

ASTRONOMY

Life on Mars Hardy

➤ THERE SEEMS to be drab gray but efficient and hardy life on Mars, Dr. Carl Sagan of the Yerkes and McDonald Observatories reported to the American Association for the Advancement of Science and the Society for the Study of Evolution meeting in New York.

Observations at the recent favorable opposition of Mars were made by Dr. G. P. Kuiper and others with the 82-inch McDonald Observatory reflector under excellent seeing conditions. Conclusions from these studies were reported by Dr. Sagan.

Vivid greens and blues previously reported during the height of the Martian spring were not seen and are called by Dr. Sagan "mostly illusory."

The dark areas on Mars were an almost uniform gray when compared with a color chart illuminated by daylight. Occasionally there were very faint traces of green-blue pastels.

More definitely visible was the previously reported brown ring around the melting polar ice cap of Mars. However, this is no sure sign of life, as the reappearance of dark areas after dust coverage could perhaps be explained by shifting over underlying vitreous lava fields. Dr. Sagan con-

siders the color changes the only signs suggestive of life on Mars.

"It still seems likely that organisms especially adapted to the Martian environment may exist," Dr. Sagan said. "They would be very different from terrestrial organisms."

The relative lack of color on Mars may have been due to a severe drought, which inhibited a more vivid color display. The observed extensive dust storms and the reformation of the South Polar ice cap after melting may both indicate an unusual absence of water in the equatorial regions where the dark areas are localized.

"When we arrive there we must expect life on Mars, if it exists, to be very different from anything familiar," Dr. Sagan warned. Martian organisms, due to temperature extremes, absence of oxygen and water scarcity would have to be extremely hardy and efficient.

In expecting a low form of life on Mars and assuming that eventually man might make space flights to this planet, Dr. Sagan agreed with a majority of the astronomers who recently served on a Science Service Grand Jury inquiry.

Science News Letter, January 12, 1957

ENTOMOLOGY

Top Insect Flight Put at 35 M.P.H.

➤ NO LIVING INSECT is capable of flying faster than 27 miles per hour in level, continuous flight or 35 miles per hour in a short burst, Dr. Brian Hocking, University of Alberta professor of entomology, told the American Association for the Advancement of Science meeting in New York.

Estimates in the past for insect flight have varied all the way from early conventional aerodynamic theory in France, which argued that a bumble bee should not be able to fly at all, to a later American observation, refuted shortly thereafter, that a deer fly traveled 820 miles per hour.

Prof. Hocking arrived at his figures by measuring the power required by a number of insects in flight, their capacity for nectar as fuel and their efficiency.

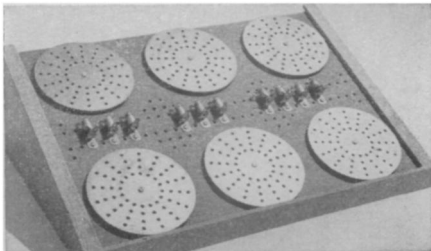
The Monarch butterfly can carry fuel for a flight of about 620 miles, his studies showed.

Prof. Hocking explained that insects learned to fly about 300,000,000 years ago, perhaps by first climbing up emergent aquatic vegetation and gliding from this elevation.

They are the only invertebrate animals to have learned to fly, and it was about another 100,000,000 years before the vertebrates, the reptiles, birds and flying mammals, followed the insects in flight and largely made the earlier flyers their food.

Science News Letter, January 12, 1957

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Questions

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GENETICS—How do people pay for their youthful vigor? p. 24.

MEDICINE—By how much have tranquilizers cut shock treatments in VA hospitals? p. 28.

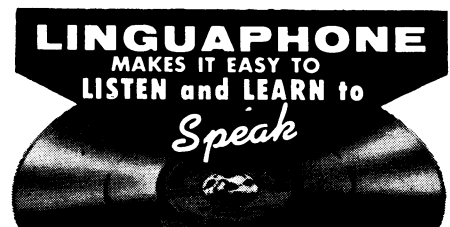
PHYSICS—How are metal "whiskers" being used? p. 21.

PLANT PHYSIOLOGY—What is the importance of being able to cultivate single cells of higher plant tissues? p. 21.

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