

Seminar on the Nomination of

**Cultural and Natural
Heritage
of Malaysia**

**to the
World Heritage List**

**Post Seminar
Report to UNESCO by
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August 1998

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MISSION BRIEF

The mission brief as expressed in my contract with UNESCO was:

- *Accompany national specialists to three natural heritage areas chosen by the Malaysian authorities and advise them on the potential for each of the three sites for meeting criteria for inscription of sites on the World Heritage List and on the adequacy of the relevant conditions of integrity of each site*
- *Suggest to the Malaysian authorities possible options for using various nomination strategies, e.g. single site nominations, cluster or serial sites etc., for drawing up nomination dossiers for the sites identified by the Malaysian authorities;*
- *Provided advice on the potential of any other units included in the Malaysian protected area system for meeting World Heritage criteria and conditions of integrity subject to the Malaysian authorities willingness to present and discuss information on such additional sites;*
- *Participate in the seminar on Malaysian World Heritage sites scheduled to be convened between 28th and 29th July 1998, in Penang, Malaysia, and present, in oral and written forms, the findings of the field visits and suggestions to the Malaysian authorities on procedures, time schedules and other details guiding the Malaysian program for submitting nominations of natural properties to the World Heritage List; and*
- *Prepare a detailed report on the outcome of, and recommendations deriving from the mission to the consideration of the World Heritage Centre*

EXECUTIVE SUMMARY

The Malaysian Government has short-listed three natural heritage areas for possible nomination to the World Heritage List, namely:

- Mulu National Park in Sarawak State
- Kinabalu Park in Sabah State
- Taman Negara (National Park) on Peninsula Malaysia (partly within the states of Pahang, Kelantan and Terengganu)

All three areas were briefly inspected during the mission and a considerable amount of documentation was obtained and studied. All are formal protected areas under either State or Federal legislation.

Preliminary Advice on potential to qualify as World Heritage

It is highly probable that all three areas under consideration for nomination on natural heritage grounds can meet at least one of the criteria, and likely that at least two of the sites will qualify against more than one criterion. No formal assessment or articulation of a case suitable for nomination purposes has yet been prepared for any of the three sites.

Conditions of integrity

It is highly probable that Conditions of Integrity (i) to (iv) can be readily met where relevant. Again, this will need to be evaluated when it is clear on what basis a nomination will be made.

As the existence or preparation of management plans is now a prerequisite to listing. (Operational Guidelines Condition of Integrity (v), I tested for

- Existence of a Management Plan
- Application of Management Plans
- Awareness of plan by staff
- Effectiveness of the plan to control development and to initiate programs for conservation.

Management plans exist for all three areas. However, I do have reservations about the status, power, relevance and application of these plans. I recommend that nominations for any of the three prospective natural heritage sites address how the existing plans are to be reviewed, given greater status and made more relevant to day-to-day management. Ideally that process should be completed as a prerequisite of any nomination.

(Condition of Integrity vi) addresses the regulatory and institutional framework which governs the protection and management of a site. This includes legislation, and the legal aspects of strategic plans, policies and management plans. Also, this condition requires that the definition and adequacy of the boundary be established. It was not possible in the time available to undertake any in-depth investigation against this criterion but I do not see any insurmountable problems with meeting Condition (vi).

Towards nominations

All three prospective areas are worthy of inclusion on a national list of Tentative Nominations.

It should be relatively straightforward to up-date documentation and undertake an assessment and articulation of the World Heritage values for each of the three prospective nominations. A comprehensive assessment may prove problematic at this time for Taman Negara and Mulu where the level of survey, inventory and research is far from complete. A comprehensive assessment for Mount Kinabalu would be possible in the short term given the greater level and range of documentation and the greater ease of regional comparison.

Assessment against the Conditions of Integrity should similarly prove to be fairly straightforward but some effort will be needed to ensure adequate documentation.

It should therefore be feasible for adequate nomination documents for all three areas to be prepared in the near future.

However, there are matters which I identified as being important to address, both in the interests of better management of the protected areas and to avoid creating a perception of contradiction between World Heritage listing and an inferior presentation to visitors. Such issues are also likely to impact detrimentally on the tourism industry based on these parks if not remedied in the near future.

In the case of Mulu, the standard and condition of visitor infrastructure, both inside the caves and boardwalk access to the caves, needs to be addressed.

In the case of Taman Negara, a combination of the degraded condition of visitor facilities in the Kuala Tahan locality and, related to that, the increasing impact of external development on the park and especially on the quality of the visitor experience, also in the Kuala Tahan locality.

In both Mulu and Taman Negara it would also be desirable to have the relationship between the indigenous people and the park clarified to avoid any unnecessary issues arising at a later date. It would also be appropriate for the indigenous people with traditional use rights on each of the parks to be consulted for their views on world heritage nomination prior to such nomination being submitted.

At least Kinabalu and Taman Negara represent highly prospective nominations and Mulu remains prospective but requires substantial address of the level of documentation, assessment of heritage significance as well as address of some management issues.

It is possible that there are other prospective world heritage nominations in Malaysia and some attention has been drawn to these and recommendations made that the Government of Malaysia keep such sites under on-going review.

The seminar and associated inspections was a very valuable exercise.

MISSION REPORT

Programme

My official program in Malaysia is at Attachment 1.

The first sector of the program involved the inspection of the three potential nominations, namely:

- Mulu National Park in Sarawak State
- Kinabalu Park in Sabah State
- Taman Negara (National Park) on Peninsula Malaysia (partly within the states of Pahang, Kelantan and Terengganu)

The second sector of the program was participation in the “Seminar on the Nomination of Cultural and Natural Heritage of Malaysia to the World Heritage List” held in Penang on the 29th and 30th July.

I was accompanied and ably guided throughout the inspections by Mr. Jasmi bin Abdul, Director of Research and Conservation in the Department of Wildlife and National Parks, a Federal agency based in Kuala Lumpur. His assistance was complemented by State or local representatives in each locality.

A brief outline of the nature of inspection for each area is provided as an introduction to each of the site specific reports presented in this report.

Scope of the Report

This report has been prepared after the seminar held in Penang on the 28th and 29th July. Preliminary findings were presented at the seminar but some aspects have been developed subsequently and may differ from the preliminary findings, at least in detail.

Geographic Context of Prospective areas

The geographic context for the Malaysian sites can be simplified as follows:

Malaysia occupies a biologically strategic part of the world

- Peninsula Malaysia occupies the south eastern extremity of the Asian continent, a feeder to past land bridges which connected to the Indonesian archipelago
- Eastern Malaysia occupies the geographically most diverse parts of the large island of Borneo, an island rich in endemic species.

The three sites therefore include

- The large mammals and plants of Asia
- The distinctive endemic plants and animals of Borneo
- Some of the more distinctive landforms of Borneo, (Mount Kinabalu and the Mulu caves and karst).

The two prospective sites in East Malaysia complement each other in terms of landscape and biota and in turn they complement the Taman Negara site on Peninsula

Malaysia. Further, all three sites appear to complement the existing listings in neighbouring Thailand and Indonesia.

The regional context of all three prospective natural heritage sites was taken into account, including existing and prospective World Heritage Sites in neighbouring Thailand and Indonesia.

A. MOUNT KINABALU

Description of site

“One hundred and thirty eight kilometers from Kota Kinabalu, the capital of the Malaysian state of Sabah, rises the majestic Mount Kinabalu. With its peak at 4,101 meters (and growing), Mount Kinabalu is the highest mountain in South-East Asia. This distinction has earned it considerable attention in myth and legend as well as in geography, and the mountain has for most of history been revered as a sacred spot. The hundreds of square kilometers encompassed by its slopes, from sea level to the jagged stone edge marking its summit, form the Kinabalu National Park. Within this area is found some of the richest flora in the world, ranging from lowland dipterocarp forest to the montane oak, rhododendron, and conifer forests of the middle altitudes and eventually to the alpine meadows and stunted, windswept bushes of the summit.

The climb up Kinabalu is one reason why many visitors come. Despite its intimidating size, Kinabalu is one of the easiest mountains in the world to climb. No special skills or equipment are needed, and each year thousands of visitors undertake the expedition, which takes two to three days.

Though the Kinabalu Park is famous largely for the climb, the climb is in turn as famous for the beauty of its route as for the view from the top. Kinabalu's slopes possess a wealth of plant growth and a large variety of birds, and much of the climb's interest and beauty lies in tracing the transitions from one ecosystem to the next as one reaches ever higher altitude. For visitors with more time to spend in Kinabalu, there are graded paths leading through rich lowland forest to mountain rivers, waterfalls, and tumbled bat caves.

Size: 75,370 ha.

Highest Point: Mount Kinabalu (4,101 meters)

Flora Fauna: One of the largest flowers in the world grows here. Its giant red blossom, the *Rafflesia* can grow to over 170 cm in diameter. More the 250 bird varieties have been recorded. Small mammals which inhabit the mountain include mountain squirrels, tree shrews and bats.”

*(Extracted from the Official Home-page of the
Malaysia Tourism Promotion Board, New York)*

Legal status of site

Kinabalu Park was originally established in 1964 under the National Parks Ordinance No.5 of 1962. The Ordinance was later replaced by the National Parks Enactment No. 13 of 1977 which in return was replaced by the National Parks Enactment No. 13 of 1984.

Sabah Parks is a statutory body under the Sabah Ministry of Tourism and Environmental Development and is administered by the Sabah Parks Board of Trustees.

The management plan appears to have no legal status under the legislation.

INSPECTION

The visit commenced from Kota Kinabalu, the capital of Sabah state. Transport to the park was by car and involved about 90 minutes travel on highway standard roads. We were met at the park headquarters by the Park Superintendent, Mr. Eric Wong.

We visited the main visitor centre and also viewed an audio-visual presentation, followed by inspection of the botanical garden, a living collection of plants found in the middle and higher altitudes of the park.

We then travelled to a lowland park visitor access at Poring Hot Springs on the eastern side of the park. Here the inspection included a canopy walk followed by a butterfly farm and a living collection of 800 species of orchids found in the lower altitudes of the park.

GENERAL OBSERVATIONS

a. Headquarters Precinct

The headquarters precinct is the main visitor precinct for Kinabalu Park, receiving over 200,000 visitors per annum, including 80,000 overnight visitors and 32,000 who climb the mountain. The result is that the headquarters precinct is a busy area with movement of vehicles and people among the numerous buildings which provide accommodation, information and other services.

Notwithstanding the functional nature of the headquarters precinct, it is tidy and well maintained, though some of the buildings are totally utilitarian with little sympathy for their surrounds.

The accommodation and restaurant functions have been leased out to concessionaires.

Visitor Centre

The visitor centre at Park Headquarters comprises mainly photographs and taxidermy specimens of birds and mammals. The display is very professional in terms of technical standard of exhibits but explanation is limited. It makes a useful contribution to visitor understanding of the mammal fauna of the park.

Missing from the display is a focus on the geology and geomorphology of the mountain that might have been expected.

Display material relating to other protected areas in Sabah, including a marine national park, seems out of place.

Audio Visual

The audio visual, comprising a dual screen, sound tracked slide show, is very professional and informative.

Botanical Garden

The “Mountain Garden” botanical garden is located on 4 hectares of land immediately behind the visitor centre and has obviously been established for many years. The display is compact, professional and well known and understood by staff.

There are presently about 500 species of plants in the Mountain Garden.

The botanical garden concept as presented here makes a real contribution to the visitor experience in Kinabalu in allowing visitors to see at close quarters many plants which may be difficult to encounter or see in the wildlands of the park.

The botanical garden is fenced and inspection is only permitted under supervision by staff. Inspections are available daily.

b. Poring* Hot Springs Precinct

*pronounced *po-ring*, the local Dusan name of a giant bamboo growing in the locality.

The Poring Hot Springs precinct is located on the lowland eastern edge of the park and is a multi-purpose visitor zone, containing a canopy walkway, botanical garden, orchid collection, butterfly farm, office, chalets, restaurant and hot spring baths.

Canopy Walk

The canopy walk, believed to be the first of its kind in South East Asia, is a suspended cable type elevated walkway suspended from large emergent trees in the rainforest. It was the prototype from which the much longer version was developed in Taman Negara in Peninsula Malaysia.

The walkway is in places more than 40 metres above ground level and is available for use by visitors for a fee and all visits are supervised. During my visit I observed at very close quarters, two orang-utans within metres of the walkway. I had the unique experience of observing one of the orang-utans building a ‘nest’ adjacent to the walkway.

The structure appears well designed and is very functional though not for those frightened of heights. The light nylon net sides to the walkway are no doubt functional but do little to instil confidence.

The walkway is an undoubted asset for promoting understanding of tropical rainforest and offers a memorable experience to visitors. In combination with the nearby butterfly farm and botanical gardens, the Poring Hot Springs precinct offers a unique educational opportunity for visitors.

Poring Butterfly Farm

The butterfly farm comprises open trap gardens, a visitor centre with air-conditioned specimen room and a large gauze flight atrium. It is staffed by 3-4 staff, the supervisor appearing very knowledgeable on the subject of butterfly breeding.

The butterfly farm is managed primarily as an education facility but also apparently attracts researchers, especially from Japan. Only local species are maintained, mostly without the need for importation of wild specimens or eggs. The famous Rajah Brooks birdwing butterfly is a feature of the collection. Other insects are also raised, including large species of phasmids.

Botanical Gardens

Although I did not inspect this garden, it is in the early stages of development and is not yet open to the public. Its focus is the species of the lowland section of the park, in particular the non orchid species.

Poring Orchid Collection

The orchid collection at Poring Hot Springs is extraordinary, comprises more than 800 of the estimated 1500 orchid species of the park. It includes what is reputed to be the world's largest and smallest orchids, both species of Kinabalu Park. The living collection is not (yet) open to the public and is understandably security fenced.

There are almost 5000 specimens of orchids in the Poring Orchid Centre.

The orchid garden is accompanied by a large set of laboratories which are in the process of being set up for curating and research. A reference collection of pickled flower specimens taken from the living collection is already underway. Laboratories are already being equipped for tissue culture propagation, focusing on rare and threatened species.

Hot Springs and baths.

The hot springs at Poring comprise very hot and slightly sulfurous hot water emerging from under a large granite boulder. For some years the water has been channelled into concrete and tile pools designed for outdoor bathing. These baths are in the process of being extended for more general water based recreation, including a water slide.

The hot spring baths are somewhat out of place in a national park and have been developed purely for recreation with little or no regard for the adjacent rainforest setting. They are however very much on the periphery of the park and do not impact on the conservation values of the park though they do detract from an otherwise quasi-natural precinct.

Accommodation

A number of chalets have been constructed in the Poring Hot Springs precinct. They give the general impression of being 'first generation' European design structures which do not reflect local architecture or the rainforest environment.

Poring Hot Springs precinct records about 130,000 visitor nights from the array of accommodation offered.

The accommodation and restaurant services have been 'privatised' - leased on a concession basis.

Staffing

I was particularly impressed with the number, range of disciplines and employment tenure of staff in Sabah Parks, in particular the Research and Education Division which comprises 62 personnel of which 26 are permanent. Some of these specialist staff are based in Kinabalu Park. Long term and stable employment appears to be a feature of the Kinabalu Park.

POTENTIAL WORLD HERITAGE VALUES

It takes little effort to recognise that Mount Kinabalu should be able to qualify on at least two criteria - possibly more. In particular it should be able to meet at least criteria 3 and 4 - natural beauty and biological diversity.

Whilst the inspection team did not have time to climb Mount Kinabalu, there is an abundance of information about the site. My inspection of the two visitor precincts together with extensive documentation provided by Sabah Parks has allowed me to gain a good appreciation of Mount Kinabalu as a potential World Heritage nomination. The documentation includes a major text specific to Kinabalu and recently revised and republished. A new scientific journal ('Sabah Parks Nature Journal') published by Sabah Parks, includes a number of papers on recent research in Kinabalu.

