

# Expedition No. 3: Europe and the Middle East 1964: Narrative

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### **America (April 18-27: 9 days)**

On April 18, 1964 Dr. Harlan drove with two of his colleagues at OSU, Cliff Elder and Wayne Huffine, from Stillwater, Oklahoma to the [Southern Forage & Pasture Improvement Conference](#) in Gainesville, Florida. On the way, passing through Bunkie, Louisiana, they received a \$37 “Welcome to Louisiana” speeding ticket; but that did not deter their purpose. The first thing Harlan did in Gainesville was to drive to a motel and meet briefly with Edwin and Mildred Yocum, Jean’s parents, who had been residing in Clearwater, Florida since Edwin’s retirement from George Washington University in about 1957 and had agreed to drive up to Gainesville to meet with Jack. Harlan attended the conference, including a presentation he did on bluestem grass, and then on April 23, Cliff Elder drove him to Jacksonville to catch a plane to Washington DC, where he took care of some business amongst the gorgeous cherry blossoms and companioning springtime floral display.

On April 24 he flew to New York City and met his family for a day at the 1964 World’s Fair. Sue had come in by train from the University of Rhode Island at Kingston for the day at the fair and then returned. On the 26<sup>th</sup>, the rest of the family took the train to Kingston to see the campus and meet Sue’s boy friend, and future husband, Robert Leonard (Bob) Hughes. Jack was impressed with the young man, “who sort of twinkles.” The next day Jack was on a plane to London and Jean and the three younger Harlan children were driving back to Oklahoma.

### **Europe (April 28-May 2; 4 Days)**

Dr. Jack Harlan arrived in London on Tuesday, April 28 and remained there until May 2. He spent these days in the Kew Herbarium meeting staff and studying the pressed plant specimens of the plants he

would encounter on this expedition. He familiarized himself with how to identify the various varieties of wild wheat and barley, then the various grasses, especially the Cynodons. In the evenings he would ride the underground, down a pint at the pub, and eat at the various inexpensive restaurants near his hotel.

On May 1, having done what he could do in the limited time in London, Harlan flew to Rome for two days of playing the tourist. He was tossed and tussled about by huge crowds at the Vatican and finally had enough. It was a grueling experience, but well worth it to finally stand, albeit with a thousand other people, gazing at the great works of Leonardo in the Sistine Chapel. Although raised in an atheist home and belonging to a fairly intellectual Presbyterian Church in Stillwater, down deep in Jack Harlan's soul he was a Catholic. In his view, the ancient church remembered how to worship God: with elaborate and dramatic ceremonies, amid much incense and candles, singing in some foreign language that only the priests could understand. Ceremonial religion was more primitive, closer to the original, than the small group discussions that the Presbyterian Church had devolved into. So he was glad to suffer through the crowds, just to see the master work of the master on the greatest ceiling in the world.

He also loved to delve into the arena of contrasts. While in Rome, the home of some of the world's greatest art, Harlan had his portrait sketched by an "old guy who spoke French ... which I bought mostly because it must be a tough way to make a living." This illustrates another side of Jack Harlan: his sympathy for those at the bottom of society, who are nevertheless working to try to support themselves, and especially in this case: the old man making sketches of people for a few Lira was, somehow, closer to the original man – doing whatever he can do to make an honest living (living in a subsistence economy), as opposed to the busy executive rushing about the city toting a briefcase making big money at the expense of ordinary people.

### **ISRAEL (May 3 – 8: 6 days)**

The next stop was Israel, another sacred spot, perhaps the most sacred spot on earth. He had visited a few places in Israel towards the end of his 1960-61 expedition. This time he would be in Israel for five days. Here the business of Plant Exploration was a constant interruption from the real business of seeing Israel. He met with [Daniel Zohary](#)<sup>1</sup>, the son of noted botanist [Michael Zohary](#). Zohary took Harlan to a valley which was thought to be the valley of the battle between the Israelites and the Philistines, in which David slew Goliath. There they saw some wild grasses and relatives of wheats and barleys. Jack Harlan was always looking over his shoulder trying to see inside the walls of Jerusalem. In his short stay there he met with several notable people and visited the Sea of Galilee and the Negev Desert, among other places of interest.

When May 8 came, Jack Harlan reluctantly boarded another airplane and left Israel, without seeing Israel. He was off to Turkey, which was his primary target of this expedition. He needed to travel to Greece first, because Israel had no diplomatic relations at this time with Turkey.

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<sup>1</sup> In the course of doing the research for this book, in May of 2014, I discovered that Daniel Zohary was still alive and I found his email address. With great anticipation I emailed him the transcript of this portion of the 1964 expedition, introducing myself and asking if he could make some comments on those days. A few hours later I received an email from his wife, saying that Danny was very ill and could not answer any questions, but that he often spoke of Jack Harlan with great respect and admiration. HVH2

**Europe (May 9-10: 2 days).** Harlan did a little site-seeing in Athens.

**Istanbul (May 11 – 12)**

So, he arrived in Istanbul, Turkey on May 11, 1964. Upon landing and getting settled in a room at the Palace Hotel, he headed for the [Beyoğlu](#)<sup>2</sup> market. He noted with astonishment how much Istanbul had changed in the past 16 years, but how much Beyoğlu had remained the same.

The next day, May 12, Harlan made an effort to make contact with the people he would be working with: [Halet Çambel](#) and Mark Glazer; and also, and probably more importantly, visit some of local mosques: [Süleymaniye Mosque \[in 1964\]](#), [Mosque of Sultan Ahmed \[in 1964\]](#) and [[Hagia Sophia](#)] [[in 1964](#)]. Harlan had done his research and, again, being fascinated with religion he sought out the most spectacular houses of worship he could find.

On May 13, 1964 Harlan flew to Ankara and then, the following day, found a night train to [Elâzığ](#), [[1964](#)] some 150 miles from Braidwood's dig. As he traveled by train that night he woke up several times, but was able to determine his direction of travel from the stars he could see out the train window. It was a perfectly clear moonless night and the stars were brilliant. Harlan must have had a very good familiarity with the night sky to navigate by the stars from a speeding train in an unknown land.

