Connor³ with the rat, and more recently Cleg-horn⁴ with the mouse have been unable to confirm this, however.

We have also been unable to demonstrate any effect of the injection of Swingle and Pfiffner's extract on the sex function of the mouse. The extract used (which was kindly supplied by Mr. N. Evers), was 'Eucortone', prepared by Messrs. Allen and Hanbury. As has been shown in this laboratory, Eucortone is capable of keeping completely adrenalectomised cats alive for long periods.

We found that the daily injection of 0.5 c.c. of Eucortone subcutaneously failed to produce precocious maturity in female mice as judged by the weight of the animal and time of opening of the vagina, compared with that of controls, and also did not affect the normal course of oestrus in the adult female. No difference was observed between male mice receiving injections of Eucortone, and controls receiving the same amount of saline.

In view of the evidence of Connor³, Asher and Klein⁵ and others that aqueous adrenal cortical extracts are potent to produce experimental sex changes, the suggestion that the adrenal cortex secretes two distinct hormones must be seriously considered.

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¹ Corey, E. L., and Britton, S. W., *Amer. J. Physiol.*, **99**, 33; 1931.

² Swingle, W. W., and Pfiffner, J. J., *Amer. J. Physiol.*, **96**, 153; 1931.

³ Connor, C. L., *Proc. Soc. Exp. Biol. Med.*, **29**, 131; 1931.

⁴ Cleg-horn, R., *J. Physiol.*, **76**, 193; 1932.

⁵ Asher, L., and Klein, O., *Klin. Woch.*, **10**, 1076; 1931.

Natural Melody

On the evening of October 8, I was at Angmering-on-Sea, and my host, Mr. Kenneth Barnes, called me to listen to the wind playing, and took me to the bathroom, which faced down wind. The wind was blowing hard and gustily, and was producing a most amazing effect—exactly as though a flageolet were being played by a human performer.

The melody was in E, major, with A $\sharp$ substituted for A $\flat$, and it ranged over five semitones, of approximate frequency 1290, 1448, 1625, 1824, 1932. The melody did not slur up and down, as when the wind whistles through a cranny, but changed by sharply defined steps from note to note. The melody included runs, slow trills, turns and grace notes, and sounded so artificial that I felt bound to open the window and make sure that the tune was not being played by a human performer out of doors.

The sounds were traced to the overflow pipe of the bath, through which air was rushing in at the rosette (of six holes, each 9 mm. diameter, set in a circle) covering the inner end of the pipe where it joined the bath.

Next morning I examined the pipe. It was about 3 cm. in diameter, and about 3 ft. 5 in. long, in the form of an S-bend, of which the lower portion passed through the outer wall, and ended in an open mouth. The natural frequency of the pipe when blown into by mouth was about 161—that is, three octaves below the keynote of the scale previously indicated. Evidently the wind was playing on the 7th, 8th,

9th, 10th and 11th overtones of the pipe, and the melody was being produced by the rapid fluctuations of wind-pressure.

I wonder whether such an effect can ever have occurred in Nature?—a broken bamboo stem, for example, partially obstructed at its windward end, and so 'shielded' by vegetation, soil, etc., as to produce a pressure difference between its open ends?

The effect of elaborate melodies thus produced without human intervention would be highly magical and suggestive.

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Oct. 12.

Higher Vibrations of Chladni Plates

THE Chladni plates in use at the present time for producing nodal lines are ordinarily made of brass, ten inches square (or ten inches in diameter if circular) and one eighth or one sixteenth of an inch thick. They are set in vibration by drawing a violin bow along the edge perpendicular to the plate. If the plates are any thinner than one sixteenth of an inch, the pressure of the bow will tend to distort the plate and the resulting figure will be unsymmetrical. Using a slight modification of a valve oscillator described before¹, I have succeeded in getting symmetrical figures upon brass plates one thirty-second and one sixty-fourth of an inch thick. The plate is balanced at the centre upon a small cone attached to the vibrating diaphragm of a loud speaker. A brass plate any thinner than these will bend under its own weight and distort the figure.

The two symmetrical sand figures shown in the illustration (Fig. 1) were produced upon a brass plate

FIG. 1.

one thirty-second of an inch thick. It is possible to obtain hundreds of symmetrical nodal patterns by varying the note of the electric tube. The patterns become more and more complicated as the pitch of the note is raised. These thin plates will break into nodal patterns at very high frequencies.

Prof. Andrade has also invented a vacuum tube oscillator for Chladni plates.² He uses a magnetic coupling instead of the mechanical coupling described here.

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Sept. 30.

¹ *Phil. Mag.*, **12**, Suppl. 320, Aug., 1931.

² Andrade and Smith, *Proc. Phys. Soc.*, **43**, 405-411, July, 1931.