Use of a Lab-Field Couplet to Link Rock Classification and Facies Interpretation

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General Overview / Goals

- Students synthesize information on lithology, sedimentary structures, and fossil assemblages, while moving toward the larger picture of facies interpretation.
- Linkage of lab and field components doubly reinforces understanding of course concepts.
- Students work in small groups to develop interpretations with minimal instructor input.
- Instructor-led class discussion concludes each component.

Lab Component

- Students receive 20 hand samples and 20 rock names and/or descriptions.
- Students must match descriptions with the proper rocks and propose environments of formation for each sample.
- Included among the samples are rocks similar to those encountered in the field component.

Field Component

- Students differentiate successive formations using lithology, sedimentary structures, and fossil assemblages.
- Students determine probable sedimentary environments for each formation.
- Students interpret the observed facies succession and reconstruct a portion of local geologic history.

Modifications

- The lab-field couplet can be easily adapted for local geology and teaching collections.
- Components may be presented in either order, although this will affect the amount of background information supplied to students during the field exercise.