EDITORIAL NOTES

ERRORS IN "PRACTICAL STANDARDIZING OF ORGANIC DRUGS."

Dr. A. B. Lyons requests that we call attention to a serious error in his book on "Practical Standardizing of Organic Drugs." There has been a transposition of matter on pages 167 and 168; this is corrected by inserting after line 7 in paragraph B59 the matter (6 lines) at top of page 168; follow with the matter on page 167 beginning with line 10 (*i. e.*, with paragraph B60 and including the first 5 lines of B61).

On page 84, line 13, there is a misplaced decimal point—for 0.2 Gm. read 2.0 Gm.

It is hoped that those who have a copy of the book will make notations as above.

AGENT AND INSPECTOR, ANTI-NARCOTIC ACT.

The United States Civil Service Commission announces open competitive examinations for the positions of Agent and Inspector, Antinarcotic Act. The salaries range from $1800 to $2250 per year; Congress may allow an increase of $20 per month, after satisfactory service. Receipt of applications for the examinations close December 31.

BRIEF ABSTRACTS OF PAPERS READ BEFORE THE SCIENTIFIC SECTION, A. PH. A., CLEVELAND MEETING.*

WORK OF THE PHARMACOGNOSY LABORATORY, BUREAU OF CHEMISTRY, WASHINGTON, D. C.

By Arno Viehoever.

Progress has been made in the campaign for cleaner drugs in connection with Crude Drug Control. A new method has been worked out for the detection and separation of dirt by floating the plant tissue with carbon tetrachloride. Data were collected dealing with the principles involved in the adequate handling of crude drugs.

Of practical significance are the results of studies on products yielding hydrocyanic acid, saponins, cedrin and other glucosides. Santonin was discovered in domestic Artemisia species. New apparatus were devised for sublimation, microsublimation and micro-melting point determination.

Domestic insects are being examined for cantharidin; and the work on certain food products, such as the various coffee species, and spices, *e. g.*, mustards, is being continued.

THE OCCURRENCE AND FORMS OF CALCIUM OXALATE IN OFFICIAL CRUDE DRUGS.

By Edgar T. Wherry and George L. Keenan.

About 75 of the drugs listed in the U. S. Pharmacopoeia IX, and the National Formulary, 4th edition, are stated to contain crystals of calcium oxalate. A study of these crystals by the immersion method under the petrographic microscope has shown that the larger part of the crystalline material heretofore described as being calcium oxalate has been confirmed as such, while in a few instances, *e. g.*, the leaves of belladonna and hyoscyamus, the crystalline material has been found to be a substance other than calcium oxalate monohydrate. With the aid of this method, the identification of crystalline material as calcium oxalate monohydrate in powdered drugs should be readily accomplishable.

KINO, GAMBIR AND CATECHU.

By E. N. Gathercoal and R. E. Terry.

The authors discuss the following problems: Do these astringent drugs deteriorate upon aging, especially with exposure to air, sunlight or heat? Are there any identification tests for these drugs? Is the solubility in alcohol, hydro-alcohol or water a suitable test for the

* We are indebted to Chairman Arno Viehoever.

determination of the quality of these drugs? Why is gambir preferred to catechu as an astringent drug?

STUDIES OF THE BARK OF MYRICA CERIFERA LINNÉ.

By Heber W. Youngken.

Commercial samples of "Bayberry, Bark" usually consist of the root bark containing rhizome bark or in further addition also aerial stem bark. The physical, histological and histochemical characteristics are described in detail. Tannin, gallic acid, starch and red coloring matter were found in the entire plant bark. The name "Wax Myrtle Bark" rather than "Bayberry Bark," generally referring to another Myrica species, is recommended for the bark of *M. cerifera L.*

A BOTANICAL AND CHEMICAL STUDY OF NICANDRA PHYSALODES (L.) PERS.

By Anton Hogstad, Jr.

The Apple of Peru is an old-fashioned garden annual, which is to be found at the present time in waste places and old gardens, being cultivated for its large blue showy flowers. The plant resembles that of a large Physalis. The studies were made on materials derived from the Medicinal and Poisonous Plant Investigations Gardens, which include a macroscopical and microscopical description of the plant, with 20 drawings, historical data and chemical studies; the latter involving the complex study of the solanaceous alkaloids.

AMERICAN MALE FERN, DRYOPTERIS MARGINALE.

By. E. E. Stanford.

This species is scatteringly common in dry soils of the northern states. It is smaller than its European relative, and consequently more expensive to prepare for market. It appears rarely to enter commerce, much of our "male fern" being in reality a species of Osmunda.

Preliminary studies by the Sollmann angleworm method indicate that the resin of *Aspidium marginale*, of which the specimens thus far examined give a good yield, approximates that of *Dryopteris filix-mas* in physiological activity.

THE PHARMACOLOGY OF PYRETHRI FLORES.

By W. H. Zeigler.

1. Alkaline solutions of the extract lose their activity upon standing.

2. It is toxic to ants when fed to them in 0.5 percent solution sweetened with syrup.

3. It is highly toxic to the boll-weevil both by mouth and by contact.

4. 0.1 mg. per Gm. body weight of the active extract of *Pyrethri Flores* dissolved by the aid of sodium hydroxide in 0.4 percent sodium chloride injected into the lymph sac of the frog, or subcutaneously into the turtle, produces within five minutes convulsions followed by paralysis.

