 (Published in 1989, Addendum added 2013)

Desert Expansion and Drought: Environmental Crisis, Part I

*James DeMeo, Ph.D.**

The following materials summarize some of my observations regarding the formation and spreading of deserts and the related problem of droughts. Over 30 years ago, Wilhelm Reich warned that the atmosphere was becoming increasingly stagnant and drying up, and our planet was in great danger from the problem of desert spreading (1, 2). Today, we have ample evidence indicating his warning was correct, and the process of desertification continues, unabated. In a prior work, I discussed in some detail the comparative nature of various desert regions, identifying one single, large desert region, called *Saharasia*, as containing the largest single, contiguous territory of extremely arid, harsh desert lands on Earth (3). It was documented that the Saharasian region played a central role in the development of the armored, desert character structure and was a source region for the migratory cultures who later introduced armored patrism into distant regions. In the present paper, I have gathered evidence suggesting that the Saharasian region also plays a fundamental role in determining the climate and weather of regions at very great distances. Saharasia was not only the cradle and source region for the armored, desert character structure but also appears largely responsible for the formation of secondary, less-harsh deserts at distant regions around the world. Indeed, the *global desertification process* appears to be rooted in the existing major desert regions of the earth, notably Saharasia. These desert regions appear to act as source regions for atmospheric energetic stagnation (DOR), which is circulated about by planetary winds from one region to another. Gradually, inexorably, the planetary atmosphere is experiencing an overall increase in stagnation and

* Director of Research, Orgone Biophysical Research Laboratory, P.O. Box 1395, El Cerrito, CA 94530.

James DeMeo: "Desert Expansion and Drought: Environmental Crisis"
Journal of Orgonomy, Vol.23, No.1, 1989, pp.15-26.

