ray Hill, N.J.) and by D. H. Kelly (Itek Laboratories, Lexington, Mass.). Both Levinson and Kelly noted, independently, that the fundamental of the stimuli used in the experiment has sufficient amplitude to account for the obtained results. They point out, correctly, that the conditions of the experiment were such that the amplitude was not only constant but, at the fusion point, of a magnitude that is quite in line with previous results, about 0.5 to 3.5 percent.

The formula for computing this amplitude, as provided by Levinson and Kelly, is

$$m_1 = \frac{2}{\pi}\left[\tan\frac{\pi}{4N_s} - \tan\frac{\pi}{4N_v}\right]\bar{I}$$

where $N_s$ and $N_v$ are the number of pulses in the standard and variable trains, respectively, and $\bar{I}$ is the average luminance. This formula is exact for the case of standard and variable pulse trains of equal duration. Where $N_s$ and $N_v$ are large, the usual small-angle approximation for the tangent may be made.

Our assumption, in writing the paper, was that the amplitude of the fundamental would not be constant over the many conditions of the experiment, during which frequency was held nearly constant. Our checks on this point were in error. No "nonlinear property" of the visual system is revealed. On the contrary, the results provide another confirmation of the low-pass filter-like behavior of the eye above 12 cycles per second or so [H. de Lange, *J. Opt. Soc. Am.* **48**, 777 (1958); D. H. Kelly, *ibid.* **51**, 422 (1961)]. This property of the eye diminishes the effectiveness of the higher harmonic components of complex stimulus wave forms relative to the fundamental [J. Levinson, *Science* **130**, 919 (1959); D. M. Forsyth, *J. Opt. Soc. Am.* **50**, 337 (1960)]. The results also confirm the justice of the plea of Kelly [*J. Opt. Soc. Am.* **51**, 917 (1961)] "that experiments with nonsinusoidal periodic stimuli should be designed on the basis of a preliminary harmonic analysis of the waveforms used."

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## Simple Method of Harvesting Limnoria from Nature

*Abstract.* Outward diffusion of salt from a concentrated solution placed in a centrally bored, cylindrical hole causes *Limnoria* to collect at the surface of infested wood.

The small marine isopod, *Limnoria*, can digest cellulose and multiply at the expense of this and other substances contained in pilings, dock supports, ships' hulls, floats, barges, or other wooden structures immersed in seawater. The unusual properties of its digestive system, as well as the worldwide, billion-dollar destruction caused by this organism, has led to considerable biological and biochemical research from both basic and applied points of view (*1*). Such research inevitably involves harvesting a supply of specimens from nature, sometimes at frequent intervals and in exceedingly large numbers, depending on the objective of the work.

A convenient solution to the problem of obtaining living, undamaged specimens from the depths of infested wood has been sought in various ways, such as electric shocks, partial putrefaction of the material, and so forth (*1*), but the end result has generally proved either unsatisfactory or unreliable in comparison with the laborious, time-consuming, and painstaking procedure of gradually shaving down the wood with scalpel or razor and gently removing with a pair of forceps whatever individuals chanced to escape laceration or other damage to their brittle exoskeleton and delicate organs.

We have recently found a simple way to cause virtually the entire population of *Limnoria*, comprising hundreds or thousands of individuals in a heavily infested, small block of wood (Fig. 1) to move out of their burrows and adhere at the surface. It is merely necessary to drill a cylindrical hole of suitable diameter down the center of the wood, fill with an oversaturating suspension of sodium chloride in sea water, and cork up the cylinder. The wood is then left immersed in a shallow pan of sea water. In the course of several days, as the salt diffuses slowly from the center, the *Limnoria* move outward. The method is simple, efficient, and possibly applicable to comparable situations involving other types of microfauna (*2*).

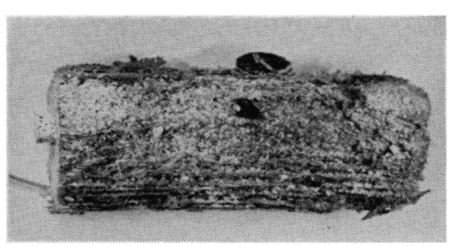

Fig. 1. Active, healthy specimens of *Limnoria* at the surface of a block of wood, 7½ by 3 inches, from a partially destroyed dock. The organisms were driven from their burrows by boring a central hole, ½ inch in diameter, through most of the length of the wood, filling the hole with seawater oversaturated with NaCl, closing with a cork, and leaving the preparation immersed in seawater for several days. [J. Gonor]

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#### References and Notes

1. D. L. Ray, Ed., *Marine Boring and Fouling Organisms* (University of Washington Press, Seattle, 1959).
2. This research was aided in part by Office of Naval Research Contracts Nonr-1353(00) and Nonr 477(05).
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## Plasma-Free Corticosteroid Response to Electric Shock in Rats Stimulated in Infancy

*Abstract.* Circulating corticosteroids were measured after a brief electric shock in rats which were manipulated during infancy. When compared to nonmanipulated controls it was found that the manipulated rats showed a significant elevation of corticosteroids as early as 15 seconds after shock, whereas the nonmanipulated subjects did not show a significant elevation of steroids until 5 minutes after a brief shock. Further, the levels of corticosteroids were consistently higher in the manipulated subjects over a 15-minute period.

Recent experiments which have been reported concerning the effects of infantile experience in the responses to stress in the adult organism have in general indicated that animals which have been treated in a variety of ways as infants tend to exhibit a less pronounced physiological response to stress in adulthood than their nontreated counterparts.

Thus hypertrophy of the adrenal after chronic exposure to such stressors as an injection of hypertonic glucose (*1*) or daily exposure to fear-producing