

# Dr. Jeffrey Hudon, Biblical Archaeology, Session 3, Archaeological Methodology

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This is Dr. Jeffrey Hudon in his teaching on Biblical Archaeology. This is session 3, Archaeological Methodology.

Okay, our next topic is actually methodology in archaeology, but I want to again, point out some important aspects to take a closer look.

Let's consider archaeology in the New Testament versus archaeology in the Old Testament. We actually have two different animals here, not just chronologically. If you look at archaeology and study archaeology in an Old Testament context, you're dealing with empires, with kings, with major battles, with royal and major movements between empires and regional kingdoms, and all of these create a lot of archaeological data, destructions, building programs, and of course these are often mentioned in Scripture.

In the New Testament, archaeology is much more difficult to connect with the text because Christianity was a movement, a spiritual-religious movement within Judaism initially, and that is, makes it difficult to identify archaeological finds that are directly related to the text. So, in the Old Testament, I would argue that archaeology is obviously relevant in both parts of the Bible but more relevant in the Old Testament than in the New. Now, in biblical studies, I like to consider, and others do as well, archaeology is kind of a fifth gospel.

It gives us an external check or an external supplement to Scripture and other ancient contemporary records. It provides additional information, insight, and material evidence, again, that will substantiate the biblical account. Going back to the Old Testament and archaeology, it's relevant because our historical sources outside of the Bible are very limited.

There are some Egyptian, Assyrian, and Babylonian records, but these again are scanty with lots of huge gaps, and so archaeology helps us fill those gaps and gives us, again, an outside confirmation for those records that are extant. Definition for Near Eastern archaeology: a blend of physical science and history that attempts to find evidence of humanity's past, both prehistoric and historic, from material remains. So that's a larger definition of archaeology beyond biblical archaeology.

Now we turn to methodology. What is left to discover? Unfortunately, not much. We sometimes will try to explain or show that archaeology is like a puzzle, trying to put a puzzle together with 90% of the pieces missing.

With the pieces you have, you try to make some coherent picture and try to decide or try to envision what is missing to fill in the blanks. What is left for us to discover? Well, first and foremost, pottery. Pottery is extremely important for archaeology, and we'll talk about that in a minute.

It was used for almost everything. Again, envision a world without plastic, where metal is very rare and expensive. Wood is, again, scarce and not used for as much as we use it today.

So, pottery is left for storage, for cooking vessels, eating, etc. And so, pottery is, again, very important in any kind of ceramic vessel. Metal, nails, weapons, and tools.

And then, of course, after the 7th century BC, coins begin to appear. And by the 5th century and 4th century, during the Persian period, coins become an important aspect in dating levels or strata or sites, because coins, again, are an excellent dating tool along with pottery. Stone is often used, again, for grinding, rolling, sling stones, etc.

That's prevalent in Bible lands as well. Perishable materials such as wood, parchment, leather, and cloth rarely survive, but they sometimes do.

When they do, it's in very unique, dry, desert-type environments, such as the Dead Sea Scrolls and Qumran. We like to use the term Qumran because it's a very common residue to explain what remains for us to discover today. So, very little, but we have to take what we find and make the most, glean the most information from it.

By far, the most important aspect in archaeology, and we'll talk about this more as we go along, are inscriptions. And why are inscriptions important? Well, again, writing, the alphabet, appeared somewhere in the middle of the second millennium BC. Before that, pictographs and cuneiform.

But writing is important because it connects the ancient writer, the ancient person, directly to the reader, whether he be contemporary with the writer or contemporary with us. Now, writing or inscriptions often appear on pottery, and these are called ostraca. We mentioned that previously, briefly, or in singular, ostrakon.

Now, a lot of Hebrew ostraca have been found, not a tremendous amount, but a considerable amount. Some of the most important are the Mesad Hashavyahu inscription, or ostraca found at a small fortress right along the Mediterranean, late 7th century date. And then a corpus of, kind of like a cache of ostraca from a fortress at Arad, again, which we mentioned was excavated by Aharoni in the 1960s.

And these were written, they were dispatches, brief messages by the commander Eliashib of the fortress. And again, telling us troop movements and supply

movements and the fear of Edomite attack. So very important, kind of a snapshot of a very, very critical period in Israel's history or Judah's history when Jerusalem was about to fall to the Babylonians.

