

concerned with the relation between these two systems and its significance in convulsions. The fourth chapter of this part is on the autonomic basis of emotion.

The last part, on results and applications, begins with two very good chapters on the principles of autonomic organization and on organismic physiology. There is a chapter on anesthesia, and one headed "The

autonomic nervous system and neuropsychiatry," which is an attempt to analyze the effects of various procedures used in the treatment of schizophrenia. A good summary at the end of each chapter is helpful to the reader. The book is a distinct contribution to the literature.

FRANK A. HARTMAN

REPORTS

GENERAL COUNCIL ON ZOOLOGICAL NOMENCLATURE

THE undersigned zoologists, resident in the United States of America, at the invitation of the Committee on Nomenclature of the American Society of Mammalogists and with the cooperation of the "American Commission on Scientific Nomenclature" of the Entomological Society of America, do hereby associate themselves together as a society and certify as follows:

First: The name of the society shall be the General Council on Zoological Nomenclature.

Second: The objects of the society shall be:

- (A) To act in an advisory capacity in all matters concerning zoological nomenclature during the World War and for such time thereafter as it may consider desirable.
- (B) To administer, amend, interpret, and maintain a code of nomenclature for the use of zoologists.
- (C) To cooperate with societies maintaining committees on nomenclature, at least those represented in its own membership.
- (D) To retain within itself important powers of decision and legislation and of substitutions and additions to its membership, but always subject to full hearings and the advice and counsel of one or more of the committees above mentioned.
- (E) To cooperate with zoologists practised in nomenclature who are residents of foreign countries when the war is ended or as soon thereafter as may be practicable.

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Merely on the face of it, the above may seem to be a self-constituted body of dubious possibilities and audacious construction. That this is not the case may be evident when its history and purposes are explained. It is the outgrowth of numerous informal discussions among a large number of zoologists dur-

ing the past few years and of formal action taken by at least two national societies.

Even in years just prior to the war, the International Commission on Zoological Nomenclature was relatively inactive and after hostilities began in Europe in 1939 it became practically non-functional. This created a situation in which all cooperative action was endangered and nearly a century's hard-earned progress in nomenclature was threatened. Individuals and organizations began to discuss special codes for their separate groups only and in some cases took definite action. Recently a German (Poche) has promulgated a code of his own and in general at the moment every zoologist having a nomenclatural problem finds himself without appeal to any constituted authority. It was precisely to avoid this condition that codes and commissions were devised.

Discussion among zoologists unanimously recognized the emergency, but it was difficult to arrive at a basis for action which did not involve very great delay and long-drawn controversy. There were those who felt that the international idea could not be abandoned and others who advocated complete divorce from the Old World. The latter pointed to the success of the International Commission as being mainly due to the American, C. W. Stiles, whose final conclusion (see *SCIENCE*, 73: pp. 349-354, 1931) was that it was not further workable. Among those holding this opinion were several Europeans.

As announced in *SCIENCE* (June 12, 1942) the Entomological Society of America, pursuant to action taken at its meeting in December, 1941, formed an "American Commission on Scientific Nomenclature in Entomology" apparently with the object of proceeding independently. Somewhat later at its annual meeting in April, 1942, the American Society of Mammalogists instructed its standing committee on nomenclature "to act pro-tem in the present world crisis for the Committee [sic] on Nomenclature of the International Commission." The Mammalogists' committee felt that any committee restricted to a particular branch of zoology would be ineffective. Therefore, with the approval of the society's president and principal directors, this committee entered into correspondence with the entomologists proposing that the two committees, without further authorization, jointly

* Dr. Simpson's signature is assumed on the basis of his verbal agreement before he left for war service where he can not now be reached.

sponsor the selection of a small group of representative nomenclaturists to "take over," at least for the time being. Full cooperation between the two committees proved impractical without great loss of time, so the Mammalogists' committee, after receiving the approval of the majority of the entomologists, selected and organized the group as indicated above. The membership of the Mammalogists' committee which carried this out was as follows: A. Cabrera, E. R. Hall, G. S. Miller, Jr., W. H. Osgood, T. S. Palmer, G. G. Simpson and G. H. Tate.

