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Cross-Cultural Earthen Building in Mali

Let's build a schoolhouse with the Dogon people of Terelli, Mali.

Workshop Overview



A Cross-Cultural Earthen Building Workshop
January 9th - 25th, 2010 - Dogon Country, Mali

The Dogon will share with us their languages, music, cuisine, farming, and building techniques. We will build alongside the Dogon villagers to complete a one-room schoolhouse. A 5 x 5 meter earthen dome, its construction will be our main activity. Students will learn dome design methods while gaining skills in stone, rammed earth bags, and cob. We will also learn about traditional Dogon building techniques by assisting several local builders with their work. Tour the country by foot and bus to see Dogon Permaculture in action. Visit spectacular ruins of old Dogon towns comparable to Mesa Verde and Chaco Canyon.

Experience the daily life of the people of Terelli, an off-grid traditional village. Each day will be packed with learning, work, wholesome food, fantastic scenery, and great company. We will be surrounded by learning opportunities throughout our stay. The workshop will be a multi-lingual event with translation between French, English, and Dogon.

Participants will learn everything that they need to build structurally sound domes using little more than earth from the site. The design is a parabolic dome with two windows and a door.

Lectures and instruction will total in time approximately as follows:

Earthen Dome construction

- Earthbag construction
- Cob construction and plasters
- Stone masonry
- Rubble trench foundations



Dome building by hand is an ancient art that is still used today in many parts of the world. It is one of the fastest and simplest ways to enclose a space, and is ideal for desert environments. Participants will learn everything needed to build structurally sound domes using earth. Almost all our materials will come from the building site itself.





We think travel ought to allow a strong connection to develop with new people and places, as well as create small positive changes. You can take a vacation, learn a new skill, and volunteer with the Dogon people. Cross-cultural connection is important for us all because it allows us to learn and expand our concepts of everything.

The Dogon have as much or more to teach us, as we have for them. The Earthbag system was chosen for this project because of drying times, not because we think the Dogon should use it on a wide-scale. Using Earthbags in the dome instead of pure Cob allows us to keep the workshop shorter.

Your Workshop Leaders

Scott Howard will lead our workshop to success. He founded Earthen Hand Natural Building in 2002, with the goal to build and promote artistic earthen architecture. He offers workshops about earthen building techniques locally and abroad. He is also available for hire as a builder, designer, or consultant on alternative building projects. Please see:

www.earthenhand.com

Atime Saye will be our head guide and contact in Dogon country. Atime and Scott met in Terelli, Mali two years ago, and have co-organized this event. Atime is a doctoral student at the University of Bamako and tour leader in Dogon country with Ginna Do Tours. He also helps throw the annual Dogon Ultramarathon, which you are also invited to attend. Please see: www.ginnadotours.org

Paulina Wojciechowska, architect and author, will co-teach this workshop with Scott. A seasoned earthen builder, she has taught workshops world wide for more than fifteen years. Her books are entitled, "Building with Earth a guide to flexible-form Earthbag construction", and "Earth Hands & Houses – Earthbag and Other Alternative Construction Methods". Please see: www.earthhandsandhouses.org

About Mali & Dogon Country

Mali is famous for its earthen buildings, its music, and mysterious far off places. You have probably heard of the far off city called Timbuktu, along the Niger River. It was once a cultural and spiritual capital because of the trans-Saharan trade (13th-16th centuries). It was also the birth place of Ali Farka Toure, world famous Malian blues musician who is still rockin' today. You may have also seen or heard about the impressive mud brick mosques; the Great Mosque of Djenne is the largest earthen building in the world! Experience traditional culture in the Dogon country, where historical villages are carved into the face of spectacular cliffs. Mali is one of the world's poorest countries economically, and infrastructure is rough, so be ready to enjoy an amazing ride! Embark on an adventure of a lifetime with earthen architecture, Malian music, bustling markets, and cultural richness. The Dogon country in SW Mali is one of the most visited places in West Africa.

The Dogon villages lie at a unique place in the dessert where the cracks in the land create shelter from the sun's radiation. The principal Dogon area is bisected by the Bandiagara Escarpment, a sandstone cliff of up to 500m (1,640 ft) high, stretching for about 150km (almost 100 miles). There are pathways navigating cliff cracks, and rivers running through the

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land to supply bountiful crops. The first Dogon in the area settled on the cliffsides below the dwellings of the ancient Tellem people, who are shrouded in magic and mystery. In more recent times, the Dogon have used adobe brick and stone block to build larger buildings somewhat farther out onto the plain. The Dogon now number just under 800,000, and their villages

extend within walkable distance of each other along the entire Bandiagara Escarpment. The geological, archaeological and ethnological interest, together with the landscape, make the Dogon country one of the most fascinating sites in the world. Experience the unique village life and marvel at ancient Tellem cave dwellings. The Dogon are best known for their mythology, their mask dances, wooden sculpture and their architecture. Dogon culture is surrounded in mysticism and intrigue, for example, they had unexplainable knowledge about stars in the solar system invisible to the naked eye long before they had telescopes.



