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ASTRONOMERS DIVIDED ON REALITY OF MARTIAN CANALS

Is there evidence of intelligent life on Mars?

Astronomers are divided in two camps on this question of interest this week with the red planet nearer earth than it has been for a century.

Debate centers chiefly about the straight lines on the face of the planet which have been seen by some observers. Adherents of the "life" theory maintain these are canals constructed intelligently to bring the waters of the polar seas into the desert regions. Skeptics say those who see "canals" are seeing things.

Here are arguments on both sides, as summarized by Dr. Heber D. Curtis, director of Allegheny Observatory.

The believers maintain:

1. That at least three experienced astronomers and many amateurs have seen and mapped many canals.
2. That a smaller telescope of six to 12 inches in better for seeing the canals than larger instruments.
3. That the more important canals have been mapped by different observers in essential agreement.
4. That we do not see the actual channels but the wide, irrigated strips on each side.
5. That they lie on arcs of great circles, that is, are perfectly straight and this presupposes intelligent creation.
6. That they are realities, constructed by beings of high intelligence to preserve life on a slowly desiccating planet.

The skeptics maintain:

1. That the majority of skilled observers have been unable to see them.
2. That foremost astronomers, using the giant instruments at Lick, Mt. Wilson and Yerkes Observatories have been unable to see or photograph any such markings as have been mapped.

3. That Martian maps of Lowell, Pickering and Schiaparelli show great divergences.
4. That the best preparation for "seeing" the canals is to spend the previous day in studying a good map of them.
5. That lines to be visible on Mars would have to be at least 30 miles wide.
6. That only an ant or a fool would make absolutely straight canals, disregarding level contours, unless Mars is as level as an ocean.
7. That the lines have no objective existence, but are due to physiological and psychological factors which affect our perceptions of random shadings and features too minute to be separately distinguished.

Dr. Curtis gives the following account of experiments conducted by the English astronomers, Evans and Maunder, which might account for "seeing the canals!"

"Evans and Maunder drew on disks of card-board about six inches in diameter random hap-hazard drawings, lines and shadings. Then they put these disks up in front of classes of English school boys of twelve to fourteen years, and at such distances away that the disks subtended about the same angles as would Mars in a powerful telescope. In other words, the disks were placed so far away that it was very difficult to make out the details of them. The school boys knew nothing of the purpose of the experiment, and none of them had doubtless ever seen a map of Mars. Now it is well known to psychologists that the human eye has a tendency to group hap-hazard minute objects, too small to be separately distinguished, into straight lines. This is just what the school boys did, and a majority of the sketches which the boys turned in showed straight, canal-like markings, and many of them looked quite like a map of the Martian canals.

"I have this year tried this experiment on two Pittsburg audiences made up of unusually intelligent people. It first threw on the screen a good clear "map" of the canals and let it stay there a while. I next threw on the screen some lantern slides made from one of Evans and Maunder's drawings, but made so small that it looked to the audience about the same size as the disks did to the school-boys, or as Mars does in a powerful telescope.

"Many intelligent observers in both audiences, straining their eyes to see the details, affirmed that they saw canals, and that these were straight, and not crooked. They ought, in fact, to have seen them, if their eyes were all right. Then a larger slide of the drawing was thrown on the screen, to show them that there was not a single straight line on it!

"Many, perhaps the majority of astronomers, believe that some such explanation as this is the true basis of the "canals", that skilled and honestly and sincere observers have been, in effect, deceived by a perfectly natural and well-known peculiarity of the human eye when we use it to try to see things that are really too small to see separately."

By wearing a pedometer, an Iowa farm woman found she usually walked five miles each day in preparing meals for her family of three.
