

Obituary

David Lambert Lack ScD, FRS (1910-1973)

David Lack came from an East Anglian family of tenant farmers, the name being a variant of Lock. The stock was of modest means, but David's father became a leading ear, nose and throat surgeon in London. His mother was the daughter of an Indian Army colonel and until her marriage was an actress, usually in a touring company. She was of mixed Irish and Scottish descent. They lived in an enormous house in Devonshire Place run by a retinue of servants and a succession of nannies. In spite of his town life, he somehow acquired an interest in birds when he was nine, and a year later a régime of long holidays in the country began usually at New Romney in Kent where he learnt most of his birds.

After preparatory schools, mostly in London, he went at the age of 14 to Gresham's School, Holt, Norfolk, perhaps at that time the most liberal of public schools, where there was an extraordinary collection of intelligent boys who afterwards became famous in many walks of life. He was not outstanding at school, but by the time he went to Holt the interest in birds had become dominant and he went out birdwatching alone for almost the whole of every holiday and every spare hour at school. Brief illnesses often kept him out of team games and, since all the great bird environments of the Norfolk coast were within easy cycling distance of Gresham's, his ornithology progressed in an extraordinary manner. While at school he did some original studies on the Nightjar, finding it to be double- and not single-brooded as the books said, and just after leaving school he wrote his first paper in *British Birds* on this topic. He decided that he *must* be a zoologist, though warned by the authorities that there were no careers in ornithology, nor in going on expeditions!

He went up to Cambridge at the age of 19 and almost immediately visited the sewage farm and saw his first Wood Sandpiper. He did well enough at his Tripos courses but found them dull and uninspiring. Almost the whole of his energies were going into birdwatching; he was an outstanding member of the Cambridge Bird Club, extraordinarily learned and experienced for his age in this field, and wildly enthusiastic. During his four years at the University, Lack published a good paper on the Nightjar in *Ibis* and did some really original work with L. S. V. VENABLES on changes in the Breckland avifauna caused by afforestation. By the time he left Cambridge in 1933 he had published no fewer than nine ornithological papers, at least two of them of real merit and originality on habitat selection by birds, and a joint paper with his father entitled 'Territory reviewed'.

He had also written, mainly during his undergraduate years, *The Birds of Cambridgeshire*, an excellent summary published by the Cambridge Bird Club in 1934. By the time he went down he had absorbed all the useful literature on bird behaviour then available in English—Eliot Howard, Selous and so on. It was an astonishing performance in view of the fact that he also secured a high Second Class Honours degree in Natural Science. For two of his years he practically ran the Cambridge Bird Club and in his vacations managed expeditions to Bear Island and East Greenland.

In 1933 Julian Huxley and the Cambridge Zoology Department apparently jointly suggested his name for a vacancy as a biology master in a new co-educational school, Dartington Hall, in Devonshire. David went to the school, was delighted with what he saw and accepted the post at once. In this he was extraordinarily fortunate, and so was the ornithological world, for there can hardly have been another school post in the country where he would have had the friendly atmosphere and encouragement, and above all the freedom of movement and action, which allowed him to make a splendid start in his chosen career of ornithology.

During David's last year at Cambridge I had got to know him well, and over the following years I used to meet him from time to time and learn about his work with the Robin, the results of which began to appear in 1939 and which culminated in his admirable *The Life of the Robin* in 1943. This is so well known that I need say little about it except that it was a pioneering achievement which fully deserved its great success. In 1939 he was given a long period of leave from Dartington which enabled him to accomplish a really outstanding achievement in his study of the ornithology of the Galápagos Islands. This led him to the great paper on 'Variation in the Galápagos finches' (California Academy of Sciences, 1945) and two years later to, arguably, the best book he ever wrote, namely *Darwin's Finches*. This showed, from a detailed study of nearly all the species, subspecies and forms of the Geospizinae, that when two related species meet in the same region they tend to compete and that both can persist there only if they are isolated ecologically either by habitat or by food. He was able to state categorically that all Darwin's finches are isolated from each other ecologically, and to argue that new species originate when forms first differentiated in geographical isolation later meet in the same region and keep distinct.

When war came David was very fortunately, both for himself and for ornithology, selected for training in operational research, and he soon became heavily and successfully involved in the early work on radar. It was, of course, top secret and nothing at all was published about it until 1945 and then only in a very brief preliminary form.

But characteristically David made the most of this opportunity and from it emerged some valuable facts on the migrational drift of birds studied by radar. When David and other biologists first became involved in this work, the mysterious radar echoes were completely inexplicable and the Army and Air Force personnel concerned referred to them as 'angels'! It seems that quite a number of people really believed this and it was a long time before scientists were able to convince the authorities that these were really migrant birds.

