

THE NATURE SOCIETY (SINGAPORE) AND THE STRUGGLE TO CONSERVE SINGAPORE'S NATURE AREAS

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INTRODUCTION

When Singapore became an independent nation on 9 Aug. 1965, there were five nature reserves that were the legacies of the colonial government (Wee & Corlett, 1986). These reserves were at Bukit Timah, Pandan, Kranji, Labrador and the Central Water Catchment area. The total area under protective legislation was 1,940 ha (19.4 km²), administered by the Nature Reserves Board whose chairman was the Director of the Singapore Botanic Gardens, and the then National University of Singapore (University of Malaya in Singapore), had a representative, usually a botanist, as a board member. The Public Utilities Board was also represented because the Central Water Catchment encompassed Singapore's three main reservoirs and the area was held in trust by them.

Soon after independence, pressure for land resulted in the mangrove reserves of Pandan and Kranji being released for development (Wee, 1982). Pockets of the Central Water Catchment area were subsequently also excised. The forested corridor between Bukit Timah Nature Reserve and the Central Catchment Nature Reserve was later cleared for the construction of the Bukit Timah Expressway. Subsequently, the status of the Labrador Reserve was downgraded to that of a nature park.

MALAYAN NATURE SOCIETY (SINGAPORE BRANCH)

The Malayan Nature society (MNS) was then in existence, being formed in Singapore in 1954 by a handful of mostly colonial civil servants. Based in Kuala Lumpur, it had a Singapore Branch (MNS-S). The society had yet to be sensitised to the need for nature conservation.

MNS-S mainly held educational activities, like talks and conducted nature walks. Members were mainly academics, undergraduates and those employed in fields related to biology. Up to the early 1980s, locals were very much uninterested in nature. Most activities failed to attract more than a few members. The society persevered in educating the public by articles in the local media. Membership was in the low hundreds.

By the latter half of the 1980s there was a gradual increase in membership. Most Singaporeans were then living in high-rise apartments—an environment virtually devoid of nature. Field trips became popular as more and more people became aware of the attractions of the fast dwindling nature areas. Bird watching was then a major attraction. An informal group of birdwatchers was in existence as far back as the 1960s but it was with the arrival of Christopher Hails that a formal Bird Group was formed, led by Clive Briffett from the University (Wee, 2006). Hails had then been recruited by the government and tasked with the job of attracting birdlife to urban areas. The group enthusiastically went about documenting bird species from various habitats and soon spawned a Conservation Committee.

The Serangoon Sludge Treatment Works and surrounding mangroves around Lorong Halus had been the best birding area, with numerous migratory species during certain months of the year (Parish & Wells, 1984). When the area was closed for redevelopment, there was only a lone article protesting its closure in the local daily, *The Straits Times* (Ilsa Sharp, pers. comm.).

Fortunately, another area was discovered in 1986 when Richard Hale stumbled upon some mangrove and prawn ponds around Sungei Buloh which up to that time had apparently not been visited by MNS-S members (Briffett, 2004; Hale, 2004). Unfortunately, this area shortly afterwards became scheduled for development as an agro-technology park. This time a small group of birders worked under high pressure to document the richness of the birdlife there and produced an illustrated brochure (Hale et al., 1987). Thus the first conservation proposal by MNS-S was prepared. It detailed the potential of the area as “a veritable microcosm of cultural and natural history interest” pointing out its educational value and provided suggestions on how the area could be managed, with a visitor centre, possible staffing and a programme of guided walks and farming tours. A total of 126 species of birds were listed with 40 typically wetland species, many of which were birds on migration from northern Asia.

The Chairman of the Conservation Committee met with key government ministers and personally escorted then President, Mr. Wee Kim Wee as well as then Deputy Prime Minister, Mr. Goh Chok Tong, and then Minister of National Development, Mr. S. Dhanabalan. All were highly impressed. Perhaps as a result of this personal touch, the government responded positively and by 1989, Sungei Buloh Nature Park became a reality.

Encouraged by this success, the society went into high gear and prepared a series of conservation proposals based on the Sungei Buloh format and a Master Plan for the Conservation of Nature in Singapore was released in 1990 (Avadhani et al., 1990). This Master Plan listed the already protected nature reserves as well as many areas of secondary forest noted for their rich birdlife. This plan was well received by the government and was consulted for major the government policy and planning.

At the closing ceremony of the 1991 Clean and Green Week, MNS-S was presented with the Green Leaf Award (Anon., 1992a). This award, received on behalf of the Singapore branch of the society by its Chairman, Wee Yeow Chin, complemented the previous year's award when Richard Hale won under the individual category. This was a recently created award given to organisations and individuals who had made outstanding contributions to environmental protection and preservation.

