The Genus Phalaris in Turkey

Türkiye'de Phalaris Cinsi

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As stated by Anderson (1) who recently studied the taxonomy and the distribution of the genus Phalaris, this genus is represented on the world by 15 species. As origin, some of them are native to America. Another group is native to lands bordering the Mediterranean Sea and one species is found throughout the northern hemisphere as an holarctic element. At present, because of man's activities and agronomical investigations, many of them have been introduced on all the continents and thus have gained a worldwide distribution (1).

In Turkey it occurs 8 species of Phalaris. Seven of them are mediterranean plants (P. paradoxa, coerulescens, minor, aquatica, truncata, brachystachys, canariensis) and are found in relatively dry places: fields, roadsides, grassy lands. The eighth (P. arundinacea) is an element belonging to the northamerican-eurosiberian flora and grows on wet places: edges of lakes, riversides.

Some of these species are important plants used as animal food. The most important of them is P. canariensis which is widely cultivated in Turkey for its grains used as a food for small cage birds. It is grown in the Aegean, Marmara, Central-North and South-East agricultural regions of Turkey and the grains, known as «kusyemi» are exported in a large scale (8).

Among the perennial species, P. aquatica is said to be a good forage grass in the young state and has been found much valuable for pasture in Australia and in North America (2). However, it has been noted that it may be injurious to animals in some respects. Thus, it is said that the poisoning of sheep which have

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grazed in a pasture containing a large percentage of *P. aquatica* was due to the alkaloids present in this grass (6). Another report of sheep poisoning with the same plant gives as reason the large amount of nitrates that it accumulates in some cases (7).

*P. crinoïdacea*, another perennial species, is praised as a good forage grass when young (3):

*P. minor* is also said to be an useful forage plant and is even cultivated in this purpose (4).

The present paper deals with the description of the genus *Phalaris* in Turkey, gives a key for the identification of the 8 species growing in this country, followed by the description of each species and the distribution according to the specimens that we have seen in the following herbaria: Herbarium of the Royal Botanic Garden at Edinburgh, Herbarium of the Royal Botanic Gardens at Kew, Herbier du Conservatoire Botanique de Genève, Herbarium of the Faculty of Sciences at Ankara, Herbarium of the Faculty of Sciences at Istanbul and Herbarium of the Faculty of Pharmacy at Istanbul. The localities have been arranged according to the grid system introduced by P.H. Davis (5).

**Phalaris L.**

*Sp. Pl. 54 (1753), G. Pl. 29 (1754)*

Annual or perennial grasses. Rhizomes, in perennial species, short or creeping, or the base of the culm swollen in the lowest internodes. Culms erect or geniculate at the base, terete, glabrous and smooth. Leaf-blades flat, glabrous, sheaths glabrous and smooth, the lower often minutely scabrid, the upper somewhat or clearly inflated or enclosing the base of the panicle, ligules membranous, ovate or oblong, often torn. Panicle dense, then ovate, oblong or more or less cylindrical, or somewhat loose, then lanceolate and lobed. Spikelets laterally compressed, pedicelled, 3-flowered, the lower two florets reduced to sterile lemmas (one or both of them may be obsolete), the single fertile floret bisexual, disarticulating above the glumes together with the two sterile lemmas adpressed at its base. Spikelets all alike, bisexual and fertile, or these spikelets accompanied by sterile ones. Fertile spikelets: glumes equal in size, 4-8 mm long, longer than the floret,
usually glabrous, 3-nerved, keeled, the keel winged or wingless, sterile lemmas reduced to 1 or 2 scales or obsolete, often hairy, fertile lemma 2.5-4 mm long, keeled, ovate-lanceolate in profile, coriaceous, shiny, glabrous or covered with adpressed silky hairs, obsolesely 5-nerved, palea linear in profile, of the same texture and about the same length as the lemma, hairy only on the upper part of the keel, obsolesely 2-nerved. Sterile spikelets: if present in the panicle, the glumes equal in size, but somewhat different from those of the fertile spikelets, or much deformed and hardened at the base of the inflorescence, lemma and palea membranous, linear-lanceolate in profile. Stamens 3. Anthers 1.3-5 mm long. Grain tightly enclosed by the lemma and palea, elliptical or oblong, somewhat flattened, brown, bearing at the top the rest of the style, with a narrow groove at the ventral keel, the groove dark coloured, reaching the middle or the top of the grain. Embryo 1/2 - 1/3 the length of the grain, hilum as a small, roundish spot at the base of the groove. Starch grains compound, with numerous components, oblong or rounded, 5 to 25 μ in diameter.

