

The Check-List and Chorology of the *Linum* L. (Linaceae) Taxa in the Flora of Turkey

Özer Yılmaz* and Gönül Kaynak

Uludağ University, Science & Art Faculty, Biology Department, 16059, Görükle, Bursa, Turkey

ABSTRACT

A check-list of the genus *Linum* L. in the Flora of Turkey is presented with 51 taxa, of which 22 are endemic to Turkey. Taxonomical changes that have occurred since the recent publications are included. The chorology of taxa are given in dotted squares of the map of Turkey.

Key Words: check-list, chorology, *Linum*, Linaceae, Turkey.

INTRODUCTION

The genus *Linum* L. comprises about 180 species in the temperate region of the World (Mabberley 2002). The Mediterranean area is one of the main centers of diversity for this genus and restricted about 75 species (Greuter et al 1989), particularly *Linum* localized in the Balkans and Anatolia (Davis 1967a). The *Linum* species are herbs or small shrubs, with alternate or rarely opposite, entire leaves, with or without stipular glands at base. The flowers born usually in cymes or rarely solitary, which are five numerous, heterostilous or homostilous (Davis 1967a). The genus has economic importance, especially the common flax *L. usitatissimum* L. cultivated for the seed (flax oil) and fiber production (Baytop 1999).

Boissier (1867, 1888) recognized 42 species of *Linum* in his *Flora Orientalis*, some of these species were described from Turkey. Davis (1957; 1967b) carried out taxonomic studies on *Linum* in Turkey, where he made new combinations and described many new taxa. The first revision of *Linum* in Turkey was done by Davis (1967a) for the Flora of Turkey and the East Aegean Islands in which they recognized 38 species. They indicated the possibility of finding further species either imperfectly known (*L. annotinum* Koch, *L. vanense* Azn.). A complementary work is the Donner's (1990) distribution maps of all taxa presented in the Flora of Turkey. Donner (1990) has been given the chorology for 50 taxa of *Linum* in dotted squares of the map of Turkey.

Since *Linum* was revised by Davis (1967a) for the flora of Turkey, *L. maritimum* L. has been added as a new record (Güner et al 1996) and two new taxa has been published, *L. pamphylicum* Boiss. and Heldr. ex Planch. subsp. *olympicum* Kaynak and Yılmaz and *L. vuralianum* Yılmaz and Kaynak (Yılmaz 2003; Yılmaz et al 2003; Yılmaz and Kaynak 2008). Moreover, two new combinations were given, *Linum pamphylicum* subsp. *papilliferum* (Hub.–Mor. and Reese) Yılmaz and Kaynak and *Linum hirsutum* subsp. *platyphyllum* (P. H. Davis) Yılmaz and Kaynak (Yılmaz and Kaynak 2006a, 2006b). In addition, one new combination has been made, *L. pubescens* subsp. *anisocalyx* (P. H. Davis) Yılmaz and Kaynak (2008).

The present work gives the first updated check-list and the chorology of the *Linum* taxa in the Flora of Turkey after Davis (1967a) and Donner (1990).

MATERIALS AND METHODS

Since 2000, during our taxonomical work of the genus *Linum* L. (Linaceae) in Turkey, we have carried out extensive field studies and collected large of number of specimens. Some of these materials were compared with the specimens in the herbaria of ANK, AEF, BASBG, BULU, DUF, EGE, ESSE, GAZI, HUB, ISTO, ISTF, KNYA, MARE, US, WAG and VANF. They were identified with the aid of Flora of Turkey (Davis 1967a), Flora Europea (Ockendon and Walters 1964), Flora of U.S.S.R. (Yuzepchuk 1974), Flora of Cyprus (Meikle 1977), Flora of Iran (Sharifnia and Assadi 2001) Flora of Iraq (Agnew 1980), Flora Palaestina (Zohary 1987), and some other publications (Boissier 1867; Davis 1957; Davis 1967b; Hartvig 1986). In totally, over then 1500 herbarium specimens have been studied carefully. The check-list and chorology of the *Linum* species in the Flora of Turkey based on relevant literature given above and other publications (Akçiçek 2002; 2003; Akıncı and Özhatay 2000; Aslan and Türkmen 2003; Aydoğdu and Akan 2005; Donner 1990; Dönmez 2002; Duman 1991; Eminağaoğlu and Anşın 2003; Fakir 2006; Gümüş 1994; İlarlan

* Corresponding author: ozery@uludag.edu.tr

et al 1997; Ketenoglu and Güney 1997; Kandemir et al 2000; Karaer and Kilm 2001; Kaynak 1987; Özgökçe and Behçet 2001; Sanön and Özen 2001; Seçmen and Leblebici 1978; 1990; Serin and Ertugrul 1999; Serin et al 2001; Tugay et al 2002; Türe and Tokur 2000; Ocakverdi 2001; Tatlı et al 2002; Vural et al 1997). According to the publications, the names of some taxa have changed. The plant list is given alphabetically. Synonymous and distribution are also given in after the current names. The authors of plant names follow Brummitt and Powell (1992).

