

Clast exposure on boulder covered desert slopes.

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## الغطاء الصخري في المنحدرات

### Abstract

Variation in the degree of clast exposure on stony desert slopes is examined in an area of North East Jordan. Geological influences on the characteristics of stone mantles are modified by relative slope position. Observations that the nature of the surface stone cover changes downslope because of the transport and accumulation of the underlying substrate are confirmed by quantitative analysis. An elliptic function is described as a means of estimating relative clast exposure from simple field measurements of clast dimensions. There are no significant difference in mean clast exposure between the four main basalt lithologies of the study area, but a distinctive pattern of clast exposure catenas can be identified. Convex slopes maintain relatively high levels of clast exposure along the profile, whereas concave profiles typically have declining levels of clast exposure from crest to toe. About two thirds of the variation in clast exposure is accounted for by lithology and four slope variables: relative relief, slope length, gradient, curvature.

KEY WORDS: stone mantle, clast exposure, basalt, slope wash

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