Key to the species

1. Panicle with two kinds of spikelets: fertile and sterile. In the fertile spikelet: fertile lemma glabrous or sparsely hairy, sterile lemmas obsolete

2. Annuals. Panicle with deformed and hardened sterile spikelets at its base. Upper leaf-sheath enclosing the base of the panicle
   1. paradoxa

2. Perennials, culms bulbous at the base. Panicle without any different kind of sterile spikelets at its base. Upper leaf-sheath far from the base of the panicle
   2. coerulescens

1. Panicle with one kind of spikelets: fertile. Fertile lemma covered with adpressed silky hairs, sterile lemmas 1 or 2

3. Keel of the glumes winged. Panicle dense. Sterile lemmas 1 or 2

4. Sterile lemma 1. If a second is present, then this one very small

5. Annuals. Wing of the glumes broad, with a clearly denticulate margin. Sterile lemma half the length of the fertile lemma. Anthers 1.5 mm long
   3. minor
grazed in a pasture containing a large percentage of *P. aquatica* was due to the alkaloids present in this grass (6). Another report of sheep poisoning with the same plant gives as reason the large amount of nitrates that it accumulates in some cases (7).

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usually glabrous, 3-nerved, keeled, the keel winged or wingless, sterile lemmas reduced to 1 or 2 scales or obsolete, often hairy, fertile lemma 2.5-4 mm long, keeled, ovate-lanceolate in profile, coriaceous, shiny, glabrous or covered with adpressed silky hairs, obsoletely 5-nerved, palea linear in profile, of the same texture and about the same length as the lemma, hairy only on the upper part of the keel, obsoletely 2-nerved. Sterile spikelets: if present in the panicle, the glumes equal in size, but somewhat different from those of the fertile spikelets, or much deformed and hardened at the base of the inflorescence, lemma and palea membranous, linear-lanceolate in profile. Stamens 3. Anthers 1-3.5 mm long. Grain tightly enclosed by the lemma and palea, elliptical or oblong, somewhat flattened, brown, bearing at the top the rest of the style, with a narrow groove at the ventral keel, the groove dark coloured, reaching the middle or the top of the grain. Embryo 1/2 - 1/3 the length of the grain, hilum as a small, roundish spot at the base of the groove. Starch grains compound, with numerous components, oblong or rounded, 5 to 25 μ in diameter.

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3. Keel of the glumes winged. Panicle dense. Sterile lemmas 1 or 2

4. Sterile lemma 1. If a second is present, then this one very small

5. Annuals. Wing of the glumes broad, with a clearly denticulate margin. Sterile lemma half the length of the fertile lemma. Anthers 1.5 mm long

   3. minor
5. Perennials, culms often bulbous at the base. Wing of the glumes narrow, with an entire or obsolete denticulate margin. Sterile lemma one third the length of the fertile lemma. Anthers 3.5 mm long

4. *aquatica*

4. Sterile lemmas 2 and equal in size

6. Sterile lemmas 1/6 - 1/10 the length of the fertile lemma. Annuals or perennials

7. Annuals. Upper leaf-sheath inflated. Panicle ovate or oblong. Glumes 6-8 mm long. Fertile lemma 4-5 mm long. Wing tapering gradually till the base of the glume

5. *brachystachys*

7. Perennials. Upper leaf-sheath not inflated. Panicle oblong-cylindrical. Glumes 5-7 mm long. Fertile lemma 3-4 mm long. Wing on the upper 1/2 - 2/3 of the glume

6. *truncata*

6. Sterile lemmas 1/2 the length of the fertile lemma. Annuals

7. *canariensis*

3. Keel of the glumes wingless. Panicle somewhat loose and lobed. Sterile lemmas 2, half the length of the fertile lemma. Rhizomes creeping

8. *arundinacea*

1. *P. paradoxa* L., Sp. Pl. 1665 (1763). Fig. 1.

