RANDOM SAMPLES

edited by CONSTANCE HOLDEN

More Dead Sea Caves?

Israeli archaeologists last month announced the discovery of what they believe are four additional caves in the area where the Dead Sea scrolls were found almost 50 years ago.

The Dead Sea scrolls are 800 documents related to the Old Testament that were found in 11 caves near the Dead Sea between 1947 and 1956. Nothing further has been found in repeated surveys of the area since then, says Magen Broshi, curator emeritus of the Dead Sea scrolls at the Israel Museum in Jerusalem. Nonetheless, Hanan Eshel of Bar Ilan University, who explored the area 2 years ago while still a graduate student, noticed some unusual markings. He found "irregular depressions in the soil which as far as we understand can be only caved-in caves," says Broshi. That interpretation is strengthened by the fact that there are paths ending at each depression. Eshel, who could not be reached for comment, is quoted in an Associated Press story as saying, "This is the first time since the 1950s that caves carved by humans have been found in the Qumran area."

The archaeologists' fondest hope is that the new caves will contain more scrolls. But, says David Maltsberger, a Biblical archaeologist and Baptist pastor in North Vancouver, British Columbia, who has participated on digs with Eshel, what they find "will be significant no matter what it is," as it's an area where many fled during the early Christian era.

Excavations are to begin in November. Broshi and Eshel were criticized recently on the Internet by Maltsberger for plans to work with Vyndel Jones, a flamboyant Texan archaeologist and Bible scholar who engages in glamorous projects such as looking for Noah's Ark (which he claims to be digging up in Turkey). Now, however, Broshi says, "We are divorced from Vyndel Jones" and will be assembling their own team of volunteers to do the excavations. Time is of the essence, say the archaeologists, as they want to get at the caves before looters find them.

Qumran discovery. Apparent caves were found in area where Dead Sea scrolls were stored.

Physics Restored at James Madison U.

Physics has a new lease on life—at least at James Madison University in Harrisonburg, Virginia. Early this year the school decided to eliminate its physics department, including its 10 tenured physicists, on the grounds that it was too expensive and overstaffed for the number of majors it turned out (*Science*, 24 February, p. 1095). But in late July the administration offered a reprieve.

Norman Garrison, interim dean of the College of Science and Mathematics, explains that decision came about because the department "made a lot of progress toward revising [its] program" and developed a "redeployment plan" in which some physics faculty teach nonphysics courses in other colleges. But some faculty think the change of heart is due to a breach-of-contract lawsuit that a group of Madison professors filed last May. They charged that the school had failed to consult a faculty committee that was supposed to be offering advice on restructuring.

While Garrison says the lawsuit was a separate matter that had nothing to do with the reprieve, some professors, such as physicist Dorn Peterson, believe it has helped things along and indeed may have saved the physics program. Peterson notes that the deployment plan was submitted last March, but the university didn't react to it for 4 months, during which time the lawsuit was filed. Peterson says faculty members have donated $50,000 to pursue the suit, which is scheduled to go to court in November. The parties have now agreed to stay mum. But as Madison historian Caroline T. Marshall explained to the *Chronicle of Higher Education* (4 August), the suit is not being dropped because larger issues relating to "the faculty's role in the curriculum" need to be addressed.

Wellcome to the Big Leagues

The Burroughs Wellcome Fund, the U.S. biomedical foundation which is getting richer by $400 million thanks to a windfall from its British partner, the Wellcome Trust, has announced the creation of $6 million worth of new grant programs to boost biomedical research. The six programs include awards for career development and for research in pharmacology, parasitology, and reproductive health, as well as institutional awards for interdisciplinary training.

