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COVER: A few days old, the first emperor penguin to be bred and hatched outside the Antarctic peeks out from under the protective abdominal fold of its father. Three emperor penguin chicks hatched in September at the Hubbs-Sea World Research Institute Antarctic penguin facility in San Diego. See p. 297. (Photo: Sea World)

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Equating rape with love?

In the article "To everything there is a season" (SN: 9/6/80, p. 150), you refer to the late summer and early fall as the season to which "a young man's fancy turns to thoughts of love." In paragraph five you state: "Incidences of rape cluster in the late summer. . . And it is not a product of revealing summer clothes—Smolensky found a study by a Dr. Leffingwell, 'Seasonal Incidence of Offenses Against Chastity, 1880-1884,' that noted the same venal prominence." The article equates rape with a kind of love, or a kind of peak sexual desire. It may be, according to paragraph eight, that "testosterone peaks in September," giving rise to increased sexual activity, but rape is never to be confused with either love or sexual desire — it is an act of violence and hatred towards another individual. To mention rape in such a lyrical article, in almost a sympathetic and humorous vein, is to continue to ignore the fact that rape is a serious and unforgivable crime against humanity, and must be observed as such.

*Elizabeth Standen
Mountlake Terrace, Wash.*

Selective use of data

The recent hypothesis of J. Cairns that human cancer may be caused by chromosome rearrangements and not point mutations (SN: 10/4/80, p. 212) is based on ideas that have received current popularity with the discoveries of gene rearrangements during development, particularly in the immunoglobulin system. The hypothesis is, however, based on selective use of severely limited data in two diseases, xeroderma pigmentosum and Bloom's syndrome. A more careful evaluation of extant data on these diseases in fact indicates that there is a constant correlation between cancer and point mutations. Chromosome rearrangements show no such correlation. Because XP is primarily a disease in which cancer is induced by environmental agents, the apparent paucity of cases with internal cancers (but not complete absence, since at least 12 have been reported) does not demonstrate anything fundamental about the mechanism of carcinogenesis. It may only indicate that the levels of exposure of internal organs to environmental carcinogens is low in comparison to the carcinogenic intensity of sunlight. One should therefore avoid being swayed by fashionable thoughts about gene and chromosomal rearrangements in mammalian development and avoid making this year's discoveries in cell biology into this year's explanation for cancer.

*James E. Cleaver
San Francisco, Calif.*

Cometary musings

Hundreds of millions of years ago the Solar System is invaded by a swarm of icy comets. Their path takes them on the plane of the ecliptic and through the orbits of most of the planets. On several of their visits, the swarm passes near Europa, and dozens crash into its surface and cause that moon to crack like a marble. No debris is left, and the ice becomes part of the normal surface, and, in fact, glazes over the surface. On yet other of their visits Mars becomes their target. Although its atmosphere is thin it is sufficient to melt a few and the debris splashes down, leaving behind massive erosion channels which early astronomers may have mistaken for canals. When Dr. Lowell first observed Mars there may have yet been enough residual water or water vapor in them to provide a sufficiently high reflectance to lead him to that belief. Yet others of the swarm crash to Earth. One of the visits 65,000,000 years ago may have set off a chain of events which led to the mass extinction of half the species of life on the planet. Later visits and smaller comets might have increased the atmospheric water vapor pressure so that normal orbit changes and axis orientations led to massive precipitation in the colder regions of the surface, thus resulting in the glacial cycle.

The swarm travels on, each visit having fewer and fewer icy comets. It will come again. But when?

*P.T. Bohall
Springfield, Va.*

A Wee idea

After reading your article on the Wee Pocket Chirper (SN: 9/27/80, p. 203), I came up with an idea. If cadmium telluride produces an electrical charge when struck with radiation, why not build a large chamber lined with cadmium telluride into which would be placed the radioactive wastes from various power plants and the like. The electricity given off could be stepped up by transformers to be used as power for communities or other energy consuming environments. This process would put radioactive wastes to good use and would lessen the need for petroleum-run generators.

Being one of your younger readers I am less knowledgeable in this area of science, but it seems to me that this is a feasible plan. If it is, why has it not yet been put to use?

*Peter Silverstein
New Rochelle, N.Y.*

(In theory, says Chirper developer C.J. Umbarger of Los Alamos Scientific Laboratory in New Mexico, the idea is a good one. However, one 2-millimeter cube of cadmium telluride costs about \$150, and the small electrical signal it gives off when struck by radiation is "quite negligible." — Ed.)

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