

“ OPERATION ORYX ”

By MAJOR I. R. GRIMWOOD

Leader of the Expedition

ACKNOWLEDGMENTS

In reports of this nature it is customary to conclude by acknowledging the help received from other persons or organizations. In this case the procedure is being reversed in order to emphasize the fact that “ Operation Oryx ” was a combined operation, of which the part played by the field party represented only one facet.

First, then, tribute must be paid to Mr. A. F. Watts, O.B.E., Resident Adviser and British Agent at Mukalla, who obtained the agreements of the rulers of Quaiti, Kathiri and Mahra States to the operation and without whose enthusiastic support no expedition could have taken place.

As a result of that support the Fauna Preservation Society gained the participation of the Hadhrami Beduin Legion whose services, and the help of whose Commandant, Lieut.-Col. J. W. G. Gray (Quaid Gray), it is impossible adequately to acknowledge. From the moment the advance party arrived at Mukalla, Gray relieved it of all administrative problems and demonstrated that there was no difficulty too great for that fine little force to overcome. When the field party with all its equipment was finally assembled he personally escorted it to the area of operations and left it there to continue its work ; with it there was a highly efficient self-contained unit of vehicles and men, maintained from HBL forts and kept in contact with the outside world by a wireless link to HBL headquarters at Mukalla. All ranks of the Legion showed great enthusiasm and cheerfully turned out at all hours of the day or night, willingly foregoing their Id celebrations and other holidays.

The Royal Air Force also played a major part in “ Operation Oryx ” and the Fauna Preservation Society owes a great debt of gratitude to the many of its officers who took a keen personal interest in the operation and went to the limit of their powers to make it a success. Though naturally unable to indulge in any special flying the R.A.F. was able so to arrange its commitments as to transport all members of the field party and their equipment, including the Piper Cruiser aircraft, to Aden and back and, when the time came to evacuate the oryx, to fly them to Nairobi with such efficiency and speed that they suffered no loss of condition on the way.

Of the other organizations which contributed to the operation it is possible here to mention only a few of those which rendered assistance to the field party directly.

Foremost was the East African Wild Life Society which lent its Piper Cruiser aircraft for use as a spotter plane, and Wilken Air Services, Ltd., of Nairobi, who carried out modifications to it and lent spare parts. Electronic Aids (East Africa), Ltd., built a portable radio beacon to assist the Cruiser to navigate in difficult country and installed a wireless to work to the sets used by the Hadhrami Beduin Legion. Aden Airways were not only willing to fly a special charter plane to Sanau to evacuate

the oryx, should the R.A.F. be unable to do so, but assembled the Piper Cruiser free of charge on its arrival in Aden.

To Ker and Downey Safaris, Ltd., of Nairobi, the Society is indebted for the free use of its workshops for building the catching car and for obtaining and dispatching spare parts when emergencies arose ; to the Kenya Government for the loan of Mr. D. R. M. Stewart, game biologist ; and to Mr. John Seago, wild animal dealer, who, through his principal assistant, Mr. Tony Parkinson, and by the loan of his equipment, allowed the field team to gain experience of catching the East African oryx (*Oryx beisa*) before leaving Kenya, and who accommodated the Arabian oryx and provided them with expert care on arrival in Nairobi.

Last but far from least in the eyes of those taking part, the kindness of Messrs. Ind Coope, Ltd. must be recorded in presenting such a generous quantity of tinned beer that it lasted throughout the expedition, despite the thirst-generating temperatures encountered.

Individual helpers were so numerous that it would be invidious to single out names for mention, but it would be impossible to end this section without some reference to the contribution of the two men whose knowledge of the habits of the oryx, familiarity with the country and ability as trackers made contact with these animals possible ; namely Tomatum bin Harbi and Mabkhout bin Hassanah.

The foregoing refers principally to the contributions of outside bodies and individuals which directly affected the field party. Many others must have helped in other ways. Without the Society's Secretary, however, and his staff, there could have been no “ Operation Oryx ” and full tribute must be paid to their organizing ability and the tireless attention to detail which went into the voluminous correspondence that alone made the expedition possible.

The Fauna Preservation Society acknowledges most gratefully donations to “ Operation Oryx ” from the following :—

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The audited accounts for “ Operation Oryx ” will be published in the next issue of *Oryx*.

EVENTS LEADING UP TO THE OPERATION

The decline of the Arabian oryx (*O. leucoryx*) has been aptly summarized in L. M. Talbot's *A Look at Threatened Species*,* which shows how the range of those animals, which once inhabited suitable country throughout the Arabian peninsula and northwards into Sinai, Palestine, Jordan and Iraq, has been so reduced that in recent years reports of its existence have come only from a narrow belt of country running along the southern, and possibly eastern fringe of the Rub-al-Khali desert. Of this belt accurate information was obtainable only about the western half, i.e. that part lying within the Aden Protectorate.

The habit of the oryx, either natural or as the result of persecution, is to live during the cold weather largely, but not entirely, within the sand sea. During summer, however, they require shade in which to lie up during the heat of the day and as shade is unobtainable amongst the dunes, they move out on to the gravel plains or "jol" to the south. Here there are a few scattered bushes and caves in which to shelter. Though the oryx live in small parties of from one to seven individuals, it appears that there are certain chosen areas of jol in which they tend, or tended, to congregate, forming loose populations, which may be concentrated by the presence of fresh vegetation in any part in which rain has fallen. Until recent years three such populations were known to exist in the Aden Protectorate, centred on Ramlat Subatain, Khusham-al-Jebel and the area of the Wadis Shuwait and Mitan respectively. The last oryx was seen in the western, Subatain, area in 1947 and the last record from Khusham-al-Jebel is the killing of one animal in 1951.

The eastern, or Mitan, population had, however, existed successfully up to 1959 when the Fauna Preservation Society's attention was drawn to it by Mr. M. A. Crouch, then Assistant Adviser, Northern Deserts, Eastern Aden Protectorate. At that time its numbers were estimated to be between eighty and one hundred. The reason for its survival was the remoteness of the area, which was used by only a few Beduin, who can have killed no more than four or five animals a year.

In December, 1960, however, a party of armed raiders from outside the Aden Protectorate prepared a motorized expedition and having apparently crossed the whole of the Rub-al-Khali from the north, arrived at the Ramlat Mitan, in which vicinity they remained and hunted for several weeks. This party, hunting from cars, is known to have killed at least forty-eight oryx.

The Arabian oryx is, by its vigilance and ability to travel great distances, more than a match for the Beduin hunting on foot or camel back, although the hunter cheerfully expects to spend ten days to a fortnight on the spoor of one animal. But the oryx is helpless against motorized hunters, for on the jol, 99 per cent of the country carries a good spoor and 95 per cent of it can be traversed by car. It is therefore simply a matter of following up an animal till it is sighted—spooring at speeds of 20 miles per hour being possible—and then running it to a standstill.

* The Fauna Preservation Society, 1960. 10s.

In January, 1961, the area was visited by Capt. D. W. A. Johnston, on leave from the Hadhrami Beduin Legion, who took a keen interest in the fate of the oryx and whose report on the earlier raid reached the Fauna Preservation Society. Johnston attempted to capture some of the survivors, but though he succeeded in throwing a shark net from a Landrover over two of them, they both died, though in the one case not until it had been transported to Sanau fort and kept there for three days.

In August, 1961, as the result of a series of meetings at the Fauna Preservation Society's headquarters, attended by Crouch and Johnston and many others, it was decided that the Society should launch an operation in the Eastern Aden Protectorate to capture a sufficient number of the surviving oryx to form a breeding herd. Thus the oryx could be saved from extermination and when circumstances became favourable reintroduced into some part of its original habitat.

The operation was timed for April–May, 1962, when heat would have driven the oryx south out of the sand sea, but before temperatures had risen intolerably. Leadership was entrusted to the writer who, in the name of the Kenya Game Department, had offered to look after any oryx captured until a permanent home had been chosen for them. His deputy was to be Crouch, who had obtained permission to take part in the expedition. Johnston was in the end unable to participate and his place was taken by Capt. G. A. Shepherd, of the Armoured Car Squadron of the Federal Regular Army (formerly the Aden Protectorate Levies). Mr. M. H. Woodford, a private veterinary surgeon from Dorset, was chosen as the veterinary officer of the party and Mr. P. W. J. Whitehead, a former game ranger in both Northern Rhodesia and Tanganyika, with considerable experience of catching animals, joined as capture expert. Mr. D. R. M. Stewart, the biologist of the Kenya Game Department, was included to take full advantage of any opportunity of adding to knowledge of the biology and ecological requirements of the oryx. Finally, when the East African Wild Life Society offered the use of its light aircraft, Mr. G. K. Gracie joined the party as pilot.

PREPARATIONS

Preparations went ahead in Aden, Britain and Kenya.

With the assistance of the Resident Adviser, Eastern Aden Protectorate, permission of the rulers of the states in which the expedition would be operating was obtained and the participation of the Hadhrami Beduin Legion promised. The co-operation of the Air Ministry was kindly given.

In Kenya a special catching car was built, collapsible animal crates were made, sand tyres were fitted to the aircraft and both VHF and HF wireless sets were installed—the latter for communication with HBL ground sets. A portable radio beacon was also specially built. Reception pens for the oryx were built on the Veterinary Quarantine Station at Isiolo, where the climate approximated to that of Arabia, and the Kenya members of

the team spent a week practising catching the much larger *Oryx beisa* in the Northern Frontier District.

Then, in February, 1962, in the middle of these preparations, came the news that the raiders had returned to the Wadi Mitán in the previous December and had killed another sixteen oryx. Next, a report was received according to which all oryx had been destroyed. Could the expedition continue? An anxious meeting was held in London and a telegram asking for advice was sent to the Governor of Aden, Sir Charles Johnston. Back came the reply: "Oryx report mentioned is corrupt and no such categorical statement was made but no certainty is possible. I advise expedition should continue as planned."

