gating the trematode infestations of any population of molluscs or other invertebrates (especially those collected from a circumscribed area) which serve as a basis for genetic or biological studies.

MIRIAM ROTHSCHILD

Ashton,
Peterborough.

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FOREST PRODUCTS

Creep in Nailed Joints

DURING the past three years, tests have been in progress at the Division of Forest Products, Commonwealth Scientific and Industrial Research Organization, to investigate the creep of nailed timber joints under constant lateral loads. No information on this subject has hitherto been available, although recently Wyatt[1] has given some results on the loading of eaves joints. Möhler[2] has also reported some limited tests, while Norén[3] has discussed the theoretical basis of creep in nailed joints.

Symmetrical three-member joints, made with 1 in. thick boards joined by 9 and 12 standard wire gauge nails, have been loaded in tension with loads up to 50 per cent of their short-duration-test strength. Some of the joints were made with green *Eucalyptus obliqua*, others with dry *Pinus radiata*. All joints were located for most of the time in a covered position, though open to the weather on one side, but later they were located inside an industrial-type building. The joints in initially green timber were allowed to dry as the tests proceeded. Readings of the displacement of the outer members relative to the inner member were taken at suitable intervals.

The results have shown that the fractional creep of nailed joints, that is, the ratio of total relative displacement after prolonged loading to that immediately after loading, may be considerable. For example, the displacement after 500 days in initially green *E. obliqua* joints with 9 standard wire gauge nails loaded to 30 per cent of the strength in short-duration loading of closely matched joints was approximately 15 times the displacement immediately after application of the load. The total displacement in these joints was then about $\frac{1}{4}$ in. The results have indicated that the rate of drying may have some effect on the creep-rate. The fractional creep of the dry *Pinus radiata* joints similarly loaded was only one-third of the above value, and the total displacement only 1/16 in.

The fractional creep of the nailed joints in solid timber appeared to reach a maximum at loads 30–40 per cent of the short-duration-test strength. This is in contrast to the behaviour of timber under constant stress[4], where fractional creep is independent of stress or increases with high stress. The total displacement in the joints, however, was greater the higher the load. Tests are being made to investigate the fractional creep over a wider range of loads; meanwhile, it is thought that the peak noted in fractional creep is linked with nail withdrawal resistance becoming active at a critical deformation.

A peak in fractional creep was again observed in similar tests on joints made with $\frac{1}{4}$-in. thick plywood and with hardboard nailed to initially green *E. obliqua*. It occurred at a load of about 15 per cent of their short-duration-test strength. These joints showed a much higher fractional creep than that obtained with the solid timber joints under the same percentage of ultimate load.

A paper is being prepared describing these tests in detail.

J. J. MACK

Division of Forest Products,
Commonwealth Scientific and Industrial
Research Organization,
Melbourne.

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PSYCHIATRY

Yohimbine as an Autonomic Test Drug

YOHIMBINE in fairly high doses (2–7 mgm./kgm.) exerts adrenolytic effects and is sympatholytic for salivary reactions in animals[1–5]. Higher doses (28 mgm./kgm.) produce sympatholysis of nictitating membrane retraction, while even more is required for sympatholysis of mydriatic action[2,3].

In preliminary experiments on human beings we found yohimbine hydrochloride (0·5 mgm./kgm.) given intravenously over a period of 5 min. to be the maximum dose that could generally be tolerated. This dosage, which is low in comparison with those already mentioned, did not produce any evidence of adrenergic blockade. Only central stimulatory effects were obtained, the degree of which was found to vary considerably with the individual's general emotional reactivity.

The final experimental procedure consisted of a 5-min. base-line, a 5-min. preparatory period with insertion of a needle and injection of normal saline, 5 min. of yohimbine infusion, and a 55-min. follow-up period. EKG and respiration were recorded, blood pressure was measured every 30 sec. and finger skin temperature every 5 min.

The 15 male schizophrenic patients were of diverse diagnostic subtypes and showed all degrees of chronicity and deterioration. The nine normal volunteers were selected to cover a similar age-range.

Six trained people independently rated and ranked the subjects according to their emotional reactivity, judging particularly from reactions of anxiety or fear in connexion with any events causing stress during the preceding two months of observation. The rating scale of emotional reactivity is as follows: 0, very little sign of any reactions (more or less stuporous); 1, definitely (pathologically) sub-reactive; 2, somewhat sub-reactive (the lowest a healthy person could possibly go—many mentally ill people should also fall into this group); 3, normally reactive (without obvious signs of nervousness); 4, somewhat over-reactive (a little nervous); 5, rather over-reactive (quite nervous but not to a definitely pathological degree); 6, definitely over-reactive (shows abnormal degree of fear and anxiety); 7, strongly over-reactive (which means that the patient is among the most tense and anxious cases that can be managed in experiments).

Particularly in the group of schizophrenic patients the full range of emotional reactivity was covered, from semi-stuporous states to strong over-reactivity. The rankings made by the six observers showed