

IMAGES OF NATURE IN SWETTENHAM'S EARLY WRITINGS: PROLEGOMENON TO A HISTORICAL PERSPECTIVE ON PENINSULAR MALAYSIA'S ECOLOGICAL PROBLEMS

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Introduction

My major purpose in this article is to make a plea for a more firmly rooted historical perspective on Malaysia's rapidly burgeoning ecological problems. Let me make it quite clear, however, that my objective is not to trace men's role in changing the face of nature in Peninsular Malaysia, but rather to offer a modest introduction to the history of ideas associated with the natural environment of that country over the past 100 years. Viewed in this way the present study falls within the many faceted, multi-disciplinary field of the history of environmental ideas in general, and the study of man's attitudes towards forest environments in particular.

During the past decade there has been a growing awareness among social scientists, and especially among psychologists, anthropologists and geographers, of the need to get within the cognitive worlds of the people they study. Much of the impetus for this new trend has come from psychology, in particular environmental psychology, and from the related fields of architecture and design. In this paper a strong emphasis is placed on the importance of the cognitive viewpoint, especially as it relates to the rapidly growing area of interest now commonly referred to as environmental perception.

The Global Concern

"We travel together, passengers on a little spaceship, dependent on its vulnerable reserves of air and soil: all committed for our safety to its security and peace; preserved from annihilation only by the care, and the work, and I will say the love we give our fragile craft"¹

¹Stevenson, A. United Nations Economic and Social Council, Official Records, 39th Sessions p. 90. Quoted in Caldwell, L. K. *Environment: A Challenge for Modern Society* (New York, 1970), p. 84.

In recent years a number of writers have contended that indefinite growth cannot be maintained by the finite resources of the earth (Forrester, 1970; SCEP, 1971; Meadows et al., 1972). If these predictions are close to the mark, then an industrial way of life which places high priorities on economic growth and consumption may not be sustainable. Policies which focus on the quantity of economic production rather than on the quality of life will inevitably result in the disruption of ecosystems, the depletion of resources, and the undermining of the very foundations of survival.

A small but growing body concerned citizens, scholars and politicians are coming to realize that a society based on stability may be more desirable than one based on expansion. Central to the idea of the stable society is the view of man as an integral, functioning part of nature, with all the responsibilities that this implies for the proper maintenance of the planet.

Ecological Problems in Peninsular Malaysia

One does not have to invoke prophecies of gloom and doom to be aware of the fact that Peninsular Malaysia is fast approaching a period of severe ecological disruption. At a time when our knowledge of the biosphere, though considerable, is still full of gaps and question marks, there is a definite need to view issues pertaining to ecological problems with a great deal of caution. In Malaysia, unfortunately, ecological caution is afforded only passing and rather parsimonious recognition.

Species diversity tends to reach a maximum in tropical rain forests and tropical coral islands. Since each species is of potential value to man there is an overwhelming need to maintain the natural diversity of these ecosystems. But there is also another reason why we should be concerned with maintaining species diversity. It is well known that ecosystems tend towards stability. The more diverse and complex the system the more stable it is; the more species there are, and the more they interrelate, the more stable is their environment.

Unfortunately we still do not know enough about the complexities of the tropical rain forest. We are, in fact, in danger of destroying it before we have come to understand it. "At the moment, we value it only for a few plants, principally timbers like mahogany and

greenheart. For the rest it is considered useless, best cut down in the search for minerals or cleared for agriculture"²

Throughout Malaysia true wilderness areas are in rapid retreat. While it is beyond the scope of this paper to trace the forces behind this trend, it should be pointed out that we still know very little about man's impact on the tropical environment of Malaysia. Indeed, it is only in recent years that a few concerned citizens (Straits Times, 1973) and scholars have begun to examine the impact of the rapid removal of the jungle on problems such as soil erosion and water quality (Leigh, 1973; Leigh and Low, 1972), the issue of annual flooding, especially on the east coast of Peninsular Malaysia (Leigh and Low, 1972), and the results of forest clearance on plant and animal life (Wyatt-Smith and Wycherley, eds., 1961; Wycherley, 1969; Marshal, 1973). In Malaysia, questions relating to air and water pollution, the ill side effects of rapid urbanization and the profound problem of the quality of life are only now beginning to emerge. This rather tardy concern, however, must be welcomed as a step forward. Interest in the quality of the natural world and the value of human existence must, at least in part, be seen within the context of the development process which is at work throughout most of the Third World. That process, as Kenneth Boulding has so aptly stated, "involves a unified social dynamics which exists only in embryo".³

