

FOREST CONSERVATION IN BRITISH MALAYA*

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INTRODUCTION

The British first gained foothold in the Malay Peninsula when Francis Light, a country trader of the East India Company, took formal possession of the island of Penang on August 11, 1786 in the name of King George III of England. Sultan Abdullah of Kedah offered to lease Penang to the EIC to gain protection against possible attacks from Siam or Burma.¹ Singapore became a British colony after the British took possession of the island in 1819 to establish a post by the southern approach of the Malacca Strait that would give them access to the profitable maritime trade route to China.² Malacca was subsequently acquired in 1824 after a treaty signed by the British and Dutch delineated their respective territories through the Malacca Straits.³ These three states, along with Province Wellesley (in Kedah) and the Dindings (along the coast of Perak) composed the Straits Settlements.

The Malay States of Perak, Selangor, Negri Sembilan, and Pahang became Protected Malay States from 1874 – the year in which British Residents were first introduced – to 1895 when they became part of the Federated Malay States. Emily Sadka asserts that “[r]easons of imperial policy and strategy played their part in the assertion of British control over these states; but it was the local administrators who moved strongly for intervention, and their motives were economic”.⁴ The Unfederated Malay States of Kedah, Perlis, Kelantan, Terengganu and Johore came under British rule only during the early years of the 20th century after the Treaty of 1909 defined the boundary between Siam and British Malaya.⁵

The earliest available records concerning forestry in the peninsula go back to the late nineteenth century although there had been references to the Chinese shipping forest produce from Malaya as far back as 800 A. D.⁶ Malaya’s first Forest Department was formed in 1883 under the Superintendent of the Singapore Botanic Gardens. In the Federated Malay States; the control of the forest during the early years as one of the responsibilities of the Land Office. It was only in 1895 when a full-time forest officer was appointed in Perak, Selangor, and Negri Sembilan. The Malayan Forest Department – embracing both the Straits Settlements and the Federated Malay States – was however formed only in 1901, after which forest reservation or conservation proceeded on a large scale.⁷

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This paper will attempt to look into British forest conservation policies during their occupation of Malaya from the last five years of the nineteenth century until 1939, before the Pacific War broke out. These policies will be dealt with under the following headings; *Reservation, Conservation and Protection; Legislation; and Research, Education and Publication*. The final section will provide the concluding remarks for this study. The reader must be advised that the data used for this paper was taken solely from the Annual Reports, the State Administration Reports, and the Forest Department Reports which were submitted to the British Colonial Office from 1895 to 1939.

RESERVATION, CONSERVATION, AND PROTECTION

Even before the British established a Forest Department in the Malay Peninsula, the Residents were already aware of the rapidly deteriorating condition of the valuable timber in the Colony. As early as 1880, Bloomfield Douglas, British Resident of Selangor, had already expressed alarm "that the supply of gutta in this State is for the time exhausted, in consequence of the wholesale destruction of the trees by the natives two or three years ago".⁸ Residents of the other States had likewise expressed similar concerns. Hugh Low, British Resident of Perak, felt that "[s]ufficient care has never been yet taken of the revenue derivable from the timber forests;"⁹ while Martin Lister, Superintendent of Negri Sembilan, had taken steps to discourage "the devastation of virgin forest for dry paddy planting".¹⁰ What is heartening to note is that officials in Great Britain share the same care and concern for their colony's forest. In a letter of the Marquess of Ripon to Acting Governor Maxwell in 1893, he states,¹¹

"There are several references in the reports to the damage done to timber by miners, charcoal burners, gutta-percha collectors, hill padi planters and others. In the Negri Sembilan, I am glad to notice regulations have been issued to check the waste.... I hope all reasonable steps will be taken to prevent indiscriminate destruction of timber and to protect adequate reserves. I am not aware whether any forest officers have been appointed in these States, or whether occasion for them has as yet arisen; but it will hereafter no doubt be advisable to have skilled supervision, and to deal with the forest reserves in all the States upon a definite and uniform system."

The British Residents in Malaya took this message as the cue to move towards more systematic forest conservation. Frank Swettenham, then British Resident in Perak by 194, apparently speaking for and in behalf of the other Residents, expressed it succinctly in this Report of 1893.¹²

"The warning to protect forests reflects the views often expressed locally. We have no forest officers, and though for years there has been an expressed intention to mark out and protect reserves, very little has been done in that respect. The extraordinary rapidity with which the forest disappears in popular districts is, however, a warning that it is time to act if the splendid timber we possess is to be preserved. The question is a large one, surrounded with difficulties, and to do any really effective conservation would cost a large sum.

"The first requisite is professional advice, and we probably could not do better than seek the help of the Indian government, which is always so ready to assist us. To begin with, it will be sufficient to mark out the best reserves, to road them, and only allow selected trees to be felled and sold. A forest department will group up, but at first it should not be costly, and whatever the expense, the experience of other countries less fortunate than this one is that there are few things on which money can be so well spent as the conservation of State forest."

