

Analysis of Salicaceae Collections Data in Some Herbaria of Türkiye

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Abstract: Building on centuries of research based on herbarium specimens gathered through time and around the world, much research on the analysis of collections data in the herbarium is being done. In this study, the herbarium records of the family *Salicaceae* were analyzed. According to the herbarium records examined, *Salicaceae* family is represented by two genera in Turkish herbariums. A collection of 917 herbarium records for the genus *Salix* and 242 for the genus *Populus* was considered from the six biggest herbaria of Türkiye as ANK, ISTO, HUB, AEF, ISTE and GAZI. The number of taxa in herbaria collections, distribution, and the number of taxa according to family, distribution of taxa by collection date and locations, and comparison of Turkish data with well-known herbaria from the world were evaluated in the current study. Python programming language was applied for the data cleaning and visualization using pie charts, plots, bar graphs and map plots. ISTO holds most of the genus *Salix* with 287 records, followed by AEF with 221 records and HUB with 148 records. Total genus *Salix* collections of herbaria include 53 taxa. The oldest *Salix* herbarium sheet dates back to the mid-1800s (GAZI), whereas most herbarium sheets were collected from 2000-2001 (AEF). Most records for both genera *Salix/Populus*, were collected from Ankara province. Ankara is followed by Bolu and Kars districts, respectively. Furthermore, the locations from which the *Salicaceae* members have been collected are presented with the help of a Turkish province map.

Keywords: *Salicaceae* collections, *Salix* L., *Populus* L., herbaria, Türkiye, Python.

Türkiye'nin Bazı Herbaryumlarındaki Salicaceae Koleksiyon Verilerinin Analizi

ÖZ: Zaman içinde ve dünya çapında toplanan herbaryum örneklerine dayanan yüzyıllarca süren araştırmalara dayanarak, herbaryumdaki koleksiyon verilerinin analizi üzerine birçok araştırma yapılmaktadır. Bu çalışmada *Salicaceae* familyasına ait herbaryum kayıtları incelenmiştir. İncelenen herbaryum kayıtlarına göre *Salicaceae* familyası Türkiye herbaryumlarında iki cins ile temsil edilmektedir. ANK, ISTO, HUB, AEF, ISTE ve GAZI olmak üzere Türkiye'nin en büyük altı herbaryumundan *Salix* cinsi için 917 ve *Populus* cinsi için 242 herbaryum kaydı koleksiyonu değerlendirilmiştir. Bu çalışmada herbaryum koleksiyonlarında yer alan takson sayıları, taksonların familyalara göre dağılımı ve sayıları, taksonların toplanma tarihi ve yerlerine göre dağılımları ve Türkiye verilerinin dünyada bilinen herbaryumlarla karşılaştırılması değerlendirilmiştir. Pasta grafikler, grafikler, çubuk grafikler ve harita çizimleri kullanılarak veri temizleme ve görselleştirme için Python programlama dili uygulanmıştır. ISTO; 287 kayıtlı *Salix* cinsinin çoğunu elinde tutarken, onu 221 kayıtlı AEF ve 148 kayıtlı HUB takip etmektedir. Toplam *Salix* cinsi herbaryum koleksiyonları 53 takson içerir. En eski *Salix* herbaryum kayıtları 1800'lerin ortalarına (GAZI) kadar uzanır, oysa çoğu herbaryum kaydı 2000-2001'den (AEF) sonra toplanmıştır. *Salix/Populus* cinsine ait kayıtların çoğu Ankara ilinden toplanmıştır. Bunu sırasıyla Bolu ve Kars ilçeleri takip etmektedir. Ayrıca *Salicaceae* üyelerinin toplandığı lokasyonlar Türkiye il haritası yardımıyla gösterilmiştir.

Anahtar Kelimeler: *Salicaceae* koleksiyonu, *Salix* L., *Populus* L., herbaryumlar, Türkiye, Python.

INTRODUCTION

Herbarium collections have long been one of the primary sources of information and unique records for taxonomic, biogeographic, molecular systematic, and many other studies (Rønsted *et al.*,

2020). Mainly, herbarium records are used for conservation purposes (Godefroid *et al.*, 2011); genomic studies comprised of populations genetics and phylogenies (Kuzmina *et al.*, 2017); domestication history (Ramos-Madrigal *et al.*, 2019); plant pathogens (Yoshida *et al.*, 2014) and

chemotaxonomy (Allasi Canales *et al.*, 2020). According to the data in Index Herbarium as of 31 December 2021, there are 3522 active herbaria in the world, containing 397,598,253 specimens (Thiers, 2020). Specimens' images have been used to study digitalized herbaria, for example, showing the effects of climate change on the differentiation of flowering season of plant species (Primack *et al.* 2004). Herbarium data have been accumulated in international databases such as the Global Biodiversity Information Facility (GBIF, <https://www.gbif.org/>) and Integrated Digitized Biocollections (iDigBio, <https://www.idigbio.org/>) with plant specimens' digitization of labels (Shirai *et al.* 2022).

Türkiye is a prominent country concerning biodiversity richness, including forest trees and shrubs (Kaya and Raynal, 2001). One of the most significant members of the Turkish forests is the Salicaceae family (Skvortsov, 1999; Acar *et al.*, 2022). Today, there are 27 willow species naturally found in Turkey (Acar *et al.*, 2022). Among them, four species and/or subspecies are endemic to Turkey, namely *S. trabzonica* A. Skv. (Terzioğlu *et al.*, 2007), *S. purpurea* subsp. *leucodermis* L., *S. rizeensis*, A. Güner et J. Zieliński and *S. anatolica* J. Zieliński and D. Tomaszewski (Güner, 2000; Zieliński & Tomaszewski, 2007; Acar *et al.*, 2022). Around the world, the number of reported willow species varies from 350 to over 500 species (Wu *et al.*, 2015). Salicaceae specimens which have been repeatedly gathered for scientific purposes through time and around Türkiye are preserved at many Turkish plant libraries. Generally, Türkiye has 53 herbaria including 990,374 specimens (Thiers, 2020). Sampling has been done widely since the 1940s in Türkiye, and ANK herbarium is the oldest, established in 1933 (Baytop, 2010a). Most of the herbaria are increasingly realized and explored by researchers. Every specimen in Turkish herbaria is treated to be adequately dried and pressed to preserve the morphological integrity of the plant on archival cardboard. Many specimens are identified by experts, and herbarium specimens are labelled with scientific name, identifier, collector, location, date

and origin of material at minimum (Bölükbaşı *et al.*, 2019).

Research has not yet determined the complex distribution and composition of the Salicaceae herbarium sheets in Türkiye. In addition, although the digital form of herbaria conserve money and time, there is not a well-established digitalized platform to investigate collections. The data produced in the current study can be the first step to accessing the Salicaceae herbarium collection list, including sampling date, location, and species number in Türkiye for anyone who may do research at the first stage. Thus, the study aims to 1) determine the number, distribution, and age of Salicaceae members' herbarium sheets and 2) provide a comparison between herbaria with a high number of collections of Salicaceae members in Türkiye which has the most significant collection in the world.

MATERIAL AND METHODS

Among the highest volume herbaria of Türkiye, AEF, ANK, GAZI, HUB, ISTE, and ISTO were selected to be visited, and all the herbarium specimen vouchers for family Salicaceae were inspected and photographed (one shot general view, one shot on details and one shot for label). The information on the herbarium specimen label was recorded in an MS Excel spreadsheet since those herbaria did not have a digital database. All collections involving 916 herbarium records for the genus *Salix* and 242 for the genus *Populus* were considered from the six biggest herbaria of Türkiye shown in the Index of Herbariorum (Table 1). All the herbarium specimen labels had to at the least contain the necessary information; however, some vouchers lacked the collection location, collection date or specimen identification. The unidentified specimens were labelled as *Salix* sp. without epithets. The basic information for a herbarium specimen label is as follows:

- Herbarium Voucher Number
- Scientific Name
- Collector
- Collection Date
- Collection Location
- Identifier

Table 1. Names, locations and codes of referred Herbaria.
Çizelge 1. Herbariumların isim, lokasyon ve kod bilgileri.

Herbarium Name	Herbarium Code	Location
Ankara University Faculty of Pharmacy Herbarium	AEF	Ankara University, Ankara, Türkiye
Ankara University Faculty of Science Herbarium	ANK	Ankara University, Ankara, Türkiye
Gazi University Herbarium	GAZI	Gazi University, Ankara, Türkiye
Hacettepe University Herbarium	HUB	Hacettepe University, Ankara, Türkiye
Istanbul University Faculty of Pharmacy Herbarium	ISTE	Istanbul University, Ankara, Türkiye
Istanbul University Forestry Faculty Herbarium	ISTO	Istanbul University, Ankara, Türkiye
Royal Botanical Gardens	K	Kew, London, United Kingdom

Basic data cleaning operations were performed on MS Excel Spreadsheet for misspelling, removing duplicates and treating missing values. This was followed by importing this cleaned herbaria data spreadsheet to Python Pandas library data frame (McKinney, 2010), shown in Supplementary Table 1, 2. Python data frame was applied for further detailed data wrangling for misspelling, missing values, and duplicates. In cases where the collection location was abroad, the location was replaced with a “foreign” notation. Furthermore, in case of detection of an anomaly, the labels were inspected from the previously shot photographs. Figure 1 shows one example photograph from ANK Herbarium.

Kew Royal Botanical Gardens, London, United Kingdom, already has a database for digitalized herbarium specimen vouchers, and those data are publicly accessible. Kew Royal Botanical Gardens’ database has been queried (last access 18 March 2022), and all the genus *Salix* data have been downloaded in a MS Excel spreadsheet. Python libraries were utilized for data visualization, and various plotting techniques such as pie charts, donut plots, bar graphs and map plots were applied for a better understanding of the data. Furthermore, Python web scripts were run to download the herbarium specimen voucher photographs and to construct maps.

RESULTS AND DISCUSSION

Turkish herbaria specimen vouchers represent the family Salicaceae in two genera, namely the genus *Salix* and the genus *Populus*, with 916 and 242 records, respectively. Regarding the genus *Salix*, ISTO holds the most specimens, with 287 specimens (31.3%), followed by AEF with 220 specimens (24.1%) and HUB with 220 specimens

(16.6%) (Figure 2, 3). HUB holds 72 specimens (29.8%), ANK has 55 specimens (22.7%). Even though ISTE contains many more specimens than other selected herbaria, only 42 representative specimens (17.4%) of the genus *Populus* were taken into consideration in the current study. Endemic *Salix* taxa are housed in GAZI (*S. purpurea* subsp. *leucodermis*), HUB (*S. rizeensis*, *S. purpurea* subsp. *leucodermis*) and ISTO (*S. trabzonica*) herbaria (Supplementary Table S1).



Figure 1. An example of photographs taken from the Herbaria.
Şekil 1. Herbariumlarda fotoğraflanan bir örnek.

Turkish herbaria preserve 12 *Salix* specimens (incl. one hybrid) donated or exchanged from Real Jardín Botánico, Madrid, Spain (MA), Museo Nacional de Historia Natural, Havana, Cuba (MNHN), Naturhistorisches Museum Wien, Austria (W), Max Nydegger Virtual Herbarium and Heinz Kalheber private herbarium according to herbarium specimen labels (Table 2). For the genus *Populus*, no foreign-originated specimen was observed.

Salix alba was the most common taxon in Turkish herbaria, with 239 specimens among the total number of 916, followed by *Salix caprea* with 84 members and *Salix cinerea* with 71 specimens. *Populus tremula* is also represented by the highest herbarium sheet numbers in every herbarium

because of their common ornamental uses in many parks. Twentyseven are represented by the limited number of herbarium sheets for the Family members (Tables 3, 4).

The collection date for the oldest herbarium specimens for the genus *Salix* dated back to the 19th Century (Figure 4), namely the year 1842, *S. persica* donated by MNHN, and the year 1865 (Figure 5) with *S. triandra* subsp. *bornmuelleri*. The years 2001 (119 specimens), 2002 (99 specimens) and 1966 (83 specimens) are those for which the most specimens are dated in Turkish Herbaria. However, 27 of 916 specimens' collection dates were unknown.

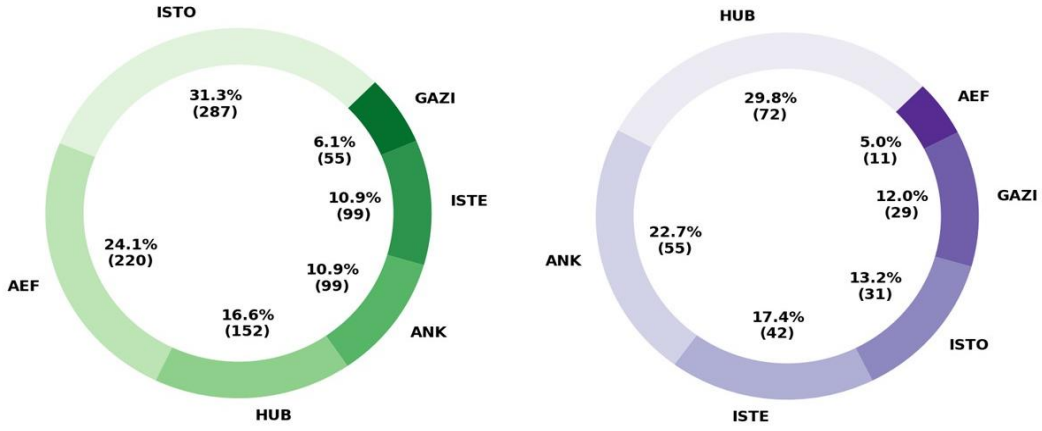


Figure 2. *Salix* (green circle) and *Populus* (purple circle) specimens in ANK, AEF, GAZI, HUB, ISTO, ISTE: Total 916/242 specimen, respectively.

Şekil 2. ANK, AEF, GAZI, HUB, ISTO, ISTE'nde *Salix* (yeşil daire) ve *Populus* (mor daire) türleri: Toplam sayı 916/242, sırasıyla.

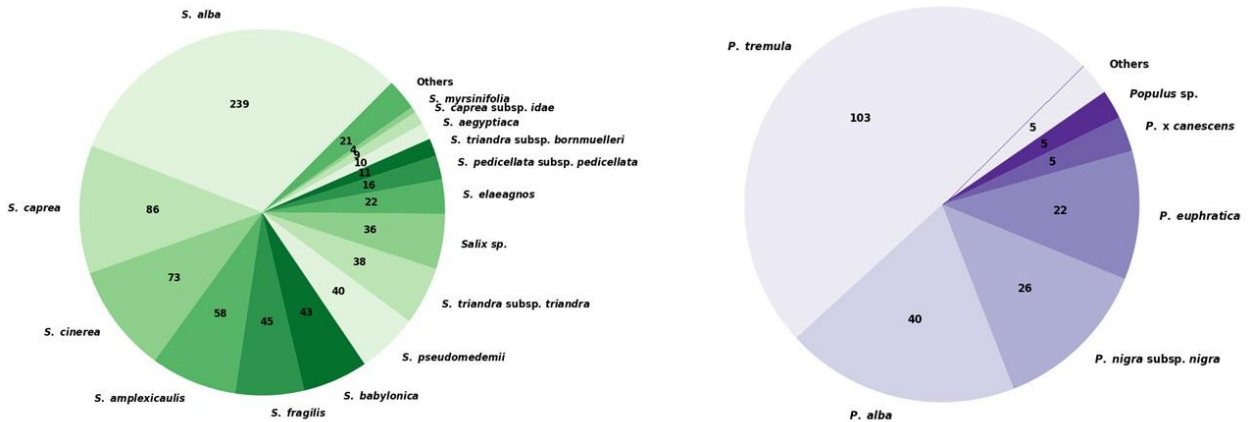


Figure 3. *Salix* (green circle) and *Populus* (purple circle) specimens' numbers in Turkish herbaria.

Şekil 3. *Salix* (yeşil daire) ve *Populus* (mor daire) türleri örneklerinin Türkiye herbaryumlarındaki sayısı.

Table 2. The *Salix* specimens (herbarium sheets) donated/exchanged from foreign Herbaria.

Çizelge 2. Yabancı Herbaryumlardan hibe edilen/değişilen *Salix* türlerine ait herbaryum örnekleri.

