of the experiment. This fact was called to his attention. He is indebted to Professor Wm. H. Dall, Hon. Curator, Div. Mollusks, U. S. Nat. Museum, and to Professor Junius Henderson, Curator of Museum, University of Colorado, who after careful examination of specimens resembling the subject of the experiment pronounce the snail *Rumina decollata* Linne. According to these authorities these snails are natives of Europe and were introduced into this country and now flourish in Texas which is the source of supply of the snails being studied in this institution.

THOMAS R. GARTH

UNIVERSITY OF DENVER

INTERNATIONAL SEED EXCHANGE

NEARLY a hundred botanic gardens in different parts of the world issue annually or biennially a seed list for the purpose of mutual exchange. In the past two years nearly 3,000 different genera of plants have been offered in these lists.

The botanic gardens publishing seed lists are chiefly those of Europe. Outside of Europe are in Asia four, namely Tokyo, Sapporo, Buitenzorg and Tiflis; in Africa two: Kirstenbosch near Cape Town, and Tunis; in South America: Montevideo; in North America: Ottawa and Brooklyn.

Are there not other institutions, for example, in the Western States, or in Australia, that might be interested in receiving seeds from different parts of the world in exchange for those of their local plants? The undersigned invites correspondence regarding this matter.

ALFRED GUNDERSEN,
Curator of Plants

BROOKLYN BOTANIC GARDEN

SCIENTIFIC BOOKS

Nervous and Mental Reeducation. By S. I. FRANZ. pp. 225. New York, Macmillan, 1923.

STUDIES in reeducation were among Dr. Franz's first contributions, and this volume summarizes an accumulated experience in the subject. It is treated from the standpoint of reeducation of specialized capacities, as of paralyzed limbs or speech functions, and only briefly from the standpoint of the personality as a whole, for example, in the final chapter on "The Psychotic." The viewpoint is that of the physiological psychologist, distinctly from the therapeutic angle. The reading group to which it appeals is a broad one, including the physician interested in the management of voluntary motor dysfunction, and the non-medical specialist concerned with reeducative methods, as the occupational therapist. The first three chapters discuss general psychological principles as related to the special topic; here the author's clearness of style shows to exceptional advantage and makes one feel that if he is ever interested to do so, he can give us a text in general psychology to rival Woodworth's. In these pages and even more so in the second section of the volume, "General Reeducation Principles," he stresses the advantage of quantitative methods in reeducation. This is the portion of most interest from the point of view of experimental psychology, and contains suggestions that may well be assimilated into psychometric technique, *e.g.*, the hammer and nail exercise of p. 80, the tennis ball exercise of p. 87, the walking exercise of p. 110.

A drawback of the volume is its brevity, though this will be judged lightly by workers in allied fields who themselves venture on the task of writing books. It is apparent that chapters of a few thousand words, covering the reeducative aspects of poliomyelitis, of tabes, cerebral paralysis and speech defects, must be very fragmentary or very condensed. This book gives the latter impression. How much many who read the book for information will get from these chapters is an open question. Limitations of space seem to have excluded almost everything in the way of case material; the value of the latter for the present topic can hardly be overstated, and few can be in so good a position to make these contributions as Dr. Franz. This feature gives to the volume an introductory character, and a good deal is left to the further interest and learning capacity of the reader. In this connection one may wish that other and more casuistic work might be made better available by references, though Mackenzie's notable contributions to the general field are duly recognized.

On this topic from this author, one expects a work of great concreteness and practicality, and is not disappointed. It may be noted that Dr. Franz is one of the few whose contributions to the medical field have won him its honorary doctorate. On both psychological and medical sides, the book is stocked with management counsel. The hope must still be retained that the author will find time to give more insight into the rich casuistic material of which the matter of this book gives evidence.

F. L. WELLS

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

OPINIONS 78 TO 81

OPINION 78.—Case of *Dermacentor andersoni* vs. *Dermacentor venustus:* On basis of the premises presented, the commission is of the opinion that *Dermacentor venustus* dates from Marx in Neumann, 1897, type specimen Collection Marx No. 122 (U. S. National Museum), from *Ovis aries,* Texas, and that *Dermacentor andersoni* dates from Stiles, 1908, holo-

type U. S. P. H. & M. H. S., 9467, from Woodman, Montana.

Opinion 79.—Case of Lamarck's (1801a) Système des Animaux sans Vertèbres: "Rigidly construed," Lamarck's (1801a) Système des Animaux sans Vertèbres is not to be accepted as designation of type species.

Opinion 80.—Suspension of Rules in the Case of *Holothuria* and *Physalia:* The Echinoderm genus *Holothuria* Linn., 1767, restr. Bruguière, 1791, type *H. termula* 1767 = *H. tubulosa* 1790, and the *Siphonophorae* genus *Physalia* Lamarck, 1801, type *P. pelagica* 1801 = *Holothuria physalis* 1758, are hereby placed in the official list of generic names.

Opinion 81.—The Genotype of *Cimex, Acanthia, Clinocoris* and *Klinophilos:* On basis of the premises before the commission, the common bedbug of Europe, *Cimex lectularius,* is the genotype for *Cimex* 1758, *Acanthia* 1775, *Clinocoris* 1829, and *Klinophilos* 1899 (*Clinophilus* 1903), and its proper technical designation under the Rules is *Cimex lectularius. Cimex* Linn., 1758, type *C. lectularius* is hereby placed in the official list of generic names.

