

**Research Activity Report**  
**Supported by “Leading Graduate Program in Primatology and Wildlife Science”**  
 (Please be sure to submit this report after the trip that supported by PWS.)

2016. 6, 10

<b>Affiliation/Position</b>	Primate Research Institute/M1
<b>Name</b>	Gao Jie

<b>1. Country/location of visit</b>
Primate Research Institute, Kyoto University, Inuyama
<b>2. Research project</b>
Genome Science Course
<b>3. Date (departing from/returning to Japan)</b>
2016.5.30 – 2016.6.3, 2016.6.7 (6 days)
<b>4. Main host researcher and affiliation</b>
Dr. Hayakawa, Assistant Professor at Primate Research Institute, Kyoto University
<b>5. Progress and results of your research/activity</b> (You can attach extra pages if needed)
Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.
<p>During this course, I conducted DNA analyses of the fig insect samples collected from Yakushima. Here is our schedule:</p> <p>May 30: Guidance; DNA extraction and purification          May 31: DNA extraction and purification; PCR; Purification of PCR products          June 1: Purification of PCR products; Electrophoresis          June 2: Sequence analysis of sequencing results          June 3: Discussion and preparing for the 5th International Seminar on Biodiversity          June 7: Poster presentation in the 5th International Seminar on Biodiversity</p> <p>Fig and fig wasp samples were collected in Yakushima. By analyzing the sequence of the samples, we would like to test the hypothesis that figs and fig wasps have been coevolved.</p> <p>The tree shows the following relationships and bootstrap values:</p> <ul style="list-style-type: none"> <li>Node 44: (F1 <i>F. sarmentosa</i> - Yakushima, F4 <i>F. sarmentosa</i> - Yakushima, F2 <i>F. sarmentosa</i> - Yakushima, F6 <i>Ficus</i> spp. - Yakushima, F8 <i>F. pumila</i> - Yakushima) sister to (AB445603.1 <i>F. pumila</i> - Nagata-misaki, Kamiyaku-cho, Kagoshima, AB445605.1 <i>F. sarmentosa thunbergii</i> - Taketomi-cho, Okinawa, AB445606.1 <i>F. sarmentosa nipponica</i> - Yaku-cho, Kagoshima, AB445609.1 <i>F. erecta</i> - Aragusuku, Gusukube-cho, Okinawa, AB445602.1 <i>F. variegata</i> - Mt. Kuburadake, Okinawa)</li> <li>Node 49: (Node 44) sister to (F5 <i>F. erecta</i> - Yakushima, AB445607.1 <i>F. erecta</i> - Kitamidorigaoka, Toyonaka-shi, Osaka)</li> <li>Node 78: (Node 49) sister to (F7 <i>F. microcarpa</i> - Yakushima, AB445595.1 <i>F. microcarpa</i> - Kojima, Yaku-cho, Kagoshima)</li> <li>Node 32: (Node 78) sister to (F3 <i>F. superba</i> - Yakushima, AB445593.1 <i>F. superba japonica</i> - Anbo, Kagoshima, AB445594.1 <i>F. caulocarpa</i> - Mt. Kuburadake, Okinawa)</li> <li>Node 88: (Node 32)</li> </ul> <p>Scale bar: 0.0005</p>
<p>Fig. 1 Neighbour-joining tree of <i>Ficus</i> species using atpB-rbcL region of the chloroplast (from the group poster)</p>

