Phytotaxa 772 (3): 276–284
https://www.mapress.com/pt/

Article

ISSN 1179-3155 (print edition)
PHYTOTAXA
ISSN 1179-3163 (online edition)

https://doi.org/10.11646/phytotaxa.772.3.7

To look and to see; a new species of *Lepidium* (Brassicaceae) from Türkiye

ERGİN HAMZAOĞLU
Gazi University, Gazi Education Faculty, Department of Mathematics and Science Education, TR-06560, Yenimahalle, Ankara, Türkiye
erginhamzaoglu@gazi.edu.tr; *https://orcid.org/0000-0001-6053-6796*

Abstract

Lepidium caespitosum is an endemic species growing in semi-saline meadows, identified from Erzurum (Eastern Anatolia, Türkiye). Some specimens collected from saline marshes in Central and Western Anatolia have been identified as *L. caespitosum* for approximately 60 years. In this study, *L. caespitosum* specimens collected from Erzurum in 2025 -presumably the type locality- were morphologically compared with specimens from saline marshes in Central and Western Anatolia that had been previously identified as *L. caespitosum*. The comparison revealed that the Central and Western Anatolian specimens generally differed from the Erzurum specimens in terms of indumentum type and density, leaf dimensions and morphology, pedicel and flower part dimensions, fruit morphology, and habitat preference. The Central and Western Anatolian specimens, which shared similar morphological characteristics, were evaluated as a new species and named "*Lepidium turcicum*". The new species is described, its distribution, a comparison with *L. caespitosum*, its brief ecological preferences, and some illustrative photographs are provided.

Key words: *Lepidium caespitosum*, new species, taxonomy, Türkiye

Introduction

Lepidium Linnaeus (1753: 643), which includes plants of high economic and medicinal importance such as "Cress (*Lepidium sativum* Linnaeus (1753: 644))", is one of the largest genera of the Brassicaceae family (Hedge 1965, Ren *et al.* 2025). Recent phylogenetic studies have expanded the genus's scope and increased the number of taxa by including several closely related genera. According to Al-Shehbaz (in press), the total number of *Lepidium* species is 270 (now 271 with the novelty). A total of 16 species of the genus grow in Türkiye (including *Cardaria* Desvaux (1815: 163) and *Coronopus* Zinn (1757: 325)) (Al-Shehbaz *et al*. 2002, Yüzbaşıoğlu & Keskin 2013).

Lepidium caespitosum Desvaux (1815: 178) is a perennial species described in 1814 based on specimens collected from Erzurum. Endemic to Türkiye, the species is easily distinguished from other perennial species by its wingless fruit, smaller than 5 mm, and its fleshy linear leaves (Hedge 1965). In the period following the publication of the species, all specimens collected from saline marshes in the Tuz Lake (Ankara, Konya, Aksaray), Acıgöl (Denizli, Afyonkarahisar), Seyfe Lake (Kırşehir), and Tödürge Lake (Sivas) basins were identified as *L. caespitosum* (Hedge 1965, see the section on "examined herbarium specimens" in this manuscript).

Detailed examinations revealed significant and persistent morphological differences between samples from Erzurum and those collected from saline marshes in Central and Western Anatolia. In the work titled *Flora of Turkey and the East Aegean Islands*, it is thought that the inability to identify these differences is because the Erzurum samples were not examined carefully enough. In the recently published manuscript entitled "Taxonomic revision of *Lepidium* L. (Brassicaceae) from Turkey," it can be argued that a positive bias stemming from high confidence in the work entitled *Flora of Turkey and the East Aegean Islands* had an effect (Hedge 1965, Bona 2014). Here, it has been determined that specimens collected from salt marshes in Central and Western Anatolia, previously identified as *L. caespitosum*, actually belong to a new species. Based on the examined specimens, both the new species and *L. caespitosum* have been described, and their distinctive characteristics have been determined.

 Accepted by Karol Marhold: 18 Aug. 2026; published: 2 Sept. 2026

Materials & Methods

The material for this study consists of numerous herbarium specimens previously identified as *Lepidium caespitosum.* These specimens were thoroughly evaluated using the related literature and with related species in the herbaria GAZI, NK, HUB, E, K, P, and G (Hedge 1965, Busch 1970, Davis *et al*. 1988). Specimens from Central and Western Anatolia, as well as from Erzurum, were examined in detail, and the differences between them were identified. The specimens were examined and the images were taken using a Leica EZ4 HD microscope and a Canon EOS60D digital camera. The morphological characters were measured using a ruler with 0.5 mm accuracy and an ocular micrometer.

Taxonomy

Lepidium turcicum Hamzaoğlu, ***sp. nov.*** (Figs. 1–3, Table 1).

