

Training Adult Leaders in Land Navigation

By David Fisher
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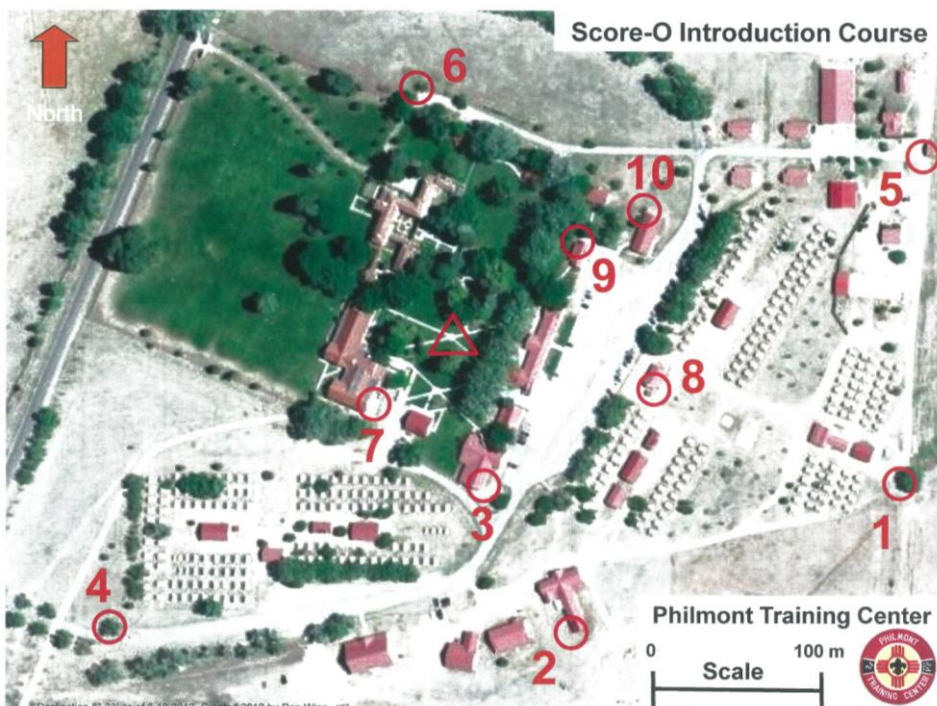
Each year since 2009 the Boy Scouts of America Land Navigation Team has put on a weeklong (five day) training class on land navigation ("Finding Your Way Night or Day") at the Philmont Training Center at the Philmont Scout Ranch in Cimarron, New Mexico. The course is designed to teach each participant how to navigate in the outdoors. And explain how to teach these skills to the cub scouts, boy scouts, and venturers within their units, districts and council.



The course covers orienteering, geocaching, map and compass skills, how to use a GPS and many more skills. The course does not teach "pace and bearing". It is not design to be a training camp or train one in coaching techniques for elite athletes.

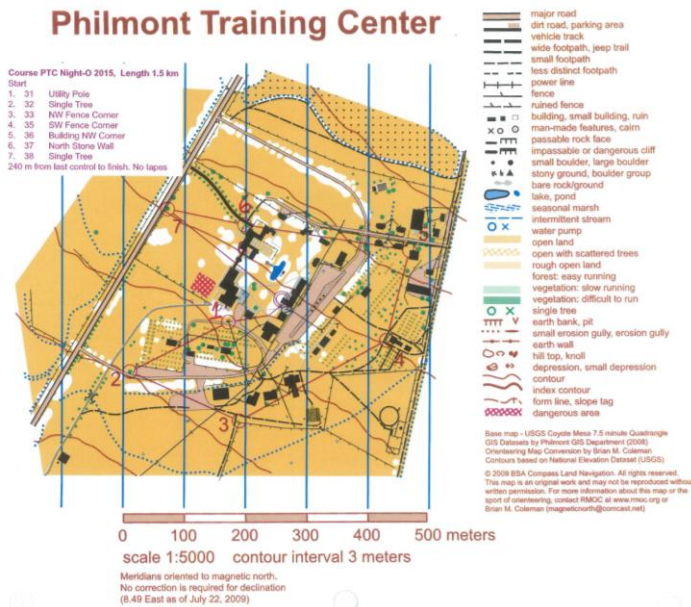
The instructors Brian Coleman, Ralph Courtney, and Don Winn try to have more outdoors hands on fun activities than classroom lecturing. On Monday morning after introductions, course expectations and goals we were getting a beginner's briefing and

being sent out on a score-0 course on an aerial photo/map of the Philmont Training Center (PTC). The Philmont Training Center is a 0.3 sqKM campus centered around the Villa Philmonte. The terrain is flat and open making it very runnable.