Species	Herbarium	Donated By
<i>S.triandra</i>	GAZI	MA
<i>S.alba</i>	GAZI	MA
<i>S.cinerea</i>	GAZI	MA
<i>S.elbursensis</i>	GAZI	Max Nydegger Virtual Herbarium
<i>S.wilhelmsiana</i>	GAZI	Max Nydegger Virtual Herbarium
<i>S.persica</i>	GAZI	MNHN
<i>S.cantabrica</i>	GAZI	MA
<i>S.apendicalata</i>	HUB	W
<i>S.aurita x repens</i>	HUB	Herb. Heinz Kalheber
<i>S.repens</i>	HUB	Herb. Heinz Kalheber
<i>S.rhaetica</i>	HUB	W
<i>S.aurita</i>	HUB	Herb. Heinz Kalheber

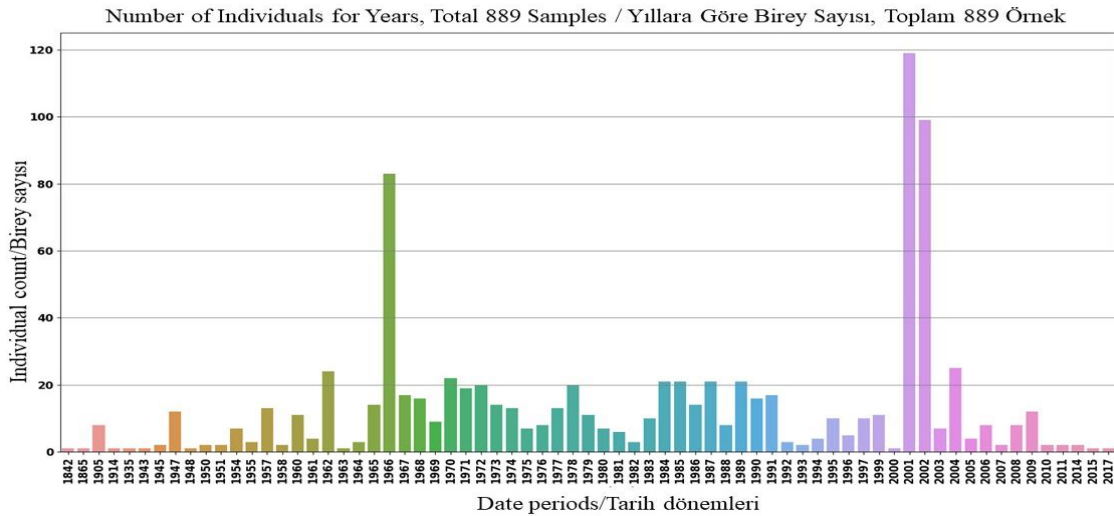


Figure 4. The distribution of collections of the *Salix* species in Turkish herbaria based on “collection date”.

Şekil 4. Türkiye herbaryumlarındaki *Salix* türleri koleksiyonlarının “toplama tarihine” göre dağılımları.

Table 3 The *Salix* specimens are represented by a limited number of herbarium sheets.

Çizelge 3. Sınırlı sayıda herbaryum örneği ile temsil edilen *Salix* türleri.

Species	Number	Species	Number
<i>S. bornmuelleri</i>	3	<i>S. aurita x repens</i>	1
<i>S. tetrasperma</i>	3	<i>S. apendicalata</i>	1
<i>S. caucasica</i>	3	<i>S. safsaf</i>	1
<i>S. reticulata</i>	3	<i>S. persica</i>	1
<i>S. alba x fragilis</i>	2	<i>S. pentadroides</i>	1
<i>S. apoda</i>	2	<i>S. alba</i> subsp. <i>coerulea</i>	1
<i>S. retusa</i>	2	<i>S. pentandroides</i>	1
<i>S. rizeensis</i>	2	<i>S. trabzonica</i>	1
<i>S. cantabrica</i>	1	<i>S. alba x acmophylla</i>	1
<i>S. rhaetica</i>	1	<i>S. aurita</i>	1
<i>S. repens</i>	1		

Table 4. The *Populus* specimens are represented by a limited number of herbarium sheets.
Çizelge 4. Sınırlı sayıda herbarium örneği ile temsil edilen *Populus* türleri.

Species	Counts
<i>P. nigra</i> subsp. <i>caudina</i>	2
<i>P. trichocarpa</i>	2
<i>P. balsemifera</i>	2
<i>P. angulata</i>	1
<i>P. canescens</i>	1
<i>P. pyramidalis</i>	1

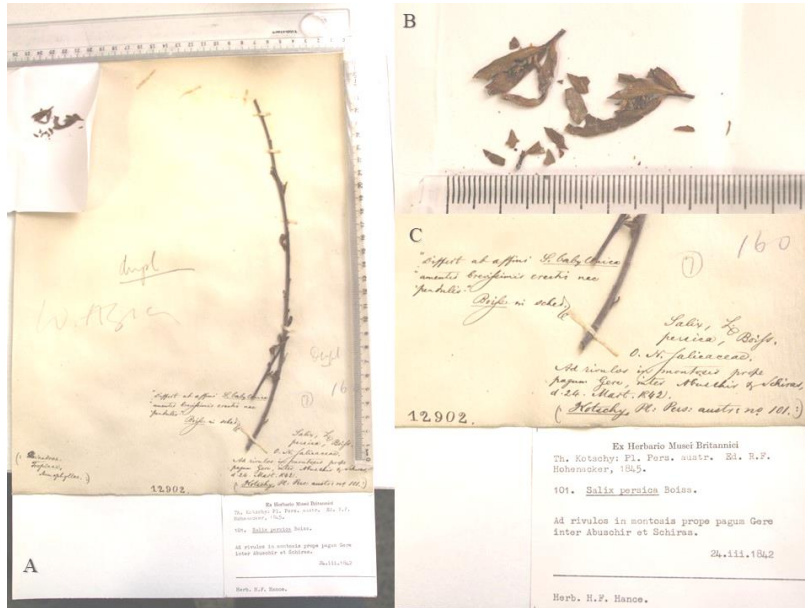


Figure 5. The oldest *Salix persica* herbarium sheet (A) in GAZİ herbarium and its catkin (B) dated back to 1842 (C).
Şekil 5. *Salix persica* (A) ve kedicigi (B) GAZİ herbariumunda bulunan 1842 yılından (C) en eski herbarium örneği.

The analysis and map constructed according to collection locations reveal that 265 specimens were collected from the Ankara Province, followed by Bolu and Kars with 40 and 39 records, respectively (Figure 6). Like other families, the rich collection of Salicaceae was collected and housed in Ankara with the help of Turkish or foreign botanist efforts (Baytop, 2010b). Türkiye has 81 provinces, and Turkish herbaria keep specimens from 66 provinces, which is 81.4% of the Turkish Provinces. As shown in the map (Figure 6), interestingly, there are no *Salix* records from Southeast Anatolia in the biggest herbaria. In 2009, Arıhan and Güvenç (2009) highlighted the existence of genus *Salix* members' distribution in the Southeast. The conflict between the previous publication and our finding could be explained by

the presence of only local herbarium records in the Southeastern region of Türkiye, which are not considered in the study.

Collection dates for the genus *Populus* are at the beginning of the 20th Century, starting in 1905, and most of the specimens were collected during this previous century (Figure 7). However, 16 specimens did not contain dates; therefore, their collection dates are unknown (Supplementary Table S2).

Regarding the genus *Populus*, collection from Ankara province leads with 28 specimens, followed by Istanbul and Kars/Çankırı with 14 and 13 specimens, respectively (Figure 8). There are specimens collected from 52 provinces which include 54% of the Turkish provinces.

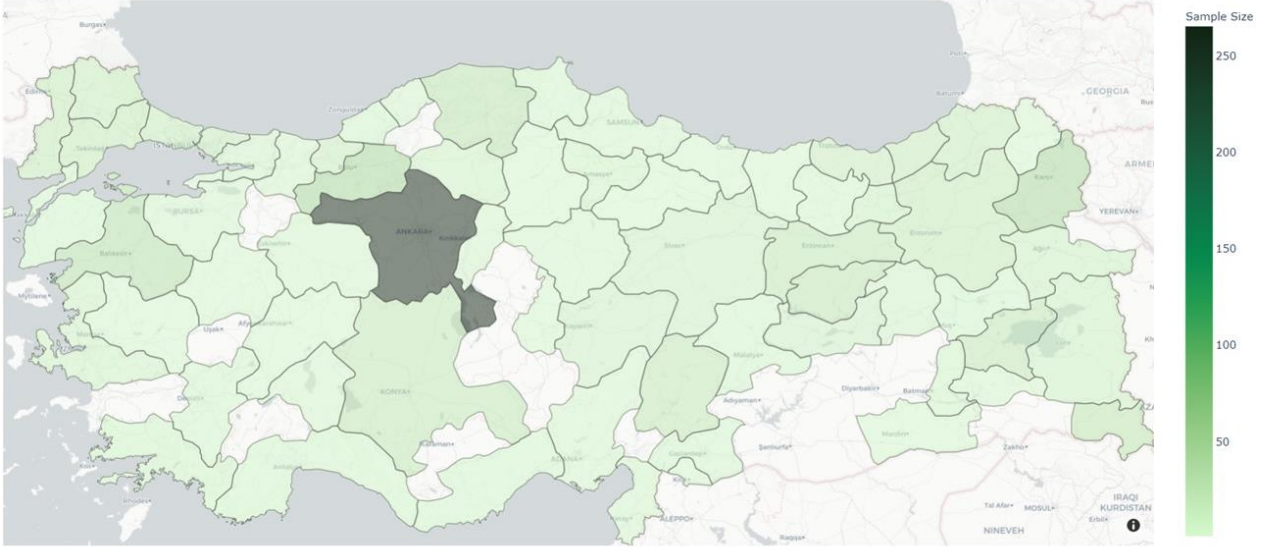


Figure 6. Turkish herbaria *Salix* specimens' collection locations and number of records collected.
Şekil 6. Türkiye herbaryumlarında, *Salix* türleri koleksiyonlarının lokasyonları ve çalışılan örneklerin sayısı.

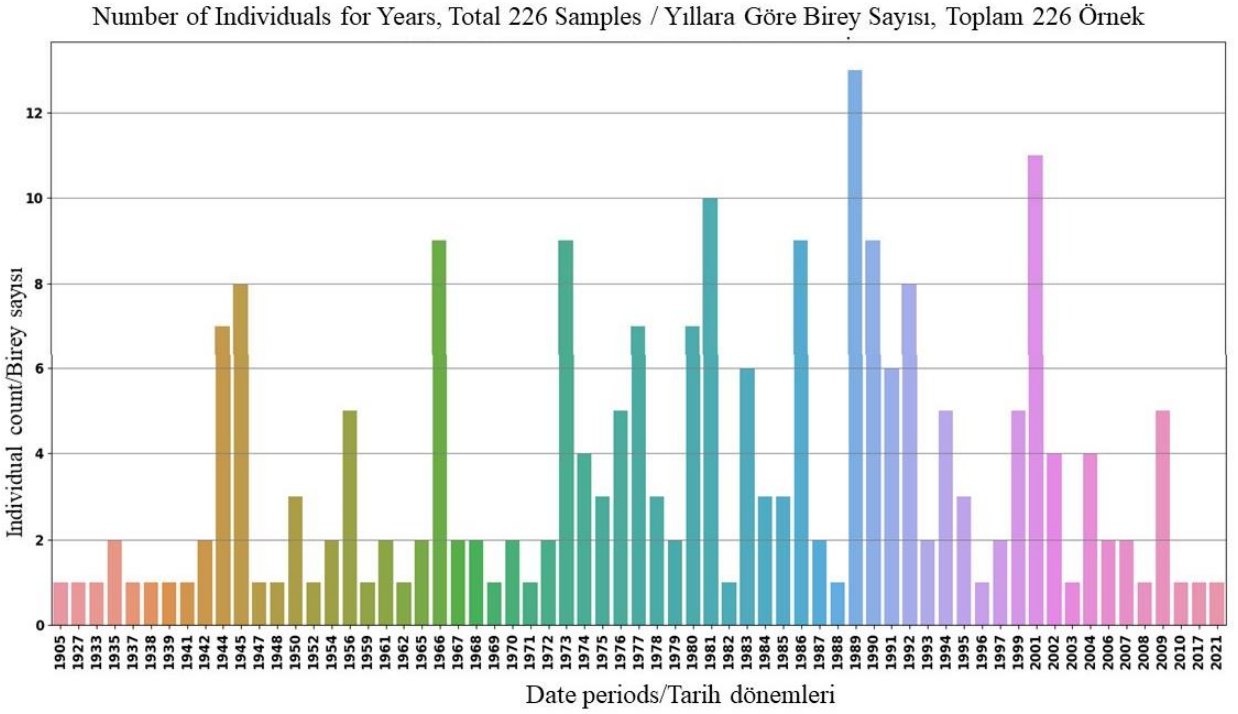


Figure 7. The distributions of collections of the *Populus* species in Turkish Herbaria based on "collection date".
Şekil 7. Türkiye Herbaryumlarındaki *Populus* türleri koleksiyonlarının "toplama tarihine" göre dağılımları.

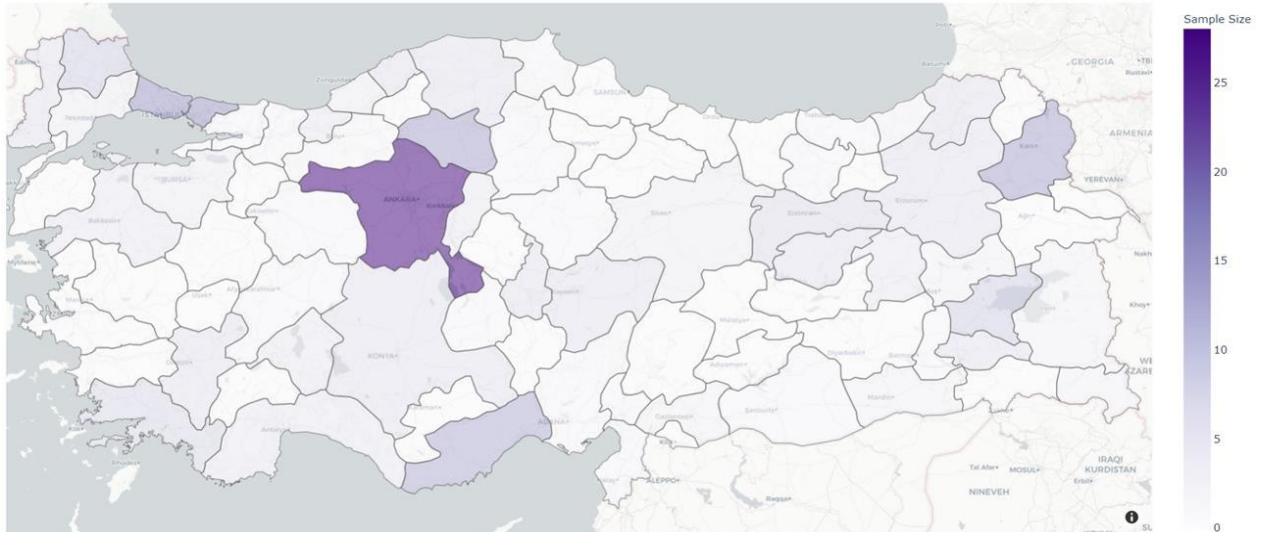


Figure 8. Turkish herbaria *Populus* specimens' collection locations and number of records collected.

Şekil 8. Türkiye herbaryumlarında, *Populus* türleri koleksiyonlarının lokasyonları ve çalışılan örneklerin sayısı.

Turkish herbaria have 53 *Salix* taxa with many representative species from the world. Some herbaria show the highest number of records regarding Salicaceae specimens. The *Salix* collection is represented by 212 herbarium sheets (KRAM Herbarium) and 393 *Salix* taxa (KOR Herbarium) of the Polish Academy of Sciences. As one of the world's oldest and largest herbaria, the Royal Botanic Gardens Kew (K; founded 1852; 8,125,000 specimens), has a unique heritage (Rønsted *et al.*, 2020). Kew Royal Botanical Gardens has 760 *Salix* specimens which were gathered all around the world. Map (Figure 9) shows the specimen collection' locations where the total number of countries is 38. The top three countries for the collection locations are 139 specimens from India, 106 from USA and 64 from China. Interestingly, the locations of 177 herbarium specimens are unknown. The total number of national willow herbarium specimens' sheets in the six biggest Turkish herbaria is the same as in the World *Salix* collections of Kew herbarium.

The Salicaceae collection summaries, organized map and list in the current study can be used to revise both genera for future use as performed in previous studies (Morrison *et al.* 2017). The data are also beneficial for understanding how the

family members are distributed across the country (Türkiye) and continents based on herbarium records, as mentioned by Funk (2018). All the lists and graphs constructed in the current study put forward the Salicaceae family's historical and distribution diversity in Türkiye. With the help of the list, the gaps and false identifications in the herbaria can be revised. The collection list and detailed images for recording digital herbarium data can powerfully complement traditional voucher collections (Heberling and Isaac, 2018). The resources generated in this work will also form the basis of much research, such as an Illustrated Flora of Turkey.

CONCLUSION

Herbaria are an excellent resource for comprehending global biodiversity. However, there have been few achievements on the Salicaceae herbarium sheet list and digitalization efforts in the herbaria of Türkiye. Based on the herbarium data set, the study summarized various distribution novelties of Salicaceae members in Türkiye. The presented study, which includes a documented collection list of Salicaceae members, will inspire and facilitate future research potential of Salicaceae in the herbarium as well as highlight the need for digitization of data.