Diagnosis:—*Lepidium turcicum* is related to *L. caespitosum*, but is distinguished by the stems which glabrous or sparsely papillate towards inflorescence (not sparsely to densely pubescent); the cauline leaves which glabrous and not auriculate (not pubescent especially towards base and subauriculate); the pedicels which glabrous or sparsely papillate and 4.1–6.4 mm long (not pubescent and 6.6–9.1 mm long); the sepals which 1.6–1.9 mm long and glabrous (not 2.1–2.8 mm long and pubescent; the petals which 2.4–3.6 mm long (not 4–5 mm long); and the fruits without sinus (not with 0.2–0.3 mm sinus).

TYPE:—TÜRKİYE. Ankara: Between Şereflikoçhisar and Ankara, 16. km, near Tuz Lake Rest Area, 907 m a.s.l., salt marshes, 16 May 2026, *E.Hamzaoğlu 8279* (holotype GAZI!; isotypes GAZI!, ANK!, HUB!).

Description:—Perennial herbs, 9–20 cm tall. Stems erect, simple or few branched from base, glabrous or sparsely papillate towards inflorescence, petiolar remains present at base. Leaves linear, glabrous; basal long-petiolate, 4–8 cm long (incl. petiole), mostly on non-flowering shoots, base expanded, petiole distinctly narrower than lamina, lamina 1.1–3.2 mm wide; cauline sessile, subamplexicaule, not auriculate, 2.5–5.5 cm long and 1.2–3.1 mm wide. Inflorescence short raceme, simple or corymbosely branched above, glabrous or sparsely papillate. Pedicels ascending, glabrous or sparsely papillate, 4.1–6.4 mm long. Sepals obovate, 1.6–1.9 × 0.6–1.0 mm, glabrous, greenish-purple mixed with white and membranous margins. Petals spathulate, white, 2.4–3.6 × 1.3–1.6 mm. Stamens 6, 1.7–2.4 mm long. Fruits glabrous, broadly ovate-cordate, unwinged, 2.7–3.9 mm long (excl. stigma) and 2.3–3.5 mm wide, with 2.1–2.9 × 0.5–0.8 mm septum, without sinus, stigma 0.2–0.4 mm long. Seeds scarcely winged, ovate, 1.5–2.2 × 0.9–1.5 mm, brown.

Distribution and habitat:—Salt marshes have very high salinity, with soil pH greater than 8 and high concentrations of sodium (Na) and chloride (Cl). These marshes, characterized by their high salt content, appear off-white during the summer and autumn months when the soil surface dries out. They are called "solonchak" or "white-alkaline" because of their appearance (Black 1970). *Lepidium turcicum* prefers saline marshes on the edges of saline lakes in central and western Türkiye. In these areas, elevations range between 800 and 1300 m a.s.l. Numerous populations of this species are found particularly in Tuz Lake, located within the borders of Aksaray, Konya, and Ankara provinces in Central Anatolia. The species also grows in saline marshes on the edges of Seyfe Lake (Kırşehir), Bolluk Lake (Konya), and Tödürge Lake (Sivas) in Central Anatolia, and Acıgöl (between Afyonkarahisar and Denizli) in Western Anatolia (Figure 4, see the section on "examined herbarium specimens" in this manuscript). *Lepidium turcicum* is accompanied by obligate halophytes such as *Limonium iconium* (Boiss. & Heldr.) Kuntze, *L. lilacinum* (Boiss. & Balansa) Wagenitz, *Salsola stenoptera* Wagenitz, *Petrosimonia nigdeensis* Aellen, *P. brachiata* (Pall.) Bunge, *Halocnemum strobilaceum* (Pall.) M.Bieb., *Halimione verrucifera* (M.Bieb.) Aellen, *Puccinellia convoluta* (Hornem.) Fourr., *P. distans* (Jacq.) Parl., *Salicornia europaea* L., *Frankenia hirsuta* L., *Aeluropus littoralis* (Gouan) Parl., *Thesium compressum* Boiss. & Heldr., *Camphorosma monspeliaca* L. subsp. *monspeliaca*, *Lepidium cartilagineum* (J.Mayer) Thell. subsp. *crassifolium* (Waldst. & Kit.) Thell. and *Plantago maritima* L. in the Central and Western Anatolian salt marshes.

Phenology:—Flowering from May to June and fruiting from June to July.

Etymology:—The species was named "*Lepidium turcicum*", inspired by Türkiye, the country where it grows.

Proposed Turkish name:—In Türkiye, the species that grows in the salt marshes of Central and Western Anatolia has been given the name "Türk Teresi (Turkish Cress" which is consistent with its scientific name.