The "Council" thus formed is frankly experimental and the method of its genesis is unusual, but those responsible for it have felt that any other method, especially in these times when large general meetings are interdicted, would defeat itself in prolonged discussion and fatal delay. Under restrictions which the Council has placed upon itself it is hoped that it may be a wholly representative and cooperative body. A brief set of by-laws has been adopted in which important provisions are to the effect (1) that the active membership shall not exceed fifteen, (2) that addi-

tions and replacements shall be made only from candidates nominated by large associations of zoologists, and (3) that no important action can be taken without first obtaining the opinion of at least two nomenclatural committees of national societies and several individuals not members of the Council. A judicial function is thus implied preceding any legislation.

It does not propose to supersede any existing special nomenclatural committees, but on the contrary it is designed to stimulate them to greater interest and more action. Its post-war status is problematical, but at least as a temporary measure and an effort in a direction urgently needing attention, it is hoped it may find support. At an early date it is proposed to increase the membership from nine to eleven in order to cover important branches of zoology which are not now well represented.

The by-laws giving details of proposed action will soon be available for distribution to any interested zoologists who may apply for them.

WILFRED H. OSGOOD,
Secretary

SPECIAL ARTICLES

ISOLATION OF THE ANTIANEMIA FACTOR (VITAMIN B_c) IN CRYSTALLINE FORM FROM LIVER*

SOMETIME ago Hogan and Parrott¹ pointed out that under certain dietary conditions chicks fail to grow, and develop a severe anemia which can be cured with liver extracts. They recognized the responsible factor as being an unidentified member of the B complex and for convenience designated it vitamin B_c. O'Dell and Hogan² developed an assay procedure with chicks, and succeeded in concentrating the factor in crude liver extract about sixty-fold.

In the fall of 1940 we undertook the isolation of this vitamin. We have recently succeeded in obtaining the compound in pure form. It crystallizes from water in orange-colored spherulites which exhibit typical parallel crossed extinction. After repeated recrystallization it separates in clusters of thin yellow spear-head shaped platelets.³ It does not melt below 360° C. but darkens and chars from about 250° C. Analysis of an ash-free specimen gave the following percentage composition: C 50.50, 50.63; H 4.78, 4.78; N 19.91.

The compound yields a crystalline methyl ester which has no melting point, contains less than 5 per

cent. of the activity of the original acid and can be converted back to the crystalline acid.

When the crystalline acid is administered to day-old chicks on a prophylactic test⁴ at a dosage level of 2.5γ per gram of deficient ration the chicks grow normally and at the end of 4 weeks exhibit no anemia. Studies under way will establish the minimum dosage level necessary. The data in Table I summarize the

TABLE I
BIOLOGICAL RESPONSE TO CRYSTALLINE VITAMIN B_c

	No. of chicks	Level per gm of ration	28-day test		
			Hgb. gm 100 cc	Per cent. Hematocrit	Weight (gm)
1. Basal ration (negative controls)	127	...	5.51*	14.2	75.8
2. Broiler ration (positive controls)	18	27.7	169.5
3. Basal ration + crude concentrate	16	0.18 cc	9.90*	29.7	191.1
4. Basal ration + semi-pure fraction	4	5.0γ	32.5	198.5
5. Basal ration + vitamin B _c (crystals)	9	2.5γ	10.95*	30.1	196.3

* Number of chicks tested was 11, 6 and 6, respectively.

results of a preliminary demonstration of its potency on the chick.

⁴ The details of this method will be published elsewhere by Mr. C. J. Campbell, whose valuable assistance on the animal assay work is hereby acknowledged.

* This article was received for publication on April 8, 1943.

¹ A. G. Hogan and E. M. Parrott, *Jour. Biol. Chem.*, 132: 507, 1940; 128: Proc. xvi, 1939.

² B. L. O'Dell and A. G. Hogan. In press.

³ A complete crystallographic description will be given later by Professor C. B. Slawson, of the University of Michigan.