**With Braidwood at [Çayönü Archaeological Site](#) (May 16 – June 22 = 36 days) [map](#) [Transcript](#)**

[Robert Braidwood](#) and his wife, [Linda](#), ([see also](#)) were noted archaeologists working at various sites in the Middle East, trying to shed light on the transition between the “hunter-gatherer” economy, to the more advanced, “farming” economy we enjoy today. This shift, which some call the “Neolithic Revolution”, took place at various times and in various places around the world; however, the transition seems to have taken place in the Middle East about 8-12,000 years ago. The Braidwoods had supervised excavations at a very early site at Jarmo, Iraq in the 1950's and after having been forced to leave Iraq due to political instabilities, relocated to the other (west) side of the Zargos mountains in Iran, conducting the same sort of investigations there. Jack Harlan had joined the Braidwood team at the foot of Kermanshah in Iran in 1960 on his second exploration and made some modest, though significant, contributions. (See Exp. No 2) Braidwood did not stay long in Iran, however, and launched his studies in the fertile region of southeastern Turkey not long before Harlan arrived in May of 1964. Braidwood had invited Dr. Harlan to come to the site and help identify microscopic plant fragments. As it turned out, Harlan was given very few specimens to examine (they were just beginning work at the site), but he spent a considerable amount of time driving around the country side observing and collecting wild wheats, barleys and grasses of various kinds. His field notes contain many observations from an agronomic perspective. To view a transcript of his journey through Turkey click [Trans](#).

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<sup>2</sup> Note that all throughout this trip Harlan is writing Turkish names, in his notes, with appropriate Turkish accents. How does he know all this? He must have learned a great deal about the Turkish language and spelling during his 1948 expedition and, being gifted in languages, remembered quite a bit.

The Braidwood dig was officially called the ***The Joint Istanbul-Chicago Universities' Prehistoric Research Project in Southeastern Anatolia***. The project was sponsored by the University of Chicago, Oriental Institute. The primary participant in the excavation from the University of Istanbul was [Halet Çambel](#). Robert Braidwood was a pioneer in the science of archaeology, bringing together into his team scientist from several different fields.

The Çayönü site, in southeastern Turkey, was chosen because of the abundance of mounds or tells. It is in a fairly remote area but surrounded by several towns: [Diyarbakir](#), [Ergani](#) and then [Elâzığ](#) to the northwest, [Siirt](#), [Kulp](#) and [Muş](#) to the northeast, [Silvan](#) and [Batman](#) to the east, [Viranşehir](#) and [Urfa](#) to the west and the border with Syria about 25 miles to the south, as the crow flies. See [map](#). To view images of these towns as they were, or might have been, along with some of the news of the day in 1964, according to Google, see the following: [Diyarbakir64](#), [Ergani64](#), [Elâzığ64](#), [Siirt64](#), [Kulp64](#), [Muş64](#), [Silvan64](#), [Batman64](#), [Viranşehir64](#) and [Urfa64](#).

Jack Harlan arrived at the Çayönü camp on May 16, 1964. He had arrived by night train to Ergani, and somehow got a ride to the camp in the early morning hours. He was shown to a tent, where he rested until 6:00 AM when everyone was roused up. The Braidwoods found him washing his face at a faucet. The first thing, after a refreshing breakfast and visit, was to go back to town and take care of some business. He returned and caught up on his notes and sleep. That evening they were buffeted by a strong wind and rain and Jack recovered from his travels. The next morning they were up at 5:30, which was a little bit late for the camp crew and after breakfast Harlan traveled with [Marvin Mikesell](#) (Mike) a geography man and dropped him off at Lake [Hazar Gölü](#) near Sivrice. Harlan drove, apparently alone, on to Elâzığ, where he met **Bobby Stewart** and **Jesse Robertson**, an assistant of zoologist, [Barbara Lawrence](#). They showed him their work room, had lunch at a local Lokauta and drove back in the afternoon, picking up Mike on the way. This was a very beautiful reintroduction to the Turkish country side. Barbara then went to Urfa to meet with Bruce and Halet at some other sites. Harlan thought about going down there the next day, but was concerned about his own stomach cramps.

Jack Harlan slept under a tent in the camp area that night and was up at 5:20 the next morning. There was nothing for him to do at the site, so he went for a hike to the south, over a limestone ridge where he saw quite a few wild crop plants growing, shielded by the rocks from grazing sheep. He listed in his notes the following: "[H. spontaneum](#)<sup>3</sup> (barley), [T. aegilopides](#) (wheat) and [T. dicoccoides](#) (Emmer) – all three, also [Avena](#) (oats) & great gobs of [Aegilops](#) (goat grass) as well as [H. bulbosum](#) (Barley)" (names in parentheses mine). The next ridge south is topped by a cemetery with lovely old oak trees. "A truly beautiful place. In a swale on north side of 1<sup>st</sup> ridge is a remnant of an oak woodland. It has *Craetegus* (Hawthorn) *Pistocaea*, (*Pistacia*), *Prunus* (fruit tree), *Quercus* (Oak), *Ficus* (Ficus) and some other things I don't know. Also *Vitis* (grapes), *asparagus*, *anabryalreas* (?), *Vicia* (Vetch), *Lathyrus* (sweet pea or Vetchling) & many other items of interest." He returned to the camp amid much discussion about the long hours, but, for him, it was a good day. He saw a lot of the endemic grasses and semi-domesticates

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<sup>3</sup> Note that the web link takes you to *H. vulgarae*, the more common form of barley, not *sontoneum* or *bulbosum*. I could not find web photos of *spontaneum* or *bulbosum*. The websites were full of the news about chromosome loss in *bulbosom*, but no photos.

all growing on the hills just as he imagined them to be 12,000 years ago. Out in the country Turkey had not changed in the last 16 years. In the cities, Turkey was fast becoming a modern country.