FIGURE 1. Habit. A: *Lepidium turcicum*, B: *L. caespitosum*.

Proposed conservation status:—The threat category of the species was assessed according to IUCN Red List criteria, taking into account field observations and habitat measurements calculated using GeoCat (Bachman *et al*. 2011, IUCN Standards and Petitions Committee 2024*).* Accordingly, the surface area of the salt marshes in Central and Western Anatolia, where the species is likely to be found, is approximately 7,535 km^2, comprising Tuz Lake and its surroundings (including Bolluk Lake, Akgöl, Düden Lake, Eşmekaya Lake, Köpek Lake, and Tersakan Lake) approximately 7,400 km^2, Seyfe Lake approximately 90 km^2, Tödürge Lake approximately 4 km^2, and Acıgöl approximately 41 km^2. Since *Lepidium turcicum* grows only in salt marshes, the waterlogged areas of lakes and the salt steppes surrounding them should be excluded from this surface area calculation. In this case, the species' distribution area would be significantly reduced. On the other hand, the species may also be found in the salt marshes surrounding salt lakes such as Yay Lake and Palas Tuzla Lake (Kayseri), Sarıgöl and Karagöl (Sivas), Akşehir Lake (between Konya and Afyonkarahisar), Burdur Lake (between Burdur and Isparta), Akgöl and Yarışlı Lake (Burdur), which are

not included in the " examined herbarium specimens " section of the species. In the author's extensive studies in the Tuz Lake basin, it was observed that the species is not found in all marshy areas around the lake and shows a fragmented distribution. Where it is found, the population consists of approximately 100–5000 individuals (Aydoğdu *et al*. 2002). This situation is thought to be similar in other saline lakes located in Central and Western Anatolia. The most serious threat to the species' habitat is the drilling of artesian wells for agricultural irrigation. These wells are causing a rapid decrease in groundwater levels, which in turn leads to the drying up of wetlands over time. The drying up of wetlands will cause a decrease, and eventually the complete extinction, of plant species that grow in this habitat. Furthermore, drainage canals constructed to create new agricultural land by reducing salinity pose another threat. They aim to drain saline marshes by removing surface saltwater, thereby reducing soil salinity. This might be a good method for agriculture, but it poses a serious threat to species that prefer salt marshes. Given that the "Area of Occupancy (AOO)" is less than 5.000 km^2 and the habitat is less than 500 km^2, and because of its fragmented distribution and the presence of artesian wells and drainage channels in or near its habitat, it is deemed appropriate to recommend Endangered [EN, B1ab(i,ii)] as the threat status for *Lepidium turcicum.*