About Mali

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For maps of Mali and the Dogon country, see www.ginnadotours.org.

Why take this workshop?

- Participants will gain skills they can use to create healthy, practical and sustainable structures.
- Cross-cultural learning. This workshop brings together tourists and indigenous people to build needed structures. The event is a meaningful way for people from distant cultures to learn about and help each other.
- Tourism generates about 11% of the global GDP. It is the largest source of income for many under-developed nations. Still the money doesn't usually make it to the pockets of most of the people. Sometimes the presence of tourists can



cause much more harm than good.

- This workshop is a great alternative kind of tourism. You are going with a sense of purpose to complete a meaningful task in a supportive, team environment.
- To seeing a new country with guides that inform you culturally, and environmentally is very advantageous. This workshop allows you to visit as a participatory tourist, learning technical skills in a structured way alongside people from the area. What could be more fun?
- For the Dogon communities, the workshop will provide education for local young people while building a schoolhouse that will directly improve their education.
- Redistribution of wealth. By hosting eco-building workshops in developing countries, we create a symbiotic relationship. Most earth building techniques are still illegal in most parts of the US. Conversely, building codes are much more lenient in developing countries. Communities in these countries often lack the funds to complete new building projects, and the tuition fees make it all possible.
- Empower people with earthen building. The rising number of people that are aware of the potential of very fine and very low cost housing gives us hope for the future. These techniques benefit everyone excepting the wealthy who want to sell more prefab building materials.
- Educate young people by building eco-schools. As the youth see this new kind of participatory community architecture rise from the ground itself, this positive example will have a great impression.

Please also see the **Workshops, & The Advantages of Earthbag Building** sections of www.earthenhand.com

Mali Workshop FAQs

What is the tuition money used for?

Funds are applied in this order:

1. Materials and tools for building the school, education materials for teaching this process
2. Guides, transportation, lodging, and food costs during the workshop.
3. Instructor airfare and compensation.
4. Sponsorship of local African people to attend the workshop for free.

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What does Tuition cover?

Instruction, guides, housing, meals, and transportation for the dates of the workshop. Each participant will receive: a copy of the plans, a drafting compass, ruler, pencils, a paper pad, and a diploma certifying your attendance at our workshop.

What does Tuition NOT Cover?

Travel to and from the workshop site: an estimated 80 USD, including bus, room and board from Bamako airport. A generous budget might include about \$8 USD per day for gifts, snacks, and drinks. You make your own air travel arrangements. We can recommend a travel agent if you would like.

Do I need a Visa?

Obtain a Visa by contacting the Mali consulate in your respective country.

How Much is Air Fare?

We can recommend a travel agent for you if you ask.
About 1600 USD, or 900 EUR

Who are the Dogon People?

Let the Dogon tell you about themselves. Please go to Atime Saye/Ginna Do Tours' site: www.ginnadotours.com

Do I have to travel alone to the workshop site?

You do not. We are organizing a rendezvous in Bamako so we can guide you directly the Dogon country with ease. This leg of the trip will allow attendees to begin to get to know each other and Mali as we move across the landscape. Of course, if you are already traveling in Africa or have other plans, you are welcome to find your own way to the Dogon country. Many transports head that way, and any savvy traveler can easily arrive safely.

What Parts of Mali will we see?

Please also see the itinerary. We are happy to meet you in Bamako, but this is not required. We will guide you to Mopti, and on to the Dogon Country the following day. We encourage people to use this workshop as a great introduction to Mali or even Africa. It is recommended that you arrive in the country just before the workshop and take advantage of easy traveling with the entire group to the Dogon Country. Adventurous or experienced travelers can choose to meet the workshop at our building site in Dogon Country. Our tour will be focused on arriving at the site straight away. So we recommend giving yourself some free travel time after the workshop to attend the ultramarathon (see above), and to travel to experience other places in Mali.

What is the food like?

