

(For JSPS Fellow)

Form B-5

Date (日付) 2日10月2017年

(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): NITTA Joel Hamilton (ID No. P16391)
- Participating school (学校名): 千葉市立千葉高等学校
- Date (実施日時): 25日9月2017年 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): Ecology and Evolution of Ferns
- Name and title of your company (同行者 職・氏名)  
一人で行きました
- Lecture format (講演形式):
  - ◆Lecture time (講演時間) 90 min (分), Q&A time (質疑応答時間) 30 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))  
プロジェクター使用による講演

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

I first introduced myself and provided some personal background. I described briefly my home state of California, shared some interesting stories about my family history as immigrants from Japan, and explained how I became interested in science. I spent most of the talk explaining my research topic, fern ecology and evolution. Ferns are the second-most diverse group of land plants (after seed plants), but many details of their ecology and evolution are not well understood. One important characteristic of ferns that sets them apart from all other land plants is their unique life cycle, which alternates between two very different, free-living stages called the "sporophyte" and the "gametophyte." The "ferns" that most people are familiar with are actually sporophytes, and very few people know about the much smaller (typically < 1 cm) gametophytes. Despite their small stature, gametophytes are very important for fern reproduction because they make the eggs and sperm. One major area of my research has been studying the ecology of fern gametophytes in the field and identifying them to species by using DNA sequences. I also discussed other areas of my research, such as determining how different fern species are related (phylogeny), describing new species (taxonomy), and investigating how fern species are adapted for their unique environments (physiology).

- Overall advice or comments to future participants in the program (今後の講師へのアドバイス):

Be sure to include Japanese translation spoken and on slides for important phrases and keywords. It is difficult to explain one's research in very simple, slow English only, so the students need at least some terminology in Japanese to understand. Since I didn't have an experiment, I showed some videos. This helped the students understand the topic and broke up the long talk, which was a needed break for both me and the students.

必要に応じてはパワーポイントのスライドに日本語訳を書いたり、できれば話している間も重要な語彙やフレーズを日本語で説明するとよろしいかと思います。自分の研究をわかりやすく、かつゆっくり英語で説明することは思ったよりも難しかったので、日本語訳を適切に使うことは生徒たちの理解の大きな助けになると思います。そして、結構長い発表ですから、(もし実験する予定がなければ)途中で映像を取り入れると、生徒たちの理解も高まるし、自分の休憩にもなるのでおすすめです。

- Other noteworthy information (その他特筆すべき事項):

- Impressions and opinions from a company (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。)