Archæological Investigations in the Libyan Desert

THE Libyan Desert is a never-failing source of archæological material of interest and often of considerable importance. Further evidence in support of this was afforded by the account given by Mr. W. B. Kennedy Shaw before the Royal Geographical Society on January 6 of an expedition in 1935 of which he was leader. The main objective of the expedition was the further exploration of the Wadi Hawa, which west of long. 24° forms the boundary between French Equatorial Africa and the Anglo-Egyptian Sudan. East of that meridian, the Wadi has been visited only by four expeditions since 1923, and is little known, a section of fifty miles being unsurveyed and the extreme eastern end unexplored until the present occasion.

Between January 14 and April 9, 1935, the party covered 6,300 miles, of which half was through unexplored country. Before setting out for the main objective, a visit was paid to the Gilf Kebir plateau and its recently discovered wadis, with the view of searching for rock paintings additional to those already reported. Small caves or rock shelters on the neck of a re-entrant valley provided a series of twenty-five in red and white, showing human figures and animals which included *Bos africanus*, the cattle of Egyptian Predynastic and Old Kingdom times afterwards superseded by *B. brachyceros*. Their collars, or halters, spotted coats and prominent udders show that the domesticated animals were intended. One painting shows a woman seated inside a cave or hut. It is stated that the Abbé Breuil, who has examined the expedition's copies, dates these paintings as Predynastic of about 5000–4000 B.C. The series, of which full details will be published later, should prove a valuable addition to the examples of prehistoric art already known from the Libyan Desert. A solitary cairn burial in 'Grassy Valley' (which lies somewhere about 100 miles south-east of 'Uweinat) yielded a crouched skeleton with carnelian beads and a pot closely paralleled in the Predynastic period.

In the Wadi Hawa some valuable work of exploration was carried out with which it is not proposed to deal specifically here, except to say that the whole of the Wadi from long. 24° eastward was traversed and surveyed, and observations taken of the animal and vegetable life. The archæological investigations covered a number of ancient sites, which occur along the Wadi. On a hill on the north bank were some hundreds of stone grave cairns. Of these, two were opened and found each to contain a contracted burial but without associated objects. At one large site farther to the east was found the evidence of what had clearly been an important settlement. The ground was covered with sherds, ashes and burnt bones with polished diorite axes, ostrich-shell beads, querns, grinders, etc. Here burials are unmarked by cairns or otherwise.

Two or three skeletons were excavated. One had a necklace of five turquoise beads, dated tentatively as Old Kingdom, and at its waist were many coils of ostrich-shell beads. Farther east near Jebel Rahib cairn burials re-appear. In one of these, two halves of a cow's jaw had been buried alongside the body. What was perhaps the most interesting and significant discovery, however, was made in a depression lying between Merga and Burg et Tuyur, where a number of old water pans indicates the attraction for an early population, of which evidence was seen in fragments of pottery and implements. The skull of a skeleton obtained here has been pronounced by Dr. Cave of the Royal College of Surgeons to agree strikingly with the Predynastic type. Though there were no objects associated with this burial, nearby were animal bones, sherds, polished stone axes, ostrich-shell fragments, etc., of a kind similar to those found in Wadi Hawa. Hitherto archæological material from Hawa has been assigned to Meroitic times. Here, however, is evidence of a considerable and much earlier population, which the character of their artefacts shows to have followed an agricultural and pastoral mode of life. These pursuits for such a number would have been impossible either to-day or in Meroitic times, and evidently point to conditions more favourable some four to five thousand years the latter.

Passenger Transport in London and Berlin

IN a paper read to the Royal Society of Arts on December 11, Mr. Frank Pick discussed the organisation of London transport with special reference to the London Passenger Transport Board. He pointed out that progress in conceiving and organising London has been unequal and unbalanced. The L.P.T.B. enjoys at present a certain uniqueness of character which makes its study useful and advantageous. There is a drawback in the fact that the suburban services of the main line railways, representing 273 million car miles, are still dispersed in the hands of four amalgamated companies. These services represented in car miles 34 per cent of the whole, or in passengers 13 per cent of the whole. There is a standing joint committee to settle disputes, but this is not the same as the welding of those interests into one. The electrification of the Southern Railway and the failure to electrify the railways north of the Thames have led to the growth of London in the south, and have diverted the population in that direction.

Unluckily, traffic considerations are partially subordinated to other considerations still retaining elements of competition. Local authorities vie with one another in seeking expansion. Housing programmes have a tendency to settle and concentrate in unexpected areas. In particular, a vacant piece of land, vacant because the transport facilities are

inadequate, seems specially attractive. There cannot be a competitive basis to the economic and intelligent planning of the Metropolis.