Many Malian foods are incredibly tasty and hearty. All are quite healthy. The vegetarian may have a harder time finding good selection or well-balanced meals. The main foods eaten are rice, millet, sorghum, kassaiva, and beans, cooked as a sort of porridge, served with a meat or fish sauce. A common meal in southern Mali including the Dogon country is called tô. This is a pudding made from pounded millet, served with a sauce of meat or vegetables. Some dishes are spicy, and some not at all.

What are the bathrooms like?

A fair question considering it is Africa. From Bamako to Mopti, we will only occasionally be near a really fancy western-



style bathroom. Other facilities are reasonably tolerable, but know that many toilets in Africa are pit types. Bringing your own tiny bag of toilet paper, or even wet wipes is not a bad idea. In the Dogon Country, the bathrooms were very nice relative to many other places. Showers in the Dogon country are functional and private. Taking a shower from a bucket is the most common way. The water isn't usually heated and in short supply because it must be hauled by hand.

Occasionally, one's host family might heat up some water on the fire for a guest to bath in the evening when it cool outside.

What about Malaria?

Although Malaria is common of much of West Africa, very few mosquitos can survive the dry and breezy climate in the Dogon Country. We will use extra caution to sleep under netting when traveling to and from our workshop site. Malaria is a potentially life-threatening disease. Please obtain an effective preventative medicine that will last you the entire time you plan to stay in West Africa.

What other hazards might we encounter?

Talk to your travel and immunization clinic to get up to date immunization and disease prevention information. As you may know, water in other countries can leave visitors with diarrhea or worse. A water filter, iodine tablets, and some medicines would be great to have along.

As in most big cities, there are some cases of theft in Bamako. It's the same in cities like New York, just being aware of one's surroundings is the best prevention. The best wallet is buried under your clothes. And remember, we will greet you at the airport and guide you to the workshop site!

Is there Work Trade available?

Yes. Contact right away if interested.

Are there Scholarships available?

Yes. At this time, these are only for people who live and work in Africa, and make less than the equivalent of 2000 US per year.

What Insurance will I need?

For your protection, please obtain Traveler's insurance.

What are the Physical Requirements of this workshop?

First of all, it is open to anyone with the will to come and help. It is recommended that you be able to stand and walk all day, and lift 25 lbs (13.5 kg) repeatedly. Contact if you have questions or concerns - we will find a way for you to come.

Can participants come Early or stay Later?

Yes. Everyone is encouraged to stay at least a few days longer, as we are all invited to attend the annual Dogon ultra-marathon (Jan 27th -Feb 2) as a runner or walker. Visit www.ginnadotours.org to learn more!

If you want to come early, contact me about this right away.

What should I read before coming on this trip?

Find and read books on: Earthbag building, Earthen plasters, Malian history, French language, Dogon Culture and history,

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and Travel to Mali.

What gear do I need to bring?

Imagine hot days, cool nights, occasional dusty wind, and rustic accommodations. We will be tenting on floors and rooftops in the village of Terelli. Tents are not necessary, but a good idea for added comfort. Feel free to bring your own, and the best type for this trip would be compact and able to stand on its own held down by small weights.

You will need: a sleeping bag, sleeping pad, pillow, mosquito repellent, preventative malaria medication, and a mosquito net that can be easily suspended above your bed. Also, bring comfortable and sturdy shoes you can hike or work in. Sturdy sandals are a great alternate shoe because of the heat. A large hat, sunglasses, moisturizing cream and sunscreen are great. Bring any toiletries and medicines you may need - wetwipes are useful for cleaning one's face and hands in desert climates, among other uses.

If possible bring a water filter, travel guide, small French and/or English lesson book, French/ English dictionary, hand-held translator, calculator, pencils, paper, books, clipboard, drafting compass, directional compass, magnifying glass, binoculars.

You may wish to bring a very small combination lock that can be put on your bags for added security. An effective way to conceal your valuables is a hidden money belt.

Consider bringing something to give away: old clothes, shoes, cell phones, walkmans, etc. - things that you might want to receive as a gift if you didn't have one of those yet.

What NOT to bring?

Leave your personal cell phones, ipods, nice watches, and jewelry at home. No sense in inviting thieves. Portable music is great, but consider bringing a discman or tape player that you might leave behind with a deserving Dogon student at the end of your stay. Old cell phones can sometimes be used in Africa also, so if you are looking to give one away, bring it. Things like shoes, clothes, soccer balls, are very valuable to these people, and could make great gifts. Nothing too shabby, but it doesn't need to be new.

How should I carry my money?