On 22nd March Grimwood and Gracie set off as advance party being flown to Aden in a R.A.F. Transport Command Beverley. It carried the Piper Cruiser in its hold, together with the animal crates and baggage.

On arrival they made contact with Mr. I. E. Snell and Mr. F. A. H. Wilson, of the Protectorate Secretary's office, who were to prove so hospitable and helpful to various members of the field party and who later, when the party had moved up country, dealt with a bombardment of S.O.S. telegrams without turning a hair. They also met Wing Commander Howard, the Middle East Command Movements Officer, who promised and gave every possible help.

On 29th the advance party flew to Riyan in its own aircraft which Aden Airways had kindly reassembled, leaving the baggage to follow. There they were met by Crouch who had motored in from his station of Meifaah a few days earlier.

After driving to Mukalla and meeting Mr. Watts, the Resident Adviser, the advance party was installed in the Residency Rest House, overlooking the Sultan's palace, which was put at their disposal until the convoy moved up country.

The first few days were occupied in meeting the Residency staff and HBL officers—a process involving a great deal of very pleasant hospitality—and in taking over the arrangements made by Crouch, who unfortunately had been flown to hospital in Aden with malaria. From then on both Gracie and Grimwood were busy, for the aircraft had to be serviced, fuel obtained and engine cowling covers made; timber had to be bought to be taken up country for the making of more animal crates; large quantities of powdered milk to be obtained in case baby oryx were caught. Lucerne and grass hay had already been bought in the Wadi Hadhramaut, where it was later collected by the HBL. Servants and a carpenter to accompany the expedition had to be engaged, a contract for messing made, tents borrowed from the R.A.F. at Riyan, and camp furniture from the Residency, and a hundred other details attended to.

At this period it seemed that nothing could go right for the expedition. The aero fuel, which had been ordered in February, had not arrived and as a result the Cruiser was grounded. When the fuel did come it was found to be only half the amount ordered, the dhow carrying it broke down and the cargo had to be transferred. Kit did not arrive from Aden. Then a succession of public holidays closed all shops and offices.

The worst blow, however, was a signal from Whitehead to say that the

specially built catching car, which was to have been sent by sea from Mombasa direct to Mukalla, had been refused shipment at the last moment and that there was not another ship for a month. There was nothing that the advance party could do from its end, except send messages for help to Wilson in Aden, so its members learned with relief that the R.A.F. had come to the rescue and that the car had been flown to Aden on 10th April. On 12th Grimwood returned to Aden to collect it, taking delivery from Shepherd, who had already moved it to his house. On 16th he set out on the three-day drive to Mukalla, along the “ road ” which runs mainly along the beach, with several loops inland over awkward lava flows and hills. All went well until 60 miles from Mukalla when, at 2 a.m., the gearbox disintegrated, leaving top the only serviceable gear.

It was on arrival at Mukalla that the HBL mechanical section first showed its mettle for within 20 minutes the gearbox was out of the car and stripped down and Mr. G. W. Dawson, the Legion’s Transport Supervisor, was combing the Suk to see what Ford parts could be obtained. An identical second-hand gearbox (apparently) was eventually found and bought, but unfortunately the “ works ” were not the same. Time did not allow of reference back to the Nairobi agent who had been given the gearbox to overhaul and who had charged a large sum for doing so, for the convoy was due off in five days’ time. New gears were cut and new bushes made and fitted and altogether the gearbox was tried out, removed and stripped down again five times. Eventually with bush bearings in the place of some irreplaceable roller bearings, the car was handed over with a warning that it would only have a very limited life. It was decided to take it, but as a precaution a hole was cut in the cab roof of a Bedford 1 ton pick-up and lined with old car tyres, so that some sort of reserve catching car would be available.

Meanwhile the ill luck of the expedition had not exhausted itself. The plan had been for Woodford, Whitehead and Stewart to be flown to Aden by the R.A.F. in time to join Shepherd on another R.A.F. flight to Riyan on 19th April. Crouch was to arrive at Mukalla by road on the same day, so that all would be ready to move up country on the 21st. Unfortunately the flights from both the U.K. and Kenya were delayed, so only Shepherd was there to catch the plane. In the evening came a signal from Wilson, the expedition’s staunch friend in Aden, to say that he had managed to book the missing three on the Aden flight on the 21st, but that night, 19th April, a heavy storm of rain put Riyan airstrip out of action and the flight was cancelled. But at last on the 24th the party arrived in Ghuraf, in the Wadi Hadhramaut, by an unscheduled Aden Air flight and was able to join the main column when it reached Al Abr the next day.

Meanwhile at Mukalla preparations had been completed and all stores, tents, baggage and fuel taken over by the HBL and loaded and lashed on their Model R Bedford 5-ton load carriers. At 0800 hours on 23rd the first part of the convoy set off, to be followed three hours later by Quaid Gray and his wife in their Landrover, the wireless vehicle, and Shepherd and Grimwood in the catching car. Gracie and Crouch were left to follow on in the Cruiser, which would fly direct to Al Abr on the 25th.

MUKALLA TO SANAU (see Map)

The first day's drive was a short one but the road, which would scarcely warrant that title in many countries, was both steep and rough, winding up the bare rocky coastal escarpment, so reminiscent of parts of Waziristan, to Maula Mattar at 5,500 feet and some 50 miles from Mukalla. Here a chilly but perfect starlit night was spent.

Next day, the 24th, the whole convoy set off at 0625 hours, finishing the climb to the plateau up a narrow pass under spectacular limestone cliffs. On top the going became easier, the road traversing a bare rock and gravel plain, pitching gently to the north and only occasionally intersected by deep gullies. After 70 miles a halt for lunch was called at Jahi, where a small HBL post has been built overlooking the Wadi Duan. This wadi runs due north into the main Wadi Hadhramaut and like the latter has precipitous sides, perhaps as much as 800 or 900 feet high, while its flat bed varies from half a mile to over a mile in width. Surface water is to be found in several places, and where it occurs there is intensive cultivation. Settlement is dense by Arabian standards and the villages and towns are built in vertical tiers of many storied houses, usually against a cliff, like the better known towns of Saiun, Shibam and Tarim in the Wadi Hadhramaut.

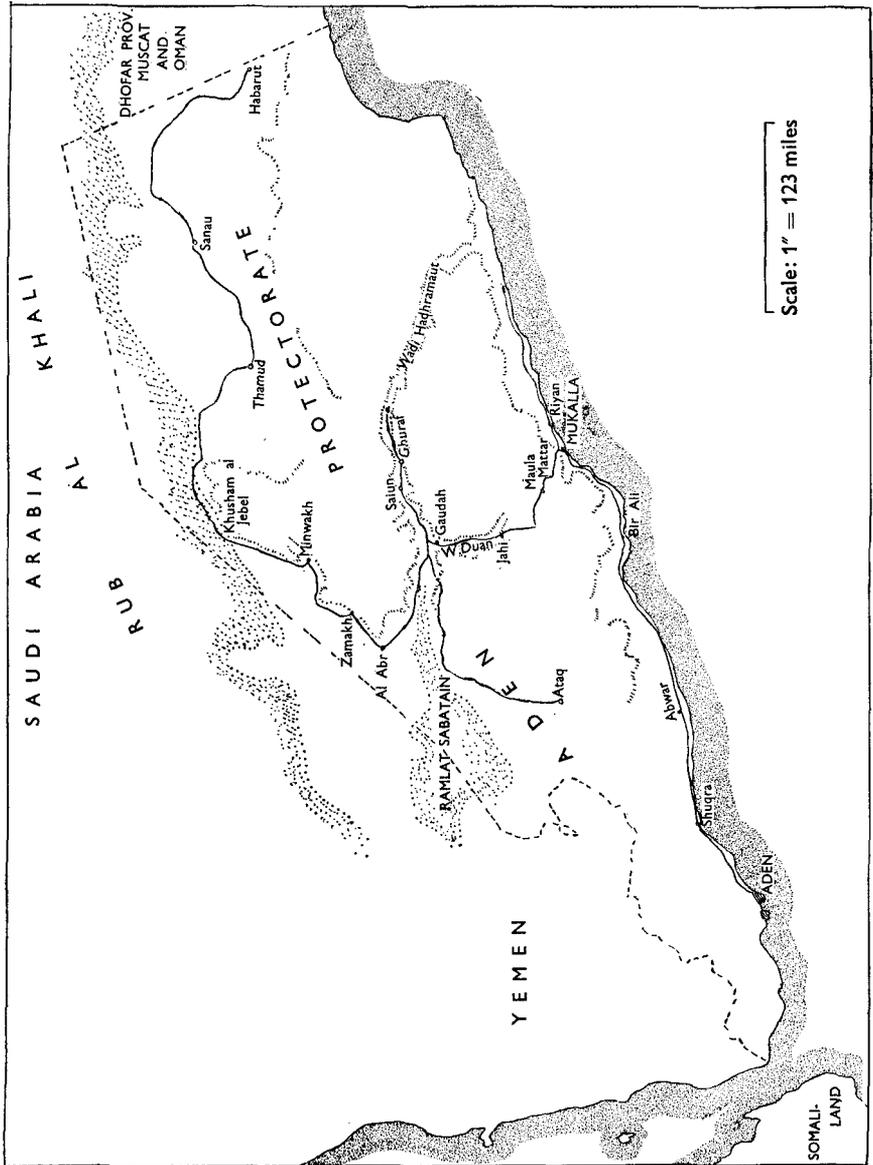
After negotiating the vertiginous drop into the wadi the convoy followed the road leading northwards along its bed towards its junction with the Wadi Hadhramaut. After 30 miles the wadi bed became noticeably drier and eventually all cultivation ceased, though the remains of ancient settlements showed that it had not always been so.

