ascription of certain coastal populations from southern Spain (Cádiz province) has been regarded as questionable (López González in Castroviejo 1993b). However, the specimens cited above are best assigned to *S. purpurascens* subsp. *spathulata* in the light of their leaf morphology and habitat. S. Martín-Bravo

Rosaceae

Amelanchier parviflora subsp. ***dentata*** (Browicz) K. I. Chr., **stat. nov.** ≡ *Amelanchier parviflora* var. *dentata* Browicz in Notes Roy. Bot. Gard. Edinburgh 31: 323. 1971.

Rosa pulverulenta M. Bieb

+ IJ: Jordan, Province of Shoubak: Queen Alia Forest, W slope of Jhayeer hill (30°32'55.1"N, 35°31'18.3"E), rocky limestone outcrops in old degraded *Pistacia atlantica* and *Juniperus phoenicea* woodland, accompanied by *Rhamnus lycioides* subsp. *graeca* (Boiss. & Reuter) Tutin, *Cerasus microcarpa* C. A. Mey., *Rubia danaensis* Danin, *Colutea istria* Mill., *Lonicera etrusca* Santi and *Noaea mucronata* (Forssk.) Asch. & Schweinf., 1495 m, 29.6.2011, *Al-Gharaibeh GH 99/2011* (herb. Yarmouk University Jordan). – A circum-Mediterranean taxon extending to the Caucasus, not previously recorded from either Palestine (Zohary 1972) or Jordan (Al-Eisawi 1982) and hitherto, in the Levant, only known to occur as far south as Lebanon and Syria (see map in Kurtto 2009). The extant population in Jordan consists of a group of four mature plants separated from each other by 1 m. The species is doubtless native and was fairly common in the area in the past, when old local women used to collect the fruits to make decorative necklaces. M. M. Al-Gharaibeh

Sorbus umbellata subsp. ***baldaccii*** (C. K. Schneid.) K. I. Chr., **stat. nov.** ≡ *Sorbus umbellata* var. *baldaccii* C. K. Schneid., Ill. Handb. Laubholzk. 1: 689. 1906 ≡ *Sorbus meridionalis* var. *baldaccii* (C. K. Schneid.) Asch. & Graebn., Syn. Mitteleur. Fl. 6(2): 100. 1906 ≡ *Sorbus baldaccii* (C. K. Schneid.) Zinserl. in Komarov, Fl. SSSR 9: 398. 1939.

Scrophulariaceae

Digitalis cariensis subsp. ***ikarica*** (P. H. Davis) Strid, **comb. nov.** ≡ *Digitalis leucophaea* subsp. *ikarica* P. H. Davis in Notes Roy. Bot. Gard. Edinburgh 36: 6. 1978.

Digitalis leucophaea Sm. was described from specimens collected by Sibthorp and Bauer on Mt Athos on 11 August 1787 (Smith 1809: 439). It is doubtfully distinct from the more widespread *D. lanata* Ehrh., from which it differs mainly in its slender habit, smaller flowers and longer bracts. Plants from the E Aegean island of Ikaria have been described as *D. leucophaea* subsp. *ikarica.* They are fairly common on Ikaria where they were studied by the present author in 2008 (*Strid 56438,* G, herb. Strid and photos). They are distinctly different from *D. leucophaea* but very close to the Anatolian *D. cariensis* Boiss. ex Jaub. & Spach, hence the new combination. A. Strid

Commelinaceae

Commelina communis L.

N **RK:** Ukraine, the Crimea: Simferopol, 74 Kievskaya str., a lawn between flower-bed and pavement, 19.8.2011, *Yena* (CSAU). – This is an alien species new for the Crimea. It has previously been reported from other Black Sea countries such

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

as Bulgaria (Delipavlov & Češmedžiev 2003), Turkey (Davis 1984), Russian NW Caucasus (Zernov 2006) and Georgia (Gagnidze 2005). In 2009, some plants were planted as ornamentals in the given locality and immediately started to self-propagate by seeds. Through three vegetation periods the colonised area increased markedly in size, and now dozens of blossoming plants occupy a shady place of c. 6 m^2. Native to E Asia, *Commelina communis* is listed in the Global Compendium of Weeds (GCW 2011). In E Europe the species has been found rather rarely (Fedorov 1976; Nikitin 1983), in Ukraine it first appeared in the mainland part (Protopopova 1987), corroborating the tendency of invaders to reach the Crimea long after their spread elsewhere in E Europe (Yena 2010). In addition, in 2009, I found a few individuals of *C. benghalensis* L. in Yalta (southern coast of the Crimea), but only as a casual weed in a flower container.

