

Kuk Heritage:

Issues and Debates in Papua New Guinea



Edited By
Andrew Strathern and Pamela J. Stewart

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Cover Photo: The Kuk Standing Stone (Charlie Nairn, 1995)

From the PNG National Museum, Port Moresby, PNG, the Centre for Pacific Studies, James Cook University, Townsville, Australia, and the Okari Research Group, Department of Anthropology, University of Pittsburgh, Pittsburgh, PA., U.S.A.

KUK HERITAGE: ISSUES AND DEBATES IN PAPUA NEW GUINEA

Andrew Strathern and Pamela J. Stewart (eds.)

This volume contains contributions from staff affiliated with/at the Papua New Guinea National Museum (Nick Araho, Herman Mandui, Andrew Moutu, John Muke, and Pamela Swadling) and by Pamela J. Stewart, Andrew Strathern, and Jack Golson, discussing the issues and debates that focus on the Kuk archaeological site in the Western Highlands province of Papua New Guinea and its future as a proposed heritage area. The Kuk site is well known for the long time depth of its evidence of prehistoric agriculture in New Guinea. It also falls within the territorial interests of a local group, the Kawelka people, as well as the national government. Reconciling the interests of the 'stakeholders' in this site is a major task, and these essays consider the issues carefully. This volume is of interest to both anthropologists and archaeologists and relates to the practical application of anthropological findings in the context of cultural development and heritage management in the Pacific. A further discussion of the Kuk site is forthcoming in "Nine thousand years of gardening: Kuk and the archaeology of agriculture in Papua New Guinea" compiled by Pamela Swadling, Jack Golson, and John Muke.

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Preface and Acknowledgments

The present collection of papers has been brought together with the explicit purpose both of drawing attention to the importance of the Kuk archaeological site in the Western Highlands of Papua New Guinea and of showing some elements of the complexities that surround issues to do with cultural heritage generally, in cases where a delicate balance has to be sought between international, national provincial, and local interests. We undertook in discussion with the PNG National Museum at our own initiative from 1997 onwards to put together, edit, and format this collection also as a means of making returns at all of the above levels for our own opportunities in carrying out research on social issues generally in Papua New Guinea. Since financial constraints prevented the PNG National Museum and the James Cook University from allocating funds to help with the publication of the papers, we have met these costs from personal sources, specifically drawing on assistance from the Office of the Dean, Faculty of Arts and Sciences at the University of Pittsburgh, and technical expertise kindly supplied by Craig Seder, from the University's Cathedral Publishing. The cost of publishing the volume in this format has been the equivalent of approximately PNG K1,200, and we see meeting this cost, along with our own writing and extended editorial work, as an appropriate way of demonstrating reciprocity in research at all levels, particularly the local level of the Kawelka people themselves, who are central in all of the book's discussions.

Pamela J. Stewart and Andrew Strathern

Pittsburgh, September 7, 1998

The nomination of Kuk for inclusion in the World Heritage Listing

**Kuk is the early agricultural site complex
dating from 9,000 years ago
in the Western Highlands Province
of Papua New Guinea**

**The archaeological finds at Kuk
indicate that Pacific Islanders
were amongst the world's
first gardeners**

This document was presented by the Director of the Papua New Guinea National Museum and Art Gallery, Soroi Eoe, at the World Heritage Committee Meeting at Suva, Fiji in July 1997.

**Prepared by Jack Golson and Pamela Swadling
with papers by Andrew Moutu and Herman Mandui**

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July 1997

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An Anthropological View of Some Pertinent Issues.
by Andrew Moutu**
 - b. Kuk Swamp at Present - Technical Considerations
by Herman Mandui**

1. Criteria for nominating Kuk under the terms of the World Heritage Convention.

Criteria

The criteria under which the early agricultural site complex at Kuk is being nominated for inclusion in the World Heritage List are as follows:

- **Kuk has elements or structures of an archaeological nature which are of outstanding universal value for the point of view of history and science (Article 1 of the Convention);**
- **Kuk has sites:** works of man or the combined works of nature and of man, and areas including archaeological sites which are of outstanding universal value from the historical, ethnological or anthropological points of view (Article 1 of the Convention);
- **Kuk is an outstanding example of a type of landscape which illustrates significant stages in human history (Subsection a, Clause iv of Section 24 of the Convention);**
- **Kuk is an outstanding example of traditional human land-use which is representative of a culture (or cultures), especially when it has become vulnerable under the impact of irreversible change. (Subsection a, Clause v of Section 24 of the Convention);**
- **Kuk is a cultural landscape. It thus "represents the 'combined works of nature and of man' designated in Article 1 of the Convention. They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and/or successive social, economic and cultural forces, both external and internal. They should be selected on the basis both of their outstanding universal value and their representativity in terms of a clearly defined geo-cultural region and also for their capacity to illustrate the essential and distinct cultural elements of such regions (Subsection 36 of the Convention)."**

Integrity requirements

- The site "should have a management plan. When a site does not have a management plan at the time when it is nominated for the consideration of the World Heritage Committee, the State Party concerned should indicate when such a plan will become available and how it proposes to mobilize the resources required for the preparation and implementation of the plan. The State Party

should also provide other document(s) (e.g. operational plans) which will guide the management of the site until such time when a management plan is finalized" (Section 44 of the World Heritage Convention, Subsection b, Paragraph v).

The National Museum is working with other government, local authorities and the local people preparing and implementing a management plan.

- A site "should have adequate long term legislative, regulatory or institutional protection. The boundaries of that site should reflect the spatial requirements of phenomena that provide the basis for its nomination for inscription on the World Heritage List" (Section 44 of the World Heritage Convention, Subsection b, Paragraph vi).

Kuk is currently protected under the National Cultural Property Act and steps are being taken to revise this act.

- "In principle, a site could be inscribed on the World Heritage List as long as it satisfies one of the four criteria and the relevant conditions of integrity. However, most inscribed sites have two or more criteria. Nomination dossiers, IUCN evaluations and the final recommendations of the Committee on each inscribed site are available for consultation by State Parties which may wish to use such information as guides for identifying and elaborating nomination of sites within their own territories" (Section 45 of the World Heritage Convention).

Procedure for the eventual deletion of properties from the World Heritage List

Papua New Guinea notes that should World Heritage Listed sites cease to have a working management plan that is being effectively implemented, such sites will be deleted from the List. "The World Heritage Committee adopted the following procedure for the deletion of properties from the World Heritage List; and

- where the property has deteriorated to the extent that it has lost those characteristics which determined its inclusion in the World Heritage List; and
- where the intrinsic qualities of a World Heritage site were already threatened at the time of its nomination by action of man and where the necessary corrective measures have not been taken within the time proposed, the State Party on whose territory the property is situated should so inform the Secretariat of the Committee" (Section 46 of the World Heritage Convention).

2. Under the nomination requirements it is essential that appropriate legislative and administrative measures are in place to protect the site being nominated.

- **Papua New Guinea recognizes that only exceptional sites are included in the World Heritage List** and that this inclusion “implies that legislative and administrative measures have already been taken Informed awareness on the part of the population concerned, without whose active participation any conservation scheme would be impractical, is also essential” (Section 34 of the World Heritage Convention).
- Steps are being taken within Papua New Guinea to ensure at the national, provincial and local levels “that there is adequate legal and/or traditional protection and management mechanisms to ensure the conservation of the nominated cultural properties or cultural landscapes. The existence of protective legislation at the national, provincial or municipal level and/or a well-established contractual or traditional protection as well as adequate management and/or planning control mechanisms is therefore essential and, must be stated on the nomination form. Assurances of the effective implementation of these laws and/or contractual and/or traditional protection as well as of these management mechanisms are also expected. Furthermore, in order to preserve the integrity of cultural sites, particularly those open to large numbers of visitors, the State Party concerned should be able to provide evidence of suitable administrative arrangements to cover the management of the property, its conservation and its accessibility to the public” (Section 24 of the World Heritage Convention, Subsection b, Paragraph ii).
- **Should Kuk be recognized as having the prerequisites for inclusion in the World Heritage List, this recognition will assist in ensuring “that there is adequate legal and/or traditional protection and management mechanisms [in place] to ensure the conservation” of the site.**

3. The nature of the archaeological evidence at Kuk

Archaeological finds in the Wahgi valley indicate that Pacific Islanders were some of the world's first gardeners. The oldest evidence for agriculture has been found in swampy areas in the Western Highlands of Papua New Guinea. It consists of drainage channels and associated features such as mounds and stake holes. Although archaeologists have as yet found no direct evidence, it is likely that dry land agriculture was also being practiced from 9,000 years ago; as slope clearance for gardens would explain the sudden increase in the deposition of erosional fans in swamps as well as increasing indications of forest clearance.

Archaeological investigations indicate that the swamp drainage was not continuous, but consisted of different drainage systems that operated during six phases between 9,000 and 100 years ago. The oldest phase of swamp drainage dating to 9,000 years ago has only been found at Kuk near the town of Mount Hagen, the other phases are found at Kuk and elsewhere in the Western Highlands, see figures 1-4.

The oldest wooden artifact from the island of New Guinea is a wooden spade found in a prehistoric drain dating to 4,000 years ago at Tambul. The oldest dated garden plants are gourds dating to 2,300-2,400 years ago. The major crops being grown from 9,000 years ago until the appearance of the American sweet potato within the last few hundred years would have been taro (*Colocasia esculenta*), various yams (*Dioscorea* species) and bananas (*Musa* species).

4. The phases of swamp use at Kuk

The volcanic ashes

The different gardening systems of each phase, as listed below, consistently appear in the same relationships with volcanic ashes (tephras) throughout the Western Highlands of Papua New Guinea. The sequence of these ashes and their dates are shown in Figures 5 and 6.

- **Phase 1 (9000 years ago)**

This was probably wetland rather than true swampland management. Both moisture-sensitive and moisture-tolerant crops were being grown. The archaeological features found at Kuk consist of a two meter wide by one meter deep drain, stakeholes and basins, see Figures 7 and 8. No wooden artifacts survive from this phase. The large Phase 1 drains extend beyond Kuk towards the Wahgi, but have not been studied beyond Kuk.

- **Phase 2 (6000-4500 years ago)**

Both moisture-sensitive and moisture-tolerant crops were being grown. The archaeological features found at Kuk and elsewhere (see Figure 2) consist of large drains and irregular circular mounds one to one and half meters in diameter made within a web of small channels and basins dug in the clay, Figures 7 and 9. In many ways these mounds would be smaller versions of the island beds made at Kolepom in southwest Irian Jaya. No wooden artifacts survive from this phase.

- **Phase 3 (3500-2300 years ago)**

Both moisture-sensitive and moisture-tolerant crops were being grown. The archaeological features found at Kuk and elsewhere (see Figure 2) consist of large drains and chains of small inter-connected basins probably for the moisture-tolerant crops and regular cultivation plots formed between straight gutters intersecting at right-angles for moisture-sensitive crops (see Figures 7 and 10). A wooden spade dating to 4000 years ago has been recovered from a ditch at Tambul and a woman's digging stick from Warrawou (Manton) dating to 2300 years ago. Gourds have been recovered from two sites. These are *Benincasa hispida* from Kana dating to 2450 years ago and *Lagenaria siceraria* from Warrawou (Manton) dating to 2300 years ago.

- **Phase 4 (2000-1200 years ago)**

Unlike the previous variety of garden features, which suggests diversified cropping, the emphasis appears to have been growing one crop. The

archaeological features found at Kuk and elsewhere (see Figure 2) consist of large drains and long parallel garden drains, narrow and deeper than they are wide, with similar drains joining them at right angles. The whole forms a rather open network, whose repetition over large areas is suggestive of single crop planting (see Figures 7 and 10). The likely crop is taro. A woman's digging stick was found in a prehistoric ditch at Minjigina, part of the Draepi-Minjigina estate. No wooden artifacts survive at Kuk.

- **Phase 5 (400-250 years ago)**

The emphasis again appears to be on growing one crop. The archaeological features found at Kuk and elsewhere (see Figure 2) consist of large drains and minor drains which are comparable to those of Phase 4, but the ditches become wider, shallower and flat-bottomed, and the network appears to be less open (see Figures 7 and 10). Wooden digging sticks and spades were found in prehistoric ditches at Kuk, Kotna and at Kana.

- **Phase 6 (250-100 years ago)**

The emphasis continues to be on growing one crop. The archaeological features found at Kuk and elsewhere (see Figure 2) are large drains and a network of garden ditches which become tighter, and as they become tighter and more grid-like, begin to resemble the chequer-board pattern of gardens and intervening ditches characteristic of dry-land sweet potato cultivation in the upper Wahgi valley today (see Figures 7 and 10). These changes reflect the introduction of the sweet potato which is moisture-sensitive requiring intensified drainage. For the first time houses appear in the Kuk swamp, one round, the other rectangular with rounded ends, and are identical (in size, shape, internal arrangements and scattered disposition) to the men's houses and long women's houses, the latter with the provision for the stalling of pigs, which make up the recent hamlet and homesteading pattern of residence in the Mount Hagen region. Wooden digging sticks and spades are found at Kuk and elsewhere.

1. Figure 1: The drainage around Kuk.
(from Golson and Hughes 1980)
2. Figure 2: Early agricultural and other archaeological sites in the Western Highlands.
Map produced by Jack Golson and Pamela Swadling, June 1997, using MapInfo and the ADC Worldmap.
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(Produced by Jack Golson and Pamela Swadling, July 1997, revising Golson 1977)
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(From Harris and Hughes 1978)
10. Figure 10: Schematic presentation of the grid drainage systems of swamp drainage found in Phases 3-6. Note that in Phase 3 there is a continuation of basins and interconnecting channels as well as the first appearance of a grid system of drainage.
(Produced by Jack Golson and Pamela Swadling, July 1997)

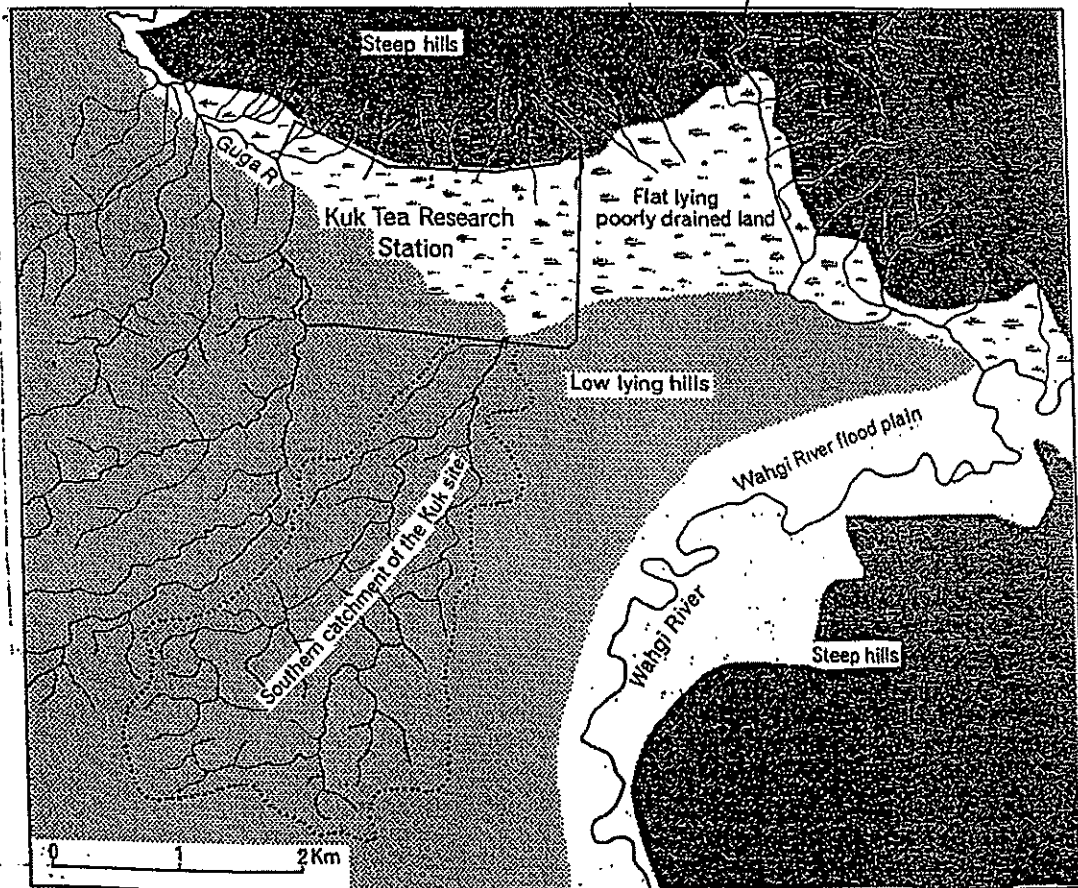


Figure 1: The drainage around Kuk.
(from Golson and Hughes 1980)



Figure 2: Early agricultural and other archaeological sites in the Western Highlands.
 Map produced by Jack Golson and Pamela Swadling, June 1997, using MapInfo and the ADC Worldmap.

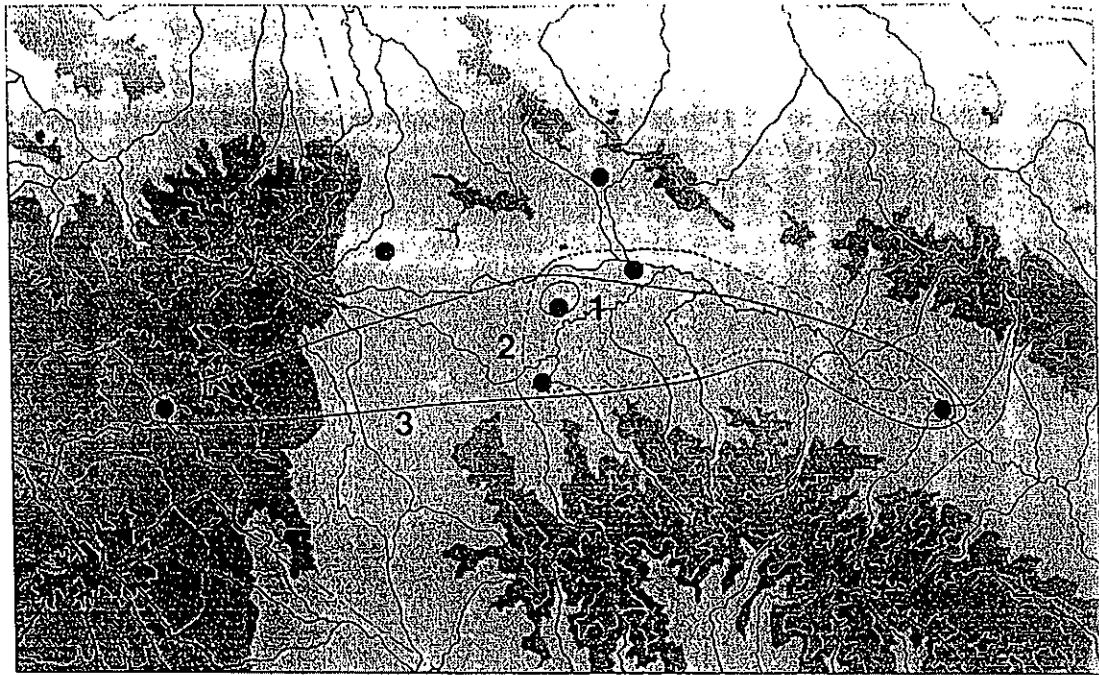


Figure 3: Maximum known extent of swamp drainage. Phases 1-3

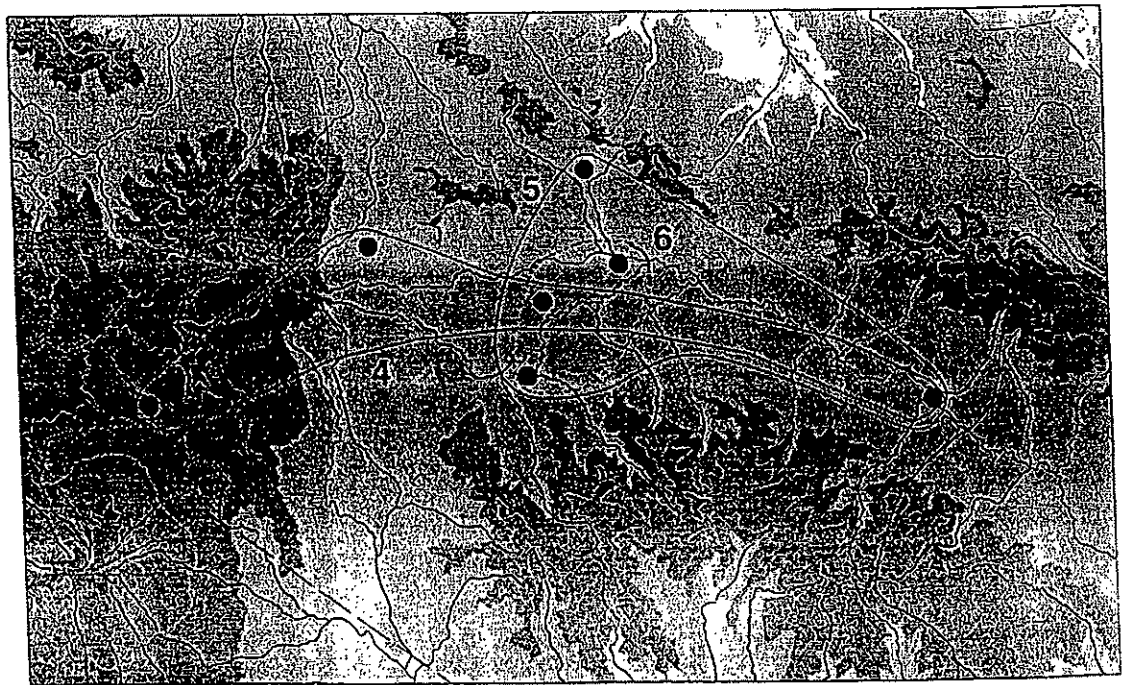


Figure 4: The maximum known extent of swamp drainage. Phases 4-6

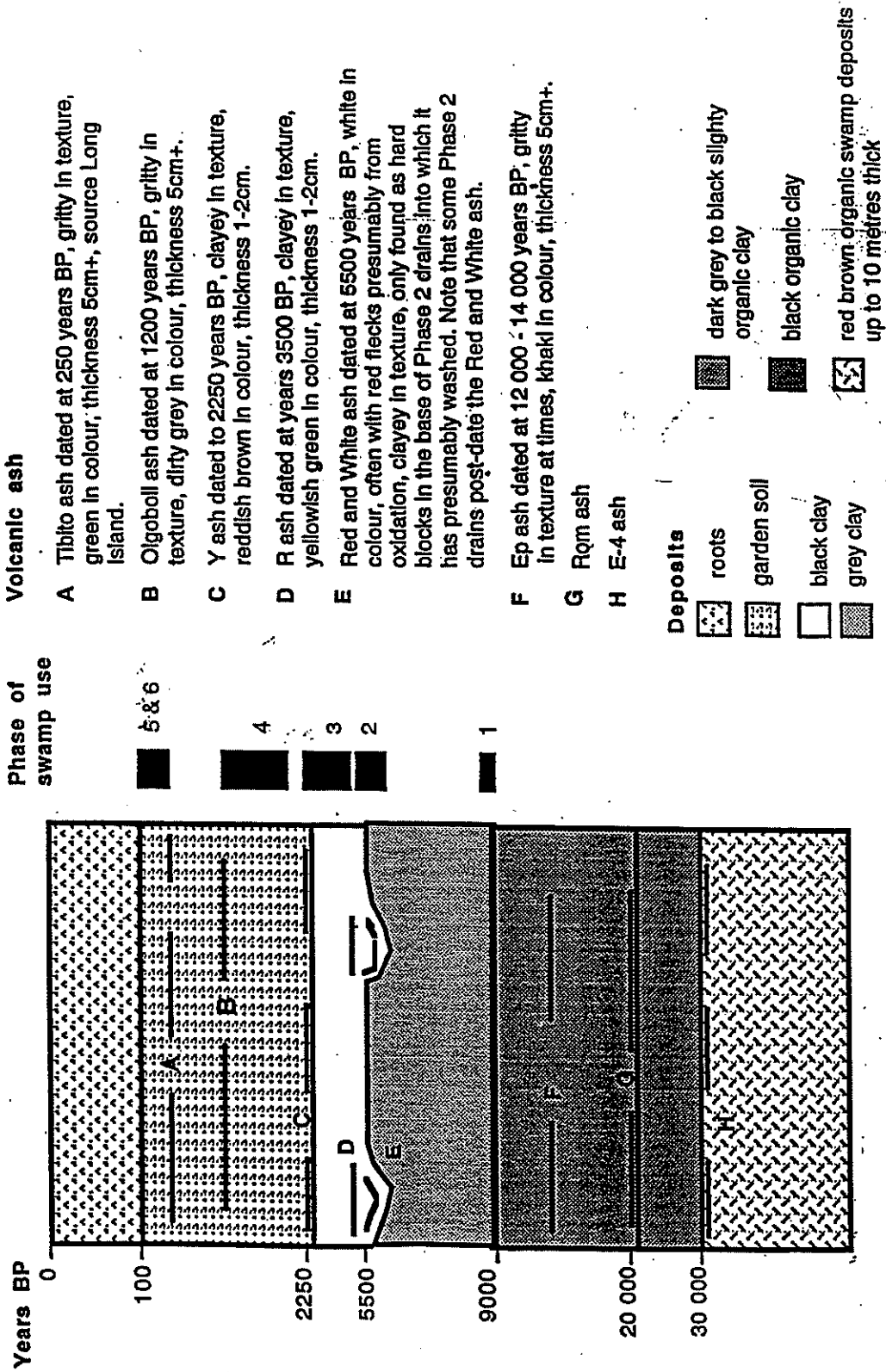


Figure 5: Schematic presentation of the stratigraphy of southeastern Kuk, showing the nature of the swamp deposits, the phases of swamp use, known dates and volcanic ashes. (Drawn by Pamela Swadling from data provided by Jack Golson, July 1997).