Environmental Perception and Behaviour

Given the situation I have outlined above, it surely behooves us to reconstruct, as far as possible, the ideas and attitudes which men at different times and in different places have imputed to nature in Malaysia. A pursuit of this type is valid both in and for itself and also because it may well shed some light on present day problems.

The distinction between attitude and perception is still a blurred one even (especially?) in the literature of psychology. Here I have taken up Thurston's notion that an attitude is the "sum total of man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specified topic... It is ad-

² Allen R. & Goldsmith, E. "The Need for Wilderness *The Ecologist*, Vol. 1, 1971, p. 24.

³ Boulding, K. E. *The Impact of the Social Sciences* (New Brunswirck, 1966), p. 50.

mittedly a subjective and personal affair"⁴ This definition is fairly similar to Boulding's (1956) concept of the 'image', or the subjective content of knowledge. In Boulding's words, this "is what a man thinks the world is like, the sum total of his beliefs, his image of the world and himself and space and time, his ideas of causal connection, and so on."⁵ In order to avoid confusion the words 'perception' and 'attitude' are used interchangeably in this paper.

The recent output of review articles and bibliographical guides attests to a growing interest in environmental perception studies. (Brookfield, 1969; Wood, 1970; Goodey, 1971; Walmsley and Day, 1972). In human geography, it has been noted that perception is not a sub-branch of that discipline, but rather an all-pervasive and supremely important intervening variable in any analysis of the spatial expression of human activities."⁶ The relationships, however, between attitudes and overt behaviour are still far from clear, and it will probably be quite some time before the lacunae in this area are bridged (O'Riordan, 1973).

Since the early 1960's a number of geographers have written a few splendid works in the areas of environmental perception and the history of environmental ideas (see, for example, Lowenthal, 1961; Glacken, 1967; Tuan, 1971). For the most part, however, these studies have been confined to Western experiences and therefore set within the framework of occidental cultures (for an exception, see Tuan, 1968). This study offers a preface to the study of environmental ideas in what might be termed the neo-European world of nineteenth century Malaya. Ultimately such an enquiry will have to be expanded so as to encompass both Malay and Chinese attitude towards the natural environment of Malaysia. For the time being, however, a start must be made somewhere. Few, if any, answers are provided in what follows. Instead, the interested reader will find that quite a number of questions are raised; hopefully some of them will prompt further research.

⁴ Thurstone, L. L. "Attitudes can be measured" *Readings in Attitude Theory and Measurement*, ed. by Martin Fishtein (New York, 1937), p. 77.

⁵ Boulding, K. E. *The Meaning of the Twentieth Century: The Great Transition* (London, 1965), p. 40.

⁶ Golledge, R. G., Brown, L.A. & Williamson, F. "Behavioral Approaches in Geography: An Overview" *Australian Geographies*, Vol. 12, 1972. p. 3.7

Malaya Circa 1875

In 1819 Sir Stamford Raffles wrote to Colonel Attenbrooke informing him that "Our object is not territory but trade, a great commercial Emporium, and a fulcrum whence we may extend our influence politically, as circumstances may hereafter require..."⁷ By 1874 circumstances did in fact seem to merit greater political intervention in the Malay Peninsula. From that date onward Britain began to take a much greater interest in the political and economic affairs of the inland portions of the Peninsula.

The period of the 1870's and 80's offers an appropriate starting point for an enquiry into British attitudes towards nature in Malaya. Looking back on his early years in the country Swettenham could later write that Malaya in 1874 was *terra incognita* to both official and trader alike. "There were", in his words, "no reliable books on the subject, the whole country was an absolute blank on every map... Of the nature of the country, the character of the people, their numbers, distribution, sentiments, or condition, there was an ignorance, profound, absolute and complete".⁸ This, of course, was something of an exaggeration since Swettenham and accounts of the country (for example, Anderson, 1828; Begbie, 1834; Newbold, 1839; Wallace, 1869). But for the most part Swettenham's statement can be taken at face value: Europeans still knew very little about the interior of the Peninsula.

