

A study of characteristics of lava flow and compositions of Mt. Chuzi, North Taiwan

Taiwan is located on a complex convergent boundary between the Eurasian plate and Philippine Sea plate. My research project was to study the characteristic and composition of the lava flow of Mt. Chutzi in northern Taiwan. Mt. Chutzi is one of the seven subvolcano groups of Tatun volcano group which was active between 0.8Ma to 0.6Ma during the Pleistocene epoch. I have chosen this volcano because it is an extinct volcano and the outcrops are relatively easy to access and there are no post-volcanic activities such as ejection of sulphuric acid which could be very dangerous.

I have a great interest in studying earthquake and volcanic hazards. I knew that I have to carry out at least nine days of independent fieldwork in order to fulfil one of the criteria for charted geologist application in the future. I have always thought of carry out my final year project back in my hometown and learn about the geology in detail. I knew that it will be relatively expensive to carry out fieldwork overseas and send samples back to the lab for further chemical analysis. Fortunately, the Katie Wilkinson Research Scholarship has supported and given me an opportunity towards the final year research project. After several discussions with my supervisor, in order to have more data for the project, the investigation sites had increased from two initially to four sites. Samples collected from different sites allowed me to carry out chemical analysis to study the evolution of magma, hypothesise the explosivity and direction of lava flow. Together with the field observations, these data allow me reconstruct and study the past volcanic environment.

Last summer, I had carried out two weeks of fieldwork at Linshanbi, Cape Fukuei, Qinshan and Alibang in northern Taiwan. The fieldwork allowed me to work independently to practice and transfer the field skills that I have learnt from the previous field courses. Initially, many challenges were encountered during the fieldwork. The greatest challenge was that the outcrops were exposed to weathering processes which make it difficult to collect fresh samples and weathered samples would increase uncertainties in the analysis. The weather was another challenge because it was 36°C in July and furthermore, I had to suspend my fieldwork for 4 days due to a typhoon. Fortunately, I had received lots of assistance from North Coast & Guanyinshan National Scenic Area Administration and Yangmingshan National Park Headquarters throughout the fieldwork.

From the academic side of view, I have reinforced and learnt new field skills that were not learn from the practical sessions. The fieldwork had also helped me to work and solve problems independently, which is very helpful for my future career. Moreover, I have also met lots of people from the bureau in Taiwan and ENV staff members who were being very supportive throughout the fieldwork.

Even though lots of challenges were faced, there were many people willing to give me a hand to help and guide me toward the completion of fieldwork. Again, I have to acknowledge Katie Wilkinson Research Scholarship that enabled me to conduct my research project overseas. I had enjoyed the fieldwork and the skills that I learnt and the experiences that I gained were very valuable and memorable.



Scenery of Cape Fukuei.



Andesite from Cape Fukuei

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