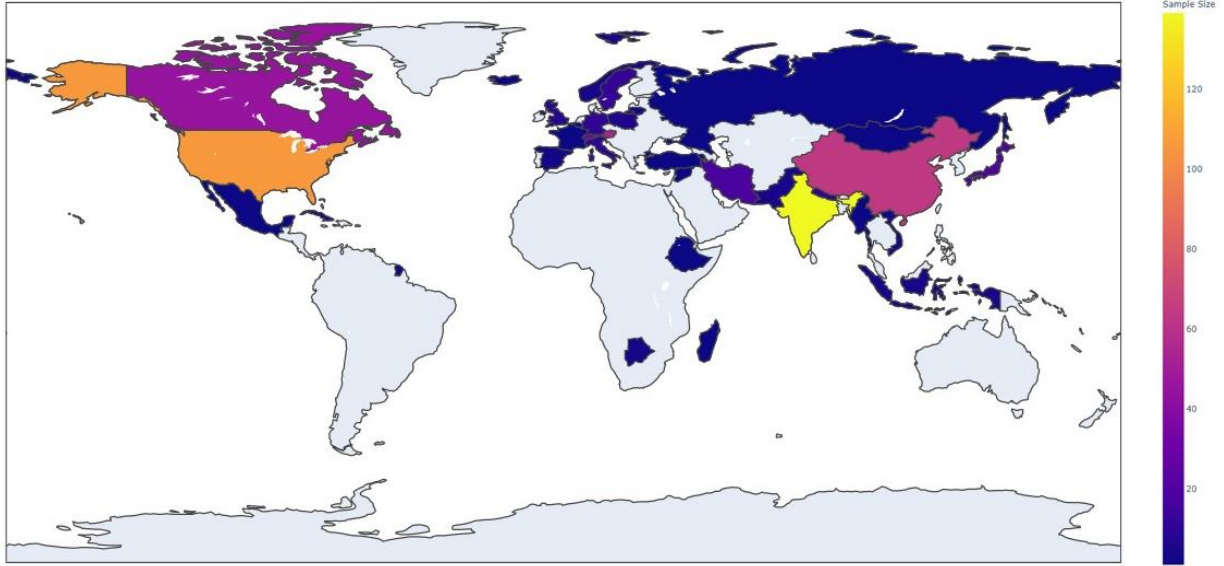


Figure 9. Kew Royal Botanical Gardens' *Salix* collection locations and number of specimens (177 Locations are unknown).
Şekil 9. Kew Kraliyet Botanik Bahçeleri'ndeki *Salix* koleksiyonları lokasyonları ve örneklerin sayısı (177 lokasyon belirsizdir).

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REFERENCES

- Acar, P., F. Ö. Değirmenci, H. Duman, and Z. Kaya. 2022. Molecular phylogenetic analysis resolving the taxonomic discrepancies among *Salix* L. species naturally found in Turkey. *Dendrobiology* 2022, vol. 87: 13-26. <https://doi.org/10.12657/denbio.087.002>.
- Allasi Canales, N., T. N. Gress Hansen, C. Cornett, K. Walker, F. Driver, A. Antonelli, C. Maldonado, M. Nesbitt, C.J. Barnes, N. Rønsted. 2020. Historical chemical annotations of *Cinchona* bark collections are comparable to results from current-day high-pressure liquid chromatography technologies. *J. Ethnopharmacol.* 249, 112375. doi: 10.1016/j.jep.2019.112375.
- Arihan, O. and A. Güvenç. 2009. Ankara çevresinde yetişen söğüt (*Salix* L.) türleri. *Ot Sistematik Botanik Dergisi.* 15–52.
- Baytop, A. 2010a. Hikmet Birand'ın (1904-1972) Anadolu Bitkileri Koleksiyonu. *Osmanlı Bilimi Araştırmaları* 11 (2010): 321-329
- Baytop, A. 2010b. Plant collectors in Anatolia Turkey *Phytologia Balcanica* 16 (2): 187 – 213. Sofia.
- Bölükbaşı, A., M. Benli, F. Geven. 2019. Analysis of Plant Samples in Gypsum Habitats in Herbarium (ANK), Ankara Üniversitesi Çevre Bilimleri Dergisi. 7(1), 56-64.
- Funk, V.A. 2018. Collections-based science in the 21st Century. *Journal of Systematics and Evolution.* 56: 175–193.
- Godefroid, S., A. Van der Vyver, P. Stoffelen, E. Robbrecht, and T. Vanderborgh. 2011. Testing the viability of seeds from old herbarium specimens for conservation purposes. *Taxon* 60, 565–569. doi: 10.1002/tax.602022.
- Güner, A. 2000. *Salix* L. pp 216-217. *Flora of Turkey and the East Aegean Islands*. Vol. 11 (ed. by A Güner, N Özhatay, T Ekim & KHC Başer) Edinburgh University Press, Edinburgh.
- Heberling, J.M. and B.L. Isaac. 2018. iNaturalist as a tool to expand the research value of museum specimens. *Applications in Plant Sciences* 6: e1193.
- Kaya Z, and Raynal D.J. (2001) Biodiversity and conservation of Turkish forest. *Biological Conservation* 97(2): 131–141.

- Kuzmina, M. L., T. W. A. Braukmann, A. J. Fazekas, S. W. Graham, S. L. Dewaard, A. Rodrigues, B. A. Bennett, T. A. Dickinson, J. M. Saarela, P. M. Catling, S.G. Newmaster, D.M. Percy, E. Fenneman, A. Lauron-Moreau, B. Ford, L. Gillespie, R. Subramanyam, J. Whitton, L. Jennings, D. Metsger, C. P. Warne, A. Brown, E. Sears, J.R. Dewaard, E.V. Zakharov, P. D. N. Hebert. 2017. Using herbarium-derived DNAs to assemble a large-scale DNA barcode library for the vascular plants of Canada. *Application Plant Science* 5, 1700079. doi: 10.3732/apps.1700079.
- McKinney, W. 2010. Data structures for statistical computing in python, Proceedings of the 9th Python in Science Conference, Volume 445.
- Morrison, S.A., T.S., Sillett, W.C. Funk, C.K. Ghalambor, T.C. Rick. 2017. Equipping the 22nd-century historical ecologist. *Trends in Ecology and Evolution* 32: 578–588.
- Primack, D. C. Imbres, R.B. Primack, A.J. Miller-Rushing, P. Del Tredici. 2004. Herbarium specimens demonstrate earlier flowering times in response to warming in Boston. *American Journal of Botany*. 91: (8) 1260–1264. doi: 10.3732/ajb.91.8.1260.
- Ramos-Madrigo, J., A. K. W. Runge, L. Bouby, T. Lacombe, J.A. Samaniego Castruita, A.F. Adam-Blondon, et al. 2019. Palaeogenomic insights into the origins of French grapevine diversity. *Nature Plants* 5, 595–603. doi: 10.1038/s41477-019-0437-5.
- Rønsted, N., O.M. Grace, and M.A. Carine. 2020. Editorial: Integrative and Translational Uses of Herbarium Collections Across Time, Space, and Species. *Front. Plant Sci.* 11:1319. doi: 10.3389/fpls.2020.01319.
- Shirai, M., A. Takano, T. Kurosawa, M. Inoue, S. Tagane, T. Tanimoto, T. Koganezawa, H. Sato, T. Terasawa, T. Horie, I. Mandai, T. Akihiro. 2022. Development of a system for the automated identification of herbarium specimens with high accuracy. *Scientific Reports* 16;12 (1):8066. doi: 10.1038/s41598-022-11450-y.
- Skvortsov, A. K. 1999. Willows of Russia and adjacent countries: Taxonomical and Geographical Revision. Nauka Publishers, Moscow.
- Terzioğlu, S., K. Coşkunçelebi, and B. Serdar. 2007. Contribution to the description of an endemic Turkish *Salix* species. *Plant Biosystems* 141: 82–85. doi:10.1080/11263500601154055.
- Thiers, B. M. 2020. The Worlds herbaria 2019. A summary report based on data from index herbariorum. <http://sweetgum.nybg.org/science/ih/> (Accessed December 5th, 2022).
- Wu, J., T. Nyman, D. Wang, G.W., Argus, Y. Yang, and J.H. Chen. 2015. Phylogeny of *Salix* subgenus *Salix* s.l. (Salicaceae): delimitation biogeography and reticulate evolution. *BMC Evolutionary Biology* 15: 31. doi:10.1186/s12862-015-0311-7.
- Yoshida, K, H. A. Burbano, J. Krause, M. Thines, D. Weigel, and S. Kamoun. 2014. Mining herbaria for plant pathogen genomes: Back to the future. *PLoS Pathogens*. 10, e1004028. doi: 10.1371/journal.ppat.1004028.
- Zieliński, J. and D. Tomaszewski. 2007. *Salix anatolica* (Salicaceae), a new species from Turkey. *Annales Botanici Fennici* 45: 386–388. doi:10.5735/085.045.0506

Table S1 The list of studied herbarium sheets of *Salix* taxa in the six biggest herbaria of Türkiye.
Çizelge EK-1 Türkiye'nin en büyük altı herbaryumunda incelenen *Salix* taksonlarının listesi.

	Species	Herbarium Code	Herbarium Voucher Number	Date	Location
1	<i>Salix amplexicaulis</i>	ANK	19839	21.05.1971	Tekirdağ
2	<i>S. amplexicaulis</i>	ANK	13494	13.07.1968	Tekirdağ
3	<i>S. amplexicaulis</i>	ANK	2108	14.07.1947	Ankara
4	<i>S. amplexicaulis</i>	ANK	93983	25.05.1985	Sivas
5	<i>S. babylonica</i>	ANK	2105	18.04.1947	Ankara
6	<i>S. babylonica</i>	ANK	76813	12.06.1999	Bartın
7	<i>S. babylonica</i>	ANK	78216	12.09.1997	Hatay
8	<i>S. caprea</i>	ANK	89449	19.09.2003	Ardahan
9	<i>S. caprea</i>	ANK	89248	17.07.2004	Kars
10	<i>S. caprea</i>	ANK	57686	7.07.1986	İstanbul
11	<i>S. caprea</i>	ANK	14920	8.03.1969	İstanbul
12	<i>S. caprea</i>	ANK	21847	21.05.1980	Bolu
13	<i>S. caprea</i>	ANK	21355	2.04.1972	Bolu
14	<i>S. caprea</i>	ANK	2107	20.03.1905	Ankara
15	<i>S. caprea</i>	ANK	26969	27.05.1973	Balıkesir
16	<i>S. caprea</i>	ANK	34523	18.04.1976	Konya
17	<i>S. caprea</i>	ANK	42902	14.07.1979	Kars
18	<i>S. caprea</i>	ANK	15305	3.06.1969	Trabzon
19	<i>S. alba</i>	ANK	90466	25.05.2002	Erzincan
20	<i>S. alba</i>	ANK	6594	2.06.1905	Edirne
21	<i>S. alba</i>	ANK	13293	2.06.1905	Kırklareli
22	<i>S. alba</i>	ANK	17660	22.04.1970	Edirne
23	<i>S. alba</i>	ANK	17660	22.04.1970	Edirne
24	<i>S. alba</i>	ANK	10870	30.04.1967	Tekirdağ
25	<i>S. alba</i>	ANK	16510	30.03.1970	Edirne
26	<i>S. alba</i>	ANK	10984	5.05.1967	Bitlis
27	<i>S. alba</i>	ANK	10984	5.05.1967	Bitlis
28	<i>S. alba</i>	ANK	2104	8.05.1966	Balıkesir
29	<i>S. alba</i>	ANK	9198	8.05.1966	Ankara
30	<i>S. alba</i>	ANK	9070	6.05.1966	Samsun
31	<i>S. alba subsp. alba</i>	ANK	39827	21.05.1978	Amasya
32	<i>S. alba</i>	ANK	34739	28.04.1976	Afyon
33	<i>S. alba</i>	ANK	8887	4.05.1966	Ankara
34	<i>S. alba</i>	ANK	8887	4.05.1966	Ankara
35	<i>S. alba</i>	ANK	8887	4.05.1966	Ankara
36	<i>S. alba</i>	ANK	20159	8.06.1971	Elazığ
37	<i>S. alba</i>	ANK	20159	8.06.1971	Elazığ
38	<i>S. alba</i>	ANK	81010	5.06.2003	Kırklareli
39	<i>S. alba</i>	ANK	109949	20.06.2014	Balıkesir
40	<i>S. alba</i>	ANK	64727	9.05.1992	Trabzon
41	<i>S. alba</i>	ANK	38824	29.05.1977	Balıkesir
42	<i>S. alba</i>	ANK	38824	29.05.1977	Balıkesir

Table S1. Continued.
Çizelge Ek-1 Devamı.

43	<i>S. alba</i>	ANK	68773	16.06.1905	Mersin
44	<i>S. alba</i>	ANK	13231	12.11.1968	Kırkkale
45	<i>S. alba</i>	ANK	14027	27.11.1968	Edirne
46	<i>S. alba</i>	ANK	13494	13.12.1968	Tekirdağ
47	<i>S. alba</i>	ANK	6256	28.05.1960	İzmir
48	<i>S. alba</i>	ANK	6251	17.03.1960	İzmir
49	<i>S. alba</i>	ANK	6554	19.05.1961	Edirne
50	<i>S. alba subsp. alba</i>	ANK	39776	20.05.1978	Amasya
51	<i>S. alba subsp. alba</i>	ANK	39830	21.05.1978	Amasya
52	<i>S. alba</i>	ANK	2569	9.05.1954	Balıkesir
53	<i>S. alba</i>	ANK	2103	*	*
54	<i>S. alba</i>	ANK	17626	22.04.1970	Tekirdağ
55	<i>S. alba</i>	ANK	28087	11.05.1974	Denizli
56	<i>S. alba</i>	ANK	38801	28.05.1977	Balıkesir
57	<i>S. alba</i>	ANK	36084	30.09.1976	Konya
58	<i>S. alba</i>	ANK	18686	13.05.1970	Bolu
59	<i>S. alba</i>	ANK	83050	18.07.2004	Yalova
60	<i>S. cinerea</i>	ANK	89925	29.04.2004	Kayseri
61	<i>S. cinerea</i>	ANK	38281	5.08.1977	Ankara
62	<i>S. cinerea</i>	ANK	19498	3.05.1971	İstanbul
63	<i>S. cinerea</i>	ANK	33671	28.07.1975	Bolu
64	<i>S. cinerea</i>	ANK	18682	13.05.1970	Bolu
65	<i>S. cinerea</i>	ANK	13935	26.06.1968	Kırklareli
66	<i>S. cinerea</i>	ANK	8590	9.02.1966	İstanbul
67	<i>S. cinerea</i>	ANK	10939	1.05.1967	İstanbul
68	<i>S. cinerea</i>	ANK	11496	13.06.1967	İstanbul
69	<i>S. cinerea</i>	ANK	15962	6.08.1969	Kırklareli
70	<i>S. cinerea</i>	ANK	2106	17.05.1947	Ankara
71	<i>S. elaeagnos</i>	ANK	52886	8.05.1984	Eskişehir
72	<i>S. elaeagnos</i>	ANK	18452	8.08.1970	Bolu
73	<i>S. elaeagnos</i>	ANK	18452	8.08.1970	Bolu
74	<i>S. elbursensis</i>	ANK	74813	11.06.1988	Bayburt
75	<i>S. fragilis</i>	ANK	18680	13.05.1970	Bolu
76	<i>S. fragilis</i>	ANK	20670	20.07.1971	Tekirdağ
77	<i>S. fragilis</i>	ANK	32561	4.07.1975	Konya
78	<i>S. fragilis</i>	ANK	2632	15.04.1954	Balıkesir
79	<i>S. fragilis</i>	ANK	83861	19.04.2006	Malatya
80	<i>S. myrsinifolia</i>	ANK	74659	15.06.1997	Sinop
81	<i>S. retusa</i>	ANK	56636	4.07.1947	Switzerland
82	<i>S. reticulata</i>	ANK	56635	4.07.1947	Switzerland
83	<i>S. pentandra</i>	ANK	90898	26.03.2008	Gümüşhane
84	<i>S. pseudoepressa</i>	ANK	90477	26.05.2002	Erzincan
85	<i>S. viminalis</i>	ANK	2109	17.05.1947	Ankara
86	<i>S. wilhelmsiana</i>	ANK	90476	26.05.2002	Erzincan

Table S1. Continued.
Çizelge Ek-1 Devamı.