Conservation issues were subsequently led by less experienced though concerned members. They were enthusiastic but lacked the behind-the-scenes-contacts. Press releases and media confrontations became the order of the day. The most vocal of these was over Marina South, an area reclaimed from the sea and overgrown with vegetation as it was left for the soil to stabilise. The habitat naturally attracted wildlife. Birdlife in particular was thriving and nature enthusiasts were enthralled. Requests that an area around two natural ponds be made a bird sanctuary were met with silence from the authorities. The ensuing media war resulted in the government filling the swampy area (Anon., 1992b). The necessity to control mosquito breeding was the official reason given.

So MNS-S lost the battle for Marina South. As then Minister of National Development, Mr. S. Dhanabalan, was to declare later on, that the government could always recreate such a habitat, meaning that Marina South was never unique. Had the society negotiated for the area to be left alone until such time as the land was ready for development, the public would have the nature area to enjoy for a few more years. Hopefully lessons had been learnt from this (Wee, 1993).

Another struggle worth mentioning is that for Senoko. This was an area of degraded mangrove forest, prawn ponds and grassland around Sungei Sembawang. Because of the varying habitats and absence of major human activities, it was also rich in birdlife. The area was earmarked for housing and MNS-S wanted it to be set aside as a wildlife sanctuary. Again, there were heated debates in the media. The government was eventually willing to set aside a major pond as the centrepiece of a town park but the society was adamant in wanting the entire area. In the end nature lost and Sembawang New Town now stands where nature once thrived.

Eventually, every one of the other conservation proposals in the society's Master Plan was rejected and till today, Sungei Buloh is the society's first and only success in persuading the government to set aside any new area for nature conservation.

In hindsight, it would be fair to say that those involved may have been a little naïve. Flushed with the success of Sungei Buloh, members failed to realise that the government had in fact already made a major concession towards conservation, the first after 23 years of Singapore's independence.

NATURE SOCIETY (SINGAPORE)

Conservation was a dirty word in the late 1980s and early 1990s and lobbying the government was not without its attendant risks. Being the Singapore branch of MNS had disadvantages, especially when insinuations were made that it was taking orders from a foreign government. To counter that, the society re-registered itself as the independent Nature Society (Singapore) (NSS). With Singapore officially no longer a branch of MNS, the latter subsequently changed from being the Malayan to the Malaysian Nature Society, the name Malayan referring to the geographical and not the political entity.

About this time, the government announced plans to build a 36-hole golf course within a 142-ha (1.42 km²) forested site adjacent to the Lower Peirce Reservoir (Fig. 1). The area was a nature reserve and the forest, although not pristine, consisted of mature secondary growth, then more than 80 years old. Building the golf course would have meant felling about 40,000 old trees and the destruction of the associated flora and fauna.

A report was hastily assembled, stating reasons why the forest should not be sacrificed for yet another golf course (Wee, 1992). The resulting 80-page "environmental impact assessment" was delivered to the political leadership but received

no positive response. A campaign was organised that resulted in many thousands signing up, giving not only their names but their identity card numbers and occupations. At the height of the campaign rumours were rife that the NSS president's office had been raided and the signatures seized. This was untrue but the signatures had been deposited for safe-keeping in a bank.

The almost daily confrontation in the media led to increasing public support against the construction of the golf course and eventually the project was shelved. For the record, this was also the one and only time the NSS managed to persuade the government not to proceed with the destruction of a nature area.

According to a report in *The Straits Times* of 18 Aug.2003 (Chua & Neo, 2003) and subsequently in Francesch-Huidobro (2006, 2008), the president of NSS received a courtesy call by the Internal Security Department in the early 1990s. This was in the midst of the society's campaign against the proposed golf course and a background of media canvassing for various nature areas. The meeting was civil and the discussion relevant and to the point. This was also at a time when Prof. Tommy Koh, NSS's patron, was about to leave for Rio de Janeiro in Brazil to chair the Earth Summit's preparatory meeting.

NATURE CONSERVATION DURING THE EARTH SUMMIT YEARS

The early 1990s was a time of great international concern for the natural environment. The United Nations Conference on Environment and Development, generally known as the Earth Summit, was due to take place in Jun.1992. Singapore's Tommy Koh was appointed Chairman of the Preparatory and Main Committees. Singapore's commitment to nature conservation was thus put in the spotlight. The then Ministry of the Environment and Water Resources (Ministry of the Environment) was kept busy preparing the national report for the Preparatory Committee (Anon., 1991). This was followed by the Singapore Green Plan, detailing "the policy direction Singapore will take towards realisation of the long term vision of a model Green City" (Anon., 1992a). In it, the government promised to set aside 5% of land area (from the original 3%), after reclamation, for nature conservation.