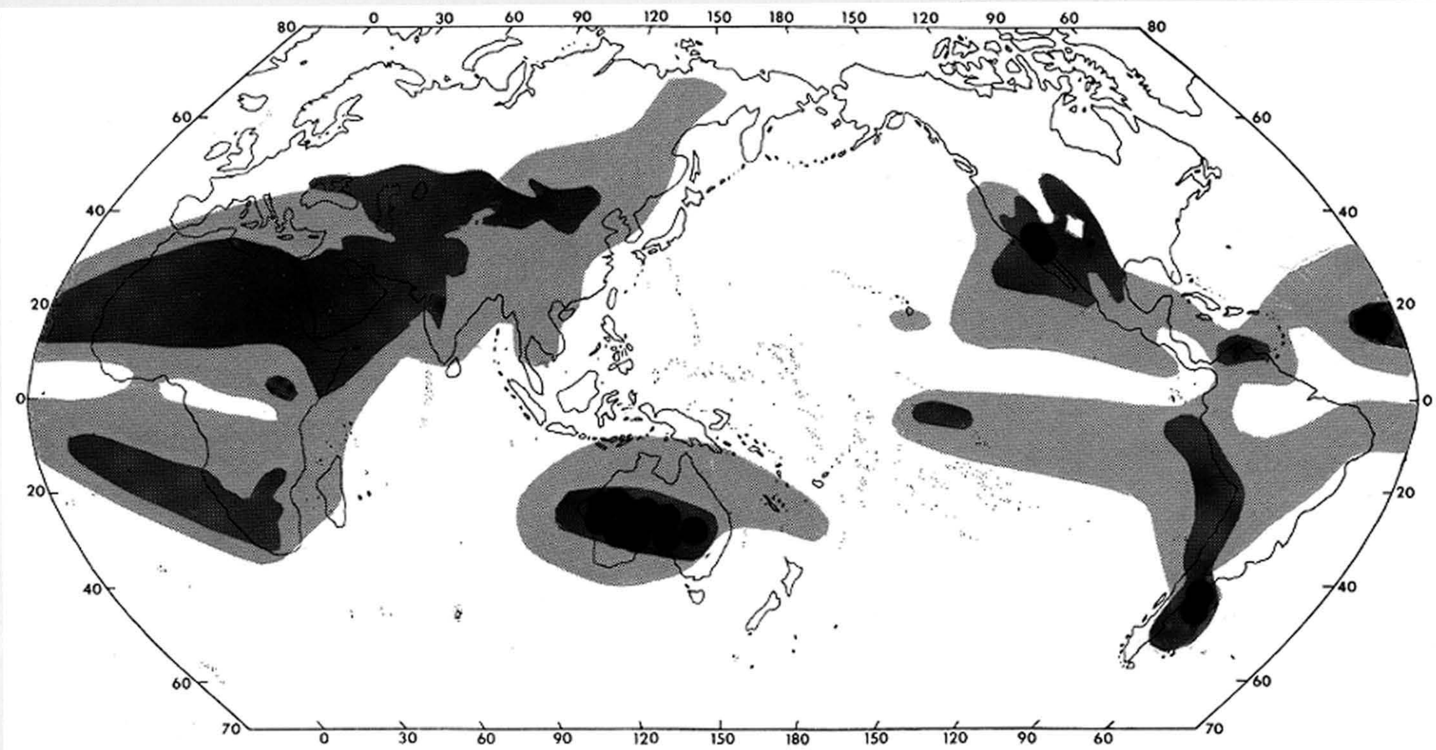

Figure 1

Desert/Drought Map. Desert regions over land and ocean appear in black (Koppen's BW or BS climate types). Shaded or grey areas mark regions that experience a regular dry season (Koppen's Aw, Cs, Cw, and Dw climate types) (9, 10).

desert development, though more rapidly in some regions than in others. The phenomenon of *drought* appears to be but a preliminary step in this global process, which has been going on since c.4000 BC when the great Saharasian Desert Belt first began to develop. Desertification has greatly accelerated over the last century, however, given the environmental consequences of a continuing human population explosion; the living tree and plant cover of the planet today is being killed and stripped away at a shocking pace, and the air and water have become increasingly toxic. The end result is that more than 60,000 square kilometers of new desert lands are created each year (4).

I stress that this paper presents only the barest of an outline and sketch of the global desert/drought connections, which likely contribute to other major atmospheric/environmental problems, such as acid rains, the "greenhouse" warming, and ozone imbalances.

Observations of Drought in Kansas, 1979-1980

In a previous article in this journal, evidence was presented on the effects of a series of 12 cloudbusting operations undertaken in Kansas, in 1979 and 1980, during mild to severe drought conditions (5). These operations were undertaken from a single field research station, and no attempts were made to employ the more effective mobile-operations technique of cloudbusting, which allows one to seek out and eliminate pockets of DOR and energetic barriers in different locations within a drought zone. Good local rains were stimulated by those early Kansas cloudbuster operations, but only within a radius of around 100 miles of the field site.

Of significance was the fact that, during these early 1979 to 1980 experiments, *we could not find a way to fully eliminate the drought situation by using the cloudbuster from within the center of the drought zone.* The high-pressure, drought air mass refused to budge. In particular, long duration zenith draws, lasting more than a single day, simply expanded and over-excited the atmosphere and did not promote a subsequent widespread collapse of the drought conditions, or any general sequestration reaction, which is usually the case. On many occasions, the dry atmosphere would be cleaned of most DOR qualities, and isolated thunderstorms would occur near the cloudbuster. The atmosphere would temporarily regain its transparency and a rich blue color, but clouds would not continue to build into the area, and the drought persisted. We could neutralize stagnant energy at our Kansas field site but could not initiate any general energy streaming or an influx of moisture. After weeks of work and study of the problem, I gained the impression that the "obstacle in the way" did not exist in Kansas and could not be broken by working there. Since that time, as some of my coworkers in orgonomy know, I have become increasingly uncomfortable with long-term cloudbuster operations from a single site within a persisting drought zone, as a means of effectively eliminating widespread atmospheric stagnation. The evidence given here speaks to this issue and, I believe, provides evidence that droughts are rooted in the more formidable process of desert formation and desert spreading.