A. V. Yena

Cyperaceae

Carex buekii Wimm.

+ An: Turkey B6: Kayseri, Pinarbaşi, river marsh, with *Salix,* 1500 m, 18.6.1954, *Davis 21923* (BM, K); id. C6: Adana, district of Saimbeyli, Antitaurus, Himmetli, river sides, 600 m, 12.4.1957, *Davis & Hedge 26647* (BM, K). – Both localities, separated by only 50 km, were cited by Nilsson (in Davis 1984: 154) under *Carex elata* subsp. *omskiana* (Meinsh.) Jalas. Both specimens are incomplete and the second moreover immature, but the observable features do not match those traditionally reported for *C. elata* subsp. *omskiana.* The reddish, scale-like, reticulately splitting basal sheaths of the Adana material and the suborbicular to broadly obovate, faintly nerved or nerveless, yellowish green and reddish spotted, c. 2 mm long utricles of the Kayseri voucher place both within the variability of *C. buekii* rather than *C. elata* subsp. *omskiana* (see Chater in Tutin & al. 1980: 321, Egorova 1999: 463). In addition, *C. buekii* has also been cited from neighbouring countries: Transcaucasia, including Georgia (Egorova 1999: 464) and Bulgaria (Stoeva & al. 2005), whereas *C. elata* subsp. *omskiana* is considered to reach its southern European limit in NW Ukraine (Chater in Tutin & al. l.c.) and Egorova (l.c.) did not see Caucasian material and considered its alleged occurrence in the N Caucasus and Pre-Caucasus (Grossgejm 1940, 1949) as doubtful. A third Anatolian specimen cited by Nilsson (l.c.) under *C. elata* subsp. *omskiana,* from B6 Maraş (13 km S of Andirin at Çatak, 800 m, *Coode & Jones 1137*), was not seen by us; it would be desirable to confirm its identity.

P. Jiménez-Mejías & M. Luceño

Carex elata subsp. ***omskiana*** (Meinsh.) Jalas.

? An: See preceding entry.

P. Jiménez-Mejías & M. Luceño

Gramineae

Arundo mediterranea Danin

+ Lu: Portugal: Algarve district, municipality of Silves, parish of Armação de Pêra, Sitio de Quintão, 40 km west of Faro (37º06'N, 08º22'W), 12.8.2011, *Pistoor* (B, PAL). – Many more individuals were seen in the area around Armação de Pêra, but were not collected. The only *Arundo* species mentioned in floras of the area (e.g. Franco & Afonso 1998: 198) are *A. donax* L. and *A. plinii* Turra, the latter perhaps in error. As shown by Danin (2004), *A. mediterranea* has frequently been mistaken for *A. plinii*.

A. Danin & S. J. Pistoor

Eragrostis multiglandulosa H. Scholz, **sp. nov.** – Holotypus: [Greece, Nomos of Evros, Eparchia of Samothraki:] Insel Samothraki, SW Kamariotissa, Lagune, Strandkies und Küstenkalkfels am SO-Ende, 2 m, 27.8.2007, *Biel 07.284a* (B).

Gramen annuum. *Culmi* c. 33 cm longi, prostati. *Foliorum* lamina margine tuberculato-glandulosa, vagina cum laminae nervis disperse glanduloso-punctata. *Panicula* aperta, internodiis longioribus, ramis paucispiculatis. *Spiculae* 3–10 × 2–3 mm, 5–21-florae; *pedicellus* cum lemmatum carina eorumque nervis lateralibus glandulosus. *Caryopsis* 0.6 mm longa, subrotundata, rufa, utrinque indistincte reticulata.