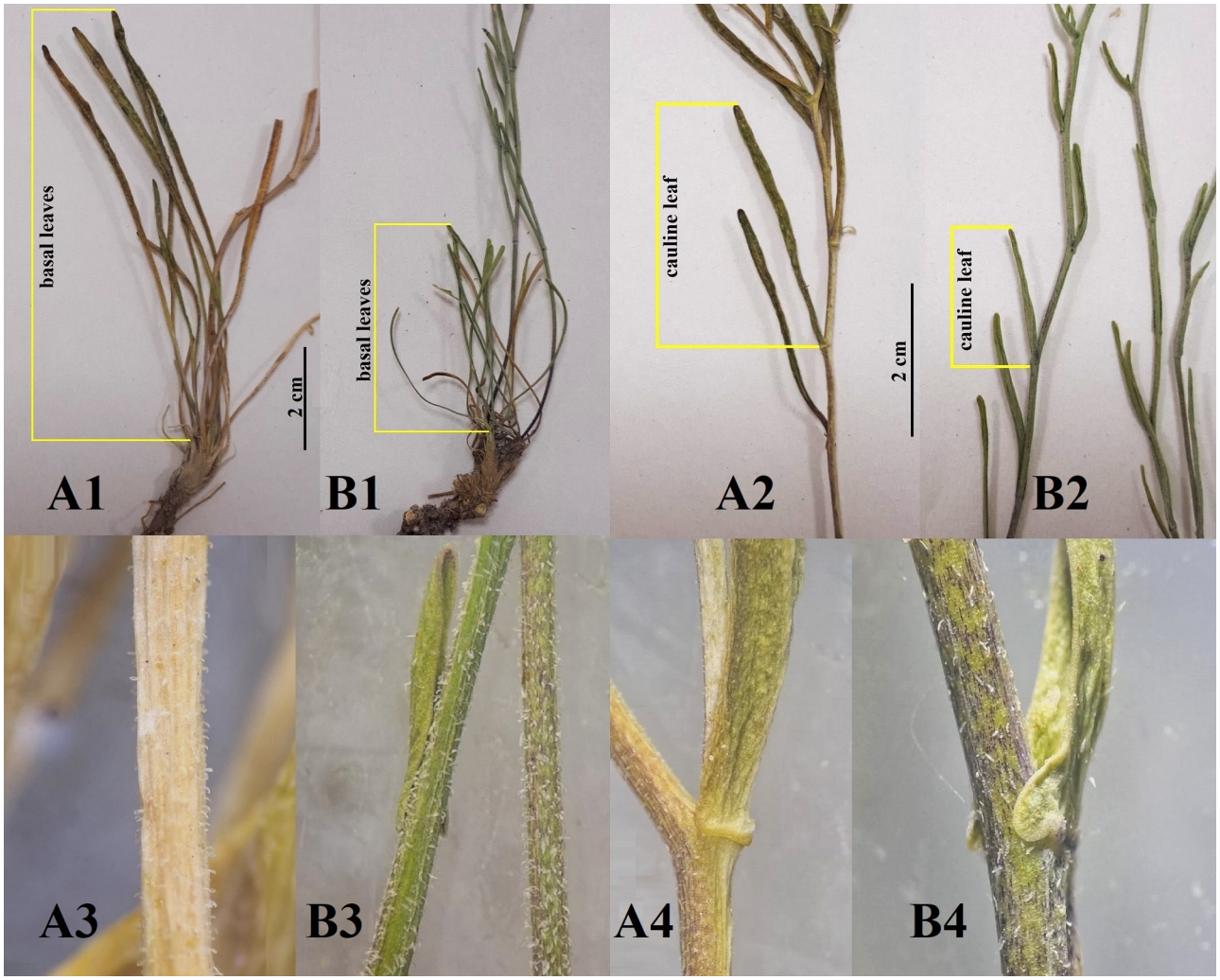

FIGURE 2. *Lepidium turcicum* (A) and *L. caespitosum* (B). 1: basal leaves, 2: cauline leaves, 3: indumentum, 4: auricle.

Lepidium caespitosum Desv., J. Bot. Agric. 3: 165 (1815). (Figs. 1–3, Table 1).

Type:—[TÜRKİYE]. Habitat in Oriente [*Tournefort s.n.*] (holo. P05356175, virtual image).

Description: Perennial herbs, 5–16 cm tall. Stems erect, simple, sparsely to densely pubescent, petiolar remains present at base. Leaves linear, pubescent especially towards base; basal long-petiolate, 2–4.5 cm long (incl. petiole), mostly on non-flowering shoots, base expanded, petiole scarcely narrower than lamina, lamina 0.5–0.9 mm wide; cauline sessile, subamplexicaule, subauriculate, 1.1–3.1 cm long and 0.8–1.1 mm wide. Inflorescence short raceme, usually simple or rarely corymbosely few branched above, pubescent. Pedicels ascending, pubescent, 6.6–9.1 mm long. Sepals obovate, 2.1–2.8 × 1.2–1.6 mm, pubescent, greenish-purple mixed with white and membranous margins. Petals

spathulate, white, 4–5 × 2.1–2.5 mm. Stamens 6, 2.3–3.1 mm long. Fruits glabrous, ovate-elliptic to suborbicular, unwinged, 2.8–4.1 mm long (excl. stigma) and 2.1–3.1 mm wide, with 2.3–2.8 × 0.6–0.9 mm septum, with 0.2–0.3 mm sinus, stigma 0.6–1.1 mm long. Seeds scarcely winged, ovate, 1.4–2.1 × 0.9–1.3 mm, brown.

FIGURE 3. *Lepidium turcicum* (A) and *L. caespitosum* (B). 1: sepals, 2: petals, 3: fruit.

Distribution and habitat:—*Lepidium caespitosum* prefers meadow areas in northeastern Türkiye, within the borders of Erzurum province, where mild salinity occurs due to poor drainage. In these areas, elevations vary between 1755 and 1770 m a.s.l. The species is known from two locations: the area around the city center of Erzurum and the district of İspir (Erzurum). This study examined the *Lepidium caespitosum* population in Çayırtepe village, located around Erzurum. The specific location indicated by the reference to İspir is not clearly known. (Figure 4, see the section on "examined herbarium specimens" in this manuscript). The species grows often together with *Puccinellia distans*, *Suaeda confusa* Iljin, *Plantago maritima*, *Lepidium cartilagineum* subsp. *crassifolium*, *Scorzonera cana* (C.A.Mey.) Griseb. var. *jacquiniana* (W.Koch) D.F.Chamb, *Halimione verrucifera*, *Carex divisa* Huds., *Limonium bellidifolium* (Gouan) Dumort. var. *bellidifolium*.