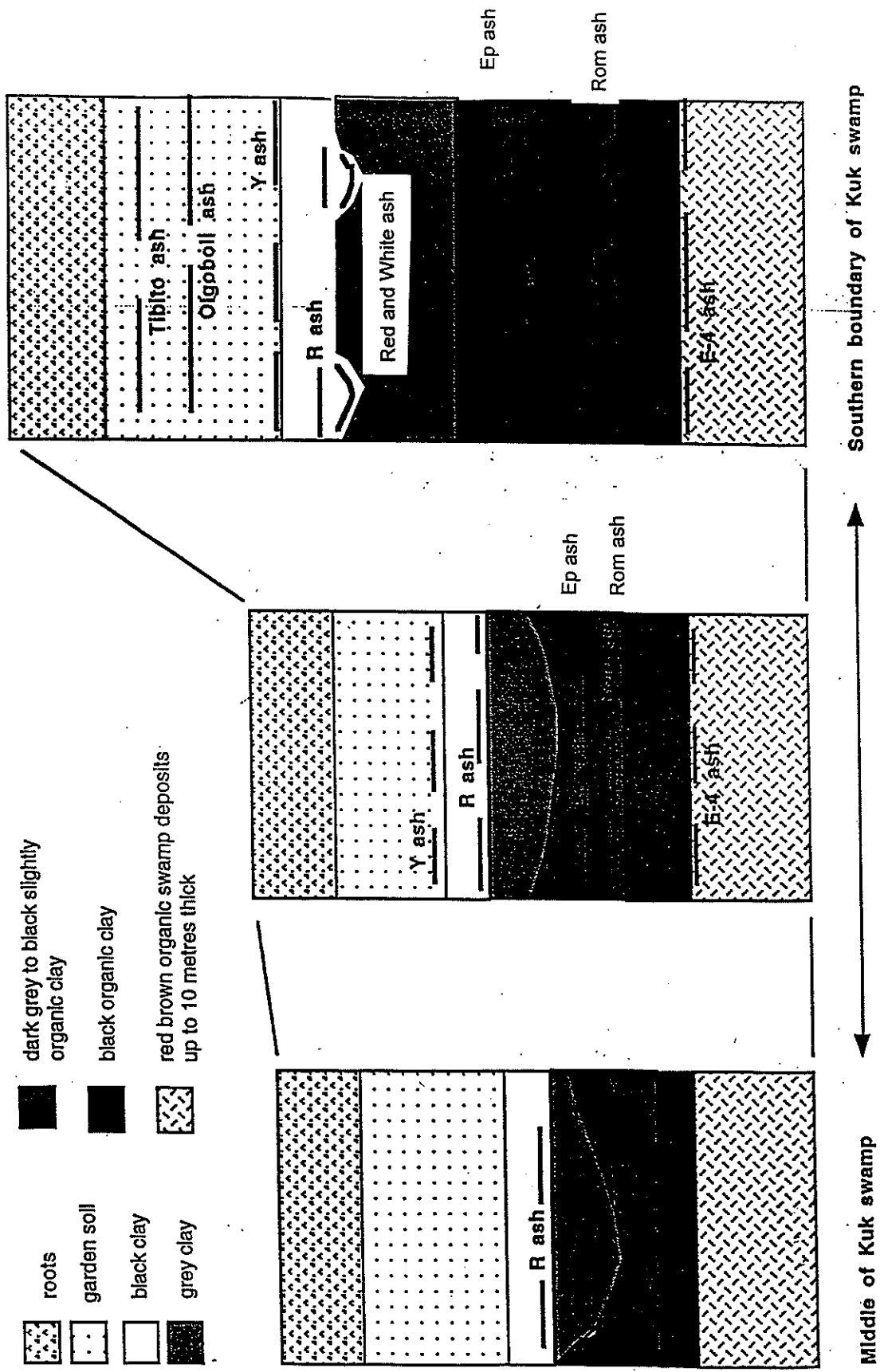


Figure 6: Schematic presentation of the deposits in Kuk swamp.
 (Drawn by Pamela Swadling using data provided by Jack Golson, July 1997)

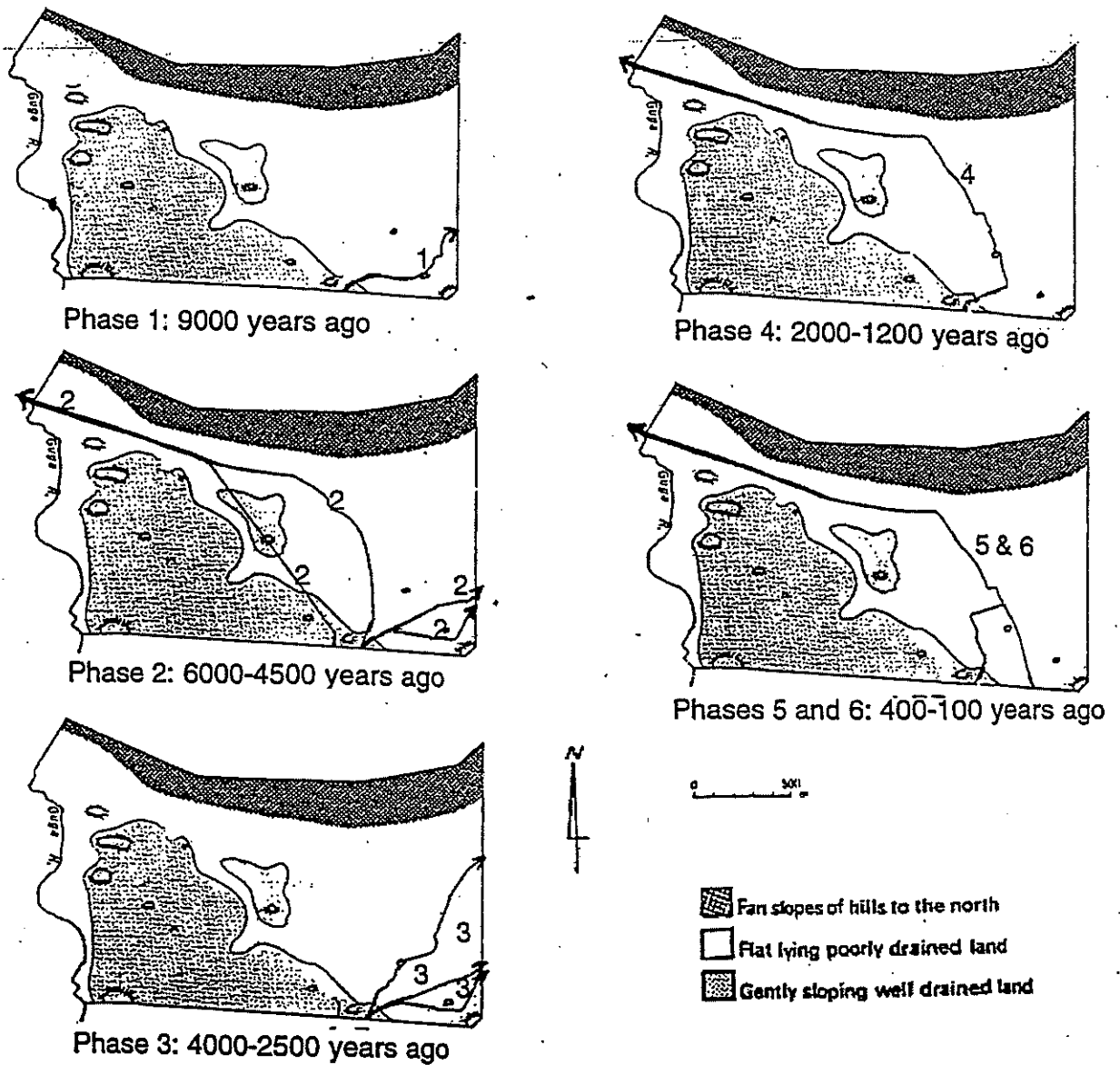


Figure 7: Kuk swamp showing the main drains during each phase.
 (Produced by Jack Golson and Pamela Swadling, July 1997, revising
 Golson 1977)

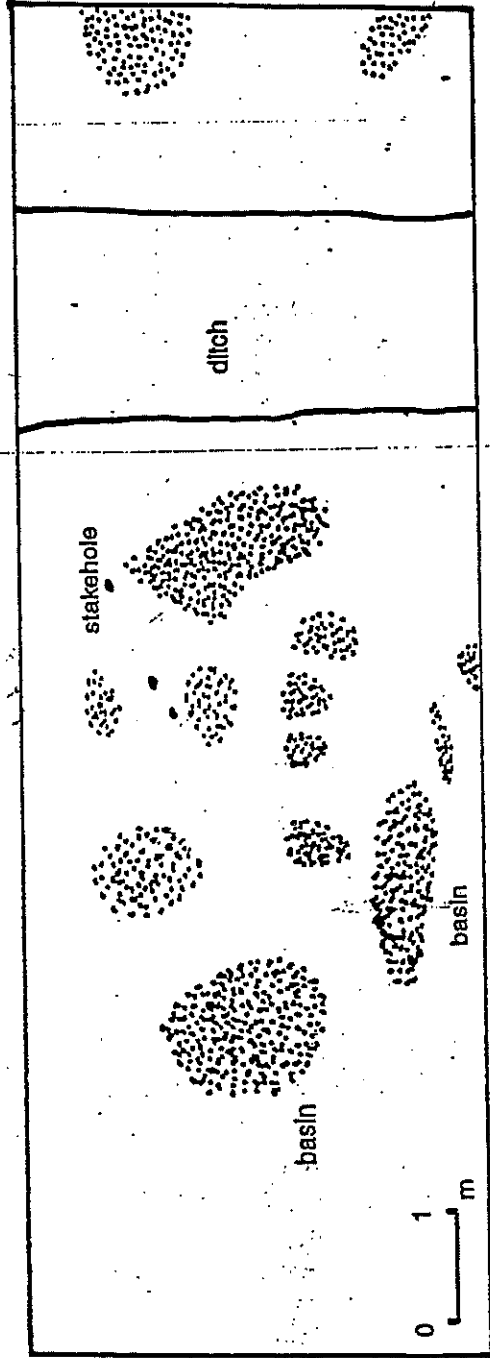


Figure 8: Schematic presentation of agricultural features found in Phase 1, dating to 9,000 years ago.

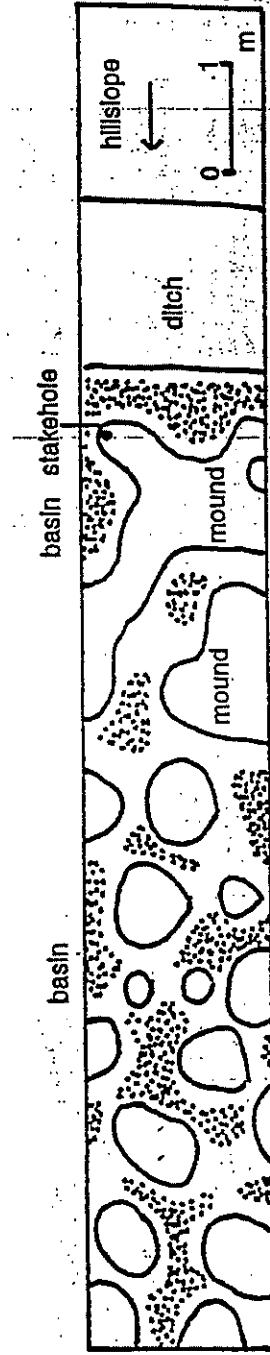


Figure 9: Agricultural features found in Phase 2, dating from 6,000-4,500 years ago. (From Harris and Hughes 1978)

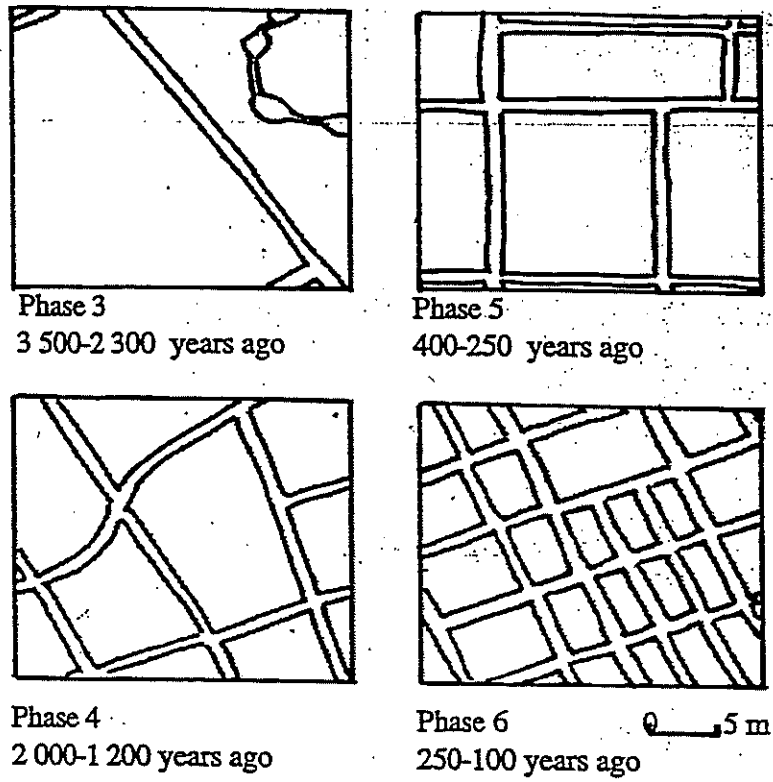


Figure 10: Schematic presentation of the grid drainage systems of swamp drainage found in Phases 3-6. Note that in Phase 3 there is a continuation of basins and interconnecting channels as well as the first appearance of a grid system of drainage.
(Produced by Jack Golson and Pamela Swadling, July 1997)

5. The land use and conservation of Kuk

- a. The Kuk Archaeological Heritage and the Kawelka Landowners:
An Anthropological View of Some Pertinent Issues.
by Andrew Moutu**

- b. Kuk Swamp at Present - Technical Considerations
by Herman Mandui**

a. The Kuk Archaeological Heritage and the Kawelka Landowners: An Anthropological View of Some Pertinent Issues

by Andrew Moutu

Introduction

This section of the report provides an anthropological account of the recent field visit to Kuk (Western Highlands Province) undertaken by Dr. John Muke of the University of Papua New Guinea and officers from the National Museum & Art Gallery, namely Nick Araho and Herman Mandui of the Prehistory Department and Andrew Moutu of the Department of Anthropology. The trip was undertaken between 23 - 30 May 1997, funded under the auspices of the National Museum and Art Gallery at a cost of K6947.80.

The primary objective of the trip stemmed from the recent developments that have taken place at Kuk, particularly the repossession of the Kuk Research Station by the local landowners, the Kawelka. The trip was undertaken with the intention of establishing an on site assessment of the extent of the impact that repossession of the Kuk station will have on the archaeological features at Kuk. As a means to preserve and protect the archaeological heritage at Kuk the National Museum and Art Gallery is taking steps to have Kuk declared as a World Heritage Site. This report discusses the findings of the Kuk trip as well as putting forward some suggestions as to how and what needs to be done, given the Museum's interest in Kuk.

The Kuk (Tea) Research Station is enveloped within a land area of about 300 square hectares and is located about 15-20 kilometers to the northeast of Mt. Hagen city and can easily be reached within 10-15 minutes drive from Kagamuga Airport. It is located within the territories of a Melepa speaking tribe called the Kawelka. The Kawelka are one of the best ethnographically documented groups of people in New Guinea (M. Strathern 1972; A.J. Strathern 1971, 1972, 1979, 1993; Gorecki 1979a and b, 1985; A.J. Strathern and P.J. Stewart 1998a, 1998b).

Brief History of the Station and Archaeological Fieldwork

The land on which the station is located was alienated from the local landowners in 1968. The settlement took place on the 13th of June 1968, when \$Aus 7,771 was paid

to 63 persons of whom 11 were chosen as agents. The 63 persons signed crosses as their signatures. From the list we cannot tell the clan or tribal affiliations of the signatories (National Archives n.d.).

The Kuk Station was set up in 1969 by the then Department of Agriculture, Stock and Fisheries (forerunner of the current Department of Agriculture and Livestock) when Papua New Guinea was under Australian colonial administration. Following the purchase of the land from the local landowners, the State, since the colonial period, has invested a considerable amount of time and money in developing the land to make it feasible for agricultural use and especially for the purpose of scientific research into tea production for commercial purposes.

The colonial administration, utilising local labour, dug huge drains to get rid of excess water from the land so that it was viable for agricultural research. Houses for government officers and an office complex for administration of the station and research activities were also built and electricity was also brought into the station. A road network was established within the station as well as between it and Mt. Hagen.

At the time of the purchase of the land for the present station Kuk Station was a natural swamp and was under water. Perhaps this was one reason why the Kawelka accepted the price which was offered to them as the portion of land was permanently under water and appeared then to provide no immediate economic value. This view has apparently changed (Muke 1997). Today's young generation of the Kawelka seem to think that the colonial government cheated them and paid only a little for the acquisition of the land and therefore it is proper for them now to reclaim the land from the state.

Prior to the purchase of the land at Kuk and the establishment of the station, the majority of the Kawelka were living at Mbukl in the Dei Council Area which is further north of the present location of Kuk. They had retreated to Mbukl in the period prior to contact with the Europeans primarily because of endemic tribal warfare. The Kawelka began to re-occupy their old area at Kuk from the early 1950s onwards (A. Strathern 1972:32, Gorecki 1979a).

As soon as the colonial government set up the research station and ditches were dug to get rid of excess water from the swamp, land around the peripheries of the station became dry enough for human habitation. The Kawelka returned to Kuk, which was at the time unoccupied, and lived in scattered hamlets mainly along clan lines at the

peripheries of Kuk Station. Having said that, it is also true that some of the Kawelka, prior to the establishment of the station, were living within the vicinity of the swamp on small ridges which were high above the swamp level and dry enough for human habitation. Not all of the Kawelka came to settle around Kuk even after the establishment of the station, but the majority of them live there now.

Archaeological field work at the Kuk Station began about 1972 with Professor Jack Golson. At that point in time, it was not necessary for researchers to seek permission from the local land owners as the land was under the control of the colonial government. Professor Golson and his colleagues who were working with him also utilised local labour in their investigations and involved some local land owners particularly people like Korowa, Nema, Romri and Ru who were distinguished tribal leaders.

In 1982 Pamela Swadling produced for the National Museum a prehistory booklet showing the picture of Korowa standing in a modern drain with a prehistoric drain in its section. This sparked a stunning sensation among the Kawelka who did not know about the agricultural civilization their ancestors were engaged in. It contributed towards educating the Kawelka themselves about the historical significance of the ancient drainage systems and it also evoked in them a certain sense of pride about the history of their own place and people.

Archaeological investigation into the prehistoric drainage at Kuk was more convenient in the days when Professor Golson and his team carried out field work there. In an unpublished field trip report Muke (1997) observed that there are several reasons which made such a study not only possible but convenient:

- the archaeological evidence was recovered within the boundaries of state-owned land;
- it was during the colonial period that the ancient artefacts were discovered and as there was a heavy presence of the colonial administration, the local people saw the colonial officers as their superiors and this view also extended to the researchers who easily went about their activities without being bothered about the possibility of a confrontation with landowners;
- in view of the two points raised above and with a succession of expatriate officers-in-charge at Kuk who were fully aware of the significance of the

prehistoric gardening activities, the archaeologists enjoyed an easy access to the site;

- the archaeologists themselves gradually commanded respect and friendship with the locals which allowed the research to go on without any hostility.

Muke (1997) further noted that Professor Golson and his colleagues did not have to confront the local landowners to gain access to the archaeological site because of the apparent state ownership of the land. The comfort that Golson and his colleagues enjoyed to carry out their research which made Kuk world famous and caused scientists to reconsider the history of agricultural civilizations is over now with the recent developments that have taken place at Kuk in the last 9 years.

This did not emerge out of a political vacuum or as an independent isolated event. It was a result of a much wider political process the country was going through.

The Closure of the Kuk Station and Efforts to Preserve the Archaeological Heritage

By 1990 with the dawn of the Bougainville crisis the government was experiencing financial difficulties as a result of the closure of the large Bougainville copper and gold mine and the loss of revenues resulting from this situation.. Different government departments and organisations had their budgets severely cut and the then Department of Primary Industry (now the Department of Agriculture and Livestock) also suffered the same fate. Consequently it made plans to close the research station. The DPI was having financial difficulties to maintain its agricultural research stations in the country and with security problems and concerns about the safety of the staff, the DPI closed the station at Kuk in 1993 (Muke 1997).

Having said that, it is also important to realise that there is no direct link between the Bougainville crisis and the closure of the research station at Kuk. But the closure of the mine did have a strong financial effect on the country as a whole. As such the Bougainville crisis was more of a catalytic event which immediately preceded the closure of the station. Although we were not able to establish clearly what went on at Kuk between the time of PNG's Independence to the closure of the station, to provide an historical link between these events, there has been a gradual erosion of

government presence not only at Kuk but elsewhere in the country as well. And when the Bougainville crisis set in, it had the incidental effect of terminating what had already been a deteriorating state of government presence at Kuk.

When the station was closed down, the provincial DPI office in Mt. Hagen made several attempts to maintain control over the property at Kuk. An attempt was made to reach a compromise with the local landowners with the objective of allowing public servants to use the vacated houses and for rental payments for the use of these to be remitted to the landowners. A general agreement was reached with the help of Wilson Kelt, a local DPI Officer, to open a passbook account. That arrangement did not last long as monies collected from rents were misused and this prompted the Kawelka to force the public servants who were living in the houses to vacate them (Muke 1997).

This led to the total abandonment of the state-owned research station and at the same time the land owners immediately moved into the residential compounds and houses. It is not clear whether the occupation of the government houses falls in line with traditional claims of ownership of land among the Kawelka (Muke 1997) or whether the neighbouring Ndika (Jika) tribe also occupy the houses. It was never investigated during our field trip because of the sensitivity of the issues and the suspicions that such an investigation might arouse.

By 1993, then, the Kawelka started moving into the station, occupying houses and the office complex. They also started settling and making gardens on some of the blocks of land. On one block of land coffee trees have already been planted and will be ready for harvest within the next two years.

