

# TREE Field School Equipment List 2018

## REQUIRED COURSE SUPPLY LIST...

1. **Waterproof and or gas-filled binoculars:** 7 X 42 or 45, or 8 X 42 or 45, or 10 X 42 or 45 work best.
  - Medium sized ones work well. Binoculars have 2 sets of numbers attached to them. The first number (power) usually ranges from 7 X to 10 X. The larger the number the closer the object appears to you (good). But that doesn't mean that 10 X is for you. That high of power can sometimes make it hard to find the animal and can make the image jump around. So, usually we recommend 7 X or 8 X power binoculars. The second number (aperture) ranges from 20 to 50 millimeters usually. The larger the number here the more light comes in.
    - Avoid compact binoculars: the forest is dark and they just don't work well.
  - Whatever you choose above make sure that they are waterproof! If they are not waterproof they are essentially useless. They will fog up and will not be usable.
    - So, go local stores and try a number of brands out. But, I recommend not buying them in person. You can get much better prices online... especially if you purchase last year's models or closeouts. Also, remember that you will be carrying them around for hours; so bigger is not always better. Again, avoid compacts they just will not let in enough light and so will be fairly useless.
2. Notebooks:
  - One Rite in the Rain 195 All-Weather Birder's Journal, Yellow, 4 5/8" x 7"
  - One Student Field Notebook: 100 Spiral Bound DUPLICATE pages [Spiral bound]  
Hayden-McNeil Publishers Publication Date: November 1, 2000 |  
ISBN-10: 1930882742 | ISBN-13: 978-1930882744 | Edition: N/A. This notebook is for all of your field assignment submissions including your Journal.
  - One Rite in the Rain 313-MX All-Weather Level Notebook, 8.5" x 11": For your data collection.
3. Compass: a compass preferably the Brunton TruArc™ 5: <https://www.brunton.com/products/truarc-5>. *Don't get the TruArc 10, 15 or 7.*
4. 1-2 one-gallon Ziploc Brand Storage Bag: try to get them without any writing on them. These are for storing your field map, camera... for use in the field.
5. Writing Instruments:
  - One Rite in the Rain pen.
  - Mechanical pencil + lead and or "rite in the rain" pen, and 1-2 black Sharpie pens, small set of colored pencils.
  - A small notebook for course lectures.
  - Whistle: in case of emergency in the field.
  - Two 2018 journal articles for each of the following species: White-faced Capuchin (*Cebus capucinus*), Mantled Howler Monkey (*Alouatta palliata*), Black-handed Spider monkey (*Ateles geoffroyi*). Please get them from a reputable scientific journal. You can find them easily in Primatelit via the [primateinfonet](http://primateinfonet.com). Please put each article in a gallon-sized Ziploc storage bag.
  - Water carrier: This is also critical for fieldwork. You should carry enough water to be out say 4 hours at a time. I carry 2 water bottles myself in a fanny-pack (butt-bags for you Brits out there). Other people bring small packs that carry water and a few supplies like camelbacks. I also put Gatorade or electrolyte tablets into my water bottles for the field. This practice keeps your electrolytes in balance in humid climates.
  - Waterproof digital watch or stopwatch: this is necessary to take timed data. Please do not forget it. If you like, you can bring a digital audio recorder. You can take your data with it and they usually keep time (this is not required).
  - Flashlight and batteries: you will need a reliable flashlight to walk around the station and in the forest at night (optional night hikes). Make sure you have additional batteries and bulbs just in case. A waterproof one is preferred but not mandatory. Headlamps can be really nice options... though they can attract bugs directly to your head!
  - Clothing: field clothes should dry quickly and be lightweight. You need not spend a lot of money on field clothes for this course. Discount stores offer many options especially in the fitness area. ***Make sure that you go easy on the colors! Bright colors can attract unwanted insects like bees and wasps!***
    - Rubber boots: Also a must for tropical wet forests in South and Central America. You will need to get a pair of high (just below the knee) rubber boots. I know that they do not offer much support but it's critical that you keep your feet completely dry and that you have some snake protection. You can purchase these in the US in stores like Wal-Mart, Home Depot, or tack shops... Try them on carefully. Try them on with shorts and walk around in them. If they flap on to the back of your calves and make a slapping sound then avoid these; or you will end up with bad bruises by the end of a day. For fit - go big. I usually do this: if my heel comes out of the boot completely but I don't throw the boot across the room when walking I choose that one. Usually ½ size bigger than you are used to is about right. Steal toes are extra-fine as you usually avoid any holes due to wear. Avoid boots with bright colors, flowers, insects on them... you don't want bees and such to follow you around. Finally, I put a shoe insert in my boots to give some arch support. You should also make sure that they fit with some heavy socks.
    - Closed-toed sandals, sneakers or hiking boots for light hikes and zip lining.
    - Long pants are a must for the field you will not be allowed to wear shorts in the forest as plants and insects may be a problem. If you can get a few pairs of the pants whose bottom of the leg part zips off then that's best. Often