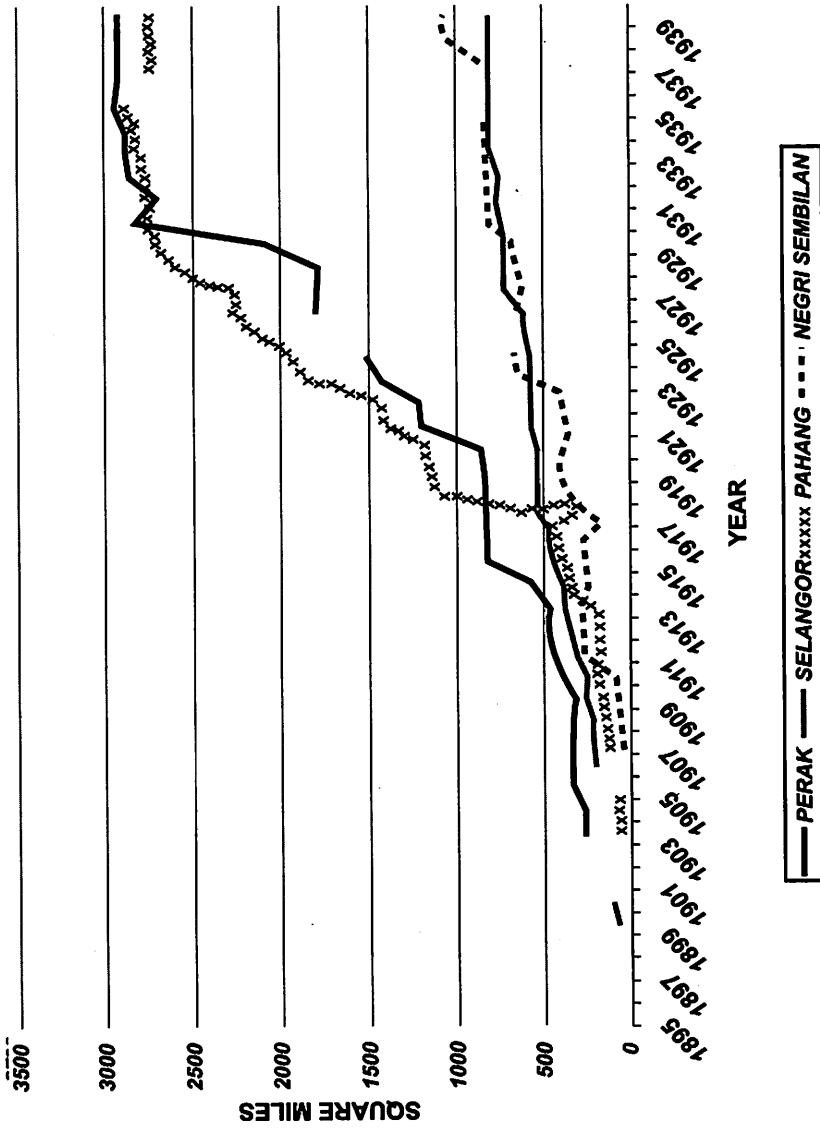
By 1895, a Forest Officer was appointed in Perak and "proceeded to Indian in order to study under the Indian Forest Department".¹³ By 1897, a Forest Department was established in the same State, under the supervision of Mr. A.B. Stephens, an officer who had previously held the appointment of Superintendent of Government Plantations in Perak. Immediately after his appointment, he organized his staff, framed regulations, and demarcated forest reserves.¹⁴

Figure 1. provides a summary of the growth of the area of forest reserves in the Federated Malay States, from 1895 to 1939. Except for some years where forest area reserves have not been mentioned in the Annual Reports (thus producing gaps in the data), a clear trend of increasing yearly forest reservation acreage can be seen from the available data in all four states of the FMS. The more pronounced forest reservations in the States of Perak and Pahang, is presumably due to the relatively bigger land area of these two States as compared to Selangor and Negri Sembilan.

As for the Straits Settlements, no separate figures were available for Penang, Malacca, and Singapore, but were reported on by the Colonial Administration as one whole unit. But like the Federated Malay States, considerable effort was taken by the British officials to set aside forest reserves despite incomparably smaller area of the States belonging to this grouping. Forest Reserve Areas in the Straits Settlements were first mentioned in the Annual Reports of 1915.

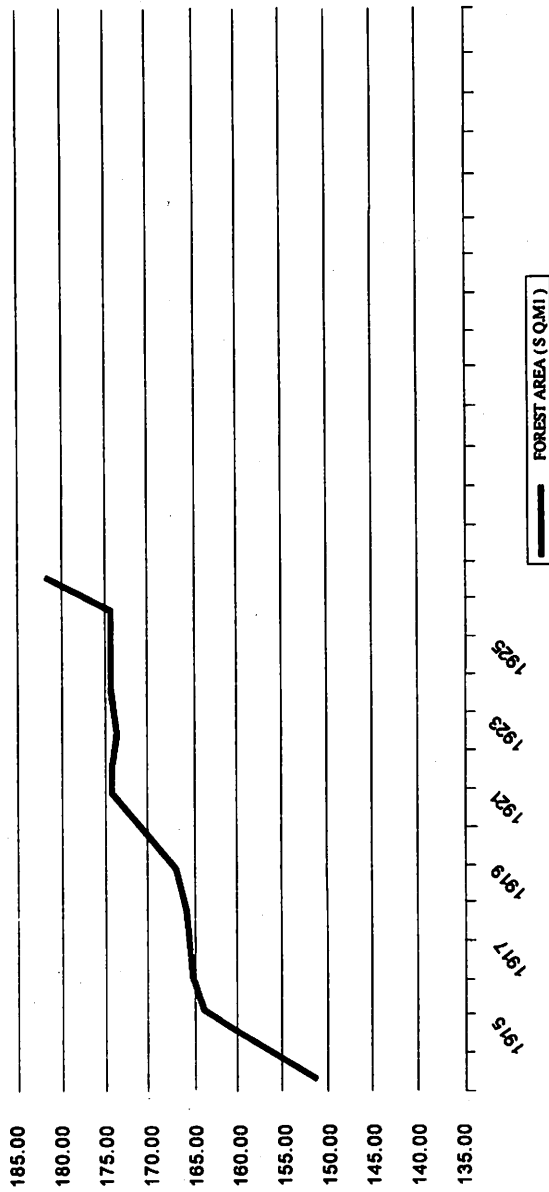
The Unfederated Malay States' Administration Reports, on the other hand, had not been as thorough and as consistent in reporting forest reserve acreage in the

