

The Journal of the Royal Institute of Thailand

Vol.IV, 5 December 2012

ISSN 1906-7879



The Journal of
the Royal Institute of Thailand
Volume IV, 2012

To Celebrate the Auspicious Occasion of Her Majesty Queen Sirikit's 80th Birthday Anniversary in 2012

Editor's Note

As the Journal of the Royal Institute volume IV, due at the end of 2012, wishes to celebrate the auspicious occasion of Her Majesty Queen Sirikit turning 80, consequently many essays and articles in this issue focus on works in which Her Majesty is involved. The first essay, "The Story behind the Queen Sirikit Centre for Breast Cancer, its philosophy and outreach projects" informs us about the aims of the Queen Sirikit Centre for Breast Cancer (QSCBC) and how these aims are achieved. The three essays on "Her Majesty Queen Sirikit and the Conservation of the Wild Flower Fields in Northeastern Thailand", "Mangroves... Coastal Treasure of Thailand", and "Organic Honey of Thailand" are works which Her Majesty has been promoting. "Biodiversity and Sustainable Agriculture for Medicine, Health, and Food" is one of Their Majesties' great concerns. "Queen Sirikit on Her Majesty's State Visits in 1960 and 1962" recounts the historical royal visits vividly. Other essays, although not focusing directly on the theme, touch upon the various interests of Her Majesty. For example, "King Rama VI's Promotion of Khon and Drama in General" relates how the promotion was continued successfully by Her Majesty Queen Sirikit. "Prince Damrongrajanubhab and Thai Literature" as well as "Translations of National Literature : Existing Translation Works as Means to Promote Understanding among Nations" can widen the interest on Thai literature. Some are of current interest such as "Thai food: A Gateway to Cultural Understanding."

It is hoped that the variety of essays in this issue will catch a wider audience's interests and bring readers to join us in honouring and celebrating Her Majesty Queen Sirikit's 80th Birthday.

Long Live Her Majesty Queen Sirikit.

Srisurang Poolthupya

(Srisurang Poolthupya)
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The story behind the Queen Sirikit Centre for Breast Cancer, its philosophy and outreach projects.

Finola Chatamra

Abstract

To honour Her Majesty the Queen's special birthday, the editorial board asked if an article could be written about the work of the Queen Sirikit Centre for Breast Cancer, based at King Chulalongkorn Memorial Hospital, Thai Red Cross Society. The centre was built up from the ambitious idea of creating a centre of excellence for the treatment of all women, but primarily the underprivileged. The main barrier to the project's fruition was the lack of initial funding. The article charts the story of the centre's humble beginnings to its present status, as an international 'centre of excellence', in clinical care and research. It also examines the outreach work to educate Thai women about breast cancer at a national level, and its pioneering annual breast cancer awareness campaign. The piece also discusses the centre's breast and cervical cancer screening programme in the slums of greater Bangkok.

Keywords: goals of QSCBC, outreach projects

'I would like it to be a sanctuary for women in need.'
Her Majesty Queen Sirikit, Patron.

Her Majesty the Queen graciously opened the Queen Sirikit Centre for Breast Cancer (QSCBC) in 2005 as Patron, accompanied by HRH Princess Sirindhorn. The opening came after many years of planning, building a team and fundraising by Dr Kris Chatamra MBBS [London], FRCS [England], MD [London]. After returning to Thailand after 30 years in the UK, as a senior clinician and internal examiner at the Royal College of Surgeons, England, he saw the need for a facility designed specifically

for cancer patients, primarily breast cancer patients and open to all women, especially the underprivileged.

The unit was based at King Chulalongkorn Hospital, a government rather than a private hospital, to ensure that all women could have access to care. A multi-disciplinary cohesive approach to treatment, where the patient is the centre of a care plan, rather than being passed along a line of physicians and surgeons, was a core philosophy. Breast conservation for breast cancer patients, was another innovation and key policy pioneered by Dr Kris Chatamra at the centre: fighting surgically to save a woman's breast rather than automatic mastectomy. Funds were raised to send the doctors and nurses of the QSCBC team abroad to do postgraduate training and to absorb the most modern ideas in breast cancer. Once a team and the philosophy were established, the funds were gradually raised to buy the best and carefully researched, equipment available. The centre is under the auspices of the Thai Red Cross Society, which has a very heavy burden of responsibilities in many areas, and despite tremendous support financially, in order to create what is known in the medical field as 'a centre of excellence', Dr Kris Chatamra had to be proactive, if his vision was to be achieved. The final phase was to move the team and equipment under one roof, namely the Queen Sirikit Centre for Breast Cancer, which now provides inpatient facilities for 80 patients and outpatient treatment in one centre.

The latest most modern equipment installed is a new MRI machine dedicated to breast cancer. The machine is designed with extreme sensitivity and specificity for lesions in the breast. It differs from digital mammography and ultrasound but compliments their findings. MRI dedicated for breast cancer measures the dynamic physiology, rather than anatomy of the breast. The image shows, for example, the normal and abnormal blood flow into a tumour, so that the pathological changes of breast tissue can be monitored. This is the most exciting new development in breast cancer and it is offered to patients who are selected ethically by the medical team at the centre. The price per patient at the QSCBC will be radically reduced. Donations will be sought to help the very poor women the centre serves in the slum communities in greater Bangkok and from around the country.

Dr Kris Chatamra was keen to carry out research and teach young doctors and nurses. Funds were raised to invite leading international clinicians and researchers to offer free seminars, open to any doctor or nurse across the country, so that the best teaching was available to all. International collaborative research relevant to Thai cancer patients was started. Patient support groups were built up to work along side the first 'breast cancer specialist nurses', trained at post-graduate level in the UK and the States. Their job is to support new patients through every part of the treatment from diagnosis onwards with factual information and vital psychological support. Quality of care and the treatment of the whole woman are important factors in the QSCBC approach; to this end the centre created a prayer room where patients with faith in their chosen religion could spend quiet time. The walls of the centre are covered with four hundred donated paintings and photographs; live music is also regularly played, to give patients the most positive environment.

Men, women and children are all treated at the QSCBC. Some patients come forward too late for diagnosis and consequently pass away. The final stage of the plan to support the QSCBC, is to build a hospice village for the underpriviledged, to convalesce or pass away without pain and with dignity. It is hoped that it will be a self- sufficient community, growing a lot of its own rice, fruit and vegetables, on the land already donated in Minburi. It is also hoped that it will be a support to the local community's economy.

One of the national initiatives of the Queen Sirikit Centre for Breast Cancer, is a photographic campaign to educate the Thai public about breast cancer and indeed, cervical cancer. Breast cancer is the leading cancer killer of women in Thailand, with cervical cancer being a close second. A trend is emerging, which shows that breast cancer in Thailand may be a younger woman's disease, compared to the average age of onset in the West. The aim of the campaign is to dispel the myths about breast cancer and cervical cancer, promoting the main message 'early detection may save your life'. Each photograph has a written message that is informative about cancer, dispelling myths and giving facts. The imparted information is based upon the questions most asked by patients. The hope is to decrease the fear of breast and cervical cancer that



Figure 1: QSCBC Ambassadors

so many women associated with this disease and to empower women to be proactive about their health, wherever possible.

The photographs represent men and women from every part of Thai society, from the slum communities, business women, Buddhist and Christian nuns, to film stars. Anyone who sees the photographs will be able to relate to the chosen ambassadors. The campaign also includes the women diplomats who represent their countries in Thailand, namely for 2012, H.E. The Ambassador of the United States of America, H.E. The Ambassador of Argentina and H.E. The Ambassador of Switzerland. The campaign also includes foreign business women who also make up Thai society and are not ex-patriots. Every age of breast cancer ambassador is represented, to appeal to every woman in Thailand. The campaign mission is to clearly state that breast cancer can affect any woman.

The campaign is the first of its kind in Thailand and it is not commercial in any way. The photographs do not represent a company or carry a logo. The ambassadors are not paid and they offer their support as a gift and service to Thai society. This is the fifth year of the awareness campaign and each year has shown greater success with the photographs reaching a wider audience.

The QSCBC gives out the photographs on a cd-rom at no charge, to hospitals, factories, buses, train and underground networks, shopping malls, offices, anywhere where the photos can be printed out cheaply and then displayed in public areas. The campaign is seen as a service to Thai women. Partnering with the media is also a huge help in showing the public this campaign and spreading accurate information about these two cancers, through the outlets of press and television.

Another initiative the Queen Sirikit Centre for Breast Cancer has instigated is an outreach project, which reaches into twenty different communities within the slums of Greater Bangkok. This project offers free education, screening and treatment for breast and cervical cancer, to women, in the poorest slum communities, who have no access to this type of care. The most modern breast and cervical diagnostic tests, namely, digital mammography, ultrasound and cervical PAP smears, are given to the women most in need of financial help. If necessary, the women are treated free and they



Figure 2: Teaching women in the communities.

are also followed up for further assessments. All the funding is raised privately by the QSCBC. The women are screened in groups of 100 as the project rotates around the various slum communities every 3 months. Women who may be in need in the interim months, before the team's next visit, are offered immediate help. 2000 Baht pays for one digital mammography, ultrasound, medical examination and history. 500 Baht pays for one cervical PAP smear [approx. 50 pounds sterling in total].

Following an initial talk about breast and cervical cancer in the women's home slum community, the women can register to come into the QSCBC, for the diagnostic tests. The women are given a short questionnaire to assess their knowledge of breast and cervical cancer before the teaching session and again afterwards, to check that they truly understand what they have been taught. Prizes are offered for the best results and other donated gifts are given, ensuring that the essential message of 'early detection of breast and cervical cancer' is understood, in a relaxed, positive and non-threatening



Figure 3: Magician entertaining the children while their mothers are being screened.

way. If a woman cannot read or write, volunteers, who are breast cancer survivors themselves, come along side the community women to assist them in filling out the test forms. The presence of the breast cancer survivors is also the best example to the communities, that a good quality of life, post breast cancer, is indeed possible, thereby dispelling all their engrained negative preconceptions. The outreach project is open to all women in communities, whatever their religious belief, and reaches across Greater Bangkok from the slums next to the port to the homes built on the city's rubbish tips.



Figure 4: A Typical slum house.

All ages of women are educated about cervical and breast cancer, but the emphasis is to also alert younger women, particularly teenagers about the need to be proactive about screening. Women over 40 years are given breast and cervical tests and those under 40, who are sexually active, receive only PAP smears, unless there are presenting breast symptoms. Women who have hidden their advanced symptoms are also encouraged to come forward for treatment. The project aims to overcome feelings of fear, shame or embarrassment, as barriers to seeking treatment or screening. Religious beliefs may be a deterrent to some women, who cling to the idea that they deserve breast or cervical cancer because of their negative acts in previous lives. The team will always try and persuade a woman that because the project is present in her community and is offering help, then she surely deserves the best care available. Other women, on a subsistence wage, will claim to be too busy earning the money for the family's evening meal, rent and school fees, to attend the screening programme. Ignorance about both of these diseases, exhaustion, as well as the fear of being diagnosed are all barriers to seeking help. To encourage the women to come for checks, a magician entertains their children and grandchildren, as well as entertaining the women too. A cosmetic company brings a team to put make-up on the women, so the overall atmosphere is light hearted and fun. The women go home and spread the word in their communities that the whole experience is very positive. Women have often seen the sad fate of others in their

community, who have already suffered and died with breast cancer, due to a very late diagnosis; the QSCBC project hopes to combat this type of understandable attitude. Breast cancer to many women still equates to a terrible death.



Figure 5: Women from the communities at the QSCBC for screening.

All funds are raised for this outreach project by the QSCBC and the work is carried out at weekends, preventing a financial burden or indeed an increase in the heavy daily workload at the QSCBC. All staff volunteer their personal time, aided by cancer survivors and their families. The project has a remit to serve the very poorest women, so to guarantee the best stewardship of the raised funds, the valuable insight and assistance of volunteer social workers is gratefully accepted. It is essential to ensure the funds raised for the project are used in the most valuable way and on the most needy candidates. QSCBC also works closely with NGOs in each community to achieve this goal.

The project tries wherever possible to work alongside other welfare programmes, including those that promote microcredit projects or childrens' education programmes, which aim to improve the quality of life for these women and their families. One project may offer help with school fees and uniforms, another baby milk. An international chain of restaurants that has cooked for President Clinton, President Bush and President

Putin, has also agreed to work with the QSCBC, by teaching the poorest women from the slums, to cook, as a way of helping them secure better jobs and income for their families. The average subsistence wage of these women is approximately 100-200 Baht per day [approx. 2-4 pounds sterling]. Many of the women are bringing up families alone or are the grandmothers of the children, it is essential that they are offered the opportunity to have tests which give early detection of cancer. Without the diagnostic screening tests offered by the QSCBC, these women would not have the opportunity to have any care.



Figure 6: QSCBC Building

Her Majesty Queen Sirikit wants the centre to be a sanctuary open to all women but primarily the underprivileged; it is now a reality.

Queen Sirikit on Her Majesty's State Visits in 1960 and 1962

Pornsan Watanangura[1]

Abstract

The appointment of the two queens to be Queen Regents in Thai history, indicates the confidence of the incumbent Kings in the ability of their royal consorts. It also highlights a new era for Thai women and their role in society. The accompaniment of Her Majesty, with King Rama IX of Thailand, as the youngest monarchs in the world, on official State Visits in 1960 and 1962, proved to be a new and highly significant influence, both on a small country in Southeast Asia, post the crisis of World War II and also on how the country was to be perceived internationally thereafter. The state visits of the twentieth century have some similarities with the state visits made to Europe, for the first time, by King Chulalongkorn in 1897. The royal tours of both Kings took place during a background of political turmoil internationally; in both cases the monarchs, King Chulalongkorn and King Bhumibol, gained tremendous acknowledgement and respect internationally. The visits strengthened the already existing ties between the Siamese Court and some of the leading countries of the Western democratic world.

This research paper, beginning from the onset of the first visit to Europe of King Chulalongkorn in 1897, but concentrates on the state visits of Queen Sirikit in 1960 and 1962. It will illustrate the significant impact on diplomatic, political and cultural aspects internationally, at such a critical time. The presence of Queen Sirikit accompanying King Bhumibol, without doubt, increased the success of the visits and helped shape Thai-Asian and Western relations in the long term.

Keywords: Queen Sirikit on State Visits

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1. Introduction

In the History of Thailand, there are only two Queen Regents: Queen Savabha Pongsri, during the reign of King Chulalongkorn, who acted as Queen Regent during His Majesty's first European tour in 1897. Queen Sirikit, acted as Queen Regent during His Majesty, King Bhumibol Adulyadej's monkhood in 1956. The appointment of the two queens, indicates not only the confidence of the Kings in the abilities of Their Majesties, but it is also evidence of the new role Thai women would begin to play during these periods in history. The conflicts in the world at that time, made it possible and essential that Queen Sirikit accompanied King Bhumibol when going abroad. The appearance of Her Majesty with King Rama IX of Thailand, as the youngest Royal monarchs in the world, on two state visits in 1960 and 1962, proved to be a new and significant opportunity for a small country in Southeast Asia, after the World War II crisis, to launch itself again positively, on the World Stage.

Similar to the first visit to Europe of King Chulalongkorn in 1897, the prevailing conditions after World War II, during the 'Cold War' made the State Visits of King Bhumibol and Queen Sirikit in 1960 and 1962, not only advisable but unavoidable. Both state visits took place in a period of world political crisis, namely, during the age of colonization in the 19th century and the confrontation between two political ideologies during the 'Cold War' after World War II in the 20th century. Through the royal state visits, which were very important for the sovereignty of the Kingdom of Siam, the Siamese monarchs gained tremendous acknowledgement from Europe and from every country visited. The royal tours set the stage for a new era in Siamese-European and Thai-Western relations in many respects and strengthened already existing ties between the Siamese court and some of the leading countries of Asia, Europe and America, Australia and New Zealand. King Bhumibol with Her Majesty Queen Sirikit succeeded in changing the way in which the West viewed Siam, its monarchy and its people. Siam was no longer just the name of an exotic, faraway land in a fairy tale - it was a real place.

2. The State Visits during the World Crisis



Figure 1: Their Majesties on State Visits in 1960

The state visits of the royal couple of the Chakri Dynasty, in 1960 and 1962, were not strictly a world tour, but the trips are considered of great importance in the establishment of Thailand, in a stronger position on the world stage, during the political and ideological conflicts of the mid-twentieth century. Similar threatening conditions politically, that had occurred during the first state visit of 1897, were in evidence during the second in 1960 and 1962. A comparison of the preconditions of the royal tours of both of the Siamese Monarchs, will lead to a greater understanding of the significance of the State Visits of Her Majesty Queen Sirikit in the middle of the twentieth century.

At the end of the 19th century, conditions in Siam and throughout the region were changing rapidly. Even before King Chulalongkorn came to the throne in 1868,

Siam was under threat from agressive colonial politics of the European powers and there were also wars with neighbouring countries. Clashes with European powers intent on extending their influence in the region led to the loss of the independence and sovereignty of a number of Siam's neighbours. These events were all warning signs of the Western powers' imperialist intentions in South and Southeast Asia. France and Britain, in particular, were no longer content to maintain trade and religious missions in the countries of the region as in earlier times. The armed clashes between France and Siam of 1893 during the reign of King Chulalongkorn, was the final spark that lit the fuse and prompted the King to embark on a new course of action aimed at preserving Siamese sovereignty.

In the words of the King: "I must travel to Europe. It is essential that we establish a presence there."[2]

This turmoil prevailed not only over Asia. An overview of Europe-Asia relations at the End of the 19th Century will shed some light on the decision of King Chulalongkorn going to Europe in 1897 at the time of world crisis.

At the end of the 19th century and continuing on until the end of the Second World War in 1945, Europe was at the very heart of the major changes affecting world events. Europe in 19th century after the Industrial Revolution drove changes, the consequences of which are still felt today. Competition among major European powers was also rife as countries fought to hold on to their colonies and expand their economic and political sphere of influence throughout Asia and Africa.

This turmoil of the late 19th century can be compared with the state of great anxiety, confusion and uncertainty politically during the 20th century, the period of the reign of King Bhumibol (1950 -). The European colonization before World War I in Siam, is in some way similar to the threat from the socialist-communist countries for many nations, including Thailand, which spread all over the world.

After World War II, before the world tour and state visits of King Bhumibol and Queen Sirikit of Thailand, in 1960 and 1962, Europe was in a state of restoration, economically, politically, even culturally. The United States of America replaced the

[2] Letter from King Chulalongkorn to Prince Svasti Sophon, dated September 3, 1893, cited in: Jiraporn Sathapanawatana's *Siam in* Crisis R.E.112, Bangkok: Teachers Training Department 1976, p. 194.

importance of Europe and became a 'world power' leading the 'Western Democratic World'. The fact that the Alliance won the Second World War against Hitler's Germany did not end the conflicts in Europe, including Stalin's socialist-communist regime, which continued to expand its political ideology. The situation led in the end to confrontation between countries with different political and economic ideologies, i.e., between democratic and socialist-communist lead nations in Asia, Europe and America. The ideological conflict in the twentieth century was sharpened after the establishment of the 'Federal People Republic of Yugoslavia' after 1948. The Cold War began. The world was then divided into two blocks with the United States of America on one side, the Soviet Union, and the People Republic of China, after its revolution in 1949, on the other.

Many countries in the world, especially those in Southeast Asia including Thailand, fought against the Communists. The communist parties were active regionally. In Europe, the German Democratic Republic (Die Deutsche Demokratische Republik/ die DDR or East Germany) was established in 1949, also the Federal Republic of Germany (Die Bundesrepublik Deutschland or West Germany). The violent military expansions of the Soviet Union into East-block states (Poland, Hungary, and into East Germany 1950-1960, escalated the confrontation between the two ideologies. In 1950, the People Republic of China claimed Thailand as its former colony. The danger was clear and present. This alarming sign indeed accelerated Thailand to become a member of the United Nations in 1950. The government also showed solidarity with the UN by sending troops to the Korean War and gave shelter to the Chiang Kai-shek's army of 'Kuomintang' in northern Thailand, near the boarder to China.[3] Laws against crimes that deal with communism were passed. Many Thai intellectuals showed sympathy with the communist ideology. Among them was Chit Bhumisak, a student of the Faculty of Arts, Chulalongkorn University. The process of the communist expansion in Thailand after World War II, could be best demonstrated by the literary movement of *Littérature Engagée* developed in

[3] The region is later known as the 'Golden Triangle' in northern part of Thailand with 'Khun Sa', known as "King of Opium" as leader. Members of this army were partly integrated with the hill tribes in the North, partly with the Thais. It is the projects of His Majesty King Bhumibol of Thailand in the sixties that gradually transferred this opium region into agricultural land.

