The Japanese Tradition of Grafting

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Various methods for grafting have been created and inherited from previous generations for a long time in Japan. While some methods have spread widely, others have not done so and remain hidden within a nursery. Many of these grafting techniques are then lost when there is no successor to learn from the master. It is with regret that I recall this history of lost grafting techniques in Japan.

I have utilized various methods of grafting not only to propagate plants but also as a potential tool to introduce the indigenous character of the rootstock into the scion. Examples of my work are presented below.

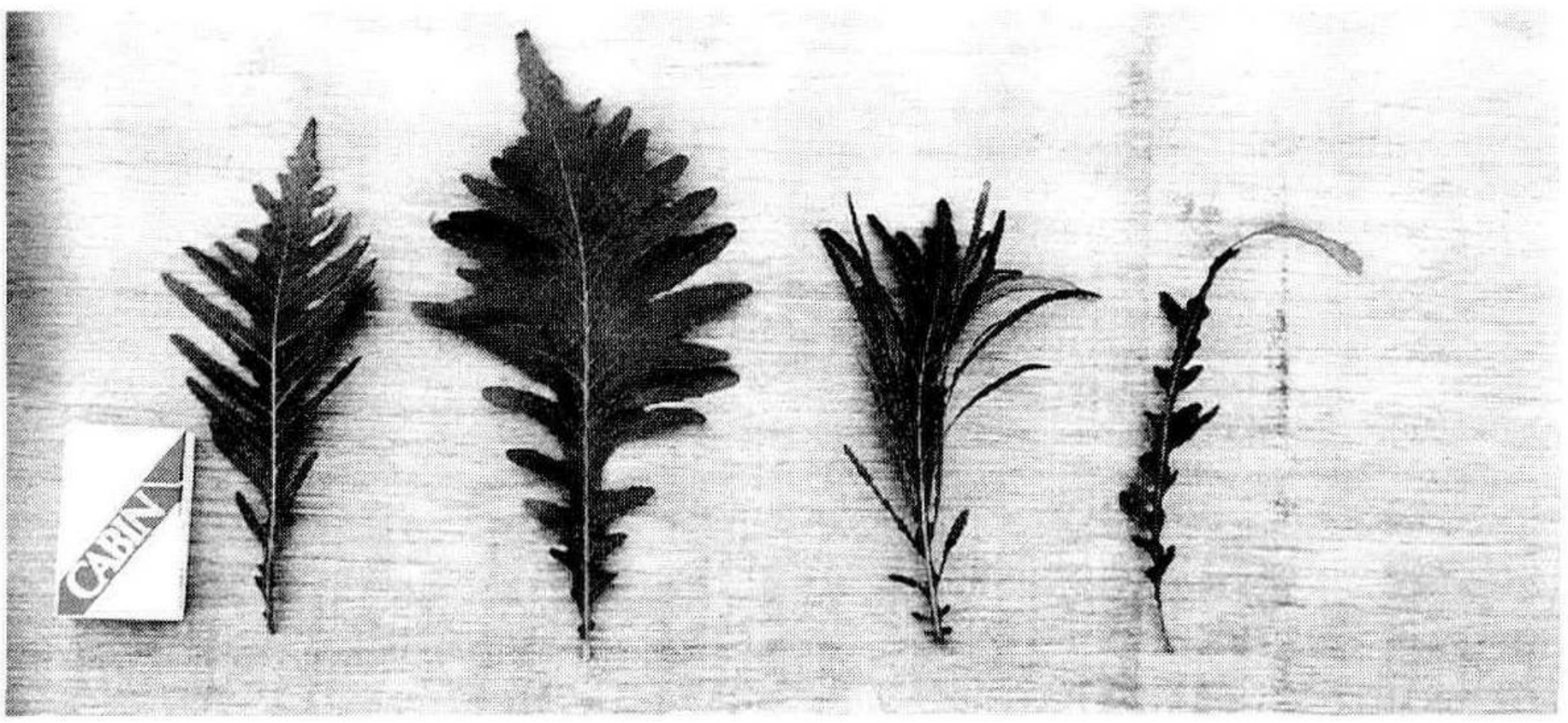

Figure 1. *Quercus dentata* 'Pinnatifida' leaf shapes observed when grafted onto a number of different *Quercus* species.

Figure 2. A grafted weeping silktree albizzia.

Quercus dentata 'Pinnatifida' was grafted onto a number of *Quercus* species [*Q. dentata*, *Q. aliena*, *Q. mongolica*, *Q. acutissima* (syn. *Q. serrata*), and *Q. variabilis*] with differing results. I observed that some *Q. dentata* f. *pinnatifida* grafted onto *Q. dentata* produced bigger leaves than on *Q. aliena* a year after grafting and leaves as strange as peacock feathers were observed in the 2nd year (Fig. 1). When grafted onto either *Q. acutissima* or *Q. mongolica* the leaves become thinner and curled at the tip like a phoenix. These results suggest that using different understocks may produce grafted plants with forms listed in the literature similar to *Q. dentata* f. *laciniata* and *Q. dentata* f. *pinnatiloba*. Further research will be needed to better understand these results. When grafted onto *Q. acutissima* and *Q. variabilis*, a beautiful golden leaf coloring developed which may have been affected by the inherent color of the rootstocks. In addition I am planning additional trials with different rootstocks aiming to improve fall color, reddish-brown in Japanese on European oaks, with scarlet oak and pin oak which have a natural red color.

In addition, I have had successful results with a weeping-type silktree albizzia which is difficult-to graft (Fig. 2).

Breeding of Spring Flowering Gladiolus for Cut Flower Production

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BREEDING AND MARKETING

Two types of demand dominate cut flower sales (more than 80%) in Japan; one is business occasions such as ceremonial needs and the other is domestic consumption such as casual flowers. The remaining approximately 20% is demand by flower fanciers who have a passion for flowers. They may have studied flower arranging and take it for granted that one decorates with flowers when visitors come. Flower fanciers have a higher sensitivity with regard to flowers, are better at flower arranging, and may act as a driving force in the flower market leading to the next generation of casual flower sales. Therefore, breeders should pay more attention to their demands and produce/introduce new plants that can create new images with flowers. Traditionally the forces driving plant breeding have been predominately productivity increases and disease resistance.

POTENTIAL OF SPRING GLADIOLUS

Images of the commonly grown gladiolus are the following. A large and gaudy flower that is conspicuous everywhere in summer, suitable for a hotel lobby but not for a family table, good for decoration at the front entrance of a home but not good for placing on a cupboard, and fading quickly.

Spring gladiolus are different. They flower from autumn to spring and have a long flower life. Stem diameter is less than 7 mm and height is less than 1 m; this is good for compact flower decorations. The range of flower colors is wide and includes most