

**Sanders, J. E.; Merguerian, Charles; Such, Russell; Carbone, Kathryn, Currington, Kathleen; Eshaghoff, Tania; and Levine, Jessica, 1996a, Bellvale Mountain, NY: isoclinal, overturned syncline with steep reverse fault along the SE limb.**

The synclinal structure of the Devonian strata of the Bellvale Mountain block has been long recognized. Proterozoic gneiss, which bounds Bellvale Mountain on the SE and NW, recognizably contrasts with the Devonian cover rocks which include the Bellvale and overlying Schunnemunk formations. In two ad-hoc undergraduate field courses we have subdivided the Bellvale and by attention to geopetal criteria, have found the structure to be an isoclinal NW-vergent overturned syncline trending  $\sim N35^{\circ}E$  with a steep reverse fault along the SE limb bringing only a small part of overturned upper Bellvale against right-way-up Schunnemunk. The lower Bellvale, a marine flysch, consists of interbedded dark-gray shale and -siltstone and quartzose graded sandstone layers up to 3 m thick that locally are laminated and cross laminated.

The upper Bellvale, a nonmarine molasse, consists of coarse, gray, pebbly quartzose sandstone and -conglomerate in which trough cross strata are prominent. The overlying Schunnemunk, also a nonmarine molasse, consists of red-colored pebbly, trough-cross-stratified sandstone and -quartz-pebble conglomerate with minor shaly interbeds. In most exposures, we have found a late slaty cleavage, oriented  $\sim N70^{\circ}E, 75^{\circ}SE$ . We assign a maximum Late Paleozoic age to the folds and slaty cleavage. The major block-bounding dip-slip faults and late strike-slip faults may be of mid-Jurassic ages.

**To Cite This Abstract:** Sanders, J. E.; Merguerian, Charles; Such, Russell; Carbone, Kathryn, Currington, Kathleen; Eshaghoff, Tania; and Levine, Jessica, 1996a, Bellvale Mountain, NY: isoclinal, overturned syncline with steep reverse fault along the SE limb (abs.): Geological Society of America Abstracts with Programs, v. 28, no. 3, p. 96.