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THE PLANTS OF USING FOR DYE IN KÜRECİK (AKÇADAĞ / MALATYA), EASTERN ANATOLIA OF TURKEY

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SUMMARY

In this study the plants that used as dying wool have carried out in Kürecik district (Akçadağ/Malatya). Totally 15 species are used that they are 12 grow natural and 3 culture plants belonging to 11 family. Using parts of this species are that flowers, roots or aerial parts. 11 species of them also uses as folk medicine.

ÖZET

Bu çalışmada Kürecik Bucağında (Akçadağ/Malatya) halk arasında yün boyamak amacıyla kullanılan bitkiler sunulmuştur. Toplam 11 familyada 12 doğal ve 3 kültür bitkisi olmak üzere 15 tür kullanılmaktadır. Bu bitkilerin kullanılan kısımları çiçekleri, kökleri veya topraküstü kısımlarıdır. Bunlardan 11 bitki türü ise aynı zamanda halk ilacı olarak kullanılmaktadır.

Key words: Ethnobotany, Natural Dye, Kürecik, Malatya, Turkey.

INTRODUCTION

Natural dyes, an old tradition were used until the end of the 18th century by local people in Anatolia (1). There are three kinds of natural dyes; vegetable, animal and metallic. The natural dying processes are conducted in one of three ways; directly dying, cubic dying or dying with mediator substances (2, 3). Wool fibers that were used to weave carpet and rugs were dyed mostly with vegetal dye substances. About 150 plants uses for dye in Turkey (2).

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Malatya is located in the East Anatolia Region of Turkey (Fig. 1). Small worn hills and extinct formations are very common in the area. There are wide plateaus and plains created by the lava and ashes from the extinct volcanoes.

The study is centered in the township Kürecik, Akçadağ, the district of Malatya province. It is composed by highland place up to 3500 m. The surveyed region has a population of 5000 in habitants.

Civilization in this area is based on B.C. 3000 and Kürecik has very rich flora especially with rare and endemic plants. Great percentages of the plants are endemic also these plants are used (4). Kürecik is near the Tohma Vale (Gürün-Darende) 101. Important Plant Area of Turkey (5).

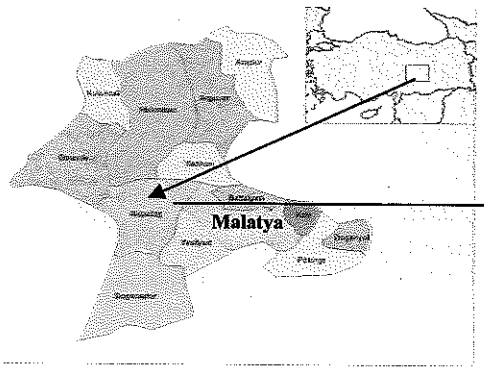

Figure 1: Map of Malatya and Turkey.

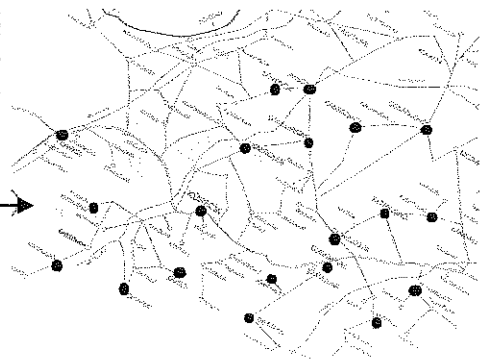

Figure 2: Map of Kürecik; 20 villages are marked with ●

In this research, a survey on dye plants in Kürecik is aimed, which there aren't any researches about that, although Kürecik has very rich flora and plant culture, people who live in there immigrate to big cities. So this study can help to be not forgotten dying with plants knowledge in Kürecik before it is completely lost (6).

RESULT AND DISCUSSION

This research covers plants samples there are used by regional people for natural dye production. The local names of the plants, the parts used for dye production, obtained colors, used mediator substances, storage and preparation of plants for use were determined by collecting information from regional villagers. The research contain 20 villages (Fig. 2). Plant sample were collected by asking regional people. Information about dye plants was registered during field tours, then the plants were pressed, dried according to herbarium techniques and identified by Flora of Turkey (7). All plants specimens were kept in herbarium ISTE. Also local names of plants, their parts used for

dying purposes, obtained colour and colouring matter were determined. All taxa in species, genus and family levels in alphabetical order and used parts, preparation and administration were writen.