The period after 1874 was characterized by a rapid upsurge of interest in the geography, geology and ethnography of Malaya. A new and fascinating world being opened up to European eyes for the first time. It was a world filled with exotic plants, animals and peoples; a world of scenic diversity and strangeness, of gloom and foreboding; it was a period of considerable excitement, of rapid exploration and observation; it was a period during which impressions of the new land were being hastily set down.

Swettenham's Travels (1874-85)

With the exception of Raffles, Sir Frank Athelstane Swettenham (1860-1946) is perhaps the most remembered of nineteenth century ci-

⁷ Raffles, S. Sir Stamford Raffles to Colonel Attenbrooke (letter, Singapore, June 10, 1819) Reprinted as "The Founding of Singapore" Journal, Straits Branch Royal Asiatic Society, Vol. 2, (1878) p. 179.

⁸ Swettenham, F. A. *The Real Malay* (London, n.d.) pp. 7-8.

vil servants and administrators. His long and distinguished career in Malay spanned a period of more than thirty years during which time he held a variety of important positions. Toward the end of his career he was appointed Governor of the Straits Settlements and eventually retired in 1904.

The years 1874-76, as pointed out earlier, mark a turning point in the history of Malaya. British intervention in those years "was to a large extent provoked by the threat which the bloodshed and disorder of the old order in Malaya constituted to the peace and security of the Straits Settlements..."⁹ But as Swettenham himself so aptly put it, intervention "would be highly beneficial to British interests and British trade, though these pleas had hitherto been dismissed as of no importance."¹⁰

During the early years of intervention Swettenham played a subordinate but nevertheless important role in structuring relationships between Perak and Great Britain. In the period 1874-76 he undertook a number of missions to Perak, five of which are contained in his Perak Journals (Cowan, ed., 1951). In the years that followed he also made a number of trips to various parts of the Peninsula including an overland trek to the East Coast in 1885.

Swettenham was, in fact, one of the most indefatigable travellers of his time. Though an extremely busy man he always seemed to be able to find time off from his many official chores to record his feelings about what he had seen, heard and learned on his many journeys. His writings, therefore, constitute a valuable reservoir of information on the land and life of Malaya during the latter part of the nineteenth century. His early writings specifically are important because they provide us with some of the first glimpses of the interior of the Peninsula and contribute to a small but growing storehouse of ideas about the nineteenth century Malayan scene.

Images of Nature

The natural environment is frequently imputed with content that can only be described as moral, esthetic, religious and psychological.

⁹ Cowan, C.D. ed. "Sir Frank Swettenham's Peak Journals, 1874-1878" Journal, Malayan Branch, Royal Asiatic Society, Vol. 24 (1951) p. 7.

¹⁰ Swettenham, F. A. *British Malaya: an account of the origin and progress of British influences in Malaya* (London, 1906) p. 174.

¹¹ O'Riordan, T. "Some Reflections on Environmental Attitudes and Environmental Behavior: Area, (1973) Vol. 5 p. 20.

Unfortunately, as Yi-Fu Tuan (1966) has pointed out, little work has been done on this difficult, often elusive area which deals with the values and the meanings people have placed on the land. The problem of reconstructing ideas is further compounded by the fact that there is "cognitive conflict both between individuals and groups and within the individual as different needs and situations stimulate attitudinal responses,"¹¹ In what follows I have identified a number of themes around which Swettenham's attitudes tend to cluster. Where it is possible I have drawn on the writings of a few of Swettenham's contemporaries in an effort to show that the themes I have identified may well have more general applicability.