+ Gr: Up to now only known from the type locality. *Eragrostis multiglandulosa* is similar to *E. ciliatensis* (All.) Janch., also present on the island of Samothraki, but differs by the presence of numerous glands evenly spaced abaxially on midvein and lateral nerves of leaves and lemmas, and by the more open panicles with distant branches and spikelets. In its shore habitat, the new species is associated with *E. minor* Host.

H. Scholz & B. Biel

Oryza rufipogon Griff.

– RK: See next entry.

Oryza sativa L. ("f. *spontanea* Roshev.")

N RK: Ukraine, the Crimea: Krasnoperekopsky region, W of Ishun' town (45°54'59"N, 33°44'35"E), rice fields, 0 m, 11.7.2010, *Yena* (CSAU). – Weedy rice, so called "red rice", has been self-propagating in the Crimea since the beginning of local rice cultivation in the 1960s and has

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

spread widely since, even though its occurrence has never been reported. Plants of weedy rice can be distinguished from cultivated rice by taller stems, longer awns, red, violet or white coloured, drooping panicles, earlier flowering time (within July), shed caryopses and frost-resistant seeds. The taxonomic identity of Crimean weedy rice is still uncertain, but it is certainly not *Oryza rufipogon,* under which name it is reported for the region in Euro+Med PlantBase (Valdés & Scholz 2009). *O. rufipogon* is easily recognised at least by anther size (twice as long as in any other weedy, including Crimean, rice taxon). According to the monographer (Duistermaat 1987), *O. rufipogon* is taxonomically distant from *O. sativa* and its weedy derivatives, not a synonym of the latter as claimed by Valdés & al. (2009). To some extent, Crimean weedy rice morphologically resembles *O. nivara* Sharma & Shastry, but recent phylogenetic studies (Olsen & al. 2007) show that weedy rice rather derives from a number of genetically heterogeneous cultivars of *O. sativa*. According to current knowledge, the appropriate name and rank for Crimean weedy rice seems to be *O. sativa* f. *spontanea* (Roževic 1931).

A. V. Yena

Pholiurus pannonicus (Host) Trin.

+ An: Turkey C3: Coastal region E Antalya, Belek Park (Absa), S Karadayi (36°51'21"N, 31°06'35"E), brackish grassland N of dune area, 5 m, 13.5.2005, *Ristow 672* (B). **–** In Turkey hitherto only known from the European part of the country. M. Ristow & H. Scholz

Poa caucasica Trin.

– An: The single specimen reported by Edmondson (in Davis 1984: 475) from Turkey A9, Çoruh, 2200 m, does not belong to *Poa caucasica* of *P.* sect. *Nivicolae* (Roshev.) Probat., endemic to the Caucasus region (see Cvelev in Tahtadžjan 2006) but to *Poa nemoralis* L. s.l. (*P.* sect. *Stenopoa* Dumort). H. Scholz & R. J. Soreng

Ventenata subenervis subsp. ***major*** H. Scholz, T. Gregor & Meierott, **subsp. nov.** – Holotypus: Turkey B8, Bingöl, pass 16.3 km SW Solhan on road Bingöl-Muş (D 300), open *Quercus* scrub and dry rocky grassland, 1443-1460 m, 17.6.2010, *Gregor 67709 & Meierott* (B). Differt a *Ventenata subenervi* subsp. *subenervi* paniculis laxioribus ac spiculis majoribus: nam gluma inferior 6–7.5 (nec 3.5–5.5) mm longa, superior 9–12 (nec 7,5–10) mm longa; lemma inferius 10–15 (nec 9–13) mm longum.

+ An: The specimen consists of 3 plants, well characterised by loose panicles (longer branches) and greater spikelets. The type population may be a remnant of a formerly widespread taxon or more likely a progressive neoendemic (on the evolution of this genus and related genera, compare Eig 1929: 79). H. Scholz

Vulpia ligustica (All.) Link

+ Gr: Greece, Nomos of Thesprotia: NW Jiromeri (39°39'56"N, 20°19'10"E), *Quercus coccifera* shrub on rock-bed, 110 m, 5.5.2005, *Willing & Willing 133.160* (B); id., Nomos of Karditsa: NW Krioneri (39°20'17"N, 21°40'52"E), rocky declivity with *Abies* woodland, 840 m, 28.5.2005, *Willing & Willing 140.741* (B). **–** The species has so far apparently been overlooked on the Greek mainland or was misidentified; its native range encompasses most Mediterranean countries from France to Asia Minor, including NW Africa (Valdés & Scholz 2009).