you just have to wash the bottoms if they get muddy. Otherwise try and stick with nylon or very lightweight cotton blends. Heavy cotton takes forever to dry when washed or rained on. You can wear sleeveless or short-sleeved shirts into the field (your preference). I usually choose a long-sleeved button-down shirt myself; they offer protection and pockets as well. Again just make sure that the material will dry quickly.

- You need a bathing suit for the beach and pools.
- Socks: some people prefer wool as they are comfy and they dry quickly. Others cotton. Just make sure that you bring enough of them to keep your feet dry. Personally, I buy a big bag of tube socks or a few pairs of soccer socks and just choose a new pair every few days; then throw the rest away.
- Hat/bandana. You will need something(s) to cover your head. Either a hat or bandana works well in the field. Again please avoid bright colors or patterns to avoid pesky insects.

### OPTIONAL GEAR...

- Some of you may want to bring lightweight gardening gloves to prevent getting insect bites on the hands.
- Also, many students like having a mosquito head-net to protect their head and neck from bites. You can get hats that have built in nets or get a separate one like this one from REI <https://www.rei.com/product/780999/sea-to-summit-head-net>. I highly recommend this for everyone.
- Some sort of knife like a Swiss army knife is a good idea.
- Flip-flops for wearing around camp.
- Shorts and t-shirts for around camp.
- A nice outfit (purely optional) for dinner out and BBQ's at the station.
- Clothespins - we can of course get these in country.
- A mosquito net. Don't purchase one here as they can be very expensive. If you want one just let us know and we can get them cheaply in Costa Rica. I think they will cost about 8 dollars if you want us to get one for you.
- Sleeping pad. El Zota does have mattresses for the bunk beds but they are not too comfy. I bring an inflatable mattress pad myself. The beds do have sheets but they are kind-of coarse. You might bring a personal set for your own comfort (twin is probably the right size).
- Pillow: the pillows everywhere in Central America are scary! So, please bring your own. We can stop at a store in country or you can transport one from home.
- One or two Ziploc® Brand Flexible Totes for storing your stuff in your room. These are optional of course but nice to have.
- Toiletries: we can get these in country... just try and avoid soap... with flowery scents.
- Sunblock.
- A small luggage lock: at El Zota there are little boxes for you to keep valuables in. Bring a key or combination lock for it so you don't have to worry about your stuff.
- Cameras... do bring a camera if you can. There is so much to see and shoot. A small one is best but if you are an avid photographer you will not be disappointed. Just make sure that you can somehow keep it dry. I suggest being able to put it into a zip lock. If you are using film this should all go into a zip lock as well.
- If you have a GPS unit this is great too.
- Bug repellent: There are mosquitoes in Central America carrying Dengue fever. This is not a trivial disease so we want you to protect yourself as much as possible. Here is the CDC link concerning Dengue fever should you care to read further about it: <http://wonder.cdc.gov/wonder/prevguid/p0000443/p0000443.asp>
  - Try and bring a few kinds of mosquito repellent, as you might not like one specific kind. Here is a link to the CDC website about this topic: <http://www.cdc.gov/ncidod/dvbid/westnile/resources/uprepinfo.pdf> Keep in mind that while DEET works very well it is quite caustic especially in high doses. We recommend strength of 20%-30%. Higher doses can be very irritating to the skin (especially the face) and can be absorbed through the skin! I use it on my clothes (though be careful around your equipment... it eats through plastic)... so of course you use it on your skin! Then we recommend that you use an herbal formulation for your face ears and hands. There are a number of such products out there and they all work reasonably well. Finally, Vick's vapor rub also seems to deter mosquitoes. It is based in petroleum jelly so is also pretty waterproof. It also has menthol and has a nice cooling effect!
- A towel quick dry is best but not necessary. If you like we can stop in town before going out to the station and picking up one... as well as sundries like soap, shampoo...
- Medications: *Bring an ample supply* of any prescriptions that you take on a daily basis. Make sure that you carry these on the plane. You can get replacement meds in any pharmacy in the country so losing them is not a huge problem. But, you should have a list of the meds you are taking along with dosages just in case you do lose them.
  - Bring 1 weeks supply of an antibiotic that you can take for digestive problems. You might get a touch of "tourista" while in CR. The CDC recommends drugs like Cipro or doxycycline for this. I bring a week worth of both. Be aware however, that doxycycline when combined with lots of sunlight can lead to nasty sunburn. We also highly recommend (as does the CDC) a daily dose of Pepto-Bismol to prevent tourista. You can get this in Costa Rica, or get a bottle for the month. Just a swig each day seems to be very beneficial. Finally, a weeks worth of Lomotil is also a good thing just in case.
  - We also recommend that you bring a bottle of Benadryl... we seem to use this more than any other medication. If you are subject to allergies please also bring your usual anti-histamine.
  - Antifungal topical creams or liquid is also recommended as you might get athlete's foot. Again keeping your feet dry is a must in this climate.

