

in some instances practically none on first instar larvae of the southern armyworm, *Prodenia eridania* (Cram.), second and larger instars of the melonworm, *Diaphania hyalinata* L., and large larvae of the southern beet webworm, *Pachyzancla bipunctalis* (F.). Alcoholic extracts gave slightly better results. The material was very repellent to small larvae which attack Cruciferae but was much less effective than derris on larger ones.

When tested against the larvae of the codling moth, *Carpocapsa pomonella* (L.), by the apple plug method the root powder gave about 60 per cent. clean fruit when used at the rate of two pounds per fifty gallons of solution. An alcoholic extract of the fresh root when used at the rate of two pounds extractives per fifty gallons solution gave 90 per cent. clean fruit. The results against the codling moth larvae have been deemed of sufficient interest to warrant a detailed chemical study of the plant extractive. Such a study is now under way, and the results of the toxicity of the various fractions of the extractive to the insect will be published soon elsewhere.

WALTER T. SWINGLE

BUREAU OF PLANT INDUSTRY

H. L. HALLER

E. H. SIEGLER

M. C. SWINGLE

BUREAU OF ENTOMOLOGY AND PLANT
QUARANTINE

PROPOSED NAMES FOR THE FOLLICLE- STIMULATING AND INTERSTITIAL CELL-STIMULATING HORMONES OF THE ANTERIOR LOBE OF THE PITUITARY BODY

DESPITE the widespread use of the cumbersome terms, follicle-stimulating hormone and interstitial cell-stimulating hormone, no investigator has proposed simple etymologically justified names as badly needed substitutes. We should like to propose names which we hope either will be accepted by other investigators or will lead to the coinage of names which will receive general approval.

As a common suffix of both hormones, the term "kentrin" (from *κεντρίζω*, to goad, stimulate) seems suitable. An apt prefix for the follicle-stimulating hormone is furnished by the word *θύλακος*, bag, sack, —a word which Aristotle used to describe the sack in which the eggs of the tunny are enveloped. Therefore, "thylakentrin" is suggested as the name of the follicle-stimulating hormone. This hormone also stimulates or maintains the germinal epithelium of the testis. The name "thylakentrin" also suggests an action on the male gonad since *θυλάκη* is the Greek noun for scrotum.

"Metakentrin" (*μετά*, among, between, and *κεντρίζω* to goad, stimulate) appears to be a suitable name for

the interstitial cell-stimulating hormone which has been isolated as a pure substance.¹ This name could refer to stimulation or maintenance of the interstitial cells of either the ovary or the testis.

HARRISON C. COFFIN

UNION COLLEGE

H. B. VAN DYKE

SQUIBB INSTITUTE FOR MEDICAL RESEARCH

THE ENCYCLOPEDIA OF CHEMICAL REACTIONS

A DISCUSSION of this proposed work of reference was printed in *SCIENCE* for June 15, 1934 (Vol. 79, p. 541). As a result of that article, together with other news reports of a like nature, many chemists volunteered their services, to assist in abstracting chemical reactions for the Encyclopedia.

Up to the present there are twenty-three abstractors, who are either actively engaged with abstracting or have contributed a considerable volume of reactions to the E. C. R. In addition to these, twenty-five other chemists have signified a willingness to assist in the work as soon as a publisher has been secured and the prospects have become more promising for bringing the work into print. This has now been realized. The Chemical Publishing Company, Inc., of New York City, have agreed to sponsor the publication of the E. C. R. and authorizes me to say that any one wishing to join our list of abstractors, will for a small contribution of his time, receive permanent recognition on the Board of Editors, besides enjoying the satisfaction of having helped in compiling a much needed work. The E. C. R. has been called "an indispensable reference work."

The abstracting of eighteen chemical journals is complete to about 1936. The abstracting of twelve others has been begun. Most of the journals in the English, Swedish and Czech languages have been covered, but abstracting assignments can still be secured in the remaining ones and especially in the French, German and Japanese journals. Over 6,000 reactions have been typed and are now ready for the press. It is to be hoped that many other chemists will feel inclined to give some assistance to this "monumental work."

C. A. JACOBSON

WEST VIRGINIA UNIVERSITY,
MORGANTOWN

ANIMAL BEHAVIOR DURING AIR-RAIDS

RECENT months have given observers in Britain an opportunity of obtaining some interesting information relating to the behavior of animals under conditions of modern warfare. A survey of such information as has so far been published would seem to indicate that

¹ T. Shedlovsky, A. Rothen, R. O. Greep, H. B. van Dyke and B. F. Chow, *SCIENCE*, 92: 178, 1940.

the reactions of animals in general may be classed under three heads: (1) species showing alarm; (2) species showing indifference, and (3) species which react with defiance. While at this stage only preliminary results can be given, it seems that within any one species individual animals will react differently each to the other. Thus, among mammals at least, there is considerable evidence to support the claims of those naturalists who regard animals as capable of having definite and distinctive "personalities."