Another event triggered by the impending Earth Summit was the formation of the National Council on the Environment in 1990 (Anon., 1990). This was later to become Singapore Environmental Council. Although more concerned with brown issues, the agency provided much needed support to nature conservation.



Fig. 1. Upper Peirce Reservoir, where the proposed golf course was to be built.

The nature reserves were placed under the direct purview of the National Parks Board (NParks) when it was formed in 1990. During the initial years, surveys of nature reserves were made in collaboration with the NSS and the National University of Singapore to obtain baseline information (Chan & Corlett, 1997). The NParks also invited the NSS to be represented in their Nature Reserves Committee. This was necessary as botanists and horticulturists had always been prominent among the senior NParks staff. But gradually, staff members with a bias to zoology were actively recruited. With this the start of a new era for nature conservation began.

The government was at last paying serious attention to biodiversity and its conservation. After all, the greening of the city had shown its worth after so many decades of intense tree planting. And it was time to move towards the concept of a city within a garden, if not a city within a "rainforest."

The first hint of the government's changing attitude came earlier when it took up the MNS-S proposal of a bird sanctuary in Sungei Buloh (Hale et al., 1987). This was indeed the first post-colonial allocation of land for nature conservation. The announcement in Nov.2001 of the gazettement of two nature reserves was another historic milestone. Labrador, a nature reserve that had been downgraded to a public park after independence, was re-gazetted a nature reserve. The other was the upgrading of Sungei Buloh's status to that of a wetland reserve (Figs. 2-3).



Fig. 2. Sungei Buloh Wetland Reserve Visitor Centre.



Fig. 3. Mangrove boardwalk at Sungei Buloh Wetland Reserve.

POST-EARTH SUMMIT YEARS

The post-Earth Summit years saw major changes in the NSS. Since its MNS-S days, the society had always been closely associated with the National University of Singapore. In fact major office holders were often from the University. Thus there was always close collaboration with biologists in then Departments of Botany and Zoology. In the early 1990s, the NSS moved its office from the University where it always had its base. This sadly led to fewer and fewer academics being involved in activities of the society. The NSS also established guidelines on media communication that effectively eliminated public confrontations with the government. In fact, the society had once again learnt the wisdom of working closely in a non-confrontational way with the authorities.

Whatever the advantages of working with the authorities, there were setbacks as well. This was seen during the initial public call for the saving of Chek Jawa in 2001, and for once, the NSS was not at first seen publicly as being very involved (R. Tan, J. Lai, N. Sivasothi, pers. comm.)

Chek Jawa is an intertidal zone situated at the eastern shore of Pulau Ubin. Its uniqueness is the richness of marine life not seen anywhere off the main island of Singapore (Tan & Yeo, 2003). This was only realised around the time when the government announced plans to reclaim the area. Volunteers like Joseph Lai, N. Sivasothi and Ria Tan came forward spontaneously, to help collect, identify and catalogue the organisms found there. This was followed by a publicity blitz on the internet, an illustrated account in the *Asian Geographic* (Sivasothi, 2001) and a very successful series of public exhibitions. Once aware of the rich marine biodiversity, hundreds of visitors streamed in during periods of low tide (Fig. 4).

Other volunteers organised conducted tours in an effort to minimise damage to the habitat, many at the forefront being NSS members but mainly being seen as non-partisan individuals (Fig. 5). The National Development Minister, Mr. Mah Bow Tan, visited the area, was visibly impressed and belatedly announced a reprieve for Chek Jawa. With this deferment, the same volunteers worked tirelessly with the NParks to implement a sustainable guiding system for the long term. Further volunteers were recruited and provided field training. The NSS became officially involved in the project and was a member of the Working Committee set up by the NParks.



Fig. 4. Kelvin Lim of the Raffles Museum of Biodiversity Research showcasing the rich marine biodiversity to visitors at Chek Jawa.



Fig. 5. A volunteer guide conducting a public walk at Chek Jawa.

Not working closely with biologists also had its setbacks. This became painfully obvious in 2005 when the Marine Conservation Group (MCG) of the society became involved with Project Noah (Anon., 2006a). Initiated by the Singapore Underwater Federation, the proposal, among others, was to deepen the Pulau Hantu lagoon to make it suitable for diving activities. Based on information provided by the MCG and the Conservation Committee, the NSS threw in its official support.