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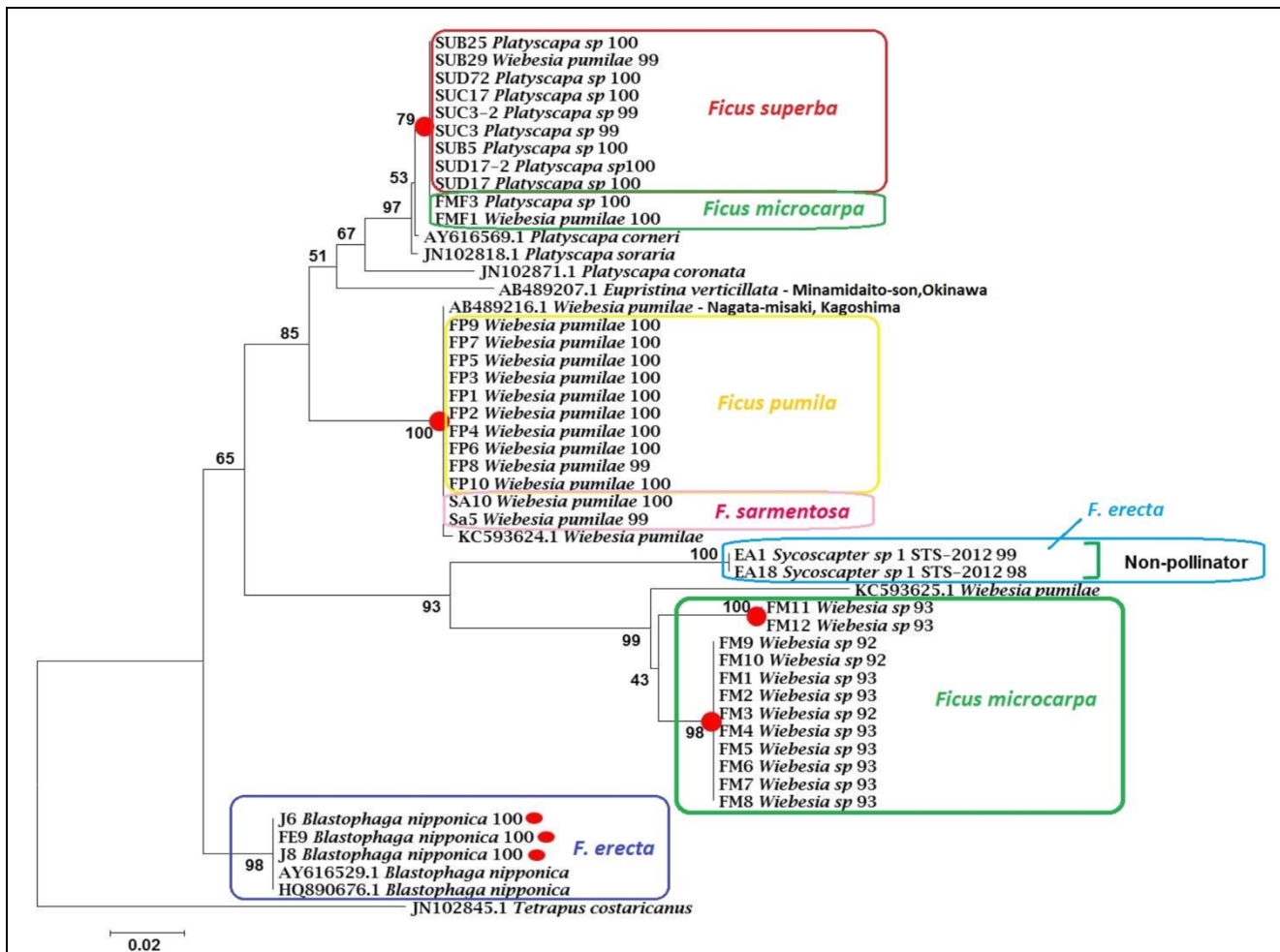


Fig. 2 Neighbour-joining tree of fig wasp species using 28S nuclear gene (from the group poster)

The fig phylogenetic tree is shown in Fig. 1 and the fig wasp phylogenetic tree is shown in Fig. 2. Combining the results collected from Yakushima about the correspondence relationship of fig species and fig wasp species, we concluded that the coevolution relationship was not distinct from the DNA analyses.

On June 7, we presented our study project in the 5th International Seminar on Biodiversity.

During this course, I learned about the method of DNA sequence analysis. We worked as a team and shared valuable experience working together and finishing a project. It was very helpful for me.

## 6. Others

Thank all people in this course for their kind help.

During this course, I felt the schedule was kind of tight for the genetic experiments for students who had no relevant experience including me. It might help to have more time if there are many beginners in the course.