chaeologist Christopher Henshilwood of the South African Museum in Cape Town has been unearthing at Blombos Cave what it believes is proof of modern behavior during the Middle Stone Age period, 250,000 to 40,000 years ago. In the December 2001 issue of the *Journal of Human Evolution*, for example, the team described a cache of elaborately worked bone points—which many researchers consider evidence of the ability to visualize a complex form—found in layers older than 70,000 years. But the ochre engravings, unearthed in 1999 and 2000, could be the best evidence yet that humans were capable of symbolic representation that long ago. The smaller piece, 53 millimeters long, has a series of X-like crosshatches, some struck through by a horizontal line. The larger chunk, about 76 mm long, features many X's traversed by three horizontal lines.

"This is clearly an intentionally incised, abstract geometric design," argues anthropologist Stanley Ambrose of the University of Illinois, Urbana-Champaign. "It is art." French cave art expert Jean Clottes is more circumspect. Although "the geometric design is fully deliberate … and shows a desire to achieve symmetry," Clottes says he is "far from sure" that "it is an incontrovertible instance of symbolic behavior … it could also be a kind of doodling." What's not seriously in dispute is the 77,000-year date, pegged to charred stone tools in the same soil layer and sand grains in an overlying dune.

Although many researchers are willing to grant the Henshilwood team's claim that the artist intended to symbolize something, few are ready to embrace a radical new chronology for the spread of modern behavior. "I have a bit of trouble with the argument that this is now *the* evidence to displace all claims for the earliest modern behavior elsewhere," says anthropologist Meg Conkey of the University of California, Berkeley. Even if symbolic representation did arise in Blombos Cave, it may have been a fluke: a flicker of insight that died with the artist. "There are at least 30 Middle Stone Age sites scattered across the continent that could be expected to show the kinds of things reported … [in] Blombos Cave," says archaeologist Richard Klein of Stanford University. But they don't, he says, with the possible exception of a site in the Congo. Ambrose agrees: "[Blombos] remains unique in its abundance of evidence for modern behavior."

Henshilwood counters that more Blombos-type discoveries may well turn up at other digs in Africa. "This is just the tip of the iceberg," he predicts. As for the 30 sites Klein refers to, he says, "most were dug in the 1920s, '30s, and '40s and were not dated properly," and most were not well excavated.

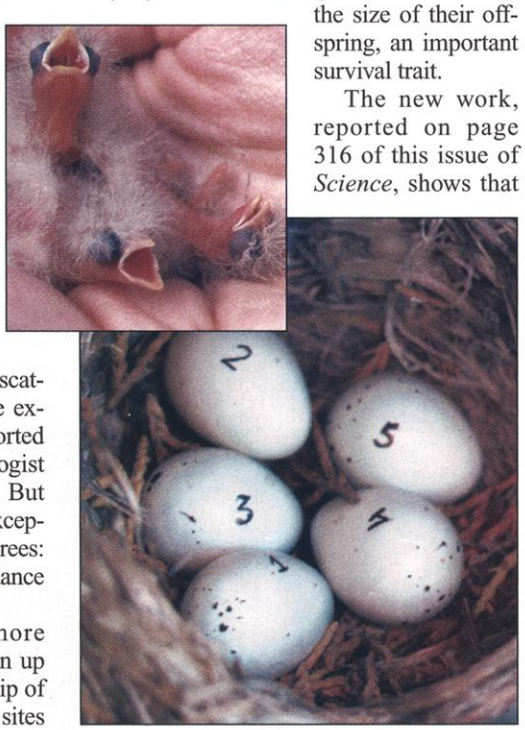
If Blombos Cave is an aberration, the task is to try to explain why modern behavior did not appear simultaneously across Africa. Henshilwood suggests that the cave's location overlooking the Indian Ocean—where seafood might have provided a rich diet—provides a clue. "Did those anatomically modern people who ended up in a coastal environment do better?" he asks. "This does seem to be the pattern." The search for such patterns, some experts say, might be more important than pinpointing the precise origin of modern behavior. "These authors don't need to make big, bold claims to convince us that what they have is important," says Conkey. "The interesting question is not so much, 'Is this the earliest?' but 'Why did it happen here?' " –MICHAEL BALTER

EVOLUTIONARY BIOLOGY

Finches Adapt Rapidly To New Homes

Birds of a feather don't necessarily stick together. A study of house finches has demonstrated that in just 30 years, finches newly settled in Montana and Alabama begin to look and act quite different from each other, despite being close kin. Alexander Badyaev, an evolutionary ecologist at Auburn University in Alabama, and his colleagues have also shown that these flourishing avian pioneers improve their chances of success in part by controlling the sex of their eggs as they lay them. In this way, mothers influence the size of their offspring, an important survival trait.