Phenology:—Flowering from May to June and fruiting from June to July.

Proposed conservation status:—According to field observations and herbarium specimens, the species is found between Çayırtepe and Dumlu villages, northeast of Erzurum city center, and within the borders of the Ispir district (Erzurum) (see the section on "examined herbarium specimens" in this manuscript). No current evidence has been found

of the population of the specimen collected by Alfred Huet du Pavillon in June 1853, labelled "İspir" (G00796828). The address is probably incomplete, with "İspir" written instead of "İspir road," as suitable habitats for the species exist along the road from Erzurum city center towards İspir district. Even if the address were correct, the species likely inhabits a very limited area in İspir district. To the north and west of Erzurum (particularly between the villages of Çayırtepe and Dumlu), there are approximately 80 km² of poorly drained meadow areas. If we assume that the narrow area in İspir district is approximately 10 km², then the species "Extent of Occurrence (EOO)" is approximately 90 km². On the other hand, the entire area between the villages of Çayırtepe and Dumlu is not suitable for the growth of this species. The area has numerous low-salinity regions dominated by harvested Poaceae species (Tan *et al*. 2002). In addition, some areas remain underwater year-round. In this case, the species "Area of Occupancy (AOO)" is less than 10 km². Intensive agricultural activities are carried out in the species' distribution area. Furthermore, the area also contains two large drainage channels that reduce salinization (which is detrimental to the species). Based on field observations, habitat calculations using GeoCat, and an assessment considering IUCN Red List criteria, it is deemed appropriate to recommend *Critically Endangered* [CR, B1ab(i,ii)] for the threat status of *Lepidium caespitosum* (Bachman *et al*. 2011, IUCN Standards and Petitions Committee 2024).

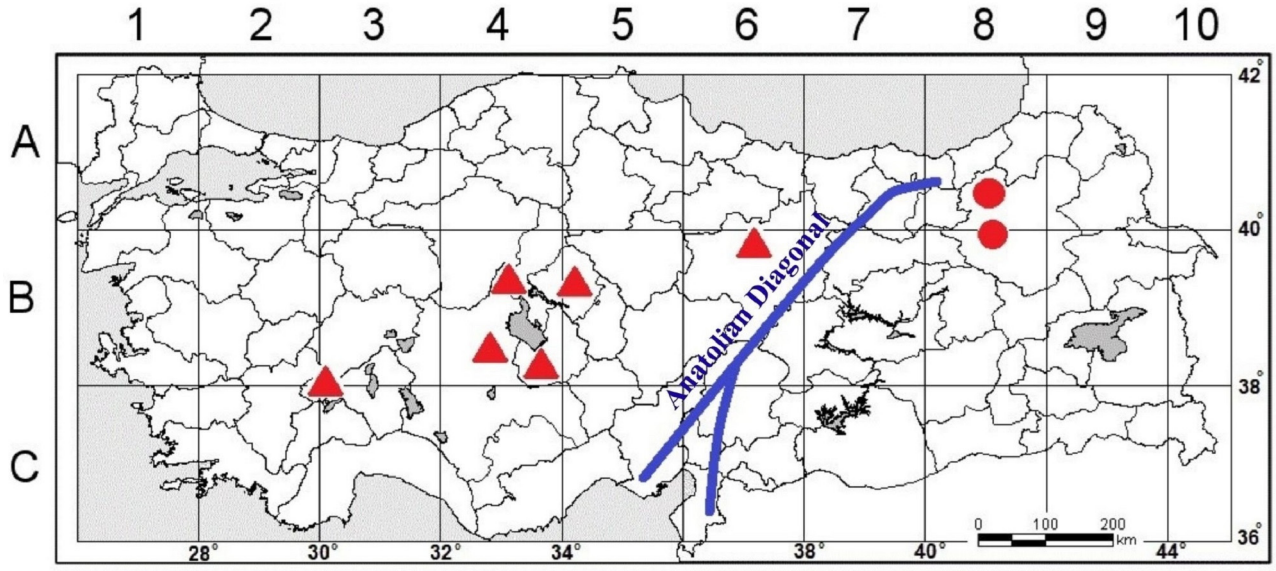

FIGURE 4. Distribution map of *Lepidium turcicum* (▲) and *L. caespitosum* (●).

Taxonomic notes:—Indumentum is the most noticeable difference between *Lepidium turcicum* and *L. caespitosum*. *L. turcicum* is hairless or sparsely hairy only towards the inflorescence. Whereas, all above-ground parts of *L. caespitosum* are hairy. In terms of vegetative characteristics, the basal leaves (including the petiole) of *L. turcicum* are longer and wider. On the other hand, the stem leaves of *L. caespitosum* are subauriculate, while auricles are absent in *L. turcicum*. In terms of generative characteristics, the most important difference is observed in the fruit. *L. turcicum* fruits lack sinuses and have a short stigma. Furthermore, the pedicel, sepal, and petal dimensions of *L. turcicum* are smaller (Table 1).