H. Scholz & E. Willing

References

Abdallah M. S. & De Wit H. C. D. 1978: The *Resedaceae:* a taxonomical revision of the family (final instalment). – Meded. Landbouwhoogeschool Wageningen **78(14).**

Alefeld F. G. C.1862: Ueber die Malveen. – Österr. Bot. Z. **22:** 247–261.

Al-Eisawi D. M. 1982: List of Jordan vascular plants. – Mitt. Bot. Staatssamml. München **18:** 79–182.

Andreev N., Ančev M., Kožuharov S., Markova M., Peev D. & Petrova A. 1992: Opredelitel na visšite rastenija v Bălgarija. – Sofija: Nauka i Izkustvo.

Anon. 1915a: Berichtigungen zu den von R. Muschler in Engl. Bot. Jahrb. XLIII. (1909), XLVI (1911), XLIX. (1913) und L. Suppl. (1914) veröffentlichten Diagnosen afrikanischer Pflanzen. – Bot. Jahrb. Syst. **53:** 366–375.

Anon. 1915b: Nachträgliche Bemerkung des Vorstandes des Botanischen Vereins der Provinz Brandenburg zu dem Aufsatze des Herrn Prof. Dr. G. Schweinfurth: "Dr. Reno Muschlers Fälschungen" (S. 170). – Verh. Bot. Vereins Prov. Brandenburg **56:** 206.

Ascherson P. & Graebner P. 1936–38: Synopsis der mitteleuropäischen Flora **12(3). –** Leipzig: Engelmann.

Banfi E., Galasso G. & Soldano A. 2005: Notes on systematics and taxonomy for the Italian vascular flora 1. – Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano **146:** 219–244.

Behr O., Behr E. & Zahn K. H. 1937: Beitrag zur Kenntnis der Hieracien der Balkanhalbinsel. – Glasn. Skopsk. Naučn. Društva **18:** 51–67.

Behr O., Behr E. & Zahn K. H. 1939: Beiträge zur Kenntnis der Hieracien von Südserbien – Glasn. Skopsk. Naučn. Društva **20:** 23–34.

Blanca G., Cabezudo B., Cueto M., Fernández López C.

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

& Morales Torres C. (ed). 2009: Flora vascular de Andalucía oriental **3.** – Sevilla: Consejería de Medio Ambiente.

Boissier P. E. 1872: Flora orientalis **2.** – Genève & Basel: H. Georg.

Boulos L. 2002: Flora of Egypt **3.** – Cairo: Al Hadara.

Boulos L. 2008: Flora of Egypt checklist. Revised annotated edition. – Cairo: Al Hadara.

Buttler K. P. & Hand R. 2008: Liste der Gefäßpflanzen Deutschlands. – Kochia Beih. **1.**

Castroviejo S. (ed.) 1993a, b: Flora iberica. Plantas vasculares de la Península Ibérica e Islas Baleares **3, 4.** – Madrid: Real Jardín Botánico.

Cecchi L. & Selvi F. 2009: Phylogenetic relationships of the monotypic genera *Halacsya* and *Paramoltkia* and the origins of serpentine adaptation in circum-Mediterranean *Lithospermeae (Boraginaceae):* insights from ITS and matK DNA sequences. – Taxon **58:** 700–714.

Conti F., Abbate G., Alessandrini A. & Blasi C. 2005: An annotated checklist of the Italian vascular flora. – Roma: Palombi.

Conti F., Alessandrini A., Bacchetta G., Banfi E., Barberis G., Bartolucci F., Bernardo L., Bonacquisti S., Bouvet D., Bovio M., Brusa G., Del Guacchio E., Foggi B., Frattini S., Galasso G., Gallo L., Gangale C., Gottschlich G., Grünanger P., Gubellini L., Iiriti G., Lucarini D., Marchetti D., Moraldo B., Peruzzi L., Poldini L., Prosser F., Raffaelli M., Santangelo A., Scassellati E., Scortegagna S., Selvi F., Soldano A., Tinti D., Ubaldi D., Uzunov D. & Vidali M. 2007: Integrazioni alla Checklist della flora vascolare italiana. – Natura Vicentina **10:** 5–74.