RESULTS AND DISCUSSION

The check-list and the chorology of the genus *Linum* in the Flora of Turkey:

1. *Linum arboreum* L. in Sp. Pl. 279 (1753).
Synonym: *L. caespitosum* Sibth. & Sm. in Fl. Graec. Prodr. 1: 216 (1806). *L. dorfleri* Rech. f. in Oesterr. Bot. Z. 84: 147 (1935).
Distribution: Greece (Crete and Karpathos Island), Southwest Turkey (Figure 1). East Mediterranean Element.
2. *Linum aretioides* Boiss. in Diagn. ser. 1(1): 55 (1843).
Distribution: Endemic to Turkey (Figure 1).
3. *Linum aroanium* Boiss. & Orph. in Boiss. Diagn. ser. 2 (1): 96 (1854).
Synonym: *L. bithynicum* Azn. in Bull. Bot. Soc. Fr. 44: 167 (1897). *L. cassium* Rech. f. in Ark. Bot. Andra ser. 1: 312 (1950). *L. aroanium* var. *paphlagonicum* P. H. Davis in Notes R. B. G. Edinb. 22: 137 (1957).
Distribution: Greece, Syria, Lebanon, Turkey (Figure 1).
4. *Linum austriacum* L. in Sp. Pl. 278 (1753) subsp. *austriacum*
Synonym: *L. squamulosum* Rud. in Willd., Enum. 338 (1809).
Distribution: Europe, Russia, Crimea, Caucasus, Iran, Iraq, Afghanistan, Turkey (Figure 2.).
5. *Linum austriacum* subsp. *glaucescens* (Boiss.) P. H. Davis in Notes R. B. G. 28: 38 (1967).
Synonym: *L. glaucum* Boiss. & Noe in Boiss., Diagn. ser. 2(5): 66 (1856). *L. alpinum* Jacq. var. *glaucescens* Boiss. in Fl. Or. 1: 865 (1867).
Distribution: Caucasus, Iran, Turkey (Figure 1).
6. *Linum bienne* Mill. in Gard. Dict. Cd 8, no.8 (1768).
Synonym: *L. angustifolium* Hud. in Fl. Anagl. ed. 2, 134 (1798).
Distribution: Europe, Caucasus, Syria, Iran, Iraq, Turkey (Figure 1). Mediterranean Element.
7. *Linum boissieri* Aschers. & Sint. ex Boiss. In Fl. Or. Suppl. 137 (1888).
Distribution: Endemic to Turkey (Figure 1). East Mediterranean Element.
8. *Linum cariense* Boiss. in Diagn. ser. 1(5): 86 (1884).
Synonym: *L. lignosum* Stapf in Denk. Denkschr. Kaiserl. Akad. Wiss., Wien. Math.-Naturwiss. Kl. 51(2): 22 (1886). *L. verruciferum* Azn. in Bull. Herb. Boissier 2(7): 314 (1907).
Distribution: Endemic to Turkey (Figure 1). Iran-Turanian Element.
9. *Linum catharticum* L. in Sp. Pl. 281 (1753).
Distribution: Europe, Northwest Africa, Caucasus, Iran, Turkey (Figure 1). Euro-Siberian Element.
10. *Linum ciliatum* Hayek in Ann. Nat. Hofmus. Wien, 28: 160 (1914).
Distribution: Endemic to Turkey (Figure 1).
11. *Linum corymbulosum* Rchb. in Fl. Germ. Exc. 834 (1830-1832).
Synonym: *L. liburnicum* auct. non Scop. in Fl. Carn. ed. 2, 1: 230 (1772).
Distribution: South Europe, Southwest Asia, East Africa, Turkey (Figure 1). Mediterranean Element.
12. *Linum densiflorum* P. H. Davis in Notes R. B. G. Edinb. 22: 146 (1957).
Distribution: Caucasus, Iran, Turkey (Figure 1). Iran-Turanian Element.
13. *Linum empetrifolium* Schott & Kotschy in Tchihat. Asie Min. Bot. i. 143 (1860). Synonym: *L. carnosulum* Boiss. var. *empetrifolium* Schott & Kotschy ex Boiss. in Fl. Or. 1: 864 (1867). *L. empetrifolium* (Boiss.) P. H. Davis in Notes Roy. Bot. Gard. Edinb. 28: 38 (1967).
Distribution: Endemic to Turkey (Figure 1).
14. *Linum flavum* L. in Sp. Pl. 279 (1753). subsp. *flavum*
Distribution: Europe, South Russia, Crimea, Caucasus, Turkey (Figure 1). Euro-Siberian Element.

