

Some Antecedents About Turrialba's *Twin Plume*.

(Technical note. April 14, 2012)

Several reports, during the dry season, have raised concern, about what is believed, increased activity at Turrialba volcano: Costa Rica. The truth of the matter is that; under clear weather conditions this and other several active volcanoes are easily observed from all surroundings, provoking false warnings.

On march 27th, a rumor about elevated activity on the summit of Turrialba, generated attention on TV, radio and press since a double plume was reported from different directions. Although such *twin* plumes were observed and reported, this does not mean augmented activity. Evenmore, a paralell rumor of a landslide, on the cráter area, was disconfirmed. None of the volcano monitoring parameters was altered. Fig. 1.

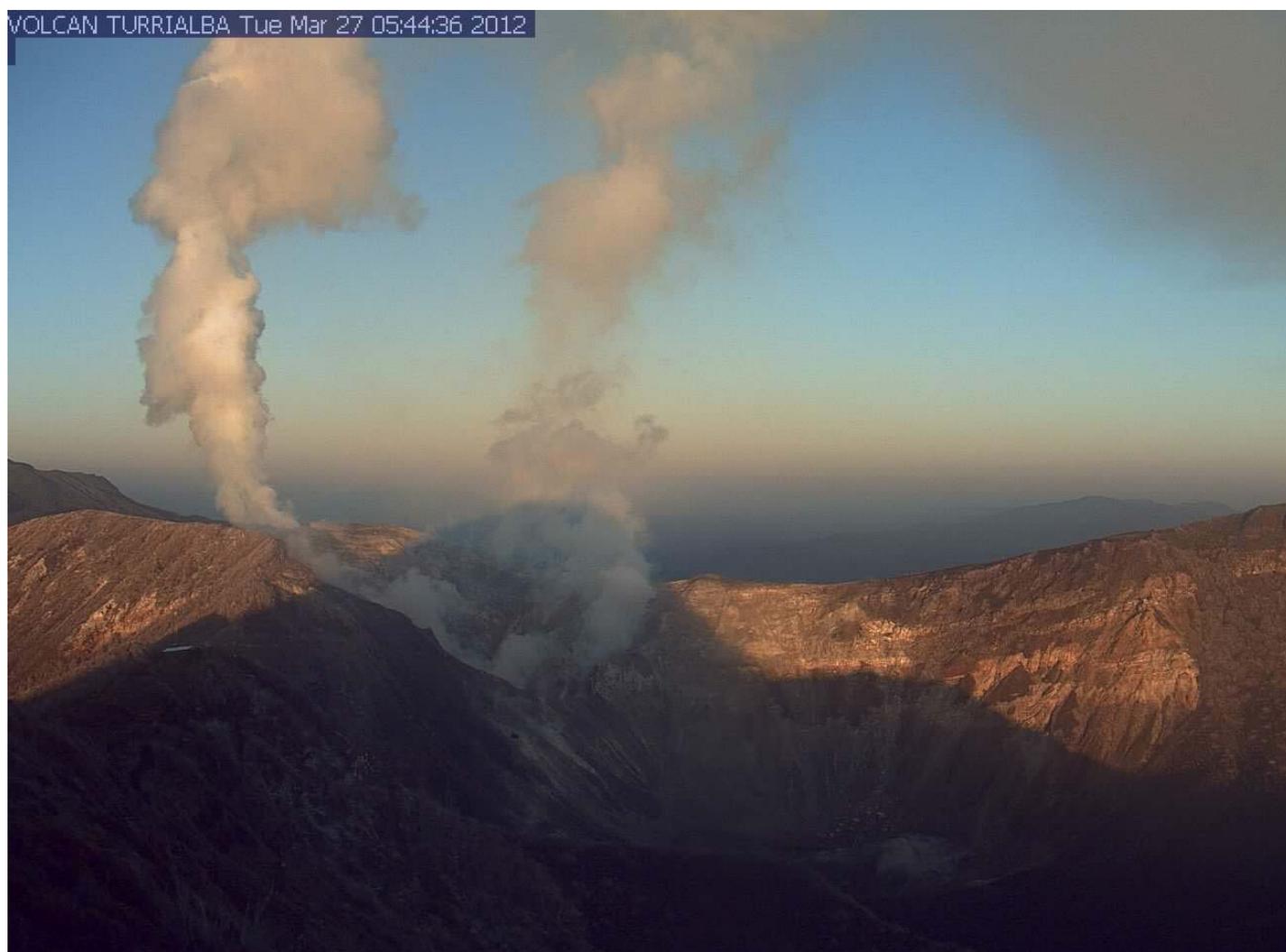


Fig. 1. Image taken at 5:44am. View from east to west.