My Kansas field observations indicated that the 1980 drought conditions in the Central USA were somehow connected to, or anchored in, locations very far away in the west or southwest, where the streams of orgone energy normally entered the region. This thought first occurred when observing the behavior of the Galactic Orgone Stream (subtropical jet) on satellite images. The stream of energy would enter North America in western Mexico, on its normal southwest to northeast trajectory; but suddenly, it would halt its forward movement and "vanish" from the satellite image, or be diverted northward, along the Rocky Mountains. In such cases, the diversion took on a most unusual angular characteristic, as if it was hitting a barrier that prevented its direct entry into the Central USA. Indeed, Reich identified a specific form of atmospheric energetic barrier at work during his Arizona experiments of 1955 (1:212-253). From Kansas, however, I observed that, when the Galactic Stream was diverted or halted by a barrier in the Southwest, invariably the Central USA was flooded with stagnant, DOR conditions, much of which seemed to come directly "out of the desert." The stagnant DOR would push into the Central USA and, once settled in, trigger one of two atmospheric responses.

1. When there was a good northward flow of moist air from the Gulf of Mexico, a line of storms would be triggered along the boundary region between the dry, DOR desert air and the moister, energetic Gulf air. Severe thunderstorms would develop thereafter, sequestering the hazy DOR and giving rise afterward to very crisp and sparkling days. In these cases, drought would not occur, and the streaming of moisture and energy into the region would resume. This provocation of severe weather by intruding stagnant air is recognized

by classical meteorologists as the "dry line" phenomenon and is used to forecast an increased severe storm and tornado probability for the Great Plains (6).

2. On other occasions, the intrusion of dry, DOR air would initiate a complete and widespread immobilization of the atmosphere, giving rise to drought conditions that would persist for weeks or months. This happens when the quantity of arid, DOR air is simply too great for the healthy, pulsing orgone to deal with. In these cases, stagnant DOR conditions would spread across the region, become energetically anchored to the landscape, refuse to be "blown away," and give rise to persisting drought. This was so, even when moister air masses from the Gulf of Mexico or cold fronts from the Canadian north would enter the region. Shortly after this situation developed, energy streams would avoid the region entirely, giving rise to characteristic drought circulation patterns.

The above relationships may be viewed functionally:

Outbreak of DOR desert air into a moist border region

OR PREVAILS, DOR is sequestered in the moister region as storms develop, sometimes with severe activity;

DOR PREVAILS, and is not sequestered; DOR spreads, anchors itself to the landscape, produces drought, diverts all streams of energy and moisture.

A distinction must also be made here between the energetic expression of deadly orgone in the atmosphere and the mass expression, or particulate "stuff" which chokes the stagnant air mass. A given landscape may have a given energetic expression, be it either sparkling, deadened, or overexcited in character. These mass-free energetic expressions may become attached to a given landscape and resist being blown away by winds. They will instead work to alter the characteristics of any air mass which intrudes into that particular region. Deadly energetic qualities that come into a landscape can, by virtue of its water-hungry and pulsation-dampening qualities, sap clouds of their moisture and convective energy. Fronts or storms that enter such an area "weaken," and "lose their punch." Or, if a significant pulse of energy and moisture entered a