After a short session on

teaching philosophy and second class map and compass skills (map symbols, map scale, contour lines, orienting a map, using a compass, taking a bearing and what the five colors on an orienteering map represent) we were out on a point to point course on a five color orienteering map of the PTC. The PTC orienteering map is a yellow map with buildings, roads, and lots of tents. After running each course Ralph insisted that we do a self analysis/critique (homework) of our run. This consisted of: 1. Draw your route on the map, 2. Identify your mistakes and 3. List how to improve for next time.



After this short course we went into Orienteering Merit Badge requirements and some orienteering and compass skills (compass bearing, pace counting, declination, and international symbols). To break up the afternoon we went out and did some pacing to determine our pace at an elevation of 6500 feet.

On Tuesday the morning session was broken up into three segments. The first segment went over intermediate O-skills (such as aiming off, handrail, contouring, and relocation), and how to teach Orienteering Merit Badge. Ralph's philosophy was to concentrate on requirement #7 (do three orienteering courses) first before working on requirements 1-6 (the bookwork items) and 8-10 (designing a course, being an official and teaching other scouts).

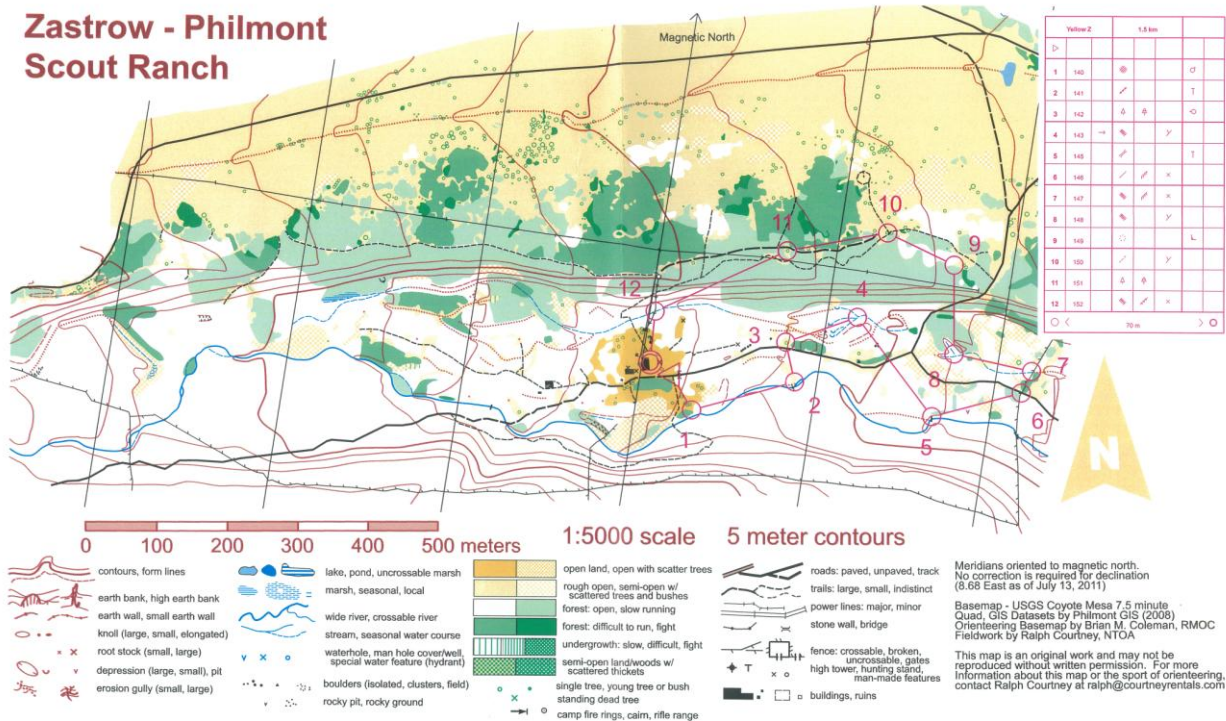
The second part of the morning covered choosing a base map and map coordinates. We learned a little about Latitude and Longitude versus Universal Transverse Mercator - UTM coordinate systems.

