DATA REPOSITORY FIGURE CAPTIONS

Figure DR1. Stereonets of fault-slip data collected along the ESFZ (Wulff net, lower hemisphere). The large black arrows indicate the direction of compression and extension obtained from the inversion method of Carey (1979). The localities of structural sites are reported in (A).

Figure DR2. (A) Aerial photo of the Rio Lempa area (location reported in Figure 2). (B)-(C) Close-up of the aerial photo with line-drawing showing the morphostructural expression of the El Salvador Fault Zone in the area.

Figure DR3. Schematic stratigraphic relations in the Mercedes Umaña area (CEL, 1994, 1995). bm: intracalderic lavas and scorias; bo: lavas of the Berlin old volcanic edifice; br: Blanca rosa fm.; gi gray ignimbrite; td: young tephra deposits; ps: lava and scoria Portillo-Capules.

Figure DR4. (A) Digital elevation model (DEM) exemplifying the influence of the El Salvador Fault Zone (ESFZ) on the local drainage pattern (see text for further details). (B) Close-up of the El Triunfo area showing the right-lateral horizontal offset of the main rivers. c) Calculation of river offsets along the ESFZ by restoring the initial geometry of the drainage system (see Replumaz et al., 2001). This restoration has been obtained by sliding back the two sides displaced by the fault in a high resolution DEM cut along the fault trace and correlating river channels across the ESFZ. The best fit between the

downstream and upstream channels is obtained for a lateral displacement of ~400m, although individual rivers may reach up of ~450m offset.

Figure DR5. Topographic profiles across the trace of the ESFZ showing the consistent vertical displacement of the Late Pleistocene planar surface formed by Grey ignimbrite deposits. Paleosurface envelopes result from the interpolation of topography peaks.

REFERENCES CITED

Replumaz, A., Lacassin, R., Tapponnier, P., and Leloup, P.H., 2001, Large river offsets and Plio-Quaternary dextral slip rate on the Red River Fault (Yunnan, China): Journal of Geophysical Research, v. 106, p. 819–836], doi: 10.1029/2000JB900135.

DATA REPOSITORY

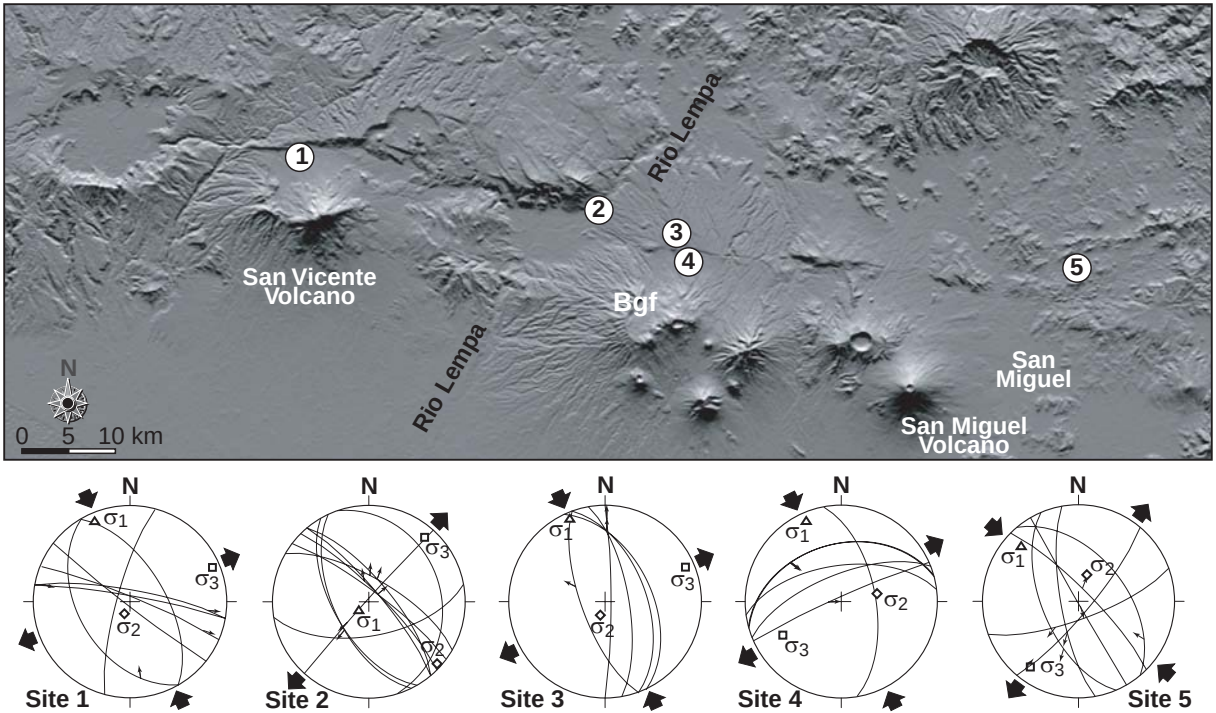
TABLE DR 1.MESOSCOPIC STRUCTURAL FIELD DATA

