

the second cross will exhibit long-winged, gray-body-color and one fourth will exhibit long-winged, ebony-body-color.

An etherized, long-winged, ebony-body-colored male is placed in a fresh culture bottle containing a vestigial-winged, gray-body-colored female. Within ten days after the third cross is made the parents are removed. When the adult flies emerge they are etherized and examined.

The progeny of this cross should exhibit long-wings and gray-body-color. One male and one female long-winged, gray-body-colored flies are placed in a fresh culture bottle. The parents are removed ten days after the cross is made. When the adult flies emerge, they are transferred to a clean bottle and etherized.

The progeny of this fourth cross exhibit a ratio of approximately nine-sixteenths long-winged, gray-body-colored flies; three-sixteenths long-winged, ebony-body-colored flies; three-sixteenths vestigial-winged, gray-body-colored flies; and one-sixteenth vestigial-winged, ebony-body-colored flies (Fig. 3). These findings are coordinated with the class discussion.

Discussion

The writer spends six to eight weeks on the unit, depending upon the speed of his class. The laboratory work is interspersed with class discussions. Usually five one-hour class periods are devoted to mitosis and meiosis, prior to beginning any of the laboratory work. After the virgin female culture is started, the writer begins class discussions of simple crosses, with particular emphasis on the cross being carried out in the laboratory.

While the dihybrid cross is developing, most of the class periods are spent discussing the broader aspects of genetics, such as hybrid corn, human genetics, and animal breeding. The writer believes that from such a unit on genetics the students obtain an invaluable knowledge of genetics in everyday life.

Suggested References

1. Demerec, M., and B. P. Kaufman. 1950. *Drosophila Guide*. Carnegie Inst. of Washington, 44 pp.
2. Sinnott, Edmund W., L. C. Dunn, and Th. Dobzhansky. 1950. *Principles of Genetics*. McGraw-Hill Book Company, 505 pp.
3. Turtox, General Biological Supply House. *The Culture of Drosophila Flies and Their Use in Demonstrating Mendel's Laws of Heredity*. Turtox Service Leaflet, No. 15, 4 pp.



Across The Editor's Desk

Discovery of a **potent new antibiotic**, called **tetracycline**, has been announced recently. The discovery fulfills a prediction that valuable new weapons against diseases could result from a determination of the chemical structure of terramycin, accomplished in 1952. Tetracycline has proven active against microorganisms linked with such diseases as bronchial pneumonia and "strep" sore throat, in laboratory tests, and appears to parallel the activity of terramycin against germs associated with typhoid fever, boils, and urinary tract infections.

Seeds of *Mimosa pudica*, the "**sensitive plant**," obtainable from several supply houses or gathered from wild plants in some southern states, will germinate and grow in a warm room. These interesting plants can be used in the lecture room or laboratory to strikingly demonstrate responses by plants to heat and touch. My students also grow them at home as "conservation pieces," and for unique gifts.

Energetic and capable NABT member and former Managing Editor, **Irving C. Keene**, invites all of you to visit his new and modern suite of biology rooms at **Brookline High School** during NABT's Annual Convention in Boston, or any other time you are in that area. Irving's school is only seven miles from Boston; his article in this issue describes his unique and outstanding facilities, and includes an invitation to you.

Robert R. Finlay, Supervisor of Conservation Education, State Dept. of Education, Columbus 15, O., wants illustrated written descriptions of outstanding teaching techniques and practices in all phases of Conservation from Ohio teachers for the report of **NABT's National Conservation Project** in cooperation with The American Nature Ass'n. Contact Bob if you would like further information, or send him your material.

The number of Americans afflicted with cancer appears to be increasing yearly, and a majority of all having advanced stages of cancer die from it despite approved medical efforts. Many in the field of cancer research and control feel that we should give more attention to making young people aware of recognized and suspected **causes of cancer**. Reference materials for such class discussions, special reports, and projects appears in *A Methodology for Environmental and Occupational Cancer Surveys*, Pub. Health Tech. Monograph No. 1, U. S. Gov't Printing Office, Washington 25, D. C.; also in literature from Cancer Prevention, Inc.,