(1) *The Jungle as Wilderness*

If "what we see, what we study, and the way we build and shape the landscape is selected and structured for each of us by custom, culture, desire and faith"¹² then it would seem reasonable to expect that Europeans would view nature in Malaya from a very particular perspective. It must be kept in mind that even before the opening of the nineteenth century many Western European countries, including Britain, had been radically transformed by the hand of man. Vast areas once heavily wooded had been cleared over many centuries and landscapes in many areas had taken on a totally man-made look (see, for example, Hoskins, 1970). Indeed it can be argued that the rural, ordered and cultivated landscape had become the ideal. Wilderness areas were viewed as anathema to man, a hindrance to progress, morally inferior to the cultivated man-created landscape, in short, the antithesis of civilization, (for comparison with the American experience, see, for example, Huth, 1957; Aiken, 1971). It should not surprise us, therefore, if we find similar views in Swettenham's early writings.

Like a number of his contemporaries, Swettenham found the jungle gloomy, boring, and weird, but at the same time beautiful and enchanting. These seemingly contradictory views existed side by side and seem to have depended on the location of the observer. In his second Perak Journal (10th-18th June, 1874) Swettenham records how he was held up for quite a while at Senggang on the Perak River. He

¹² Lowenthal, D. ed. *Environmental Perception and Behavior* University of Chicago, Department of Geography Research Paper No. 109 (Chicago, 1967) p. 1.

found the people there to be very kind and hospitable and "except for the inexpressible dullness and junglyness of the place one might almost exist without being miserable"¹⁸ When he was at Senggang he made a short visit to the hot springs nearby. However, he again found the jungle "a weird, gloomy looking place, filled the Malays say with ghosts. . ."¹⁴

In the following year (1875) Swettenham made a difficult journey down the Slim and Bernam rivers. He recounts that for ten miles below the junction of the Slim and Bernam he passed through an extensive area of reeds and ferns, the home of alligators, snakes and strange birds. According to our intrepid traveller he "never saw such a horrid ghostly place. . . The river looks as if it were visited by men perhaps not once in a century"¹⁵ Ten years later (1885) Swettenham made a journey across the Peninsula from west to east. We find, however, that his ideas about the heart of the jungle and his psychological reaction to it have not changed. He was still uneasy in the "impenetrable gloom of [the] virgin forest."¹⁶

Swettenham makes it quite clear that an uninhabited, uncultivated wilderness is not desirable, presumably from both an aesthetic and practical point of view. He shared this belief with a number of his contemporaries and predecessors. In 1819 Raffles wrote that the site of Singapore, which was a wilderness before and which had no inhabitants was now a bone of contention between Holland and Britain. In his journey across the Peninsula in 1885 Swettenham ascended the Bernam River on his way eastward. He found the upper reaches of the Bernam to be "most lovely," although the district was not populated and rather not cleaned. In the vicinity of the Slim River, Leech had earlier commented that the country he passed through was very pretty "if it were cleared, but at present there is no more to be seen at an elevation of 4,000 or 5,000 feet than there is in the plains, the jungle being so dense"¹⁷ And Daly, writing about the metalliferous formations of the Peninsula, thought that Malaya would be a "vast un-

¹⁸ Cowan, *op. cit.* p. 84

¹⁴ *Ibid.* pp. 84-85.

¹⁵ Swettenham "From Perak to Slim, and Down the Slim and Bernam" Journal, Straits Branch, Royal Asiatic Society, Vol. 5 (1880 a) p. 65.

¹⁶ Swettenham "Journal kept during a Journey across the Malay Peninsula", Journal, Straits Branch, Royal Asiatic Society, Vol. 15 (1885) p. 4.

¹⁷ Leech, H.W.C. "About Slim and Burnam" Journal, Straits Branch Royal Asiatic Society, (1879 b) Vol. 4 p. 43.

inhabited jungle, were it not that the interior yields rich gold and tin alluvial deposits on either side of the range of hills that form the back-bone of the country".¹⁸

(2) *The Jungle as Sensual Delight*

The jungle, however, was not always depressing and full of gloom; it could also be a source of great pleasure. Early travellers in Malay forests often found great delight in the ever-changing kaleidoscopic nature of the local scene. As I have already indicated, these seemingly contradictory views of nature may be related to the relative location of the observer. Those who travelled and lived *in* the jungle often found it a disturbing, even frightening, experience. All this changed when the jungle could be viewed from *afar*, from a vantage point, while floating on a river or standing in a clearing. Given an opportunity to observe and contemplate the richness of the natural world, the observer gained an opportunity to develop an aesthetic interest in the jungle.

