

FINAL REPORT

TAXONOMIC REVISION AND MOLECULAR PHYLOGENY OF THE GENUS *PYRUS* L. (*ROSACEAE*)

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1. Brief Financial Report

The total amount awarded by IAPT was used as follows:

-Travel cost = US\$ 700.00 : This amount covered airfare, hotels, and food.

-Field trip to Azerbaijan = US\$ 300.00 : This amount covered a car, gas, and a driver.



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Prof. Dr. Ali A. DÖNMEZ

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2. Scientific Report

Introduction

Diversification of pears is centered in western Eurasia and eastern Asia, mainly China. A group of western species are found in Europe, northern Africa, Turkey, Iran, Iraq, Syria, Central Asia, and Caucasia whereas eastern species are found predominantly in Eastern Asia. The Caucasus region is a critical site for diversification of the genus and is thus of great importance. The purpose of this project is to perform field trips in Azerbaijan to collect *Pyrus* taxa and examine herbarium materials in the BAK (Baku, Azerbaijan) herbarium. As I proposed in the IAPT Grant Application, these findings will serve to enrich my knowledge about Caucasian *Pyrus* and to provide more leaf material for future molecular analyses.

Material and Methods

The field trip was made on 14 - 18 September 2015 throughout Xhizi, Quebele and Gence (Azerbaijan). Leaf samples were prepared in silica gel for molecular analysis. All specimens were deposited at both HUB (Ankara, Turkey) and BAK (Baku, Azerbaijan) herbarium. A visit to BAK herbarium was made on 15th September 2015 to examine Caucasian *Pyrus* taxa. Beside this, we collected some closely related genera to *Pyrus*, such as *Cotoneaster* Medik., *Sorbus* L., *Amelanchier* Medik., *Crataegus* L.

Results

We collected some *Pyrus* taxa (Table 1) including *Pyrus salicifolia* (Figure 2), *P. caucasica* (Figure 2), *P. oxyprion* and *P. georgica*, all of which are rarely found in Turkey. Therefore, the field work in Azerbaijan allowed for the examination of important Caucasian *Pyrus* taxa and to describe a new species of *Pyrus*. Description of the new species is in preparation now and will be submitted soon. In addition, we identified *Crataegus petrodavisii* as new record of for Azerbaijan flora and this manuscript has already been submitted (In press).

Table 1. Collected specimens from Azerbaijan.

Taxa	Voucher No	Locality
<i>Pyrus georgica</i> Kuth.	ZUG 574	Baku: Gilezi village, 40°52'17.6"N, 049°20'44"E, 400 m, 14.9.2015.
<i>P. georgica</i>	ZUG 576	Baku: Xizi, Altrağaç National Park, 532 m, 15.9.2015.
<i>P. georgica</i>	ZUG 577	
<i>P. oxyprion</i> Woronow	ZUG 578	
<i>Pyrus</i> sp.	ZUG 579	
<i>Crataegus petrodavisii</i> Dönmez	AAD 19681	
<i>Crataegus orientalis</i> Pallas ex Bieb.	AAD 19683	Baku: Xizi, Altrağaç village, 1026 m, 40°50'26"N, 048°57'48.6"E, 15.9.2015.
<i>Cotoneaster meyeri</i> Pojark	AAD 19685	
<i>P. salicifolia</i> Pall.	ZUG 575	
<i>Pyracantha coccinea</i> M.Roem.	AAD 19690	Quebele: around Turyançay, 132 m, 40°43'185"N, 047°33'66.8"E, 18.09.2015.
<i>Crataegus monogyna</i> Jacq.	AAD 19691	Quebele: İsmaili, Nourğışlah village, 651 m, 40°57'17.1"N, 047°52'51.3"E, 18.9.2015.
<i>Crataegus monogyna</i> Jacq.	AAD 19704	Xizi: Beşparmak mountain, 18.9.2015.
<i>P. salicifolia</i>	ZUG 587	İsmaili, Muğanlı village, 40°41'40.1" N, 048°31'65.1"E, 851 m, 18.9.2015.
<i>P. salicifolia</i>	ZUG 588	
<i>P. caucasica</i> Fed.	ZUG 586	
<i>P. caucasica</i>	ZUG 583	Baku: Xizi, 40°53' 622" K, 048° 58' 232" D, 857 m, 14.09.2015.



Figure 1. A photograph from field trip in Xizi while collecting *Pyrus taxa*.



Pyrus salicifolia Pall. - ZUG 587



Pyrus caucasica Fed.- ZUG 586

Figure 2. Some taxa of *Pyrus* collected from Azerbaijan.