In October 1993 Dr. John Muke of UPNG and Mr. Nick Araho of the National Museum contacted the local landowners and the relevant provincial authorities to convene a meeting with regards to the archaeological features at Kuk. The two also gave a small talk to a group of local landowners at Kuk about the archaeological significance of the Kuk finds and their meaning for the cultural heritage of Papua New Guinea (Muke 1997).

Soon after that meeting a team of archaeology students from the University of Papua New Guinea together with Professor Golson and Dr. Muke met with the local landowners together with officers from Culture and Tourism and DPI Officers from the Western Highlands Provincial Government. The meeting provided an opportunity

- to discuss with local land owners and provincial authorities plans for the future as to how the land will be used;
- for the archaeologists to outline their views about the need to protect this irreplaceable prehistoric heritage of the country;
- to seek ways and means to protect and preserve parts of the Kuk prehistoric agricultural site as a national heritage as well as for future scientific research.

The meeting was held at the place of Ongka (a Kawelka tribal leader), inside a church building and lasted for about six hours. The archaeologists talked about the significance of Kuk and its contribution to world heritage. It was made very clear that they went there as neutral people with only a scientific interest in the area. Both the local people and the provincial government responded favorably to the need to protect the site and the local people indicated that the areas of most archaeological interest would not be destroyed. Should the need arise, the people would contact the National Museum (Muke 1997).

It became apparent during that meeting that the landowners were not pleased with the presence of provincial government officers, as they felt that the Government had abandoned the station and no proper arrangement was made to look after it. Care-taker responsibility was initiated by the people themselves and if the government wanted the property back it must pay them first (Muke 1997).

At the end of the meeting it was agreed that another meeting be called with representatives from the University of Papua New Guinea, and the National Museum would call another meeting to draw up some contingency plans in the event that the local people proceed with intensive use of the land for gardening or settlement which might cause some damage or destruction to the sites, and to look at ways to meet the long term need for archaeological investigations and preservation of the site as it possesses a testimony important to world history (Muke 1997).

Following this, a proposal for funding an intensive archaeological investigation and for further investigations in the areas including looking into ways to resolve the differences between the state and the local landowners was drafted by Dr. Muke. Attempts to secure enough funds for the work were unsuccessful. After this no real concerted effort was made up till 1997 to preserve the archaeological sites at Kuk (Muke 1997).

Between 1994 and 1997 little was going on between the government through its respective agencies such as the Department of Agriculture and Livestock, the Lands Department, and the National Museum, and the landowners. Dr. John Muke continued to make occasional visits to Kuk on his own accord to maintain a continued interest in the archaeological sites there. Professor Andrew Strathern on a trip to make a documentary film for the BBC in mid-1995 observed some local developments in the station, especially gardening and felling of trees, which prompted him to raise concerns about the archaeological heritage of the area with Professor Golson. This subsequently led to a recent field visit by Professor Golson and Dr. Muke. Following their trip another visit was made by Dr. Muke and National Museum officers Nick Araho, Herman Mandui, and myself.

The reclaiming of the Kuk research station and the subsequent utilisation of the land is problematic on several fronts primarily because it involves at least two different parties with almost competing ideologies. The parties concerned here are the Government of Papua New Guinea and the local landowners, the Kawelka, on whose land we have the record of the prehistoric agricultural civilisation. Any amicable compromise that would safeguard the archaeological heritage of the Kuk swamp must take into account how these two parties relate to Kuk with their obviously different ideologies regarding issues of ownership over the land and the different intentions of using the land. Whatever the compromise may be, it must be careful not to raise expectations that, if later not met, might disillusion the landowners.

From the Government's point of view the research station is still a state property. A considerable amount of time and money has been invested in bringing it to the condition where it was when the government officers abandoned the station. The Government still has continued interests in the land and property at Kuk. For instance it has been thinking of stationing a police barracks at Kuk. However, with the recent developments at Kuk, what is at stake now is the legitimacy of the state's interest in the area and how this legitimacy is perceived by the local landowners (Muke 1997).

Across Papua New Guinea the problem of landowners' claims is a common phenomenon. Often these claims arise out of financial benefits that stem from the exploitation of land resources or the use of land for public purposes. In some instances landowners place a demand on the Government to pay compensation to them for land that was purchased from them in colonial days. Along with this is a prevalent belief that the colonial authorities cheated them by luring the previous generation into accepting

exotic times of wealth, which in monetary terms were nothing more than a token of gift-exchange (Muke 1997).

A similar view is held by some Kawelka who feel that they were not properly paid or they were not adequately compensated for the loss of the land which was sold to the state. They feel that the government still owes them money (Muke 1997).

Muke (1997) observed that the Kuk station is like a battlefield in which the Kawelka are using the principles or tactics of warfare to further their own ends. Muke noted that the landowners are using a common practice in tribal warfare called "redomestication of abandoned land". In such a practice the motive of war is not always the permanent acquisition of the land by the winners. Instead after a period of time has lapsed, the refugees may return home and initially inhabit the portions of the land farthest from the battlefield (Muke 1997)

Since the potential for war is higher soon after the truce has been achieved by the warring parties, the individuals who dare to redomesticate abandoned land do so with caution and where their good judgement allows. Initially marginal areas of abandoned land are cultivated first, and in the event of war, some protection may be rendered. If the peace negotiation lasts long enough, the entire population progressively move their settlements closer to the enemy and legally reclaim all the land they have lost. Once the migrants have successfully reclaimed the abandoned land, they assert their autonomy and make claims over the land. The land becomes theirs again (Muke 1997).

Muke (1997) observes that in the case of Kuk Station the Kawelka landowners view the State as their enemy and their hostility towards the State was visible in the meeting in 1993 when the officers from the provincial government were asked not to participate. The Kawelka engaged in a combination of both a war of words and physical confrontation against the government officers in their bid to reclaim and regain control over their original land. The Kawelka also have a fear that the Government may attempt to remove the landowners from the station land at Kuk. If the Government does remove them, the Kawelka will make demands for compensation for "looking after the station" as well as for the work they have put into the land.

Muke observed that at the time the Kawelka were battling with the Government, the Government did not counter-attack to maintain a balance either through a war of words

or physical confrontation by sending in police to arrest or remove the landowners from the station. The Government, through its officers in Kuk and Hagen, should have intervened and stopped the local people when they brought in portable sawmills and were felling gum trees on the station (Muke 1997). Muke believes that the Kawelka were questioning the State's legitimate claim over the land when the trees were successfully felled without any resistance from the State. Then there was the move towards gardening activities which coincided with the partitioning of the major blocks of land among the clans of the Kawelka. Even then there was no sign of resistance or intervention on the part of the State (Muke 1997).

The stage is now set so that the Kawelka can claim that they are the legitimate owners of the Kuk station and whatever negotiations or deals that have to do with the Kuk swamp land must necessarily be with them and not the State as the authority. The Kawelka have successfully presented their claim as legitimate landowners to the Kuk property with the planting of coffee trees in some blocks of land. Muke noted that the planting of coffee trees not only serves as a symbol of legitimacy or permanent reoccupation, it is also an asset which the landowners can use to bargain for a huge compensation claim in the event that the State moves in to reclaim the Kuk station from them.

Heritage, Scientific Research and Issues of Intellectual Property Rights

Finally, this area of Papua New Guinea has been under anthropological and archaeological research for a period of over 30 years. Having become acquainted with researchers and the kind of work they do, the local people have developed their own stereotypes about the acquisition of 'local knowledge' and of how this knowledge gets to be used. I will discuss my personal appreciation of this issue at the end of this report. During our brief stay in Kuk people raised questions about whether or not there is any commercial benefit in archaeological research and in particular the Museum's attempts to preserve and protect the archaeological heritage at Kuk. While these questions may stem from their misunderstandings about archaeological excavations and geological explorations which lead to mining and drilling for commercial purposes, the questions may serve to illuminate how the Kawelka creatively negotiate and mobilise their claims in the face of interventions.

Tribalisation of the Kuk Research Station

As soon as the government officers left the station in 1993, the Kawelka moved into the station and reclaimed the land as well as claiming all the property on the station. The figure at the end of this report shows the current division of station land among the three main clans of the Kawelka tribe.

I now turn to A. Strathern to provide a brief historical-ethnographic account of the Kawelka. A. Strathern (1972: 32, 34) records that:

The Kawelka in the 1960s lived chiefly on the mountain slopes north of the Sepik-Wahgi Divide within Mt. Hagen District, in what since 1962 has been Dei Local Government Council Area. In 1964 the Kawelka numbered 860 persons. In the last twenty years many of the Kawelka have re-colonised the Kuk area which their tribe occupied before. [The following data also relate to demographic circumstance in the 1960s, since today the population of the Kawelka is much greater than it was then.]

"The Kawelka are not a large tribe by Hagen standards. A few tribes in the Central and Western Melpa areas reach sizes of 5-7,000 people and the segmentation pattern of these is correspondingly more complicated than that of the Kawelka. An overall average size for Melpa tribes is c. 1,060 persons; within Dei Council the figure is 820. These averages are reduced by the fact that a few tribes have shrunk to a very small size, sometimes to fewer than 100 persons. In the Northern Melpa area (Dei Council plus some Baiyer and Jimi Valley groups) there were two tribes in 1964-1965 with 2-3,000 persons; four with 1-2,000; and thirteen within the range of 68 to 1,000.

Gross overall population density within the Dei Council is not high by comparison with some other parts of Hagen . . . It amounted in 1964-5 to only 67.81 persons per square mile (with a population of 14,323 persons in an area of 2,112 square miles).

Effective density in the territory of the Kawelka is probably between eighty and a hundred persons per square mile, not very different from the average density for the Central Melpa area (in the early 1960s) of 118.1 persons. The Kawelka do not consider themselves to be en bloc short of land, although certain sub-groups

have from time to time found themselves in difficulty and men living in the recolonised area in 1969 became embroiled in a dispute with men of a neighboring segment of the large Ndika tribe, which was ostensibly over land. The development of cash cropping, which requires garden land to be removed from the ordinary cultivation processes and to be planted with semi-permanent coffee trees, has in recent years increased people's awareness of the material value of land claims and the possibility of land shortages. There is an apparent lack of overall land pressure and concomitant inheritance problems which probably accounts for the reason why the Kawelka and other Melpa groups maintain fairly flexible attitudes to the incorporation of 'outsiders'. " (A. Strathern 1972:32-34).

Land pressures and population densities, however, have greatly increased by the 1990s. While there are no current data available on the demographic trends of the Kawelka, a look at the national population census carried out in 1980 and 1992 reveals that the population of the Western Highlands has increased tremendously, so too therefore has the province's population density. This means that among the Kawelka, and the same may be said for other parts of the Western Highlands, land related issues will increasingly become a major problem, and the Kawelka will become short of land. A. Strathern stated that the introduction and development of cash cropping, which requires that garden land be removed from ordinary food cultivation so that coffee can be planted, has increased the people's awareness of the material value of land and the possibility of land shortages (ibid:34).

The Social Organisation of the Kawelka

As adapted from A. Strathern (1972:35) Figure 2 provides a formal segmentary paradigm of sub-groups down to the sub-sub-clan levels within the Kawelka tribe.

The Kawelka tribe is divided into three clans which are Kundmbo, Mandembo and Membo. These clans are divided into sub-clans and further down to the level of sub-sub-clans. The segmentary paradigm provided by A. Strathern shows that following a clan is a clan section and then the sub-clan and sub-sub-clan.

To understand the categorisation of the different group levels, A. Strathern (1971:15-36) provided the following definitions which I will just summarise. At the highest level of his segmentary paradigm is the tribe. A tribe is a political bloc formed by military

alliance between the segments of an origin group. Such an origin group may emerge from sharing a mystical divination object or maybe through an origin myth. Major functions of the tribe are warfare against traditional enemies or for large ceremonial exchange or cult occasions (ibid: 19-20).

The second segmentary level below the tribe is a clan. A. Strathern states that the clan plays a very important role in social and political action, that is, the level of clan is the site where ceremonial exchanges and warfare are socially engineered. At the level of clans, clansmen are responsible "for taking blood revenge and paying compensation for killings inflicted in warfare. They organise moka exchanges together. They possess, and are settled on a single territory, except in cases where segments of the clan have migrated, to colonise a new territory or to return to a previous one" (ibid: 23).

In between a clan and sub-clan is a clan section. A. Strathern reports that "not all clans are divided into sections and they are recognised by their high degree of social distance as compared to sub-clans which enjoy a lesser social distance. "Those that are, seem to be in a process of fission . . . incipiently taking on the status of the clan. If the fission is completed, the section names become clan names, and the original clan name may disappear or . . . move to the level of a major-section name" (ibid:25). A. Strathern reports that in general there is a degree of mutual disparagement and rivalry between clan sections. Such disparagement is not found between their constituent sub-clans and often emerges from competition between big-men in the clan sections. They may settle and possess separate territories and engage in warfare separately (ibid:25).

Following a clan-section is a sub-clan. Sub-clans are the site of independent mutual exchanges and exchanges are important for the sub-clans to assert their autonomy. However, a certain degree of animosity goes on between and within sub-clans, albeit it is usually discouraged (ibid:26).

The next level following the sub-clan is the sub-sub-clan. This level of segmentation is internal to the group itself and exists mainly to further particular interests of the members of this group. There is also much fluidity at this level and often knowledge of the existence of particular sub-sub-clans and its members in a particular clan is not clearly known. A. Strathern reported that Hageners create these small sub-divisions in order to give the impression that their group has many men and to obtain separate shares in ceremonial gifts for each little segment. In private they admit that these groups are very small (ibid:26-27).

As A. Strathern repeatedly stated in his writings, and as I also came to realise, a salient feature of the social organisation of the Kawelka is that there is much fluidity at the segmentation levels below the clan level. The segmentation patterns of the three clans differ in certain respects. People continue to invent and abandon their affiliations with particular groups for different reasons. For instance, A. Strathern reported that "It appears possible from accounts, that some of the Kundmbo sub-clan names have been invented within the last twenty five years, and that the two contemporary clan sections earlier functioned as sub-clans" (A. Strathern 1972:42).

It appears that groups are constantly being made or unmade in the face of particular circumstances. The idea of a particular social group, especially at the segmentation levels below the clan level, often emerges as a reaction to particular situations, for instance with the prospect of material benefits like compensation payments, a clan or a sub-clan can create a new sub-sub-clan etc, to be able to mobilise claims to its advantage.

This feature of the social organisation for the Kawelka will present a problem for us if the Museum considers paying compensation for particular blocks of land which are currently possessed by the different Kawelka clans. A best strategy would be to engage community participation initially and then eventually deal with individual block owners.

A Kawelka Rationale for Reclaiming Kuk from the State

In a discussion with Ru I learnt that one of the major reasons why the Kawelka are so adamant about their ownership of the land in the Kuk station is because of population pressure. My attempts to access of the 1992 population reports for the Western Highlands province were unsuccessful so I cannot provide any projections about the demographic trends of the Kawelka and how these trends will affect their land use at Kuk.

It is important that we see the tribalisation of the Kuk research station also as a consequence of population pressure. The population figures of 1982 and 1992 do not tell us exactly the population figures for the Kawelka as compared to A. Strathern's (1972) ethnographic account which records specifically the population of the Kawelka at the time he was carrying out field work there in the 1960s. However an appreciation of the 1982 and 1992 population census figures runs as follows.

According to the reports from the National Statistical Office, the Western Highlands Province has a total land area of 8,897 square kilometres. In 1980 Western Highlands had a population of 262,886 persons. In 1990 the population of Western Highlands had become the largest in PNG, with the exception of Morobe. Its population growth rate between 1980 and 1990 was slightly higher than the national average in spite of the fact that Western Highlands has a highly mobile population and migration outside of the province is frequent. It recorded a population growth rate of 2.5% per year which means that the actual population will most likely double within the next 10-20 years. More than 80% of the population was enumerated in the districts Hagen Central, Hagen North and Waghi. The two remaining districts, Jimi and particularly Tambul, have, however, a population growth rate which is much higher than the provincial average.

Western Highlands has a small land area by PNG standards. In 1990, it had the highest crude population density of all provinces, viz. 38 persons per square kilometre. Its physiological population density was 81 persons per square kilometre. Physiological density is the number of persons per square kilometre of arable land or land which is being actively used for agricultural purposes. The figures provided by the National Statistical Office suggest that most of the arable land is being actively cultivated, thus signalling that land available for agricultural purposes is being used up at an increasingly fast rate.

In our brief stay in Kuk I observed that the Kawelka like to make gardens close to their homesteads, as this allows their women to have easy access to the gardens to harvest sweet potato for the pigs. In the gardens they plant basic crops like sweet potato, corn, bananas, cabbages, and tomatoes. Food and vegetables gathered from these gardens are consumed by individual households, while some are sold at the local market in Kuk or in Hagen. Most of the Kawelka are scattered along the peripheries of the station and use the land in the station for food gardens.

Only one block of land had coffee planted alongside with other food crops and vegetables. But the coffee plants will become permanent as they grow and take up space and nutrients other food plants might require to grow. The particular block of land which has coffee planted is owned by Ru. While Ru is very much in support of the initiative of the Museum to preserve archaeological sites at Kuk, he may or may not be fully aware of the potential threat the roots of the coffee plants have for the archaeological structures beneath the earth surface. When I asked Ru whether other Kawelka will plant coffee trees on their blocks of land, Ru replied that some might do so

covertly and with fear that the Government may reclaim the land from them again. Others, especially those who have many children and sons in particular, he says will not plant coffee because coffee trees use up land that will be used to provide food for them.

Intergenerational Conflict of Ideas among the Kawelka

What also became apparent to me while we were in Kuk was the limited knowledge, or the lack of knowledge, especially among the younger generations of the Kawelka, of the historical significance of prehistoric finds which their land possesses. Along with this is an intergenerational conflict of ideas about how the land which contains the prehistoric structures is to be used. The older and the younger generation of Kawelka have different views about what to do with the land at Kuk.

The older generation easily supported the idea of preserving the prehistoric structures but they may be likely to lay claims for compensation against any loss of land, which they are now using. The younger generation on the other hand do not want to give away the land and the station back to the State. As I pressed them about possible government intervention to reclaim the land and the station from their possession most of the young people I talked to indicated that they would demand compensation for the development they have put into the land and the "care-taker" responsibilities they assumed as soon as the government officers left the station.

As it appears to me, the problem of intergenerational conflict of ideas is a result of two main reasons:

- the anthropological and archaeological research which has been carried out among the Kawelka was during a time when most of the present young generation were children growing up and they have since not been informed (especially in their schools) about the significance of the place and the kind of work done in those researches.
- the younger generation of Kawelka were not educated about the history of their own place and people with the consequent effect of their lack of knowledge about the historical significance of the archaeological finds at Kuk and their significance for Papua New Guinea's cultural heritage.

Finally there have been sentiments raised which are related in some respects to the debate on intellectual property rights. During our brief stay in Kuk there were no sentiments of such a nature raised, partly because we never probed the people whom we talked with. However, Muke (1997) reported that on his earlier trip in a discussion with Ru, Ru had raised a pointed remark in relation to archaeological investigations at Kuk

Jack Golson i kam na mipela I wok wantaim long baret. Em I baim mipela pinis. Tasol Jack i kisim save i go long Australia, em i no lusim wantaim mipela. Ol samting bilong tumbuna yu laik mipela i lukautim em tru samting bilong bihain. Nau ol Kawelka sot long graun na ol kisim blok pinis. Em i hat tru long mi stopim ol long noken bakarapim ol baret bilong tumbuna. Yu save taim ol planim kaikai pinis ol bai askim yu long baim ol sapos yu laik wok long graun bilong ol (Muke 1997: 13).

Embedded in what Ru raised are two important issues which I believe must be taken into account when we are dealing with the Kawelka about preserving the archaeological heritage in Kuk. Firstly it affirms the reasoning that the Kawelka are adamant to maintain their claims to the land at Kuk because of population pressure. This means that if the Museum were to follow through in its initiatives in preserving the archaeological heritage, we would have to devise a framework of mutual arrangements whereby the Kawelka could continue to use the land and concomitantly the archaeological structures are preserved and protected from destruction.

Secondly Ru's statement has implications which are related to the wider debate on intellectual property rights which is now gaining prominence in Papua New Guinea. Ru's statements made specific remarks on the notion of ownership and reciprocity of knowledge. The issue of ownership of knowledge is difficult and complicated and raises ethical and epistemological considerations. My own belief about these sentiments is that they were raised within the context of the deep and embedded relationships that have been established between researchers and the local people with whom they lived and carried out their research. As the comments were raised in a personal context, it follows that such sentiments cannot be simply extended to issues of intellectual property rights, as they emerge from a personal encounter between researchers and local people. Therefore it is only fair that such issues are negotiated at the level of personal relationships.

Nonetheless it is important that researchers must lay out clearly the nature of their researches, outlining what kind of benefits such research will bring to the particular community and the country in general, and the merits and demerits of such a research so that the people whom the researcher(s) is/are working with will be able to make an informed and intelligent decision about whether or not to allow such research to go on in their community.

To allow the sentiments that were raised in Kuk to be brought into the wider debates of intellectual property rights would be an overstatement. However, it will be fair if these sentiments are directed towards the present legislative and policy framework within which scientific research is carried out in Papua New Guinea so that policy initiatives are made to provide for reciprocity of knowledge and local capacity building and development in general. Furthermore, the sentiments can be used to examine the ethical and epistemological considerations which underlie scientific research. Specifically what ethical commitments does scientific research imply toward local communities where researchers are based? At an epistemological level, how can research such as ethnographic work with its self-reflexive character be of use to local people?

Conclusion and Recommendations

The trip has left us with a lot more to think and worry about than we desired. What is needed to save the 9,000 years old archaeological heritage at Kuk from destruction is decisive action on the part of the National Museum together with a mutual compromise with the local landowners. If the odds appear unbeatable to arrange a compromise about the land at Kuk with the landowners, the Museum will have to abandon its initiative in preserving Kuk for posterity.

As recommendations for steps to be taken to preserve the archaeological heritage, the following general points are in order:

- There must be a constant open and formal dialogue with the local landowners. Particular people that we need to establish contact with are individual block owners some of whom we have identified already as illustrated in our sketch map (Figure 1).
- Any fieldwork team that will be carrying out work in future at Kuk must be based at Kuk so that we can maximise exchanges, dialogue and understanding with the

local landowners about the interests of the National Museum.

- We must be careful not to raise unrealistic expectations with the idea of preserving the archaeological heritage. If we want to preserve the area and make it available for tourist visits, we have to work closely with the local landowners and the provincial government authorities to have extensive publicity of the site so that we can help attract tourists to the area; we also have to worry about how the money from visitors will be shared among the Kawelka clans or individual block owners as discrepancies may arise about money from visitors which may lead to internal conflicts and eventual destruction of the archaeological records found there.
- We must endeavour to educate the Kawelka and the Western Highlanders generally about the archaeological heritage of Kuk. This can be organised most successfully during field visits when our officers are out at Kuk. Officers can try to organise small gatherings to educate and raise awareness about the archaeological significance of the Kuk heritage.
- The Museum must consider working together with the Department of Education to produce a social science syllabus for students in our primary and secondary schools to educate them about the historical heritage of this country including the significance of the Kuk finds and the archaeological heritage at Kuk.
- We must attempt to get the appropriate census information so that we can make projections about the demographic trends of the Kawelka and how these will affect the land on which Kuk stands. Future research must get access to this information, in particular information about the population density, growth and fertility rates and physiological density. Such research will also need to specify the particular census divisions and census units of the Kawelka and particularly Kuk itself so that projections can also be made from there.
- We must take into account A. Strathern's words about how land for food gardens is being replaced with coffee gardens with the effect of raising the people's awareness about the material value of land and the possibility of land shortages and land claims. In the old station at Kuk now there is only one plot of land with coffee trees, owned by Ru. As soon as Ru starts harvesting his coffee, it will be interesting to see how many other Kawelka will start planting coffee as well.

--- Future work on Kuk must research into and establish the history of how the land at Kuk was alienated from the Kawelka.