In the late afternoon the convoy approached the first sand obstacle of the journey where, just before its junction with the Wadi Hadhramaut, a few miles of small dunes block the Wadi Duan. To a four-wheel drive vehicle this stretch presents no difficulty and even the two-wheel drive 1-ton pick-ups negotiated it without real trouble. It proved too much for the catching car in its emasculated condition, however, and with a horrible screech the gearbox finally gave up the struggle. After sorrowfully pushing it into the Mukalla Regular Army fort at Gaudah the car was abandoned and the journey resumed, camp being made for the night a few miles further on.

Next morning, after negotiating a further stretch of sand dunes, a short drive of 30 miles brought the convoy to Al Abr, where it was met by Woodford, Whitehead and Stewart, who had reached there from Ghuraf late the previous evening. At noon the Cruiser arrived with Gracie and Crouch, and the whole party was together for the first time.

Al Abr is a small whitewashed fort built on a rock overlooking the well of that name, which houses a company headquarters and one platoon of the HBL. Similar forts, each with a garrison of platoon strength or less, exist at Zamakh, Minwakh, Thamud, Sanau and Habarut, with another company headquarters at Thamud: this policy of holding the only watering places enabling tribal squabbles and individual blood feuds to be kept in check.

Camp was pitched in the wadi not far from the well and the rest of the



morning spent in sorting out and repacking loads. In the afternoon everyone accompanied the Grays to see some interesting rock engravings in a nearby wadi, in which pictures of ostrich, oryx and horsemen carrying lances could clearly be made out.

From Al Abr the route runs north-east across level sandy plains for 100 miles, skirting the western edge of a rocky plateau which here runs right up to the Rub-al-Khali sand sea itself, in a point known as Khusham-al-Jebel, literally "the nose of the jebel", famous for its ibex. To circumvent this and to reach the "jol" or plains country to the east, the road then takes a 70 mile hook to the north through the sand sea.

Next day a late start was made, for the aim was only to reach Khusham-al-Jebel, so as to tackle the dunes in the cool of the following morning. At dusk the light convoy reached camp on the edge of the dunes, the Cruiser flying in under the expert guidance of Mubarak el Kaher, the doyen of the Desert Guards.

As part of the going had been soft the heavy convoy of Model R's had lain up for the heat of the day at the intervening post of Zamakh and only reached camp at 2200 hours. After a short halt to refuel vehicles and the aircraft, and to cook a meal, they were off again at midnight in order to get as far as possible through the dunes before the sun rose to warm the sand.

The light convoy set out at 0515 hours, having waited to see the Cruiser take off on its flight to Thamud.

The track plunged straight into the dunes, which here run in rough ridges from north-east to south-west with valleys of good-going in between. These valleys are blocked at intervals by dunes connecting one ridge to another, and not only had these to be negotiated but, since the general course was eastwards, a way had to be found from one valley into the next in succession.

The Kenya members of the party found the technique of dune-driving new and exhilarating, the principle being to keep high up the side of one dune until speed dropped to the danger point and then to zoom down and across the valley and rush as far as possible up the other side with the added momentum gained, and then to repeat the process. Only by thus maintaining both height and momentum was it possible to cross the intervening smaller dunes as they occurred.

The sight of the whole convoy criss-crossing and weaving, with each vehicle speeding on its own course, was impressive and good progress was made despite not infrequent bogging down of individual vehicles. After some 15 miles, however, the Model R convoy was overtaken and it was learned that one lorry had run a big end or main bearing. Such occurrences are apparently taken in their stride by the HBL because, after determining by wireless that there were no spare bearings at Thamud or Al Abr, Gray ordered the Thamud lorry out to relieve the cripple of its load and the convoy to proceed, leaving the broken down lorry to await the arrival of a bearing from Mukalla.

This situation allowed the expedition to be of help for the first time for next day the Cruiser, with Gracie, Crouch and Tomatum, flew to Riyan, picked up the necessary spares sent out from Mukalla and returned

to Al Abr for the night. On 29th it landed between the dunes beside the stranded lorry, delivered the bearings and was back at Thamud by 0830 hours. The repaired lorry also reached Thamud that night, and it appears that the HBL could teach a lesson to many a Kenya transport business.

After leaving the broken down lorry, the light convoy moved on quickly and having negotiated the last and biggest “ irk ” (dune), emerged on to the eastern jol. A halt was made for lunch in the Wadi Hazar and after that came an easy run over low hills and plain, until Thamud, 75 miles further on was reached.

All members of the party except Shepherd and Whitehead whose Landrover had broken down and who did not get into camp until after midnight, were royally entertained that night by Rais Ahmid Noor Barashid, the Company Commander responsible for the Thamud–Sanau–Habarut area, and it was comforting for those not flying to learn that the next day would be a rest day.

Thamud consists of a small platoon post built to overlook the only well in the neighbourhood. As the hot season had begun, most of the Beduin were concentrated within a radius that would allow them to water their camels once a week. Less than a dozen were in evidence, however, which gives an indication of the sparseness of the population. Vegetation of sorts was fairly plentiful in the neighbourhood and even a few bushes grew in the main wadi.

On the way in from Wadi Hazar a pair of gazelle (*G. arabica*) had been seen and the first houbara bustard, cream-coloured coursers and bifasciated larks. A pair of the latter, with their curious hoopoe-like flight, were very much in evidence round camp next day and the nest of a great grey shrike (*Lanius excubitor*) was found in a bush.

Another “ first ” was a “ dhub ” lizard—a heavy squat creature with a blunt muzzle and short crested tail. These animals, which grow to a maximum length of about 2 ft. 6 in., and weigh up to 4 or 5 lb., are a pale greyish yellow almost white, with darker heads. They are highly prized for food, and, as they can run as fast as a man, it is not always easy to intercept them before they escape into their burrows. Dhub hunting was to become one of the major sports of the expedition.

Less welcome fauna were the scorpions, with their habit of getting into bedding, and at Thamud one of the servants was stung by a green one, the only one of its kind seen.

Next morning, 29th April, the heavy convoy set off at dawn, the light convoy following later. The way led at first through low gravelly hills intersected by well vegetated wadis, where there were many of the ancient trillithons described by Thesiger. Later the country opened out into typical sandy plains, usually with a light mantle of gravel or pebbles, on which one or two gazelle, a few hares and many dhubs were seen. Shepherd opened the score for the visitors by capturing one of the last after a spirited chase.

The midday halt was held under a fine ilb tree, the first since the Wadis Duan and the first tree of any sort since Al Abr.

Shortly after leaving, the signs of recent rain which had been apparent

everywhere, ceased and it became evident that rain had not fallen further to the east where it was hoped to find oryx. What effect this would have on the hunt was difficult to say, but that it had affected the local Beduin was evident for twice they fired shots over the convoy to halt it, so as to get the latest news of rain and consequent pasture for their camel herds.

Sanau, half surrounded by low whitish hills of gypsum, was reached at 3 o'clock after an easy run of just over 100 miles and a camp site was immediately selected about 3 miles from the fort. This was near the old airstrip and after a runway had been marked out the Cruiser was signalled to fly in, and did so an hour or so later.

After seven days on the road the expedition had reached its forward base and here it was to say goodbye to the Grays, who were due to leave for Habarut next morning. No party in a strange country—though this did not apply to Crouch, of course—has ever been better befriended than were the members of the field party by the Grays, and no expedition can ever have found itself in the same position of being relieved of all administrative and transport problems, so that its members could be free to enjoy all that was to be seen. The Fauna Preservation Society, and particularly the members of its field party, owe an inexpressible debt of gratitude to Quaid Gray and the HBL.

THE HUNT

It was known that if any oryx still existed they would be found in an area stretching from 50 miles east of Sanau up to the Dhofar border. Since there was no other source of water, however, capture operations would have to be based on the well at Sanau. It had therefore been decided to build holding pens at Sanau for any animals caught and Quaid Gray had agreed to allow the large store attached to the fort to be modified for that purpose. This would be ideal, for it would provide the requisite darkened conditions. The capture party would operate as a mobile unit based on the fort, returning there to re-equip or supply itself with water and rations. Any oryx caught would also be sent back to Sanau and be held there until the operation was over. Then they would be flown back to prepared accommodation at Isiolo, in Kenya.

The capture method proposed was that which had proved successful with beisa oryx in Kenya, that is to say noosing from a moving vehicle. For this a fast cross-country vehicle with high acceleration is necessary, so that an animal can be shepherded from a distance on to the piece of ground selected and then, at the right moment, quickly closed. The car must be capable of sharp turns at high speed so as to follow any jinks the quarry may make, and, in the case of oryx, to avoid attacks during which the animal might damage itself against the car. The noose is wielded by a man who stands supported by a pulpit-like rail which is built as far forward as possible. The noose and the rope leading to it are tied by light threads, or otherwise secured to a long pole with the other end made fast to the vehicle.

At the right moment the noose is slipped over the animal's head, the pole broken away and the noose drawn tight. The animal is then secured—

not always an easy matter in the case of one as aggressive and well-armed as an oryx—blindfolded, given a tranquilizer or such other drugs as are thought necessary, put in a crate, and the blindfold removed. The crate has sliding doors at either end and is of such dimensions as to allow the animal to stand up or lie down, but not to turn round. Being dark inside it has a quietening effect and appears to give an animal a sense of protection against the noise and smell of human beings outside, since few fight or kick when once shut in and most are reluctant to leave the crate on arrival at the other end of the journey. Once crated, animals must be moved to a holding pen in the shortest possible time. The regulations applying to the capture of animals in Kenya say a journey of not more than two hours. These holding pens are usually darkened, or have high thatched walls through which the animal cannot see. Here it is kept for a period varying for each species, but usually not less than six weeks, to settle down before being moved to its final destination. During this time it is further accustomed to its travelling crate by having that built into a wall or door and by having to enter it to get its food and water.