87	<i>Salix sp.</i>	ANK	54321	13.06.1984	Van
88	<i>Salix sp.</i>	ANK	54323	13.06.1984	Van
89	<i>Salix sp.</i>	ANK	41578	7.05.1978	Amasya
90	<i>Salix sp.</i>	ANK	90370	24.05.2005	Kahramanmaraş
91	<i>Salix sp.</i>	ANK	93984	25.05.1985	Sivas
92	<i>Salix sp.</i>	ANK	None	*	*
93	<i>Salix sp.</i>	ANK	57850	1.06.1987	Bolu
94	<i>Salix sp.</i>	ANK	55858	21.08.1985	Ağrı
95	<i>Salix sp.</i>	ANK	89244	29.10.2004	Erzurum
96	<i>Salix sp.</i>	ANK	89243	29.10.2004	Erzurum
97	<i>Salix sp.</i>	ANK	89989	26.05.2004	Kayseri
98	<i>Salix sp.</i>	ANK	900003	26.05.2004	Kayseri
99	<i>Salix sp.</i>	ANK	16507	30.03.1970	Edirne
100	<i>Salix sp.</i>	ANK	13609	15.07.1968	Edirne
101	<i>S. amplexicaulis</i>	ISTO	30541	2004	Düzce
102	<i>S. amplexicaulis</i>	ISTO	28856	1962	Bolu
103	<i>S. amplexicaulis</i>	ISTO	3103	1964	*
104	<i>S. amplexicaulis</i>	ISTO	2298	1962	Kastamonu
105	<i>S. amplexicaulis</i>	ISTO	2291	1962	Kastamonu
106	<i>S. amplexicaulis</i>	ISTO	21278	1962	Zonguldak
107	<i>S. amplexicaulis</i>	ISTO	28160	1996	Kastamonu
108	<i>S. amplexicaulis</i>	ISTO	34341	2006	Kocaeli
109	<i>S. amplexicaulis</i>	ISTO	33199	2001	Kastamonu
110	<i>S. apoda</i>	ISTO	33401	1955	Bayburt
111	<i>S. armenorossica</i>	ISTO	4990	1966	Van
112	<i>S. armenorossica</i>	ISTO	1225	1957	Kars
113	<i>S. armenorossica</i>	ISTO	33404	1995	Bayburt
114	<i>S. armenorossica</i>	ISTO	1226	1954	Hakkari
115	<i>S. armenorossica</i>	ISTO	5302	1966	Ağrı
116	<i>S. babylonica</i>	ISTO	33628	2006	Tekirdağ
117	<i>S. babylonica</i>	ISTO	28632	1999	Çanakkale
118	<i>S. babylonica</i>	ISTO	7735	1966	Mersin
119	<i>S. babylonica</i>	ISTO	8878	1995	Kırklareli
120	<i>S. bornmuelleri</i>	ISTO	1219	1957	Tunceli
121	<i>S. bornmuelleri</i>	ISTO	1224	1957	Kahramanmaraş
122	<i>S. bornmuelleri</i>	ISTO	1230	1957	Kahramanmaraş
123	<i>S. acmophylla</i>	ISTO	4989	1966	Hakkari
124	<i>S. acmophylla</i>	ISTO	26005	1971	Kahramanmaraş
125	<i>S. acmophylla</i>	ISTO	4358	1965	Gaziantep
126	<i>S. acmophylla</i>	ISTO	898	1958	Kilis
127	<i>S. acmophylla</i>	ISTO	28857	1966	Siirt
128	<i>S. acmophylla</i>	ISTO	782	1958	Gaziantep
129	<i>S. acmophylla</i>	ISTO	15462	1971	Bitlis
130	<i>S. acmophylla</i>	ISTO	12695	1966	Siirt

Table S1. Continued.
Çizelge Ek-1 Devamı.

131	<i>S. acmophylla</i>	ISTO	12697	1966	Mardin
132	<i>S. acmophylla</i>	ISTO	9854	1966	Hakkari
133	<i>S. aegyptiaca</i>	ISTO	1227	1954	Hakkari
134	<i>S. aegyptiaca</i>	ISTO	15600	1972	Bitlis
135	<i>S. aegyptiaca</i>	ISTO	15599	1972	Bitlis
136	<i>S. aegyptiaca</i>	ISTO	28858	1966	Bitlis
137	<i>S. aegyptiaca</i>	ISTO	29013	1961	Armenia
138	<i>S. aegyptiaca</i>	ISTO	4943	1966	Hakkari
139	<i>S. aegyptiaca</i>	ISTO	4973	1966	Hakkari
140	<i>S. alba</i>	ISTO	37902	2017	Ankara
141	<i>S. alba</i>	ISTO	27718	1999	Bolu
142	<i>S. alba</i>	ISTO	28871	1966	Van
143	<i>S. alba</i>	ISTO	21330	1978	Muğla
144	<i>S. alba</i>	ISTO	27718	1999	Bolu
145	<i>S. alba</i>	ISTO	27327	*	Konya
146	<i>S. alba</i>	ISTO	27055	*	İzmir
147	<i>S. alba</i>	ISTO	27043	1982	İzmir
148	<i>S. alba</i>	ISTO	9971	1969	Çorum
149	<i>S. alba</i>	ISTO	15290	1970	Manisa
150	<i>S. alba</i>	ISTO	15570	1971	Denizli
151	<i>S. alba</i>	ISTO	3614	1965	Kütahya
152	<i>S. alba</i>	ISTO	3663	1965	Yozgat
153	<i>S. alba</i>	ISTO	4449	1965	Zonguldak
154	<i>S. alba</i>	ISTO	3740	1965	Balıkesir
155	<i>S. alba</i>	ISTO	28631	1999	Çanakkale
156	<i>S. alba</i>	ISTO	17641	1976	Konya
157	<i>S. alba</i>	ISTO	5164	1966	Hakkari
158	<i>S. alba</i>	ISTO	838	1960	Kırklareli
159	<i>S. alba</i>	ISTO	7708	1966	Çanakkale
160	<i>S. alba</i>	ISTO	7257	1967	Kahramanmaraş
161	<i>S. alba</i>	ISTO	7483	1968	Erzurum
162	<i>S. alba</i>	ISTO	5760	1966	Erzincan
163	<i>S. alba</i>	ISTO	4735	1966	Kastamonu
164	<i>S. alba</i>	ISTO	4325	1965	Kayseri
165	<i>S. alba</i>	ISTO	27327	1989	Konya
166	<i>S. alba</i>	ISTO	7620	1966	Tunceli
167	<i>S. alba</i>	ISTO	17061	1971	Tekirdağ
168	<i>S. alba</i>	ISTO	24269	1980	Bursa
169	<i>S. alba</i>	ISTO	16415	1973	Trabzon
170	<i>S. alba</i>	ISTO	31660	1999	Tunceli
171	<i>S. alba</i>	ISTO	31703	1991	Bingöl
172	<i>S. alba</i>	ISTO	30537	2004	Düzce
173	<i>S. alba</i>	ISTO	32757	1991	İzmir
174	<i>S. alba</i>	ISTO	28872	1966	Hakkari

Table S1. Continued.
Çizelge Ek-1 Devamı.

175	<i>S. alba</i>	ISTO	9788	1966	Hakkari
176	<i>S. alba</i>	ISTO	9785	1966	Hakkari
177	<i>S. alba</i>	ISTO	17383	1974	Tunceli
178	<i>S. alba</i>	ISTO	4984	1966	Hakkari
179	<i>S. alba</i>	ISTO	28873	1962	Sakarya
180	<i>S. alba</i>	ISTO	9841	1966	Hakkari
181	<i>S. alba</i>	ISTO	28868	1966	Hakkari
182	<i>S. alba</i>	ISTO	5035	1966	Hakkari
183	<i>S. alba</i>	ISTO	9843	1966	Kars
184	<i>S. alba</i>	ISTO	9787	1966	Hakkari
185	<i>S. alba</i>	ISTO	9855	1966	Hakkari
186	<i>S. alba</i>	ISTO	9882	1966	Erzurum
187	<i>S. alba</i>	ISTO	33627	2005	Kırklareli
188	<i>S. alba</i>	ISTO	5006	1966	Muş
189	<i>S. alba x acmophylla</i>	ISTO	14959	1971	Elazığ
190	<i>S. alba</i>	ISTO	2299	1962	Kastamonu
191	<i>S. alba</i>	ISTO	7642	1966	Tunceli
192	<i>S. alba</i>	ISTO	5962	1966	Antalya
193	<i>S. alba</i>	ISTO	5936	1967	İstanbul
194	<i>S. alba</i>	ISTO	23188	1978	Manisa
195	<i>S. alba</i>	ISTO	5149	1966	Antalya
196	<i>S. alba</i>	ISTO	8398	1969	Ankara
197	<i>S. alba</i>	ISTO	17914	1975	Adana
198	<i>S. alba x fragilis</i>	ISTO	28869	1960	Trabzon
199	<i>S. alba</i>	ISTO	5036	1966	Hakkari
200	<i>S. alba</i>	ISTO	9879	1966	Van
201	<i>S. alba</i>	ISTO	9850	1966	Ağrı
202	<i>S. alba</i>	ISTO	6953	1965	Yozgat
203	<i>S. alba</i>	ISTO	34982	2006	Bartın
204	<i>S. alba</i>	ISTO	3171	1962	Çanakkale
205	<i>S. alba</i>	ISTO	5163	1966	Van
206	<i>S. alba</i>	ISTO	4097	1965	Kahramanmaraş
207	<i>S. alba</i>	ISTO	5012	1966	Hakkari
208	<i>S. alba</i>	ISTO	26703	1987	Tunceli
209	<i>S. alba</i>	ISTO	5248	1966	Erzurum
210	<i>S. alba</i>	ISTO	26704	1987	Tunceli
211	<i>S. alba</i>	ISTO	2336	1962	Bolu
212	<i>S. alba</i>	ISTO	33224	1980	Bolu
213	<i>S. alba</i>	ISTO	33399	1995	Giresun
214	<i>S. alba</i>	ISTO	29038	1973	Armenia
215	<i>S. caprea</i>	ISTO	23246	1978	Bursa
216	<i>S. caprea subsp. caprea</i>	ISTO	1543	1962	Bolu
217	<i>S. caprea</i>	ISTO	17306	1972	Bitlis
218	<i>S. caprea</i>	ISTO	15601	1972	Bitlis

Table S1. Continued.
Çizelge Ek-1 Devamı.

219	<i>S. caprea</i>	ISTO	20932	1978	Artvin
220	<i>S. caprea subsp. caprea</i>	ISTO	9957	1966	Kars
221	<i>S. caprea</i>	ISTO	9786	1966	Hakkari
222	<i>S. caprea subsp. caprea</i>	ISTO	23213	1978	Bursa
223	<i>S. caprea subsp. caprea</i>	ISTO	21942	1979	Bolu
224	<i>S. caprea</i>	ISTO	9842	1966	Kars
225	<i>S. caprea subsp. caprea</i>	ISTO	3968	1965	Artvin
226	<i>S. caprea</i>	ISTO	7475	1967	Erzurum
227	<i>S. caprea subsp. caprea</i>	ISTO	17926	1973	Kocaeli
228	<i>S. caprea subsp. caprea</i>	ISTO	24378	1979	Bursa
229	<i>S. caprea subsp. caprea</i>	ISTO	21920	1979	Bolu
230	<i>S. caprea subsp. caprea</i>	ISTO	16409	1973	Trabzon
231	<i>S. caprea subsp. caprea</i>	ISTO	16412	1973	Trabzon
232	<i>S. caprea subsp. caprea</i>	ISTO	15722	1972	Ordu
233	<i>S. caprea subsp. caprea</i>	ISTO	1640	1962	Kastamonu
234	<i>S. caprea subsp. caprea</i>	ISTO	7648	1966	Bolu
235	<i>S. caprea subsp. caprea</i>	ISTO	7346	1967	Balıkesir
236	<i>S. caprea subsp. caprea</i>	ISTO	23078	1979	Bolu
237	<i>S. caprea subsp. caprea</i>	ISTO	3718	1960	Ankara
238	<i>S. caprea subsp. caprea</i>	ISTO	5697	*	Erzincan
239	<i>S. caprea subsp. caprea</i>	ISTO	16825	1973	Kocaeli
240	<i>S. caprea subsp. caprea</i>	ISTO	17309	1972	Bitlis
241	<i>S. caprea subsp. caprea</i>	ISTO	1542	1962	Bolu
242	<i>S. caprea subsp. caprea</i>	ISTO	4287	1962	Düzce
243	<i>S. caprea subsp. caprea</i>	ISTO	4591	1965	Eskişehir
244	<i>S. caprea subsp. caprea</i>	ISTO	3819	1965	Yozgat
245	<i>S. caprea subsp. caprea</i>	ISTO	17407	1974	Erzincan
246	<i>S. caprea subsp. caprea</i>	ISTO	7550	1966	Kütahya
247	<i>S. caprea subsp. caprea</i>	ISTO	16414	1973	Trabzon
248	<i>S. caprea subsp. caprea</i>	ISTO	17827	1972	Ordu
249	<i>S. caprea subsp. caprea</i>	ISTO	17167	1971	Balıkesir
250	<i>S. caprea subsp. caprea</i>	ISTO	5309	1966	Kars
251	<i>S. caprea subsp. caprea</i>	ISTO	21277	1962	Sinop
252	<i>S. caprea subsp. caprea</i>	ISTO	6911	1967	Kars
253	<i>S. caprea subsp. caprea</i>	ISTO	21243	1978	Artvin
254	<i>S. caprea</i>	ISTO	33206	2001	Kastamonu
255	<i>S. reticulata</i>	ISTO	21989	1977	Austria
256	<i>S. caprea</i>	ISTO	33280	1999	Balıkesir
257	<i>S. caprea</i>	ISTO	30538	2004	Düzce
258	<i>S. caprea</i>	ISTO	33629	2006	Tekirdağ
259	<i>S. caprea</i>	ISTO	34983	2007	Bartın
260	<i>S. caprea</i>	ISTO	27615	1995	Sakarya
261	<i>S. caprea</i>	ISTO	29036	1960	Armenia
262	<i>S. caprea</i>	ISTO	27719	1999	Ankara

Table S1. Continued.
Çizelge Ek-1 Devamı.

263	<i>S. caprea</i>	ISTO	28863	1966	Kars
264	<i>S. caprea</i>	ISTO	17397	1974	Erzincan
265	<i>S. caprea</i>	ISTO	27505	1997	Bolu
266	<i>S. caprea</i>	ISTO	16411	1973	Trabzon
267	<i>S. caprea</i>	ISTO	28173	1996	Kastamonu
268	<i>S. caprea</i>	ISTO	26291	1983	Zonguldak
269	<i>S. caprea</i>	ISTO	24571	1981	Bolu
270	<i>S. caprea</i>	ISTO	28633	1999	Çanakkale
271	<i>S. caprea subsp. idae</i>	ISTO	7360	1967	Balıkesir
272	<i>S. caprea subsp. idae</i>	ISTO	23044	1979	Balıkesir
273	<i>S. caprea subsp. idae</i>	ISTO	2862	1951	Balıkesir
274	<i>S. caprea subsp. idae</i>	ISTO	336	1951	Balıkesir
275	<i>S. caprea subsp. idae</i>	ISTO	15796	1973	Balıkesir
276	<i>S. caprea subsp. idae</i>	ISTO	8489	1969	Balıkesir
277	<i>S. caprea subsp. idae</i>	ISTO	17179	1971	Balıkesir
278	<i>S. caprea subsp. idae</i>	ISTO	24273	1980	Balıkesir
279	<i>S. caprea subsp. idae</i>	ISTO	15800	1973	Balıkesir
280	<i>S. cinerea</i>	ISTO	4324	1965	Kayseri
281	<i>S. cinerea</i>	ISTO	2334	1962	Sakarya
282	<i>S. cinerea</i>	ISTO	839	1960	Kırklareli
283	<i>S. cinerea</i>	ISTO	21273	1962	Zonguldak
284	<i>S. cinerea</i>	ISTO	34	1948	Kocaeli
285	<i>S. cinerea</i>	ISTO	30539	2004	Düzce
286	<i>S. cinerea</i>	ISTO	2290	1962	Kastamonu
287	<i>S. cinerea</i>	ISTO	17643	1976	Konya
288	<i>S. cinerea</i>	ISTO	27409	1984	Kars
289	<i>S. cinerea</i>	ISTO	33402	1995	Artvin
290	<i>S. cinerea</i>	ISTO	24232	1980	Tokat
291	<i>S. cinerea</i>	ISTO	33630	2005	Kırklareli
292	<i>S. cinerea</i>	ISTO	840	1960	Kırklareli
293	<i>S. cinerea</i>	ISTO	7394	1968	İstanbul
294	<i>S. cinerea</i>	ISTO	2337	1962	Kocaeli
295	<i>S. cinerea</i>	ISTO	20594	1978	Kırklareli
296	<i>S. cinerea</i>	ISTO	15238	1972	Kocaeli
297	<i>S. elaeagnos</i>	ISTO	7691	1966	Bolu
298	<i>S. elaeagnos</i>	ISTO	23058	1979	Bolu
299	<i>S. elaeagnos</i>	ISTO	1541	1962	Bolu
300	<i>S. elaeagnos</i>	ISTO	2297	1962	Kastamonu
301	<i>S. elaeagnos</i>	ISTO	23073	1979	Bolu
302	<i>S. elaeagnos</i>	ISTO	2294	1962	Kastamonu
303	<i>S. elaeagnos</i>	ISTO	1235	1957	Bolu
304	<i>S. elaeagnos</i>	ISTO	30540	2004	Düzce
305	<i>S. elaeagnos</i>	ISTO	28183	1996	Kastamonu
306	<i>S. elaeagnos</i>	ISTO	20860	1978	Sinop

Table S1. Continued.
Çizelge Ek-1 Devamı.

