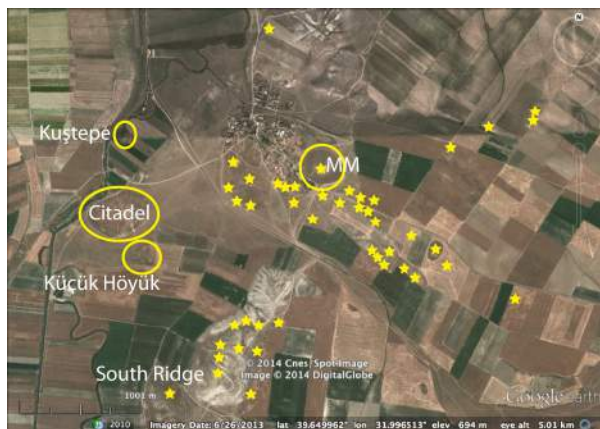


# Gordion: The Historical Landscape from the South Ridge

Less than an hour, 3.6 km. Off-road part may be a muddy due to irrigation; moderately steep for a short distance. Closed-toe shoes are recommended.



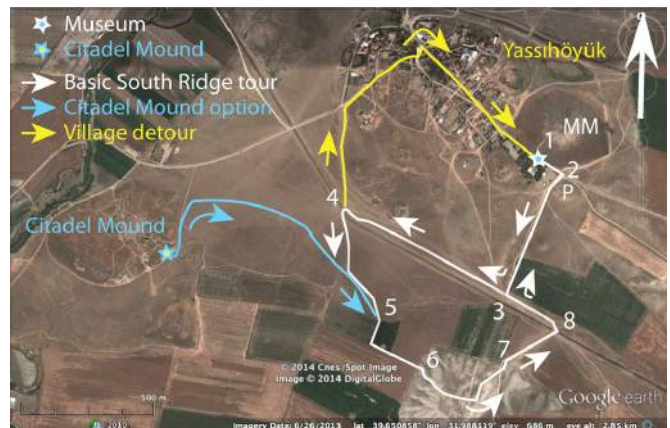
This walk features the geology, botany, archaeology, recent history, and culture of the Gordion region. The most notable characteristic of this landscape is the many tumuli (burial mounds) that dot the region. Most date to the Middle Phrygian period (ca. 800-500 BC), a time of great wealth (King Midas). Tumuli were meant to be seen. Many are located on the horizon line, where they would have shown the power of the rulers that had them built.



The walk starts and ends at the Gordion Museum in a 3.6 km loop (plus any wandering about). Or, if you are already at the Citadel Mound and want to walk to the museum, you can pick up the south ridge tour [2.8 km total], or take a side trip back through the village (total 4.4 km total). You can appreciate the beauty of this ancient place best early in the morning or late in the afternoon. You cannot get lost: as long as the big tumulus, Tumulus MM is in view, you can always figure out how to get back to the museum.

## Summary of the route

[White trail] From the museum [1] turn right and walk to the end of the museum grounds, within which is a small native plant garden [2]. Turn right again and follow the dirt road to the drainage ditch; turn right [3]. Walk parallel to the drainage ditch until you reach the bridge [4]. Cross the bridge and make your way in a generally southeast direction; if they haven't been cut down, you will see a couple of tamarisk trees [5]. Pass just to the right of the one on the left, and head in a southwesterly direction; as you near the ridge [4], go off-road and make your way to the ridge by walking along the field boundaries [6]. Make your way across the ridge and turn in a northeasterly direction until you meet a dirt road [7]. After you cross the ditch, turn left [8]. About 200 meters further along, turn right in the direction of Tumulus MM to return to the museum.



Blue trail] If you start from the Citadel mound, make your way across the plain to the tamarisks at point [5], and pick up the 'white' trail to return to the museum [total: 2.8 km]. To go through the village, walk parallel to the ditch about 800 m and then follow the 'yellow' trail [total: 4.4 km].