The following day, Tuesday, May 19, Harlan went with Mike in the land rover, first *down* Diyarbakir Road to Saddle Said to the end of the oaks forest. There he found *H. spont* abundant, but no Triticum. They turned around and came back & took the [Cermik Road](#). They climbed a limestone ridge – twice -and saw that *H. spont* was abundant but no Triticum. At the village of [Cermik](#) they decided to come back because they were getting low on benzene fuel for the land rover and there was none to be found in Çermik. After walking through the town and watching part of youth day festival, they drove back to Elâziğ, climbing limestone ridge at a third place, spotting *H. spont*, but no Triticum. At [Ergani](#) they got benzene & went on to the Tigris River toward [Dicle](#). Dicle is a Turkish word for Tigris, which was about 16 miles to the east, and also the name of a village on the Tigris. Harlan, again, noted that *H. spont* was present, but no Triticum. The oaks well developed & plentiful here. He also spotted a Juniper. They returned to the camp and then out to the site of the dig. He saw *H. spont* all around the site, but no Triticum. He reported in his journal: “Mike & I learned two Turkish words today. We asked some boys the name of *H. spont*. They said “OT”. We pointed to wheat & they said “Bugdry” & to barley & they said “Arpa” & to *H. spont* & they said “OT”. But it turns out “OT” means “plant”! The other word was “Bagka” means “another kind”! [map](#)

On Wednesday, May 20, Harlan was finally given some materials from the dig to identify, but he could not make much sense out of it. In the afternoon he and Mike set out again to Diyarbakir and then Bozova. About Diyarbakir he noted in his notes: “How that town has changed! Really booming – mostly military, but with large set of grain elevators, too.” From there they drove up and over the [Karacadağ](#). Please follow the link and read it. It contains some very interesting and current information from Mt. Karacadağ. The south slope was lush with wild *T. aegilopoides* (wild Einkorn) and *T. dicoccoides* (Wild Emmer). “Thousands of acres could be harvested with a combine,” he wrote that night. He went on to comment about the wild crop plants in another area he had visited that day: “Basaltic rubble fields. Unplowable & not too heavily settled. The barley continuous strip along the roadside from Ergani to Bozova, but not out in the wild wheat. The Barley is a weed. Bozova a nice & comfortable site near a small lake. Met Bruce & Barbara, Bill Fisher & the Bessedigts, Sargon & Hciluk, the local Turks: the first an archaeology student, the second, zoology & Barbara’s helper. We had brought Diray Guğ (girl arch student). Later Halet came. Lunch, walk, slept on terrace of the ‘[Chai](#) Haume<sup>4</sup>”

The next day he went to the site but there was not much for him to do there so he hiked the hills nearby noting the wild barleys, but lack of wheats. He would write later: “The barley invades all the fields & crosses with the cult barley as expected. It is a little taller & earlier & looks like some heterosis in the cross.” By “heterosis” he meant “hybrid vigor”. When he returned he showed Halet some of the wild wheats and barleys he had collected from the Karacadağ mountain. The next few days were days of inactivity for Dr. Harlan. Two members of the team, Bobby Steward and Jesse Robinson, however, have been sequestered in Elâziğ because of some kind of passport problems. Harlan does not describe the difficulty in detail in his journal; however he does relate that they were basically stranded in Elâziğ. On

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<sup>4</sup> Not sure about the second word, but this may be a Turkish tea house.

May 24 Bobby Stewart was deported. Jack Harlan, not having very much to do at the site, volunteered to drive with the Braidwoods to Elâzığ to see Bobby off and on the way they saw the military camp and inquired there on Jessey's behalf. When they presented the plan Jessey was agreeable to move over there until something more permanent could be arranged.

Harlan sets out with several other people and drives around the area, observing the various plant life, and probably collecting as he goes, as he can find seeds. They first got rooms at the Ipek Palas Hotel in Urfa and then drove around a great loop: Urfa, Akçakale, Ceylanpınar, Viranşehir and back to Urfa collecting as they went. The next day, May 28, he visited the Bozova site. Then, in the afternoon it was off to Diyarbakır, which they referred to as "Big D". Between May 25 and June 2, Harlan divides his time between the site and driving around the whole area, collecting. He is having a good time, using the various color coded jeeps made available by Braidwood's expedition. It is not at all clear from his notes where he is staying, but it is probably in one of several hotels in the area. During this time he helped Halet with a presentation she was preparing. A few times he looked in the microscope and would write in his notes: "Very strange stuff," but his main industry was exploring the countryside around the site and collecting seeds. To see a map of his travels click: [Map](#) for May 26, [Map](#) for May 27, [Map](#) for May 30, [Map](#) for June 1 and [Map](#) for June 2.

### **A Wild Wheat Harvest ([Trans](#))**

On June 3 Dr. Harlan began a different kind of project; something that he had been thinking about for some time and finally had the opportunity to do it. All the while he is trekking around the hills Harlan is thinking "These are prehistoric hills. This is something like what the people were seeing when they made the great transition from hunting/gathering to farming. There is wild barley, oats, einkorn, emmer and a few other things out here that they were probably harvesting, taking back to their camp, threshing them, grinding the grain into some kind of mush which they could eat." As he walks along he plucks some of the barley heads and munches them. "Not bad," he thought, "but not very good either." He picks another head of einkorn, this time, and tries it. "Not much taste, but it may have some nutritional value." He starts talking out loud: "This is what they might have been doing before the revolution ... plucking grains ... but then they begin to see that they need a lot of this stuff and if they can figure a way to get rid of these husks, there might be a way to eat this stuff for food." He comes to the crest of a ridge and views the broad expanse below, dotted with little villages – just like it was 10,000 years ago. "Now, I wonder," he thought, "how much wild grain could one person harvest in one day?" He tried grabbing handfuls and soon found that this was not a good way to do it. He needed some kind of bag to put the heads in and this method was already tearing up his hands. He remembered seeing back at the camp some stone sickle blades that Braidwood had found at the Jurmo site. They really had not been at Çayönü long enough to uncover stone blades, but it was just a matter of time before they did. "I wonder," Harlan thought, "could I take some stone blades and attach them to a piece of wood or, maybe, bone and recreate a tool that they may have used and just test it to see how much one of these 10,000 year old pioneers could harvest of this abundant wild grain?"