Before that, the Lachish ostraca were found in the 1930s in the gateway, inner gateway of the major city of Lachish. Again, same time frame. Judah's falling to the Babylonians.

And these are, again, dispatches, sometimes desperate in intent, wanting information about what cities have fallen to the Babylonians and what have not. And poignantly, one of the Lachish letters, or Lachish ostraca, is very similar to Jeremiah 34:7, when it mentions that only Lachish and Ezekiah remained aside from Jerusalem without falling to the Babylonians. And this, one of the ostraca there that I've got up on the PowerPoint, the text of it parallels that very, very well.

How did the date remain? Again, coins for later remains from the Persian period on. Pottery, we'll talk about that. Architectural and artistic styles change as does pottery.

And, of course, in the last couple of generations, carbon 14 or C14 dating for organic materials is very important, as well as historical sources outside of the Bible that are contemporary with the biblical text. So, all of these are important for dating remains. Finally, archaeology is a destructive science.

Again, you cannot excavate a site twice. We talked about the importance of getting data published. If you don't publish the data or the data isn't published from a dig, everything's lost because you can't usually go back and re-excavate what you already have.

You can maybe find places where they haven't excavated to test their conclusions or to make sense of the site. But unless you have data from the excavators that they've kept records, you have nothing except maybe some artifacts. And those are, again, digging is usually done in five-by-five-meter squares or a trench.

And that is how you glean your data from that. Abuses of archaeology. There are plenty.

And as we saw from our earlier slides, the early archaeological expeditions to the Holy Land were very little more than treasure hunters looting and plundering. They were looking for artifacts, monuments, and artistic ornamentation for their museums back in Europe and the United States. Worse than that, now we've got extremists like ISIS, which have absolutely destroyed many of the remains in Syria, the country of Syria.

And we'll see some of those as we go along. Very, very sad. Tadmor, or the great Roman city Palmyra, was absolutely destroyed, and other monuments as well, including parts of Nineveh.

Another abuse of archaeology is to use it for nationalistic purposes. Now, we saw again early in the early years of archaeology that archaeology was kind of a guise for military intelligence, scoping out the land for possible troop movements or movements of armies. Also, national prestige is to be the first to get this or discover that or to display what you've found and make new theories or new historical conclusions.

Worse than that are contemporary nationalistic claims or historical claims from data that you excavate. This is very subjective and has been done both by some Israeli and several Palestinian authority archaeologists. They tend to ignore or overlook certain aspects of the site and magnify or enhance other areas and historical periods, specifically peoples.

Religious purposes can be an abuse of archaeology. Again, looking for theological confirmation to your theological views and theological or biblical interpretation. We call this archaeological eisegesis.

That can be abused from both sides, both the maximalist and minimalist. People who, again, believe the Bible is the word of God and have a high view of scripture can abuse this by pushing the evidence too far. And, of course, people who are minimalist can abuse it by ignoring evidence that supports scripture.

And speaking of the minimalist, ideological purposes that counter the Bible. And again, this is a common issue with archaeology. And you have to read and read with a critical bent to make sure that this is not serving somebody's self-interest.

The field of archaeology has a lot of large egos. And that is true as well. So, people need to be well aware of all of these.

Proper use of archaeology to answer questions, to satisfy a quest for knowledge about the ancient past and a deep desire to make a contribution to, again, answer some of these questions, make suggestions about perhaps it was handled this way or done this way. And this is some archaeological evidence that may support that. To commit oneself to objectivity throughout the process of digging, processing, and publishing the data.

One, just an example of that, one season, I was excavating at the site of Heshbon, Tal Hispan with Andrews. And my daughter, who was sifting, sifting some excavated soil, found a beautiful seal. And I thought the seal was dated earlier than it was, but I was quite excited about that.

But through study and through looking at parallels, I realized that that was later than I wanted it to be. But it was still a very important find. It turned out to be a seventh century Ammonite iconography, beautiful iconography of an Ibex and its young and some other, other symbolism on a small stone seal with a perforated, so it was hung by the neck.

Anyway, so you have to, even though you yearn and want something to be something, you have to study it and publish it for what it is, not for what you want it to be. To fully collect, assess, and study the data before making biblical correlations with it. This is a difficult one for those of us who have a faith-based approach to archaeology, but you have to be careful about that.

Don't be hasty in making biblical connections with a find. Easy to do. I've done it myself.