- First aid: While the station does have a first aid kit we recommend that you bring your own bandages, tape, gauze and creams. Anti-biotic cream anti-itch cream and hydrocortisone cream is really a must for plant-base rashes and insect bites. Eyes: antihistamine drops and or saline drops can help especially if you get DEET in your eye. Many students just carry a small bottle in their field pack just in case.
- Bring some moleskin just in case you get blisters. This does not go on your skin but goes in your boot. There are also blister Band-Aids by Band-Aid brand that cover a blister on your skin.
- Bring some Q-tips, and a set of tweezers too.
- Bring Sunscreen; the sun in the Caribbean can be strong so please don't forget this! If you wear glasses please bring an extra pair and if possible bring contacts! Binoculars and glasses are a mess together... instant fogging! So, make sure you bring enough solution and a way to clean them. You can get most contact supplies in local pharmacies if it's a problem of space and weight of your luggage.
- Vaccinations...Students don't have to get special vaccinations for this trip. But, please make sure that you are current on Tetanus, and normal vaccinations for Polio, Mumps...! Optionally, we recommend the Typhoid vaccine (pill form)... but it is very unlikely that you will be exposed. However, if you are going to travel around Central America then you might want to do this. There have been a few cases of Malaria in Costa Rica. If you would like to take a preventative take Chloroquin. It has fewer side effects and covers the strains in Costa Rica. Please avoid stronger more expensive drugs if possible as they have severe side effects especially for people who have mood disorders.
  - Here is the CDC link for Malarial drugs should you want to peruse it: <http://www.cdc.gov/malaria/travel/>
- **Snacks and such...**
- There is a small shop at El Zota where you can purchase some items; so having some pocket money is a good idea. But, feel free to bring snacks with you. Power bars or breakfast bars are really good should you miss breakfast. Chocolate does not wear well as it melts pretty easily. But hard candies are great in the field. The diet in Costa Rica is going to be pretty devoid of preservatives and fillers. There will be a lot of fresh fruits veggies and of course rice and beans. So, if you really crave processed food bring it with you. Just make sure that you seal it all in zip locks!
  - **About Peanut Butter...**
  - I know that most people like to have peanut butter for snacks... in the field. I love it myself. But, peanut butter is super expensive in Costa Rica – like \$6 USD for a small jar! What I would suggest is that each student brings the dehydrated kind (1 jar per student) of peanut butter for all of us to share. We can add water to it as we go along in country. We will provide all of the other things that could go with it (bread, jelly...).