Danin A. 1983: Desert vegetation of Israel and Sinai. – Jerusalem: Cana.

Danin A. 1996: Plants of desert dunes. – Adapt. Desert Organisms **45(3).**

Danin A. 2004: *Arundo (Gramineae)* in the Mediterranean reconsidered. – Willdenowia **34:** 361–369.

Danin A. (ed.) 2006+: Flora of Israel online. – Jerusalem: The Hebrew University. Published at http://flora.huji.ac.il/browse.asp [accessed 3 July 2011]

Danin A. & Plitmann U. 1987: Revision of the plant geographical territories of Israel and Sinai. – Pl. Syst. Evol. **150:** 43–53.

Davis P. H. (ed.) 1965, 1984: Flora of Turkey and the East Aegean Islands **1, 8.** – Edinburgh: University Press.

Delipavlov D. & Češmedžiev I. 2003: Opredelitel na rastenijata v Bălgarija, [ed. 3]. – Plovdiv: Akad. Izdat. na Agranija Univ.

Dor I. & Danin A. 1996: Cyanobacterial desert crusts in the Dead Sea Valley. – Israel. Algol. Stud. **83:** 197–206.

Dor I. & Danin A. 2001: Life strategies of *Microcoleus vaginatus:* a crust-forming cyanophyte on desert soils. – Nova Hedwigia Beih. **123:** 317–339.

Duistermaat H. 1987: A revision of *Oryza (Gramineae)* in Malesia and Australia. – Blumea **32:** 157–193.

Egorova T. V. 1999: The sedges (*Carex* L.) of Russia and adjacent states (within the limits of the former USSR). – St Louis: Missouri Botanical Garden.

Ehrendorfer F. & Samuel R. 2001: Contributions to a molecular phylogeny and systematics of *Anemone* and related genera *(Ranunculaceae-Anemoninae)*. – Acta Phytotax. Sin. **39:** 293–307.

Eig A. 1929: Zwei neue Gramineengattungen von der *Ventenata*-Gattung gesondert. – Repert. Spec. Nov. Regni Veg. **26:** 65–79

Escobar P., Schönswetter P., Fuertes Aguilar J., Nieto Feliner G. & Schneeweiss G. M. 2009: Five molecular markers reveal extensive morphological homoplasy and reticulate evolution in the *Malva* alliance *(Malvaceae)*. – Molec. Phylogen. Evol. **50:** 226–239.

Escobar García P., Mascia F. & Bacchetta G. 2010: Tipificación del nombre *Lavatera triloba* subsp. *pallescens* (Moris) Nyman y revaluación de *L. minoricensis* Cambess. (*L. triloba* subsp. *minoricensis* comb. nov.). – Anales Jard. Bot. Madrid **67:** 79–86.

Fedorov A. A. (ed.) 1976: Flora evropejskoj časti SSSR. **2.** – Leningrad: Nauka.

Fennane M. & Ibn Tattou M. 2005: Flore vasculaire du Maroc, inventaire et chorologie 1. – Trav. Inst. Sci. Rabat, Sér. Bot. **37.**

Fernandes R. 1968: Contribuições para o conhecimento do género *Lavatera* L. – Collect. Bot. (Barcelona). **7:** 393–447.

Fiori A. 1923-1925: Nuova flora analitica d'Italia **1.** – Firenze: Ricci.

Fischer M., Oswald K. & Adler W. (ed.) 2008: Exkursionsflora für Österreich, Liechtenstein und Südtirol, ed. 3. – Linz: Oberösterreichische Landesmuseen.

Foitos D., Kônstantinidis Th. & Kamarê G. 2010: Bublio eruthrôn dedomenôn tôn spaniôn & apeiloumenôn futôn tês Elladas **2.** – Patra: Ellênikê Bôtanikê Etaireia.

Franco J. do Amaral & Afonso M. da Luz da Rocha 1998: Nova Flora de Portugal (Continente e Açores) **3(2).** – Lisboa: Escolar.