But this is something we have to constantly check ourselves and say, well, this could be a connection to the scripture or it may not be. And try to, with further study and examination, come to a more clear understanding before making that statement. Get professional assistance rather than to attempt to interpret finds outside of your expertise.

Very important here. We mentioned that the new archaeology, again, wants it to be, wants digs to be multidisciplinary. And so, you need experts.

If you're not an expert in some field, you get the help to get the proper understanding of that before you interpret or record your conclusions. Be exceptionally organized with recording, collecting, and storing data. It's amazing how easily archaeological finds can disappear, can be misplaced, or recording techniques; whether you do electronic data or pencil and paper, things can get misplaced and lost.

Be very organized and watch that. And then to recognize the limitations of archaeology as a tool for biblical studies. And it first and foremost helps us understand the biblical world and its people.

Sometimes it helps to substantiate, validate the Bible, and sometimes it actually proves the Bible. But we just have to recognize that it also has limitations. And we'll see some examples of that.

Can archaeology prove the Bible? Usually, archaeology can only support or affirm what the Bible states. A good example of that is some pictographs that Andrews University found in the Sinai showing camels used by people in patriarchal times. Well, does that mean that it proves the existence of Abraham? Not really.

But it does show that camels used during the patriarchal period took place. Some scholars thought that that was an anachronism and there were no camels in patriarchal times. Well, these pictographs in Sinai seem to validate scripture.

Does it prove Abraham, though? No, but it does show that he certainly could have existed and certainly could have used camels. So that's essentially what we're talking about. So, you want to excavate a site? Do you want to excavate in the Holy Land? What do you do? I remember as a student in Israel, we had a couple of visitors to our school.

Our school was located right on Mount Zion. It's still there, Jerusalem University College. We had two Americans, you can tell by their very clear American accent, show up at our gate.

They had two brand-new shovels and a brand-new pick that they had bought at the hardware store and wanted to excavate outside of the Institute property. And I pulled them aside and I said, first of all, it's illegal what you're asking to do. You have to get a permit from the Department of Antiquities.

You will not, and they will not issue you a permit because you're not professional archaeologists. Secondly, where you want to excavate is a fill. And this is probably got 2000 years of just a loose fill that you have to dig through before you find stratified remains.

I said, so your methodology is wrong. Where you're trying to dig you might find an isolated find, but you won't answer any historical questions. Secondly, it's illegal.

And so, they kind of moaned and groaned and took off. But yeah, this is typical. It's quite a process.

First of all, assuming you have the training and the expertise, you choose a specific site to excavate and you raise money, usually from donors. Sometimes your school will help. You study that site and you look at it carefully, walk the surface of it, look for any clues of where maybe the gate was, or maybe a high point where the Acropolis, if there was one, would be, and that would be where you maybe find your temples or palaces.

You look for surface remains of any kind of architecture. Maybe you can see the outlines of walls from houses or whatever. And then do you excavate or do you survey? Most archaeology projects do both.

We have to understand that during the Old Testament, most people lived in cities and towns. There were some farmsteads in times of peace, but usually they were in walled towns or in cities. A research design.

So, you need to give a very carefully worded plan for what you want to do, what questions you have, and what questions you want answered. And with budget specialists, all the minutiae of your dig permits.

You have to purchase a permit and get approved to dig. And that would be in Israel, the IAA, the Palestinian Department of Antiquities, and the Jordanian Department of Antiquities. And that's for those three regions or countries.

And these are expensive. They have to be renewed every year. You also want to get affiliation with usually ASOR, the American Schools of Overseas Research, or the AIA, American Institute of Archaeology, to legitimize you, show respectability, and possibly get grants.

And then, of course, DOA officials from your host country will oversee the project. So, you see, there's a lot to it. Finances.

Again, raising money from donors, volunteers. You have to advertise and put out feelers for getting volunteers to come and work on your dig. And if you're doing it through a school, which most are, most projects are through schools, you have students that can get academic credit.

Again, recruiting of staff. Your specialist must be done. Equipment is expensive, and oftentimes a lot of equipment needs to be renewed annually.

And you can see all of that logistical issues coming to fore. And then finally, there are local and regional surveys. You have to look at your site in context.

And so you're just not looking at your site, but you have to look at the surrounding region and do studies of that, maybe do surveys, and look at your site in the context of a larger region. Very, very important. So a lot, a lot goes into that.

Okay, just to summarize, what do we search for? Answers. First of all, the site that you're excavating on, what was its ancient name? Some of those, again, remain because of the Arabic name. The toponymic name is preserved.