DOR drought region, an oranur-like reaction might be triggered, and wild, raging storms would develop. Stormy orgonotic sequestration in the atmosphere precipitates water, possibly because DOR is transmutated into water; but unsequestered DOR appears to alter atmospheric chemistry to produce acidic conditions and ozone (1:148-158). DOR conditions can also precipitate *melanor* from the atmosphere (7), which appears similar in nature to what is called "soot" by air pollution researchers (8). This term "soot" appears to be poorly understood from a classical perspective and can include hard-to-distinguish materials of industrial, agricultural, and cosmic origins. Melanor, which precipitates from the stagnant atmosphere and has a blackish coloration, also has a killing effect upon organisms and the life energy; when it contaminates an environment, it works a powerful life-negative influence. DOR can therefore energetically "anchor" itself to a landscape and also be carried on winds. The mass and mass-free expressions of DOR generally go hand-in-hand, however, and tend to reinforce each other. The same is true regarding the mass and mass-free expressions of healthy, pulsing orgone, which forms clouds and raindrops. While much remains to be learned regarding the process whereby DOR is cycled within the earth's biosphere, it is clear that deserts are generally choked with it and act as source regions from which DOR-infested air masses blow, affecting surrounding areas.

A Global Circulation of DOR and Spread of the Desert Atmosphere

In the above context, the desert is seen as a source region for the production of droughts in distant, normally wet regions. Widespread desiccation, forest fires, loss of plant cover and soils, and the establishment of new desert conditions may follow thereafter. The desert is also seen as a factor in the development of violent, severe weather in those same wetland regions, when local energetic conditions allow for a strong sequestration reaction. At this point, we simply note the connections; in a subsequent installment, we will discuss violent weather episodes, provoked by outbreaks of stagnant desert air. It is my contention that the desert southwest and, indeed, all deserts act like giant ameba, sending out "pseudopods" of stagnant DOR that dry up adjacent wetter territories, or provoke the atmosphere in those areas into a powerful phase of agitation and sequestration. Besides these observations in Kansas, I have made similar confirming observations elsewhere.

In southern Florida, for example, it is quite normal for a short wintertime dry period to occur, though on occasion the dry period can be more extended and severe. Oftentimes these seasonal droughts have been attributed to "dust storms in the Sahara Desert." At those times, air sampling instruments, which filter dusts from the air for study, will routinely trap clay particles from the Florida atmosphere characteristic of the Sahara Desert. One could find outdoor surfaces covered with a fine, yellow-orange powder, while satellite images revealed long fingers or "pseudopods" of Saharan air, extending west across the Atlantic Ocean, entering Florida (9). While the orgone-energetics of these phenomena are poorly understood, there has been a lot of study of the widespread global nature of Saharan "dust."

For example, systematic observations of thick atmospheric haze have been made over the open oceans (10). Within the North Atlantic and Indian Oceans, the thickest of the haze observations are clearly associated with air masses that move out of the Sahara Desert. In the Northern Hemisphere winter, a finger of hazy desert air moves westward from the North African coast, all the way across the Atlantic, into the eastern portions of South America, which experiences a "normal" dry season at that time. Unusual *permanent* semiarid conditions also prevail in the far eastern portion of Brazil and in northern Venezuela. On occasion, as mentioned above, if this finger of desert air also expands enough, or moves northward far enough, it will bring on an "abnormal" dry season, or drought, in Florida. In summertime, the flow of hazy air out of the Sahara is more toward the east and northeast, where it blends with similar air from other desert lands in the Middle East and Central Asia. At those times, atmospheric conditions in those areas become exceedingly hazy, stagnant, hot, and arid (11).

