The term "delusion of parasitosis" has been used to refer to an emotional disorder in which the patient has an unwarranted belief that live organisms, such as mites or insects, are present on or in his body (Wilson and Miller, 1946; Wilson, 1952; Obermayer, 1955). The term was later shortened to "delusory parasitosis" by W. G. Waldron (1962), public health entomologist for the Los Angeles County Health Department, who had investigated hundreds of cases of the disorder and made a thorough and systematic study of it. The term "entomophobia" has long been used in referring to the delusion, but it more appropriately applies simply to an unfounded fear of insects, as the Greek roots imply. The visitor who is repulsed and even frightened when viewing for the first time a suddenly agitated mass of American cockroaches in a rearing cage can be said to be suffering from entomophobia in the strict sense of the word. Generally, greater understanding of and familiarity with insects decrease this fear, just as they decrease what is usually a deep-seated fear of harmless snakes and eventually enable people to handle them.

About 5 or 6 victims of delusory parasitosis telephone or call in person for our advice and help each year. Over a 25-year period, certain patterns of behavior have become apparent that are similar to those described by Waldron (1962, 1963), Schrut and Waldron (1963), and other investigators to whom they refer in their literature. Descriptions by telephone of the victim's troubles usually identify cases of delusory parasitosis because of the stereotyped pattern and the absurdity of the symptoms. The supposed "bugs" or "creatures" are believed to change colors; appear and disappear while they are being watched; enter the skin and reappear; invade the hair, nose, and ears; and to persist despite repeated treatments of the supposedly infested house by competent pest control operators and despite frequent bathing and applications of ointments. If the person, in most cases a woman, brings in samples of the supposed pest, it invariably consists of small bits of lint, cloth, dandruff, scabs, sand particles, dirt, or miscellaneous debris. Occasionally, by chance, innocuous insects or insect parts are included with the debris. There is usually a long history of ineffectual visits to medical doctors and/or dermatologists before an entomologist is seen. The skin has often been injured by frequent and sometimes desperate scratching and cleansing. The presumed pests offered for identification are frequently wrapped in tissue paper or stuck onto tape, although occasionally they are contained in a small vial. The patient is confident that microscopic examination of the collected samples will reveal the creatures that seem so real. One patient returned to the author's office 3 times during 6 years, each time accompanied by a dubious and apologetic husband, but each time confident that the cause of her troubles would be found. Another has called repeatedly concerning "termites" that were believed to be "eating out" her insides and occasionally emerging from the joints of her arms and legs. Presumed specimens sent for identification were, of course, scabs and other debris.

Waldron (1962) presented 7 typical delusions of persons suffering from delusory parasitosis. These were:
1. The "bugs" are black or white when first noted, and then later may change color. [We have frequently noted this same reaction among afflicted persons.]

2. The "bugs" jump. [One person demonstrating this to the author was using a steel knife blade to prod the inanimate objects she thought were insects along a nylon slip that was stretched on a plastic sink top. The static electricity generated by this activity made the objects "jump". Unfortunately, the simple explanations that were made in an effort to describe the phenomenon sufficed only for a short period of time. The same type of observation was made at the home of a highly successful and well-known playwright who was a victim of delusory parasitosis. He observed that "organisms" on a piece of paper jumped about when he brought his finger close to them. The explanation, of course, was that there was a release of electrostatic charge from his body, which had been gained by walking over a large expanse of carpeting on a dry, windy day. The same individual "observed" that bits of debris developed "stringers' that grew out from the main part of the particle and enabled it to move about. A common characteristic of the victim is that he is desperate for an explanation of each new observation.]

3. The "bugs" may infest the patient's hair, and can be shaken or combed onto a sheet, towel, or newspaper.

4. "Bites" or papule-like irritations which develop on the skin usually itch, causing the persons to scratch themselves, even to the point of severe tissue damage.

5. The "bugs" may come out of such common household items as toothpaste, vaseline, or cosmetics. [One patient claimed that tiny bugs came out from between her teeth after she brushed them.]

6. The supposed infestation in a home may become so severe as to literally force the person to move to another location. Unfortunately, the "bugs" usually reappear in the new dwelling.

7. The patient may be so positive of the supposed infestation and give such a lucid description that other members of the family will stoutly support the contention, even though they are not afflicted.

In our experience, the victims of delusory parasitosis are often well educated, responsible, hard-working, and appear to be rational and sensible about matters not pertaining to this one particular obsession. Possibly, these people are very susceptible to the destructive results of prolonged stress.

In the few cases in which our conversations have casually led to the revelation of personal problems, causes for stress and worry have been evident--usually marital troubles. For anyone wishing to pursue this aspect of delusory parasitosis, some interesting female case descriptions were given by Schrut and Waldron (1963), who characterized these cases as having as their basis "an unconscious sexual guilt with an attempt to ward off feared, and at the same time hoped for, invasion of a sexual nature."

In addition to this cause, they also pointed out, however, that sexual problems were by no means the sole sources of difficulty: Infantile or early childhood guilt or other effects relating to rage, envy, and aggression, as well as other forbidden impulses, may individually or in combination underlie the symptoms in these cases.