Again, on April 12th, Turrialba's double column produced headlines on mayor newspapers and TV news. No phreatic eruption or release of sediments or prexistent material was documented. OVSICORI's webcam was on, offering images in near-realtime registering most of the gas activity that morning. A team from this institute, visiting the summit, did not see any extraordinary activity. Fig 2.

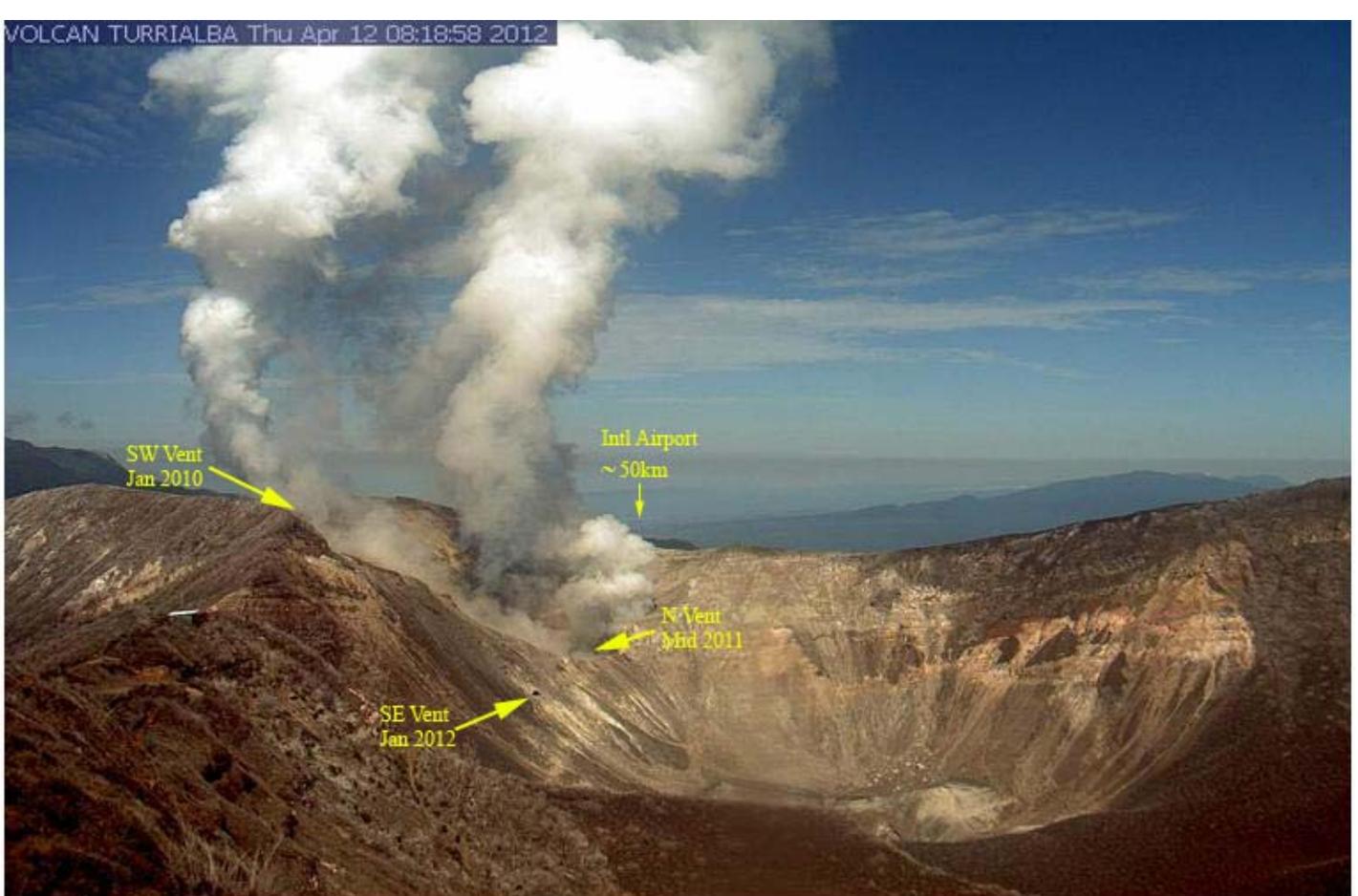


Fig 2. Screenshot of OVSICORI's webcam showing the sources of gas and vapor.