In Kürecik (B6 Malatya) 15 plant species are stated that are used for dying wool. Villagers uses branchies, leaves, barks of woody plants, flowers or all parts of herbaceous plants. Woody plant parts expecially are collected in autumn and keeps in water 1-2 weeks or 5-6 days. But herbaceous plants generally use freshly or dried parts keep in water 3-4 days before dying. Wool that cutted from sheep, washes, spinnes and transform wool yarns. These wool yarns moistens and hold up in an closed case with water for several days it changes according to plants. Dying wool yarns make boiler as 45-50 lt. Plant parts and water are put in boiler and are waited for desired colours. The colours change according to time. At the same time some natural or chemical mediators can be used during dying, such as *Plumbago europae*, ash, alum and salt. Some villagers point out that using chemical mediator would damage wool. Plants that in the boiler boils with water and after filtered. When wanted colours occurs, wool yarns are taken out, shakes off and they are waited for cool down. The mediator is added with plants or sometimes it is added after dying wool yarns. Cold wool washes again in cold water to stable the colour and let it dry (4,6).

1. *Allium cepa* L. (Pivaz, Soğan) (Liliaceae)

Dried onion shells are kept in water for 4-5 days, then wool yarns are boiled in colored water with dried onion; alum is added for one hour and the yarns become bright yellow (Fig.6).

2. *Armeniaca vulgaris* Lam. (Herung, Kayısı) (Rosaceae)

Dried stem barks is kept in water for 1 week, then wool yarns, plant parts and alum or salt are in colored water for 2 hours and the yarn color becomes yellow. Usages of these plants for dying haven't been recorded in literatures before this study (Fig. 3).

3. *Arnebia densiflora* (Nordm.) Ledeb. (Ellik, Havacık) (Boraginaceae)

Dried below ground is kept in water overnight, then wool yarns and dried plant parts are boiled in the colored water and alum is added for one hour and the color becomes a tone of red. Sometimes ram tails directly colors with (Fig. 3).

4. *Berberis crataegina* DC. (Karamuk) (Berberidaceae)

Roots are kept in water for one week, then wool yarns, plant parts and alum or salt are boiled with the colored water for two hours and the color of the yarns becomes olive-green (Fig. 3).

5. *Crataegus x bornmuelleri* Zabel (Cıvica zar, Gıvica zar) (Rosaceae)

Dried root are kept in water for 4 days, then wool yarns, plant parts and alum or salt are boiled in the colored water for one hour. The yarns become yellow tones (Fig. 3). Also this species is endemic.

6. *Crataegus orientalis* Palas ex Bieb. var. *orientalis* (Gıvica sur, Cıvica sur) (Rosaceae)

Dried root are kept in water for 4 days, then wool yarns, plant parts and alum or salt are boiled in the colored water for one hour. The yarns become yellow tones (Fig.3).

Figure 3. A carpet part that dyied with *Euphorbia macroclada*

7. *Euphorbia macroclada* Boiss. (Ğaşil) (Euphorbiaceae)

Dried herbs and wool yarns are boiled in water for two hours and the yarns color become yellow (Fig. 4).

8. *Juglans regia* L. (Cuz, Guz, Ceviz) (Juglandaceae)

Fruit barks can directly dye wool yarns without using mediator substances. Usually, wool yarns become a brown color when they are directly dyed with fruit barks. If salt is used as mediator substance, yarn color turns to black (Fig 3).

9. *Papaver dubium* L. subsp. *laevigatum* (M. Bieb.) Kadereit (Lala, Kulilkasor) (Papaveraceae)

Dried underground parts and fresh flowers kept in water, then wool yarns, plants parts and salt are boiled in that water for two hours; wool yarns color becomes claret red with underground part and wool yarns color becomes grey with flowers.

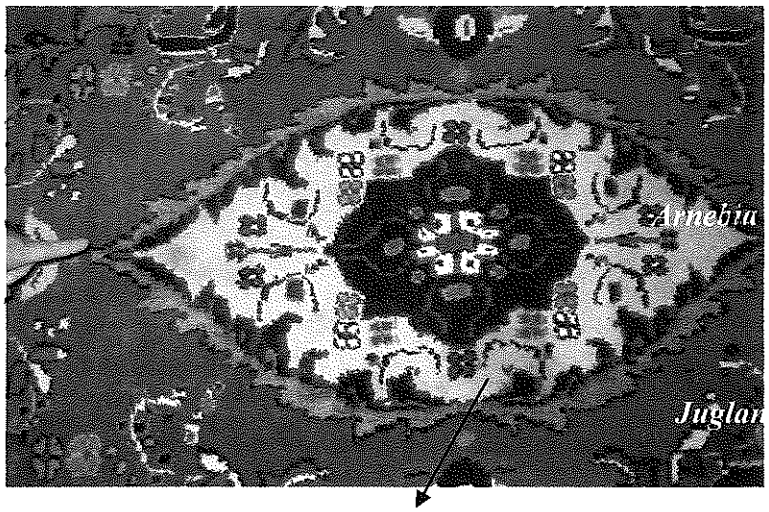

Figure 4. A carpet part that dyied with straw of *Triticum aestivum.*

10. *Papaver macrostomum* Boiss. et Huet ex Boiss (Lala, Kulilkasor) (Papaveraceae)

Dried underground parts and fresh flowers kept in water, then wool yarns, plants parts and salt are boiled in that water for two hours; wool yarns color becomes claret red with underground part and wool yarns color becomes grey with flowers.