307	<i>S. elaeagnos</i>	ISTO	1702	1962	Zonguldak
308	<i>S. elbursensis</i>	ISTO	5226	1966	Van
309	<i>S. elbursensis</i>	ISTO	4940	1966	Hakkari
310	<i>S. elbursensis</i>	ISTO	28891	1966	Hakkari
311	<i>S. elbursensis</i>	ISTO	17247	1974	Erzincan
312	<i>S. elbursensis</i>	ISTO	837	1955	Rize
313	<i>S. elbursensis</i>	ISTO	9847	1966	Hakkari
314	<i>S. excelsa</i>	ISTO	29035	1972	Armenia
315	<i>S. excelsa</i>	ISTO	29661	1991	Bingöl
316	<i>S. excelsa</i>	ISTO	28865	1943	Lebanon
317	<i>S. excelsa</i>	ISTO	5319	1966	Erzurum
318	<i>S. excelsa</i>	ISTO	26708	1987	Tunceli
319	<i>S. fragilis</i>	ISTO	9853	1966	Ağrı
320	<i>S. fragilis</i>	ISTO	28875	1966	Ağrı
321	<i>S. fragilis</i>	ISTO	28874	1962	Kastamonu
322	<i>S. fragilis</i>	ISTO	16410	1973	Trabzon
323	<i>S. fragilis</i>	ISTO	21082	1962	Kastamonu
324	<i>S. fragilis</i>	ISTO	5236	1966	Erzurum
325	<i>S. fragilis</i>	ISTO	2293	1962	Kastamonu
326	<i>S. myrsinifolia</i>	ISTO	27607	1997	Kastamonu
327	<i>S. myrsinifolia</i>	ISTO	27492	1995	Kastamonu
328	<i>S. pedicellata subsp. pedicellata</i>	ISTO	4342	1965	Gaziantep
329	<i>S. pedicellata subsp. pedicellata</i>	ISTO	4088	*	Kahramanmaraş
330	<i>S. pedicellata subsp. pedicellata</i>	ISTO	15523	1972	Elazığ
331	<i>S. pedicellata subsp. pedicellata</i>	ISTO	5984	1966	Antalya
332	<i>S. pedicellata subsp. pedicellata</i>	ISTO	7645	1966	Tunceli
333	<i>S. pedicellata subsp. pedicellata</i>	ISTO	27232	1989	Konya
334	<i>S. pedicellata subsp. pedicellata</i>	ISTO	15815	1973	Hatay
335	<i>S. pedicellata subsp. pedicellata</i>	ISTO	14954	1954	Elazığ
336	<i>S. pedicellata subsp. pedicellata</i>	ISTO	27329	1989	Konya
337	<i>S. pedicellata subsp. pedicellata</i>	ISTO	26705	1987	Tunceli
338	<i>S. pedicellata subsp. pedicellata</i>	ISTO	26700	1987	Tunceli
339	<i>S. pedicellata subsp. pedicellata</i>	ISTO	26701	1987	Tunceli
340	<i>S. pedicellata subsp. pedicellata</i>	ISTO	26706	1987	Tunceli
341	<i>S. pentandra</i>	ISTO	604	1957	Kahramanmaraş
342	<i>S. pentandra</i>	ISTO	603	1957	Kahramanmaraş
343	<i>S. pseudoepressa</i>	ISTO	5303	1966	Erzurum
344	<i>S. pseudoepressa</i>	ISTO	9881	1966	Erzurum
345	<i>S. pseudomedemii</i>	ISTO	112	1950	Kahramanmaraş
346	<i>S. pseudomedemii</i>	ISTO	17311	1972	Bitlis
347	<i>S. pseudomedemii</i>	ISTO	29039	1971	Armenia
348	<i>S. pseudomedemii</i>	ISTO	14745	1966	Kars
349	<i>S. pseudomedemii</i>	ISTO	15440	1971	Muş

Table S1. Continued.

Çizelge Ek-1 Devamı.

350	<i>S. pseudomedemii</i>	ISTO	29683	1991	Bingöl
351	<i>S. pseudomedemii</i>	ISTO	33400	1995	Bayburt
352	<i>S. pseudomedemii</i>	ISTO	1231	1957	Adana
353	<i>S. pseudomedemii</i>	ISTO	28892	1964	Samsun
354	<i>S. pseudomedemii</i>	ISTO	1220	1957	Tunceli
355	<i>S. pseudomedemii</i>	ISTO	17396	1974	Tunceli
356	<i>S. pseudomedemii</i>	ISTO	28866	1960	Sivas
357	<i>S. pseudomedemii</i>	ISTO	5742	1966	Erzincan
358	<i>S. pseudomedemii</i>	ISTO	17308	1972	Bitlis
359	<i>S. pseudomedemii</i>	ISTO	17395	1974	Tunceli
360	<i>S. pseudomedemii</i>	ISTO	3610	1965	Kahramanmaraş
361	<i>S. pseudomedemii</i>	ISTO	5308	1966	Erzurum
362	<i>S. pseudomedemii</i>	ISTO	3110	1964	Samsun
363	<i>S. pseudomedemii</i>	ISTO	17912	1975	Erzincan
364	<i>S. pseudepressa</i>	ISTO	1223	1957	Kars
365	<i>S. safsaf</i>	ISTO	3134	1963	Adana
366	<i>S. tetrasperma</i>	ISTO	607	1957	Kahramanmaraş
367	<i>S. tetrasperma</i>	ISTO	606	1957	Kahramanmaraş
368	<i>S. tetrasperma</i>	ISTO	605	1957	Kahramanmaraş
369	<i>S. trabzonica</i>	ISTO	33403 (endemik)	1995	Rize
370	<i>S. triandra subsp. bornmuelleri</i>	ISTO	17913	1975	Ağrı
371	<i>S. triandra subsp. bornmuelleri</i>	ISTO	29664	1991	Bingöl
372	<i>S. triandra subsp. bornmuelleri</i>	ISTO	28854	1950	Sivas
373	<i>S. triandra subsp. triandra</i>	ISTO	5174	1966	Kars
374	<i>S. triandra subsp. triandra</i>	ISTO	28856	*	Hakkari
375	<i>S. triandra subsp. triandra</i>	ISTO	9844	1966	Kars
376	<i>S. triandra</i>	ISTO	26707	1978	Tunceli
377	<i>S. triandra subsp. bornmuelleri</i>	ISTO	21139	1978	Antalya
378	<i>S. triandra</i>	ISTO	28867	1966	Ağrı
379	<i>S. triandra subsp. triandra</i>	ISTO	33631	2007	Tekirdağ
380	<i>S. triandra</i>	ISTO	29049	1955	Armenia
381	<i>S. triandra</i>	ISTO	28990	1961	Armenia
382	<i>S. viminalis</i>	ISTO	9584	1967	Erzurum
383	<i>S. wilhelmsiana</i>	ISTO	5223	1966	Van
384	<i>S. wilhelmsiana</i>	ISTO	9782	1966	Hakkari
385	<i>S. viminalis</i>	ISTO	9852	1966	Ağrı
386	<i>S. viminalis</i>	ISTO	9851	1966	Ağrı
387	<i>S. viminalis</i>	ISTO	5207	1966	Ağrı
388	<i>S. pentandroides</i>	AEF	7045	1983	Elazığ
389	<i>S. alba</i>	AEF	22633	2002	Ankara
390	<i>S. alba</i>	AEF	22668	2001	Ankara
391	<i>S. alba</i>	AEF	22690	2002	Ankara
392	<i>S. alba</i>	AEF	22692	2002	Ankara

Table S1. Continued.

Çizelge Ek-1 Devamı.

393	<i>S. alba</i>	AEF	22694	2002	Ankara
394	<i>S. alba</i>	AEF	22632	2002	Ankara
395	<i>S. alba</i>	AEF	22691	2002	Ankara
396	<i>S. alba</i>	AEF	22467	2002	Ankara
397	<i>S. alba</i>	AEF	22704	2001	Ankara
398	<i>S. alba</i>	AEF	22672	2001	Ankara
399	<i>S. alba</i>	AEF	22656	2001	Ankara
400	<i>S. alba</i>	AEF	22733	2002	Ankara
401	<i>S. alba</i>	AEF	22689	2002	Ankara
402	<i>S. alba</i>	AEF	22698	2002	Ankara
403	<i>S. alba</i>	AEF	22705	2001	Ankara
404	<i>S. alba</i>	AEF	22732	2002	Ankara
405	<i>S. alba</i>	AEF	22739	2001	Ankara
406	<i>S. alba</i>	AEF	22695	2002	Ankara
407	<i>S. alba</i>	AEF	22738	2001	Ankara
408	<i>S. alba</i>	AEF	22673	2001	Ankara
409	<i>S. alba</i>	AEF	22675	2001	Ankara
410	<i>S. alba</i>	AEF	22674	2001	Ankara
411	<i>S. alba</i>	AEF	22706	2001	Ankara
412	<i>S. alba</i>	AEF	22671	2001	Ankara
413	<i>S. alba</i>	AEF	22658	2001	Ankara
414	<i>S. alba</i>	AEF	22669	2001	Ankara
415	<i>S. alba</i>	AEF	22670	2001	Ankara
416	<i>S. alba</i>	AEF	202	1945	Ankara
417	<i>S. alba subsp. coerulea</i>	AEF	8298	*	*
418	<i>S. alba</i>	AEF	22697	2002	Ankara
419	<i>S. alba</i>	AEF	22734	2001	Ankara
420	<i>S. alba</i>	AEF	20911	*	Ankara
421	<i>S. alba</i>	AEF	19594	*	Ankara
422	<i>S. alba</i>	AEF	4316	1968	Ankara
423	<i>S. alba</i>	AEF	4305	1968	Ankara
424	<i>S. triandra</i>	AEF	22471	2002	Ankara
425	<i>S. triandra subsp. triandra</i>	AEF	22545	2002	Ankara
426	<i>S. triandra subsp. triandra</i>	AEF	22546	2002	Ankara
427	<i>S. triandra subsp. triandra</i>	AEF	22547	2002	Ankara
428	<i>S. triandra subsp. triandra</i>	AEF	22548	2002	Ankara
429	<i>S. triandra subsp. triandra</i>	AEF	22490	2002	Ankara
430	<i>S. triandra subsp. triandra</i>	AEF	22699	2002	Ankara
431	<i>S. triandra subsp. triandra</i>	AEF	22544	2002	Ankara
432	<i>S. triandra subsp. triandra</i>	AEF	22470	2002	Ankara
433	<i>S. triandra subsp. triandra</i>	AEF	22468	2002	Ankara
434	<i>S. triandra subsp. triandra</i>	AEF	22742	2002	Ankara
435	<i>S. triandra subsp. triandra</i>	AEF	22469	2002	Ankara
436	<i>S. triandra subsp. triandra</i>	AEF	22729	2002	Ankara

Table S1. Continued.

Cizelge Ek-1 Devamı.

437	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22549	2002	Ankara
438	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22702	*	Ankara
439	<i>S. triandra</i>	AEF	22475	2002	Ankara
440	<i>S. triandra</i>	AEF	22474	2002	Ankara
441	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22473	2002	Ankara
442	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22700	2002	Ankara
443	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22679	2002	Ankara
444	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22678	2002	Ankara
445	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22649	2002	Ankara
446	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22730	2002	Ankara
447	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22731	2002	Ankara
448	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22491	2002	Ankara
449	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22550	2002	Ankara
450	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22701	2002	Ankara
451	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22543	2002	Ankara
452	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22542	2002	Ankara
453	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22541	2002	Ankara
454	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22480	2002	Ankara
455	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22477	2002	Ankara
456	<i>S. triandra</i> subsp. <i>triandra</i>	AEF	22478	2002	Ankara
457	<i>S. acmophylla</i>	AEF	8289	1935	Gaziantep
458	<i>S. excelsa</i>	AEF	22707	2001	Ankara
459	<i>S. excelsa</i>	AEF	22708	2002	Ankara
460	<i>S. excelsa</i>	AEF	22709	2002	Ankara
461	<i>S. excelsa</i>	AEF	22710	2002	Ankara
462	<i>S. excelsa</i>	AEF	22711	2002	Ankara
463	<i>S. excelsa</i>	AEF	22712	2002	Ankara
464	<i>S. excelsa</i>	AEF	22713	2002	Ankara
465	<i>S. excelsa</i>	AEF	22637	2002	Ankara
466	<i>S. excelsa</i>	AEF	22736	2001	Ankara
467	<i>S. excelsa</i>	AEF	22666	2002	Ankara
468	<i>S. excelsa</i>	AEF	22638	2002	Ankara
469	<i>S. excelsa</i>	AEF	22714	2002	Ankara
470	<i>S. excelsa</i>	AEF	22755	2002	Ankara
471	<i>S. excelsa</i>	AEF	22757	2002	Ankara
472	<i>S. excelsa</i>	AEF	22667	2002	Ankara
473	<i>S. excelsa</i>	AEF	22665	2002	Ankara
474	<i>S. excelsa</i>	AEF	22641	2002	Ankara
475	<i>S. excelsa</i>	AEF	22639	2002	Ankara
476	<i>S. excelsa</i>	AEF	22641	*	Ankara
477	<i>S. excelsa</i>	AEF	22751	2001	Ankara
478	<i>S. excelsa</i>	AEF	22752	2001	Ankara
479	<i>S. excelsa</i>	AEF	22753	2001	Ankara
480	<i>S. excelsa</i>	AEF	22754	2001	Ankara

Table S1. Continued.

Çizelge Ek-1 Devamı.

481	<i>S. excelsa</i>	AEF	16535	1987	Ankara
482	<i>S. excelsa</i>	AEF	16535	1987	Ankara
483	<i>S. excelsa</i>	AEF	7034	*	Muş
484	<i>S. fragilis</i>	AEF	22530	2002	Ankara
485	<i>S. fragilis</i>	AEF	22532	2002	Ankara
486	<i>S. fragilis</i>	AEF	22533	2002	Ankara
487	<i>S. fragilis</i>	AEF	22541	*	Ankara
488	<i>S. fragilis</i>	AEF	22543	*	Ankara
489	<i>S. fragilis</i>	AEF	22680	*	Ankara
490	<i>S. fragilis</i>	AEF	22681	2002	Ankara
491	<i>S. fragilis</i>	AEF	22538	2001	Ankara
492	<i>S. fragilis</i>	AEF	22685	2002	Ankara
493	<i>S. fragilis</i>	AEF	22535	2001	Ankara
494	<i>S. fragilis</i>	AEF	22525	2002	Ankara
495	<i>S. fragilis</i>	AEF	22528	2002	Ankara
496	<i>S. fragilis</i>	AEF	22527	2002	Ankara
497	<i>S. fragilis</i>	AEF	22529	2002	Ankara
498	<i>S. fragilis</i>	AEF	22539	2001	Ankara
499	<i>S. fragilis</i>	AEF	22728	2001	Ankara
500	<i>S. fragilis</i>	AEF	22682	2002	Ankara
501	<i>S. fragilis</i>	AEF	22644	2002	Ankara
502	<i>S. fragilis</i>	AEF	22534	2001	Ankara
503	<i>S. fragilis</i>	AEF	22537	2001	Ankara
504	<i>S. fragilis</i>	AEF	22536	2001	Ankara
505	<i>S. fragilis</i>	AEF	22727	2001	Ankara
506	<i>S. fragilis</i>	AEF	22524	2002	Ankara
507	<i>S. fragilis</i>	AEF	22531	2002	Ankara
508	<i>S. fragilis</i>	AEF	22540	2001	Ankara
509	<i>S. fragilis</i>	AEF	22684	2002	Ankara
510	<i>S. fragilis</i>	AEF	22683	2002	Ankara
511	<i>S. babylonica</i>	AEF	22721	2002	Ankara
512	<i>S. babylonica</i>	AEF	22735	2002	Ankara
513	<i>S. babylonica</i>	AEF	22716	2002	Ankara
514	<i>S. babylonica</i>	AEF	22748	2002	Ankara
515	<i>S. babylonica</i>	AEF	22718	2002	Ankara
516	<i>S. babylonica</i>	AEF	22720	2002	Ankara
517	<i>S. babylonica</i>	AEF	22750	2002	Ankara
518	<i>S. babylonica</i>	AEF	22749	2002	Ankara
519	<i>S. babylonica</i>	AEF	22740	2001	Ankara
520	<i>S. babylonica</i>	AEF	22717	2002	Ankara
521	<i>S. babylonica</i>	AEF	22737	2001	Ankara
522	<i>S. babylonica</i>	AEF	22688	2001	Ankara
523	<i>S. babylonica</i>	AEF	22635	2002	Ankara
524	<i>S. babylonica</i>	AEF	22636	2002	Ankara

Table S1. Continued.