Others are not. We have worked at three sites. I've worked at three sites in Jordan.

And two of those sites, we do not have a name preserved in the Arabic. Tall Jalul, which we cannot find any ancient name close to that. Khirbet Safra, which is clearly a modern Arabic name because of the meaning of Safra.

Again, we get Safran from, it's a yellow, yellow ruin. And there's yellowish bedrock and stone at our site. So that's clearly a modern name or semi-modern name.

Others do have the ancient name preserved, like Tall Hispan for Heshbon. Okay, so site identification, periods of settlement. When was your site settled? When was it occupied? Was it occupied during the period of the judges or the period of the monarchy, the period of the patriarchs? What was the, what was the timeframe there? And why was it abandoned? Was it a human agent that caused the abandonment, maybe a destruction? Was the city burned, or was it famine, or lack of food? So, people left.

Was it an earthquake? What was the reason the city was left or abandoned? Who lived there? The ethnicity of the inhabitants. Were they Israelites? Were they Moabites, Ammonites, or Arameans? Some of these people groups are difficult to identify in the material culture. There are certain indicators.

Some pottery is unique to certain ethnicities. Some, some artifacts are, some finds are, but sometimes that's very, very difficult. Okay.

And if it's destroyed, who did, who did the destruction? And again, sometimes you can get, you can have clues, like, for instance, Scythian arrowheads outside of the Jerusalem walls show clearly the Babylonian destruction since they used that type of arrowhead. But most of the time, it's difficult unless you have historical sources. Inscriptions are epigraphic material written on stone, ivory, or ceramic, sometimes on plaster, parchment, or leather fragments.

Always looking for those. I want to spend a little bit of time on inscriptions and mention something else here. If you travel to Egypt, which I was just at this last month, again, you see hieroglyphs on everything, on walls, on columns, in every place.

There's, there's hieroglyphic writing, pictographs. When you go to Mesopotamia, you constantly find clay tablets, and there are caches of those. We have lots, thousands of these to, to read.

But there's almost a conspiracy of silence when you come to the Levant, meaning Syria, Jordan, Lebanon, Israel, Palestine. And why is that? Why don't we have a lot of monumental inscriptions or just simply inscriptions from the Holy Land? And again, it's known as kind of a divine conspiracy. Why not? One possibility is that the peoples of those in that area of the Levant may have written inscriptions, perhaps on plaster, on top of stone or mud brick walls, and wrote it in ink.



And that simply did not survive. So, we have lots of standing stones, masivot, and other monuments that are bare. And they're not inscribed, they're not incised, they're not, there are no cuts made in the stone to, to read anything.

We do have ostraca, which, of course, are ink, but they sometimes survive on pottery. Why not, why not monumental inscriptions? Well, that might be the reason they were put on; they were put on plaster, written on plaster, and that wore off over the years. Now, the reason we say that is that at a site called Tel Dir Allah in Jordan, in 1967, this is possibly the site at Biblical Sukkot, Hank Franken, a Dutch archaeologist, was excavating the site, and his workmen were working through a sanctuary and, and, and clearing down to the floors.

They found a plastered wall that had been preserved through destruction. On that plastered wall was a huge, lengthy text written in ink. It was in, it was in, it was very fragmentary and very, very difficult to peel off that wall and preserve, but they did that.

And because of that find, they were able to read the name of Balaam, son of Beor, in a slightly later context, showing him to be a religious figure in their history. And again, confirming to a certain extent the narrative in Numbers 22 through 24 of the oracles that Balaam pronounced to Israel, for Israel rather than against Israel. So, these are important finds, but again, it was kind of by accident that that plaster wall was preserved throughout the centuries, maybe dating to the ninth century BC.

But because it was, we have a, this long text mentioning Balaam. So that's basically the, the best perhaps explanation of this very, very much lack of, of monumental inscriptions. We just have small fragments aside again from the Mesha Stele and some other Moabite inscriptions, very little.

So, a material cultural object is simply anything made, altered, shaped, or deposited by humans. And so those are, those are the three things we search for probably in, not necessarily in that order. I think inscriptions are the most important, but answers to the questions we have.

And then of course, cultural objects that will tell us and a little bit more about who lived there and what happened. So, we end with the quote, the stones do cry out. We just need to listen very carefully.