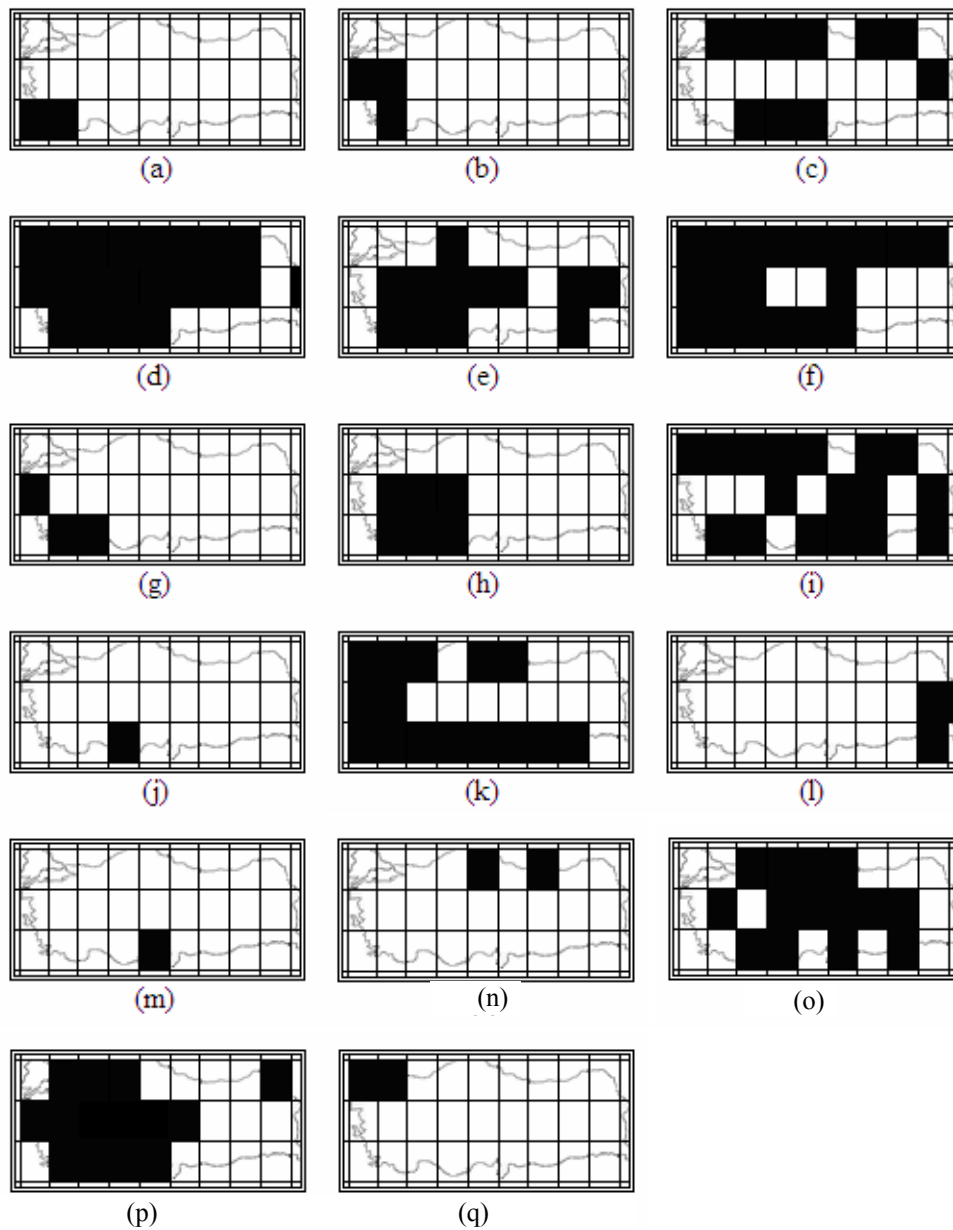


Figure 1. Distribution of *L. arboretum* (a), *L. aretioides* (b), *L. aroanium* (c), *L. austriacum* subsp. *austriacum* (d), *L. austriacum* subsp. *glaucescens* (e), *L. bienne* (f), *L. boissieri* (g), *L. cariense* (h), *L. catharticum* (i), *L. ciliatum* (j), *L. corymbulosum* (k), *L. densiflorum* (l), *L. empetrifolium* (m), *L. flavum* subsp. *flavum* (n), *L. flavum* subsp. *scabrinerve* (o), *L. hirsutum* subsp. *anatolicum* (p) and *L. hirsutum* subsp. *byzantinum* (q) in dotted squares of the map of Turkey.

15. *Linum flavum* subsp. *scabrinerve* (P. H. Davis) P. H. Davis in Notes R. B. G. Edinb. 28: 38 (1967).

Synonym: *L. scabrinerve* P. H. Davis in Notes R. B. G. Edinb. 22: 158 (1957).

Distribution: Endemic to Turkey (Figure 1) . Iran-Turanian Element.

16. *Linum hirsutum* L. subsp. *anatolicum* (Boiss.) Hayek in Prodr. Fl. Balc. 1: 564 (1925).

Synonym: *L. anatolicum* Boiss. in Diagn. ser. 1(1): 56 (1843). *L. hirsutum* var. *glanduliferum* Boiss. in Fl. Or. 1: 859 (1867).

Distribution: Endemic to Turkey (Figure 1). Iran-Turanian Element.

17. *Linum hirsutum* subsp. *byzantinum* Azn. in Bull. Soc. Bot. Fr. 46: 140 (1899).

Distribution: North Greece, Turkey (Figure 1).

18. *Linum hirsutum* subsp. *oreocaricum* P. H. Davis in Notes R.B.G. Edinb. 22: 143 (1957).

