comparable in size with that of China. Pope has, single-handed, done for China what has not yet been accomplished for the United States. Since our reptilian fauna is more similar to that of China than to that of any other Old World area, this book will be of great interest and usefulness to American students.

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SPECIAL ARTICLES

CAFFEIC ACID IN PRUNES AND ITS BEHAVIOR AS A LAXATIVE PRINCIPLE

IN studies on the laxative principle of prunes[1] it was observed that caffeic and chlorogenic acids caused an increase in tonus and amplitude of contraction of isolated rabbit jejunum or duodenum. This action was similar to that caused by various prune extracts.

In view of the forementioned results, an attempt was made to isolate chlorogenic and caffeic acids from dried Santa Clara prunes (Prune D'Agen) and determine their laxative actions. We were unable to obtain any indication of the presence of chlorogenic acid; however, caffeic acid crystals were obtained from the alkaline hydrolyzed water extract of prunes by the method of Plücker and Keilholz[2] and Freudenberg.[3] These crystals were definitely identified as caffeic acid by melting point, mixed melting point and elementary micro-analytical determinations. The latter gave C 56.75 per cent. and H 4.77 per cent. as compared with the theoretical values C 57.14 per cent. and H 4.76 per cent. Quantitative determinations indicate a concentration of about .03 per cent. caffeic acid in the whole dried prune. The variations in concentration of caffeic acid in prunes were not determined.

The source of caffeic acid in prunes is still uncertain. Since Kohman and Sanborn[4] reported the presence of quinic acid in prunes it was thought that the source might be chlorogenic acid, but, as already stated, this acid was not found to be present. Nierenstein[5] has suggested that these two acids are often combined in complex caffetannins.

Feeding tests with live rabbits, dogs and human subjects have failed to show any significant laxative effect, whereas in tests with isolated rabbit duodenum a slight change in tonus and amplitude was observed.

It is concluded that caffeic acid has been isolated from prunes and that it is not the substance responsible for the laxative action caused by the ingestion of prunes.

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THE EFFECT OF THE PERFORMANCE OF PHYSICAL WORK ON MIMOSA

IT is recognized that physical work or exercise within physiological limits makes the muscles of animals stronger and more difficult to fatigue. This investigation was begun to determine what effect, if any, the performance of physical work would have on the susceptibility of the plant, Mimosa, to fatigue, as well as on its capacity to perform work. For this purpose seven vigorous potted greenhouse plants of *Mimosa pudica* were used. The plants were approximately 30 cm high and had been grown from seeds sown 10 months earlier. Two leaves of approximately the same size of each plant were selected. One of these leaves was made to perform physical work, while the other, which served as a control, was not. It should be mentioned in this connection that the experiments were carried out in a greenhouse maintained at a temperature of approximately 26–27° C. and under natural conditions of day and night in January and February when the days were around 10 hours in length and the nights 14 hours.

The method of making the leaf perform physical work or so-called exercise was to attach weights to the leaf and then stimulate by dropping a cylindrical piece of wood 30 mms long and weighing 90 mgs through a glass tube 25 cm long and striking the junction of the four primary leaflets, as shown in Fig. 1. This stimulus caused the leaf to drop and when the leaf rose during the succeeding 15 minutes physical work was performed by raising the weight. Knowing the extent of rise of the leaf and the weight of the load lifted, the amount of work done could easily be calculated.

The experiments were performed in the following manner. At 9 A. M. a 115 mg weight was suspended at the junction of the four primary leaflets to one leaf of each of the seven plants to be worked or exercised, and these were then stimulated and caused to drop as described above and shown in Fig. 1. During the