It is very clear that Kinabalu has attracted a lot of biological survey and research over more than a hundred years and much of this is well documented. The result is that unlike many other mountainous regions of the island of Borneo, Kinabalu is relatively well studied. Notwithstanding this skewed information base, Kinabalu is sufficiently distinctive and different to all other mountains in Borneo that further research on other Bornean mountains will not dislodge Kinabalu from its being regarded biologically and landscape wise as the pre-eminent mountain of the island of Borneo, if not South East Asia.

Kinabalu is the highest mountain in South East Asia. Although that in itself is not a World Heritage value, this contributes to aspects which are of potential world heritage value.

The glaciated summit plateau of Mount Kinabalu is distinctive and spectacular and features widely in geography texts, travel books and tourism posters across the world. It is the magnet that attracts trekkers from across the world. While the summit plateau regularly features in photography, the less easily photographed Low's Gully, a glaciated 1.5 km deep chasm which cleaves the summit plateau captures the attention of the mountaineer. The summit landscape is distinctive, unusual and by popular acclaim, "a superlative natural phenomena" and of "exceptional natural beauty" (criterion iii)

The glacial landscape on the summit plateau is a relictual landscape which provides graphic evidence of changing climate, an on-going process. In particular, Kinabalu represents outstanding evidence of the impact of the Pleistocene glacial upon even the humid tropics of the world. With the post glacial warming, Kinabalu's altitudinal range has provided the most important refugia for the Bornean biota of the Pleistocene.

Notwithstanding the substantial height of Kinabalu at circa 4095 metres, it is a very young mountain, parts being aged between 1 and 1.5 million years, claimed to be the youngest non-volcanic mountain of this size in the world. Mount Kinabalu grows at the rate of about 5mm per year as the granite pluton core continues to thrust up through the earth's crust. This is claimed to be of great geological significance and is evidence of the continuing evolution of the earth's geophysical environment.

I consider that Kinabalu has good prospects of qualifying under World Heritage criterion (i). However, there is still the need to clearly document and articulate the evidence and the case for qualifying against this criterion.

The great altitudinal range of the mountain, from 152 metres a.s.l. to 4095 metres a.s.l., results in an altitudinally layered habitat with a corresponding large diversity of plants and animals. As the mountain has continued to grow it has carried relictual plant and animal communities from the colder climate of the Pleistocene up to altitudes conducive to the survival of such plants and animals. For example, several of the relict conifer species (e.g. *Phyllocladus hypophyllus*) have closely related counterparts in temperate latitudes such as in Tasmania. 25 species of *Rhododendrons*, including 5 local endemics are part of the evidence of the botanical link with mainland Asia where the *Rhododendrons* are concentrated in the Himalayan region.

Cormer (quoted by Datuk Lamri bin Ali 1998) has described Kinabalu as containing "the richest and most remarkable assemblage of plants in the world", with flora affinities of the Himalayas, China, Australia, New Zealand and North America.

An indication of the biological diversity is the estimated more than 1000 species of orchids (Lamb and Chan 1978) although local estimates run to 1500 species, which would represent about 5% of the orchids of the whole world. It is probable that the orchid flora includes both the largest and smallest known orchids.

Kinabalu supports many species of plants and animals endemic to the island of Borneo and significant numbers of Kinabalu local endemics. An indication of the biodiversity can be obtained from the fact that a total of 78 species of figs (*Ficus* sp.) have been recorded, including the local endemic *Ficus deltoidea* var. *kinabaluensis* which occurs up to 3,100 meters a.s.l.. An impressive 20% of the world's known fern species or 610 species, has been recorded on Kinabalu (Beaman et al 1991)

Kinabalu is renowned for its insectivorous pitcher plants of which 16 have been recorded. It also boasts both known species of the extraordinary parasitic plant *Rafflesia*, renowned for having the largest flowers in the world at up to 1 metre diameter.

I believe there is a case for Kinabalu being nominated to qualify under criterion (iv), though this still needs to be carefully evidenced and articulated.

An interesting aspect of the Kinabalu site is the existence of three very impressive living collections of plants found on Mount Kinabalu, including an extraordinary collection of about 800 orchid species. These living collections serve to illustrate the exceptional biological diversity of Kinabalu and contribute to the visitor experience and facilitate scientific study of the biodiversity of the mountain.

The living collections are professionally curated and additional research attention is being actively planned for the orchid collection with large laboratories in the process of being equipped.

Conditions of Integrity

The proposed nomination is the existing Kinabalu Park. The park includes the greater part of the mountain including at least all of the remaining naturally forested slopes. The proposed nomination therefore incorporates all of the remaining natural biodiversity and habitat relevant to the massif. As such, the park has a high degree of site integrity and embraces all of the most significant geological, geomorphological and botanical features that are likely to represent the key natural heritage values.

Indeed, when viewed on a satellite image, Kinabalu Park is very apparent - the boundary is obvious, the result of the 'cookie cutter' effect of logging and clearing right up to the boundary.

The boundary has been surveyed, permanently marked on the ground and is maintained. The proposed nomination therefore has logical, complete and identifiable boundaries.

Management Plans

The management plan appears to have been prepared in about 1993. However, I am concerned to see that the plan is promptly updated to fully reflect the current management objectives and practices.

The plan is backed by a State policy document and by legislation. Both the legislation and the park policy is very soundly based and clearly specifies the conservation role of parks.

My overall assessment is that the management regime of Mount Kinabalu is very professional and is based on a broad documentation and knowledge of the diverse range of natural attributes. The obvious knowledge and commitment of staff is backed up by an abundance of scientific information about the park, up to date published information, and an obvious high level of interest and 'ownership' within the community of Sabah.

I believe that Sabah Parks would benefit from some outside assistance to ensure that the documentation and listing case is of a high standard and a model for other nominations in Malaysia.

Threats

There appear to be no immediate threats to the site. However, potential future threats may include:

1. Cableways, towers and other inappropriate structures on the mountain (no proposal current)
2. Funding (not currently evident)

SUMMARY

Kinabalu is a self recommending site with good site integrity.

The standard and volume of information on the natural heritage attributes of Kinabalu is excellent.

The living collections add an interesting dimension to the international significance.

There is a *prima facie* case for Kinabalu being nominated as a part of the World's heritage. A case can be made for nomination against several criteria, indeed should be considered for nomination against criteria (iii) and (iv) and possibly also (i) and (ii).

Kinabalu is a formally established protected area backed up by State legislation, agency policies and a management plan. The boundaries are formal and have recently been marked on the ground.

Kinabalu is vested directly in the Board of Trustees of Sabah Parks, a specialist conservation agency. All the indications confirmed to me that Sabah Parks is a highly competent management agency exhibiting a high standard of professionalism. Kinabalu therefore should be capable of meeting the important provisions of Condition of Integrity (vi) regarding legislative, regulatory and institutional protection.

Whilst no provision exists for buffer zones outside the protected area, this is not a serious issue for the greater part of the boundary where adjacent land is unlikely to be developed beyond the agricultural activities already present and options for down-slope extension of the park are minimal. However, it would be beneficial if the Sabah Government could consider the options for more sympathetic planning and development control in strategic locations adjacent to the park such as the village area near the park headquarters.

I have a high degree of confidence in the management regime but need to be confident that the management plan is updated and has the power to provide an adequate level of protection and direction for conservation management consistent with World Heritage status. The test would be to establish whether the plan, policy and legislation provide an adequate level of protection to prevent inappropriate structures being developed in the park.

Recommendations

Overall, the Kinabalu site is the most advanced of the Malaysian sites in terms of documentation for possible nomination. I consider that an adequate level of knowledge exists to facilitate an assessment and articulation of a case for nomination.

Accordingly, it is recommended:

1. *That the Federal Government of Malaysia, with the co-operation of the State of Sabah, immediately place Mount Kinabalu on a Tentative List of World Heritage nominations for Malaysia.*
2. *That the Federal Government of Malaysia and the State Government of Sabah facilitate preparation of the necessary documentation for the formal nomination of Mount Kinabalu to the World Heritage list.*
3. *That the Management Plan for Kinabalu park be reviewed prior to listing to ensure it provides the highest level of protection and management direction available under Sabah State legislation.*
4. *Subject to completion of an adequate level of research and inventory of Crocker Range Park to the immediate south of Kinabalu, this park be evaluated for its potential for possible later nomination, either for inclusion in Kinabalu site or nomination in its own right.*

B. GUNUNG MULU NATIONAL PARK

Description of Site

The site under consideration for nomination is the whole of the existing Gunung Mulu National Park, a State owned park within the State of Sarawak in Eastern Malaysia on the western side of the island of Borneo. The site presently comprises 54,4000 hectares. During my visit I was advised that Ministerial approval had been obtained for significant additions to the park in which case those additions would presumably be included in any nomination.

Inspection

We were met at the city of Miri in northern Sarawak by Mr. Sapuan Bin Haji Ahmad, Senior Assistant Director of Forest (Head National Parks and Wildlife Division) in the Forest Department, Sarawak. We then travelled by commercial aircraft to the Mulu airport, a 'short take off-land' (STOL) airstrip which is located outside of, but adjacent to Gunung Mulu National Park.

The plane flight provided an excellent overview of the geographic context of Gunung Mulu National Park, including that part of Brunei Darussalam adjacent to the Sarawak border including that part adjacent to Gunung Mulu National Park.) The extensive and convoluted meandering of the Baram River was also evident and graphically illustrated the reason why the boat trip to Mulu is so long.

At Mulu we crossed the Sungai Melinau (Melinau River) to the park headquarters which is located on the eastern shore of the river.

Following a briefing by staff and a brief visit to the visitor centre, we walked about 3 km to the Lady Cave and the nearby Deer Cave. Most of the walk is on a substantial boardwalk through dense primary forest. We inspected the Lady Cave, a small show cave, and then proceeded to the Deer Cave. We traversed most of the length of the Deer Cave, a massive through-tunnel, before returning to the entrance to view the evening exit of bats from the cave. We returned to Park Headquarters after dark.

The following morning we travelled by boat up the river to the Wind Cave, a small show cave, before walking up river by boardwalk to the Clearwater Cave. Following these cave inspections we again travelled by boat back to park headquarters.

From Park HQ we travelled by car to the nearby Royal Mulu Resort which I briefly inspected.

On completion of the inspection of Gunung Mulu National Park we travelled by commercial plane back to Miri en route to Kota Kinabalu in Sabah.

Legal Status of Site

The Gunung Mulu National Park was formally gazetted under the Sarawak National Parks Ordinance in 1974.

Interestingly, the greater part of the gazettal details the “privileges conceded” to the local inhabitants who are categorised either as inhabitants of specified longhouses or as Nomadic Punans.

Indigenous and local peoples

Interestingly, the greater part of the gazettal of the park details the “privileges conceded” to the local inhabitants who are categorised either as inhabitants of specified longhouses or as “Nomadic Punans”.

The privileges in the park for the occupants of specified longhouses outside the park include hunting for deer, wild pig and fish in specified areas and similarly for the collection of damar, rotan, getah, pandan leaves and edible fruits and plants.

Nomadic Punan living in the park have the same privileges but those privileges extend throughout the park. In addition, nomadic Punan have the privileges of taking timber for firewood and construction of temporary dwellings, such privileges being forfeited by any Punan who adopt a “settled mode of existence”.

The 1993-94 Management Plan acknowledges that nomadic Punan still inhabit one area in the south east of the park.(Sungai Ubong)

The Government of Sarawak is encouraging Punan to settle at Batu Bungan, just outside the park. However, it is suggested that this concentration of population on the park boundary may be having the undesirable effect of concentrating hunting in the adjacent section of park which is also the main visitor precinct.

It became apparent that in recent times there have been tensions between local settled Punan, the park and Government agencies. A park facility, the original bat observatory, was apparently a target of some of that hostility.

There is clearly a need to address the relationship between the local and indigenous people and the park in the review of the management plan. The issue has the potential to become increasingly problematic over time if not carefully managed.

GENERAL OBSERVATIONS

Park Headquarters Precinct

The park headquarters precinct contains many buildings set around a semi - cleared area. The buildings include the park office, visitor centre, canteen, staff quarters and a range of accommodation bungalows, chalets and dormitories. Ancillary equipment and installations include telephone tower, electricity generator, wharf and a network of boardwalks and paths.

The array of buildings is functional and not overly obtrusive. However, the advent of a private ‘restaurant/bar’ immediately across the river intrudes into the precinct, especially at night when the lighting and sound is obtrusive. Park staff have initiated tree planting to address the problem. This development is a smaller scale version of the problem at Taman Negara and underscores the impact that unsympathetic

development just outside a park can have on a park environment, especially when park visitor precincts are located on the very periphery of a park.

The noise from the park generator was also intrusive in the visitor precinct.

Boardwalk to Lady and Deer Cave.

Lady and Deer Caves are accessed from park headquarters via 3kms of mostly boardwalk with some sections of concrete pathway. The boardwalk is a logical piece of infrastructure given the very high rainfall and boggy ground conditions, including peat. The boardwalk was apparently constructed less than 10 years ago and is of a solid wood construction. Notwithstanding the good design and construction of the boardwalk it has been necessary to address the dangerously slippery surface by laying mesh on much of the surface. Further, much of the planking is deteriorating, suggesting that the boardwalk will require major maintenance if not replacement in the very near future - no doubt at substantial cost.

The boardwalk passes through very impressive primary lowland rainforest which provides a valuable visitor experience independent of the main purpose of the boardwalk providing access to the caves.

Lady Cave

This cave provided the first indication of some of the problems associated with the presentation of the Mulu Caves. Firstly, the generator powering the Lady Cave and the nearby Deer Cave proved to be intrusive within the gorge that the walking track/boardwalk passes through. Secondly, the electrical switching produces an irritating sound within the caves. (I was advised that there is a proposal to eliminate this generator and instead run cabling the 3km from park headquarters. Also, it was indicated that this and some other caves were to be re-wired.).

My observations relating to the presentation problems in the caves is confirmed by an independent audit conducted by staff of the Jenolan Caves Trust (Australia) in 1997 on behalf of the Royal Mulu Resort.

Deer Cave

Deer Cave is traversed by a concrete path with sections of boardwalk. Deer Cave is a spectacularly large tunnel type cave which passes right through a limestone range. Visitors could not fail to be impressed by the scale of this cave and the massive limestone cliffs on the approaches to the cave.

Some of the pathway in Deer Cave is in need of upgrade and the electrical wiring needs attention. The sulphuric acid generated in the bat guano is threatening the cabling.

Deer Cave appears to be an appropriate visitor focus for the park given the spectacle of the cave and the likely low impact of visitor access.

Bat Viewing

The bat fligh-out from the Deer Cave is very impressive, with possibly hundreds of thousands of bats emerging from the cave before dusk. What is intriguing and visually

impressive is the pulsing of the emergence, each pulse containing thousands of bats that rise in a spiral from the entrance and after several circuits, fly in linear formation out of the gorge. Bat-eating raptors regularly prey on the emerging bats.

A simple deck has been provided near the entrance of Deer Cave to facilitate close-up viewing of the bat fly-out.

A major bat observatory is being rebuilt adjacent to the boardwalk, about 0.5 km down valley from the Deer Cave, to facilitate viewing of the bat fly-out. Work has been temporarily suspended.

Unfortunately the bat observatory is somewhat intrusive to the visitor experience of the boardwalk. After about 3 kms of walking through impressive dense primary rainforest, the visitor emerges into a small clearing with a conspicuous building (presently under construction). We discussed how it would be possible to separate the boardwalk and the observatory at a later time by relocating part of the boardwalk to bypass the bat observatory.(to be then accessed by a spur off the main boardwalk).

Boat access up the Melinau River

The river is the boundary of the park and is also the main access to the Wind and Clearwater Caves.

Unfortunately the recent activities of local Punan people has resulted in huts being constructed immediately adjacent to the river and clearing of trees to the waters edge. The new settlement apparently has arisen following the destruction by fire of a long house in the locality and on-going debate about what form a new longhouse should take. The resultant development, clearing, erosion and refuse detracts from the otherwise impressive tree lined river access to the caves. I suggested the possibility in the longer term of negotiating with the local residents to achieve at least partial restoration of the tree-lined river bank as a means of enhancing the rainforest experience of the visitor.

