

## INSTITUTE OF CURRENT WORLD AFFAIRS

JHM-6

NATIONAL PARKS

Penang, Malaysia  
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Mr. Peter Bird Martin  
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Dear Peter,

Malaysia's national parks are some of the most impressive places I've seen anywhere. Including lowland and montane forests, mangroves, freshwater swamps, rivers, caves, and islands, they contain representatives of most ecosystem types found in this region. These areas and Malaysia's nature reserves are virtually the only places where almost no Malaysian is allowed to achieve a feeling of accomplishment in putting something into the jungle, opening a wilderness, or developing a wasteland. The area also the only places of scarce human habitation where a foreigner without pressing economic need can go without being considered a bit mad by most Malaysians.

Malaysia does not have a unified system of national parks; there is only one national park under Malaysia's federal authority. The rest of the parks are in East Malaysia (Borneo) where the states of Sabah and Sarawak each retain autonomy in land use and forest management matters. Malaysia now has 17 national parks, overall (counting a few in East Malaysia still in initial stages of being constituted). In addition, there are 10 nature reserves in Peninsular Malaysia under the authority of Perhilitan (the federal office of wildlife and national parks) and several more in East Malaysia provided with varying levels of protection from encroachment or development under state forest and wildlife protection laws. However, suffice it to say that Malaysia has just over a million hectares of terrestrial parks and reserves.

The Third Malaysian Plan, for the period from 1976 to 1980, was the first overall national policy to call for the establishment of more national parks and nature reserves under federal authority, and also outlined a National Environmental Policy. In 1980, the federal National Parks Act went into effect, allowing new national parks to be set up in Peninsular Malaysia. The Act's rationale reflects standard conservation goals, and is closely in line with the World Conservation Strategy adopted in 1980 by the International Union for the conservation of Nature. Sabah's National Parks Ordinance dates back to 1962, prior to Independence, while Sarawak's was enacted in 1979, both independent of federal measures. While the East Malaysian states have each set of several new national parks under their own authority in recent years, no new national park has been established in Peninsular Malaysia since Independence.

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Each of Malaysia's national parks and reserves is unique in terms of habitat or historical significance. They may not have been unique long ago. But as development has affected so much land in Malaysia over the past 20 years, the legal protection afforded to parks and reserves has in some cases left them as "islands" of the only large examples of certain specific ecosystem types in the region, or even in the world, relatively free of human disturbance. Some of these areas are quite large -- the 4343 square kilometers of Taman Negara, Peninsular Malaysia's national park, is one of the largest protected areas in Southeast Asia, and occupies about 5 percent of West Malaysia's total land area.

Over the past decade or so, Malaysia's conservationists have become increasingly vocal in trying to get the government to set up more protected parks and reserves. In 1974, the Malayan Nature Society published a "Blueprint for Conservation in Peninsular Malaysia" that identified 64 areas deserving of legal protection from exploitation or development, as parks or reserves. The government has since acted on several of the 1974 recommendations with regard to setting up reserves.

The World Wildlife Fund Malaysia has been working with state governments for the past six years to develop conservation strategies. The strategies take a strong multi-sectoral approach to conservation, but planning for the establishment of reserves and parks is a major focus of all of them, referring to specific conservation criteria on a site-by-site basis. While actual recommendations of the state strategies that have been developed so far have often fallen short of the hopes of dedicated conservationists, the planning processes they set in motion may have important conservation implications for the future. Their bottom line, a radical departure from current standard practice in Malaysia, appears to be "When in doubt, conserve!" World Wildlife staff have called for conservation units to be established in central positions within each state's executive apparatus. They emphasize the need for comprehensive, long-term planning for park and reserve development and management.

The most active organization with regard to national parks and nature reserves in Malaysia is the Malayan Nature Society, the area's oldest existing conservation group. As a "nonpolitical" society rather than a "pressure group," it generally stands in good favor with key government agencies. Its current head, Dr. Salleh Mohammed Nor, is also head of the Forestry Research Institute of Malaysia, a statutory body. When it considers an issue pressing enough, the group can get the ear of even the Prime Minister. The Malayan Naturalist, its quarterly magazine, is roughly equivalent in function to the Audubon or Sierra Club magazines in the United States, but without the slick photos. The Malayan Nature Society has been joined in work on many issues by the Malaysian Mountaineering Association.

