

By cuspids!

Professor studies teeth to determine migratory patterns

By ROBERT C. RADCLIFFE
National Geographic News Service

A man who judges people by their teeth believes he knows how Americans got where they are today.

By Americans, Dr. Christy G. Turner II means the Indians and Eskimos of the New World who were on hand for thousands of years when the first Europeans arrived.

Turner, whose investigations have been supported extensively by the National Geographic Society, also believes:

- that he is on the track of finding out where these earliest Americans came from — roughly somewhere in central Siberia and north China;
- that they moved from Asia to Alaska across the Bering Land Bridge by following the animals

example, he cites another trait: a tendency for some people — typical of northern Asians, but unknown among people of European background — to have lower first molars with three roots, instead of two.

His extensive research shows that 5 percent of all Indians also have this trait, those living today as well as those buried many thousands of years ago.

The three-root clue shows the Indians' ancestors came from Asia, he says, adding that he'll know where more specifically when he finds people somewhere in Asia with the same trait at the same 5 percent frequency.

In the same way, he hopes to find the original Asian homeland of Eskimos, who have a 40 percent frequency of this trait.

Turner says teeth provide about 250 clues of independent characteristics that have been passed through the generations by genes. He has concentrated on 28 major characteristics to watch for as he examines and categorizes the teeth of prehistoric and modern men alike.

they hunted (the Eskimos with harpoons seeking whales, seals, and other marine mammals along the shore, and the Indians with spears tracking mammoth, bison, and horse inland).

• that a third group of immigrants, armed with bows and arrows, also crossed the bridge, just before the Ice Age glaciers melted enough to drown the bridge beneath rising oceans, about 10,000 to 12,000 years ago.

AND ALL OF this he surmises from teeth, by painstakingly examining thousands of ancient and modern teeth from the New World and Asia.

Turner is a professor at Arizona State University at Tempe and, in the small fraternity of dental anthropologists, is one of the world's foremost explorers of this kind of history.

He says teeth provide about 250 clues of independent characteristics that have been passed through the generations by genes. He has concentrated on 28 major characteristics to watch for as he examines and categorizes the teeth of prehistoric and modern men alike.

Among his 28 clues are: Shovel teeth — Insides of the front teeth or incisors are markedly scooped out or "shoveled" in the mouths of Indians and moderately so with Eskimos. Europeans' teeth never are.

"This clearly shows that all the people of the New World had to come from north Asia, where shovel teeth are also characteristic," Turner says. "It rules out south Asia entirely and Europe entirely."

Peg teeth — A large percentage of people from the Amur River area in northern Asia and, on the other side of the Bering Sea, Eskimos in Alaska and arctic America have third upper molars that are shaped. Nobody else has teeth like this.

Five cusps — Asians and American Indians always have five cusps (the little bumps or knobs on back grinding teeth) on their lower second molars. Most Europeans and people from southeast Asia have only four cusps.

TURNER SAYS he doesn't know of any adaptive value or purpose of these teeth differences or what triggered these gene mutations.

He is convinced these traits are "quite stable evolutionarily." As an

example, he cites another trait: a tendency for some people — typical of northern Asians, but unknown among people of European background — to have lower first molars with three roots, instead of two.

ON THE BASIS of what is known so far, Turner has come up with the following ideas of how the earliest Americans found their way to Alaska.

• With the top of the world still gripped by the Ice Age, a large ice-free corridor existed, running north-east from the Lake Baykal region of Siberia along the Lena River basin and eventually to the grass-covered Bering Land Bridge.

Turner speculates that Asian ancestors of the Indians wandered through this natural corridor hunting the large grass grazing animals like bison, horse, and mammoth that were their natural prey, crossing the center of the bridge, which was many hundreds of miles wide.

• Another migration to the New World probably began in Mongolia's Amur River Valley, which also remained ice-free during the Ice Ages. According to Turner's theory, ancestors of Eskimos — Amur River valley people today closely resemble them — moved down the valley to the sea north of Japan.

