

Journal of
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CAVE SCIENCE

IMPERIAL COLLEGE EXPEDITION
TO THE
KARST OF PERU

CAVE SCIENCE

Imperial College Karst Research Expedition to the Peruvian Andes, 1972

Log of the Peru Expedition	1
R. J. Bowser	
The Pirhuacocha Area	7
G. Wadge and J. M. H. Coward	
The Palcamayo Area	13
J. M. H. Coward, L. W. Tunbridge and R. J. Bowser	
The Caves of the Palcamayo Area	18
R. J. Bowser and J. M. H. Coward	
Caves in Peru	27
L. W. Tunbridge	
Expedition Logistics	30
R. J. Bowser, L. W. Tunbridge and G. Wadge	

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Expedition Logistics

R. J. Bowser, L. W. Tunbridge and G. Wadge

Transport and Customs

Our limited budget did not permit us to have our own transport in Peru, which would have been very expensive. Shipping charges and the cost of taking a vehicle overland from the USA are quite prohibitive. We did budget for those items in our early planning stages (the cost in 1972 was approximately £1,600). It also takes three weeks to travel one way overland and must be ruled out if time is short. Vehicles may of course be purchased in Peru, but prices are very high, and resale could be difficult unless a reliable contact was known in Peru. Since we believed our expedition would have relatively little need of transport once our first base camp had been established we decided to rely on borrowed and rented transport whilst in Peru.

Our equipment, about 1½ tons of it, was shipped to Peru on the "Oropesa" by the Pacific Steam Navigation Company. The cost was about £60 per freight ton, thanks to a generous discount from the shippers. Other incidental costs were transport to and from various docks, and customs charges. These added about £30 to our shipping bill. We had to arrange a bankers guarantee for £2,000 to cover the import duty on our equipment whilst we were in Peru (food is allowed in duty free). This was done in London and cost £60 in bank charges in London and Peru. However, it can be avoided by depositing \$400 with the customs in Peru which is returned when the equipment leaves the country. We believe we were relatively lucky with customs in Peru as our goods were already cleared when we arrived and it only took eight days to arrange our guarantee and remove our equipment from the customs. Unfortunately the weight restrictions on air travel meant that we had very little equipment, such as tents and cooking gear, with us and so we were unable to use all of this time very profitably.

Our personal transport to Peru was by an unusual route. First London to Toronto by BUNAC charter (£62 each) where we met Julian and Mary. After a very pleasant weekend in Hamilton we drove down to Miami in Julian's Canadian Rambler Estate, which was in somewhat dilapidated condition (fill her up on oil and check the petrol please). From Miami we flew to Lima via Quito on specially reduced rates from Ecuatoriana Airways. Fortunately we also managed to get a free night in Quito's best hotel and saw a little of the city, thanks to timetable muddles.

Upon our arrival in Lima, which was on a Friday afternoon, we decided that little could be done that weekend towards saving our equipment from Lima customs and so we hired a Toyota Land Cruiser from the Peruvian equivalent of Avis and drove up towards Oroya. Hire vehicles are unfortunately very expensive and our 600 kilometre journey over three days cost us £60. The hire company also stipulated that the insurance for the Land Cruiser was not effective off tarmac roads — this rather restricts one in Peru.

When all our gear was cleared through customs we were fortunate that our customs agent arranged a relative's lorry to take us and the equipment to our first base camp. This trip cost us £24, which turned out to be relatively expensive, though not extortionate. We subsequently learned that trucks can be arranged quite

easily in the Parada, which is Lima's market. However a knowledge of realistic prices is invaluable when hiring transport.

Peru is fortunately well endowed with public transport. There are generally three ways of travelling in Peru:

1. Buses, famous for people hanging on everywhere, their spartan seating and their reckless driving. However they are incredibly cheap. The 187 kilometre journey from Lima to Oroya cost about 50p.
2. Colectivos, which are taxis that run on a set route and carry five people. On distance journeys, as opposed to suburban trips, the cars have a timetable and it is necessary to book unless a full complement of passengers is found or the difference in fare is paid. This method is fast, reliable (which is surprising, judging by the age of the cars used), and relatively cheap — about twice the bus fare.
3. Taxis, which have the advantage that they will leave from where you wish and will carry more luggage than a colectivo, but are consequently more expensive.

Whilst at base camps we found that hiring horses or mules would be relatively easy, but had little use for them except at Shaca Marca where they were generously supplied free by our friends in the village.

Transport between base camps was kindly arranged free by the Cerro de Pasco Corporation at Oroya, who were also very helpful in our geological mapping. Our transport back to Lima from Huagapo was arranged quite cheaply with a local truck owner, whom we had befriended during our stay. Most of the private transport in Peru is by lorry, and there is no shortage of lorry owners looking for cargo.

One minor obstacle to travel in Peru is the number of check points along the roads, where all lorries and buses have to stop for a police check. It is wise to keep your passport handy at these points; however, apart from checking the passport, the police are generally considerate to tourists.