Again, the village development serves to illustrate that some key aspects of the visitor experience in Gunung Mulu are not under the control of the park management agency.

Wind Cave

This relatively small show cave contains an outstanding collection of intact speleothems (cave decorations), particularly floor to ceiling columns. The river access to the cave, the interesting location of the cave above the river and the outstanding cave formations contributes to an outstanding visitor experience.

Notwithstanding the age of the boardwalks and other infrastructure in the cave being only about 10 years, there is a real need for renovation or replacement of the walkway and wiring, particularly for visitor safety.

Lang Cave

This cave provides graphic evidence of the volume of water which can pass through the cave in the form of the remains of the pedestrian bridge over the underground river hanging from the opposite side of the river.

The remains of the boat used by the first expedition into the cave is an interesting relic which is worthy of interpretation.

Clearwater Cave.

The general visitor access into the Clearwater cave is limited to some few hundred metres of the 108 kilometres! of known passage in the cave

One outstanding feature just inside the entrance to this cave is the development of 'photokarst', specialised cave entrance calcareous formations formed from deposits by micro-plants which are constantly oriented towards the light entering the entrance of the cave.

Royal Mulu Resort

Royal Mulu Resort is a large 180 room resort located several kilometres downriver from park headquarters and just outside the park.

Given that there is no road access from the outside world, the resort, like the park is dependent very much on aerial access and to a lesser extent river access. The airstrip is only suitable for STOL aircraft and therefore limited to Twin Otter size carrying a maximum of about 19 passengers. River access from Miri is about 8 hours and even from the upstream roadhead is still 3-4 hours.

The resort, not surprisingly, is reported to operate well below capacity throughout the year. Hence, there are proposals for lengthening the runway of the airport to accommodate prop jet aircraft such as Fokker Friendship with an enhanced carrying capacity which would benefit the resort.

However, any augmentation of visitor access to Mulu has immediate implications for the park, in particular the condition of the infrastructure to accommodate the increase without detriment to the caves (and indeed the visitors safety).

Staffing

An issue apparent to me was the limited tenure of most of the park staff. The temporary and short term employment arrangements are not conducive to the development of committed and trained staff. Apparently one result of the limited tenure is the on-going loss of staff to private tourism operations.

Level of staffing, tenure of employment and range of expertise compares unfavourably with that of Kinabalu Park in Sabah. An important protected area like Mulu deserves a well trained permanent staff.

POTENTIAL WORLD HERITAGE VALUES

There is no doubt that the most obvious natural heritage feature of the Gunung Mulu National Park is the karst landscapes, in particular the famous Pinnacles and the large and varied caves. However, the park clearly has other important natural heritage attributes such as the primary rainforest which covers most of the park.

The Gunung Mulu National Park also has wilderness values. This wilderness setting may well enhance the international significance of the karst features of Mulu.

There are some significant documented cultural heritage sites including archaeological sites which may enhance the case for nomination of Mulu and complement the nearby Niah Caves which are regarded as an important cultural heritage site.

There may be some options for extending the nomination to include or complement other protected sites in the region such as the culturally important Niah caves.

Given the intimate connection of Gunung Mulu National Park with the pristine forests of the adjoining Brunei, any consideration of the heritage significance of Gunung Mulu National Park must consider the important context of the Brunei forests. The future of the Brunei forests (part of the Labi Forest Reserve) could have implications for Gunung Mulu National Park and similarly, any proposal to construct a road or other form of development along the border could have serious implications for the natural heritage and wilderness integrity of Gunung Mulu National Park.

There is also definite potential for a trans-border protected areas and/or World Heritage sites in co-operation with Brunei Darussalam.

On the evidence presented, it is not possible to be definitive about whether the karst of Gunung Mulu National Park truly represents outstanding universal value. There is no doubt that the karst and cave system is very impressive but the question arises as to how they compare with any comparable tropical and sub-tropical cave systems elsewhere. For example, claims are made about the length of the Clearwater cave system which indicate that it is certainly not the longest cave in the world but there is no information in documents provided to suggest how it might compare with other caves systems in any qualitative way.

There seems to be good evidence of the Sarawak Chamber being the world's largest single cave chamber with a reported floor area of 24 hectares.

One exceptional aspect of the Mulu caves is that the whole system is embedded in a rugged wilderness of primary forest. But whether this is unique I am unable to establish at this stage. The spectacular rillen kare formations known as The **Pinnacles** is certainly not the only example in the region. For example, the Lunan Stone Forest in China is a well known sub-tropical example of this formation. However, unlike Lunan, the Mulu Pinnacles are embedded in a rugged wilderness whereas Lunan has been long developed with many man-made pathways, stairs etc. and is as much a cultural site as a natural site. Thus, the Pinnacles may well be

globally the most outstanding rillen karen in a pristine condition. These are the types of comparisons that need to be made to establish just how distinctive the Mulu karst is in a regional and international context.

This is not meant to be a criticism of the Mulu karst but rather drawing attention to the need for an open comparative evaluation of just what is special about the Mulu Caves. That comparison may take considerable research to establish but is necessary to validate any claims, especially statistical claims, about the heritage significance of the Mulu caves.

Nor should focus be limited to the karst alone. In a South East Asian context, Mulu is a comparatively large area of primary forest, albeit much of it on limestone. The non-cave biodiversity of Mulu is impressive and may well prove to be equally as impressive as the karst in an international context. Whilst biodiversity of Mulu is unlikely to be comparable to Kinabalu in numerical terms, Mulu may well eclipse Kinabalu in respect of the **lowland** tropical rainforest species and forest on limestone, much of which is missing from Kinabalu. Mulu also obviously has a well developed and reasonably documented cave biodiversity.

The problem which I face in making an evaluation of Mulu's natural heritage is the limited documentation made available to me. This can in part be explained by the fact that the very existence of the Mulu caves was virtually unknown until less than three decades ago, hence has had a lot less attention from expeditions than say Kinabalu. The karst has attracted a lot of attention from expeditions, the forests much less so. Notwithstanding, the level of documentation made available was very limited and raises the question of whether sufficient documentation is available to conduct an adequate assessment of world heritage significance.

It may be that an adequate level of documentation exists for the Mulu site, including the biodiversity, but the issue remains that this information must be evaluated first in the context of Borneo and subsequently in a regional and global context as part of an assessment of significance.

Integrity

Like Kinabalu, Mulu National Park is readily apparent from satellite imagery as a result of the 'cookie cutter' effect of logging extending up to the boundary for much of the length of the boundary - but so far, mostly only logging and not agricultural and settlement.

There is one important exception to this pattern - where Mulu Park adjoins the international border with Brunei. On the Brunei side of the border is wonderful unlogged rainforest wilderness (part of Labi Forest Reserve) which adjoins and totally complements Mulu. The pristine forest on the Brunei side of the border is important context for the Mulu site as it effectively increases the size of what is otherwise an island of forest.

This offers great potential for a trans-border protected area. It is understood that the forest on the Brunei side of the border is protected and managed as a nature reserve so in the shorter term, an agreement between Brunei and the Sarawak State of Malaysia

to recognise the complementarity of their respective protected areas would help ensure the integrity of the greater area and thereby the integrity of Mulu, especially of its habitat connectivity.

Possibly in the longer term there may be a prospect for a trans border World Heritage Area.

Gunung Mulu National Park appears to have good site integrity though several matters deserve study. Firstly, as mentioned above, maintenance of the connectivity of Mulu with the protected forests in adjoining Brunei is important to the biological integrity of Mulu and deserves early attention. Secondly, given the geological and hydrological patterns of Mulu, there is a possibility that subterranean catchments extends outside the park, especially to the north east. If this is the case, there could be a risk of logging outside the park impacting on the Clearwater cave system.

It is apparent that the management plan for Gunung Mulu National Park is now out of date and needs urgent review. I have read an annotated version of the 1993-95 and can only conclude that there is a need to thoroughly review the management plan and present it in a more useable form for field management and for the community.

A first step for review and update of the plan would be a thorough desk-top inventory of natural resource information of Mulu, preliminary to re-assessment of the heritage significance of Mulu. The re-assessment of heritage significance can then feed both into the management plan and into a possible world heritage nomination. In this way, review of the management plan would provide a new basis for possible world heritage nomination, at the same time as up-grading the management approach of what is obviously a very important protected area. Both a nomination and site management would be more soundly based.

Presentation Management

There is a lot of infrastructure in the form of boardwalks and visitor facilities in the caves - most of which has reached or is approaching the end of its life. This represents a need for substantial funding to upgrade and improve the infrastructure. Without this commitment of funds, we could end up with a great World Heritage Site but have such poor presentation that it brings World Heritage status into disrepute. The funding and programming of infrastructure needs to be addressed prior to listing to give confidence that the presentation of the site would be befitting of World Heritage status.

Gunung Mulu National Park will undoubtedly continue to attract visitation and probably see a significant increase in visitation if the airport is upgraded. Regardless of whether or when the park is nominated for World Heritage, the issue of redevelopment and on-going maintenance of the infrastructure will need to be addressed. If the park is to be nominated, the matter of the infrastructure becomes more critical. Further, it is to be hoped that the replacement and upgrade of the cave infrastructure is accomplished using world best-practice in cave engineering and environmental protection. In particular, there is a need for tight controls on the electrical installations and the types of materials used in walkways etc.

Greater use of aluminium in walkways, whilst expensive to install would save greatly in maintenance costs and improve the present level of safety for visitors because of deterioration of wooden structures.

Threats to the proposed nomination site

A number of potential threats in the future are apparent, including:

1. Delays in replacement of infrastructure, especially boardwalks and cave infrastructure.
2. Reports of possible privatisation which extends beyond leasing of existing buildings.
3. Construction of a road along the Sarawak-Brunei border - would sever the important wilderness link, thereby impacting on the biological and wilderness integrity of Mulu.
4. Environmentally inappropriate development and infrastructure in the caves.
5. Inadequate resourcing and employment security of a professional staff
6. Royal Mulu Resort driving development in and adjacent to the park.
7. Entry of pollution to the cave system from logging and clearing outside the park.
8. Relations with local community, especially the traditional owners, the Punan.

Recommendations

Insufficient documented evidence was provided for an unqualified judgement as to the prospect of Gunung Mulu National Park meeting the world heritage criterion. Similarly, there are a number of concerns relating to the management of the park which need to be addressed before proceeding down the path of assessment and nomination.

Accordingly, it is recommended:

1. *That the Federal Government of Malaysia, with the co-operation of the State of Sarawak, immediately place Gunung Mulu on a Tentative List of World Heritage nominations for Malaysia.*
2. *That the known natural heritage values of Gunung Mulu be fully documented and reviewed for significance.*
3. *That the Management Plan for Gunung Mulu park be reviewed to ensure it provides the highest level of protection and management direction available under Sarawak State legislation.*
4. *That the planning and resourcing of infrastructure up-grade and replacement be addressed by the Government of Sarawak.*
5. *Consult with the indigenous people with lawful access and use rights on the park regarding the possible nomination of the park for world heritage, preliminary to any nomination.*
6. *That the Federal Government of Malaysia, to the extent possible, provide assistance to the Government of Sarawak (for the above tasks 2,3 and 4) for this nationally and internationally important heritage and tourism site.*
7. *Subject to satisfactory progress with 2,3 and 4, that the Federal Government of Malaysia and the State Government of Sarawak facilitate assessment of heritage values and the preparation of the necessary documentation for the formal nomination of Gunung Mulu to the World Heritage list.*
8. *That there be appropriate high level consultations with the Government of Brunei on the future of the forests adjoining Gunung Mulu and to explore the opportunities for co-operative protection and management of the two adjoining forests.*

C. TAMAN NEGARA

Description of Site

The site being considered for possible nomination is the whole of Taman Negara (National Park), comprising 434,300 hectares.

Note: My recommendations suggest expansion of the proposed nomination to also include the nearby Krau Game Reserve to be considered as part of a nomination.

Inspection

Accompanied by Mr. Jasmi bin Abdul from the Department of Wildlife and National Parks, I travelled from Kuala Lumpur by car to the park headquarters at Kuala Tahun on the Tembeling River. The last hour of the drive was over poor unsealed road through heavily logged forest and oil palm plantation.

We were accommodated in the Kuala Tahun resort.

In the evening, at the resort we watched a dance presentation by a group of local Batek indigenous inhabitants of the park.

Next morning we travelled by boat downstream to a camp of the Batek indigenous people ('Orang Asli' in Malay, meaning the 'original people'). There we met briefly with the head man of this particular band which comprised about 40 people. This semi permanent camp, is located just within the park.

During the morning we investigated the canopy walk, a 400+ metre long canopy walk modelled on the prototype constructed in Kinabalu Park in Sabah. (See section on Kinabalu)

We later travelled upstream by boat to a small outpost of the main resort known as Kuala Kenyam.

Next we travelled back to park headquarters and then up the Sungai Tahan (Tahan River) for about 40 minutes to a popular visitor attraction, a set of cascades on the river. For most of our return journey down the river we were able to drift with the current.

In the evening we watched an audio visual (video) presentation on the park.

On the second morning we commenced walking before dawn to climb to the summit of a mountain (Bukit Teresek) some 3 kilometres west of the resort where we were rewarded with extensive views over the interior of the park, including good views of Gunung Tahan, the highest mountain (2155metres a.s.l.) in Peninsula Malaysia and central to the park.

Our return to Kuala Lumpur was firstly by boat for about 2.5 hours to Kuala Tembeling and then by car to Kuala Lumpur enroute to Penang.

Legal Status

Taman Negara was formally established as a national park in 1938/39 by the colonial administration. The park came into being following the agreement of the Sultans of the three affected states, Pahang, Kelantan and Terengganu, to the reservation of State lands as national park. Each State enacted their version of the Taman Negara Enactment. The original name given the park was the King George V National Park to commemorate the silver jubilee of the accession to the throne of King George V.

The Sultans agreed to appoint an officer in charge to manage the park and gave that 'officer-in-charge' authority to appoint a superintendent for the park.

The Director General of the Federal Department of Wildlife and National Parks is the "officer in charge" of the park, the department employing the necessary staff to manage the park. The Director General is based in Kuala Lumpur and the Park Superintendent is based in the park at Kuala Tahan.

From a reading of the Taman Negara Enactment(s) two important things are noted. Firstly, the land remains state land and does not become Federal land. Secondly, the Trustees have been vested with the powers to decide the future management of the park, including the approval of developments which may not necessarily be in the best interests of the conservation values of the park. For example, the trustees may under certain circumstances approve mining in the park. The trustees may also approve roads, railways, dams, reservoirs, aerodromes, hotels and "dwelling houses, buildings and works of public utility....".

Much of the boundary of Taman Negara has been surveyed or marked. In many places, logging and oil palm plantations have pressed right up to the park boundary.

Although managed by a Federal agency, it is clear that the real and legal power over the park still rests mostly with the three state governments. In legal status then it probably differs little from the state owned and managed protected areas in Sabah and Sarawak but is complicated by the involvement of four different governments.

POTENTIAL WORLD HERITAGE VALUES

This is a large protected area (434,000 ha) of mostly untracked, rugged wilderness.

It is the home of many internationally rare and threatened species of plants and animals, including such large mammals as elephant, tiger, tapir, Sumatran rhinoceros and gaur. As the by far the largest protected area in Peninsula Malaysia, it represents the best prospect of secure habitat for the larger mammal species, indeed of many species. Even then, its long term adequacy for survival of the larger species may be questioned.

Taman Negara contains a superb examples of the once extensive Lowland Dipterocarp rainforest. These forests contain large trees characteristic of the Dipterocarp primary forest.

It appears that the natural heritage values of Taman Negara are reasonably well documented, though not as comprehensively as for Kinabalu, partly from the fact that Taman Negara is a largely untracked wilderness resulting in a large part of the area being uncondusive to many types of survey and research.

