

# An Illustrated Guide to the Initiation and Development of Azalea Flowers

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Azalea flowering schedules are usually based on the number of weeks after the final pinch. We have been as guilty of that as any other researchers working with this crop. We will state that long days should be provided for six weeks following the pinch, to assure adequate vegetative growth before short days are started. Then we will recommend a minimum of eight weeks of short days before plants are placed at temperatures ranging from 35 to 50°F to break flower bud dormancy. Four to six weeks in the cooler (four weeks for Kurume types, six weeks for other groups) will usually be required, and then plants can be forced at 60°. We will usually say that forcing time varies with variety, season, and temperature. We are quite exact in the time schedule until forcing time, and then we will admit variations in time required for flowering.

Azalea flower schedules have been developed after many years of experience and research. The schedules are quite accurate but occasionally flower initiation does not occur exactly when expected. Examination of the shoot apices, rather than the calendar, would have revealed that the plants were not developing precisely as one would have expected. Performing the various cultural steps based on stage of apex development would make allowances for varietal, seasonal and climatic differences.

The same equipment is needed for dissecting azalea shoot apices and determining stages of development as is needed for leaf counting in Easter lily timing. A forceps or teasing needle can be used to remove leaves and bud scales around the apex, but a sharp-pointed knife blade also can accomplish the task. A 10x hand lens would enable one to detect the stages of floral development. Identification of major floral parts is necessary for guidelines to be of value. Photographs of the different stages as originally listed by Kohl and Sciaroni might help and are shown in this article.

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Kohl, H. C., J. and R. H. Sciaroni. 1956. Bud initiation of azaleas. Calif. Agric. 10(5):15.

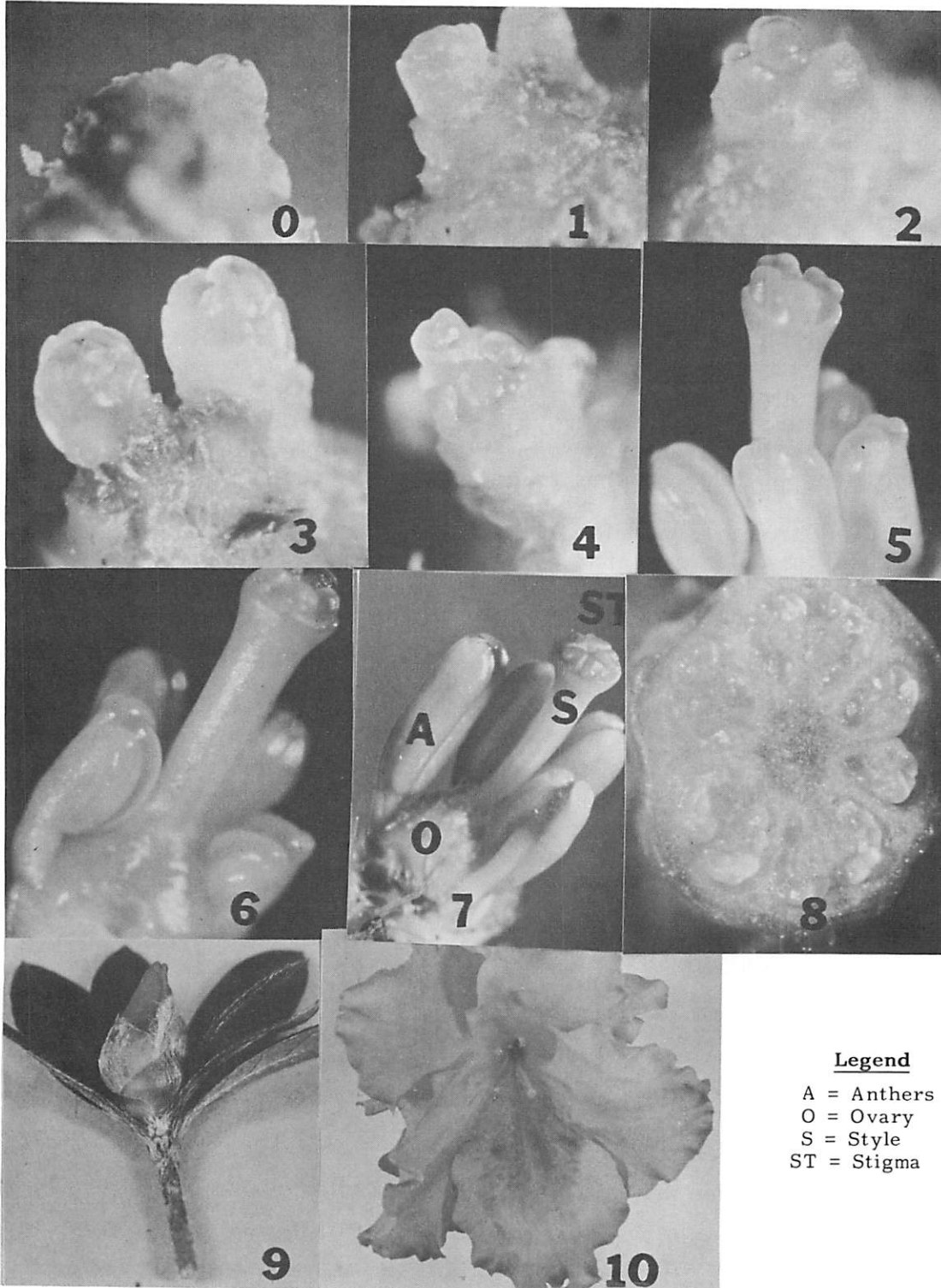
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## Stages of Apex Development of Azaleas

Stage	0	Vegetative. Apply chemical pinching agents.
	1	Change in shape of terminal.
	2	First row floral parts originated.
	3	Petals differentiated.
	4	Anthers differentiated. Place plants at 35 to 50°F.
	5	Style elongated and open. Apply GA at 60°.
	6	Style elongated and closed. Move plants from cooler.
	7	Ovary well developed.
	8	Ovules well developed (cross-section of ovary).
	9	Bud showing color.
	10	In flower

Pictures are of the variety Red Wing but floral apices of most varieties are very similar.

Legend

A = Anthers  
 O = Ovary  
 S = Style  
 ST = Stigma