David's period as an amateur ornithologist was ended by the war, and a great change came in 1945 when the Edward Grey Institute of Field Ornithology was established as part of a new department of Zoological Field Studies in Oxford. David Lack was offered the post of Director, which he accepted without hesitation. He already had an immense range of research interests clearly defined, with work far advanced in some of them. He concluded that the most important function of the new Institute was to open up fresh fields of enquiry; and, partly because of the historical background of the Institute and partly because several of his other lines of research were already being effectively pursued in Great Britain, he chose to make the prime research concern of his establishment the study of population problems. As he said, 'the object is to find out why birds are as numerous as they are'. It was, of course, emphasised that to make any impact on this topic a continued study of bird populations over a period of years was essential, and thus it was that population ecology became his main concern for the rest of his life. There is no doubt he would have liked to continue his work on the Robin and to have used this species for the purpose; but after a trial period he ruled this out because Robin nests are much too difficult to find in bulk. Instead he concentrated on the Great Tit, which has the great advantage, among others, of readily adopting nestboxes.

David's main work on population problems gave rise in due course to four substantial and important books: *The Natural Regulation of Animal Numbers* (1954), *Population Studies of Birds* (1966), *Ecological Adaptations for Breeding in Birds* (1968) and *Ecological Isolation in Birds* (1971). These are not primarily ornithological but deal with some major problems in animal ecology using studies in bird reproduction and behaviour to provide the main sources of new evidence. The general conclusion was that populations are primarily controlled by density-dependent factors. Natural selection of family size is the key factor, the normal clutch size being that which, on average, results in the largest number of surviving young. This was in direct contradiction to a strong school of thought among ecologists which held the view that the main factors were independent of density (for example, climatic) and that they operated in pretty much the same manner whether a given species was scarce or abun-

dant. This raised a further extremely important genetic issue: whether group selection is conceivable as a mechanism having evolutionary effects, or whether all selection has to be in terms of the individual alone. This controversy took up much of David's time during recent years and the issue is still undecided. His 1966 book is very largely concerned with it, and its implications run outside conventional ornithology since the matter can ultimately be settled only on the basis of population dynamics and genetics. While the 1968 and 1971 works are still largely concerned with this problem, they also have a tremendous importance and interest for the ornithologist, and every serious student of birds will be much the better for reading them. There is, however, one other earlier book of David Lack's which is as ornithologically fascinating and readable as *The Life of the Robin*, namely *Swifts in a Tower* (1956). Both these books convey delightfully the enthusiasm and excitement of ornithological work to the amateur, without diminishing the detail and rigour of the scientific side. At the time of his death he had finished or nearly finished another book, on West Indian birds, which I venture to forecast will be as good reading as any of his others.

David Lack was a strong individualist, completely involved in the particular research work in hand and with tremendous power of concentration on this to the exclusion of all else. His standards were so high that he was often impatient and somewhat disparaging of amateur work which nevertheless, at its level and considering the time involved, was of real value. This tended in some quarters to give him a reputation of standoffishness, and there is no doubt that he could be prickly at times. I think he had few intimate friends, and both inclination and circumstances, especially serious family illness, led him to avoid taking positions of responsibility in ornithology. Thus, considering his worldwide eminence as an ornithologist, it is remarkable that, apart from serving a short term as Vice-President, he was never deeply involved in the activities of the British Ornithologists' Union, neither as President, Secretary nor editor of *Ibis*. For a long time he displayed little interest in or concern for conservation, but over the last few years this attitude was rapidly giving way. Another reason for his isolation was what he called 'my irritating weakness', namely his need for nine or even ten hours sleep a night in order to work efficiently. Since, when engaged in fieldwork, he was of necessity out early in the morning, the end result was that he could take part in no evening activities of any kind and one hardly dared even to ring him up after 8 p.m. He was also deeply and anxiously involved in family life: *Who's Who* for many years recorded his sole recreation as 'home help'.

A great feature of his period at the Edward Grey Institute was the annual student conferences in bird biology held every January.

At these he was able to discard attitudes which made him seem unapproachable. He talked freely and happily with everybody and he gave brilliantly clear lectures which were of enormous value to promising young ornithologists.

Lack was elected a Fellow of the Royal Society in 1951 and was President of the International Ornithological Congress at the Oxford meeting in 1966. He obtained the Cambridge Sc.D. degree in 1948 and was awarded the Godman-Salvin Gold Medal of the British Ornithologists' Union in 1959 and the Darwin Medal of the Royal Society in 1972, which, sadly, he was too ill to receive in person. In 1949 he married Elizabeth Silva, with whom he wrote a number of joint papers. They had four children, three boys and a girl.

W. H. THORPE

David Lack Studentships: an appeal So many ornithologists have gained so much from David Lack that the British Ornithologists' Union has decided to commemorate his life and work by raising a fund for studentships in field ornithology bearing his name. In order to achieve this aim, generous contributions are requested. Donations should be sent to **British Ornithologists' Union (David Lack Studentships)**, c/o Zoological Society of London, Regent's Park, London NW1 4RY.



PLATE 52. David Lambert Lack, scd, fRS (1910-1973) at the XIV International Ornithological Congress, Oxford, July 1966 (*photo: Eric Hosking*)