

MEMBERS OF THE EXPEDITION³

LEADER, ETHNOLOGIST AND FILM DIRECTOR: Charles P. Mountford, O.B.E.,
F.F.A.A.A., F.R.A.I., F.R.G.S.

Honorary Associate Curator in Ethnology, South Australian Museum

DEPUTY LEADER AND ARCHAEOLOGIST: Frank M. Setzler, PH.B.

Head Curator, Department of Anthropology, Smithsonian Institution

ORNITHOLOGIST: Herbert G. Deignan, B.A.

Associate Curator of Birds, Smithsonian Institution

MAMMALOGIST: David H. Johnson, PH.D.

Curator of Mammals, Smithsonian Institution

ICHTHYOLOGIST: Robert R. Miller, PH.D.

Associate Curator of Fishes, Smithsonian Institution

BOTANIST: Raymond L. Specht, PH.D.

Lecturer, Department of Botany, University of Adelaide

ANTHROPOLOGIST: Frederick D. McCarthy, DIP.ANTHROP.

Department of Anthropology, Australian Museum, Sydney

PHOTOGRAPHER AND STAFF WRITER: Harrison Howell Walker

National Geographic Society, Washington

HONORARY SECRETARY: Bessie I. Mountford

GUIDE AND LIAISON OFFICER: William E. Harney

CINE-PHOTOGRAPHER: Peter Bassett-Smith

TRANSPORT OFFICER: Keith Cordon

COOK AND HONORARY ENTOMOLOGIST: John E. Bray; Cook from 12 August
1948: Reginald Hollow

The Institute of Anatomy, Canberra, also attached a nutritional unit to the expedition to study aboriginal health and food. Its members were:

MEDICAL OFFICER: Brian Billington, M.B., B.S.

NUTRITIONIST: Margaret McArthur, M.SC.

BIOCHEMIST: Kelvin Hodges, B.SC.

THE STORY OF THE EXPEDITION

IN 1946, when planning began for the expedition to enter Arnhem Land early in 1947, full co-operation came from many quarters. The National Geographic Society and the Smithsonian Institution of Washington offered to make members of their staffs available; the Minister for Information undertook to meet all travel and transport costs; the Minister for Air offered air transport, wherever it was possible; the Minister for the Army allowed the expedition to draw on Army stores for food and equipment; the Minister for Health arranged for a unit of three scientists from the Institute of Anatomy to join the expedition, their object being to study aboriginal health and nutrition; the Minister for the Interior, who placed his Northern Territory organization at our disposal, later helped us greatly, assisting in the transport arrangements and the forwarding of mails and supplies; and the Council for Scientific and Industrial Research released a navigator and engineer to man the 66-foot Army trawler which had been promised from the Disposals Commission. With so much co-operation and help, considerable progress was made toward completing the arrangements for the expedition by the end of 1946. The Australian authorities, however, considering that a postponement of a year would allow time for a better arrangement of staff and transport, suggested such a course to the National Geographic Society and the Smithsonian Institution of Washington. Both agreed to the postponement.

By the beginning of 1948 the final party had been selected and the arrangements for transport and supplies completed, except for the boat, the non-provision of which was the sole cause of the delays, misfortunes and disorganization that beset our movements. The first contingent of the American party, Dr David Johnson and Dr Robert Miller, from the Smithsonian Institution, and Mr Howell Walker, from the National Geographic Society, reached Sydney by air on 21 February. Two days later Mr Frank Setzler and Mr Herbert Deignan, both from the Smithsonian Institution, arrived in Brisbane by boat.

Their arrival completed the scientific party, which consisted of Frank Setzler, deputy leader and archaeologist; Robert Miller, ichthyologist; Herbert Deignan, ornithologist; Howell Walker, staff photographer and writer; Brian Billington, medical officer; Miss Margaret McArthur, nutritionist; Kelvin Hodges, biochemist; Raymond Specht, botanist, from the University of Adelaide; Frederick McCarthy, anthropologist, Australian Museum, Sydney; and myself as leader, ethnologist specializing on aboriginal art, and film director.

Other members of the party were: Mrs Bessie Mountford, honorary secretary; Peter Bassett-Smith, cine-photographer and wireless operator; Keith Cordon, transport officer; John Bray, cook and honorary entomologist. No previous scientific expedition in Australia had covered so many interlocking fields of natural history, medical science and ethnology.