The rest of the morning was spent learning what the sport of Geocaching is. After a short lesson on how to use a GPS unit we all went out to find some caches.

After lunch we had our first big test. We went down to Zastrow a Philmont staff camp on the Rayado River in the southeast corner of the ranch. Zastrow is Philmont's orienteering and geocaching camp. It is a small camp in a river valley with a 15+ meter climb to the flats above on the north side and 25+ meter climb to the flats above the Rayado River on the south side. The camp is

nestled in a nice open pine forest with scatter open areas. The ridge on the north has a swatch with lots of scrub oaks, and other forms of thick vegetation before becoming rough open with scattered individual trees (see Zastrow map).

Zastrow - Philmont Scout Ranch



We started with a control setting exercise. We were given a map with two locations to find. Based on the road, power line and vegetation we had to find the correct location to hang each control. Next course, a nice course. This was can fool you if attention and the map, novice/first time a very wet year streams/swampy so it was hard to wet.



came our first woods twelve point yellow a nice fun course that you do not pay stay in contact with especially for orienteers. This being all the intermediate areas had lots of water avoid getting our feet

After this 1.5 KM orienteering course we had an opportunity to find some of the geocaches located around camp.

After we got back to the training center I took a nice hot shower and went over to have one of Philmont's famous barbecue buffalo dinners. After dinner the Kwahadi Indian Dancers performed for an hour and then they had western dancing until it got dark. In the

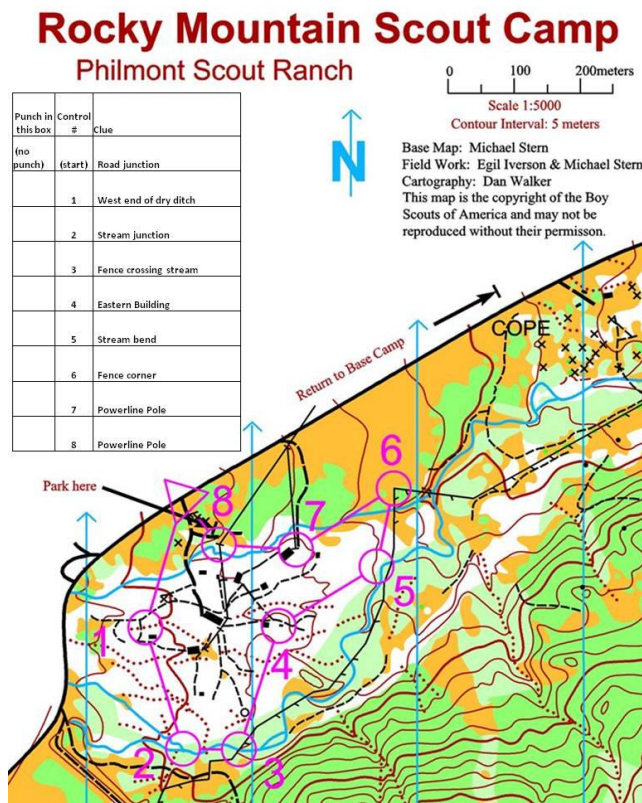
darkness of the night, lit only by the moon and stars we did a seven-point 1.5 KM night-O course on the PTC map.

The Wednesday morning's session was split into two sections. A classroom session and an outdoor session at Rocky Mountain Scout Camp. The classroom session went over Cub Scout hiking requirements, and the Venturing land navigation requirements. Even though orienteering is an individual sport, in "Scouting" we use the buddy system sending the scouts out in teams of two. Cub scouts go out as a den with an adult leader.