- Distribution: Endemic to the flora of Turkey (Figure 2). Iran-Turanian Element.
19. *Linum hirsutum* subsp. *platyphyllum* (P. H. Davis) Yılmaz & Kaynak Ann. Bot. Fennici 43(1): 62 (2006).
Synonym: *L. hirsutum* subsp. *anatolicum* var. *platyphyllum* P. H. Davis in Notes R.B.G. Edinb. 22: 142 (1957).
Distribution: Endemic to Turkey (Figure 2). Iran-Turanian Element.
20. *Linum hirsutum* subsp. *pseudoanatolicum* P. H. Davis in Notes R.B.G. Edinb. 22: 143 (1957).
Synonym: *L. hirsutum* subsp. *anatolicum* var. *eglandulosum* P. H. Davis in Notes R.B.G. Edinb. 22: 142 (1957).
Distribution: Endemic to Turkey (Figure 2). Iran-Turanian Element.
21. *Linum hypericifolium* Salisb. in Parad. 79 (1806).
Distribution: Caucasus, Turkey (Figure 2).
22. *Linum maritimum* L. Sp. Pl. 280 (1753).
Distribution: South Europe, Cyprus, Palestine, Turkey (Figure 2). Mediterranean Element.
23. *Linum meletonis* Hand.-Mazz. in Ann. Nat. Hofmus. Wien, 27: 62 (1913).
Distribution: North Iraq, Turkey (Figure 2). Iran-Turanian Element.
24. *Linum mucronatum* Bertol. in Misc. Bot. (1): 18 (1842) non Gilib. (1792) nomen illegit. subsp. *mucronatum*
Synonym: *L. sulphureum* Boiss. & Hauskn. ex Boiss. in Fl. Or. 1: 857 (1867). *L. rigidissimum* Post in J. Linn. Soc. Bot. 24: 424 (1886).
Distribution: North Iraq, Syria, Turkey (Figure 2). Iran-Turanian Element.
25. *Linum mucronatum* subsp. *orientale* (Boiss.) P.H. Davis in Notes R.B.G. Edinb. 22: 153 (1957).
Synonym: *L. flavum* L. var. *orientale* Boiss in Dagn. ser. 2(1): 99 (1853). *L. orientale* (Boiss.) Boiss. in Fl. Or. 1: 855 (1867).
Distribution: Syria, Turkey (Figure 2). Iran-Turanian Element.
26. *Linum mucronatum* subsp. *armenum* (Bordz.) P. H. Davis in Notes R.B.G. Edinb. 28: 37 (1967).
Synonym: *L. balansae* Boiss. in Fl. Or. 1: 855 (1867). *L. orientale* Boiss. subsp. *armenum* Bordz. in Acta Hort. Bot. Jurjev. 13: 20 (1912). *L. mucronatum* subsp. *orientale* (Boiss.) P. H. Davis var. *balansae* (Boiss.) P. H. Davis in Notes R.B.G. Edinb. 22: 154 (1957).
Distribution: Caucasus, Iran, Iraq, Turkey (Figure 2). Iran-Turanian Element.
27. *Linum mucronatum* subsp. *gypsicola* P. H. Davis in Notes R.B.G. Edinb. 22: 156 (1957).
Distribution: Endemic to Turkey (Figure 2). Iran-Turanian Element.
28. *Linum nervosum* Waldst. & Kit. in Pl. Rar. Hung. 2: 109 (1805).
Synonym: *L. nervosum* var. *glabratum* DC. in Pordr., 1: 426 (1824). *L. aucheri* Planchon in Lond. J. Bot. 7: 173 (1847). *L. nervosum* var. *aucheri* (Planchon) Boiss. in Fl. Or. 1: 862 (1867). *L. nervosum* subsp. *glabratum* (DC.) P. H. Davis in Notes R. B. G. Edinb. 22: 136 (1957).
Distribution: Europe, South Russia, Crimea, Caucasus, Iran, Turkey (Figure. 2).
29. *Linum nodiflorum* L. in Sp. Pl. ed. 2, 401 (1762).
Synonym: *L. luteolum* Bieb. in Fl. Taur.-Cauc. 1: 256 (1808). *L. nodiflorum* var. *perpapillosum* Gomb. in Not. Syst. Paris 14: 110 (1951).
Distribution: South Europe, Crimea, Caucasus, Cyprus, Syria, Iraq, Iran, Turkey (Figure 2). Mediterranean Element.
30. *Linum obtusatum* (Boiss.) Stapf. in Denk. Akad. Wiss. Wien, Math.-Nat. Kl. 51(2): 23 (1886).
Synonym: *L. alpinum* Jacq. var. *obtusatum* Boiss. in Fl. Or. 1: 865 (1867).
Distribution: North Iraq, Turkey (Figure 2).
31. *Linum olympicum* Boiss. in Diagn. ser. 1(1): 56 (1843) subsp. *olympicum*
Synonym: *L. hirsutum* L. var. *alpinum* Boiss. in Fl. Or. 1: 859 (1867). *L. kotschyianum* Hayek in Ann. Nat. Hofmus. Wien 28: 160 (1914).
Distribution: Endemic to Turkey (Figure. 2).
32. *Linum pamphylicum* Boiss. & Heldr. ex Planch. in London J. Bot. 7: 511(1848). subsp. *olympicum* Kaynak & Yılmaz in Ann. Bot. Fennici 40 (2): 147 (2003).
Distribution: Endemic to Turkey (Figure. 2). East Mediterranean Element.
33. *Linum pamphylicum* subsp. *pamphylicum*
Synonym: *L. orientalis* Boiss. var. *pamphylicum* Boiss. in Fl. Or. 1: 856 (1867). *L. pamphylicum* (Boiss.) Podp. in Verh. K.K. Zool.-Bot. Ges. Wien 52: 639 (1902).

