

morphology that can be used to quantify Quaternary uplift and deformation. Detailed mapping and cosmogenic dating on other sites in this area is currently in progress and can be used to establish slip/uplift rates for the region.

The surface exposure ages from Palpa and Mirave provide a small glimpse of the possibility of correlating kilometer scale pediment surfaces for long distances along the forearc of Peru. The evaluation of the regional scale effects of changing subduction geometry on uplift rates and deformation characteristics in the forearc region can thus be quantified by the correlation of these pediment surfaces (and marine terraces). Our work in dating offset terraces along active faults is beginning to show a new Quaternary chronology illustrating the age and uplift rate variations along the strike of the Peruvian margin and suggesting a much more active tectonic setting than previously thought. This unique data set will provide new constraints on the currently proposed hypotheses for active deformation of the Andean forearc, and for the latitudinal changes in tectonic forcing due to changes in the style of subduction, along the South American margin.

References

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