--- Finally in terms of future research and with retrospect to the recent field trip, there were mixed sentiments presented to us by different people. Generally the trip was a success in that it was the first time that the National Museum was able to present to the people its interests in the land at Kuk. There was a certain degree of reception and interest in the kind of work the Museum does and the reasons why we were there. Although we experienced no sense of animosity towards us we must not downplay any of those possibilities. As we were identifying ourselves as people with the interests of continuing the work Professor Golson left behind, it became easier to discuss and work along with some of the Kawelka who came to share with us the kind of interest we have.

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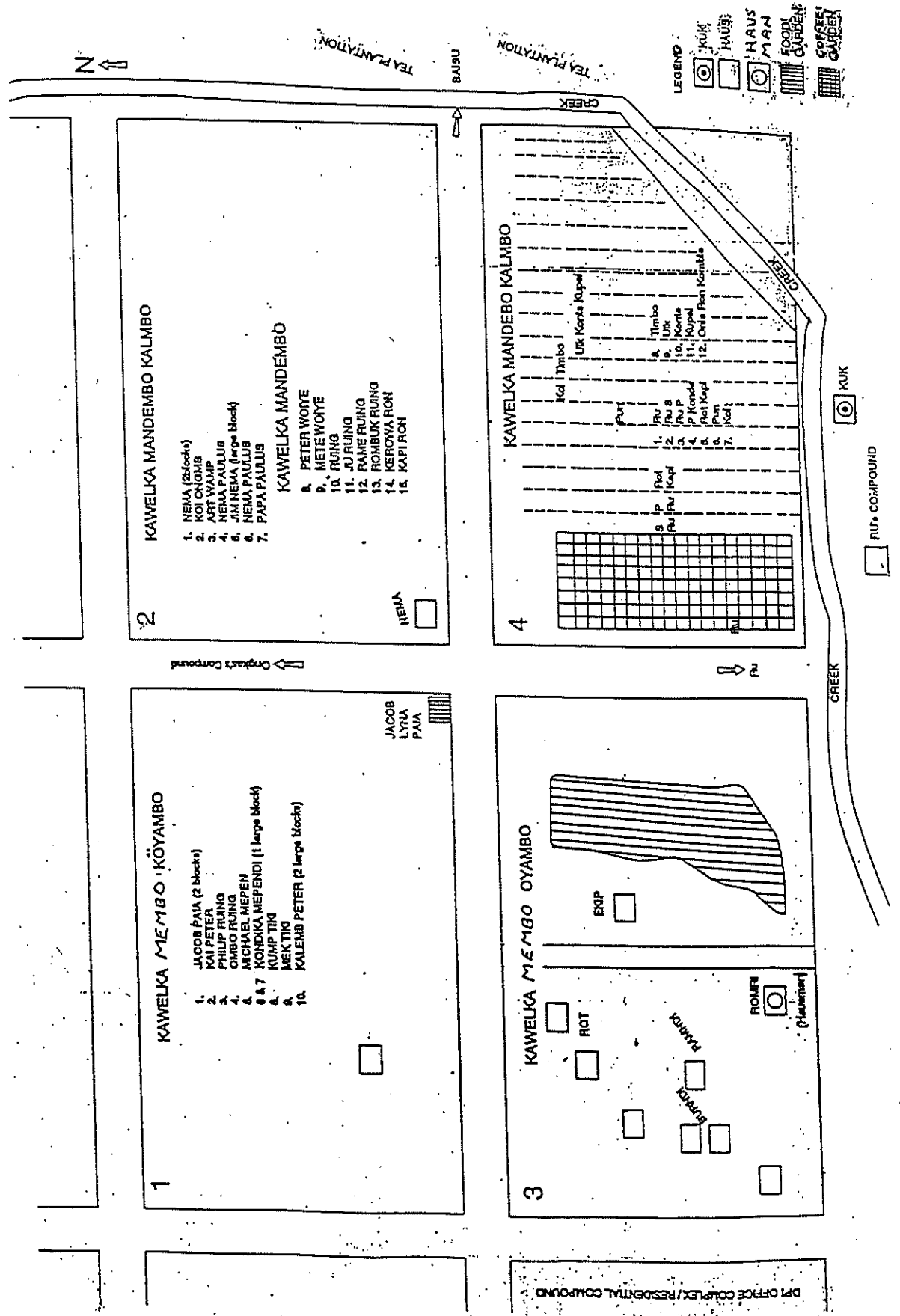
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FIG. 1 : TRIBALISATION OF KUK PREHISTORIC SITES
(Not drawn to scale)



THE KAWELKA

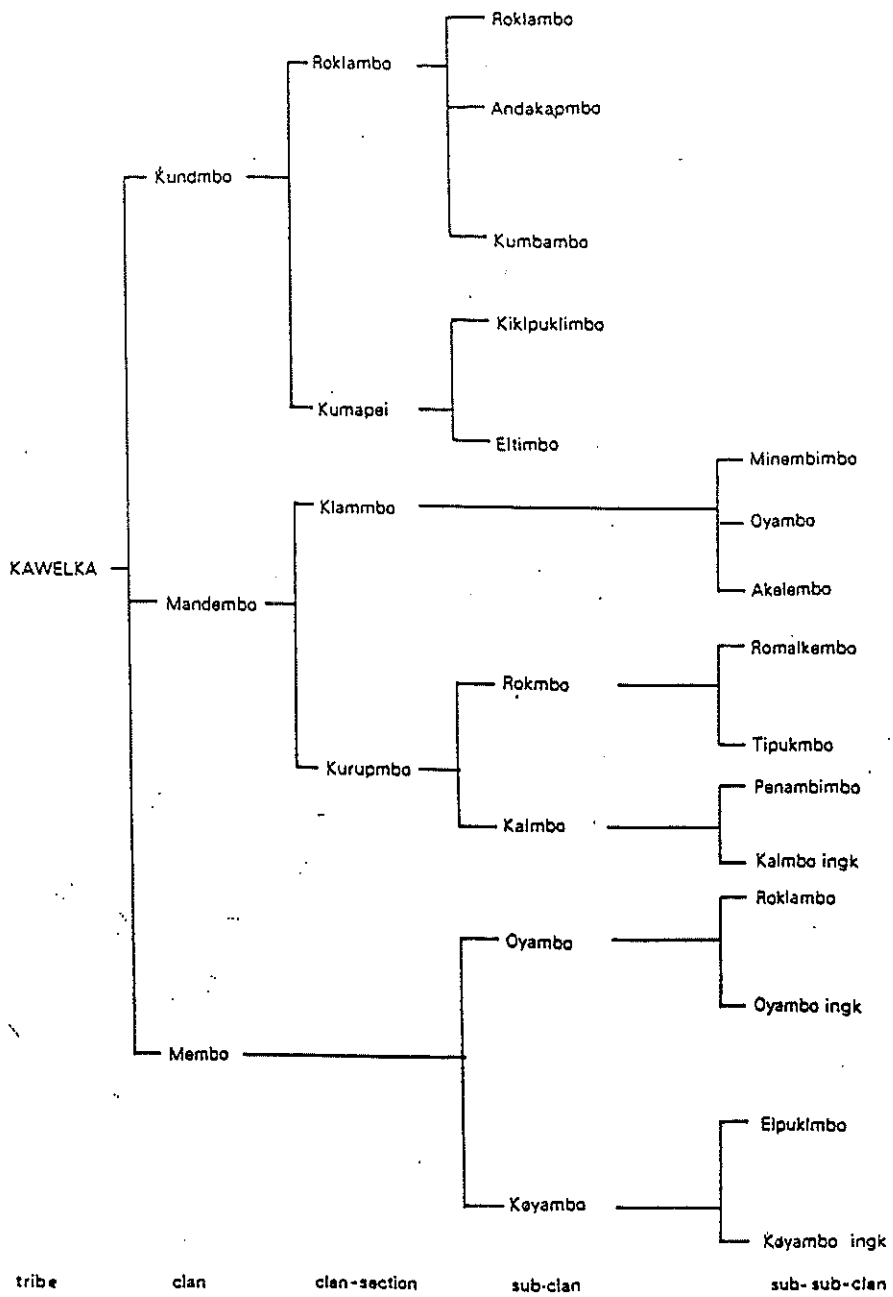


Figure 2. Kawelka segments

b. Kuk Swamp at Present - Technical Considerations

by Herman Mandui

This survey was conducted between the 22 - 30 of May 1997. The basic aim of the archaeological survey was to conduct an 'on the spot' assessment of the present land use patterns practiced by the Kawelka people on the blocks created by the Department of Primary Industry back in the late 1960's. Only the blocks highlighted in Professor Jack Golson's 1972-1977 Investigations Report (see Figure 1) and categorized as;

1. Essential
2. Desirable and
3. Notify before development

were surveyed due to time limitation. These blocks are located in the southeast portion of Kuk swamp.

This survey also took into consideration the individual subsistence crops grown in individual blocks in relation to the existing prehistoric drainage features as reported by Professor Jack Golson between 1972 and 1977. This will formulate the basis of the impact that recultivation will have on prehistoric features beneath the ground.

However, information from experts of related fields must be sought to give a better understanding of existing land use patterns by the Kawelka and the impact these will have on archaeological material.

The survey took into consideration a number of issues including;

- contemporary drainage types
- types of subsistence crops grown on each block
- types of commercial crops grown on each block
- sequential type of cropping
- technique of 'encroachment' and
- general observations

The results of this survey form the technical component of this report.

Contemporary Drainage Types

Drains are dug to divide cleared portions of land into sub blocks. I noted 3 main

contemporary drainage types which are in use by the local people. As land is cleared (through burning and physical uprooting of swamp pitpit) the land is marked and two main drains are dug on each side of the land. These main drains act as the main system which drains water out from the sub block to existing outlets; outlets being the large drains dug during the initial draining of the Kuk swamp (about 30 years ago). The large drains are channeled toward Tibi creek which then filters into the Wahgi river in the east (and other drainage which runs into the Guga river in the west).

The smaller drains (D1) and (D2) exist within the sub blocks and they form the grid iron type of structure within the sub block. (See Figure 2). The larger drain (D3) runs along the block and divides one block from another. Drain D3 was dug during the initial drainage of the Kuk swamp in the late 1960's. They have now been back filled through redepositing and growth of swamp pitpits.

The contemporary drain width and depths were measured to see if there was a possibility of disturbance to the prehistoric drainage systems beneath the ground.

Basic drainage measurements noted;

Drain Type (D1)	
Depth	30 cm
Basal width	30 cm
Drain Type (D2)	
Depth	50 cm
Basal width	50 cm
Drain Type (D3)	
Depth	100 cm
Basal width	150 cm

It is important to note that all drainage depths increase (due to maintenance) and decrease (due to backfilling) over time. In some instances, as coffee trees mature, drain D1 disappears altogether, leaving only drains D2 and D3. This will be discussed elsewhere in this report.

Subsistence Crops

The type of subsistence agriculture used in Kuk is a kind of mixed cropping system. Note that the use of the term subsistence does not strictly imply that the crop grown is to be eaten by the grower as some were noted being sold in the local market and at the main market in Mt. Hagen town. The main difference made here is between short term and long term cash crops (See Table 1).

Subsistence crops noted in the blocks included peanuts, sweet potato, taro, cucumber, rungia, pumpkin, hibiscus, ginger, round and Chinese cabbages, wingbeans, spring onions and bananas. These are all short term crops except for bananas which are used as the initial shade tree for commercial coffee trees.

Commercial Crops

Arabica coffee is the main commercial crop which was noted growing in the blocks. According to Cobley (1956), 'coffee bushes begin to bear fruits when they are 3-4 years old and may continue to do so for 50 or 60 years.' Coffee trees may pose a problem with prehistoric sites through their root penetration. The blocks assessed showed recently planted coffee trees at the youthful stage. Ru's block is the only block noted where coffee has recently matured and is in its first stage of harvest.

Note that not all blocks have coffee cultivation at present. Coffee has been noted only in Blocks 9A, 10A and 11B. However, given time I think that coffee will be cultivated within the remaining blocks. It is not known if coffee has been cultivated in the north western portion of the swamp.

Commercial tea is grown in the extreme eastern end, on the other side of Tibi creek, on the higher ground towards Baisu Correctional Institution. This is outside of the area of archaeological interest. No tea was noted cultivated in the blocks assessed.

Table 1. Types of crops cultivated at Kuk during the survey

SHORT TERM CROPS

Peanuts (*Arachis hypogaea*)
Sweet potato (*Ipomea batatas*)
Wing Beans (*Psophocarpus tetragonolobus*)
Taro (*Colocasia esculenta*)
Cucumber (*Cucumis sativus*)
Round Cabbages (*Brassica oleracea*)
Chinese Cabbages (*Brassica pekinensis*)
Ginger (*Zingiber officinale*)
Pumpkins (*Cucurbita pepo?*)
Hyacinth Beans (*Lablab niger*)
Bristle Grass/Pitpit (*Saccharum edule*)
Aibika (*Abelmoschus manihot*)
Native Cress (*Rungia klossi*)

LONG TERM CROPS

Bananas (*Musa* spp. Australimusa Section)
Coffee (*Coffea arabica*)
Tea (*Carmellia sinensis*)

Sequential Cropping

This technique is locally developed by village people in the Wahgi valley and involves the cultivation of short term crops for breaking down the swamp soil structure before commercial crops such as coffee and tea are grown. Short term crops are either consumed immediately or sold for cash. This practice was first pointed out to me by Dr. John Muke on the Minj terraces where coffee was cultivated in the early 1990's. As the swamp is drained, first a layer of aquatic soil is exposed and crops such as corn and peanuts (which are a legume plant) are planted. Young banana suckers are also planted. As short term crops are harvested and removed, young coffee trees are planted along with banana trees which act as shade trees. This technique will be repeated until the whole block is cleared. During the period of assessment, no block was completely developed, however the most advanced block was Ru's.

Encroachment Techniques

Dr. John Muke noted that during the recultivation of the blocks of land, the people normally cultivate and till soil from the centre of the block outwards. This means that no disturbance of the blocks is initially seen from the roads. It is practically impossible to see any disturbances as the track is camouflaged and unless one enters the block, nothing is seen as occurring on the block. As the person expands outwards from the centre of the block, the cultivated areas are cleverly concealed until long term crops

have reached a mature stage and cannot be removed unless some form of compensation is paid. This is the case as seen in Ru's block. (See Figure 3)

Hired Laborers

It was noted that most of the initial work on the blocks was conducted by laborers from other parts of the Wahgi Valley as hired contract workers. This could pose a problem of destruction to the archaeological features at Kuk as they are not aware of the archaeological importance of Kuk.

Contemporary Settlements

All the recent houses noted in the blocks are built in traditional 'thatched roof' style. Apart from the permanent buildings built in part of Blocks 4 A/B, 5 A/B and 6 A/B, no other permanent or semi permanent buildings were noted in the blocks surveyed. This would indicate that the Kawelka still have a fear of the State moving in to reclaim the land.

Drain Types and Commercial Coffee

The most matured (>10 years) coffee trees are grown at the eastern end of Kuk, outside the area of current archaeological interest. It is interesting to compare drainage types in relation to coffee growth in that area with Ru's current plantation in Block 10A. In Ru's coffee block, 3 main drains were noted. However, only 2 main drains were noted in the coffee plantation on the Baisu section. The difference is due to stages in coffee growth. In the youthful stages of coffee growth, 3 drains are needed to drain water out. However, as the coffee trees mature, the smallest of the drains (D1 inter sub-block feeder drain) disappears through infilling and only D2 (sub-block drains) and D3 (main sub-block divisional drains) remain. Finally D2 disappears and only D3 remains in the final stages of the coffee tree growth. (See Figure 4)

Pig (*Sus scrofa*) Impact

There is no direct threat from pigs at this point in time because all cultivated blocks are fenced. The fences also acted as an indicator of which blocks were cultivated. However, there was a noticeable difference in fences. In the blocks which were newly cultivated, the fences erected were of a wooden nature (as seen in Block 10C), whereas in the blocks which had cattle or pig fencing (e.g. Block 9A) they tended to be 'established'. In Highlands societies, pigs are normally used as 'tractors' for gardening but this was not noted during the Kuk survey.

Gum (genus Eucalyptus) Trees Impact

The trees were planted by the then Department of Primary Industry during the initial formation of the Kuk Research Station because of their water tolerant capacity and their ability to soak (absorb) water through the roots. In swamp conditions the tree acted as a 'sponge' and was one of the main factors in contributing towards a reduced water level in Kuk swamp. However, for archaeological interests the large penetrating roots of the gum tree are responsible for the destruction of prehistoric drainage features by growing on exposed contemporary drain walls. At present, the gum tree is not seen as a threat because of its harvesting by the Kawelka for housing material and commercial purposes.

General Observations

With reference to Professor Jack Golson's diagram of major archaeological interest areas, Blocks 10C to 12C and Blocks 10D to 12D employ very heavy encroachment techniques. Pockets of subsistence gardening are found mostly from the centre to the eastern edges of the blocks. The western edges of the blocks are still heavily vegetated and during the time of survey, no camouflaged tracks were noted along No. 4 N/S Road. However, tracks to subsistence gardens follow fan slopes of the hill to the northern end and come in from the north east. It was also interesting to note that a small number of young coffee trees were planted with mixed subsistence crops within these blocks.

One of the possible reasons why people are taking time in cultivating these blocks is the availability of land at the southern fan slopes of Ep Ridge. However, as population increases, cultivation of the existing blocks is imminent. In the southern sections of Kuk swamp, blocks are heavily cultivated because of the scarcity of land and the impossibility of population movement further south of Kuk swamp.

The following notes about road accessibility in the north eastern portion of the Kuk swamp were made;

No. 4 E/W Road is completely inaccessible by vehicle. Foot tracks are present.

No. 3 E/W Road is accessible by Four Wheel Drive vehicles only up to Blocks 10C and 10D.

No. 2 E/W Road is inaccessible by vehicle. Walking tracks are present. (See Figure 1) The area described by Professor Jack Golson as true swamp was dry and accessible by walking at the time of survey but the presence of large logs (most probably gum trees) indicated, a rough peat bog after heavy rain.

Recommendations

In respect to the above report with attached appendices following I recommend;

1. That specialist surveys be conducted by experts in related fields to assess maximum impact of present land use patterns by the Kawelka.
2. Advice to the Kawelka on cultivation of substitute commercial crops other than coffee (e.g. cultivation of taro).
3. Constant monitoring of Kuk land use patterns by an archaeologist with support from the Goroka McCarthy Museum.
4. Identification of extant route of the Kuk phase 1 drainage east of Kuk.

Reference

Cobley, L.S. (1957) An introduction to the botany of tropical crops. (Second edition revised by W.M. Steele) Longmans, London.

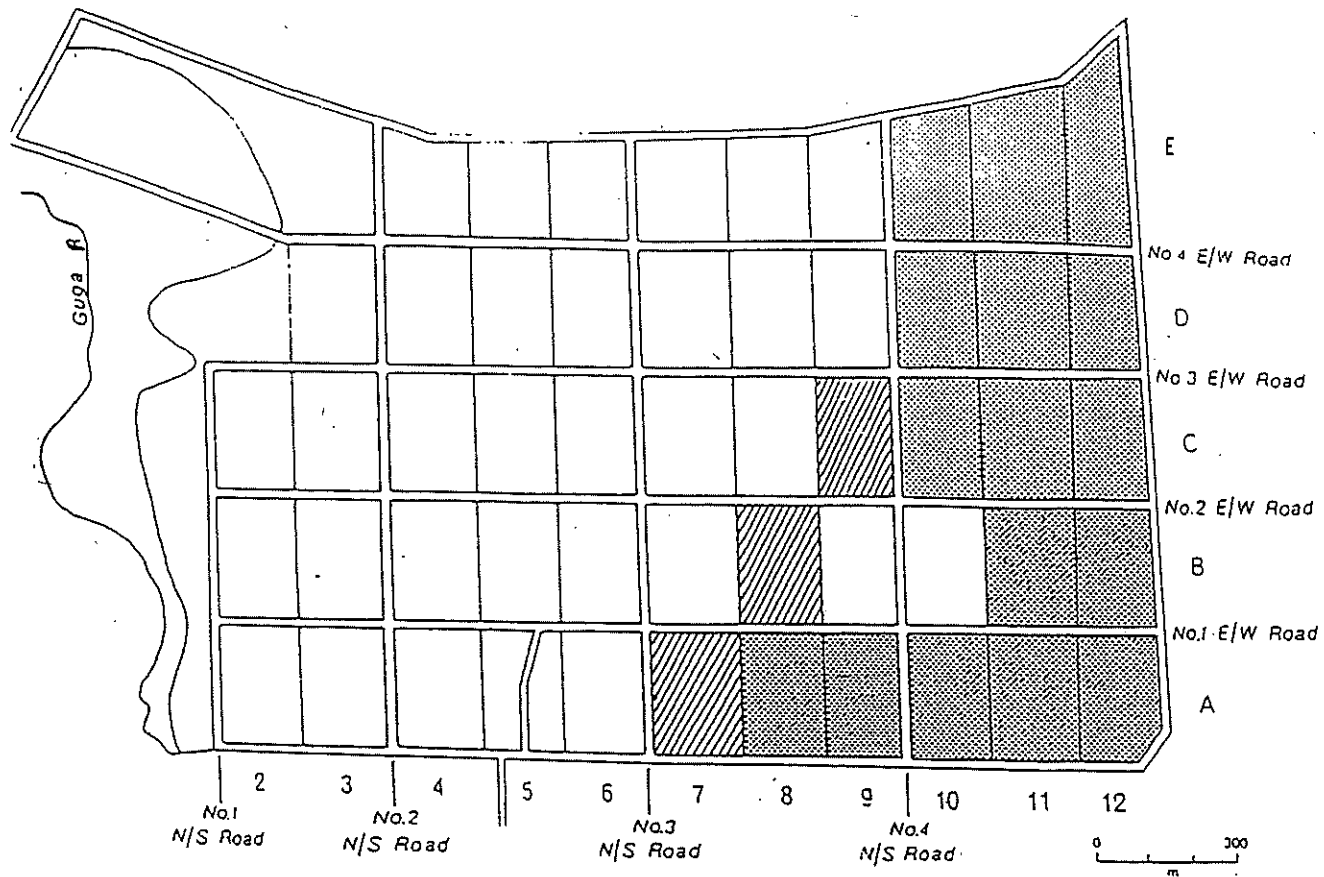


Fig. 1A Blocks of major archaeological interest (reproduced from Golson 1984)

