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TAXONOMIC CONTRIBUTIONS TO THE GENUS DIANTHUS (CARYOPHYLLACEAE) FROM TURKEY NAME OF THE ARTICLE

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ABSTRACT. According to the related literature and some taxonomic websites, it was proven that *Dianthus liboschitzianus* and *D. erinaceus* (var. *erinaceus*) are the valid names, which are accepted as a synonym. It was determined that *Dianthus erinaceus var. alpinus* not *D. erinaceus* (var. *erinaceus*) is a taxon, which is a synonym under *Dianthus webbianus.* Furthermore, the lectotypes were determined for *Dianthus erinaceus* and *D. masmenaeus var. glabrescens*, which was typed by being based on more than one specimen.

1. INTRODUCTION

The first comprehensive revision, which focused only in Turkey on the *Dianthus* L. (Caryophyllaceae) genus was made in the work titled the *Flora of Turkey and the East Aegean Islands* [1]. Approximately 20 years after this study, a regional revision was made, which covered 26 species of the genus grown in Eastern Anatolia. At the conclusion of this revision study, 7 species were made into a synonym [2]. Whereas, in the revision in the *Dianthus* genus made in Southern Transcaucasia in recent years, a species known to grow in Eastern Anatolia was reduced to a synonym [3]. Furthermore, in the taxonomy websites, which are prevalently used, such as the *World Flora Online* and *Euro+Med*, some of the *Dianthus* taxa in Turkey were accepted as synonyms [4, 5].

In this study, the taxonomic validity for the names of *Dianthus liboschitzianus* Ser. and *D. erinaceus* Boiss. (var. *erinaceus*), which are accepted as synonyms, have been

Keyword and phrases. Dianthus, lectotypification, taxonomy, Turkey, valid name

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discussed. Furthermore, the lectotypes for *Dianthus erinaceus* and *D. masmenaeus* Boiss. var. *glabrescens* Boiss., which were typed by being based on more than one specimen, were determined [6].

2. Materials and Methods

The materials of this study were the virtual images obtained from the Kew (K), Edinburgh (E), Muséum National d'Histoire Naturelle-Paris (P) and Geneva (G-BOIS) Herbaria and related protologues [7, 8, 9, 10]. In addition to these images mentioned above, the topotype specimens in the Gazi University (GAZI), Ankara University (ANK), and Hacettepe University (HUB) Herbaria were also utilized. The acronmys are according to Thiers 2021+ [11].The names attributed to the specimens were discussed in the framework of type localities indicated on the labels and the details indicated in the protologues by the authors themselves in their own handwriting. The rules and recommendations of the ICN (Principle III, Art. 9.3, Rec. 9A and 9C) have been followed while designating the lectotype [6].

3. Results

3.1 ***Dianthus liboschitzianus*** Ser., Prodr. 1: 360 (1824)! [12].

Holotype: [Armenia] “Iberia petrosis, *Bieberstein s.n.* (LE).

Description: Perennial, woody at base, several-stemmed herbs. Stems erect, 8–20 cm tall, usually unbranched, glabrous or sparsely pubescent below, 2–5-noded. Sterile shoot leaves densely clustered, subulate-linear, flattened, rigid, apex usually spinescent, 1.5–3.5 cm long, longer than cauline leaves. Lower cauline leaves persistent after anthesis; middle linear, 6.0–17.0 × 0.6–1.0 mm, ± canaliculata, appressed to stem, shorter than internodes, glabrous, apex acuminate, sheaths 2–3 times as long as wide. Inflorescence erect, flowers solitary; pedicels 5–45 mm long. Epicalyx scales 4; outer cartilaginous, purplish or brownish, veinless below, indistinctly 3–5-veined above, glabrous, appressed to calyx, 1/3–1/2 as long as calyx, lanceolate-linear to obovate-elliptic, 4.0–5.0 × 1.5–2.5 mm, with narrowly scarious (c. 0.2–0.3 mm) margins, apex acute except arista, arista 1/5– 1/2 as long as scale; inner similar to outer, 1/2–3/5 as long as calyx, oblanceolate, 4.5–7.0 × 2.5–3.6 mm, with broadly scarious (c. 0.4–0.6 mm) margins, apex acute-obtuse except arista, arista up to 1/4 as long as scale. Calyx cylindric-lanceolate, 12.0–18.0 × 2.5–3.4 mm, indistinctly 25–35-veined, glabrous, purplish; teeth triangular, 3.0–5.0 × 1.2–1.7 mm, 3–5-veined, apex acuminate, sometimes short mucronate. Petals 12–21 mm

long; limb oblanceolate to obovate, 4.0–7.0 × 2.5–5.0 mm, c. 1/3 as long as petal, completely exserted from calyx, unspotted, ebarbulate, white or pinkish, entire, irregularly crenate or 7–9-toothed to apex, with teeth up to 1/5 as long as limb; claw 8.0–14.0 × 1.0–1.2 mm, collar 1/3–1/2 as wide as claw. Capsule distinctly longer than calyx. Seeds elliptic, 2.2–2.8 × 1.2–1.8 mm, blackish.