The above description applies to the capture of animals for zoos, usually young animals ; but the oryx party would have to attempt to catch any oryx seen. It might be found a long way from ground suitable for fast driving or might possibly be encountered during the heat of the day. Either of these conditions could result in over-exhausting the animal before it was caught. This risk had now been increased by the failure of the proper catching car, since the pick-up that had been modified to take its place could not match it in acceleration and manœuverability. Besides, the catcher would have to stand as far back as the passenger’s seat with his head through the hole in the roof, so that the animal would be dangerously close to the car before it could be noosed. Other risks inherent in the plan were the long time it would take to get the oryx back from the place of capture to Sanau and the fact that they would have to be flown out from there before completing the normal period of settling down and getting accustomed to strange foods.

The field party had hoped to hear news of oryx on arrival at Sanau, but though the garrisons of both that fort and Habarut had been alerted for the last few months, no sign of these animals had been reported since the murderous raid in December. It was also learned that the party had been at work again in January, having either stayed the whole time or having returned for a second hunt.

The prospect was gloomy, but Tomatum, who had joined the expedition at Thamud in the capacity of guide and to whose personal interest and enthusiasm so much was due, was confident that if any oryx survived they could be found. He suggested a move to a certain wadi some distance to the east, which had been a favourite haunt of oryx in the past. Quaid Gray had marked out a landing strip near this wadi on his way to Habarut and signalled it to be in good order.

The next day, 30th April, was therefore spent in assembling the two heavy animal crates, in starting a mason on building walls to divide the store into three separate pens, in getting the expedition’s carpenter to modify the store doors and starting him on building light airtravel crates

out of the timber which had been brought for that purpose, in buying goats in milk in case young animals were caught, in testing the ground/air wireless link between the Cruiser and the HBL set, in filling water drums and in sorting out ten days' supplies from the rations which had been brought.

That night the vehicles were loaded with water, petrol, aero-fuel, tentage and all stores other than bedding and at dawn next day the party set off. It consisted of one Model R, one pick-up and one Landrover, in addition to the substitute catching car. This unit, to which a wireless Landrover was added on Gray's return from Habarut, together with an escort of ten men commanded by Shawish (Sgt.) Said Bobar, was to remain with the expedition for the whole hunt. It would be appropriate to record here how excellently they played their part.

One of the chief attributes of the Bedu is his cheerfulness and that was amply demonstrated by all concerned. The "jundis" (Sepoys) were as willing to turn out at 3 a.m. to load lorries, pitch tents, set out on a hunt or carry out any other duty, as during more normal working hours, and everything was done with a smile and, where possible, with a song. Shawish Hassan Salim Shumasi, more usually known as Abu Darabas, who was in charge of the transport, was a tower of strength and he and his drivers were often working half the night maintaining their vehicles, mending punctures, replacing broken springs, etc., so that everything should be ready for the usual dawn start. Alternatively they would set out immediately on returning from a two-day hunt to fetch a load of water or petrol when everybody else was resting, so that there should be no interruption to the programme. The signallers, too, maintained most efficient communications and at no time was the party not in contact with HBL headquarters at Mukalla or with local posts. Perhaps the most telling tribute is the fact that though working for an entirely strange group of people, all but two of whom could speak no Arabic, no order was ever queried and no instruction was ever thought too difficult to carry out.

To return to the hunt. The convoy reached the chosen camp site soon after noon and the aircraft flew in an hour or so later, with Tomatum to guide it to the spot. Such maps as were available being little better than sketch maps, this practice of having a passenger who knew the ground became obligatory on cross-country flights. When searching for oryx it had been hoped this would not be necessary, as the aircraft would be able to home on the portable radio beacon which had been brought from Kenya; but that very afternoon, when carrying out a practice, the power pack in the aircraft which governed both the beacon detector and the ground wireless failed. As a result the Cruiser was never again able to fly without a guide, and over the featureless country which had to be covered a guide was not always possible. The aircraft was therefore deprived of a great deal of its usefulness.

Next morning, 2nd May, the Cruiser with Gracie, Grimwood and Tomatum took off to reconnoitre the wadi in which the camp was situated northward for some 65 miles to the point where it entered the sand sea. There was no sign of oryx and no indications of recent rain which might tend to concentrate them.



Photo : G. A. Shepherd.

**THE CITY OF MUKALLA, FROM WHICH THE EXPEDITION
SET OUT.**



Photo : G. A. Shepherd.

**MODEL R BEDFORD LORRY WITH TWO ANIMAL TRAVELLING
CRATES WHICH ACCOMPANIED THE HUNTING PARTY ON ALL
OCCASIONS.**



Photo : G. A. Shepherd.

ORIGINAL KENYA BUILT CATCHING CAR.



Photo : G. A. Shepherd.

**SUBSTITUTE CATCHING CAR WITH HOLE CUT IN
CAB ROOF.**



Photo : P. W. J. Whitehead.

TOMATUM BIN HARBI.

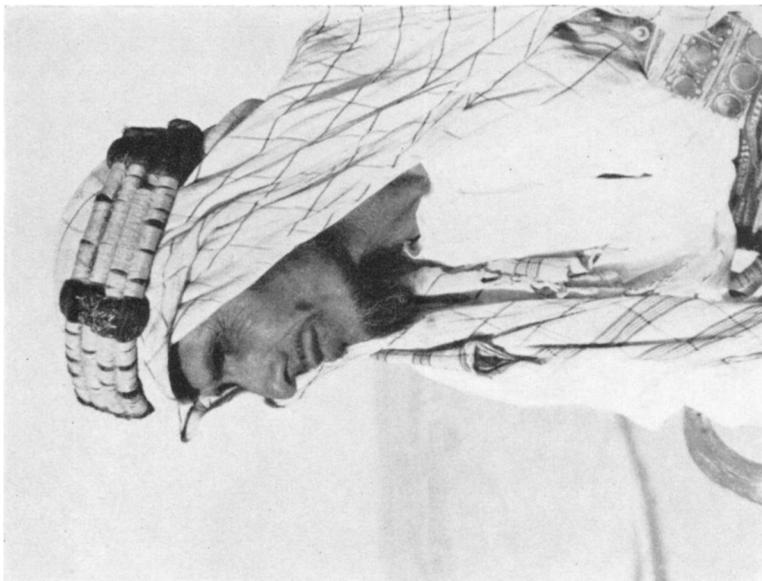


Photo : P. W. J. Whitehead.

MABKHOUT BIN HASSANAH,
Desert Guard.



Photo : P. W. J. Whitehead.

SHAWISH HASAN SALIM SHUMASI,
"ABU DARABAS".



Photo : D. E. M. Stewart.

MAIN CAMP No. 2.



Photo : G. A. Shepherd.

NIGHT BIVOUAC.



Photo : M. H. Woodford.

CAREFULLY SECURING THE FIRST ORYX.
Standing—C. K. Gracie.



Photo : G. A. Shepherd.

THE FIRST ORYX BLINDFOLDED.
Whitehead and Mabkhout holding the animal.

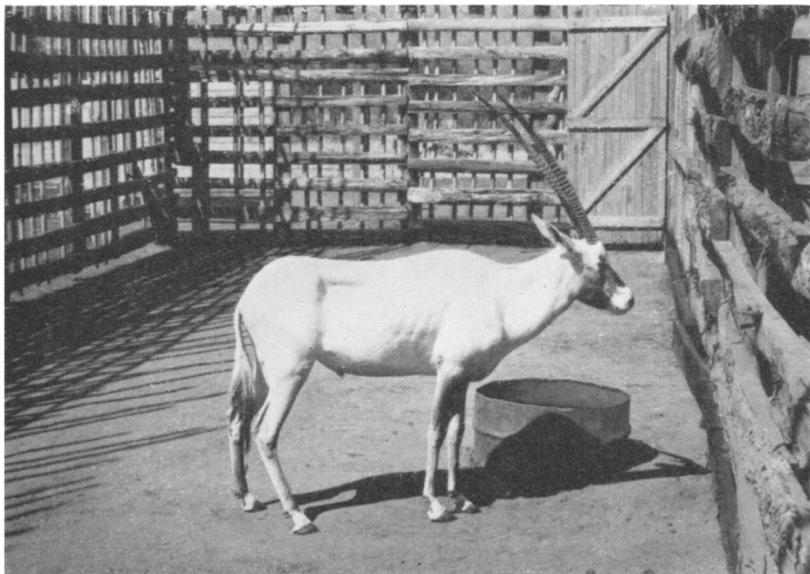


Photo : D. R. M. Stewart

THE BULL "TOMATUM" ON ARRIVAL AT ISILO.

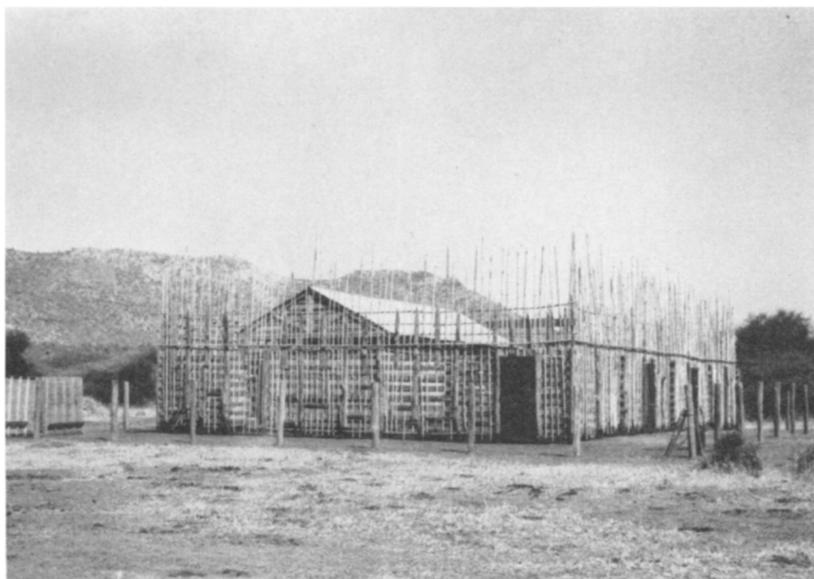


Photo : D. R. M. Stewart.

