J. Int. Environmental Application & Science, Vol. 11(3): 263-266 (2016)

The Chorology of Genus *Laurocerasus* Duhamel (*Rosaceae*) in East Black Sea Region-Turkey

Fazlı ÖZTÜRK*, Cihat ÖLÇÜCÜ

Department of Biology, Faculty of Sciences, Yüzüncü Yıl University, Van, TURKEY

Received June 04, 2016; Accepted September 20, 2016

Abstract: This study was carried out between 2009-2011. The aim of the study was to determine Laurocerasus Duhamel genus grown in East Black Sea Region. With these ecological and chorological studies on Cherry laurel belonging to Laurocerasus Duhamel genus grown in East Black Sea Region was determined. In this study Cherry laurel, with local names as "*yabani, ince, kiraz, geç, vavul, yürek, karpuz, siyah, fındık, beyaz, sivri*" which grown in East Black Sea Region have been used. According to our study 10 taxa of local culture and one original natural-wild was observed and first time the *Laurocerasus officinalis* Roemer c.v. "beyaz karayemiş" was determined in Turkey. With this study, chorology of determined taxa in Turkey has been shown by the grid square system.

Keywords: Laurocerasus officinalis*, Distribution, Chorology, Turkey*

Introduction

Laurocerasus officinalis Roemer, which belongs to genus *Laurocerasus* in *Rosaceae* L. Family is origin of plant from Middle and Western Asia, South-East Europe and Anatolia. Nowadays it has been used in many fields such as food, medicine and landscaping.

A lot of taxonomic studies have been carried out since past times and synonym have been found. Synonym: *Prunus laurocerasus* L., *Padus laurocerasus* (L.) Miller., *Cerasus laurocerasus* (L.) Lois., *Laurocerasus vulgaris* Carr.

Laurocerasus officinalis was first collected in Trabzon in 1546 by French Pierre Belon and was called as *Cerasus trapezuntuna* (Trabzon kirazı). The plant was took to Italy from Istanbul in the same year and to Vienna in 1574 and was sent to France and England from there. *Laurocerasus officinalis* which can take any shape by being pruned, has shiny, dark green leaves with white flowers which don't fall have been grown in parks and gardens in Europe since 1600 (Alpınar & Yazıcıoğlu, 1991, Anonim, 2004). Cherry laurel (Karayemiş) which is also known as taflan on Black Sea coast have been over many continents of the world. Spreading areas of culture forms of Laurocerasus officinalis in Turkey is very large and especially, it spreads around Rize, Trabzon and Giresun in eastern part of Black Sea side. Also its spreading starts from Ordu, Samsun, Sinop, Kastamonu to Istanbul (Özbek, 1952). It is seen in coastal regions of Turkey with aim of landscaping.

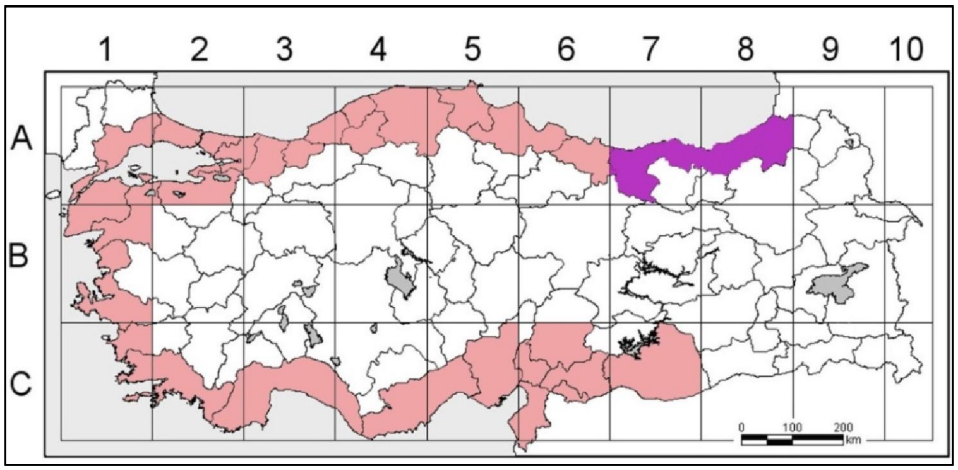

Figure 1. Chorology of *Laurocerasus officinalis* in Turkey.

*Corresponding: E-Mail: fazlioz65@yahoo.com; Tel: +90 432 225 17 01; Fax: +90 432 486 54 13

Eastern Black Sea region as research area is located on North-East of Turkey. The research area has been carried out is located on Europe-Siberia phytogeographical region for plant geography. Our study area contains A7 and A8 squares according to Davis's grid square system which he has applied for Turkey's flora (Davis, 1965). This taxa is mostly found at the heights about 0-2000 above sea level in Black Sea region (Davis, 1972). Fruits of *Laurocerasus officinalis* plant is known as " Karayemiş or Laz Kirazı" in Black Sea region (Özbek, 1952). Material of research area consists of cherry laurel samples collected in Eastern Black Sea region basin (Giresun, Trabzon, Rize) morphological and chorological of these samples and ecological properties belonging to these.

