

**Outcrop Mapping at Woodall Shoals,
South Carolina-Georgia:
Author's Commentary**

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The University of Tennessee at Chattanooga offers a traditional Bachelor of Science degree in geology. Students in this program are required to take *Structural Geology* (4 hrs, fall semester) and *Field Methods in Structural Geology* (4 hrs, spring semester) during their junior or senior year.

For several years now, I have had students in my field methods class (*Field Methods in Structural Geology*) map 30-ft x 30-ft (or 10-m x 10-m) areas of the 2,000-m² outcrop at Woodall Shoals, on the Chattooga River, in the eastern Blue Ridge. I provide students with Bob Hatcher's map of the outcrop (Hatcher et. al., 1989), with project areas masked off (white) and replaced with an appropriate grid. Students work in small groups and are provided basic tools for the task (measuring tapes, cord, chalk, Bruntons, etc.).

The very large outcrop at Woodall Shoals contains a full compliment of rock fabric and complex geologic structures typical of high-grade terrains. Students are reminded that similar structures are commonly developed at map and regional scales in the eastern Blue Ridge and are asked to consider the outcrop before them as a scale model of such an area. Mapping at Woodall Shoals, with the benefits of 100% exposure and a relatively small area, provides a good introduction to mapping metamorphic rocks and associated structures. Traditional mapping of larger areas of such complexity is difficult and frustrating for most undergraduate students, and may be ineffective.

I use this project late in the spring semester, after students have gained considerable mapping experience in deformed sedimentary rocks of the fold and thrust belt and low-grade metamorphic rocks of the western Blue Ridge. These relatively advanced mapping students thoroughly enjoy this project and can commonly map a 900-ft² (or 100-m²) project area, with reasonable completeness and accuracy, in several hours, given that boundary geology is provided. The weather in April is also commonly very pleasant and contributes to a very enjoyable day at Woodall Shoals.

It also works well to make Woodall Shoals, and the presently described project, the conclusion of a geologic-transect field trip. In this case, we leave Chattanooga early Saturday morning, make geologic stops in the Ocoee gorge, at Chunky Gal, at the Buck Creek dunnite and Corundum Knob, and at Winding Stairs Gap, guided by relevant stop descriptions in the GSA Centennial Field Guide (Absher and McSween, 1986; Hatcher, 1986; and Hatcher and Milici, 1986). We typically camp Saturday night along the Tallulah River, west of Clayton, GA, and devote all day Sunday to Woodall Shoals.

For evaluation purposes, students' map patterns are compared to that of Hatcher et. al. (1989, Georgia Geological Society Guidebook, v. 9, n. 3, Plate 3). Although a perfect match is not expected, the patterns should bear a reasonable resemblance. Other aspects of the evaluation consider the format and completeness of the map in terms of map symbols, density of structural symbols, explanation of symbols, rock names and lithologic descriptions, scale, north arrow and declination, title, author, group member names, date, etc. The evaluation can also consider observations of students' performance in the field and their contribution to the progress of their group.

References Cited

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