Okay. We talked a little bit about pottery. Why is pottery so important? I like to make an analogy between pottery and cars.

And in the 1960s, a very, very popular Ford car was introduced called the Mustang. And the Mustang came out in April of 1964 and it took the market by storm. By the middle of 1966, 2 million Mustangs were on our roads.

The Mustang was the most popular very popular sports car. It is still in production. Now, if you're a car guy or car gal, and you put a 1964, 1965 Mustang next to a 2022, 2023 Mustang, where they're both Mustangs, they're both made by Ford.

They both have fenders, headlights, grills, engines, rear-wheel drive, and a lot of similarities, but you can look at those two cars and know immediately that one is contemporary. One was made in 2023. The other is close to 60 years old because of the style.

If you put a fender from a 65 Mustang and a fender from a 2023 Mustang together, they both have the same function and basic shape, but you can tell by the style that they are generations apart. The same goes for pottery. Pottery is always used for the same function: food storage, food preparation, food serving, and other uses as well.

But pottery forms and pottery styles have change throughout history. And so that gives us, as archaeologists, a clue about what we're looking at and when it was made. Now, a good ceramic expert in archaeology, say William G. Dever, can look at a potsherd and tell you, at best, maybe within 50 years of when that was produced.

And that's pretty good. Good relative chronology for pottery. It's not as good as coins, but it's pretty good.

Most of the times we can get it within a century. Pottery tells us a lot of things. By the way, just to clarify, potsherds are just a simple broken piece of pottery.

First of all, pottery is indestructible. You can burn it, and you can break it, the pieces are still going to be there. They don't rot away, and they don't deteriorate.

And they're everywhere. If you go to the Holy Land to visit any of these ancient sites, you'll be walking over broken pottery almost the entire time. And you can see that they're still there.

They're still there. Okay, so we talked about styles, such as pottery styles, which have changed over the centuries. That's one way they can help us, and that is dating.

Dating a site, because pottery from the time of Abraham looks not anything close to the pottery of the time of, say, David and Solomon. There is a lot of difference there. So, date.

The second one is ethnicity. Some pottery forms and styles are unique to a certain people. And I want to point this out here on our slide.

The pottery assemblage here is from the biblical site of Shiloh or Shiloh. This is early Israelite pottery from the period of the judges. Collar rim jars, pots, smaller jars here, bowls, etc., craters.

Look over here. This is contemporary pottery from the Philistines. Same time and date.

Okay, same date and close to the same region. Notice the difference. A lot finer, it's got slip and color to it.

It's got designs, artistic designs. And that tells us that this is a different culture, different people. Now, sometimes a piece or two of Philistine pottery end up at Israelite sites and vice versa.

But if you've got what we call an assemblage, like hundreds of forms, hundreds of vessels, and maybe two or three are Philistine, 98% are Israelite, you've got an Israelite site and vice versa. So, it tells ethnicity. Okay, that's very, very clear in some cases.

Now, sometimes, it's homogeneous. It's the same pottery used for different people. At the same time, you've got potters that go around to different towns and cities.

One city may be Ammonite, one city may be Moabite, one city may be Israelite, and they all use the same pottery. But as kingdoms emerge and develop, pottery tends to develop in different directions. And then you can tell differences in ethnicity.

Level of prosperity. Pottery would tell us how things are going. Now, look at this pottery here that's Israelite.

It's heavy, it's clunky, there's no painting, there's no slip. It's wheel turned, but pretty basic. And that tells us that there's not really time for an artisan class to emerge and, you know, spend extra time on pottery to make it beautiful, to paint it, to decorate it.

It's strictly utilitarian. It's to keep body and soul together and do its job, to hold food or water or whatever. On the other hand, this Philistine, Mycenaean-style pottery has beauty to it.

This took extra effort for an artisan to paint that and to put slip and color to that. But it's beautiful. And that tells us that the Philistine culture was much more economically advanced, culturally advanced than the Israelite culture during the period of the judges.

And that, again, correlates with the biblical text quite nicely. Now, if you find certain pottery in certain rooms of certain buildings, you kind of can understand what went on there. Maybe it was a storage, a storeroom, or a kitchen or something else.

What you find there will tell you usually what went on there. And we're assuming that the pottery is in situ, that it was destroyed or collapsed, the roof collapsed on it. And so, it's a clean assemblage, meaning it hasn't been moved around.

