

Ethnobotanical Research in Friday Markets of Bodrum (Mugla, Turkey)

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Abstract. The town of Bodrum is on a peninsula in the southwestern part of the province of Mugla between the Mediterranean and the Aegean. The Research Project on the Useful Plants of the Bodrum Area was started in October 1999 to collect data on the traditional uses of plants for food, medicine, fodder, fuel, handicrafts and other uses. The Friday market of Bodrum is a magnet for numerous villagers around the Bodrum and proved an important source of data for the project. For more than a year now, one or more members of the project have visited every Friday market to record wild edibles, flowers, herbs, medicinal plants, and ethnographic materials such as

baskets, spoons, and amulets made from plant materials. The availability of wild edible greens throughout the year was documented. Interviews with the women and stall keepers were conducted, cooking recipes of various edibles, and the preparation and application of herbal medicines were noted. During the last 19 months over 700 plant samples were collected and information about them was recorded. Our database now includes information on more than 360 species of useful plants in the area, as well as the related literature. The highest percentage of the useful plants are wild edibles which show similar uses in several Mediterranean countries.

Key words: Bodrum, Ethnobotany, Medicinal plants, Turkey, Wild edibles

B.C. Herodotus, the father of history, was born in the fifth century in Halicarnassus, a town on the southwestern coast of Turkey, now called Bodrum. The French historian Braudel, writing on the history of the Mediterranean, visualised that Herodotus would be astonished if, after 2500 years, he came back to the Mediterranean region as a tourist (BRAUDEL 1995).

"Herodotus would not recognize the orange, tangerine and lemon trees with their golden fruit as these had been brought by the Arabs from the Far East; and the agaves, aloes which are American imports to the Mediterranean. *Eucalyptus* trees would also be strange to him as they are Australian, as well as the Iranian Cypress, and vegetables from all over the world, tomatoes from Peru, eggplants from India, corn from Mexico..."

But, as ethnobotanists, we may be more interested in what Herodotus would find familiar in his home town market. Although agricultural pro-

ducts and man-made landscapes have changed, sometimes dramatically, wild greens, mushrooms, fruit, and all the aromatic herbs are probably much the same and they were probably prepared and consumed in the same way as today in many towns and villages around the Mediterranean.

The town of Bodrum is situated on a peninsula in southwestern Turkey in the province of Mugla. The peninsula is surrounded on the north by the Gulf of Mandalya, on the west by the Aegean Sea, and on the south by the Gulf of Kerme or Gökova. The Mediterranean begins and the Cycladic Sea ends, at Tekir Point where the ancient Cnidos was founded (MANSUR 1972). It is on the 37th parallel (as the Paros at Cyclades, and Syracuse of Italy), and enjoys a temperate climate; the winters are warm and rainy, the summers hot and dry, but the sea breeze cools the town in summer. The Mugla area hosts many aromatic and medicinal plants, as well as some relic endemics, such as *Liquidambar orientalis*.

About 2500 years ago, Halicarnassus was a very prosperous Aegean town. It was the capital town of King Mausolos (377-353 B.C.), where his successor built a Mausoleum to his name, which became one of the Seven Wonders of the World (ALPÖZEN 2000). It was successively sacked by Alexander's soldiers, the Romans, Byzantines, Crusaders, Turkish Beyliks, the Ottomans and various bands of robbers and pirates. For most of its recent history Bodrum has been a small port, inhabited by a mixed population of Greeks and Turks. In the population exchange of 1922, the Greeks were replaced by Cretan Turks. Today, the town of Bodrum has a population of about 25.000, and the population of the whole peninsula is about 80.000. In summer, tourists cause the population jumps to 250.000.

The Research Project on the Useful Plants of the Bodrum Area was begun in October 1999 to collect data on the traditional uses of plants for food, medicine, fodder, fuel, and handicrafts. From the start, the Bodrum Friday markets have been a very important focus for this research (Fig. 1). These markets are a magnet for the numerous villagers from the surroundings and they provide an irreplaceable source of ethnobotanical data.

Until 10 years ago the market place was located at the town port near the castle. It was then moved uphill to a covered area located conveniently next to the town's main bus station. Women and men, sometimes from quite distant villages, come by local transport to this bus station to buy and sell in the Friday markets. The market place covers an area of over 3000 m², with about 300 registered stands and about 100 individuals who do not have formal stands, as well as a few itinerant peddlers.