NOTICE TO ZOOLOGISTS OF CERTAIN GENERIC NAMES TO BE INSERTED IN THE OFFICIAL LIST

THE following generic names (with genotype in parentheses) have been submitted to the International Commission on Zoological Nomenclature for inclusion in the official list of generic names.

The secretary will delay final announcement of the votes on these names until November 1 in order to give to any zoologists, who may desire, the opportunity to express their opinions.

Protozoa: *Balantidium* Clap. and Lachm., 1858b, 247 (*entozoon*); *Endamoeba* Leidy, 1879a, 300 (*blattae*); *Giardia* Kunstler, 1882, 349 (*agilis*); *Trichomonas* Ehrenb., 1838a, 331 (*vaginalis*); *Trypanosoma* Gruby, 1843a, 1134 (*sanguinis*).

Cephalopoda: *Argonauta* L., 1758a, 708 (*argo*); *Octopus* Lam., 1799, Prodromus, 18 (*vulgaris*); *Sepia* L., 1758a, 568 (*officinalis*).

Gasteropoda: *Acteon* Montf., 1810, 314 (*tornatilis*); *Ampullaria* Lam., 1799, Prodromus, 76 (*urceus*); *Buccinum* L., 1758a, 734 (*undatum*); *Bulimimus* Ehrenb., 1831 (*labrosus*); *Bulla* L., 1758a, 725 (*ampulla*); *Calyptraea* Lam., 1799, Prodromus, 78 (*chinensis*); *Columbella* Lam., 1799, Prodromus, 70 (*mercatoria*); *Helix* L., 1758a, 768 (*pomatia*); *Limax* L., 1758a, 652 (*maximus*); *Littorina* Feruss., 1821, Tabl. Syst., XXXIV (*littorea*); *Natica* Scop., 1777, 392 (*canrena*); *Physa* Drap., 1801, 31 (*fontinalis*); *Planorbis* Müller, 1774, 152 (*cornea*); *Succinea* Drap., 1801, 32 (*putris*); *Tethys* L., 1758a, 653 (*leporina*); *Vitrina* Drap., 1801, 33 (*pellucida*).

Lamellibranchiata: *Anodonta* Lam., 1799, 87 (*cygneus*); *Cyprina* Lam., 1818, 556 (*islandicus*); *Dreissena* Van Bened., 1835, 25 (*polymorpha*); *Mactra* L., 1767, 1125 (*stultorum*); *Margaritana* Schum., 1817, 137 (*margaritifera*); *Mya* L., 1758a, 670 (*truncata*); *Mytilus* L., 1758a, 704 (*edulus*); *Ostrea* L., 1758a, 696 (*edulis*); *Sphaerium* Scop., 1777, 397 (*cornea*); *Tellina* L., 1758a, 674 (*virgata*); *Teredo* L., 1758a, 651 (*navalis*); *Venus* L., 1758a, 684 (*mercenaria*).

Polyplacophora: *Chiton* L., 1758a, 667 (*tuberculatus*).

Scaphopoda: *Dentalium* L., 1758a, 785 (*elephantinum*).

Tunicata: *Ascidia* L., 1767, 1087 (*mentula*); *Botryllus* Gaert., 1774, 35 (*schlosseri*); *Clavelina* Savig., 1816, 174 (*lepadiformis*); *Diazona* Savig., 1816, 35 (*violacea*); *Distaplia* de Valle, 1881, 14 (*magnilarva*); *Molgula* Forbes, 1848, 36 (*oculata*).

C. WARDELL STILES,
Secretary to the International Commission on Zoological Nomenclature
HYGIENIC LABORATORY,
U. S. PUBLIC HEALTH SERVICE

SPECIAL ARTICLES

THE RELATION OF PLURISEGMENTAL INNERVATION TO RECOVERY IN INFANTILE PARALYSIS

THE earlier conception of the pathology of infantile paralysis attributed the paralytic features of the disease to a primary degeneration or atrophy of the anterior horn cells. This conception has been enlarged to include the several other changes in the central nervous system which appear in the acute or paralytic stage of the disease, but damage to the anterior horn cells still holds its place as being directly responsible for the paralytic manifestations. The initial change in the motor cell itself in this disease is atrophy of the intracellular network of the neurofibrillae. The cell body swells and becomes more globular. With this swelling a disintegration of the Nissl granules occurs and often extends throughout the whole cell. In many instances the nucleus retains its normal appearance for a remarkably long time. Generally, it also retains its position in the middle of the cell. The nucleus may even remain after the peripheral part of the cell body is degenerated and dissolved. When a severer change occurs in the cell body, the nucleus is converted into a deeply staining irregular structure. Complete karyolysis takes place at times. Occasionally vacuoles may be seen in the protoplasm. Finally round cells invade and ingest the ganglion cells till only a clump of round cells with greatly increased protoplasm remains to mark the site of the ganglion cell. The nerve filaments of the gray matter are faintly stained and of irregular contour. Sometimes they present small swollen nod-