Apparently the MCG was unaware of real situation on the ground. The lagoon was teeming with marine life and deepening it would have resulted in serious and irreversible damage to the habitat (Figs. 6–7). Also, unfortunately, the Conservation Committee's main expertise had always been greatest in birds and had but limited knowledge of marine biology.

The subsequent uproar on the internet generated by independent marine conservation groups and marine-savvy individuals led to the NSS re-examining its support. Project Noah subsequently suffered an ignominious demise (Anon., 2006b).

THE YEARS AHEAD

Planners once viewed nature reserves as land banks, from where parcels could be excised for development. Hopefully, not any more. We are now learning to treasure what little we have left. We are even treasuring our small areas of degraded mangrove forest where once they were regarded as mosquito breeding grounds to be reclaimed. The future is currently bright for nature conservation. Unfortunately very few hectares of pristine vegetation are left. How often do we realise when it is nearly too late the worth of what we had before but did not appreciate.

Yet, the battle for nature conservation is not over. We need to remain vigilant and to ensure what little protected nature reserves we have left remain protected. In land scarce Singapore, there will always be someone or other eyeing forested areas for development. To these people, nature reserves are just overgrown land that should be put to economic use.

Once, there was only the NSS to speak out for conservation. Not so now. A few other conservation organisations have since been established. More importantly, there are currently many net-based conservationists, who are passionate and energetic, and who operate independently of established institutions.



Fig. 6. The lagoon at Pulau Hantu at low tide showing its rich marine life.



Fig. 7. A poster prepared to showcase the rich biodiversity of the marine life at Pulau Hantu, used for public education by WildSingapore.



Fig. 8. An outreach programme involving students at Chek Jawa.

As the oldest non-governmental organisation, the NSS has been trying to co-operate with them. The objectives are the same and NSS can help coordinate efforts, suggest directions, and add value in general. More than ever before, nature conservation needs a strong and united voice, now that there are far fewer nature areas left in Singapore than in years gone by.

The experience of Chek Jawa should not be forgotten. Chek Jawa's success came from the groundswell of public opinion that was garnered through outreach programmes, where the public was totally convinced of the value of the habitat (Sivasothi, 2001; Tan, 2001; Chua, 2002) (Fig. 8). The effectiveness of the internet was instrumental in garnering this support and this modern medium of communication should be used to the fullest. What this means is that younger activist volunteers should, more than ever, be at the forefront, as these are the people who are net-savvy and most conversant with this new medium.

Finally, there is still a need to be professional in conservation work. Many, if not most, volunteer conservationists nowadays are non-scientists who, although passionate about the cause, are not always well versed with the technicalities of the habitat and its associated flora and fauna. Also, the need to work closely with the government agencies and those in academia is crucial.

The recent report from the United Nations cited the possibility of the extinction of the human race if we do not amend our ways fast (UNEP, 2007). This adds urgency to the need not only to preserve what little is left but to increase areas where nature rules unharmed by human activity.

ACKNOWLEDGEMENTS

We wish to thank Chua Ee Kiam for providing the three images of Chek Jawa and the two of Sungei Buloh Wetland Reserve. Ria Tan kindly allowed us to use her two Pulau Hantu images.

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EDITOR'S NOTE

The authors have been long-serving members of the Nature Society (Singapore) and active conservationists for many decades in Singapore as seen from their biodata below:

Wee Yeow Chin was involved with the Malayan Nature Society (Singapore Branch) starting in the 1960s, first as a student member, then as Honorary Secretary (1978–1990) and finally as Honorary Chairman (1990–1991). With the formation of the Nature Society (Singapore) in 1991, he became its first Honorary President, staying until 1995. In 2005 he helped establish the Bird Ecology Study Group and has been running the group's weblog <http://besgroup.talfrynature.com/> ever since.

Richard Hale is an experienced birder and held the post of Vice-President of the Nature Society (Singapore) for many years. He has been an excellent fund-raiser having obtained thousands of dollars for the Society's coffers. In 1997 he organised the Celebrity Bird Race raising \$135,000 for the Society's building fund. He is responsible for NSS's one and only conservation success when the government agreed to set aside Sungei Buloh as a bird sanctuary. He has also been mainly responsible for raising over \$12,000 for the Society by organising the sorting and sale of used postage stamps collected by members. He was the first individual to be awarded the Green Leaf Award (Individual Category) for his contribution to conservation. He is also a founder member of the Bird Ecology Study Group.