RANDOM SAMPLES

edited by CONSTANCE HOLDEN

Squabble Over Heavy Elements

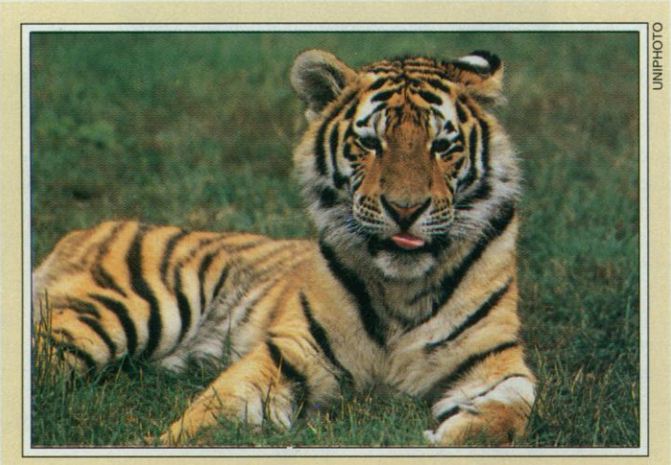
Call it a late christening ceremony. Researchers from the German Heavy Ion Research Society's laboratory in Darmstadt last week announced names for three chemical elements (107, 108, and 109 in the periodic table)—the heaviest elements yet discovered—that were found at Darmstadt way back in the early 1980s. The official ceremony was attended by some heavyweight "godfathers," including German research minister Heinz Riesenhüber and Yuri Oganessian, from the Joint Institute of Nuclear Research in Dubna, Russia, whose group shares credit for the discovery of element 108.

Why did the German researchers wait so long to name their elements? The answer lies in an unseemly row that has been raging since the 1960s. Both the Dubna researchers and their main competitors—a team from the Lawrence Berkeley Laboratory led by Glenn Seaborg—claim to have discovered elements 104 and 105. The Americans wanted to name them rutherfordium and hahnium; the Russians, kurchatovium and nielsbohrium. Until this squabble was sorted out, the naming of the heavier elements was also held up.

It's been difficult to resolve the conflict. Evidence on the "transfermium" elements (those with numbers greater than 100) is hard to collect because they survive only briefly after being produced in collisions in accelerators and their presence must be inferred by extrapolation from known radioactive decay products. But a joint working group of the International Union of Pure and Applied Chemistry (IUPAC) and its physics counterpart, IUPAP, earlier this year produced a ruling on who discovered each of the transfermium elements—and credited both the U.S. and Russian groups for 104 and 105.

That didn't end the matter: IUPAC executive secretary Maurice Williams says Seaborg "went through the roof." IUPAC won't be publishing the working group's report in its journal until Seaborg has prepared a commentary. The physicists, though, have gone ahead and published the findings—much to the annoyance of Seaborg, who argues that the working group contained too few nuclear chemists, and that it awarded the Russians joint credit for discovering element 104 on the basis of "retrospective treatment of 20-year-old Dubna data."

Elements 104 and 105 are therefore still embroiled in controversy. But 107 to 109 are finally cleared for christening by the Darmstadt researchers. Assuming the names are approved, as expected, by IUPAC's Commission on the Nomenclature of Inorganic Chemistry, element 107 will be called nielsbohrium (as a gesture to the Dubna group); 108 will be named hassium, after the Latin name for Hesse, where the Darmstadt lab is based; and 109 is to be meitnerium, after the German nuclear physicist Lise Meitner.



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Siberian tiger. Soul mate to the spotted owl?

Tigers in Jeopardy

The Russians are increasingly getting caught up in American-style environmental conflicts. One striking example: Russian environmentalists are waging a battle on behalf of the endangered Siberian tiger, whose range is being threatened by logging operations. Shades of the spotted owl.

Last month, the forest service of Primorsky Krai, a region just across the sea from Japan, gave permission to the Hyundai Corp. of South Korea to log about 300,000 hectares of old growth forest near the headwaters of the Bikin River. Primorsky Krai, say environmentalists, is the prime stomping ground for Siberian tigers, which number only about 500 in the wild.