There they found millions of sea animals, all kinds of whales and seals, using the pack ice on the Sea of Okhotsk for breeding grounds. Gradually, Turner says, the Eskimos' ancestors crossed the land bridge, keeping close to the frozen shoreline and their food supply.

• Turner also theorizes there was a third group migration, by a different people — hunting moose and other forest animals — who crossed just before the land bridge disappeared.

At that time, Turner believes, the climate was moderating and getting wetter, causing the spread of forests across the grasslands of Alaska and providing a corridor south through the melting ice sheet.

The third group's descendants today may be the Na-Dene peoples, Indians such as the Athabaskans who live in the forests from British Columbia north into Alaska and the Yukon Territory. The Na-Dene have teeth traits different from Indians and Eskimos, suggesting they were the last of the land bridge immigrants.

Few traumas when teens leave home

When a child leaves home for the first time, it's more likely a normal transition than a trauma for parents, said a Michigan State University specialist in family and child relationships.

"Although there may be some initial anxiety, most parent-child relationships progress normally to the separation stage, so it doesn't come as a shock to either side," said Dr. Lawrence B. Schiamberg, associate professor in the Department of Family and Child Sciences.

Parents and children generally agree on the need for a mutual cutting of the apron strings.

"The empty nest syndrome is not as widespread as we've often led to believe."

Although individual reactions vary, Schiamberg

said parents may experience a very mild form of grief when their child moves away from home, especially if that child is their only or last one.

"Parents face a change in their routine, a change in their relationship with their child, and there may be some sadness connected with the passing of that relationship."

Fathers are less likely to experience a sense of loss than mothers.

"Traditionally, a woman's identity is more closely fused with childbearing than a man's, but this is changing as more women enter the work force."

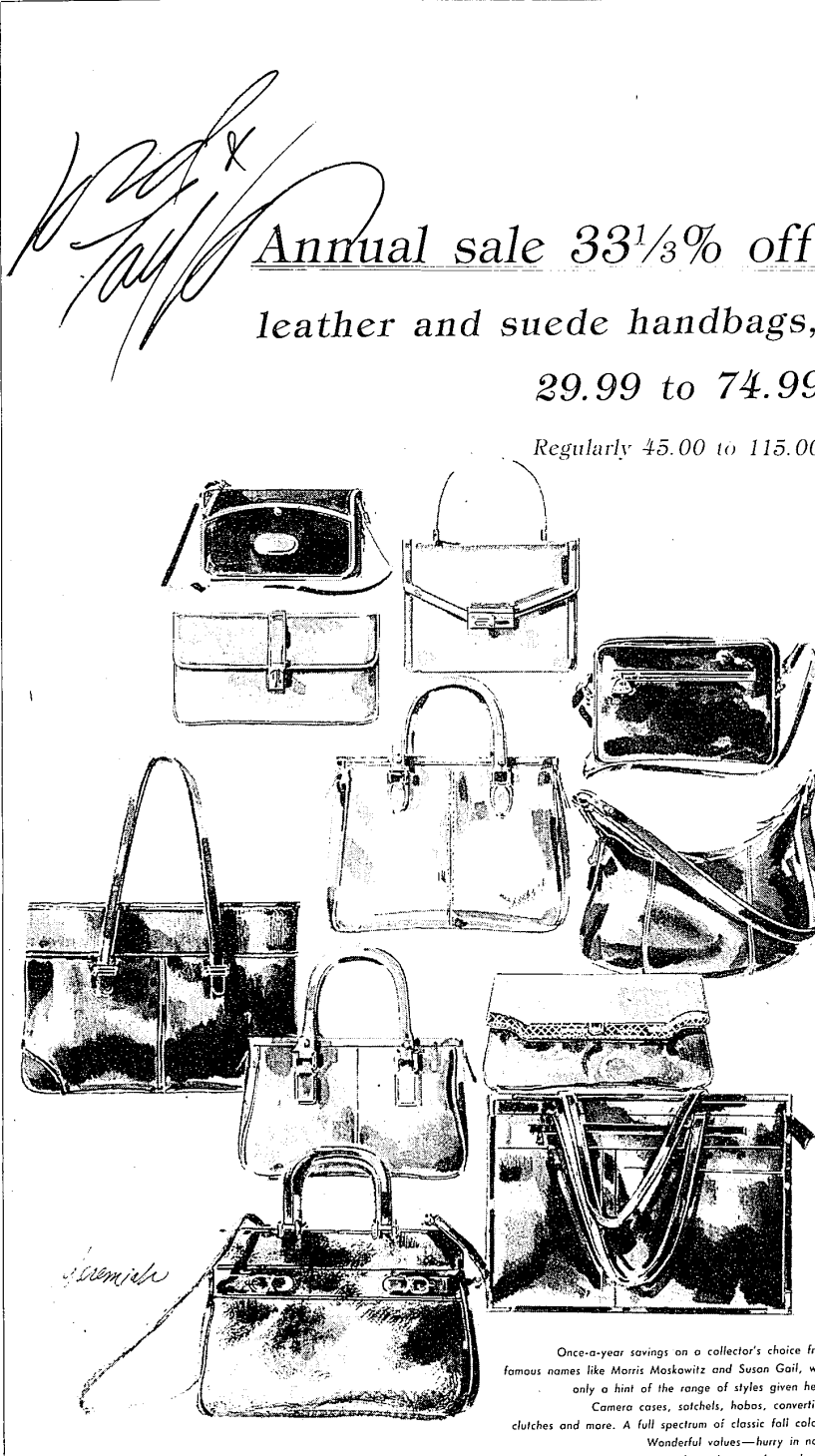
College students living away from home for the first time may notice a feeling of homesickness,