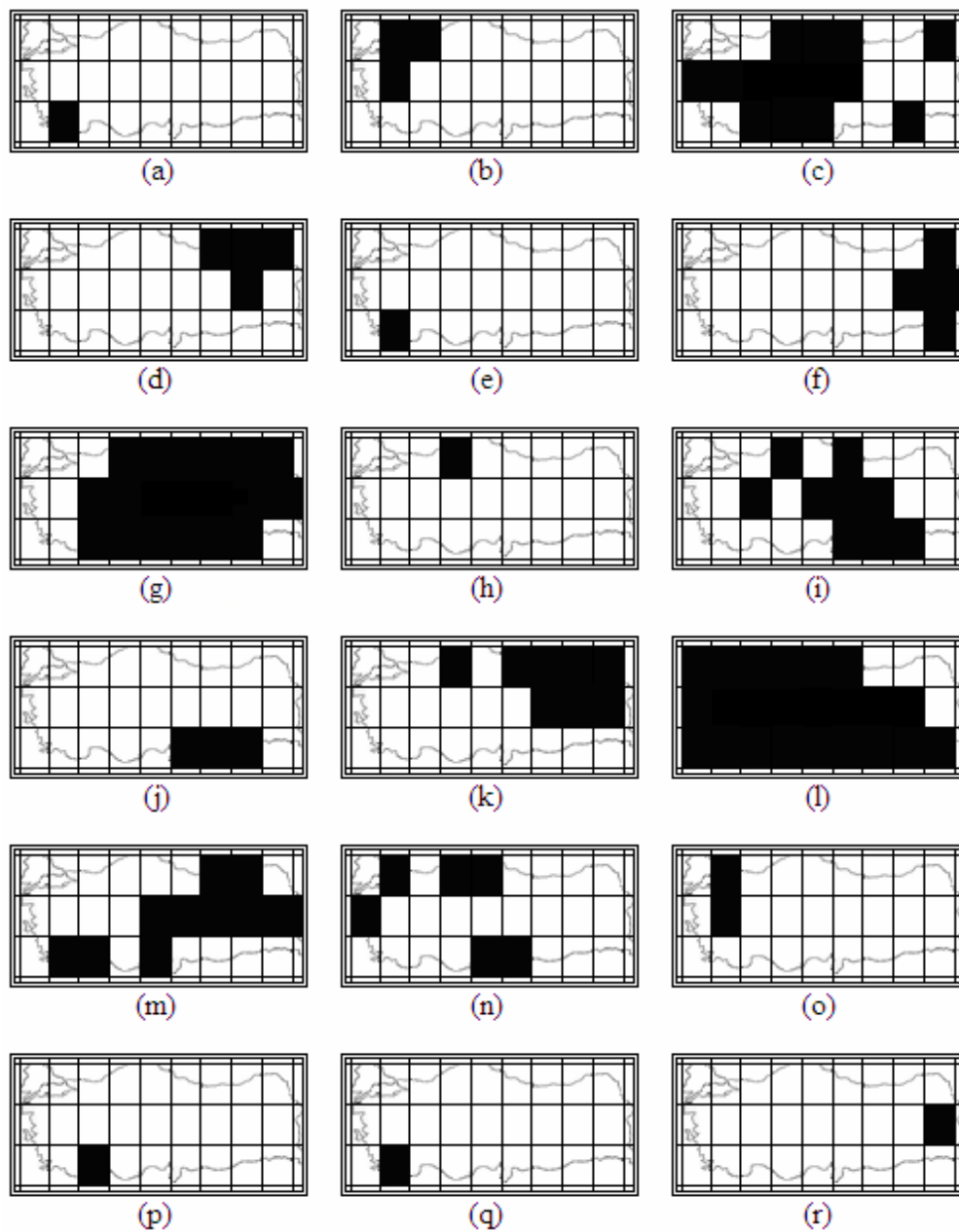


Figure 2. Distribution of *L. hirsutum* subsp. *oreocaricum* (a), *L. hirsutum* subsp. *platyphyllum* (b), *L. hirsutum* subsp. *pseudoanatolicum* (c), *L. hypericifolium* (d), *L. maritimum* (e), *L. meletonis* (f), *L. mucronatum* subsp. *armenum* (g), *L. mucronatum* subsp. *gypsicola* (h), *L. mucronatum* subsp. *mucronatum* (i), *L. mucronatum* subsp. *orientale* (j), *L. nervosum* (k), *L. nodiflorum* (l), *L. obtusatum* (m), *L. olympicum* subsp. *olympicum* (n), *L. pamphylicum* subsp. *olympicum* (o), *L. pamphylicum* subsp. *pamphylicum* (p), *L. pamphylicum* subsp. *papilliferum* (q) and *L. persicum* (r) in dotted squares of the map of Turkey.

Distribution: Endemic to Turkey (Figure. 2). East Mediterranean Element.

34. *Linum pamphylicum* subsp. *papilliferum* (Hub.-Mor. & Reese) Yılmaz & Kaynak in Ann. Bot. Fennici 43(1): 77 (2006).

Synonym: *L. papilliferum* Hub.-Mor. & Reese in Feddes Rept. 52 (1): 45. 1943. *L. mucronatum* Bertol. subsp. *gypsicola* P.H. Davis var. *papilliferum* (Hub.-Mor. & Reese) P.H. Davis in Notes R.B.G. Edinb. 22: 158. 1967.

Distribution: Endemic to Turkey (Figure 2). East Mediterranean Element.

35. *Linum persicum* Boiss. in Diagn. ser. 1 (6): 27 (1845).
Distribution: Iran, Turkey (Figure 2).
36. *Linum peyroni* Post in Pl. Postianae 3: 6 (1892).
Distribution: Syria, Iran, Turkey (Figure 3). Iran – Turanian Element.
37. *Linum pubescens* subsp. *anisocalyx* (P. H. Davis) Yılmaz & Kaynak
Synonym: *L. anisocalyx* P. H. Davis in Notes R. B. G. Edinb. 22: 149 (1957).
Distribution: Endemic to Turkey (Figure 3). East Mediterranean Element.
38. *Linum pubescens* Banks & Sol. in Russell, Aleppo ed. 2, 2: 268 (1794)
subsp. *pubescens*
Distribution: Syria, North Iraq, Turkey (Figure 3). East Mediterranean Element.
39. *Linum punctatum* Presl. subsp. *pyncophyllum* (Boiss. & Heldr.) Gustavsson in Bot. Not. 131(1): 16 (1978).
Synonym: *L. alpinum* Jacq. var. *pyncophyllum* (Boiss. & Heldr.) Boiss. in Fl. Or. 1: 865 (1867). *L. alpinum* subsp. *pyncophyllum* (Boiss. & Heldr.) Maire & Petitmengin in Mater. Etude Fl. Geogr. Bot. Orient 4: 51 (1908). *Linum pyncophyllum* Boiss. & Heldr. in Diagn. Pl. Orient. ser. 2, 1: 97 (1854). *Linum punctatum* Presl subsp. *kurdicum* (P. H. Davis) Greuter & Burdet in Willdenowia 12(1): 45 (1982).
Distribution: Greece, Turkey (Figure 3).
40. *Linum seljukorum* P. H. Davis in Notes R. B. G. Edinb. 22: 149 (1957)
subsp. *seljukorum*
Distribution: Endemic to Turkey (Figure 3). Iran-Turanian Element.
41. *Linum strictum* L. var. *spicatum* Pers. in Pl. 1: 336 (1805).