The fixation upon arthropods has some specific and individual meaning in the life history of the person involved, and causes the patient to see a physician, an entomologist, or both. Generally, such problems can be traced to severe infantile or childhood emotional deprivation with lack of basic emotional need fulfillment which is too often glibly explained away solely by present-day problems.

Emotional problems were prominent among the 51 case histories, from the literature and from their own observations, that were discussed by Wilson and Miller (1946). For example, for one patient the delusion was precipitated by the shock of an accident in which his sister lost her vision as the result of his negligence. Among the case histories were several in which auditory hallucinations were prominent features, the patients claiming that they could hear the insects "knocking" or "clicking." Another common characteristic revealed in the investigations was the patients' excessive preoccupation with
cleanliness. One patient, a widow aged 51 and "a person of higher than average intelligence," had skin that was dry and rough from the use of disinfectants. "She spends her entire time from early morning to late at night cleaning, scrubbing, and sterilizing her home. All available money is spent on cleaner's bills for clothing, bedding, curtains, and similar items."

Another of these odd patients "boiled the entire family wardrobe each night and all the bed-clothes each morning. She insisted that the family bathe in gasoline daily and rub with sulfur and lard."

The entomologist's obligation ends, of course, after he has made his diagnosis from the entomological viewpoint. However, he should make certain that the possibility of insect or mite infestation has been thoroughly investigated. People with delusory parasitosis generally have had insect or mite problems, have reacted violently to them, and have "eradicated" the pests several times over.

The adviser can usually determine from the nature of the conversation whether the caller with itching sensations really has a pest problem, such as fleas, lice, bed bugs, tropical rat mites, straw itch mites, human itch mites, or the like.

The problem of the person really having pests is, of course, generally much easier to solve than the problem of the person who has no pests but believes he has. An example of how obscure a real pest problem can be is illustrated by a report by J. R. Traver (1951) on an infestation of mites, *Dermatophagoides scheremetewskyi* Bogdanov, on her own person, resulting in itching red papules on scalp, eyes, ears, nostrils, shoulders, under the arms, beneath the breasts, on the chest, both upper and lower back, and occasionally around the umbilicus. Other members of her family were likewise infested. The ailment was initially diagnosed by a physician as "psychoneurotic." Fortunately, the victim was a zoologist, had access to a microscope, and found the causative agent. Many attempted treatments failed to eradicate the infestation. However, attacks by the implicated mite species are extremely rare.

"Cable Mite" Dermatitis

Probably anyone with extensive experience in household pest control has had his attention called to real or apparent cases of dermatitis or paresthesia (prickling, tingling, or creeping sensation) among persons, usually women, who work with old, dusty records, with elaborate electronic equipment, or in other industrial situations, but for which no insects, mites, or other organisms appear to be responsible. The presumed cause for these symptoms is sometimes referred to as "cable mites." Sometimes by the time the case is called to the attention of an entomologist or pest control operator, the premises have already been treated repeatedly with insecticides and acaricides, but with no results. Likewise, various ointments and frequent bathing may have offered no relief. It is therefore encouraging to find a report of a successful solution to a situation of this type.

Scott and Clinton (1967) investigated reports of paresthesia by 10 female employees in the physics laboratory of a national agency. No possible causal organisms and no visible symptoms on the victims could be found. The only surfaces in the laboratory that were not routinely cleaned by custodians were "scanner mirrors" because they were so fragile and extremely expensive. The mirrors were covered with a thick layer of yellowish, fluffy, fibrous material, found to be mainly rock wool. Scott and Clinton hypothesized as follows:

When the power cable for the new scanning machines was installed, particulate matter from the rock-wool bats in the ceilings of some cubicles was dislodged and drifted into the ventilating registers around the edges of the cubeile. From these, it showered slowly over the cubicles and their occupants. The scanning projectors caused a slight vibration of the scanning mirrors when they were turned on. This vibration allowed for dislodgment of some of the accumulations of dust into the surroundings.
Following the verdict that the "cable mite" dermatitis of the 10 employees resulted from the "rock-wool aerosol," work areas of the laboratory were thoroughly scrubbed and floors and mirrors were vacuumed weekly. Even though the hypothesis was incompletely tested, personnel were told that the problem had been solved and that recurrences of the dermatitis were unlikely, thus overcoming the effects of what was believed to be a psychological enhancement, resulting from conversations among employees, of a condition originally occasioned by physical agents. Two of the victims continued to complain occasionally of irritations of gradually decreasing intensity. A check of the situation 6 months later revealed no further complaints from employees.

Cable mite dermatitis is not strictly a delusory parasitosis, except insofar as the victims may believe they are being infested by insects or mites, even though no organism can be found. Unlike the victims of delusory parasitosis, people suffering from cable mite dermatitis are being affected by some real—not imaginary—substance in their environment; if the substance can be found and eliminated, they will fully recover from their dermatitis symptoms.

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