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#### *About the Institute*

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

# ABSTRACTS

PAPERS PRESENTED AT THE  
FORTY-FIFTH ANNUAL MEETING

**Southwestern and Rocky Mountain Division  
American Association  
for the Advancement of Science**

and the

FORTIETH ANNUAL MEETING  
COLORADO-WYOMING ACADEMY OF SCIENCE

MAY 7-10, 1969

COLORADO SPRINGS, COLORADO

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PRELIMINARY ANNOUNCEMENT  
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COPY

PAPER PROPOSED FOR THE BOTANICAL SCIENCES SECTION  
SOUTHWESTERN AND ROCKY MOUNTAIN DIVISION  
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE  
and  
COLORADO-WYOMING ACADEMY OF SCIENCE  
COLORADO SPRINGS, COLORADO, MAY 7-10, 1969

Author(s): Allan M. Hale

(If paper is of joint authorship, underline the name of the one who will make the presentation at the meetings).

INSTITUTIONAL CONNECTION OF AUTHOR(S): Department of Population Studies  
University of Colorado

TIME REQUIRED FOR PRESENTATION: 15 minutes

PROJECTION EQUIPMENT NEEDED: 2 x 2  
(only 2"x2" can be assured.)

ABSTRACT  
(Must not exceed 200 words)

Results of the Application of Taximetric Techniques in the  
Study of Varieties of Triticum.

In order to determine the degree of interrelatedness of the stocks of the Triticum species of cereal grains, taximetric techniques were employed to analyze relevant information. For this study, sixty-eight different varieties of wheat were obtained from the University of Wyoming Agricultural Station at Laramie. Among these were twenty-four varieties of Regional Hard Red Spring wheat, twenty varieties of State Spring wheat and twelve of Dwarf Winter wheat. Such basic characters as height, flower number, flower arrangement, brush length and angle of reflection, length and color of seeds, spikelet length and the ease of seed removal were considered.\* The computer yielded a graphical representation of this in the "Skyline" plot. Objects most similar appeared together on the horizontal axis of the plot and C-value, the degree of similarity, appeared on the vertical. The plot reveals the hierarchical structure of the study. The study was particularly valuable because the wheat group ploidy levels which were not part of the original data became evident. Further applications of computer techniques in the grouping of Triticum are currently in progress by this author.

\* These were analysed for validity and interdependence with the character analysis technique (computer assisted). The sixty-eight varieties were then clustered with the similarity graph technique.