

biweekly, monthly, or less frequent schedules. Present CDC programs use a combination of the first two procedures, whereby two blocks in each unit are sampled weekly by the grill method, one being a fixed station block representing the block with the highest fly potential in the area; the other, the random block station changing from week to week. Results indicate this technique to be entirely satisfactory for reflecting population trends in the large metropolitan areas where these activities were undertaken.

Probably the defect most evident on surveillance programs is the inability to establish and maintain inspections on routine weekly or semiweekly schedules. One reason behind this inability is the general tendency to adopt an inspection schedule too extensive for the manpower available. This invariably results in insufficient data collected in a discontinuous manner. Such data rarely lend themselves to accurate interpretation. Schedules arranged to expend 80 percent of the allotted time in completing the required inspections generally provide ample compensation for time loss arising from adverse weather conditions. Continuous data derived from smaller samples is to be preferred to those procured from sporadic inspections of a more extensive sampling area.

The pattern of fly activity being contingent upon the various ecological factors of the environment makes it advisable to conduct surveys under conditions as nearly similar as possible. As performance of block surveys over the same time intervals is impossible wherever a number of blocks must be checked, the sequence of block inspections on successive weeks should be so altered that the various blocks have an equal chance of being surveyed under the differing conditions of temperature,

moisture, and shade.

In any community program, the scarcity of flies can be due either to unfavorable weather conditions or to the control measures employed or to both. To ascertain more closely the role control operations play, it is essential that some effort be made to determine fly densities in an area where conditions are similar to the treated city except for the absence of control tactics. An untreated town selected for this purpose rarely shows identical sanitation conditions, and the fly densities may exceed or be less than those in the treated city. However, the data secured will yield an appraisal of the trends in the fly population which can serve as a yardstick for those obtained in the treated city.

Community fly programs vary in scope from those of a purely operational nature to those established for research purposes, and in size from hamlets of 500 to 1,000 people to municipalities in the range of 50,000 to 100,000 population. With such diversity of purpose and size, the funds, manpower, and objectives likewise exhibit much variation, which in turn is translated into modifications of control and evaluative procedures. The extensive coverages desirable in the larger cities are not necessary in the smaller communities; the reconnaissance survey adequate for a small operational program may lack the degree of accuracy required on a research endeavor. Consequently, both control and appraisal efforts must of necessity be fluid and adaptable to local conditions. By this approach it is felt that any community can establish a suitable means of evaluation which will adequately guide and appraise the effectiveness of its fly control program. Without this guidance and evaluation, fly abatement can easily become an unsuccessful and costly undertaking.

## *Production of Stereographs*

ROBERT E. BATES, JR. \*

The Audio-Visual Production Services of the Communicable Disease Center is producing stereo reels and slides in many fields of public health work. At the present time the most advanced series pertain to venereal diseases. These slides will

be used in medical colleges as well as for aiding diagnosticians.

Although stereography is not new, it has only recently been adapted for use as a visual training aid and has been very favorably received.

\*Audio-Visual Production Services, CDC.



Stereography is probably the most fascinating of any photographic presentation. It is the only medium by which the appearance of an object may be reproduced in detail so that the viewed image appears as it did in the original. Unlike the flat photograph, which does not indicate size, distance, depth, or contour, the stereograph reproduces full, natural size, distance and shape.

Stereography, after declining in popularity for many years, is now again becoming popular with amateur, as well as professional photographers. It is being used not only as a source of entertainment for personal use, but for full-scale audiovisual education in schools and colleges and in the world of advertising and selling.

The principle of stereoscopy is very simple. Our eyes are positioned at approximately 65 mm. from pupil to pupil. Therefore, we have an individual point of view for each eye.

The two photographs made with a stereo set-up correspond with the visual image of the eyes. If these images are viewed in a manner in which each eye sees its own image, there is then viewed a single three-dimensional image as is seen in normal vision.

The technique of stereoscopy, while not entirely

different from normal photographic practices, requires a more thorough knowledge of lighting, subject, and related object placement and skill.

Stereo may be applied in stereomicrography, stereoradiography, and many other specialized fields.

The cameras used in making the stereographic slides in our case are a Voightlander Stereoflektoskop, 6 by 13 centimeters, and a Stereo-Realist 35 mm. Any matched pair of cameras may be used if provisions are made whereby two exposures may be made at the same instant, with the lenses parallel and with a separation of 65 mm. between points of view. A single camera can be used in the case of photographing inanimate objects if a sliding base permitting moving the camera laterally 65 mm. for the second exposure is used.

The method used by AVPS in presenting and viewing stereographs is the Sawyer Viewmaster system. This is a flat reel, approximately  $3\frac{1}{2}$  inches in diameter, containing seven stereo pairs of color transparencies approximately  $7/16$ -inch square, mounted stereoscopically and observed by use of the viewer. The stereograph is examined by inserting the reel in the viewer, facing light, or if a light attachment is provided, pressing the light bar and placing the viewer to the eyes. When it is desired to change to the next scene, one merely pulls the advance lever down, changing to the next scene. Each reel is titled with a main title and each frame with a subtitle.

The Stereo-Realist viewer takes one titled slide, approximately  $1\frac{5}{8}$  by 4 inches, at a time and has its own built-in light source. The image size for this slide is 1 by  $7/8$  inches.

**Left:** Sawyer Viewmaster and reel.

**Below:** Stereo-Realist Viewer and slide.