The new work, reported on page 316 of this issue of *Science*, shows that



Urban invader. Labeling eggs by birth order helped explain the house finches' (*above*) widespread success.

CREDITS: A. BADYAEV *ET AL.*

ScienceScope

Take It Back White House budget officials have backed off from a proposal to transfer some $35 million in research funds from the Smithsonian Institution to the National Science Foundation (NSF) after hearing strong protests from Congress and the scientific community.

The Office of Management and Budget had planned to shift the money as part of the president's 2003 budget request that will be released on 4 February (*Science*, 7 December 2001, p. 2066). Budget officials had argued that the funds, for the museum's astrophysical observatory, tropical research institute, and environmental center, could be better managed by NSF, which would then hold a competition open to all scientists. But shortly before Christmas, Smithsonian officials were told that the plan had been withdrawn.

"The change is as definite as it can be [without a formal budget]," says a Smithsonian official. But the White House may still order up a study on how best to support science at the Smithsonian.

Human Genome, Take 2 ScienceScope's recent item about an informal vote on the future of the Human Genome Project painted a darker picture than was intended (21 December 2001, p. 2451). National Human Genome Research Institute director Francis Collins invited dozens of researchers attending a December meeting on the sequencing project's future to vote on one of two propositions: "A. We declare victory for the Human Genome Project at the essential completion of the human sequence [in 2003] ... and we will then identify what happens next with some other term, such as 'genome research,' " or "B. We consider the Human Genome Project to be a continually evolving entity, adding new goals and opportunities as the science and its medical applications move forward." Participants voted roughly 3:1 for proposition A.

Prior to the tally, Collins noted in a jovial—not dictatorial—tone that the poll wouldn't be the final word. Afterward, he cracked that some members of his staff probably wouldn't be happy that he'd put the choice to a vote—drawing laughs from the crowd. To see the entire event for yourself, check out www.nhgri.nih.gov/CONF/beyond01.htm.

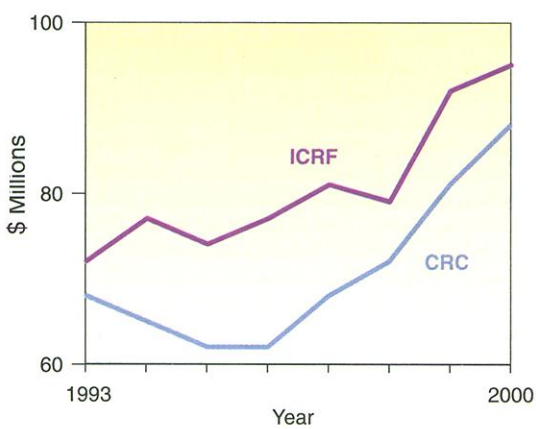
are not to be condoned but are hardly a major offense. "I don't think it's such a big deal," says Richard Reading, director of conservation biology at the Denver Zoological Foundation and co-chair of Colorado's Lynx and Wolverine Advisory Team. "They only needed to inform their superiors."

Yet that misstep may have cost the broader effort its credibility. As Forest Service Chief Dale Bosworth conceded in a statement, the scientists' actions "have called into question the scientific integrity of the interagency survey." **–ERIK STOKSTAD**

CANCER RESEARCH

Will Bigger Mean Better For U.K. Charity?

HERTFORDSHIRE, U.K.—After a long and sometimes tense courtship, the United Kingdom's two major cancer charities are ready to unite next month to form a giant funding agency similar to the U.S. National Cancer Institute (NCI). Cancer Research UK, which will be the world's biggest nongovernmental cancer research organization and the United Kingdom's largest fund-raiser, is expected to spark new collaborations at the often-frustrating nexus of basic and clinical research: turning promising test tube findings into experimental therapies.



Substantial dowries. Research funds have grown steadily for the U.K.'s two largest cancer charities.

British cancer researchers are hoping that the recipe for happiness within Cancer Research UK, as in many successful marriages, will be the complementary strengths of the partners. The Imperial Cancer Research Fund (ICRF) is a basic research powerhouse that mostly supports in-house labs, whereas the Cancer Research Campaign (CRC) focuses on prevention, treatment, and diagnostic research through extramural grants and at a handful of clinical units it underwrites.