Thailand, which had its first phase between 1947 to 1957. This political-literary movement is characterized by the first actions of the so-called "progressive" writers and their proclamation of *art for life against art for art's sake*. The central question was about the function of literature and the actual task of the writer. This "peaceful uprising" of 1952 resulted in many Thai authors turning to the social problems of the country and they therefore, gave greater impetus to "progressive literature". This also applies to the time after the first military putsch by General Sarit Thanarat in 1957 that led to a blossoming of progressive "literature for life" in Thailand, if only for a period of a year. The second military putsch in Thailand was however a major turning point. General Sarit abolished the constitution, dissolved parliament and governed the country with 20 laws he set himself. Communist actions, or actions considered as such, were forbidden and the media was heavily censored. Many writers and journalists were put under strict surveillance or arrested as communists. Among them, Chit Bhumisak, who was accused of being a communist. In May 1965 Chit went "into the jungle" in order to take part in the revolutionary fight of the farmers, workers and the Communist Party of Thailand. Chit Bhumisak was shot dead on 5 May 1966 in the jungle in a province of north-eastern Thailand. Following Chit's death, the previously more literary socialist battle of the Thai people gained a new realism and became for many a political reality in many regions of Thailand. Satien Chantimathorn, a famous Thai writer, with his book *'The Thread of Littérature Engagée',*[4] called the time period after the second military putsch in the year 1958 "Dark Ages of Enlightenment". It was also the beginning of the Vietnam War with Henry Kissinger's 'Domino Theory', which feared the countries of South East Asia would topple and become Communist, one after the other.

This literary and political movement in Thailand after World War II did not change the stable and clear position of the Thai government which at that time was supporting the 'Western Democratic ideology', considering the United States of America as a close ally. Thai military, wanting, above all else, to safeguard their independence, had allowed the formidable military presence of the United States during 1961-1975, in Thailand.

[4] Satien Chantimathorn wrote this book, in which a first view of this literary movement in Thailand is given, after joining other students going to the jungle for 5 years after student demonstration in October 1976.

It was within this context that King Bhumibol, accompanied by Queen Sirikit, the ninth monarch of the Chakri Dynasty, found it imperative to make state visits in 1960 to 15 countries in Europe and North America, one year prior to the 'Berlin Wall', the symbol of the peak of the 'Cold War'. In 1962, the monarchs of Thailand visited four countries in Asia including Australia, and New Zealand. It was the time of the Vietnam War and political turmoil in South East Asia.

Queen Sirikit's composition in *'In Memory of the State Visits of His Majesty the King',*[5] witnesses the world crisis during His Majesty's State Visits to the United States in 1960.

> "…An important appointment that myself and the members of our entourage awaited with enthusiasm and excitement, was the day when the King would be awarded an Honorary Degree at Williams University, one of the oldest universities in the United States. […] That night, I could not sleep well. I confess it was because a member of the committee had whispered to me, *"Tomorrow, even if something goes wrong, you should not be frightened. And please don't think that we dishonour you. There might be distribution of leaflets or some students will walk out during the ceremony."* […].
>
> But the situation was totally different.
>
> That night, at dinner, the Rector of Williams University, said
>
> " … You know that in America, no one can stop people from expressing their opinions. He himself was surprised that there was no reaction as expected, and therefore, he had asked these students, (many with long hair which made them look even more frightening), why they had not walked out of the ceremony when one of the leaders of Southeast Asian country was being awarded a degree. The students said

[5] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* Her Majesty Queen Sirikit is gracious to grant Her Royal permission for the first edition of this book on the Auspicious Occasion of the Royal Ceremonial Celebration of Her Majesty the Queen's Third Cycle Birthday Anniversary on 12th August 1968 (B.E. 2511) and on the Auspicious Occasion of the Royal Ceremonial Celebration of Her Majesty the Queen's Sixth Cycle Birthday Anniversary on 12th August 2004 (B.E. 2547)

that they had not intended to attack directly Thailand, but as Thailand had friendly relations with their government, and they were against their Government's policy, they had planned to walk out of the ceremony while the King was giving his speech. But, they did not do so because the King had clapped his hands to honour the three of them. They thought the King was opened-minded because he had listened to other people's opinions. […] "[6]

The events two years later in Sydney and Melbourne, Australia, was more dramatic. Here the story in Sydney:

"…The weather was fine on the day when we arrived in Sydney […] A large crowd had already gathered. But, as soon as our car stopped at the city hall, a protest sign appeared once again to chase away the dictator. There was the noise of people trying to subdue a troublemaker, just two cars behind us. This person had at first been part of the crowd, then when our car passed by, he had lifted the sign up in his hand. The people nearby and some police officers caught him and snatched away the sign, but it was too late because we had already seen it. […]. After the ceremony and our return to Government House in Sydney, some people brought these leaflets to him (His Majesty the King) in his private quarters. The leaflets' message was the same, it was to 'drive the dictator back to Thailand', together with an additional message accusing Thailand's 1962 Government of being murderers for having executed innocent people. Anyone who knew anything about Thailand, apart from reading this leaflet would think that our country was entirely lawless, as in a gangland movie. Some Thai students in Sydney privately told us that this country has a secret organization of reds which is very well funded. […] Their criticisms of our Government were not really reasonable. Those called innocent in the leaflets were those who

[6] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 5, p. 236-242.

had been sentenced to death for arson and those who were spies and had committed various crimes in our country.[7]

Due to the ease of twentieth century travel, a far more extensive royal tour was carried out by King Bhumibol and Queen Sirikit in 1960 and 1962, far more extensive than the voyage to Europe of King Chulalongkorn in 1897. Both royal tours illustrate the importance of maintaining the sovereignty of a country, by being accepted as equal, by all the countries visited. In this regards the policy of pursuit of the 'balance of power', played a most crucial role.

3. The policy of the balance of power, cauchemar des coalitions[8], in the time of the 'Cold War'

It is vital to draw a comparison between the political situation in the reign of King Bhumibol, around 1960, and the situation at the end of the 19th century, in the time of King Chulalongkorn, as a clue for a better understanding of the policy of the balance of power pursued by both Siamese Monarchs.

The first visit to Europe of King Chulalongkorn was not yet scarred by the two world wars of the 20th century, Europe was still at the peak of its political, cultural, diplomatic, and military powers. Europe after World War II has changed tremendously. It would take the continent almost half a century to recover from the wounds inflicted by these wars. Europe after World War II had changed tremendously and had experienced a new situation, due to the ideological conflicts in the world. The war had had a huge effect a South-eastern Asian country, Thailand.

In the eyes of these European nations, Siam at the turn of the last century under King Chulalongkorn, was a small country with relatively little political bargaining power and, unlike Japan, endowed with a weak military. Strategically and economically, it was much less important than either China or India. Yet, it was key to the success of France's colonial ambitions to lay claim to the Indochina

[7] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 5, p. 200-202.

[8] It is known among the European historians that *cauchemar des coalitions* belongs to the politics of Frederich the Great of Prussia in 18th century.

peninsula and for the British to control Burma, India, and Malaya. The friendship French President Félix Faure showed to the Siamese monarch during the time of King Chulalongkorn's visit to Paris 1897, was motivated in part by his awareness of the possibility of a conflict between England and Russia. The political circumstances in Europe, around this time, were tense with the conflicts of the different interests between the European powers, England, France, Russia, particularly in the area of colonial politics. These political tensions help to clarify the reasons behind the tactics of the Siamese monarch, when he adopted to forge relations with some of the major powers at the time, namely Russia and Germany. In befriending Russia and Germany, the King hoped to preserve the sovereignty of his Kingdom, against the colonial designs of the French and British, while also achieving a balance of power between the various foreign influences in Siam. During the reigns of King Rama IV and King Rama V, there were just a small number of Western countries with a significant presence in Siam. These were principally France, England, Russia, Germany and the United States. The shifting nature of the relations between many of the major European powers at the time is particularly useful in explaining the strategy pursued by King Chulalongkorn i.e. to "lean on Russia" to "intimidate France."[9]

According to the remarks of the former European Union ambassador, H.E. Klauspeter Schmallenbach in February 2003, King Chulalongkorn's success in establishing cordial relations with the European powers, at such a difficult time, was no less an achievement than that of French Foreign Minister Robert Schumann, who convinced his German counterpart to sign a treaty establishing the European Coal and Steel Community in the 1950s,[10] not long after the conclusion of the Second World War.[11]

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[9] Pornsan Watanangura, Tosporn Kasikam, *Relations between the Kingdom of Siam and the Royal Houses of Europe in the Documents Pertaining to King Chulalongkorn's First Visit to Europe in 1897*, p. 48-49, 94-98, 105-111.

[10] Schumann relied for success on close cooperation with Konrad Adenauer, the first Chancellor of the newly-formed Federal Democratic Republic of Germany, a country that historically had been an enemy[10] of the French and that had only recently occupied their country. Then in 1963, at a time when many of the countries of Western Europe were still highly protective of their recently acquired independence, France, represented by President Charles de Gaulle, and Germany under Chancellor Konrad Adenauer, signed a Friendship Treaty.

[11] H.E. Klauspeter Schmallenbach, King Chulalongkorn – A First True Honourary European. In: *The Journal of European Studies*, Special Issue, Year 12, Volume 1, January – June 2004, p.11-79.

The difficult time after World War II wase vident in Europe and Asia. Similar to the situation at the end of the 19th century in Thailand, when Prime Minister Phibun Songkram with his traditional anti-communist position, led Thailand to continue its recognition of Taiwan. He also supported the French in their actions against communist insurgents in Indochina. In the meantime, the balance of power in the world would shift from the 'Old World' to the 'New'. The United States assumed a dominant role in the world, culturally, politically, militarily and subsequently economically. In 1955, the headquarters of the new *South East Asia Treaty Organization* (SEATO) was established in Bangkok and Thailand offered the United States the use of Thai military bases. In the 1960s, several countries in Western Europe embraced a call for European integration and, in 1967, the *European Economic Community* (EEC) was established. Also in 1967, Thailand became a founding member of the Association of Southeast Asia. After the fall of Berlin Wall, with the ratification of the Treaty on European Union, otherwise known as the *"Maastricht Treaty"*, signed in 1992, the *European Union* came into being.

The anti-communist policy of Thailand tremendously influenced the foreign policy of the country after World War II, in the reign of King Bhumibol. Thailand, still a small country in the eyes of the West, gained a strategic position in Southeast Asia, by being a buffer state against the communists, invading from the East, that is from Korea, Vietnam and Cambodia. Each country in Indo-China including Thailand, holds a strategic status. Losing one country, in the sense of Henry Kissinger's 'Domino-Theory', the foreign minister of the United States at the time, could lead to the loss of the whole region of Indo-China, which is one of the most important strategic bases of the United States in Asia.

Before the world tour of Queen Sirikit in 1960, the Thai policy of persuing a 'balance of power' in foreign policy, was marked by a number of state visits by the King and Queen, to neighboring countries, thus stabilizing old friendships. State visits were untertaken regionally to the Republic of Vietnam (South Vietnam on December 18-21 1959); Indonesia and Burma [February 8-16 and March 2 to 5 respectively in 1960; Pakistan (11-22 March 1962) and Malaya in June 1962]. Their Majesties were warmly welcomed by President Ngô Dinh Diém of South Vietnam, President Achmad Sukarno of Indonesia, President U Win Maung of Burma, President Field Marshal

Mohammed Ayub Khan of Pakistan and the King of Malaya, His Majesty King Yang di-Pertuan Agong Syed Putra Jamalullail and Her Majesty Queen Raja Permaisuri Agong, in a magnificent and dignified ceremony in Kuala Lumpur. With these state visits, Thailand had tied the friendship with all neighboring countries and attached a condition of alliance to fight against the communists in South East Asia. The policy of establishing a balance of power, in the time of King Chulalongkorn, by making alliances with Russia and Germany, to balance the two powers of Europe, England and France, turned out to be a policy of friendship with the whole 'western democratic world' in the 20th century. The result was to balance and protect Thailand from the power of two major 'socialist-communist countries', Soviet Union and the People Republic of China.



Figure 2: Their Majesties with President Sukarno at the airport in Indonesia, 8 February 1960, in: *Königin Sirikit, Juwel ihres Landes*, S. 63



Figure 3: Their Majesties with President Macapagal and wife in Philippine, in: *Königin Sirikit, Juwel ihres Landes,* p.103



Figure 4: His Majesty King Bhumibol in Malaya in: *Königin Sirikit, Juwel ihres Landes,* p.111

The state visits thereafter in June 1960, which lasted seven months and four days, were not only to present the world's youngest monarch to the world, but they also clearly demonstrated the clear position of Thailand's foreign policy, which was aiming to form alliances with the western world, particularly the United States of America. In this connection, the presence of Queen Sirikit of Thailand, with Her Majesty's charm and beauty, was a major key to the success of the royal tours.

4. On Her Majesty's State Visit in 1960 and 1962 – Ambassador of successful Mission for Thailand - A New Era in Thai-Asian and Western Relations

When King Chulalongkorn travelled to Europe in 1897, he was alone without Queen Savabha Pongsri. The traditional role of Siamese women and the duration of the journey, would not allow her to travel. More over, Queen Savabha Pongsri as Queen Regent of Siam had a more important duty at the time of political crisis of the country and during the absence of the King. The world travel of the ninth Monarch of the Chakri Dynasty was different. Here, - Queen Sirikit, as the second Queen Regent in the Thai history, accompanied, for the first time, His Majesty King Bhumibol, representing Thailand as a goodwill Ambassador resulting in the success of the missions and consequently marked an important turning point in relations between Thailand and Asian-Western countries.

Similar to the first visit to Europe of King Chulalognkorn, the state visits of Queen Sirikit in 1960 and 1962 were not recreational trips.

In the word of Her Majesty Queen Sirikit in *In Memory of the State Visits of His Majesty the King:*

> "I once thought that visiting foreign countries would be a joyful and exciting experience, especially for young people. […] I never left my homeland at all because the King definitely had no intention of leaving the country, *except for an unavoidable reason.* As the Head of the Thai Nation, the King thought it best to stay inside the country in order to be close to his people. […] and as for me, I never thought of going anywhere if He did not go."

> In 1959, I accompanied the King to some foreign countries for the first time. We travelled to the Republic of Vietnam for a State Visit for a few days. Then the King visited Indonesia and Burma, and I had a chance to go with him.
>
> During that time, I heard that the government had contacted the governments of fourteen European countries, as well as America, in preparation for state visits by the King. *Theses trips were very important and were to take many months to complete.* […] "[12]
>
> (emphasized by the author)

The account by Her Majesty Queen Sirikit confirms the hidden political agenda of both state visits in 1960 and 1962.

The state visits were indeed of great political importance and the Thai government consequently took care of Their Majesties trip in every aspect. The long journey which took seven months, led the government to arrange for the royal family to stay in one location, in Switzerland. The house arranged was called Flonzaley, located in the mountains between Lausanne and Montreux, on the Swiss-French side in the Puidoux-Chexbres district. Their Majesties could see their children and stay with them for a short periods after returning from each of the visits. Her Majesty also relates that the house would provide their parents from some relief from their travels.

4.1 'The Queen is not a fairy tale queen'
Leader of Traditional Thai Costume and Fashion

As the State Visits made to America and Europe in the summer 1960, were the first major occasions for Her Majesty to accompany the King to 15 countries, from summer to autumn, through to winter with its snow, a vast number of preparations were essential, especially the preparation of clothing.

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[12] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit*, footnote 9, p. 78-80.

> "First, I invited some ladies who had been to foreign countries as Ambassadors' wives to dicuss this matter with me and to give their advice about clothing. From these conversations I learned about the dress styles of those who had once been guests of the Royal Family at the garden party of the Court of St. James. I also learned about the clothing styles of the Ambassadors' wives when they went to meet Heads of States in very grand formal ceremonies. However, my personal advisors all agreed that since these ladies had merely attended ceremonies in their capacity as Ambassadors' wives overseas, the clothes they had worn had probably not been so stunning. Their recommendation to me was as follows: "Your Majesty is the Queen of Thailand, the first Lady of our country and the representative of Thai women, so your case cannot be the same as ours." [13]

Finally, Her Majesty had to make up her own mind as to the most appropriate dress styles to wear, while accompanying His Majesty to America and Europe. After making some research, Her Majesty's last decision was to dress in both the Thai and western styles, in trend at the time, similar to King Chulalongkorn, who dressed in 'English style', as reported in a Polish newspaper.[14] In the end, Mr. Pierre Balmain, a French designer, who happened to be in Bangkok at the time, came to be Her Majesty's couturier for western costumes on subsequent occasions.

[13] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit*, footnote 9, p. 82.

[14] In: *Kurier Warszawski (The Warsaw Courier)* Morning Aditional Issue dated 3 July 1897.

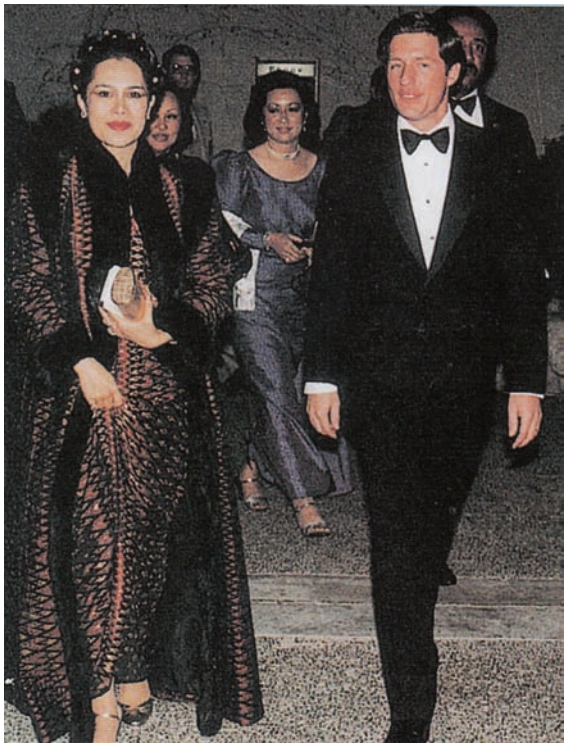

Figure 5: Queen Sirikit and Pierre Balmain, Balmain visited Thailand in 1979, *Königin Sirikit* in: *Juwel ihres Landes,* p. 217

On the occasion the Lord Mayor of London arranged a luncheon banquet to take place at Guildhall in honour of Their Majesties, Queen Sirikit wore a Thai costume to Guildhall.[15] At the ball on the last night in London, arranged by the Dutchess of Kent and Princess Alexandra, Queen Sirikit of Thailand and the Thai ladies wore Thai costume now known as "Thai Borom Biman". This impressive costume, especially with its accessories and ancient belts or waist bands, were extraordinarily elegant and very impressive to the Westerners.[16]

[15] It was a grand banquet and very formal. The Royal Family had arranged many carriages for the transportation. That evening Queen Sirikit was shocked to read large headlines in some newspapers "Queen Sirikit Rode Hatless to Guildhall,", with pictures in the carriage, for the Thai costumes were not yet known to them.

[16] Compare: *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit*, footnote 5, p. 110.

It is Queen Sirikit's traditional Thai style costumes during this period of world travel, which were firstly presented to the world. Today, Her Majesty has set the standard of traditional Thai costumes. This new fashion trend for Thai women has developed an income for the people in rural areas. The Royal project, "Silpacheep", the Queen's foundation, which maintains the art of traditional weaving, both in silk and cotton, is also engaged in preserving and developing other traditional crafts. Her Majesty the Queen has been tireless in Her work to promote these traditional art forms and to garner income generation for rural communities.



Figure 6: Queen Sirikit in traditional Thai robe, in : *Königin Sirikit, Juwel ihres Landes,* p.239



Figure 7: King Bhumibol and Queen Sirikit in "Thai Borompiman" in Hofburg Palace in Vienna 1964



Figure 8: Queen Sirikit in "Thai Ruan Ton" at Eastwest Center, on the campus of the University of Hawaii, USA. In 1967



Figure 9: Queen Sirikit examining silk materials



Figure 10: Their Majesties discussing on Thai textiles



Figure 11: Queen Sirikit with villagers during advice on Thai silk

A Sharp Intellect and Charm both in Word and Action

The first country in the program was the United State of America, which lasted one whole month, the most crucial destination of the journey. The State Visit to America lasted one whole month. The Queen was only twenty-eight years old. For Queen Sirikit, the most fearful event was the press conference, which "almost crushed my excitement at visiting America for the first time".[17] Her Majesty still remembered the King's first press conference:

> "The room was full of microphones and tape recorders, and spotlights that targeted powerful beams of light onto our faces, and my eyes were blurred. Many camera bulbs were constantly flashing, reporters surrounded us, and all eyes were stuck on us. They took photographs, made films for television broadcasting, and interviewed the King – all at the same time …[18]



Figure 12: Press release in Los Angeles 1960, in: *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* p. 44.

[17] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 5, p. 92.