Lepidium turcicum is distinguished from *L. caespitosum* by indumentum, basal leaf dimensions, stem leaf base characteristics, pedicel, sepal and petal dimensions, and fruit tip characteristics (Table 1). The first question that comes to mind is why these differences weren't understood before. Firstly, *L. caespitosum* is an endemic species to Türkiye, known only from the vicinity of Erzurum. Therefore, the number of specimens collected and examined is quite small. When examining *Flora of Turkey and the East Aegean Islands*, the first and most comprehensive revision on the genus *Lepidium* in Türkiye, it is understood that only the "İspir" specimen belonging to the Erzurum population of *L. caespitosum* was observed. All other specimens examined in this article are from Central and Western Anatolia, referred to as *Lepidium turcicum* (Hedge 1965). In the revision study conducted by Bona (2014), it is observed that the evaluation of the species *Lepidium caespitosum* generally follows the work entitled *Flora of Turkey and the East Aegean Islands*. In his revision included in the same work, Hedge (1965) stated that further studies were needed to clarify the boundaries between *L. caespitosum* and *L. cartilagineum* Thell. In his revision, Bona (2014) clarified this issue and concluded that the two species are distinct. What made Hedge (1965) suspicious was probably the co-occurrence of *L. caespitosum* and *L. cartilagineum* in the saline areas between Çayırtepe and Dumlu villages in

Erzurum, because specimens of both species were collected from the same place by Alfred Huet du Pavillon (Hedge 1965). However, this is not a variation, but a habitat preference. These two species still grow in the same place (Bona 2014).

TABLE 1. Comparison morphological characteristics of *Lepidium turcicum* and *L. caespitosum*.

Characters	*Lepidium turcicum*	*Lepidium caespitosum*
Stems	glabrous or sparsely papillate towards inflorescence	sparsely to densely pubescent
Leaves	glabrous	pubescent especially towards base
Basal leaves	4-8 cm long (incl. petiole), petiole distinctly narrower than lamina, lamina 1.1-3.2 mm wide	2–4.5 cm long (incl. petiole), petiole scarcely narrower than lamina, lamina 0.5–0.9 mm wide
Cauline leaves	not auriculate, 1.2–3.1 mm wide	subauriculate, 0.8–1.1 mm wide
Inflorescence	sparsely papillate	pubescent
Pedicels	glabrous or sparsely papillate, 4.1–6.4 mm long	pubescent, 6.6–9.1 mm long
Sepals	1.6–1.9 × 0.6–1.0 mm, glabrous	2.1–2.8 × 1.2–1.6 mm, pubescent
Petals	2.4–3.6 × 1.3–1.6 mm	4–5 × 2.1–2.5 mm
Fruits	without sinus, stigma 0.2–0.4 mm long	with 0.2–0.3 mm sinus, stigma 0.6–1.1 mm long
Habitat	salt marshes, 800–1300 m a.s.l.	semi-salty meadows, 1760 m a.s.l.

Distribution and habitat notes:—When the distribution of *Lepidium turcicum* and *L. caespitosum* is examined, it is evident that the Anatolian Diagonal is an important geographical dividing line (Davis, 1965; Gür, 2016). Accordingly, *L. turcicum* grows west of the diagonal, while *L. caespitosum* grows east of it (Figure 4). In his taxonomic study of some Asian *Lepidium* species, German (2020) stated that *L. caespitosum* is not widely distributed in Türkiye and occurs only in Northeastern Anatolia (i.e., Erzurum). On the other hand, neither the work entitled *Flora of Turkey and the East Aegean Islands* nor subsequent studies have indicated that the populations called *Lepidium caespitosum* in Central and Western Anatolia belong to a new species (Hedge 1965, Aydoğdu *et al*. 2002, Serteser & Acar 2016, Yıldırımlı 2019).

The two species have different preferred altitude ranges and habitat types. *Lepidium turcicum* grows in salt marshes on the edges of lakes at altitudes between 800 and 1300 m a.s.l. in Central and Western Anatolia. However, based on current information, *L. caespitosum* grows in poorly drained, semi-saline meadows at an altitude of approximately 1760 m a.s.l. (Tan *et al.* 2002). In addition, more than 15 obligate halophyte species are found in the habitat of *L. turcicum* (Aydoğdu *et al*. 2002, Serteser & Acar 2016, Dítě *et al*. 2023). However, observations have revealed that six obligate halophyte species have been identified in the habitat of *L. caespitosum* (see "distribution and ecology" for *Lepidium caespitosum*). On the other hand, *Puccinellia distans*, *Plantago maritima*, *Lepidium cartilagineum* subsp. *crassifolium*, and *Halimione verrucifera* are common neighboring species within both species.