Synonym: *L. strictum* subsp. *spicatum* (Pers.) Linb. fil. in Ofrers Finish. Vet. Soc. Forh. 48: 63 (1906).
Distribution: South Europe, North and east Africa, Southwest Africa, Pakistan, Turkey (Figure 3).
42. *Linum strictum* var. *strictum* in Sp. Pl. 279 (1753).
Distribution: South Europe, Cyprus, Turkey (Figure 3).
43. *Linum tauricum* Willd. subsp. *bosphori* P. H. Davis in Notes R.B.G. Edinb. 28: 37 (1967).
Distribution: Endemic to Turkey (Figure 3).
44. *Linum tenuifolium* L. in Sp. Pl. 278 (1753).
Synonym: *L. cilicicum* Fenzl. in Tchih. As. Min. Bot. 141 (1860).
Distribution: Europe, South Russia, Crimea, Caucasus, Iran, Turkey (Figure 3).
45. *Linum tmoleum* Boiss. in Diagn. ser. 1(8): 105 (1849).
Distribution: Endemic to Turkey (Figure 3). East Mediterranean Element.
46. *Linum triflorum* P. H. Davis in Notes R. B. G. Edinb., 22: 159 (1957).
Distribution: Endemic to Turkey (Figure 3). Iran-Turanian Element.
47. *Linum trigynum* L. in Sp. Pl. 279 (1753).
Synonym: *L. gallicum* L. in Sp. Pl. ed. 2, 401 (1762).
Distribution: South Europe, North Africa, Syria, Cyprus, Iran, Turkey (Figure 3). Mediterranean Element.
48. *Linum unguiculatum* P. H. Davis in Notes R. B. G. Edinb. 22: 145 (1957).
Distribution: Endemic to Turkey (Figure 3). Iran-Turanian Element.
49. *Linum ussitatissimum* L. in Sp. Pl. 272 (1753).
Distribution: Widespread in the northern hemisphere, cultivated as crops (Figure 3).
50. *Linum virgultorum* Boiss. & Heldr. ex Planch. in London J. Bot. 7: 172 (1848).
Distribution: Greece, Turkey (Figure 3). East Mediterranean Element.
51. *Linum vuralianum* Yılmaz & Kaynak in Bot. J. Linn. Soc. 156: 459 (2008).
Distribution: Endemic to Turkey (Figure 3).
- According to Davis (1967a) and Christodoulakis (1995), *L. gyaricum* Vierh. subsp. *gyaricum* and *L. gyaricum* subsp. *icaricum* Christod. found in the east Islands of Greece. They are removed from the check-list, because these taxa distributed outside of political boundary of Turkey.
- In the check-list the endemism of *L. obtusatum* and *L. seljukorum* have changed. Previously, *L. obtusatum* has been given as endemic to Turkey (Davis 1967a). Subsequently, Agnew (1980) reported that this species distributed concurrently in north Iraq. The taxonomically distinctive species *L. seljukorum* distributed in central Anatolia and so far in west Armenia (1967a). Afterwards, Gabrielian and Ditrich (1992) described the Armenian specimens as a new species, and Egorova (2000) designated it as *L. seljukorum* subsp. *barsegianii* (E. Gabrielian & M. Ditrich) T. V. Egorova. In addition, *L. olympicum* subsp. *athoum*