Gagnidze R. 2005: Sak'ar'velos p'loris konspek'ti. nomenklaturuli nuscha [Vascular plants of Georgia. A nomenclatural checklist]. – Tbilisi: Sak'art'velos Mec'nierebat'a Akad.

GCW 2011: Global Compendium of Weeds. – Published at www.hear.org/gcw/index.html

Gentry A. H. 1992: *Bignoniaceae* part II (tribe *Tecomeae*). – Fl. Neotrop. Monogr. **25(2).**

Germishuizen G. & Meyer N. L. (ed.) 2003: Plants of southern Africa: an annotated checklist. – Strelitzia **14.**

Gottschlich G. 2009: Die Gattung *Hieracium* L. *(Compositae)* in der Region Abruzzen (Italien). – Stapfia **89.**

Greuter W. 2008: Med-Checklist **2.** – Palermo etc.: OPTIMA.

Greuter W., Burdet H. M. & Long G. 1989: Med-Checklist **4.** – Genève: Conservatoire et Jardin botaniques;

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

Berlin: Botanischer Garten & Botanisches Museum Berlin-Dahlem.

Greuter W. & Raus Th. (ed.) 2006, 2010: Med-Checklist notulae 24, 29. – Willdenowia **36:** 719–730; **40:** 189–204.

Grossgejm A. A. 1940: Flora Kavkasa, ed. 2, **2.** – Baku etc.: Trudy Botaničeskogo Sada S.S.R. Armenii etc.

Grossgejm A. A. 1949: Opredelitel' rastenij Kavkaza. – Moskva: Sovetskaja Nauka.

Grossgejm A. A. 1950: Flora Kavkasa **4.** – Moskva & Leningrad: Izdatel'stvo Akademii Nauk SSSR.

Guzik Ja., Protopopova V. V., Kagalo O. O., Moiseenko I. I., Prots B. G. & Ševera M. V. 1997: Novi lokalitety karantinnogo bur'janu *Euphorbia dentata* Michx. v Ukrajini. – Ukrajins'k. Bot. Žurn. **54(3):** 280–283.

Halácsy E. von 1900–1901: Conspectus florae graecae. **1.** – Leipzig: Engelmann.

Hamzaoğlu E., Budak Ü. & Aksoy A. 2011: A new genus, *Turanecio,* of the *Asteraceae* (tribe *Senecioneae*). – Turk. J. Bot. **35:** 479–508.

Hughes C. 1998: Monograph of *Leucaena (Leguminosae-Mimosoideae)*. – Syst. Bot. Monogr. **55.**

Iamonico D. 2010: *Malva subovata* subsp. *bicolor,* comb. & stat. nov. *(Malvaceae)*. – Ann. Bot. Fenn. **47:** 312–314.

Inocencio C., Rivera D., Obón M. C., Alcaraz F. & Barreña J. A. 2006: A systematic revision of *Capparis* sect. *Capparis (Capparaceae)*. – Ann. Missouri Bot. Gard. **93:** 122–149.

Izquierdo I., Martín J. L., Zurita N. & Arechavaleta M. (ed.) 2001: Lista de especies silvestres de Canarias (hongos, plantas y animales terrestres). – La Laguna: Consejería de Política Territorial y Medio Ambiente.

Jalas J. & Suominen J. (ed.) 1976, 1980: Atlas florae europaeae **3, 5.** – Helsinki: Committee for the Mapping of the Flora of Europe.

Jarvis C. 2007: Order out of chaos. Linnaean plant names and their types. – London: Linnean Society & Natural History Museum.

Komarov V. L. (ed.) 1937: Flora SSSR. **7.** – Moskva & Leningrad: Akademija Nauk SSSR.

Kurtto A. 2009: *Rosaceae* (pro parte majore). – In: Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. – Published at http://ww2.bgbm.org/EuroPlusMed/, accessed 18.8.2011.

Lack H. W. 1975: Die Gattung *Picris* L., sensu lato, im ostmediterran-westasiatischen Raum. – Diss. Univ. Wien **116.**

Lansdown R. V. 2008: Water-starworts *(Callitriche)* of Europe. – B.S.B.I. Handbook **11.**

Llamas K. A. 2003: Tropical flowering plants: A guide to identification and cultivation. – Portland: Timber.