The Environmental Protection Society of Malaysia, a small group headed by Gurmit Singh, goes far beyond a narrow concept of conservation, taking positions on the widest possible range of environmental quality issues, including those related to parks and reserves. If government officials want to know what "responsible"

environmentalists will have to say about an issue, they generally call for comments on the Malayan Nature Society, World Wildlife Fund, or Gurmit Singh.

The two other organizations that are active on nationwide conservation issues and pressing for greater attention and resources for national parks and reserves are Sahabat Alam Malaysia (Friends of the Earth, or SAM) and the Consumers Association of Penang (CAP). While neither of these groups have initiated any major pro-park or reserve campaigns, they have given considerable attention to conservation issues in their publications, Suara SAM, and Utusan Konsumer.

Whether they take a cooperative or confrontational approach to government policies, all of Malaysia's environmental organizations have become quite outspoken about the need to conduct early and thorough environmental impact assessments of projects that are likely to affect sensitive environments, and to allow open, routine, and public criticism of the assessments. Far from having an "anti-development" atone, the call for environmental assessments in Malaysia stems from the belief that development and conservation must be mutually supportive. Among the major incidents that galvanized Malaysian conservationists in support of routine environmental assessments have been several issues related to national parks and nature reserves. (More about that, later.)

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To convey a small sense of the fascinating aspects of some of the parks, I'd like to describe some parts of one of them, Niah. Niah is not the largest park (in fact, it's one of the smallest, at only 3,102 hectares). Unlike many, it is easily accessible and is one of the most completely explored natural areas in Southeast Asia. Niah is located just above Sarawak's coastal plain, about 13 kilometers of the new highway between Miri and Bintulu.

When I arrived at park headquarters around 2:00 in the afternoon, a procession of wiry men with huge leg muscles marched bouncingly down the ironwood plankwalk on the other side of the Niah River to a building at the end of the walkway. On his back, each carried a load of guano stuffed in two burlap sacks, one nestled atop the other, and braced by a cloth band straining against his forehead. They carried their loads, over 70 kilos, 3 kilometers over the plankwalk from Niah's Great Cave.

The building is the Niah Guano Cooperative, which buys guano of standard grades, based on age and moisture content, which can be quickly ascertained by texture and odor (or taste!) if there is any question. An average day's haul brings in about M \$18 (about US \$7.20), a handy supplement to cash income from the sale of surplus farm produce and cash crops.

During a torrential rain, which began at 3:00 in tropical tradition, I looked around the excellent display area in the park's office-bungalow, which includes a large relief model of the park. Marked with trails, small streams, hills, and prominent rock outcrops, its landmarks kept me on the right track on numerous occasions over the next ten days I spent in the park. For me, one of the greatest attractions of Niah is that it's virtually impossible to get lost there, a quite rational fear in most of Borneo's jungles.

The 400 meter high limestone massif of Gunung Subis is unmistakable in the middle, and small rivers flowing around its base and out to the Niah River serve as guides off the marked trails. By starting early in the morning and returning just after dark (with a break in a cave or under some improvised shelter during the afternoon rain) there is also no need to sleep in the forest instead of the dry and mosquito-free comfort of the park bungalow. Many visitors relish a night on top of Gunung Subis, however, to marvel at the spectacular sunset over the western hills and sunrise over the South China Sea, with the possibility of a memorable celestial show inbetween.

I had read about the red hematite cave paintings found in Gunung Subis' caverns, and the archeologists' reports of ancient canoes containing human bones. These finds were first investigated in 1958, and pushed back the clock on when human civilization first appeared in Southeast Asia by several thousand years. The "Painted Cave" at Niah was apparently used as a burial ground, and the Great Cave possibly as a habitation, as long as 40,000 years ago! The caves at Niah were declared a national historic monument soon after their remarkable archeological value was recognized.