Habitat and phenology: The species grows on stony slopes in steppes and prefers altitudes between 1650–2850 m a.s.l. The flowering period is July through August.

Distribution: The species, other than its type address from Armenia, is also grown in Georgia, Iran and Turkey. It is evaluated as an Irano-Turanian phytogeographic region element by taking into consideration its distribution and preferred steppe habitat [1].

Specimens examined: *Dianthus liboschitzianus* - TURKEY. Erzincan: Between Erzincan and Refahiye, around Karadağ R/L station, 2820 m a.s.l., 24.8.2012, rocky slopes, *Hamzaoğlu 6619* & *Koç* (GAZI!); Gümüşhane: Torul, between Ekinciler and Arpacık villages, 1690 m a.s.l., 14.7.2007, rocky places, *Hamzaoğlu 4812* & *Budak* (GAZI!); Ordu: Kabadüz, Çambaşı plateau, Kılınç hill, 2470 m a.s.l., 10.8.2009, rocky places, *Hamzaoğlu 5560*, *Budak* & *Koç* (GAZI!); Giresun: N. of Şebinkarahisar, 2040 m a.s.l., 9.8.2009, rock places, *Hamzaoğlu 5540*, *Budak* & *Koç* (GAZI!); Bayburt: Between Bayburt and Anzer, above Yoncalı village, 2265 m a.s.l., alpine steppes, 12.7.2009, *Koç 570* & *Hamzaoğlu* (GAZI!); Trabzon: Araklı, Çankaya, around Boğalı village, between 1700 and 2000 m a.s.l., 29.7.2002, *Hamzaoğlu 3268* (GAZI!); *Dianthus multicaulis* - TURKEY. Erzurum: Palandöken Mountain, Ejder hill, around radio / television transmitter, 3140 m a.s.l., grassy slopes, 24.8.2012, *Hamzaoğlu 6633* & *Koç* (GAZI!); *ibid.*, 2600 m a.s.l., 2.7.2006, grassy slopes, *Hamzaoğlu 4130* & *Budak* (GAZI!); Bingöl: Bingöl Mountain, Beritan plateaus, c. 3000 m a.s.l., 22.8.1983, *Ekim 7870* (ANK!); Artvin: Murgul, above Damar village, Alaca (Tiryal) Mountain, Bozukkaya place, c. 2500 m a.s.l., alpine meadows, 29.8.1977, *Düzenli 1017* (ANK!); Yusufeli, Altıparmak plateau, Kaçkar slopes, between 2650 and 2700 m a.s.l., alpine meadows, 19.7.1989, *Aytaç 2920* (GAZI!); Kars: Arpaçay, above Dağköyü village, 2465 m a.s.l., 25.7.2010, grassy slopes, *Hamzaoğlu 5940*, *Budak* & *Koç* (GAZI!); Between Kars and Ardahan, around Kiziroğlu village, rocks, 2200 m a.s.l., 15.7.2006, *Hamzaoğlu 4264* & *Budak* (GAZI!); Digor, between Oyuklu and Alaca villages, 2250 m a.s.l., alpine meadows, 4.7.2013, *Hamzaoğlu 6822* & *Koç* (GAZI!); Ardahan: Posof, Kolköy, Arsiyan Mountain, 2445 m a.s.l., 26.8.2012, grassy slopes, *Hamzaoğlu 6643* & *Koç* (GAZI!); Çıldır, Yıldırımtepe village, around Şeytan Castle, 1950 m a.s.l., rocky slopes,

4.7.2013, *Hamzaoğlu 6816* & *Koç* (GAZI!); *Dianthus cretaceus* - TURKEY. Artvin: Kozlu village, Tütüncüler plateau road, 2500 m a.s.l., 27.7.2010, grassy slopes, *Hamzaoğlu 6018*, *Budak* & *Koç* (GAZI!); Ardahan: Göle road, 13 km S.W. of Ardahan, 1950-2050 m, 13.8.1975, *Dalcı 359* (E, E00493138, virtual image!); Posof, Ilgar Mountain, descent from Ilgar pass to Posof, 2100 m a.s.l., 26.8.2012, grassy slopes, *Hamzaoğlu 6638* & *Koç* (GAZI!); Kolköy, Arsiyan Dağı road, 2270 m a.s.l., 26.8.2012, grassy slopes, *Hamzaoğlu 6644* & *Koç* (GAZI!).