*NOTE: I prepared this walking tour in the summer, 2014. It is based on many publications and conversations over the years with the following people: Ayşe Gürsan-Salzman, Ben Marsh, Mecit Vural, and many Gordion team members. If you have any comments or corrections, feel free to contact me at nmiller0@sas.upenn.edu. Fieldwork was funded by the Penn Museum. The views expressed here are mine alone. Naomi F. Miller, July, 2014*

## [1] Start at the Museum and Tumulus MM



Tumulus MM is across the street from the museum. From a distance, it is the most prominent feature of the landscape, but as you stand in the street, your view of this 53-m burial mound is obscured by street trees. The fence was erected in 1995 to reduce erosion by encouraging plant growth [see Tumulus MM tour]. Facing MM from the museum, turn right and walk to the end of the museum grounds.



If you see a flock of sheep or goats  
Be aware that there may also be a dog of the same general size, shape, and color. DO NOT get between the dog and its flock.



The landscape you are walking in has been populated for over 4,000 years. Most of the tumuli (indicated by stars on previous page) were constructed between about 800 and 500 BC, so they were already old when Alexander the Great passed through on his way to conquer Asia. They have been part of the landscape for each succeeding generation. We hope that they will last another 2500 years, but given the rate of agricultural development and suburban expansion, that remains an open question. Protection of these mounds is not a technical problem, but rather a political and economic one.

## [2] Native plant garden and Tumulus P

Turn right between the small native plant garden just inside the museum fence and Tumulus P. Follow the dirt road to the drainage ditch; turn right.

[Make a detour to the top of Tumulus P if you are interested in the Gordion Landscape Overview tour.]

**Archaeology:** Tumulus P was excavated in 1956. It was constructed for a child's burial; one its most famous artifacts is a ceramic goose, on display in the Museum of Anatolian Civilizations in Ankara.

**Culture:** Depending on the time of your visit (before 9 AM is best), you may still see flocks of sheep and goat accompanied by a shepherd, donkey, and dog.





### [3] Drainage ditch

Walk parallel to the drainage ditch until you reach the culvert.

**Geology:** The mountain to the east (behind you) is called Dua Tepe; its basalt substrate gives the soil a reddish color. Sometime in the past 2000 years, the native juniper and oak were cut down, leading to massive erosion of soil onto the plain. This 'colluvium' is up to 4 meters deep.

**Botany:** The vegetation along the roadside is subject to much abuse by animals and tractors. The constant soil disturbance permits only a limited variety of plants to grow, such as 'Syrian rue' (*Peganum harmala*; *üzerlik* in Turkish).

**Archaeology:** Several tumuli (some excavated, some not) are on the rise to your right. When the valley bottom was lower (i.e., before the 4 meters of colluvium were deposited), the tumuli would have been an even more impressive site. It seems likely, therefore, that the ancient road paralleled the valley bottom to the south of these tumuli, unlike the modern road.

**Recent history:** The excavation house (the building on the high point ahead of you toward the right) was built in the 1950s on a couple of excavated tumuli.

**Culture:** In the 1990s, a drainage ditch was dug to the Sakarya river to reduce flooding from the uplands.



*Peganum harmala*

### [4] Culvert

Cross the culvert and then make your way in a generally southeast direction.



**Geology:** You can get an idea the scale of erosion at the ditch. The bottom of the ditch is more than 2 m above the surface of 2000 years ago.

**Botany:** Reeds (*Phragmites*) and Cat-tails (*Typha*) thrive in the intermittently wet ditch bottom.

**Archaeology:** Despite the deep colluvial deposits, archaeologists have found stone blocks from the extensive ancient settlement.

**Recent history:** In the distance to the northwest, you can see the village of Kıranharmanı, settled by Bulgarian Turks who came to the region during the population exchanges after the War of Independence (upper vegetation line).

**Culture:** In 1957, the government dredged and straightened a stretch of the Sakarya river. Before that time, the plain flooded annually; even rice was grown. Water also flowed from mountain springs. The government dug the drainage ditch that you are now crossing in the 1990s to channel the runoff into the Sakarya (lower vegetation line). [You can see the straightened channel and the meander of the 'Eski' (former) Sakarya at the lower left corner of the second image in the tour.]

#### [4.5] Sakarya plain toward the ridge

As you make your way across the plain, it is easiest to follow the various tractor tracks; if they haven't been cut down, you will see a couple of tamarisk trees.



**Geology:** The red clayey soil on which you are walking is over 4 meters deep in the center of the plain, having eroded from the uplands to the east.