My favorite of the cave paintings shows what looks like a man, a hunter holding a blowpipe in one hand and an upside-down creature, looking like one of Borneo's flying squirrels, in the other. Beside him, a figure somehow unmistakable female is jumping up and down, jubilantly shouting the cave-person equivalent of "You got it! You got it!"

While I had read reports of the prehistoric graffiti in the Sarawak Museum Journal before arriving in Borneo, it was only in Sarawak that I learned of the other human activities that put Niah "on the map." (These were also reported in the Journal, but their significance escaped me from a distance.) The limestone of Gunung Subis is honeycombed with caves, many of them home to several species of bats and swiftlets, as are most such caves in Southeast Asia.

Cave-dwelling swiftlets build hard little nests by spitting up saliva and mixing it with debris, building up solid and cozy pockets for their eggs against cave walls. The material of these nests is the essential ingredient in birdsnest soup, a costly Chinese delicacy. After the nests have been soaked to soften them, the debris is meticulously picked out, and the remaining material dried. Sarawak birdsnests sell for as much as US \$200 per kilo, and are exported to Hong Kong and Singapore. While the guano collection only went commercial in 1929 at Niah, the swiftlets and their nests have been major players in long-distance trade between Borneo and China for a thousand years or more. Birdsneests were a major commodity, along with certain resins and gums found in the jungle, that could be traded for the precious Chinese dragon jars still in great demand for status and rituals among Dayak communities.

A skillful birdsnest collector and an assistant, working with a set of precisely-fitted, telescoping bamboo poles, can collect over a kilo per day (though this is unusual) from precisely specified

parts of the caves. Lucrative hereditary rights to collect in each part of the caves at Niah are registered with the Sarawak Museum and sanctioned by state ordinance. Gathering nests is risky business, however, as collectors must nimbly climb scaffolds, poles, or ledges to reach the upper walls and ceilings of the caves that are the cushiest addresses for swiftlet nesting. Occasionally, someone falls. A little boy at Rumah Chang, an Iban longhouse just outside the park, told me the last nest collecting fatality was three years ago. He simulated the pop-eyed, broken-boned result with great dramatic skill.

When the caves were declared a historic monument in 1958, and later when Niah was constituted as a national park in 1974, the Sarawak government considered prohibiting both nest collecting and guano harvesting. It was hoped that the ban would protect any archeological remains that had not yet been documented, as well as allowing the restoration of cave ecosystems free of major disturbances. However, the nest and guano trades were themselves considered to be unique, and the birds nest trade culturally significant. Compensation to those holding nest collection rights would be expensive. Eliminating that source of income to local residents was likely to cause hardship, particularly to residents of Rumah Chang. The longhouse had already given up rights to hunt and collect other forest products within park boundaries, and some of the community's customary farmland was being converted to a government-sponsored oil palm plantation. In the end, limited rights to continue economically valuable activities in the park, such as nest and guano collecting, have been retained, but the activities are closely monitored by the Sarawak Museum, which has an office next to the guano coop.

The scale of Niah's Great Cave is super-human, as if rock is mocking flesh. Few parts of the main cavern are totally dark; the subtle light on the rock inside makes even a dull day's hazy light look brilliant by comparison. The angles of sunrays, direct and reflected, create the illusion that the cave was carved by light rather than water. Far above the undulating, guano-softened surface of the cave's floor, the birds nest collectors' candles flicker near the curving ceiling, eerily-moving, tiny points of light in the darkness. Below, people move quietly, flashlights occasionally illuminating an ingenious architecture of plank walkways, ropes, and wooden ladders marking convoluted paths over and around protruding rocks and deep cavities throughout the cave. On smooth inclines, steps have been carved into the soft floor to reduce the chance of slipping. Air movements in the cave follow no immediately apparent rules; in some extremely enclosed areas, fresh breezes completely dispell the characteristic pungent cave-stench, unforgettable in part because it remains in cave-visitors' clothes through several rough washings...ammonia, mushrooms, and something else...

I wondered what the cave would be like without the people in it. I tried to imagine it through the eyes of a person with no experience of artificial light beyond glowing embers or resin-soaked leaves, without the scaffolds and ladders, and without the well-worn paths detouring around break-neck drops. The only sounds would be the dripping water, clicks and flutters of bats and birds disturbed from sleep, and the scuttle of beetles and tiny cave scorpions.