ORYX HOLDING PENS AT ISILO.

Leopards have twice, and lions once, entered the space between the outer wire fence shown and the pallisade, but on all occasions were scared away by the guard.



Photo : P. W. J. Whitehead.

THE HADHRAMI BEDUIN LEGION FORT AT SANAU.



Photo : D. R. M. Stewart.

PIPER CRUISER.

Lent by the East African Wild Life Society.



Photo : G. A. Shepherd.

THE ROAD INTO WADI DUAN.



Photo : D. R. M. Stewart.

THE BEGINNING OF THE SAND SEA.



Photo : D. R. M. Stewart.

SPOOR OF ARABIAN ORYX.

Note the rounded toes and heels touching the ground.



Photo : G. A. Shepherd.

**SHALLOW CAVE IN WHICH THE THREE ORYX
WERE RESTING.**



Photo : M. H. Woodford.

THE PARTY.

Tony Shepherd.

Peter Whitehead.

Michael Crouch.

Mick Gracie.

Donald Stewart.

Major Grimwood is invisible behind Capt. Shepherd !

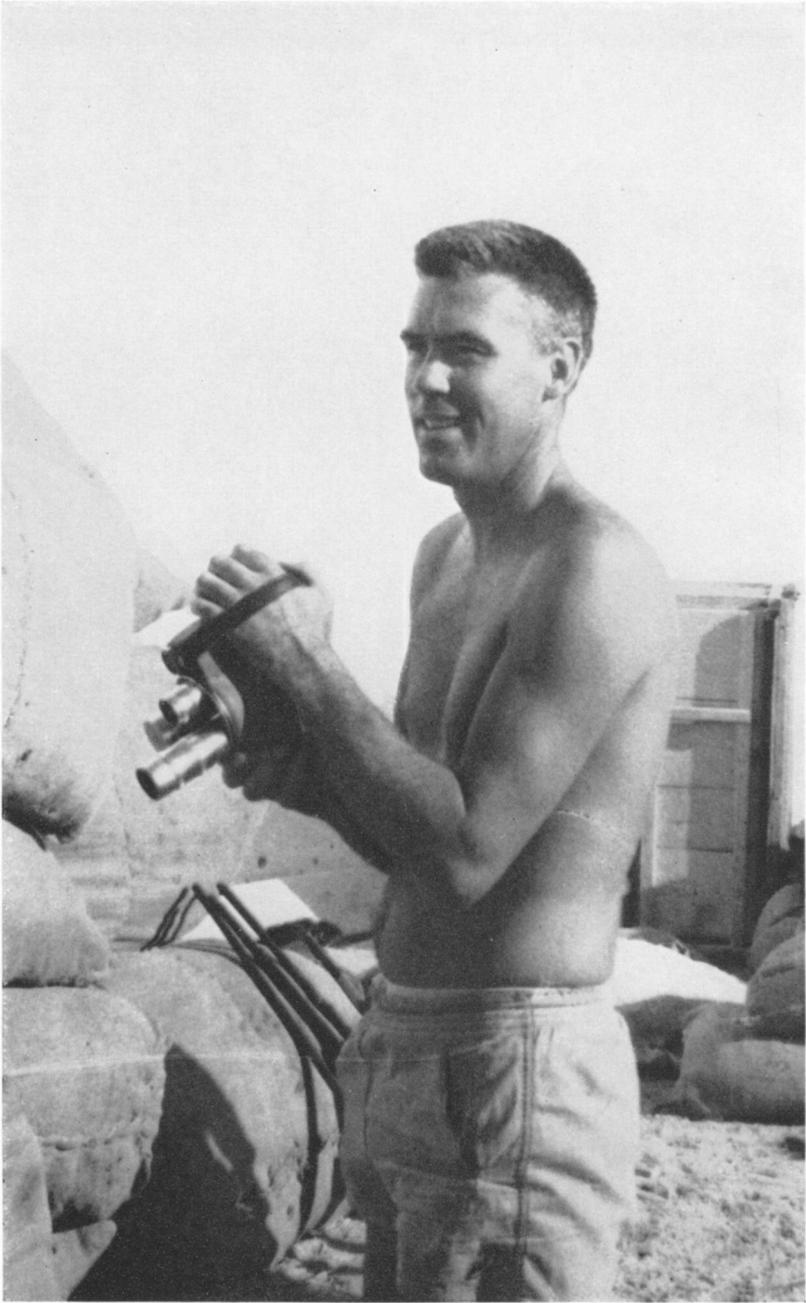


Photo : G. A. Shepherd.

MIKE WOODFORD AT SANAU.

Rim gazelle (*G. marica*) were, however, seen on seven occasions in parties of from three to five, their white bodies showing up clearly from the air against any background, but particularly against the red sands of which the dunes in those parts are composed. Subsequent observations showed that the range of this species does not extend far from the sands, its place being taken by *G. arabica* on the jol proper.

On return to camp a council of war was held and it was decided that after the Grays had passed through that afternoon on their way back from Habarut, Whitehead and Stewart should set off on a two-day ground reconnaissance of the area to the east of the wadi, northwards as far as the sands, taking the Landrover and pick-up. Tomatum and Said bin Miriam, a Kathiri Desert Guard, would accompany them as guides. Meanwhile the Model R would be used to bring in further supplies of water and fuel from Sanau.

When the Grays arrived, however, they brought news that Mabkhout bin Hassanah, a Desert Guard, would be arriving on a lorry later that day bringing water from Habarut. After all too short a halt the Grays pushed on for Sanau and it was decided to wait and see what news Mabkhout had before making any further move. Mabkhout is a Kathiri who had acted as Thesiger's guide on three of his journeys, including the one through Mahra country. He is regarded as a local expert on oryx.

At 8 o'clock Mabkhout arrived and was immediately drawn into consultation with Tomatum. To everybody's delight he was able to produce evidence that some oryx at least had survived the winter raid, since, early in February, a Bedu had seen three at a point some 40 miles north-east of the camp and believed that there had been a fourth in the area. Furthermore, only eighteen days previously his son had seen the tracks of two animals 50 miles south-west of camp.

The search party left at 0430 hours on 3rd May for the former area and were back again by 1430 hours with the exciting news that they had seen week-old tracks of one oryx accompanied by a calf and fresher tracks of another. They had not explored further for fear of disturbing the animals. On their way back they had chosen a camp site and marked out an airstrip 27 miles further north, which they considered would be the nearest place from which it would be safe to operate, without fear of scaring the oryx.

Camp was moved to the new site that evening and lights and noise kept to a minimum.

Orders for the morrow were that the hunting team should leave at 0430 hours and drive straight to the spot where the oryx tracks had been seen. It consisted of the Landrover, carrying trackers, guides and an Arabic-speaking member of the expedition, the modified pick-up catching car with the Kenya-trained crew, and the Model R carrying the two animal crates. The Cruiser, with Tomatum as guide, would take off later and follow up the hunting team's wheel tracks, meeting the vehicles, which would halt on reaching the oryx spoor. From that spot the Cruiser would fly a box search by compass, drop news to the ground party of anything seen and then return to camp.

In the morning, however, wiser counsel prevailed or, to put it another way, the leader, but not the pilot, got cold feet at the risks involved,

in view of Tomatum's uncertainty as to whether he could find camp again from the air, and it was decided to concentrate on the ground search only.

The hunting team set off at 0430 hours and drove due east for approximately 17 miles until they reached the spot where the spoor had been seen.

The countryside here consisted of rolling sand and gravel plains interspersed with a few low hills and rocky outcrops; through it ran a pattern of shallow depressions and drainage lines. In these depressions a surprising amount of clump grass grew and though it was mostly sere and brown it was noticeably greener in certain areas, where rain had fallen perhaps one or two years previously. As subsequent experience showed, this grass provides the oryx with its principle diet at that season of the year, so by searching the greener areas it is possible to determine whether there are any oryx in the locality, for they are drawn to them from distances of up to 100 miles.

The place where spoor had been found was one such spot and after casting around over an area of some 20 square miles it became clear that it had harboured several oryx during the previous few weeks. The spoor of at least four was identified, of which two were immature, and there had possibly been a fifth. But only one track was less than seven to ten days old, and this it was decided to follow up.

In the writer's opinion far more can be learned of the habits of an animal by following its tracks over a period than by direct observation of it at rest or feeding, and that certainly held for this oryx. Though apparently in no way alarmed it kept steadily on the move, following a fringe of grass along a drainage line, taking a mouthful here and there, and then crossing in a direct line to the next grassy patch, which might be a mile or more away. Having worked its way up that one it would cross to the next, and so on, progressing steadily eastwards the whole time.

In these circumstances spooring was relatively simple as it was only necessary to cut a drainage line once to know if the oryx had visited it or not, since it invariably travelled the whole length of the vegetation in each hollow. Having found where the oryx left the patch and the direction in which it was heading, it was then possible to drive to the next patch and so on. Nevertheless Tomatum and Mabkhout gave a foretaste of the uncanny skill in tracking they were afterwards to display on many occasions. In the Landrover moving at 20 miles an hour they could follow a spoor which was so lightly imprinted, or so far to flank, as to be quite invisible to the Europeans. Such a demonstration also served to show how helpless the Arabian oryx is against motorized hunters.

By noon, when the trail had reached a point some 20 miles to the east, the height of the sun made further tracking difficult. An awning was spread between two vehicles and the whole party rested in its shade until 1330 hours—it was too hot to sleep—when a fresh start was made. At the end of two more hours the hunt had progressed another 15 miles. The quarry had now left the area of grass and was heading purposefully for some other region. Excitement was rising for the trackers estimated the spoor to be little more than twelve hours old. But at this point the next major wadi was reached, running northwards into the sands. The

tracks disappeared straight into the mile-wide sandy bed and as ill luck would have it, were totally obliterated by wind-blown sand. A series of wide casts failed and it was obvious that even if the spoor could be found again, it would be impossible to come up with the oryx before dark. The hunting party therefore set out for home.