Note: *Dianthus liboschitzianus* is accepted as a synonym of *D. cretaceus* Adams according to the *World Flora Online* [4] taxonomy website and Nersesian [3]. It can be stated that *D. liboschitzianus* displays a similarity to *D. multicaulis* Boiss. & A.Huet and *D. cretaceus* from the aspect of general appearance and some morphological characters, when the related literature, herbaria examples and field observations are taken into consideration [1, 12, 13, 14].

However, the species can also be distinguished clearly from both species from the aspect of its leaves, calyx scales, calyx teeth and petal measurements (Table 1). Furthermore, there are differences between *Dianthus liboschitzianus* and *D. multicaulis* for the number of veins on the outer calyx scales and the shape of the petal laminae. Whereas, there are differences between *D. liboschitzianus* and *D. cretaceus* for the frequency of sterile groups of leaf shoots, the ratio of length and width for the central leaf stipules, the number of veins on the outer calyx scales, the width of the pellicle edge and length, calyx measurements, number of veins outside the calyx, measurements of the petal laminae, ratio of the fruit and calyx length, and shape and length of the seeds (Table 1). Based in these differences, it was decided that it was necessary to accept *D. liboschitzianus*, *D. multicaulis* and *D. cretaceus* as three separate species.

3.2 ***Dianthus erinaceus*** Boiss., Diagn. Pl. Orient. 1(1): 21 (1843)! [8].

Protologue citation: [Turkey, Manisa] “in parte superiori Sypili supra Magnesiam ubi vix floriferum legi Julio ineunte 1842”, *Boissier s.n*.

Lectotype (designated here): [Turkey, Manisa] “Sypilus supra Magnesiam, Jul. 1842”, *Boissier s.n.* (K, K000725493, virtual image!; isolectotype: K, K000725492, virtual image!; K, K000725494, virtual image!; E, E00301868, virtual image!). (Figure 1).

TABLE 1. Morphological comparison between *Dianthus liboschitzianus*, *D. multicaulis* and *D. cretaceus*.

Character	*D. liboschitzianus*	*D. multicaulis*	*D. cretaceus*
Sterile shoot leaves	densely clustered, 1.5–3.5 cm long	densely clustered, 4–9 cm long	loosely clustered, 4–10 cm long
Middle cauline leaves	6.0–17.0 × 0.6–1.0 mm, sheaths 2–3 times as long as wide	16.0–45.0 × 0.9–1.4 mm, sheaths 2–3 times as long as wide	25.0–45.0 × 1.2–2.0 mm, sheaths as long as wide
Outer epicalyx scales	indistinctly 3–5-veined above, 4–5 mm long	indistinctly 1–3-veined above, 7–13 mm long	indistinctly 3–7-veined above, 9–20 mm long
Inner epicalyx scales	indistinctly 3–5-veined above, 4.5–7.0 mm long, with broadly scarious (c. 0.4–0.6 mm) margins	indistinctly 3–5-veined above, 7–12 mm long, with broadly scarious (c. 0.4–0.6 mm) margins	indistinctly 5–9-veined above, 8–18 mm long, with narrowly scarious (c. 0.2 mm) margins
Calyx	12.0–18.0 × 2.5–3.4 mm	12.0–17.0 × 2.2–4.0 mm	18–23 × 4–5 mm
Calyx teeth	3–5 mm long, 3–5-veined	5–7 mm long, 3–5-veined	5–7 mm long, 7–9-veined
Petal	12–21 mm long	20–26 mm long	23–30 mm long
Petal limb	oblanceolate to obovate, 4.0–7.0 × 2.5–5.0 mm	suborbicular to broadly ovate, 5–8 × 4–7 mm	suborbicular to broadly obovate, 8–11 × 7–10 mm
Petal claw	8.0–14.0 × 1.0–1.2 mm	15.0–18.0 × 1.3–1.6 mm	15.0–19.0 × 1.5–2.0 mm
Capsule	distinctly longer than calyx	distinctly longer than calyx	equal or shorter than calyx
Seed	elliptic, 2.2–2.8 long	elliptic, 2.2–3.0 mm long	ovate, 1.7–2.2 mm long