[18] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 5, p. 92.



Figure 13: Queen Sirikit and King Bhumibol on the visit of the Liga of the Red Cross societies in Switzerland 1960, in: *Königin Sirikit, Juwel ihres Landes,* p.349

The trip to America was hard and exhausting. There were ceremonies to be attended and many places to be visited. During the whole month, Their Majesties were rarely back at the residence before midnight or one o'clock in the morning. The Queen admitted that journeys like this were new to her. During the trip to New York Queen Sirikit felt very weak, queasy and airsick because of inadequate sleep for many weeks. Her Majesty told about her experiences with New York press:

> "…although I followed the King's instructions to use my mental power and not give in, I still could not move at all … But when the plane circled La Guardia Airport in New York, my mental power broke. I ran to the toilet, paying no attention to people questioning me in Thai and

> in English […] I stood in front of the wash basin […] I heard a knock on the door … the King called for me […]. I shall never forget that moment. I felt terribly sick. Both my heart and my legs were trembling. My hands were completely cold, and my head was in a whirl. […] I stepped down the stairs after the King into a big crowd. […] My ears heard people shout "Queen, Queen smile !, " […] While I was feeling queasy and dizzy, someone held a small tape recorder to my mouth and asked, "What is your impression of New York?" It seemed strange to ask someone who had just stepped off an aeroplane such a question, but I gave an answer to the inquirer and he or she seemed to be satisfied with it. I could not even remember my answer […].[19]

For the young royal couple, the trip to the United States of America was a prelude to a long and persistant friendship with the US President, from since President Eisenhower to President Goerg W. Bush. *TIME Magazine* (11.July 1960) reported on the warmest reception of President Eisenhower in the White House and characterized the Queen of Thailand as "the enchantingly elegant and the most feminine Queen Sirikit, 27"[20]

In Europe, on the first day of Their Majesties' arrival in Germany, the Queen was very excited to see big crowds of people, who joyfully greeted them along the sides of the roads of the royal route. The German people were smiling and looked happy to see the royal couple from the Oriental. Some had words of blessing and some shouted "Long live Thailand". Even after the King and the Queen had entered a building, the crowd still refused to go home. The gatherings grew larger and they kept shouting the names of Their Majesties. The Queen went out on to balcony with King Bhumibol, smiling and waving to the crowd for a while, but, they would still not go home, so that

[19] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 9, p. 96, 98.

[20] *Queen Sirikit : Glory of the Nation*, published by the National Identity Office, The Office of the Permanent Secretary, The Office of the Prime Minister, Royal Thai Government, first published 2011, German version, footnote 5, p. 72.

the royal couple were delighted to go out three times. Queen Sirikit was very impressed and could not forget this warm welcome and the hospitality of the German people everywhere, during nine days stay in Germany:

> "I could never have imagined the interest that the German people held for us. They had persistently stood there for hours and hours waiting to see us for just a short while, giving no thought to their personal comfort, even though it was already such a late hour for them. Whenever we reflected on this, it brought back such warm and happy memories for us. It was a very impressive and unforgettable moment for the King and myself."[21]

One of the explanations for this wonderful welcome has been put forward by a German that the monarchs of Thailand came to Germany shortly after Germany had suffered from their guilt and was still struggling for their survival to build up their nation again. Germany had just recovered from the crisis and had just experienced the period of "Wirtschaftswunder" in the early 60s. Still, the feelings of unhappiness, disappointment and guilt were perceptible. Amidst this atmosphere, the arrival of the young royal couple from a far away land was a huge encouragement. Queen Sirikit had charmed the German people with her charm and indescribable beauty. The persistent stories and pictures of the Queen of Thailand in one of the German Womens' magazines *Bunte*, even after Her Majesty's State Visit in Germany in the year 1960 confirm this statement.

Charming Presenter and Engagement to Strengthen the Position of Thai Women

In Germany, Her Majesty was interviewed by German mass media several times and their photographers were most often with them at those times. One of the most popular question was the question of emancipation of Thai women:

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[21] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit*, footnote 5, p. 118.

> "…They would ask me when it was that Thai women had gained equal rights with men. I always responded that we have had equal rights with men for a very long time. We did not need liberation because we were not humiliated; rather, we were ourselves all the time. Our tasks and duties were to have a happy family and bring our children up as good citizens. The view that we merely followed behind men was an erroneous one, if we followed, it was because we liked to do so. But, if necessary, we could be leaders. I reminded them of the Thai ancient proverb about women that says, "One hand rocks the cradle, the other hand swings the sword. […]
>
> Another thing that they liked to ask was whether I had any influence over the King. I quickly responded that I never did. When I told them that it was the other way around, they laughed. They even told me that when they interviewed many other leaders' wives, these ladies all said that they influenced their husbands, especially in regard to their husband's work. I told them that it was our long tradition for a wife to trust her husband and never to interfere in his work. The male journalists laughed with delight, while the female journalists reserved their position; they disagreed, but they did not interrupt."[22]

It is well known that at the 6th decade of the 20th century in Germany was marked as 'Pillenknick'-Jahre, whereas (German) women had for the first time sexual freedom through the 'Pille'. The position of German women, especially in the family, is very different from that of Thai women. In Germany, the long family tradition had set the strong position and duty of 'fathers' inside and outside the family, while German women have always been a symbol of The "Three Ks"- Kinder (children), Küche (kitchen) and Kirche (church). The answer of the Thai Queen from a far away land may present a new aspect of women emancipation. Many Thai women share the opinion, that they behave as 'inferiors' in order to be high in a position.

[22] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 5.



Figure 14: Queen Sirikit with Frau Luebke, the wife of the Bundes president of the Bundesrepublic of Germany in 1960, in: *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit*, p.62



Figure 15: Their Majesties before the Town Hall in Bonn, 1960 , in: *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit*, p.59



Figure 16: Queen Sirikit with Thai students in the Bundesrepublic Germany in 1960, in: *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit*, p.61

Her Majety's support for Thai women is well-known, as it is not only limited to strengthen the position of them, but has been enhanced to encourage the education of women and their children, improvement of their family lives and last but not least the promotion of their professional activities through handicrafts and weaving.

4.2 The Red Cross Activities

During the first visit to Europe in 1897, on the excursion to Lake Leman at the district called Evian in Switzerland, King Chulalongkorn met the President of the Red Cross Society, who talked a great length about joining the Society.[23] After

[23] Telegram sent from Geneva on May 22nd 1897, at 8 p.m. via Saigon and arriving in Bangkok on May 23rd at 2.45 p.m., in: Pornsan Watanangura, Naruemit Sodsuk, Khanittha Boonpan (editors), *The First Visit of King Chulalongkorn to Europe in 1897 – A Collection of Letters and Documents from the First Visit to Europe of King Chulalongkorn in 1897*, (English version). Bangkok: Centre for European Studies at Chulalongkorn University, p.33.

the visit, the Red Cross was established in Siam. Queen Savabha Pongsri was the first President of the Red Cross Society of Siam and Queen Savang Vadhana the second President. Nowadays, Queen Sirikit, as President of the Red Cross Society, has made the work and activities of Thai Red Cross known abroad. The original work of supporting wounded soldiers, has been expanded to help refugees, natural catastrophies and blood donation, among other valuable roles.



Figure 17: Her Majesty Queen Sirikit, President of Thai Red Cross Society, in: *Königin Sirikit, Juwel ihres Landes,* p. 330



Figure 18: Queen Sirikit on the managing the emergency accommodation for the refugees, in: *Königin Sirikit, Juwel ihres Landes,* p. 339

5. Fazit: A New Era in Thai-Asian and Western Relations

King Bhumibol and Queen Sirikit's world trip in 1960, state visits in 1962 (and 1965), set the stage for a new era in Siamese-European-western relations. These bonds would define the country's relations with Europe and America throughout the 20th century, down to the formation of the European Union. Especially important is that on these trips, the monarchs were received as an "equal" by the crowned heads and leaders of the visited countries and this tremendously changed the 'old image' of 'Siam' or 'Thailand'.

The voyages to the West by the Siamese monarchs in the 19th and 20th century had many points in common. In sailing to the continent, King Chulalongkorn set Siam on a course of development based almost entirely on the Western model, particularly education. His trips marked the start of *official* diplomatic relations with European countries such as Russia, Norway, and Poland, and strengthened already existing ties between the Siamese court and some of the leading countries of Europe, especially Russia, Germany and the Austro-Hungarian Empire. The State Visits of King Bhumibol and Queen Sirikit in the 20th century strengthened these bonds and established 'old friendships' in the new difficult circumstances after World War II, which can be best illustrated from Their Majesties' state visits to the United States of America, Germany, France, Belgium, The Netherlands and the United Kingdom in 1960. The journeys marked a new era of transporting the technology from the western

world through 'aid for the third world countries' which developed from the speech of King Bhumibol to the American Congress in June 29, 1960.

His Majesty's speech gave a great impression to the audience by combining his personal desire to see his birthplace in Boston, and his father's alma mater, Harward, with the spirit of good will of all Thai people. The American people were more sympathetic to the King of Thailand and his country, particularly by his mention of American aid and cooperation between the two countries. In His Majesty's opinion,

> " … American assistance will enable Thai people to achieve their objectives through their own efforts. I need hardly say that this concept has our complete endorsement. Indeed, there is a precept of the Lord Buddha that says 'Thou art thine own refuge'. We are grateful for American aid, but we intend, one day, to do without it.[24]



Figure 19: Queen Sirikit and King Baudouin and His Majesty's fiancé Fabiola in 1960, in: *Königin Sirikit, Juwel ihres Landes,* p.93

[24] Amporn Samosorn, His Majesty King Bhumibol Adulyadej of Thailand – A Model Goodwill Ambassador of the Country. In: *Thai Airways Kinnaree Magazine* to celebrate His Majesty The King's Diamond Jubilee on 9th June 2006. Also see: http://thaiairways.com



Figure 20: In: *Post Today,* special publication on the occasion of 400 years of Thai-Dutch Relations 2004, pictures with contribution from the Royal Netherlands Embassy in Bangkok



Figure 21: His Majesty King Bhumibol and Queen Sirikit during the audience with Pope Johannes XXIII at Vatican, October 1, 1960, in: *Königin Sirikit, Juwel ihres Landes,* p. 92

Thailand became not only one of the close allies of the United States, but of all the European countries with the same political ideology. Everywhere in Europe, the Thai royal couple were welcomed and hailed with great enthusiasm. In 1960, from the United States of America, the King and Queen went on to the United Kingdom, the Federal Republic of Germany, Portugal, Switzerland, Denmark, Norway, Sweden, Italy, the Vatican City, Belgium, France, Luxembourg, the Netherlands, and Spain. Especially in Germany after the hard time post World War II, King Bhumibol and Queen Sirikit were the highlight of all state visits ever made to Germany. The young, fresh and intelligent monarchs, with the beauty of Her Majesty the Queen, with her delicate and elegant gestures, conquered the hearts of the Germans and Europeans.



Figure 22: Queen Sirikit on a talk on the visit in a hospital in Lisbon, Portugal in 1960, picture from the Achives of the Foreign Ministry in Lisbon, Portugal



Figure 23: Exchange of presents – Her Majesty Queen Sirikit and Queen Ingrid of Denmark in 1960, in: *Königin Sirikit, Juwel ihres Landes,* p. 88



Figure 24: King Bhumibol and Queen Sirikit on State visit in Spain with generalissimo Francisco Franco and his wife, 3 November 1960, in: *Königin Sirikit, Juwel ihres Landes,* p.100

While the most tangible rationale for King Chulalongkorn's first trip to Europe in 1897 was to prevent the kingdom from becoming a colony of the West, there were other more abstract reasons for the journey. The first of these was to familiarize the West with Siam and to fix in the minds of the people of Europe an image of the country as 'civilized'. This is why it mattered that King Chulalongkorn was hailed by the European media as an intelligent leader skilled in winning the hearts of almost all those he met, whether royals like himself or common people. The affection, in almost the same way as his grandson, King Bhumibol and Her Majesty Queen Sirikit were shown, was virtually equal to that showered upon him by his own subjects in Siam.

At the beginning of the voyage to Europe in 1897 by King Chulalongkorn, it was reported, in Illustriertes Wiener Extrablatt, that Siam, after the sensation of the famous Siam-twins, In-Chan, that the Austrians had seemed to forget this country until the arrival of the King of Siam. King Chulalongkorn succeeded in changing the way in



Figure 25: Their Majesties in a banquet, New Zeland, 20 August 1962, in: Juwel ihree Landes, p. xx

[25] Pornsan Watanangura, Tosporn Kasikam, *Relations between the Kingdom of Siam and the Royal Houses of Europe in the Documents Pertaining to King Chulalongkorn's First Visit to Europe in 1897,* footnote 4, p. 119-268 (chapter 4, 5)

which the West viewed Siam, its monarchy and its people. Siam was no longer just the name of an exotic, faraway land, it was indeed a real place.

King Bhumibol and Queen Sirikit also heard the opinions of many who believed Thailand to have a fairy-tale image. Thailand was clearly not known to many countries in the world, as the following illustrates:

> "Mr. and Mrs. Simmermann, long-time American friends of the Princess Mother, came to visit us. […]. They told us that professors at the university in Los Angeles knew very little about oriental countries. They did not know about Thailand and thought that Southeast Asian countries were backward. They usually mentioned only the heat, flies, and mosquitoes, demonstrating the narrow view that Westerners could have of other countries. This couple endeavoured to explain that oriental cultures were ancient and valuable and some of them did not yet exist in Western countries. […] In fact, there were still many foreigners with good intentions towards us. For example, I recently invited a very important Westener to have lunch with me. He said that he was very concerned because when he visited the temple in the Grand Palace, he heard a tour guide explain to some foreign tourists, "The King of Thailand, King Rama V, had a thousand wives." […] Is what the tour guide said true? " I replied, "No, it's not true." Then he said, "If it's not true, you shouldn't let them speak nonsense like that because there are a lot of foreigners who do not use their brains to think first before believing what they have been told what was true or not (as the King said in a speech), but these people will believe whatever they are told straightaway. […]."[27] (Reported in Los Angeles)

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[26] *Illustriertes Wiener Extrablatt,* evening post, 24 June 1887, cited in: Pornsan Watanangura, Tosporn Kasikam, *Relations between the Kingdom of Siam and the Royal Houses of Europe in the Documents Pertaining to King Chulalongkorn's First Visit to Europe in 1897,* footnote 4, p. 128

[27] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 9, p. 256, 258.

In Canada, in Montreal at a reception at the Citadel, Queen Sirikit wrote:

" They (many guests) were very interested in Thailand, although we could hardly find any people who really knew about Thailand.…it could be concluded that the Canadians knew very little about Thailand.[28]

[…] it could be concluded that the Canadians knew very little about Thailand because we were so far away from each other. I thought that because of this lack of knowledge, in future, our public relations should have a wider coverage. I showed them that medicine in Thailand was very advanced and we were proud that it was second to none. Our physicians could perform brain surgeries, cardiac operations and other major operations without difficulty. That was new information to them. […]. The King told me later that when he visited an elementary school in Canada, a teacher was teaching young students about Thailand. The teacher asked what the name of the capital of Thailand was and one of the students answered that it was Moscow!"[29]



Figure 26: Queen Sirikit and Queen Elizabeth II of England on the State Visit in Thailand in 1972, in: Juwel ihree Landes, p. xx

[28] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 9, p. 286.

[29] *In Memory of the State Visits of His Majesty the King, The Royal Compositions of Her Majesty Queen Sirikit,* footnote 8, p. 276.

We cannot deny that both voyages gave a more accurate view of Thailand, its monarch and its people. With the King's trips, Thailand and the countries visited entered a new era in diplomatic, political and cultural relations. Their Majesties's journeys transformed the perception of Thailand in Europe and Asia and that of Europe, America as well as the Europeans, the Americans in Thailand.

In conclusion, King Chulalongkorn's travels through Europe served a purpose as important as the round-the-world tour made by Their Majesties King Bhumibol Adulyadej and Queen Sirikit after the Second World War; an historic trip that reacquainted the world with Thailand and the country's young monarch. In 1960, the world was entering a new phase in its history, the Cold War. Tensions between the capitalist economies of the West and the Communist Eastern bloc were heating up, and the countries of Europe were seeking to forge new bonds after the destruction of the Second World War. His Majesty King Bhumibol set off on his journey at a time when Communist ideology threatened to topple governments throughout Southeast Asia. Like his grandfather before him, the present monarch and especially Queen Sirikit excited the people of the West. With the trips, Thailand and the countries visited entered a new era in diplomatic, political and cultural relations. Their Majesty's arrivals in Europe and America were symbols of Thailand's reopening and reorientation to the West.

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Her Majesty Queen Sirikit and the Conservation of the Wild Flower Fields in Northeastern Thailand

Thawatchai Santisuk[1]

Abstract

It is a great pride for Thailand and the Thai people, that Her Majesty Queen Sirikit takes a deep interest in the conservation of biological resources and the environment. While visiting the local populace and following up the royally initiated projects in rural areas across the northeast, Her Majesty has become fascinated by the unique, seasonal wetland habitat of multicolored wild flower fields or 'seasonal blanket marsh vegetation'. This fragile habitat is represented by the 'Lan Dusita' and 'Pha Taem' wild flower fields in Sakon Nakhon and Ubon Ratchathani Provinces respectively. At 'Lan Dusita' the beauty of the miniature flowering plants dominating the field has immensely pleased Her Majesty. And she has promptly granted the most common wild flowers the royal names: 'Dusita' (*Utricularia delphinioides*), 'Soi Suwanna' (*U. bifida*), Thip Kesorn (*U. minutissima*), Sarassa Chandhorn (*Burmannia coelestris*), and Manee Dheva (*Eriocaulon smitinandii*). As regards the conservation status, the miniature plants mentioned can be classified under the vulnerable category due to the habitat loss at an alarming rate by deforestation and urban development. Her Majesty has brought in earnest the splendour of the wild flower fields to the attention of the public and official authorities. She has instructed the government agencies concerned to take immediate action on the proper conservation measures for a revival of the neglected wild flower fields in northeastern Thailand.

Keywords: Her Majesty Queen Sirikit, Thailand, wild flower fields

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Her Majesty the Queen and the conservation of biological diversity

On the auspicious occasion of Her Majesty Queen Sirikit's 80th Birthday Anniversary in 2012, it is an appropriate time to mention an important role of Her Majesty the Queen in the nature conservation of the unique, picturesque wild flower fields or 'Thung Dokmai Pa' which are under threats from deforestation and urban development, especially in northeastern Thailand. A love of nature, forest, flora and fauna is deeply rooted in Her Majesty's character. She is always fascinated by the wilderness of a forest landscape with a variety of colorful, sweet-scented wild flowers. Her Majesty's passion for flowers and plants reflects an appreciation of and a deep concern for nature and biological resources that encompasses not just the pleasure of their aesthetic values, but also the need to care and nurture them.

For the past 60 years Her Majesty the Queen has accompanied His Majesty the King on their innumerable visits to the local populace in rural areas, and thus witnessed the drastic changes in ecosystems as a consequence of the massive forest destruction and modification. Over five decades, Her Majesty has long been dedicating herself to raise the welfare and livelihood of local villagers. She has also worked simultaneously on the conservation of natural resources and the environment. Whilst His Majesty focuses his attention on the development of water sources for agriculture, Her Majesty finds ways and means for the restoration of forest and watershed areas. Her Majesty is aware that deforestation will sooner or later bring hardship to local inhabitants. Hence, she has developed an idea to enable local villagers to live in harmony with forests. Her thorough understanding of nature and of the relationship between people and forests has given rise along this line to a vast array of royal initiatives in many areas across the country. Some examples include "*Forests Love Water", "Little House in the Big Forest", "Sirikit Reforestation"* and *"The Model Farm"* projects.

Her Majesty the Queen is a leading force not only in reforestation and sustainable forest management, but also in the conservation of native plants and other biological resources. She has promoted the conservation and breeding programs of some rare and threatened wild orchids, namely 'Inthanon Lady Slipper Orchid' (*Paphiopedilum villosum* Lindl. Stein) and 'Ueang Sae' (*Dendrobium scabrilingue* Lindl.), native to Mae Hong Son, for reintroduction into their natural habitats. Her

Majesty's work in the conservation of natural resources and the environment has admirably gained international recognition. Apart from several awards, in 1986 she was presented with a certificate by the World Wide Fund for Nature proclaiming her one of the world's leading conservationists. In 1992 the Asian Institute of Technology (AIT) presented her with a gold medal for her work in conservation. In 2010 the Royal Thai Government designated Her Majesty Queen Sirikit 'The Mother of Biodiversity Protection' in accordance with Her Majesty's lifelong duties dedicated to the protection of nature and biological diversity or biodiversity. In fact, she had led the conservation activities on biological resources more than three decades prior to the world community's creation of the Convention on Biological Diversity (CBD) in 1992. Many obligations contained in the Convention are surprisingly in conformity with Her Majesty's activities on the aspects of conservation and sustainable management of biological diversity.