Materials and Methods

This study was carried out between 2009-2011 in East Black Sea Region. In the mentioned years, regular excursion has been carried out and data about morphological, chorological, phenological and ecological properties of *Laurocerasus officinalis* in Eastern Black Sea region have been collected.

Results

For the first time, natural and cultivar forms of the taxon of Laurocersus officinalis have been done and localities have been determined. Distributions of determined taxa have been shown as chorological on the maps.Upper and lower altitude tolerance limits of sample areas have been determined. Bioclimate layers, soil analysis, soil structure, temprature, humidity and flowering and vegetation of taxa have been determined.

Cherry laurel of which analysis have been done, have been kept in VANF herbarium as herbarium material. As a result of our study, we have determined that there are natural and wild forms of Laurocerasus officinalis together with Rhododendron generally in Picea ssp. and Fagus ssp. forest deeps. It has been determined that there are ecological spreads up to 2000 m.

After the study, 10 cultuvar variety and one of which is original naturel-wild have been determined. Total 11 taxa.

Natural-wild: 1. *Laurocerasus officinalis*
Cultivar: 2. *Laurocerasus officinalis* cv. "*kiraz karayemişi*"
3. *Laurocerasus officinalis* cv. "*geç karayemiş*"
4. *Laurocerasus officinalis* cv. "*vavul karayemişi*"
5. *Laurocerasus officinalis* cv. "*yürek karayemişi*"
6. *Laurocerasus officinalis* cv. "*karpuz karayemişi*"
7. *Laurocerasus officinalis* cv. "*siyah karayemiş*"
8. *Laurocerasus officinalis* cv. "*fındık karayemiş*"
9. *Laurocerasus officinalis* cv. "*beyaz karayemiş*"
10. *Laurocerasus officinalis* cv. "*sivri karayemiş*"
11. *Laurocerasus officinalis* cv. "*ince karayemiş*"

1. Chorology: *Laurocerasus officinalis* ***'orginal natural-wild'***
Localite : A7 Trabzon; Düzköy, Akçaabat.
Altitude : 1200 - 2000 m.
Phenology : VI.

2. Chorology: *Laurocerasus officinalis* c.v. ***'kiraz karayemiş'*** F. O.
Localite : A7 Trabzon; Yomra, Arsin, Köprübaşı.
Altitude : 20 -1000 m.
Phenology : V.

3. Chorology: *Laurocerasus officinalis* c.v. '*geç karayemiş*' F. O.
Localite : A7 Giresun; Eynesil, Görele, Çanakçı.
Altitude : 600 -1500 m.
Phenology : VI.

4. Chorology: *Laurocerasus officinalis* c.v. '*vavul karayemişi*' F. O.
Localite : A7 Trabzon; Çarşıbaşı, Vakfikebir, Beşikdüzü.
Altitude : 650 -1400 m.
Phenology : V.

5. Chorology: *Laurocerasus officinalis* c.v. '*yürek karayemiş*' F. O.
Localite : A8 Rize; Güneysu, İyidere, Derepazarı.
Altitude : 750 – 1600 m.

Phenology : IV.

6. Chorology: *Laurocerasus officinalis* c.v. *'karpuz karayemiş'* F. O.
Localite : A8 Rize; Merkez, Çayeli.
Altitude : 100 – 400 m.
Phenology : V.

7. Chorology: Laurocerasus officinalis c.v. *'siyah karayemiş'* F. O.
Localite : A7 Trabzon; Akçaabat, Düzköy.
Altitude : 350 – 650 m.
Phenology : IV.

8. Chorology: *Laurocerasus officinalis* c.v. 'fındık karayemiş' F. O.
Localite : A7 Trabzon; Vakfikebir, Tonya.
Altitude : 140 – 400 m.
Phenology : V.

9. Chorology: *Laurocerasus officinalis* c.v. '*beyaz karayemiş*' F. O.
Localite : A8 Trabzon; Sürmene, Hayrat, Dernekpazarı.
Altitude : 300 – 800 m.
Phenology : V.

10. Chorology: *Laurocerasus officinalis* c.v. *'sivri karayemiş'* F. O.
Localite : A8 Trabzon; Düzköy, Akçaabat.
Altitude : 1200 – 2000 m.
Phenology : VI.

11. Chorology: *Laurocerasus officinalis* c.v. '*ince karayemiş*' F. O.
Localite : A8 Trabzon; Sürmene, Araklı, Hayrat
Altitude : 400 – 600 m.
Phenology : IV.