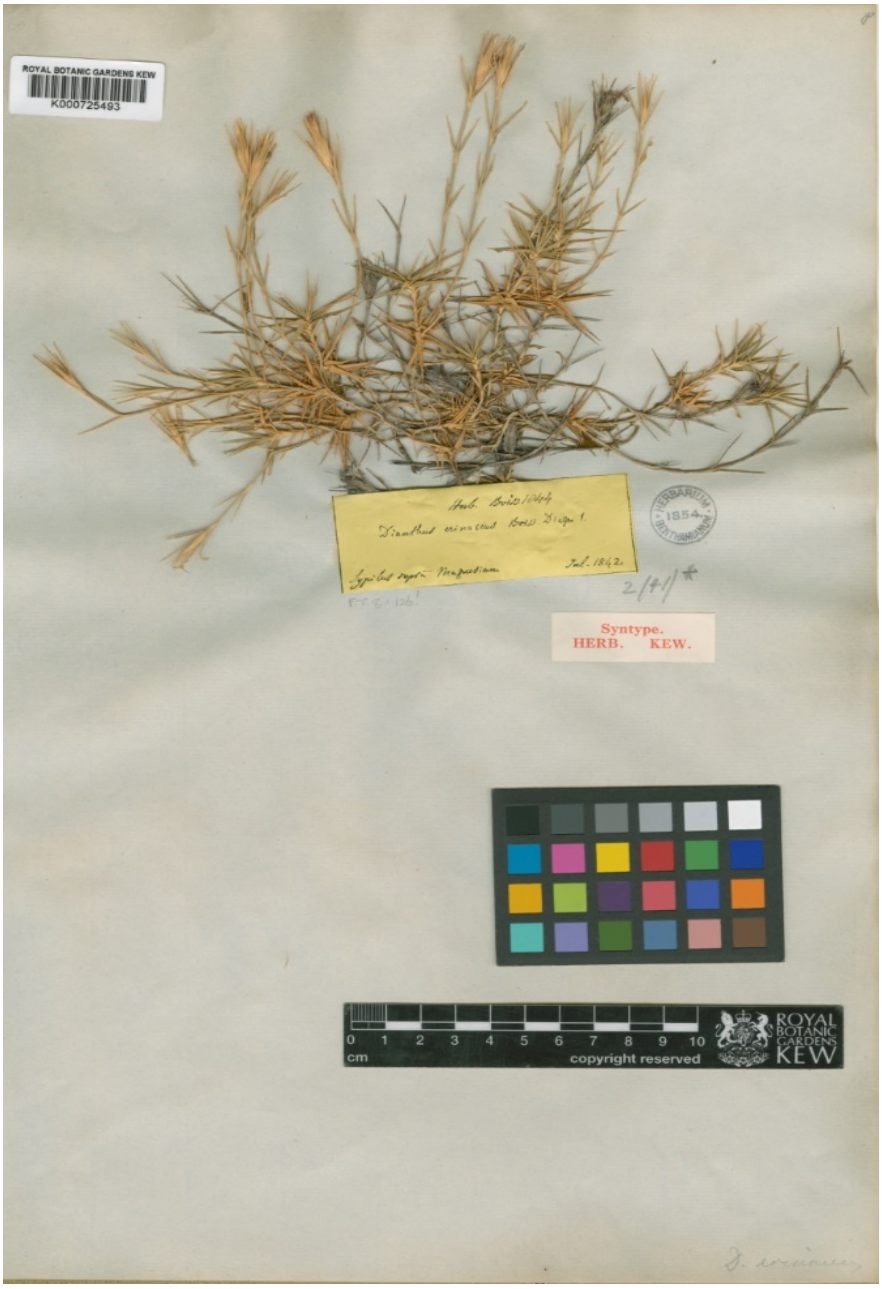

FIGURE 1. Lectotype of *Dianthus erinaceus* from K herbarium (http://apps.kew.org/).

