Letters

California Redwoods: Congress Debates Park Acreage

For more than 2 years the preservation of some of California's giant redwood trees in a national park has been debated in Congress. The fate of the redwoods, one way or another, will probably be determined within the next 2 months. Last October the Senate Interior Committee reported out a compromise bill, S. 2515, which subsequently passed and is now pending before the House Interior Committee. Bill S. 2515 authorizes a two-unit 61,654acre (25,000-hectare) national park. The north unit is in Del Norte County and consists of Jedediah Smith and Del Norte Coast State Parks plus 11,150 acres of land in private ownership. The south unit is in Humboldt County and consists of Prairie Creek State Park plus 22,474 acres of privately owned land. Of the 33,330 acres of virgin timber within the proposed boundaries of the national park, 20,300 acres or 61 percent comes from the three state parks. Similarly, 45 percent of the total land comes from the state parks. Thus, only 13,030 acres of virgin timber now in private ownership will be afforded protection under this bill.

Conservationists believe that the Senate bill can be greatly improved by revision of the boundaries to include a minimum of 72,000 acres, and there is a reasonable prospect that this acreage can be purchased within the \$100-million appropriation limit set by the Senate bill. The Senate Interior Committee has considerably overestimated the price of redwood stumpage.

Even if the boundaries are expanded to include 72,000 acres, only 20,710 acres of virgin timber now in private hands will be preserved instead of the 34,400 acres that would have been saved under the Sierra Club's original 90,000-acre park proposal. Even with these proposed additions, then, this park would still be a great compromise.

At the House Interior Committee field hearings in California in April of this year, two principal arguments were made against the very small park proposed in the Senate bill. The lumber companies and other special interest groups argued that the park would mean economic doom. Several committee members, including Chairman Aspinall (D-Colo.), indicated they felt the nation could not afford the cost of the park.

The fact is that all of the privately owned timber within the boundaries of the Senate bill is but a 1 year's supply for the existing sawmills of Humboldt and Del Norte counties. All of the timber in the areas which conservationists want added to the Senate's park proposal constitutes less than a 6 months' supply of timber for these mills. Clearly, if the lumber companies were practicing sustained-yield logging (which they are not), the park would have no adverse effect on the local economy. Since they are not logging on a sustained-yield basis, the lumber industry in these counties will soon suffer a decline regardless of the park.

For Congressmen to argue that we cannot afford to preserve 1 percent of the redwood forests we inherited in a national park that would be 1/35th the size of Yellowstone borders on the ludicrous. Last year this same Congress passed one of the largest public works appropriation bills in the nation's history-\$4.6 billion, of which \$1.6 billion went to the Corps of Engineers and Bureau of Reclamation. The total cost of the redwood park is but 2 percent of 1 year's expenditures for the space program or equal to what we are spending in Vietnam every 36 hours. One can only speculate on what future generations will think of our system of priorities.

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LSD and Marihuana: Where Are the Answers?

In his editorial "LSD and marihuana" (15 Mar., p. 1189) Abelson is to be commended for his indictment of the mass media and their effect on the spread of psychedelic drug abuse. Young people have the message that these drugs are closely interwoven with sex and fun, two other aspects of our lives which are used in all manner of entertainment and advertising.

The increased use of marihuana by a large segment of our population is another matter. This is not limited to the teenager or college student or "hippy" types. Many people are using marihuana as a relaxant or as a form of recreation in much the same manner that alcohol is used by others. These people include college professors, doctors, lawyers, business men, and school teachers.

In the literature in the United States a few cases of temporary psychosis have been reported following acute intoxication with marihuana. The La-Guardia Commission reported three such cases in its experiment, with the conclusion "that given the potential personality make-up and the right time and environment, marihuana may bring on a true psychotic state" (1). The large increase in the use of marihuana in recent years has produced few such cases, which Becker attributes to a better understanding of the drug effects in the subculture which serves to introduce newcomers to the drug (2).

According to Murphy, "As with alcohol, it is quite difficult to distinguish the longer-term effects of cannabis use for the personality traits or changes which would have been present whether the drug had been used or not" (3). In Mayer-Gross's opinion "The chronic hashish psychoses described by earlier observers have proved to be cases of schizophrenia complicated by symptoms of cannabis intoxication" (4). Allentuck states, "a characteristic cannabis psychosis does not exist. Marijuana will not produce a psychosis de novo in a well-integrated, stable person" (5). And Murphy writes: "The prevalence of major mental disorder among cannabis users appears to be little, if any higher than that in the general population" (3).