Figure 1 : Forest Reserve Area, Federated Malay States, 1899-1939



Source: State Administration Reports, 1899-1939

Figure 2: Forest Reserve Area, Straits Settlements, 1915-1939.



Source: Straits Settlements Report, 1915-1939.

member-states. Kedah first reported a forest reservation of 125 square miles in 1916. By 1922, this figure had risen to 390 square miles, and steadily grew to about 1,021 square miles by 1928. But this figure had stagnated, and ten years later, in 1939, the forest reserve area in Kedah remained at 1,019 square miles. Perlis, the smallest Malay State, had reported its forest reservation only twice: 40 square miles in 1930, and 50 square miles in 1937.

Kelantan's land during this period was for most part under concession, particularly the Duff Development Company. Ltd., who collected forest produce and revenue for most of the colonial years. Forest reserve areas for this State was first mentioned in the Administration Report of 1928 at 142 square miles. A.S. Haynes, British Adviser for Kelantan explains in this Report for 1930 that "[I]t was difficult to give any reliable account of the valuable timbers and forest resources of the State owing to the absence of a properly constituted Forest Department with trained officers", but that, "[d]uring the year a promising young Kelantan officer was sent to the Federated Malay States for scientific training in the Forest Department there".¹⁵ A separate Forest Department was finally constituted in Kelantan in 1933, with the secondment from the Federated Malay States, Assistant Conservator of Forest Mr. A. B. Walton, as State Forest Officer.¹⁶ By 1938, the area of reserved forests, however, was only 79.5 square miles or 1.4% of the area of the State. A.C. Baker, British Adviser to the Government of Kelantan, explains that although there are vast forest reserves in the State, "the Forest Department has only been properly organized and staffed for the last six years with the result that forest reserves in the densely populated coastal area in inadequate, as nearly all the available land was cleared and occupied before the Forest Department was organized".¹⁷

Terengganu has only one reported figure for its forest reserve area: 608 square miles in 1937. The States's British Advisers have set preventive measures in place, nonetheless, pending formal organization of the Forest Department in the State. In the 1932, Administration Report, C.C. Bronw reports that "exploitation on any large scale has not been encouraged as there is at present no Forest Department in the State and consequently no safeguard against wasteful working methods".¹⁸ It was only in 1935 that, "arrangement were made and for sanction accorded to the proposal for the secondment of an officer of the Malayan Forest Service to organize and administer a department from the beginning of 1936".¹⁹ For the succeeding years, the Trengganu Forest Department was kept busy organizing its staff,²⁰ determining the forest resources of areas proposed for reservation and adding to the general knowledge of the distribution of the forest flora,²¹ and making progress in the constitution of the reserves preliminarily notified.²² By 1937, the forest reservation in the State was reported at 608 square miles or 12.5% of the area of the State.²³ Johore's forest conservation concern was first sighted in the 1913 Report where it states that, "[a]t many places on the line there is reported to be valuable timber notably in the Segamat district; and the time appears now to have arrived when it would be of advantage; to the future resources of the State to detail

a number of Forest Officers for duty at various points on the line, where there is good timber within easy access, for the two purposes of ensuring that immature timber is not cut and of exploring the surrounding forests with a view to the acquisition of information on the distribution of the various species of the more valuable timbers. It would probably be also of similar advantage if the cutting of mangrove and other similar woods were so regulated as to prevent indiscriminate and wasteful cutting and so ensure a steady and profitable supply."²⁴

Two years later, D.G. Campbell, then General Adviser to the Government of Johore expressed his fear that "the State is still losing large sums annually owing to the want of an adequate and competent Forest Department... In the meantime, efforts are being made to reserve forest belts in various localities."²⁵ In 1918, an Interim Forest Department was set in place, but without the service of properly trained officer and had remained a branch of the Land Officer.²⁶ A Conservator of Forest was appointed in September 1920, and had reported that the forests of Johore "have suffered from over exploitation and in the past from the lavish destruction of timber for gambier planting."²⁷ By 1928, the State had already a reserved forest area of 173 square miles.²⁸ Two years later, in 1930, 763 square miles had been set aside for reservations.²⁹ Within 10 years from the first reported forest reservation, Johore's reserved forest area reached 1,129.40 square miles or almost 16% of the area of the State.³⁰

