

Questions

ASTRONOMY—When was the first sunspot of the current cycle seen? p. 355.

ENDOCRINOLOGY—What effect did long use of reserpine have on the sex glands of experimental rats? p. 360.

OCEANOGRAPHY—What element was used in chemical studies of the ocean floor? p. 361.

Photographs: Cover, General Electric Research Laboratory; p. 355, All American Engineering Co.; p. 357, Eastman Kodak Company; p. 362, Westinghouse Electric Corporation; p. 368, Larry's Novelties.

TECHNOLOGY

Living Tissue Can Now Be Seen With Color TV

► A MICROSCOPE that uses invisible light as well as color television is giving medical science a look at living tissues of the body.

The first results with the special microscope, called the ultraviolet color translating microscope, were reported by Dr. Vladimir K. Zworykin, Radio Corporation of America, Camden, N.J., and F. Hatke and C. Berkley of the Rockefeller Institute for Medical Research to the National Academy of Sciences meeting in New York.

Up to now, studying living tissue has been difficult, if not impossible, because the light needed to illuminate the tissue under the microscope causes rapid damage and death to the cells being watched.

The TV microscope uses short bursts of ultraviolet light lasting for about one-thousandth of a second. Sixty such bursts per second are used to illuminate the specimen and can be kept up for longer "viewing" times than have been possible in the past. The image seen by the microscope is reproduced on a color television receiver.

Earlier methods of watching live tissue required photography or the use of a continuous beam of ultraviolet light.

The reduced ultraviolet "dose" from the new system has allowed researchers to make continuous observations of cell cultures, muscle fibers, and connective tissue. Color motion pictures have also been made of various body cells as well as the capillary circulation between arteries and veins, all in the living state.

Science News Letter, December 7, 1957

Do You Know?

Parthenogenesis is far less marked in chickens than in turkeys.

Chemicals may be used to cause flowers to set their *fruit* without pollination.

The first International *Polar Year* was 1882-83.

Galileo's *sunspot* drawings made in 1612 are comparable in quality with drawings made today with small modern telescopes.

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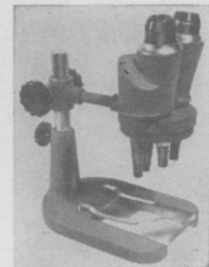
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