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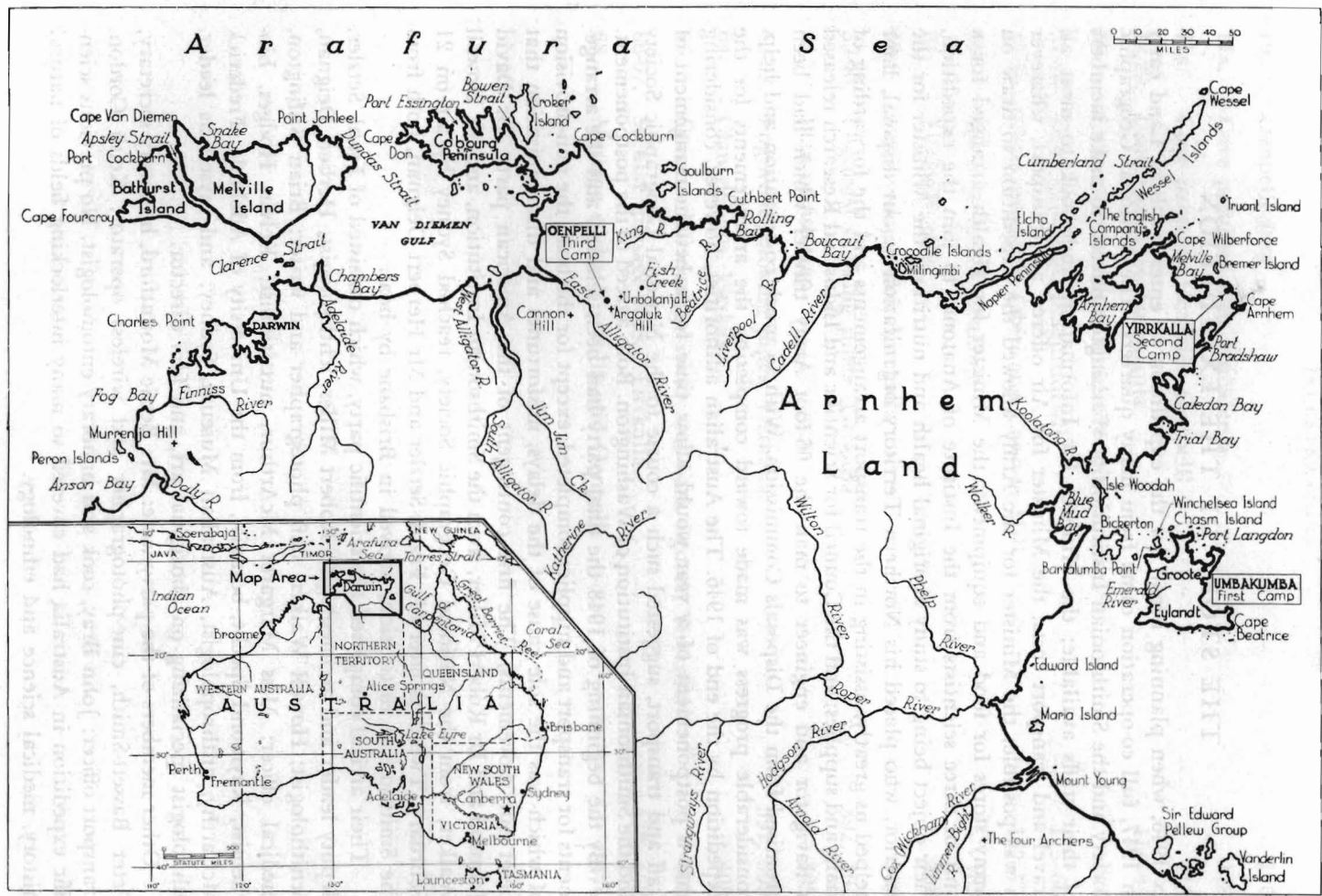


FIG. 1. Arnhem Land, showing expedition camps

After being entertained at vice-regal, civic and academic receptions in the capital cities, in a manner seldom accorded a scientific party, members assembled in Adelaide during the second week in March. On the morning of 18 March, all left for Darwin, over two thousand miles away, in a Royal Australian Air Force plane and well before sunset we reached our destination. The delivery of heavy equipment, which had been sent overland, delayed the party for ten days in Darwin. The naturalists, however, were fully employed, for the sea coast and jungles adjacent to the camp were particularly rich in fauna and flora.