Let us rejoin Swettenham on one of his early trips to Perak (1874). We find him just about to leave Senggang on the Perak River. He comments: "Beautiful as this place always is I never saw it look so lovely as it did this morning (June 22). Gunong Buboh... was for half its height clothed in thick clouds, which directly over the tops of the hills were the darkest purple while the edges had caught from the rising sun a deep soft saffron which was wonderfully lovely in striking contrast to the dark foliage of the jungle with which these hills are covered (Cowan, ed., 1951, pp. 85-86).

During his journey across the Peninsula in 1885 Swettenham constantly remarked on the beauties of nature. One or two extracts from his journal will suffice to make this quite clear. In the neighborhood of the upper reaches of the Lipis he noted that all "the trees that do flower seem to have come out in this dry weather, and we passed many covered all over with a splendid purple bloom, others bright scarlet and yellow, and the Memplas (*Michelia?*), the leaves of which are used as sand-paper in full flower, a delicate pale yellow blossom with the sweetest scent"¹⁹ The descent of rapids in the river he found both amusing and exciting. On one occasion he noted that the rapids and the approach

¹⁸ Daly, D.D. "The Metalliferous Formation of the Peninsula" *Journal, Straits Branch, Royal Asiatic Society*, (1878) Vol. 2 p. 194.

¹⁹ Swettenham, *op. cit.*, p. 13.

to them "form the most striking picture we have yet seen on this river, which presents a long succession of lovely ever-changing scenes ... Huge boulders are piled in picturesque confusion on either side of the channel... and the clouds of spray dashed up from the rapid against the deep shadow of jungle foliage make a picture not to be forgotten"²⁰

Many of Swettenham's contemporaries recorded similar landscape images in their journals, diaries and letters. Indeed it would be quite difficult to find a writer of the 1890's and 80's who did not find at least some pleasure in the constant variety of nature in Malaya. For the naturalist, of course, the Malay Peninsula was a continual source of interest and delight. I will close this section with a quotation from Hervey:

"The Jahor river is certainly a fine one, but in the Lenggü (Linggiu?), though narrower, the beauty of the scenery increases; some of the winding bits are wonderfully lovely, rattans everywhere adding to their charm and variety with their beautiful featherlike sprays; the monkey-ropes hanging gracefully here and there, their pale tint limning out with delicious contrast the cool dark green of the leafy walls around them."²¹

(3) *The Jungle as Cornucopia*

My reference to the naturalist's interest in the Malay Peninsula leads on directly to a more general consideration of the 'Jungle as Cornucopia'. Swettenham, and many other writers of his time, were fascinated with the overwhelming variety of flora and fauna which they saw on their travels. Of course their interests in the richness of the tropical environment were often based on utilitarian motives, but not always. The jungle was frequently viewed as a veritable Garden of Eden, of interest in and of itself.

To be sure, there was nothing really new about this. Much earlier in the century Raffles had shown a very deep interest in natural history. He did, in fact, keep a herbarium and was often in contact with the famous Sir Joseph Banks of the Royal Society. The period after 1875, however, was characterized by a great outpouring of

²⁰ *Ibid.* p. 13-14.

²¹ Henry, D.F.A. "A Trip to Gunong Blumirt" Journal, Straits Branch, Royal Asiatic Society, Vol. 3 (1879) p. 99.

interest not only in the flora and fauna of Malaya but also in the geology of the country, its mineral resources, soil fertility and climate. Everything came under scrutiny as the land was rapidly opened up to European eyes. The result was a general amazement at the richness of the tropical world. Consider the following extracts from the writings of the 1870's:

During a journey to Batu Caves, Daly noted that "wild elephants are plentiful, and Durians, Pelasan, Rambutan, Rambei, Mangostin and other large fruit trees grow plentifully in the rich soil surrounding this limestone hill, in the midst of the most luxurious jungle vegetation."²²

In his explorations of the tin country of the Kinta area Leech had this to say: "To the naturalist and botanist this district is full of interest; that magnificent butterfly — the ornithoptera Brookani formerly supposed to be peculiar to Borneo, is found plentifully in several places. It is almost needless for me to add that the presence of limestone is a pretty certain sign of good soil."²³