López González G. 1986: De Linnaei plantis hispanicis novitates nonnullae. II. – Anales Jard. Bot. Madrid **42:** 319–324.

López González G. 1990: Notas referentes al género *Sesamoides* Gómez Ortega *(Resedaceae)*. – Anales Jard. Bot. Madrid **48:** 97–100.

López E. & Devesa J. A. 2010: Notas taxonómicas sobre el género *Centaurea (Asteraceae)* en la península ibérica. *C. paniculata, C. hanryi y C. diffusa*. – Anales Jard. Bot. Madrid **67:** 113–126.

Martín-Bravo S. 2011: *Resedaceae.* – In: Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. – Published at http://ww2.bgbm.org/EuroPlusMed/, accessed 20.11.2011.

Martín-Bravo S., Meimberg H., Luceño M., Märkl W., Valcárcel V., Bräuchler C., Vargas P. & Heubl G. 2007: Molecular systematics and biogeography of *Resedaceae* based on ITS and *trnL-F* sequences. – Molec. Phylogen. Evol. **44:** 1105–1120.

Mayfield M. H. 1997: A systematic treatment of *Euphorbia* subgenus *Poinsettia (Euphorbiaceae)*. – Austin: Diss., University of Texas.

Molero J. & Montserrat J. M. 2005: Nomenclatura de algunas especies del género *Malva* Linnaeus *(Malvaceae)*. – Fontqueria **55:** 285–292.

Molero J. & Montserrat J. M. 2006: Adiciones y enmiendas nomenclaturales en el género *Malva* L. *(Malvaceae)*. – Lagascalia **26:** 153–155.

Molero J. & Montserrat J. M. 2007: A new species of *Lavatera* sect. *Olbia* (Medik.) DC. *(Malvaceae)* from north-east Morocco. – Bot. J. Linn. Soc. **153:** 445–454.

Müller Argoviensis J. 1868: *Resedaceae.* – Pp. 548–589 in: Candolle, A. P. de (ed.), Prodromus systematis naturalis regni vegetabilis **16(2).** – Paris: Masson.

Nikitin V. V. 1983: Sornje rastenija flory SSSR. – Leningrad: Nauka.

Nordenstam B., Pelser P. B., Kadereit J. W. & Watson L. E. 2009: *Senecioneae*. – Pp. 503–525 in: Funk V. A., Susanna A., Stuessy T. F. & Bayer R. J. (ed.): Systematics, evolution, and biogeography of *Compositae*. – Wien: International Association for Plant Taxonomy.

Olsen K. M., Caicedo A. L. & Jia Y. 2007: Evolutionary genomics of weedy rice in the USA. – J. Integr. Pl. Biol. **49:** 811–816.

Pelser P. B., Nordenstam B., Kadereit J. W. & Watson L. E. 2007: An ITS phylogeny of tribe *Senecioneae (Asteraceae)* and a new delimitation of *Senecio* L. – Taxon **56:** 1077–1104.

Protopopova V. V. 1987: Semejstvo 182 Kommelinovye (Komelinovi) – *Commelinaceae* – P. 432 in: Prokudin Ju. N. (ed.), Opredelitel' vysših rastenij Ukrainy. – Kyïv: Naukova Dumka.

Pujadas Salvá A. J. & Muñoz Garmendia J. F. 2010: *Orobanche pseudorosmarina* A. Pujadas et Muñoz Garm. sp. nov. *(Orobanchaceae)* from the eastern Mediterranean region. – Acta Bot. Croat. **69(1):** 1–6.

Raimondo F. M. & Domina G. 2007: Two new *Mimosaceae* naturalized in Italy. – Fl. Medit. **17:** 209–216.

Ray M. F. 1995: Systematics of *Lavatera* and *Malva (Malvaceae, Malveae)*: a new perspective. – Pl. Syst. Evol. **198:** 29–53.

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

Ray M. F. 1998: New combinations in *Malva (Malvaceae: Malveae)*. – Novon **8:** 288–295.

