

BODY OF EVIDENCE

Technology takes the guesswork out of identifying skeletal remains

For seven years, David Achord, a detective with the Nashville Metropolitan Police, failed to match the skeleton of an unidentified white female to missing-persons reports. Then a computer program called ForDisc compared the bones against thousands of solved cases and revealed that the forensics lab had made a critical mistake: The white female was really a black male. Searching through the correct files, Achord easily identified the remains.

ForDisc, developed by the University of Tennessee Forensic Anthropology Center, enhances the painstaking process of identifying skeletal remains by hand. A forensic anthropologist records a skeleton's bone mass and shape. The software compares the data with identified skeletons and provides the subject's probable height, sex and ethnic background. This, says forensic anthropologist Richard Jantz, ForDisc's co-creator, can help law-enforcement agencies narrow the candidate pool so that they can run dental-verification and DNA tests on, say, five sets of remains instead of thousands. Quicker identification provides relief to the next of kin, and in some cases it can help narrow down a field of criminal suspects.

Jantz and his colleagues plan to update ForDisc's database next year so it can also estimate age at the time of death. That sounds good to Achord: "If I know I'm looking for a white male in his 50s, as opposed to a black female in her teens, I can save a whole lot of time." —CHRIS OPFER

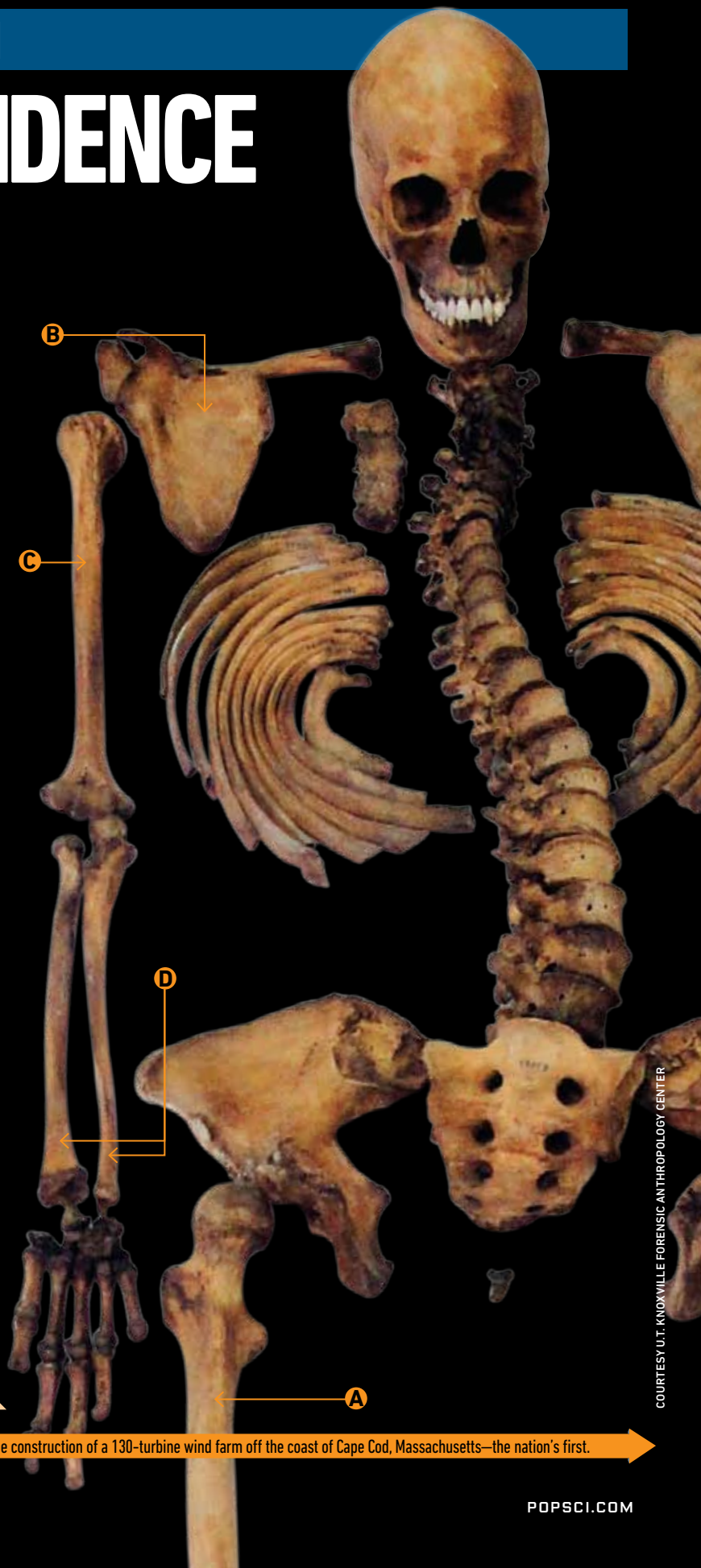
HOW TO IDENTIFY A BODY

A ForDisc compares the short femurs and tibias with known skeletons. Here, it suggests with 90 percent certainty that the subject stood 5'6".

B The short and narrow scapula indicates that the subject is female (99.1 percent).

C The small, round ends of the humerus increase sex determination to 99.9 percent.

D Statistical analysis of the size ratios of all these bones, as well as the fibula, ulna and radius, shows that they best match a Caucasian female (65.7 percent).



COURTESY U.T. KNOXVILLE FORENSIC ANTHROPOLOGY CENTER

APRIL 28 After years of debate, the U.S. Department of the Interior approves the construction of a 130-turbine wind farm off the coast of Cape Cod, Massachusetts—the nation's first.