

### 3

#### Phylogeny of *Prunus yedoensis* Matsumura (Rosaceae)

Joo-Hwan Kim\*, <sup>1</sup>Chansu Kim and <sup>2</sup>Yun Shik Kim

Dept. of Biology, Taejon University, Taejon  
300-716

<sup>1</sup>Cheju Forestry Exp. Institute, Cheju

<sup>2</sup>Dept. of Biology, Korea University, Seoul 136-701

Although taxonomists have suggested several theories on the origin of *Prunus yedoensis*, there is no agreement yet. Three scenarios are represented: 1) hybridization, 2) it is native to the Idz peninsula in Japan, and 3) it is native to Mt. Halla in Korea. To define the taxonomic problems of *P. yedoensis* and pursue the phylogeny, we performed a morphological review, anatomy by LM and SEM, RAPDs and nrDNA ITS sequence analyses. Also, phenetic and cladistic analyses were performed based on the results. We found 33 previously unknown individuals of *P. yedoensis* along with three ones which had been already reported from Mt. Halla, conserved as National Monument. Based on the results, we suggest the following: 1) It is confirmed that the origin of *P. yedoensis* is Mt. Halla on Cheju Isl., 2) we could not detect any evidence that *P. yedoensis* is a hybrid between nearby species, 3) *P. yedoensis* has an independent evolutionary history and is distinguishable from other species, and 4) *P. pendula* might be the most closely related species to *P. yedoensis*.

---

Keywords: *P. yedoensis*, origin, phylogeny