5. The location of action is in the spinal cord.

6. The drug is not toxic to rabbits and dogs when injected subcutaneously or administered by mouth.

7. The amount of extract injected intravenously necessary to produce convulsions in the rabbit or dog under general anesthesia is uncertain. One-tenth of a mg. per Gm. body weight may prove effective.

8. The dog when injected intravenously under local anesthesia with the extract of *Pyrethri Flores* dissolved in 0.9 percent sodium chloride by the aid of sodium hydroxide, goes into convulsions which are not necessarily fatal.

9. The convulsant dose of the extract of the *Pyrethri Flores*, for a dog injected intravenously under local anesthesia, is about 0.04 mg. per Gm. body weight or about half the dose for the frog.

10. The convulsions are controlled by inhalations of ether.

BIOLOGICAL STANDARDIZATION OF LOCAL ANESTHETICS, WITH SPECIAL REFERENCE TO EFFECTS OF STERILIZATION ON SOLUTIONS OF COCAINE AND PROCAINE.

By Paul S. Pittenger.

This is a continuation of a previously reported paper in which the author describes a method for quantitatively determining the activity of local anesthetics. This method was then used in a series of experiments in order to determine the effects of different forms of sterilization and aging on solutions of cocaine and procaine.

The conclusions follow:

The activity of local anesthetics can be quantitatively determined by the method proposed.

The activity of solutions of cocaine and procaine is not affected by the addition of 0.3% Three Cresols or by sterilization by means of the Arnold sterilizer or autoclave at 115° C. for 15 minutes.

Unsterilized solutions of cocaine and procaine, solutions sterilized without heat ap-

parently lose no activity during a period of 3 months.

Unsterilized solutions of cocaine and solutions of cocaine sterilized without heat apparently lose about 10% of their activity during a period of 14 months.

Solutions of cocaine which have been autoclaved for 15 minutes at 115° C. apparently lose no activity during a period of 14 months.

Solutions of cocaine which have been Arnold sterilized apparently lose about 5% of their activity during a period of 14 months.

Unsterilized solutions of procaine, solutions sterilized without heat and solutions sterilized with heat, lose no activity during a period of 14 months.

Cocaine and procaine in the dry form are apparently stable and show no signs of deterioration during 14 months.

Concentrated solutions of cocaine or procaine can be sterilized 5 successive times at 115° C. without any apparent loss of activity.

Saccharin Feeding of Rats.

By B. Fantus and L. Hektoen.

The importance of saccharin as a sweetening agent for medicine and in *Diabetes mellitus* justified, it seemed to us, the undertaking of a prolonged feeding experiment.

Synopsis: Prolonged observation on several groups of rats receiving saccharin in their food, with special attention to weight curve, duration of life, and necropsy findings.

Conclusions: Feeding saccharin to rats in even relatively enormous doses and for a lifetime of these animals does not produce lesions appreciable either macroscopically or microscopically, nor does it interfere with the development of these animals or of their progeny, or shorten their span of life.

The Identification of Some Local Anesthetics.

By L. E. Warren.

The usual alkaloidal reagents have been applied to 2 percent solutions of alypine, apothesine, benzocaine, eucainé, butyn, cocaine hydrochloride orthoform, phenacaine, procaine, propaesin, quinine and urea hydrochloride, stovaine and tropacocaine. Observations on the optical activity of the substances studied were also made and a few color reactions were included. In a total of over 400 tests several reactions were observed which it is believed have not been reported previously. Several of these reactions are of particular value in the identification of the substances. A method for the rapid identification of certain local anesthetics has been worked out. This consists in first applying the diazo-reaction by which the substances are separated into two groups. This is followed by treating separate portions of the unknown solution, respectively, with potassium sulphocyanate, potassium iodide, sodium nitro-prusside, potassium sodium tartrate, potassium citrate, potassium permanganate and mercuric chloride. In these tests no two of the substances studied give parallel reactions.

LEPER DEATH RATE GREATLY REDUCED BY CHAULMOOGRA OIL TREATMENT.

A recent issue of the *British Medical Journal* states that the use of Chaulmoogra Oil for the treatment of leprosy has had an extremely beneficial effect in the treatment of this scourge in India. "The treatment was commenced at the largest Indian leper asylum at Parulia early in 1921. The death rate in the first six months was reduced to 66 percent and in the second six months to 29 percent and for the first six months of this year to 21 percent, as compared to the average rate for three years before the treatment was begun.

"Similarly at Fusion the annual death rate has been reduced from 25 to 5 percent."

During the past few months several errors have occurred in selling and dispensing barium sulphide, death resulting in two of the cases that have come to our attention. One of these was in the state of Washington, and the other in New Jersey. These accidents are indicative of the necessity for making inquiry relative to whether the sulphide or the sulphate is desired and prompts this item.

MORE THAN 500,000 ARE ON UNCLE SAM'S PAYROLL.

We are going fast in the direction of 1:10. There are now 68,718 employees in Washington from the President down who come within the purview of the Federal Executive Civil Service Records. They do not include another group in the employ of the legislative and judicial agencies.

The latest figures of the Civil Service Commission show the number of employees outside of Washington number 490,883, making the total more than 500,000. Before the war the number of federal employes was 438,057.