Specimen examined:—*Lepidium turcicum* (all paratypes). [TÜRKİYE]. AFYONKARAHİSAR: Between Dazkırı and Çardak, Gemiş village road, 2–3. km, edge of Acıgöl, 800 m a.s.l., 10 April 1998, *Z.Aytaç 7788* (GAZI!); AKSARAY: Between Sultanhanı and Eskil, 900 m a.s.l., salt marshes, 11 November 1993, *N.Adıgüzel 1424 & H.Duman* (GAZI!); ANKARA: Between Şereflikoçhisar and Ankara, 16. km, near Tuz Lake Rest Area, 907 m a.s.l., salt marshes, 30 June 2025, *E.Hamzaoğlu 8234* (GAZI!, ANK!, HUB!); Between Şereflikoçhisar and Aksaray, edge of Tuz Lake, 1 June 1998, *M.Aydoğdu 3832* (ANK!); shore of Tuz Lake, 25 km., north of Şereflikoçhisar, c. 900 m a.s.l., salt marsh, 28 July 1956, *McNeill 304* (E00051317!, K005934124!, virtual images); Tuz Lake, 10 km S of Şereflikoçhisar, 950 m a.s.l., salt mudflats, on drier mud, 29 April 1965, M.J.E.Coode & B.M.G.Jones 168 (E00051321!, virtual image); DENİZLİ: Between Acıgöl and Dazkırı, near Alkim Soda Factory, 825 m a.s.l., 19 June 1994, *E.Yurdakulol s.n.* (ANK!); KIRŞEHİR: Sifegöl [Seyfe Lake] near Mucur, salt marsh, 17 June 1954, *P.H.Davis 21795* (E00051319!, K005934122!, virtual images); KONYA: Between Cihanbeyli and Konya, near Kırkışla village, 30 May 1956, *H.Birand 144* (ANK!); Between Konya and Cihanbeyli, 81 km., fringe of Ağabeyli village, in vicinity of Acı Tuz Lake (Bolluk Lake), 980 m a.s.l., edge of salt marsh, 27 May 1956, *H.Demiriz 2770* (E00051318!, virtual image); SİVAS: Between Zara and Sivas, 1300 m a.s.l., salt marsh, 20 May 1960, *Stainton & Henderson 5086* (E00051322!, K005934121!, virtual images).—***Lepidium caespitosum*.** [TÜRKİYE]. ERZURUM: Yakutiye, north of Çayırtepe village, 1760 m a.s.l., semi-salty meadows, 30 May 2025, *E.Hamzaoğlu 8229* (GAZI!, ANK!, HUB!, flowered); ibid., 27 June 2025, *E.Hamzaoğlu*

8232 & M.Koç (GAZI!, ANK!, HUB!, fruited); [Erzurum] Habitat in Oriente [*Tournefort s.n.*] (P05356175!, virtual image, holotype); Paludes Erzeroum [Erzurum], *A.Huet s.n.* (G00796829!, virtual image); Circa Erzeroum [Erzurum], in paludosis decno Euphratem, fl. June an fr. July 1853, *A.Huet s.n.* (P05356174!, P05356176!, P05098886!, virtual images); [Erzurum], İspir, June 1853, *A.Huet s.n.* (G00796828!, virtual image).

Acknowledgments

The author is grateful to the curators of the GAZI, ANK, HUB, E, K, P, and G herbaria. The *Lepidium caespitosum* specimens used in this study (Çayırtepe, Erzurum) were collected during TANAP Biorestoration Monitoring studies. I would like to express my gratitude to the TANAP Natural Gas Transmission Company and the contractor Assystem Energy and Environmental Investments Inc. (Türkiye) for preparing this study's foundation and contributing to the *Lepidium* (Brassicaceae) taxonomy.

References

Al-Shehbaz, I.A., Mummenhoff, K. & Appel, O. (2002) *Cardaria*, *Coronopus*, and *Stroganowia* are United with *Lepidium* (Brassicaceae). *Novon* 12 (1): 5–11. https://doi.org/10.2307/3393229

Aydoğdu, M., Hamzaoğlu, E. & Kurt, L. (2002) New halophytic syntaxa from Central Anatolia (Turkey). *Israel Journal of Plant Sciences* 50 (4): 313–323.