**Botany:** The plain is overgrazed; depending on the time of year and rainfall, you might see many grasses and other annual plants or just perennials (e.g., *Camphorosma monspeliaca*). As you walk toward the ridge, you might be lucky enough (in June or early July) to see 'Bells of Ireland' (*Molucella laevis*) poking up from the clay.

**Archaeology:** Towards the west, you can see the flat Gordion

Citadel mound, 'Yassıhöyük'; the mound to the right is Kuştepe and the one to the left is the Küçük Höyük, both part of the fortification system of Middle Phrygian and later Gordion.

**Recent history:** The battle of the Sakarya was fought here (August 23–September 19, 1921); there are traces of military defenses on the top of the flat mound, and archaeologists have found spent shells from the battle.

**Culture:** The main cash crops today are onions and sugarbeet, but in this region you might also see fields of wheat, alfalfa, sunflower, and safflower. The fields are over a kilometer from the river. Although they are heavily irrigated, you do not see canals. With moveable plastic pipe, water can be brought as far as 2 kilometers from the Sakarya; without pumps, this gentle rise near the ridge would have to be dryfarmed.



*Camphorosma monspeliaca*



*Molucella laevis*



[5] Tamarisk trees between plain and cultivated slope of ridge

Pass just to the right of the tamarisk on the left, and head in a southwesterly direction; as you near the ridge, go off-road and make your way to the ridge following along the field boundaries.



**Geology:** A light colored gypseous marl ridge rises above the surface of the relatively recent red colluvium. It is easy to mistake the natural ridge fingers (towards the left) as tumuli, but as you approach, it becomes clear that they are not circular piles but rocky outcrops.

**Botany:** Assuming no one has cut them down since this was written, you will be heading between the two tamarisk trees. Tamarisk (*Tamarix*; *ılgın* in Turkish) grows in poorly drained areas like this plain. It is nibbled by the flocks.

**Archaeology:** Ahead of you to the left, you can see several tumuli along the ridge. Although the tumuli look pretty impressive, they are gradually being eaten away by irrigated fields on the far side.

**Recent history:** One of the tumuli has a telephone pole on top of it!

**Culture:** The local name for this ridge is *Deve Dengi*, literally translated as 'camel equivalent', but we can think of it as camelback ridge.

[6] "Deve Dengi," the South Ridge

First, have a look back toward the plain:



**Geology:** As you leave the fields behind, the clayey red soil gives way to the gypseous marl of the ridge. The marls do not hold water as well as the basaltic soils, and are more sustainably utilized as pasture than as irrigated fields.

**Botany:** The weeds associated with irrigation have been encroaching on the ridge pasture land for many years. Notice the buffer zone where water-loving field weeds and steppe plants co-exist/fight it out (depending on your basic assumptions about nature).

**Archaeology:** Towards the west, you can see the flat Gordion Citadel mound, 'Yassıhöyük'; the mound to the right is Kuştepe and the one to the left is the Küçük Höyük, both part of the fortification system of Middle Phrygian and later Gordion. If you have binoculars or a telephoto lens, you might be able to see the Gordion Citadel Gate, shown in the inset. Arrowheads were found embedded in the fortification wall of the Küçük Höyük.

**Recent history:** The battle of the Sakarya was fought here (August 23-September 19, 1921); there are traces of military defenses on the top of the flat mound, and archaeologists have found spent shells from the battle.

**Culture:** Pasture is communally owned (by villages), and fields are individually owned. Today, cheap, subsidized irrigation water, and the unsubsidized cost of animal husbandry make cultivable land more valuable for fields than for pasture. As a result, the area devoted to pasture, on which native steppe plants thrive, is being unsustainably replaced by monocropping and associated moisture-loving field weeds. The loss is to biodiversity and future generations.

[6] Deve Dengi, continued from previous page

Make your way across the ridge and turn in a northeasterly direction until you meet a dirt road. But now that you're here, you might first want to wander about up here to look at tumuli, plants, and the lay of the land; the plants shown below bloom in June and July

**Geology:** As you walk across the ridge, you will see a bright white crystalline stone: gypsum. Gypsum and alabaster have the same chemical composition, calcium sulfate ( $\text{CaSO}_4$ ).

**Botany:** In this overgrazed area, you may notice that many plants are spiny, which protects them from the flocks and herds. Other plants produce strong phytochemicals in their leaves that deter herbivory. A number of plants grow only on gypseous soil, or tolerate it very well. If you are here at the right time of year (June–early July), especially if the previous winter has been moist, you will see many beautiful plants, some of which grow only in Anatolia.