LEGISLATION

Probably one of the first legislation made to protect the forest of British Malaya was the 1893 Land Code which "gives powers for the proclamation of forest reserves".³¹ In the same report, a regulation was mentioned to be under consideration for prohibiting the burning of hardwood timber for charcoal to be used in smelting furnaces. By 1901, a Forest Enactment was in the course of preparation,³² and promulgated throughout the three Western States (of Perak, Selangor, and Negri Sembilan) by 1903.³³ The Forest Enactment had been under consideration and discussion for several years until it finally became law in 1907.³⁴ For years, this piece of legislation remained unchanged, with just minor amendments being introduced from the time. The Forest Department Report of 1922 however reported major important amendments in the Forest Rules. These include (i) the exercise of the rights given to Malays to take timber, atap, and other produce from the State land for the certain purposes was now permitted outside the mukims (districts) in which they live only with the permission of the Conservator; (ii) increased royalty of timber; (iii) expanding the powers of the Conservator in reserved forests subject to the control of the Resident in matters affecting, or likely to effect the general administration of the State; and (iv) the transport of gutta-percha by road, railway, or river had been prohibited, unless it was covered and accompanied by a certificate of origin, the object being to prevent the illicit dealings in gutta-percha and to facilitate their detection.³⁵ No major amendments were introduced after 1922. It

was only in the Annual Report of 1933, however, when the policy of the Government on its colony's forests was finally expounded on. These were "to set aside an adequate proportion of the forest area for permanent timber production, and in the forest reserves, as they are called, cutting is strictly regulated in accordance with conservative principles. The working of the State land forest, which are destined ultimately for alienation is subject to drastic restrictions, but the giving out of the very large areas forest growth is to be replaced immediately by some other crop, the degradation of the soil as well, is not regarded favorably."³⁶

RESEARCH, EDUCATION AND PUBLICATION

British forest conservation policies didn't just end with marking off forest reserve areas, framing laws to enforce rules and regulations, and growing seedlings for the replanting of felled trees. The British officials had likewise been concerned with and worked towards the scientific study of trees, forest produce and all flora and fauna found in the forest reservations. They published results of experiments and fieldwork results in forest journals, came out with manuals concerning timber and other forest resources, and prepare textbooks written in the vernacular for the use of the Malay students being trained in the Forest School. Finally, the British established a forest research facility, a library, a museum and a forest school to further disseminate knowledge of forest matters to the community at large.

As early as 1891, "a scientific expedition consisting of the Director of Gardens and Forest, Straits Settlement; the Curator of the Raffles Museum; and Lieutenant Kelsall, Resident Assistant, attempted to reach Gunong Tahan... during the months of June, July, and August, but, owing to transport and other difficulties, did not succeed in attaining their object, although... many interesting botanical and other specimens were collected during their journey".³⁷ In 1900, after H.C.Hill, Inspector-General of Forests in British India "made an extended tour in the States and had furnished an invaluable and exhaustive report suggesting the lines on which [the] vast forest resources should be worked on in the future",³⁸ the services of a trained forest officer, Mr. A.M. Burn-Murdoch from Burma, were obtained in late 1901.³⁹ Raj Kumar remarked that "[t]he setting up of the Department, although without professional foresters, represented an important step to building up an administrative structure for managing the forests, and at the same time it formalized the conservation aspects of forestry".⁴⁰

Long before the establishments of the Timber Laboratory in 1929, British botanical enthusiasts carried on experiments directed towards increasing the number of timbers used in Malaya. As early as 1884, there had already been published results on Malayan timbers after experiments were made on the strength and stiffness of the better known woods used in the Straits Settlements. A summary of this early work can be found in Ridley's book. **The Timbers of the Malay Peninsula** (1901).⁴¹ Among the first scientific done for forest resources was the monitoring of the rate of growth of hardwood trees⁴² and taking of the girth measurement of trees

before being approved for felling.⁴³ Burn-Murdoch himself did considerable research on timber and the results of his work, **Trees and Timbers of the Malay Peninsula**, were published in two parts in April 1911 and December 1912, respectively.⁴⁴

Upon Burn-Murdoch's death in 1914, Cubitt took over as Conservator of Forests in Malaya. In this first Annual Report in 1915, he immediately expressed the need for expanded research; and in 1917, proceeded to initiate silvicultural and botanical research, aside from setting aside "wood specimens... for future forest museum and for the information of the public, each specimen being supported by botanical specimens from the same tree to remove all doubt as to authenticity".⁴⁵ In 1917, the Chief Secretary of the Federated Malay States, E.L. Brockman, reported that, "the Government has been fortunate in being able to secure the services of Dr. F.W. Foxworthy, an American who had led forest research in the Philippines, as Forest Research Officer."⁴⁶ Foxworthy's appointment was even described by Cubitt in his report as "the most important step taken by the Government since the founding of the Department".⁴⁷ And indeed, two years after Dr. Foxworthy had assumed the post of Forest Research Officer, "valuable progress was made in forest research, especially in the collection of information regarding the commercial timbers of the country."⁴⁸ Since then, every Annual Report thereafter contained an update of research being done on the colony's forests. Likewise, with each research undertaken, publication of the results would subsequently be published. In 1920, Dr. Foxworthy was able to publish the results of his study of the local timbers, entitled, *Commercial Woods of the Malay Peninsula*. In this work, it has been established that the colony's forests "contain products of great commercial possibility, for instance, rattans, fibres, damar, wood-oil, vegetable oils, wood-distillation products, tannin, gutta-percha, paper-making material".⁴⁹

