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FLUVIAL CHARACTERISTICS OF A TYPICAL TRIBUTARY OF THE URUGUAY RIVER

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The Muertos river is a tributary of the Uruguay river located at 27°S. Its basin is a typical valley eroded in the Planalto, hence, it represents the fluvial dynamics of a large territory. Particularly, it is a case representative of the 12 medium-sized tributaries located in the forested Argentine side of the meset.

The basin is 30 km long; the river channel begins 3 km downhill of the headwaters divisory. The channel is sinuous to meandering, 5 m wide in the upper reach up to 15 m wide at the mouth. The flow is permanent, with discharges between 0.20 and 0.55 m/sec in low waters. The bedload is formed by discontinuous banks of coarse sediments, fine pebbles and gravel in the upper reach and medium to coarse pebbles in the lower section. Such sediments cover approximately a half of the river bed, the rest of it is formed by basalt. Transport of bedload occurs only during floods. The concentration of suspended sediments is extremely low.

A low fluvial terrace appears along the river; its body was sedimented under dry conditions in the upper Quaternary. In the lower valley the terrace is 400 m wide and 6 m high. A high and narrow levee was developed during the present hydrological phase, which indicates that the channel does not migrate. The grain size of the terrace sediments is completely different to that transported today: it is a silty loam with a high content (up to 42%) of colloids.

The absence of sediments older than the terrace in the valley suggests a phase of intense erosion immediately before its formation.