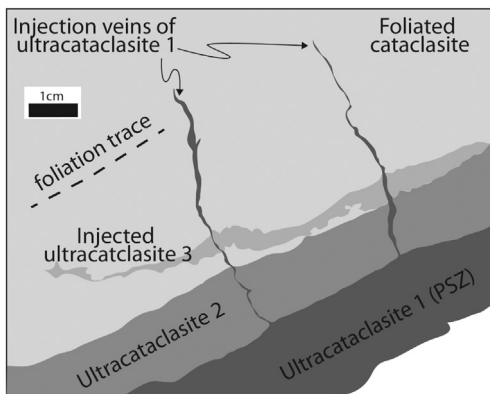




Photograph of the month



The principal slip surface of the Alpine Fault at Gaunt Creek, New Zealand, comprises a 1–10 cm thick sandwich of impermeable smectite-bearing ultracataclasite/gouge layers between higher permeability hanging wall cataclasite and footwall gravel (Boulton et al., 2012, *G³*, 13(1), <http://dx.doi.org/10.1029/2011GC003872>). In this image, two very high aspect ratio ultracataclasite veins originating within the finest-grained principal slip zone layer (labelled PSZ) cross-cut overlying layers of hanging wall ultracataclasite and project into the higher permeability hanging wall foliated cataclasite. We infer the veins were injected coseismically from a fluidized principal slip zone gouge. Fluidization should only occur if slip is localised within the impermeable principal slip zone ultracataclasite and surrounding parts of the layer are effectively undrained during the slip event. Location: Alpine Fault outcrop at Gaunt Creek, South Westland, New Zealand. 43°18'57.78"S, 170°19'17.78"E. Photograph taken by T. M. Mitchell, University College, London (tom.mitchell@ucl.ac.uk) and contributed to JSG by V. G. Toy, University of Otago, Dunedin, New Zealand (virginia.toy@otago.ac.nz).