On Teaching a Totally Blind Student Physical and Historical Geology

by

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and ‘Indy’

Jason’s present goal = PhD with a focus on vertebrate paleontology.
Biggest Barrier = Too many said ‘No’
The Process

- Lectures
- Labs
- Physical Field Trip
- Future classes + challenges

Extra Staff

Adam Staab  Mike Calvello
Lectures

• No major barriers
• Braille NoteTaker + texts (audio)
• E-mail + Cell phone communication
• Must be more descriptive with presentations.
• Exams administered through FHSU’s Kelly Center - Disability Student Services.

Labs
Shatter Cones
Pseudotachylites

Phyllites
Gneisses
Disconformities

Nonconformities
Historical Lab

Sedimentary Structures
Field Trip
Measuring a Stratigraphic Section

Dog ‘Indy’ not allowed
Future Challenges

- Paleontology
- Mineralogy
- Petrology
- Structural Geology = sabbatical
- Field Methods
- Summer Geology Field Camp
Fossil Preparation

Mineralogy
Petrology
olivine basalt
Know this diagram!!

See Pg. 132

Tectonic Provinces
Direct application of labels causes wrinkles. Using Braille font in Word has eliminated that issue.
Microstructure may not work?

**stylolites begin**
are lines or 'sutures'
more visible if dark (insoluble organics)
some cataclasis

Qtz

Structural Geology
Geologic Field Methods

Geologic Mapping
From Air Photo
Abstract:

A suspected old artillery range from Old Fort Hays is possibly present at the locality surveyed west of Fort Hays State University just off of Old Highway 40 alongside the Hays Municipal Golf Course. A grid was set up on site with magnetometer readings to find magnetic anomalies that could be related to buried ferrous material. Small anomalies were tested through the grid to test for the locations of magnetic anomalies that could provide evidence to look for cannonballs.

Methodology:

Field Methodology

At the old artillery range we set up a grid that was 30m wide by 50m long, with flags set every 10m within the grid. We then used the magnetometer to find magnetic anomalies throughout the grid area. Small anomalies were tested through the grid to test for the locations of magnetic anomalies that could provide evidence to look for cannonballs.

Lab Methodology

In the lab we used the magnetometer data from the field to create a visual analysis of the readings. We utilized various computer programs including MagMap 2000, ArcView, and Surfer.

Observations:

- The northeastern corner of the survey plot was bounded by a barbed-wire fence set in the ground with metal posts. This is probably the cause of the magnetic anomaly in this section of the plot.
- Our east-west baseline sat roughly 30 degrees north of east. This probably explains the lack of a distinctive positive-negative reading at any particular location.

Figure 1: Inset map showing the location of the test site relative to the city of Hays.

Figure 2: Team members measuring and setting up the grid at the test location.

Figure 3: Team member taking magnetometer readings along grid lines.

Figure 4: Team members measuring grid orientation.

Figure 6: Profile along the line in figure 1. The rectangle shows the possible depth to buried material.

Conclusions:

Although anomalies were found throughout our grid area, we were unable to test our results by excavation. We would like to thank the City of Hays for allowing us to use their land for this survey, as well as Dr. Neuhauser and the Geosciences Department at Fort Hays for allowing us to use the magnetometer and software.

References:


Poster Project

Integrative Geophysics/GIS/PPT

Geology Field Camp

Rugged Terrain
• Learning Outcomes
  • Change major to Biology?
  • Graduate School?
  • Apprenticeships?
  • Museum Studies degree?

"The positive thinker sees the invisible, feels the intangible, and achieves the impossible."
Author Unknown

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