Very little wild life had been seen during the day. There were six rim gazelles, four hares and a fox but in several areas well defined game trails were seen, much narrower and quite different from camel trails. Whether these were indications of a greater overall game population in former times, or resulted from seasonal concentrations at some other period of the year it is difficult to say.

Next day, Saturday, 5th May, the hunting party set out to investigate an area some 30 miles to the west of camp, where a small shower of rain was reported to have fallen a week previously. This time the party was prepared to camp out on the spoor of any oryx.

Leaving camp at 0430 hours and heading north-west, the party soon came in sight of the dunes of the Rub-al-Khali. Here a turn to the west carried the search parallel to the edge of the dunes until it reached the next major wadi, some 40 miles further on. Every possible patch of grazing was investigated *en route*. No fresh spoor was found.

After thoroughly exploring the “ramlat” where the western wadi discharged into the sand sea, which had been a favourite haunt of oryx in the past, the party turned south and followed up the wadi as far as the Sanau/Habarut track, before circling to the east and north in the direction of the area where rain had been reported. Here there were several tracks but all old and it was difficult to say whether they had been made before or after the raid. After covering a distance of 125 miles a halt was made for the night.

Large numbers of rim gazelle had been seen near the sands and the crew of the catching car had had a very close view of a fennec.

Next morning the hunting party was under way by 0420 hours, working through an area where grass was more plentiful and fresher. At 5 o'clock fresh tracks of a single oryx, made during the night, were encountered and were shortly joined by those of another animal. The hunt followed the same pattern as before with Mabkhout and Tomatum following up the spoor, sometimes on foot and sometimes in the Landrover, while the catching car cast ahead in the hope of getting a view—the lorry with the crates following some distance behind. As in the previous hunt the oryx had kept steadily on the move, making their way from one grass-lined depression to another, this time heading north.

At 8 o'clock Stewart and Grimwood in the catching car saw a single oryx through their binoculars, galloping up the slope of a low hill to the left, over which it disappeared. The car immediately gave chase but when the other side of the hill was reached the ground was found to consist of a series of re-entrants and valleys amongst which no sign of the oryx, or even its spoor, could be found. The trackers were getting impatient. They had been following up the other animal and had just found fresh droppings, so search for the first oryx was abandoned and the hunt continued on the tracks of the second. It headed north-east,

sometimes running and sometimes walking, which suggested that it was uneasy, but did not yet realize that it was being hunted. After a while the oryx slowed to a steady walk and, as the going was across a soft sandy plain, the trackers were able to follow in the Landrover at a steady 15 m.p.h. The catching car lay well forward and to the left, to intercept a probable line of flight to the dunes, now once more in sight.

At 0950 hours a small wadi was reached in which grew a few scrubby bushes. As the catching car entered it an oryx rose from under a bush 200 to 300 yards away and stood for a minute looking dazzling white in the sun. Then luckily it left what, had it known, would have been the relative safety of the sandy bed of the wadi and set off across the plain with the catching car in pursuit. It displayed none of the wiles of the beisa oryx, running straight and rather slowly and showing no inclination to stand and fight.

As the car closed with it the oryx made one rather half-hearted attempt to attack, crossing the car's bows as it did so and, because the pick-up was too clumsy to manoeuvre, receiving a bump which rolled it over. It was on its feet at once, however, apparently unhurt. A few hundred yards more and the first attempt to noose was made, but the noose, though it went over the horns of the oryx, missed its muzzle and was thrown off. The second attempt was successful, catching both its head and one foreleg. Once noosed the animal was quickly secured. It showed no fight, as was expected, and was in any case less than half the weight and size of the 400 lb. beisa oryx on which the team had practised. After being blindfolded and having its legs tied with soft bindings, the oryx was given an anti-shock injection and allowed plenty of time to recover its wind before being lifted into the crate. Then its legs were untied and the blindfold removed.

This first hunt had gone according to plan, only eight minutes having elapsed between the animal being sighted and its capture, which meant that it could have suffered no damage from exhaustion. The hunters were inclined to be pleased with themselves.

With the crate once more on the lorry an hour's drive brought the party back to camp, where an awning was rigged over the crate and the oryx given a rest before beginning its long journey to Sanau.

The animal, which was a mature bull, showed a behaviour pattern, repeated in the other animals caught, quite unlike that of any other wild animal, in the experience of any member of the field party. From the moment of capture it displayed complete resignation to its fate, showing no sign of alarm and only occasionally uttering the characteristic oryx warning snort of anger, even when the inspection trap of its crate was opened and it saw a human face to face, at a range of a few feet. It made no attempt to attack and even permitted without protest mild handling in its crate and the removal of ticks, with which it was heavily infested, particularly on the withers and between the hind legs.

At 1400 hours Woodford, Stewart and Crouch set off with the oryx for Sanau where they arrived just before midnight, having taken the normal precaution of halting for ten minutes in every hour and for one hour after every three.

The oryx, later named “ Pat ”, after Quaid Gray, travelled the whole way on its feet and arrived in good condition. Next morning it was released into one of the pens into which the store had been divided and the air crate in which it was to travel to Kenya was built into the doorway as a “ dining room annexe ” to which it could become accustomed. Woodford and Stewart remained at Sanau to look after the oryx while Crouch returned with the lorry, bringing another week’s supplies.

While waiting for the return of the lorry and working crate, the Cruiser (Gracie, Shepherd and Tomatum) flew a reconnaissance of the area to the east of camp up to the edge of the sands, but saw no signs of oryx. A foraging party was sent to Mabkhout’s people some 40 miles to the south to buy goats for the Id celebration—due to start in a few days’ time. For the rest of the expedition the day was a holiday.

At dawn the following day, Tuesday, 8th May, the usual hunting party set out eastwards to search the area to the south of the place where tracks had been seen four days before. By 10 o’clock a tributary of the big eastern wadi had been reached and here the crew of the catching car disgraced themselves by setting off in pursuit of three rim gazelles, which mirage and distance had made appear big enough to be oryx. The false alarm over, the hours until 2 o’clock were spent lying up under an awning, the search then being continued down the tributary, across the main wadi and along its eastern bank.

Very little vegetation was to be found in this area and a halt was called to consider what should be done next. Suddenly three oryx, one big, two smaller, jumped up from the shade of a knoll some three-quarters of a mile away and galloped off westwards across the wadi. The catching car set off in pursuit, making heavy going of the alternate channels of soft sand and high gravel bars overgrown with shrubby weeds.

The oryx reached the far side of the wadi well ahead of the car and set off across half a mile of sandy plain towards a low broken escarpment which gave way to the jol beyond. They were nearly headed before reaching this escarpment, but the going was soft and they just reached it, disappearing over the top in a compact bunch. When the catching car reached the top they were still in sight but instead of the expected plateau the country turned out to be a formless pattern of ridges and gullies where capture was quite impracticable. Though unable to close up on the oryx over such ghastly country, the catching car remained in pursuit and first the large oryx and then one of the smaller ones were separated off and allowed to escape.

The remaining oryx, on which attention was concentrated, kept disappearing from sight in gullies into which it was impossible to follow. Once it was seen to be lying down in such a place. But after a while it was manœuvred on to a small plain, the catching car closed in and the oryx was noosed.

The chase, which must have lasted nearly twenty minutes and covered several miles, would in normal circumstances have been abandoned almost before it started, since the day was still hot and there was the danger of exhausting the animal if it could not be caught in one short dash. Under the peculiar circumstances, however, when the species

appeared doomed and the individual almost certain to fall victim to the raiders on their next visit, it seemed justifiable to continue while there was any hope of catching the oryx alive, and the writer takes full responsibility for what happened afterwards.

The lorry arrived with the crates. After the oryx, which turned out to be another bull, had recovered its wind, it had its mouth washed out with water and was given an anti-shock injection. Then it was crated and left with the lorry crew who had orders to load it into the lorry and follow on slowly while the catching and tracking cars set out to look for the other two oryx.

After following their spoor for no more than a couple of miles, both animals were seen far ahead; or more correctly the puffs of dust made by their hooves were seen, for their bodies were quite invisible with the low light coming from behind them. The two oryx, which had presumably been resting, made off across an area of sharp lava flows intersected by impassable gullies and soon left the hunting cars out of sight. By casting ahead, however, the spot was found where one of them had emerged on to better going and a few minutes later the smaller one was seen galloping across the plain ahead making for the hills. A short dash and it was noosed, caught, blindfolded and bound, having put up no more of a struggle than its predecessors.

This one turned out to be a young female, estimated to be in her second year, and to everyone's relief she did not appear to be greatly distressed by her long run.

The lorry came up within an hour and the second crate was taken down in which to load the female. It was then discovered that the male, which had last been seen standing firmly on its feet, was dead. Remorse caused by this discovery tempered the satisfaction of having at last caught a female, but as has been previously stated the peculiar circumstances surrounding the expedition justified, in the writer's mind, the taking of risks and that that was so is borne out by the fact that the female survived, despite having been involved in the greater part of the chase of the male as well as her own capture.

A post-mortem on the spot showed the immediate cause of death to be a hæmorrhage in the region of the liver, but later, when the specimen was being prepared for museum purposes, a recently fired .303 bullet was found embedded in one haunch. So it seems probable that having only just recovered from the effects of that wound the animal was in too weak a state to withstand further strain. The bullet may have been fired by one of the raiders, but it seems more probable that it was by a Mahra who, it was later learned, came across four oryx on the fringe of the sand some 70 miles further west after the raiders had left. Of these he killed one and wounded one. This was the only recent killing of oryx by local Beduin of which the expedition learned.

After a slow journey, so as to spare the female oryx as much as possible, camp was reached at 2100 hours. It was decided to give her a further rest before subjecting her to the strain of the long journey to Sanau and plans were made for the morrow.