Cash is the easiest by far. Visa is much easier to use in Mali than Mastercard. Traveler's checks work, but places that cash them may be few and far between. There are banks that do this in Bamako, and Mopti. We will pass through these cities to get to the Dogon country, so participants can access banks then, just prior to the workshop.



Itinerary

Arrive in Bamako any time. You will be greeted by Scott and Atime.

The city of Bamako, offers an intricate blend of the modern and the traditional, while maintaining an authentic African identity. Bamako is the capital of Mali, currently estimated to be the fastest growing city in Africa, and is known as one of the best places in the world for music lovers and performers.

Jan 6th

We will take a moment to ground ourselves, sleep, or see a few sights in Bamako before beginning our journey to Mopti bright and early the next morning

The bus ride to Mopti is long, scenic, and will give us plenty of opportunity to talk with African people traveling the in same direction (approx. 10hrs).

Mopti is a city at the confluence of the Niger and Bani rivers, between Timbuktu and Ségou. It is frequented by tourists because many flights from Europe touch down at the nearby airport. The city lies on three islands linked by dykes: the New Town, the Old Town and Bani. As a result it is sometimes known as the "Venice of Mali". The islands had long been inhabited, but Mopti was only founded in the nineteenth century as part of the Massina Empire, later becoming the base of El Hadj Umar Tall. With French domination, Mopti became known for its egret feather industry. It has continued to grow around its harbour and is Mali's most important port. It is also known for its fish and salt markets.

Jan 7-8th

We will spend a few hours in the day walking around the markets of Mopti, and visiting the local earthen mosque. One can find great buys of cloth, art, music, artifacts, tools, and much more.

We will board our chartered mini-bus very early and complete the last leg of our road trip to the Dogon country before the main heat of the day (approx. 4 hrs).

The Dogon country is incredible in topography, geology, archeology, art, music, and agriculture.

We will hike down through the maze-like paths between the cliffs, arriving at the Dogon village of Tirelli in the afternoon. We will take the rest of the day to meet our hosts including the chief of Tirelli, talk with one another, and set goals for the workshop. We will visit the building site and walk around the area to mingle with the locals. Then, we will have a ceremony in which we will make more tamping tools while talking about our intentions for the project.

Jan 9th

Lecture: "Dogon culture and society" - What you need to know. This will familiarize us with the local culture including basic Dogon greetings and customs.

This night, and each night after, we sleep on the beautiful rooftops of Tirelli. Some students may find beds in vacant rooms of their Dogon hosts' houses. Each person is somewhat free to choose where they sleep in the village, but many suitable places exist.



Jan 10th

We will begin our first lessons in earthbag building in the morning after breakfast. We will continue to build with earth bags all day, breaking for meals and afternoon lectures, with plenty of time to acclimate and rest from our travels.

Lectures: "The dynamics of domes" - How domes behave from an engineering perspective, "Why earth bag domes" - Arguments for using this building system more

Jan 11th

Our days now begin to move into a gentle routine. Our group will learn to maximize our cooperation and speed of building. Questions and answers will flow freely, and all participants will learn each technique of the building system. Earth bags will contain gravel for good drainage at the base of the building. We will complete the foundation portion of the dome on this day, as it will be mostly completed before our arrival.

Lecture: "The properties of clay and sand" - Learn about how to locate, identify, and test clays. Learn the basics of using different proportions of clay and sand for building.

Discussion: "What is tourism? How can we improve it?"

Jan 12th

Continuing with our merry routine, we will rise early and continue practicing our precise dance of laying bags quickly by keeping the whole team active. From this day forward our wall material for the dome will be clay and sand. Students will learn to do every job in a rotation: Mixer, Tosser, Filler, Tamper, and so on.

Lecture: "How to design domes" - Student participate in the creation of a dome design on paper and in modeling clay. & Learn a few essentials for dome design.

Enjoy an evening of Traditional Dogon music!

This day we will participate in the repair or construction of a traditional clay Dogon grainary. Take a long walk to nearby Dogon villages - about seven miles round trip. Observe Dogon permaculture in action at nearby farmlands. Observe a variety of Dogon buildings and discuss with local experts about their cultural meanings.

Jan 13th

Work a little more on the dome.

Lectures: "Dogon grainaries and earth plasters", "Dogon Permaculture", "Meaning in Dogon architecture"

Jan 14th

Work on the dome in the morning. Then visit local modern Dogon buildings being constructed of adobe bricks and stones from the nearby cliffs.