But how do you put on an event/activity without a map? Don showed us how to use an aerial map from the resources available on the web (Google Maps).

Next we went over gear and different types of events and competitive orienteering with OUSA. We also covered the first class requirements, including how to measure the height of a tree, tower, or flagpole, and the width of a stream or ditch.

Before heading out we were divided into four teams to design two eight point butterfly courses. Each person on each team was assigned to design a four-point course for his team's wing of the butterfly course. Outside of class we met to compile a team course with input from each team member.



The Rocky Mountain Scout Camp is a small camp nestled against the mountains across from the Tooth of Time. The camp is ~0.4 KM by 1 KM with a COPEs course covering about a third of the eastern section of camp. We used the western section of camp, which is mostly wooded with a lot of buildings, trails and ditches. The map has open terrain with patches of green on the north and light green on the southern side along the stream.

The instructors set up a 1.5 KM 8 point yellow course to practice our orienteering skills and give us another chance to enjoy the beauty of Philmont and get some awesome pictures of the Tooth of Time.

Wednesday afternoon at the PTC is family free time. This is when families have a chance to get together for an afternoon hike, horse ride, visit an area attraction or other family activities.

For us diehard students not doing family activities we attended Brian's session on making a five-color orienteering map. He showed us how to use the tools on the web along with Global Mapper to develop a base map. We picked a camp to use as an example and Brian went through the steps to develop a base map from an aerial photo and some GIS data. When Brian was done we had a base map with contour lines in OCAD (the graphical art/drawing program used to produce orienteering maps). Next he showed us how to add the features visible from the aerial photo onto the map (i.e. roads and building). He also went over adding point and area features to the map. He made developing a base map and a basic unfield checked map look easy. As a reference the last appendix in the training manual is "Getting Started with OCAD® 11" from OCAD® the smart software for cartography, which is the basic user manual for OCAD®.

Thursday morning we spent our time in the classroom covering pack and troop events, University of Scouting/Pow-Wow, Introduction to Outdoor Leader Skills (IOLS), school yard maps, permanent O courses, camporees, teaching Orienteering Merit Badge, Geocaching Merit Badge, summer camp, district/council events, national camp school and orienteering camps with one small break to cover finding direction without a compass.

The course manual has a complete set of lesson plans so once one has a map he/she is ready to go.

The theme of the morning was get them out on a map and do not do the "compass game". Pace and bearing is "not orienteering".

After lunch we had a mini-class on the program CLUE. Clue is a free program used to print nice neat course description sheets. The instructors described how the program works and how to fill in each row and column of the description sheet and print the results. The program is limited to standard international symbols only.

After the mini-class we all went out to Zastrow. At Zastrow we set up the two butterfly course we had designed. We split into pairs with each pair setting out two controls. After setting out our controls we vetted the controls our sister team put out.

The rest of the afternoon was spent doing a four-point 0.8 KM advanced course or geocaching around camp for more treasure.

That night after a sing along with Don and Ralph, we learned how to navigate by the stars. Look for the Big Dipper and follow the bottom two stars in the ladle in a straight line to the North Star, which is at the end of the handle in the Little Dipper.

On Friday we went out to Zastrow to run the other teams butterfly course and

finished with lunch we some little cancelled went over talked



do some more geocaching. We the morning session marker pickup. After were scheduled to do string-O with the kids but it was do to rain. Instead we resources and everyone about plans to take O

home. The final exercise was Graduation-O. Each person was given a map with a set of circles on it and asked to pick up a certain control. The object was to figure out which control was yours based on the control description such as road ditch junction.

We finished with graduation pictures and a PTC all conferences assembly.

In summary the course covered all facets of land navigation from beginner on up. In this five-day course we did eight orienteering courses at three different venues and as much geocaching as one desired.

If you are interested in joining the BSA Land Navigation Team, or attending the 2016 PTC land navigation course August 7-13 or Staffing the land navigation area of the 2017 National Jamboree July 16-29 contact Brian Coleman at magneticnorth@comcast.net, or you can visit the PhilmontTrainingCenter.org or summitbsa.org/events/jamboree/overview/ website for more information or to register.