Cizelge Ek-1 Devami.

525	<i>S. babylonica</i>	AEF	22659	2001	Ankara
526	<i>S. babylonica</i>	AEF	22660	2001	Ankara
527	<i>S. babylonica</i>	AEF	22661	2001	Ankara
528	<i>S. babylonica</i>	AEF	22662	2001	Ankara
529	<i>S. babylonica</i>	AEF	22687	2001	Ankara
530	<i>S. babylonica</i>	AEF	22719	2002	Ankara
531	<i>S. babylonica</i>	AEF	22722	2002	Ankara
532	<i>S. babylonica</i>	AEF	22746	2001	Ankara
533	<i>S. babylonica</i>	AEF	22747	2001	Ankara
534	<i>S. babylonica</i>	AEF	22686	2001	Ankara
535	<i>S. cinerea</i>	AEF	8300	2001	Lebanon
536	<i>S. cinerea</i>	AEF	8299	2001	Lebanon
537	<i>S. pseudomedemii</i>	AEF	22566	2001	Ankara
538	<i>S. pseudomedemii</i>	AEF	22509	2001	Ankara
539	<i>S. pseudomedemii</i>	AEF	22647	2001	Ankara
540	<i>S. pseudomedemii</i>	AEF	22495	2001	Ankara
541	<i>S. caprea</i>	AEF	22556	2001	Ankara
542	<i>S. pseudomedemii</i>	AEF	22512	2001	Ankara
543	<i>S. pseudomedemii</i>	AEF	22511	2001	Ankara
544	<i>S. pseudomedemii</i>	AEF	22505	2001	Ankara
545	<i>S. pseudomedemii</i>	AEF	22494	2001	Ankara
546	<i>S. pseudomedemii</i>	AEF	22501	2001	Ankara
547	<i>S. pseudomedemii</i>	AEF	22502	2001	Ankara
548	<i>S. pseudomedemii</i>	AEF	22507	2001	Ankara
549	<i>S. pseudomedemii</i>	AEF	22513	2001	Ankara
550	<i>S. pseudomedemii</i>	AEF	22723	2001	Ankara
551	<i>S. pseudomedemii</i>	AEF	22510	2001	Ankara
552	<i>S. pseudomedemii</i>	AEF	22634	2001	Ankara
553	<i>S. pseudomedemii</i>	AEF	22726	2001	Ankara
554	<i>S. pseudomedemii</i>	AEF	4258	2001	Kars
555	<i>S. cinerea</i>	AEF	22488	2001	Ankara
556	<i>S. cinerea</i>	AEF	22486	2001	Ankara
557	<i>S. cinerea</i>	AEF	22522	2001	Ankara
558	<i>S. cinerea</i>	AEF	22482	2001	Ankara
559	<i>S. cinerea</i>	AEF	22842	2001	Ankara
560	<i>S. cinerea</i>	AEF	22836	2001	Ankara
561	<i>S. cinerea</i>	AEF	22833	2001	Ankara
562	<i>S. cinerea</i>	AEF	22835	2001	Ankara
563	<i>S. cinerea</i>	AEF	22839	2001	Ankara
564	<i>S. cinerea</i>	AEF	22838	2001	Ankara
565	<i>S. cinerea</i>	AEF	22834	2001	Ankara
566	<i>S. cinerea</i>	AEF	22840	2001	Ankara
567	<i>S. cinerea</i>	AEF	22841	2001	Ankara
568	<i>S. cinerea</i>	AEF	22843	2001	Ankara

Table S1. Continued.
Çizelge Ek-1 Devamı.

569	<i>S. amplexicaulis</i>	AEF	22589	2001	Ankara
570	<i>S. amplexicaulis</i>	AEF	22590	2001	Ankara
571	<i>S. amplexicaulis</i>	AEF	22577	2001	Ankara
572	<i>S. amplexicaulis</i>	AEF	22574	2001	Ankara
573	<i>S. amplexicaulis</i>	AEF	22596	2001	Ankara
574	<i>S. amplexicaulis</i>	AEF	22593	2001	Ankara
575	<i>S. amplexicaulis</i>	AEF	22594	2001	Ankara
576	<i>S. amplexicaulis</i>	AEF	22598	2001	Ankara
577	<i>S. amplexicaulis</i>	AEF	22582	2001	Ankara
578	<i>S. amplexicaulis</i>	AEF	22605	2001	Ankara
579	<i>S. amplexicaulis</i>	AEF	21708	2001	Ankara
580	<i>S. amplexicaulis</i>	AEF	22630	2001	Ankara
581	<i>S. amplexicaulis</i>	AEF	22628	2001	Ankara
582	<i>S. amplexicaulis</i>	AEF	22591	2001	Ankara
583	<i>S. amplexicaulis</i>	AEF	22592	2001	Ankara
584	<i>S. amplexicaulis</i>	AEF	22601	2001	Ankara
585	<i>S. amplexicaulis</i>	AEF	22603	2001	Ankara
586	<i>S. amplexicaulis</i>	AEF	22604	2001	Ankara
587	<i>S. amplexicaulis</i>	AEF	22606	2001	Ankara
588	<i>S. amplexicaulis</i>	AEF	22624	2001	Ankara
589	<i>S. amplexicaulis</i>	AEF	22615	2001	Ankara
590	<i>S. amplexicaulis</i>	AEF	22616	2001	Ankara
591	<i>S. amplexicaulis</i>	AEF	22619	2001	Ankara
592	<i>S. amplexicaulis</i>	AEF	22620	2001	Ankara
593	<i>S. amplexicaulis</i>	AEF	22585	2001	Ankara
594	<i>S. amplexicaulis</i>	AEF	22586	2001	Ankara
595	<i>S. amplexicaulis</i>	AEF	22587	2001	Ankara
596	<i>S. amplexicaulis</i>	AEF	22623	2001	Ankara
597	<i>S. amplexicaulis</i>	AEF	22625	2001	Ankara
598	<i>S. amplexicaulis</i>	AEF	22626	2001	Ankara
599	<i>S. amplexicaulis</i>	AEF	22744	2001	Ankara
600	<i>S. amplexicaulis</i>	AEF	22613	2001	Ankara
601	<i>S. amplexicaulis</i>	AEF	22677	2001	Ankara
602	<i>S. amplexicaulis</i>	AEF	22584	2001	Ankara
603	<i>S. amplexicaulis</i>	AEF	22567	2001	Ankara
604	<i>S. amplexicaulis</i>	AEF	22569	2001	Ankara
605	<i>S. amplexicaulis</i>	AEF	21703	2001	Ankara
606	<i>S. amplexicaulis</i>	AEF	22572	2001	Ankara
607	<i>S. amplexicaulis</i>	AEF	8284	2001	Ankara
608	<i>S. amplexicaulis</i>	AEF	8287	2001	Ankara
609	<i>S. acmophylla</i>	GAZI	3181	2009	Batman
610	<i>S. acmophylla</i>	GAZI	3081	2009	Batman
611	<i>S. acmophylla</i>	GAZI	3167	2009	Batman
612	<i>S. acmophylla</i>	GAZI	3517	2009	Batman

Table S1. Continued.
Çizelge Ek-1 Devamı.

613	<i>S. triandra</i>	GAZI	8343	1996	İzmir
614	<i>S. triandra subsp. triandra</i>	GAZI	9391	2004	Artvin
615	<i>S. triandra subsp. triandra</i>	GAZI	9919	1991	Artvin
616	<i>S. triandra subsp. bornmuelleri</i>	GAZI	3589	2009	Siirt
617	<i>S. triandra subsp. bornmuelleri</i>	GAZI	9571	2004	Erzurum
618	<i>S. triandra subsp. bornmuelleri</i>	GAZI	3583	2009	Batman
619	<i>S. triandra subsp. bornmuelleri</i>	GAZI	3581	2009	Batman
620	<i>S. triandra subsp. bornmuelleri</i>	GAZI	4131	1989	Ankara
621	<i>S. pentadroides</i>	GAZI	7045	1997	Elazığ
622	<i>S. alba</i>	GAZI	8342	1996	İzmir
623	<i>S. alba</i>	GAZI	5431	1990	Nevşehir
624	<i>S. alba</i>	GAZI	8363	1991	Muğla
625	<i>S. alba</i>	GAZI	46	1990	Kırıkkale
626	<i>S. alba</i>	GAZI	1623	1990	Ankara
627	<i>S. alba</i>	GAZI	4019	1989	Ankara
628	<i>S. alba</i>	GAZI	3580	2009	Batman
629	<i>S. alba</i>	GAZI	1053	2011	Ankara
630	<i>S. alba</i>	GAZI	8363	1991	Muğla
631	<i>S. alba</i>	GAZI	4018	1989	Ankara
632	<i>S. alba</i>	GAZI	1136	1987	Ankara
633	<i>S. alba</i>	GAZI	7064	1997	Elazığ
634	<i>S. babylonica</i>	GAZI	1372	1990	Ankara
635	<i>S. babylonica</i>	GAZI	701	1987	Malatya
636	<i>S. caprea</i>	GAZI	2921	1984	Rize
637	<i>S. caprea</i>	GAZI	3559	1989	Rize
638	<i>S. caprea</i>	GAZI	6324	1984	Rize
639	<i>S. caprea</i>	GAZI	9918	1991	Artvin
640	<i>S. caprea</i>	GAZI	5518	1989	Rize
641	<i>S. cinerea</i>	GAZI	1745	1986	*
642	<i>S. caprea</i>	GAZI	6473	1997	Trabzon
643	<i>S. caprea</i>	GAZI	1628	1990	Ankara
644	<i>S. caprea</i>	GAZI	1109	1990	Bolu
645	<i>S. caprea</i>	GAZI	298	1945	Ankara
646	<i>S. cinerea</i>	GAZI	EA1013	1989	Malatya
647	<i>S. rizeensis</i>	GAZI	6891 (endemik)	1985	Rize
648	<i>S. pseudomedemii</i>	GAZI	9548	2006	Erzincan
649	<i>S. pseudomedemii</i>	GAZI	9671	1991	Bayburt
650	<i>S. pseudomedemii</i>	GAZI	2065	1988	Bolu
651	<i>S. pseudomedemii</i>	GAZI	9673	1991	Bayburt
652	<i>S. elbursensis</i>	GAZI	43304	1988	Gümüşhane
653	<i>S. amplexicaulis</i>	GAZI	1439	2011	Ankara
654	<i>S. purpurea subsp. leucodermis</i>	GAZI	10391 (endemik)	2015	Muğla
655	<i>S. purpurea subsp. leucodermis</i>	GAZI	10640 (endemik)	1992	Denizli

Table S1. Continued.
Çizelge Ek-1 Devamı.

656	<i>S. purpurea</i> subsp. <i>leucodermis</i>	GAZI	10334 (<i>endemik</i>)	1994	Muğla
657	<i>S. purpurea</i> subsp. <i>leucodermis</i>	GAZI	10334 (<i>endemik</i>)	1991	Muğla
658	<i>S. wilhelmsiana</i>	GAZI	9758	1991	Rize
659	<i>S. wilhelmsiana</i>	GAZI	43303	1988	Gümüşhane
660	<i>S. persica</i>	GAZI	12902	1842	Iran
661	<i>S. cantabrica</i>	GAZI	479322	1993	*
662	<i>Salix</i> sp.	GAZI	7083	1983	Muş
663	<i>Salix</i> sp.	GAZI	4739	1983	Artvin
664	<i>Salix</i> sp.	GAZI	7033	1983	Muş
665	<i>S. triandra</i> subsp. <i>triandra</i>	HUB	6353	1986	Kars
666	<i>S. triandra</i> subsp. <i>bornmuelleri</i>	HUB	363	1865	*
667	<i>S. triandra</i> subsp. <i>bornmuelleri</i>	HUB	9709	1987	Ankara
668	<i>S. triandra</i> subsp. <i>triandra</i>	HUB	6445	1981	Artvin
669	<i>S. triandra</i> subsp. <i>bornmuelleri</i>	HUB	3429	1980	Tunceli
670	<i>S. pentandra</i>	HUB	6436	1974	Isparta
671	<i>S. pentandra</i>	HUB	6437	1990	Kahramanmaraş
672	<i>S. alba</i>	HUB	6362	1989	Ankara
673	<i>S. alba</i>	HUB	11125	1989	Ankara
674	<i>S. alba</i>	HUB	7931	1990	Gaziantep
675	<i>S. alba</i>	HUB	6366	1983	Siirt
676	<i>S. alba</i>	HUB	6356	1990	Sivas
677	<i>S. alba</i>	HUB	6251	1999	Kayseri
678	<i>S. alba</i>	HUB	2303	2003	Düzce
679	<i>S. alba</i>	HUB	3630	1986	Kars
680	<i>S. alba</i>	HUB	1751	2002	Düzce
681	<i>S. alba</i>	HUB	1893	2002	Düzce
682	<i>S. alba</i>	HUB	6359	1986	Kars
683	<i>S. alba</i>	HUB	1477	2001	Düzce
684	<i>S. alba</i>	HUB	6360	1990	Kırıkkale
685	<i>S. alba</i>	HUB	4330	2004	Artvin
686	<i>S. alba</i>	HUB	6352	1986	Kars
687	<i>S. alba</i>	HUB	6361	1989	Çankırı
688	<i>S. alba</i>	HUB	6423	1991	Rize
689	<i>S. alba</i> x <i>fragilis</i>	HUB	83-1904	1983	Germany
690	<i>S. alba</i>	HUB	6363	1989	Bingöl
691	<i>S. alba</i>	HUB	6348	1981	Erzincan
692	<i>S. alba</i>	HUB	6368	1985	Çankırı
693	<i>S. alba</i>	HUB	6351	1993	Muğla
694	<i>S. alba</i>	HUB	None	2002	Ankara
695	<i>S. alba</i>	HUB	6367	1987	Konya
696	<i>S. alba</i>	HUB	6344	1985	Konya
697	<i>S. alba</i>	HUB	6341	1984	Konya
698	<i>S. alba</i>	HUB	6342	1983	Konya
699	<i>S. alba</i>	HUB	6340	1985	Konya
700	<i>S. alba</i>	HUB	6338	1989	Ankara

Table S1. Continued.

Çizelge Ek-1 Devamı.

701	<i>S. alba</i>	HUB	6339	1974	Ankara
702	<i>S. alba</i>	HUB	6343	1985	Konya
703	<i>S. alba</i>	HUB	6337	1989	Bingöl
704	<i>S. alba</i>	HUB	None	1994	Isparta
705	<i>S. alba</i>	HUB	6369	1989	Çankırı
706	<i>S. alba</i>	HUB	None	2010	Kastamonu
707	<i>S. alba</i>	HUB	None	2008	Sivas
708	<i>S. alba</i>	HUB	6347	1990	Tunceli
709	<i>S. alba</i>	HUB	6365	1988	Ankara
710	<i>S. alba</i>	HUB	6399	2009	Kastamonu
711	<i>S. alba</i>	HUB	37364	1994	Kayseri
712	<i>S. alba</i>	HUB	6355	1984	Ankara
713	<i>S. alba</i>	HUB	6345	1977	Konya
714	<i>S. alba</i>	HUB	6350	1989	Çankırı
715	<i>S. alba</i>	HUB	6346	1984	Erzincan
716	<i>S. alba</i>	HUB	16399	2009	Kastamonu
717	<i>S. alba</i>	HUB	9174	1989	Ankara
718	<i>S. fragilis</i>	HUB	6431	1985	Antalya
719	<i>S. excelsa</i>	HUB	6432	1984	Tunceli
720	<i>S. fragilis</i>	HUB	9529	2006	Erzincan
721	<i>S. babylonica</i>	HUB	6377	1986	Kars
722	<i>S. babylonica</i>	HUB	6376	1984	Ankara
723	<i>S. babylonica</i>	HUB	1752	2002	Düzce
724	<i>S. babylonica</i>	HUB	14785	2008	Sinop
725	<i>S. babylonica</i>	HUB	6375	1990	Kahramanmaraş
726	<i>S. babylonica</i>	HUB	16493	2009	Kastamonu
727	<i>S. babylonica</i>	HUB	16494	2009	Kastamonu
728	<i>S. babylonica</i>	HUB	6374	1987	Malatya
729	<i>S. rizeensis</i>	HUB	6442 (endemik)	1985	Rize
730	<i>S. apoda</i>	HUB	6373	1987	Rize
731	<i>S. caucasica</i>	HUB	3631	1986	Kars
732	<i>S. caucasica</i>	HUB	6400	1984	Rize
733	<i>S. caucasica</i>	HUB	6402	1986	Kars
734	<i>S. pedicellata</i> subsp. <i>pedicellata</i>	HUB	6435	1990	Erzincan
735	<i>S. pedicellata</i> subsp. <i>pedicellata</i>	HUB	6434	1990	Mersin
736	<i>S. pedicellata</i> subsp. <i>pedicellata</i>	HUB	6433	1990	Kahramanmaraş
737	<i>S. apendicalata</i>	HUB	None	1994	*
738	<i>S. caprea</i>	HUB	6383	1978	Ankara
739	<i>S. caprea</i>	HUB	6394	1979	Tunceli
740	<i>S. caprea</i>	HUB	6354	1982	Kars
741	<i>S. caprea</i>	HUB	6385	1983	Artvin
742	<i>S. caprea</i>	HUB	6398	1986	Kars
743	<i>S. caprea</i>	HUB	6378	1991	Artvin
744	<i>S. caprea</i>	HUB	4122	2004	Artvin

Table S1. Continued.

