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## SELENOLOGY AND COSMOGEOLOGY

### COSMIC AND GEOLOGIC IMPORT OF THE LUNAR FEATURES

By Dr. HERMAN L. FAIRCHILD

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**APOLOGY:** In slight excuse for trespassing in the astronomic field it may be said that a geologist, cooperating with an astronomer, showed the fallacy of the nebular hypothesis, which had been cherished by astronomers and selenographers for more than a century; and that a student in geology may have some reasonable ideas in selenology.

**Thesis:** The basins and pittings of the lunar surface are impact craters and are ocular confirmation of the view that the planets and satellites were built by cold accretion. This implies acceptance of the planetesimal hypothesis of Chamberlin and Moulton. The genesis, growth, history and structure of the earth and moon are here considered from the planetesimal view-point.

Ever since Galileo first peeked at the moon through his crude telescope, the lunar surface has been perhaps

the most singular, fascinating and puzzling of telescopic objects. Galileo's surprise and delight have been reexperienced by all observers, and for four centuries selenography has been a favorite pastime for sky-gazers. Description and portrayal of the so-called craters and of the plains, mountains and the many peculiar features make an extensive literature. In recent time photography has largely displaced pen and pencil. Naturally the moon has been the subject of much speculation and imaginings and the cause of superstition and mental aberration. Scientific literature includes much lunar description that is unscientific and even unreasonable. The most pretentious treatise on the moon in American literature argues for the existence on the moon of atmosphere, snow, ice and vegetation. This ignores the heated condition of the surface during the long lunar day. It would be a new

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