Description: Perennial, woody at base, densely tufted herbs. Stems erect, 4–14 cm tall, usually unbranched, densely pubescent, 3–5-noded, dead leaves persistent at base. Sterile shoot leaves subulate, canaliculata, rigid, apex acuminate and spinose, equal or longer than cauline leaves. Lower cauline leaves persistent after anthesis; middle linear-subulate, 12.0–20.0 × 0.5–0.7 mm, canaliculata, separated from stem, equal or shorter than internodes, rigid, thick, pubescent, apex acuminate and spinose, sheaths up to 2 times as long as wide. Inflorescence erect, flowers solitary; pedicels 2–12 mm long. Epicalyx scales 8–10(–12); outer cartilaginous, greenish or straw-coloured, distinctly 1–3-veined, pubescent, separated from calyx, 3/5–4/5 as long as calyx, linear-subulate, 12.0–19.0 × 0.5–1.0 mm, sometimes very narrowly scarious-ciliate at base, apex acute except arista, arista at least 4/5 as long as scale; inner similar to outer, veinless below, 1–3-veined above, ± equal or 3/4 as long as calyx, oblanceolate, 12–16 × 2–3 mm, with narrowly scarious (0.2–0.3 mm) margins, apex acute-obtuse except arista, arista 1/3–1/2 as long as scale. Calyx lanceolate, 16.0–20.0 × 2.5–3.2 mm, veinless below, ± distinctly 35–45-veined above, glabrous, greenish or sometimes purplish; teeth narrowly triangular-oblong, 4.5–6.0 × 1.0–1.3 mm, glabrous, 7–9-veined, apex acuminate and long mucronate. Petals 18–21 mm long; limb narrowly cuneate, 6.5–8.0 × 4.5–5.5 mm, c. 1/3 as long as petal, 3/4 exserted from calyx, usually spotted, barbulate, pinkish above, purplish or yellowish-green beneath, 9–11-toothed to apex, teeth up to 1/5 as long as limb; claw 12.0–14.0 × 0.9–1.1 mm, collar as wide as claw. Capsule shorter than calyx. Seeds elliptic, 2.2–2.8 × 1.2–1.5 mm, brownish-black.

Habitat and phenology: *Dianthus erinaceus* grows in rocky places at altitudes of 1200–1475 m a.s.l. It has been observed flowering in August and fruiting in September.

Distribution: According to the existing data, the species is only an endemic with a narrow distribution, which is known from its type address at Mount Spil in Manisa Province. When its distribution is taken as the basis, then it can be evaluated as a Mediterranean (East) phytogeographical region element [1].

Specimens examined: *Dianthus erinaceus* - TURKEY. Manisa: Spil Mountain National Park, Atalanı place, around fire tower, 1475 m a.s.l., 5.8.2012, rocks, *Hamzaoğlu 6589*, *Aksoy & Koç* (GAZI!); ibid., sommet du Mont Sipyle, au-dessus de Magnesie, 11.8.1854, *Balansa 104* (P, P04948451, virtual image!; K, K000725495, virtual image!); South of Atalanı place, between 1200 and 1300 m a.s.l., rocky places, 8.8.1983, *Duman 1083* (GAZI!).

Note: According to the protologue, this taxon is defined based on specimens collected from Manisa (Magnesiam) Province, Turkey (Sypilus [Spil Mountain]) [8]. There were four sheets collected by Boissier from "Sypilus [Spil Mountain]" in the K and E Herbaria. One of these sheets, (K000725493), was selected as the lectotype (Figure 1).

3.3 ***Dianthus webbianus*** Parl. ex Vis., Atti Riunione Sci. Ital. 2: 180 (1841)! [7].

Holotype: [TURKEY. Balıkesir] "in montis Idae Bithyniae summitate, ?.9.1819", *Parolini s.n.* (K, K000725498, virtual image!).

Synonym: *Dianthus erinaceus* Boiss. var. *alpinus* Boiss., Fl. Orient. 1: 498 (Boissier 1867)! Holotype. [TURKEY. Balıkesir] "in summo monte Ida Troadis", *Parolini s.n.* (Hb?); *D. arpadianus* Ade & Bornm. var. *trojanus* Bornm. & Sint., Repert. Spec. Nov. Regni Veg. 36: 385 (Fedde 1934)! Lectotype (Hamzaoğlu 2020). [Balıkesir] "P. Sintenis: Iter trojanum 1883. M. Ida, in marmor montis Kapu-Dagh [Kapıdağ], 1/7, No. 556" (E, E00301902, virtual image!).

