

(For JSPS Fellow)

Form B-5

Date (日付) 01/02/2016

(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): Md. Kamruzzaman \_\_\_\_\_ (ID No. P 15389)
- Participating school (学校名): Fukui Prefectural Wakasa High School (Wakasa-city, Fukui) \_\_\_\_\_
- Date (実施日時): 29/01/2016 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): (in English) Phenology of Subtropical Mangrove Species

(in Japanese) 亜熱帯マングローブ樹種のフェノロジー

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

Mangroves in the subtropical area of Japan are growing in the northern limits of their distributions. This study was conducted to understand vegetative phenology, reproductive phenology, as well as to evaluate and compare the litterfall dynamics of three mangrove species in the family Rhizophoraceae, *Bruguiera gymnorrhiza*, *Kandelia obovata*, and *Rhizophora stylosa* on Okinawa Island, Japan. Leaf fall and leaf production (stipule) of all the studied species occurred throughout the year, with distinct seasonal patterns, i.e., the highest in summer (June–August) and the lowest in winter (December–February).

In case of *B. gymnorrhiza*, flowers were observed throughout the year, with a massive production in September, whereas propagule production was highest in May and July. Reproductive organs of *K. obovata* followed a very specific monthly periodicity, where flowers were observed from May to October with the greatest abundance in August, and propagules were observed from March to June with the massive abundance of mature propagule in April to May. The highest production of flowers and fruits were observed in July for *R. stylosa*, whereas massive production of propagule was observed in September. The average development period from flower buds to mature propagules was 9 months in *B. gymnorrhiza*, 11 months in *K. obovata*, and 11–12 months in *R. stylosa*. The maturation period of reproductive organ of all the three species appears to be similar to that of congeneric species inhabiting tropical regions.

The conversion rate of flowers to propagules was 9.8 % in *B. gymnorrhiza*, 6.1 % in *K. obovata*, and 2.2 % in *R. stylosa*. *Bruguiera gymnorrhiza* tended to increase new leaf production

with increasing reproductive organ production, but *K. obovata* and *R. stylosa* showed a negative correlation between new leaf production and reproductive organ production.

- Language used (使用言語): English

- 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))

Presentation file was .ppt and I used projector

◆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))

Accompanied person my host researcher

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

Akira Osawa, Professor, Graduate School of Global Environmental Studies, Kyoto University

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

I am really grateful to JSPS for offering me such a good opportunity for sharing my experience with students. Actually this was a very good experience in my life.

- 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。):

My host researcher told me that the presentation was very nice and he enjoyed a lot with high school student and he was impressed to get very intellectual question from the student regarding our lecture.