I am an author, historian and journalist who specialises in the history and culture of drugs. My books include *Emperors of Dreams: Drugs in the Nineteenth Century*, which was widely acclaimed in the press and commended to the House of Commons. I am also the editor of the Penguin anthology of drug writing, *Artificial Paradises*. I have written on the cultural use of drugs for newspapers including the *Telegraph*, the *Guardian* and the *Independent*, and for specialist and drug policy journals including *Druglink* and the *International Journal of Drug Policy*. I have lectured on the subject at academic institutions including the Wellcome Institute for the History of Medicine, University College London and Liverpool John Moores University. I am a trustee of the educational charity Transform Drug Policy Foundation.

I have conducted fieldwork with the San Pedro cactus in Peru, during the course of which I gathered botanical samples from across its habitat range and observed the trade in cut and preserved specimens at the *curandero* markets in Trujillo and Lima on the Peruvian coast. I also observed and experimented with various techniques of San Pedro preparation, participated in ceremonies and ingested the cactus myself on several occasions.

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‘San Pedro’ is a generic name for a family of cacti (*Echinopsis spp.*). These cacti grow in Andean valleys from Ecuador through Peru to Argentina, at altitudes of roughly 1000-2000m. Specimens vary from valley to valley in size,
colour, spine density and stem configuration, as well as their content of mescaline and other alkaloids. Two or three separate species are generally recognised, though there may be more.

These cacti contain a small quantity of mescaline, usually around 1% or less by dried weight. Mescaline is active only at relatively large doses of around 300mg. Thus the amount of fresh or dried cactus required to produce a hallucinogenic ‘trip’ is substantial: typically around 6-12 inches of thick stem. This quantity is virtually impossible to ingest as the cactus is extremely bitter and indigestible. It is very hard to eat even a mouthful of raw cactus without choking or vomiting.

The San Pedro has been used as a visionary sacrament for at least 3000 years, and is still commonly used by curanderos, or traditional healers, in healing and divination rituals today. It is widely sold for this purpose in herbal vegetable markets, usually in lengths of around 12-15 inches. However, the cacti are never consumed in this form. They are prepared by the curanderos by slicing and boiling, usually for a minimum of 24 hours.

In this respect the San Pedro cactus should not be confused with the peyote cactus, which also contains mescaline but in a higher concentration (up to 5%). In its traditional use (e.g. by the Huichol Indians in Mexico), peyote is chewed raw or dried. By contrast, San Pedro in the Andes is never consumed in its raw or dried form. Its use always involves significant further preparation. (By the same token, it is highly misleading to compare dried San Pedro to dried ‘magic mushrooms’ (Psilocybe/Stropharia spp.), which can be ingested without further preparation.)

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1 6 studies are cited at [http://www.erowid.org/plants/cacti/cacti_sanpedro_potency_faq.shtml](http://www.erowid.org/plants/cacti/cacti_sanpedro_potency_faq.shtml). One estimates mescaline content at 2%, one at 0.8%, the rest at less than 0.5%

2 Bas-reliefs of the San Pedro cactus can be seen at the ritual site of Chavin in northern Peru (2000-1000 BC)

It should also be noted that the traditional *curandero* brew, made simply by boiling the dried stem, is relatively weak. Its effect is mildly stimulant and not hallucinogenic. For the type of effect recognised as a ‘trip’ by Western drug users, more intensive preparation is required. Since the 1970s, a small number of Western drug enthusiasts, mostly in California, have experimented with stronger preparations of San Pedro and have published their results in small press books and journals and, over the last few years, on the internet⁴.

These preparation techniques, aiming to produce a strong mescaline dose (upwards of 300mg) from the cactus, are varied but always elaborate. Typically the cactus is frozen and subsequently defrosted to break down the cell walls and render the plant matter more digestible. This matter is then cooked for anything up to a week, often with lemon juice to break the plant matter down further, and/or allowed to ferment so that the semi-solid cellulose ‘mucus’ is dissolved. Even with elaborate reduction techniques, the end result is something between a half-pint and a pint of cloudy green liquid, bitter and foul to the taste. Since this brew has an effect broadly similar to a dose of ecstasy, widely available today for around £2-£5, San Pedro consumption remains a minority interest.

There will nevertheless always be a small number of people, intrigued by its mystique, who will wish to experiment with ingesting San Pedro. Very few of these people will do so more than once or twice. They may or may not succeed in ingesting an active dose, but in either case are unlikely to do themselves much harm. I am unaware of any records of serious toxicity or fatality from the use of San Pedro. By contrast, experiments with entirely legal psychoactives such as datura species or fly agaric mushrooms regularly result in serious toxicity or fatality.

⁴ For an early and influential example, see Jim DeKorne, *Psychedelic Shamanism* (Loompanics 1994). DeKorne’s preparation involves lengthy boiling, filtering, reboiling etc. By contrast, he takes peyote raw and without further preparation.
The San Pedro cactus is a popular conservatory and greenhouse plant. It is an attractive ornamental, with spectacular flowers. It is fast growing and tolerant of temperate climates, and for these reasons has been an established rooting stock since the 1930. Many growers are attracted to it by its sacred status in its Andean homeland. Those who wish to experiment by ingesting it are a small minority, and there is no indication that their numbers have increased over the last thirty years. It would be perverse to categorise it as a drug on the basis of this marginal activity.