heights of 1,000 feet above drainage. The Central or Alleghany province is composed of linear ridges separated by valleys of varying width, trending northeast-southwest, with seven more or less definite parallel ridges in a distance of 14 miles rising to heights of 1,000 to 2,000 feet above drainage. The southeastern, or Great Valley province, is a broad valley consisting of a dissected peneplain which lies at an elevation of about 2,100 feet.

It sometimes happens in this region that the alignment of clouds with mountain ridges is so conspicuous that there can be little question but that the distribution of clouds is determined by the topography. This is likely to be conspicuous when there are continuous thin clouds covering the Cumberland plateau and moving to the southeastward. As the cloud mass moves over the Alleghany province there is a gradual alignment of clouds in the northeast-southwest direction paralleling the mountain ridges, separated by narrow cloudless areas, and the perfection of this arrangement increases with progress southeastward across the ridges. This parallelism is maintained for several miles over the Great Valley and gradually becomes less definite.

R. J. HOLDEN

TWIN SEEDLINGS IN ANGIOSPERMS

IN SCIENCE for May 16, 1930, one of the items of the Supplement page xiv has to do with the possibility of two plants being produced from a single seed. "Mrs. Tema Shults Clare, a teaching fellow at the University of Southern California, has obtained in two instances pairs of twin seedlings sprouting from Torrey pine seeds, and one pair of similar twins from the seed of a piñon pine." To this report is added the following statement: "This habit of twinning from single seeds is peculiar to the gymnosperms. The higher seed plants, the producers of showy flowers, apparently do not have this possibility."

In SCIENCE for August 23, 1929, R. H. Woodworth reported the production of two embryos from one seed of *Alnus rugosa,* a species of the Betulaceae which is a family of the Angiospermae. From a sowing of 150 seeds about 50 per cent. germinated and six of these produced twin seedlings. The pairs have developed quite normally into young plants. This phenomenon is considered at length in a paper entitled "Parthenogenesis and Polyembryony in *Alnus rugosa,*" which appeared in the *Botanical Gazette* for June, 1930.

It is also well known that the citrus fruits, particularly the grapefruit, produce seeds which frequently give rise to more than one seedling.

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MINERAL RESOURCES OF GREECE

ONE usually thinks of Greece as the home of decaying monuments to immortal thinkers and writers. Few of us realize that Greece is a wealthy country. The ancient Greeks did considerable mining of copper, silver and tin, but they did not begin to touch the wealth of other minerals which lay beneath the soil. The development of natural resources has remained inactive for ages.

The Germans were pioneers in extracting some of Greece's mineral wealth and are still active in some localities. The British have long been quarrying the valuable and extensive marble deposits, but on the whole a vast and virgin area remains to be worked.

The more abundant ores found in Greece are those of iron, lead, sulfur and magnesium. The yearly production of these ores averages 322,000 tons. Iron ore mined amounts to 88,000 tons containing 42–62 per cent. iron. Lead is mined to the extent of 76,000 tons. This ore is rich in silver. Magnesite occurs throughout Macedonia and contains 95 per cent. magnesium carbonate. Other ores extracted in lesser amounts are those of zinc, nickel, chromium, manganese, aluminum, copper and antimony. The total amount mined approaches 30,000 tons yearly.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

A PRACTICAL METHOD OF DETERMINING THE FALL IN POTENTIAL IN A MICRO-ELECTROPHORESIS CELL[1]

A PRACTICAL method of determining the fall in potential in a micro-electrophoresis cell is described, whereby it is possible to determine the fall in potential at any stage of an experiment without any loss of time.

[1] From the Laboratory of Hygiene, Department of Pensions and National Health, Ottawa, Canada.

The method is a so-called null method and in principle consists of balancing two unknown circuits using a precision voltmeter to register the voltage in one circuit necessary to balance the other, as indicated by a sensitive galvanometer. A certain definite assembly of apparatus was found to be most satisfactory. Fig. 1 indicates the apparatus used together with the connections, and is self-explanatory. The Central Scientific (Weston) galvanometer is placed in the circuit for preliminary balancing.