Annual, tufted grasses. Culms erect or geniculate at the base, 20-100 cm tall. Leaf-blades 2-9 mm wide, minutely scabrid on both surfaces and on the margins. Sheaths glabrous, smooth, upper sheath inflated and enclosing the base of the panicle. Ligules 2-8 mm long, often torn. Panicle dense, oblong-cylindrical, tapering to narrow base, pale green, often purple tinged, 4-10 cm long, 1.5-2.5 cm wide. Panicle axis scabrid. Spikelets falling in groups of 6-7, all pedicelled, one of them with a bisexual floret and fertile, the others sterile. Fertile spikelets: pedicelled, glumes 7-8 mm long, attenuate at the top to a 2-3 mm long awnlike prolongation, 3-nerved, with 2-3 secondary nerves on each face, winged on the keel, wing as a toothlike projection of about 1 mm long on the middle of the keel, sterile lemmas obsolete, each represented by one or a few hairs, fertile lemma ovate-lanceolate in profile, 3 mm
Fig. 1. Phalaris paradox. 1-4 normal fertile spikelet: 1 glumes, 2 lemma, 3 palea, 4 grain. 5-6 normal sterile spikelet: 5 glumes, 6 lemma and palea. 7 basal fertile spikelet. 8, 9, 10 basal sterile spikelets. (x 7).

long, coriaceous, shiny, glabrous or with some silky hairs towards the top, palea as long as the lemma. Sterile spikelets: pedicelled, glumes 4-6 mm long, acute, 3-nerved, winged on the keel, wing irregularly denticulate, sterile lemmas each represented by one or a few hairs, lemma and palea membranous, 2 mm long. Anthers 1-1.8 mm long. Grain oblong, 2.5 mm long, 1 mm wide, the rest of the style erect, embryo 1/3 the length of the grain, the groove about 1/2 the length of the grain.

The spikelets found at the base of the panicle are quite different from those described above. They are gathered in the same way in clusters of 7 and have a fertile spikelet which are surrounded by sterile ones. But all are reduced in size and are
indurated; the fertile spikelet is sessile (instead of pedicelled), 5 mm long, with the glumes shortly tapering at the top and the sterile spikelets are reduced to 1-2 mm glumes with crestlike wings.

The number of the hardened spikelets at the base the inflorescence is very variable. They are rarely absent. They occupy a short or longer distance in the panicle, or even the greater part of it.


It is a mediterranean plant found mainly in Outer Anatolia. It grows in waste places, uncultivated lands, roadides. April-July. It is reported from European Turkey.

P. paradonta is very close to P. cocculus because of the following common characters. In both of them, the spikelets fall in groups of 7, in which one of them has a bisexual floret, the others being sterile; the fertile lemma is glabrous or nearly so, and the sterile lemmas fall at its base are reduced to one or a few hairs. But it can be easily recognized as follows. It is an annual
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plant; the fertile spikelet is pedicelled and have the glumes attenuate at the top to an awnlike prolongation and winged on the keel with a toothlike projection; the spikelets found at the base of the panicle are indurated, the fertile one being sessile and the others much reduced.

2. *P. coerulescens* Desf., Fl. Atlant. 1, 56 (1798). Fig. 2.

Fig. 2. *Phalaris coerulescens*. 1-4 fertile spikelet: 1 glumes, 2 lemma, 3 palea, 4 grain. 5-6 sterile spikelet: 5 glumes, 6 lemma and palea. (x 7).

Perennial, tufted grasses. Culms erect or geniculate at the base, 20-150 cm tall, bulbous at 1 or 2 superposed lower internodes. Leafblades 1-4 mm wide, often convolute in the lower leaves, minutely scabrid on both surfaces and on the margins. Sheaths glabrous and smooth, upper sheath slightly inflated, lower sheath scabrid. Ligules 2-4 mm long, often torn. Panicle dense, oblong or cylindrical, pale green or purplish, 2-7 mm long, 7-20 mm wide. Panicle axis scabrid. Spikelets falling in groups of 6-9 (often 7), one of them sessile, with a bisexual floret and fertile, the surrounding spikelets pedicelled, male and sterile. In groups of more than 7 spikelets, there are often 2 fertile spikelets. Fertile spikelets: sessile, glumes 7-8 mm long, lanceolate in profile, acute, glabrous or adpressed hairy, 3-nerved, with 2-3 secondary nerves on each face, winged on the keel, wing toothlike, with entire or
denticulate margins, asymmetric on the two glumes, sterile lemmas obsolete, each represented by one or a few hairs, fertile lemma lanceolate in profile, 3.5-4 mm long, coriaceous, shiny, glabrous or with a few adpressed hairs towards the top, palea as long as the lemma. Sterile spikelets: pedicelled, 6-7 mm long, glumes obovate-oblong in profile, glabrous or adpressed hairy, 3-nerved, keel winged, wing oblique and denticulate at the top, sterile lemmas represented by one or a few hairs, lemma and palea membranous, 2.5 mm long. Anthers 3 mm long. Grain oblong, 2.5 mm long, 1 mm wide, the rest of the style erect, embryo 1/3 the length of the grain, the groove about 1/2 the length of the grain.


