TEETH GIVE CLUE TO SEX, AGE, RACE

"If we were simply to find the teeth of a human, say in Yucatan, it is very possible that we should be able to identify its sex, age, race (whether European or Mongolian), certain diseases their owner may have suffered, and perhaps something about the owner's cultural life."

Speaking to an audience of anthropologists and dental researchers on August 3 at Wilson Hall, Dr. Poul Pedersen, Special Fellow at the Institute for Dental Research and Associate Dean of the National Dental College in Denmark, summarized present scientific advances in his speech on "Dental Aspects of Anthropology."

That teeth can frequently exhibit racial, sexual, occupational, and cultural characteristics has already been established, said Dr. Pedersen, and his own findings among Greenland Eskimos amply revealed how teeth could be used as a new, investigative tool for anthropology.

In terms of racial differences, said Dr. Pedersen, dental evidence has offered additional proof that Eskimos are part of the Mongolian race. Just a few of the dental findings that help establish the Mongolian ancestry of the Eskimos are: 1) Pure Eskimos have few wisdom teeth like the Mongoloid, 2) 10 to 20 percent of Eskimos have three-rooted lower molar teeth (whites have only two-rooted ones), and 3) Eskimos show a low incidence of Carabelli cusps (little projections on the upper molars which appear in a high percentage of whites). It is also interesting to note, said Dr. Pedersen, that where there is Eskimo-white intermarriage, certain

Mongoloid dental characteristics tend to disappear.

Dental diagnostic methods, said Dr. Pedersen, also extend into problems of sex and culture differentiation. Skulls of Eskimo women, for example, can be identified by grooves worn across the teeth as a result of pulling animals' sinews (used for sewing) across them. Alaskan men, on the other hand, can be identified in some instances by wear and tear on the lower teeth—this because of the tribal custom of drilling holes in their lips and inserting a dumbbell-shaped bone or stone which is held in place by an inside and outside plate called a labret. It is the inside plate which rubs against the lower teeth and wears them flat.

Teeth have also played a part in the ritualistic and religious patterns of certain primitive tribes. Some tribes, for example, file their teeth; others knock them out; and still others insert precious stones in the enamel. The development of such anthropological evidence, said

ATTITUDE SURVEY

Do you think you know what your supervisor thinks of your work? Do you feel free to make suggestions concerning your work to your supervisor? Do you get along well with other people in your section? These are typical of the questions asked by Jack Beecher and Phil Janus, Analysts of the Management Analysis Section, NIH, when they conduct an attitude survey as part of a management analysis.

These surveys are made to get some idea of how people feel about their jobs, their bosses; to call attention to problem areas; and to suggest improvements when necessary.

At the present time, Mr. Beecher and Mr. Janus are making a follow-up of an attitude survey they made of the Division of Research Grants and Fellowships late last year. They hope to find out how people's ideas have or have not changed since last queried.

In that survey, each person was interviewed at his own desk; questioned on his duties, methods, problems relating to his work. Following that, the analyst and employee went to another room where they were able to talk privately, even though no names were used in the questionnaire.

Results of the survey showed that employee-supervisor relations were, in general, good. 97% of those interviewed said they felt free to make suggestions within their section; 94% felt they knew very clearly what their duties and responsibilities were; 93% believed their good work was appreciated.

On the other hand, about one-fifth of the people felt they did not know what their supervisor thought of their work. 30% said their supervisor criticized their work. Of these, one-third objected to being
Investigations of the Genetic Research Unit, NCI, are showing that just as there are genes that control coat color in the mouse, so are there genes that influence susceptibility to the various types of cancer. Some of these genes have been identified with certain chromosomes, and even specific genes have been related to susceptibility to a specific type of tumor.

Unlike the simple inheritance of coat color, the inheritance of susceptibility to tumor formation is complex: many genes are involved. Such is the case in lung and mammary tumors, for example, which Drs. W. E. Heston and M. K. Deringer are studying intensively, and in leukemia, the subject of study emphasized by Dr. L. W. Law.

Through inbreeding with selection for 40 or more generations, geneticists have developed inbred strains of mice in which the incidence of these and other types of cancer can be accurately predicted. Such strains are used in more than 90 percent of the cancer research done today. From the colony developed by W. J. McEleny of the unit, over 92,000 mice of these pure strains and their uniform F1 hybrids were produced for NCI during the past year. The unit has also assisted in the establishment of similar colonies all over the world.

The geneticists of the unit are delving deeply into the physiology of the animal before and at the time of tumor development, in an effort to learn how the genes control other intrinsic factors and how these are influenced by environment. Certain genes, for example, control the propagation and transmission of the milk agent, a virus influential in the development of mammary tumors in the mouse. The action of other influencing genes is manifested through the physiology of hormone production.