Discussion and Conclusion

As a result, a taxonomic study on natural and cultuvar forms of *Laurocerasus officinalis* has been carried out for the first time. Natural and wild forms of *Laurocerasus officinalis* have been determined for the first time with this study. Also 11 forms in cultuvar forms as taxonomic have been determined for the first time. After studies, "beyaz karayemiş" has been determined for the first time as local cultural variety. Also with this taxonomic study, chorological of *Laurocerasus officinalis* have been determined for the first time.

References

Akman Y, (1990) *İklim ve Biyoiklim*. Palme Yayınlan Mühendislik Serisi, **103**, Ankara. 319s.

Alpınar K, Yazıcıoğlu E, (1991) Taflan (*Laurocerasus officinalis* Roemer) meyvaları üzerinde farmasötik botanik yönünden bir araştırma, Bitkisel ilaç hammaddeleri toplantısı bildirisi. Eskişehir, **81**, 9.

Anonymous, (2004) www.tagem.gov.tr/yeni%20web/ projeler/ uygulamaya %20aktarılan/ projeler01/ bahçe01/7.htm. Last date : 05.06.2010.

Ayaz FA, Bertoft E, Reunanen M, (1996) Changes in the low molecular weight carbohydrate content of *Laurocerasus officinalis* Roem. cv. globigemmis during fruit development. *Bulg. J. Plant Physıol*., **22**, 25–29.

Ayaz FA, Kadıoğlu A, Hayırlıoğlu S, (1998) Determination of some molecular weight carbohydrates in the fruits of wild *Cherry laurel* (*Laurocerasus officinalis* Roem.) using gas chromatography. *Tr. J. of Botany* , **22**, 65-68.

Baytop A, (1972) *Farmasonik Botanik.* İstanbul Üniversitesi Eczacılık Fakültesi Yayınları, Yay. No:36, Ata Yayınevi , İstanbul. 416 s.

Baytop T, (1984) *Türkiye'de Bitkiler ile Tedavi* . İstanbul Üniversitesi Yayınları, No:1 İstanbul.

Beret B, (1955) Çakırgöl Dağında glasiyal izler. *Türk Coğr. Dergisi,* **15-16***,* 115-125.

Burnham CR, (1964) *Discussions in Cytogenetics.* Minneapolis, Burgess Publishing Comp., Minnesota.

Darlington CD, La Cour LF, (1976) *The Handling of Chrosomes*. George Allen and Unwin Ltd., Sixth Edition, London.

Davis PH, (1965-1985) *Flora of Turkey and the East Aegean Islands,* **1-9.** Univ. Press., Edinburgh.

Davis PH, (1988) *Flora of Turkey and the East Aegean Islands,* **10** (supplement). Univ. Press., Edinburgh.

Gogolishvili ZM, (1971) Study of sylvan cherry laurel fruit. *Trudy Gruzinskii Nauchno Ssledovatel'skii Institut Pischevoi Promyshlennosti*, **5**, 133-136.

Güner A, Özhatay N, Ekim T, Başer KHC, (2000) *Flora of Turkey and the East Aegean Islands, (Supplement) Vol 11*. Edinb. Univ. Press, Edinburgh.

İslam A, (2002) Cherry laurel (*Prunus laurocerasus*). *New Zeal. J. Crop. Hort.,* **30**, 301-302.

Kaya A, Aydın O, (2008) Experimental investigation of driying kinetics of cherry laurel. *Journal of Food Process Engineering* , **31-3**, 398-412.

Mikeladze GG, Kutaledze L, (1971) Clarification of fruit and berry juices by enzymatic hidrolysis of protein compounds, *Trudy Gruzinskii Nauchno Ssledovatel'skii Institut Pischevoi Promyshlennosti,* **4**, 207-210.

Özbek S, (1952) Karayemiş (*Prunus laurocerasus* L.) *Ankara Üniversitesi Ziraat Fakültesi Yıllığı*, 2, 309-314.

Öztürk F, (2001) Sitotaksonomi'de sürekli preparat için modifiye edilmiş bir metot. *Cent.ent. Stud., Misc. Pap.* **75**, 5-7.

Öztürk F, Öztürk A, (2002) Doğu Anadolu'da yayılış gösteren *Veronica* L. (*Scrophulariaceae*) cinsine ait *Beccabunga* Dum. seksiyon üyelerinin revizyonu. *Ot Sistematik Botanik Derg.,* **7-2,** 15-42.

Romeo Rodriguez MA, Vazquez Oderiz ML, Lopez Henandez J, Simal-Lazano J, (1992) Studies on chemical composition, physical charateristics and maturity indices of cherry laurel (*Prunus Lauroceerasus* L.) and elderberries (*Sambacus nigra* L.). *Indust. Alimentari,* **31***,* 911-912.

Stace CA, (1980) *Plant Taxonomy and Biyosystematics.* Edward Arnold (publishers) Ltd., London.