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after prolonged use of the feet, and a marked reduction of efficiency in the use of the hands and fingers. The trait first becomes evident at about the fifteenth year and gradually grows worse. Complete disability seems to vary with individuals, but occurs in this family history quite late in life. This pedigree includes 7 generations and 78 individuals. A total of 7 affected males occur in generation II, IV and VI. The observed ratio of affected and normal males fits the expected ratio for a sex-linked recessive trait.

4. **Vitamin C in Home Processed Tomatoes.** (Progress Report). I. A. Wills. John Brown University.

5. **Some Exceptional Forms of Quartz.** H. E. Wheeler, Arkansas Geological Survey. Silicon dioxide, the most abundant compound in Nature constitutes 60% of the lithosphere, and free quartz forms not less than 12% of the earth's crust. The various forms of quartz number more than 200.

Taking the temperature and optical properties of quartz into consideration, six distinct types are recognized, - the alpha and beta modifications of Quartz, tridymite, and christobalite.

Quartz has its origin by sublimation, fusion, or solution, a clear understanding of which enables us to interpret, many of the forms in which the mineral is found in nature.

Crystal habit, which sets us forth on delightful journeys through an infinitely varied territory, is specifically illustrated by two rare forms in Arkansas, cubic and exfoliated quartz. Certain other types are presented.

Inclusions in quartz list many minerals, some gases, and liquids, a few of which are not yet identified. Pseudomorphic forms have an intriguing interest as well as the several types of twinning.

Pertinent economic interest in quartz crystals center on their piezoelectrical nature and predicts for Arkansas an important development of her resources in the manufacture of radio oscillators and other scientific materials.

**29th Annual Meeting April 28, 1945.**
**University of Arkansas School of Medicine, Little Rock, Arkansas**

1. **Specific Gravity and Fluidity Factors of Glaze Slips.** E. S. Amos, Niloak Company, Little Rock.

2. **Some Ceramic Properties of Certain Pulaski and Saline County Clays.** W. E. Crockett, Niloak Company, Little Rock. Three typical clay types, outlined by Tracy in a 1944 United States Geological Survey publication were analyzed for ceramic properties. The desired data were correlated with possible industrial applications.

3. **Private Industrial Research Programs.** W. L. Belvin, Bureau of Research, University of Arkansas. The paper presented covered Private Industrial Research Programs. It dealt with the nature of industrial research, industrial research as a resource, costs of industrial research, industrial research for the small enterprise, how private industry uses public research agencies, economic and commercial research and something of which the future holds for continued research programs. It

was pointed out that some of the reasons for the growth in industrial research are (1) the growing realization by industrialists and investors that research pays, (2) the pressure of competition which supplies an incentive to develop new and improved methods and products, (3) the desire for expansion and diversification of products and (4) new discoveries and inventions.

4. **Economic Importance of Arkansas' Deer Herd.** Roy K. Wood, Coordinator, Federal Aid Projects, Arkansas Game and Fish Commission, State House, Little Rock.

5. **Inheritance of Susceptibility to Caries in Albino Rats (Rattus Norvegicus).** H. R. Hunt, Michigan State College, C. A. Hoppert, Michigan State College, and W. G. Erwin, Henderson State Teachers College. The two objectives at the outset of this investigation were: (1) to determine whether there is an inheritance factor in the development of dental caries in the albino rat; and (2) if there is such a factor, to discover, if possible, the number of gene pairs involved and the genetic and physiological effects of each gene. The inheritance factor has been demonstrated. The second objective is yet to be attained. A cariogenic diet provided an essential tool for the study. The most susceptible and the most resistant offspring of a group of rats from several sources were selected to start the susceptible and resistant lines respectively. These two lines were developed by phenotypic selection, brother x sister inbreeding, and progeny testing of breeders.

   The susceptible line is now in the 12th generation and the resistant line is in the 7th. The average time required for the individuals of the 12th generation susceptibles to develop caries, after being placed on the caries diet, was 24 days, and for the 7th generation resistants, 245 days. This conclusively proves that heredity is a factor in susceptibility to dental caries in rats. There are reasons for believing that multiple factors are responsible for this difference, but further experimental work is required to test this hypothesis.

6. **Arkansas "Weeds" as Industrial Raw Material.** D. M. Moore, University of Arkansas. Possibilities of the use of floss from milkweed were discussed and accompanied by Kodachrome slides. An account of the program to collect this floss for use by the navy was presented. Enough floss for making more than one million life jackets was reported. Other possibilities were explored and suggested.