These ocean/desert "haze" observations are confirmed by climate maps which include information on conditions over the open oceans; stagnated desert atmospheric conditions exist over the oceans *at each and every location where a desert exists along a coastal zone*. Figure 1 gives a new global Desert/Drought Map, which identifies these oceanic desert regions (12). The map also identifies the corresponding land desert regions and all areas of the globe where distinct *seasonal droughts*, or *dry seasons*, occur at one time or another during the year (13). From this map, it is clear that areas of oceanic drought persist as major aspects of the land deserts. Some land deserts may be source regions for the oceanic deserts, and ocean deserts, once formed, may actually "feed" DOR-infested atmospheric conditions into other land areas. The Desert/Drought Map raises a number of new questions regarding long-distance climatic relationships. Regions of seasonal drought are likewise connected to desert stagnation, though not on a year-round basis. In general, there is a more northerly displacement of stagnant air from the deserts in the months of May through August, and a more southerly displacement from November through February. Areas outside the boundaries of the seasonal drought may also be affected and suffer from droughts, but not on any regular, yearly basis. The most remarkable fact to emerge from the Desert/Drought Map is, however, the global interconnected nature of the stagnant atmospheric conditions responsible for deserts and drought, which span vast distances, across the oceans and around the world. The map gives a chilling impression of a planet being attacked by a large, growing cancer tumor. The major expression of this planetary "cancer" is across the same hyperarid territory I previously have identified as Saharasia, which did not exist prior to c.4000 BC (3). Secondary, connected desert regions also exist, similar to metastases.

But what do we mean when we say "haze and dust." Like the word "soot," these are rather ambiguous terms, though they do appear to bear a functional relationship to deadly orgone (DOR). Haze and dust have the capacity to dry up and block rainfall both in desert lands and in normally wetter regions, into which the dusty, hazy air may blow (14). This fact has been noted by many climatologists in recent years, but for the record, the role of atmospheric haze in reducing cloud cover and blocking rainfall was first pointed out by Reich (7, 15). Additionally, according to my own survey of the literature, there is no evidence to support the contention that 100% of what is called "atmospheric haze" is composed of "dust particles" or "soot." Indeed, the observed nature of haze remains a riddle to classical climatology which relies on unproven concepts, such as the "swelling of dust particles," to explain the decreased visibility within the stagnant atmosphere, especially under conditions of higher humidity when rainclouds should normally develop, but do not. Indeed, stagnant DOR-infested air can become very charged with moisture, to the point that stagnant fog appears, or even a choking, acidic drizzle, but no regular rain showers. There are even unique rainless "fog deserts" adjacent to some oceans, and other deserts where saturated air with 100% relative humidity exists only a few thousand feet over a roasting, overheated landscape. And yet, in such cases, significant orographic or convective cloud cover and rains do not occur (16). These observable phenomena exist but, like deserts over the open ocean, are not usually discussed in textbooks.

Other factors at work in spreading deadly energetic conditions and the desert atmosphere have to do with the assault on the earth's plant cover. There is growing evidence that the stripping away of plant cover over large regions can affect the energetics of the atmosphere in a relatively permanent manner and promote drought conditions. For example, measured declines in rainfall have occurred over parts of the tropics where the rainforests have been cut down (17). Other areas of the world, particularly in Africa and Asia, are at great risk, given a rampant and continuing deforestation and devegetation (18). In these and other areas, a great deal of forest and agricultural burning also takes place. The smoke from the fires rises to great altitudes and adds to atmospheric congestion and stagnation, affecting cloud growth and rainfall in a negative manner. The reduction of rainfall, in regions where the living plant cover has been wiped out or badly assaulted, appears in part to be the result of a loss of life energy pulsation and charge at the earth's vegetated surface and in the atmosphere. This energetic pulsation appears most dramatically on time-lapse satellite images of cloud cover over the tropical rainforests. As the plants vanish, the capacity for the surface to hold a charge appears to be reduced; regular atmospheric pulsation ceases, the sequestration process is extinguished, and DOR-related, stagnated drought conditions set in.