Huxley¹ has recently given some account of the behavior of the animals of London Zoo during air bombardment. Fell² has given similar information in regard to wild animals of the east coast of Scotland. News reports have supplied additional information from time to time.³

During recent air-raids on London, a young giraffe deserted its house to sleep in the open (thereby catching a chill). One zebra preferred to take shelter in a basement, while another which had been liberated by a bomb blowing down the gate of its enclosure, emerged to wander through Regent's Park. The monkeys were indifferent. Some ruminants ran about. A crane which was also released went out to the London streets. A donkey reacted defiantly and replied to the noises of the bombs by an angry braying of its own.

During a recent air-raid on the east coast of Scotland a flock of black-headed gulls (*Larus ridibundus*) displayed something akin to mass hysteria when a nearby anti-aircraft battery suddenly opened fire in the early hours of the morning. With one accord the whole colony of several hundred rose into the air in a

flurry of startled cries and flapping wings. For nearly an hour afterwards they circled round and round before once more resuming their habitual position on the field that they have made their winter quarters. The smaller wild birds contented themselves in uttering subdued twitterings from their perches in the trees and hedgerows. On the other hand, an owl which has taken up residence in the locality behaved in a manner more akin to the attitude of defiance shown by the London donkey. This bird, probably a tawny owl (*Strix a. sylvatica*) gave vent to its feelings during some unusually intense gunfire by a paroxysm of indignant screeches of a most belligerent tenor. He left no doubt that he resented this unseemly incursion upon the progress of his night-work.

There have been several cases reported of dogs becoming conditioned to respond appropriately to the "Alert" and "Raiders Past" signals. Thus, when the warning sirens go one dog "began to howl and put its tail between its legs," while another went straight to the shelter. On the "Raiders Past" signal, these dogs emerged at once from the place of refuge.³ Mice are generally regarded as being extremely sensitive to loud noises. However, during one raid, the writer had occasion to enter another room in the house, thereby startling a mouse which had been foraging, unperturbed by the "noises off." Perhaps mice, as well as men, become accustomed to the amenities of twentieth-century civilization.

H. BARRACLOUGH FELL

DEPARTMENT OF ZOOLOGY,
UNIVERSITY OF EDINBURGH

SOCIETIES AND MEETINGS

THE WESTERN SOCIETY OF NATURALISTS

The thirteenth annual winter meeting of the Western Society of Naturalists was held at the University of California at Los Angeles on December 18, 19 and 20, 1940. Nearly 100 members and guests registered. Prominent on the program were two evening lectures and three symposia. On December 18, Professor H. S. Jennings addressed an informal evening gathering and smoker on the subject, "The Biological Nature of Man." On December 19, following the annual dinner, Professor G. E. MacGinitie, retiring president of the society, delivered an address, illustrated by both slides and motion pictures, on the feeding habits of some mud-flat animals. The symposia were as follows:

December 18 (morning): "Training for Research and Instruction in the Biological Sciences." *Chairman*: President G. E. MacGinitie. *Contributors*: Dr. I. L. Wiggins, Department of Botany, Stanford University; Dr. Vesta Holt, Department of Biology, Chico State

Teachers College; Dr. Raymond B. Cowles, Department of Zoology, University of California at Los Angeles; Dr. Jesse A. Bond, Department of Education, University of California at Los Angeles.

December 18 (afternoon): "The Historical Development of the Climax Communities of the Western United States." *Chairman*: Professor Carl Epling, Department of Botany, University of California at Los Angeles. *Contributors*: A. E. Wieslander, U. S. Forestry Service; H. L. Mason, University of California; D. I. Axelrod, fellow, National Research Council, and I. L. Wiggins, Stanford University.

December 19 (morning): "Perspectives in Marine Biology." *Chairman*: Dr. Robert C. Miller, director, California Academy of Sciences. *Contributors*: Dr. Rolf L. Bolin, Hopkins Marine Station, Pacific Grove; Dr. Robert C. Miller; Dr. C. E. ZoBell, Scripps Institution of Oceanography; Dr. E. R. Norris, University of Washington; Dr. H. U. Sverdrup, director, Scripps Institution of Oceanography.

Officers for the year 1941 were elected as follows:

³ *The Manchester Guardian*, and other sources.

¹ *The Spectator*, London, November 1, 1940.

² *The Spectator*, London, November 8, 1940.