Communications throughout Peru are good though journey times can be long due to the mountainous and often rough roads. Public services serve virtually every part with regularity. Off the beaten track progress is generally easy by foot or mule except in the jungle where the dense forests make progress almost impossible.

On leaving Peru we again encountered difficulty with customs and nearly had to leave one of our members behind to sort them out. However our gear was finally cleared and loaded aboard ship about a month after we left. Incidental costs such as packing, transport to docks and agents charges etc. were £150. One final cautionary note on shipping — our ship was over two months late in docking at London; we dread to think what would have happened if it had been two months late on the outward trip.

(R.J.B., L.W.T.)

Food

During our planning we had envisaged being a considerable distance from any population and therefore decided to be completely self sufficient in all our food requirements. However when we arrived at our base camp we found that the area is populated, as are most of the highlands of Peru, and the locals were disappointed that we would not buy food from them. Meat, corn and potatoes are cheap and plentiful in areas where they are produced (avoid llama meat like the plague). Buying food from local farmers would be a far better proposition than surviving on dried foodstuffs. The only disadvantage with this is that it requires some degree of mobility

(i.e. expedition transport) to do this; one's local farmer may only produce potatoes and it may be necessary to travel several kilometres to obtain meat. This would be satisfactory on odd occasions but could waste a lot of time and effort if it were the norm. Food shops in towns are expensive and choice is limited (except in pasta — in one supermarket we found at least 50 varieties); if food is bought in country towns the market is the best source. (R.J.B., L.W.T.)

Medical

Considering that the expedition was based close to the type area of one of the most deadly virus diseases known to man — Oroya Fever — the medical officer feels it something of a personal triumph to have "brought 'em back alive". Fortunately this feeling, and the one we all felt on venturing into that part of the world (something close to paranoia) was totally unfounded, as we later learnt that the disease and the sandfly bearer had virtually died out in this century.

Biting insects in fact were remarkably uncommon west of the Amazon basin due mainly to the lack of vegetation. Our first camp at Pirhuacocha, close to the continental divide at 4,500m, was a remarkably healthy place once we acclimatised to the altitude. Everyone here suffered to a greater or lesser extent from altitude sickness (soroche) particularly as we came up from almost sea level in a day. The symptoms of insomnia, headache, lack of breath, apathy and even vomiting in some cases were treated with Doriden, Codis and rest. Things on average improved greatly after four or five days and work rate and fitness improved to about 75% of sea level performance after six weeks to two months. Insomnia still remained a problem however and most people preferred to stay on Doriden till the third month.

Intestinal disorders constituted far and away the most common complaint, almost all of which responded to Lomotil (with or without Neomycin) and Streptotriad usually in that order. Judging by the frequency of occurrence of diarrhoea, the second camp at Huagapo was less healthy than the first; whether this was due to the fact that we drank the water which we also spent a good deal of time wading about in, inside the cave, or that we started eating quite a lot of the local produce, is a moot point. On the balance of it, it is probably the latter, and the Portasyl water steriliser pump seems to have been very effective.

A miscellany of minor problems included fleas, piles, toothache and snow-blindness none of which proved serious and on the whole the standard of health was high, perhaps in part due to our good diet and daily vitamin intake, usually Ferrograd-C and Surbex-T. Another factor worth considering in assessing the physiological health of the expedition is the part played in maintaining this by the psychological health of everyone. This was good on the whole; in other words it never actually got to blows at any stage. The isolation and small number of the party, 4 then 6 and finally 5, was such that we relied on the party as a whole and were not able to split into cliques. The odd case of altitude apathy and mild neurosis did show itself but the one case of paranoid schizophrenia that I did expect did not materialise so I never in fact got to use the straight-jacket. Sad . . . (G.W.)

Finance

In organising an expedition of this nature the main problem is one of finance. We were fortunate in obtaining generous cash donations from British Petroleum, Gilchrist Educational Trust, Imperial College, Mount Everest Foundation and Royal Geo-

graphical Society. A balance sheet is shown below. This shows the actual cost to us and not the normal retail cost. Insurance is not included as it was automatically paid by Imperial College. The amounts shown assume £1=\$2.56.

EXPENDITURE		INCOME	
Equipment	100.30	British Petroleum Co. Ltd.	50.00
Photographic Equipment	60.38	Gilchrist Educational Trust	50.00
Medical	6.81	Imperial College Exploration	
Packing	25.17	Board	900.00
Stationary	23.72	Mount Everest Foundation	200.00
Post and phone	21.45	Royal Geographical Society	100.00
UK Travel	15.92	Sale of food	60.39
Food	303.28	Sale of equipment	66.40
Travel to Peru	1,091.77	Personal contributions	728.32
Travel in Peru	104.64		<hr/>
Shipping	181.37		£2,155.11
Maps etc.	16.75		
Hotels	45.93		
Customs, Dock and Bank			
Charges	150.44		
Miscellaneous	7.18		
	<hr/>		
	£2,155.11		

28th June 1973
(R.J.B.)

Acknowledgements

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Expedition Members

Roger J. Bowser
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Lloyd W. Tunbridge
Geoffrey Wadge
John A. Walkington

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