When the oryx had first leapt into view, a small white animal had been

seen to dart away, which some thought to be a rim gazelle but others thought might have been a baby oryx. Whitehead and Shepherd, with Mabkhout as guide and tracker, were therefore to return to the spot to find out the answer and to capture the baby, if baby it had been. Gracie and Crouch, with Tomatum as guide, were to fly to Thamud, or if necessary Mukalla, to obtain a new half shaft for the catching car, which had damaged one during the chase. Grimwood was to take the oryx to Sanau.

The lorry left at 0100 hours on the 9th and, observing the usual halts, arrived at the fort at 1000 hours with the female (later named “ Edith ”, after Mrs. Gray) still in an alert condition after travelling the whole way lying down. She was released into a separate pen in the store, where she appeared to settle down well. “ Pat ” had by this time started to nibble at fresh-cut local grasses, but he would not look at the lucerne hay which had been specially brought up from Wadi Hadhramaut. He was also drinking regularly.

The Cruiser arrived at Sanau in the evening of 9th May on its way back from Thamud with the half-shaft for the catching car, but almost as it landed came a signal to say that spare parts were required for the Landrover, which had broken a shacklepin while looking for the baby oryx. Crouch, Gracie and Tomatum therefore flew back to Thamud next morning and from there direct to camp.

Stewart and Grimwood also returned to camp with the Model R, leaving Woodford alone to look after the oryx. Whitehead and Shepherd’s trip had disproved the baby oryx theory. They found the spot where the oryx had been lying up in shallow caves scooped out of the side of a gypsum knoll, with an excellent all-round view, but though it appeared that this site had been used for several days there was no spoor except that of the three adult oryx.

The situation now was that roughly all oryx country had been reconnoitred. In recent years oryx had been known to come out of the sand sea only on the 100-mile front between the wadi lying 60 miles to the east of camp and the wadi 40 miles west of camp and they had not been seen more than 70 to 80 miles south of the sands. The camp wadi could be regarded as dividing this 8,000 square mile rectangle into two blocks. In both of them the oryx area was limited by the presence of grass, which in 1962 seemed to be confined to a belt lying between 15 and 40 miles from the sands. Two oryx had been found in the western block and three in the eastern. In addition it was known that four, perhaps five, others had been in the eastern block shortly before the hunt began. The oryx which had been seen but not caught in the western block and the survivor of the three in the eastern block had been thoroughly scared and had probably headed back into the sands. It was decided therefore to concentrate on the five which had not yet been disturbed.

The next morning, 11th May, the usual hunting party left camp at 0430 hours and headed for the eastern wadi, taking a more southerly route and searching the few suitable grassy areas as it went. On reaching the wadi it went a further 10 miles east before turning north and running up to within sight of the dunes. All this country was very arid and held little to attract oryx. No tracks of any sort were seen. Finally the party

turned west and drove parallel to the dunes and some 8 to 10 miles south of them, back to the camp wadi. This last line was across flat sandy plains on which, judging from the state of the grass, no rain could have fallen for many years. There were no fresh signs of oryx.

One more mammal was added to the list when early in the day two hedgehogs were found making their way across an open plain. One of these, a male, was amazingly tame, refusing to curl up for more than a few seconds at a time, even when handled. He was taken back to camp where he soon became the expedition's mascot, being brought offerings of juicy dung beetles by all and sundry, which he crunched up with every sign of delight. He was catholic in his tastes and equally happy to dine off camel spiders or raw meat. One day he nearly died of heat stroke, lying limp and uncurled in the hand, but a drink of water soon revived him and from then on he had his daily ration of water. Plans were afoot to take him to a new home in Kenya or England but everybody was secretly relieved when H.H. escaped from his box and presumably returned to the company of his own kind.

Saturday, the 12th, was spent as a holiday and in carrying out maintenance on the Cruiser, one of whose brakes had become unserviceable. The next day was the first day of the five-day Id celebrations, but all ranks agreed that the mystery of what had become of the five missing oryx must be solved. They were not in the central grassy area of the eastern block where their tracks had first been seen and they had not left the block to the east or north. No sign of them had been seen in the western block. The remaining possibility was the south.

The hunting team accordingly set out at the usual time on the 13th, heading south-east towards some low hills. A thorough search was carried out from there to the eastern wadi, covering all likely areas of the southern half of the block. Vehicle tracks were found in plenty but only a single month-old spoor of one oryx.

That was the last deliberate attempt made to find this group, though the hope of coming across them accidentally always remained. It seems probable that they in fact moved out eastwards, their tracks being missed on some rocky piece of ground, because later Tomatum was told by a Bedu at Sanau that a similar party of oryx had recently been seen in the neighbourhood of Mugshin, across the border in Dhofar.

Now it seemed best to concentrate on the animals known to be in the area, alarmed though they might be, so the 14th saw the hunting party setting off at dawn to patrol the northern boundary of the western block along the edge of the sands. Both Tomatum and Mabkhout thought that the first oryx seen on the 6th would have made its way straight to the safety of the sands, but that the absence of shade amongst the dunes would force it out again within a few days. The object of the hunt was therefore to try to cut its tracks as it made its way back on to the jol.

The route lay down the camp wadi to the dunes, on reaching which it was proposed to turn west and follow their edge as far as the western wadi. At 0600 hours, however, while still some 5 miles short of the dunes, the 24 to 48 hours-old spoor of a single oryx was encountered. This spoor led off westwards into some low hills, in the higher valleys of which

patches of fresh green grass were abundant, and amongst which the oryx had wandered and fed for some time. The spoor was followed until 1100 hours when the usual midday halt was called, by which time Mabkhout and Tomatum were convinced that it was the same oryx as seen on the 6th, and a female. On resuming the hunt the trail left the hills and headed northwards, eventually entering the sands, into which it was followed with some difficulty for several miles. As catching would be impossible in such country, and the oryx was now thought to be at least 36 hours ahead, it was decided to break off the direct hunt, to return to the edge of the dunes and to follow this southern limit westward, to see if and where she had left them again.

This part of the Rub al Khali is of extraordinary beauty, the 300 feet high dunes being composed of red sand, wind sculptured into curves and ridges which reproduce every form known in snow except the corniche itself. The intervening areas of gravel held patches of brilliant emerald vegetation, the result of a spate in the camp wadi spilling out into the sand sea some two years before, and there was generally far more life than was to be found on the jol to the south. Rim gazelle were very plentiful, their white coats showing up against the red background as they made off at speed. Their tracks were interlaced with those of hares and hedgehogs, and with what was taken to be the spoor of foxes and fennec.

Brown-necked ravens were also seen, in addition to bifasciated and desert larks. A few European swallows and spotted flycatchers, left behind in the northern migration, took advantage of the shade of the vehicles at every halt.

While making off south-westwards to get out of the sands, the spoor of a new oryx was encountered, which proved that the western block had held three, not two. This animal, believed to be a male, had come out as far as the edge of the dunes some time about a week previously but had then turned north and gone back. Unfortunately its spoor was never seen again.

Camp that night was made in idyllic surroundings on the edge of the dunes at a point some 15 miles west of the camp wadi and the hunt continued at dawn. After following the line of the dunes westwards for another 10 miles the party headed off slightly southwards, making for the green area where the spoor of the pair had been picked up on the 6th. Before arriving there, however, the five to six day-old spoor of a single animal was seen and this was followed eastward for four hours before it was realized that it was the earlier track of the animal which had been followed all the previous day. It appeared, therefore, that if the female of the pair seen on the 6th (the male of which had been captured) had fled to the sand, she had later re-emerged, wandered around for a day or two and then re-entered of her own volition. A rumour of rain having fallen recently a few miles within the dunes might, if true, account for such behaviour and would also explain the action of the third animal whose spoor had been seen for the first time the previous day.

Whether the move had been due to rain or not it was obvious that the whole hunting area had by now been thoroughly disturbed. The two animals of the western block, and almost certainly the sole survivor of the

three in the eastern block, were now back within the safety of the sands, and none of them was likely to forsake that shelter as long as it could withstand the lack of shade. Further capture would be impossible till the oryx came out and the longer the area could be rested the greater was the chance of that happening. Though there was enough water in camp to last until the 23rd, petrol was getting short and would only suffice for another four days' hunting.

As the whole hunting area had by now been thoroughly disturbed, it was decided to suspend all hunting till the 19th, when a last two-day hunt would be held in each of the blocks. The final move to Sanau would be made on the 23rd, but meanwhile Shepherd would go to Aden to make arrangements for the evacuation of the oryx already caught.

Accordingly during the afternoon of 16th May Gracie, Shepherd and Crouch flew to Ghuraf, where Shepherd was to catch the next day's Aden Airways flight to Aden. Then Stewart and Grimwood filled in three rather uncomfortable days of high winds and blowing sand, with a little bird and botanical collecting and in discussing depressing reports of the female oryx being off her feed and showing signs of weakness.

On 19th May the hunting party set off for the last hunt in the eastern block, heading north-east so as to cut the line of the dunes three-quarters of the way to the eastern wadi. A dawn flight had shown a few green patches to exist along the foot of the southernmost dunes from near the mouth of the camp wadi to this point and it was thought that any oryx emerging from the sands was most likely to do so in this area.

The dunes were reached shortly after 7 o'clock and a swing made to the west, so as to follow their southern edge in the direction of the camp wadi. Nothing had been seen when the time came for the usual midday halt, but shortly after starting off again the track of a single oryx was noticed where it had left the sands and entered one of the patches of grass. The spoor, which was some 24 to 36 hours old, was difficult to follow at first, for the animal had wandered about grazing, crossing and recrossing its previous trail; but at last Tomatum found where it had left the grassy hollow and, to everyone's delight, it had headed south into some dune-banked hills, instead of north back into the sand sea.

From the hills the oryx had still headed south, snatching a little food from the very sparse vegetation between successive ridges of subsidiary dunes and low rocky hills, but all the time the country became easier and easier and the vegetation better, as it approached the main "green belt" of the block; so by evening everybody's hopes were high.