Hartvig has been described from northeast Greece (Hartvig 1986). Therefore, the Anatolian endemic *L. olympicum* has been given in the check-list as *L. olympicum* subsp. *olympicum*.

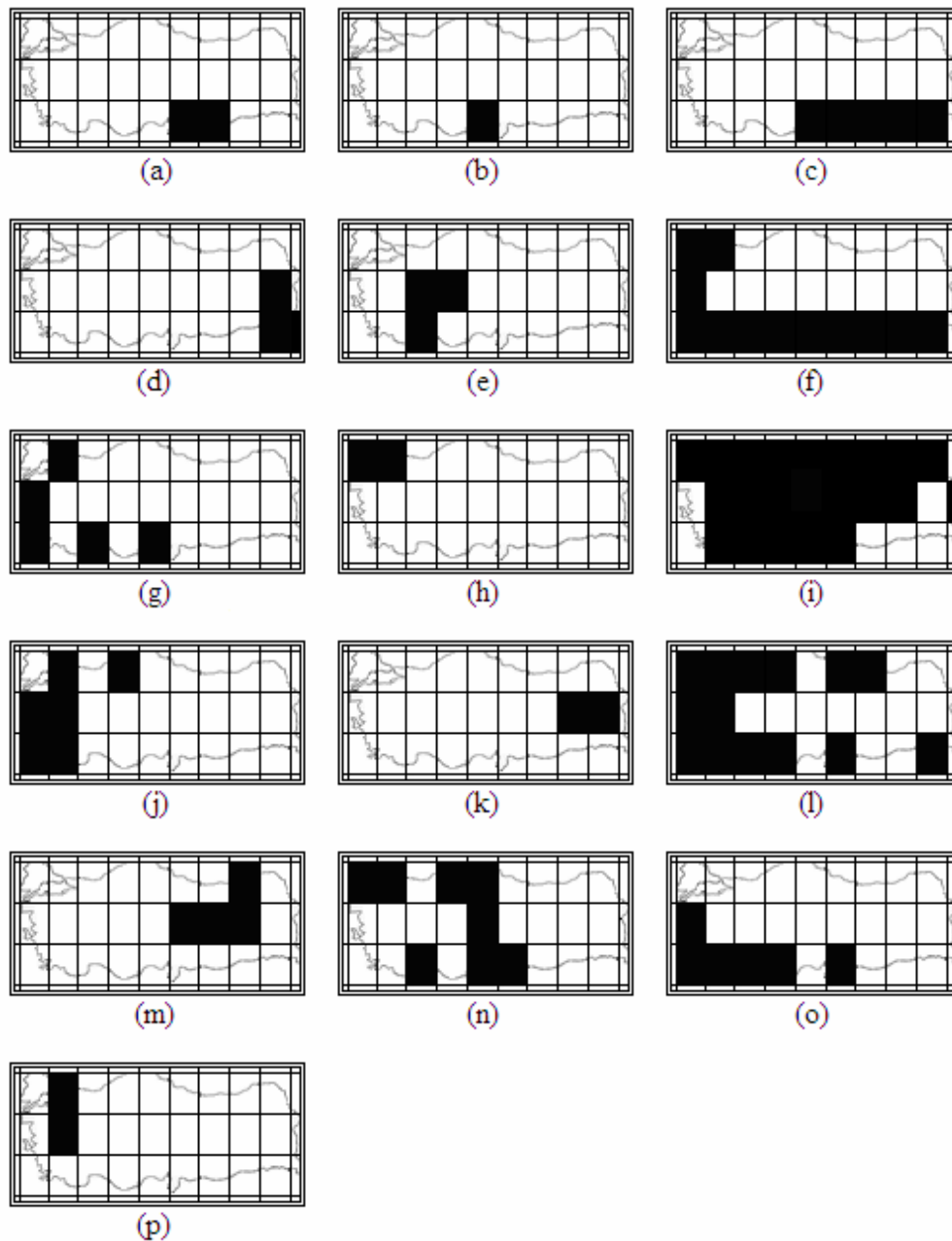


Figure 3. Distribution of *L. peyroni* (a), *L. pubescens* subsp. *anisocalyx* (b), *L. pubescens* subsp. *pubescens* (c), *L. punctatum* subsp. *kurdicum* (d), *L. seljukorum* subsp. *seljukorum* (e), *L. strictum* var. *spicatum* (f), *L. strictum* var. *strictum* (g), *L. tauricum* subsp. *bosphori* (h), *L. tenuifolium* (i), *L. tmoleum* (j), *L. triflorum* (k), *L. trigynum* (l), *L. unguiculatum* (m), *L. ussitissimum* (n), *virgultorum* (o) and *L. vuralianum* (p) in dotted squares of the map of Turkey.

In conclusion, the genus *Linum* contains 51 taxa, of which 22 are endemic to Turkey. The endemism percentage is c. 43%. This result indicates that Turkey is a major centre of diversity and speciation for the genus *Linum*.