By 1921, research had become a full-blown activity for members of the Forest Department as more studies had been lined-up for completion, and more scientists were recruited to help with the work. Dr. Foxworthy was joined in the Department by Captain H.W. Woolley who had spent months of study in various research laboratories and wood-working establishments in England, Canada, the US, the Philippines, and British North Borneo prior to his appointment in Malaya.⁵⁰ In the same year, two important publications on Malayan forests were issued. These were *The Commercial Woods of the Malay Peninsula*, issued in November 1921 as the first of the **Malayan Forest Records** in the "Malayan Science Bulletin", and *The Minor Forest Products of the Malay Peninsula* as Issue No. 2 of the **Malayan Forest Records**.⁵¹

The highlight of the year 1922 as far as the Forest Department was concerned was the Malaya-Borneo Exhibition. The Forest Administration Report for that year describes the event glowingly.⁵²

"From a forest economic point of view the outstanding event of the year was undoubtedly the Malaya-Borneo Exhibi-

tion in Singapore, at which a very representative display of the forest products of British Malaya was assembled, and an effort made to enlighten the public as to the objects and methods of the Forest Department. Forest officers largely increased their knowledge of the forest products of the country; numerous valuable exhibits were acquired for the forest museum at Kuala Lumpur; and increased knowledge is showing the way to increased revenue. In short, the forest exhibit has already paid its way."

In 1924, British Malaya's Forest Department was already able to send specimens to the British Empire Exhibition, the importance of which was measured "by what was learnt of trade conditions and trade requirements".⁵³ By 1925, the Forest Department had been allotted "600 acres of land at Kepong [Selangor]... space not only for experimental plantations but also for the erection of a properly-equipped research institute and school".⁵⁴ In 1927, a vernacular forest school for 12 students had been established; and the first course begun in September under the direction of an Assistant Conservator,⁵⁵ no doubt to begin the training of the locals for forest work. In the meantime, Dr. Foxworthy's *Commercial Timber Trees of the Malay Peninsula* was issued as **Malayan Forest Records No. 3**, while Messrs. Blair and Byron summarized the results of their own and other chemists' investigations in **Malayan Forest Records No. 4**, as Notes on Damar Penak.⁵⁶

The 1928 Report of the Forest Research Officer of the Federated Malay States contained an assessment of the course of instruction at the Forest School that started in September 1927 and ended on 12th June of that year.⁵⁷

"The subjects treated during the year were surveying, forest engineering, forest mensuration, forest law, and silviculture.

"The survey course included chain, chain and compass, and plane table surveying, and also map making and the calculation of areas from the map.

"Forest engineering included instruction in the use of the Abney level on laying out paths and compartment boundaries, and the construction of simple bridges.

"Forest mensuration dealt with the measurement of standing and felled timber and calculation of volume; and forest law, of course, included the Forest Enactment and Rules and such parts of other Enactments as have any bearing on them.

"Of all the subjects undertaken, silviculture proved the most difficult, since this is still in a rather theoretical stage in this country. An effort was made, however, to import to the school the elementary principles of the science and to demonstrate, by actual work in forest reserves in various parts of the country, its local application under varying conditions. Silviculture operations were carried out by the students in forest reserves in Kinta, Selangor, and Negri Sembilan, and a visit was also made to the Matang Mangroves."

In the same year, two more publications were issued as **Malayan Forest Record Nos. 5 and 6**, respectively: *Malayan Plant Names and Malayan Mangrove Swamps* both authored by J.G. Watson. In addition to abovementioned titles, J.G. Watson and C.D.V. Georgi prepared an illustrated article entitled *Jelutong, Its Tapping, Coagulation and Refining* for translation to Chinese; and a special paper on *Minor Forest Products* was prepared by Messrs. Cubitt and Watson for the Empire Forestry Conference of that year.⁵⁸ In 1929, **Malayan Forest Record No.6**, *Mangrove Swamps of the Malay Peninsula* by J.G. Watson, and the **Malayan Forest Record No.7**, *Mangrove Bark as a Tanning Material* by Dr. T.A. Buckley, were issued. But the most important event of this year, however, was the occupation of the new Forest Institute in September. The permanent buildings in this complex housed a museum, a laboratory, workrooms, and offices. In addition there were several temporary or semi-buildings which housed the quarters for the senior officers, the forest school, the student's and clerks' quarters, a store, a surau (prayer room), and houses for laborers.⁵⁹

