

there are two distinct and separate periods of opening or anthesis, a condition which may be designated as dianthesis. Between the two periods of opening there is an interval of about 24 hours. The entire time from the beginning of the first or female opening with the end of the second or male opening (the completed cycle of dianthesis) covers slightly less than 36 hours.

The succession of sets continues to operate on this schedule very regularly under favorable weather conditions and this brings two different sets into alternation or daily sequence each day. Each forenoon a new set opens for the first or female opening and this same set opens for the second or male opening on the afternoon of the following day. Each afternoon the set which opens for the second opening had its first period of opening during the forenoon of the previous day.

Each flower is perfect, it has two distinct periods of opening, it is mature as a female during the first period and as a male during the second period. There is the development of the two sexes in each flower at different times (dichogamy). The flowers open synchronously in sets and the two periods of opening occur during different hours of the day. Thus the flowers open on a tree at any one time are alike, and the development of the flowers is so coordinated or synchronized that the entire tree functions as a female in the forenoon and as a male in the afternoon.

#### THE GENERAL RULES FOR FLOWER BEHAVIOR IN THE "B" GROUP

The flowers of varieties of the B group are like those of the A group in structure and general appearance. Also they have the same two periods of opening and the flowers also open synchronously in sets. But the sets are normally open for the first or female period in the afternoon and for the second or male period in the forenoon either of the following day or of the second day. The succession of sets of flowers operating in this cycle gives a sequence in the daily alternation that is the reverse of that in class A. The flowers of a tree of a member of the B group function as males in the forenoon and as females in the afternoon.

#### THE DAILY RECIPROCATION BETWEEN "A" AND "B" VARIETIES

The relative flower behavior typical for A and B varieties and the reciprocation in pollination which results may be shown by comparing two clonal varieties such as Taylor and Panchoy.

During the forenoon, while flowers of Taylor are in the first period or female anthesis, the flowers of Panchoy are all of the second period or male opening (upper section of Fig. 3). Thus trees of Panchoy are shedding pollen during the forenoon at the