It was planned to establish four research camps and to stay in the field from March until November, leaving before the oncoming wet season would hamper, if not prevent, our movements. Each camp would be situated in different topographical conditions, conditions which not only determined the distribution of the fauna and flora, but also influenced the aboriginal way of life.⁴

The camps were to be:

- (a) Groote Eylandt. This was an island camp, with a somewhat stony hinterland and a distinctive aboriginal culture.
- (b) Roper River. A fresh-water river and swamp environment and an aboriginal way of life which depends largely on river and fishing techniques.
- (c) Yirrkalla. Situated on the sea coast in north-eastern Arnhem Land, with fresh-water swamps and eucalyptus forests in the rear. The culture of the aborigines has been somewhat influenced by Macassan fishermen who, until about forty years ago, regularly visited those parts.
- (d) Oenpelli. On the western escarpment of the Arnhem Land plateau. This camp has a particularly wide range of topographical conditions, each with its own distinctive fauna and flora. To the east is the rugged Arnhem Land plateau, in which there are many aboriginal cave shelters. At the base are lines of fresh-water lagoons, the home of a multitude of water-birds and fish and, to the west, the widespread flood-plains of the Alligator Rivers.

By 1 April the heavy camp equipment and supplies had reached Darwin and the party was ready to move to our first camp at Groote Eylandt. However, although the Royal Australian Air Force was able to fly us to Groote Eylandt in Catalina flying-boats, it did not have planes capable of transporting our forty-seven tons of food, camp gear and scientific equipment. Providentially (at least, so it seemed at the time) the owner-skipper of a 200-ton, flat-bottomed wooden barge called the *Phoenix*, which had been commissioned to bring dismantled material to Darwin from an old flying-boat base at Groote Eylandt, offered to carry the supplies on the outward journey, promising to reach there within fourteen days of our departure.

4. Map, Fig. 1.

As the Catalina, by making two journeys, could take the party, a skeleton camp, and twenty-one days' supply of food to Groote Eylandt, I arranged for one group to leave on 3 April and the second to leave two days later. But heavy storms and monsoonal rains so reduced visibility that the flight on 3 April was impossible. Next morning we set out, reaching Little Lagoon, a small, almost land-locked harbour on the north of Groote Eylandt, about midday. We established camp at Umbakumba, a native settlement under the control of Fred Gray, and on 6 April were able to welcome the remainder of the party with the exception of David Johnson, Herbert Deignan and Howell Walker, who were travelling on the *Phoenix*, the two naturalists to collect over a wider area, and the latter to gain local colour and photographs for his *National Geographic* articles.

The early days of our camp at Groote Eylandt were marred by a series of misfortunes, all associated with communication and water transport. When Peter Bassett-Smith installed his short-wave set, he found that the valves had been damaged and the set would not function. This meant that we had no communication with the outside world, except through a distant mission station, and then only with the aid of native runners.

By 14 April food was getting low and, as we were unable to get news of the *Phoenix*, I decided to walk to the mission station. There, by the aid of the radio, I could find out if the *Phoenix* had left on time and, if not, could arrange for a further supply of food to be sent out by air. We boarded Fred Gray's launch, to cover part of the journey by sea, but a particularly heavy storm drove us into shelter and we returned to camp four hours later, with nothing accomplished. Early next morning Fred Rose, a visitor, Gordon Sweeney, a patrol officer of the Native Affairs Branch, and I, with a number of aboriginal men, set out to walk to the mission station on the Angoroko River, thirty-eight miles distant. It had been raining for days. Five inches had fallen on the day our boat was driven into shelter and, as it turned out, three inches on the day we walked. The track was an old Army road, which for most of the way had been turned into a water-course by continuous rains, the streams were filled to overflowing, and the swamps, sometimes waist-deep, extended for miles.

When at 10.30 p.m. we completed that strenuous journey, we found, to our chagrin, that the Angoroko River was too heavily flooded for us, in our exhausted condition, to cross. So after all the strenuous effort we had to spend the night, sleeping in the mud around tiny smouldering fires, on the *wrong* side of the river. Even when, next morning, we did succeed in reaching the opposite bank, the heavy static prevented wireless communication until the evening. When I learned that heavy weather had kept the *Phoenix* at Darwin I contacted the Army and Air Force, who quickly co-operated, and before I was able to return to Umbakumba a Catalina flying-boat had delivered food to the expedition camp, and, for the time being, our troubles were over.