The Forest Museum was given considerable discussion in the Annual Report of the Forest Research Officer for the Year 1930. While far from being complete, the museum already contained important specimens of the forest resources in Malaya. Timber specimens occupied the ground floor, the gallery is devoted chiefly for minor produce, the large room adjoining the library was used for the display of herbarium specimens and photographs of commercial trees, and start was made with a collection of seedlings and typical leaves from the nursery and plantations. F.W. Foxworthy and H.W. Woolley published **Malayan Forest Record No.8** that year—a study on *Durability of Malayan Timbers*.⁶⁰ In 1931, a departmental code of instructions entitled the *Malayan Forest Manual*, embodying standing orders, rulings and precedents, was published during the year, and a quarterly technical periodical, the *Malayan Forester*, was started.⁶¹

By 1932, the Timber Research Laboratory has started going into Practical Applications by carrying on experiments in the impregnation of sleepers, electric standard poles and pit props by the "open tank" method.⁶² **Malayan Forest record No.10 and 11**, were issued this year – *Dipterocarpaceae of the Malay Peninsula* by Dr. F. W. Foxworthy, and *Damars of the Malay Peninsula* by Dr. T. A. Brinkley. Aside from this regular series, the first vernacular textbook on surveying

was prepared by Mr. D. B. Arnot, Assistant Conservator and Instructor, Forest School. Also, Mr. A. V. Thomas, Assistant Engineer, prepared a summary of the timber testing results for distribution among local engineers.⁶³ In 1933, the Forest Department report of additional training and practical work being given to the students. These include a forest reconnaissance was undertaken in the mountainous jungles in the State of Perak, the purpose of which was to acquaint the students with commercial tree forms not normally encountered in the lowland forests; a constitution of three volume sample plots in meranti forest; and, drill instructions given by non-commissioned officers of the Federated Malay States Police. In the meantime, more textbooks in the Malay Language were coming out for use of the students, among them, Mr. D. B. Arnot's *Ilmu Sukat-sukatan Tanah* (Methods of Land Surveying) and *Kitab Ilmu Kayu-kayuan* which timbers and their identification.⁶⁴

By 1938, the Forest Department had a staff of 42, of whom 10 area attached to Federal posts at Headquarters or Research (including 3 specialist officers), 16 are in the Federated Malay States, 2 in the Straits Settlements and 6 in the Unfederated Malay States.⁶⁵ The Research, Education and Forest Economy Section of the Forest Department by this time had already encompassed the following areas: Botany, Wood Technology, Timber Testing, Wood Preservation, Durability Tests, Forest Economy, Forest Chemistry, Entomology, Silvicultural Research, Meteorology, Publications, and Education.

CONCLUDING REMARKS

The forest of British Malaya fall into two categories: *Reserved Forests and State Land Forests*. *Reserved Forests* from the permanent forest estate, one-third of which have a purely protective function ("Protective Forest Reserve"), the remaining two-thirds being dedicated to the growing of a continuous succession of timber crops ("Productive Forest Reserves"). On the other hand, *State Land Forest* are destined for eventual destruction prior to the conversion of the land to agriculture and other uses; exploitation being virtually uncontrolled, useful timber unnecessarily wasted.⁶⁶

British forest conservation policy for Malaya from the last two decades of the nineteenth century up till before the Great Pacific War of the 1940s could be viewed as through and satisfactory both for colonizer and colonized. During the first few years of the British Occupation of the Malay Peninsula, destruction of valuable timber in the forests by the local people went unabated. Andaya narrates how the rise of the importance of gutta-percha in the 1840s attracted the services of the *orang asli* (aborigines) collectors and, coupled with the "increased demand of the Malay middlemen, placed in jeopardy the delicate balance which for hundreds of years had allowed harvesting to proceed without endangering the ecology of the jungle."⁶⁷ By the 1880s, some British Residents had obviously noticed that forest resources were rapidly dwindling and took initial steps at conservation. Perhaps it is important to note at this point that the Residents themselves were "environmental-

ists". Pat Barr mentions how Frank Swettenham and Hugh Low, "disliked the short-term and essentially destructive nature of the tin industry".⁶⁸ Moreover he characterized Hugh Low as follows:⁶⁹

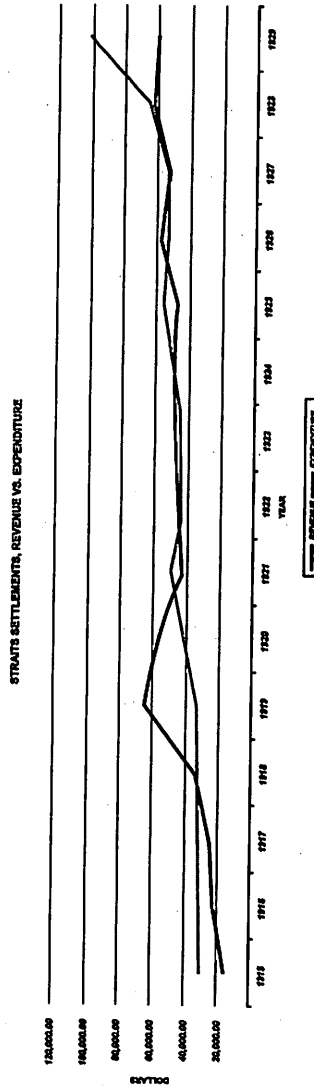
"His approach to the use of natural resources was equally provident, and Perak was the first State to issue regulations governing the conservation of water supplies, jungle wood, and wildlife. A Circular of 1888 states that, from 4th July onward, no mangrove trees would be cut down of 'a smaller diameter than 3 inches inside the bark at 3 feet from the ground'. It is rather hard to imagine charcoal burners and woodcutters armed with rulers making the requisite measurements – but Low warned that heavy fines would be imposed on any transgressors of the new rule. Similar fines would be imposed on those who unlawfully set traps in the rivers for the turtles during the off-season and it was one of the many duties of the Penghulus [Chieftain] to remind the fishermen of this."