1928 North Ave., Bridgeport 4, Conn., and American Cancer Society, Inc., 130 E. 66th St., New York 21, N. Y.

Success in producing sucrose (common table sugar) by chemical synthesis—the "Mt. Everest" of carbohydrate biochemistry—has been reported by **Dr. Raymond Lemieux** and **Dr. George Huber** of The Canadian Nat'l Research Council. As to the immediate commercial use of sugar synthesis, however, Dr. Henry Hass, Chemist-President of The Sugar Research Foundation, comments: "It is as unlikely as some real estate agency having Mt. Everest cut up into lots and sold for development!" The process is now quite expensive, and sugar produced by green plants is comparatively cheap. However, the knowledge promises to make the synthesis of many complicated biochemical substances easy routine. In connection with their experiments, Dr. Lemieux and Dr. Huber were also able to synthesize maltose and trehalose.

Radioactive penicillin-G has been prepared by "feeding" the penicillin-producing mold a compound which includes radioactive carbon-14.

A new compound which has a "relatively high activity against tuberculosis in mice," called **thioisonicotinamide** and a chemical relative of the T B drug isoniazid, has been derived from tobacco.

International Friendship League, 40 Mt. Vernon St., Boston, Mass., has hundreds of teacher-sponsored letters from boys and girls in all countries of the free world. Most of these are written in English, and the writers are eager for pen-friends in the United States. Life science teachers and their pupils can exchange specimens, secure information and enjoyment firsthand, practice communication, make lasting and interesting friendships, and help promote international understandings through exchange letters and packages with these boys and girls in foreign countries. The League is endorsed by NEA, U. S. Office of Education, and the State Department, and sponsored by many foreign Ministries of Education.

Single copies of the following recent **conservation teaching aids** can be had free from Forest Service, U. S. Dept. of Agriculture, Washington 25, D. C.: *Suggestions for Integrating Forestry in the Modern Curriculum*; *The Big Three—Water, Grass, and Trees* (playlet for children); *How Man Starts New Forests*; *Forest Insects and Diseases*; *Materials to Help Teach Forest Conservation* (a new source list); *Forest Service Films* (a listing of films available on loan for educational purposes to schools, civic groups, churches, television studios, etc.); *Suggested Questions for a High School Conservation Quiz*; *What the Forester Does for Wildlife*.

Your Editor has belatedly learned that staunch and active NABT member, **Dr. James M. Sanders**,

Chicago Teachers College, was recently elected **President of NABT Affiliate, THE CHICAGO BIOLOGY ROUND TABLE**, succeeding **Ruby Fremont**. Why doesn't someone tell me these things earlier! Dr. Sanders also presented to this fine group an official NABT Affiliation Certificate earlier this year.

Our **Dr. C. W. Lantz** was Chairman of The General Committee for "**The Fourth Annual Midwest College Conservation Education Conference**." NABT members **Matala, Weaver, Fowler, Milliken, Smith, Whittaker, Bender, Beuschlein**, and others served as leaders or resource persons on the Conference Program.

Be sure to take advantage of the column, "**To Serve The Busy Biologist and The Cooperative Advertiser**," in this and the November issues. Please **be sure to mention** *The American Biology Teacher* when answering individual advertisements, and **be sure to place your orders for equipment and supplies with the fine firms and individuals who advertise in our Journal**.

Will someone volunteer to head a committee to furnish direct help to beginning teachers of biology, and to those first attempting to organize and teach life science in the elementary grades? Perhaps a special column can be started in the Journal, or a separate bulletin service offered. If you have ideas on this, please contact any NABT officer or member of The Editorial Staff (complete list in the November issue).

LETTERS

Dear Editor:

I am in full agreement with Woolever's article, "Animals and Why Children Fear Them," but I feel that it doesn't go far enough. Do we not need an article by a psychiatrist to remind us of the best ways to overcome fear? I feel that we don't know the methods well, but the following are possible steps:

1. Provide correct knowledge to replace fear due to ignorance.
 - a. The snake is not slimy, etc.
2. Know the hazards involved in handling the animal. The "tame" deer which is eating out of one's hand may become impatient and strike with its sharp hoof. Germs may cause illness; so always wash hands before eating, before leaving toilet, etc.
3. Provide pleasurable experiences with the animals feared. Let the child see his classmates enjoying handling, touching, and talking about the specimen.
4. Get the child to talk and write about his fear and how it started, if he can recall.
5. Know what to do.
 - a. Put on a leather glove before handling the bat, chipmunk, rat, etc.