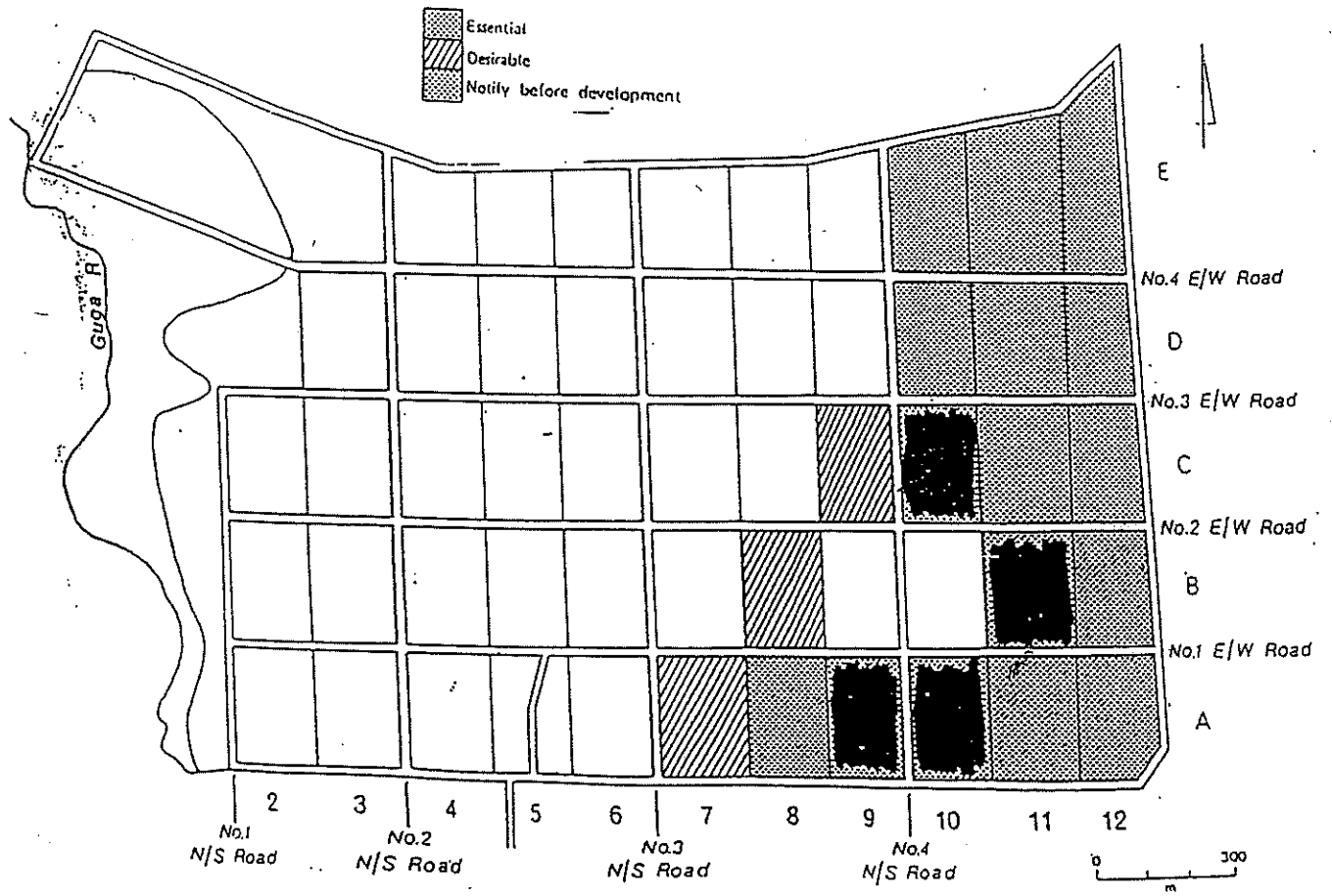


Fig. 1B Blocks (in black spots) showing present coffee cultivation

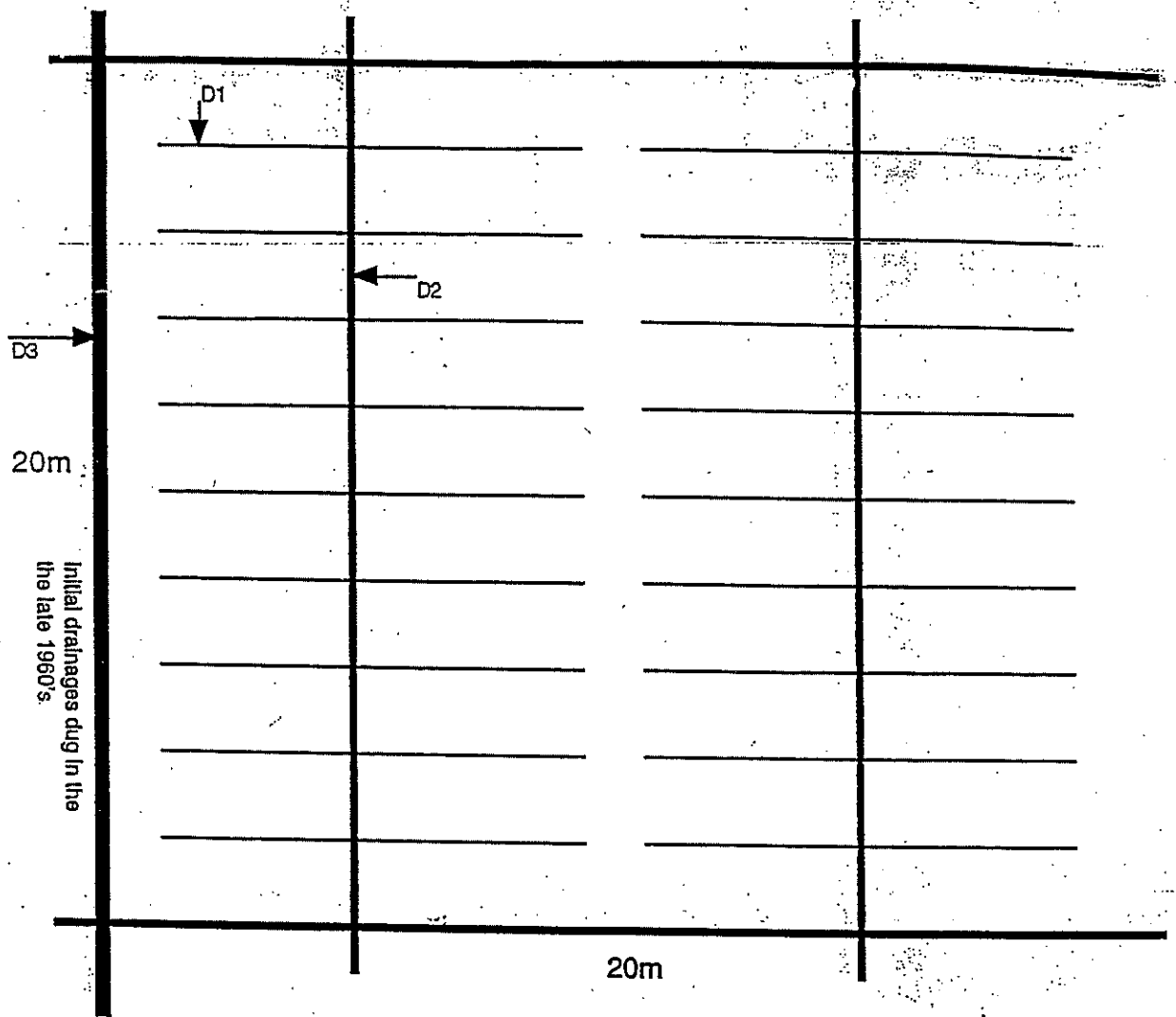


Fig. 2a Organisation of drainage systems within a sub-block at SE Kuk

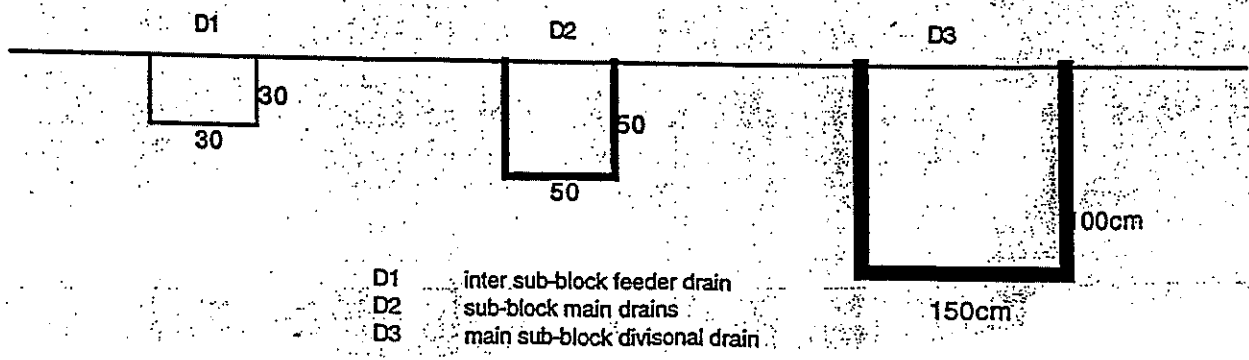


Fig. 2b Drain depths and widths at Block 10A

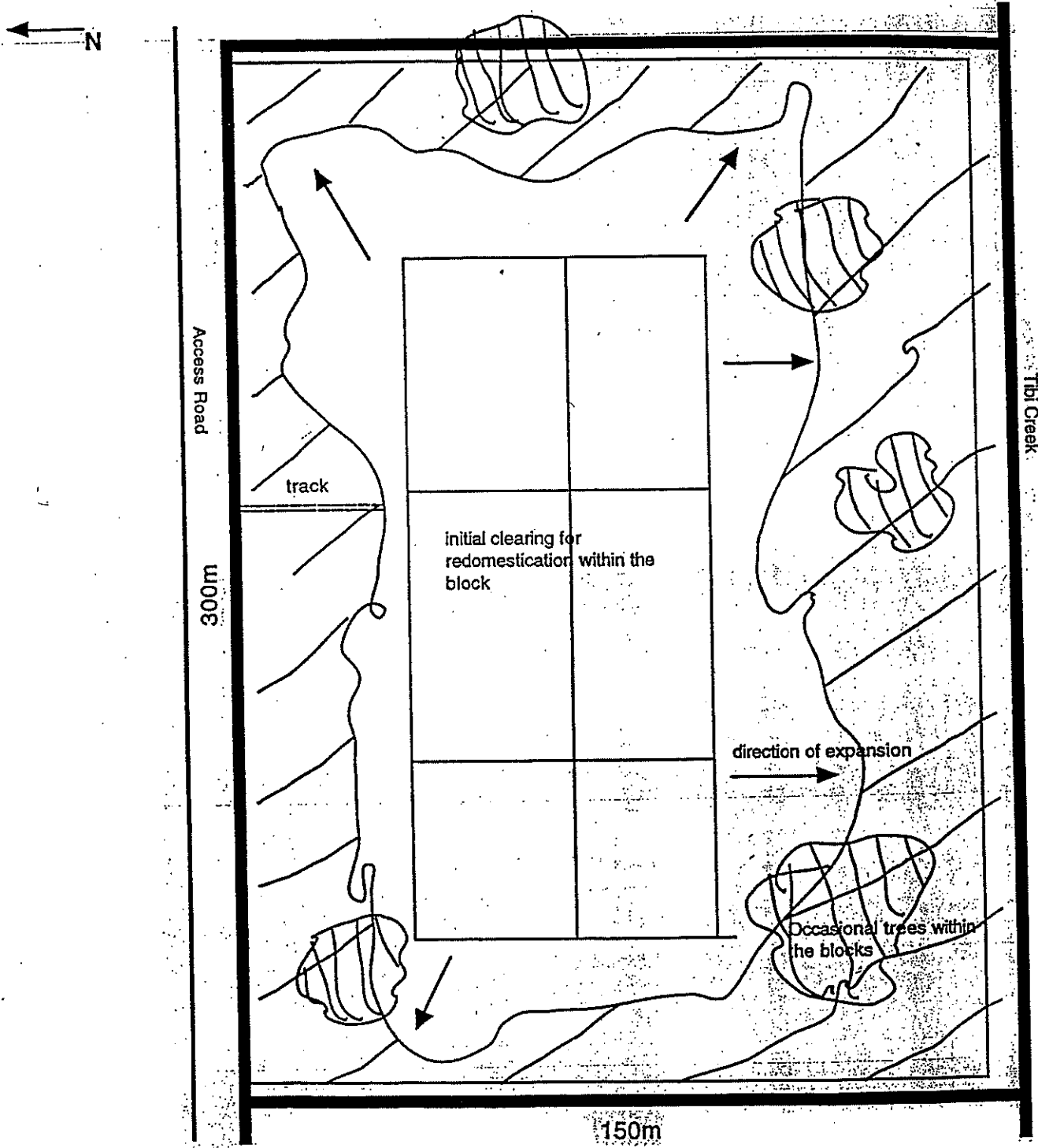


Fig. 3 Schematic drawing of encroachment technique employed by the Kawelkas

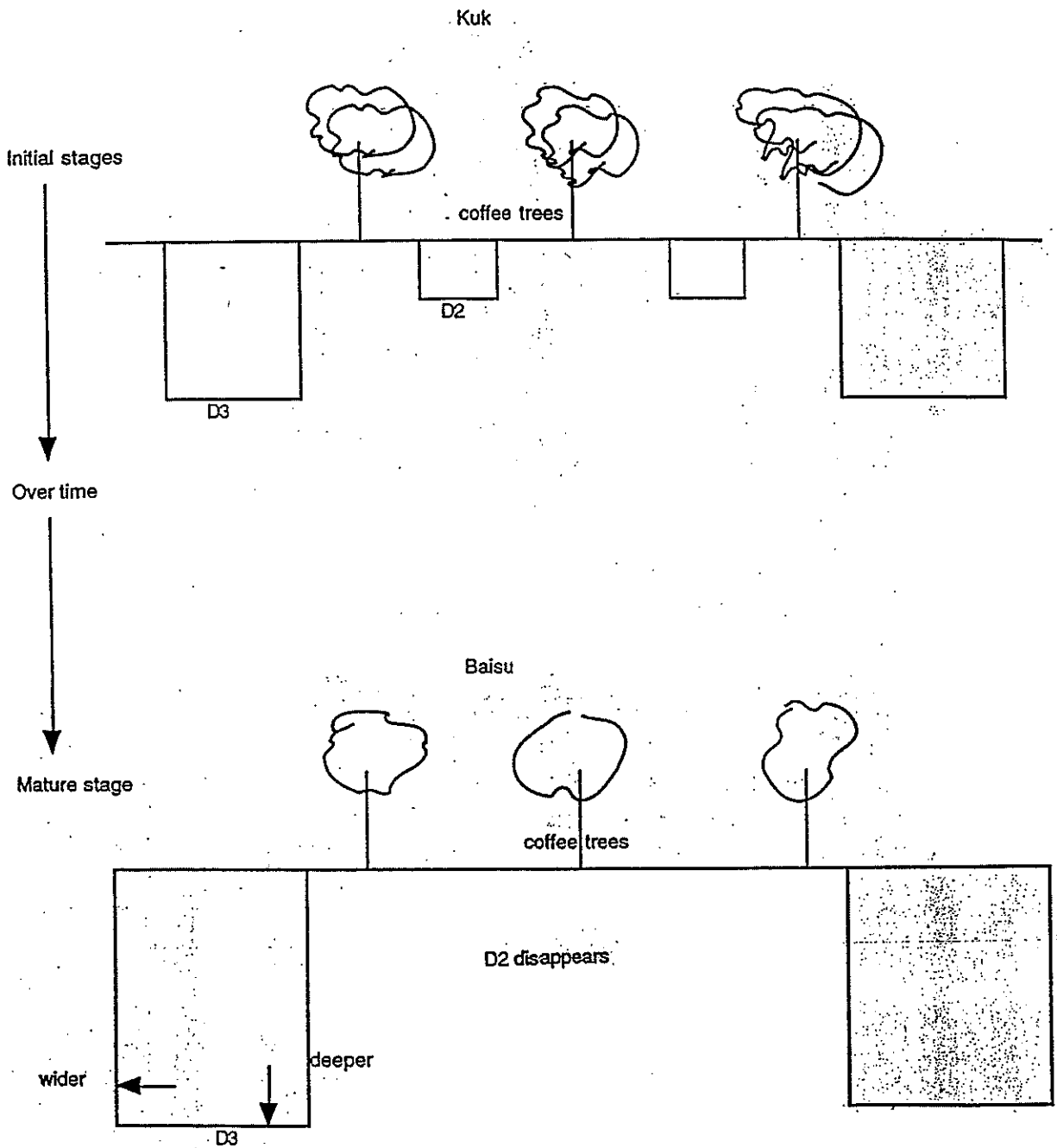


Fig. 4 Comparison of coffee growth and ditch measurement between Kuk and Baisu

REPORT ON SOME KAWELKA PERCEPTIONS ON THE KUK ARCHAEOLOGICAL SITE.

By Nick Araho, Principal Curator, Archaeology Department, PNG National Museum, P.O. Box 5560, Boroko N.C.D., Papua New Guinea

Introduction.

This report concerns preliminary findings on people's perspectives at the Kuk archaeological site during a trip to the site by members of the Papua New Guinea National Museum, and the University of Papua New Guinea. The members of the team included Dr. John Muke, lecturer in archaeology from the Department of Anthropology and Sociology at the University of Papua New Guinea (UPNG). Members of the Papua New Guinea National Museum were Mr. Andrew Moutu, Principal Curator of Anthropology; Mr. Herman Mandui, Impact Archaeologist; and Mr. Nick Araho, Principal Curator of Archaeology. The report is part of a larger study carried out at the Kuk archaeological site. It attempts to document details of the author's encounter with two members of the Kawelka community residing at the Kuk archaeological site, and draws on this experience to pose some serious practical and philosophical issues concerning future archaeological research at Kuk.

In this report I will dwell on questions which emanate from three basic issues that were raised concerning:

- (1) whether there is a profit motive involved in archaeology and
- (2) whether restriction on further/future archaeological work can be imposed
- (3) ownership and control of the Kuk archaeological site

I will then focus on a number of implications arising from the concerns raised above.

As the concerns raised are of fundamental importance to the future success of the Kuk archaeological project, strategies need to be developed to educate the Kawelka and one such approach that will be considered will be the utility (and the dangers) of equating current experiences with the past as a means of raising, maintaining and perpetuating interest in the preservation of the Kuk site.

The question of control, ownership, and perceptions about monetary value will be addressed as a means to examine some of the basic assumptions that underpin our concern with archaeology and the practice of it (as it relates to Kuk). This will allow us to consider the issue of who gets what out of the archaeology of Kuk.

The above points will be examined by asking:

(1) whether the Kawela are interested in the history of Kuk in the form it has been presented to them (i.e. as an important archaeological phenomena in national and international terms)

(2) if they are interested in the history of Kuk and why they are interested.

RESULTS OF THE INVESTIGATION

People's perceptions.

A range of issues confronted us during the field trip to Kuk but in the case of this report I wish to dwell on some specific issues which were raised by two members of the Kawelka community which may be symptomatic of some of the perceptions among its members. These issues are:

(a) the idea that monetary value can be attached to products directly associated with or indirectly emanating from one's involvement in archaeological endeavors (such as the one we were associated with at Kuk).

(b) the ownership and control of the Kuk archaeological sites.

On the first point, the issue was raised by Paul Wap. His question was if there was a profit motive involved in archaeology, especially through the publication and the sale of books on the Kuk archaeological site. I explained that:

(1) publications (if there were any) were for educational purposes and that no one makes a profit on the sale of books. The money made on the sale of books and magazines was just enough to cover the cost of producing the books (e.g. Pam Swadling's PNG Prehistory booklet).

(2) On the general point about the monetary value of archaeology I stated that this depended on one's idea about how to perceive the role of the archaeological work at Kuk. One could either conceive of archaeology as a profit venture or regard it as an educational tool in which the achievements at Kuk could be used as a testimony to man's ingenuity and skill in managing landscapes. Either way there are consequences (both good and bad) in the way information from Kuk can be used.

I take up this issue later when I argue that the stoppage of further archaeological work at Kuk as a means of expressing one's convictions can clash with notions of ownership and valuation of the land.

I stated that people at Kuk can disrupt archaeological research at Kuk though there is no legal basis for villagers at Kuk to do this. I stated that the power to stop archaeologists from working on the sites (Kuk) remains in their hands, but the

implication of this action would be felt on a number of fronts. These areas are as follows:

(a) archaeologists would shift their focus to another area in order to continue their research. The implications of this move for the Kawelka is that it solves their immediate concerns about other agents (such as archaeologists or other government workers) whose views they may regard as impediments to their plans about the future of the Kuk site.

On the other hand the concern for the archaeologist is that it may set back progress on the work at Kuk especially with regard to salvage plans to be carried out. In such a scenario the direction for more work is being motivated by the interest of the archaeologist.

(b) destruction of the Kuk site through: (i) further cultivation and tillage and (ii) neglect.

(c) aspects of Kuk history will remain unknown through neglect leading to the use of a very limited data set of archaeological evidence and the possibility of flaws in the claim for early agriculture in PNG and the Australian region. For example, there is no direct evidence for plant remains in association with drainage ditches. On the other hand a strong case can be made for the use of circumstantial evidence for the practice of agriculture such as the presence of drainage ditches at different time periods and the presence of wooden spades which have been recovered from the ditches. This suggests that agriculture was being practiced. The point is that one can only hope to improve the quality of the evidence and this can only come about if more archaeological research can be carried out to find the 'missing links'.

(d) cessation of further archaeological work would lead to more destruction of the archaeological site especially where cultivation was going on for coffee and vegetables.

Therefore, it was their choice as to whether they wanted archaeological work to continue and to have a record of the sites preserved in publications or to forgo any archaeological and anthropological work and have the information lost forever through cultivation (and neglect) at the Kuk archaeological site.

The other issue that I raised was the importance of Kuk as a medium to educate the people about their past as well as its contribution to the history of Papua New Guinea as a nation. I stated that every country needs a history (including the past deeds of their ancestors' major achievements) which helps to define its independent sovereignty. The appeal to past deeds as a reference point is important for a people to define themselves as an entity. National history often includes the noble deeds, and the achievements of the past to which people can refer as a source of pride and inspiration and which then becomes a tool for the recognition of a political entity in the

world community. In the case of Kuk, the site currently used by Papua New Guineans is a showpiece of major achievements in agricultural evolution in the past by ancient people. These achievements were realized by people who lived in the Kuk area thousands of years, and who in fact made those ditches, but of whom we have no further traces.

So when it comes to identifying who dug the ditches, this question is never mentioned in the texts that deal with Kuk but archaeologists take a big leap of faith and bestow the ownership of Kuk on all of Papua New Guinea as a much safer option than associating the site with any one group.

It was against the above background that my line of argument to the Kawelka was framed with the view that Papua New Guineans needed something to show the world and that Kuk was a good example.

In order to convince the Kawelka about the relevance of Kuk to national history and its archaeological significance to the world a series of strategies needs to be devised. One possible approach is to:

- (a) continue to educate the Kawelka on the importance of history, and
- (b) relate their contemporary experiences with particular images of Kuk's archaeological past.

The reason for suggesting the second approach is that people can relate more easily to their own traditional experiences. This I think is an appropriate means of generating interest and enabling people to understand the importance of the Kuk archaeological site. But what needs to be continually stressed is that there is no direct relationship between the modern day Kawelka and the inhabitants of Kuk from the remote past. But it seems that the Kawelka are one of the groups that have a strong case for ownership of the land on which the Kuk archaeological site is located so on that basis they can be granted some custodianship rights. In considering the above strategy I further added that their contemporary experience such as songs, dances, feasts, gardens, and making moka exchanges helps to define their socio-political entity. And some of the traditional activities listed above served as mediums through which their socio-political status may have been transmitted.

Equating past with present.

But are the Kawelka likely to equate the prehistoric populations with themselves? It would seem to me that given the importance of Kuk's past it would not be unexpected for them (Kawelka) to make a connection between themselves and the past achievements at Kuk. What are the implications of such an association? This kind of assertion is strongly disputed by archaeologists on technical grounds because

archaeologists take the view that there is no connection between an ancient population (with which major works such as the Kuk ditches may be associated) and the present population of the Kuk area. But it would be naive to totally discard the possibility that the Kawelka will make a claim of association with the prehistoric site or simply claim the site regardless of state ownership of the land in the future. This change of attitude, particularly in the claim for an association with the past, or an outright claim, may arise owing to a changing socio-political or demographic climate as is the case now at Kuk. For example the changing demographic picture in terms of a rapid increase in population is one reason given by Ru for the encroachment on land on which the Kuk archaeological site is located.

For another example where archaeology becomes politicized one can refer to the archaeological environment in Australia where indigenous aboriginals are using archaeology to assert their (political) rights to land, waterways, hunting and ceremonial grounds, and fishing areas. In the strict scientific sense it is hard to show a direct connection between ancient cultures of Australia and its current aboriginal inhabitants but with changing perceptions archaeology in Australia is now known as Aboriginal archaeology, which to some people gives recognition to a continuity of cultures from the past inhabitants to the present.

Archaeological inferences.

The attempt to use current cultural experiences as a tool for salvaging and preserving the past of Kuk impinges directly on the use of archaeological inferences and the inherent flaws and dangers of using this approach. In short, the use of analogy in archaeology is based on the premise that observations on behavior patterns of contemporary populations can be used to explain past behavior patterns of an ancient population. By using the above analogy it was important to use Kuk as an example of the past achievements of the ancestors/people living at Kuk (whoever they were). It was important to use Kuk as a case study to portray to the world the achievements of those who lived there in the past.

The problem with the case of the analogical inferences (i.e. inferences based on analogy) is that it is misleading directly to transpose the details of particular phenomena or experiences of the distant past onto the present landscape (cultural or physical) or vice versa.