After duly reflecting their views on the degradation of the forests in their Annual Reports to the Colonial Office in London, it was just a matter of time before things were set in place for the eventual establishment of the Forest Department at the start of the 20th century. With training and recruitment of the Forest Officers initial coming from British India, the Department started off as shaky but from there, the Forest Department never looked back. Indeed, once it found its footing, this Department made leaps and bounds in growth and development. This growth is measured in very impressive achievements, as clearly shown in the documents pertaining to the Forest Administration in British Malaya. These achievements include the gazetting of forest reserve areas throughout the whole Peninsula, regardless of size and quantity of forest resources; providing ample legislation to support and enforce policies, rules, and regulations; and building and investing on silviculture, research, publications and the education of the local people.

Secondly, one may ask if the revenue they derive for controlling forest exploitation motivated the British colonizers. To answer this, I looked into and plotted Forest Revenue against Forest Expenditure during the years the Forest Department was in place in British Malaya. Due to lack of data brought about by either incomplete reporting (as in the case of Expenditure in the Federated Malay States) or total absence of mention, especially in the Unfederated Malay Administration Reports, a conclusive statement for this case is difficult to make. Nonetheless, the Revenue data for the Straits Settlements was complete and may be initially used to build assumptions on profit as a motivating factor in conserving forests resources of British Malaya.

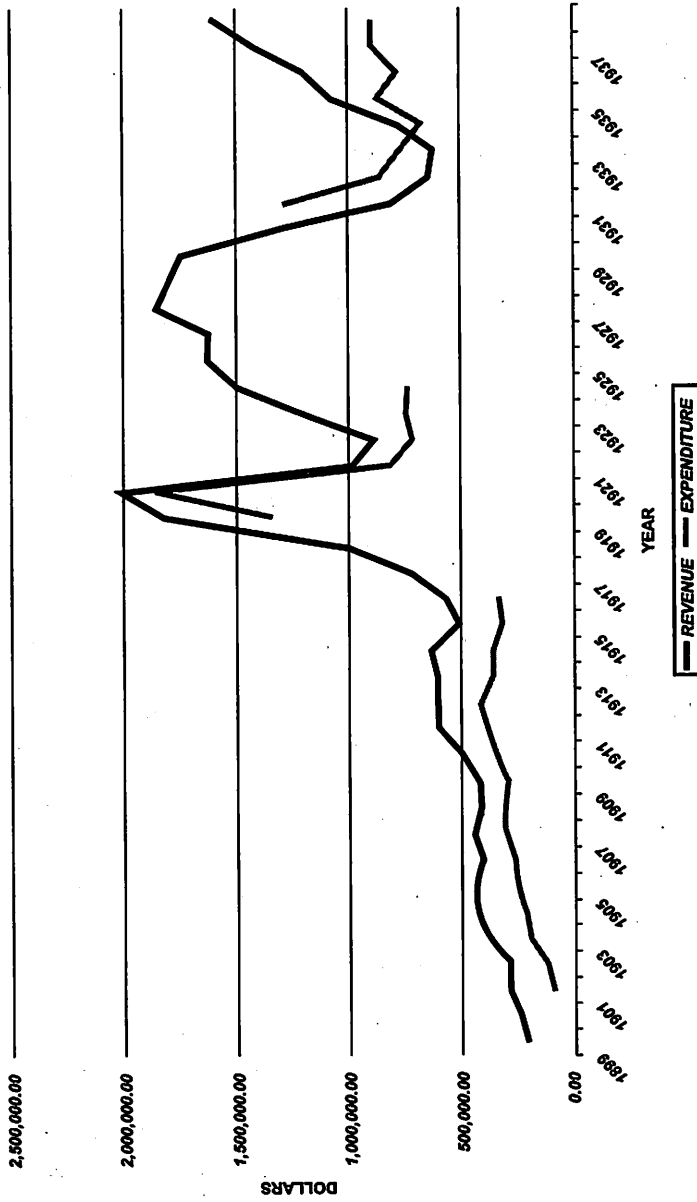
From the data above, while indeed the Colonial Government profited a lot from the boom years after the First World War with a huge demand for timber products for massive housing and Railway construction, and fuel for the smelting of

Figure 3: Straits Settlements, Revenue vs. Expenditure



Source: Straits Settlements Reports, 1915-1939

Figure 4: Federated Malay States, Revenue vs. Expenditure



Source: State Administration Reports, 1899-1939

tin-ores, this was short-lived. Revenue versus Expenditure data for the subsequent years was, at best, canceling each other out. With the tapering off of demand for wood in the subsequent years – brought about by availability of alternative fuel sources and completion of public infrastructure works – Expenditure eventually outpaced Revenue towards the last years of the 1920s for the Straits Settlements.

The Federated Malay States data, while incomplete; still showed some kind of trend, albeit inconclusive for most part.