Although Hyundai has been logging to a limited extent in the region for about a year, the recent agreement would vastly expand the company's operation. And that would seriously jeopardize the tigers' habitat, contends David Gordon, director of the Siberian Forests Protection Project at the Pacific Energy and Resources Center, a think tank in Sausalito, California.

In granting Hyundai permission to step up its logging, the forest service appears to have overruled a range of state and local groups. Goskompriroda, Russia's version of the Environmental Protection Agency, has recommended against the logging in two recent ecological impact statements. Additional protests have come from the Udege, a people indigenous to Primorksy Krai; the Forestry Committee in Moscow; and Alexei Yablokov, Russian President Boris Yeltsin's adviser on environment and public health.

But cash-strapped Primorsky Krai wants to move ahead anyway. In a telegram to the region's governor, Vladimir Kuznetsov, Yablokov stated that he was "surprised at the unjustified urgency in the leasing of the forests.... Such actions are a direct violation of Russian law." But in a statement to the Siberian press, Kuznetsov asserted that he would fulfill the contract with Hyundai unless Yeltsin personally interceded.

The Real Truth About Science

Some time within the next few months, you'll be able to start receiving a new periodical devoted to "truth in science and technology." Did you think you were getting that already from your favorite science journals? Wrong, according to Massachusetts Institute of Technology math professor Gian-Carlo Rota, who thinks the world could use a newsletter devoted to "debunking pseudoscientific theory"—like economic modeling and Freudian analysis. Statistical analysis has shown the latter to be less effective than African witchcraft, says Rota, giving you a flavor of what he intends to say in his startup, which is to be titled "State of the Art."

Other headliners planned by mastermind and editor-in-chief Rota might include a list of discoveries that contradict Darwinian evolutionary theory, or an exposé of "neural networks" (he feels this is simply a new name for multivariate statistical analysis). And there are to be columns like the one titled "Phony Baloney," which Rota hopes to fill with "hot news items" from "a network of informants who will contribute, either anonymously or under a pseudonym, or under their own names."

If you're interested, Rota urges you to contact him at MIT right away for a trial issue (subscription price is yet to be determined), because continued funding for the enterprise is contingent on establishing a credible mailing list. In return, Rota promises you a news-

letter that will not shy away from controversial subjects or unpleasant truths, as do publications like *Science* and *Nature* that are "linked to the establishment."

African AIDS Toll

AIDS is expected to reduce the projected population in the African countries worst hit by the disease by 20 million during the next quarter-century, according to the latest United Nations world population projections.

Africa is the home of the 15 countries with the highest prevalence of HIV. By 2015, the UN projects that AIDS will be directly responsible for 13 million excess deaths in these countries (more than 13 million will die of AIDS but many of these would have died prematurely from other causes). In addition, AIDS deaths among women in their reproductive years will mean that about 7 million fewer children will be born.

In spite of this staggering toll, the UN says Africa's population is still expected to double by 2015.

Shaping the NSF of the Next Century

The National Science Foundation (NSF) is making good on its promise to get the public involved in charting the agency's future (*Science*, 21 August, p. 1035). Last week James J. Duderstadt, president of the University of Michigan and chairman of the National Science Board, announced the formation of a 15-member commission co-chaired by William Danforth, chancellor of Washington University, and Robert Galvin, former CEO and current chairman of the executive committee of Motorola. The commission will occupy itself with two questions: How can NSF enhance the nation's academic system in science and engineering? And how can NSF broaden its mission in order to facilitate better links between academia and industry? The commission will hold three public meetings (17 September, 16 October, and 7 November) at NSF headquarters in Washington and will take written comments until 15 October. It will make recommendations to the science board at the end of November—after the election.

STUART/RODGERS/REILLY

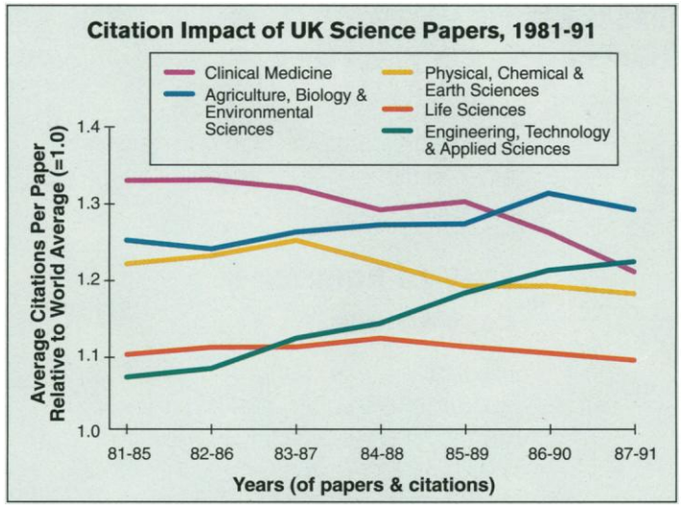
Danforth and Galvin. Defining where NSF goes from here.