To Hornaday, a naturalist, Selangor was a wealthy storehouse of animal life of great interest. In the vicinity of Jeram he noticed "water birds, notably a few pelicans, two species of ibis, a small white egret, the stone plover, a booby, two terns, snipe, sandpiper, etc."²⁴ Further inland "Rhinoceros hornbills (*B. rhinoceros*) were frequently seen, and we obtained one good specimen. The Malays and Jakuns brought us many specimens of the beautiful little mouse deer (*tragulus*)..."²⁵

Throughout Swettenham's writings we also find a similar interest in the bounties of the natural environment. He was impressed, for example, by the ability of certain aboriginal groups to sustain a simple but adequate life in the depths of the jungle. The Sakeis, he said are "clever gardeners, and they grow sugar-cane, plantains, sweet potatoes, and other vegetables in abundance." They also grow although consume little rice. They are fond of tobacco but they chew rather than

²² Daly "Caves at Sungir Batu in Silangos" Journal, Straits Branch, Royal Asiatic Society Vol. 3 (1879) p. 119

²³ Leech, "About Kinta" Journals, Straits Branch, Royal Asiatic Society Vol. 4 (1879 a), p. 25.

²⁴ Hornaday, W.T. "Account of a Nationalist's Visit to the Territory of Selangor" Journal, Straits Branch, Royal Asiatic Society, Vol. 3 (1879), p. 125.

²⁵ *Ibid.* p. 129.

smoke it. It is quite obvious that the riches of the earth could be obtained with a minimum of exertion.

Everything caught Swettenham's attention and keen eye. He was just as interested in Malay pottery, limestone caves, and sugar mills as he was in the maiden-hair fern, peacock, plover, jungle fowl, snipe, elephant and assorted other animals, some of which he could not name. To Swettenham's practical mind the country also offered great opportunities for exploitation, development and economic gain. This brings me to my fourth and final theme.

(4) *The Jungle as Renumeration*

There is undoubtedly a great deal of truth in Albert Memmi's comment that "the colonialist does not plan his future in terms of the colony, for he is there only temporarily and invests only what will bear fruit in his time."²⁶ British attitudes towards the Peninsula, especially after 1875, were to a large extent influenced by the possibilities the country offered to trade and the exploitation of natural resources. As an administrator and civil servant Swettenham was eager to promote those interests.

On his way to Perak in April 1874 Swettenham spent some time on Pangkor Island. He noted in his journal that there "does not seem to be anything on the island in the way of cultivation except coconuts and they do well, bearing after 5 years. Pepper I believe would do well here, perhaps coffee also. I saw some bits of a very fine wood cut on the island — it resembles mahogany very closely, will take a splendid polish, and is hard and heavy; there is nothing like it in Penang. Ebony can also be got here."²⁷ During his numerous journeys in the Peninsula Swettenham invariably kept an eye on the possibilities the country offered to speculation, trade and development.

Other writers too were confident of Malaya's economic prospects. Leech, for example, felt that large sections of Perak offered excellent opportunities for the cultivation and transport of coffee, tea, and other tropical products.

In 1875 Swettenham could write that in spite of "Pahang's rich deposits of gold and tin, its large population (about 60,000) and its almost total freedom from taxation, it does not advance in prosperity

²⁶ Memmi, A. *The Colonizer and the Colonized* (Boston, 1970), p. 69.

²⁷ Cowan, *op. cit.*, p. 34.

or importance...²⁸ But he foresaw great prospects for this part of Malaya. Ten years later we are informed that "no intelligent person could see the country [Pahang] without regretting the circumstances which still kept it closed to legitimate enterprise..."²⁹ It would appear that Swettenham was somewhat chagrined at this lack of 'progress'. Undaunted by these circumstances, he suggested that a road be built between Johor Bharu and Pekan. "This would put Singapore and its resources in direct communication with the lower country of Pahang, besides tapping a long stretch of land, both in Johor and Pahang, useful for the cultivation of low country tropical products".³⁰ It is hardly necessary to expound on the implications of these ideas, especially as they relate to British economic gain. Swettenham was also quite sanguine concerning the economic future of Selangor where, due to "the richness of the soil, both for cultivation and in minerals, there is reason to hope that [it] will eventually become one of the wealthiest States in the Peninsula"³¹ Swettenham saw a great trading and mining future for Selangor. Nature was benevolent indeed in the Malay Peninsula.