But not for long. On 5 May Bassett-Smith, who had by then succeeded in getting his wireless set to work as a receiver, intercepted a message from Johnson, saying that the barge *Phoenix* was on a reef in Boucaut Bay,⁵ but that the staff and supplies were safe. Knowing that a spell of rough weather would break up the ancient barge I arranged with Fred Gray to take us to the wreck, about three hundred miles distant, in his little 33-foot launch, and, if necessary, bring back the members of our party with what scientific equipment we could salvage.

For five days our little craft battled against heavy seas to reach the barge. When we arrived at Milingimbi, in the Crocodile Islands, we saw, to our great relief, the *Phoenix* unloading cargo with her flat bottom resting on the mud.⁶ She had floated off the reef on the high tide of the previous day. Finding our supplies were safe and the staff well, we loaded up some of the scientific instruments and equipment (we were not short of food in the main camp) and, taking Deignan with us, set out for Umbakumba. It took six days to return to Groote Eylandt, the weather conditions being even worse than on the outward journey, and on 24 May, six days after our arrival and five weeks after her scheduled time, the *Phoenix* entered Little Lagoon with the supplies for which we had waited so long.

With all the party together and ample supplies, work started in earnest. Billington and Hodges, having finished their medical examination of the aborigines at Umbakumba, moved to the mission station on the Angoroko River; Miss McArthur, who had already completed one nutritional camp at Hemple Bay, established another at Bickerton Island, accompanied by Specht, the botanist, and Howard Coates, an officer of the Native Affairs Branch; while Setzler and McCarthy spent a few days at Winchelsea Island, excavating Malay graves. Later, McCarthy examined cave paintings within the area. In general, the naturalists did most of their collecting around the main camp.

My duties as leader kept me, for most of the time, in the main camp. I was able, however, to make a brief stay at Bickerton Island, visit totemic places along the west coast of Groote Eylandt and, with McCarthy and others, examine the cave paintings at Chasm Island which had been discovered by Flinders in 1803. I was also able to view a totemic ceremony of which, previously, we had little knowledge.

The late arrival of the *Phoenix* necessitated the abandonment of the Roper River camp. But the added length of stay at Groote Eylandt was advantageous, because it allowed members of the party to increase their knowledge and natural history collections of this interesting island environment.

After fourteen weeks at Groote Eylandt a Catalina flying-boat and a mission launch moved the party to Yirrkalla. This was by far the most pleasant of all our camps. We pitched our tents on the crown of a sandhill carpeted with a mat of thick grass, a welcome change after the soft sand of Umbakumba. Before us was an open curving beach, on which the waves thundered day and night, and

5. Pl. 2A.

6. Pl. 2B.



PLATE 2A. *Phoenix* on a reef at Boucaut Bay



PLATE 2B. *Phoenix* unloading at Milingimbi

behind us a fresh-water swamp, shaded by large trees, fringed with luxuriant grasses and intersected with a stream of clear water. The weather, too, was at its best. The mists of morning gave way to warm dry days, while the nights were chilly and refreshing. As we sat at meals we could look across the tumbling waters and watch the aboriginal children at play, shooting the breakers in their small canoes, spearing fish, or drawing pictures in the glistening sands.

The day after reaching Yirrkalla, we received a pleasant surprise in the form of a visit from the American Consul for South Australia, Mr E. Seibert, who had made the journey to see his American colleagues; the Administrator for the Northern Territory, Mr A. R. Driver; and the Director-General of Information, Mr Kevin Murphy.

The only change of staff happened at Yirrkalla. Cordon, the transport officer, returned to Adelaide because of sickness in his family. Bray became transport officer and the position as cook was filled by Reginald Hollow.

We had no sooner settled in our camp than the Northern Territory patrol launch *Kuru* visited us. With it came W. E. Harney to act as guide to the expedition. Harney's knowledge of Arnhem Land, especially of the Gulf of Carpentaria, is extensive; of the aboriginal people, deep and understanding; and of the fauna and flora, considerable. As a story-teller and singer, Harney entertained us, individually and collectively, for hours with his tales of cattle thieves, droving and journeys with the aborigines. Merely stopping to pick up Miss McArthur, Miller, Setzler, McCarthy and Harney, the *Kuru* continued her journey to Port Bradshaw, where Setzler dug out more Malay graves, Miller caught fish by line, poison and net, and McCarthy and Harney examined a small group of cave paintings at Jelangbara. Miss McArthur had asked to be allowed to establish a nutrition camp, with no other companions but her two aboriginal interpreters, a man and his wife, claiming that she could get a truer picture of the aborigines in their natural environment if she were by herself.