Also, there appears to have been a strong research and management bias towards mammal conservation with an overlay of a North American approach to recreation and visitor management. Other aspects of natural heritage appear to have received only limited attention.

Integrity

Taman Negara is embedded in the remaining main tract of forested land in Peninsula Malaysia. Logging has extended up to the boundary in some places and oil palm plantation has followed in some cases. Notwithstanding, it is apparent that there is still potential for extending and improving the integrity and manageability of the boundary - not essential but highly desirable.

There may be a case for a serial nomination for the rainforests of Peninsula Malaysia. The Taman Negara nomination could include the nearby Krau Game Reserve which is similarly primary forest with large mammals. Krau is more strictly managed than Taman Negara, is not open to visitors and as a consequence appears to have received more attention from researchers.

I offer the vision of a **second stage nomination** which might include a trans border protected area to the north of Taman Negara - the existing Halabala National Park in Thailand and the proposed but not yet established Belum National Park in Malaysia - also a large tract of primary forest complete with all the large mammals of mainland South East Asia.

It is at the stage of a second round of considering nominations that the Endau-Rompin National Park should be critically evaluated for its contribution to a serial nomination for Peninsula Malaysia. My limited knowledge of Endau-Rompin, together with some independent reports, suggests that the value of the park for conservation of the larger mammals is under threat. Accordingly, I could not at this stage recommend the inclusion of Endau-Rompin in a serial nomination with Taman Negara.

Management Plan

I have reviewed the 1987 Master Plan for Taman Negara. Noting that it is now more than a decade old, and many changes have occurred, the review of the Master Plan is now overdue. I note from the Master Plan the intention of reviewing the Master Plan every 5 years.

The Master Plan is said to have followed the US approach so that the Master Plan is a policy document only and no action arises directly from the document. No general action plan arising from the Master Plan was drawn to my attention though the Master Plan calls for the formulation of twenty four specific plans.

Management is clearly complicated by the dual Federal and three State administrations involved in management.

Presentation Management

Taman Negara has (had) a world-wide reputation as a great national park, in particular a large tropical rainforest park that was only accessible by boat. I am of course referring to the original visitor area at Kuala Tahan on the Tembeling River. It came a complete surprise to me to discover that the remoteness of Kuala Tahan has been destroyed by road access and the visitor experience changed forever. Indeed, with the seemingly inevitable upgrade of the road, the mystical visitor experience of remoteness will disappear forever. Taman Negara (or at least the Kuala Tahan section) will have lost the unique attraction which originally put it on the world map as an outstanding, remote visitor experience.

The boat access to Kuala Tahan is still an outstanding and very important visitor experience but that experience is not guaranteed and indeed is undermined by:

- discovery by visitors arriving by boat that there is alternative road access (indeed, vehicles parked on the foreshore announce this to arriving visitors)
- the river foreshore along the river access is not formally protected from development and clearing except for that section where one side of the river is in Taman Negara.
- the recent introduction by the Kuala Tahan resort of two jet boats for fast travel along the river, detracts from the visitor experience of the locally owned and more traditional wooden boat access and introduces an unnecessary technology and noise source into the rainforest/river precinct.
- the collection of floating restaurants and associated development on the river opposite Kuala Tahan resort and park headquarters.

Given that all these issues are technically outside of Taman Negara but have on-going impacts which seriously detract from the quality of the visitor experience of Taman Negara illustrates how little or no control the park has over the quality of visitor experience. For many visitors, the main experience will have been the river trip (that is what its international reputation was built on) but it is the river trip experience which has been seriously damaged and may in time be eliminated.

Similarly, the park is not in control of or having any significant influence in the development of a major town opposite Kuala Tahan, a development which will further impact on the visitor experience, if not on the heritage values of the park. It also sends a message that the park has not been able to defend itself from the impact of encroaching outside development.

It is disappointing to see such a world famous superb visitor experience as the boat trip to Taman Negara (and what was the remoteness of Kuala Tahan), being progressively destroyed by inadequate development control adjacent to the park.

Continuing the theme of visitor experience, the Kuala Tahan/Park headquarters precinct is reasonably well organised and presented, at least in the immediate vicinity of the resort. However, it is very apparent that management and maintenance of the visitor infrastructure is not keeping pace with the impact of visitors. Walking tracks are often badly eroded, signs are varied in standard and abandoned buildings and

equipment are in disrepair. Judging from the odours south of the resort, the effluent treatment system is not fully effective. Given that the immediate surrounds of the resort/headquarters precinct is likely to be the most utilised of the park, the presentation and visitor experience is much poorer than it should and could be. It is certainly not of a standard that might be expected in the main visitor precinct of a World Heritage Area.

The problems outlined above are, like Mulu National Park in Sarawak, the product of the good intent of placing park visitor facilities on the edge of the park but not having or not exercising any planning or development control on lands immediately outside the park. In future planning of visitor facilities, a choice has to be made between placing visitor areas well inside the park or actively seeking to control development adjoining the park. From a conservation viewpoint it is far preferable to adopt the latter, seeking to keep as much as possible of the park free of development.

The above visitor experience/development control issues are not critical to Taman Negara being able to qualify against the World Heritage criteria for irrespective, the major conservation values are still present. However, the poor presentation aspects need to be considered for their impact on the image of world heritage. With world heritage listing, new and additional world attention can be expected to focus on Taman Negara and as such is likely to raise questions about management standards, at least from a visitor viewpoint. The options then are;

1. discount the Kuala Tahan precinct as one where management and development control issues are outstanding and **exclude from World Heritage nomination**
2. at time of nomination, the Malaysian Government give undertakings to remedy the problems prior to a decision to list
3. defer nomination and address the outstanding problems prior to nomination.

It would be far better if option 3 were adopted. However, it is acknowledged that the only essential action is in respect of that part of the Kuala Tahan precinct within the park, requiring environmental and presentation audits of this precinct and an action plan to address the issues.

Notwithstanding, the visitor experience aspects relating to the river trip and the impact of the urban development opposite Kuala Tahan, external to the park, deserves to be addressed to at least stop the decline in the experience or, better still, look to restore and protect as much of the pre-existing visitor experience as possible. Enhancement of the visitor experience will both enhance the reputation of Taman Negara as a World Heritage site and undoubtedly maintain the quality of experience and economic viability of the resort area.

A formal plan to protect the wild and scenic river values between Kuala Tembeling and Kuala Tahan would be a major step towards protecting one of the world's great river journeys. This may be achievable in co-operation with the landholders along the river, for protection of the forested river foreshores, as well as preserving the visitor experience also protects the river foreshore from erosion.

Threats

A number of current and potential threats to the values, integrity and presentation of the park are evident or apparent, including:

1. Development outside of Taman Negara, especially along the eastern shore of the Tembeling River upstream of Kuala Tahan.
2. Poor relations with local community, especially the Batek.
3. Further road upgrade to Kuala Tahan.
4. Inadequate resources to control impact of visitation, especially erosion on walking trails.

Summary

Although only limited documentation on the heritage significance of Taman Negara was made available, I would be confident that Taman Negara is worthy of nomination for world heritage listing and can qualify on at least two criterion. Never the less it is essential that for a nomination like Taman Negara there is full documentation and articulation of the case for world heritage listing. That documentation and articulation appears not to exist at this time.

Notwithstanding, there are some aspects of management, management planning and presentation which are of concern and which, ideally, should be addressed prior to or concurrent with nomination or listing.

Whilst there is an 11 year old Master Plan, it is clearly out of date and in need of review and extension into formulation of action plans.

There are environmental, development control and presentation issues associated with Kuala Tahan/Park Headquarters, both within the park and adjacent, which deserve attention prior to listing.

Similarly, a good case exists for exploring the options for protecting the quality of the visitor experience associated with the Tembeling River. Including those sections of river outside the park.

In general, Taman Negara can readily meet the World Heritage criteria and is likely to meet the conditions of integrity, except possibly in respect of a management plan. A case appears to exist for including the nearby Krau Game Reserve as part of a single nomination. Similarly, a good case appears to exist for considering a later nomination of a trans border area on the nearby Thailand border.

Endau Rompin park in the south of Peninsula Malaysia has only been considered in a cursory way but preliminary indications suggest that the case for nomination may not be viable given reductions in the size of the reserve and loss or imminent loss of some larger endangered species such as Sumatran rhinoceros.

GENERAL SUMMARY

- All three prospective natural heritage nominations examined are outstanding natural heritage protected areas of which the people of Malaysia should be proud.
- Each prospective nomination has a good prospect of meeting at least one of the World Heritage criteria. At least two areas are likely to meet two or more of the criteria.
- Taman Negara could be immediately expanded to a serial nomination (to include Krau Game Reserve) and the announced new additions to Mulu could be included if Mulu is nominated.
- Each has adequate boundaries though improvements are desirable in two cases (Taman Negara and Mulu)
- Each has a management plan but the effectiveness and application of each as a means of effective development control, protection and conservation programming needs immediate review and update.
- Several parts of several of the prospective nominations could be threatened if effective management measures are not taken (development adjacent to sites, pollution, walking track erosion, funding for staffing and funding for infrastructure replacement and up-grade.)
- Overall, all sites still need a rigorous documentation of heritage values preliminary to any nomination. Further, each will need some attention to management issues, especially Mulu and Taman Negara. Effective address of these management issues will be a challenge which needs all parties to work together to address and overcome.
- In all three sites, the prospective nominations are relevant to local indigenous people, especially Taman Negara and Mulu where indigenous people continue to lawfully occupy the protected area. The relationships between these people and the respective parks deserve to be clarified prior to any nomination.
- A potential second round of nominations should consider the potential for trans border nominations in conjunction with Thailand, (Halabala-Belum area), Brunei (Complement to Mulu) and Indonesia (Sarawak-Kalimantan)
- Some major environments characteristic of Malaysia, in particular the marine environments, peat forest and other lowland tropical forests deserve to be further evaluated for conservation purposes and potential world heritage status.

GENERAL RECOMMENDATIONS

The following recommendations are made in the spirit of being constructive towards and supportive of successful nomination of prospective natural heritage sites to the World Heritage List by the Government of Malaysia.

Accordingly, it is recommended:

- 1. That the Government of Malaysia should be congratulated on the initiative and conduct of the “Seminar on the Nomination of Cultural and Natural Heritage of Malaysia to the World Heritage List”.**
- 2. That the Government of Malaysia and the relevant State Governments be congratulated on the selection of three outstanding protected areas as prospective natural heritage nominations to the World Heritage List.**
- 3. That the Government of Malaysia be encouraged to proceed with the necessary preparatory work (See site-specific recommendations) for the nomination of one or more of the three prospective natural heritage nominations at the first opportunity.**
- 4. That the Government of Malaysia, with the co-operation of the States of Sabah, Sarawak, Pahang, Kelantan and Terengganu, immediately place Kinabalu, Mulu and Taman Negara on a Tentative List of World Heritage nominations for Malaysia.**
- 5. That the Government of Malaysia give consideration to a second stage of nominations as suggested in this report, including possible co-operative ventures with the neighbouring ASEAN countries of Thailand, Indonesia and Brunei.**
- 6. That the Government of Malaysia continue to review the natural heritage places of Malaysia for potential world heritage nomination, especially marine areas (e.g. Pulau Redang), peat forests and other lowland tropical forests.**
- 7. That UNESCO and IUCN positively consider any request for assistance from the Government of Malaysia to facilitate the preparation of quality natural heritage nominations and to facilitate sound management of those sites.**
- 8. That UNESCO and IUCN convey thanks to the Malaysian Government for the highly professional standard and hospitality offered in the conduct of the Seminar and associated inspection of the natural heritage sites.**

*Peter Hitchcock
 Natural Heritage Consultant
 IUCN Representative
 29-8-98

Attachment 1**Itinerary of Natural Heritage Consultant (Peter Hitchcock)**

Day	Date	Time	Activity
Day 1 Tuesday (In Kuala Lumpur)	21 st July 1998		Arrive in Kuala Lumpur (Stay in Kuala Lumpur)
Day 2 Wednesday (To Sarawak)	22 nd July 1998		Depart by air to Miri Depart to Mulu Visit Mulu National Park (Stay in Mulu)
Day 3 Thursday (To Sabah)	23 rd July 1998		Visit Mulu National Park Depart to Kota Kinabalu, Sabah
Day 4 Friday (Stay in Kinabalu Park)	24 th July 1998		Visit Kinabalu National Park
Day 5 Saturday (To Penang)	25 th July 1998		Depart to Kuala Lumpur and Taman Negara (Stay in Taman Negara)
Day 6 Sunday	26 th July 1998		
Day 7 Monday (To Penang)	27 th July 1998		
Day 8 Tuesday	28 th July 1998	10.30 am- 5.0 p.m.	Seminar (Day 1) at CITITEL, Penang
Day 9 Wednesday	29 th July 1998	9am - 5 p.m.	Seminar (Day 2) at CITITEL, Penang
Day 10 Thursday	30 th July 1998		Report writing, departure

OLD CASSOWARY CONSULTING

PETER HITCHCOCK *AM*

Peter Hitchcock is the principal of Old Cassowary Consulting, an Australian based environment and heritage consulting business.

Peter has a lifetime of experience in the field of natural heritage conservation in Australia and in recent years has participated in projects in a number of other countries including Lebanon, Indonesia and Japan. His special interest is World Heritage but also offers experience and skills in a range of environment and conservation disciplines including management planning, planning of new parks and reserves and planning of visitor experiences and visitor management in protected areas.

Peter has participated in the preparation of successful World Heritage nominations, participated in major inquiries into world heritage, reviewed world heritage nominations, undertaken management reviews of listed areas and been directly responsible for managing a major World Heritage Area.

Peter is currently a Commissioner of the Australian Heritage Commission, an independent statutory authority responsible for identifying natural and cultural heritage throughout Australia. He is also a member of the World Commission on Protected Areas (WCPA), a Commission of IUCN, the World Conservation Union.

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PHOTOGRAPHS OF

MOUNT KINABALU PARK

SABAH, MALAYSIA



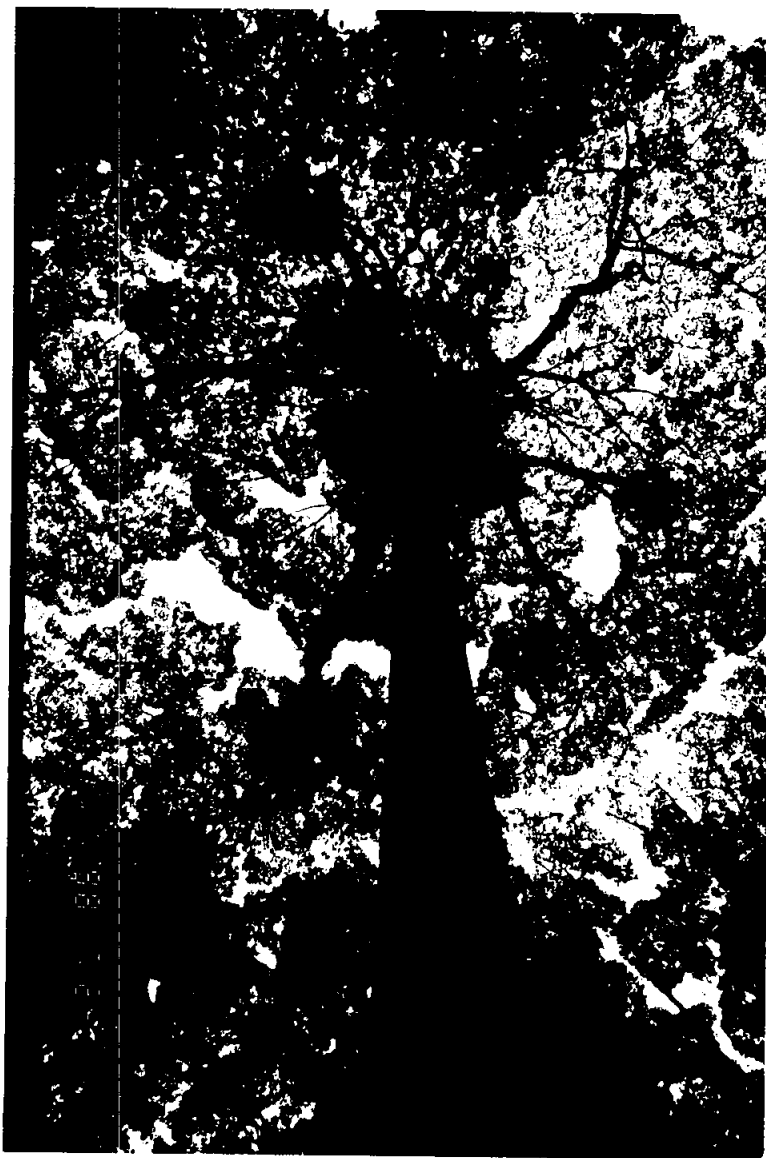
1. Typical late morning view of the massive western fall of Mt. Kinabalu with mist shrouded summit. Note the deforestation on the lower slopes. The park boundary generally corresponds to the forest interface.