Bachman, S., Moat, J., Hill, A.W., De La Torre, J. & Scott, B. (2011) Supporting Red List threat assessments with GeoCAT: geospatial conservation assessment tool. *ZooKeys* 150: 117–126. https://doi.org/10.3897/zookeys.150.2109

Black, C.A. (1970) *Toprak Bitki Münasebetleri* (in Turkish). Atatürk Üniversitesi Yayınları, Erzurum, No. 75, 313 pp.

Bona, M. (2014) Taxonomic revision of *Lepidium* L. (Brassicaceae) from Turkey. *İstanbul Journal of Pharmacy* 44 (1): 31–62.

Busch, N.A. (1970) *Lepidium* L. *In*: Komarov, V.L. (Ed.) *Flora of the U.S.S.R.*, Vol. 8. Keter Press, Jeruselam, pp. 374–391 (English version, translated from Russian by R. Lavoott). [Bush, N.A. (1939) *Lepidium* L. *In*: Komarov, V.L. (Ed.) *Flora SSSR*, Vol. 8. Botanical Institute of the Academy of Sciences of the U.S.S.R, Moskva-Leningrad, Izdatel'stvo Akademii Nauk SSSR, pp. 501–524]

Davis, P.H. (1965) *Phytogeography*. *In*: Davis, P.H. (Ed.) *Flora of Turkey and the East Aegean Islands*, Vol. 1. Edinburgh University Press, Edinburgh, pp. 16–26.

Davis, P.H., Mill, R.R. & Tan, K. (1988) *Flora of Turkey and the East Eagean Islands*, Vol. 10. Edinburgh University Press, Edinburgh, pp. 31–32.

Desvaux, N.A. (1815) Sur la famille des Plants Crucifères. *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 3 (4): 145–187.

Dítě, D., Šuvada, R., Tóth, T. & Dítě, Z. (2023) Inventory of the halophytes in inland central Europe. *Preslia* 95 (2): 215–240. https://doi.org/10.23855/preslia.2023.215

German, D.A. (2020) Taxonomic remarks on selected Asian *Lepidium* (Brassicaceae). *Phytotaxa* 452 (1): 33–45. https://doi.org/10.11646/phytotaxa.452.1.3

Gür, H. (2016) The Anatolian diagonal revisited: Testing the ecological basis of a biogeographic boundary. *Zoology in the Middle East* 62 (3): 189–199. https://doi.org/10.1080/09397140.2016.1226544

Hedge, I. (1965) *Lepidium* L. *In*: Davis, P.H. (Ed.) *Flora of Turkey and the East Aegean Islands*, Vol. 1. Edinburgh University Press, Edinburgh, pp. 279–285.

IUCN Standards and Petitions Committee (2026) Guidelines for Using the IUCN Red List Categories and Criteria, Version 14. Prepared by the Standards and Petitions Committee. Available from: http://www.iucnredlist.org/documents/RedListGuidelines.pdf (accessed 5 August 2026)

Linnaeus, C. (1753) *Species plantarum*, Vol. 2. Impensis Laurentii Salvii, Holmiae, 755 pp.

Ren, T., Xun, L., Jia, Y., Zhou, H. & Li, B. (2025) Insights into the plastome evolution and phylogenetic relationships of *Lepidium* (Brassicaceae). *BMC Plant Biology* 25: Article number 1489.

https://doi.org/10.1186/s12870-025-07524-4
Serteser, A. & Acar, H. (2016) The Relationship Halophytic Vegetation and Soil in the Vicinity of Acıgöl (Afyonkarahisar) (in Turkish). *Afyon Kocatepe University Journal of Sciences and Engineering* 16 (3): 495–506. https://doi.org/10.5578/fmbd.34215
Tan, M., Koç, A. & Erkovan, H.İ. (2002) Dumlu Yöresi (Erzurum) Tuzlu-Alkali Topraklarında Yetişebilecek Yembitkisi Türlerinin Belirlenmesi. *Atatürk Üniversitesi Ziraat Fakültesi Dergisi* 33 (3): 277–281.
Yıldırımlı, Ş. (2019) Two new species of Brassicaceae, *Descurainia tugayi* and *Lepidium tuzgoeluense* from Konya, Turkey. *Ot Sistematik Botanik Dergisi* 26 (1): 93–101.
Yüzbaşıoğlu, İ.S. & Keskin, M. (2013) A new record for the flora of Turkey: *Lepidium didymum* L. (Brassicaceae). *Biological Diversity and Conservation* 6 (3): 46–48.
Zinn, J.G. (1757) *Catalogus Plantarum Horti Academici et Agri Gottingensis*. Svmtibvs vidvae Abr. Vandenhoeck, Gottingae, 473 pp.