Andrew Miller, interim chief executive for Cancer Research UK, says it didn't make sense for the two giants to compete for donations rather than collaborating. The charities had raised the bulk of their funds by vying for legacies and other private donations as well as corporate sponsorships. Both also run national networks of shops that sell goods such as secondhand clothing, bric-a-brac, and books. ICRF's 450 stores, staffed by an army of retirees, raise about $9 million a year—often in direct competition with CRC's 270 secondhand shops. "If someone came from outer space and examined this," says Miller, referring to the competition between the charities, "they would think it was a very daft situation."

An alien visitor next month may not find a land of milk and honey: Cancer Research UK's $189 million budget in 2002, although a third larger than the government's total spending this year on cancer research, is more than an order of magnitude smaller than NCI's budget. Still, an outsider would detect considerable enthusiasm for the new entity. The merger "is a very positive step," says Nick Lemoine of ICRF's molecular oncology unit at Imperial College in London. In the months since the merger plans were announced (*Science*, 26 January 2001, p. 575), Lemoine has had ample time to contemplate working more closely with CRC colleagues on gene therapy and other projects. And as a bittersweet bonus for their efforts, the 3000 scientists at Cancer Research UK can anticipate an extra $20 million or so after the elimination of 130 managerial and support jobs. Miller says the liberated funding will allow the organization to hire more researchers and boost grants in 2003.

One lingering concern in the current CRC-supported labs is that ICRF's core strengths will guide the research agenda—especially because ICRF director-general Paul Nurse, a 2001 Nobel laureate in physiology or medicine, will be Cancer Research UK's scientific chief. Nurse could not be reached for comment. Miller, however, has pledged that most research areas will be retained and that funding committees will consist of CRC and ICRF researchers in equal measure. In addition, the combined charity will remain part of a nascent coordinating body, the U.K. National Cancer Research Institute. Pressure at Cancer Research UK will come from having to do more, not less: Scientists at both ends of the research spectrum will be encouraged to team up on "translational" projects, in which the fruits of fundamental research are used to create experimental therapies.

Observers expect that Cancer Research UK will have an easier time wooing donors than the two charities had as swinging singles. "There were concerns early on that one

CREDITS: (TOP TO BOTTOM) CRC/ICRF; DIANE CLARIDGE/AP

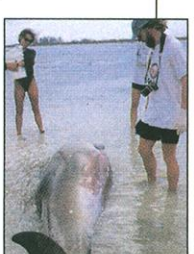
ScienceScope

Research Injection Work on infectious diseases got a boost last month with the opening of a new vaccine center at the University of Texas Medical Branch (UTMB) in Galveston. Scientists there plan to develop vaccines for a range of pathogens—from bioterror threats to sexually transmitted diseases—and ponder policy issues, such as the growing public resistance to vaccination.

The center was kick-started by a $3.75 million grant from the John Sealy Memorial Endowment, a charity that gives exclusively to UTMB. It will be directed by herpes vaccine researcher Lawrence Stanberry, who says he has lured Martin Myers, director of the U.S. National Vaccine Program Office, to be the resident policy wonk.

The new center will allow UTMB—already noted for infectious disease research (*Science*, 28 April 2000, p. 598)—"to make some very important contributions" to vaccine development, predicts John La Montagne, deputy director of the National Institute of Allergy and Infectious Diseases in Bethesda, Maryland.

Victims of Sound The U.S. Navy has concluded that a sonar training exercise caused a mass whale stranding in the Bahamas in March 2000 that killed several rare beaked whales (*Science*, 26 January 2001, p. 576). In a report released 20 December 2001, the Navy and the National Marine Fisheries Service conclude that the strandings were caused by an "unusual combination" of factors, including sea-bottom contours and water conditions that may have channeled and magnified sonar pings. The researchers could not pinpoint exactly how the sound energy injured the whales, but the acoustic assault appears to have left some dazed and confused, causing them to swim ashore. The Navy says that it will try to avoid using sonar in similar situations during training runs. But Naomi Rose, a marine mammal expert with the Humane Society of the United States in Gaithersburg, Maryland, says the report is "carefully worded" so that it does not give ammunition to critics of SURTASS LFA, a new, lower frequency sonar system the Navy plans to deploy.



Contributors: Jeffrey Mervis and Elizabeth Pennisi, David Malakoff, Martin Enserink