2. Part of the luxurious plantings in the botanical garden at the park headquarters. The garden contains a collection of mid-altitude plants from the park and represents an excellent way of presenting the great plant diversity from the park.



3. Part of botanical garden, park headquarters, Mount Kinabalu.



4. Large emergent tree in lowland rainforest, Poring Hot Springs, Mount Kinabalu.
Height is circa 80 metres.



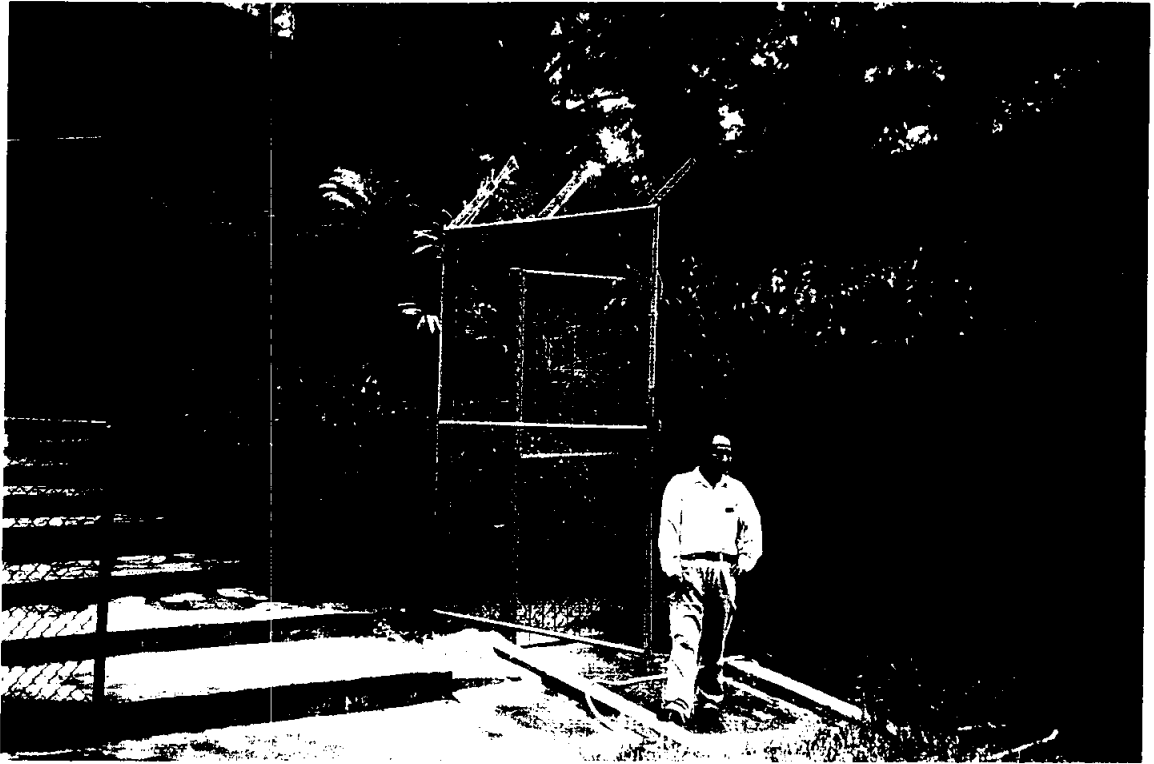
5. Recently adjusted cable attachment points for the canopy walkway at Poring Hot Springs, Mount Kinabalu.



6. Part of the insect propagation facility (The 'Butterfly farm") at Poring Hot Springs, Mount Kinabalu. The facility provides a valuable educational and research facility for the park.



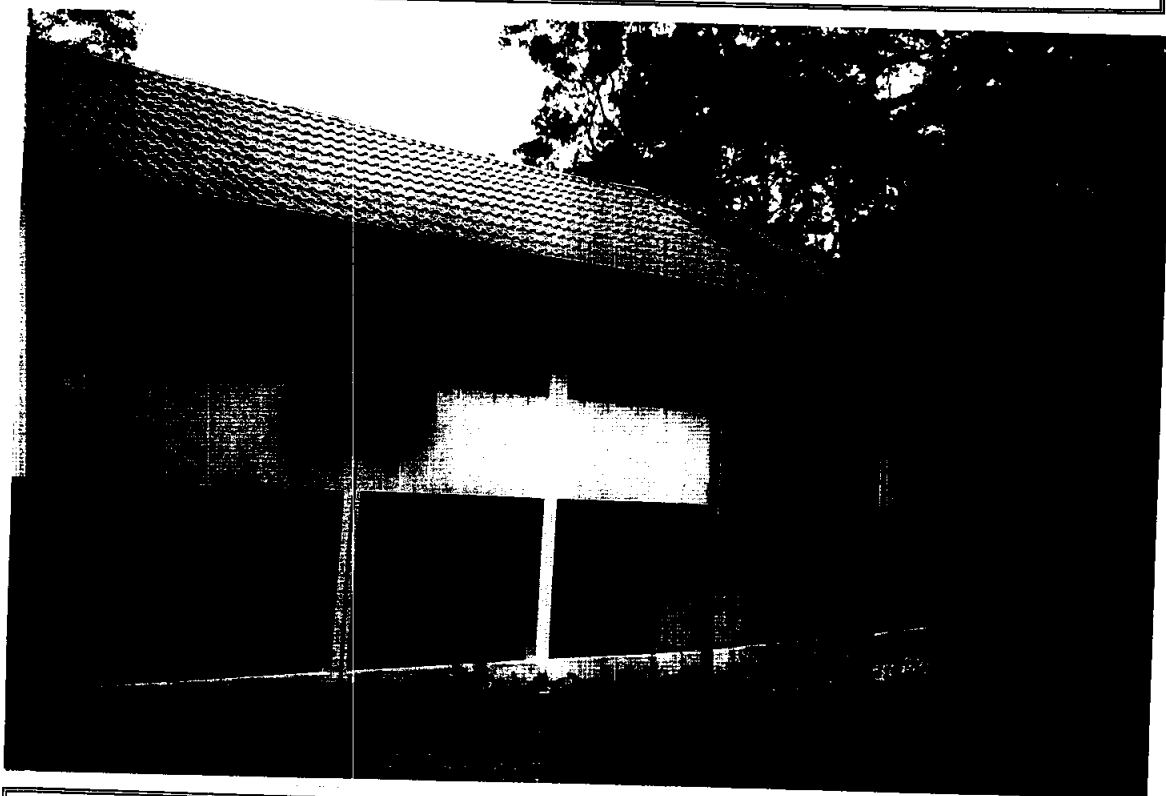
7. Some of the baths developed to utilise the nearby emergence of hot spring water. Poring Hot Springs, Mount Kinabalu. Although out of place in this grand park, these facilities are on the edge of the park and so do not intrude into the visitor rainforest experience .



8. Entrance to the Orchid Garden at Poring Hot Springs. The collection contains some 800 of the estimated 1500 species of orchids found on Mount Kinabalu. The garden is well curated and cared for and is to be an important part of an orchid research facility being established adjacent to the garden.



9. Part of the developing collection of preserved orchid flowers which will form a reference collection.

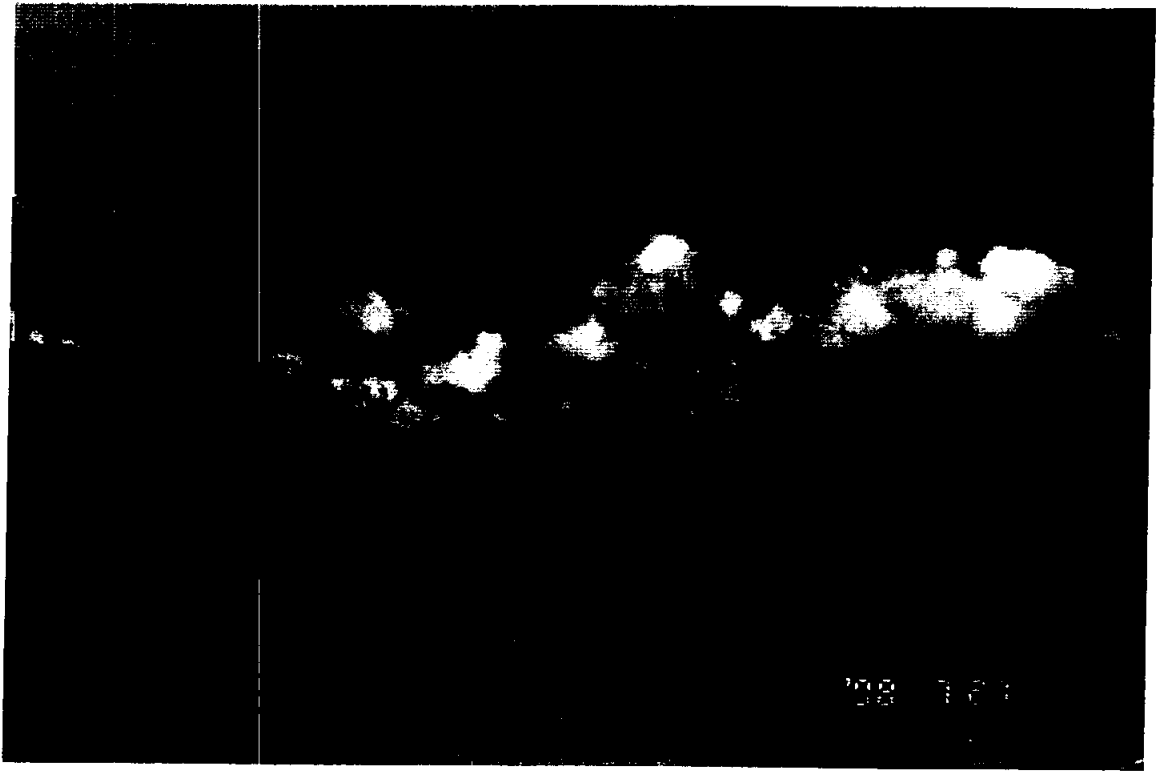


10. This building at Poring Hot Springs is being fitted out to conduct research and propagation of orchids.

PHOTOGRAPHS OF

TAMAN NEGARA

PENINSULA MALAYSIA



1. The magnificent rainforest lined Tembeling River when approaching Kuala Tahun park headquarters and resort.



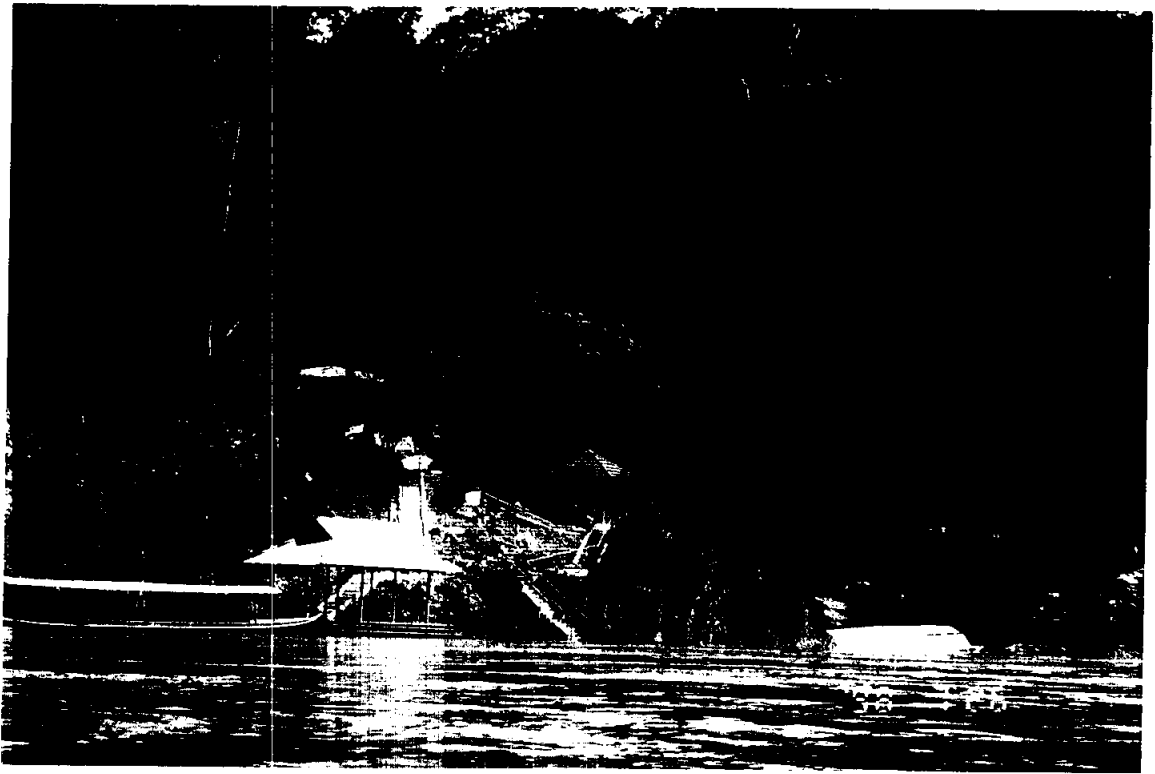
2. After years of isolation and access limited to boat access up the Tembeling River, suburbia has finally arrived opposite the park headquarters. The buildings in the background are part of a town which is now accessible via a poor standard forestry road. The 'buildings' on the river are actually floating restaurants moored so as to capitalise on the visitors staying at the park resort - and detract greatly from the ambience of the resort area of the park.



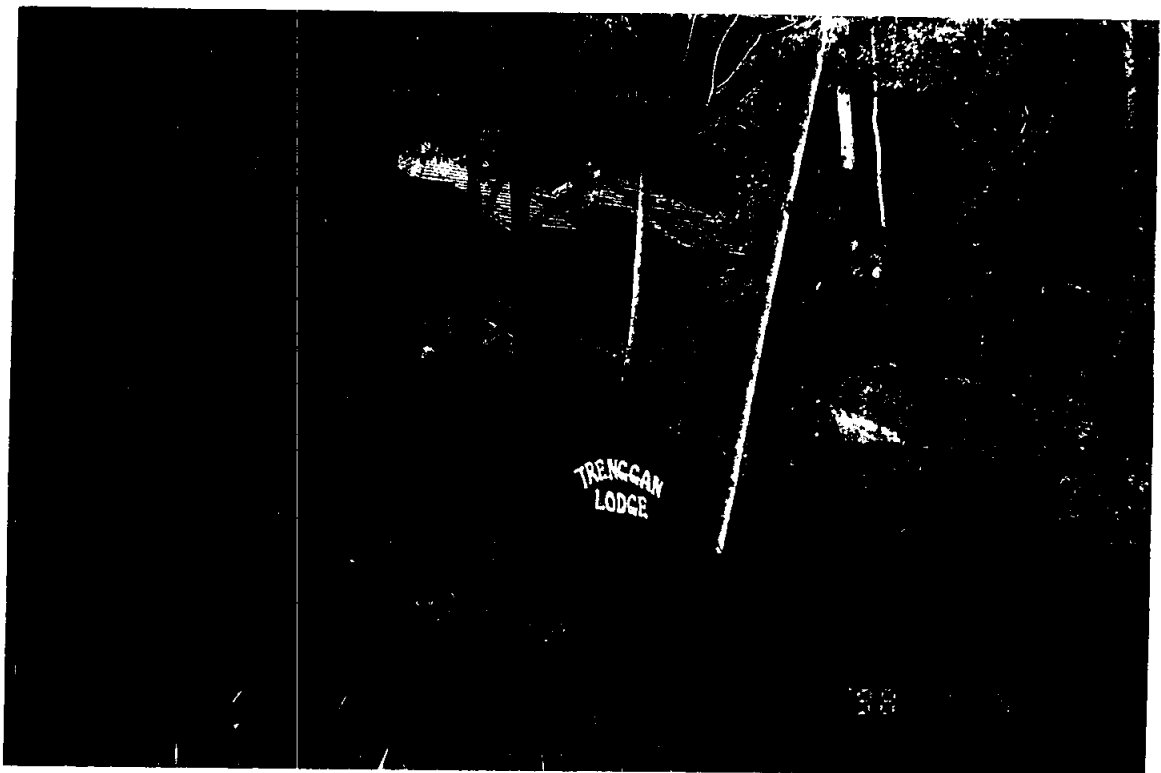
3. Part of the formal garden landscape of the Kuala Tahun resort, the main tourist accommodation in the park.