In one strain with high genetic susceptibility, mammary tumors appear in the absence of the milk agent.

The demonstration that certain chemicals can produce gene mutations has opened a new approach to the question of whether the malignant change in the cell is associated with a change in a gene. The unit has shown that the most potent chemicals in producing gene changes, the nitrogen and sulfur mustards, are also carcinogenic.

**ANNOUNCEMENTS**

**Honors**

Dr. Evelyn A. Anderson, EBMI, has been invited to serve as Consultant to the Army Medical Library on an annotated bibliography on cortisone and ACTH. Dr. Anderson will also serve as Editorial Advisor for the Journal of the National Cancer Institute for a period of two years.

Dr. Ralph W. G. Wyckoff, EBMI, has recently been elected Chairman of the National Research Council's National Committee on Crystallography. This Committee is responsible for all arrangements of international meetings such as the one it proposes to hold in Stockholm next year under the auspices of UNESCO's Union of Crystallography.

In recognition of his contributions to knowledge of malaria and neotropical mosquitoes, Mr. W. H. W. Komp, MI, has been elected to the Washington Academy of Sciences. Mr. Komp recently returned from CDC, Atlanta, where he assisted in making a film strip showing a method of micro-dissection developed by him.
NEW CHIEF FOR BLOOD PRODUCTS SECTION

Dr. John T. Tripp has recently joined the staff of the Laboratory of Biologies Control, Microbiological Institute, as Chief of the Section on Human Blood Products. Dr. Tripp, who is a biochemist and immunologist, was Assistant Director, Division of Laboratories, Michigan Department of Health, where he was in charge of the manufacture of serums and vaccines for the past fifteen years.

In general, the Human Blood Products Section is engaged in establishing standards for the production, testing, and sterilization of whole blood, plasma, and other blood products in licensed laboratories. It is the responsibility of the Laboratory of Biologies Control to supervise and license laboratories manufacturing human blood products under the Federal biologies law.

In the basic research being done by the group are studies in the preparation and preservation of blood for use in transfusion. Typical of such problems is the investigation into methods of preventing homologous serum jaundice resulting from the transfusion of plasma. This type of jaundice was a great problem during World War II.

The Human Blood Products Section, under Dr. Tripp’s guidance, is making plans to establish a blood bank for the National Institutes of Health new Clinical Center which will be ready sometime in 1952. The blood bank will supply the transfusion needs of 500 patients, and Dr. Tripp will assist in the preparation of the intravenous solutions used in the Center.

Dr. Tripp’s staff is cooperating with the American Red Cross in supervising the manufacture of blood products prepared jointly by the Red Cross and licensed manufacturers. With a wider appreciation of their therapeutic value, blood products are becoming more important than ever before.

Staff and Distaff

FREDERICK HIGHHOUSE

About a hundred years ago, a group of colonists in Virginia attempted to quell a huge bonfire on the shores by piling sand on it—the result, molten glass. According to Fred Highhouse, Head of the Instrumentation Unit, NCI, that incident gave the early settlers their first thought of making glass in this country.

At the Cancer Institute, Mr. Highhouse maintains a tradition of glass blowing craftsmanship which dates back to the 15th century. Assisted by two other glass blowers, Mr. Highhouse does most of his glass work in one room where he is surrounded by glass cutters for cutting or breaking glass, glass saws, torches, bunsen burners, flaring tools, and beeswax to prevent metal from adhering to the hot glass. Most of his work is not for the sake of beauty alone but for the practical use of NIH scientists. Some of the items his unit makes are: tubes for geiger counters, mouse holders, tissue presses and special glass for radioactive carbon. His shop also repairs microscopes, balances, and other technical instruments. Highhouse, himself, has just completed an instrument to be used for triple distilled water.

But much of the work Mr. Highhouse does is specialized. When the scientists have a “problem,” they come in and sit down with Mr. Highhouse and together they work out the details of the instrument required. One of the most difficult jobs for the unit was making a rectangular culture flask for Dr. Earle (Biologist, NCI). Most instruments are round in shape, and getting the glass evenly distributed on the parallel sides of the rectangle took a lot of ingenuity. Another “tough nut” was a complicated paper cutter for use in chromatography (a method for separating closely related compounds in a mixture). There was nothing like it on the market, says Mr. Highhouse, and it had to be designed “from scratch.” The resulting instrument is being written up for the scientific journals where Mr. Highhouse has already published several papers on the making of glass instruments.

The valuable assets in being a good glass blower, says Highhouse, are a steady hand to keep the proposed shape true to form, strong nerves (to withstand the process of constant trial and error in forming a delicate instrument), an innate sense of timing, and, of course, just plain skill. In blowing glass, Mr. Highhouse says, you use your cheeks, giving a succession of gentle puffs rather than one continuous blow from the lungs. In fact, it takes less effort than blowing a musical instrument.