With mounting excitement Harlan swiftly walked back to the camp and talked his idea over with Braidwood. "Sure, I can lend you a couple of blades. Just don't break 'em," Bob Braidwood said. He,

too, thought this would be a good experiment. Thus, on June 3, 1964 Harlan mounted two of Braidwood's stone blades onto wood handles to fabricate stone sickles. That night he wrote in his journal: "Made up two sickles out of Jelinek blade industry<sup>5</sup>. Look like they might work." On June 6 Harlan drove the Blue with Barbara to the market at Çermik, where he bought an iron sickle as a kind of "control" case - to which he could compare the stone blades. In the entry for that day he noted: "The emmer and einkorn is ripening in the area." The next day, June 7, was Harlan's birthday and the group had a small cake for him. The following day he went by himself to what he called: a "wild wheat harvest". On June 9 he went to Viranşehir and then south looking for a good place to harvest more wild plants. He found that the farmers had already harvested their fields and someone with the department of roads had scraped the roadside ditches with a road grater and cleared out the wild Einkorn he was going to harvest. It was, after all, nothing more than a bunch of weeds. In spite of that he managed to collect a few paper sacks of head material by hand. This was the first test of his theory and it looked like he was on to something. That night he planned out a modest experiment: He would go out there and find a stand of einkorn, say, or emmer, and collect it my hand. He will do several timed runs. Then he will do the same thing using the stone sickles he had made. On Wednesday, June 10 he went out again, apparently by himself, in the same general direction and that night wrote: "A wheat field w. a very poor stand & strips of einkorn. Hand stripped 5 half hour samples & sickled a 6<sup>th</sup> half hour sample for comparison. Hot dusty & tiring, but should have enough to do something with." Evidently, the heat ended the experiment early. He took 5 harvesting runs with the hand collection technique and only one with the sickle. He also reported in his notes that he wrote the results on the last page of his notebook. The following is what we find on the last page:

Wts of *T. aegilopoides* 10VII64<sup>6</sup>

30 min sickle	1225 gm
30 min strip	1025 gm
30 min strip	1105 gm
30 min strip	1125 gm
30 min strip	1090 gm
(poor stand) 30 min strip	<u>770 gm</u>
3)	<u>6340 gm</u>
	2113 gm/hr
46% grain	.46

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<sup>5</sup> Arthur J. Jelinek was an anthropologist who excavated Neanderthal and Paleolithic sites in the Lavent. These are much earlier periods than the site where Harlan was visiting. I am not sure what he meant by "Jelinek blade industry". (HVVH2)

<sup>6</sup> 10VIII64 is June 10, 1964

Note that he had the samples weighed at PTT<sup>7</sup> so the weights used for this study were obtained in the area.

The next step was to thresh the grains to remove the hard husks. He tried several methods. On June 12 he wrote in his notebook: "Tried threshing the einkorn by various means. Grinders grind it. Mortar grind it. Beating with a rock not too bad. Most of day occupied by fiddling w. ways of threshing - not too successful."

When he published the results of this study in "A Wild Wheat Harvest" in 1967 he said that he sent a portion of the harvest back to OSU to be analyzed by Bob Ahring<sup>8</sup> who weighed the samples and derived the value of 46% grain by weight, in the measured sample. Therefore, the 46% was added to Harlan's notebook at a later date; probably after he returned to OSU.

On Saturday, June 13 Harlan drove with Kay to take some pictures of the stone sickle method of harvesting and wrote in his journal that night: "Kay Shepherd? Sheppard? Shaperd? Shepand? up [Karacadağ](#) to take pictures of harvesting wild einkorn<sup>9</sup> with a stone sickle. Found a good stand but very short. I cut with one sickle for 1 hour & 20 min. with the other." It cannot be discerned from his notes which sickle he used on the June 8 harvest: iron or stone; but we shall give him the benefit of the doubt and say that he used the re-fabricated stone sickle. This was a revolutionary experiment and it had an enormous impact. Besides the *Wild Wheat Harvest* article, he mentioned it in both editions of Crops and Man.

The next day, June 14, Harlan did one more test with the stone blades. That evening he wrote in his diary: "Checked old blades with sheen w. alcohol. Believe a little came off, but does not seem soluble. May really be a polish pattern." And then he "Did some thinking about the general problem."

This author is not a scientist, but it seems to me that the Wild Wheat Harvest experiment was a very minimal project. He only took samples to be weighed on one occasion, June 8, and he made 5-30 minute hand-harvesting runs and only one with a stone sickle. The sickle run had the largest output of the 6 runs. Nevertheless, this simple one day experiment has been used by numerous people to prove one point or another about the origins of human civilization.

For example, I went on line and searched for "Wild Wheat Harvest" and this came up:

In The Human Legacy by Leon Festinger, on page 75 he writes:

"If we dispassionately divorce ourselves from what, to us, is normal, obvious practice and is, consequently, good, sensible, advantageous, and right, we can see that the one who is involved with the activity of food production makes very little sense in terms of efficiency or

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<sup>7</sup> PTT is the Post Office

<sup>8</sup> *A Wild Wheat Harvest*, pg 198, downloaded from JESTOR, Sept. 16, 2013. I talked with Bob Ahring on the telephone on May 14, 2014 and he could not remember this particular task that he did for Dr. Harlan, but he described what he thinks he would have done: weighing the total sample, separating out the grains and weighing them.

<sup>9</sup> See [story](#) for more recent findings on Mr. Karacadağ.



convenience. It takes much more work to cultivate plants and animals than to collect and hunt the wild varieties. Harlan, in a much-quoted article, describes how he went out with a stone-bladed sickle, such as was used 9,000 years ago, to harvest wild wheat. In one hour he collected enough to yield a kilo of clean grain. He estimates that in a three week period an experienced family 'without even working very hard, could gather more grain than the family could possibly consume in a year' (1967:198). Furthermore, the wild wheat was much richer in protein than domesticated varieties."

Now, is this what he said or has it been enhanced a little?

In a video posted on-line called "Stories from the Stone Age", Part 1 George Willcox, a prominent Archaeobotanist said, "Archaeologists have experimented in harvesting wild cereals in their natural area in the Middle East and what they found is that one person harvesting for a period of about three weeks could produce enough food to feed a family of four for a whole year."