I explored the caves for a couple of days before concentrating on the forests around them, and climbing Gunung Subis. The second day, I stayed at the cave mouth until dusk, knowing that the plankwalk would make it possible to find my way back to the riverside after dark. I was amused by the commotion at the cave entrance as the

bats flew out in waves, species by species, flapping, clicking, and calling on the border of the audible. Closer to the ground, swiftlets fluttered back inside the cave, circling a few times before disappearing into the pitch darkness. I wondered what precise combination of signals prevented collisions, with the enormous traffic volume, and reflected that I should have brought a hat, as splat after splat landed too close for comfort.

By the time I started back, the plankwalk was invisible except for dim moonlight striking through the shifting forest canopy. But the boards' light-absorbent silhouettes were unmistakable against the greenish-white glow of the forest floor. Bioluminescent fungi grow in strings and clusters of tiny dots after a good rain, outlining tree roots and fallen leaves. Flashlight off and eyes accustomed to the not-quite-dark, moths and bats appeared floating through the tangle of branches and liannas above, purposefully feeding and getting with the jungle's business of fertilization. (After a long dry spell, this was the flowering season for many trees and other plants; the fungus-promoting rain had broken a serious drought.) Discerning the forest by shadows against the fungus-glow below and the moonlight above, I walked back slowly, past giant meranti tree buttresses reaching across the earth like crooked rocket fins, past the tangled matrix of strangler figs descending from the croches of other trees. (The strangler fig grows from seeds deposited in medium-height branches of host trees, getting a head-start toward bright light in the forest canopy, sending down a profusion of roots that wrap themselves around the trunk of the host. When the roots have gotten strong enough to support the fig, they also squeeze the host tree to death by giving it no room to grow.)

I was not disappointed to miss seeing the yellow, red, or greenish reflections of creature-eyes in the darkness. A human creaking along a plankwalk gives plenty of warning for anyone else in the vicinity to leave or blink. However, during the daytime at Niah, I was rewarded by the sight of flying lizards and squirrels, and a couple of hours spying on the antics of three small-clawed otters. I heard some Argus pheasants, and was surprised at the number of hornbills that seem to have taken refuge in the park...

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Wildlife management varies from park to park, reflecting the differing authorities under which they were set up, differences in population (human and animal) in the vicinity, and basic philosophies of current park authorities. At Niah, for example, although the nest trade is allowed to continue, nests may only be collected during a total of 4 months each year, when neither eggs nor fledgelings are expected to be in the nests. However, at Taman Negara, where casual visitors are allowed to fish in the park's streams, wardens have only recently considered imposing a closed season on certain species to protect their reproductive cycles.

In some cases, hunting is allowed within park boundaries. For example, the 1974 proclamation establishing Gunung Mulu National Park concedes specific privileges to residents of 9 local communities that had customary rights in the area prior to the establishment of the park. The proclamation specifies game species that may be hunted, and fishing rights within certain river drainages, as well as rights to collect resins, specific latexes, rattan, leaves for weaving and baskets, and edible plants and roots. Only the nomadic Penan living within the boundaries of the park have all such rights within the entire park, and may also use wood from the park for shelter and fire. Some groups of Batek people, orang asli, have similar rights in Taman Negara.

Park authorities themselves may attempt to control certain species in the parks. At Bako National Park, on a peninsula near Kuching, Sarawak, park development has resulted in large groups of long-tailed macaques and an unusual concentration of monitor lizards hanging around park headquarters and campgrounds. The lizards like rummaging around the the areas behind wash houses, where trash is sometimes deposited, and the macaques enjoy tidbits from tourists, provided voluntarily or not. Several aggressive male macaques frequently gang up against lone female humans, and may pull hair or clothes, pick pockets, and tweak any body part they find interesting. When the macaques become particularly pesty, wardens may permit sharp-shooting members of park staff to pick off a few individuals around park headquarters. When I asked the assistant warden why they couldn't be moved instead of killed, he explained that it would be too much trouble; they would probably come back from anywhere within the park, and macaques area considered nuisances elsewhere in Sarawak.