Lan Dusita, a fragile habitat of seasonal blanket marsh vegetation

Her Majesty has clearly shown her fascination for the natural splendour of the wild flower fields in the northeast. Prior to 2005, Her Majesty normally went to the Phupan Palace in Sakon Nakhon during October-November to follow up various royal assignments in rural areas. While residing at the palace, after long and strenuous daily visits to the local populace and royal project work in remote areas, she loved to spend her free time in the breezy evening in the wilderness of the wild flower field adjoining the palace compound. Beyond the deciduous dipterocarp forest margins, the open, wet forest floor is enriched with a mass of miniature wild plants in bluish violet to deep violet blooms. They are small, erect inflorescences of tiny, delicate flowers clustered closely towards the end of the stalks. The flowers bloom gradually one after another. The beauty of this miniature plant pleased Her Majesty and she graciously granted it the royal name 'Dusita (ดุสิตา)'. Accordingly, the sandstone plain of the wild flower field is called 'Lan Dusita (ลานดุสิตา)'. Though Dusita dominates the field, there are also masses of color with other beautiful wild flowers of remarkable appearance. Additionally, Her Majesty named the tiny golden yellow orchid-like flowers 'Soi Suwanna (สร้อยสุวรรณา)'; the pale-pink or pinkish white flowers 'Thip Kesorn

(ทิพเกสร)'; the sky blue to mauve blue tulip-shaped flowers 'Sarassa Chandhorn (สรัสจันทร)'; and the compact white globose flower heads 'Manee Dheva (มณีเทวา)'.

The wet wild flower field or 'seasonal blanket marsh vegetation' in the northeast can be categorized ecologically as a type of seasonal wetland comprised of diverse flora, mainly herbaceous plants, grasses and sedges. This unique vegetation habitat is characterized by an extensive blanket-like layer of wet organic soils or substrates overlaying flat sandstone rock formations or 'Phalanhin' on the exposed floor of deciduous dipterocarp forest. After a long, hot and wet rainy season, cool breezes start to blow at the onset of the cold season and a variety of small flowering herbs profusely carpeting the wet ground floor come to life again. Their small, delicate and colorful flowers will soon competitively blossom, spreading their vivid floral beauty across the wide fields.

The main floristic components of these wild flower fields belong to the carnivorous genera of Sarai Khaonieo (สาหร่ายข้าวเหนียว)-*Utricularia* spp. (Lentibulariaceae) and Yad Namkhang (หยาดน้ำค้าง-*Drosera* spp. (Droseraceae), the mycotrophic to autotrophic genus of Dokdin (ดอกดิน)-*Burmannia* spp. (Burmanniaceae), and the other common genera of Kadum Ngoen (กระดุมเงิน)-*Eriocaulon* spp. (Eriocaulaceae) and Yabua (หญ้าบัว)-*Xyris* spp. (Xyridaceae). The height of the plants in full bloom varies from 7 to 25 cm, or rarely up to 40 cm, depending on topography, amount and distribution of rainfall, temperature, fire frequency, presence of dominant species and some other biotic factors. As regards the existing wet grassy habitat, climate, soil and soil water are the main interacting environmental factors that influence the distribution of these plants and plant communities. The seasonal wetland vegetation, as exemplified by the wet wild flower field Lan Dusita, is commonly encountered in the areas where precipitation and the stream draining water in the rainy season are their main water supplies. The soils in the wet field become temporarily water-saturated after heavy rain. Following the week-long blooming period, the substrates dry out and the plants completely wither and turn straw-colored in the hot dry season.

Due to the very poor nutrient availability in the wet substrate layer, the wild flowering herbs have to adapt themselves by means of trapping devices to capture microfauna to compensate for the lack of nutrients for their survival and growth. The carnivorous plants are thus abundant especially in the open wet ground floor of deciduous dipterocarp forest. The carnivorous plants of the genus Utricularia mostly inhabit water-saturated soils, where their tiny bladder-like traps can be perpetually exposed to continuously moving water through the substrates. Three miniature wild flowering herbs, Dusita, Soi Suwanna and Thip Kesorn thrive well in very wet soils which are poor in dissolved minerals, where their carnivorous nature renders them a competitive advantage. Their minute aquatic traps are capable of capturing mostly aquatic microorganisms. The other two small herbaceous plants are of autotrophic (Manee Dheva) or semi-mycotropic (Sarassa Chandhorn) habits. These wild flowering plants adapt themselves for their survival in inclement conditions. Most of the tiny plants are of herbaceous type, which has a short life cycle. They become fully grown and bloom in the shortest possible time in a single rainy season, and perish in the hot, dry season. The new plant growth will come to life again at an appropriate time in the next rainy season.

Botany of Her Majesty's favorite wild flowering plants

Botanical details (Taylor, 1989; Parnell, 2005) of Her Majesty's five favorite miniature plants proliferating in the wet wild flower fields are given below:

Dusita (ดุสิตา)-*Utricularia delphinioides* Thorel ex Pellegr. (Lentibulariaceae)

A small, delicate, carnivorous, annual herb, 8-20 cm tall. True roots absent. Root-like rhizoids and stolons infrequent, filiform. Traps usually few at flowering, mostly on leaves and stolons, minute, bladder-like, ovoid. Leaves solitary or few, delicate, laminar oblong-spathulate, 1-2.6 cm long, usually absent at flowering. Inflorescence erect, solitary, 10-45 cm long, usually 6-18-flowered. Flowers are many and always crowded near the apex, widely spaced low down and few. Bracts at the base, ovate, 2-6 mm long. Bracteoles linear, 2-3 mm long. Pedicels erect, 0.4-1.2 cm long.

Sepals fused, deeply 2-lobed. Petals fused, 2-lipped, asymmetrical, 0.5-1.2 cm long, blue, deep blue, blue-violet to metallic blue; upper lip erect, smaller than lower lip, lower lip spreading horizontally to erect, metallic silvery deep blue on inner surface, palate prominent, sometimes with a white streak on either side; spur 4-7 mm long, pointing downward, slightly curved. Stamens 2. Ovary superior, of 2 carpels with 1 locule. Fruit an ovoid, dehiscent capsule.

Dusita is distributed in Cambodia, Laos and Vietnam. In Thailand it is locally common in the northeastern, eastern and southeastern regions. It always grows in open, wet places, though it is a terrestrial plant amongst grasses and sedges in the flat sandstone terrain on the wet ground floor of deciduous dipterocarp forest and open pine savanna. It is found growing in a variety of marshy habitats including paddy fields at low elevations to ca.1400 m. Flowering occurs mainly from October to December.

Soi Suwanna (สร้อยสุวรรณา)-*Utricularia bifida* L. (Lentibulariaceae)

A small, terrestrial, carnivorous, annual herb, 7-30 cm tall, without true roots. Stems modified into rhizoids and stolons. Rhizoids filiform, branched. Stolons infrequent, filiform. Digestive traps numerous, bladder-like, reniform, 0.5-1 mm long, shortly stalked, borne on rhizoids and stolons. Leaves few, arising from stolon nodes, linear, 1-3 cm long, 1-nerved, membranous. Inflorescence erect, solitary, 6 -18 cm long, 1-9-flowered; flowers widely spaced. Bracts at the base, ovate, 1-2 mm long, occasionally pinkish tinged. Bracteoles minute, subulate. Pedicels 3-4 mm long, erect, strongly deflexed and enlarged in fruit. Sepals fused, deeply 2-lobed, lobes subequal, 2-4 mm long. Petals fused, 2-lipped, spurred, bright yellow, 6-10 mm long, upper lip erect, much smaller than lower lip, lower lip spreading horizontally to erect, both occasionally with red markings, palate prominent, deeper yellow; spur 3-6 mm long, facing downward, straight to slightly curved, long pointed. Stamens 2. Ovary superior, of 2 carpels with a single locule. Fruit broadly ellipsoid capsule, 2.5-3 mm, dehiscent, thin-walled.

Soi Suwanna is widely distributed in India, China, Taiwan, Japan, Southeast Asia and North Australia. In Thailand it is found scattered all over the country in moist to wet sandy, peaty-like substrate that is associated with soils or sediments derived from sandstone rocks. It is more gregarious in extensive patches in open wet grassy grounds on the flat sandstone rock formation in deciduous dipterocarp forest of the Korat plateau at elevations between 200 and 500 m, and up to ca.1300 m in the flat-topped sandstone mountains of Phu Kradueng and Phu Luang in Loei Province.

Thip Kesorn (ทิพเกสร)-*Utricularia minutissima* Vahl (Lentibulariaceae)

A small, terrestrial, carnivorous, annual herb, 5-12 cm tall, without true roots. Stems modified into capillary stolons and rhizoids. Stolons few. Rhizoids few, short, unbranched. Traps or digestive bladders numerous, minute, stalked, ovoid, mostly on stolons and leaves. Leaves few from peduncle bases and stolons, absent at flowering; leaf blade membranous, narrowly linear, 0.6-2.5 cm long, base tapering onto petiole, apex obtuse. Inflorescence solitary, erect, 4-8 cm long, 1-6-flowered; flowers widely spaced. Bracts narrowly ovate, at the base. Bracteoles similar but narrower. Flowers pale purplish-pink or white, 5-8 mm long, on erect flowering stalk. Sepals fused, 2-lobed, lobes equal. Petals fused, 2-lipped; upper lip very much smaller than lower lip, palate yellow, throat white; spur 2-3 mm long, pointing downwards, slightly longer than lower lip, straight; lower lip spreading; Stamens 2, at base of corolla tube, included. Carpels 2, connate into 1-locular, superior ovary. Fruit obliquely ellipsoid capsule, dehiscent.

Thip Kesorn is widespread from India, China, South Japan, Southeast Asia to North Australia. In Thailand it is sporadically found all over the country. It grows in wet sandy soil in open grassy places and wet sandstone terrain at low elevations. In northeastern Thailand, the plant grows on the wet grassy ground floor of deciduous dipterocarp forest in association with Dusita, Soi Suwanna, Sarassa Chandhorn, and Manee Dheva. Flowering is mainly from October to December.

Sarassa Chandhorn (สรัสจันทร)-*Burmannia coelestris* D. Don (Burmanniaceae)

A small, herbaceous, annual plant with chlorophyll, autotrophic or semi-mycotrophic. Stems green, slender, when flowering 10-30 cm tall. Leaves simple, with both basal and stem leaves. Basal leaves few, spirally arranged in a radical rosette at the base of stem, linear to lanceolate, 0.5-2 cm long, apex pointed, recurved. Stem leaves small, bract-like. Inflorescence 1 or 2-6-flowered; bracts lanceolate, 3-6 mm long. Flowers sky blue, mauve-blue, pale violet-blue or pinkish blue, with yellow tinge at the tops, 1-1.5 cm long, usually solitary or in a group of 2-3 at the end of slender and erect flowering stalk. Perianth tube actinomorphic, with 3 prominent, lateral wings. Tepals 6, in 2 whorls, outer tepals ovate-triangular, inner tepals triangular. Stamens sessile, arranged in 3 inside the perianth tube. Ovaries ellipsoid to obovoid, trigonous, 3-loculed, with axile placentation. Fruits capsular, obovoid, with persistent perianth, irregularly dehiscent.

Sarassa Chandhorn is widely distributed in India, Bangladesh, Southeast Asia and Australia. It is distributed all over Thailand, but is more abundant on the sandstone plateau of the northeastern region at elevations of 150-1,400 m. It grows well in marshy grassland with the wet carpet-like substrate overlaying the flat sandstone rock formation on the exposed ground floor of deciduous dipterocarp forest. It is commonly interspersed in between a variety of herbaceous plants, but rarely exists in dense clumps. Flowering time varies from September to December. The blooming period usually lasts for 2-3 weeks, or longer if the rain-fed water and stream draining water can continuously seep through the wet grassy fields.

Manee Dheva (มณีเทวา)-*Eriocaulon smitinandii* Mold. (Eriocaulaceae)

A small, terrestrial, tufted and rooted, annual herb. Stems 3-7 cm tall. Leaves simple, grass-like, narrow, linear, 3-5 cm long, spirally imbricated at bases appearing in a small tuft, leaf apex pointed, slightly recurved, leaf base sheathing. Inflorescence

stalk or scape several, arising from the basal rosette, erect, slender, much varying in length from 4-25 cm, angled, topped with white, globose, involucral head, 6-9 mm diameter, involucral bracts reflexed. Flowers minute, numerous, unisexual, with both sexes in the same head. Male flowers: sepals 3. Stamens 6 in 2 whorls. Female flowers: petals not prominent. Ovary superior, 3-loculed. Fruit a loculicidally dehiscent capsule.

Manee Dheva is confined to the Korat Plateau in northeastern Thailand. It is widespread on the exposed, flat sandstone rocks in deciduous dipterocarp forest. The plant grows in dense tufts, interspersed between Dusita, Soi Suwanna, Thip Kesorn and Sarassa chandhorn. Flowering occurs during September to December.

Conservation of the threatened wild flower fields in northeastern Thailand

The wild flower fields can be considered as hidden and neglected natural treasures of Thailand. Over the past four decades this plant community, which once extensively covered the sandstone plateau in the northeast, has been diminished or much degraded into scattered fragments. Deforestation, illegal forest encroachment, grazing, uncontrolled wild fire, and unsustainable development are all responsible for the depletion of the wild flower fields. In addition, this fragile wetland habitat can be affected by climate changes such as erratic rainfall and global warming. Although the five flowering plants are widespread, their conservation status can be categorized as vulnerable in Thailand due to the habitat loss at an alarming rate by deforestation and urban development.

Lan Dusita was hitherto the only well-known wild flower field in Thailand. In November 1999, Her Majesty the Queen spent a few days at the Sirindhorn Dam to visit the local populace in remote areas. In the evening of November 22,1999, she dropped in for the first time at Pha Taem National Park, Khong Jiam District of Ubon Ratchathani Province, to witness an unseen, wide stretch of the vast blooming field, undoubtedly the most extensive and massive wild flower field in Thailand. Over the open plain of the grand sandstone terrain in deciduous dipterocarp forest, one can be

fascinated with the magnificent work of nature in the multicolored blooming wild flowers. The field of miniature flowering plants in full bloom resembles in general appearance the 'Lan Dusita' wild flower field in Sakon Nakhon. But the 'Pha Taem' wild flower field is much more extensive and strikingly dominated by the bright golden yellow bloom of 'Soi Suwanna'. The other common wild flowers in the field are 'Dusita', 'Tip Kesorn', 'Sarassa Chandhorn' and 'Manee Dheva'. Thereafter Her Majesty made a yearly visit to 'Pha Taem' wild flower field until December 2005.

Because of Her Majesty's profound passion for the wild flowers, she has brought in earnest the picturesque wild flower fields to the attention of public and official authorities. Her Majesty has instructed the government agencies concerned to take proper conservation measures and undertake sustainable management of these threatened natural resources. To date the 'Pha Taem' wild flower field has become one of the ecotourism attractions in Ubon Ratchathani during the blooming period from October to December.

With Her Majesty's great concern over the conservation of natural resources and the environment she once said in a speech, ".....Thailand is fortunate that we can carry out conservation activities with hope and pride, because we still have sufficient natural resources needed for the country's economic, social and technological development. Therefore we must protect our invaluable natural heritage to the best of our ability. I truly hope that the Thai people will take pride in our natural beauty and in the prosperity of our lands. Let us all join hands in conserving our natural resources so that they may remain ours forever....."

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Figure 1: Her Majesty Queen Sirikit is holding a miniature plant, Manee Dheva (*Eriocaulon smitinandii* Mold.) in the wild flower field, Pha Taem National Park, Ubon Ratchathani (November 30, 2003).



Figure 2: One of the most extensive wild flower fields in Thailand dominated by the bright yellow bloom of Soi suwanna(*Utricularia bifida* L.), Pha Taem National Park, Ubon Ratchathani (November, 2001).



Figure 3: Dusita (*Utricularia delphinioides* Thorel ex Pellegr).



Figure 4: Soi Suwanna (*Utricularia bifida* L.).

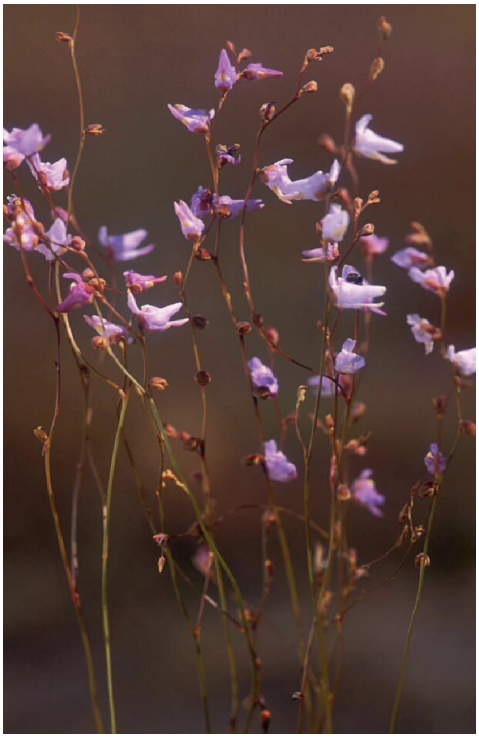

Figure 5: Tip Kesorn (*Utricularia minutissima* Vahl)



Figure 6: Sarassa Chandhorn
(*Burmannia coelestris* D.Don)



Figure 7: Manee Dheva
(*Eriocaulon smitinandii* Mold.)

Mangroves … Coastal Treasure of Thailand

Sanit Aksornkoae[1]

Abstract

Mangroves are among the most significant, highly productive and valuable coastal ecosystems of the Kingdom of Thailand. They constitute a rich natural resource including many varieties of flora and fauna. Mangroves provide considerable benefits, many goods and many varieties of services which contribute towards national development. Mangroves are an important asset for Thailand as they provide both economic and ecological benefits. Unfortunately, mangroves forests have been rapidly diminishing in the last three decades due to threats from severe degradation occuring from widespread development. However, intensive management of mangrove forests with the integration of ecological and economic approaches has been very effective. Rehabilitation, protection and conservation efforts coupled with stakeholder participation, strong technical support and strict law enforcement has been fully implemented. Under these measures, it is expected that mangroves, which are considered as "Thailand's Coastal Treasure" can be preserved in the long term where the young generation and the nation as a whole can continue to reap its benefits.

Keywords: Mangroves, Coastal treasure

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Introduction

"His Majesty the king with wary heart has said to me that he has been trying his best to stop people from destroying the mangrove forests. I myself do not understand at first why His Majesty has to be so concerned. His Majesty also told me that the mangrove forests served as refuges for larvae and small fishes, shrimps and crabs to reside in when they were not strong enough to defend themselves. Mangrove forests served as the coastal nursery which in time would provide the fishery resources for us all. Nowadays the mangrove forests were encroached upon by selfish people who destroyed the whole forests. This has been going on for a long time. His Majesty the king has tirelessly fought to save the precious mangrove forests by trying to buy back some of these forests. Princess Maha Chakri Sirindhorn also fought alongside with His Majesty the King trying to save the mangrove forests"

Her Majesty the Queen Sirikit's speech
on the occasion of Her Majesty's Birthday
on Saturday 11th August 2008
at Sala Dusitalai, Dusit Palace, Bangkok

Mangrove forests in general grow along coastlines in most tropical and sub-tropical countries. They also grow on sheltered shores of deltas and alongside river estuaries and creeks where there is an abundance of muddy soils within the inter-tidal zone.

Mangroves are among the most significant and highly productive coastal ecosystems. They support a diversity of flora and fauna of marine, fresh water and terrestrial species. Mangroves play a vital role particularly in the lives of people living in coastal areas. They also contribute towards national development by providing various benefits, goods and ecosystem services. Wood from mangroves can be used for making charcoal, domestic fuel, poles, wood-chips, tannin, wood tar and construction materials. Fruits, propagules and young leaves of some mangrove species are edible and can be consumed. Certain species of mangroves can also be used for medicinal purposes. Mangrove forests also play a significant ecological role by

providing food, nursery and spawning grounds for many commercial aquatic fauna like fish, prawn, and crabs. They also provide habitats for terrestrial animals like birds and reptiles. Mangroves also have other important ecological roles such as providing protection from coastal erosion, sediment stabilization, improving water quality, reducing the negative effects of strong windflows, dispersing energy of tidal waves and reducing global warming by acting as a carbon sink.