On the return of the party from Port Bradshaw, Setzler and McCarthy flew to Milingimbi to carry out archaeological research, whilst the remainder of the scientists concentrated on their own special interests near the base camp. During this time, the botanist, mammalogist, ornithologist, and particularly the ichthyologist added greatly to their collections. Billington and Hodges set up their nutrition laboratory in the mission hospital, a much more comfortable place for work than Umbakumba. Bassett-Smith and I photographed many aspects of aboriginal life on colour cine film. The aboriginal men also produced for me many unusual bark paintings as well as carved and painted figures.

But again sea transport troubles arose. During the period of the Yirrkalla camp I had flown into Darwin and arranged with some Chinese merchants to send their forty-ton landing barge *Triumph* to Yirrkalla, load all the gear and, with members of the party aboard, take the barge around the north coast and up the East Alligator River to our next camp at Oenpelli, a journey of about six hundred miles. Although the journey would not have been comfortable, this

move would have been much simpler than by any other means. But a few days before the barge was due to set out from Darwin its engines failed, leaving us to reach Oenpelli as best we could. Again the Air Force came to our rescue and, on 9 September, moved most of our supplies and party to Darwin, about two months after we had landed at Yirrkalla.

Two of the party, Johnson and Bassett-Smith, travelled with the remainder of our supplies in the mission lugger *Victory*. Johnson disembarked at Cape Don to collect mammals, Bassett-Smith continuing the journey to Oenpelli. By 20 September the remainder of the party had reached Oenpelli and were ready to start work.

In selecting Oenpelli I had estimated that it would be the most spectacular, the most productive and, at the same time, the most uncomfortable of our research camps; all these expectations were fulfilled.

Looking from our tent doors, we could see a placid lagoon, dotted with water-lilies and numberless birds and fringed with green rushes; on the distant shore was the eucalyptus forest; beyond that the brown buffalo-grass flood plain, and behind that, again, the high escarpment of the rugged Arnhem Land plateau, blue with the haze of distance.

Oenpelli offered a varied field for all: the naturalists, the anthropologists and the photographers.⁷ It has three distinct physical environments, each rich in its own flora and fauna; the open savannah woodlands, the black soil flood plains of the Alligator Rivers, and the forbidding plateau country in the caves of which we were to find relics of early man and innumerable aboriginal paintings.

But in physical comfort Oenpelli had little to recommend it. Although the early mornings and late evenings were sometimes pleasant, the hours of daylight were the reverse. The widespreading plains and rocky hillsides reflected the burning heat of the sun, and the hot winds and smoke from the grass-fires lit by the aborigines⁸ added to the discomfort. Every day, the temperature within the tents rose to over 100° F., and on several occasions reached 108° F. Nor were the nights much better, for when writing up our notes or preparing the specimens gathered during the day, the mosquitoes attacked us and myriads of moths, beetles and other flying things crawled into our eyes and became entangled in our hair and clothing.

Although everyone found the conditions somewhat trying, I think that Billington and Hodges worked under the greatest disadvantages. Their laboratory consisted of two Army tents, set end to end in a dusty paddock. The high temperature and the dust, where cleanliness is so important, were a continuous trial. Yet these two kept going without complaints and finished their allotted task.

Setzler and McCarthy carried out a series of archaeological excavations in the cave floors at Unbalanja Hill,⁹ about a mile west of the main camp, and working

7. Pl. 1A.

8. At the end of the dry season, the aborigines burn the grass so that they can travel more easily.

9. Pl. 1B.

conditions there were also unpleasant. The temperature among the rocks was high, the humidity oppressive and the dust from the sieves so dense that it was sometimes difficult to see the archaeologists.

After a while McCarthy left and went to Fish Creek with Bray and Miss McArthur, leaving Setzler to carry on with only the help of two aborigines. At Fish Creek Miss McArthur studied the diet and food habits of an aboriginal group, and McCarthy noted their methods of food-gathering; Bray added many insects to his entomological collection.

The reduced size of the lagoons at the end of the dry season had concentrated the fish. Miller declared that they were the richest waters in which he had collected. He netted his specimens in both the fresh-water lagoon and the tidal East Alligator River.

