

# SCIENCE

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# LETTERS

## Frog Endangerment

In their letter “Tropical poison frogs,” Charles W. Myers and John W. Daly (19 Nov., p. 1193), who are undoubtedly experts in the biology of dendrobatid frogs, provide incorrect information about the meaning of the frogs’ listing under the Convention on International Trade in Endangered Species (CITES).

All dendrobatid frogs of the genera *Dendrobates* and *Phylllobates* are listed in CITES Appendix II, which does not equate to “threatened” status, nor does it require evidence of “endangerment.” The listing, designed to regulate trade in vulnerable species, does require that an exporting country first make a judgment that trade will not be detrimental to the species before issuing an export permit. If range countries are refusing to issue such permits, it may be because they have made determinations that trade from their populations is not sustainable, or because they have other, stricter domestic measures separate from CITES which ban such trade, a sovereign right of every nation with or without international treaties.

Perhaps we in the regulatory agencies need to do a better job in working with the scientific community to explain what trade is regulated internationally, and why. Cooperative efforts between scientific researchers and conservationists are crucial if we are to conserve tropical biodiversity and the genetic bank it encompasses.

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## Smallpox Virus Stocks

Having thus far stayed out of the debate about smallpox destruction, I am moved to comment on the thoughtful Policy Forums published recently in *Science* (19 Nov., pp. 1223 and 1225) where two sets of eminent virologists (B. W. J. Mahy *et al.* and W. K. Joklik *et al.*) come to such opposite conclusions.

I am persuaded by the arguments of Mahy *et al.* for destroying existing stocks of the virus. The opponents are not really arguing against destruction, but rather for continued research. They might even agree

that if no research is being done on the virus, it might as well be destroyed.

I find it hard to believe that we need to, or even will, continue research on a virus whose release from containment would be such a disaster while its present threat is nil. The opponents of its destruction propose a broad program of “studying in detail [smallpox’s] molecular pathogenesis.” They apparently believe that this can be done in a secure P4 facility. I have seen such facilities, and they are cumbersome, to say the least. I cannot see carrying out a wide-ranging program of molecular analysis on an eradicated disease in such a difficult and expensive facility. If any other facility were used, the problem of security would be serious: the opponents of destruction themselves note that in the laboratory in Birmingham, England, where escape occurred, “simple but essential administrative precautions were ignored.” The sole insurance against a repeat would be the type of vigilance that only a P4 facility can maintain over the long haul.

While I agree that a deeper understanding of pathogenesis will help counter microbial infections, I doubt that we so desperately need to study smallpox that it would be worth the risk inherent in the experimentation. Much of the value of research can be gained from studying related viruses, especially vaccinia. Eradication of the virus as well as its disease will better serve the long-term interests of humanity as the proponents of destruction have argued.

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## The Importance of Restaurants in Superconductivity Research

We were surprised to read in Gary Taubes’ Research News article “Holding the lines in high-temperature superconductors” (17 Sep., p. 1521) that the “ultimate solution to the problem” of pinning in high- $T_c$  superconductors “was suggested at a Chinese restaurant in Anaheim, California, in March 1990” when “[John] Clem suggested that since a vortex is a linear object, ‘a really keen way to immobilize it’ . . . would be to create . . . ‘a line-like potential well, a line of normal non-superconducting material, a microscopic hole through the super-