In Crops and Man, Harlan points out that every indigenous society has some kind of myth about how they came to cultivate crops and became agriculturalists. See Chapter 2 of both editions. It would seem that Dr. Jack R. Harlan has, himself, been elevated to the level of the mythological. We have seen that in his own notes he performed a one day – 3 hour long experiment, where he made five-30 min. harvesting trials with his bare hands and only one-30 min. trial with a re-fabricated stone sickle. His conclusion was that "Anyone could have ..." And the scientific world bought it! I cannot find anywhere that this experiment was repeated by anyone, let alone on a more massive scale. And yet, it is quoted by many authors and has remained as one of the foundation stones of our understanding about how man began to cultivate wheat and barley. Wait a minute. I am not through. Five of the six trials were by hand and they were not as productive as the one sickle trial. What does this prove? Only, and this is what Harlan originally said, that wild grains could be harvested at a rate of 1 kg per hour (the myth says 2 kg). This does not bring us one step closer to understanding how and where early man got the idea to bring the grains home and grow them in a garden. That is the crucial step. When you harvest from the wild you really don't change anything. It is only when you harvest seeds, save the best to plant that domestication begins and the great transition begins to take place. Harlan did not prove anything about these crucial steps; and yet the myth of "harvesting wild wheat with a stone blade" continues to be propagated. I think Dr. Harlan would be very pleased to see that this happened. He is now up there with the gods. To read a transcript of Harlan's journal click [Trans.](#)

Note: the Çayönü archaeological site and the Hilar caves are currently facing destruction by neglect.

See: <http://turkisharchaeonews.net/news/%C3%A7ay%C3%B6n%C3%BC-archaeological-site-and-hilar-caves-face-oblivion>. And:

<http://www.hurriyetdailynews.com/Default.aspx?pageID=238&nid=66976&NewsCatID=375>.

The first of the above references states:

The significance and uniqueness of Çayönü results from the hypothesis that identifies it as the place where the pig was domesticated for the first time in human history. Additionally, it is thought that the regular cultivation of cereal also started near

Çayönü and the genetically common ancestor of 68 contemporary types of cereal still grows as a wild plant in close vicinity to Çayönü.

Çayönü was also the site where the earliest known piece of cloth had been found. This piece of textile was a linen fabric 9,000 years old and it had been woven from locally grown flax. What's more the site is believed to have been the main bead producing centre during the early-Neolithic period. Archaeologists discovered four early copper items at Çayönü, dated at 7,200 BC. Çayönü is also the location of the earliest known hammered copper objects.

The primary intent of this website is to show that the Çayönü site, in spite of its significance to our understanding of the development of early human activity, is being destroyed by neglect. The Turkish government can no longer afford to provide even the minimum of security for the site. The same is true of the Hilar caves.

Over the next four days Dr. Harlan continues to hike around the area collecting, even to the woodland near Hilar. Hilar is a small village south of Ergani near which are some caves and rock shelters, obviously occupied since great antiquity. His diary description recorded on June 19 is choice and is presented here:

June 19 Fri. "Barbara has been negotiating sheep & goat skeletons. Goat party at Hilar & sheep to school. The tragedy about Jesse – the telegram to Halet came on Tues. But got stuffed behind books & Irma Hunter accidently found it Thurs AM. I went up & got Jesse Thurs aft & brought him down. The goat party went off at Hilar. What a prehistoric scene! A white haired woman (Barbara) and a youth (Jesse) cutting up meat from a roasted goat. The crowd milling about, squatting, eating, huge mouthfuls of rice, bread & goat meat, all set among the weird limestone rocks & [rock shelters](#) of [Hilar](#). Goat cooked over cow dung. The old Billy was very good & tasty. Not strong at all & rather beef-like than sheep-like. A fine wild village party. Halet & the Walens stayed & recorded folk songs. Wish I could have stayed too. A fine experience Oh, yes! The helicopter came to take pictures & I got a ride back to D. a real experience & he took us over the walled city for a terrific view. This is the way to travel.

The next day the crew began closing the dig for the season. Dr. Braidwood worked at Çayönü between 1964 and 1978. He came back and worked it again between 1985 and 1991. Work at this site "provided extensive and significance evidence for the theory that between 8,000 and 12,000 years ago there was a shift from a hunter-gatherer to an agricultural society in southern Turkey." (Wikipedia) The closing of the excavation was not without its own excitement. To read more about it click [Trans. Turkey](#) has made great strides since 1964 to transform itself into a modern nation. One aspect of this has to do with harnessing its water resources and improving its agriculture. See the [GAP Project](#) for southeastern Anatolia.

**Departs Braidwood's Arch. Site and travels around Turkey (June 22 – July 7, 1964: 16 days) Traveling with a group in 3 cars, Barbara Lawrence is riding with Harlan, doing a little collecting along the way.**

During the next 16 days Dr. Harlan drove around Turkey with the Braidwood crew, which traveled in the three color-coded jeeps, collecting along the way. Barbara Lawrence traveled with Jack Harlan in the Blue. They went through beautiful canyon country to Muş, Silvan, Hazro, back to Silvan and Lice and Diyarbakır, Murat, Bingöl and Muş, where they spent the night. He wrote in the margin of his diary for June 22 “A little past Dergalip Köprüsü past high water mark of trip. From now on I’m going home – slowly, but home.” Continuing on, leaving a detailed notation of the various wheats, einkorns and other plants in his diary, they made it to Elâziğ, then to Malatya, then [Elbistan](#), where they “Toured the town, saw the 13<sup>th</sup> Century [Seljurk Mosque](#)”, then on to Darende, where he wrote: “It has lost its isolation, but not all its charm, yet. A real oasis.” The next day was June 25 and Harlan noted in his diary that one of the tires on the jeep was getting low: “The tire wasn’t completely down but had to change it. The gas station nearby would not fix it so after some inquiry found a place. The phrase goes something like: PATLAK LASTIqi YE(R)MAH MISINIZ. It works like magic.” This was Harlan’s spelling in his notebook. According to my Turkish friend, Ibrahim Aba, who helped me with this section of the book, the expression was probably more like “Patlak lastipinizle yerdeminsiniz”, which means something like “the tire is flat.” After some difficulties, Harlan finally got the tire fixed and drove on to Guatip for the night. [map](#)