4. Part of an occasional dance display by local Indigenous Batek inhabitants of the park. Resort guests are encouraged to participate.



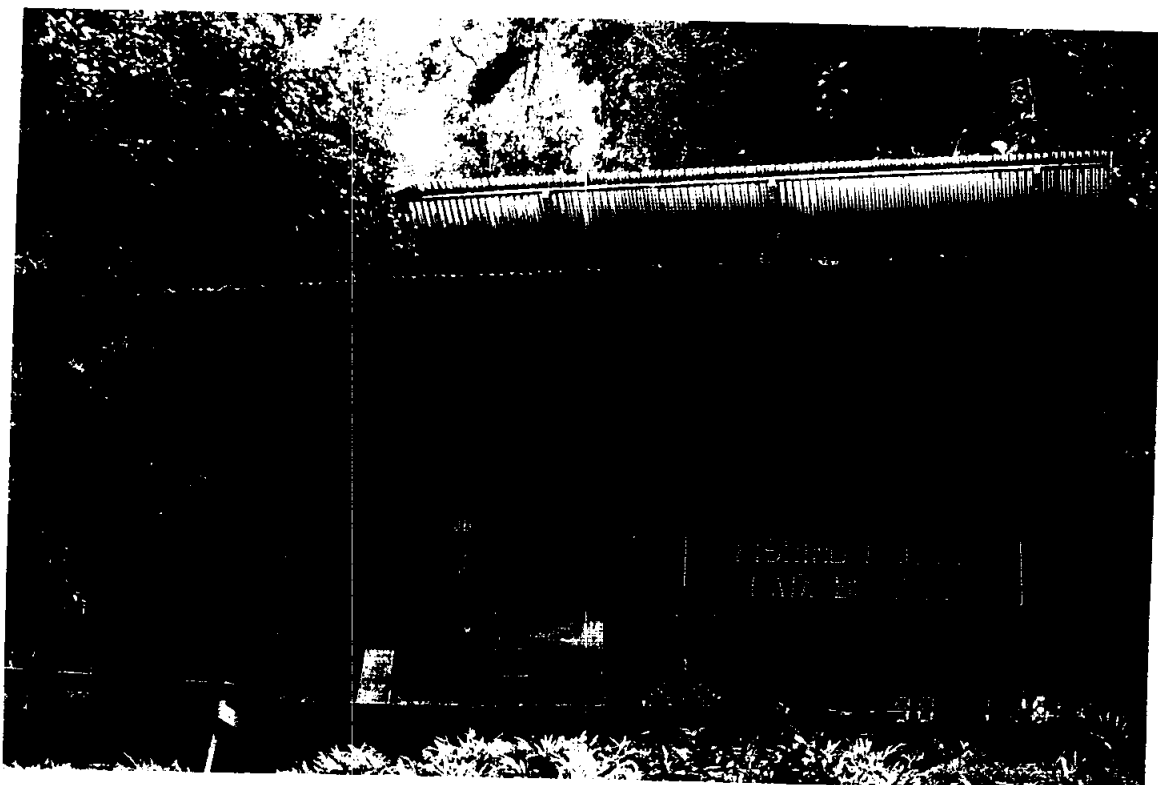
5. The river approach to Trenggan Lodge, a more low-key and remote outstation of the main Kuala Tahun resort. Access is presently by boat only.



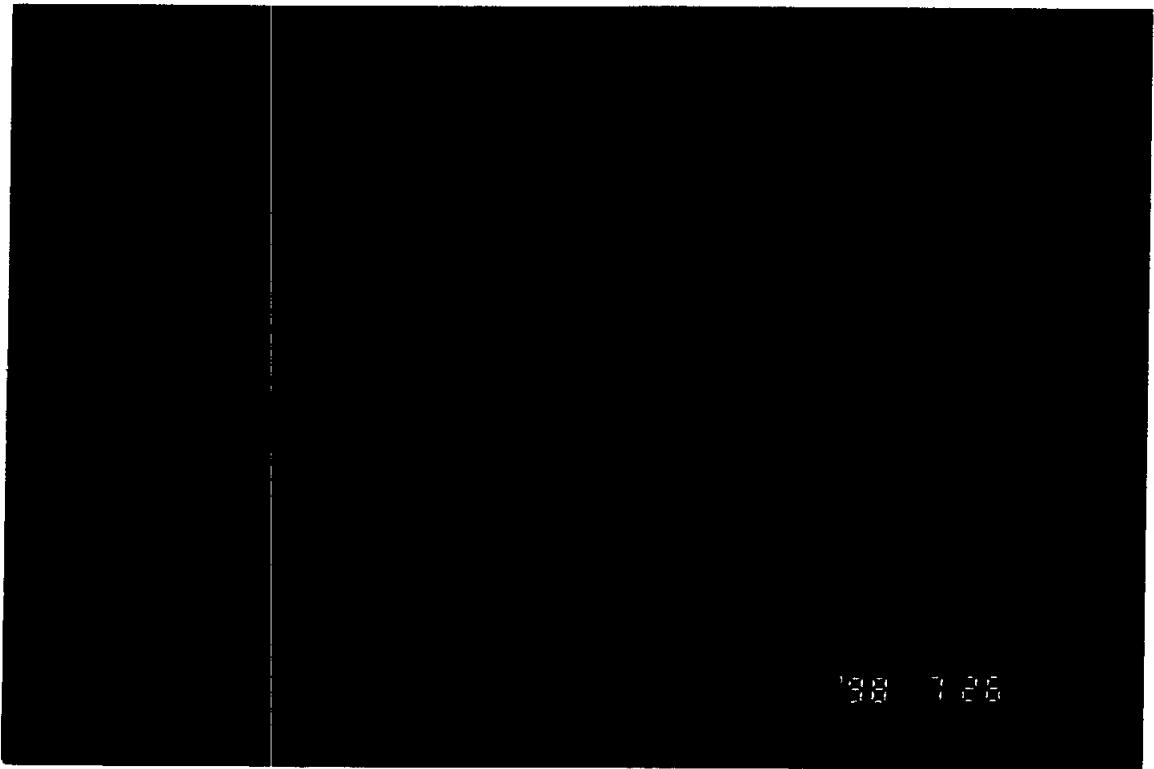
6. Accommodation at Kuala Trenggan is in separate bungalows.



7. Pedestrian bridge on the margins of the Trenggan Lodge precinct which is located in intimate contact with the rainforest.



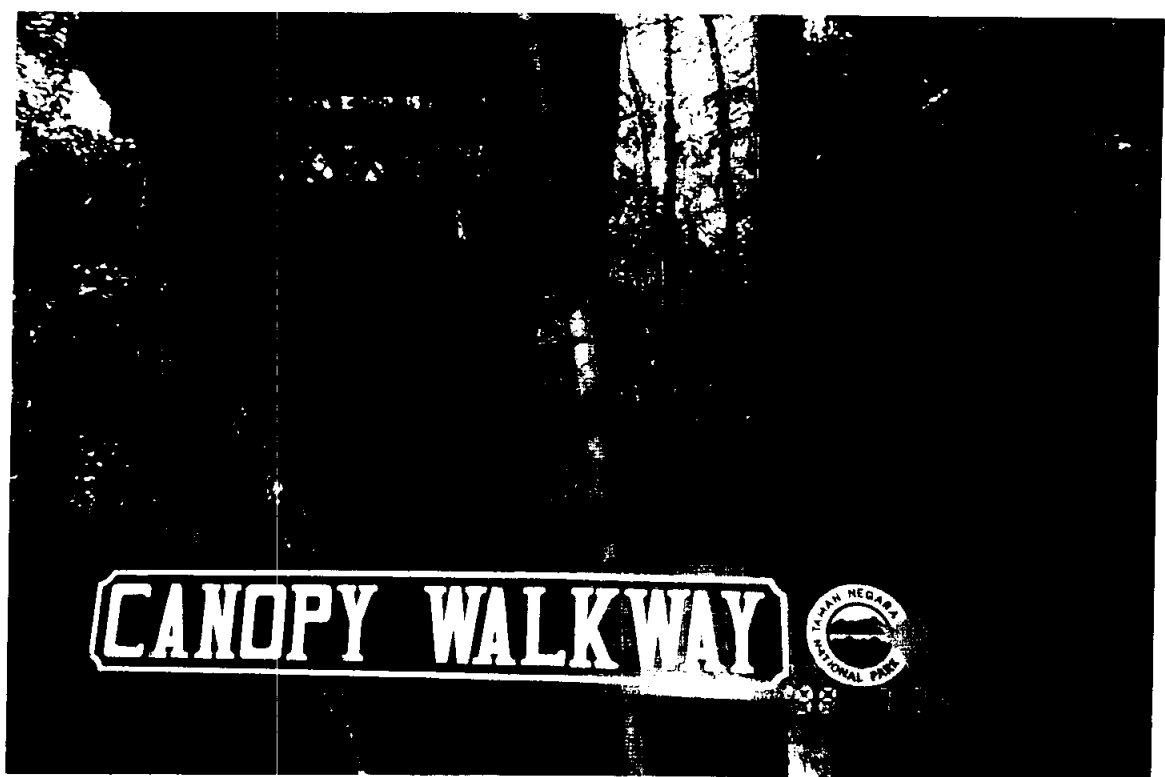
8. A small "fishing lodge" at Lata Berkoh on the Tahan River does seem to be an anachronism on a popular walking track.



9. The interior of Taman Negara is a high quality wilderness. This view of the interior may be had following a walk of only about an hour from park headquarters.



10. The main means of access to much of the interior is by boat up rivers such as the Tahan. This head of navigation is reached after about 40 minutes boat travel from park headquarters a Kuala Tahan.



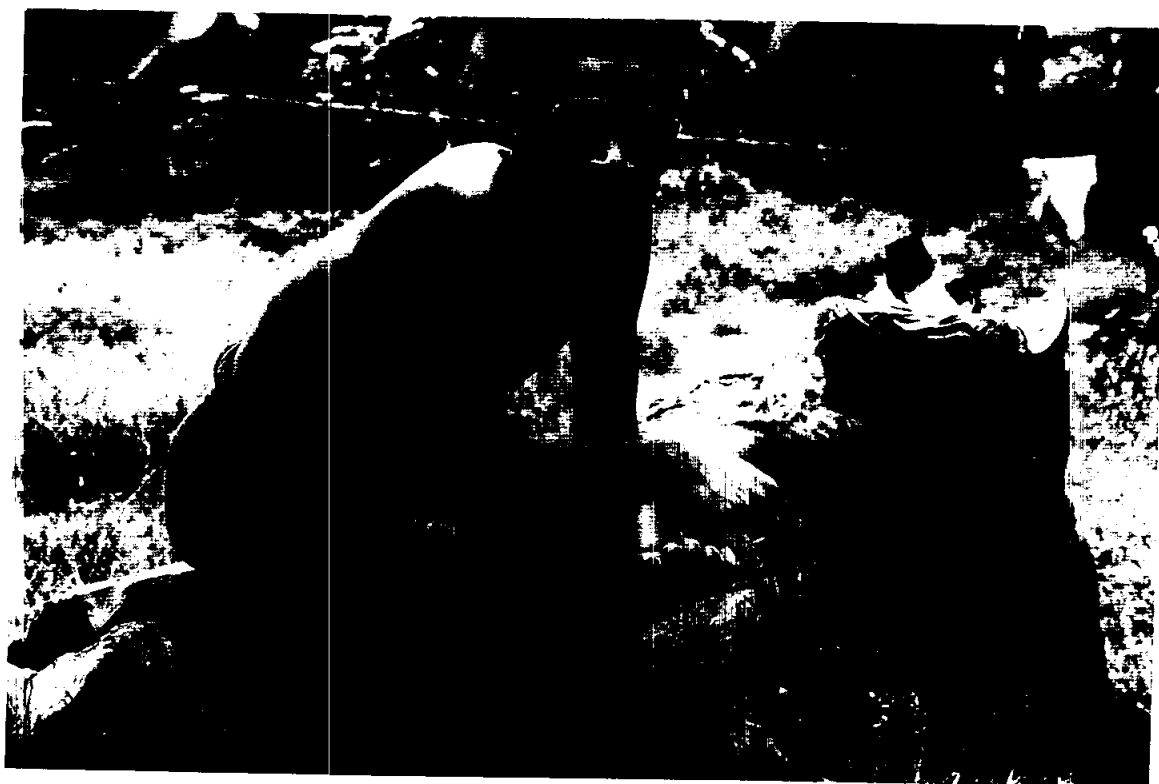
11. Entrance to the canopy walkway upstream of park headquarters, Taman Negara.



12. Part of the canopy walkway which was modelled on the walkway at Mount Kinabalu. Parts are over 40 metres above the ground.



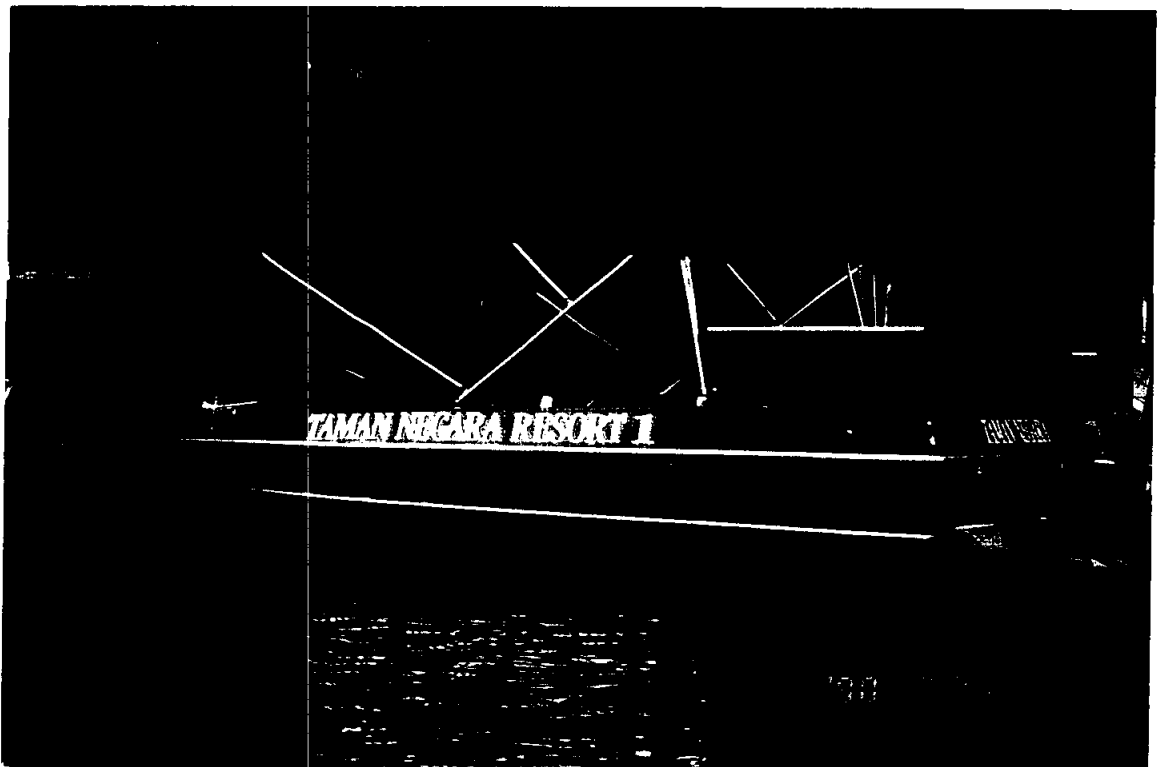
13. Semi-permanent dwelling used by a group of Batek indigenous peoples who inhabit the park.