For more than a year and a half now, the project staff and its volunteers have visited the Friday markets. They collected samples and recorded the wild edibles on sale, as well as flowers, herbs, medicinal plants and ethnographic objects such as baskets, spoons, and amulets made from plant materials. Sometimes as many as 25-30 species of wild greens and a variety of mushrooms were recorded in a single day. Throughout the peninsula over 700 plant samples have been collected. Our database now includes information on more than 360 species of plants.

On Fridays the market becomes a carnival of colours and odours: piles of oranges, tangerines, and beans, pyramids of tomatoes, apples, and among them always heaps of "wild" greens, which the locals call "Deli", which translates both as crazy and undomesticated. Women bring the edible greens, flowers and herbal teas that they collect, as well as home-made bread, olives, olive oils, soaps, herbal oils, and vegetables grown in their gardens. Villagers also bring chicks, hens, and ducks, as well as eggs, milk, yoghurt, butter and various cheeses. Some women bring very little and one wonders if it is worth the bus fare (Fig. 2). By observing, photographing, asking questions, buying samples and trying all the suggested recipes, and discussing the results with the women on the following market day, we have become friends with some of the villagers and were invited to their homes. Through these visits we have been able to collect valuable additional information.

Most of the herb dealers are located in one section of the market (Fig. 3). Here on nine or ten

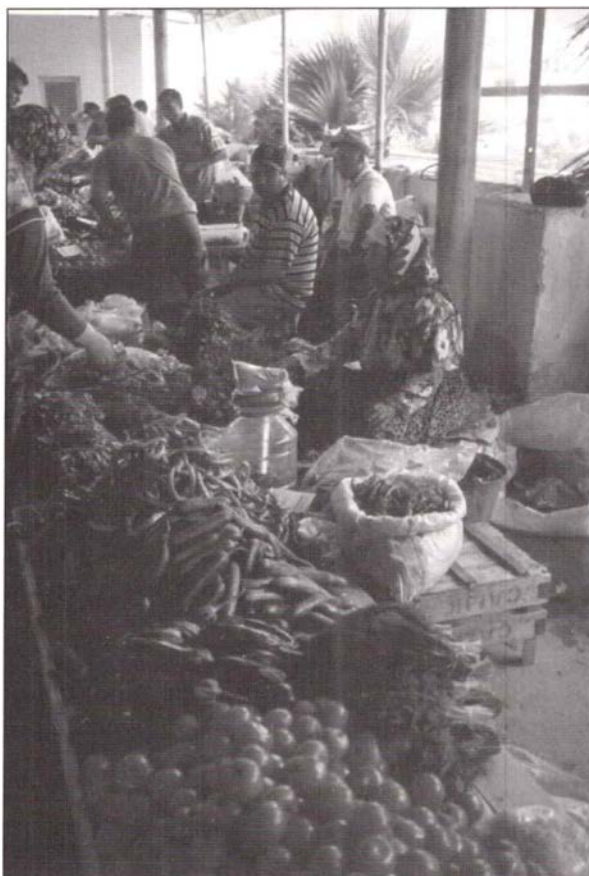


Fig. 1 - Friday market of Bodrum.

counters, bags of spices and medicinal dried herbs are piled or arranged in rows, and hung from ropes. They also sell dried vegetables, amulets against evil eye, commercially packaged herbal teas, and spices from all over the world.

The project is still continuing, but a summary of some of the preliminary findings will show the positive and negative aspects of market places in an ethnobotanical research design.

In the Bodrum study the highest percentage of useful plants belong to natural or so called "wild" edibles (see Tab. 1). We found that among 275 natural useful plants known in the area, almost half (137) are in the wild food and beverage category. If we include the 26 cultivated plants used as food, the percentage of edibles in the total goes up to 60%. In the Bodrum market we recorded about 60 wild edibles, which is close to half the total. The remainder of the information on these plants came from visits to the villages.

The second largest category is plants used in the treatment of human ailments: 79 species of wild plants were considered medicinal, in addition there were 12 cultivars or semi-naturalised plants

with medicinal uses. About half of the medicinal plants are also used as edibles. Thirty-four of the natural plants that have medicinal properties are used only for the treatment of humans. Four wild plants are recorded for the treatment of animals. We found 36 of the 91 medicinal plants (about 40%) offered for sale in the Bodrum market.

The third category is fodder plants and we recorded 42 plants used as animal fodder, but only one of these was found in the Friday market.

The fourth category is plants used in handicrafts. Thirty-two of them were recorded in this area, but only three were found in Bodrum market. This shows that markets can be a good source for edibles and medicinals but are not ideal for other plant uses such as fodder, fuel and handicrafts.