It is a mediterranean plant collected in Turkey from Marmara region and European Turkey. It is found in fields and meadows. May-July.

_ P. coerulescens_, together with _P. paradoxa_, constitute a group which can be put apart from the other species of _Phalaris_ by their common characters given under _P. paradoxa_. The characteristic features that serve to separate it from _P. paradoxa_ are as follows. It is perennial, the culm has at is base one or two swollen internodes. The central fertile spikelet of the fascicle is sessile, with acute (not as an awnlike prolongation) glumes and asymmetrical wings on both glumes. There are no indurated and reduced spikelets at the base of the panicle.

3. **P. minor** Retz, Fasc. Obs. Bot. 8 (1783). Fig. 3.

Annual, tufted grasses. Culms erect or geniculated at the base, 20-80 cm tall. Leaf-blades 3-9 mm wide, smooth on both surfaces, minutely scabrid on the margins. Sheaths glabrous, upper sheath slightly or not inflated. Ligules 4-6 mm long, often torn. Panicle
dense, oblong or more or less cylindrical, pale green, 1.5-5.5 cm long, 1-1.5 mm wide. Panicle axis scabrid. Spikelets shortly pedicelled, all alike. Glumes 5 mm long, lanceolate in profile, 3-nerved, winged on the keel, wings irregularly erose-denticulate. Sterile lemma only 1 and 1 mm long, adpressed hairy. Fertile lemma 3 mm long, ovate-lanceolate in profile, coriaceous, shiny, adpressed hairy. Palea a little shorter than lemma, linear in profile. Anthers 1.5-1.8 mm long. Grain 2 mm long, ovate, the rest of the style erect and acuminate, embryo 1/3 the length of the grain, the groove 1/3-1/2 the length of the grain.

Fig. 3. Phalaris minor. 1 glumes, 2 fertile lemma with a sterile lemma at the base, 3 palea, 4 grain. (x7).


It is a mediterranean plant collected from West and South Anatolia where it grows in gardens, fields, roadsides. April-July. It is reported from European Turkey.

P. minor is an annual species. It can be recognized by its glumes with clearly erose-denticulate margins, by the single sterile lemma which is about 1/3 the length of the fertile lemma.

![Fig. 4. Phalaris aquatica. 1 glumes, 2 fertile lemma with the sterile lemmas at the base, 3 palea. (× 7).](image)

Perennial, tufted grasses. Rhizomes short. Culms erect or geniculate at the base, 50-120 cm tall, often bulbous at the base. Leaf-blades 3-8 mm wide, smooth on both surfaces and minutely scabrid on the margins, or minutely scabrid on both surfaces of the upper leaves. Sheaths glabrous and smooth, lower sheath minutely scabrid. Ligules 3-7 mm long, often torn. Panicle dense, cylindrical, pale green, 6-8 cm long, 1-1.5 cm wide. Panicle axis scabrid. Spikelets pedicelled, all alike. Glumes 6-7 mm long, semi-oblong in profile, glabrous, 3-nerved, keel winged, wing on the upper 1/2-1/3 of the glume, with the upper margins oblique, entire or slightly erose. Sterile lemmas 2, the upper 1.5 mm long, the lower smaller than 0.5 mm, both hairy. Fertile lemma 4 mm long, ovate-lanceolate in profile, coriaceous, shiny and adpressed silky hairy. Palea somewhat shorter than the lemma. Anthers 3-3.5 mm long.

A 2 (E) İstanbul: Halkali, Orman Başmüdürlüğü Çayır Tohumu Üretme Fidanlığı, (the seeds are introduced from U.S.A.), 21.vi.1960, N. Gülgrün, İSTE 8451a! A 2 (A) İstanbul: Orhantepe, 20.vi.1960, A. Baytop, İSTE 5941! Pen-
It is a mediterranean grass, collected in Istanbul and in South Anatolia. It is found rather on wet soil, in uncultivated fields. May-July. There is no records from the European Turkey, except one where the plant has been grown experimentally from the seeds coming from U.S.A.

The principal features that identify *P. aquatica* are that it is a perennial species, has cylindrical panicles and possesses only one well developed sterile lemma in the spikelet, the second being very short.

5. *P. brachystachys* Link, Neues Journ. Bot. Schrader 1 (3), 134 (1806). Fig. 5.

