Sponsorship was received with many thanks from: Overseas Development Administration; Fauna Preservation Society; Corpus Christi Liddiard Travel Fund; Corpus Christi Spencer Fund; Lily and Marcus Sieff Charitable Trust; Corpus Christi College; Worts Travelling Scholars' Fund; Bowater Corporation; Bradfield College; Cambridge Expeditions' Fund; Dixon Galpin Fund; J. Watson and Sons; Professor Hering Memorial Research Fund; Rio Tinto Zinc Limited; Royal Entomological Society; Sir Antony Burney; Mr. O. Sunderland; Heffers Bookshops.

Equipment was much appreciated from: Karrimor International (discount); Japanese Cameras Limited; Kentmere Limited; Polaroid (UK) Limited and World Wide Butterflies Limited.

Further information on the expedition may be obtained from Mark Cheverton, Corpus Christi College, Cambridge, CB2 1RH. When prepared the specimens will be available for examination at the British Museum (Natural History).

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CAMBRIDGE HIMALAYAN HIGH ALTITUDE RESEARCH EXPEDITION

MEMBERS

Alison Beazley, B.Ed. (Cantab)
Anthony Cooke-Yarborough, B.A. (Cantab), Economics
Dr. Paul Edwards, M.A., M.B., B.Chir.
Jeannie Elliot, Physical Anthropology, New Hall, Leader
Julia Heald, Archaeology, New Hall
Kate Ogden, Oriental Studies, New Hall
Charles Prescot, Modern Languages, Christ's College
Mike Sugden, Modern Languages, Christ's College
Jonathan Turner, B.A. (Cantab), Land Economy
Lavinia Wilson, B.A. (Oxon), English, Dip.Ed.

AIMS

Three projects were envisaged: the first study involved research into the effects of altitude on mental acuity (designed by Dr. Alan Baddeley, Director of the Applied Psychology Unit for the Medical Research Council). The second project was a study of the effect of altitude upon blood components with particular reference to foetal haemoglobin (suggested by Dr. James Garlick, Head of the Physical Anthropology Department, Cambridge). The site chosen, Leh, is in the centre of an area dominated by Buddhist Lamaism and so we also decided to study, for a third project, the socio-economic relationships between local villages and their monasteries.

INTRODUCTION

The medical tests required a minimum height of 11,500ft and that no acclimatisation should take place on the way up. The town of Leh, in the Ladakh region of north Kashmir, was one of the few suitable sites in the world with a direct flight (three

hours from Delhi), and affording enough local interest to occupy the expedition for a month at that altitude. For significant results at least ten subjects were required and so five men and five women were chosen.

THE EXPEDITION

We left Heathrow on 29th June, laden with stoves, cooking utensils, tents and reams of mental acuity tests, and after a 14 hour flight via Moscow we arrived in the early morning at Delhi. We were met by a stifling wave of hot, humid air as we left the aircraft and were not to stop sweating profusely until our flight to Leh a fortnight later.

Our first two weeks in Delhi were spent acclimatising to the time change and premonsoon humidity, and carrying out low altitude control tests eventually to be compared with the results from Leh. We spent much of our time with the British High Commission, which was most helpful to us. The authorities allowed us up to Leh only on condition that our anthropological investigations were severely restricted.

On 15th July, the great moment came: carrying nearly 200 kg. of food for our camp at Leh we boarded a Boeing 737 amid the early morning confusion of hawkers, sleeping bodies and the odd sacred cow at Delhi airport. After one and a half hours we had come in sight of steep snow-capped peaks piercing the thick cloud, and descended to the old British summer resort of Srinagar (6,000ft.). We climbed steeply from Srinagar and before long were above dry valleys of spectacular proportions, glistening snow caps and glaciers cutting their way through the jagged scenery. After just forty minutes we descended into the Indus valley and, passing over large areas of military installations, came to land on Leh's recently built short tarmac runway. Here we were met by the expedition doctor, Paul Edwards, who had taken a week to come up by train, bus and lorry, the last leg taking two days on the road from Srinagar. He was well adapted to the altitude and helped us as we breathlessly heaved our luggage onto the roof of the incredibly dilapidated local bus, into which we squeezed ourselves for the three mile uphill drive to the bright green irrigated terraces of Leh itself.