**Archaeology:** You can see the tumuli close up if you walk south; the excavated mounds on this ridge are Middle Phrygian in date.

**Recent history:** The Battle of the Sakarya was fought in this region. The telephone pole dates to the 20th century.

**Culture:** You are now on 'Deve Dengi'. The grazing flocks leave their dung as they walk in parallel lines across the soft surface of the ridge. So even if you see no sheep or goats, you know that they have been here.



Some plants of Deve Dengi, the South Ridge



*Centaurea virgata*



*Stipa lessingiana*



*Onobrychis tournefortii*



*Hedysarum varium*



*Jurinea pontica*



### [7] Road to drainage ditch

Head in a northeasterly direction until you meet a dirt road. Follow it across the ditch and turn left.

**Geology:** Kızlarkayası (the cliff north of Yassihöyük) has a similar geology to the south ridge (on which you are standing).

**Botany:** With severe grazing pressure, *Artemisia* (sagebrush / wormwood, Turkish: *yavşan*) and *Thymus* (wild thyme, Turkish: *kekik*) replace the native bunch grasses of the central Anatolian steppe.



**Archaeology:** To the north, you can see the near tumuli, and also a couple on the horizon line to the east (right) of the Kızlarkayası cliff.

**Recent history:** The village of Yassihöyük, named after the flat Citadel mound, was first settled in the early part of the 20th century. Starting in the 1950s, the Penn Museum-sponsored excavation of Gordion and some of the tumuli provided cash income to many of the village households.

**Culture:** The material remains of the modern world are visible present-day landscape: the water tower was under construction in 1982, telephones came later, water from the river supplied pump-irrigation to fields within a couple of kilometers of the river until the present-day pumping station was installed (mid-1990s) on the Kızlarkayası ridge. There is virtually no limit to irrigation until the river and water table are pumped dry.

### [8] Walk about 200 meters further along

You will be back to spot [3]; turn right in the direction of Tumulus MM to retrace your steps back to the museum. To go to the museum, make a sharp right where the road forks, about 200 m from the ditch crossing, which is a bit over a half kilometer from the museum and Tumulus MM

**Archaeology:** Dung burned as fuel left charred seeds that inform us about ancient environment and land use. As you approach the paved road, Tumulus P will be on your right, and the Gordion museum on your left.

**Recent history:** Sheep and goat herding is declining as irrigation made it difficult for many unique endemic steppe plants to compete with cosmopolitan boring field weeds.

**Culture:** even if you see no sheep or goats, you know they have been here from the scatters of dung pellets.



If you are doing the walk from the Citadel mound with the Yassihöyük side trip, keep going straight (stations 3, 4) and turn right instead of crossing the ditch again.

### Cumulative distances and Lat/Long coordinates in decimal degrees

|  |  |   |   |  |
|--|--|---|---|--|
| [1] Museum<br>39.6529°N, 31.9968°E                   | [4] Culvert, 1.3 km<br>39.6512°N, 31.9884°E                                | [7] Cross ridge: to dirt<br>road, 2.5 km<br>39.6459°N, 31.9951°E    | Back to Museum [1],<br>3.6 km<br>39.6529°N, 31.9968°E                                     | Citadel to [5]; [5] to [8]; [8]<br>to [3] to [4]; village detour<br>(yellow line) back to<br>Museum, 1.1 |
| [2] Museum corner,<br>0.1 km<br>39.6524°N, 31.9978°E | [5] Cross plain: to<br>tamarisk trees, 1.7 km<br>39.6476°N, 31.9897°E      | [8] Culvert, 2.7 km<br>39.6471°N, 31.9975°E                         | Citadel distance to [5];<br>back to museum, 1.1 +<br>1.7 = 2.8 km<br>39.6497°N, 31.9807°E | +1.2+0.7+1.4 = 4.4 km<br>39.6485°N, 31.9952°E  |
| [3] Drainage ditch, 0.6 km<br>39.6485°N, 31.9952°E   | [6] Follow field boundar-<br>ies: to ridge, 2.0 km<br>39.6547°N, 31.9915°E | Drainage ditch to MM<br>turnoff [3], 2.9 km<br>39.6485°N, 31.9952°E |   |  |