Like what the Straits Settlements data show, the Federated Malay States Revenue figures showed a dramatic increase during the boom years after the war. But note that expenditure was at its peak too during this same period. A second boom was experienced towards the end of the 1920s but immediately fell to pre-1920 levels, this time with Expenditure clearly exceeding that of Revenue. Towards the years before the Great Pacific War, however, Revenue picked up a third time with Expenditure now tapering off to manageable levels.

From the available figures, it would be safe to assume that Forest Conservation, per se, was not the lucrative cash cow, as it might have been popularly perceived. There is no doubt that forest exploitation did bring in revenue for the British colonial government. But at the same time, they also invested and spent heavily for surveying of forest lands, demarcating of forest areas, building infrastructure to transport forest products to towns and mining areas, funding expenditure for scientific research, and maintaining forest resources on sustainable levels.

And finally, the locals were not at all displaced nor inconvenienced during the implementation of Forest Policies by the British colonizers. Even before the Forest Department was established, the *orang asli* already served as forest produce collectors and, according to Negri Sembilan Superintendent Martin Lister, “invaluable guides” during his various expeditions in the jungle.⁷⁰ Miners, most of whom were Chinese, were provided wood free for mining purposes⁷¹, as “the Malays had been allowed to continue to take timber for their dwellings and for all local purposes, without having to take our passes”.⁷² And as early as 1896, locals had already served in the Forest Department of the Federated Malay States as tappers and forest guards, eventually rising through the ranks in the course of the years. A Forest Ranger named Long bin Ujang had been cited in the Forest Department Report of 1926, during his retirement “after thirty years of faithful service”.⁷³ Moreover, the British encouraged Malay Settlement in forest reserves to initially cultivate the land for food-crops, and when cultivation had been satisfactorily established, the land was excised from the reserves and titles issued to the occupants.⁷⁴

More than anything else however, it was the establishment of the Forest School in Kepong, Selangor in 1927 which had brought the most benefit to the Malays. The locals were given training and courses on forestry matters by leading practitioners, experts, and scientists who had already spent a considerable amount of their professional life in the field. Years later, these trained locals were able to replace the British in managing Malaya’s forest resources. Literature on various studies and experiments on forests and forest products were published one after the

other as soon as Dr. F. W. Foxworthy took control as forest Research Officer in 1917. Credit likewise goes to Mr. D. B. Arnot for his valuable textbooks, which were written in the Malay language – *Ilmu Sukat-sukatan Tanah (Methods of land Surveying)* and *Kitab Ilmu Kayu-kayuan* and published in 1933, for paving the way for the locals' eventual care and control of their own forest resources. By 1939, the fruits of almost half a century of colonial forest conservation policies in British Malaya could well now be presumed to be in the hands of its rightful beneficiaries.

ENDNOTES

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- 4 Emily Sadka (1968). *The Protected Malay States (1874-1895)*, p. xiv.
- 5 Andaya, *opcit.* P. 191-200.
- 6 Raj Kumar (1986). *The Forest Resources of Malaysia: Their Economics and Development*, p. 65.
- 7 J. Wyatt-Smith, *The Malayan Forest Department and Conservation* in J. Wyatt-Smith and P. R. Wycherley (eds.) (1961). *Nature Conservation in Western Malaysia*, 1961, p. 37.
- 8 Enclose 2 in No. 5, *Financial Report on the State of Selangor for the Year 1881. Straits Settlements. Correspondence Respecting the Protected Malay States*, p. 31.
- 9 *General. Straits Settlements. Further Correspondence Respecting the Protected Malay States*, p. 31.
- 10 *Land. Agriculture . Straits Settlements. Further Correspondence Respecting the Protected Malay States*, p. 131-132.
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- 14 *Forests. Federated Malay States. Perak Administration Report for the Year 1897*, p. 13.
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- 17 *Forests. Annual Report on the Social and Economic Progress of the People of Kelantan for the Year 1938*, p. 34-35.
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- 20 *Forests. Annual Report on the Social and Economic Progress of the People of Trengganu for 1936*, p. 24-26.
- 21 *Forests. Annual Report on the Social and Economic Progress of the People of Trengganu for 1937*, p. 27-30.
- 22 *Forests. Annual Report on the Social and Economic Progress of the People of Trengganu for 1938*, p. 28-30.
- 23 *Trengganu, 1937, opcit*, p. 28.
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- 27 *Forests. Annual Report on the State of Johore for the Year 1920*, p. 9.
- 28 *Forests. Annual Report on the State of Johore for the Year 1928*, p. 20-21.
- 29 *Forests. State of Johore. Annual Report for the Year 1930*, p. 20-21.
- 30 *Forest Produce. State of Johore. Annual Report for the Year 1939*, p. 16-17.
- 31 *Forest Reserves [Selangor]. The Secretary of State's Despatch. Straits settlements. Reports on the Protected Malay State for 1893*, p. 54.
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Acting Resident-General (W. H. Treacher, C. M. G.), p. 12.

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- 70 *Sakeis – Negri Sembilan. Straits Settlements. Further Papers relating to the Protected Malay States. Reports for 1891, p. 73.*
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- 74 *Administration and General. Federated Malay States. Report on Forest Administration for the Year 1921, p. 15.*