vidual can be discerned, but these are certainly inadequate as a basis for the study of culture. All cultures have a vastly richer content than that which would suffice to insure the survival of the societies which bear them. It is clear that the individual has psychological and emotional needs as well as physiological ones and that part of the function of culture is to provide satisfaction for these, but we must wait for the psychologist to tell us exactly what these needs are.

It will be many years before ethnologists obtain a clear understanding of these processes, and even when they do their work will not be finished. Everything that the ethnologist can observe, record or analyze is a product of the interaction of three elements—culture, society and the individual. The interrelation of these elements may be made clearer if we liken the culture to a symphony, the society to an orchestra and the individual to a musician playing his prescribed part but always playing it a little off key. Society, through the medium of its component individuals, is responsible for the overt expression of culture and for its perpetuation. No culture can exist without a society. Conversely, no society can exist without a culture. It is culture which provides the techniques for group living and the stereotypes which make the behavior of individuals sufficiently predictable for them to be able to work together. It transforms what would otherwise be a mere aggregate of persons into an integrated, functional whole. Lastly, it is the individual who is responsible, in the last analysis, for all additions to culture. Every new idea must originate with some person. Nevertheless, culture and society together shape the individual, changing his general needs to concrete desires and making his adult personality a compromise between his demands and theirs. In every situation culture, society and the individual are so interdependent and in a state of such constant interaction that an attempt to study any one of the three without constant reference to the other two can lead to only meager and mutilated conclusions. Even in the study of the individual, which psychology has made its special province, it is becoming clear that any approach to personality which fails to take culture and society into account soon reaches a dead end. Just as the various schools of ethnology, with their limited aims and approaches, must ultimately fuse into a single science of culture, so we may expect this science of culture to finally fuse and disappear into a larger science of human behavior. This will be the authentic Anthropology, the study of man.

SCIENTIFIC EVENTS

THE SPREAD OF ELM DISEASE IN ENGLAND

ACCORDING to an article in the London *Times* ten years have now passed since the first case in England of elm disease was identified by Dr. Malcolm Wilson, of the University of Edinburgh. This was a tree growing at Totteridge, Herts, and although the first recorded case, there is reason to believe that the disease had already been present for some years without attracting notice. During the past decade the disease has either spread or been found to occur over the whole of England and a large part of Wales, though it has not crossed the border into Scotland nor is it yet known in Ireland.

From a report received by the forestry commissioners it appears that the disease spreads slowly in some localities and quickly in others, but taking the country as a whole the progress is not very perceptible. In many of the districts visited there were actually fewer trees infected in 1937 than in 1936; on the other hand, those trees that were attacked showed a more pronounced form of die-back. Even in the most severely affected areas, where up to nearly 50 per cent. of the elms have been killed, there remains a residue of healthy trees which, it is to be hoped, will continue to survive and prove resistant to the fungus.

The *Times* states that the American investigators who have been studying the disease in England have demonstrated by inoculation tests that the different species and varieties of elm show varying degrees of resistance to attack. It seems that the American elm (*Ulmus americana*) is much more susceptible than the common forms of elm grown in England; hence, possibly, the very rapid death of attacked elms which is a feature of the disease in the United States. Of the British elms tested, the least susceptible variety commonly grown appears to be the Wheatley elm (*Ulmus stricta Wheatleyi*). In view of the ease with which elms can be propagated from suckers or layers, the most hopeful line of work for the future is the discovery of resistant individuals from which to raise stocks to take the place of trees that have fallen victim to the disease. Work along these lines is proceeding.

THE CANADIAN DEPARTMENT OF MINES AND RESOURCES

A COMPREHENSIVE account of its principal activities during the year is presented by the Department of Mines and Resources, Ottawa, in its report for the fiscal year ending March 31, 1937. The report covers the work of the former Departments of Mines, Interior, Indian Affairs and Immigration from March to December, 1936, when these departments were amalgamated to form the present department, and of the new department from December to the end of the fiscal year.