The question of when concentrations of wildlife in a park become "pests" calling for control measures is usually a matter of definition. In most cases, managing human behavior in the park would make more sense. Using another Taman Negara example, many visitors joke that the best place in the park to see "wildlife" is right off the back porch of the park's hostel. Sambar deer and large families of wild boar frequent the open garbage dump behind the building. Repeated recommendations for the park to build a small incinerator on-site or create a sanitary landfill across the river from park headquarters have yet to yield results. Yet park authorities have taken other opportunities do direct animal movement in the park and opportunities to observe it by providing some artificial salt licks and observation hides near natural and artificial ones to allow people to see some of the park's shyer fauna at night.

Few of the parks have overall management plans, and those that exist have become largely out-dated. However, park staff generally have a feel for the gradations in human influence throughout the park, whether or not it is described on paper. While none of the parks have really be "zoned" to direct human impacts, the placement of trails, resting areas, and campgrounds has been thought out to balance visitor movement to park highlights against protection of sensitive animal and plant populations and the landscape.

Park authorities emphasize that sound management depends on adequate understanding of ecological relationships within the park and

outside. These may be extremely difficult to observe. Time-consuming, detailed studies are being done gradually, as qualified people become interested, but they often wait until volunteers or academic researchers come along to initiate investigations on a particular topic, whether or not it reflects pressing management needs of the park. The Malayan Nature Society has encouraged such voluntary work and several foreign or international organizations have provided staff for wildlife and ecological studies, including World Wildlife Fund, the Royal Geographical Society, and CUSO (a private Canadian development organization).

Literature put out by the Wildlife and National Parks Office ("Perhilitan") points out that conserving Malaysia's natural heritage, or at least representative remnants of it, has become increasingly important as land development continues and tropical forests around the world continue to be destroyed. It's a matter of national prestige these days. But Perhilitan conservationists have had a hard time building public support for their work, despite the slow recognition that such support may be an answer to their fundamentally weak position when push comes to shove in the bureaucracy. On issues with any controversial potential, Perhilitan officials are often preventing from even giving basic information to the public until crucial decisions have already been made, characteristic of the cloak of secrecy endemic to so much government activity in Malaysia. In some cases where Perhilitan has been only a reluctant party after-the-fact to decisions threatening the conservation values of the parks it is charge to protect, sensitivity to public opinion and potential environmental impacts in the first place could have saved a great deal of embarrassment and expense.

Several incidents concerning national parks in recent years have become foci of intense conservationist action. The first was in the early 1980s when the National Electricity Board revealed a plan to build a major hydroelectric dam on the Tembeling River. The dam would have flooded a large portion of Taman Negara. After much noise in the press and angry statements from conservation groups, the government withdrew its plan for the dam. At the time, no rule required the government to assess the environmental impacts of such projects, although such assessments were already recommended by the international banks and other agencies that are called upon to supply the capital for major infrastructure projects. (Certainly, no assessment was made available to the public.) There is also little in Malaysian law that automatically prevents excisions from parks or nature reserves when land is demanded for other government projects. Portions of parks and nature reserves can be taken for "development" purposes just as any other reserved land can be reclassified under Malaysian law.

The integrity of pristine portions of Taman Negara was threatened again last year, when a road was almost built through the heart of the park to the base of Gunung Tahan (at 2,187 meters, the highest peak in Peninsular Malaysia). The origin of the plan for the road is not completely clear, but the most common version is that when the Prime Minister helicoptered into the park near Gunung Tahan, he was so impressed that he expressed interest in making the mountain more accessible to the Malaysian people. (Currently, the round trip from park headquarters to the summit takes a minimum of 8 days' trekking.) The army was asked to build the road, and

within only a few months, construction began on a 4-wheel drive track to Kuala Tahan; the village across the river from park headquarters would be accessible by road for the first time. However, the Malayan Nature Society and World Wildlife Fund Malaysia only learned that the track was to continue into the heart of the park once the road to Kuala Tahan was well under way.