The fund's awards totaled around $6 million a year before the 1993 transfer of wealth. The total is slated to reach about $23 million in 1997 when the transfer is complete, says Wellcome spokesperson Martha Peck. She claims that the fund is "the only major foundation in the U.S. whose sole mission is to support biomedical research." Scientists interested in learning more can call the fund, located in Morrisville, North Carolina, at 919-991-5100. E-mail: mailback@bwfund.org

Winning With Testosterone

It's been well established that testosterone levels in both humans and monkeys rise precipitously in combat and victory and fall after defeat—whether it be in battle or on the chessboard. Now a group at Georgia State University has shown that these fluctuations occur in onlookers as well.

Georgia State psychologist James Dabbs sent several graduate students into "sports bars" in Atlanta during last year's championship match of the World Cup soccer tournament. The match was on TV, and the students' mission was to collect saliva samples from rabid fans of the two finalists, Brazil and Italy. Saliva samples were taken just before the game started and after Brazil trounced Italy. Some of the Italian fans were so depressed they disappeared before follow-up samples could be taken, says Dabbs.

But the results, presented at last month's meeting of the American Psychological Association in New York City, were clear: Testosterone rose in 11 of the 12 Brazilian fans, by an average of 27.6%. And the hormone levels in nine Italians fell by 26.7%.

"I think what we saw is how sensitive the body is—you don't have to be in the fight yourself"

BOB DAEMMRICH/SYGMA

Hormone surge. Brazilians celebrate at last year's World Cup.

to look like a combatant biochemically, says Dabbs. The Italian data could be ambiguous, as testosterone levels always drop during the course of a day. But in the Brazilians, "the increase is striking," says Dabbs, who made

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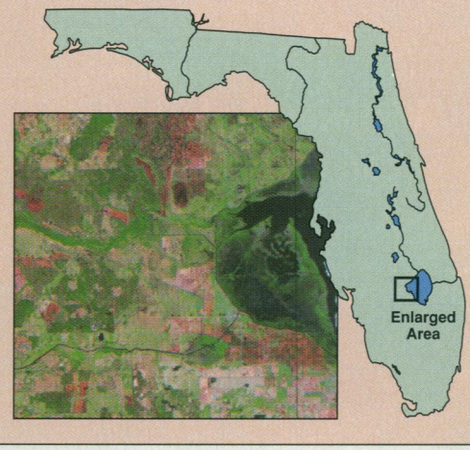
Diagnostic Imagery for Florida

A map of South Florida, incorporating high-quality and up-to-date satellite imagery (on a scale of 5 kilometers to the centimeter), will be used in the $3 billion effort to restore the Everglades over the next 2 decades (*Science*, 23 June, p. 1688). Sarah Gerould, ecosystems coordinator for the U.S. Geological Survey (USGS) in Reston, Virginia, says the map will help scientists see how vegetation patterns have changed in recent years—for example, the rapid spread of cattails in response to excessive nutrients in the Everglades. This section of the map, which was produced by the USGS's South Florida Ecosystem Program, shows the Calloosahatchee River flowing into Lake Okeechobee, and varied geography including urban areas (pink), rangeland (light green), coastal marsh (dark green), flood plain with hardwood forests (green along river), and palmetto prairie grassland (pink, speckled).



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it into the *National Enquirer* a few years ago for his finding that trial lawyers have higher testosterone levels than other lawyers.

Social psychologist Alan Booth of Pennsylvania State University, who has studied testosterone in tennis and chess players, says he believes the soccer cup finding is "the first time [the effect has been] shown to occur among onlookers." Sociologist Alan Mazur of Syracuse University, who studies testosterone and behavior in males, adds that while some scientists tend to confound dominance with physical aggression, testosterone changes in this study are clearly associated with competitive—as opposed to violent—urges.

Lubricants and HIV

The virus that causes AIDS, previously thought to die quickly outside the body, can survive for several days in certain lubricants even after treatment with a germicide, according to a new study. Because lubricants are used on many surgical instruments, improved sterilization techniques may be advisable, according to microbiologist David Lewis of the University of Georgia Institute of Ecology, the study's lead author. Some clinicians demur, arguing that current cleaning techniques are effective, but others say those techniques are not always used.