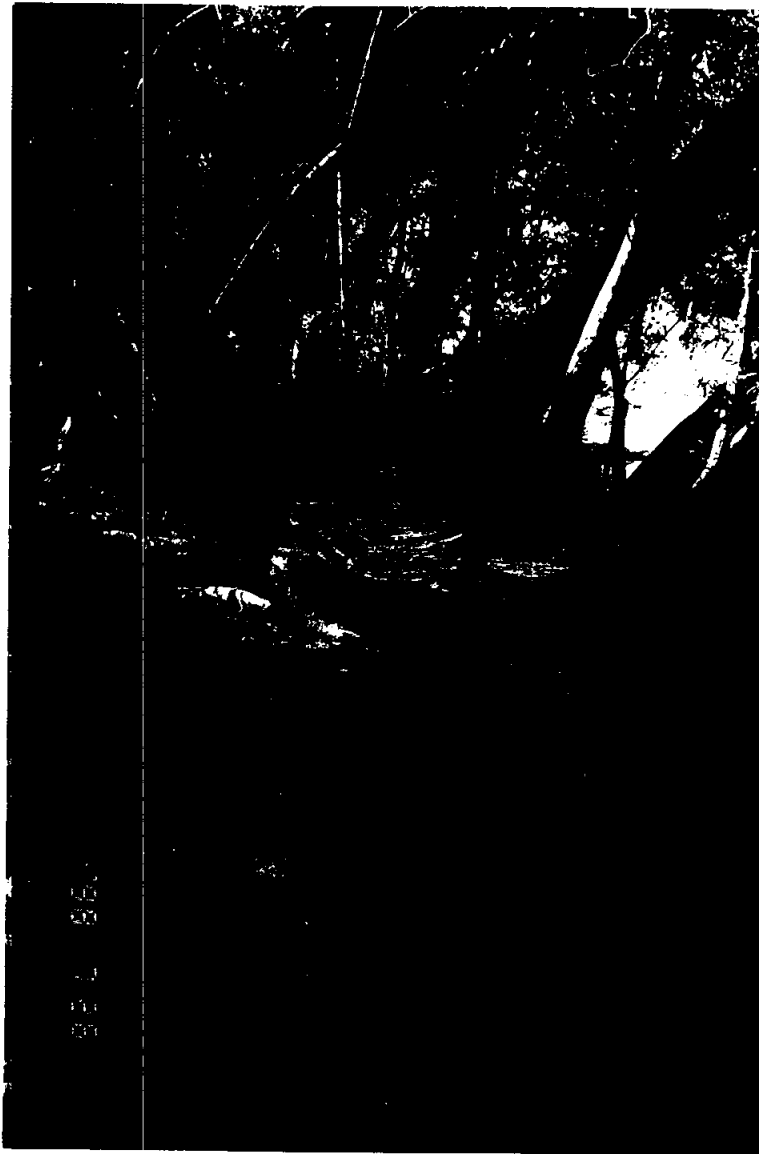
14. Batek man at a semi-permanent camp within the Taman Negara.



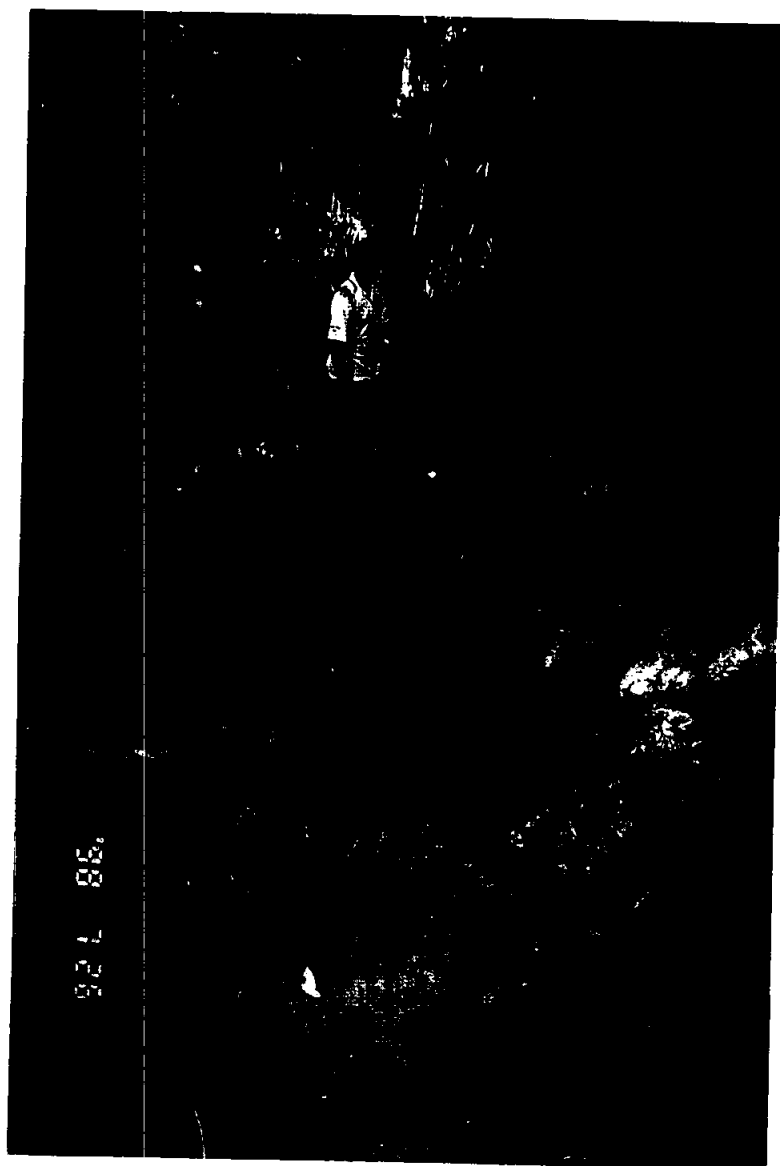
15. Abandoned temporary dwelling of Batek tribal peoples.



16. Although the introduction of New Zealand made jet boats reduces the length of the river journey, it introduces a whole new and noisy dimension to Taman Negara which is not conducive to genuine nature based tourism.



17. Although unsightly, this walking track is comparatively stable.

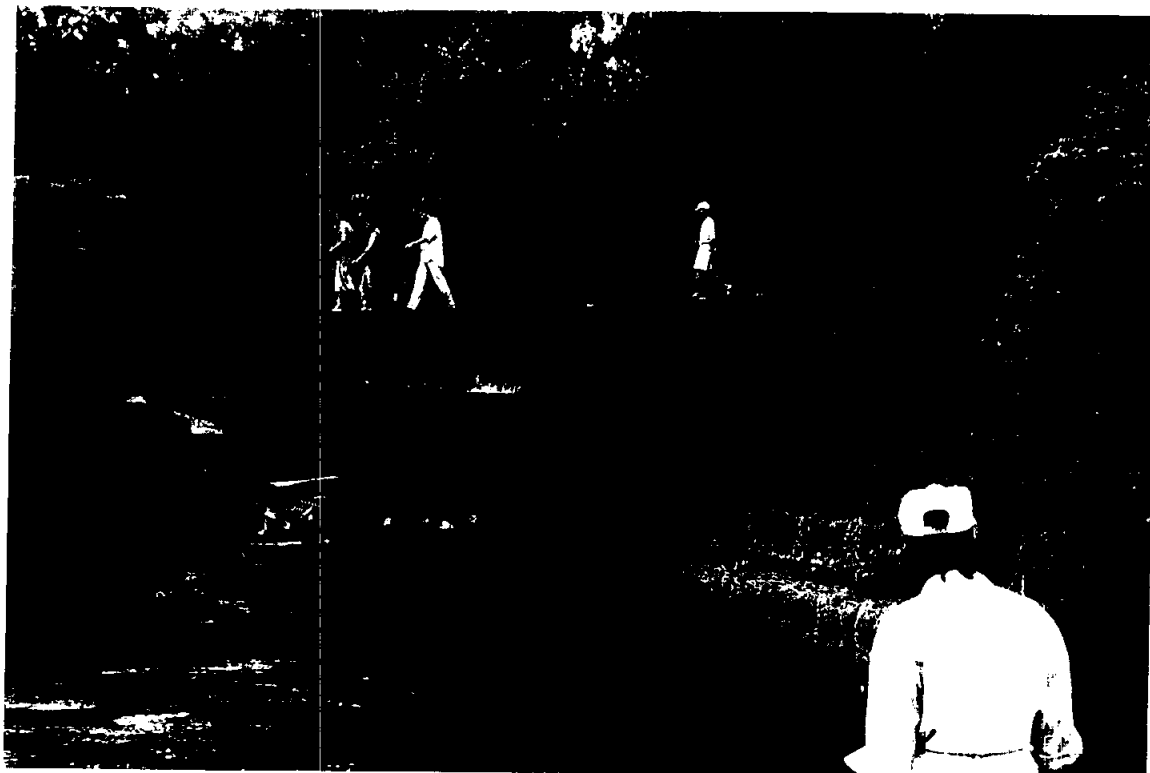


18. This walking track is typical of the walking tracks near Kuala Tahun, the deep yellow earths being highly erodable.

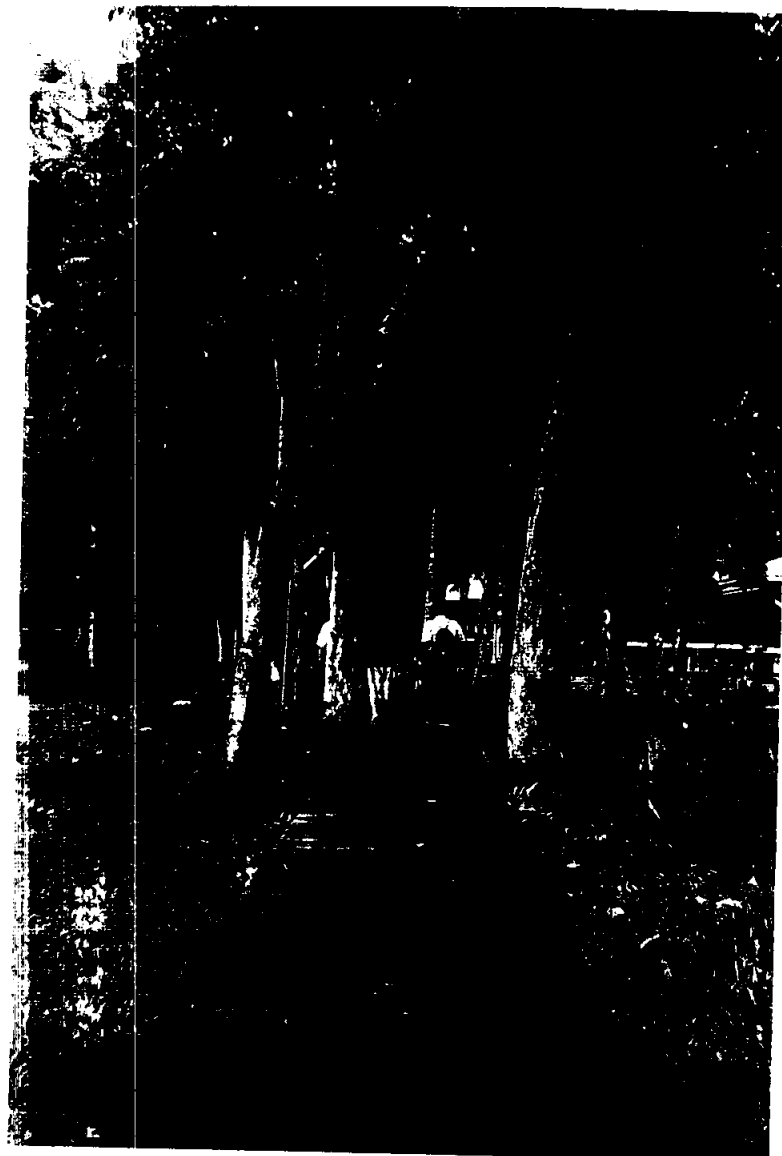
PHOTOGRAPHS OF

GUNUNG MULU PARK

SARAWAK, MALAYSIA

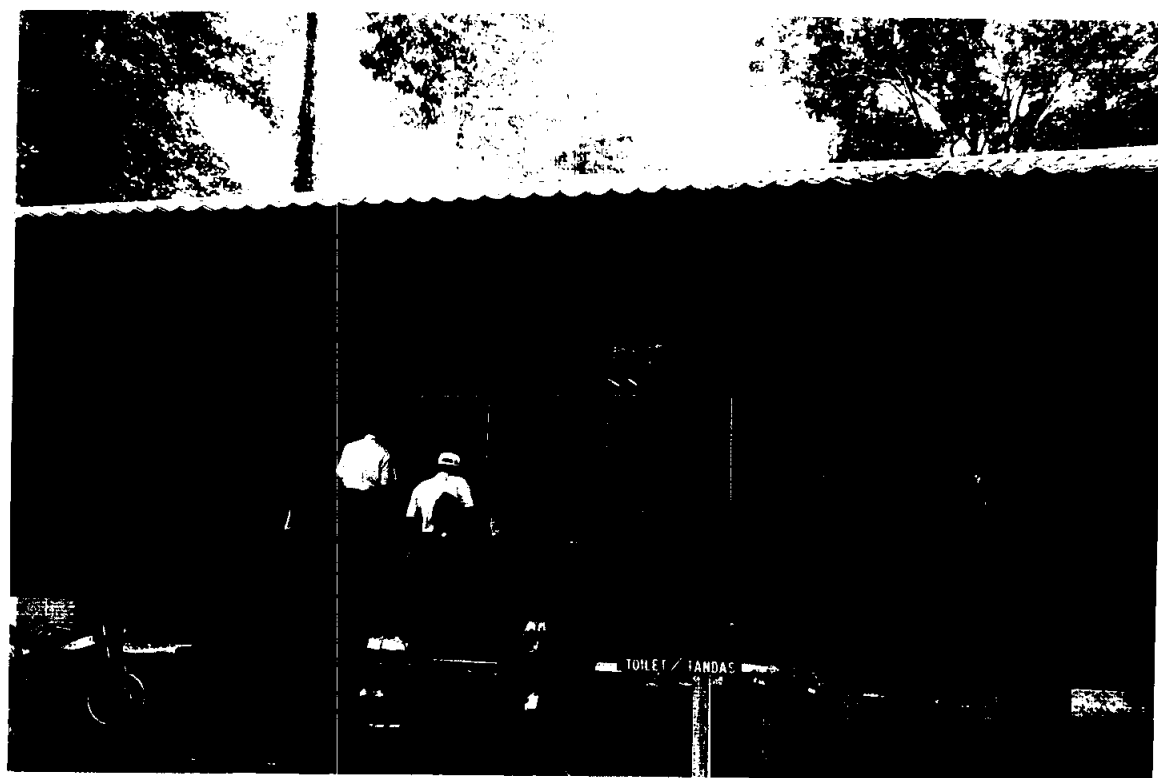


1. Access to the headquarters of Mulu National Park is via a boat trip of many hours up the river or a 30 minute flight from Miri and a walk across the suspension bridge.



