

## **Undergraduate fieldwork course on ecology and earth sciences at Mt. Akagi Caldera, Gunma, Japan: for non-science majors**

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Mt. Akagi, locating at nearly 100-km north from Tokyo, is a huge caldera having some central cones growing until around 30 thousand years ago. The mountains composing the Akagi caldera has forests at their slopes. The caldera also has some lakes different in aqueous ecology. The mountains and lakes at Mt. Akagi caldera could be an ideal geological complex for fieldwork in earth and environmental sciences.

The fieldwork course is held for a week in the late summer prior to the fall-to-winter semester. Three-to-four faculty members, responsible to scientific education for non-science majors at Musashi University, instruct around ten students. Most of the applicant students are freshmen with no experiences on fieldwork in high school curricula.

Each instructor presents the outline of the fieldwork plan before the vacation season in summer. Usually, the plans cover several fundamental topics in environmental and earth sciences: geophysical observation on geodesy and meteorology, astronomical observation, semi-quantitative analysis of inorganic constituents in aquifer like the Onuma cardela lake, vegetation survey in forest ecosystem, geographical and geological field trip at some cardela cones and somma. Each student can chose the project theme from the proposed projects by the instructors whereas group project is recommended. Group study is usually effective in the works at the field and the pre-field preparation works on the college campus in Tokyo. Usually, the work group for hydrogeochemistry merges with that for geological observation based on the field trip.

On each day the fieldworks carry out from 9 to 6. The data are reviewed at night in each group supervised by the faculty members; the works on the next day are revised at the review session, too. On the final day, each group must present preliminary report. Final report is due in early winter.

After the Fukushima severe accident, we could detect radiocesium in the Akagi area. We are now planning to add a radioecology project in the course.