![Fig. 5. Phalaris brachystachys. 1 glumes, 2 fertile lemma with the sterile lemmas at the base, 3 palea, 4 grain. (x 7).](image)

Annual, tufted grasses. Culms erect or geniculate at the base, 20-70 cm tall. Leaf-blades 2-5 mm wide, minutely scabrid on both surfaces and on the margins. Sheaths glabrous, the upper inflated, the lowers minutely scabrid. Ligule 2-4 mm long, often torn. Panicle dense, ovate or oblong, pale green, sometimes purplish, 1.5-
3 cm long, 1.1-1.5 cm wide. Panicle axis scabrid. Spikelets short pedicelled, all alike. Glumes 6-8 mm long, semi-obovate in profile, glabrous, 3-nerved, keel winged, wing broad and oblique at the upper part, becoming gradually narrower as reaching the base of the glume, margins entire. Sterile lemmas 2, equal, about 0.5 mm long, ovate-lanceolate, somewhat fleshy, brownish, glabrous, with a row of hairs at its base. Fertile lemma 4.5-5 mm long, lanceolate in profile, coriaceous, shiny, adpressed hairy, Palea as long as the lemma. Anthers 3-3.5 mm long. Grain 3.5 long, 1.5 mm wide, elliptic, the rest of the style recurved, embryo nearly as half as the grain, groove as long as the grain.


It is a Mediterranean plant, found mainly in West and South Anatolia where it grows in uncultivated land, edges of fields, roadsides. May-July. It is reported from European Turkey.

*P. brachystachyus*, as *P. truncata*, are recognized with the two small swollen sterile lemmas present at the base of the fertile floret. This character puts them together, separating them from the remain of the *Phalaris* species. The main characters that differentiate *P. brachystachyus* from *P. truncata* are as follows. *P. brachystachyus* is annual, the upper sheath on the culm is inflated. The panicle is ovate or nearly oblong. The glumes are 6-8 mm long, the wing is broad and oblique on the upper margin and attenuated till the base of the glume. The fertile lemma is 4.5-5 mm long. The rest of the style is recurved.
6. *P. truncata* Guss., Suppl. Fl. Sic. Prodr. 18 (1832). Fig. 6.

Fig. 6. *Phalaris truncata*. 1 glumes, 2 fertile lemma with the sterile lemmas at the base, 3 palea, 4 grain. (x 7).

Perennial, tufted grasses, with sterile shoots. Culms erect or geniculate at the base, 50-100 cm tall. Leaf-blades 1-3 mm wide, often convolute in the upper leaves of the culms and in the leaves of the shoots, minutely scabrid on both surfaces and on the margins. Sheaths glabrous, not clearly inflated, lower sheaths and the sheaths on the sterile shoots minutely scabrid. Ligules 2-4 mm long, often torn. Panicle dense, oblong-cylindrical, pale green, sometimes purplish, 2.5-5 cm long, 8-16 mm wide Panicle axis scabrid. Spikelets shortly pedicelled, all alike. Glumes 5-6 mm long, semi-obtriangular in profile, glabrous, 3-nerved, keel winged, wing on the upper 1/2-2/3 of the glume, broad and oblique-truncate on the upper part, with entire margins. Sterile lemmas 2, equal, about 0.5 mm long, ovate-lanceolate, somewhat fleshy, brownish, glabrous, with a row of hairs at its base. Fertile lemma 3.5-4 mm long, lanceolate in profile, coriaceous, shiny, adpressed hairy. Palea nearly as long as lemma. Anthers 3-3.5 mm long. Grain 3 mm long, oblong, the rest of the style erect, embryo 1/3-1/4 the length of the grain, groove as long as the grain.

It is a mediterranean grass collected from both sides of the Bosporus, the Marmara Sea region and the European Turkey. It is found in fields and roadsides.

*P. truncata* is close to *P. brachystachys*, due to the fact that both possess two small, fleshy and glabrous sterile lemmas at the base of the fertile floret. Yet it can be separated from it by the following characters. *P. truncata* is perennial, the upper sheath on the culm is not clearly inflated. The panicle is oblong-cylindrical. The glumes are 5-6 mm long, the wing is more truncate than oblique on the upper margin and occupies the upper 1/2-1/3 part of the keel. The fertile lemma is 3.5-4 mm long. The rest of the style is erect.

7. **P. canariensis** L., Sp. Pl. 54 (1753). Fig. 7.

