

$s = \int \psi_A \psi_B d\tau$ provides useful qualitative information.

He stressed that overlap calculations suggest that Pauling's bond-strength values over-emphasize the difference between tetrahedral and octahedral bonds. His own calculations are consistent with bonding between the d_{π} -orbital of a central atom and the p_{π} - or d_{π} -orbitals of an attached group, and d_{π} - p_{π} hybridizations may be important in some compounds. If two d_{π} -bonds are formed by the central atom of a square complex, then, other things being equal, the *cis*-configuration will be more stable.

Dr. A. F. Wells (Imperial Chemical Industries (Dyestuffs), Ltd., Manchester) discussed the stereochemistry of atoms in crystals and distortion from ideal 'bond angles' by the geometrical requirements of the attached groups. He illustrated these points by reference to the crystal structures of divalent compounds of palladium, platinum and copper. Copper behaves uniquely and its compounds are not isomorphous with those of any other metal, owing to the peculiar co-ordination of copper which gives it four nearest neighbours at the corners of a square and two more distant neighbours completing a distorted octahedron.

Dr. L. E. Sutton (Oxford), in summing up, welcomed the introduction of physical methods into co-ordination chemistry. The following also contributed to the discussion: Prof. A. Albert (National University of Australia), Dr. J. S. Anderson (Atomic Energy Research Establishment, Harwell), D. C. Bradley (Birkbeck College, London), F. Burstall (Chemical Research Laboratory, Teddington), G. E. Coates (Bristol), Dr. D. P. Craig (University College, London), Dr. D. D. Eley (Bristol), Dr. M. E. Foss (Guy's Hospital, London), Dr. P. George (Cambridge), Dr. A. Maccoll (University College, London), Dr. W. G. Palmer (Cambridge), and Prof. W. Wardlaw (Birkbeck College, London).

R. G. WILKINS

FUNCTIONS OF THE NATURE CONSERVANCY

THE Committee of the Privy Council for Agricultural Research and Nature Conservation has issued a paper*, giving a short account in general terms of the functions and aims of the Nature Conservancy, to meet a demand for information about this body. A separate note dealing more particularly with the recruitment of staff and the award of maintenance allowances is available for *bona fide* inquirers. The present paper points out that the first two functions of the Conservancy, to provide scientific advice on the conservation and control of the natural flora and fauna of Great Britain, and to establish, maintain and manage Nature reserves, cannot be carried on without continuous scientific research to build up and maintain the essential body of knowledge and experience. This research will be conducted principally, but not exclusively, in the proposed Nature reserves, and the Conservancy can make grants in aid of specified researches to be undertaken by the universities or other research bodies and award maintenance allowances for the postgraduate training of suitable students. As a start, provisional laboratory accommodation is being attached to the

* Committee of the Privy Council for Agricultural Research and Nature Conservation. The Nature Conservancy. Pp. ii+6. (Nature Conservancy, 91 Victoria Street, London, S.W.1. 1950.)

Conservancy headquarters in London and Edinburgh, and the establishment of a fully equipped terrestrial research institute is under consideration.

The Conservancy has provisionally scheduled about a hundred and fifty places in Great Britain as National Nature Reserves. Of these, seventy to eighty in England and Wales and about thirty in Scotland are areas of biological or physiographical importance, while some forty are features of special geological importance and will be administered in the same way. When the areas finally selected have been accurately surveyed and delimited and either acquired or made subject to suitable management agreements, they will be declared National Nature Reserves under the Act. The Conservancy may also make by-laws for the protection of a National Nature Reserve, by controlling entry into, or movement within, a Reserve, the killing or taking of animals of any description, or interference with the vegetation and soil, and the lighting of fires, etc., and it may also control the killing of birds within surrounding areas; this last provision is necessary to avoid serious effects on the bird population of a reserve. Restriction of entry will only be applied where and when it is essential to serve the purposes for which the reserve was established. It is imperative that most of the reserves should be actively managed, and the Conservancy intends to train a staff to take charge of the reserves, to study continuously the effects of different kinds of treatment, to arrange for the destruction of pests, and to keep the plant and animal populations in balance. Some of the more important reserves will each have a resident officer who will participate in the necessary research as well as be responsible for day-to-day management. In others a single officer may be able to look after a group of reserves. Provision is also made for local Nature reserves to be established by local authorities in agreement with the Conservancy.

It is recognized further that Nature reserves alone cannot sufficiently provide for the general conservation of the flora and fauna, for comparative studies, or for the display of particular types of plant and animal communities on an adequate scale. The Conservancy is required to notify the local authorities concerned, or the agricultural departments and the Forestry Commission, of any other places of special scientific interest. The Conservancy cannot here, however, do more than seek to persuade the responsible authorities of the importance of scientific interests and to encourage general conservation of the flora and fauna and features of special geological importance by all concerned over much wider areas in which scientific interests, though important, cannot be paramount.

Finally, the paper seeks to make clear the distinction between the functions of National Parks and of National Nature Reserves, and in particular that while, so far as land is concerned, the first objective of the Nature Conservancy is the preservation as Nature reserves of good samples of the various types of natural and semi-natural vegetation with their accompanying animals, as well as the stations of rare and interesting species, the principal objective of reservation is scientific study. The Conservancy is convinced that properly organized study and research, carried on mainly in the reserves, is essential both for the increase of fundamental knowledge and for the future application of this to the proper management of National Parks and to the development of similar land for other uses.