Unfortunately, mangrove forests in Thailand have been heavily depleted during the period of 1980-2000 due to conflicting development purposes, in particular shrimp farming. However, the country has properly formulated the national mangrove policy which includes rehabilitation, conservation and sustainable utilization of mangrove resources. Current efforts have created a trend towards improvement, which is favorable for the mangrove ecosystem. At present intensive management plans that have integrated ecological and economical approaches are being implemented to restore the endangered mangrove ecosystem. With these efforts, it is expected that mangroves in Thailand can be preserved in the long run so that the young generation and the nation as a whole can reap its various benefits. This paper provides a detailed description about mangroves in Thailand, the ecosystem goods and services it provides and the current status of mangroves in Thailand. The paper concludes with discussing various approaches and strategies for the sustainable management of mangrove ecosystems.

Mangrove Areas and Distribution

The mangrove forests in Thailand cover approximately 1,400 km or 50% of the total 2,800 km long coastline. They are also found alongside lagoons and rivers in inter-tidal zones between low (neap) and high (spring) tide. The total mangrove area of the country has declined drastically with time. Charruppat and Charruppat (1997) found significant reductions in mangrove area from the period of 1975 to 1996. In 1975, they found through the use of satellite imageries that the total area was approximately 1,954,375 rai or 312,700 ha; in 1996 it was only 1,047,380 rai or 167,580 ha. However, recent surveys done in 2004 by the Department of Marine and Coastal Resources of the Ministry of Natural Resources and Environment found that mangrove area increased to approximately 1,460,622 rai or 233,700 ha, which is about 0.0016% of the total 950

million rai or 15.2 million ha of the total global mangrove area (spading et al., 2011).

Mangrove forests are distributed throughout the Thai coastal line in the southern and south-eastern parts of the country and in the upper regions of the Gulf of Thailand (Figure 1). The best developed mangrove forests are found on the west coast of the peninsula and the areas on the Andaman coastline in the provinces of Phang-nga, Ranong, Trang, Krabi and Stun (Figure 2). Mangroves in the western part of the Gulf of Thailand, especially in Rayong, Chantaburi, Cholburi are mainly composed of small-sized trees. The tree size is small in this area due to the heavy selective and subsidized cutting activities done over many years by local communities. Large areas of degraded mangroves consisting of various small non-commercial tree species can be found in the inner part of the Gulf of Thailand, particularly in Samut Sakorn, Samut Songkram and Samut Prakarn provinces. These provinces were once long occupied by fish and shrimp ponds. After these ponds were abandoned, the areas were again recolonized by new mangrove species, particularly the *Avicennia* and *Rhizophora* species (Figure 3).



Figure 1: Distribution of mangroves along the coastline of Thailand



Figure 2: The best developed mangrove forests along the Andaman coastline.



Figure 3: Young mangroves forest with a narrow strip along the coastline of the Gulf of Thailand.

Mangrove Values

Mangroves have a variety of values. Mangroves act as a "wood bank" (Figure 4) where they can be cut for firewood, charcoal, wood construction. They are also a home to marine and terrestrial animals living in coastal areas such as shrimp, crab, fish. The mangrove environment provides a nursery, spawning grounds, habitat and shelter for these animals. In addition, mangroves work as a "kitchen" and provide an enormous amount of food from the dead leaves that fall each year. These leaves decay and provide highly nutritious feed to plants and animals that help them in their growth. Mangroves also operate as an effective and low capital "wastewater treatment plant", specific root characteristics of mangroves can purify wastewater; they also serves as an "air purifier plant" where they can absorb carbon dioxide and release oxygen into the air. Mangroves also serve as "hospitals" where they provide various herbs and medicinal plants to coastal communities. Furthermore, the mangrove acts as a natural "coastal barrier" that prevents soil erosion and impedes in the path of tsunamis (Figure 5). The mangrove acts as a "natural learning classroom" where coastal ecosystem characteristics can be studied. The mangrove also serves the function of a "bridge" that connects the land and sea and assists in creating the proper balance and functioning of the coastal ecosystem. The mangrove is also recognized as a "livelihood resource" for people who live in the coastal and adjacent areas. As we can see, mangroves are truly natural coastal treasures and provide significant social, economic and environmental security for local communities and the nation as a whole.

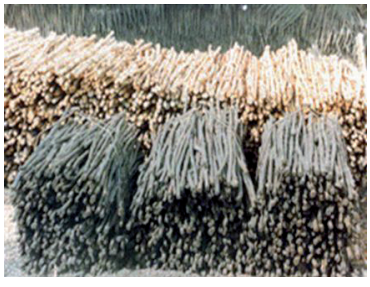


Figure 4: Wood from mangroves for firewood and charcoal making



Figure 5: Tsunami resistance from mangroves at Phang-nga Province, in 2004

Mangroves … National, Social and Economic Costs

Mangroves provide welfare to coastal communities (Figure 6), they are like a supermarket that provide a variety of products such as shrimp, shellfish, crab, fish, and energy as well as firewood/charcoal and herbs. If put in economic terms, mangroves are comparable to providing "welfare cost" assurance to coastal communities (Figure 7) and localities throughout the nation. The mangrove contributes towards providing a "sufficient-living" for several generations of coastal communities and localities.



Figure 6: Mangrove products at a local supermarket in a coastal community



Figure 7: A coastal community along the coastline

Mangrove Environment

Generally, mangroves cover an area along the coastline with very strict to special environmental features; for example tropical climate, inter-tidal zones, muddy soil and brackish water. The structure and functioning of the mangrove ecosystem is strongly influenced by a combination of many important environmental factors (Aksornkoae, 1993; Hutchings and Saenger, 1987) including topography, climate, tidal range and inundation, soil and water conditions, waves and currents and nutrients both from land and sea.

Mangrove Flora

Mangrove forests are rich in floristic composition including tree species, palms, epiphytic flowering plants, algae and phytoplankton. According to the record of mangrove species in Thailand (Aksornkoae at al. 1992 and Aksornkoae, 1993), there are approximately 74 species. Most of the dominant and important species are

Rhizophora mucronata, Rhizophora apiculata, Avicennia_alba, Avicennia marina, Bruquiera cylindrica, Bruquiera gymnorrhiza, Ceriops tagal, Excoecaria agallocha, Sonneratia alba, Sonneratia caseolaris, Xylocarpus granatum, Xylocarpus moluccensis, Lumnitzera racemosa, Lumnitzera littoraria, and *Excoecaria agallocha*. Two common species of palms, *Nypa fruiticans* and *Phoenix paludosa,* and two ferns, *Acrosticum aureum* and *Acrostichum spiciosum* are abundant in mangrove forests. Figure 8 illustrates some of the important tree species in mangroves.

The epiphytes are widespread within the mangrove forest, the common species are *Dendrobium crumenatum, Hoya parasitica, Paphiopidilum exua, Luisia zollingeri* and *Viseum ovalifolium*. All these species can be found on stems, branches and roots of various mangrove tree species and dead trunks.

Many genera of algae which are attached to the trunks and roots of mangrove trees are highly productive, particularly *Rhizophora, Avicennia* and *Bruguiera*. Some algae species are attached to stones, shells, dead leaves or debris in the mangrove forest. There are about 46 species of algae reported by Lewmanomont (1976), and the important species are *Catenella, Bostrychia, Gracillaria, Hypnea, Caulerpa* and *Dictyota*.

Mangrove forests are also favourable habitats for phytoplanktons. There are more than 100 genera of phytoplankton communities in the mangrove (Paphavasit et al., 2009). The important species mainly belong to the genera of *Oscillatoria, Palaria, Chaetoceros, Thalassionema, Anabaena, Thalasssiosira, Bacillaria* and *Nitzschia*.



Rhizophora *Bruguiera* *Xylocarpus*

Figure 8: Some important tree species in mangrove forests; *Rhizophora, Bruguiera* and *Xylocarpus*.

Mangrove Fauna

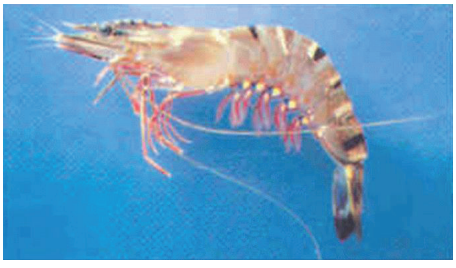
Mangrove forests provide food and habitats for faunistic populations including fresh water, marine and terrestrial populations which are of considerable size and variety. The diversity of fauna within the mangroves is high due to ample food, resources and a wide range of microhabitats. These encompass shrimps, fishes, crabs, molluscs, birds, reptiles, amphibians and mammals.

Mangrove Shrimps

There are approximately 15 species of shrimps that are found in mangroves. There are four important families of shrimp species, namely Penaeidae, Pelaemonidae, Alpheidae and Ogyridae. The genera *Penaeus* and *Metapenaeus* are found in abundance, especially *Penaeus merguiensis*, *Penaeus monodon*, *Penaeus indica, Metapenaeus ensis* and *Metapenaeus hungerfordi*. Other shrimp species like *Palaemon semmelinkii*, *Alpheaus euphrosyne* and *Ogyrides* sp are also found in mangrove forests. However, species of banana prawn (*Penaeus merguiensis)* and giant tiger prawn (*Penaeus monodon)* have the highest commercial value. There are

also some freshwater shrimp species such as *Macrobrachium rosenbergii* which use mangrove forests as spawning grounds. Following their spawning phase they return to grow in their native fresh water habitat.

Figure 9 shows two species of commercially significant shrimps in mangrove forests.



Penaeus monodon



Penaeus merguiensis

Figure 9: Important commercially shrimp species in mangroves

Mangrove Fishes

Generally, fish are abundant in mangrove forests both in terms of number and diversity. Fish use mangrove forests as nursery grounds, breeding grounds, shelter and permanent habitats. Monkolprasit et al. (1983) classified approximately 72 mangrove fish species into four groups; true residents, partial residents, tidal visitors and seasonal visitors. *Chanos chanos*, *Lates* sp and *Mugil* sp are the most commercially important fish species in mangroves as shown in Figure 10. Other common fish species found in the mangrove forest are *Ambassis* spp, *Epinephelus* spp, *Leiognthus* spp, *Stigmatogobius* spp, *Lujanus* spp, *Brachygobius* spp, and *Boleophthalmus boddanti*.



Chanos chanos



Lates sp



Mugil sp

Figure 10: Important commercially fish species in mangroves

Mangrove Crabs

There are approximately 30 species of crabs found in mangroves as recorded by Naiyanetr (1985). A majority of crabs belong to the four predominant families, Grapsidae, Ocypodidae, Portunidae and Gecarcinidae. The most common and important species are grapsis crabs (*Sesamar* spp) and fiddler crabs (*Uca* spp). Many crabs in mangroves have attractive colours, in particular the fiddler crabs (*Uca rosea*, *Uca vocans* and *Uca forcipata*). The mangrove mud crab, *Scylla serrata* is the largest edible crab and is of commercial importance. The most common and important species of mangrove crabs are shown in Figure 11.



Sesamar spp *Scylla serrata* *Uca rosea*

Figure 11: Common and important species of mangrove crabs

Mangrove Molluscs

Numerous molluscs are found in mangroves. The univalves, *Nerita* spp, *Littorina* spp and *Ellobium* spp are common and abundant. Other species in the univalve group are *Cerithidea* spp, *Cassidula aurisfelis*, *Elysia viridis* and *Monodonta labio*. Bivalves are also common and are often of high commercial value. These are oyster *(Crassostrea commercialis)*, mangrove mussels, mangrove cockles (*Andara* sp) and a number of species of mangrove clams. Bivalves which feed on rotten stems and dead mangrove wood, particularly the *Teredo* spp are also found but in small numbers. Oyster, clam and cockle as shown in Figure 12 are common and commercial species in mangroves.


Oyster


Clam


Cockle

Figure 12: Common and commercial species of molluscs in mangroves

Other Mangrove Animals

There are various animals that live in the mangroves such as birds, egrets, herons, kingfishers, mammals such as monkeys, otters, wildcats, and bats. Dugong and dolphin species are also found in the mangroves. Reptiles such as snakes, turtles, and various species of insects such as moth, butterfly, caterpillars and bees are also found in mangroves. Fireflies on the *Sonneratia* sp are a major attraction and various tourists visiting mangroves come to see them. Other smaller organisms such as copepods, nematodes and fungi are also important species and in abundance in mangrove forests.

Mangroves….. National Livelihood Resources

The mangroves provide numerous livelihood opportunities that fulfill the four basic needs of living such as shelter, food, medicine and cloth. People who live in coastal areas and/or nearby the mangrove forests achieve these benefits through the utilization of mangrove resources.

Mangroves are composed of various kinds of trees, as it was mentioned previously, they act as a "wood bank". Coastal communities can use mangrove wood and make a living out of them through several means; they can use it as poles, fire wood, construction materials, and fishing gears. Woods from species of *Rhizophora*, *Avicennia*, *Bruguiera* and *Xylocarpus* are particularly beneficial for use by coastal communities. In addition, mangrove woods from *Rhizophora* spp are widely used for making charcoal that has the best quality compared to other mangrove and terrestrial woods. It can also be used for domestic cooking, and surplus amounts can be sold for additional income.

Propagules from many species of mangrove can be cooked for tasty desserts. Figure 13 shows a dessert made from propagules of *Bruguiera gymnorrhiza*. This product can be a source of income for coastal communities. This dessert was first created by the "Nam-cheiw mangrove villager" in Trad province. Cookies, which are made from the propagules of the *Bruguiera cylindrica* spp are also a popular dish made by villagers of Satul province.

Nipa, the mangrove palm, is well known for its multi-purpose use as leaves for roofing, for cigarette wrapping and raw material for baskets. Fruits from nipa are widely used in desserts. In addition, nipa sugar is also used in cooking and for use in bakery products. Products from nipa palm are commercially important and can help raise monthly income to approximately 5,000 baht per family per rai (0.16 ha) in Pakpanang District of Nakorn Sri Thammarat province, (Bamroongrugsa, 2001). In addition, Nipa Palm can also be used as a potential alternative source for bioethanol, as studied by Matsui et al. (2011). Honey can also be collected from mangrove forests (as shown in Figure 14). There are various kinds of food items produced by local mangrove communities from different parts of mangrove trees as described by Chumrieng et al. (2011). Another traditional use of mangrove plants is medicines. Certain species of mangroves contain active substances that have the power to cure various ailments. However, these traditional medicinal plants have not received the support of scientific investigation and experiments.



Figure 13: Propagules of *Bruguiera cylindrica* for making cookies



Figure 14: Honey collected from mangroves

Mangrove forests play a significant role in sustaining the productivity of inshore and offshore fisheries. They contribute through the supply of nutrients to the ecosystem, provide shelter and nurseries for fish and help support numerous aquatic species. The importance of mangrove forests as shelters and nurseries for commercial fishery species is becoming increasingly evident. Many species of penaeied shrimp use mangrove forests as shelter and nursery grounds for part of their life cycle. Mangrove waters are usually rich in nutrients (detritus) and suitable for fishing. The major fishery sources found in mangrove waters are detritivorous fish, crabs, crustaceans and molluscs. Communities that live in or near mangrove forests catch fish, shrimp, crabs and molluscs daily from the surrounding estuarine areas (Figure 15). Aquaculture is widely practiced in the mangroves and most of the culture fisheries are shrimp farms, particularly the *Penaeus monodon* spp. Currently crabs are also harvested widely in mangroves. There are other species such as oyster, cockle and green mussel which are not harvested for large-scale commercial use. Mangroves serve a very important role for the growth and productivity of these species by providing a source of dissolved and suspended nutrients.



Fish catching



Molluscs collection

Figure 15: Fishing and molluscs collecting by local mangrove community

Mangrove forests, serve as a link between marine and terrestrial ecosystems. They also play a significant role in maintaining the health and stability of various adjoining ecosystems such as seagrass beds, coral reefs and marine ecosystems. Mangroves represent a unique ecological niche and habitat for a variety of marine and terrestrial animals. The amount of organic matter and nutrients produced by the

forests not only support the mangrove ecosystem but also other related ecosystems as mentioned earlier. Moreover, mangroves help to stabilize shorelines and estuaries by protecting them against tidal bores, soil erosion and large storms such as tsunamis. They also help reduce global warming by acting as a carbon sink (Laffoley and Grimsditch, 2009).

Mangrove forests are a coastal treasure and an asset for Thailand's coastal communities. If mangroves were destroyed, damaged or went extinct, there would be no habitat or food to support the various plant and animal organisms in the area. Their destruction would also effect the livelihoods of coastal communities. Furthermore, the loss of mangrove-related ecosystems would disturb other ecosystems over a considerable area, which could result in large-scale economic loss and socio-cultural change in coastal communities.

Mangrove Degradation and Depletion

There are various important threats to the degradation and depletion of mangrove forests. An extensive area of mangrove habitat has been destroyed with remaining areas facing increasing threat from anthropogenic activities. There are ten main causes for encroachment into mangrove areas in Thailand, these are aquaculture, mining, agriculture, urbanization, ports and harbor construction, roads and transmission lines, dredging, industry and power plants, salt production and harvesting of forest woods. Of these ten causes, each cause varies in extent and degree of negative impact on the mangrove ecosystem.

In 1961, mangrove forests were estimated to cover an area of approximately 2,299,375 rai or 367,900 ha as recorded by Klankamsorn and Charuppat (1982). The area has gradually decreased to 1,954,575 rai or 312,732 ha in 1975; 1,795,675 rai or 287,308 ha in 1979 and to 1,227,675 rai or 196,428 ha in 1986. As per a survey done in 1996, approximately 1,047,381 rai or 167,580 ha (Charuppat and Charuppat, 1997) of mangrove area remains in Thailand. Approximately 50% of the total mangrove area has been depleted due to shrimp farming (Figure 16) particularly on the eastern and southern coasts of Thailand. Mangrove forests along the coastline of the Gulf of Thailand have also been lost, especially in the province of Chantaburi, Samut

Songkram, Samut Sakorn, Surat Thani and Nakorn Si Thammarat. However, mangrove habitat in the country has increased in the last few years according to the latest survey conducted in 2004 by the Department of Marine and Coastal Resources of the Ministry of Natural Resources and Environment. Mangrove area increased to approximately 1,460,622 rai or 233,700 ha, the area recorded in 1996 was only 1,047,381 rai or 167,580 ha. There is hope that mangrove forest area will increase in the future. With close participation among all stakeholders including government agencies, the private sector, non-government agencies and local communities, mangrove habitat area can increase through important activities like rehabilitation and conservation.



Shrimp ponds



Resettlement area

Figure 16: Clearing of mangrove forests for shrimp farming and resettlement area.

Future Directions and Sustainable Mangrove Management

Mangrove forests of the Kingdom of Thailand cover an area of approximately 1.5 million rai or 240,000 ha along the coastlines of the Andaman Sea and the Gulf of Thailand. Covering such an extensive area, these precious ecosystems and their resources will have to be sustainably managed. The holistic management approach should be implemented to achieve economic, social and ecological balance. Three main activities should be implemented in order to facilitate this aim, mangrove rehabilitation, protection and sustainable resource utilization.

Mangrove rehabilitation: Mangrove forests in Thailand previously covered an area of approximately 2.96 million rai or 312,700 ha in 1997. However latest surveys in 2004 found that only 1.46 million rai or 233,700 ha of mangrove habitat remained, revealing an almost 50% depletion in area in less than 20 years. In order to maintain mangrove ecosystem functioning and health, sustained benefits for local communities, economy of the country and natural disaster risk prevention, the re-establishment of mangrove habitat is urgently required. Currently, the government has set up a proper mangrove rehabilitation programme that is targeting the improvement of at least 5,000 rai or 800 ha per annum. There are large potential areas for rehabilitation, particularly abandoned shrimp ponds, mudflats and degraded mangrove areas. Today, mangrove rehabilitation is being practiced with close participation among all stakeholders as illustrated in Figure 17. Since the initiation of the rehabilitation programme, significant establishment of mangrove habitat has been achieved, particularly in abandoned shrimp ponds (Kato et al. 2008) (shown in Figure 18) and along the coastlines.



Figure 17: Participation of Stakeholders in mangrove rehabilitation



Figure 18: Mangrove rehabilitation in abandoned shrimp ponds

Mangrove protection: Mangrove protection is one of the most important activities needed for preserving existing ecosystems. Although protection efforts in the past by government and local communities have not been entirely successful, current efforts which are occuring with close participation among stakeholders have been successful in protecting mangroves. There are many examples of best practices in different areas for mangrove protection, in particular of Pred nai village which is situated in Trad

province. The Department of Marine and Coastal Resources of the Ministry of Natural Resources has taken strong action for mangrove protection, the department has been providing training, running campaigns to bring awareness and participation, and has been disseminating knowledge about the importance and value of mangroves. Hopefully with this level of assistance and effort, it is expected that mangrove forests in Thailand will be well protected.