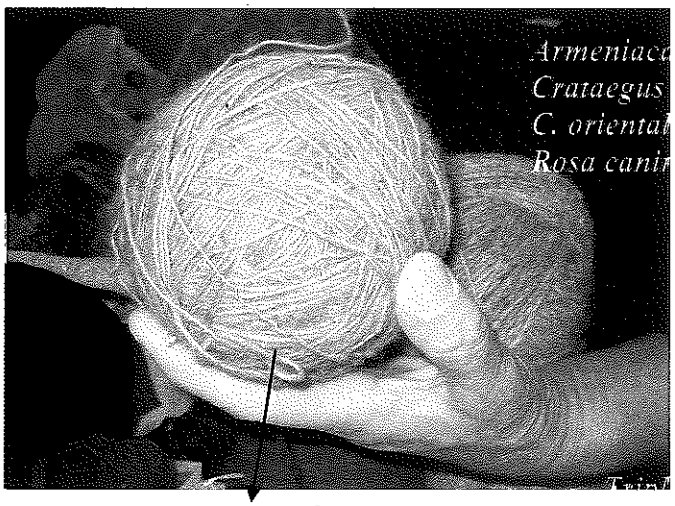

Figure 5. A wool yarn that dyied with shell of *Allium cepa*

11. *Plumbago europae* L. (Artuğ) (Rosaceae)

All parts of fresh plants and wool yarns boiled for 15 minutes as mediator when plants were dying. It is not uses frequently.

12. *Rosa canina* L. (Şilan) (Rosaceae)

Dried root barks are kept in water for 4 days, and then wool yarns, plants parts and alum or salt are boiled in the colored water for one hour. The yarns become light brown tones (Fig.3).

13. *Quercus cerris* L. var.*cerris* L. (Çorık) (Fagaceae)

Leaves and cupules are kept in water for 3-4 days, and then wool yarns, plant parts and alum or salt are boiled in color becomes brown near black.

14. *Tripleurospermum sevanense* (Manden.) Pobed. (Papatya) (Compositae)

Dried underground parts are kept in water for 1-2 days, then wool yarns, plant parts and salt are boiled and the color becomes yellow (Fig. 3).

15. *Triticum aestivum* L. (Ganım, Buğday) (Graminea)

Old straw is kept in water for 1 day, then wool yarns and straw are boiled in colored water for 2 hours and the yarn color becomes between light yellow and white (Fig. 5).

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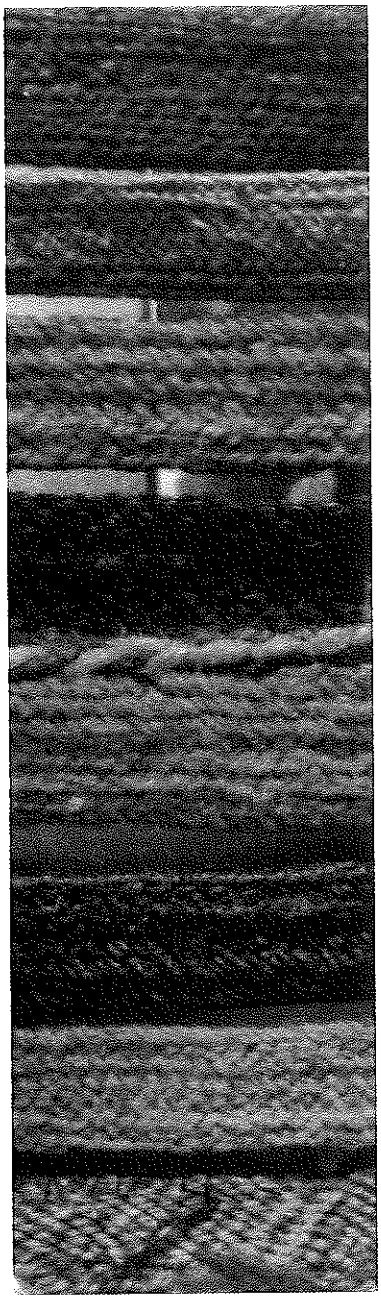

Figure 6: Dyied and knitted string

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