Çizelge Ek-1 Devamı.

745	<i>S. caprea</i>	HUB	None	2004	Georgia
746	<i>S. caprea</i>	HUB	6388	1984	Rize
747	<i>S. caprea</i>	HUB	None	2003	Düzce
748	<i>S. caprea</i>	HUB	None	2003	Düzce
749	<i>S. caprea</i>	HUB	None	1981	Rize
750	<i>S. caprea</i>	HUB	None	1982	Trabzon
751	<i>S. caprea</i>	HUB	None	1984	Erzincan
752	<i>S. caprea</i>	HUB	None	1979	Tunceli
753	<i>S. caprea</i>	HUB	None	2008	Sivas
754	<i>S. caprea</i>	HUB	6396	1989	Mersin
755	<i>S. caprea</i>	HUB	6381	1978	Kahramanmaraş
756	<i>S. caprea</i>	HUB	6399	1987	Isparta
757	<i>S. caprea</i>	HUB	6384	1985	Kars
758	<i>S. caprea</i>	HUB	None	2004	*
759	<i>S. caprea</i>	HUB	6393	1972	Bitlis
760	<i>S. caprea</i>	HUB	6391	1972	Bitlis
761	<i>S. caprea</i>	HUB	6390	1995	Kars
762	<i>S. caprea</i>	HUB	6392	1984	Kars
763	<i>S. caprea</i>	HUB	6382	1972	Bitlis
764	<i>S. caprea</i>	HUB	None	1983	Germany
765	<i>S. caprea</i>	HUB	None	*	*
766	<i>S. caprea</i>	HUB	6379	1989	Sakarya
767	<i>S. caprea</i>	HUB	None	2008	Sivas
768	<i>S. caprea</i>	HUB	None	2000	Austria
769	<i>S. aegyptiaca</i>	HUB	6372	1986	Kars
770	<i>S. aegyptiaca</i>	HUB	6370	1986	Kars
771	<i>S. aegyptiaca</i>	HUB	6371	1990	Van
772	<i>S. aegyptiaca</i>	HUB	6415	1972	Bitlis
773	<i>S. cinerea</i>	HUB	6413	1970	Bolu
774	<i>S. cinerea</i>	HUB	6403	1977	Bitlis
775	<i>S. cinerea</i>	HUB	6405	1985	Konya
776	<i>S. cinerea</i>	HUB	6417	1981	Kars
777	<i>S. cinerea</i>	HUB	6414	1972	Bitlis
778	<i>S. cinerea</i>	HUB	6416	1974	Ankara
779	<i>S. cinerea</i>	HUB	6407	1977	Ankara
780	<i>S. cinerea</i>	HUB	6406	1974	Ankara
781	<i>S. cinerea</i>	HUB	6404	1984	Rize
782	<i>S. cinerea</i>	HUB	6409	1974	Ankara
783	<i>S. cinerea</i>	HUB	6408	1987	Ankara
784	<i>S. cinerea</i>	HUB	6410	1972	Bitlis
785	<i>S. cinerea</i>	HUB	None	1995	Germany
786	<i>S. cinerea</i>	HUB	6380	1985	Çankırı
787	<i>S. cinerea</i>	HUB	6397	2008	Kars
788	<i>S. cinerea</i>	HUB	6412	1977	Konya

Table S1. Continued.

Çizelge Ek-1 Devamı.

789	<i>S. triandra</i> subsp. <i>triandra</i>	HUB	6438	1985	Kars
790	<i>S. pseudomedemii</i>	HUB	6439	1981	Bayburt
791	<i>S. pseuodepressa</i>	HUB	6440	1991	Bayburt
792	<i>S. elaeagnos</i>	HUB	6425	1989	Çankırı
793	<i>S. elaeagnos</i>	HUB	6421	1984	Çankırı
794	<i>S. elaeagnos</i>	HUB	6422	1985	Çankırı
795	<i>S. elaeagnos</i>	HUB	6424	1987	Çankırı
796	<i>S. elaeagnos</i>	HUB	None	2010	Kastamonu
797	<i>S. elaeagnos</i>	HUB	None	2008	Sinop
798	<i>S. elbursensis</i>	HUB	6429	1985	Kars
799	<i>S. elbursensis</i>	HUB	6426	1986	Kars
800	<i>S. elbursensis</i>	HUB	6427	1991	Artvin
801	<i>S. elbursensis</i>	HUB	None	1988	Bayburt
802	<i>S. elbursensis</i>	HUB	6430	1985	Kars
803	<i>S. elbursensis</i>	HUB	6428	1985	Kars
804	<i>S. purpurea</i> subsp. <i>leucodermis</i>	HUB	6441 (endemik)	1997	Denizli
805	<i>S. wilhelmsiana</i>	HUB	43303	1988	Bayburt
806	<i>S. wilhelmsiana</i>	HUB	6446	1987	Erzurum
807	<i>Salix</i> sp.	HUB	6449	*	*
808	<i>S. auritaxrepens</i>	HUB	None	*	Germany
809	<i>S. repens</i>	HUB	None	*	Germany
810	<i>S. rhaetica</i>	HUB	None	*	*
811	<i>S. aurita</i>	HUB	None	1914	Germany
812	<i>Salix</i> sp.	HUB	6451	*	*
813	<i>Salix</i> sp.	HUB	6452	*	*
814	<i>Salix</i> sp.	HUB	6448	*	Kars
815	<i>Salix</i> sp.	HUB	64450	*	*
816	<i>Salix</i> sp.	HUB	None	1984	Ankara
817	<i>S. amplexicaulis</i>	ISTE	19839	21.05.1971	Tekirdağ
818	<i>S. amplexicaulis</i>	ISTE	13494	13.07.1968	Tekirdağ
819	<i>S. amplexicaulis</i>	ISTE	2108	14.07.1947	Ankara
820	<i>S. amplexicaulis</i>	ISTE	93983	25.05.1985	Sivas
821	<i>S. babylonica</i>	ISTE	2105	18.04.1947	Ankara
822	<i>S. babylonica</i>	ISTE	76813	12.06.1999	Bartın
823	<i>S. babylonica</i>	ISTE	78216	12.09.1997	Hatay
824	<i>S. caprea</i>	ISTE	89449	19.09.2003	Ardahan
825	<i>S. caprea</i>	ISTE	89248	17.07.2004	Kars
826	<i>S. caprea</i>	ISTE	57686	7.07.1986	İstanbul
827	<i>S. caprea</i>	ISTE	14920	8.03.1969	İstanbul
828	<i>S. caprea</i>	ISTE	21847	21.05.1980	Bolu
829	<i>S. caprea</i>	ISTE	21355	2.04.1972	Bolu
830	<i>S. caprea</i>	ISTE	2107	20.03.1905	Ankara
831	<i>S. caprea</i>	ISTE	26969	27.05.1973	Balıkesir
832	<i>S. caprea</i>	ISTE	34523	18.04.1976	Konya

Table S1. Continued.

Çizelge Ek-1 Devamı.

833	<i>S. caprea</i>	ISTE	42902	14.07.1979	Kars
834	<i>S. caprea</i>	ISTE	15305	3.06.1969	Trabzon
835	<i>S. alba</i>	ISTE	90466	25.05.2002	Erzincan
836	<i>S. alba</i>	ISTE	6594	2.06.1905	Edirne
837	<i>S. alba</i>	ISTE	13293	2.06.1905	Kırklareli
838	<i>S. alba</i>	ISTE	17660	22.04.1970	Edirne
839	<i>S. alba</i>	ISTE	17660	22.04.1970	Edirne
840	<i>S. alba</i>	ISTE	10870	30.04.1967	Tekirdağ
841	<i>S. alba</i>	ISTE	16510	30.03.1970	Edirne
842	<i>S. alba</i>	ISTE	10984	5.05.1967	Bitlis
843	<i>S. alba</i>	ISTE	10984	5.05.1967	Bitlis
844	<i>S. alba</i>	ISTE	2104	8.05.1966	Balıkesir
845	<i>S. alba</i>	ISTE	9198	8.05.1966	Ankara
846	<i>S. alba</i>	ISTE	9070	6.05.1966	Samsun
847	<i>S. alba subsp. alba</i>	ISTE	39827	21.05.1978	Amasya
848	<i>S. alba</i>	ISTE	34739	28.04.1976	Afyon
849	<i>S. alba</i>	ISTE	8887	4.05.1966	Ankara
850	<i>S. alba</i>	ISTE	8887	4.05.1966	Ankara
851	<i>S. alba</i>	ISTE	8887	4.05.1966	Ankara
852	<i>S. alba</i>	ISTE	20159	8.06.1971	Elazığ
853	<i>S. alba</i>	ISTE	20159	8.06.1971	Elazığ
854	<i>S. alba</i>	ISTE	81010	5.06.2003	Kırklareli
855	<i>S. alba</i>	ISTE	109949	20.06.2014	Balıkesir
856	<i>S. alba</i>	ISTE	64727	9.05.1992	Trabzon
857	<i>S. alba</i>	ISTE	38824	29.05.1977	Balıkesir
858	<i>S. alba</i>	ISTE	38824	29.05.1977	Balıkesir
859	<i>S. alba</i>	ISTE	68773	16.06.1905	Mersin
860	<i>S. alba</i>	ISTE	13231	12.11.1968	Kırıkkale
861	<i>S. alba</i>	ISTE	14027	27.11.1968	Edirne
862	<i>S. alba</i>	ISTE	13494	13.12.1968	Tekirdağ
863	<i>S. alba</i>	ISTE	6256	28.05.1960	İzmir
864	<i>S. alba</i>	ISTE	6251	17.03.1960	İzmir
865	<i>S. alba</i>	ISTE	6554	19.05.1961	Edirne
866	<i>S. alba subsp. alba</i>	ISTE	39776	20.05.1978	Amasya
867	<i>S. alba subsp. alba</i>	ISTE	39830	21.05.1978	Amasya
868	<i>S. alba</i>	ISTE	2569	9.05.1954	Balıkesir
869	<i>S. alba</i>	ISTE	2103	*	*
870	<i>S. alba</i>	ISTE	17626	22.04.1970	Tekirdağ
871	<i>S. alba</i>	ISTE	28087	11.05.1974	Denizli
872	<i>S. alba</i>	ISTE	38801	28.05.1977	Balıkesir
873	<i>S. alba</i>	ISTE	36084	30.09.1976	Konya
874	<i>S. alba</i>	ISTE	18686	13.05.1970	Bolu
875	<i>S. alba</i>	ISTE	83050	18.07.2004	Yalova
876	<i>S. cinerea</i>	ISTE	89925	29.04.2004	Kayseri

Table S1. Continued.

Cizelge Ek-1 Devami.

877	<i>S. cinerea</i>	ISTE	38281	5.08.1977	Ankara
878	<i>S. cinerea</i>	ISTE	19498	3.05.1971	İstanbul
879	<i>S. cinerea</i>	ISTE	33671	28.07.1975	Bolu
880	<i>S. cinerea</i>	ISTE	18682	13.05.1970	Bolu
881	<i>S. cinerea</i>	ISTE	13935	26.06.1968	Kırklareli
882	<i>S. cinerea</i>	ISTE	8590	9.02.1966	İstanbul
883	<i>S. cinerea</i>	ISTE	10939	1.05.1967	İstanbul
884	<i>S. cinerea</i>	ISTE	11496	13.06.1967	İstanbul
885	<i>S. cinerea</i>	ISTE	15962	6.08.1969	Bolu
886	<i>S. cinerea</i>	ISTE	2106	17.05.1947	Ankara
887	<i>S. elaeagnos</i>	ISTE	52886	8.05.1984	Eskişehir
888	<i>S. elaeagnos</i>	ISTE	18452	8.08.1970	Bolu
889	<i>S. elaeagnos</i>	ISTE	18452	8.08.1970	Bolu
890	<i>S. elbursensis</i>	ISTE	74813	11.06.1988	Bayburt
891	<i>S. fragilis</i>	ISTE	18680	13.05.1970	Bolu
892	<i>S. fragilis</i>	ISTE	20670	20.07.1971	Tekirdağ
893	<i>S. fragilis</i>	ISTE	32561	4.07.1975	Konya
894	<i>S. fragilis</i>	ISTE	2632	15.04.1954	Balıkesir
895	<i>S. fragilis</i>	ISTE	83861	19.04.2006	Malatya
896	<i>S. myrsinifolia</i>	ISTE	74659	15.06.1997	Kastamonu
897	<i>S. retusa</i>	ISTE	56636	4.07.1947	Switzerland
898	<i>S. reticulata</i>	ISTE	56635	4.07.1947	Switzerland
899	<i>S. pentandra</i>	ISTE	90898	26.03.2008	Gümüşhane
900	<i>S. pseudopressa</i>	ISTE	90477	26.05.2002	Erzincan
901	<i>S. viminalis</i>	ISTE	2109	17.05.1947	Ankara
902	<i>S. wilhelmsiana</i>	ISTE	90476	26.05.2002	Erzincan
903	<i>Salix sp.</i>	ISTE	54321	13.06.1984	Van
904	<i>Salix sp.</i>	ISTE	54323	13.06.1984	Van
905	<i>Salix sp.</i>	ISTE	41578	7.05.1978	Amasya
906	<i>Salix sp.</i>	ISTE	90370	24.05.2005	Kahramanmaraş
907	<i>Salix sp.</i>	ISTE	93984	25.05.1985	Sivas
908	<i>Salix sp.</i>	ISTE	None	*	*
909	<i>Salix sp.</i>	ISTE	57850	1.06.1987	Bolu
910	<i>Salix sp.</i>	ISTE	55858	21.08.1985	Ağrı
911	<i>Salix sp.</i>	ISTE	89244	29.10.2004	Erzurum
912	<i>Salix sp.</i>	ISTE	89243	29.10.2004	Erzurum
913	<i>Salix sp.</i>	ISTE	89989	26.05.2004	Kayseri
914	<i>Salix sp.</i>	ISTE	900003	26.05.2004	Kayseri
915	<i>Salix sp.</i>	ISTE	16507	30.03.1970	Edirne
916	<i>Salix sp.</i>	ISTE	13609	15.07.1968	Edirne

Table S2 The list of studied herbarium sheets of *Populus* taxa in the six biggest herbaria of Türkiye.
Çizelge EK-2 Türkiye'nin en büyük altı herbaryumunda incelenen *Populus* taksonlarının listesi

No	Species	Herbarium Code	Herbarium Voucher Number	Date	Location
1	<i>Populus alba</i>	ISTO	33624	20.08.2021	Tekirdağ
2	<i>P. alba</i>	ISTO	2295	1962	Kastamonu
3	<i>P. alba</i>	ISTO	31925	1987	Ankara
4	<i>P. alba</i>	ISTO	31381	1992	Balıkesir
5	<i>P. alba</i>	ISTO	29650	1986	Zonguldak
6	<i>P. alba</i>	ISTO	29644	1986	Zonguldak
7	<i>P. angulata</i>	ISTO	24003	1950	*
8	<i>P. x canescens</i>	ISTO	5234	1966	Van
9	<i>P. x canescens</i>	ISTO	9846	1966	Muş
10	<i>P. x canescens</i>	ISTO	9848	1966	Hakkari
11	<i>P. x canescens</i>	ISTO	5030	1966	Muş
12	<i>P. x canescens</i>	ISTO	29648	1986	Kırklareli
13	<i>P. x canescens</i>	ISTO	31379	1992	Tekirdağ
14	<i>P. euphratica</i>	ISTO	17915	1975	Mersin
15	<i>P. euphratica</i>	ISTO	4139	1995	Mersin
16	<i>P. euphratica</i>	ISTO	28878	1966	Mardin
17	<i>P. euphratica</i>	ISTO	12603	1966	Mardin
18	<i>P. euphratica</i>	ISTO	9783	1966	Hakkari
19	<i>P. nigra subsp. nigra</i>	ISTO	33625	2007	Kırklareli
20	<i>P. nigra</i>	ISTO	25881	1981	Sivas
21	<i>P. nigra</i>	ISTO	31700	1991	Bingöl
22	<i>P. nigra subsp. caudina</i>	ISTO	31701	1991	Bingöl
23	<i>P. nigra</i>	ISTO	20934	1978	Artvin
24	<i>P. nigra</i>	ISTO	5745	1966	Erzincan
25	<i>P. tremula</i>	ISTO	38098	2017	Çankırı
26	<i>P. tremula</i>	ISTO	34981	2006	Bartın
27	<i>P. tremula</i>	ISTO	17253	1974	Erzincan
28	<i>P. tremula</i>	ISTO	9840	1966	Kars
29	<i>P. tremula</i>	ISTO	31380	1991	Muğla
30	<i>P. trichocarpa</i>	ISTO	24006	1950	*
31	<i>P. trichocarpa</i>	ISTO	24005	1950	*
32	<i>P. usbekistanica</i>	ISTO	31704	1991	Bingöl
33	<i>P. euphratica</i>	ANK	7	1944	Mersin
34	<i>P. euphratica</i>	ANK	1179	1979	Mersin
35	<i>P. euphratica</i>	ANK	1179	1956	Mersin
36	<i>P. euphratica</i>	ANK	7	1935	Mersin
37	<i>P. euphratica</i>	ANK	7	1954	Mersin
38	<i>P. alba</i>	ANK	14239	1933	Antalya
39	<i>P. alba</i>	ANK	257	1937	Bitlis
40	<i>P. alba</i>	ANK	4761	1977	Mersin
41	<i>P. alba</i>	ANK	235	1945	Ankara
42	<i>P. alba</i>	ANK	4313	1938	Ankara

Table S2. Continued.
Çizelge EK-2 Devamı.

