Great Basin of the southwestern United States

The Monitor Range is located in central Nevada directly east of the Toquima and Spring Mountains. The range is a rugged and isolated area covered to a large extent with very mature vegetation. The range is characterized by a series of canyons and spurs, which are often steep and difficult to traverse. The range has a number of peaks exceeding 3,000 meters above sea level, and the highest peak is Mount Charleston, which rises to 2,000 meters.

The Schell Creek Range is located in east-central Nevada northwest of the Snake Range, rising to 3,622 meters above sea level and is characterized by a series of canyons and spurs. The range is covered with mature vegetation and has a number of peaks exceeding 2,000 meters above sea level. The highest peak is Mount Charleston, which rises to 2,000 meters.

Glacial landforms in the interior Great Basin (Blackwelder 1931, 1934; Sharp 1938; Currey 1969; Waite 1974; Piegat 1980; Osborn and Bevis 2001) are common but not well recognized and because many mountains in the Great Basin are remote and offer poor access, many landforms are often unrecognized. The effect of this on the spatial distribution of periglacial deposits and prioritizing those areas with the greatest potential for discovery.

PROJECT GOALS:

- Evaluate this GIS-based technique via field observations
- Test the methodology described by Frauenfelder and Kääb (2000), Hoelzle (1996), and Frauenfelder et al. (2001) within the ArcView environment, preliminary results accurately predicted the spatial distribution of permafrost, (a) protalus ramparts, (c) rock glacier in Lehman Cirque, (d) solifluction lobes on Jeff Davis Peak, (e) small moderately developed rock glacier on slope of Jeff Davis Peak, and (f) well-developed rock glacier in North Fork Baker Valley.

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