The night was spent in a little hollow, with conversation held in whispers, as the wind was unfortunately from the north. The hunt continued at dawn next day and after following for some 2 miles the spot was found where the oryx had suddenly broken into a gallop and headed south for 4 miles before once more slowing to a walk. At first it was thought that the hunting party must have been almost up to the oryx the night before and that the northerly wind had carried a warning, but a more probable explanation was that the oryx had been frightened the previous morning by the sound of the Cruiser flying along the edge of the dunes.

The oryx was by now on the edge of the “ green belt ” and after going a couple of miles and lying up for the heat of the day in a small cave, where it had twice urinated, it once more turned south and started to feed along the various drainage lines.

With the easier going, Tomatum and Mabkhout who up to now had been working on foot, running on the spoor, casting ahead and supporting one another like a couple of good hounds, were able to show what they could do in the way of high-speed tracking. The oryx, though feeding, had not been wasting time and had made its way steadily southwards across a series of open plains. The Landrover, carrying both trackers, kept up an average of a good 15 m.p.h., and sometimes reached the amazing speed of 25 m.p.h. without their losing the trail. The oryx was being rapidly overhauled.

Soon the best of the grass country was left behind but the oryx still kept purposefully on making its way across an area of stony jol. It was now past 9.30 in the morning and it was clear that the oryx was looking for a place in which to lie up for the heat of the day. At one point it had tried a small bush, but had moved on dissatisfied, to explore along the foot of a sharp little cliff which left the driver of the catching car—who was following the usual practice of moving from vantage point to vantage point in hope of a view—in a quandary as to whether to keep along the top or the bottom. At last it entered a narrow valley with a sharp ridge of low cliffs on the left and a few bushes growing in the wadi bed in the centre. It seemed certain that it would be couched either under one of the bushes or in a cave in the cliffs, but there was no way of telling which, so the catching car steered a middle course.

The Landrover, following the spoor, veered left and began to make its way up the lower slopes of the ridge, when suddenly the oryx leapt to its feet some 20 yards ahead and with a series of rather clumsy bounds reached the sky-line. There it stood poised for a second or two before disappearing down the other side of the ridge. The catching car swung in a half-circle and charged the ridge, luckily finding a practicable route to the top. The other side was steep but not impossible and on reaching the bottom the oryx was seen loping away across a level plain, no more than 600 yards ahead. Before it had gone another 600 yards the catching car was alongside and, since the oryx neither attempted to attack or turn away, it was noosed at the first attempt.

This animal, which to everyone’s disappointment turned out to be another bull, was almost certainly the third animal of the trio seen on the 8th, being recognizable both from the shape of its horns and from its spoor. In following up its wanderings over the last 24 hours the cars had done 58 miles and the animal probably several miles more, giving an indication of the distances which Arabian oryx can travel. Also, in remaining couched until the car was almost on top of it, the oryx had repeated the action of the first bull caught, suggesting that the species does not always resort to flight, but regards hiding as an alternative means of escape.

The oryx was crated, loaded on the lorry, and the convoy returned to camp, which turned out to be little more than 3 miles distant to the

north-west. In the evening the oryx was sent on to Sanau on a second lorry and arrived there in good condition early next morning. Though caught after a less distressing run than either of the other two, and though subjected to a far shorter journey back to camp, this oryx would need all these advantages because it would have to be flown out without any time to acclimatize itself to captivity.

Next day, 21st May, a party set out for a last hunt in the western block. The route followed was very much the same as that taken on the 14th and 15th, but no more recent spoor was seen. A final search was made where the wadi discharged into the sand sea and then, after a cast to the east to complete the traverse of the dune line, the party returned home and the hunt was over.

THE RETURN TO KENYA

On arrival in Aden on 17th May, Shepherd had found the prospect for the air evacuation of the oryx far more favourable than he had dared to hope. The R.A.F. was carrying out one of its periodic air deliveries to the Thamud company of the HBL and by making that coincide with the end of the oryx operations, the captured animals could be flown out to Aden. The operation was timed for 26th and 27th May. A Beverley from Aden would fly rations from Riyan to Thamud and Sanau on the 26th and after spending the night at Sanau would take off at dawn for Aden. There the animals would be transferred to a fast Britannia, due to arrive in Nairobi in the early afternoon. The whole journey from Sanau to Kenya would be accomplished in less than twelve hours.

Camp was moved back to Sanau on 22nd May and the business of packing up stores began. The Cruiser was to fly Grimwood and Crouch to Riyan on the 23rd, Grimwood to say goodbye to the Resident and the Grays, and Crouch to return to his station at Meifaah. Gracie would fly the Cruiser on to Aden and arrange for its wings to be taken off in readiness for its onward flight to Nairobi in the hold of a Beverley. Grimwood would return to Sanau with the ration flight on the 26th and accompany the oryx and the rest of the party to Aden and, if arrangements for the dispatch of the Cruiser had been made in time, to Nairobi. After the departure of the Beverley the ground convoy would leave Sanau for Mukalla under the command of Abu Darabas.

The flight to Riyan went off according to plan where Crouch, Grimwood and Gracie sat down to their first civilized meal, a sumptuous breakfast provided by the Grays, with only slightly guilty feelings at having stolen a march on their companions and with visions of more such meals to come. At midday, however, a signal arrived to say that the ration flight had been put forward to the 24th, leaving only a minimum of time for the jobs which had to be done and none for the other hospitality which had been offered. The next morning, when the Beverley arrived, the first person to get out was Shepherd, looking much sleeker than when last seen and loaded with parcels of fresh fruit and two large bottles of champagne.

Sanau was reached at 1300 hours. Stewart, Whitehead and Woodford had not been idle and all the stores destined for Kenya or England had

already been packed and dumped at the landing ground, leaving only the crating of the oryx to be done. Despite considerable forebodings, this turned out to be relatively simple, thanks to an ingenious system of chutes which Whitehead had worked out, so by dark the crated oryx were loaded on the Beverley, ready for the dawn take-off.

The five European members of the expedition returned to the fort for a last meal of goat and baked beans, washed down with Messrs. Ind Coope's excellent beer and Shepherd's champagne, before saying good-bye to the HBL members of the team and the expedition's servants and returning to camp at the air strip. Abu Darabas, his men and the servants alike had worked tirelessly for the expedition and it was a sad parting.

The morning of 25th May started with the unique experience of being called by a uniformed officer of the R.A.F. bearing cups of hot coffee—could it have been the champagne which made all five members of the expedition oversleep?—but by 0515 hours the Beverley was airborne and heading for Aden.

At Aden the oryx were transferred to the waiting *Britannia* and after a word of thanks to Wilson, who had come to the airport to see the oryx, the expedition was on its way again. Nairobi was reached by 1530 hours and an hour later the oryx were at Whitehead's house, where they were to be rested before continuing to Isiolo the next day.

That the oryx arrived practically unaffected by their journey of over 2,000 miles can be attributed in part to the extraordinary equanimity of the species, which has been remarked upon before. Above all, however, it was due to the way in which the R.A.F. addressed itself to the task of moving the animals with the least possible delay and with the minimum disturbance. Without this and without the assiduous attention given to details of their comfort by everyone concerned in their flight, the end of the move of such newly-caught animals might have been very different.

The next day produced the only setback in the transfer of the animals, when it was learned that a serious outbreak of foot-and-mouth disease had occurred at Isiolo and that infected cattle had been in close proximity to the holding pens prepared for the oryx. The choice then lay between moving the three oryx to Isiolo, where the climate approximated to that of the Arabian desert, and exposing them to an infection to which they had no natural resistance, or keeping them in Nairobi and risking the cold and damp which prevails at that season of the year. After some hesitation the latter course was chosen and Mr. John Seago stepped into the breach by offering to look after the animals at his trapping station just outside the town. Despite all that could be done in the way of providing warmly thatched enclosures, the oryx were undoubtedly cold and miserable for the first night. Next day, however, small huts were built on to each pen, in which the animals could be shut whenever it was cold, and these, with the assistance of the East African Power and Lighting Co., were fitted out with electric ovens—later replaced with radiant heat lamps.

As a result of these measures, the oryx began to pick up and, as soon as they had accustomed themselves to strange foods, started to put on weight

again. For six weeks they were held in Nairobi, gaining steadily in condition. Then, when all risk of infection had gone, they were moved to their proper pens at Isiolo, where they are now thriving.

CONCLUSION

“Operation Oryx” only partially succeeded in its object of capturing a viable breeding nucleus of Arabian oryx as an insurance against the extermination of the species in the wild. The effort in the field came too late, after such a breeding nucleus had ceased to exist in the region to which efforts were directed. This, the last population, of the existence of which there was reliable information, had numbered eighty to a hundred, eighteen months before the expedition took the field. One raid had then killed forty-eight of them. Hearing of that raid the Fauna Preservation Society launched “Operation Oryx” the following April, when physical conditions would give the greatest chance of success. Before then, however, the same men returned and killed a further thirteen oryx and possibly more.

When the field party arrived on the scene it could find traces of only eleven animals having survived the slaughter. Of these eleven, five had already left the area in which capture was politically possible, four were seen and captured and the remaining two took refuge in the sand sea where pursuit was impossible.

The lesson to be learned is how terrifyingly quickly, and irrevocably, a locally favourable situation can be destroyed by thoughtless selfishness and how that destruction can imperil the very existence of a whole species.

Besides capturing the three oryx, the expedition obtained information on the distribution, biology and habits of the species. Stewart, the biologist, chiefly by the technique of dung analysis in which he is a specialist, obtained data on its food requirements of oryx. On this he will shortly be publishing a scientific paper.

Reports were also received, both during the operation but more particularly as a result of the interest it caused, of a few small parties of oryx still existing in the wild in the eastern region of the Arabian peninsula. The whereabouts of a few other individuals already in captivity also became known. The Society's object of establishing a breeding herd in captivity is still capable of realization, if the owners of captive animals will pool them for the good of the species. If the requisite number cannot be obtained in this way, further capture attempts can still be made.