All this takes experience and Mr. Highhouse has it. A glass blower since the age of 15, he has traveled through Europe, visiting glass blowers in Paris, London, Stuttgart, Berlin, and Jena, to improve his technique. He believes that American methods are now better. While more of the work in Europe is done by hand (because labor is cheaper), European glass instruments are not as strong as ours. They have nothing to compete with our pyrex glass, says Mr. Highhouse with a contented air.
IN MEMORIAM

The RECORD regrets to announce the death of George Matlack Azpell, 61 (Purchase and Supply Branch), of a coronary thrombosis, at home. Mr. Azpell was a valuable member of the branch, responsible for purchasing chemical and drug supplies. Last September he was the recipient of an award from the Board on Employee Awards of the FSA, for saving the government $2700.

Mr. Azpell will be sorely missed by his friends and co-workers.

ATTITUDE Cont'd

criticized in the presence of others; almost half of them said the supervisor displayed anger, impatience, or lack of tact.

Several questions were designed to bring out attitudes about matters outside of the Division. Almost half of the people said they would like more information about NIH and PHS. (The new NIH RECORD has been geared to meet that need.) Several complaints were made of the health, safety, and sanitation features of Building T-6, most of which have been corrected.

Summing up the results of the survey, a number of good pointers were brought to light; NIH people would like more orientation programs and training programs to help them in their work; they want to know more about the Institutes and the Public Health Service...outside of the work of their immediate section. Many showed an interest in a summary of NIH accomplishments; a desire to visit the labs.

A question on "suggestions" brought the following responses:
Want job vacancies posted on bulletin boards; should have a lending library for employees; need a morning "coffee time"; more social functions for employees; need an easier way to get in and out of grounds in the evening; buses should run oftener; if possible, run buses into the Institute grounds; and finally, a request for a manual of instruction for new employees.

Similar studies have been made in Purchase and Supply Branch and Buildings Management Branch. Ideas of employees are carefully considered and tried out when feasible.

NIMH RECEIVES "OSCAR" FOR NEW MOVIE

The Cleveland Film Council has given the National Institute of Mental Health an "Oscar" for its new film, Preface to a Life. The film won first place in the Mental Hygiene category at the Council's Third Annual Film Festival on June 13.

Preface to a Life, which shows how parents' attitudes and actions can affect the child's developing personality, was first shown at Wilson Hall on April 14 when NIH staff members had a "sneak preview" before the film was released to the public. Premiere screenings were held in key cities throughout the country during Mental Health Week last April, and there has been a heavy demand for showings ever since.

The "Oscar" was presented at the Cleveland Film Festival Dinner where Miss Gloria Swanson was guest of honor and speaker. The purpose of the Cleveland Film Council is "to encourage the production and wider use of audio-visual aids, with particular emphasis on nontheatrical 16mm films to keep the public well-informed, and to promote the welfare of the community."

Preface to a Life was made by Sun Dial Films, Inc., with Dr. M. Ralph Kaufman, who helped make The Snake Pit, as principal psychiatric consultant. The film is available from FSA Regional Offices and State Mental Health Authorities for showings before parent-teacher associations and other groups.

DRIVER'S QUIZ

Worth more than sixty-four dollars are the right answers to the following questions on D. C. traffic rules. A wrong answer and a lack of information may lead to serious consequences. Those who drive Government cars during the course of the day should be especially familiar with traffic rules because they are responsible for the safe conduct of these missions as well as for the safe return of the car. Test your knowledge of D. C. traffic rules.

1. Where no streetcar platform exists, you must stop at least (5, 10, or 15) feet behind a streetcar when it stops for passengers.

2. Maximum speed while passing a playground is (5, 10, or 15) miles per hour.

3. When parking on a down grade, you are required to turn your front wheels (toward or away from) the curb.

4. A flashing red light means (slow down or stop).

5. Passenger vehicles are required to (slow down or stop) at a railroad crossing.

6. A turn signal should be made at (20, 50, or 100) feet from intersection.

7. An emergency vehicle (has or has not) right-of-way through a red light.

8. You are required to park (10, 15, or 20) feet from fire hydrants.

Answers: 1. 5 feet; 2. 15 mph; 3. toward; 4. stop; 5. slow down; 6. 100 feet; 7. has; 8. 10 feet.

TEETH Cont'd

Dr. Pedersen, can be of use in establishing intercultural tribal influences.

As a means, too, of establishing certain nutritional standards and the prevalence of disease in both past and present societies, Dr. Pedersen pointed out that teeth are marked during childhood by both nutritional diseases and by such acute infections as scarlet fever, measles, diphtheria, and others. The grooves and pits which appear on the teeth as a result of disturbances in calcification can establish the age at which these diseases occurred—because these marks are left in direct relation to the ordinary, established pattern of dental growth.