And so that can also tell you. What if you have pottery from a foreign country, say from Cyprus or from, northern Syria or from Egypt, showing up at these sites? Well, that tells you that there's some sort of trade going on. We can do neutron activation analysis on pottery and know exactly, or not say exactly, but know close to where that pottery was made and where that clay came from.

So, even though it may look similar, that clay may be made from a site quite a ways away. And again, that tells you that there's some sort of trade. So, pottery, again, gives us a lot of information about these aspects that archaeologists look at and try to find answers to.

This picture here on the upper right is yours truly, overlooking a huge cache of pottery that we uncovered in 2009 at a site in Jordan, Tal Jalul, Andrews University site. And that all pretty much dates to the 8th century BC, the time of Isaiah. It was a room that was full of pottery, broken pieces of pottery.

Huge, huge cache that you see that is laid out on the table there. Okay, tools of the trade. And these are some of the things we use in archaeology.

A theodolite, which isn't used too much anymore for taking levels. Now we use what's on the upper right, a GPS, which uses satellite to give us an exact elevation and location of a certain surface that we want to measure. Again, this is important because you're dealing with different squares and different parts of the site, and you can look at the relationship between levels and walls and whatever, between points of your site that are maybe far apart.

And those will give you exact readings for elevations and know exactly where these walls are in comparison to others. Okay. Sifting screens over here on the bottom right.

We have a young lady sifting soil, and sifting screens will help you catch small items like seals, beads, small artifacts, tools, or whatever that are small and can easily be missed. So, we sift, try to sift all of our soil. And because of that, we find a lot of, a lot of goodies, for lack of a better word.

Some things that we don't have include a gufa. We don't have that here in North America. This is an old, reused automobile tire with some handles bolted or stapled on.

And those work good for hauling dirt, hauling soil. And they're very indestructible. You can rebuild them if they break apart.

Very popular in the Middle East. A trowel, like masons use, is almost indispensable for doing careful work around artifacts or installations. A small hand pick and brush if you're, again, if you're dealing with very delicate work.

And again, toothpicks and other dental picks are also used for cleaning very delicate objects. So that's just a little overview of some of the tools and instruments we use. There are two types of ways of excavating a site, and we've mentioned them before, but I'll go into more detail now.

There's the square method. Again, we have five-by-five-meter squares. It's actually six by six, but you have borders around each square.

And why do we leave these borders? Why don't we just clear the whole thing off? Well, we leave these standing borders or bulks, as they're called, to give a vertical dimension to our excavation. In other words, if we dig down, we can see, kind of like a layer cake, when you cut a piece out of a layer cake, you can see perhaps a phase or two in that dirt wall, and maybe we missed it. Maybe there was a floor there, and we dug through the floor, but you can see it in the vertical bulk.

So, this is kind of a control device to keep us honest in our digging. And then, of course, you've got these four exposed squares, and you can see what's on the floor, the bedrock there, whether it's walls or floors or whatever you come up with. But again, you've got some places where you don't have access to that.

Now, if you find something interesting, you can also take out a bulk after you excavate both squares and make it one large exposed area. So that's very, very popular. The other way is by trenching.

This is a picture of the famous Neolithic Tower at Jericho, one of Kenyon's trenches. Huge. And this is another one that we did in Jordan, a place called Tal al-Umayri.

And that was a kind of a trench that went up through the defensive systems along the slope, and they're able to date all the different defensive walls of the site. Here's, again, a section of that from that important site in central Jordan. Archaeologists do love destruction layers and people's misfortune.

When a site is destroyed violently, roofs cave in, or fire, everything is like a time capsule because everything is exactly how the people left it, maybe just a few minutes earlier. And so, we dig through the rubble and the burn layer and maybe the collapsed roof, and we've got a beautifully sealed locus or loci, areas that are unique and peculiar. And these are untouched.

And so, we can really get a lot of data from these sealed loci. And so, that's something that archaeologists appreciate, even though at the time in antiquity, it was a tragedy. We've used the term tells a lot, and this is two examples of ancient tells.

Again, tells are an artificial mound, and that's what it means. The word means in both Arabic and Hebrew. But they actually are ancient cities that have been destroyed, rebuilt, destroyed, rebuilt over the centuries. Now notice the difference between these two tells.

This is Beit Shan in the Herod Valley, looking to the west. Look at how tall that is. That has many, many superimposed cities, one on top of the other there, up to 30, by the estimate of the excavators, over probably thousands of years.

