



Late Violets

THE long, mild autumn which we have enjoyed over practically the whole of the country will without much question make it possible for November wood rovers to find May flowers in bloom. And unless winter sleet and snow fall too heavily it may be possible to turn out violets from under the shelter of dry leaves every month until spring comes again.

Winter violets seem more or less miraculous, but as a matter of fact they are quite natural, and really only to be expected when we have spring weather in the fall. Flower buds of perennial plants, whether they are woody trees and shrubs or whether they store their reserve food under ground as violets do, are almost always made up in advance. As soon as the season's leaves are unfolded in the spring, buds providing leaves and flowers for the subsequent season begin to develop at the bases of their stems, and by the time autumn comes these buds are finished and sealed up inside their protective covering of scales. Everything the plant will wear next spring is already there in miniature. All that is needed to start the unfolding process is proper warmth and proper moisture. If this happens to come in the fall rather than at its proper time six months later, it makes no difference to the plant. Violets do not run by calendar. They respond automatically when the proper stimuli reach

It is not remarkable, either, that they should bloom in the dead of winter, when the ground may be frozen under their roots. The warmth need not be general; so long as it reaches the buds and the little nub of stored food at the "crown" of the plant, that is enough to set things going. And the slightest surface thaw may easily suffice for that.

Science News Letter, November 14, 1931

## Here's how you can give two likeable

\$3.50

## **Christmas Gifts**

A \$5.00 gift at this reasonable \$3.50 price--if you fill out two of the gift spaces below with names of your friends, you may have the two Science News Letter Subscriptions at \$3.50 each, instead of \$5 each.

A good way to solve two Christmas Gift problems at one time, and save a little money as well.

•

To SCIENCE NEWS LETTER 21st and Constitution Avenue, Washington, D. C.		
Please enter for [] 1 year [] 2 years the following subscriptions to Science News Letter and bill me:		
GIFT TO	GIFT TO	
Name	Name	
Street Address	Street Address	
City and State	City and State	
GIFT TO	My Name and Address-Send Bill to:	
Name	My Name	
Street Address	Street Address	
City and State	City and State	
Prices: 1 year, \$5.00; 2 years, \$7.00 12080		

Two or more one year subscriptions, \$3.50 each

No extra charge for postage to anywhere in the world

