

(For JSPS Fellow)

Form B-5

Date (日付)

15/2/2012

(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): Bacosa Hernando Pactao (ID No. P 11073)

- Participating school (学校名): Aomori Prefectural Sanbongi High School

- Date (実施日時): 7/2/2012 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Our Tiny Friend, Our Great Friends

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

The lecture began with warm-up exercises and basic questions to stimulate the attention of the students to the topic. This was followed by a video on how bacteria work and benefit human beings and the environment. After a short flash on the formation of the earth and the role of bacteria in the evolution of life, I showed several slides on microbial product in Japan. The main part of the lecture began with a brief summary on how I became a researcher that led to my current research. I introduced my hometown through its natural attractions- the beaches, the lakes, the forest, and the effect of mining and oil drilling activities to these valuable resources. From these I expounded on soil and water pollution that led to loss of life in coastal habitats such as mangroves. Mangroves as valuable resources need to be protected because several life forms depend on it. The remediation of mangrove contaminated soil became the motivation of my research to investigate first the effect of oil pollution on meiofauna population in mangrove sediments. Driven by the very slow recovery of meiofauna in the soil, the second part of my presentation began with my research on oil and hydrocarbon-degrading bacteria from mangrove sediments in Okinawa. Inspired by the relationship of the toxicity of oil components especially aromatic hydrocarbons, I focused on studying the mechanism of a microbial consortium that can degrade aromatic hydrocarbons more rapidly than aliphatic hydrocarbons. I discussed the degradation ability of the consortia, and the community dynamics during the degradation process. I emphasized my goal of remediating an oil-contaminated soil, and the microbial consortium I developed as a potential candidate to clean-up contaminated mangrove areas. I encouraged students to ask questions after the first part of my talk and during the lecture. This is for them to

review and understand the first part, to stimulate their thinking, and attune them to the second part. Also I did some warm-up activities, changing of seats, and question and answer by raising the colored cards during the lecture.

- Language used (使用言語): English and Japanese

- Lecture format (講演形式):

◆Lecture time (講演時間) 100 min (分), Q&A time (質疑応答時間) 50 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))

Projector, colored papers

◆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))

none

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

none

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

none

- 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。): NA