Site	Kind of mesostructures	Number of data	Computed σ_1 az/dip	σ_2 az/dip	σ_3 az/dip	Formation	Age of deformed rock
1	Striae on faults	7	346/10	204/70	67/8	Cuscatlan Fm.	Pleistocene
2	Striae on faults	10	228/77	133/1	42/12	Black Ignimbrite	Late Pleistocene
3	Striae on faults	5	336/9	201/78	67/9	Tephras overlying Gray Ignimbrite	Holocene
4	Striae on faults	6	336/9	80/57	241/31	Tephras overlying Gray Ignimbrite	Holocene
5	Striae on faults	7	314/19	86/63	218/18	Balsamo Fm.	Plio-pleistocene

Note: Palaeostress orientation of fault-slip data has been computed using Carey (1979) inversion method

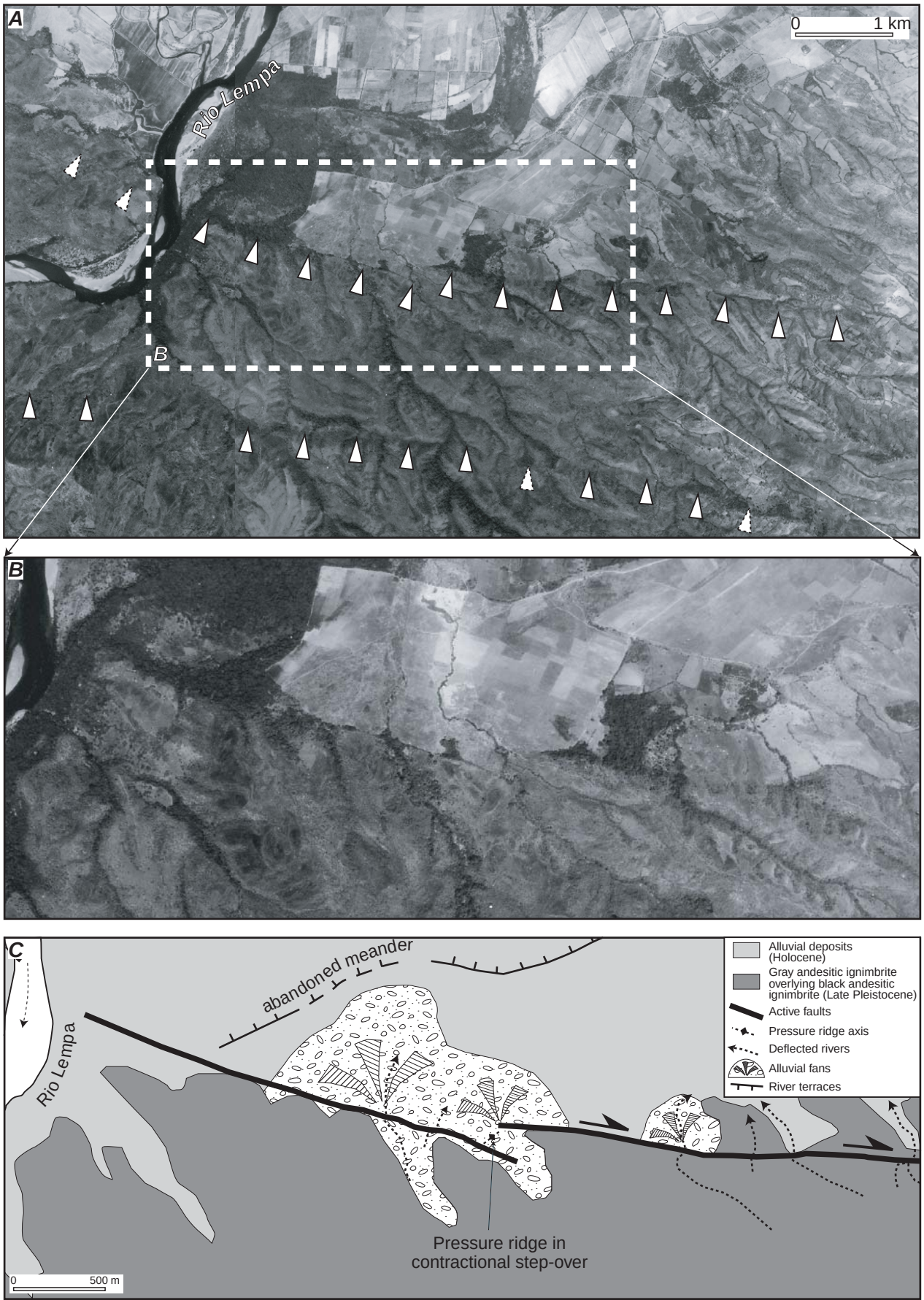
Data Repository

Figure DR 1



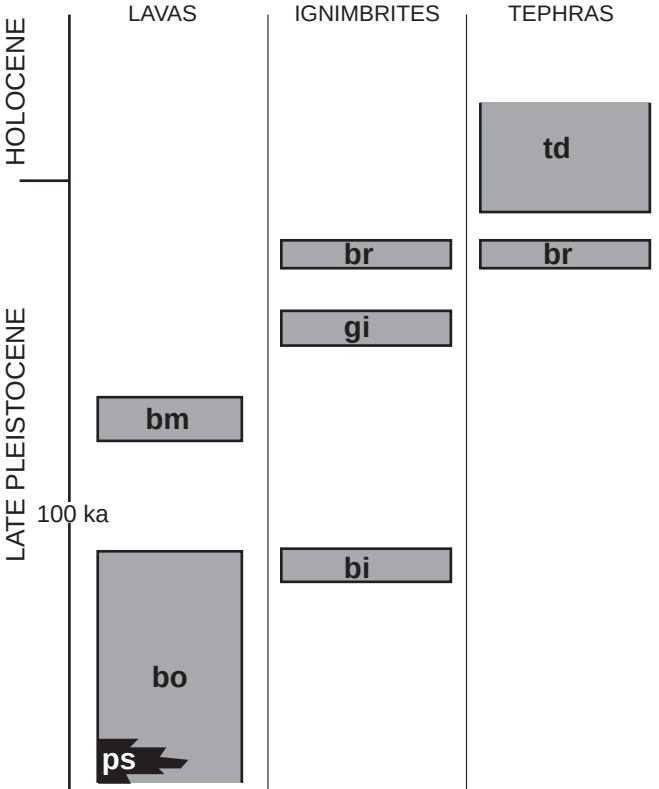
Data Repository

Figure DR 2



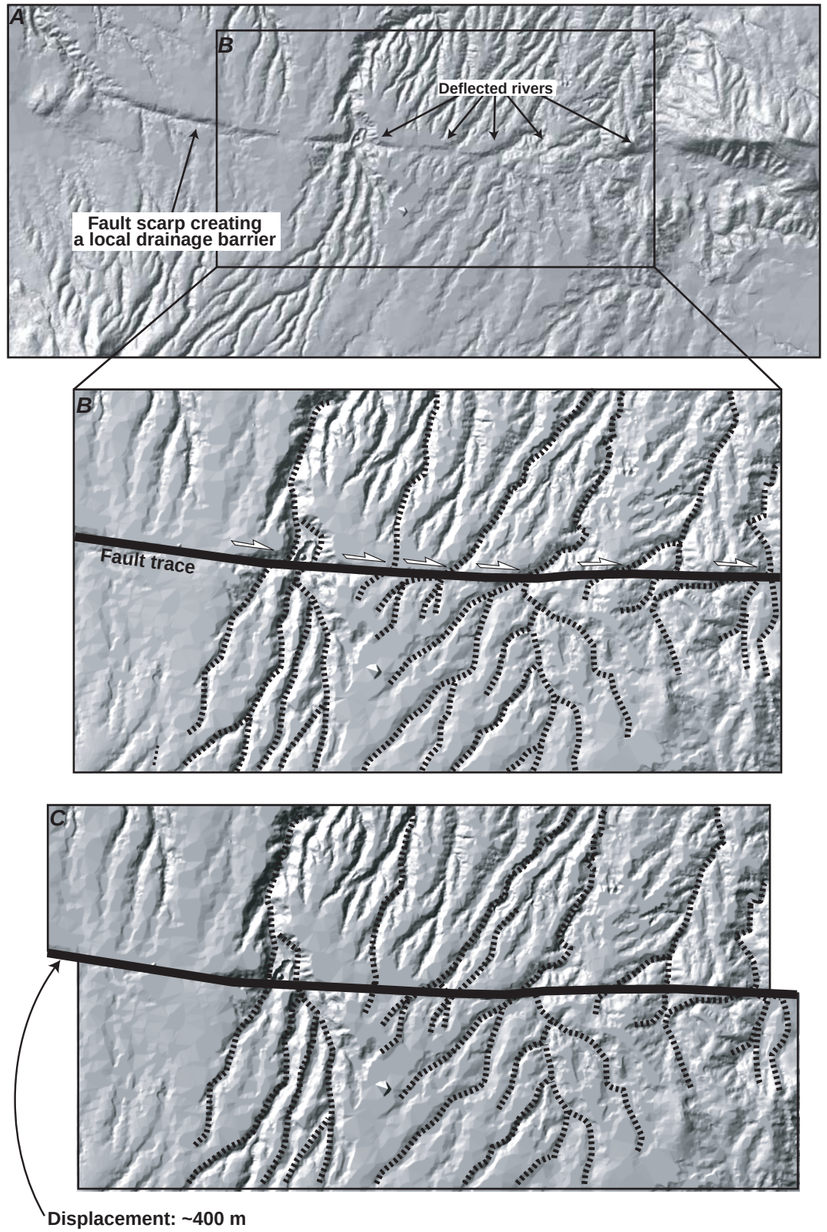
Data Repository

Figure DR 3



Data Repository