Asking polite questions through conventional channels didn't seem to get very far. The official position was this was a move in the right direction for tourist development (despite the fact that the army crew building the road had it designated as an "emergency" measure, according to press reports). However, after much public questioning, environmentalists were able to outline clear damage to the park that could be expected from such a road, and were able to present their case to the Prime Minister. He, in turn, requested the Malayan Nature Society to look into alternative ways of providing easier access to Gunung Tahan.

In a laborious and expensive 3-month effort, the Society and the Malaysian Mountaineering Association prepared a full-fledged detailed feasibility study of providing access from the other side of the park, and developing a full set of visitor facilities over time to ease pressure on the area around current park headquarters at Kuala Tahan. The alternative plan also involves building a road, but this is supposedly through a much less sensitive part of the park. About three months after receiving this report, the government announced that it had reconsidered its road building plan, and decided to cancel it in the best interests of the park. However, the response to the alternative plan has also been luke-warm, partly due to the current shortage of resources in the budget for "non-essential" projects, due to the general downturn of Malaysia's economy in the wake of low prices for the country's main export commodities. The lack of enthusiasm may have also stemmed from the admission that Perhilitan was having trouble even managing the facilities at the park now -- finally, a few months ago, visitor services at Taman Negara were turned over to a private firm, in the hopes that they could be managed more efficiently and free park staff for essential conservation work like surveys, trail maintenance, and Wildlife Act enforcement. The dam and road incidents, and the public responses to them, may have made strong points about the need for an overall park policy to prevent ad hoc encroachments.

One result of Malaysian conservationists' growing confidence and organization has been an initiative to get the government to make some positive movement on setting up additional parks. When no new parks had been gazetted 4 years after the National Parks Act was passed, the Malayan Nature Society decided to undertake a scientific survey itself of the 87,000 hectare Endau-Rompin reserve. The expedition was intended to demonstrate that there is ample reason to make the area into a park. It also focused national attention on conservation issues in general.

Raising funds for such a major expedition was an ambitious project. It was to be a Malaysian venture, to be funded by Malaysians. Raising funds for such a major expedition was an ambitious project. It was to be a Malaysian venture, financed by Malaysians. This effort was greatly aided by The Star, one of Malaysia's leading English language newspapers. (A Malay and Chinese language newspaper later joined the campaign -- Utusan Melayu and Thung Pau.) Malaysia's enormously esteemed first Prime Minister, Tunku Abdul Rahman, threw his personal prestige behind the expedition as its patron. As explorations progressed, Malaysia's government and private T.V. stations each produced a documentary about the expedition, and other press coverage was frequent and positive. After initial hesitation, since private sponsorship of the expedition in the first place may have been taken as a mild indictment of official inaction, the government also threw help solidly behind the expedition in the form of advice and regular army assistance in transporting goods and people into the reserve.

Largely because of the enthusiastic response in terms of donations to support the project, the initial 6-month expedition was extended to a full year; donations in cash and kind amounted to almost half a million Malaysian dollars (over US \$200,000), an enormous amount in the Malaysian context. A broad invitation was issued to scientists in the region to take part in the expedition, with its considerable logistical support; the Nature Society hoped the findings of the expedition would become a showcase of local expertise.

Similar expeditions have recently been conducted in several areas of Malaysia, though nothing as ambitious as the Endau-Rompin project depended so completely on Malaysian financial and scientific support. The most remarkable of these recent expeditions was at Mulu in Sarawak, a cooperative venture between Malaysia and the Royal Geographical Society. Beginning in 1977, the survey produced a detailed resource inventory of the new Gunung Mulu park, and began work on a management plan. It was continued in 1980 and 1984 with the exploration of Mulu's large caves. The expedition documented that Mulu's Sarawak Chamber is the largest natural cave chamber in the world, and that Clearwater Cave, over 51 kilometers of passage, is the longest cave system in Southeast Asia. (For safety and conservation reasons, it was decided that only the first kilometer or so, depending on water conditions, would be open to the public.

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Conservation consciousness is rising quickly in Malaysia, as people have realized that the forests are limited, and that a logged-over forest and an undisturbed jungle are two very different things from an ecological viewpoint. Malaysians are realizing that they can afford to protect their national parks and reserves, and that if conservation does not get a share of natural resources now, later may be too late.

Sincerely yours,

*Gudith Mayer*