The tell on the bottom is a lot lower, and it only has maybe three or maybe four layers in it. That's tell Beersheba, that's biblical Beersheba, biblical Beit Shan. And that was actually, that site was apparently established during the period of the judges, and perhaps destroyed in the late 8th or early 7th century BC, so just a few hundred years.

But even then, you've got evidence of town planning inside, you've got stores, large storehouses, you've got a water system here that you can go down subterranean and get water without having to go outside of the city. So, it was very well planned and built. This is the gateway here, the inner gateway, and it was a city of the kingdom of Judah during the monarchy.

But again, lower, because it didn't last nearly as long as Beit Shan. Here's a section through a tell, and again, you have to think of a layer cake, and see all the different examples of a city layered over another city, and so on and so on. Now it gets confusing, and it gets complicated, because maybe one city, they make a cistern, or they cut through an earlier level, or maybe a level's cleared away and doesn't even exist anymore, they just totally cleared that level away and built something else.

So, tells can be very complicated, stratigraphy can be very complicated, so you have to dig very carefully, and again, that vertical section is going to tell you a lot if you can keep that preserved in your bulk, in your area between your squares. I love these two pictures, because cities on the tell still exist, and here's two examples. Arbil in Iraq, beautiful example of what an ancient city looked like.

Here you've got, you can see the tell, the glassy, the sloped edge of the tell, the walls, and the city inside. And this is a functioning city that is an ancient Old Testament-style city in Iraq. Another one, Aleppo, the Aleppo Citadel in Syria, is the same deal; you've got a walled tell with a gate, just like they would appear in the Old Testament.

So those actually still exist, at least in those two circumstances. Okay, the other example besides a tell is a kerbe. A kerbe in Arabic means ruin.

It's simply a site that is, on the surface, not very deep; the stratigraphy is very shallow, and the Hebrew word for that is horvat or horva, with the same meaning. And these are cities or towns or sites, maybe a farmstead, whatever, a fort, that only existed for a short time, and they were abandoned, and they just simply did not survive over the centuries to build up accumulation and levels and complicated stratigraphy. This is our site we dig at in Jordan called Khirbet Safra.

This is a top plan, and this is the actual aerial photo. And you can see, it's perhaps hard through the picture here, but you can see the line of the wall. You can see the line of houses here along the wall.

There's a lot you can see right on the surface. You can see wall lines and features, architectural features, that have survived through the centuries. Now, this is a rare find because this is a city from the period of the judges, probably. It was probably abandoned or left during the period of the early monarchy, the time of David, and we don't know why.

We think it was established around 1250 BC, but it was really never settled again. So, you don't have later peoples coming, clearing the site and building something else, except for one area in the Byzantine period, there was a farm house we found on the on this side of the tell here. And so, this is a pristine city from the period of the judges that existed probably until the reign of David.

And so that hasn't been contaminated or destroyed by later occupation. And that's pretty rare. So, we're pretty excited about that.

And we have found some very exciting things as well, relating to that chronology, known as the backbone of history. I'm speaking today from Andrews University, and Andrews University had a very famous Old Testament scholar by the name of Edwin R. Thiele. You can see his dates there.

He's actually buried here in Berrien Springs. But he was an Old Testament scholar who was trained at the University of Chicago. And he had just a passion for trying to solve biblical chronology, specifically the chronology of the kings of Israel and Judah.

And by just looking at the text, the dates would not line up. And many people thought, well, there was maybe corruption in the text. Maybe there were people who altered the text later, and later, copiers of the text did something.

But Thiele went back and figured out that they used two different calendars, the Kingdom of Israel and the Kingdom of Judah, and a different accession year system. When he finished his work, they harmonized beautifully. I've had Israeli scholars and secular scholars say that they don't necessarily have a really high view of scripture, but they say you cannot argue with Thiele.

It works. And, and so, Thiele was, had made a very important contribution to biblical chronology and dating the different kings of Israel and Judah by his chronological system. And, of course, that was published in his book, *The Mysterious Numbers of the Hebrew Kings*, which I was told by one of my Israeli professors, you need to get the second edition, not the third, not the first.

Third edition: Apparently, he fiddled with it and actually made it, but he didn't make it as good. But that's important work and important for putting things in the right chronological place. Okay.

So, chronological table. This is a period that most archaeologists work in. We're missing the Neolithic or New Stone Age here.