For the ornithologist there were birds everywhere, on the water, in the grass, among the trees and the tumbled rocks of the plateau. Oenpelli was a prolific field for Deignan. For the botanist, too, the conditions were equally good and Specht's collection grew by leaps and bounds. Bassett-Smith and I concentrated on making a coloured film on the varied bird and plant life of the lagoons. And in the caves of the rugged plateau I found extensive galleries of unusual cave paintings.

On 19 October, just as the party was farewelling Miller on the eve of his departure for U.S.A., Johnson reached Oenpelli after walking 160 miles from Cape Don, without a native to guide him. He had been successful in making a collection of mammals which can be compared with that made by the naturalist Gilbert over a hundred years ago.

But, even to the end, transport troubles followed us. The Chinese merchants, having repaired the landing barge *Triumph*, had arranged to send it up the East Alligator River to Oenpelli, load our supplies and, with the party aboard, transport us to Darwin. We had partly dismantled our camp, when the news came through by wireless that a widespread measles epidemic had broken out in the Darwin area and the movement of all aborigines was prohibited. As the barge was manned largely by an aboriginal crew, that meant the *Triumph* could not leave Darwin. It seemed as if we might have to wait, in a partly dismantled camp, for an indefinite time, but after many negotiations I was able to arrange for Harney and myself to be flown into Darwin to form part of the crew. The final difficulty was overcome when Harry Moss, the pilot of the little plane that carried us to Darwin, generously offered to act as our pilot along the treacherous East Alligator River.

We left Darwin at midnight, and two days later, on 1 November, reached the Oenpelli landing. Most of that night, and all the next day, we worked incessantly transferring the supplies by motor from our camp, several miles inland, to the river bank. Then, as the brief tide (we were seventy miles from the sea) lifted the barge from the muddy bottom, everyone, expedition members and aborigines alike, rushed the goods on board hoping to get away before the tide went out.

But a tangled anchor rope delayed us and we were left stranded in the mud for another twelve hours. By next sunrise, however, we were on our way down the river and by sunset, two days later, we were berthed at the Darwin jetty. The field work of the expedition was over.

The results of the expedition could hardly have been richer, both from the standpoint of human companionship and scientific results. I cannot speak too highly of the good fellowship that existed between members of the party during the eight months we were together, a good fellowship not always present on expeditions where members have been together for extended periods. The gross results of the collections, too, were impressive: 13,500 plant specimens, 30,000 fish, 850 birds, 460 animals, several thousand aboriginal implements and weapons, together with photographs and drawings of a large number of cave paintings from Chasm Island, Groote Eylandt and Oenpelli. There was also a collection of several hundred aboriginal bark paintings and two hundred string figures. In addition to the physical collections of natural history and ethnological specimens, each scientist had written extensive field notes as a basis for his scientific papers. There were also many hundreds of monochrome and coloured photographs as well as several miles of colour film on aboriginal life and natural history.

Two articles on the expedition have been published in the *National Geographic Magazine*: 'Cruise to Stone Age Arnhem Land'¹⁰ by Howell Walker and 'Exploring Stone Age Arnhem Land'¹¹ by myself. Four coloured cine films have also been completed, with Bassett-Smith as photographer and myself as director: 'Arnhem Land', a survey of the natural history and ethnology of that region; 'Aborigines of the Sea Coast', dealing with native life at Yirrkalla; 'Birds and Billabongs', picturing the birds and the water-lilies of Oenpelli lagoons; and 'The Arawaltja Ceremony' of Groote Eylandt.

This volume is the first of a series which will describe the scientific results of the Arnhem Land Expedition. General subjects which will be published in the succeeding volumes are: Ethnology, archaeology, ornithology, mammalogy, hepherology, conchology, botany, ichthyology.

The ethnological and natural history specimens collected on the expedition will, when the research work on them is completed, be distributed between the Australian and American institutions, with the exception of the botanical collection. A duplicated collection has already been presented to the major herbaria in Australia; to the Kew Gardens, London; to the Arnold Herbarium, Harvard University, Boston; to the United States National Herbarium, Washington; and to the Rijksherbarium, Leiden, Netherlands.

Many of the cave paintings discovered at Oenpelli, and bark paintings collected at Groote Eylandt, Yirrkalla and Oenpelli, have been reproduced in colour by UNESCO in *Australia: Aboriginal Paintings—Arnhem Land*.

C.P.M.

10. Walker (1949), pp. 417-30.

11. Mountford (1949), pp. 745-82.