The next day, June 26, 1964 Harlan and Lawrence took the lead in the processions and headed south to the coast. Collecting all the way, they traveled along a ridge with a rift valley on their left. This suddenly dropped into a plain. They dove through [İncirlikuyu](#) and then to Mersin, where they stayed in the new Toros Hotel, which had been finish about three years previously. When they left the ridge and came down into the plain they had probably passed through the Cilician Gates, or Gülek Pass, through which many have come, including Alexander the Great in 333 BC and St. Paul, who grew up in this area in the first century AD. [Map](#) Over the next X days they traveled down the [road to Silifke](#), Jack noting the changes in the last 16 years, then on to [Silifke](#) where they climbed all over the [castle](#) and on to Mut and to [Konya](#). Barbara was now getting sick. They stopped at a shop and bought some Tribuli<sup>10</sup> blades. [Map](#) Finally they made it to Ankara where they got the jeep serviced. “A nice evening, but had to get back into liking the city ways and trivial chit-chat.” [map](#)

While at Ankara Harlan, after a considerable struggle, got airplane tickets but finally didn’t seem to get any. But he did get his passport processed for the next leg of the journey. On June 29 Harlan is getting sick with dysentery. That night was a party at Haluk’s house which went too late. He was glad to just get to bed. They departed and reached Istanbul on July 1. His dysentery was nearly cured. On July 3, Harlan took a day off and went to the bazaar to do a little shopping. He did the same on July 4. A few more days in Istanbul, fighting paperwork and visiting bazaars, he was finally ready to cross into Europe on July 8, still noting the presence of various species of Poaceae. He and Barbara Lawrence drove straight to Sophia Bulgaria in the Blue on July 9, 1964.

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<sup>10</sup> Tribuli, also known as Caltrops are [spiked weapons](#) from the Roman times.

## **EASTERN EUROPE (July 8 – September 1: 55 days)**

The history of Europe is a very turbulent one, filled with endless wars. The Europeans are a very aggressive people, always wanting to dominate their neighbors. Every place you go in Europe has been owned or occupied, or at least ruled by a succession of European powers. There is no place on earth quite like it. China has had its internal wars, to be sure, and so have certain areas of Africa, but nowhere on earth has the warfare been so continuous and so well recorded.

Jack Harlan has done his homework in preparation for this trip. The basic history of Europe is taught to every American school child, in different stages, but especially in what we have called “World History”. In today’s global society World History is more a pretty equitable study of the history of the various places in the world, but back in the 1930’s when Jack Harlan was taking World History in High School in Washington DC what he took was probably about 80% the history of Europe. He probably took some kind of European history course in undergraduate college. Most likely he took courses in world geography, too, and all this gave him a basic foundation on the different nations and different phases of conflict in Europe. Europe dominated the 19<sup>th</sup> Century and America dominated the 20<sup>th</sup> Century. You cannot tell the story of man on Earth without telling about Europe and America. But, it is clear that in preparing to take this, his third expeditionary journey, Jack Harlan spent many hours in the OSU library, looking over maps, plotting his journey and studying the places he would visit, especially the cathedrals of Europe. He knew exactly where he was going and he went prepared. He went as an Agritourist – he was on an agricultural mission and the sponsors were paying his way, but at certain times, he was nothing more than a tourist. In reading his journal of the 1964 expedition he seemed to know a great deal about the cathedrals he visited. Now, either he was an expert in cathedral architecture or he became one on the trip. His knowledge of the history and architecture of the cathedrals goes beyond what one would just be able to pick up in a casual visit. He must have studied them in detail in preparation for the trip.

So, he and Barbara Lawrence left Erdine Yugoslavia on July 8, 1964 and drove straight to [Sofia](#), Bulgaria, spending the night in a borrowed apartment (with separate bedrooms) because there were no rooms in the hotels. The next day they drove to [Niš](#), Serbia for the night and then on to [Belgrade](#), where Barbara departed by plane. Harlan waited in Belgrade through Monday, July 13, when the US Embassy was opened, got a list of agricultural facilities in Yugoslavia and went to see the Corn research station in Belgrade. There he visited with the director, Dr. Piper. They had lunch together. Now on his own, he visited the local Botanical Garden, but it was in sad shape, so he stopped by the local Catholic Church. It is best to read his own words about what happened next: “Coming back, stopped at [St. Marks](#). Mass was being sung. Absolutely magnificent music – a thrilling experience & I, one lone protestant Presbyterian, was the only one there. I wept.” This is a remarkable event. Jack Harlan, born in an atheist household and after many years, rather reluctantly - with his wife’s urging – joining a Presbyterian congregation, first in Woodward and then in Stillwater, Oklahoma, was always drawn to the great dramaturgy of the Catholic Church; now, in a place about as far away from Oklahoma as one could get – Belgrade, Yugoslavia and there being stirred by the vast emptiness of this monumental structure designed and constructed to hold hundreds, if not thousands, of worshipers of God is moved to tears by the enormity of the sounds echoing through this empty edifice. Now, this author, an

ordained minister himself, believes that what he saw at St. Mark's reflects the fact that the European church was, and still is – in general – a dying church. The time of the great strength of the church in society is now over in Europe. This Jack Harlan realized and his tears were, not only for the emptiness of the church today but for the emptiness of life without a living faith in the living God. He wept for Europe.

On Tuesday, July 14, Dr. Harlan drove on to Zagreb, Croatia, for lunch and then on to Ljubljana, 40 km to the west of Zagreb. On July 15 he made his way to the agricultural facility at the University of Ljubljana to see how their plant breeding programs were going. He went to Prof. Sader's office at 7:00 in the morning but the good professor did not show up until 9:30 and then he claimed that he did not know anything and sent him over to his assistant, Engineer Spanering, who spoke a little English and had a sister in the US. But, he didn't know much either. They agreed to meet in the field, but Spanering never did show up and Harlan left exhausted, having spent the entire day speaking German, which was not his strong language. He did, get the names of some valuable contacts, however. The next day, Thursday, July 16, he was escorted to the Farming Institute. This facility was doing some pretty good things. There he met Prof. Dr. Ing. Agr. KARLO ŠOŠTARIĆ – PISAČIĆ, Faculty of Agronomy and was invited to his home. That evening he would record in his journal: "Mrs. ŠOŠTARIĆ cooked up a luncheon & we had a nice visit. It has been a comedown for him. He lost a farm & much property in the war & revolution, but seems resigned. The two rooms very large & nice but they must share the bath & perhaps the kitchen w. another family. Formerly a Baron's house it now is occupied by 70 people. Still the flat was very nice & the view of the old city & cathedral lovely. Didn't get off till 3:00 because the old fellow kept planning my route. Still I'm glad I took the time & he gave me a good steer about going to PLITVICE to see the lakes & good hotel which was not full. One other contact

Dr. Milovinic Josip & Prof.