Roževic R. Ju. 1931: K poznaniju risa. – Trudy Prikl. Bot. **27(4):** 1–133.

Schweinfurth G. 1915: Dr. Reno Muschlers Fälschungen. – Verh. Bot. Vereins Prov. Brandenburg **56:** 170–175.

Sibthorp J. 1832: Flora graeca **8.** – London: Taylor.

Smith J. E. 1806–09: Florae graecae prodromus **1.** – London: Taylor.

Stoeva M., Uzunova K., Popova E. & Stoyanova K. 2005: Patterns and levels of variation within section *Phacocystis* of genus *Carex (Cyperaceae)* in Bulgaria. – Phytol. Balcan. **11:** 45–62.

Strid A. & Tan K. (ed.) 1997, 2002: Flora hellenica **1, 2.** – Ruggell: Gantner.

Täckholm V. & Boulos L. 1977: Additions and corrections to the second edition of Students' Flora of Egypt. – Publ. Cairo Univ. Herb. **7–8:** 211–218.

Tahtadžjan A. L. 2006: Konspekt flory Kavkaza **2.** – St. Petersburg: Sankt-Peterburgskogo Univ.

Tate J. A., Fuertes Aguilar J., Wagstaff S. J., La Duke J. C., Slotta T. A. B. & Simpson B. B. 2005: Phylogenetic relationships within the tribe *Malveae (Malvaceae,* subfamily *Malvoideae*) as inferred from ITS sequence data. – Amer. J. Bot. **92:** 584–602.

Tutin T. G., Burges N. A., Chater A. O., Edmondson J. R., Heywood V. H., Moore D. M., Valentine D. H., Walters S. M. & Webb D. A. (ed.) 1993: Flora europaea, ed. 2, **1.** – Cambridge: University Press.

Tutin T. G., Heywood V. H., Burges N. A., Moore D. M., Valentine D. H., Walters S. M. & Webb D. A. (ed.) 1968, 1980: Flora europaea **2,** 5. – Cambridge: University Press.

Valdés B., Rejdali M., Achhal el Kadmiri A., Jury S. L. & Montserrat J. M. 2002: Catalogue des plantes vasculaires du nord du Maroc, incluant des clés d'identification. **1.** – Sevilla etc.: CSIC.

Valdés B. & Scholz H. 2009: *Poaceae* (pro parte majore). – In: Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. – Published at: http://ww2.bgbm.org/EuroPlusMed/, accessed 20.11.2011.

Vladimirov V. & Petrova A. S. 2009: A new alien species of *Euphorbia (Euphorbiaceae)* to the Bulgarian flora. – Phytol. Balcan. **15:** 343 – 345.

Yena A. V. 2010: Irresolute conquistadors: behavior of some invasive plants in the Crimea. – In: Anon. (ed.), IX. International Conference on Anthropization and Environment of Rural Settlements. Flora and Vegetation. – Kyïv.

Yena A. V. & Evseenkov, P. E. 2010: *Beta vulgaris* subsp. *maritima* (L.) Arcang. *(Chenopodiaceae)* – novy taxon dlja flory Kryma. – Ukrajins'k. Bot. Žurn. **67:** 700–703.

Yena A. V., Evseenkov P. E. & Svirin S. A. 2011: *Sagina maritim*a G. Don *(Caryophyllaceae)* – novy vid flory Ukrainy. – Ukrajins'k. Bot. Žurn. **68:** 191–194.

Zernov A. S. 2006: Flora Severo-Zapadnogo Kavkaza. – Moskva.

Ziman S. N., Ehrendorfer F., Kadota Y., Keener C. S., Tsarenko O. N., Bulakh E. & Dutton B. E. 2005: A taxonomic revision of *Anemone* L. sect. *Omalocarpus* DC. sensu lato *(Ranunculaceae)*: Part I. – J. Jap. Bot. **80:** 282–302.

Zohary M. 1938. On the *Plantago* species of the Near East. – Palestine J. Bot. **1:** 225-232.

Zohary M. 1972: Flora palaestina **2.** – Jerusalem: Israel Academy of Sciences and Humanities.

Downloaded From: https://bioone.org/journals/Willdenowia on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use