Description: Perennial, woody at base, densely tufted herbs. Stems erect, 3–4 cm tall, usually unbranched, sparsely pubescent, 2–3-noded, dead leaves persistent at base. Sterile shoot leaves subulate, ± canaliculata, rigid, apex acuminate and spinose, equal or longer than cauline leaves. Lower cauline leaves persistent after anthesis; middle linear-subulate, 7.0–9.0 × 0.5–0.7 mm, canaliculata, separated from stem, longer than internodes, rigid, thick, glabrous, apex acuminate and spinose, sheaths up to 2 times as long as wide. Inflorescence erect, flowers solitary; pedicels 1–5 mm long. Epicalyx scales 8–10; outer cartilaginous, greenish or straw-coloured, distinctly 1–3-veined, glabrous, separated from calyx, 3/5–4/5 as long as calyx, linear-subulate, 7.0–10.0 × 0.5–1.0 mm, sometimes very narrowly scarious-ciliate at base, apex acute except arista, arista at least 4/5 as long as scale; inner similar to outer, veinless below, 1–3-veined above, ± equal or 3/4 as long as calyx, oblanceolate, 9–12 × 2–3 mm, with narrowly scarious (0.2–0.3 mm) margins, apex obtuse-truncate except arista, arista 1/4–1/3 as long as scale. Calyx lanceolate, 12.0–15.0 × 2.5–3.2 mm, veinless below, ± distinctly 35–45-veined above, glabrous, greenish or sometimes purplish; teeth narrowly triangular-oblong, 3–5 × c. 1 mm, glabrous, 7–9-veined, apex acuminate and long mucronate. Petals 14–16 mm long; limb narrowly cuneate, 5–6 × 4–5 mm, c. 1/3 as long as petal, 3/4 exserted from calyx, unspotted, barbulate, pale pinkish above, purplish or yellowish-green beneath, 9–11-toothed to apex, teeth up to 1/5 as long as limb; claw 10–11 × c. 1 mm, collar as wide as claw. Capsule shorter than calyx. Seeds elliptic, 2.0–3.0 × 1.1–1.5 mm, brownish-black.

Habitat and phenology: *Dianthus webbianus* grows in rocky places at altitudes of 1675–1750 m a.s.l. It has been observed flowering period is July through August.
Distribution: According to the existing data, the species is only an endemic with a narrow distribution, which is known from its type address at Mount Kaz in Balıkesir Province. When its distribution is taken into consideration, then it can be evaluated as a Mediterranean (East) phytogeographical region element [1]. Topographically, *Dianthus webbianus* and *D. erinaceus* are isolated species.

Specimens examined: *Dianthus webbianus* - TURKEY. Balıkesir: Edremit, Zeytinli village, Kaz Dağı National Park, Sarıkız road, 1675 m a.s.l., 6.8.2012, rocks, *Hamzaoğlu 6590*, *Aksoy* & *Koç* (GAZI!); ibid., summit, rocks, c. 1750 m a.s.l., ?.?.1968, *Quezel s.n.* (ANK!); ibid., 7.7.1965, *Pamukçuoğlu s.n.* (HUB-03826!); ibid., 25.7.1968, *Pamukçuoğlu & Quezel s.n.* (HUB-03826!).

Note: *Dianthus webbianus,* was given as a synonym under *D. erinaceus* at the *Euro+Med* [5] taxonomy website. Whereas, at the *World Flora Online* [4] taxonomy website, *D. webbianus* is valid and it was stated that it is a synonym of *D. erinaceus*. In accordance with the principles of priority in the *International Code of Nomenclature for Algae, Fungi, and Plants (ICN)*, *D. webbianus* (1841) is the valid name that was published previously [6]. On the other hand, place was not given at these taxonomy websites to *D. erinaceus* Boiss. var. *alpinus* Boiss., which was published in 1867 [9]. It can be stated that the confusion experienced on the subject of a valid name stemmed from this taxon, which was overlooked.

When the types and other herbaria specimens were examined in detail belonging to *Dianthus erinaceus* described from Mount Spil in Manisa Province and belonging to *D. webbianus* described from Mount Kaz in Balıkesir Province, it was determined that there were clear differences, especially for flower characters between these two taxa (Table 2). Furthermore, there are also differences for some vegetative characters of these two taxa, such as the body and leaf lengths. These differences clearly showed that *D. erinaceus* and *D. webbianus* are two separate taxa.

The specimens collected by Parolini in 1819 from the summit of Mount Kaz (montis Idae Bithyniae summitate), were named *Dianthus webbianus* in 1841. Although the date of collection is unknown, some specimens also collected by Parolini from the summit of Mount Kaz (summo monte Ida Troadis), were named as *D. erinaceus* var. *alpinus* in 1867. Furthermore, the specimens collected by Sintenis in 1883 from Kapıdağ, which is a part of Mount Kaz (marmor montis Kapu Dagh), were named

as *D. arpadianus* Ade & Bornm. var. *trojanus* Bornm. & Sint. in 1934 [7, 9, 10]. The type specimens belonging to these taxa collected from Mount Kaz were evaluated together with the other herbarium specimens and the related literature and it was decided that these were individuals belonging to the same taxon. In accordance with the principles of priority of the *International Code of Nomenclature for Algae, Fungi, and Plants (ICN)*, *Dianthus webbianus* (1841), which was published previously, was accepted as the valid name [6]. In conclusion, the specimens given as *D. erinaceus* var. *erinaceus* in the *Flora of Turkey and the East Aegean Islands* were evaluated as *D. erinaceus* at Mount Spil in Manisa Province, whereas, the specimens given as *D. erinaceus* var. *alpinus* were evaluated as *D. webbianus* at Mount Kaz in Balıkesir Province [1].