Aquicultural Fakultet Zagreb

Who worked with vetches – must write him.

Also, Prof. BATINICA or Ing SARIĆ

at SARAJEVO, FACULTY of Agronomy

Also Šoštraić wants genuine Sumac & sugar drip seed & sent publs."

The next day, July 17, he packed up and headed back on the road to collect legumes, clovers, vetches, birdsfoot trefoil and some things he could not identify. He drove down a limestone canyon and then on via Tita K to [Gospić](#), then climbed up & over to [Karlobag](#) "It's a little jewel & the raw limestone dropping to the sea is something but a very hazy day as usual & bad for pictures. Rolled on down the coast. Stopped at a Buffet & had salami, cheese & beer – no bread & on to [Zadar](#). Took the time to walk though the old city inside the walls – perfectly charming & to visit the IX<sup>th</sup> Century church, Rush, rush, rush. Tore on to [Šibenik](#), where I thought I would stop, but the ferry boat & a detour threw me out of hotel now & I went on toward Split. Bad roads for a while, then fine. Wound up at a motel type place

before Split. A long day & two more long ones to [Beograd](#). Yet passed by many interesting & lovely places w/o stopping even for a picture. Time, time, time.” He stopped at Beograde (Belgrade) for the night. [\[map\]](#)

On Saturday, July 18, 1964, he continued his impromptu journey to [Split](#), [Sinj](#), [Livno](#), [Travnik](#) and on into [Sarajevo](#). In his notes he wrote: “Travnik is old Bosnian Capital of Turkish days & covered with Mosques! Bought a pair of peasant slippers there from a man who makes them. They will need shaping up. [Peasant costumes](#) are home spun, home woven white wool robes with red vests. Rather colorful. Biggest need, as I see it so far, is a strong forage crop program & much more fertilizer. Sarajevo is full of Mosques, too. The hotel EUROPA looks like the one Archduke Ferdinand stayed in before he was shot but it had a room – two others did not. Stood through most of a mass at the Cathedral – rather well attended, I thought. Many of the Muslims wear fez’s here – although in Turkey over 30 years ago but still worn in ‘Communist’ Yugoslavia!” He ended the day at Sarajevo [map](#).

Jack Harlan liked to pick up hitch hikers as he drove along. He enjoyed the company; he could find out some new bits of local color and he simply liked helping other people. You just never know whom you might meet this way. So on Sunday, July 19 he drove from Sarajevo the 210 miles to Belgrade, picking up a group of young people on their way to some kind of doings at Rogatica and a little later an “old fellow (maybe like this [old fellow](#) ) who was going a few miles up the mountain to harvest wheat & had his scythe with him.” [map](#).

After a day in Belgrade trying to get someone to receive his car and getting tickets to London he decided to stay one more day and go visit the University of Novi Sad, Faculty of Agriculture. There he “had visit with the Director in English & he got the forage man – one *Lazić* & is he a character! Lots of fun, half in French and half in German, but he kept eating up the time & [I] kept trying to spur him on. I think he had something cooking with his wife to bring me to his house. I finally convinced him I really had to get back to the embassy. At 3:30 he insisted on a sandwich & tomatoes. I finally got off a little before 4:00 & drove like mad - got to the embassy before closing and - no word. I might as well have stayed & enjoyed the *Lazić* hospitality.”

On July 22 Harlan visited Skopje, Macedonia which had suffered a devastating earthquake one year previously (July 26, 1963). He made good time on the [autoput](#), but lost time on a 30 km detour, through some very rugged country going through [Kruševac](#) and Davidovic [Serbia] [Google: Davidovićeva]. Skopje, a year after the quake was still “[a very sad thing.](#)” He spent the night in Skopje and was up early the next day and on “mostly rough & dusty roads to Kacanik [Google: [Kačanik](#) or Kaçanik ] [Prizren](#), Dakovica [Google: [Gjakova](#) ] , Pec [Google: [Peć](#) or Pejë] and to Kosovska Mirovica [Google: [Mitrovica](#)].” [Map](#). At this point in his journey Harlan found that he had some time to kill and so he just decided to drive around just to see what he could find. His deadline was an airplane reservation from Belgrade to London on July 29, so ... let him tell the story:

July 24 Fri. Didn’t have far to go, so set out with no plans to let things happen to me. As usual it turned out well. The Frenchman was up at 4:00, so I got up at 4:30 & took off up the road. 10 km from [Raska](#) I turned off on a side road that was surprisingly good & new straight up the mountain

(well not straight exactly). In no time I was up in the spruce forest & out of nowhere came a couple of ski lodges & the usual terrace with gay chairs & tables. I had coffee, bread & cheese. The pass was nearby & had an enclosure with some grass trails in it – plots orchardgrass, [sheep's fescues](#), timothy, etc. replicated & recently clipped. The road just dropped down the other side & then found down the valley through little villages & past clusters of water mills over the stream. Very charming. At Olehandovec [Google: Aleksandrovac, Serbia] there was a detour & again it was a good choice: the road isn't on the map at all, but fairly smooth & not very dusty & through the same pretty villages. Couldn't find the Motel I was told about at Kraticure as went up to a Spa, VRNJNCKA BANJ. [Google: [Vrnjačka Banja](#)] It was an old spa of the grand tradition of absolutely loaded with people – no tourists this time. Fine old trees line the streets – parks with orchestra playing schmaltz – old date hotels & large houses of the former – rich. People thronging to the springs to drink the (ugh) mineral water. It must have been real posh in the carriage days. Had a dinner in the open with musical entertainment. Altogether a very nice day except the stomach is growling again.

On July 25 Dr. Harlan visited the Institut Za Krmno Bilje at Krusevac. He made numerous observations in his notes. To read these click **Trans**. Finally back in Belgrade he started packing, getting his car repaired to return and getting final things finalized. Harlan flew off to London on the 29<sup>th</sup> as scheduled. He totaled up his expenses and they amounted to “\$714.50 dropped in Yugoslavia in 20 days and wrote in his notes: “They need more tourists like me. Figured the money so close in fact I had beer instead of gin before dinner & ate at the cheap joint as well.” In London he began another agri-tourist adventure driving all the way to Edinburg, Scotland in four days, stopping at every cathedral he could find.