Conclusions and Suggestions for Further Research

The natural environment of Malaysia is currently being disrupted at a hitherto unprecedented pace. Given this situation there is an overwhelming need for further research into the causes and effects of man's impact on the land. In the very near future a high priority should be given to the collection, tabulation and analysis of data relating to air and water pollution, rates of soil erosion and river sedimentation, and to problems arising from noise, congestion, and aesthetic blight — to mention only a few problem areas. The sad fact is that most of this basic data is not currently available.

In the study of ecological disruptions the natural and biological sciences will obviously have an important role to play. I would argue, however, that scholars from the social sciences and humanities might

²⁸ Swettenham "Some Account of the Independent Native States of the Malay Peninsula" Journal, Straits Branch, Royal Asiatic Society (1880 b), Vol. 6 p. 199.

²⁹ Swettenham "Journal kept during a Journey across the Malay Peninsula" Journal, Straits Branch, Royal Asiatic Society, Vol. 15, (1885), pp. 33-34.

³⁰ *Ibid.* p. 36.

³¹ Swettenham. "Some Account of the Independent Native States p. 191.

play a more important role than they have to date. In many problem areas, as one ecologist has pointed out, the "ecological information is available. The sociological and anthropological information is not".³² Ecological problems, where they exist, must surely be set with their historical and cultural perspective. An attempt must also be made to uncover people's attitudes towards and ideas about the natural world and how these are related to their overt behaviour.

In this article I have demonstrated that a number of environmental attitudes coexisted in the minds of Europeans who travelled and lived in Malaya during the 1870's and 80's. I have drawn primarily on the work of Swettenham because he travelled and wrote more than most of his colleagues and contemporaries, and also because he recorded his ideas about Malaya at a time when the interior of the country was rapidly being explored, mapped and described.

The four themes discussed earlier are not meant to be mutually exclusive or exhaustive. Since attitudes tend, on the one hand, to co-exist in a person's mind and, on the other hand, to change over time, the best scheme to adopt is probably one which allows for maximum flexibility. The themes identified in this article provide a means whereby disparate materials and ideas may be brought together in a coherent and meaningful way.

A number of research topics which merit further enquiry include:

(1) A much more fully developed history of environmental ideas associated with the Malay Peninsula. Hopefully the themes identified in this article will prove to be of value in such an enquiry. The time periods covered will, of course, depend on the interests of the writer and on the availability of primary and secondary source materials. For the researcher interested in the history of British attitudes towards nature in Malaya, 1786 (the acquisition of Penang) and 1874 offer two obvious starting points.

(2) Much needed, too, is further research on ideas associated with specific environmental attributes such as soil fertility, reactions and adaptations to tropical climatic conditions, and attitudes towards the natural resources of the country. One would like to know, for example, what types of ideas the Chinese and the British have held about the tin deposits of the Peninsula and to what extent these ideas have influenced subsequent decision making.

³² Dasmann, R.F. *Planet in Peril* (Harmondsworth, 1972) p. 115.

(3) Have the Malays, the Chinese, and the former small minority of British administrators and speculators traditionally viewed the tropical jungle as an alien presence to man? Was the jungle viewed as a moral and physical wasteland fit only for conquest and fructification? An answer to these questions might well provide a perspective on current problems associated with forest exploitation and the conservation of natural resources, to mention only two areas of concern.

(4) The cultural and ethnological matrix of Malaysia would appear to offer an ideal setting for the comparative study of both past and present environmental ideas. Unfortunately this very difficult, elusive and often refractory field of enquiry is beyond the scope and ability of most geographers. For the small minority of scholars who possess a sound training in cultural history and the history of ideas (amongst other things) and who also have an aptitude for languages, the comparative study of environmental attitudes will probably prove to be greatly rewarding.

It is my contention that the geographer can make significant contributions to the history of environmental ideas associated with the Malay Peninsula. Hopefully a great deal more research will be conducted in this field of enquiry in the near future.

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