If one wishes to deter young people from experimenting with drugs they should do it by investigating and reporting the reason people feel the need to escape or alter reality through intoxicating or psychoactive drugs. This includes alcohol, barbiturates, amphetamines, and "tranquilizers" as well as the psychedelic drugs. Perpetuating myths or using scare techniques will only make them more inquisitive about the drugs or more resistive to giving up

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their habit. Nor will a severe, punitive approach deter experimentation or misuse, as is evidenced by the current upsurge in marihuana use despite 31 years of harsh criminal codes.

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References

- 1. Mayor's Committee on Marihuana, New York
- City (Cattell Press, Lancaster, Pa., 1944). H. S. Becker, Outsiders: Studies in the Sociology of Deviance (Free Press of Glencoe, New York, 1963); J. Health Soc. Behav. 8, 163
- 3. H. B. M. Murphy, Bull. Narcotics 15, 15
- (1963).
 W. Mayer-Gross, E. Slater, M. Roth, Clinical Psychiatry (Cassell, London, 1954).
 S. Allentuck and K. M. Bowman, Amer. J. Psychiat. 99, 248 (1942).

The change in attitude toward LSD is being rationalized by citing its harmful effects. The evidence, however, warrants no such conclusions. There is very little of it, and what does exist is about equally divided for and against the use of LSD. In opposition to Louria's view, cited by Abelson, that LSD may cause a variety of adverse effects, is the statement of Glickman of the Downstate Medical Center in Brooklyn that "everyone we see has a history of mental illness and to my knowledge we've never had an LSD user who was just a user and did not have previous mental [illness] history." In contrast to Louria's statement in the New York Times magazine (6 Aug. 1967) that "There is no evidence that [LSD increases creativity]," one can pose the unsigned article in Progressive Architecture (August 1966) "LSD-a design tool" in which numerous cases are reported of LSD and similar chemicals enhancing the solutions to specific architectural problems. Abelson's citation of Barron's observation that the press has glamorized psychedelic drugs and thus contributed to their use should be considered along with an article in Scientific American (April 1964) of which Barron was first author and which contains this statement:

The most systematic survey of the incidence of serious adverse reactions to hallucinogens covered nearly 5000 cases, in which LSD was administered on more than 25,000 occasions. Psychotic reactions lasting more than 48 hours were observed in fewer than two-tenths of one percent of

Regarding possible chromosomal damage, a great deal more work must be done before any conclusions are warranted. There were two studies in Science which showed that LSD induced an abnormally high rate of chromosomal breaks in peripheral blood cells (1). But there was also a study which not only failed to find the effect, but also raised important methodological problems concerning the criteria for determining a chromosomal break as well as the dosages of LSD used in obtaining the effect (2). None of the three mentioned the problem of inferring damage to sex cells from evidence of damage to blood cells. After all, if the important question concerns genetic damage to offspring of LSD users, then data on peripheral blood cells is not, by itself, sufficient to conclude that LSD is a genetic risk. It isn't even known whether LSD penetrates gonadal tissue, let alone whether it causes chromosomal abnormalities there.

The studies on fetal abnormalities are of a quite different sort, since the mechanism by which LSD induces such damage is very likely not genetic and also because a wide variety of other drugs, if injected directly into the abdominal cavity of pregnant rodents, are teratogenic.

WILLIAM A. MYERS

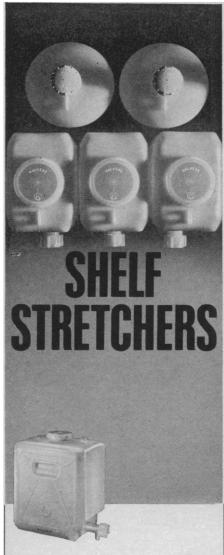
Regional Primate Research Center, University of Wisconsin, Madison

References

- 1. M. M. Cohen, M. J. Marinello, M. Back, M. M. Cohen, M. J. Marinello, M. Back, Science 155, 1417 (1967); S. Irwin and J. Egozcue, *ibid.* 157, 313 (1967).
 S. Loughman, T. W. Sargent, D. M. Israel-stam, *ibid.* 158, 508 (1967).

Is "pot" an enemy or a victim? Are we, as a supposedly advanced nation, pursuing a rational or hysterical line handling consciousness-changing substances and educating for their appropriate uses or avoidance? We adhere to two points of view, often characterizing different aspects of the same individual or community. These are the "nobody's gonna tell me what to do" (inherited from our frontier past) and the "destroy evil" from our witchburning past (a far less realistic, more medieval mystique). We must have a witch to burn.