![Fig. 7. Phalaris canariensis. 1 glumes, 2 fertile lemma with the sterile lemmas at the base, 3 palea, 4 grain. (x7).](image)

Annual tufted grasses. Culms erect or geniculate at the base, 30-60 cm tall. Leaf-blades 3-8 mm wide, minutely scabrid on both surfaces and on the margins. Sheaths glabrous and smooth, the upper inflated, the lowers minutely scabrid. Ligule 3-5 mm long, often torn. Panicle dense, ovate or oblong, pale green, 2-3 cm long, 1-1.5 cm wide. Panicle axis scabrid. Spikelets shortly pedicelled, all alike. Glumes 7-8 mm long, semi-ovate in profile, glabrous or scarcely hairy, 3-nerved, keel winged, wing narrow in the lower
part, broader upward, oblique on the upper part, margins entire. Sterile lemma 2, equal, 3-3.5 mm long, lanceolate, adpressed hairy. Fertile lemma 5-6 mm long, ovate-lanceolate in profile, coriaceous, shiny, adpressed hairy. Palea somewhat shorter than lemma. Anther 3 mm long. Grain 4 mm long, 1.5 mm wide, the rest of the style recurved, embryo half as long as the grain, groove as long as the grain.


This Mediterranean plant has been collected mainly from West and South Anatolia where it is wild in roadsides, fields and vineyards. It is cultivated in Turkey for its grains used as food for cage birds. May-July. It is reported from European Turkey.

*P. canariensis* can be recognized as follows. It is annual. The panicle is ovate or oblong. The glumes are 7-8 mm long, the wing margins are entire. There are 2 sterile lemmas at the base of the fertile floret, which are the same size and are half the length of the fertile lemma.

8. *P. arundinacea* L., Sp. Pl. 55 (1753). Fig. 8.

![Fig. 8. Phalaris arundinacea. 1 glumes, 2 fertile lemma with the sterile lemmas at the base, 3 palea. (x 7).](image-url)
Perennial, tufted grasses. Rhizomes creeping, Culms erect or geniculate at the base, 60-150 cm tall. Leaf-blades 5-18 mm wide, glabrous, smooth or minutely scabrid on both surfaces and on the margins. Sheaths glabrous, smooth. Ligule 4-8 mm long, often torn. Panicle loose, lobed, lanceolate-cylindrical, green or purplish, 12-18 cm long, 1.5-2.5 cm wide, branched, branches spreading during anthesis, then contracted, lower branches without any spikelets at their base. Panicle axis smooth, branches and pedicels scabrid. Spikelets pedicelled, all alike. Glumes 4-6 mm long, lanceolate in profile, glabrous, 3-nerved, keel wingless. Sterile lemma 2, equal in size, 1.5-2 long, with silky hairs. Fertile lemmas 3.5-4 mm long, lanceolate in profile, coriaceous, shiny, adpressed hairy. Palea as long as lemma. Anthers 2.5-3.5 mm long.


This species found almost throughout the Northern Hemisphere and also, as an introduction in the Southern Hemisphere (1), is widespread in Anatolia, and is collected mainly from Central and East parts, from nearly sea level to 2700 m. It grows on the edges of streams and lakes. It is reported from European Turkey.

P. arundinacea is a perennial rhizomatous species, occurring in wet places, on river banks, on lake edges. It can be recognized with its panicle loose and lobed, its wingless glumes and its two sterile lemmas equal in size and about 1/3 the length of the fertile floret.
SUMMARY

In Turkey, it occurs 8 species of Phalaris. One of them, *P. orundinacea*, which is native throughout the Northern Hemisphere, is also present in Turkey, mainly in Central and East Anatolia. The others, *P. paradoxa, coerulescens, minor, aquatica, brachystachys, truncata, canariensis*, are of Mediterranean origin and are found mainly in West and South Turkey. *P. canariensis* is cultivated in this country for its grains used as food for cage birds.

All these species are present in European Turkey, except one, *P. aquatica*, which is not yet collected in wild state, but is found cultivated in an agricultural station from seeds introduced from North America.

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ÖZET


Bu 8 Phalaris türine Trakyada da tesadüf edilmiştir. Ancak biri, *P. aquatica*, İstanbul'un Asya yakasından toplanmış olmakla beraber, Trakya bölgesinde henüz yabani olarak bulunmamış, fakat bir ziraat merkezinde, Kuzey Amerikadan getirilmiş tohumlardan yetiştirilmiş olarak görülmüştür.
REFERENCES


(Redaksiyona verildiği tarih: 3 Mart 1969)