Sustainable mangrove resource utlization: Mangrove ecosystems comprise of valuable varieties of flora and fauna. People use mangrove resources in many ways for both economic and ecological benefits (as mentioned earlier). Although people have been using the mangrove ecosystem for generations to reap from their direct and indirect benefits, they are inconsiderate of the long term benefits. For this, the Sufficiency-economy approach is essential to educate the people. Based on this philosophy, it is necessary to bring a balance between the use of mangrove resources and the conservation and maintainance of its ecosystem. Achieving this will ensure the sustainable utilization of mangrove resources.

Conclusion

Mangroves are highly productive ecosystems that grow in coastal environments. They are a precious resource, a "Coastal Treasure" that plays a vital role in the lives of local people. They are also an ecologically significant habitat that support the growth and life cycle of various marine and terrestrial species. However, due to increased anthropogenic intervention arising from economic development, the mangrove forest ecosystem has been facing increasing pressure and threats. It is thus required for all stakeholders to effectively apply integrated sustainable management approaches for conserving the mangrove ecosystem through mangrove rehabilitation, mangrove protection and sustainable mangrove resource utilization. For this, the Sufficiency-economy approach should be essentially considered in managing mangrove ecosystems in a sustainable manner.

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Organic Honey of Thailand

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Pichai Kongpitak [3]

Abstract

The organic honey in the kingdom of Thailand is new and innovation since few records in the literatures. Mostly the normal traditional beekeeping in Thailand is possible to be changed to the organic beekeeping in many bee-yards. The point we have to educate the beekeepers and verify the standard of organic honey in the Kingdom. The average annual honey production of a traditional hive is 3-5 kg/annum, while that of a box hive is 5-20 kg/annum. In areas with beekeeping potential, there are two or more harvests resulting from multiple flowering periods. In the country, about 10,000 metric tons of honey are produced annually . The types of honeys produced in Thailand are well known according to their seasons and their botanical origins. These types include *Eupatorium odortum, Dimcarpus fumatus, Hilianthus annus, Sesamum orientale*, and *Croton roxburghii* honeys. The majority of beekeepers extract honey by the traditional straining method, while some beekeepers with modern hives extract their honeys using honey extractors. This method has to be modified to be the standard or organic beekeeping methods. Now China produces organic honey from the Asian honey bee *Apis cerana* more than one million colonies in the forest. Bee flora and the beekeeping practice of Asian honey bees need not use pesticides and anti-biotics.

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This year 2012 is the 80th anniversary of H.M. the Queen's Birthday (12th August). During this auspicious time, H.M.'s message for sustainable agriculture and conservation is that the forests are home of thousands of plant species, which need both "domesticated" and wild bees for pollination in order to produce organic honey and provide food for humans as well as thousands of wild animal species that inhabit the forests.

Keywords: Organic honey, Asian honey bees, bee flora

Introduction

Organic honey is a pure healthy honey from unpolluted virgin forests free from environmental pollutants.The organic honey in the kingdom of Thailand is new and innovation research is needed since there are no records in the literatures. Mostly the normal traditional beekeeping in Thailand is possible to be changed to the organic beekeeping in many bee-yards. It is necessary to educate the beekeepers and vertify the standard of organic honey in Thailand. The average annual honey production of a traditional hive is 3-5 kg/annum, while that of a box hive is 5-10 kg/annum. In areas with beekeeping potential, there are two or more harvests resulting from multiple flowering periods. In the country, about 10,000 metric tons of honey are produced annually (Wongsiri *et.al*, 2010). The types of honeys produced in Thailand are well known according to their seasons and their botanical origins. These types include *Dimocarpus fumitus* (Longan), *Eupatorium odortum*, and other wild plants honeys. The prices of these honeys vary from USD 5 to USD 10 per/kg. Longan honey is in especially high demand in the country and this kind of honey can be exported as the organic honey in the future. The majority of beekeepers extract honey by the modern beekeeping method, while some big company beekeepers with modern hives extract their honeys using machine honey extractors. This method has to be modified to be the standard or organic beekeeping methods. Now in China organic honey is produced from the Asian honey bee *Apis cerana* more than one million colonies in the forest. Bee flora and the beekeeping practice of Asian honey bees **need not use pesticides and anti-biotics.**

Biodiversity of Honey Bees in Thailand

A Black Dwarf Honeybee (*Apis andreniformis*) is the smallest wild bee which has the smallest comb in the world. This dwarf honeybee was first discovered in 1858 by Smith from collected samples from Sarawak, Borneo and the small southern tipped peninsular of Malaysia and was later found in Thailand in 1989. The black dwarf honeybee has similar morphological and biological characteristics as the red dwarf honeybee (*Apis florea*). The only distinctive difference is the reproductive organ of a drone. The discovery (by the Research Unit of Bee Biology, Chulalongkorn University) in this particular area helps clarify the distribution region of black dwarf honeybees and red dwarf honeybees in Thailand and Malaysia (Wongsiri *et al*,2000).

A Black dwarf honeybee's body size is slightly bigger than a housefly. Its abdomen contains clear black and white stripes. Northern villagers call them "Pung Maan". Black dwarf honeybees can normally be found in a forest near mountains or in gardens. They like to build their comb in a tree or a bush that is not too tall. There is only one level in the comb and the comb size is a little bigger than an adult's palm. Generally, a black dwarf honeybee's hive is covered with bushes and branches as a protection from intruders (approximately 20 cm.). During February and April, these honeybees generate the highest amount of honey. Therefore, this period of the year is considered to be a honeybee hunting season by the bee hunters and villagers (Wongsiri and Deowanich,2012).

A black dwarf honeybee is a rare species and the most difficult to find in Thailand. Moreover, this type of bee is neither found in Bangkok nor the metropolitan cities of Thailand. As a result, it is not possible to be commercial bees or to be kept for beekeeping purpose.

A Red Dwarf Honeybee (*Apis florea*) is bigger and has a bigger comb than a black dwarf honeybee but is smaller than an Eastern hive bee whose comb contains many layers. The red dwarf honeybee builds a single comb that is bigger than a black dwarf honeybee. Commonly, the comb is on the branch of a bush tree in a shady area to protect the comb from being directly exposed to the sunlight or the cold. A comb of a red dwarf honeybee, like a black dwarf honeybee's comb, is usually in a bush of thorns to be covered and protected from enemies and invaders. However, it is

discovered that some red dwarf honeybees build their hive on a tall building or under the eaves outside the house. Still, this particular case is very rare. Normally, the comb is approximately 1-15 m. above the ground. This wild red dwarf honeybee is the most common species to be hunted by the bee hunters. Moreover, their honey is sold everywhere in suburban markets of Thailand. Their honey combs are the most popular among honey consumers. Therefore, in the future, it is very likely that a red dwarf honeybee will become a well known commercial species as well as their honey to be certified as the organic honey.

In Bangkok, it is possible to find a red dwarf honeybee comb on a building or a tree such as a rain tree or yellow flame tree that is more than 15 m. tall. Combs of red dwarf honeybees and black dwarf honeybees are very similar. These two types of honeybees can be distinguished from each other through a slight difference in terms of morphology. A black dwarf honeybee has black and white color stripes while a red dwarf honeybee's stripes are yellow-orange and black. The first stripe of a black dwarf honeybee is black whereas a red dwarf honeybee's is yellow-orange. The other difference between the black dwarf honeybee and the red dwarf honey bee is the reproductive organ of the drone, the lines of the wing, and the tip of the back leg.

The distribution of a red dwarf honeybee covers the Southern area of China, the East of India, and South East Asia, which is an area located on a higher latitude than a black dwarf honeybee population. Currently, there is an evidence reporting that red dwarf honeybees distribution expands to Oman. Currently, the farmers in Oman keep them as the commercial bees (Peterson, 2011). Red dwarf honeybees can be found in all parts of Thailand except in the Southern region. Moreover, there are no red dwarf honeybees in Malaysia, Indonesia, and Philippines. Red dwarf honeybees are more flexible and adaptable in infertile areas than black dwarf honeybees. Therefore, red dwarf honeybees have more diversity and more places to build their combs than any other honeybees. One of the obvious examples is that red dwarf honeybees are the only species of honeybee that can survive in a region with heat that exceeds 40 degree Celsius. Red dwarf honeybees and black dwarf honeybees create a sticky band to cover branches and twigs that cover their comb as a protection from their enemies such as ants. This behavior does not occur in giant honeybees or any other honeybees.

A Common Giant Honeybee (*Apis dorsata*) is the biggest honeybee and has the largest comb as well. Its size is approximately 1.5-2 cm. A common giant honey bee has yellow and black stripe abdomen, strong wing, and can fly in high speed. They generally live in a forest or a suburb, building their hive on a tall tree, outside a house or a temple, a tall building, or under a high tank. Their comb contains only one layer with a big half circle shape (around 0.5-2 m.) and has no coverage unlike the two previously mentioned honeybees. A common giant honeybee is fierce and it can sting in a much painful manner than any other honeybees. Therefore, many people mistakenly recognize this giant honeybee as an Oriental hornet because their sizes are very similar. Many patients stung by a wasp usually mistakenly informed that they were stung by a bee. In fact, a bee can sting its target only once in its life and then it will die. People that are accidentally stung by a bee normally will not die. However, those people who intentionally hit or disturb the bee comb may be stung many times by several bees which might lead to death. Patients that are stung by wasps will have more severe condition than ones that are stung by bees since a wasp, unlike a bee, can sting numerous times. Therefore, there are always reports informing a patient died from being stung by wasps more than bees. April is the month that giant honeybees are most productive of generating honey. Consequently, there is a phrase saying "The Fifth month honey". This kind of honey is the most popular and expensive in Thailand and Malaysia. Nowadays, there is no need to hunt *A.dorsata* in the forest since they can be kept as domestic bees. Moreover, their honey can be produced annually, making it suitable for organic honey industry.

An Eastern Hive Bee (*Apis cerana*) is bigger than a dwarf honeybee but smaller than a giant honeybee with brown and yellow stripes abdomen. Eastern hive bees can build their comb inside a tree hollow or a building that is shut and dark. Their comb is a combination of many small combs in a parallel manner called "multiple combs", with 30 cm. diameter (Ruttner, 1988). This type of honeybee can be raised in an artificial hive or a trunk. They can store honey 20 g. per comb which is more than dwarf honeybees and giant honeybees. Generally, honey season of an eastern hive bee is the same as a blooming season of rambutan, durian, and coconut's flowers. Since this honey can be collected several times a year, Eastern hive Bee is the future of organic

bees in Asia including Thailand. However, like European or Western Honeybee, further research is required in order to make them more productive.

Eastern hive bees habitually left their comb for a new one, at least once a year. In China, eastern hive bees are parts of beekeeping industry as well as European honeybees. Since there is a breed selection procedure, Chinese eastern hive bees are able to generate as much honey as 25-30 kg. per comb and their comb leaving behavior is also reduced.

The correct process of natural comb collection is to cut only parts that contain honey without having to burn down the whole hive which would kill thousands of bees.

A Western/European honeybee (*Apis mellifera*) is larger than an eastern honeybee but smaller than a giant honeybee. This species of bee is imported from a foreign country; therefore, it is sometimes called a foreign bee or an Italian bee since beekeeping business is most prospered in Italy with an oldest history of Italian beekeeping. The beekeeping industry is dated back thousands of years during Roman Era (Crane, 1983, 1990 and Crane and Graham, 1985 Ruttner, 1988).

Western honeybees are local honeybees in Europe and Africa. They have similar characteristic as eastern hive bee which is the behavior of building multiple combs in a closed area such as a tree hollow, a stone corner, or a closed building. They were later used in beekeeping industry all over the world as their combs have the most appropriate size to be kept in a standard artificial hive. Moreover, western honeybees generate the most quantity of honey which is 50 kg. per comb. If the honey is collected several times, the quantity can be accumulated to as much as 100 kg. per comb annually. The other reasons that western honeybee is chosen is because this bee is not as aggressive as a giant honeybee and does not leave its comb as often as an eastern hive bee. In Northern Thailand, as many as 200,000 colonies are parts of beekeeping industry. European honeybee keeping can be developed into organic beekeeping if proper education is provided to all beekeepers. This includes teaching them the method know-how that conforms to organic honey standard.

Organic Honey and Other Products

Bees are categorized as "Industrial Insects" that provide numerous valuable economical products such as honey, beeswax, royal jelly, pollen, propolis, and bee's venom. These products can be divided into two categories;

1. Products derived from raw material that bees collect from outside their hive such as honey, propolis and bee pollen.
2. Products created by bees based on bee physiology such as beeswax, royal jelly and bee venom.

Organic Honey: Honey is derived from nectars of the wild flowers and economic fruit trees, flowers or other nectar sources such as honey dew that bees collect from aphids. This honey dew goes through chemical and physical process until it is transformed into honey stored inside a bee comb.

How do bees produce their organic honey?

After nectar that a bee collected from the flowers moves down to its stomach, the bee's salivary gland will produce enzyme for a metabolism process that converting glucose and fructose to invert sugar called laevulose, dextrose, and other types of sugar but only a little amount. This metabolism process begins from the bee flying back to its hive. While the bee is fanning, this would generate heat energy and activate enzyme activities as well as help burning and reducing moisture which accelerates the conversion of nectar to honey. When a bee worker arrives at its hive, it will spew the invert sugar from its mouth to another worker's mouth that work in the comb to be stored in honey cells. This invert sugar is not complete honey since it still has high level of moisture or water (30-40%). In the evening when most workers are already back to their hive, they will help one another fanning to make the nectar evaporate until it is transformed to complete honey which contains only 20-25% of water. After honey production process is finished, workers will use beeswax to close the honey cells in order to store the honey for later consumption to generate energy for the bee's daily life or during food shortage.

Organic honey is pure natural honey without any pesticide, antibiotic, and other contaminants. True organic honey is obtained from bee farms located long distance

away from agricultural areas. Therefore, this honey is clean from pesticides and chemical fertilizer. An example of organic honey is honey derived from white flowers or wild flowers such as Plao flowers. In future, the demand of organic honey in foreign countries would increase, since more people are seeking for pure natural honey.

Benefits of honey have been known and aware of since ancient times. Believing that honey could cure fatigue, Greek athletes would drink honey before any Olympic competitions. Egyptian doctors used honey to heal wounds from surgeries and sterilize germs before the discovery of bacteria. Through much more advance in technologies than in the past, the scientists found that honey's ability of bacteria anti-growing are due to its special attributes which are its low moisture and high osmotic pressure. These two attributes help osmosing water out of Microbial cell and making these germs die from water shortage. Due to these supporting reasons, the modern medicine accepts the usage of honey to heal some certain wounds especially wounds from surgeries and chronic ulcers of diabetic patients.

Different kinds of flowers that bees used to produce honey cause honey to have different scent and physical characteristics. Natural honey has a very sweet taste, pleasant aroma, and color that varies from light golden yellow to dark brown (depending on sources and types of plants). In Thailand, natural honey is obtained from hive bees, dwarf honeybees, and giant honeybees. In the past, Thai people mostly used honey as herbal medicine rather than eating as food. Nowadays, more people are aware of benefits from honey and also consume greater amount of honey; therefore, there is a significant increase in honey demand which leads to the origination of beekeeping industry.

Bees that are used in Thai beekeeping industry normally are Thai or Western hive bees. Honey derived from beekeeping business is exactly the same as the one that is collected in nature. Moreover, this honey can be specified which sources of flowers are required such as honey from longan, rambutan, or lychee flowers. In order to produce organic honey, bees are kept in an organic fruit orchard, using the organic beekeeping method. Unlike bees in the wild which have to find food themselves, domestic bees are carefully taken care of and therefore can produce more honey.

As prices of honey are rather expensive as compared to sugar prices, there is a production of artificial honey. This artificial honey is basically syrup added with artificial honey flavor and glucose syrup to make it stickier like real honey. The other way to make artificial honey is converting syrup to have components that are similar to actual honey then later adding honey flavor. Therefore, it is highly recommended that consumers make a careful decision and thoroughly seek for honey that has labels from standards of the Food and Drug Administration before purchasing honey. Genuine honey should have following characteristics; viscous (showing that there is little water), the fragrant of honey and natural flowers, no bubbles as a sign of rotting, no beeswax or bees contaminated, immaculate, and light yellow or dark brown color. People who are used to consuming honey can easily distinguish real honey from artificial one through smelling and tasting. However, for those without experience, it would be very difficult to do so without using chemical proof.

Apart from differences in flavor, smell, and colors, honey derived from different flowers also contains different composition of sugar such as having different ratio of glucose and fructose. Therefore, honey obtained from different sources generally has different characteristics such as color, scent, taste, or ability to crystallize. For example, honey from rubber farm and white flowers can all be crystallized after several hour frozen while honey from lychee flowers can be less crystallized or honey from longan flowers hardly crystallize at all under the same condition.

Honey is not only used in medical industry but is also used in making dessert, bread, candies, ice-cream, or mixed in beverage such as lemon juice. Besides providing delicious flavor, honey also contains high value of nutrition. Honey can be used as a replacement of sugar in any kinds of food. In addition, honey is currently one of essential ingredients in cosmetic industry such as soap, shampoo and cream.

Thai Industrial Standards Institute (TISI), Ministry of Industry has already launched standards for honey sold in Thailand. As an assurance that the consumed products are genuine, consumers should only purchase honey with labels of TISI trademark or buy honey from trustworthy sources.

Organic Bee Pollen: Based on botany, it is pollen from wild flowers or organic economic crops flowers and collected by bees. This bee pollen is generated through

a bee mixing with anthers and therefore the bee itself is carrying out the pollen grains. The bee uses its legs to gather these pollen grain into a pack to be stored in pollen baskets on its hind legs and carried back to its hive. Bee pollen is a nutrient with high protein for the whole bee population especially broods. The pollen that is incubated with honey until it is soft will be fed to brood worker older than three days. Although each bee pollens has different composition, all have protein as major component. Other components are fat, carbohydrate, enzyme, minerals, and all vitamins.

Beekeepers usually collect bee pollen from bee's hind legs and dry it under certain procedures that still maintain all nutrients. People normally consume by adding it into their coffee or make it as another kind of drink. Some companies make it into pellets called "bee pollen" as a valuable food supplement. These pellets can turn physical fatigue from work to be back to normal condition, especially digestive system because bee pollen can cause effect on bacteria and control bacteria in intestine.

Bee pollen is considered as one of the most nutritious food since it composes of natural organic compounds as followed.

Nutrition	Percentage
Carbohydrate	40%
Protein	35%
Amino Acid	15-25%
Water	18%
Fat	5%

Other minor components of honey are vitamin B, C, D, E, and potassium, magnesium, calcium, aluminum, iron, copper, zinc, phosphorus, and sulfur.

Benefits of Organic Bee Pollen, Biological activity of bee pollen is being very interested by scientific experts. Through animal sampling and clinical research, scientists are trying to find the effect of bee pollen to physical therapy, anti-aging, as well as sport and sex physical fitness. They discovered that bee pollen can accelerate tissue and skin growth, stimulate the blood flow through the whole body, and moisturize dry skin; therefore, it can provide an anti-aging therapy. In terms of medical

treatment, bee pollen is used to cure allergies by giving to patients in small amount then gradually increase the quantity as a way to help the body develop pollen immunity. In Europe, bee pollen is used to protect and relieve complications of flu. Moreover, bee pollen is also an ingredient of many cosmetics such as facial cleanser, foundation, and care skin cream. Bee pollen can also be used as hair nurture to remain sleek and glossy, and anti-dandruff through adding it into shampoo and pomade.

Organic Beeswax: In general, natural wax is categorized into three types; animal wax, plant wax, and mineral/petroleum wax. Beeswax is classified as animal wax. The pure beeswax can only be derived from a bee comb. Beeswax composes of several types of chemicals which are released from a beeswax gland located on a dorsal of bee's abdomen. Beeswax has a very interesting history beginning at the opening of the pyramid in Egypt. There was a discovery of beeswax at the place where Egyptian people stored their ancestor body. Beeswax was an ingredient used to make mummy. Moreover, the usage of wax candle in every religion has been recorded for thousands year. Especially in Suvarnabhumi Empire, wax candle had been lighted to worship gods and used as selling products since King Jayavarman VII (1181-1220). Today, there are still Candle Ceremony parades being organized every year before a Buddhist Lent period. Moreover, the King's Royal Chitralada Projects include not only Royal Honey Project but also Royal Wax Candle Project which transforms beeswax bought from beekeepers to royal wax candle used for all royal ceremonies.

At the beginning of the plastic usage, beeswax had been used as one ingredient for several years. During that time, the price of beeswax was considered very high. In fact, some regions even used beeswax as their currency. Regarding architecture aspect, beeswax is used to build sculptures and models, especially beeswax human figures in wax museum. In addition, sailors used to use beeswax for stuffing the water leakage on the ship or stemming food storage containers. Recently, beeswax has been used as insulation for electrical equipment and dentist tool.

Nowadays, beeswax is also used as cosmetic component such as facial cleanser, skin-care oil, lipstick. Moreover it is used in production of candles, glue, gum, crayons, and even ink. Benefits of beeswax as raw material of candles are; it releases little smoke and gives pleasant fragrant.