especially during orientation, but "by registration, they're usually concentrating on other things."

Parents not be overly concerned if they don't receive a letter or visit from their offspring during the first few months of the transition from home to dormitory or apartment, he said.

"In the beginning, children may feel they have to prove their independence. They may not write home for three, months, or if they phone their parents, they'll insist on paying for the call."

Parents have two choices. They can view their child's quest for independence as a problem or what it actually is — part of the normal development process.



Annual sale 33¹/₃% off

leather and suede handbags,

29.99 to 74.99

Regularly 45.00 to 115.00

Once-a-year savings on a collector's choice from famous names like Morris Moskowitz and Susan Gail, with only a hint of the range of styles given here. Camera cases, satchels, hobos, convertible clutches and more. A full spectrum of classic fall colors. Wonderful values—hurry in now. Sorry, no mail or phone orders, please. Selected collections, not all styles and colors at all stores. Lord & Taylor, Fairlane, Lakeside, Twelve Oaks, Briarwood Mall, all open daily 10 to 9, Sunday 12 to 5. Sale ends September 14.

U-M M.D.'s fellowship winners

Two University of Michigan faculty members Hugh Deery, M.D., and Jesus Garcia-Sevilla, M.D., have been named the first recipients of the John G. Searle Fellowship in clinical pharmacology for their work with antibiotics and infectious disease and with mental depression.

The Searle Fellowship was established by the will of John Gideon Searle, who received a U-M degree in 1923 in pharmaceutical chemistry, and an honorary degree in 1967. The fellowship is administered by a private trust fund.

Dr. Deery will begin clinical testing of new antibiotic that he hopes will effectively treat multiple diseases caused by bacteria that have become highly resistant to commonly used antibiotics, as well as diseases caused by common bacteria.

A U-M house officer since 1979, Dr. Deery received his B.S. degree in 1981 from the University of Illinois, his M.S. in 1973 from Northern Illinois University, and his M.D. in 1977 from Rush Medical College in Chicago. Dr. Deery was a resi-

dent at the University of Southern California in Los Angeles in 1977-78.

Dr. Garcia-Sevilla, working with Dr. Charles Smith, U-M professor of pharmacology, will continue research on the effects of antidepressants, antipsychotics, and narcotic analgesics upon the central nervous system.

They have evidence that mental depression results from an abnormality of a receptor or sense organ in the brain which regulates other portions of the brain which mediate emotional behavior, Dr. Smith said.