Our last category is miscellaneous uses, which includes 75 plants. These are for pergolas and fences, chicken brooding nests, plants favoured by bees, decorative plants, insect repellents, glues,



Fig. 2 - Aunt Hürü with a few herbs and flowers from Kizilagaç, about 12 km from Bodrum.

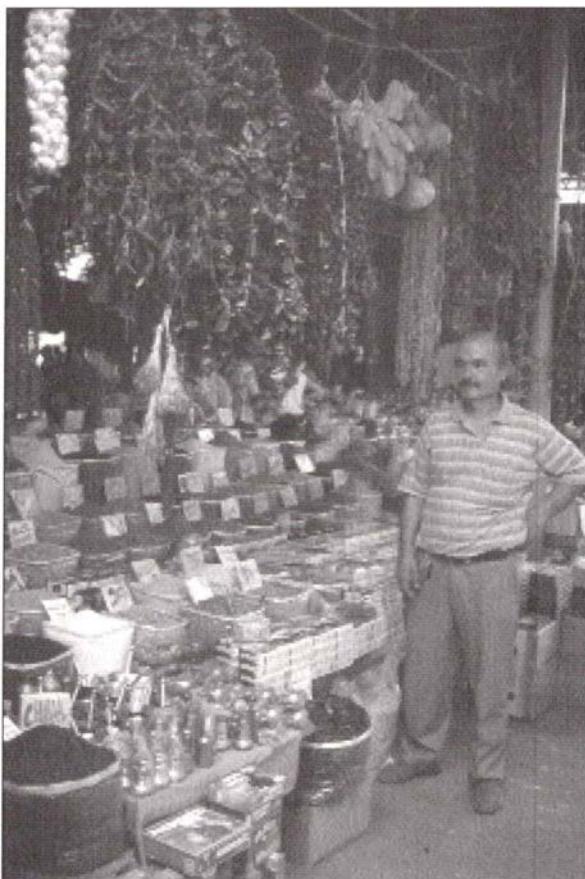


Fig. 3 - Herb dealers in Bodrum Friday market.

Tab. 1 - The research project on the useful plants of Bodrum. (Preliminary Results of October 1999-July 2001). Number of samples collected: 700. Number of identified species: 360 (in 80 families). Number of species with sufficient data and samples: 315.

Main categories	Number of useful natural plants Total 275	Percentage of each category within total natural plants	Cultivars and plants of foreign origin Total 40	Total number of plants in each category Total 315	Availability of each category in Friday Markets Total 122
Edibles	137	49.8	26	163	86
Medicinals	79	28.7	12	91	36
Fodder	41	14.9	1	42	1
Handicrafts	28	10.1	4	32	3
Miscellaneous	66	24.0	9	75	3
Fuel	7	0.3	1	8	0

plants used in rituals, in children games, etc. Only a few plants used in rituals were found in the market.

When we checked these results, the primary question which came to mind was: why were only half the known edible and medicinal plants brought to the Friday market and what was the basis for the selection?

Some plants are no longer collected by the locals, because they are not easy to collect and there are cheap, easily available substitutes in the market: Scattered notes in the literature indicated that a parasite on the roots of some *Cistus* species was edible. The fleshy and scaly red and yellow flower heads of this parasite are edible and had been prescribed by Dioscorides for stomach pains and the disciples of Hippocrates made use of it at childbirth (BAUMANN 1996). *Cytinus hypocistis* was found on the roots of *Cistus monspeliensis*, the rock-rose bush (Fig. 4). Some of the villagers remembered it as a very good sweet and that 20-25 years ago they had also used it as a glue. Now they do not collect it any more. Several older women told us that some previously collected plants are either located on steep hills or otherwise difficult to reach and it is not worth the time and effort to collect them for the market, and they say it is also not worth the trouble to collect it for themselves.

Some plants are not abundant in every part of the peninsula. Shoots of *Smyrniium connatum* are well known as edible in one village where it is abundant, but it is never seen in either local villa-

ge markets or in the Friday market at Bodrum.

On the other hand some plants are common, but the knowledge is local. Greens such as *Cerinth major* and *Limonium sinuatum* are common, but not known by many people as edible. *Centaurea solstitialis*, a spiny plant seen throughout the peninsula is known as edible in one village, but in many other villages it is thought of only as animal fodder.

Preferences differ and there are herbs, such as *Micromeria myrtifolia*, used by some villagers as tea, which I find very good. However it is not brought to the Friday market because *Salvia fruticosa*, sage, the preferred herbal tea, is the only herbal tea offered for sale.