In general, sexual mores are changing; most people drink some alcohol, many smoke tobacco, and an increasing number seem to be taking up other consciousness-changers. Cigarette smokers are medically warned but otherwise left alone to plague nonsmokers with their evil-smelling habit. Alcohol is available everywhere but the drinker is not molested unless he takes enough to destroy his judgment and control.



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"Acid" (LSD) may indeed be a demon incarnate, yet until lately one might legally possess it. "Pot," however, seems to have been tapped for Witch without analysis, trial, or reconsideration. What is the solid and impartial

Maybe we should all just drink milk, but in these days of increased pressure and strain, as well as widening existential adventure, I doubt this will suffice. Consciousness-changing additives will continue in use. Therefore it would seem that education and rational control should supplant hysterical persecution and attempted suppression. Remember the old bootleg days before repeal? "Pot" is the Witch of today as alcohol was then.

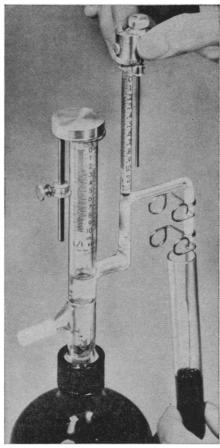
I suggest that the effects and dosages of all consciousness-changers should be tested by competent scientists and a little manual (like a calorie counter) prepared. Everyone should understand and should watch-or avoid-intake, as many of us now watch calories and cholesterol levels. Second, if "pot" turns out to be relatively innocent, it should be legalized for sale, graded like coffee, and taxed like cigarettes. In this way the states and the federal government would make a steady profit instead of the bootleggers (should it be "grassleggers"?). In addition, carefully reasoned investigation would take the place of the wild honking, braying, and persecution which now prevail.

EMMA LOU DAVIS

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I was intrigued by the recent cover painting executed under the influence of LSD (15 Mar.), in contrast to the artist's customary style, so I initiated a poll of 50 laboratory workers to determine which painting each preferred and why. Twenty preferred the painting done under the influence of LSD, and 30 preferred the conventional painting. Of the former group, the general consensus was that the painting was more expressive in contrast to the customary painting which was felt to be essentially reproductive and similar in value to that of a photograph. The group expressing preference for the customary painting simply indicated that they liked it better.

Of the 50 individuals polled, the group favoring the LSD painting had a mean age of 29 years, and the group favoring the conventional painting, 32 years. Examination of the entire group by age distribution revealed a difference



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for those less than 25 years of age as compared with those more than 25 years of age. Thirty-five individuals were 25 years or older. Twelve of the 35 (34 percent) preferred the LSD painting, whereas 23 (56 percent) preferred the conventional painting. Fifteen individuals were less than 25 years of age. Of the 15, 8 (53 percent) preferred the LSD painting and 7 (47 percent) preferred the conventional painting. Thus, it is clear that there was a reversal of preference about the age 25. A further effort was made to characterize the group and evaluate each individual as to how much of a "swinger" he or she was. Scores of 1 to 5 were assigned, with 1 representing the least swinging of the group and 5 the most swinging of the group. This simple system obviously has deficiencies; however, it is interesting to note that the group preferring the LSD painting had a mean score of 3.4 and the group preferring the conventional painting had a mean score of 2.9.

Although the results suggest that the group preferring the painting executed under the influence of LSD is a younger and more swinging group, the sample is small and the methods of study informal and not precise. The members of the group who preferred the conventional painting as well as readers of the same mind are certain to counter that our study has shown Little Significant Difference.

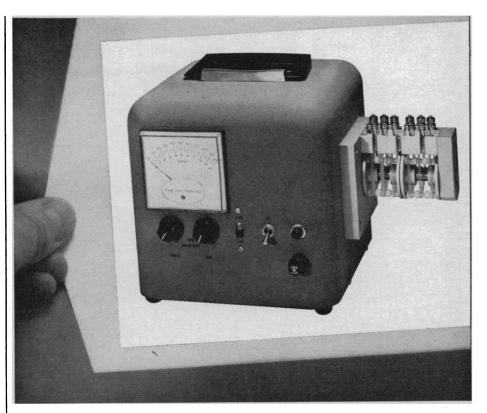
PAUL T. WERTLAKE

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IBP Delays

May I add to your concise report on the ills of U.S. participation in the International Biological Program (22 Mar.): It is highly improbable that a group of individuals who cannot agree on what constitutes a community can agree to get together for international cooperative research on communities. Not only is this an inauspicious time to commence major projects requiring new funds, but there is reason to believe that the field of ecology is not mature enough to benefit from a large-scale, coordinated program. This double misfortune is particularly disheartening since we are already in very deep ecological trouble.

HERBERT CURL, JR. Department of Oceanography, Oregon State University, Corvallis 97331



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