In the case of Kuk it sets a dangerous precedent in allowing people to have the idea that the past of Kuk is directly linked with its current inhabitants and brings into play the question of rights and ownership of Kuk by the interested parties to which both the Kawelka and the government can claim ownership on various grounds. The

reasons for claims need to be further investigated.

Koy on the significance of the Kuk archaeological site.

Koy insisted that the site was theirs and the work that was going on at Kuk was theirs and Jack Golson, Phillip Hughes (and others) were only doing work that belonged to them. The implication of this view to me is that Koy realizes the importance of the Kuk archaeological site (whatever that significance may mean) and places a value to the site. That in itself is a significant statement because once a site is regarded as having a value then people can treat it in a number of different ways. One of the ways to treat the Kuk site is to work together to preserve it.

Koy also asked if the Kawelka had the power to stop people from working on the site. My response was that people (to a certain degree) had the power to stop archaeologists from working on the Kuk archaeological site but they also had to realize that stoppage of work at the Kuk site would have a number of consequences.

Koy's statement and the view expressed by Paul Wap hint at some of the contrasts between the sentiments expressed by archaeologists and those views held by ordinary villagers as these relate to the practice of archaeology in general, and for Kuk in particular. Given the number of different viewpoints between archaeologists and villagers it is not unreasonable to ask some basic questions relevant to the interpretation and use of information from the Kuk archaeological site. The utility of this exercise is to serve as a guide to reconsider and test some of the most basic assumptions which underpin our understanding of the Kuk archaeological site, the degree of interest that villagers have in Kuk, and the implications of our presentation of a new issue to them.

It follows that a series of questions can be asked on the use of information from the Kuk site through concrete viewpoints expressed by people on the role of Kuk as they perceive it.

The first question to be asked would be:

(a) to determine if the people are interested in the history of Kuk as an important archaeological phenomena in national and international terms. I think their response would be based on what we as archaeologists and anthropologists choose to present to them. In my view the presentation by archaeologists up to the present time has been the primacy of Kuk as an educational tool. In my view much of the information that we present to them would be academically oriented. It would seem that we would want to stress the importance as has been done in the past by Golson and colleagues of the archaeological importance of the Kuk site and its socio-political value and educational role. Therefore we (as archaeologists and anthropologists) would continue to set the

agenda on what to present. Ultimately it would be our viewpoint (i.e. the national and international importance and educational role of the Kuk site) that is likely to influence any decision that the people make in relation to the preservation or the destruction of the archaeological heritage of the Kuk site and therefore a perpetuation of a trend from the nineteen sixties.

(b) why are the people interested in the past of the Kuk archaeological site? I raise this question because of the statement pertaining to control and ownership that was made by Koy on Kuk which has been expressed above. Given Koy's expression of interest in the Kuk site it would be important to determine the potential reasons as to why people like Koy place a value on the Kuk site.

Their interest in the past of Kuk would partly depend on how much or what they know about the past Kuk. Archaeologists and anthropologists think that the history of Kuk is important in the sense that it has national and international status. But the Kawelka's interest in the past of Kuk is something that academics have created and this interest (which has been instilled into the current inhabitants of Kuk) can only be maintained if:

- (i) they are willing to accept the educational information that is given out to them
- (ii) and then if they do accept it, for archaeologists to maintain this perception of the historical and educational importance of Kuk through continuous educational programs, visits and the like.

The encroachment technique observed at Kuk has to do with the need for more land. A relevant point that Muke raises with regard to land reclamation at Kuk by the villagers is the assertion that the Kawelka are testing the legitimacy of the government's stand as regards to the Kuk site. The rules they apply in terms of the occupation of the Kuk site follow certain aspects of traditional patterns of warfare where a piece of contested territory is encroached upon slowly in order to signify one's intention (in the case of warfare) which is to deliberately occupy an area then ultimately to permanently occupy and continue to defend the area in question.

The encroachment technique as observed in Kuk is a reflection of the changing and fluctuating interests of the village people as dictated by the changing demography and local socio-political concerns, which we are only beginning to understand, but more needs to be done to elicit detailed information with the view of determining how these concerns will impinge on our plans for future work at Kuk.

I raise these issues as a reminder for future investigations.

The points which I raised above have implications for the particular concern that was raised in the field about the Museum's stand as a 'neutral' body in the conflict between various parties who are contesting the rights to the Kuk archaeological site

such as: Kawelka vs. the Government and the various government agencies, e.g. Department of Agriculture and Livestock (DAL), formerly Department of Primary Industry (DPI) Lands. The National Museum is a government agency and the stand it will take can range from a conciliatory one or a hard line approach and will very much depend on a range of variables. But in the last visit to Kuk the option suggested was for a 'neutral stance'. This approach worked quite remarkably because we were well received.

Future questions.

Some of the related questions that need to be raised in future investigations are:

- (a) are the people interested in the future of Kuk and if so, why? What are the reasons?
- (b) Do they want to know more about Kuk, especially from the viewpoint of what further research shows?
- (c) How should we decide who gets the credit for any publications that arise from the Kuk report?

This question has to be asked because it deals with the future plans that we as archaeologists and anthropologist have in terms of further work at the Kuk site as opposed to the future plans that the people at Kuk have.

CONCLUSION

In this report I have tried to discuss the implications of some perceptions arising from our visit to the Kuk archaeological site. These perceptions are associated with the practice of archaeology in PNG in general and Kuk in particular. These perceptions are (a) whether there is a profit motive in archaeology, (b) whether restrictions or control can be imposed on future/further archaeological work, and (c) whether one can claim rights to and ownership of the Kuk archaeological site.

The above views I suggest are symptomatic of a wide range of questions that the Kawelka may have and allow us to ask some basic questions about the role of archaeology as depicted through the work at Kuk.

We need to ask if:

- (a) the Kawelka are interested in the history of Kuk,
 - (b) whether the Kawelka are interested in the future of the Kuk archaeological site.
- These questions need to be raised because they directly impinge on the scope and nature of future work at Kuk.

In this report I have not described in any detail the archaeological component of the fieldwork. This deliberate omission of the results of the salvage archaeology is

partly because Herman Mandui has dealt with this issue, but more importantly for the purposes of this report it has been neglected because I felt the need to start addressing the politics of archaeology at the Kuk site. In particular we need to begin concerning ourselves with questions about why archaeology at Kuk needs to be done, whom we are doing it for and who benefits from the spin offs from the Kuk archaeological site. To date the technical aspects of archaeology (i.e. excavations and reporting of the results) have dominated the practice of archaeology as carried out at Kuk but much work remains to be done and the future scope and success of the Kuk archaeological program depends on how we deal with the politics of the site. The stand taken on this trip was to be 'neutral' but this approach cannot remain for long and sooner or later the National Museum will be called upon to take a stand on issues and I think that the sooner we begin discussing the pertinent issues the better.

RECOMMENDATION

One needs to target various sections of the Kawelka community, for example by age group, socio-political affiliation, etc., and get a better sense of their views through interviews about what the people's aspirations are in terms of future plans on further work at the Kuk archaeological site. This will allow the collation of peoples' perceptions in order to work out strategies to deal with their concerns. For example, as Andrew Moutu has indicated, people may want some material benefits in exchange for the archaeological work being carried out at Kuk, but the issue of material recompense cannot adequately be addressed until we have a clear and more detailed idea of the Kawelka's plans and aspirations.

APPENDIX A. Profile of two people spoken to at Kuk.

Paul Wap.

Paul Wap is one of the young men now living in one of the abandoned Department of Agriculture and livestock (DAL, formerly DPI) houses at Kuk. In my estimate he is about 27 years old, and he is married. Paul Wap differs considerably from the older men (such as Ru, Nema, Ongka, Moni, and other older men who worked with Jack Golson) in age and outlook as regards to the Kuk site. He is representative of the young generation of Kawelka living at Kuk who have an interest in the Kuk site and the land on which the Kuk site is located for various reasons.

These reasons are not entirely known but may range from:

(a) an interest in the land at Kuk for socio-economic purposes (e.g. cultivation for food gardens, cash-cropping, house building, settlement for clans, pig raising, ceremonial

grounds, markets, trade store, etc.)

(b) schools, aid posts, piped water services, and other government services, etc.

Koy

Koy is an elderly man about 45-50 years old who has a son at UPNG. He also lives in one of the abandoned DPI houses. Koy had been away in Lae when Moutu, Mandui and I (Araho) arrived at Kuk and I ran into him one night at the Kuk trade store which is owned by the councillor at Kuk. (The trade store served as an impromptu meeting area because it is one of the focal points in the Kuk area where people gather to buy trade store goods, pass messages, and discuss issues in an informal and relaxing atmosphere).

APPENDIX B. Perspectives on various sections of the Kawelka community.

The various sections of the Kawelka community differ in age, political standing, and outlook as regards to the 'importance' and the 'relevance' of the archaeology of Kuk depending on:

(a) length of association with the history of the Kuk project
(b) personal relationship with the principal figures in the Kuk research program
(c) degree of education or knowledge about the Kuk site and
(d) the kind of choice they make with regard to the importance of Kuk which may be weighed against a number of variables such that even if they are knowledgeable about the relevance of the site they may deliberately choose to ignore its importance. One can suggest that these sections are likely to express a range of sentiments including positive or negative statements about the Kuk site. Thus the range of perceptions as expressed by the different sections of the community can be further investigated through more detailed work/interviews on how different people perceive the relevance of Kuk. One assumption would be that some people would be less willing to destroy the Kuk site because of their appreciation of the historical/archaeological value of the Kuk site instilled through education about the past of Kuk and because of their personal involvement in the Kuk archaeological project. Ru does not see his encroachment as a 'destruction' of the site as such. He is prepared to let archaeological work be done on it also. He also knows that others would 'encroach' who are not so likely to be co-operative if he did not move in first.

The Death (and Re-birth) of Kuk: A Progress Report on the Recent Developments at the Kuk Prehistoric Site, Western Highlands Province

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Introduction

The Kuk swamp is only a small part of a number of wetlands in the Wahgi Valley. Little or no archaeological prospecting has been done but the former Kuk Agricultural Research station stands out as the scientific investigations commenced in the 1970s and the archaeological records promote it as one of the 'birth places' of agriculture in the world. Scientific researchers in the past enjoyed a relatively easy access to it, because of the site being located within the territory of an institutional establishment. Since its closure in 1990 the land has been progressively reclaimed by the original owners. The area of scientific and cultural importance is now covered with gardens and this presents a potential threat of major destruction by the landowners themselves. This report examines the economic, social and political developments and assesses prospects of its survival in the future.

Part 1. The development of the swamplands

The pioneer settler, James Leahy, first introduced coffee into Goroka in 1950. He bought a twelve acre block of land from the villagers and his success in selling coffee beans in Australia set the "first wave of coffee rush" into the highlands. By 1954 nearly four thousand acres of the Goroka Valley's most productive land went to the Australians and by the late fifties there were well over one hundred Australian coffee plantations in the highlands (Connolly and Anderson 1987:282).

In the Wahgi Valley, prior to contact, large portions of the broad lower parts were seen by the people as "bad land" which was believed to be inhabited by malicious spirits (Muke 1992). Quite to the contrary, the Europeans saw the economic potential and seized the opportunity by offering European items of wealth, and purchased most of the prime agricultural land along the broad plains, the true swamplands, grasslands, and areas immediately below the major hillslopes for coffee plantations. Even the villagers submitted their best gardening lands either to creating a coffee plot as a monocrop or incorporating it as another tree crop in the mixed garden, and as a result, now, there is

land shortage.

After independence, the political drive towards nationalism opened new avenues for tribal groups to attain an economic identity as tribal landowner business groups. One of the objectives was to either buy the coffee plantations from the expatriate owners or establish similar ones. Among the earliest known transactions was the Warawau Plantation. In 1975 Pipilka Development Corporation was started by the men of the Kopi-Nokpa and Roni tribes of the Wurup area, and they are notable for having been the first landowner group to buy back a foreign-owned plantation (Burton 1987). Emergent political institutions like the Wahgi Local Government Council bought off a large number of expatriate plantations, now known as the Wahgi Mek Plantations. In the 1980s, the Western Highlands Provincial Government introduced the Land Mobilisation Programme. The facilities available to the landowners included free land surveying and easy access to bank loans. Tribal groups were quick to seek financial assistance from lending institutions and this led to the "second coffee rush", by the natives themselves. However, one of the conditions for loans was that in the event of the coffee plantation being unsuccessful, the bank would take the land. Along the Wahgi Valley there are many abandoned tribally owned coffee projects and this is an indication that the prime land remains the property of the lending institutions like the Agriculture Bank of Papua New Guinea.

1.1. The Bank Loans and the Protection of Cultural Properties.

The plans for expansion of the coffee industry have been allowed to proceed without acknowledging the need for conservation and preservation of the sites and areas that have particular topographical, biological, geological, historic, scientific or social importance. The destruction of the cultural heritage properties by the people themselves in their own land is triggered by the commercial lending institutions but it ultimately links to the international counterparts. In PNG there are no specific policies on cultural resource management but this is contrary to the instructions of some of the major international institutions. For example, the World Bank report on the Charter for the Protection and Management of the Archaeological heritage of September 1986, proclaims that

A duty for developers to ensure that archaeological heritage impact studies are carried out before development should therefore be embodied in an appropriate legislation, with a stipulation that the costs of such studies are to be included in project costs (Goodland and Webb 1987:6).

It adopted an official general policy on the management of cultural property in the development of projects that it finances. This policy states that

The bank will assist in the protection and enhancement of cultural properties encountered in the Bank-financed projects The policy pertains to any projects in which the Bank is involved, irrespective of whether the Bank is itself financing the part of the project that may affect cultural property (Goodland and Webb 1987:17).

There is no direct-World Bank funded project that is destroying the cultural fabric at Kuk, for us to make a direct appeal for its protection, but the fact remains that the entire country is dependent on Foreign Grants and World Bank Funds. There are many aspects of indigenous cultural heritage which are being directly affected by external funding such as the European Economic Cooperation grants for improvement of rural agriculture. This involves the permanent alteration of the traditional cultural landscape. In Australia it is acknowledged that "the whole landscape is a cultural place, that is an artefact of humanity: people have been modifying or giving human meanings to the landscape for at least 60,000 years" (Pearson and Sullivan. 1995:5). We can also argue this for Papua New Guinea and suggest that the contemporary cultural diversity is also a reflection of the island as an artefact of humanity for no less than 40,000 years (Groube et al. 1986, Spriggs 1997).

Alterations to the landscape in terms of drainage of the swamps, for cash crops like coffee, are a good example of the destruction of records of previous agricultural practices. Apart from Kuk and a few other sites, to date, we do not know how many thousands of acres of wetlands have been brought under cultivation and how many archaeological sites have been destroyed. The World Bank provided the following guidelines against destruction of archaeological and cultural properties beneath the earth.

- (a) Never destroy before a professional survey is done;
- (b) Always survey even if it is thought that nothing of cultural significance is present;
- (c) Treat cultural sites and artefacts as finite resources that can never be replaced;
- (d) Report all cultural discoveries to the responsible authorities;
- (e) Never dig an archaeological site or attempt to rehabilitate or preserve an important historical building or religious shrine without professional assistance.

The development in PNG is based on borrowed money but none of these guidelines

have become part of the policies of the lending institutions in the country. At the national level, the institutions like the Agriculture Bank of PNG give loans to the rural communities, to make permanent changes to the cultural landscapes through a mixture of traditional and introduced land-use practices. If the source of such funds as suggested above comes from international donor institutions, it is obvious that the World Bank policy guidelines which I believe should cover all types of donations and loans to Papua New Guinea, are not adopted to protect the indigenous cultural heritage. The question is "Who will initiate the need to stipulate donor money towards the protection and management of cultural resources?"

The international institutions leave the responsibility or the duty to the recipient country of Foreign Aid to ensure adequate legislation that provides an effective administrative structure, and ongoing financial support, by way of a special fund or legislatively provided income. However, when one borrows something there is an expectation that it must be returned with interest in future, Papua New Guinea has created itself little room to make choices to put into effect a programme which considers both economic progress and cultural development on borrowed money. The lending institutions want tangible returns for their money and it means that they too will view the spending on cultural resource management as unprofitable. As it is often said a beggar rarely has the choice of what he is about to receive but to accept it with gratitude. Hence there is the 'influenced' poor perception of heritage conservation within the country. The government would not bother itself with so large and unprofitable a task as to care for and preserve antiquity when so many other problems cry for attention.

The question of who will initiate the responsibilities towards cultural resource management has to be directed from the international lending institutions. They help fund the kind of development that involves permanent change in the physical, biological and social characteristics of the affected environment. They must take responsibility for the loss of cultural property. The international lending institutions themselves have to accept the principles laid down by the World Bank and instruct the recipient countries to stipulate that a portion of the loan and grant to a particular project or the country as a whole is directed to cater for the need for protection of cultural property and heritage management. There needs to be a direct input from the institutions like the World Bank and other Aid Donors for establishing cultural heritage services in Papua New Guinea or of appropriate bodies to awaken to formulating it within the country.

Part 2. The Kuk site.

One of the big issues facing academic research is the ownership of knowledge and properties. In the past it was easy for academics to conduct anthropological and archaeological research. That is, outside researchers first conducted their fieldwork among the Kawelka people of the Hagen region when the nation was still under colonial rule. Lewis said "The anthropologist, like other Europeans, in a colony, occupied a position of economic, political, and psychological superiority vis-a-vis the subject people (Lewis 1973:582).

The "psychological superiority" of most early researchers to the highlands regions "was derived from the fact that "they consistently received preferential treatment", not only from other Europeans in positions of political power but also from the subject people themselves" (Lewis 1973: 582-583, Muke 1997, 1998). Lewis points out that special "treatment was accorded because the researchers were members of the group in power" (ibid). The political power relations may have changed but perhaps not the academic relations.

In fact the local people are beginning to question the production of knowledge and often under misguided terms of reference equate money with successful production of textual knowledge by a few rather exceptional academics. The false impression is that all academics who conduct research enjoy the same benefits such as obtaining large research grants and landing prestigious jobs. Only a few enjoy such privileges.

A few national academics may yet demonstrate their abilities as prolific and literary writers, and even so their contributions cannot match the standards left behind by the intellectual doyens of the Wahgi. This is ignored or less appreciated by the locals, who think they have been paid pittance as informants and therefore the tendency is to continually accuse the nationals also of academic exploitation.

The specific problem with Kuk is that unlike anthropological notebooks of which the locals cannot claim ownership as these remain properties of the researchers, the archaeological sites remain in the landscape and these are elements which the local people will use as a bargain to demand some tangible returns (Muke 1997). To put it simply, the current reaction from the locals is "you pay to excavate on our land". When Professor Jack Golson and his colleagues began their work, they did not confront this problem because the site was managed by expatriates and the locals did not have the power to make such statements. Now the people have the power to refuse further archaeological research in the Kuk swamp because they own the landscape.

Ownership of things means ownership of land and in the Wahgi as well as the rest of the country there are several landowners: (a) the State, (b) the Banks and (c) the tribal

groups. Each level of ownership affects the nature of research and preservation of archaeological heritage. I shall discuss the Kuk site and demonstrate the transformation of the communal ownership to private property and then back to communal ownership again.

2.1 The Transformation of Ownership of the Kuk site.

In 1969, the then Department of Agriculture, Stock and Fisheries purchased 700 acres of swampland in the Kuk basin from the local owners, predominantly members of the Kawelka tribe. Like many of the grassland valley floors in the Wahgi, it was unoccupied at the time of contact. Oral stories in other areas suggest that the flood plains and areas immediately about them were described as zones occupied by bad spirits and considered a bad place to live (Rappaport 1968, Gorecki 1979).

At the time of contact, it was noted that the bulk of the settlement patterns were concentrated above the mosquito breeding zone (1700m +). However, the Kawelka abandoned the Kuk basin and its surrounding area as a result of tribal warfare. Most of them were living at Mbukl, at the time of the colonial administration's indications to purchase the land (Gorecki 1982, Strathern 1971). In 1969, the Kawelka were paid a sum of an equivalent of K580.00 (Ketan pers. comm. 1998). My colleague, Joe Ketan, recalled getting 20 pence (80 pence was distributed among the womenfolk) from the payments, and said with a smile that he would show me exactly where in Kuk he was when the money was distributed among the Kawelka. Perhaps one of the reasons for the willingness to sell the land was that this area was permanently underwater, and was of no immediate economic value. This view has changed.

Throughout the past the need for agricultural production to sustain a growing population, to feed the pigs and to provide a surplus for various festive activities, required communal management of swamplands. The fundamental requirement of the creation of gardens in swampland must start at a location where water can run off the garden site into an outlet. It is a planned communal work which involves digging of major ditches longer than necessary for the garden it sustains. The episodic use of the Kuk swamp found in the archaeological record is indicative of the need to amass a sociopolitical unit capable of creating channels longer than necessary for the gardens it sustains, by channelling water off the garden sites into a few outlets (Gorecki 1979). Before the government purchased the 700 acres of main swamp and set up a Tea Research Station in 1969 it was permanently under water. By conforming with the natural north-south divide with catchments from the surrounding basin drainage

westwards via the Guga creek forming the western boundary of the Station to the Gumants River and eastwards through Tibi and Baisu to the Wāhgi, the management created more outlets and this resulted in the drainage of a part of Kuk. For example, the southern boundary ditch of the station traps and disposes of some of the critical outlets of the area. The ditches penetrate deeply into South Kuk and as such are both draining extensive areas and allow Kawelka ditches to be connected with them. The Kawelka returned to Kuk in the 1960s and started occupying the land around the station boundary. The process of land management is well recorded by Gorecki (1979, 1982). He points out that the Station drainage had a sustained influence on wholesale migration because the people could garden continuously without the clogging of ditches, as it occurred periodically in the past resulting in land abandonment and opening of new gardens at suitable outlets. The problem now was that the central swamp was owned by someone else and the marginal populations were reaching critical levels of land-use.

Successive migratory waves have important repercussions in the land distribution and boundaries between the Kawelka clans. Those that came first negotiated with the neighbouring Ndika tribe to get a large portion of the land, and those that arrived late had access to a small amount of land. The case here is that the land was not fairly divided and distributed among the returning clans of the Kawelka tribe. Under such circumstances, Gorecki predicted more than a decade ago that land may be acquired by force. Although such foresight may have been directed at the competing relationships between the clans of Kawelka, they shrewdly manipulated and forced the Department of Primary Industry (DPI) personnel to abandon Kuk. As from 1990 onwards, it was then a matter of competition of ownership of the former swamp which was in perfect condition for sustained garden activities.

2.2 Archaeological Research.

In 1972, Professor Golson started archaeological investigations at Kuk. The combined study of the ditching systems and the sediments in which they are found has led to some remarkable results which included:

1. strong evidence for the beginnings of gardening on both dry land and wet land at Kuk 9000 years ago, which would make agriculture in Papua New Guinea one of the oldest in the world.
2. a sequence of gardening systems of different character in the swamp stretching in

six major periods (9000 BP; 6000-5500 BP; 4000-2500 BP; 2000-1200 BP; 400-250 BP) up to the recent past and encompassing the development of the distinctive culture of the Hagen region which we know of today. The final period of drained cultivation is associated with habitation sites scattered through the swamp, the house plans conforming to the round men's houses and the round ended rectangular women's houses of traditional style (Golson 1977).

The microscopic plants growing in the swamp were recovered from different levels of the swamp to give information about forest, grassland, climate and human cultures. A simple process like the accumulation of sediments provides a story of the history of erosion elsewhere on higher ground or changes in hydrology. These provide a kind of supporting picture of the landscape around which a site is located. Wooden artefacts (wooden spades, digging sticks) recorded from the permanently waterlogged conditions indicate the kind of technology used in performing these complex wetland management routines (Golson 1985:2).

The range of evidence gives an idea of the potential of the swamplands as an archive of botanical information as well as a storage of human activities. Kuk became a centre of scientific investigations for several reasons:

- (a). the above evidence was recovered within the boundaries of the state-owned land.
- (b). the time of the accidental discovery of the artefacts which led to the scientific investigations was a period prior to Independence, and hence there was a heavy presence of colonial administration; the natives saw the colonial *Mastas* as their superiors, and hence this view extended in part to European researchers.
- (c). In view of (b) a succession of expatriate Officers In-Charge (OIC) at Kuk aware of the significance of past gardening activities ensured that the researchers had free access to the site.
- (d). the researchers themselves gradually commanded respect among the locals, and hence a long term friendship ensued so that the work continued without local hostility.