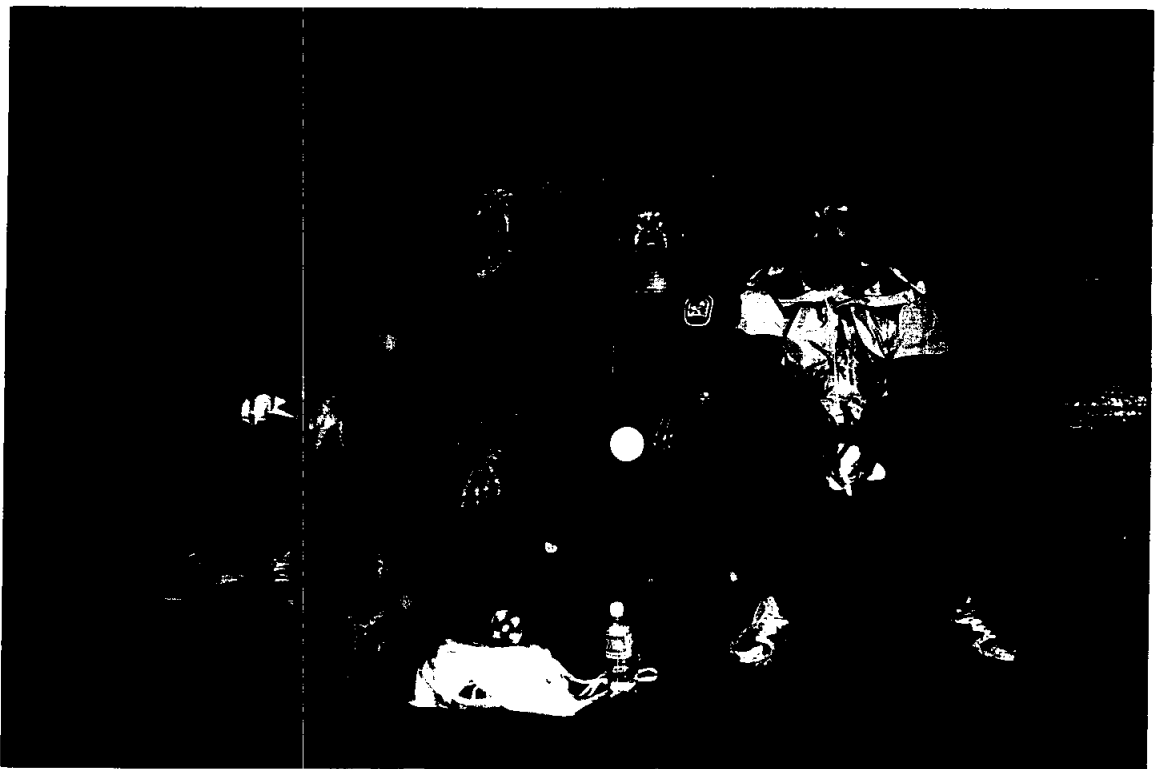
2. The park headquarters precinct is vehicle free but because of the very wet conditions, there are extensive boardwalks.

3. Park headquarters and visitor centre.

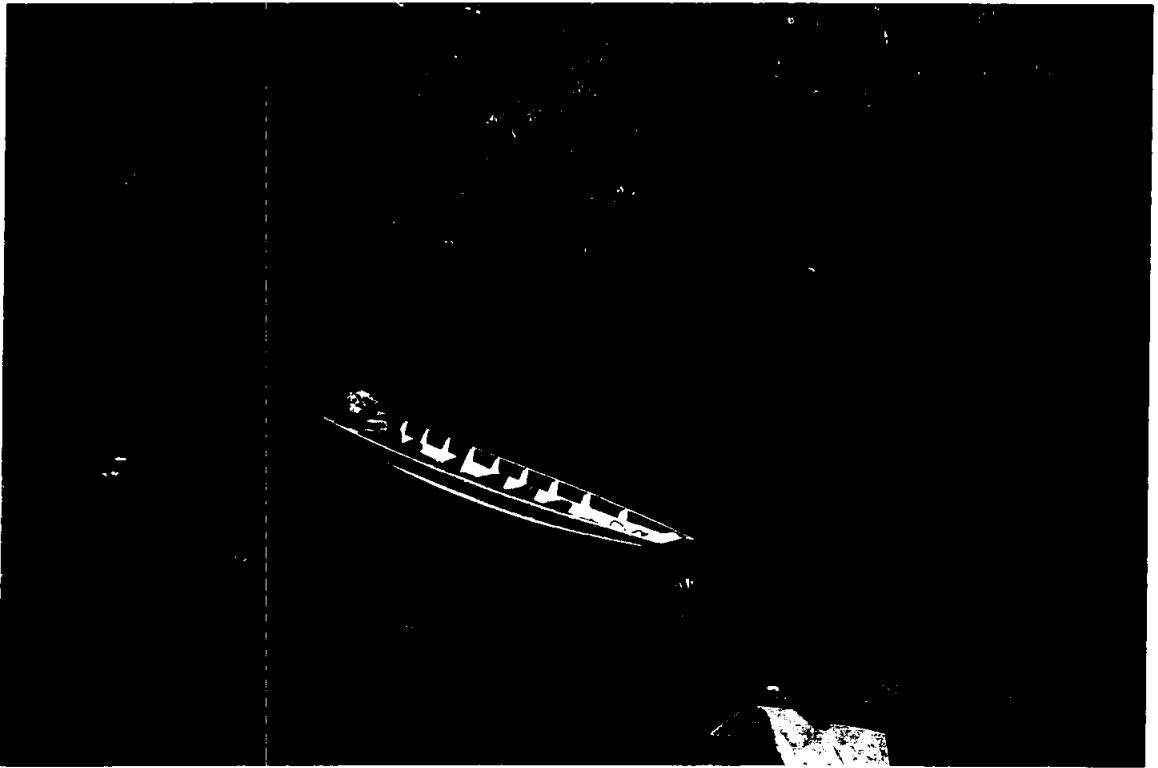




4. Several kilometres from park headquarters and outside the park is the Royal Mulu Resort, a high standard resort which is limited by the capacity of air services to Mulu.



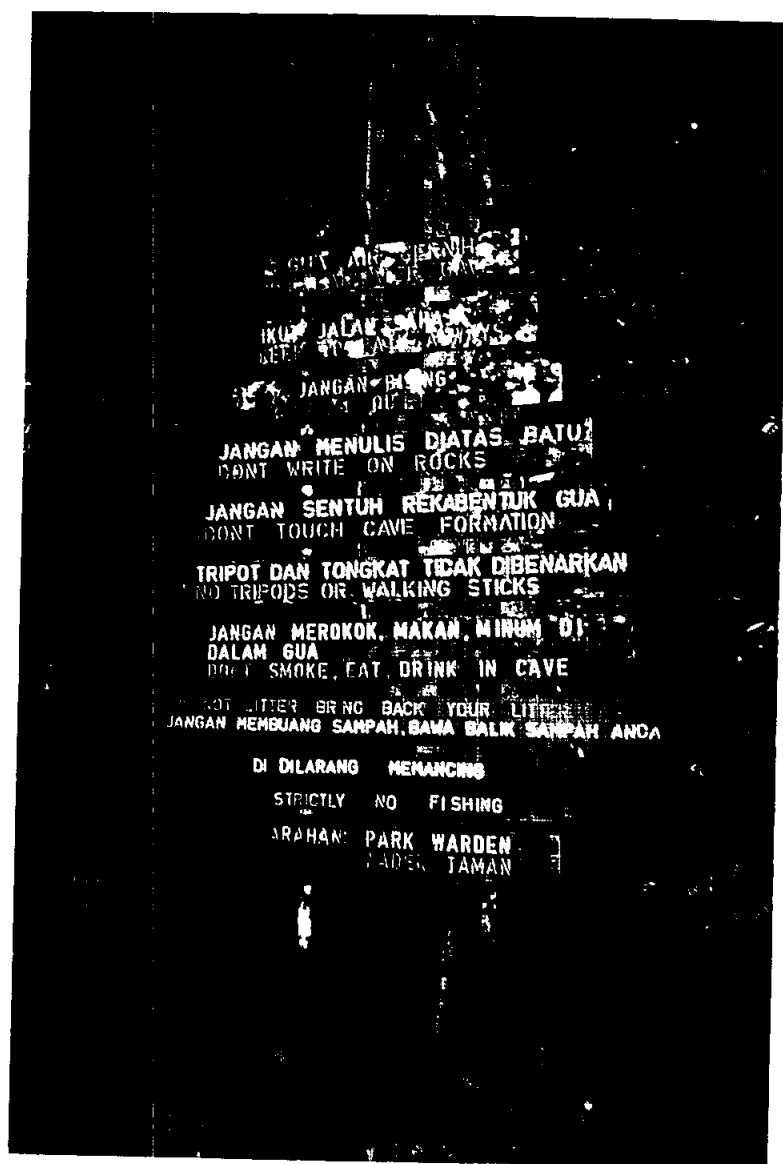
5. A boardwalk from park headquarters gives access to one of the caves 3 kilometres distant. At dusk, tens of thousands of bats emerging from one cave create a spectacle which attracts visitors.



6. Access to the Clearwater and Wind Caves is via boat up the Melinau River.



7. The boat trip is an important part of the visitor experience.



8. The visitor experience in a visit up the Melinau River is impaired by insensitive signage on arrival at the track to Clearwater Cave.



9. The more recently constructed boardwalks outside the caves in the Clearwater area are mostly well constructed and only occasionally include poor or unsafe design



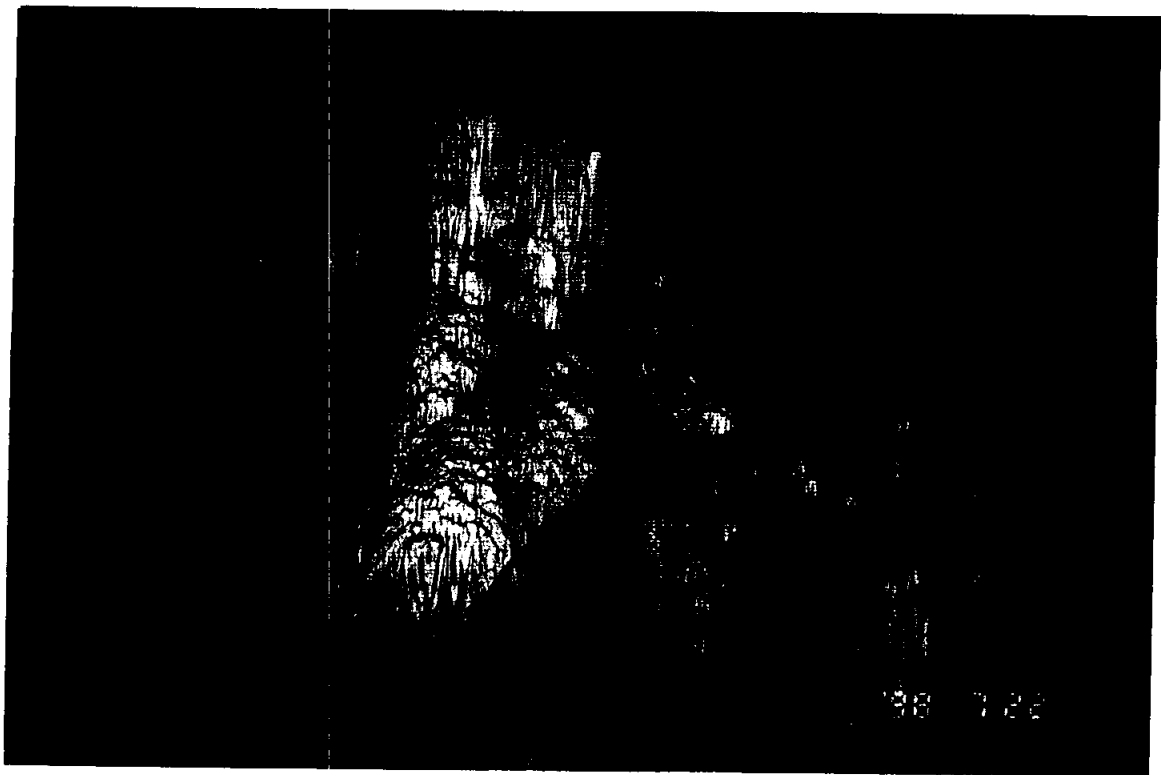
10. Cleating of one boardwalk has improved the safety of the boardwalk.

11. River side caves in vicinity of the Wind Cave.





12. The remains of the boat used by the first expedition which explored the cave. The remains are interpreted to visitors.



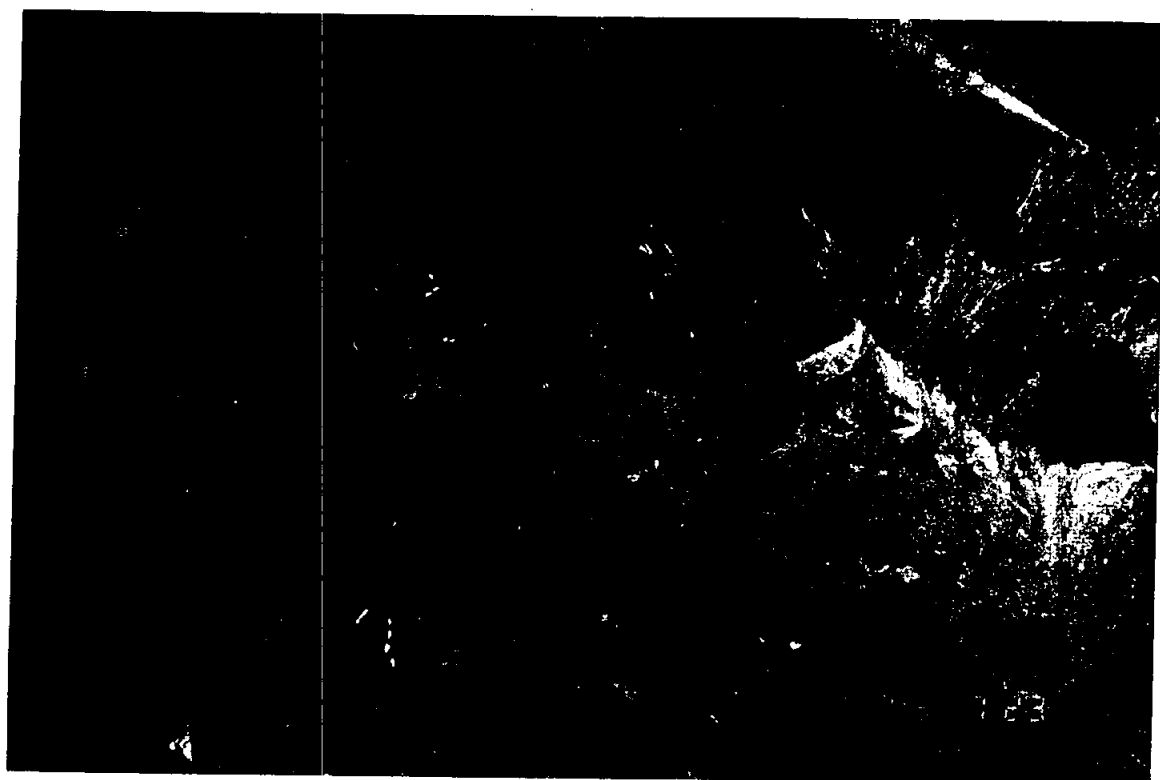
13. Many of the caves are richly ornamented.



14. A rare karst feature, photokarst, is particularly well developed at Clearwater Cave.



15. The high rainfall and humidity provide for well developed specialised species of plants around the cave entrances.



16. This species is distinguished by reputedly having only one leaf at any one time.