

Anthropology

Ron Cowen reports from St. Louis at the annual meeting of the Society of Ethnobiology

Some liked it hot

Open a textbook describing the desert tribes of North America's Great Basin, and you're likely to get a biased view. Researchers have carefully documented the plants and animals consumed by inhabitants of the Basin's colder, more populous desert areas, but have largely ignored how the other third of the Basin population found sustenance in a hotter, harsher environment.

Whereas her predecessors focused on natives in the more mountainous regions of Utah, northern Nevada, western Wyoming, southern Idaho and southeastern Oregon, Catherine S. Fowler spent three decades studying hot-desert cultures: the Southern Paiute tribes in southern Nevada and California, and the Death Valley Shoshone tribe in California.

Fowler, an ethnologist with the University of Nevada in Reno, says the fruits of her labor are twofold. In addition to providing the first detailed report on nutrition among the Basin natives of the hot desert, the study led her to meet Isabel Kelly, an archaeologist and ethnologist who had spent a year with the Southern Paiutes in the early 1930s. Kelly, who died in the early 1980s, never published her findings.

Sixty years ago, only a few Southern Paiutes spoke English, and several of these individuals served as Kelly's interpreters during their youth. Decades later, as aging adults, some of the former interpreters joined Fowler's study. By combining her findings with Kelly's, Fowler believes she has traced the group's food-gathering habits as far back as the 1830s. Her findings offer a unique look at how these native Americans once turned to the hot desert for nourishment.

Yucca and agave served as important staples, Fowler says. The Paiutes either peeled or pit-roasted the base of the agave plant and then pounded it into meal, she says. Routine fare also included mesquite beans and screwbeans, and in some areas these staples replaced acorns and pinyon nuts — prime food sources for cold-desert residents.

But in addition to harvesting the desert's natural bounty, the tribes cultivated tepary beans and other vegetables, which probably provided a safety net in lean times, Fowler says. Kelly found gardens at 70 percent of the sites she visited.

While people in the more mountainous, colder desert regions typically enjoyed a wider selection of foods, Fowler says the findings show how native Americans could survive — and even thrive — in a more severe environment. She plans to publish Kelly's notes as part of a monograph on the Great Basin.

No wonder they call it Pittsburgh

In 1982, excavations for the Pittsburgh subway uncovered a series of early 19th-century water wells containing bottles, pottery and foodstuffs. Scientists who recently analyzed organic material from four of the wells — apparently built for private homes in the 1830s — report finding nearly 100,000 pits and seeds from muskmelons, cucumbers, peaches, pumpkins, squash and similar foods. Protected from bacterial decay by immersion in water for more than a century, the organic throwaways appear remarkably well preserved, says Frances B. King, an archaeobotanist at the University of Pittsburgh.

In the early 1800s, this site had a large population of German settlers. However, King notes, an abundance of chick peas, fava beans, olives and figs in one of the wells points to a family of Mediterranean extraction or one wealthy enough to eat lots of imported foods — a rarity in the American diet at the time. Extracted teeth found in the same well suggest that one family member might have been a dentist, she adds.

"We know that a certain ethnic group was living there, we know the names of the streets, so we don't have to reconstruct absolutely everything," King says. "A little information here can tie you in to a much bigger body of data."

MARCH 30, 1991

Behavior

Hands-on babbling

Research conducted several years ago indicated that the seemingly random babbling of babies traverses a sequence of increasingly complex vocal stages, leading to the first spoken words around age 1 (SN: 6/21/86, p.390). But a new pilot study suggests babies can babble without ever making a sound, thanks to a generalized, innate language capacity in the brain.

Psychologists Laura Ann Petitto and Paula F. Marentette of McGill University in Montreal studied five infants, two of whom were deaf. The deaf babies had deaf parents and acquired American Sign Language as their first language; the three hearing babies had hearing parents who spoke either French or English at home and did not expose their infants to sign language. On three occasions, when the babies reached the ages of about 10, 12 and 14 months, the researchers videotaped the children alone and with their parents, then transcribed each infant's hand movements and vocalizations.

Both hearing and deaf babies engaged in their own brand of babbling, Petitto and Marentette report in the March 22 SCIENCE. Hearing infants initially produced strings of sounds and syllables, emitting their first words by age 1. The two deaf babies babbled with their hands, starting out with basic hand shapes for letters and numbers that they saw their parents use. Hand movements and shapes gradually grew more complex, with the first full-fledged linguistic signs emerging by age 1.

These observations challenge the widespread assumption that babbling requires normal hearing and an ability to speak aloud, the investigators argue. The brain apparently possesses some type of unified capacity for learning both signed and spoken language, they propose.

Perils of part-time work for teens

Rather than building character and responsibility, extensive part-time work during the school year may contribute to academic, social and emotional problems among adolescents, scientists report in the March DEVELOPMENTAL PSYCHOLOGY. Compared with classmates who do not work or who work only a few hours each week, high school students who put in longer hours on the job report less interest in school, lower grades, more psychological distress and physical complaints, higher rates of drug and alcohol use, higher rates of delinquency and less reliance on parental guidance.

As hours of weekly employment rise, the statistical link to these factors gains strength, particularly among students who work more than 10 hours per week, say psychologists Laurence Steinberg of Temple University in Philadelphia and Sanford M. Dornbusch of Stanford University.

The researchers administered extensive surveys to 3,989 students, aged 15 to 18, at nine high schools in California and Wisconsin. The students filled out surveys in the fall of 1987 and again about six months later. The group included youngsters from a variety of social, economic and ethnic backgrounds.

Those who had jobs displayed no advantage over the others in self-reliance, self-esteem or attitude toward work. Moreover, students working longer hours reported exerting less effort in school, even when the researchers statistically controlled the data to account for participants' initial attitudes toward school. Student workers more often reported cheating on schoolwork, copying assignments and cutting classes.

Although teenage employment probably does not, in itself, cause the list of problems noted in the study, "it may well be a contributing factor," Steinberg and Dornbusch assert. However, they point to the need for a long-term study to help clarify whether students generally work long hours because they already dislike school and whether student workers merely show a greater willingness to report bad grades, drug use and other problems.

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