TABLE 2. Morphological comparison between *Dianthus erinaceus* and *D. webbianus*.

Character	*D. erinaceus*	*D. webbianus*
Stem	4–14 cm long, densely pubescent, 3–5-noded	3–4 cm long, sparsely pubescent, 2–3-noded
Cauline leaves	12–20 mm long, equal or shorter than internodes	7–9 mm long, longer than internodes
Outer epicalyx scales	12–19 mm long, pubescent	7–10 mm long, glabrous
Inner epicalyx scales	12–16 mm long, pubescent	9–12 mm long, glabrous
Calyx	16–20 mm long	12–15 mm long
Petal	18–21 mm long	14–16 mm long
Petal limb	6.5–8.0 mm long	5–6 mm long
Petal claw	12–14 mm long	10–11 mm long

3.4 ***Dianthus masmenaeus*** Boiss. var. ***glabrescens*** Boiss., Fl. Or. 1: 502 (1867)! [9].

Protologue citation: [Turkey, Kayseri] “in regione alpina montis Argaei [Erciyes], *Balansa s.n.* (G).

Lectotype (designated here): [Turkey, Kayseri] “Regione alpine du Mount Argaei (Cappadoci), 28 August 1856, *Balansa* 658” (G-BOIS, G00549601, virtual image!). (Figure 2).

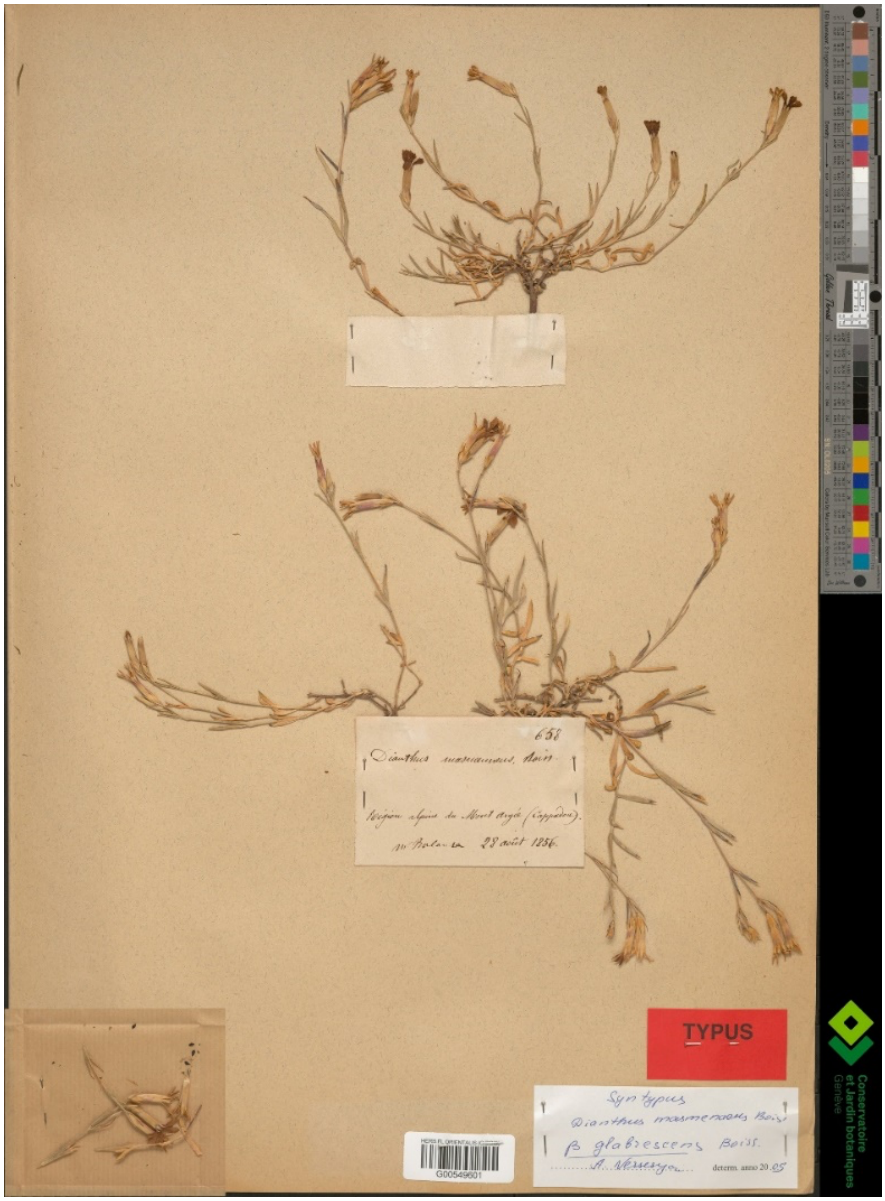

FIGURE 2. Lectotype of *Dianthus masmenaeus* var. *glabrescens* from G-BOIS herbarium (sent by Laurence Loze (secretary of G herbarium) in date 16 Dec 2020).