Marketing of Organic Honey

Generally, consumers will pay a much higher price for locally-produced honey of known origin than imported honey. The high price of locally-produced organic honey could be due to many factors. First, organic honey is a pure honey repeatedly cited in the Buddhist religion as a remedy for different human disorders, so honey is highly regarded in the culture. Its scarcity also makes supplies inadequate to satisfy local consumer demand, increasing its market value. Thirdly, locally-produced honey is heavily promoted for its medicinal and nutritional values, and consumers believe it to be the best honey. The high price of local organic honey has encouraged beekeepers to persist in their beekeeping practices and motivated many young people to engage in beekeeping as a part-time or full-time business. Above all, honey production and marketing assist in redistributing money from urban areas with high standards of living to rural areas with relatively low standards of living.

Currently the country imports annually more than 5,000 metric tons of table honey to fill the gaps in demand of 39,000 tons (CDSI 2010). The major source countries are Australia, China, Turkey, Mexico, Argentina, Pakistan, USA, Germany, and Yemen, listed in order of imported honey volume. Generally the prices of imported honey are much lower than the locally produced honey. However, neighboring Yemen supplies Thailand with the most desired imported honey, and local consumers are willing to pay up to USD 190 per kilogram (Shenouda 2004).

There is competition between locally-produced and imported honey, especially with honey imported from Turkey, Kashmir and Yemen. Some producers illegally sell the imported honey as local honey or mix the imported honey with local honey to sell at the higher prices of local honey. By this literatures if the beekeepers trust in organic honey, they can change their way to keep the bees with the organic beekeeping methods and make more money than the locally-produced and even sell the imported honey.

Royal Activity

Her Majesty Queen Sirikit has a strong will to improve Thai villagers' standard of living in a sustainable manner through hundreds of her royal initiative projects. One of such projects is beekeeping in the forest. Her Majesty stated that;

"Traditional beekeeping including wild bees and giant honey bees is part of our national heritage that requires urgent research and conservation. Burning bee nests in order to obtain honey does not only demolish bee populations but also lead to severe annual wild fire and forest destruction. Bees play a vital role in pollination of several plant species which are food sources and habitats of all wildlife. Therefore, without bees, there would be no fruits for human and animals, no flowers, no forests, and eventually no water resources such as rivers and creeks or upstreams. As a result, I believe that wild bees are the key components that help maintain our forests and world environment. Hence, applied traditional bee hunting (without burning the beehive) will preserve bee populations and sustain the right balance of our ecosystem."

Based on this belief, "Wild Bee Keeping on the High Mountain Project" was established under Her Majesty's patronage through collaboration between the Royal Thai Army and Royal Department of Forestry. The main goals of the project are to provide appropriate training for local bee hunters as well as educate them of conservative honey harvesting and the role of bees in forest ecosystem.

Organic Beekeeping (by Asian Apiculture Association 2010)

General Principle

Beekeeping is an important activity that contributes to the protection of the environment and agricultural and forestry production through the pollination action of bees.

Recommended Practices

- Hives should be made of natural materials that present no risk of contamination to the environment and bee products.

- Colonies may be fed with organic feed only to compensate for temporary forage shortages due to weather conditions or other exceptional circumstances.
- When bees are placed in wild areas, consideration should be given to their impact on the safety and integrity of indigenous insect population and pollination requirements of native plants.
- The treatment and management of hives should respect ACT organic livestock standards.
- The ability of bees to adapt to local conditions, their vitality and resistance to diseases should be taken into account.
- Honey temperatures should be maintained as low as possible during the extraction and the processing of bee products.
- Foraging areas should be large enough and as varied as possible to provide bees with sufficient forage and water.
- Bees should be kept healthy through preventive measures, selection of appropriate breeds, favorable environment, balanced diet and appropriate husbandry practices.
- The sources of forage should be essentially organically produced plants or naturally occurring vegetation.

Standards

General Management

1. Hives shall be placed in fields certified as organic and/or wild areas that have not been treated with substances prohibited in organic production. The location of hives shall ensure that bees have access to sufficient honeydew, nectar and pollen from plant sources which are in accordance with this standard. The operator shall notify ACT immediately of any changes of beekeeping sites.

2. The operator shall not site hives within foraging distances of sources of high-risk contamination and pollution, e.g. non-organic agricultural land exposed to practices with high environmental impact, densely populated urban areas, roads with heavy traffic, garbage dumps and incinerators.

3. At the end of the production season, hives shall be left with enough honey and pollen reserves for the colonies to survive the dormancy period. Any

supplementary feeding may be allowed only between the last honey harvest and the start of the next nectar or honeydew flow period. In such cases organic honey or sugar shall be used. (When organic sugar is not available, exceptions may be made for a specified time limit.) The operator shall record the type of feed, quantities, dates and the hives being fed.

4. Hives shall be made basically of natural materials. Use of materials that are potentially toxic or present risk of contaminating the environment and bee products is prohibited. Bee boxes shall be painted with only lead-free paints. Plastic foundation, if made with wooden frames and coated with organic beeswax, is permitted.

5. For cleaning and disinfecting beekeeping materials, buildings, utensils or products, permitted substances listed in Appendix may be used.

Conversion

6. Existing bee colonies may be converted to organic production. Introduced bees shall come from organic production units when available.

7. Bee products shall be sold as organic when beekeeping has been managed in accordance with this standard for at least one year.

8. All the wax shall be replaced with organic wax during this one-year period. Otherwise, ACT may extend the conversion period.

9. In cases where no prohibited substances have previously been used within the hive, the replacement of wax is not necessary.

Breeds and Breeding

10. The operator shall select breeds of bees that are able to adapt to local conditions and resistant to diseases.

Health care

11. The health of bees shall be primarily achieved by preventive measures and practices promoting resistance to diseases, e.g. replacement of queen bees at regular intervals, systemic inspection of hives to detect any health anomalies, control of male brood in the hives, regular disinfection of materials and equipment, destruction of contaminated hives and materials, replacement of beeswax, sufficient reserves of

pollen and honey in hives during the dormancy period, and use of beeswax not contaminated with diseases or pest.

12. Where preventive measures fail, and colonies become sick or infested, they shall be treated immediately. Treatments shall respect the following principles:

a. Preference should be given to the use of herbal medicinal products or alternative treatments provided that their therapeutic effect is effective for the condition for which the treatment is intended.

b. If necessary, allopathic chemically synthesized medicinal products (e.g. antibiotics) may be used under the responsibility of a veterinarian. In such cases the bee products shall not be sold as organic. The use of allopathic synthesized products for preventive treatments is prohibited.

c. All treatments with veterinary medicinal products shall be clearly recorded in details, i.e. the type of product, (including the indication of the active substances), the diagnosis, doses, the method of administration, the duration of treatment and the withdrawal period.

d. Treated hives shall be placed in isolation and go through a one year conversion period.

13. For disease and pest control the following are permitted:

- lactic, formic acid;
- oxalic, acetic acid;
- sulfur;
- natural essential oils, e.g. menthol, eucalyptol, camphor;
- Bacillus thuringiensis;
- steam, direct flame and caustic soda for hive disinfection.

14. The practice of destroying the male brood is permitted only to contain infestation with *Varroa jacobsoni*.

Mutilations

15. Mutilations such as clipping of the wings of queen bees are prohibited.

Harvesting and Processing

16. Destruction of bees in the combs as a method to harvest honey or other bee products is prohibited.

17. Extraction of honey from combs that contain brood is prohibited.

18. Chemical synthetic bee repellents shall not be used during honey extraction operations.

19. The use of smoke should be kept to the minimum. Smoking materials that are natural or in accordance with ACT organic standards are permitted.

20. In the handling/processing of bee products, the operator shall not:

- adulterate honey with water;
- use fine mesh filters or diatomaceous earth to separate seed crystals from honey;
- use high pressure filtration systems;
- heat or handle bee products using kerosene heaters or any heating systems which produce petroleum vapors in the room; or
- control stray bees or other insects using synthetic insecticides, repellants or fumigants.

21. All steps of extraction, processing and storage of honey or other bee products shall be handled with care and documented.

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King Rama VI's Promotion of Khon and Drama in General

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Abstract

King Rama VI of the Chakri dynasty had great interest in the Ramakien and dramas in general. He composed a few episodes of the Ramakien, many modern dramas, essays as well as translated or adapted Western and Indian plays to present to the Thai audience. His Ramakien kept closer to the original story of the Valmiki Ramayana. His promotion of Khon and dramas helped preserve the valuable Thai heritage. After his demise, the promotion was discontinued because of the government's financial problem. It was later revived. Queen Sirikit, through the SUPPORT Foundation, has carried on the Khon promotion as can be seen in the 'Khon Somdet' at Thailand Cultural Centre.

Keywords: King Rama VI, Khon, drama

Introduction

King Rama VI, also called King Vajiravudh, is the sixth king of the Chakri dynasty. His great interest in the Ramayana, known as the Ramakien in Thailand, caused him to start the tradition of posthumously calling the kings of the Chakri dynasty before him 'Rama', the first king being Rama I, and he himself Rama VI. Our present King Bhumibol is Rama IX.

King Rama VI was very interested in Thai literature as well as world literature. He composed various kinds of literary works in prose and verse. These are poems, dramas, short stories, essays, translations and adaptations of plays from abroad, including the plays of William Shakespeare from England, Molière from France and Kalidas from India. He was also interested in the performing arts and acted in many Khon and drama performances. Although he died at the age of forty-six, he composed

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well over seventy literary works. He was consequently bestowed the title "Somdet Phra Maha Dhiraraj Chao" which means "The Great Scholar King". by the Thai people. His promotion of Khon and drama in general is still very beneficial to the Thai performing arts and the preservation of Thai heritage to this day.

The Ramakien and Khon Performance

Although Nang, or the shadow play, also performs the Ramakien, it performs other dramas as well. The scope of Nang is rather limited as it uses leather figures already drawn up in fixed positions. Performers can only show their excellence in moving around the stage and in the recitations that accompany the movement. On the other hand, Khon or masked dance drama can show limitless art forms such as dancing, singing, acting, mask-making, costume-making, stage props, accompanying music and many other special effects. Above all, Khon makes the Ramakien literature come alive, well appreciated, entertaining as well as offering deep Buddhist moral thoughts and practical guidance on how to lead a worthy life.

The Ramakien, though based on the Indian Ramayana, has become part of the Thai heritage since the Ayutthaya (Ayudhya) period 1351-1767. Some of the Ramakien Kham Phak, or Dialogues, used as recitations in Khon performances survive from the Ayutthaya period, for example, the episodes of Sammanakha up to the fall of Kumbhakarna (Sathirakoses, 1972: 250). There are also other literary works connected with the Ramakien such as the long poem *Bali Teaches His Younger Brother*, attributed to King Narai Maharaj of Ayutthaya (Plueng Na Nagara, 1974: 114-115). King Taksin of Thonburi also composed many episodes of the Ramakien in Klon verse form which were divided into four volumes. King Rama I composed, in Klon verse form, the complete story of the Ramakien, including the episodes not found in the Indian epic Ramayana, such as the Episode of the Floating Maiden (Nang Loi), and that of the Second Wedding between Rama and Sita, Presided by Lord Shiva on Mount Krailas (Kailasa), his heavenly abode. King Rama II also composed many episodes which are lauded as dramatic and suitable for Khon performances. King Rama III commissioned five poets to write Khlong verses, describing the reliefs depicting the story of the Ramakien in the Chetuphon (Jetuvana) Temple. King Rama IV composed the Episode of Rama in Exile in Klon verse form. King Rama V composed 224 of the Khlong

verses, out of the entire 4,984 verses, which describe the mural paintings of the Ramakien, which fill the wall of the gallery in the Temple of the Emerald Buddha. The royal tradition of composing the Ramakien was carried on by King Rama VI, who also composed episodes of the Ramakien, as well as promoted and acted in many Khon performances himself.



Figure 1: King Rama VI
By Courtesy of the National Archives

King Rama VI's Ramakien

Being a scholar of world literature, King Rama VI (1880–1925) knew the Indian Ramayana of Valmiki, and based his Ramakien episodes upon it. He named the characters after those of Valmiki, or as close to those in the Valmiki Ramayana as possible in the Thai tongue. For example, Rama's brother, whose name is Lak in the earlier Ramakien, is called Laksmana in King Rama VI's Ramakien. Ravana's sister, called Sammanakha in the earlier Ramakien, is called Surapanakha in King Rama VI's

Ramakien. The character of Ravana's younger brother, who joins Rama's side, is called Bibhesana in King Rama VI's Ramakien. This character is known as Bibhek in the earlier Ramakien. Bibhek is an astrologer and a timid character who is afraid of Ravana, Kumbhakarna and Indrajita. However, King Rama VI depicted him as a brave warrior in the same way he is depicted in the Valmiki Ramayana. Bibhesana is righteous and he is afraid of no one.

King Rama VI composed the following episodes of the Ramakien (King Rama VI, 1959)

Losing Sita, Part I : Surapanakha's Jealousy
Part II : Catching the Golden Deer
The Burning of Longka
Bibhesana Driven out of Longka
Building the Causeway to Longka Part I and Part II
Wars with Longka (in three parts)
Part I : Sukasaran in Disguise
Part II : Sugriva Breaks the Royal Umbrella
Part III: Angad Delivers Rama's Message
Nagapasa (The Arrows of Naga)

In the introduction of King Rama VI's Ramakien, the king clearly explains his purpose for composing the Ramakien; that it was meant only for performing Khon. Accordingly, each episode contains texts for singing, recitations, as well as dialogues, making it more suitable for performance rather than for pure reading. King Rama VI said that he did not wish to compete with the former royal compositions which he could never match (Rama VI, 1959: p.a).

King Rama VI's promotion of Khon

Although Khon had been performed regularly before King Rama VI's time, it was formerly a court ritual or court entertainment, not meant for the general public. Originally, Khon performance was called "Kan Len Duek Dam Ban" (Kan Len means 'performance', Duek Dam Ban means 'ancient') It was perfomed in the Indrabhisek Ceremony which is the re-enactment of "the churning of the ocean" to obtain the sacred drink that gives immortality. The Devas (gods) and Asuras (divine evil beings) unite their efforts to churn the cosmic ocean, using a mountain bound by a giant naga to

produce the ambrosia. During the Ayutthaya period, performers were dressed up as Devas and Asuras. There were also the gods : Shiva, Narayana, Indra and Visvakarma. Some monkey characters were also in the performance. It was not known how these characters were dressed and performed, or how different they were from the present day Khon. However, Khon has greatly developed during the Rattanakosin (Bangkok) period.

There have been many types of Khon performances: (1) open air on the ground, (2) open air on a raised platform or stage, (3) Khon in front of a screen for shadow play (Nang Yai) that precedes the Khon performance, (4) Khon Rong Nai which performs like the court drama. i.e. more refined, and (5) Khon divided into scenes as in modern plays. This last one is called Khon Chak and it began in the reign of King Rama V.

King Rama V appointed Phraya Devesvongsavivat (Mom Rajavongs Lan Kunjara) Director of Krom Mahorasob and Hun (Department of the Performing Arts). There were many artists who taught and passed on the knowledge of the performing arts and music down to the reign of King Rama VI. The Crown Prince Vajiravudh, who later became King Rama VI, was fond of all kinds of arts including Khon. At Saranrom Palace where he resided, he promoted the art of Khon.

The Crown Prince selected good Khon teachers from the Department of the Performing Arts to train Khon performers. There were outstanding teachers such as Khun Rabam Phasa (Thongbai Suvarnabharat) who trained the Yaksa characters. He was later promoted and given the title of Phraya Brahmabhibal. Another teacher was Khun Natakanuraksa (Thongdi Suvarnabharat) who was later promoted to Phraya Natakanuraksa. He trained the male and female human characters. Khun Phamnaknatnikon (Puem Sugrivaka), teacher of the monkey characters, was later promoted to Phra Phamnaknatnikon (Dhanit Yupho, 1995: 78).



Figure 2: Phraya Brahmabhibal (Thongbai Suvarnabharat)



Figure 3: Phraya Brahmabhibal (Thongbai Suvarnabharat) playing Dasakantha
By Courtesy of Vajiravudhanusorn Library

These teachers trained men to be Khon performers. The Crown Prince's troupe was known as "Amateur Khon" (Khon Samak Len). Members of this troupe were made up of princes, sons of high-ranking officials, and the Crown Prince's pages who volunteered to be trained as Khon performers. The Crown Prince himself acted in some Khon performances. He also directed the Khon performances of his Amateur Khon Troupe.



พระบาทสมเด็จพระมงกุฎเกล้าเจ้าอยู่หัว
และสมเด็จพระนางเจ้าอินทรศักดิศจี พระวรราชชายา
ทรงฉลองพระองค์ในชุดการแสดงโขน เรื่องรามเกียรติ์
ตอนพระรามเดินดง

Figure 4: King Rama VI and His Royal Consort, Queen Indrasaktisachi,
Performing the Khon episode: Phra Ram roaming the forest
By Courtesy of Vajiravudhanusorn Library

Important Points of Khon Promotion by King Rama VI

King Rama VI introduced the Thai people to the idea of the universality of the Indian epic Ramayana and that the Ramakien derived its origin from the Ramayana. However, Thai poets added a Thai flavour to the story and did not keep strictly to the original Valmiki Ramayana. To prove his point, he presented Bibhek, whom he called Bibhesana, as a courageous Yaksa who fought for righteousness in his Ramakien

Episode of Bibhesana Driven out of Longka (Rama VI, 1959: 53-74).

In the Episode of Building the Causeway to Longka Part I and II, the story is closer to that of Valmiki. There is no quarrel between Nilabad and Hanuman, and the scene of Dasakantha's (Ravana's) mermaid daughter being sent to order her followers to carry away the stones, does not occur.

King Rama VI's Ramakien is written like a play script ready for performance. There are dialogues, songs, and recitations with detailed instructions. There is also an instruction when to add a comic relief to make the performance more fun and give the main performers time to rest. The king was a playwright-cum-director. The following translation can illustrate his method of composition.

From the Episode 'Nagapasa' (Rama VI, 1959: 150-151)

- Then the she-demon Trijata
  Consoled Sita, the beauteous princess,
  "Be not so sorrowful, Dear Princess.
  Rama, your beloved husband,
  Is not dead and gone as you presume.
  Pitying you, I shall tell you the truth.
  Any woman whose husband is dead,
  The poor hapless widow filled with grief,
  Sitting in this magic golden carriage,
  Can never make it fly up in the sky.
  Please study Lord Rama carefully.
  His fine complexion looks like that
  Of a sleeper, his mouth appears to smile.
  Do look closely at him."
- When graceful Princess Sita
  Heard Trijata's words, she understood,
  Became less sad, and ceased sobbing.
  She paid respect to Lord Rama,
  And wished him victory in the war:
  "May you beat enemies in all directions."

Then she returned in the golden carriage,
Flying over the city battlements.
Cheud (Action Song)

Dialogues

⊙ Bibhesana the Chief went searching.He brought back all the monkey troopers who went hiding because they were afraid of the power of the Nagapasa Arrow. The chief demon looked for them, calmed them down, and persuaded them to leave the forest. The monkeys returned and reorganized into divisions. After a careful inspection, the royal demon led them back to form the army.

Cheud

⊙ The monkeys that guarded the two princes, Rama and Laksmana, were frightened when they saw Bibhesana, mistaking him for Indrajita returning to capture their royal masters to be taken to Longka City. They ran to inform Sugriva, the Vanara Chief, saying,

" The foe is back, we shall be doomed today"

⊙ The Vanara Chief Sugriva became angry. He shouted, "How can you be so terrified! That's Bibhesana returning. Stop being frantic."

(Comic relief as seems suitable)

As can be seen from the above excerpt, King Rama VI's Ramakien composition is ready for performance. He wrote it like a modern playwright, yet kept to the necessary tradition of Khon. Besides the Ramakien, he wrote many other plays and had them performed regularly during his lifetime.

Other Dramas by King Rama VI

King Rama VI was fond of drama. He wrote many types of drama and his effort has popularized drama, especially the modern type like that of the West, in Thailand. When he returned from studying abroad early in 1902, he set up the Taweepanya club. He was then the Crown Prince, residing in Saranrom palace. He wrote his first play "Som Po Som Luk" and staged it at Taweepanya theatre in the palace grounds on March 20, 1904. This makeshift theatre of one hundred seats was fully built in 1906.

Another theatre established by King Rama VI was Suan Misakawan Theatre, a standard theatre where operas and all types of drama could be staged (Poonpit Amatyakul, 2011: 3). King Rama VI continued writing plays after he became king in 1910 and continued right to the end of his reign.