Ethnic preferences may also be a possibility. *Capparis spinosa* is a common plant throughout the peninsula, but the only record we have of its use is in the past. According to some villagers it was used by former Greek inhabitants. Making pickles from the buds and using the leaves in salads is common in Greece, Italy, and France, but is unknown in the villages of the Bodrum peninsula.

An example of the other side of the coin is a well known edible in the northern Aegean, *Salicornia europea*. It was unknown in this area until November 1999, when we first recorded it at Bodrum market. Even the merchant who first sold it had no idea how to prepare this fleshy annual found in coastal salt marshes. He brought it to market because he saw that was eaten in Izmir. Within a year, big bunches of *Salicornia* appeared



Fig. 4 - *Cytinus hypocistis* on the roots of *Cistus monspeliensis*, the rock-rose bush.

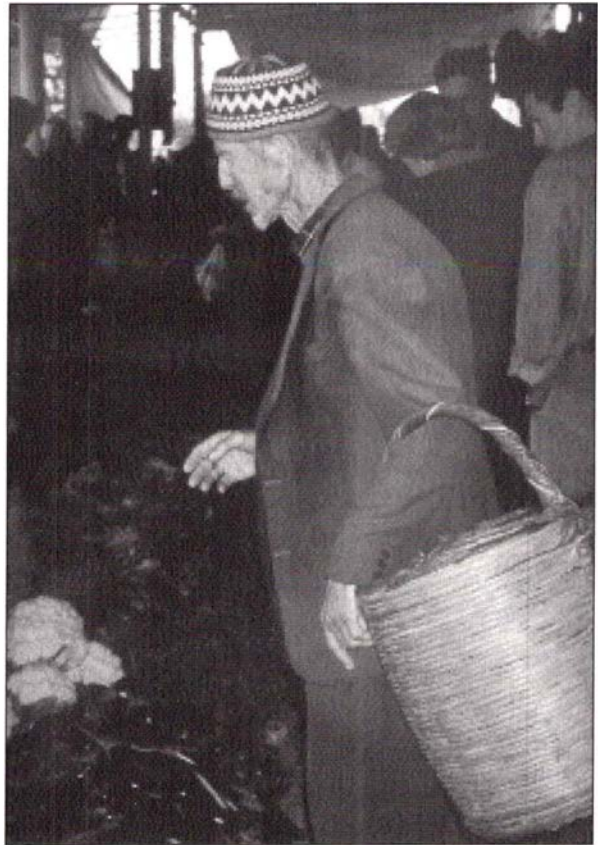


Fig. 5 - Uncle Ali with his locally made basket.

in the market, and it is now available in many stands. It is also now served as an appetizer in Bodrum restaurants and the locals have a new addition to their diet.

We have many questions still to be answered about the knowledge and the use of medicinal plants. There is a great variation among the villagers as to the plants they use for medicinal purposes. The modern herb dealers at the Bodrum market are no longer the traditional local healers or herbalists. Their information has usually been gathered at random locally and more recently from modern herbal books. They commonly suggest this or that plant is useful for the ailment the customer describes. Many of the prescribed cures seem to be successful as these merchants have been working in the market for many years.

During our year and a half of research we recorded the new medicinal plants as they arrived at the market. One vendor recently started to sell fresh *Viscum album* on the branches of *Pinus*. The vendor said a friend had read about it in an herbal

book and when it succeeded in curing his severe bronchial cough he brought it to the market.

In general there is an overlap between commonly used edible greens and medicinals, such as *Urtica dioica* and *Malva sylvestris* that are also used for a variety of ailments. Only a few plants are used solely as a medicinal, such as *Ruta chalepensis*, used in many villages as a poultice to relieve the pain of broken bones, sprains and other injuries. A few local bonesetters also use this plant for the same purpose.

Until recently many of us believed that an important part of our cultural heritage, the collective knowledge of both urban and rural Anatolians, would always be there to study when we had time to explore it. However, as many of us now realise, this knowledge is in a state of flux and subject to many outside influences. We can not say how much of this local knowledge has already been lost. But what is important for our present research is that many of the older villagers still gather plants and remember some of the

plants they no longer collect. The younger generation has little interest. For example, when we showed 22 slides of the most common local plants to the students in a village school, they remembered the local name or use of only four. Thus it is very urgent that we talk at length to the present generation of older villagers if we want to preserve this part of our cultural heritage.

Herodotus would have known many more plants than the older generations of Halicarnassos,

and he would have been familiar with most of the wild plants in the Bodrum market. He probably, like Uncle Ali (Fig. 5), would have gone to the market very early in the morning, gathered his favorite herbs in his locally made basket, and taken them home to cook, using some of the same recipes as the villagers today.

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