Euro-Biology Leaders Dropping Out

Perhaps it's something they're putting in the water in Heidelberg. Less than 2 months after Lennart Philipson resigned as director of the European Molecular Biology Laboratory (EMBL), John Tooze, executive secretary of EMBL's sister body, the European Molecular Biology Organization (EMBO), has announced that he too is stepping down.

Tooze says that his decision to leave Heidelberg has nothing to do with Philipson's departure or with any disagreement with EMBO's governing council. (Readers will recall that Philipson's resignation was the culmination of a long-running battle over the size of EMBL's budget [*Science*, 31 July, p. 607].) Rather, Tooze says, after 20 years with EMBO he'd like to spend the last 10 years of his career back in his native Britain, or maybe in the United States.

Tooze and Philipson are leaving at a crucial point in the evolution of the two sister organizations. The European Community (EC), which has been expanding its research budget over the past few years, is now beginning to encroach on EMBO and EMBL's turf. For EMBO, which spends most of its $10 million annual budget on postdoctoral fellowships, the major concern is the EC's newfound interest in funding traveling postdocs, many of them biologists. Europe's governments won't want to pay twice for the same thing, Tooze says. But "it would be sad to see an agency like EMBO dismantled in favor of the EC."



Clinical decline. Clinical medicine has traditionally been one of Britain's strengths. But things aren't looking so good in the field according to the latest analysis by the Institute for Scientific Information (ISI). The citation im-pact (average number of citations per paper) of British clinical research papers has fallen off badly over the past 5 years—despite a rise in output. What's behind the decline? Some researchers say the best clinicians are staying out of research because academic salaries lag behind those for National Health Service (NHS) physicians. But Edinburgh gastroenterologist Ian Bouchier, chief NHS scientist in Scotland, believes an increase in "soft money" from drug companies and small charities accounts for both the drop in quality and the jump in output. "A lot of people feel that this research is not as strong" as that funded by the Medical Research Council, says Bouchier.

As for the rest of British science, things could be worse. The ISI analysis shows that for the 5 years ending in 1991, UK papers were being cited 16% more than the world average—the same percentage as for the 1986-90 period. This is only a minor triumph, though, as the citation impact of British science has been sliding since the early '80s, when UK papers got 23% more citations than the world average. Source: ISI

Fuji Biotech Startup in Boston

In the past decade, Japanese firms have struck up dozens of partnerships with U.S. biotech companies and universities to keep pace with the United States. Now, Tokyo's Fuji Photo Film Co., Ltd. has come up with a more direct way of accessing the finest minds of U.S. biotech: It is forming a U.S. company with help from some prominent researchers. Earlier this month, Fuji announced the formation of Fuji Immuno-Pharmaceuticals Corp. (FIP), the brainchild of Lan Bo Chen, a cell biologist at Harvard's Dana-Farber Cancer Institute.

And Chen (who is not on Fuji's payroll) has recruited a high-powered adviser: immunologist Susumu Tonegawa, a Nobel laureate at MIT. Tonegawa says that his employer, the Howard Hughes Medical Institute, hasn't yet approved his work with FIP. Nevertheless, he has played a key role in helping launch FIP since Chen approached him 18 months ago. "Lan Bo Chen had the connection with Fuji," Tonegawa says. "What he needed was a chair for his advisory board." Tonegawa says he helped raise funds for the FIP, which received just over half of its cash (amount undisclosed) from Fuji and the rest from investments by Tonegawa and several other scientists.

A Fuji spokesman says that FIP, which will be located in Lexington, Massachusetts, is intended to develop drugs for AIDS, juvenile diabetes, and chronic articular rheumatism.