Figure DR 4



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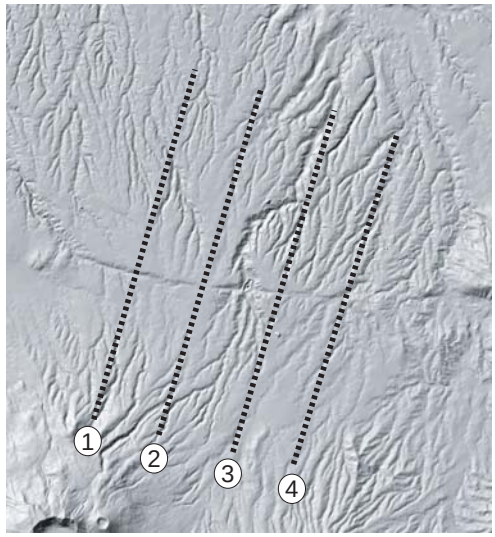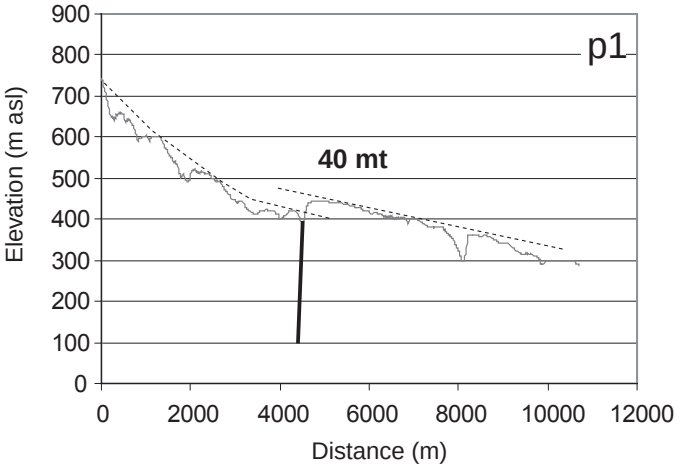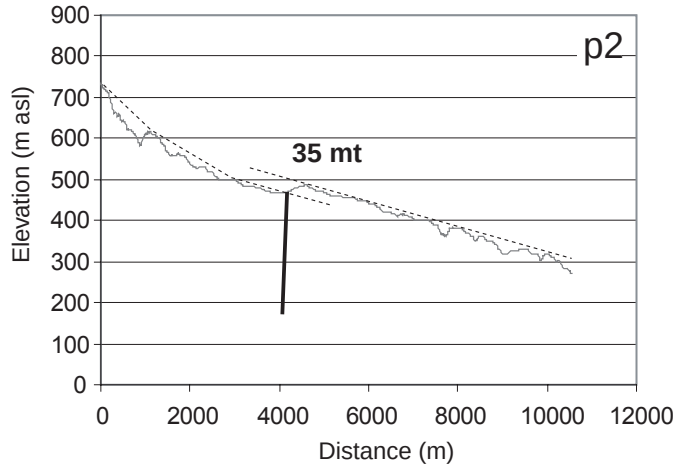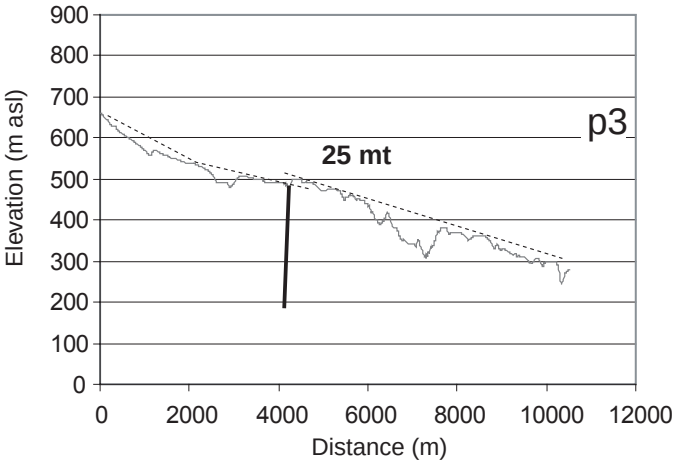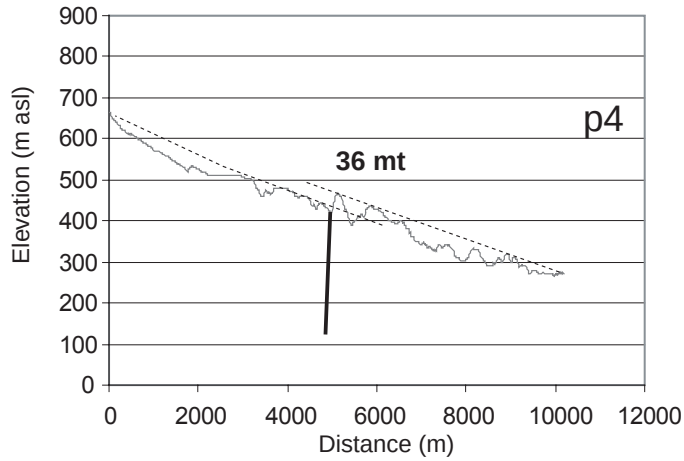
Figure DR 5