

pressing them down to the table with a stroking movement. The unclipped flies did not do this, and since they appeared entirely normal I allowed them to escape.

The clipped flies continued stroking their bodies and would not attempt flight except when provoked by being touched with a piece of paper which I pushed under the jar. Then their flight was extremely erratic. They seemed to have largely, if not wholly, lost their power of equilibrium. They would fall upside down, and could pursue no direct flight at all.

As a further test I left them under the jar until the following day and repeated observations with the same results. I again put some normal flies in a jar besides the clipped ones to compare action in flight. The unclipped flies had no difficulty in maintaining an upright position while flying about the jar even though they were striking the sides continuously. The unclipped flies stayed in flight much more, and without provocation.

As a final test I took the clipped flies out of the jars and let them go. Although the movements of the wings appeared entirely normal they could not fly, but fell to the floor with an erratic zigzag movement.

*Experiment 2.*—The procedure in this case was the same as in the first experiment, except that I used five flies instead of two. For each fly that I clipped I imprisoned another, unclipped, that had been subjected to ether for the same period, to use, as in the first experiment, for comparative study. The five from which I removed the balancers I put under one jar. The other five I placed in a second jar beside the first.

These flies I allowed to remain under the jars overnight in order to recover completely from the effects of the ether. On the following morning I found that one of the flies that had been clipped had died; two of the unclipped had succumbed. Probably the dose of ether had been too great.

Upon testing their powers of flight I found that the clipped flies, just as in the first experiment, were altogether unable to maintain equilibrium. Not one of them when released

could fly at all, but dropped to the floor with a zigzag darting movement. The unclipped flies flew off in normal flight.

*Experiment 3.*—Having acquired considerable skill at removing the balancers I put a large number of flies under the anesthetic at once. Then from nine flies I removed both balancers and placed them all under one jar. From eight flies I removed *one* balancer and put them under a second jar; and finally I put seven flies under a third jar. These seven had been subjected to the same dose of ether, but I left them untouched and confined them for comparative study as in the other experiments.

The results accorded exactly with those of the other tests.

(a) Flies seemed to notice the removal of the balancers, and kept stroking themselves with their legs about the wings and abdomen.

(b) In no case was a fly with both balancers removed able to fly. They could use their wings, but had no power of equilibrium.

But in contrast to this, the flies with only one balancer removed could fly without difficulty, in a manner to all appearances perfectly normal, although sometimes I thought they had slight difficulty in gaining balance at the commencement of a flight.

From these experiments I concluded that the balancers of the fly are intimately connected with his nervous system, and by a distinct and essential function enable him to maintain equilibrium in flight. But just as a man is not deaf who has one ear injured, nor blind though one eye is destroyed, so this power of equilibrium is not essentially impaired without the removal of *both* balancers.

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ROWAN WHEALDON

### QUOTATIONS

#### THE PROPOSED BRITISH MINISTRY OF HEALTH

THE Ministry of Health Bill, which has been under the consideration of Sir George Cave's Home Cabinet, will not, we imagine, prove to be a measure as comprehensive and revolutionary as recent debates and discussions might lead the public to suppose. In this connection

we may recall the suggestion put forward last January<sup>1</sup> by a group of ten members of Parliament headed by Major Waldorf Astor, now Parliamentary Secretary, Ministry of Food. The group advocated the combination and reorganization of existing departments for the setting up of a Ministry of Health, and submitted the heads of a bill providing that so soon as the new ministry had been established by Parliament all the powers of the Insurance Commissions for England and Wales, and all the powers of the Local Government Board, should be transferred to it by order in council, that the health functions of other departments should be taken over at such times as were found convenient, and that there should be power to transfer from the new ministry to other departments any functions transferred to it at first for the sake of convenience but found to be unsuitable for a health ministry to perform. Under this scheme the new ministry would be simultaneously acquiring and shedding powers, and although the method was recognized to be clumsy, the promoters believed that by this expedient matters of national health would be discussed on their merits undisturbed by conflicting claims of rival authorities. Writing on the subject some four months ago, we said that the indications then were in favor of the government bill being a measure to amalgamate the Insurance Commissions in England and Wales with the Local Government Board, leaving the non-medical functions of the latter department to be shed at a later date. There is general anticipation that the medical functions of the Board of Education would also be handed over, but with this possible addition the present position appears to be the same to-day as it was in March. If the bill is introduced in this form, it will undoubtedly come in for much criticism. If it means that the Ministry of Health, to quote Sir Bertrand Dawson's words, is not to have "a bigger horizon than the Local Government Board and Insurance Commission, then we must emphatically say 'No.'" On principles, as he said, there

<sup>1</sup> *British Medical Journal*, January 19, 1918, p. 98.

can be no compromise—"the practise of putting the skilled under the control of the unskilled must cease." One plan for preventing the perpetuation of this evil in the new ministry is outlined in the scheme of the British Medical Association, which proposes the establishment of an Advisory Council of experts. This council should hold regular meetings not less often than once a month, should have direct access to the minister, and should have the power of initiation—that is to say, it should have the right and obligation to tender its advice to the minister on any subject which it considered ought to be dealt with, and not merely on such matters as the minister referred to it. It is proposed to meet the objection that the Board's advice could always be overruled by the minister, acting perhaps under the influence of permanent officials—not experts either in medicine or any of the other professions concerned in the prevention of disease or the maintenance of health—by requiring reports of the Advisory Council to be presented to Parliament. What value this expedient would prove to have in practise is a matter upon which there is room for difference of opinion; but, provided the Minister had efficient permanent medical officials in an independent position of direct responsibility to him, it would undoubtedly afford some safeguard against the risk of "putting the skilled under the control of the unskilled."—*British Medical Journal*.

#### SCIENTIFIC BOOKS

*The Ornamental Trees of Hawaii.* By JOSEPH F. ROCK. Honolulu, published by the author. 1917. Pp. v + 210. Illustrated with 79 plates from photographs and 2 colored plates from paintings. \$3.50.

One of the charms of tropical cities is the profusion of flowering shrubs and trees. The reviewer has had the pleasure of spending several months in the Hawaiian Islands and can say that Honolulu is the most attractive tropical city he has ever visited. Much of this attraction is due to the wonderful variety and beauty of the cultivated shrubs and trees of the streets, gardens and parks.