

(For JSPS Fellow)

Form B-5

Date (日付)

22/September/2014 (Date/Month/Year: 日/月/年)

**Activity Report -Science Dialogue Program-**  
(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名): Gedeon Csongor Istvan (ID No.P12805)

- Participating school (学校名): Utsunomiya Girls' High School

- Date (実施日時): 22/09/2014 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) 1st part: Hungary-MAGYARORSZÁG and Japan  
2nd part: Why soil fauna is important and how can we measure them?  
EDAPHOLOG System, a new, automated system for monitoring soil fauna.

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

In the first part of my lecture, I talked about the history, culture, language, climate, agriculture of Hungary in comparison with Japan. In addition to merely describe and show my home country, such as the capital, the World Heritage Sites, I tried to pinpoint those things that are similar or can be connected between Hungary and Japan despite the large distance between the countries. Another topic was to talk about "science" and "being or becoming a scientist" as the audience might be thinking about choosing a scientific career soon. Since it is difficult to talk about this topic with simple words, I only tried to tell them my motivation in a few words and minutes. In the second part of the lecture, I talked about my field of research in the last years. The following abstract of my talk summarize this part.

Soil is one of the limited natural resources that are essential for the well-functioning of the economy and for the good quality of our life. Soils and soil organisms within it provide us essential goods and services: sustain plant and animal productivity, maintain water and air quality, support human health and habitation, mitigate floods and droughts, regulate nutrient cycling and organic matter decomposition, degrade pollutants, and store carbon. Generally speaking a "good quality soil" is balanced in nutrients, high in humus, has good structure, and contains a wide diversity of soil organisms. Soil degradation, therefore, is a serious threat, which countries have been facing with. However, the knowledge on soil organisms is still very limited. I introduced the students the new automated, soil microarthropod-monitoring system, which provides real-time data indicative of the biomass and diversity of soil microarthropods by counting their number and their body size in a given soil. Soil microarthropods are the plant litter transformers and biological regulators of soil microorganisms. The system can cover the whole methodological process of the monitoring of soil microarthropods from sampling through data collecting to data management. The new system can help in shifting from the concept of

assessing soil biological quality to managing soil biological quality.

- Language used (使用言語): English with Japanese interpretation when it seemed necessary

- Lecture format (講演形式):

◆Lecture time (講演時間) 50 min (分), Q&A time (質疑応答時間) 5-10 min (分)

◆Lecture style (ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

Power point presentation \_\_\_\_\_

◆Interpretation (ex.: assistance by accompanied person, provided Japanese explanation by yourself) (通訳 (例: 同行者によるサポート、講師本人による日本語説明))

Makoto Shibata, a Ph.D. student of the Laboratory of Soil Sciences interpreted, summarized the lecture from time to time, and helped students to ask questions (in Japanese)

◆Name and title of accompanied person (同行者 職・氏名)

Makoto Shibata, Ph. D. student \_\_\_\_\_

◆Other note worthy information (その他特筆すべき事項):

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- Impressions and opinions from accompanied person (同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。):