The Chalcolithic, the Copper Stone Age, began around 4000 BC, followed by the Early Bronze Age. The end of the Early Bronze Age is probably the period of Abraham. Middle Bronze Age is your period of the patriarchs, generally, roughly.

Late Bronze Age, the period of the oppression and the exodus from Egypt. Iron Age I is a period of the settlement. Iron Age II is a period of the monarchy, David, Solomon, and the kings after them.

The fall of Jerusalem is, there's a short period of time that some scholars call the Babylonian period, but then the Persian period started in 539 BC and lasted until 333 BC and the arrival of Hellenism under Alexander. And then, of course, ends in 63 BC when Pompey conquers Jerusalem, starting the Roman period, which ends or transitions, I should say, into the Byzantine period during the reign of Constantine. And that goes on until the fall of the Byzantine Empire to Islam in the 7th century AD.

So that's roughly the periods of time that archaeologists that work in the Holy Land, that work in biblical archaeology, deal with. Now Genesis uses the Hebrew term *Toledot*, or histories or genealogies, including the table of nations in Genesis 10, to condense or highlight areas or eras rather than lengthy periods of time from Adam to



the flood. So, this is not the course or the time to discuss how old the earth is, but we have to understand that I believe that these are condensed.

We have other genealogy lists in the Bible that show clearly that some are condensed and some are full. So, these could have lasted much longer, maybe even tens of thousands of years, rather than the famous 4004 BC suggested by Bishop Usher. Okay, the final slide in this series is I use this with my students to show what archaeology, and what archaeologists try to do.

The picture here is of a late 19th-century log structure, a hand-hewn log structure that was a chapel. It exists today on the campus of Bethel University, Mishawaka, Indiana. It's called the Taylor Memorial Chapel.

However, it was originally erected and built in Union, Michigan, quite a ways away. And it stood there in various states of disrepair until, I think, the 1980s when funds were raised; it has some significance for the missionary church denomination. They disassembled this chapel and moved it to Mishawaka, put cement footing and cement floor underneath it, wired it up, put modern windows in it, electricity, of course, and re-erected it using new materials to fill the gaps between the pieces of wood, the layers of wood.

And today it's kind of a historical site. Now, as an exercise, think of this going forward in time, maybe 500 years, and Taylor Memorial Chapel's in ruins. And maybe it's still standing, maybe it's collapsed, but there's something there, enough there for archaeologists to come.

And archaeologists, let's say for the sake of argument, do not have historical sources telling them what this is or why it was there. So this creates a problem for archaeologists because archaeologists at that time would look at the way that this chapel was built, the style, the wood, and the way the wood was and recognize that that is probably from the 18th or 19th century AD. It's not 19, later 20th century, not at all.

So, the style of the building materials is 19th century. However, the floor, the footing, and the remains of the electrical system in it are late 20th century. So, they have to figure out, they have to interpret what happened here.

And the only thing they can probably do without historical sources is figure that this was rebuilt and remodeled and modernized, an old building that was modernized and put there and then put back together. So, they have to figure out what's going on in the late 20th century. Now, can they date it any better than that? Well, maybe they can, because if they break open or break up the cement floor, they may find plastic pop bottles or pull tabs or, or objects, maybe a holstice wrapper or a, you

know, something that wouldn't, wouldn't deteriorate, wouldn't degrade, that can give that a late 20th-century date, maybe within a decade because of what they see.

And so, and coins, of course, maybe the concrete workman dropped a quarter or a penny or whatever, and that can give us a date. Because if you have a, say, a quarter, and it's found under a floor, and that quarter is dated, say, 1982, well, that floor has to be laid later than 1982 because that's sealed, that coin is sealed in that floor, it can't, the coin can't be later than the floor. And so that floor, again, was dated or poured after 1982.

Archaeologists look at that again at ancient sites as well. So that would be a challenge for archaeologists in the future. Unless they had historical sources, what exactly happened, they probably would never figure out it came from Union, Michigan. They might guess that it's a chapel because of the floor plan because there are no interior rooms; it's just one big room, meeting hall, or maybe a school.

The purpose of the building would be, they could maybe guess, but not too much else. That would be a challenge. So that's kind of what archaeologists do and some of the questions they have to answer when they work in the field.

Thank you very much.

This is Dr. Jeffrey Hudon in his teaching on Biblical Archaeology. This is session 3, Archaeological Methodology.