The first adventure, however, occurred the same day he arrived in London and shows the kind of improvisation Harlan could come up with and the flexibility of his mental capacity and then his compassion for children:

So I rented an Austin Mini for 4 weeks. The rent is \$1 plus 5¢ per mile after the first 400 mi. Then there is a deposit I get back if there is no damage to the car. £ 10 and I took out comprehensive insurance at £ 2/10/-. The transaction completed by 3:00 pm & I was loose with a strange car with right hand drive, driving on the left in London traffic without the foggiest where I was or how to get out. Slowly I worked out of town going north & followed A-1 until well out of it & then looked for a place to stop. The name Biggleswade appeared on the road signs & had a nice ring to it, so I turned off at Biggleswade & sure enough there was a nice, comfortable English country hotel – the Swan. Several rooms. The usual pub & saloon & restaurant. During dinner I heard the Church bells ringing what I suppose is change ringing an intricate pattern. So I wandered into the churchyard & browsed through the tombstones while the bells rang – which they did for at least 1 ½ hours. One tombstone seemed so poignant I copied it down as follows:

In memory of Emma Jane, the beloved wife of James Crouch who died July 23, 1855 aged 41 years.

Also of Fanny Charlotte daughter of the above who died Nov. 10, 1849 9 months.

Also of Seling Ellen died June 25, 1856 aged 10 years 6 months.

Also of Rose Sarah died June 26, 1856 aged 5 years 6 months

Also of Mary Emma died July 18, 1850 aged 12 years

Also of Charles Thomas, their son, died July 27, 1956 aged 3 years”

For the next three days Harlan drove from one old English cathedral to the next: Eby, Seby Abby, Abbotsford - home of Sir Walter Scott & Melrose Abbey – and rolled into Edinburg on August 2, just in time to register for the Xth Botanical Conference (Aug. 3-12). He met “Merton Love right off & had lunch with him & his wife. Saw some others I knew. Aaskel Love, the Reesers, Ervine Sears & Lotti, Frank Gould, etc. Got all stuff back to the room. Another botanist is staying with Miss Barrett – a Dr. Chinars from Almetchad.” The next day he met S. T. Blake and Peter Davis. “Aug 4 Tue. My 25<sup>th</sup> Wedding Anniversary, Couldn’t celebrate much. Attended symposium on manipulation of chromosomes which I thought very good.”

Harlan spent the time at the Congress meeting people, going to symposia and making notes in his diary. He summarized the Congress in his notes and lists quite a few people attending. On Wednesday, August 12, 1964, the Congress was over but Harlan had a few more things to see and to do while in Scotland. You just never know when you are going to be back in a place like this. So, he hit the road again going north and toured the lovely lochs of Scotland, including [Loch Ness](#) and [Loch Cluanie](#), which he said must be one of the most beautiful in Scotland. On Friday, August 14, having left the lochs of the north, he wrote: “Started heading south in earnest. Glencoe, Tyndrun, the west side of [Loch Lomond](#) (which really is bonnie, but dull & foggy), Dumbarton, Glasgow, then down the pike to Carlisle. The traffic absolutely maddening & a long hard day to get very little distance.” So, now he is fighting to get out of Scotland; but first, he had to find the [old Roman wall in Carlisle](#). He knew there was a Roman wall around there somewhere, so he asked a school girl who said she had read about it in her school book but didn’t know where, exactly, it was. He asked some people at the hotel, but they didn’t know much either. So, he ventured into the local cathedral and later wrote of what he found:

The cathedral is pretty disappointing on the outside & I almost didn’t go in. Inside it is much more interesting. One striking feature is the extremely deformed Norman arch, due to settling – they built over some Roman walls & didn’t know it. The arches are holding up perfectly. The early English, decorated – all the rest, some with carving, too. Then up to see the wall. Stopped at Brampton for instructions & got lots from a filling station attendant who has poetry in his soul. At his suggestion I stopped at [Lanercost Priory](#) (ruins with a functioning church attached). So-so & it was raining. Also a fine Roman bridge over the [Irthing](#) there. Then up along the wall. Actually well removed from building stones over great stretches, but earthworks clearly visible. A few good pieces of wall left, but raining & chill so after seeing a Roman camp & getting pretty wet headed south again. Absolutely maddening traffic.

On August 17 Harlan made it to Aberystwyth and went out to the Welsh Plant Breeding Station – “once the Mecca of grass breeding in the world.” First he met Llewellyn Phillips, Liaison Officer, who introduced him to Dr. E. L. BREESE (Les). He discussed the grass breeding program a little & introduced



him to Mr. EVAN DAVIES, who was doing some interesting work with Timothy and other grasses. The August 17 Diary contains several pages of technical notes.

From August 18 to 23 Harlan spent his time going to cathedrals and pulling his notes together. It was a very slow time. He finally made it back to London on the 20<sup>th</sup> and went to the Kew one day but they had nothing that he could use. Things began to change on August 24 when he met with some grass breeders. Again, there are **several pages of technical notes** from these conversations. The following day he went to a hotel, did some laundry and packed a few things for a short trip to Holland. On August 26 Harlan flew to Amsterdam and took a bus to his destination, Wageningen, where he settled in. The next day, he found the "International Agricultural Center whose function is to show people around." This they did. A young man took Harlan around and he met a few people and soon he was out at a small farm where they were breeding grasses. The Diary entries for August 27 and 28 contain an abundance of technical notes on this visit. **It is very rich, so if you wish to view it, click [here](#).** On August 29 Harlan took the train to Amsterdam and spent the day visiting an art museum and hiking around. He returned to London late Sunday. He spent a few more days in London visiting the herbariums and museums. On Tuesday, September 1, 1964 Jack Harlan boarded an airplane and returned to New York, where he was met with the normal difficulties, then to Tulsa, where he had missed his flight to Stillwater. He rented a car and arrived at home about midnight, September 1, 1964.

End of Exp # 3, September 1, 1964. Duration: April 18 to September 1: 4 months and 14 days.

Return to Chapter 6. Visit [Transcript](#).