REFERENCES

- Agnew ADQ (1980). *Linum* L. In: Flora of Iraq (Eds.: C.C. Townsend and E. Guest). Iraq, Ministry of Agriculture and Agrarian Reform Republic of Iraq, 4: 274-288.
- Akçiçek E (2002). Demirlik ve Kulaksız (Kütahya) dağları florası. *Ot Sistematik Botanik Dergisi* 9(2): 19-46.
- Akçiçek E (2003). Flora of Kumalar mountain (Afyon). *Turkish Journal of Botany* 27: 383-420.
- Akıncı Ş, and Özhatay E (2000). New floristic records for the squares A3 (Kocaeli, Turkey) *Turkish Journal of Botany* 24: 303-305.
- Aslan M, and Türkmen N (2003). New floristic records for the squares C6 and C7 from Turkey. *Ot Sistematik Botanik Dergisi* 10(2): 163-168.
- Aydoğdu M, and Akan H (2005). The Flora of Kalecik Mountain (Şanlıurfa, Turkey) *Turkish Journal of Botany* 29: 155-174.
- Baytop T (1999). Türkiye’de Bitkilerle Tedavi, Nobel Tıp Kitabevleri, Ankara.
- Boissier E (1867). *Linum* L. In: Flora Orientalis, (Ed: E. Boissier). Geneva/Basle: Publisher, 1: 848–866.
- Boissier E (1888). *Linum* L. In: Flora Orientalis Supplementum, (Ed: E. Boissier). Geneva/Basle: Publisher, pp 136-140.
- Brummitt RK, and Powell CE (1992). Authors of plant names, Kew, Royal Botanic Gardens.
- Christodoulakis D (1995). New Subspecies of *Linum-Gyaricum* (Linaceae) from Greece. *Nordic Journal of Botany* 15(2): 145-147.
- Davis PH (1957). Materials for a flora of Turkey: II. *Linum* Linn. Notes from the Royal Botanic Garden Edinburgh, 22: 135-161.
- Davis PH (1967a). *Linum* L. In: Flora of Turkey and the East Aegean Islands, (Ed.: P.H. Davis). Edinburgh: Edinburgh University Press, 2: 425-450.
- Davis PH (1967b). Materials for a flora of Turkey: XVI. Geraniaceae, Linaceae. Notes from the Royal Botanic Garden Edinburgh, 28: 35-38.
- Donner J (1990). Distribution maps to the P. H. Davis “Flora of Turkey” 1-10, *Linzer Biologische Beitrage* 22(2): 381-515.
- Dönmez AA (2002). Flora of Karagüney Mountain (Kırıkkale). *Turkish Journal of Botany* 26: 417-451.
- Duman H (1991). Enizek Dağı bitkilerinin tehlike sınıflarında yapılan bazı değişiklikler. *Journal of Biology Faculty Science and Arts Gazi University* 2: 103-108.
- Eminağaoğlu Ö, and Anşın R (2003). The flora of Hatila valley national park and its close environse (Artvin). *Turkish Journal of Botany* 27: 1-27.
- Egorova TV (2000). Taxonomic review of the genus *Linum* (Linaceae) from the Caucasus Flora. *Botanicheskii Zhurnal (Moscow & Leningrad)*, 85(7): 164-176.
- Fakir H (2006). Flora of Bozburun Mountain and Its Environs (Antalya-Isparta-Burdur, Turkey). *Turkish Journal of Botany* 30: 149-169.
- Gabrielian E, and Ditrich M (1992). *Linum barsegianii*, a new species from Armenia. *Candollea* 47: 71-76.
- Greuter W, Burdet HM, and Long G (1989). *Med-Checklist 4, Dicotyledones (Lauraceae-Rhmnaceae)*. Geneva: Conservatoire et Jardin Botaniques.
- Gümüş I (1994). B9 karesi (Ağrı) için yeni floristik kayıtlar. *Turkish Journal of Botany*, 18: 35-37.
- Güner A, Vural M, Duman H, Dönmez A, and Şağban H (1996). The Flora of the Köyceğiz-Dalyan specially protected area (Muğla-Turkey). *Doğa Türk Biyoloji Dergisi* 20: 329-371.
- Hartvig P (1986). *Linum* L. In: Mountain flora of Greece (Ed.: A. Strid). Cambridge: Cambridge University Press, 1: 553-564.
- İlarıslan R, Dural H, and Şan T (1997). Geyik dağını (Antalya) florası. *Ot Sistematik Botanik Dergisi* 4(2): 7-38.
- Juzepchuk SV (1974). *Linum* L. In: Flora of USSR (Ed.: B.K. Shishkin). Academic Science USSR. Jerusalem: Translation from Russian by Israel Program of Scientific Translations 14: 67-112.
- Ketenoğlu O, and Güney K (1997). Batı Küre Dağları (Kastamonu-İnebolu-Cide) florasına katkılar. *Ot Sistematik Botanik Dergisi*, 4(2): 39-60.
- Kandemir A, Coşkunçelebi K, and Beyazoğlu O (2000). A7 ve A8 kareleri için yeni floristik kayıtlar. *Ot Sistematik Botanik Dergisi* 7(2): 111-125.
- Karaer F, and Kılın M (2001). The Flora of Kelkit Valley. *Turkish Journal of Botany* 25: 195-238.
- Kaynak G (1987). Türkiye Florasındaki bazı kareler için yeni kayıtlar. *Doğa Türk Biyoloji Dergisi* 11(3): 118-123.
- Mabberley DJ (2002). *The plant book: a portable dictionary of the higher plants*, Cambridge, Cambridge University Press.
- Meikle RD (1977). *Linum* L. In: Flora of Cyprus (Ed.: R.D. Meikle). Kew: Royal Botanic Gardens 1: 317-324.
- Ockendon DJ, and Walters SM (1968). *Linum* L. In: Flora of Europea (Eds.: T.G. Tutin, V.H. Heywood, N.A. Burges, D.M. Moore, D.H. Valentine, S.M. Walters and D.A. Webb). Cambridge: Cambridge University Press, 2: 206-211.
- Özgökçe F, and Behçet L (2001). New floristic records on Dycotyledones for the squares B10 (Özalp-Van) from Turkey. *Turkish Journal of Botany* 25: 151-160.
- Sanön B, and Özen F (2001). Balıkesir Üniversitesi Çağış Kampüsü ve çevresinin florası. *Ot Sistematik Botanik Dergisi* 8(2): 47-67.
- Seçmen Ö, and Leblebici E (1978). Türkiye Florasındaki kareler için yeni kayıtlar. *Ege Üniversitesi Fen Fakültesi Dergisi Seri B* 2(4): 301-315.
- Seçmen Ö, and Leblebici E (1990). New floristic records for the squares in the flora of Turkey. *Journal of Faculty of Science Ege University Series B* 5(1): 15-23.
- Serin M, and Ertuğrul K (1999). New floristic records for the squares B3 and B4 (Ilgın-Konya, Turkey). *Turkish Journal of Botany* 23: 71-73.
- Serin M, Şanda MA, and Batı F. (2001). New floristic records for the square C3 (Seydişehir-Konya, Turkey) *Turkish Journal of Botany* 25: 161-162.
- Sharifnia F and Assadi M (2001). Linaceae In: Flora of Iran (Eds.: M. Assadi, M. Khatamsaz, and A.A. Maassoumi). No. 34. Islamic Republic of Iran, Ministry of Jahad Sazandegi, Research Institute of Forests and Rangelands, pp. 1-46.
- Tugay Ö, Dural H, and Bağcı Y (2002). Dipsiz Göl-Sanoy Yaylası-Sorkun (Bozkır-Konya) arasında kalan bölgenin florası. *Ot Sistematik Botanik Dergisi* 9(1): 33-55.
- Türe C, and Tokur S (2000). The Flora of the Forest Series of Yirce-Bürmece-Kömürsu and Muratdere (Bilecik-Bursa, Turkey). *Turkish Journal of Botany* 24: 47-66.
- Ocakverdi H (2001). The Flora of the Mount Kısır (Kars and Ardahan) and Nearest Environs. *Turkish Journal of Botany* 25: 311-334.
- Tatlı A, Akan H, Tel AZ, and Kara C (2002). The Flora of Upper Ceyhan Valley (Kahramanmaraş/Turkey) *Turkish Journal of Botany* 26: 259-275.
- Vural M, Karavelioğulları FA, and Polat H (1997). B5 karesi için yeni floristik kayıtlar. *Ot Sistematik Botanik Dergisi* 4(2): 61-70.

- Yılmaz Ö (2003). Uludağ'da Yayılışı Olan *Linum* L. Türleri Üzerinde Morfolojik ve Anatomik Araştırmalar. Yüksek Lisans Tezi. Uludağ Üniversitesi, Bursa, Türkiye, 144p.
- Yılmaz Ö, Kaynak G, and Vural M (2003). A new taxon of *Linum* (Linaceae) from NW Anatolia, Turkey. *Annales Botanici Fennici* 40(2): 147-150.
- Yılmaz Ö, and Kaynak G (2006a). New combination in *Linum* sect. *Syllinum* (Linaceae). *Annales Botanici Fennici* 43(1): 77-79.
- Yılmaz Ö, and Kaynak G (2006b). *Linum hirsutum* subsp. *platyphyllum* stat. nova (Linaceae). *Annales Botanici Fennici* 43(1): 62-63.
- Yılmaz Ö, and Kaynak G (2008). A new species of *Linum* (Linaceae) from west Anatolia, Turkey. *Botanical Journal of Linnean Society* 156: 459-462.
- Yılmaz Ö, and Kaynak G (2008). New combination in *Linum* Sect. *Dasylinum* (Linaceae). *Journal of Biological & Environmental Sciences* (in-pres).
- Zohary M (1987). *Linum* L. In: *Flora Palaestina* (Ed.: M. Zohary). Israel: Israel Academia Science & Humanity 2: 258-264.