Project Update: June 2021

Covid Break

Due to global Covid-19 pandemic, we had to take a break between March 2020 and April 2021 for the fieldwork at the study since there were intercity travel bans, curfews and restrictions for gatherings in Turkey for almost 18 months. During the break, we had to redesign our remaining activities of the project since most of them required social interactions with large groups (such as seed distribution festival and surveys with local people). You can find the activities that had to be cancelled and their replacements in section 1.1.

During the Covid break, we helped organise Rufford Grant Recipients Conference in Bosnia and Herzegovina from 9-11 October 2020. You can find the abstract of our project in the abstract book of the conference.

1.1 Replacement Activities

In March 2021, we applied to the Rufford with replacement activities and a new schedule.

Time	Activitiy in Original Project	Replecament Activity	Reasoning
April 2021	Interviews with the local people about Kazdagi fir.	Interviews with the forest managers to analyse the perception through Kazdagi fir.	The focus group of forest managers are smaller than local people. Also the informal interviews revealed traces of a negative Perception.
May 2021	Seed and information sharing event	A review paper to analyse what is known and what is not known about the species, especially in Turkish to be available for foresters. Also, preparation of booklet about the species to distribute NGOs and local organisations.	Instead of gathering, the task is done as a deskjob and the review will be available for more people.
June 2021	Final Report Preparation		

Review Studies
For this activity we listed all the studies (via Google Scholar) between 1964 – 2020 with the keywords "*Abies equitrojani, Abies bornmülleriana* ssp. *equi-trojani, Abies nordmanniana* ssp. *equi-trojani, Abies bornmülleriana*" since the taxonomy of the species is entangled and the species was identified at least once in the literature with the all the binomial names above. Then we categorised each study based on its focus; e.g. morphology, genetics, forestry.

Highlights: We found that there are only three studies investigating the evolution of Trojan fir (Kazdağı fir) while there are more than 50 studies focused on the wood properties of the species. We realised only two studies propose a conservation priority for Trojan fir.

The review paper was prepared in Turkish to make the research more available among local forest managers. The paper is in publication process.

Booklet Preparation & Distribution
One of the replacement activities of the project was to prepare an informative booklet about Trojan fir to distribute among local NGOs and organisations. We included a seed package and booklet to involve citizen scientists to the project. Since we were aiming to distribute seeds with a "seed sharing festival" and were not able to organise it due to Covid-19 restrictions, we realised booklets were useful tools to distribute seeds without additional contact. We prepared a germination guide, data sharing table and contact information via an envelope attached to the booklet. We aim to get feedback as soon as possible. You can find the printed versions of the booklets in *Figure 1* and digital versions in *Figure* 2.

Requested data from citizen scientist via booklets with seeds:
- The selected method for germination (soil or cotton).
- The city of the citizen scientist.
- The date planted seeds.
- The date seeds germinated.
- The height after 6 months of germination.
- Seedling death.
- Number of non-germinated seeds.

Surveys with Local Forest Managers
We replaced surveys with local people with surveys with local forest managers for two reasons: 1) smaller group to reduce human contact, 2) we realised a negative attitiude towards Trojan fir among local foresters during our fieldwork.

We designed a survey consisting of three parts with the same questions for three different species. One species is Trojan fir, the others are oak and pine which establish mixed stands with Trojan fir. Our aim is to be able to conduct a comparative analysis with the survey results. We prepared eight Likert-type (5 scale) questions with two control questions. You can find the survey questions in *Table 1* (Section 5.).

We had permission to conduct surveys with local people but since both the focus group and survey questions are changed, we reapplied to the Hacettepe University Ethics Commission to get required permissions yet it still is in review process. We will

conduct the study as soon as we get the permission.

Figure 1: Printed versions of booklets with seed package & germination information

Figure 2: Digital versions of booklets

Table 1: Survey questions for local forest managers. The same questions will be asked for oaks and pines.

Please mark the sentences as; • Strongly disagree • Disagree • Neither agree nor disagree • Agree • Strongly agree	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. Fir species harms neighbouring species					
2. Fir species supresses the development of neighbouring species					
3. Fir species prevent other species to grow in their stands					
4. Fir species distribute uncontrollably					
5. The population size of fir species are decreasing and they face extinction risk					
6. Fir species are negatively affected by climate change					
7. Fir species facilitate other species' growth and distribution (R)					
8. Fir species' distribution decreases unless their populations do not supported by forestry application (R)					