Professor Golson and his colleagues did not have to confront the original landowners over access to archaeological records as a result of the state ownership of the land. (By extension the National Museum may be seen today as the custodian of the site). With the closure of the station, it is now in the hands of the local landowners -- namely the Kawelka. The political background to the closure of the Research Station and the eventual takeover by the local landowners is presented below and the bulk of it is

extracted from correspondence with Professor Golson during 1997.

2.3. Problems of a social and political nature.

Since 1975 there were indications of Kuk being protected and preserved as a historic site. Golson made a proposal at the request of two officers of the then Western Highlands District, which was put before the District Co-ordinating Committee. The proposal was approved and passed on to the Melpa Area Authority. Golson notes that this authority recommended that the site be preserved for both archaeological and tea research. The context of the proposal was the pressure (from Mount Hagen Tea Growers) for land at the eastern end of Kuk Station to be released for commercial tea production. The DPI tactically used the argument of the archaeological importance of the eastern part of Kuk to strengthen their case against releasing land. Copies of the proposal were also sent to various relevant authorities, including IPNGS, National Museum and Office of Conservation and Environment. Nothing seems to have resulted from the above series of activities.

Golson then mentions that in mid-1976 he received correspondence from W.C. Clarke of the Department of Geography, University of Papua New Guinea (UPNG), suggesting that some of the areas of Highlands mountain tops and swamps be recommended for preservation. He brought up the possibility of a protected area at Kuk before the national Parks Board Advisory Committee and the advice from the Committee was that he should make an approach through the National Museum to have an area gazetted as an archaeological site under the National Cultural Property Ordinance. Again nothing eventuated from this flurry of activities.

Another chapter began in 1982. The preservation of the archaeological site at Kuk received renewed interest as a result of the picture of Korowa and the deep channel crossing of Phase 2 date shown in the prehistory booklet prepared by Dr. Pamela Swadling for the National Museum (Swadling 1982). Copies were sent to the officials of Western Highlands Provincial Government and Secretary of DPI asking that the department give its approval for the declaration of the site as National Cultural Property. This was followed by a letter from the Director of the National Museum requesting Professor Golson to provide a plan for the preservation of the priority areas at Kuk. He prepared the document, "A Proposal to Proclaim a Historic site at Kuk Agricultural Research Station Mount Hagen, Western Highlands Province" (Golson 1985). Again nothing eventuated from this chain of activities.

Part 3. The death and re-birth of Kuk.

The movement towards the death of scientific interest begins at the end of 1990. During the middle of that year Professor Golson met with Martin Gunther, OIC at Kuk, who told him that as a result of the closure of the Panguna Copper mine in the North Solomons Province and the reduced Government income, top level DPI discussions looked at the possibility of the closure of some of its agricultural research stations. Kuk was to be retained as the Highlands research centre; however, problems of security and safety of staff prompted its closure.

A year later, Professor Golson on a visit to England contacted J. Muke at Cambridge and raised concerns about its future. In 1990 J. Muke returned from England and followed up on the previous arrangements with Golson. In October 1993 J. Muke and N. Araho (Assistant Curator, National Museum) contacted the local landowners and the Provincial Authorities for a proposed meeting. Meanwhile brief investigations with various authorities accounted for the following developments between 1990 and 1993. Several attempts were made by the authorities in the Division of Primary Industry, Department of Western Highlands, to reach a compromise with the local landowners. The objective was to allow the Provincial public servants to occupy the vacated houses, and part of the rental collections was to go back to the villagers. A general agreement was reached with the help of Wilson Kelt, a DPI officer, to open a passbook account. Misuse of the savings led to a dispute among the Kawelka, who in turn harassed the public servants (including physical confrontation with the Government officials). This led to the total abandonment of the station and at the same time the landowners themselves moved into the residential compounds. It is not clear whether the occupation of the government houses falls in line with traditional claims of ownership of the tribal land among the sub-clans of Kawelka or between Kawelka and Ndika owners or the houses went to anyone who made a claim and moved in first. My view is that partitioning of the land and houses would follow levels of agreement between various political units of the Kawelka and Ndika clans. This matter needs further investigation.

3.1 The question of preservation.

On November 10th 1993, a team of archaeologists which included a team of senior archaeology students, Prof. Golson (ANU), and Dr. Muke (UPNG) met with the Cultural and Tourism and DPI officers both from the Department of Western Highlands and the local landowners of Kuk station. The agenda that the archaeologists presented at that meeting were

- (a). to discuss with the traditional landowners, the Provincial Authorities, the Cultural and Tourism and DPI Division, the plans for future land-use;
- (b). to create a forum for the archaeologists to outline their views on the protection of this on-site prehistoric heritage;
- (c). to seek ways on how to protect and preserve parts of the Kuk archaeological records as a national heritage and as a scientific storage for future research.

The meeting was held at the place of a senior leader, Ongka, inside a church building, and it lasted almost half a day. The archaeologists initiated the discussion on the significance of Kuk and its contribution to the world heritage. It was made very clear that they came as neutral people and only interested in the potential for scientific interest. The two parties responded favourably to the need to protect the site and there were indications that the area of most archaeological research would not be destroyed. If need arose the people would inform the authorities at the National Museum. It was also clear at that meeting that the villagers were not pleased with the sudden appearance of the DPI and Tourist Officers. They felt that the Government had totally abandoned the station and no proper arrangement was made for looking after it. The care-taker responsibility was initiated by the people themselves and if the Government wanted the property it had to pay them first.

It was resolved that representatives from UPNG and the National Museum would call a further meeting to draw up some contingency plans in the event of unexpected plans for intensive land-use which might include the destruction of the archaeological sites, and to look at ways of meeting a long term need for archaeological investigations and for the cultural resource management. Following it, J. Muke drafted a proposal for further investigations into the nature of disputes between the state and the landowners, and looking at ways of resolving the problems with a solution that would satisfy both groups. Copies were sent to the National Museum and the Prime Minister's Department. The application to the Prime Minister's Department was partly due to a letter from Paias Wingti, the then Prime Minister, to the Minister for Police and the Minister for Forestry. The Director of the Museum responded to that letter, acknowledging the significance of Kuk as a testimony to world history and proposing that any plans to develop Kuk must involve scientific investigations of a salvage nature as well as the potential for long term archaeological investigations. The application for funds was not successful.

Between 1994 and 1997, little occurred by way of a meeting between the state and the

landowners. J. Muke continued to make yearly trips in order to maintain an open dialogue with the locals, and to ensure that the archaeologists were informed of the latest developments which might disturb the areas Golson designated as of most archaeological interest (Golson 1985). A separate development in 1995 was initiated by a long term researcher of the area. Prof. Andrew Strathern on a trip to make a documentary film on religious change and the role of Christianity observed some local developments in the station by way of gardening and felling of the trees that prompted him to get in touch with Prof. Golson. Following the discussion, Prof. Golson wrote a letter to the Curator of the Prehistory Department, National Museum. A copy was sent to Dr. Muke. In response to Golson's concerns, Muke replied with an assessment of the tribal impact on the state land. An expanded version of it is presented below.

Part 4. From private to communal ownership.

Expansion of coffee plantations involves the transfer of tribally owned communal land to private property. Usually when the plantations are in their prime age of production, the land title is with the bank, and therefore this establishment effectively owns the land. The project owners spend the first five years repaying the loans and this corresponds to the period when the coffee trees are in their prime productive age. The yield per acre declines thereafter as a result of poor soil nutrients and aging trees. It requires skills in soil and tree management, and such services have to be paid for by the coffee project owners. Apart from Bank Loans, village coffee projects do not have additional financial sources to improve the yields. Many of the members treat each other with suspicion and jealousy. Conflicting tribal interests and poor management lead to the dismantling of the business groups, partitioning of the plantation among the individuals themselves and eventual abandonment of the site.

When the Banks still have a stake in the plantations, archaeologists have had no problems having full access to research but the access to detailed investigations is restricted. For example observations are limited to the examination of the walls and surfaces of newly established ditches and so far no excavations have been permitted, except for at Kana which is, in recent years the only site to receive detailed investigations outside of the Kuk enclave. The reason for the lack of serious archaeological work not only links to a lack of manpower and funds, but more importantly to the sites being found in tribally owned coffee plantations.

The traditional landowners may not be aware of the existence of prehistoric drainage systems, though they are very familiar with and have collected aspects of material culture that are part of their own recent history. Especially many have picked up

remains of fence posts, cooking stones, and axe adzes, and pointed out depositions of charcoal and ashes in stratified contexts. It is only when researchers have pointed out the existence of ditches demonstrating past agricultural activities that the question of ownership comes to the surface. In a way, archaeologists influence the people to realise the significance of swampland as a storage house of information of the past. Since they have already been drawn into accepting that the swampland is prime land for economic activity, and that the Bank has given them huge amounts of money to drain it into dry land for coffee growing, they also get the impression that the things beneath the surface of the earth are of economic value. After all big companies have paid huge money to local landowners to have access to precious minerals in the ground. Why should it not be the same for archaeological research in the swamplands? Such underlying "rationality" has influenced the people to salvage genuine archaeological objects and sell them for cash, and they have demanded that archaeologists pay them first before they investigate the appearance of past cultural activities.

Here the question of custodianship or ownership of cultural resource materials is confused with the economic value of the land and the cash crops grown in it. To change the attitude of the people will require public education of a significant nature. At this point in time, only through goodwill and sympathetic understanding of the people of the importance of cultural heritage will sites on their landscape be left undisturbed.

When a coffee project fails the land title is transferred to the Bank. The bank has the power to sell the land to recover the outstanding debts but in most cases it has not done so. This position encourages the original owners to think that the bank has forgotten the bad debts and therefore they try to convert the land that is now privately owned into communal ownership again. Kuk is undergoing a similar process of transformation. Who actually owns it remains a sensitive issue, nevertheless, an attempt is made to assess the options available and to recommend the position suitable for scientific and archaeological research. The options are: 1. Land is repossessed by the State. 2. Land is occupied illegally and it remains disputed. 3. The land is returned to the people. 4. A compromise is reached.

4.1 Option 1. Land is repossessed by the State.

Obviously Kuk is still a state property. Thousands of kina were invested and even before it was closed, more money was poured in to improve the office complex and several residential houses were built. An indication of the state's continued interest in

Kuk is reflected in the letter by Wingti mentioned earlier. We do not know what the government authorities intend to do with Kuk in the future. The problem is related to the lack of care-taker responsibility by the government personnel. No officer has visited Kuk, apart from the one appearance arranged by the academics.

There is no easy solution to the problem as it has been left too long and there is little room for an easy handover-takeover, as the lack of concern shown by the authorities over the 6 years has encouraged the landowners to transform the land into communal property. If the landowners respect the state's ownership of the land, and also accept that they have only been squatting on government land, more or less assuming care-taker responsibilities, there is a chance for the state to repossess the land without a legal dispute.

Some compromise may be reached between the state and the landowners, which would involve a substantial amount of compensation in payment. The villagers will demand compensation for looking after the state properties and loss of economic crops and food gardens planted within the state land. In short it, would be almost impossible for the state to walk into Kuk, evict the current squatters, and reclaim the state land. The only option is a legal dispute between the two interested parties.

4.2. Options 2 and 3. Land is occupied illegally and eventually returned to the people.

Land disputes are on the increase throughout the country. The local landowners are demanding that the state pay compensation for land that was purchased in the colonial days. They believe that the Colonial authorities cheated them by luring them or previous generations to accept exotic items of wealth, which in monetary terms were nothing more than a token gift exchange. Perhaps what underlies the demand for compensation is the view that the "bone" of the land or what lies beneath the ground remains the property of the tribal owners (see Strathern and Stewart, this volume). Undoubtedly, Kuk is one area where the people may feel that they were not paid properly and the government still owes them money. The Kuk station ground is like a battlefield. The Kawelka (and Ndika) are using the same principles and tactics found in warfare, by initiating a practice that is noted in warfare, which has been referred to as 're-domestication' of abandoned land (Muke 1992). As commonly observed, the motive of a war is not always the permanent acquisition of the land by the winners. Instead, after a period of time has elapsed, the refugees may return home and initially inhabit the farthest portions of the land from the battle frontiers.

When a war comes to an end the potential for further escalation is always there and the individuals who dare to re-domesticate abandoned land cautiously move to the marginal

areas or portions of land nearest to a central activity place. The entire population would progressively move their settlement closer to the enemy and legally reclaim all the land they have lost. Once successful conversion of the 'wild' territory into a 'tamed' one has been completed, the landowners assert their socio-political autonomy as a territorial group, and the land is now 'legally' theirs.

The Kuk landowners view the state as their major enemy whom they accuse of stealing their land through very cheap deals from their fathers and ancestors. The hostility shown in the early 1990s was a deliberate attempt to repossess their tribal land. They were involved in a combination of a "war of words" and physical confrontation against government personnel.

4.2.1 The Tangible Evidence.

To prove legal ownership of land one has to refer to the presence of tangible evidence on the landscape. What happens in war is that the bulk of the physical evidence of human occupation is destroyed and hence a war zone area is a no man's territory until the former owners reclaim it by mapping it with physical evidence. In other words, the recognition of the station as government land is valid so long as there is tangible evidence to demonstrate such ownership.

What is happening at Kuk now is a process of destruction of the tangible evidence left by the state through the felling of gum trees, occupation of the residential houses and office complex, and allowing pigs into the station, which bulldoze the land on top of the major drain networks. The recolonizing of the property from state ownership to communal property involves initial gardens at the boundary areas between the state and tribal groups, division of the major blocks among the main subclans, individual claims to plots within main blocks, initial gardening associated with food crops, replacement of food crops with cash crops- coffee trees- and building of houses. There is an expectation that at any stage of the domestication process initiated by the villagers, the state authorities may step in and exercise their authority over the ownership. If the Government steps in, the squatters will demand compensation for looking after the property and for development they have initiated so far, if further development means total disregard for the existing infrastructure. This is the response we got when we held the meeting at Ongka's church. The young men indicated that DPI abandoned the state property, and the locals were now providing security for the facilities. The first agenda they had in mind was for the state to compensate them for their service before other agendas were discussed.

4.2.2. Negligence of Kuk as a State Property.

The state did not counter-attack and maintain a balance on the frontier of the war of words and physical confrontation (sending in police to arrest and punish the trouble makers). For example, it should have started with the DPI authorities at the Provincial level who should have intervened when portable sawmills were used to fell the gum trees. The Kawelka achieved one objective and that was to test the State's legitimate claim over the land. As soon as the timbers were successfully felled without any noise from the state, there was a move towards gardening activities which may have coincided with the division of the major blocks among the sub-clans of Kawelka and Ndika, yet still there was no interference from state authorities. The negligence of DPI to assert its authority over the question of ownership of Kuk itself acts as an encouragement for the Kawelka to possess the land.

How the state will go about chasing Kawelka out of the blocks is an issue which if left alone will never be resolved. The DPI's failure to move into Kuk encourages the people to think that the government does not own the land any more. The final stage of legitimising the Kawelka's ownership is the symbolic act of planting of coffee trees not only as economically significant but as permanent markers. They are tangible evidence which serve as a bargaining point for a huge compensation demand from the people in the event of a claim of ownership by the state.

A dispute that is legally contested may favour the Government. This will not help to improve the long term relationship between the Kawelka and whichever state Department has the duty to use the land. Certainly the Kawelka and Ndika will be upset and to demonstrate their point they might go ahead and destroy most of the state property. Even, if the government wins the case and goes ahead with plans that will deter the landowners from interference with the activities at Kuk (e.g. presence of a police Mobile Squad), as the history of the relationship between the Kawelka and Government personnel indicates, the land owners may constantly harass the public servants which may lead to the failure and total abandonment of yet another one of these government initiatives.

4.3. Option 4. A compromise is reached.

This is a process that requires diplomacy and obviously involves the archaeologists, the villagers and the state representatives. The objective is to come to an agreement which will satisfy both disputing parties, and at the same time they are able to view the cultural and academic significance of Kuk on its own merits. The agenda on Kuk as a

prehistoric site must be introduced independently and be considered by both parties. Otherwise, whoever represents the interest of the cultural significance of Kuk will be used as a pawn and caught in the dispute between the landowners and the state, as we experienced at Kuk in our initial attempts to discuss the future of the archaeological site.

The villagers recognised that the archaeological site was inside the state land. Indeed it is doubtful whether the research at Kuk could have continued without demands for compensation for access to what people think is their property, if the site was found in traditionally owned land rather than within the boundaries of the state land. It is possible that problems of compensation and denial of access to the site might have influenced the restriction of the duration of research to only two or three field seasons rather than 30 years of work. Certainly, the personal involvement of individuals over a long period has also acted as a protective mechanism for Kuk but in the longer run the next generation may not appreciate the binding friendship which the expatriate researchers and the local villagers developed and nurtured.

The following issues have to be considered.

- A. Regardless of the outcome of a resolution favouring either Option 1. or Option 3, both parties (i.e., the state and the local people) acknowledge the significance of Kuk not only as a national heritage but a site of scientific and cultural significance to human history. All efforts are made to protect the zones of most archaeological interest.
- B. A compromise is reached, through legal battle or by negotiation, in which both parties agree to introduce development strategies which would not pose an immediate threat to the survival of the immovable archaeological remains. The protection of the archaeological site is not considered as an important issue, and requires external input.
- C. Either or both of the parties refuse to allow further research, protection and preservation of the prehistoric drainage systems.

What is the position that we take in view of the above considerations? I raise the following issues.

1. As regards position A, this is the ideal position that archaeologists and cultural resource managers would like to see. A cooperation from both parties will enable short and long term plans for archaeological research, management and protection of the site.
2. Position B is of most concern. The land's commercial value will be exploited both by the people themselves and the state. The likely scene is for an executive (businessman or politician) to come in and join forces with the landowners, and convert the research station into a huge coffee plantation. Already we know that large portions of the surrounding areas in the Wahgi swamps have been used for that purpose, without any forms of salvage archaeological research.
3. Archaeologists are forced into a situation where they are compelled to draw up contingency plans for salvage archaeology. They work closely with the locals and the state to draw up plans for the protection and management of the site. If the state turns a blind eye, an attempt is made to lobby support internationally to declare the area of most archaeological interest as a culture heritage or a world heritage. If successful, an arrangement is made with the locals to assume custodial rights to the protection and management of the site. Some payment for loyalty is made to the keepers of the site.
4. We must anticipate the worst in the case of position C. In this case, we have to start now by proposing to conduct further research, before the dispute gets out of hand.
5. There is an academic concern from long time researchers like Professor Andrew Strathern, and more recent researchers like Dr. Pamela J. Stewart, and a public concern or protest may put a halt to any development programme which is likely to damage the archaeological site. However, the way things are going even a protest at the highest level may be ignored by the state as in the case of the Ok Tedi River pollution.

Points 3 and 4 should have provided the basis for further investigations. As predicted the new chapter begins and this more or less falls in line with position 3. In November

1996, a Japanese film crew and J. Muke visited the site and to our surprise we were able to film two of the big disposal channels at Block B9. Locals are already building houses and growing crops inside the blocks. It seems to me that the land has already been divided among various individuals and they are tactically trying to authenticate their claims of ownership by putting in their own "development" on the landscape. This is the beginning of yet another new phase to the Kuk story.

If the state does not make any attempts to prevent them, there is a fair chance that they will go ahead and use the land for other purposes like growing coffee trees. In May 1997, Muke and Golson visited Kuk and a report of our observations has been compiled (Golson and Muke 1997). Muke had discussions with colleagues at the National Museum which has prompted an immediate investigation by the Museum personnel (see articles by Moutu, Araho, and Mandui, this volume).

Conclusion.

Coffee production is a high export income earner and the government is committed to pour in millions of kina, and the hard cash it brings to the coffee growers has encouraged them to equate coffee with mineral resources, and highlanders often refer to it as a pot of gold. Many have forgotten that the very land that is planted with coffee trees is an ancient landscape that contains varying records of the past, including imprints left behind by humans, especially in the wetlands where agricultural activities have prevailed for thousands of years.

It amazes me that the farming technique of the prehistoric times did not require processed fertilisers (some of the coffee varieties are fertiliser dependent and it seems that this has been done deliberately to force the traditional land owners to buy more). Can we learn anything in the swamps about how cultivators were able to retain the soil fertility which is now enjoyed by the coffee trees?

Coffee production is a low-key form of land-use technique but the consequences are far reaching when the system has been in operation for nearly 50 years. So much of the cultural heritage has already been lost, and before everything vanishes forever something must be done.

The lending institutions fail to support the preservation and studies of cultural properties. One can blame the villagers for their ignorance or for wanting to economise every element of their society but the real authors of the destruction or loss of cultural heritage on the landscapes are the national lending institutions such as the Agricultural Bank. If not one, would have to point fingers at the international financial institutions

like the World Bank.

For nearly 30 years Kuk escaped the problems of ownership as the archaeological records were within the state land. It is likely that the state will allow the original owners to re-possess the former swampland. This will make Kuk look less important on the landscape and become like all the archaeological records that have been disturbed in traditionally owned coffee plantations.

What is needed now is the use of Kuk as a case study to address the wider problems of destruction which include;

- the introduction of Acts and Policies on cultural property and heritage management,
- the recommendation for it to be listed on the World Heritage register and
- to conduct scientific investigations which would add a "final chapter" to Golson's version of the agricultural history of the highlands.

Above all, the locals are not likely to inform the scientists of their intentions, because their plan of how to cultivate land is in their minds and the usual strategy is to locate an area as their settlement site and then cultivate outwards by adding more land to what they have previously cultivated. Ironically, the challenge to preserve Kuk as a heritage site is contested by the traditional landowners, and Ru, a prominent leader of the Kawelka, made this pointed remark:

Jack Golson i kam na mipela I wok wantaim long baret. Em i baim mipela pinis. Tasol Jack i kisim save i go long Australia, em i no lusim wantaim mipela. Ol samting bilong tumbuna yu laik mipela i lukautim em tru samting bilong bihain.

Nau ol Kawelka sot long graun na ol kisim blok pinis. Em i hat tru long mi stopim ol long noken bakarapim ol baret bilong tumbuna. Yu save taim ol planim kaikai pinis ol bai askim yu long baim ol sapos yu laik wok long graun bilong ol (Ru pers. comm. May 1997).

Jack Golson came and we worked together in the ditches. He paid us for our labour but he took the knowledge to Australia. He did not leave it here with us. You want us to look after these things of the ancestors, and this is an issue to discuss in future.

Now the Kawelka are short of land and have divided the blocks among themselves. It is hard for me to try and stop them from destroying the prehistoric sites. You know when they have already made their gardens, they will ask you

for money if you want to excavate on their land.

The attitudes of the people are changing, especially with the unbalanced development between economics and culture. Culture is expected to destroy or reassert itself and follow or take the pathway of economic development. Wahgi Valley is now a coffee producing area and the drive to expand coffee plantations has elevated the value of the land. Compensation is awarded to landowners with mineral deposits, and people are aware that multi-national companies pay for trees, bushes and anything of significance to be destroyed. The potential for selling archaeological heritage items or paying for access to the sites as sources of knowledge is becoming an entity on its own. Before it becomes an enterprise, an artifact of market forces, we must do something about it in the area of Acts and Bills to be enacted by the state towards the protection, management and conservation of the landscape.

All it requires is the right political will to make it mandatory for all bank financed projects to allocate a portion (10%) of the loan to cultural resource management and retrieval studies. Otherwise, the existence of Kuk (and sites of similar antiquity) will only be remembered on paper.

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The Kuk Site: Past Heritage, Future Issues

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We have decided that the most helpful way for us to show our evaluation of the situation at Kuk is by answering, on the basis of our August 1997 field visit and on previous knowledge, a set of questions posed to us by Andrew Moutu, Principal Curator of Anthropology of the Papua New Guinea National Museum. In what follows, each heading is a question posed by Andrew Moutu and appears in the text in bold lettering. His questions are succeeded by our responses.