43	<i>P. alba</i>	ANK	4125	1945	Bursa
44	<i>P. alba</i>	ANK	6794	1945	Çorum
45	<i>P. alba</i>	ANK	None	1956	Ankara
46	<i>P. alba</i>	ANK	5245	1935	Bursa
47	<i>P. alba</i>	ANK	None	1980	Ankara
48	<i>P. alba</i>	ANK	None	1954	Bartın
49	<i>P. tremula</i>	ANK	120	1974	Nevşehir
50	<i>P. tremula</i>	ANK	2078	1956	İstanbul
51	<i>P. tremula</i>	ANK	1066	1977	Konya
52	<i>P. tremula</i>	ANK	23508	2001	Bitlis
53	<i>P. tremula</i>	ANK	3945	1974	Kayseri
54	<i>P. tremula</i>	ANK	579	1976	Erzurum
55	<i>P. tremula</i>	ANK	5522	1977	Erzurum
56	<i>P. tremula</i>	ANK	3706	2001	İstanbul
57	<i>P. tremula</i>	ANK	14239	1973	Antalya
58	<i>P. tremula</i>	ANK	5323	1945	Erzurum
59	<i>P. tremula</i>	ANK	13445	1981	*
60	<i>P. tremula</i>	ANK	3706	*	İstanbul
61	<i>P. tremula</i>	ANK	526	1956	Aksaray
62	<i>P. tremula</i>	ANK	None	1977	Ankara
63	<i>P. tremula</i>	ANK	684	1980	Kastamonu
64	<i>P. tremula</i>	ANK	1964	1956	Zonguldak
65	<i>P. tremula</i>	ANK	257	1981	Bitlis
66	<i>P. tremula</i>	ANK	1114	1977	Artvin
67	<i>P. tremula</i>	ANK	579	1979	Erzurum
68	<i>P. tremula</i>	ANK	None	1939	Rize
69	<i>P. tremula</i>	ANK	3458	1973	Kastamonu
70	<i>P. tremula</i>	ANK	33	1969	Yozgat
71	<i>P. tremula</i>	ANK	None	1948	Kastamonu
72	<i>P. tremula</i>	ANK	110	1927	Ankara
73	<i>P. tremula</i>	ANK	8417	1941	Ankara
74	<i>P. tremula</i>	ANK	None	1976	Ankara
75	<i>P. tremula</i>	ANK	None	1944	Kayseri
76	<i>P. tremula</i>	ANK	None	1944	Kocaeli
77	<i>P. tremula</i>	ANK	53	1944	Kayseri
78	<i>P. tremula</i>	ANK	None	1944	Bolu
79	<i>P. tremula</i>	ANK	8	1942	Adana
80	<i>P. tremula</i>	ANK	None	1944	Bursa
81	<i>P. tremula</i>	ANK	None	1942	Osmaniye
82	<i>P. tremula</i>	ANK	2515	1975	Eskişehir
83	<i>P. nigra</i>	ANK	7	1944	Mersin
84	<i>P. nigra</i>	ANK	43	1976	Afyon
85	<i>P. nigra</i>	ANK	None	1981	Ankara
86	<i>P. nigra</i>	ANK	None	*	Ankara

Table S2. Continued.
Çizelge EK-2 Devamı.

87	<i>P. nigra</i>	ANK	331	1981	Kastamonu
88	<i>P. euphratica</i>	AEF	8215	*	Mersin
89	<i>P. alba</i>	AEF	None	*	*
90	<i>P. alba</i>	AEF	16534	*	Ankara
91	<i>P. tremula</i>	AEF	8290	*	İstanbul
92	<i>P. tremula</i>	AEF	5047	*	Çankırı
93	<i>P. nigra</i>	AEF	11	*	Ankara
94	<i>P. tremula</i>	AEF	19092	*	Trabzon
95	<i>P. tremula</i>	AEF	14331	*	Kars
96	<i>P. tremula</i>	AEF	14327	*	Kars
97	<i>P. tremula</i>	AEF	4152	*	Hatay
98	<i>P. tremula</i>	AEF	9717	*	Gümüşhane
99	<i>P. tremula</i>	AEF	12841	*	Bitlis
100	<i>P. euphratica</i>	GAZI	8511	2001	Gaziantep
101	<i>P. euphratica</i>	GAZI	8511	2001	Gaziantep
102	<i>P. euphratica</i>	GAZI	3605	2009	Batman
103	<i>P. euphratica</i>	GAZI	3586	2009	Siirt
104	<i>P. euphratica</i>	GAZI	7122	1994	Mersin
105	<i>P. alba</i>	GAZI	5972	1992	Sakarya
106	<i>P. alba</i>	GAZI	9405	1994	Ankara
107	<i>P. alba</i>	GAZI	7860	1997	Bingöl
108	<i>P. tremula</i>	GAZI	301	1945	*
109	<i>P. tremula</i>	GAZI	1347	1992	Çankırı
110	<i>P. tremula</i>	GAZI	3843	1996	Antalya
111	<i>P. tremula</i>	GAZI	301/2	1945	*
112	<i>P. tremula</i>	GAZI	1347	1992	Çankırı
113	<i>P. tremula</i>	GAZI	1347	1992	Çankırı
114	<i>P. tremula</i>	GAZI	5415	1989	Nevşehir
115	<i>P. tremula</i>	GAZI	1137	1989	Ankara
116	<i>P. tremula</i>	GAZI	4696	1990	Nevşehir
117	<i>P. tremula</i>	GAZI	1514	2010	Ankara
118	<i>P. tremula</i>	GAZI	2417	1983	Konya
119	<i>P. nigra subsp. nigra</i>	GAZI	1704	1990	Ankara
120	<i>P. nigra subsp. nigra</i>	GAZI	1135	1986	Ankara
121	<i>P. nigra subsp. nigra</i>	GAZI	10469	1993	Muğla
122	<i>P. nigra subsp. nigra</i>	GAZI	1500	1991	Çankırı
123	<i>P. nigra subsp. nigra</i>	GAZI	21990	1990	Kırıkkale
124	<i>P. nigra</i>	GAZI	595	1945	Ankara
125	<i>P. x canadensis</i>	GAZI	10467	1992	Muğla
126	<i>P. x canadensis</i>	GAZI	10467	1992	Muğla
127	<i>P. x canadensis</i>	GAZI	4721	1990	Nevşehir
128	<i>P. x canadensis</i>	GAZI	4722	1990	Nevşehir
129	<i>P. euphratica</i>	HUB	None	2001	Siirt
130	<i>P. euphratica</i>	HUB	None	2001	Siirt

Table S2. Continued.
Çizelge EK-2 Devamı.

131	<i>P. euphratica</i>	HUB	24704	1994	Mersin
132	<i>P. alba</i>	HUB	None	*	*
133	<i>P. alba</i>	HUB	6291	1987	Ankara
134	<i>P. alba</i>	HUB	6293	1990	Kırıkkale
135	<i>P. alba</i>	HUB	None	2001	İstanbul
136	<i>P. alba</i>	HUB	None	1999	Austria
137	<i>P. alba</i>	HUB	None	1995	Isparta
138	<i>P. alba</i>	HUB	None	2001	İstanbul
139	<i>P. alba</i>	HUB	None	2001	Düzce
140	<i>P. alba</i>	HUB	None	2002	Düzce
141	<i>P. alba</i>	HUB	None	1994	Isparta
142	<i>P. alba</i>	HUB	None	1995	Isparta
143	<i>P. alba</i>	HUB	37965	1994	Kayseri
144	<i>P. alba</i>	HUB	6294	1989	Ankara
145	<i>P. alba</i>	HUB	6292	1983	Denizli
146	<i>P. tremula</i>	HUB	6321	1981	Kars
147	<i>P. tremula</i>	HUB	6322	1980	Tunceli
148	<i>P. tremula</i>	HUB	6323	1981	Kars
149	<i>P. tremula</i>	HUB	6326	1986	Kars
150	<i>P. tremula</i>	HUB	None	2001	İstanbul
151	<i>P. tremula</i>	HUB	6324	1973	Ankara
152	<i>P. tremula</i>	HUB	6325	1973	Bitlis
153	<i>P. tremula</i>	HUB	6327	1976	Kars
154	<i>P. tremula</i>	HUB	None	1983	Germany
155	<i>P. tremula</i>	HUB	6334	1983	Çankırı
156	<i>P. tremula</i>	HUB	6333	1985	Çankırı
157	<i>P. tremula</i>	HUB	None	2004	Artvin
158	<i>P. tremula</i>	HUB	6332	1972	Bitlis
159	<i>P. tremula</i>	HUB	6331	1967	Kars
160	<i>P. tremula</i>	HUB	6330	1984	Konya
161	<i>P. tremula</i>	HUB	6329	1981	Rize
162	<i>P. tremula</i>	HUB	6328	1986	Kars
163	<i>P. tremula</i>	HUB	6316	1988	Tunceli
164	<i>P. tremula</i>	HUB	None	2008	Sinop
165	<i>P. tremula</i>	HUB	6336	1989	Denizli
166	<i>P. tremula</i>	HUB	None	2007	Sivas
167	<i>P. tremula</i>	HUB	None	2001	Düzce
168	<i>P. tremula</i>	HUB	6335	1989	Çankırı
169	<i>P. tremula</i>	HUB	6318	1990	Kırıkkale
170	<i>P. tremula</i>	HUB	6319	1990	Bitlis
171	<i>P. tremula</i>	HUB	6320	1980	Tunceli
172	<i>P. nigra subsp. caudina</i>	HUB	6297	1989	Antalya
173	<i>P. nigra subsp. nigra</i>	HUB	6298	1983	Muğla
174	<i>P. nigra subsp. nigra</i>	HUB	6301	1985	Çankırı

Table S2. Continued.
Çizelge EK-2 Devamı.

175	<i>P. nigra subsp. nigra</i>	HUB	None	2002	Ankara
176	<i>P. nigra subsp. nigra</i>	HUB	6305	1981	Erzincan
177	<i>P. nigra subsp. nigra</i>	HUB	6309	1989	Isparta
178	<i>P. nigra subsp. nigra</i>	HUB	6311	1986	Kars
179	<i>P. nigra subsp. nigra</i>	HUB	6304	1982	Kars
180	<i>P. nigra subsp. nigra</i>	HUB	6306	1990	Kırkkale
181	<i>P. nigra subsp. nigra</i>	HUB	6307	1989	Ankara
182	<i>P. nigra subsp. nigra</i>	HUB	6308	1989	Artvin
183	<i>P. nigra subsp. nigra</i>	HUB	6310	1980	Erzincan
184	<i>P. nigra subsp. nigra</i>	HUB	6312	1986	Kars
185	<i>P. nigra subsp. nigra</i>	HUB	6313	1986	Kars
186	<i>P. nigra subsp. nigra</i>	HUB	6314	1980	Tunceli
187	<i>P. nigra</i>	HUB	6315	1980	Tunceli
188	<i>P. nigra</i>	HUB	None	2004	Georgia
189	<i>P. nigra subsp. nigra</i>	HUB	None	2006	Erzincan
190	<i>P. nigra subsp. nigra</i>	HUB	None	2004	Artvin
191	<i>P. nigra subsp. nigra</i>	HUB	6299	1984	Ankara
192	<i>P. nigra subsp. nigra</i>	HUB	6300	1989	Çankırı
193	<i>P. nigra subsp. nigra</i>	HUB	6302	1989	Çankırı
194	<i>P. nigra subsp. nigra</i>	HUB	6303	1989	Çankırı
195	<i>P. x canadensis</i>	HUB	6296	1993	Muğla
196	<i>P. x canadensis</i>	HUB	6295	1984	Balıkesir
197	<i>P. balsemifera</i>	HUB	99-30	1999	Austria
198	<i>P. balsemifera</i>	HUB	None	1999	Austria
199	<i>P. canescens</i>	HUB	None	2002	Düzce
200	<i>Populus sp.</i>	HUB	None	1971	Azerbaijan
201	<i>Populus sp.</i>	ISTE	17646	22.04.1970	Tekirdağ
202	<i>Populus sp.</i>	ISTE	50740	12.06.1983	İstanbul
203	<i>Populus sp.</i>	ISTE	55567	5.06.1985	Van
204	<i>Populus sp.</i>	ISTE	89245	29.10.2004	Erzurum
205	<i>P. nigra subsp. nigra</i>	ISTE	39347	10.05.1978	Balıkesir
206	<i>P. nigra</i>	ISTE	6590	19.05.1961	Edirne
207	<i>P. pyramidalis</i>	ISTE	2101	*	Ankara
208	<i>P. nigra</i>	ISTE	74727	23.08.1997	Bartın
209	<i>P. tremula</i>	ISTE	76926	14.08.1999	Bartın
210	<i>P. tremula</i>	ISTE	90751	7.06.2003	Erzincan
211	<i>P. tremula</i>	ISTE	62987	16.06.1991	Sivas
212	<i>P. tremula</i>	ISTE	13934	26.06.1968	Kırklareli
213	<i>P. tremula</i>	ISTE	5513	19.07.1959	Kırklareli
214	<i>P. tremula</i>	ISTE	24481	9.05.1973	Kırklareli
215	<i>P. tremula</i>	ISTE	21419	18.04.1972	İstanbul
216	<i>P. tremula</i>	ISTE	4154	21.05.1952	İstanbul
217	<i>P. tremula</i>	ISTE	992386	25.07.2009	Kırklareli
218	<i>P. tremula</i>	ISTE	92347	25.07.2009	Kırklareli

Table S2. Continued.
Çizelge EK-2 Devamı.

219	<i>P. tremula</i>	ISTE	92324	25.07.2009	Kırklareli
220	<i>P. tremula</i>	ISTE	76931	26.09.1999	Bartın
221	<i>P. tremula</i>	ISTE	80683	13.07.2002	İstanbul
222	<i>P. tremula</i>	ISTE	2102	9.06.1945	Ankara
223	<i>P. tremula</i>	ISTE	36099	30.08.1976	Konya
224	<i>P. tremula</i>	ISTE	25696	10.06.1973	Denizli
225	<i>P. tremula</i>	ISTE	25696	10.06.1973	Denizli
226	<i>P. tremula</i>	ISTE	60949	5.08.1989	Bitlis
227	<i>P. tremula</i>	ISTE	40589	13.07.1978	Muğla
228	<i>P. usbekistanica</i>	ISTE	38807	22.05.1977	Balıkesir
229	<i>P. usbekistanica</i>	ISTE	28055	10.05.1974	Denizli
230	<i>P. usbekistanica</i>	ISTE	32560	4.07.1975	Konya
231	<i>P. alba</i>	ISTE	46999	13.07.1981	Edirne
232	<i>P. alba</i>	ISTE	6556	19.05.1961	Edirne
233	<i>P. alba</i>	ISTE	12230	29.10.1967	İstanbul
234	<i>P. alba</i>	ISTE	2099	27.09.1947	Kayseri
235	<i>P. x canadensis</i>	ISTE	8338	1965	İstanbul
236	<i>P. x canadensis</i>	ISTE	8338	1965	İstanbul
237	<i>P. x canadensis</i>	ISTE	14004	27.06.1968	Edirne
238	<i>P. x canadensis</i>	ISTE	16513	30.03.1970	Edirne
239	<i>P. x canadensis</i>	ISTE	2100	31.05.1905	Ankara
240	<i>P. euphratica</i>	ISTE	37829	24.06.1977	Şanlıurfa
241	<i>P. euphratica</i>	ISTE	27015	30.05.1973	Siirt
242	<i>P. euphratica</i>	ISTE	27015	30.05.1973	Siirt

* No available data.