Under calm wind conditions on the volcano's summit, two distinct emitting points of gas and vapor show, due to convective conditions. Nonetheless such condition is not new; on the contrary it has been observed (under the mentioned particular conditions) since last year. In fact such observation was reported on a field note released on octubre 2011. Details can be found at:

<http://www.ovsicori.una.ac.cr/vulcanologia/informeDeCampo/2011/InfNWTurri12oct11.pdf>

At that time, the summit showed a column departing from the SW cráter (produced on January 2010). A similar one, collected gases and vapor from the main W cráter and its northern fumaroles (augmented by gases from the vent formed at the base of this very west cráter). Fig. 3.

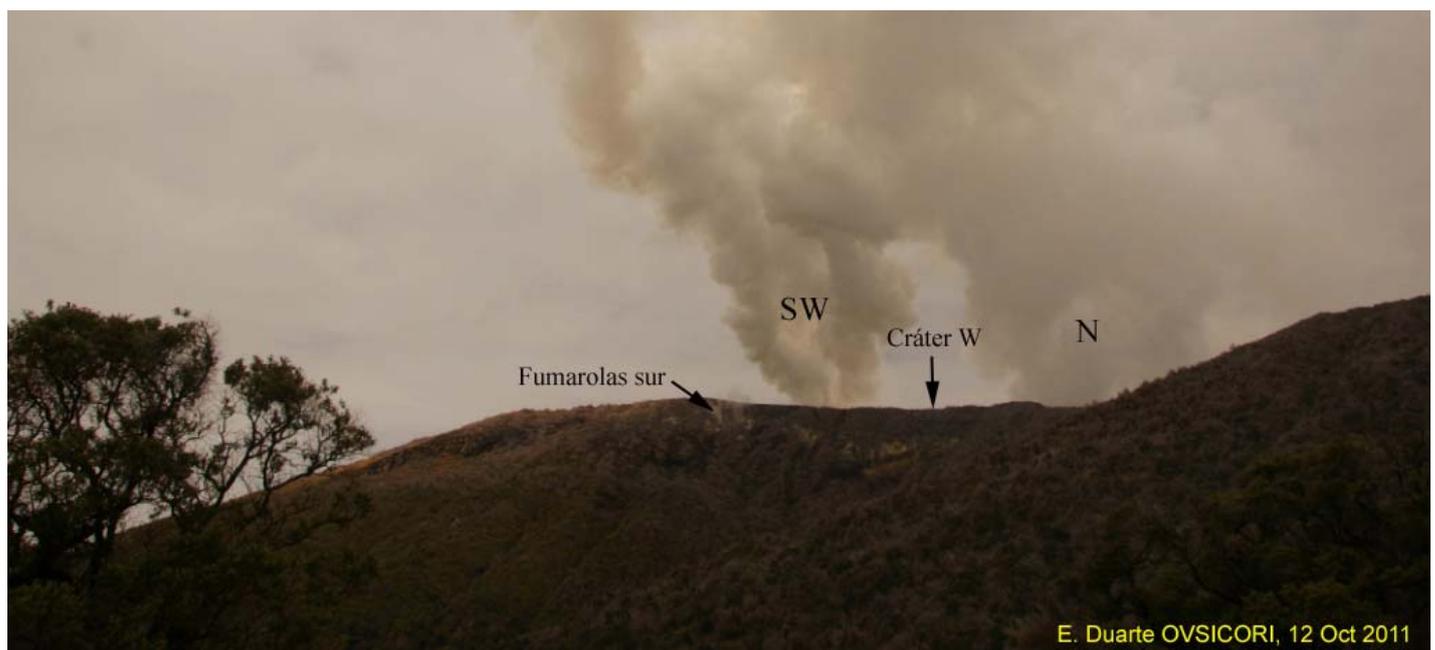


Fig. 3. View from the south of the edifice. Taken from the parkrangers booth.

Even more; initial observations of such *twin* plumes started since march 2011. Eventhough, the plume out of the SW cráter dominated, a smaller column from the W cráter and its northern fumaroles, was visible; at dusk or sunset. Fig. 4.



Fig. 4. View from west to east. Taken from La Silvia farm.

In conclusion; under dry season conditions it is common to see a *twin* plume on the summit of Turrialba volcano. Besides, the main active west cráter, three surrounding vents could produce vertical plumes. Nonetheless such condition does not imply increased activity nor presence of solid materials expelled to the atmosphere.

False reports about dark plumes (allegedly charged with ashes) tend to be explained by changing light conditions, position of the observer, atmospheric conditions and other optical factors. Such rumors and unsustained reports have a negative impact on local tourism and build negatively on the construction of accurate perceptions. More serious is the fact that false warnings may produce immediate unnecessary measures from aerial traffic controllers as to produce losses to aviation companies as diminishing credibility in authorities and scientists.

More info at: www.ovsicori.una.ac.cr .

Live images from Turrialba's webcam at.

<http://www.ovsicori.una.ac.cr/vulcanologia/videoturri.html>

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