

# Volcano Geology 7<sup>th</sup> at the Northern Andes

Multidisciplinary dialogues on volcano geology at low latitude, subduction-related polygenetic volcanoes

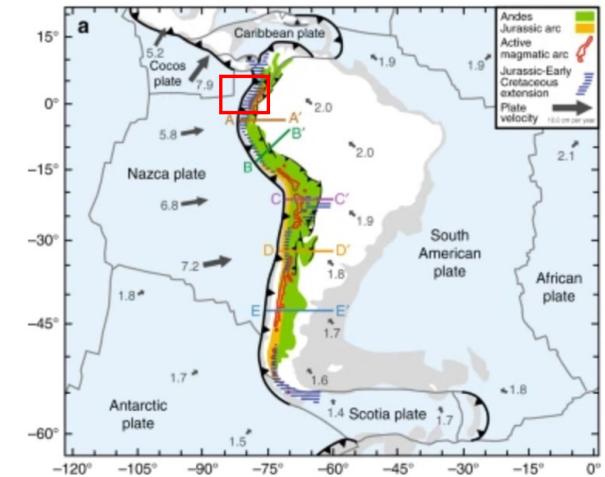
January 2025 or  
January 2026,  
depending on final  
decision on COV13

(To be confirmed  
in June-July 2024)



# Northern Ecuador – SW Colombia

- We will share experiences in the context of active tectonics across the North Andean block and discuss multidisciplinary field techniques to approach remote, poorly known, calc-alkaline polygenetic volcanoes that are long-dormant but potentially active.
- We will compare cases of good exposures at dry locations in Ecuador with cases in Colombia where the completeness of the geologic record is compromised by fast rates of weathering and erosion in the tropical climate.
- We will share experiences integrating Volcanology, Palaeoecology, Archaeology, Arts-Design, and social Sciences to involve local communities in building knowledge.



Shellart (2017)

These volcanoes are remote with limited facilities. Fieldwork involves:

- ✓ Altitudinal range: 2000 - 3800 m asl (Andean Forest/Páramo ecosystem (cold) within the ITCZ)
- ✓ Limited internet connection
- ✓ Limited cell-phone reception
- ✓ Mid-to-high difficulty trekking: there are 2-4 hrs long walks across fluvial terraces, sharp terrains, and high slopes
- ✓ Local hostels combined with humble accommodation w/shared bathrooms and cold shower in rural family houses.
- ✓ Limited food options.

# General itinerary for 9 days

1. Arrival to Ibarra (Ecuador): first slot for talks and posters
2. Visit exposures of Cuicocha and Imabura volcanoes
3. Terrestrial transport to Pasto (Colombia): all day long
4. Local transport to Las Mesas town: second slot for talks
5. Visit exposures of Doña Juana Volcanic Complex
6. Local transport back to Pasto.



We expect to raise discussions on:

- Volcano-tectonic collapse structures and related unconformities
- Lithosomes and challenges in stratigraphic correlations
- Lithofacies of Debris-Avalanche deposits, lahar deposits, small-mid volume confined vs unconfined PDCs
- Uncertainties in geochronology

# Topics for talks and posters

- Volcano field mapping, stratigraphy and facies analysis
- What can we learn from large-scale, volcanic mass-wasting processes?
- Neotectonics and paleoseismology in volcanic deposits
- The value of volcanic soils and pedostratigraphy in volcano geology
- Volcano palaeoecology and retrieving "hidden eruptions" in the tephra record
- Geoarchaeology in volcanic environments
- Revaluing geological mapping for society