When motor-coaches were put on the arterial roads running out of London it was thought that they would merely displace railway suburban traffic. In addition, an unexpected traffic grew up along the roadside, provided it could be taken to the centre of London where it wanted to go. Regulations then descended upon the system of coach routes so built up, excluding them from the centre and limiting their stops, and so destroyed more than a quarter of the traffic. This went just as mysteriously as it came, and did not reappear anywhere else.

The Board has opened two new interchanges between its railways, one at Holborn between the Central London and Piccadilly lines, and one at Monument between the City and District lines. At Holborn there used to be an exchange of traffic of about 1½ million a year; it is now 10 million, an increase of nearly seven-fold in two years. At Monument there was no exchange; but now after two years there is an exchange of 6 million passengers. It came as a surprise; no one knew that there was a large suppressed traffic waiting to be realised. The realised traffic is very considerably in advance of the estimates.

The expenditure of forty million pounds by the L.P.T.B. looked to an increase in population of 750,000 for its support, and scientific observers prophesy that it will be long before the population becomes stationary. These prophecies are a warning, and the various forms of transport must be co-ordinated in view of the certainty that development must ultimately cease. The railways must be pieced together and supplemented so that their expensive facilities can be filled with the traffic they can reasonably accommodate. The L.P.T.B. is the commencement of a new policy designed to grapple with affairs on a larger scale than the past afforded. Underneath all the commercial activities of the Board, there is the conception of a metropolis as a centre of life, of civilisation more intense, more eager, more vitalising than there has ever been before. Out of the mere pressure of all these millions of people one upon another, a pressure which transport encourages, some new whole must arise. It may well be a metropolitan State which organises the activities of its millions of citizens to a common end and purpose which we hope will be more liberal and worthwhile than that which could come from anything smaller.

In his reply during the discussion on his paper, Mr. Frank Pick referred to the traffic problem in Berlin, which, he said, is quite different from that in London. Relatively speaking, the German people are poorer and the average number of rides they take per head of the population is 330 as against 430 in London. They rarely take journeys for pleasure or for casual purposes; they travel mainly for business. The loading of the transport system in Berlin, therefore, is acute at the peak hours, and the vehicles have few passengers at the slack hours, and hence the daily service is unremunerative.

In both London and Berlin, the cheapest form of transport is the tramcar. The place the bus holds in London is held by the tram in Berlin. There is some talk of replacing trams by trolley buses, but the difficulty is to get the necessary capital. The dominant factor in Berlin is the State Railway, which works in and out of Berlin and is part of the national railway system. A large season ticket traffic at low rates has been built up, and this entirely dominates the underground system. The difficulty in framing a pooling scheme is how to pool losses. As Berlin has a population of about five million and covers an area of twelve miles, at most, from side to side, it might have been expected that the transport is on a self-supporting basis. An increase in the population may make the losses greater. In London, an increase would probably make the profits greater.

Educational Topics and Events

CAMBRIDGE.—Prof. C. G. Darwin, Tait professor of natural philosophy in the University of Edinburgh, and a former fellow of Christ's College, has been elected master of Christ's in succession to Mr. Norman McLean, who is retiring.

W. S. Mansfield, University lecturer in agriculture and director of the University farm, has been elected a supernumerary fellow of Emmanuel College.

EDINBURGH.—Prof. J. Dover Wilson has taken up duty as regius professor of rhetoric and English literature.

On the recommendation of the Faculty of Medicine, the Cameron Prize has been awarded to Prof. C. H. Browning, professor of bacteriology in the University of Glasgow, in recognition of his work on the antiseptic properties and practical applications of acriflavine and other aniline dyes.

LONDON.—Prof. B. A. McSwiney has been appointed as from April 1, 1936, to the University chair of physiology tenable at St. Thomas's Hospital Medical School. He has been, since 1926, professor of physiology in the University of Leeds.

In June and July the University will celebrate the centenary of its incorporation by Royal Charter. In connexion with the celebrations, the Dean and Chapter of St. Paul's Cathedral have arranged to hold a special service on July 1 at 11.30 a.m., at which the Archbishop of Canterbury will preach the sermon.

THE New Education Fellowship will celebrate the twenty-first anniversary of its foundation at its seventh World Conference to be held at Cheltenham on July 31–August 14. The subject for discussion is "Education in a Free Society". To Sir Percy Nunn, the president, will fall the task of expounding the lessons of the past twenty-one years; Prof. Pierre Bovet will speak on "Can Religious Education make for Freedom and Peace?", Prof. Paul Langevin on "Science and Freedom", Prof. Piaget on the "Formation of the Free Personality", and F. Clarke on "Democracy and Social Control". In 1937 the Fellowship is to co-operate with the Australian Council for Educational Research in conferences to be held in all the capital cities of Australia in July and August. The executive committee includes Mr. Frank Tate, president of the Australian Council for Educational Research, Profs. Lovell and Mackie of Sydney, the director of education, Victoria, and the vice-chancellor of the University of Melbourne. A similar conference held a year ago in South Africa was very well attended, the enrolments reaching a total of 4,000.