Given the fact that so much of the tropics is dominated by a *tropical savanna* climate type, that is, a climate with a "normal" wintertime drought ("dry season"), this loss of atmospheric pulsation predictably results in a *lengthening* and *intensification* of the seasonal drought conditions. In these cases, a clear danger exists that the seasonal dry period will become permanent. This is, of course, what happened when the seasonal rains failed in the 1970s along the *Sahel* zone of the southern Sahara. Starvation continues to be widespread in those areas, and mass migrations still occur toward cities and wetter regions. Measured reductions in rainfall, including dry periods of months in duration, have also been observed in recent years in deforested parts of the Amazon which have never before experienced a dry season. This harkens back to a long-standing debate among atmospheric scientists regarding the role of life in determining the weather (19). Meteorologists, with training in "empty space" physics, tend to dismiss the idea, while climatologists and ecologists, versed in the principles of biological homeostasis —

which is a reasonable approximation of the energetic principle of orgonotic pulsation — tend to be more accepting of the life-weather relationship (14). The fact remains, however, that barren, devegetated, or burned lands tend to maintain DOR, haze, and drought conditions, while vegetated, plant-covered lands have, at least, a greater capacity to maintain their atmospheric pulsation and rainfall.

There also is a mythology about the "cleanliness" of desert air. This may hold some truth in very special, limited cases, or for brief periods following rare, desert rain showers which do freshen and clean the air. Indeed, after such storms, deserts, especially those at higher altitudes, can be absolutely sparkling and crisp. For most of the world, most of the time, however, deserts are charged with exceedingly stagnant, oppressive, and hazy DOR conditions. When the air over them shifts and covers some new territory, that area then suffers under similar stagnant, arid conditions. This fact is recognized in the identification of "bad winds" that blow out of desert regions into areas they normally do not go, on an irregular basis. In the USA, we have the *Santa Ana* and *Chinook* winds, which are usually very hot, dry, and of a very high velocity. They trigger mild to severe illness or irritation, as well as heat waves, droughts, and wildfires. In other areas of the world, they have different names, such as the *foehn, sirocco, hamsin, sukhoevi*, and *wind of 120 days*. Particularly in the deserts of the Middle East and Central Asia, these winds are exceptionally arid and fierce, lasting for weeks or months, and are a major climatic feature at work shaping the lives of people, the kinds of agriculture they can engage in, and the types of natural vegetation that will grow (3).

"Bad winds" may blow from the desert to areas at much greater distance, however, and still maintain harsh, stagnant characteristics, even though they may have traveled thousands of miles across an ocean, or across a thickly vegetated land area. In such cases, the desert/ocean winds are noted only for the drought conditions they bring and are not given any specific name. As mentioned above, Saharan air can trigger drought in South America or Florida, while dry air from the desert Great Basin of North America can trigger drought in the Great Plains or Midwest. Other vectors are clearly at work, and many of these are suggested on the Desert/Drought Map, given above. However, this Map only expresses observations made in the lower part of the atmosphere, in the troposphere. Other circuits for transportation of stagnant, hazy air may also be at work at higher altitudes, and this possibility remains to be more fully explored. For example, "dust" from Central Asia has been found high up in the air over Hawaii (20), and dusty or sooty materials have increasingly appeared in other very remote regions of the world (21).

More discussion of the Desert/Drought Map, and the new understandings which it brings to climatology, and to the current environmental crisis, will be given at a later time.

(To be continued)

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the journal of Orgonomy

major articles

USN/ISSN 0022-3298

Published by Orgonomic Publications, Inc.

volume 23
number 1
may, 1989

Addendum to the Desert Drought Map

This paper, originally published in 1989, addressed a number of environmental issues of the day, including the somewhat established view that deserts were expanding globally. I no longer fully accept this view, given more recent information indicating the Sahara, for one major example, is beginning to turn towards slightly wetter conditions. This appears to be associated with larger climate cycles, perhaps correlated causally with global temperature variations, which rose through the 1980s and 90s. Since 1998, a peak El Niño year, global temperatures have leveled off or even slightly declined, and a "wet Sahara" may turn out to be the factor which halted global desert expansion as recorded in prior years.

Nevertheless, the Desert Drought Map and other factors discussed in this paper retain their validity and importance. My subseqent publications in later years reflect this change of views, based upon newer evidence.

James DeMeo, PhD
Ashland, Oregon, USA
September 2013