Other syntype specimens: [Turkey. B6 Kahramanmaraş] “in Cappadocia prope Albistan [Elbistan], *Tchihatcheff s.n*. (G-BOIS, G00549602, virtual image!); [Turkey. B5 Adana] “in Antitauro Cataoniae inter Hadjinjailassi [Haçin (Saimbeyli) plateau] et Faruch [Faraşa, Çamlıca (Yahyalı)], *Tchihatcheff s.n.* (G-BOIS, G00549603, virtual image!).

Note: This taxon is defined based on specimens collected from three localities in Turkey (Kayseri, Adana and Kahramanmaraş) [9]. Three sheets were found in the G-BOIS Herbarium, labelled “Typus”. Since the holotype was not clearly specified, the sheet collected by Balansa from Erciyes Mountain (Kayseri) with the barcode of “G00549601” was chosen as the lectotype (Figure 2).

Declaration of Competing Interests: The authors declare that they have no conflict of interest.

References

[1] Reeve, H., *Dianthus* L. – In: Davis, P.H., editör. *Flora of Turkey and the East Aegean Islands*, vol. 2, Edinburgh University Press, Edinburgh, (1967), 99–131.

[2] Dalcı, M., Morphological studies and new synonyms of some species in *Dianthus* L., *DOĞA Turkish Journal of Biology (Botany),* 10(2) (1986), 138–159.

[3] Nersesyan, A.A., Genus *Dianthus* L. (Caryophyllaceae) in Southern Transcaucasia, *Takhtajania* 1 (2011), 44–51.

[4] World Flora Online (2021). World Flora Online. Published on the Internet http://www.theplantlist.org/ [Retrieved 19 Jan 2021].

[5] Euro+Med (2021). Euro+Med. Published on the Internet http://ww2.bgbm.org/ [Retrieved 19 Jan 2021].

[6] Turland, N.J., Wiersema, J.H., Barrie, F.R., Greuter, W., Hawksworth, D.L., Herendeen, P.S., Knapp, S., Kusber, W.-H., Li, D.-Z., Marhold, K., May, T.W., McNeill, J., Monro, A.M., Prado, J., Price, M.J. and Smith, G.F., 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 (2018), Glashütten: Koeltz Botanical Books. https://doi.org/10.12705/Code.2018.

[7] Visiani, R., *Atti della Seconda Riunione Degli Scienziati Italiani*, 2, Torino, (1841), 180–181.

[8] Boissier, E., *Diagnoses Plantarum Orientalium Novarum*, vol. 1(1), Typographia Ferd. Ramboz, Genevae, (1843), 18–23.

[9] Boissier, E., *Flora Orientalis*, vol. 1, Geneva & Basel, H. Georg, (1867), 483–512.
[10] Fedde, F., *Repertorium Specierum Novarum Regni Vegetabilis. Centralblatt für Sammlung und Veroffentlichung von Einzeldiagnosen neuer Pflanzen. [Repert. Spec. Nov. Regni Veg.]*, 36 (1934), 385–388.
[11] Thiers, B. (2021). Index Herbariorum: A global directory of public herbaria and associated staff. New York Botanical Garden's Virtual Herbarium. http://sweetgum.nybg.org/science/ih/ [Retrieved 19 Jan 2021].
[12] De Candolle, A.P., *Prodromus Systematis Naturalis Regni Vegetabilis*, vol. 1, Sumptibus Sociorum Treuttel et Würtz, Parisii, (1824), 355–365.
[13] Adams, J.M.F., Decades quinque novarum specierum plantarum Caucasici et Iberiae, quas in itinere comitis Mussin-Puschkin observavit, et definitionibus atque descriptionibus illustravit, *Beiträge zur Naturkunde*, 1 (1805), 54–56.
[14] Boissier, E., *Diagnoses Plantarum Orientalium Novarum*, vol. 2(5), Apud B. Herrmann, Lipsiae [Leipzig], (1856), 51–53.