Leh is the capital of Ladakh, an area of Kashmir officially part of India but claimed by Pakistan and also by China, whose ceasefire line is only a few miles away over an 18,000ft. pass. The inhabitants differ from their numerous Indian Army protectors not only in their Mongolian features but also in their devout Buddhist faith. They are mostly peasant farmers, relying upon glacial streams to irrigate their terraces of barley and animal fodder, surrounded by dry dusty hills in what is often called "the highest desert in the world". In the summer months temperatures reach about 40°C, dropping to about 5°C by night. The annual rainfall is less than 3 inches. The six month winter brings snow and ice and takes a toll of the weaker members of the community, as they struggle to keep warm by burning dried Yak dung in temperatures as low as minus 40°C.

Ladakh was opened to outsiders in 1974, as part of the Indian government's policy to develop the area. In five years little has changed except in Leh itself, where many small traders from Srinagar have set themselves up purporting to sell 'Ladakhi'

souvenirs to the tourists,who fly briefly in and out on the newly opened commercial air service. The everyday life of Ladakhis is still strongly influenced by the monasteries, not only spiritually but through their ownership of much of the little land that can be cultivated. We camped a mile from Leh in a small wooded area near a spring. Any land which is not desert is of great value, so we paid a small rent to its owner, a young Ladakhi who was very friendly and spoke good English. English is still a common language between peoples of different regions of India.

The pace of life in Ladakh is very slow, and the inhabitants show the gentle contentment which is manifested throughout the world by people whose life is a struggle. Unhurried though it was life was never boring, and the free time after our morning tests was usually spent travelling in small groups on the rough local bus service to other Ladakhi villages. This gave us a very good impression of the way in which monasteries affect Ladakhi life. Four of us made extensive treks into the mountains, following tracks to over 17,000ft.

After a month in Ladakh most of us had fallen in love with the area and were sad to leave. We returned, the hard way, by bus and lorry via Srinagar. The road down from Leh is tarmaced for half the way now, but it is nonetheless frighteningly dangerous in places. In one place it climbs nearly three thousand feet up the side of a mountain, zig-zagging backwards and forwards, gaining only a few yards with each traverse. The high point of the trip came as we edged over the Zoji-la Pass into the Vale of Kashmir, seeing slopes covered in vegetation for the first time in a month.

We spent a week slowly returning to Delhi, where we had to stay for a week to wait for our cheap flights to London. This time allowed us to see very different Indian culture, on short trips to the palaces of Rajasthan and, of course, the Taj Mahal at Agra. Returning to London proved to be at least as much of a "culture shock" as arrival in Delhi had been. Most of us took at least a fortnight to rid ourselves of "Delhi Belly" to which it had proved surprisingly easy to become accustomed.

The mental acuity tests are still to be analysed by the Medical Research Council, but should produce meaningful results. The blood tests were dogged by various problems, largely due to the length of time for which samples had to be kept in a hot climate before being analysed. Anyone planning similar experiments, however, should be able to learn a great deal from our difficulties. Our anthropological investigations had to be restricted as a result of governmental pressure, but should still provide material for at least one magazine article.

FINANCES

Income	£	Expenditure	£
All the Year Round Chrysanthemum Growers	1,000	Air Fares	3,491
Ministry of Overseas Development	300	Insurance	213
Medical Research Council	300	Equipment	1,085
St. Regis International	250	Transport of Equipment	15
Wellcome Trust	250	Administration	110
Mount Everest Foundation	400	Medicines	30
Himalayan Rall	300	Accommodation in India	160
Lilia White	50	Food	530
Christ's College	50	Travel in India	380
I.M.I. Radiators	80	Fuel	6
R. Jephcott	15	Report) C.U.E.T.C. Levy)	150
Personal Contributions (in total)	3,175		
Total	6,170	Total	6,170

ACKNOWLEDGEMENTS

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CAMBRIDGE HOGGAR EXPEDITION 1979

PATRON

Professor Glyn Daniel

MEMBERS

Michael Winter, Social Anthropology
Coun Phillips, Archaeology and Anthropology
William Todd, Archaeology and Anthropology
Coun Hughes, Zoology
Christopher Jeffes, Applied Biology
All the Expedition members were undergraduates at St. John's College.

INTRODUCTION

The Expedition aimed to carry out a study of the pastoral economy of the Hoggar Tuareg, a group of Berber-speaking nomadic pastoralists who live in the central Sahara. We focused our attention on one particular descent group (or 'tribe') who had been visited by Jeremy Keenan, a British anthropologist, between 1964 and 1971. In order