1. Who are the real landowners of Kuk?

The concept of 'real landowner' depends on a prior concept of what 'ownership' is, and such concepts are culturally and historically situated. In terms of ideas regarding claims to land held by the Mount Hageners or Melpa speakers themselves, the closest concept to that of 'real landowner' is möi pukl wuö, 'the ground base man', the one who holds onto the 'ground bone', möi ombil amborom. The pukl wuö of the ground may be an individual, in relation to a section of ground within a wider territory, or a group of people, in relation to such a territory. He or they is contrasted with incomers, guests, sharecroppers, transients etc. who may share in the use of land at the will of the pukl wuö and may be entitled to such a share and even to become a pukl wuö by inheritance, gift, or a change in group-membership. In terms of the above criteria, the Kawelka group as a whole are clearly the 'real landowners' in the wider area known as Kuk, but other groups such as the Ndika Kelambe clan border on parts of the Kawelka territory and the Kawelka themselves have used land also claimed by the Ndika, having to make some restitutive payments in recognition of their use and having previously been involved in boundary disputes heard by government patrol officers. To the best of our knowledge, such areas do not include any parts of the Kuk Research Station. Within this area the Kawelka are recognized by other groups as the original title-holders to the swamplands that were drained by the colonial Administration. Accordingly, they themselves have reclaimed this area, sharing a part of it on the western edge with a prominent Ndika leader, Mr. David Tikepi, who is a Local Government Councillor and entrepreneur (coffee buyer) married into the Membo clan of the Kawelka.

If we take 'landowner' in the western legal sense of the term, the 'real' landowner

of the Kuk Research Station might be held to be the state (i.e. the Papua New Guinea State), the 'ownership' having been taken over from the previous colonial administration which made payments in the 1960s for the area. If, however, 'real landowners' is taken in the Melpa sense, the Kawelka may claim that their underlying and prior claims were neither understood by them to be extinguished by the payments received in the 1960s nor actually in law extinguished. This matter needs to be settled, both legally and practically. With regard to all areas held in customary tenure by the Kawelka around the Station, they are indisputably the pukl wuö. There are other nearby areas, also loosely defined as at 'Kuk', i.e. blockholder land leased from the state by determinations from time to time of the District Land Board. These areas are, however, not under discussion here.

2. Who are the people likely to lay claims to Kuk?

The Kawelka are the people most likely to lay claims to the Kuk Station area. We take it this question refers only to that area.

If there are other groups that may lay claims to it, these would be ones that figured as groups in any payments the Administration made for the area in 1968.

In addition, along with the Kawelka themselves, groups and individuals who have joined the Kawelka (as they say, 'come inside') will be likely to lay claims by virtue of and through their association with the Kawelka. These groups and individuals are mostly from the Tambul area and speak a different language/dialect from the Kawelka themselves.

3. Given the fluid character of the social groupings among the Kawelka, what group or groups would the Museum best enter into negotiations with in relation to preserving the archaeological heritage at Kuk? Should the Museum deal with individual block owners at Kuk, sub-clans, clans etc. or involve the community at large?

In accordance with the overall segmentary character of the Kawelka groupings, wider issues should be discussed with the larger units and narrower ones with the smaller units, bearing in mind two complications: (1) individuals have interests through marriage and friendship with more than one group, including within the Kawelka; and (2) some individuals hold positions as councillors or magistrates and therefore take an interest in affairs beyond their immediate sub-clan or clan, especially if they also have cross-cutting ties as in 1, which many do. Thus the activity group or faction that appears for any discussion may have a core of group members but include others also, whose participation must be tacitly accepted. Groups are more fluid at lower than at higher levels, but even at lower levels their membership and existence is stable enough for them to be dealt with over a period of years such as will be necessary for heritage issues to be resolved. For

matters relating to an immediate practical need, such as to take a soil sample or make a mound transect, the archaeologist(s) involved should approach the individual blockholder in the first instance and follow that person's advice or comments. For matters to do with wider conservation or heritage preservation representatives of all the Kawelka would have to be involved. Immediate needs can be negotiated without trying to resolve the wider issues and if such needs are negotiated successfully this may help to get the wider issues agreed on.

4. Money earned from coffee is more compared to the money that will probably come from for instance running a visitor's centre in Kuk. How will the Museum try to balance these two scenarios so as not to raise false expectations in relation to establishing a visitor's center there?

Problems will be minimized if no permanent disruption of existing coffee plantings occurs, as might happen if old archeological sites were uncovered. Loss of trees would have to be compensated. The Kawelka can be educated into realizing how much or how little a Visitor's Centre might bring in and that this would also depend very much on them and on the character and tone of the neighborhood. They themselves should be involved in any plans for the Center. There is likely to be jealousy and competition between them over this. Management might need to involve all sections of the Kawelka, and in particular must include the blockholders on whose land the archaeological work is carried out.

5, 6, and 7 will be answered together

5. Who are the likely allies of the Museum?

6. Who are the Museum's likely opponents?

7. What are some strategies the Museum should adopt to deal with our likely opponents?

The Museum need not appear as the sole protagonist of the Heritage idea. Indeed the Museum should strive to express both interest and concern and at the same time a certain contingent attitude, to effect that if the Kawelka themselves want a heritage site they can help promote this idea. Allies are the older men and their families. Opponents are those with no ties to the earlier work or younger people who are for one reason or another embittered by their place in the modern world. The latter group are numerous enough, but not necessarily the majority. Mr. Ru-Kundil should be involved, since he has a clear overall view of the group and its history, as well as of intergenerational and intergroup differences. The Museum should also try over time and on a wider front to enlist the help of prominent Hageners, not of the Kawelka group, e.g. the WHP Provincial Government, Michael Yake Mel the writer, Paul Pora the MP and other MPs, and

Professor John Nongorr, Law Professor at the UPNG. Among the Kawelka Dr. Joseph Ketan, a political scientist attached to the NRI who belongs to the Kawelka Membo clan, should be kept informed. The Museum should always avoid open conflict with opponents and work directly with those who are allies.

8. How can the Museum deal with the problem of intergenerational conflict of ideas relating to the Kuk archaeological heritage?

The Museum should pursue a policy of moving slowly and in step with community leaders and not antagonizing younger opponents. The Museum should offer to be helpful in assisting in the improvement of services generally in the Kuk area, for example the water supply, especially given the 1997 drought. The Museum should not play a role in the Kawelka's relationship with DPI and the government, but leave this to the leaders themselves. Our sense is that the government may be willing to give the Kawelka certificates of occupancy. The Museum can only try to win over the opinions of opponents by pointing out the unique prestige that would accrue to the place Kuk from having a heritage site, and encouraging its allies themselves to help persuade the opponents.

9 and 10 are answered together

9. What avenues are there for the Museum to effectively educate the people and seek community participation in the project of making Kuk a World Heritage Site?

10. What level of interaction should the Museum engage in to educate the people at Kuk about its intention of dealing with the Kuk heritage?

The Museum should seek to work on the school circuit, so that schoolchildren will go home and talk to their parents, siblings, and cousins.

The Museum should also encourage community leaders to visit the National Museum complex in Port Moresby.

The Museum should encourage the new archaeological work to proceed and from there work outward to the community, with help from Ru, William Pik, Tom-Kapi, and other well-disposed Kawelka leaders (e.g. Councillors, Magistrates)..

11. The Kawelka seem to dislike the Department of Agriculture both at the national and the provincial level. Does this view still exist? How can the Museum possibly find its way, given its objectives, in this conflicting situation?

The Museum should stay out of any dispute between the Kawelka and the government. The Kawelka are wary of the government. They have long-standing grievances against the Dept. of Agriculture or DPI and the Lands Department/Land Board because in the past they tried a number of times, both as a group and as individuals, to get

access to neighboring blocks for settlement/development and the blocks were allocated otherwise, or to get access to station land for sharecropping, which was refused on the grounds that the land was government land and could not be used in this way. [AJS personally attempted to assist the Kawelka in these endeavours over a period of years by writing letters and helping to file applications, all to no effect.] The Kawelka are disillusioned about government in this sense, because eventually the government simply lost control over the planted as well as the unplanted areas of the Station. The Museum should pursue its own interests with the Kawelka separately from the DPI/Agr. Dept., at most perhaps pointing out to the WHP Provincial Government that the land issue needs to be resolved and not simply for the archaeological heritage issue but for good government and order generally, and for the future redevelopment of services in the station area (water, electricity, roads).

12. Is there an interest by the Kawelka in having a local archeologist/anthropologist trained?

Such an interest could easily be generated, especially among those who have experience with researchers. Mr. Tom Kapi would be a good candidate. To what level would the training go? This needs to be specified. At the local level a number of people could be involved, who could work with Museum personnel and others to do practical work, make records, and earn money in doing so. There are potentially problems here, but if a collaborative scheme could be set up, this in itself would go far to helping to resolve the wider heritage issues favorably. However, telling the Kawelka they have no link with the archaeological findings would bias them against such a resolution and would sit uneasily with the idea of training an archaeologist/anthropologist.

13. Where do the other clans [tribes] (Jika and Mokei) stand in relation to the Kuk swamp?

If some of their members were involved in the original payment they would possibly be interested in any further payments. The Mokei (or a particular clan of them) asked the Kawelka for a share in the land at Kuk in compensation for a killing in 1995. The Kawelka refused this and paid a large compensation in money and pigs. The request was unprecedented. Whether it will be renewed cannot be predicted. As of August 1997 it had not been. Mr. David Tikepi of the Ndika Kelambe clan already lives on a part of the station but not where the archaeological digs were done. Other parts of the Station may of course contain very valuable archaeological evidence. We do not know.

14. What is the long term use of the land as seen by the Kawelka?

The envisaged long-term use of the land is that the Kawelka should themselves divide it up and cultivate all of it for subsistence crops and coffee, to relieve their shortage of land and money.

15. Is there any intention at all by the Kawelka to sell the Kuk swamp?

Not as of August 1997 [or August 1998]. Our impression is that they would be hostile to any buyers of the area as a whole because they want it for their own posterity. Such a viewpoint can change, of course. This points up the need to begin negotiating now, though not to move precipitately. At present the Kawelka are hostile to any outsiders who wish to set up businesses in their area. They tore down the foundations of a bulk store owned by a Tambul businessman on one of the blocks not far from the Station in 1997 and stopped the building from going ahead. The heritage project must be seen as theirs as well as/rather than belonging to an outside body.

SUMMARY

Our viewpoints expressed in the above provisional answers can be summed up as follows:

1. All steps taken must be collaborative. They should begin small, e.g. with new archaeological digs and talks with people who show interest in these at the community level.
2. The educational program must go through the schools as well as the community, and should also involve visits to Port Moresby, if possible, by Kawelka leaders, to see the Museum.
3. Confrontations with opponents, or involvement in disputes with the government, must be avoided by Museum personnel, as by everyone else interested in the heritage issue.
4. The whole project depends on the Kawelka's interest and willingness to support it. Without this, even if there is national legislation to protect the heritage area, the Museum's efforts will not succeed. The Kawelka, in so far as they are the 'real landowners', are also the 'real key' to success of the heritage idea. Working with allies/supporters outwards is the only feasible way to set about obtaining that support.

Epilogue following our 1998 work in Kuk:

We were glad to be able over time to assist Prof. Jack Golson during his negotiations with the local people at Kuk (including Mr. Ru-Kundil, Mr. William Pik, and others) in his efforts, along with staff members from the Papua New Guinea National Museum and Art Gallery and the University of Papua New Guinea, to 'open the road' into the Kawelka territory so that archaeological research could be carried out in the area in a harmonious manner. Prior to the archaeological work beginning in 1998 we were in correspondence with Prof. Golson and Mr. Ru-Kundil. At that time it was explained to us that due to the recent killing of a Chimbu woman a large compensation payment would need to be made and it was difficult for the Kawelka to raise all the money that was needed for this payment. Various threats of violence were being made against the Kawelka and Mr. Ru-Kundil wrote to us as well as Prof. Golson to ask for our financial assistance. We sent 500 Kina (not a small sum for two people living on an academic salary) of our personal funds to help the Kawelka people during their difficulty, which in turn helped to remove the immediate threat of violence that could have prevented the archaeological work from taking place.

Prof. Golson and Mr. Tim Denham (an archaeology student from the Australian National University who was working with Prof. Golson in 1998) had asked us in 1997 when we met in Canberra, Australia if we could be in the Kuk area when they wanted to start their work so that we could assist them if any difficulties arose. We gladly agreed to do so since we are conducting ongoing research with the Kawelka people ourselves.

While we were conducting our independent anthropological research at Kuk during 1998, Prof. Golson and Mr. Denham along with the rest of the archaeological research team worked by themselves to negotiate with the local people over issues of payment for manual labor such as digging at the research sites, land use payments to reimburse for disruption to gardening areas, etc. These negotiations were not a part of our arena of involvement. We are proud, however, to have been able to help in 'opening the road' into the Kuk archaeological site. The responses to Andrew Moutu's questions that we had earlier made proved to be a useful set of guidelines for the early stages of negotiations, in particular with regard to the need to separate out the discussions regarding access for the archaeologists on the immediate blockholders' land from later discussions (yet to be held) on the wider heritage issues. This separation enabled the archaeological work to proceed without being engulfed by broader speculations regarding the matter of 'heritage' and or by internal political competition between the different Kawelka clans themselves, e.g. between the Membo and the Kurupmbo-Kundmbo alliance set.

Cultural Heritage Written in Stone.

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The Wahgi Valley in the Western Province of Papua New Guinea where the bulk of the Kawelka people live is an area of very dense human habitation in which large sections of clan land have been alienated since the 1950s for plantation development (coffee and tea) and considerable portions also have been used for resettlement schemes and by immigrants from high-altitude areas such as Kandep, Tambul and parts of the Enga Province that are periodically subject to famine through drought and frost and have most recently (1997-8) undergone a serious period of such problems. The Kawelka returned to their present location, which is known as Kuk, from the 1950s onwards following pacification, after having been driven out in fighting with the Mokei people around 1914.

An initial trickle of Kawelka began to flood back into Kuk when cash cropping took off and the rich soils of the Kuk area provided an enticing contrast to the northern mountain lands where the Kawelka had been living in exile for about half a century. The Kawelka leader, Ongka, recalled these events in 1995. He said that his father had lived previously beside the place where the sacred standing stone is erected but he was driven out by the fighting and moved to Mbukl before the white men came (see cover of this volume for photograph of the Kuk standing stone). Ongka said that when the white men did come into the area he went back to find his own land. He noted, "If the Australian government had not come I would never have been able to do this because my enemies would have killed me, but when the government came and made peace among us it was safe for me to return to my father's land. At Mbukl it is forest land and hard to clear. When we moved back to Kuk everyone just divided up the land among themselves." The Kawelka occupied parts of the area that were not too swampy.

In 1968 the Administration purchased rights over large swampy areas adjoining the resettled Kawelka lands, drained the swamps, and turned these into an Agricultural Research Station and a tea plantation operated by the Manton Brothers, an Australian business family established in Mt. Hagen. The Station's function was to experiment with types of tea for plantation use. The land purchased for the Station had been very swampy. It was drained and sectioned neatly, solid roads were made between the sections which allowed for vehicle access. Also, casuarina trees and ornamentals were planted alongside

the roads, giving the appearance of a colonial outpost. The Kawelka lived on the periphery of the station in the interstices between major roads and the nearby tea plantation. By the 1970s they were trying to reclaim parts of the Station or land blocks next to it either for business development or for subsistence use; or to be able to plant crops on parts of the Station unused so far for development. All of these efforts (in which one of the authors, AJS, sought strenuously to assist) fell through, either because of refusal by the Department of Primary Industry or putatively through manipulation of Provincial Land Board decisions by influential outsiders. Much later, in the 1990s and under the control of the Provincial Government the Station fell into disuse and subsequently disrepair. Its houses were colonized by local public servants and others, rents were not collected, the area became a target for criminal activity, and a market with beer drinking and darts playing took over the entrance-way into the old Station precincts (see papers by Moutu and Muke, this volume).

Cash-cropping on the land gave the first independent access to cash for all categories of people in the area since smallholding plots could be and were planted by everyone and both men and women claimed access to their products although on differential terms. However, it also produced a new anxiety, as well as a new objective situation, with regard to land as a resource, since land for coffee was semi-permanently removed from the cultivation cycle and thus made unavailable for subsistence use, a factor that increased in significance because coffee required the more fertile land. Coffee plantings were uneven because of differential access to such land on the part of individuals, and succeeding generations since the 1960s have found it harder to find land on which to make new plantings. Coffee prices have fluctuated considerably over the years, and there is heavy dependence on this single crop. Also, consumption of introduced foods has risen markedly over the years since the 1970s. And large sums of money are regularly needed to pay for deaths sustained in killings, whether in warfare or not, between political groups, in addition to bridewealth payments which are much greater today relative to the total wealth holdings of any particular individual or kin nexus than they have ever been in the past. The demand for money is thus very high, and its supply rests on a base that individuals find increasingly hard to extend. It is evident therefore that tensions over inequality, perceived or genuine, in land resources nowadays translate easily into quarrels and accusations between members of local groups. By 1994, the Tok Pisin term jelas ("jealous") had entered into local discourse as a way of describing the ordinary tenor of intra-clan relationships as well as inter-clan relationships.

The intergenerational context has to be borne in mind as well. The attitudes of young males in their twenties or late teens are quite different now from those of men in

their thirties or over. These younger men see shrinking amounts of land available for their economic activities; they are accustomed to visiting town and spending money there; they play darts and drink alcohol (perhaps, smoking marijuana) as well as gambling with cards; and they are less interested in pig rearing and gardening work than the generation before them. Resentment felt within the clan often falls along generational lines, younger men feeling cut out of opportunities because of the holdings of their seniors. But the Kawelka claims to the land in the Kuk area are strongly stated by both young and old alike. And the story of the Kuk standing stone is cited as support for these assertions.

The story of the stone was related in 1995 by Ru Kundil, a traditional leader of the Kawelka tribe from the Kuk area. He begins by stating that "the stone is a very strong thing" and then he immediately turns to explain about the relationship of his tribe to the stone, saying, "The Kawelka group originated first at a place called Atekla to the south west. . . . They migrated up to" Kuk, the place where the stone stands "and at that time they were involved in warfare with the Mokei, Ndika, Yamka, Keme, Kukilika and all the groups around here. . . . Many of the other groups made alliances with each other, surrounded the Kawelka, and intended to kill them. The Kawelka decided that if they were driven out they would put a marker on the land so as not to abandon the place forever." Ru goes on to make an important descriptive comparison between the stone stele and cement markers of the sort that government authorities set up to indicate land use rights. "Nowadays people place cement markers -- the Kawelka thought about what they could place in the ground as a definite marker that this was their land, so that if anyone came along later and asked whose was this, no person of the other groups would claim the stone as his because it would be recognized as a Kawelka stone." Although Ru does not elaborate on how the stone could be physically recognized as belonging to the Kawelka it is clear that the stone's story speaks to this through the narrative associated with it. The stele is not carved, but is a naturally formed limestone column of which a similar grouping was identified in the 1980's, projecting horizontally from a hillside near the place of the Kawelka leader, Ongka. At the time of the discovery of the site two additional columnar segments were quarried from the place and set up on a Kawelka (clan Membo) ceremonial ground at a place where a Lutheran mission settlement stands. This was an innovatory action aimed at recapitulating the act of the ancestor Koi in setting up a stone of that kind as a marker of land possession and perhaps also was designed to make a statement stressing the land claims of the Membo vis-a-vis other groups such as the Ndika and their own Kawelka tribesmen.

Ru continues his narration:

"Koi of the place Kuk in the division of the Kawelka, Kuk Ku Runga-pei (Kuk stone slab

dweller), [those who live around the stone slab] is the one who set up this stone. This ancestor, Koi, was hunting in the forest area at Ropri to the north of here (where the stele stands) along with his dog. The dog became excited and followed a trail round and round and round -- running about. Then Koi listened and realized that a noise was coming from somewhere, a 'haa', 'haa' [guttural] sound. He thought there was a marsupial there and they chased the noise up to the top of the Ropri hillside and back down again yet they found no marsupial. Suddenly Koi saw there was a stone which had already been covered in pig fat and was shimmering and standing up before him and it was making a noise or talking." [The stone being covered in pig fat (kopong in Melpa) is like a well oiled skin of a person that is a sign of health and reproductive capabilities. In the past grease was applied to pearl shells used in bodily decoration as a signal that the owner of the shell was an active participant in an environment of healthy social reproduction, in addition to being applied to fertility cult stones.] "When Koi saw this stone he said, 'Oh! There is a stone here making a noise' and so they slung this stone between two poles and they brought it down to the settlement and there they made sacrifices (killing and cooking pigs) in front of it and planted a cordyline in front of it." [The cordyline represents the mi, the sacred marker of the Kawelka group. These actions indicate that the stone is seen as cognate to the originatory power of the Kawelka and symbolizes their connectedness to the earth.] "In this way he set up the Ku Runga (stone slab). The people of the surrounding grasslands did not know about this because Koi hid and set the stone up in secret. Koi set this stone up like a cement marker for the Kawelka. If anybody, either the government or local people, say anything about this ground later we can say it was Koi who had this powerful idea and set the stone up. If any group is jealous of us or says that we are recent immigrants or settlers in this area we can reply, 'Yes, you say this but whose place is this? Who set up this stone? Was it any of these grassland people who live around here or was it Koi?' Everybody will have to agree that this is true because Koi was of the Kawelka group. If he had not set the stone up we would not be sure if this truly was our land or not. We would have had to speculate about it and we would have been confused. Whatever else ever happens in future this stone will be our witness."

The sense of witness used here can have both the traditional meaning of standing for what is 'true' and the introduced meaning of a legal witness proving that the people who marked the land first were the Kawelka. Ru's narrative indicates clearly the strong sense of their heritage of landownership which the Kawelka at Kuk have, and it is a narrative which has developed in the context of recent historical events, for example claims made in 1995 on their land by one of the groups of the Mokei tribe as a result of a killing (see Strathern and Stewart 1998a, 1998b), and the actions of the Kawelka themselves in

recolonising the Kuk station and asserting their claims to it via their oral history regarding the stone.

The Kuk stone is therefore a marker of a cultural heritage that also has today come to be an important symbol of land ownership in a potentially contested arena. It stands within Kawelka Kurupmbo sub-clan territory near to where the Kurupmbo, under the leadership of Ru-Kundil and Oklom-Kor, staged a Female Spirit cult performance in 1983-4 (Strathern and Stewart 1999). Appropriately it is today surrounded by coffee trees, secular markers of ownership flanking the stone itself as a sacred marker.

It is interesting to note that Koi appears also as a Kawelka leader in a 1969 account by Ongka-Kaepa of the Kawelka flight from Kuk to Mbukl. In Ongka's narrative Koi's death at the hands of Kukilika tribesmen is described and is said to have caused the Kawelka to say that they should leave now because "We are not strong. [Our big-man] Koi is dead" (A. Strathern 1972:38). In this image it is Koi himself who is the focus and his death prompts the Kawelka to depart. In Ru's 1995 image, Koi's agency is transferred into the stone he set up, which becomes a permanent marker of Kawelka 'strength', and of the attachment of their name to the land at Kuk.

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Kuk Heritage: Issues and Debates in Papua New Guinea

Andrew Strathern and Pamela J. Stewart (eds.)

This volume contains contributions from staff affiliated with/at the Papua New Guinea National Museum (Nick Araho, Herman Mandui, Andrew Moutu, John Muke, and Pamela Swadling) and by Pamela J. Stewart, Andrew Strathern, and Jack Golson, discussing the issues and debates that focus on the Kuk archaeological site in the Western Highlands province of Papua New Guinea and its future as a proposed heritage area. The Kuk site is well known for the long time depth of its evidence of prehistoric agriculture in New Guinea. It also falls within the territorial interests of a local group, the Kawelka people, as well as the national government. Reconciling the interests of the stakeholders in this site is a major task, and these essays consider the issues carefully. This volume is of interest to both anthropologists and archaeologists and relates to the practical application of anthropological findings in the context of cultural development and heritage management in the Pacific. A further discussion of the Kuk site is forthcoming in "Nine thousand years of gardening: Kuk and the archaeology of agriculture in Papua New Guinea" compiled by Pamela Swadling, Jack Golson, and John Muke.

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