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## Grassland Ecology and Wildlife Management

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July 1974: 0 412 12290 1: 304 pages:  
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This book describes the distribution and ecology of lowland grasslands in Britain with special reference to their flora and fauna, history, and management for wildlife conservation. The maintenance and manipulation of grasslands for agricultural, scientific, conservation and recreational purposes requires an extensive knowledge of the responses of plants and animals to different treatments and disturbance factors. The book examines these in relation to the range of variation in lowland grassland ecosystems and to the known land-use history.

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Ornstein refers also to recent experiments on 'biofeedback', in which he has himself made interesting contributions on the control of automatic functions not normally under conscious control. There are also references to anthropological data on different ways that people categorise, describe and see things as evidence for the relativity and perhaps arbitrariness of what is accepted as knowledge.

The book starts by referring to Kuhn's scientific paradigms, as both giving stability to science and belief (analogous to the perceptual constancies) and also as limiting what we can see and understand. To Ornstein, behaviourism's rejection of consciousness, and logical positivism's rejection of statements not susceptible of strict 'scientific' verification as not meaningful, are examples of paradigms so narrow that important understanding is blinkered and lost. Although one may sympathise with Ornstein's dissatisfaction with behaviourism as a paradigm for psychology (however useful it may have been to concentrate experiments on technically feasible enquiry) he does not lay siege with much fact or rigour, except indeed to point to consciousness as a fact that it is absurd to ignore. He seems in places to follow Aldous Huxley in regarding the nervous system as doing not much more than filtering experience—quoting with approval Huxley's remark: "Mind at large has to be funnelled through the reducing valve of the brain and nervous system. What comes out at the other end is a measly trifle of the kind of consciousness which will help us to stay alive on the surface of this particular planet". This is, however, a view far opposed to current theories of perception, as active construction from limited data signalled by the senses—but which Ornstein also espouses. There seems to be a lack of consistency in the book on these questions; but its aim is evidently to loosen what Ornstein regards as constraining bonds of current theories of brain function, rather than attempt at this time to produce a conceptual synthesis, or a consistent working paradigm for psychology. It does have the merit of asking some awkward questions, with suggestions that answers might be found in strange places.

Here we come to the nub of the problem: to the Western reader without experience of 'meditation', the descriptions of conscious states and so on are difficult to comprehend or even to take seriously; but is this because of restricting limits of our experience, and paradigms of what should constitute science? Ornstein puts the matter cogently (page 6): "Science as a mode of knowing involves a limitation on enquiry. The essence of good experiment is successful exclusion". And

later (page 100), reversing the case from a non-technological to a Western society: "Our peasant . . . cannot see why, if it is indeed possible (as we claim) to fly to the planets, he cannot do it now in his own terms . . . When he fails, he will likely come to believe that 'space flight' is really an impossibility, that any one who claims it to be possible is simply gullible, 'unscientific', or even a liar . . . It is similar tendencies in ourselves which we, as Western students of psychology, may need to overcome in investigating an area which is so new, so spectacular, and so unknown to us . . . We should not ignore 'Eastern science' because of its imbalances, or because of the misinterpretations heaped around it". This book presents a case with honesty and with learning which is nevertheless in parts very difficult to comprehend, let alone judge. But if the case were valid, surely this is just what we might expect!

RICHARD L. GREGORY

## Highly strung

*Development and Regeneration in the Nervous System.* Edited by R. M. Gaze and M. J. Keating. Pp 105-193. (British Medical Bulletin Vol. 30, No. 2.) (British Council: London, May 1974.) UK £2.25; elsewhere £2.50.

THE title of this bulletin is most appropriate for the two thirds concerned with studies on the nervous systems of animals. Research on nerve specificity and regeneration using histology, electron microscopy, surgery and electrophysiology is described. The rest of the bulletin is concerned with medical and social topics to which the physiological studies should be relevant: the epidemiology of spina bifida, the effect of malnutrition on intelligence, the educability of the subnormal. Though the gap between the two groups is to some extent bridged by Balács's description of metabolic influences on brain development in both animals and men, the difference in treatment is marked. This is inevitable as long as the relation between nervous connections and learning is unknown. Only Cragg speculates on this, discussing his work on synaptic patterns in mentally deficient mice.

The physiological articles are mostly excellent reviews of areas of research. Gaze's article on neuronal specificity in goldfish is particularly lucid. I found the other articles slightly less satisfactory, because of the relative paucity of facts. An exception is Bower's fascinating review on the innate abilities of newborn babies and how these develop. The bulletin is well presented and will be invaluable for those interested in the wide fields it covers.

GILLIAN MOORE