In connection with recent events in Kansas, a reader asks, "[W]here is Erasmus Darwin (grandfather of Charles) when we need him most?" A Web publication in astronomy is said to suffer from "lack of peer review." The practice of destroying agricultural products in developed countries in Europe to keep prices high is questioned. Tubers grown at high altitudes in the Andes are described. Restraint is urged in criticism on the Internet. Research on artiodactyl nuclear DNA is clarified. An unfulfilled cold fusion prediction is pointed out. An alternative explanation is offered for how metallic whiskers are grown. And data on Ph.D.s earned by minorities and ranking of research-active departments are examined.

Darwin in Kansas

With respect to the piece "Darwin-free biology" (ScienceScope, 6 Aug., p. 813), where is Erasmus Darwin (grandfather of Charles) when we need him most? As he warned the Kansas State Board of Education in 1794 (*1*):

> The world itself might have been generated, rather than created; that is, it might have been gradually produced from very small beginnings, increasing by the activity of its inherent principles, rather than by a sudden evolution of the whole by the Almighty fiat. What a magnificent idea of the infinite power of THE GREAT ARCHITECT! THE CAUSE OF CAUSES! PARENT OF PARENTS! ENS ENTIUM! For if we may compare infinities, it would seem to require a greater infinity of power to cause the causes of effects, than to cause the effects themselves.

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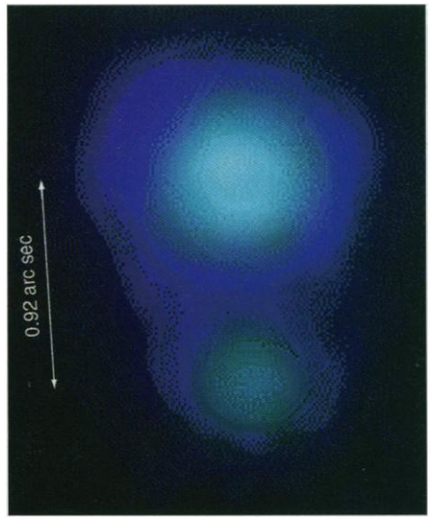
Ethane on Pluto?

The article "Telling Pluto and its partner apart" by Mark Sincell (News of the Week, 30 July, p. 649), apparently adapted from a Web site (*1*), reports the detection of frozen ethane on Pluto from spectra obtained at the new Subaru telescope on Mauna Kea, Hawaii. We are great admirers of Subaru and are delighted to see it coming into action, but this "Web site publication" suffers from the lack of peer review. Since 1991, we have routinely used the 3.8-meter U.K. Infrared Telescope, also on Mauna Kea, to obtain spectra of Pluto (*2*). Since 1995, the Cooled Grating Spectrometer at this telescope has been producing spectra that are higher in signal precision than the spectrum shown on the Subaru Web site. For example, CO and N_2 ice absorption bands are well defined in our spectra, but in the Subaru spectrum they are barely distinguishable. In addition, the posted spectrum must be shifted by about +0.0125 micrometers to bring the wavelengths of the absorption bands into accord with their correct positions. An illustration of our more recent data is shown in a 1998 review paper (*3*), and the spectra have been presented at various conferences around the world. In a paper now in press (*4*), we model the Pluto spectrum with frozen mixtures of nitrogen, methane, carbon monoxide, and water. We have specifically searched for ethane, which is predicted from photochemical calculations (*5*, *6*), by systematically adding it to our best models. We found no discernable contribution of C_2H_6 at the wavelengths noted. The real spectral features shown in the Subaru spectrum presented by Nakamura and his colleagues are completely modeled with the mixture noted above, and the two features attributed to ethane ice are in fact due to methane ice. We have successfully modeled these same features in the spectrum of Triton as well.



Pluto and its moon Charon

CREDIT: NAO

Pictures showing Pluto and Charon clearly separated were taken 9 years ago with the Canada-France-Hawaii 3.6-meter telescope, also on Mauna Kea (*7*). Our knowledge that Charon is covered largely with water ice dates to the mid-1980s from results obtained during the epoch of mutual transits and eclipses (*8*).

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Increasing Food Availability

The plant revolution, the genetically transformed crops, and their optimistic scientific background are bringing increasing benefits to companies, farmers, scientists, and maybe the environment ("Plant Biotechnology," 16 July, p. 367). Furthermore, it has been claimed that biotechnologies will contribute to the increase of food availability in developing countries and in reducing poverty, hunger, and diseases. Yet every year in Italy and the rest of Europe, tons of agricultural products and foods are destroyed to keep sale prices high, and developing countries have never had much benefit from the abundance of food in Western countries. This could be a convincing argument to discuss with the public: We all know how important sentiment is in persuading people that something is good and true.

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