According to the study, published in the 29 August *Nature Medicine*, the virus can survive in the lubricants for at least 2 days, and as long as 4, even when soaked in glutaraldehyde, a commonly used germicide. He says this has implications for instruments such as endoscopes, long tubes used as optical probes in patients, which are too delicate for the most effective sterilization procedure—high-pressure steam in an autoclave—and are usually washed and then disinfected.

Greg Stiegmann, head of surgical endoscopy at the University of Colorado, says that although the findings "are of some [theoretical] concern," there's no practical danger if endoscopes are properly scrubbed before being disinfected. But not everyone shares this confidence. Roger Marchant, a biomaterials expert at Case Western Reserve University in Cleveland, says he has found from his studies that "current cleaning procedures leave a substantial amount of material" on endoscopes. True surgical sterility, says Marchant, requires a stronger germicide, peracetic acid, which eliminates materials left on the instrument more thoroughly than glutaral dehyde can.

Donald Marianos, director of the division of oral health at the Centers for Disease Control and Prevention (CDC) in Atlanta, notes that there have been no reports of HIV transmission linked to properly cleaned and disinfected surgical instruments. He adds, however, that the CDC is working with endoscope manufacturers to design instruments that can be more easily cleaned and disinfected.

Reagent Clearinghouse

A few years ago, microbiologist Eugene Sokourenko of the University of Tennessee, Memphis, needed to find out how to make antibodies to a bacterial adhesion molecule his lab was studying. "It took us 8 months and a very hard search," he says. At around the same time, Sokourenko responded to a request for a reagent from a researcher who told him that six other labs had turned him down.

To Sokourenko, those vignettes show that "the present system"—involving cumbersome searches of the literature for the right reagent—"just doesn't work at all." His fix: a directory of research materials called Link-a-Lab.

Ads placed by Sokourenko in scientific journals will soon be asking both seekers and suppliers of research materials to send in descriptions of antibodies, cell lines, and so forth that they need or have available. Sokourenko plans to organize the information into a detailed directory, to be updated at least quarterly, designed to aid the academic researcher. Each issue of the directory, scheduled to debut in January, will cost about $20. And Sokourenko and his two partners intend to charge as much as $25 to post an entry.

Labs usually charge nothing to share reagents, but when Link-a-Lab recently surveyed scientists to gauge their reactions to the directory, 60 of the 100 who responded said they'd be willing to pay for a listing if they needed a product. On the other hand, only 30 said they would pay for an ad to offer a reagent for free.

Sokourenko says the directory will be well worth the price because Link-a-Lab will be able to be used, in effect, as a scientific dating service, bringing together potential collaborators. But an informal survey of several scientists by *Science* revealed muted enthusiasm for the idea. "It's an interesting concept," says David Sachs, a Harvard University immunologist who freely shares his reagents. But, he cautions, "most people on the cutting edge want [a new research material] because they've just read a good article on it, not because they've read about it in a catalog."

The Element Name Game

In an unprecedented retreat, the International Union of Pure and Applied Chemistry (IUPAC) has backed away from its proposed names for five of the most recently discovered elements. The move follows a row with the American Chemical Society (ACS) over who discovered some of the high–atomic number elements in the 1960s and 1970s. This summer the ACS went ahead and christened the elements unilaterally.

In the face of the long-standing disagreement, the IUPAC ruling body, meeting in Guildford, U.K., last month, for the first time in its history overruled its nomenclature commission's proposals. "We now recognize the issue was handled precipitously," says Maurice Williams, executive secretary of IUPAC. No final decision will be made before 1997. The ACS had no comment on IUPAC's move, but U.S. Nobel laureate Glenn Seaborg, who has an element named after him according to the ACS (element #106, or seaborgium) but not according to IUPAC, says, "I'm hopeful [IUPAC] will change things."