This day we will take more time to explore nearby Dogon villages, and will have opportunities to see numerous Dogon and Tellem archaeological sites. Guided by local Dogon scholars, we will explore the Dogon's history, myths about the Tellem people who lived there before them, and Dogon religion.

Jan 15th

This hike will also take us up to the top of the Bandiagara cliffs, and back down via a secret path between the cliffs, where old Dogon settlements are built deep in these cracks. On this hike we will also visit the abandoned Dogon capital - a breathtaking ruins that rises four stories high, situated under



a huge overhanging cliff (.jpg).

In the evening we may visit a local market near Tirelli.

Lectures: "Who were the Tellem people?", "Early Dogon settlements in the Bandiagara", "Mud architecture through the ages" - a slide show presentation.

This day we continue building up courses of bags on our dome-shaped classroom. As we refine our teamwork and technique, we will reach the height of completing our first arch over the door to the building. Several courses after this, we can pull out the forms which held the space of the door. Work will slow, but only a little, after the wall rises above our heads.

Jan 16th

Lectures: "Passive solar design" - Thermal mass, insulation, reflection/refraction, solar orientation, heating and cooling with the sun. "Window and door forms" - How to build and use forms of wood or earth

Spend the day approaching perfection in your earth bag building technique. We will learn Dogon songs, and share some of our own as we gain rhythm in our work.

Jan 17th

Take a break in the hot afternoon to cool off with some traditional Dogon 'beer'. Somewhat similar to western beer, the Dogon version is a refreshing probiotic beverage made from fermented millet. Learn about how it is made.

Lectures: "Designing buildings for acoustics" - the behavior of sound, "Dogon Beer" - How to make home-made fermented drinks

Complete the evening some relaxing music inside our half-finished dome.

Jan 18th

Take a day off! Whew, you earned it. Now that you know your way around, take some time to explore the Dogon country on your own or in small groups.

Jan 19th

We will resume bright and early with lecture, and discussion about methods of roofing earth bag structures. We should be approaching the top of our dome at this time.

Lectures: "Roofing and plastering earthbag buildings" - The many different methods discussed.

Jan 20th

Zen occurs on the building site. By this time we might find that we can begin to speak a new language



because of our international crew.

This day we will test several promising mixes of plaster on our newly built wall. As we watch these dry, we will learn more about which proportions of clay and sand are the best in this situation.

Lecture: "How to test your plasters"

Performance: "Dogon music and dance"

Stretching out our muscles, we continue toward our goal, enjoying each other's company. We are almost to the top!

Jan 21st

Lectures: "Community earthen building in Portland, Oregon" - Scott's work with the City Repair Project and The Village Building Convergence, "Dogon cooking" - come away with a basic understanding of how to make some common foods of the Dogon people.

Complete the dome's structure! Build a sturdy compression ring. Stand back and appreciate the work we have done.

Jan 22nd

Lectures: "Earthen building technologies, now and tomorrow" - Overview of existing technologies, visions of the future

Begin the day by mixing up earthen plaster for the dome school house. Applying earthen plaster is very fun and intuitive. We will work and play in it all day!

Jan 23rd

Discussion: "Other amazing projects and places in West Africa" - Listen to stories and share your own

Jan 24th

Continue work on plastering the dome inside and out.

Discussion: "How can we do this again, even better"

Complete the plasters on the dome! Finish the final details such as the floor and the door, time permitting. Congratulate each other!

Enjoy an evening of celebration with our new friends. Music by everyone! (More...)

Jan 25th

After...
Stay a few more days and attend the annual Dogon Ultramarathon with Scott and Atime!
See www.ginnadotours.org for more info & preregistration.

There will be more fun details to complete on our dome-shaped school house, as well as further volunteer opportunities in Terelli. Feel free to stay as long as you can!

Make your own way back,, with chances to visit some of the other amazing places in Mali on your way.



Register Now for the Mali Workshop

Enroll early before the course fills up!

The payment process: **We accept check, money order, and paypal.**

After sending a payment, please take a moment to compose an email to workshops@earthenhand.com with the following information:

- Name(first last)
- Email
- Physical address
- The method of payment you have selected
- When and how it was sent
- The amount sent this time

Payment Guide:

- 1) Reserve your spot \$250 (non-refundable)
- 2) Full tuition \$1800 w/o discount options
- 3) Discounts on tuition:

Early enrollment is 20% less than the normal price = \$1440 USD

Additional 10% dollars off for multi-person sign ups. Recommend a friend come too!

Contact us with questions about Work Trade, Large Group Discounts, Scholarships, Partnerships, or _____.

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