

ENTOMOLOGY

Special Cell Action in Bees

Insects may have in their brain some property not available to man to account for their staggering complexity of behavior.

➤ BEES and other insects may have in their brains some property of living cells that is not available to human beings and other back-boned animals.

This was suggested by Dr. C. F. A. Pantin, zoologist of Cambridge University, in his presidential address to the zoology section of the British Association for the Advancement of Science meeting in Edinburgh.

The honey bee has a brain that weighs about a millionth of man's central nervous system yet this insect has a staggering complexity behavior. The one-celled protozoa have no nerves and no complex cellular sense organs, yet they act very much like higher animals in many respects.

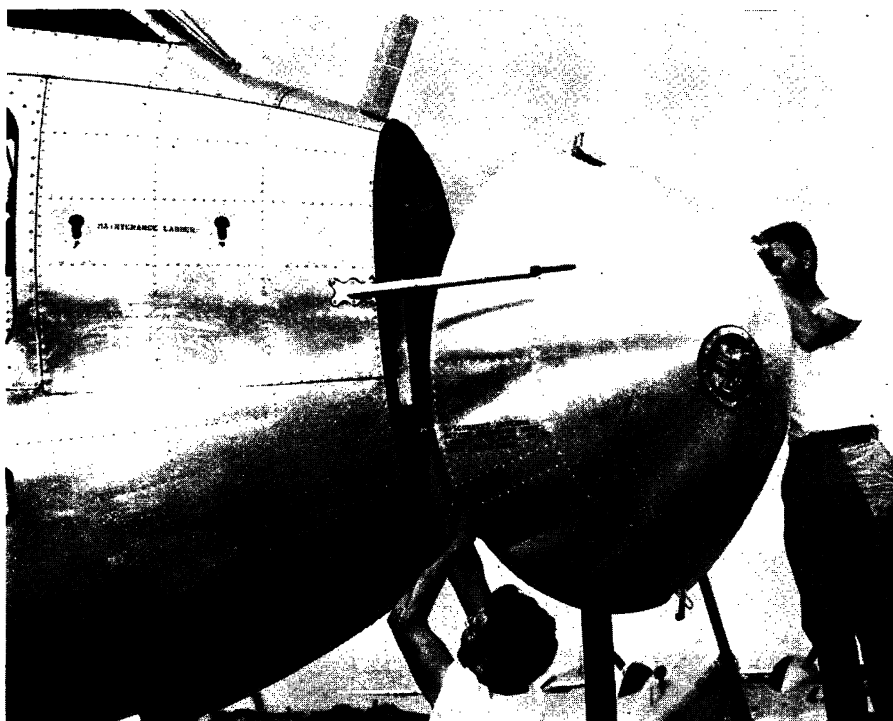
It is dangerous to assume, Dr. Pantin said, that there is only one possible mechanism by which animals can do certain things. Any machine, living or non-living, in order to achieve purposive behavior must have a mechanism able to integrate

present and past stimuli, since that is needed to predict what the machine must do next. Such machines are necessarily extremely complex and specialized. But they are not necessarily the same kind of machines to do the same things.

"Surprisingly enough," Dr. Pantin pointed out, "more than one stock of animals has independently evolved a nervous machine of precisely this kind, in the teeth of apparent improbability."

In the way that living things have developed by the process of evolution, Dr. Pantin recognizes both the workings of natural selection and an abstract plan. This plan is not peculiar to living things, however. There is nothing vitalist about it. It emerges from the unique properties of matter and energy, and even its more complex consequences govern the constitution of inanimate objects like calculating machines, as well as living systems.

Science News Letter, August 18, 1951



HOMING NOSE—These flight mechanics are attaching to the Flying Box-car a new type of nose cap containing a glide path antenna. This antenna was formerly carried on an external mast; it is now enclosed to reduce drag.

The British Association for the Advancement of Science is holding its 113th annual meeting at Edinburgh, Scotland, this week. Leading scientists of England and other parts of the world are contributing papers. Coverage of the meeting for readers of SNL is contained in articles on this and the following page. Other reports will follow in next week's SNL.

GENERAL SCIENCE

Prince Philip Asks Science to Aid Man

➤ SCIENTISTS as citizens have the duty to see that science is used for the benefit of mankind, for, of what use is science if man does not survive?

This statement by the Duke of Edinburgh, Prince Philip, speaking as its president, opened the annual meeting of the British Association for the Advancement of Science, Edinburgh.

Prince Philip, reviewing the British contribution to science and technology in the past hundred years, concluded that research workers and engineers have a dual responsibility, for their work and as citizens.

"The people who control the scientific machine," said the Duke, "both laymen and scientists, should have a proper understanding and appreciation of what science has grown into and its place among the great forces of the world."

Science News Letter, August 18, 1951

CHEMISTRY

Chemical Changes In People Foreseen

➤ THE DAY may well come in the future when a conscious molding of individuals and even of races by means of chemistry will present "problems of fearful fascination."

Sir Cyril Hinshelwood, Oxford professor of chemistry and foreign secretary of the Royal Society, made this prediction to the British Association for the Advancement of Science in Edinburgh in his presidential address before the chemistry section.

"As the cell reactions disclose their secrets, as physiology advances, and as the relation of chemical structure to effect on cell and tissue clarifies itself," Sir Cyril said, "there will emerge the possibility of deep-seated chemical intervention into processes which are now normally inviolate."

Chemically induced hereditary changes in cells are already known in crude fashion, and the influence of drugs on personality already gives concern to law and medicine, the British chemical authority emphasized.

Science News Letter, August 18, 1951