As a result, his dramatic contribution to Thai performing arts has helped establish the love for theatre, both traditional and modern among the Thai people. He wrote operas, plays in verse and prose. He also selected some Western plays to translate into Thai. These are Shakespeare's *The Merchant of Venice, Romeo and Juliet* and *As You Like It*. He adapted *Othello* into an opera in Thai, under a new title "Phraya Rajbangsan." Besides Shakespeare's plays, he also adapted some other English and French plays. His adaptation of Molière's *Le médecin malgré lui* into a Thai play has retained the craftiness, wit and comedy of the French original, although the characters have acquired a Thai quality as well as being given Thai names. King Rama VI also looked east. He translated Kalidas' *Shakuntala* into Thai. This Indian classical drama has become quite well-known internationally and it has been translated into so many languages, including English, French and German. King Rama VI's adaptation and translation of foreign plays show his intention of bringing some world literature to the attention of the Thai people.

King Rama VI also composed dramas of many kinds himself. His creativity is amazing, considering he did not have much free time. He had to oversee government affairs and closely watch world political situation. The First World War (1914-1918) occurred during his reign. Nationalism was the universal sentiment of the time. Indeed many of his works, both dramas and essays, reflected nationalism. For example, *Phra Ruang, Mahatma, Hua Chai Nak Rop* (The Warrior's Heart) are his most patriotic plays. *Phra Boromrajowat Sua Pa* (A Collection of His Royal Addresses to the Wild Tigers Corps) reflects his attempt to teach the Thai people to love and to sacrifice for the sake of their country. Some of his patriotic poems are still recited and quoted to the present day. They are very moving as well as lyrical.



Figure 5: Phra Rung: a patriotic drama
By Courtesy of the National Archives

As clearly seen, King Rama VI contributed greatly to both Thai literature and the performing arts from the time he was the Crown Prince of Siam and during his reign as King of Siam. His setting up of the Taweepanya club and later on the Wannakhadi Samoson (Literature Club) helped promote both the performing arts and literature in Thailand. The art of Khon, drama and music flourished during his time as never before. It was the first time that artists, expecially of Khon, were granted nobility and were highly respected in society. They were given lodgings built expecially for them in or near the palace. Musicians of traditional music and modern music also enjoyed support. A special school was set up for the teaching of the performing arts. Offspring of officials could be sent to this school where they learned to become artistes as well as well-educated persons. For they also studied knowledge as taught in normal schools. It was King Rama VI's opinion to have them trained in formal education as well as in the performing arts, so that both kinds of knowledge would enrich each other and make the students more outstanding as individuals (Dhanit Yupho, 1995: 91). It is a pity, however, that after King Rama VI passed away, this kind of support for performing arts stopped abruptly. It was considered too costly for the country when it suffered financial troubles during the reign of King Rama VII. The Department of the Performing Arts was dissolved. Artistes had to leave their

lodgings formerly provided by the Palace. Some of the performing arts objects, such as Khon masks, were left unattended and lost. The property of the Department of the Performing Arts, for example, masks, headdresses, and costumes for Khon and Lakhon, were turned over to the National Museum, and it was subsequently left to the curator to keep or sell them as seemed fit.

However, the Minister of the Palace Affairs at that time tried to find means to preserve the performing arts for posterity. A year after King Rama VI's demise, the minister kept the cost down by keeping fewer artistes and lowering their salaries, or placing some in other departments, so that they could earn their living and keep alive the knowledge of the performing arts. By the end of 1926, a Division of the Performing Arts was established. In 1935 this division moved from the Ministry of Palace Affairs to become part of the Department of Fine Arts (Krom Silpakorn) in the Ministry of Education. The School of Nataduriyangasastra (School of Drama and Music) which was set up in 1934 welcomed the artistes from the Division of the Performing Arts to teach in the school. In this way the performing arts, including Khon and Lakhon, have been carried on and flourished up to now.

During the present reign of King Rama IX, thanks to royal patronage, especially that of Her Majesty Queen Sirikit and that of Her Royal Highness Princess Maha Chakri Sirindhorn, the traditional performing arts of Thailand have been well supported and cherished as one branch of the precious Thai national heritage. Her Majesty the Queen has paid much attention to Nang Yai and Khon, while Her Royal Highness Princess Maha Chakri Sirindhorn has extended her interest into Thai traditional music. The Princess plays the Ranat (Thai xylophone), the So (Thai violin) and sings Thai traditional songs. Her performances for the public encourage young Thais to learn and perform Thai traditional music.



Figure 6: Her Majesty the Queen at Khon Performance organized by the SUPPORT Foundation
By Courtesy of the SUPPORT Foundation

Royal support has greatly promoted the Thai traditional performing arts; the Royal Khon Performances at the Thailand Cultural Centre in recent years have been greatly appreciated by both Thai and international audiences. Various great episodes of Khon organized by the SUPPORT Foundation (The Foundation of the Promotion of Supplementary Occupations and Related Techniques of Her Majesty Queen Sirikit of Thailand.) were presented: Prommas Episode in 2007 and restaged in 2009, Nang Loi Episode in 2010, The Battle of Maiyarap in 2011, and Jong Tanon Episode (the Building of the Causeway to Longka) in 2012.

The SUPPORT Foundation of Her Majesty Queen Sirikit of Thailand was established in 1976 by Her Majesty to promote supplementary occupations and related techniques for the people in the rural areas who are, by nature and practice, quite skilled in traditional handicrafts. Their excellent craftsmanship has been passed down from generation to generation. Her Majesty has accompanied His Majesty the King on his visits to remote villages in all corners of the kingdom, and she has discovered that the majority of Thai farmers do not earn enough to support themselves, yet they possess extraordinary craftsmanship that should be promoted seriously. This is the main purpose of the SUPPORT Foundation of Her Majesty Queen Sirikit of Thailand.



Figure 7: Phra Ram and Phra Lak on the war chariot
By Courtesy of the SUPPORT Foundation



Figure 8: Dasakantha on the war chariot
By Courtesy of the SUPPORT Foundation

The SUPPORT Foundation plays a great role in upholding and developing handicrafts of Thailand. Moreover, it also helps to promote the performing arts. To illustrate this point, "Her Majesty the Queen has demanded that the newly-made costume of *Khon* would be exquisitely refined and the make-up for the open-faced characters should be improved to meet the modern theatrical standards" (The Royal Khon Performance "Jong Tanon" Programme, 2012: 3). Therefore, SUPPORT has inspired the re-creation of the Khon costumes to the high standards of earlier times while the make-up is modernized. The Khon masters in the Fine Arts Department followed the original story written by King Rama I and Rama II, but adapted the scenes to suit the taste of a contemporary audience, adding special effects to make the story come alive.

If King Rama VI could see how Khon has been developed further, clearly seen in the three great episodes organized by the SUPPORT Foundation, he would be pleased that his promotion of Khon has been continued up to the present day.

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Prince Damrongrajanubhab and Thai Literature

Panya Borisutdhi[1]

Abstract

Prince Damrongrajanubhab is generally well-known as a government administrator and as the Father of Thai history, but his contribution to Thai literature is also very considerable. This essay aims to briefly give his biography, to relate how his literary works have benefited the field of Thai literature, and to give some of his significant works as examples to demonstrate his genius in the literary art.

Keywords: Prince Damrong, his contribution to Thai Literature

His biography

HRH Prince Damrongrajanubhab, from now on referred to as Prince Damrong, was the son of King Mongkut (Rama IV) and Chao Chom Manda Chum. He was born in the Grand Palace on the 21st of June 1862. He was named Prince Disavarakumar. The name Damrongrajanubhab was granted later by King Rama V.

When he was young, he studied the Thai language with Khun Sang and Khun Pan. He also studied Pali with Phraya Pariyatidhammadhada (Piam) and Luang Dhammanuvatichamnong (Chui). From the age of ten, he studied English with an English teacher, Mr. Francis George Patterson, whom King Mongkut employed for teaching the young princes in the Grand Palace. When he was thirteen, he studied for one year at the Royal Household Guards school, which completed his formal education (MC Poon Pisamai Diskul, 1962).

Some may wonder why Prince Damrong who did not have an extensive formal education was so learned and was so well-versed in many fields. He was so erudite because he had been educating himself all through his life. As the year 2012 marks the 150th anniversary of Prince Damrong, it is therefore appropriate to write about him and his works.

[1] Fellow of the Royal Institute, Academy of Arts

What caused him to be involved in Thai literature

In 1882, King Chulalongkorn (Rama V) ordered the Vajirayan Library to be built. Prince Damrong was on the executive committee of the Library. The purpose in establishing the Library was to preserve old writers' works and also to give the opportunity for contemporary writers to display their works. Also for the same reason, the Library issued the Vajirayan Journal to publish old and new writers' works. Later on, Prince Damrong was appointed Director of the Vajirayan Library, which was later renamed the Capital City Library. Prince Damrong remained Director through the reigns of King Vajiravudh (Rama VI) and King Prajadhipok (Rama VII).

In 1925, King Rama VII gave his personal book collections and the cabinets containing King Rama VI's books to the Vajirayan Library. Prince Damrong rearranged the Library to make it more orderly. During that time, there was not a great quantity of books. Prince Damrong found the way to increase the amount of books, by announcing that the Vajirayan Library would buy old books for a good price and he requested library officials to look for old books. Additionally, he urged members of the royal family and high-ranking government officials to publish old books for distribution on various occasions such as birthday, funeral, etc. Prince Damrong himself would arrange for the publication. He would edit the book, write a commentary as well as the biography of the person. The Vajirayan Library asked for 20 percent of the amount of the published books. In this way Prince Damrong could revise and publish old valuable books in order to preserve some volumes for posterity and also sell the rest as fund raising for the maintenance of the Vajirayan Library (Prince Damrong, 1966: Memoir).

When King Rama VII set up the Royal Institute (called at that time Rajapandityasabha) on the 19th of April, 1926, he appointed Prince Damrong, a great expert in various fields of knowledge, to be President of the Royal Institute. In this capacity, Prince Damrong took part in making Thai arts and culture flourish right up to the present day.

Prince Damrong's literary works

Prince Damrong wrote numerous works. To celebrate the 100th anniversary of Prince Damrong's birth, the Fine Arts Department collected all his literary works which were over 600 titles (Krom Silpakorn, 1962). He was named a World's Eminent

Personality by UNESCO, the first Thai to receive this honour and the second Asian after Rabindranath Tagore, the Nobel Prize Winner from India.

As his works cannot be all mentioned here, only very significant literary works will be named to give some ideas of the extent of his works.

Explaining Literature

Important titles are as follows: *Tamnan Trai Bhumi Phra Ruang, Tamnan Samkok, Tamnan Lakhon I-nao, Tamnan Sepha, Tamnan Lakhon Duek Damban, Tamra Fon Ram, Tamnan Kap Hey Ruea, Tamnan Sakkawa,* etc. These are books which explain the origins of important Thai literary works and genres.

Biographies

Important ones are *Khwam Song Cham* or (Prince Damrong's) *Memoir, King Naresuan Maharaj's Life History, Biography of Sunthon Phu,* etc.

History and Archaeology

Lectures on Siam Chronicles, Thai Wars with Burma, Krung Rattanakosin Chronicle in the Reign of King Rama II, History of Buddhist Stupas in Siam, Nirat Angor Wat, Journey to Burma, etc.

Works written in English

Prince Damrong wrote a number of articles in English for the *Journal of the Siam Society.* These have been collected and published by Siam Society to celebrate the 100th anniversary of Prince Damrong's birth in 1962 under the title "Miscelleneous articles written for the *Journal of the Siam Society* by His Late Royal Highness Prince Damrong."

Poetical Works

Prince Damrong wrote some significant poetic works. Though only sixteen titles in all, they are full of worthy thoughts and very well-written.

Examples of his literary works

Tamnan Lakhon I-nao

This book is divided into three parts: Part One explains Lakhon Ram or dance drama, Part Two discusses I-nao, dance drama, the Java Chronicle of I-nao (I-nu), Part Three explains the origin of Lakhon. Each part has many divisions.

In this book, Prince Damrong relates the origins of several types of Thai drama, the development of Thai drama in different periods from the late Ayutthaya period, the Thonburi period, and the Rattanakosin (Bangkok) period, from the reign of King Rama I to King Rama V. The book should be named "Tamnan Lakhon Thai" as he talks about I-nao dance drama only in Part Two (p. 97-116). The rest deals in details with various types of Thai dramas such as Lakhon Nok, Lakhon Nai and Lakhon Jatri. He also describes dance costumes, musical ensemble accompanying the dance, and the tradition in performing each type of drama.

Prince Damrong describes the differences between Lakhon Nai and Lakhon Nok as follows:

"It was formerly said that Lakhon Nai was performed by women. Only the royal court could own a Lakhon Nai troupe. The Lakhon that was performed for the general public was called Lakhon Nok which was performed by men. Later on, permission was granted by King Rama IV of the Bangkok period for the people outside the court to train women to play Lakhon. From that time on, Lakhon has been performed by women outside the palace. However, the fundamental difference between Lakhon Nai and Lakhon Nok is not that the performers are male or female, but that the singing tunes, the dancing patterns, the stories they play are all different. Lakhon Nai only plays three stories: the *Ramakien, Unarud, I-nao,* and no others. Formerly, when the royal women troupe performed other stories, these performances were called Lakhon Nok. Even the royal compositions of other stories such as *Sang Thong, Khawi,* were still called Lakhon Nok. Sunthon Phu mentioned this point in his Sepha composition, the *Khun Chang Khun Phaen*, in the episode which relates the presentation of Phlai Gnam, : King Phanwasa did not order the release of Khun Phaen from prison because

"he was in a trance, composing verses for Lakhon Nok. As he could not think of the words, he was in oblivion. He forgot to do his intended royal duty and retired to his sleeping couch." Thus, Lakhon Nok performed other dance dramas. The *Ramakien, Unarud, I-nao*–these three stories were not performed by Lakhon Nok. Though male troupes under the patronage of princes, like Krom Phra Bibidh and Krom Phra Bidaksa, performed *I-nao*, the performance was called Lakhon Nai. Considering the reasons cited, we can see that the difference between Lakhon Nai and Lakhon Nok

lies in the nature of the Lakhon. The main reason does not depend on the female or male performers as was formerly given" (Prince Damrong, 1965: 2-3).

Prince Damrong concluded the explanation of Lakhon Nai and Lakhon Nok that "the term Lakhon Nai must have derived from 'Lakhon Nang Nai' or 'Lakhon Khang Nai', then it was shortened to 'Lakhon Nai'. When there was another type of Lakhon Nai, people came to call the former drama Lakhon Nok. Thus there are two names to differentiate the type of drama (Prince Damrong, 1965: 46-47).

The origin of drama performed only by women was described by Prince Damrong very interestingly.

"The reason why there is a drama performed by women in Siam cannot be found related anywhere. I therefore deduce from the reason given in Tamnan Khon and Lakhon that originally, a certain king who ruled Ayutthaya (possibly before the reign of King Narai Maharaj) thought of making dancers dance according to the Vedic belief, such as being dressed like gods and goddesses and dancing to fit in with the Ramasura story. This kind of dance was performed in a royal ceremony at the palace, the same way as the Duek Dam Ban Performance already referred to. This dance may be the origin of Lakhon Nai. That is why there has been the prologue dance of Ramasura[1] right up to the Rattanakosin period. As there has been a dance which tells a story, it has become a custom to perform a story in a royal ceremony at the palace, in the same way as the custom has developed of performing Khon Luang (Royal Masked Dance Drama) in a royal ceremony outside the palace.[2] Later on, as there was the wish to perform a dance drama telling a different story, an episode of Khon was chosen to suit the type of dancing, such as the episode of Unarud in the story of Krishnavatar. They planned the choreography and trained the female dancers to perform. As they did well, the female troupe was created from then on. The origin of dance drama performed by women can be thus explained (Prince Damrong, 1965: 15-16).

The part describing *I-nao*, a Thai drama in verse, Prince Damrong surmises that the reason Princess Kunthon and Princess Mongkut of the Ayutthaya period composed

[1] This dance depicts the demon Ramasura chasing the goddess Meghala who waves a crystal ball, which he wishes to own for himself.

[2] Khon developed from the ceremonial Duek Dam Ban Performance.

I-nao as a drama, and not a poetic tale for reading, was "because at that time King Borommakot enjoyed watching dramas. It is possible that it was not long after Lakhon was first known and performed. Perhaps the two royal daughters had the duty to oversee the training of the royal drama troupe. They might have heard from their ladies-in-waiting that the Mayong drama from Malayu, often performed the story of Inao because it was a story that most Malayu people esteemed. The princesses requested that they told the story. Seeing that the story was indeed fit for drama, they tried to make it into a Thai drama. When King Borommakot saw the drama composition, he was pleased and granted permission to perform the drama of I-nao as another drama in the repertoire (Prince Damrong, 1965: 103-105).

Khwam Song Cham (Memoir)

Prince Damrong composed this book while he was residing in Penang after the change of the government from absolute monarchy to democracy in 1932.

Those who read this book will see that his *Memoir* is more concerned with history rather than his autobiography. This book gives a lot of information about life in the Grand Palace, for example, the education for young princes in those days; King Mongkut's biography in detail, from the time before he ascended the throne to the years after; events during the succession from King Rama IV to King Rama V; and happenings during the early years of King Rama V's reign.

Apart from giving information about the life and events from the various periods of history generally known from historical texts, there are also some parts in the *Memoir* that make the readers feel that they have participated in the events, and undersand the actual thinking and outlook of the people at that time. There is one story that Prince Damrong relates quite amusingly. It is the story of "ice" which was strange and new at that time.

"… One strange thing was the ice. It seemed that it was made in Singapore recently. Someone often sent a block of ice covered in sawdust to the King. Whenever the King received the ice, he distributed it to princes and high-ranking government officials. Those who had just seen it, children such as myself, liked to chip it into small pieces, keep a piece in my mouth and feel the coldness quite enjoyably. Those who were older did not like it so much. They often complained that eating ice gave them

tooth-ache. Moreover, some elderly people, hearing that the King gave pieces of ice, would not believe that it was made of water. They whispered in amazement, "How can they shape water into a solid thing?" This is because there is a saying in *Phra Ruang's Proverbs,* "Do not shape water into a body", which means, "Do not do something against nature", or it can be a censure that someone tells a lie to resemble the truth. I have been long familiar with this saying from the ancient time. The ice-making factory has just been set up in our country in King Rama V's reign (Prince Damrong, 1962: 19-20).

Prince Damrong relates the changing of the royal court customs when King Rama V returned from his visit to Singapore. He also tells about the feeling of young princes most interestingly. Readers can see how the children were fun-loving and full of curiosity.

"At the time the court customs were changed after His Majesty returned from Singapore, young princes like myself still accompanied the King. When he went to sit in the parlour, if we were not sent away because he had guests, we could enjoy sitting in a chair. When he went by car in the afternoon, we crept into the second car to follow him. In the evening at dinner, if there were empty seats at his table, he would send for young princes to sit in the vacant chairs. I could sit and eat at the table and enjoy some ice-cream. Ice-cream was a wonderful thing at that time because a small ice-maker, like the rural people have nowadays, had just arrived in Siam. On some days the water was frozen, but on other days it was not frozen solid. Therefore the day we had ice-cream was considered superb. Young princes like myself were not forced to use the modern costume. Even so, when I saw how the adults dressed themselves, I wanted to wear stockings and shoes so much. I begged my mother to get them for me. Seeing that I regularly joined the King's retinue, my mother bought me shoes and stockings. I was so glad. But the first day I wore them, I was sorry because my shoes were quiet, they did not make any noise and I had heard that they should squeak "odd, odd," if they were good shoes. I asked the royal guards how to make the shoes squeak. They suggested that I pour some coconut oil on the soles. I took their advice and tried to do so. When the shoes sounded "eed, eed", I was pleased (Prince Damrong, 1966: 181-182).

***Sadaeng Banyai Phongsawadan Siam* (Lectures on Siam Chronicles)**

This book contains lectures on Thai history given by Prince Damrong at Chulalongkorn University in 1924. It is divided into four parts which he calls "Kand". The first part relates events from the time before Thai rule to when the Thais came to rule Siam. He describes the rise and fall of the Sukhothai Kingdom. From the second part up to the fourth part, he relates the founding of Ayutthaya City, how the Ayutthaya Kingdom enlarged her territory, and the consolidation of Ayutthaya up to the great war with Burma, in the reign of King Naresuan Maharaj.

In his lectures, Prince Damrong not only relates historical events in detail, but he also gives reasons and references. He offers interesting hypotheses such as the word "Phra Ruang" which can mean either King Si Indraditya or King Ram Khamhaeng. From his hypothesis and reasoning, he comes to the conclusion that Phra Ruang should be King Ram Khamhaeng.

"However, if we consider the stories in the Mon Chronicle and Chiang Mai Chronicle, the latter says that Phra Ruang and Phraya Gnam Mueang went to help Phraya Mengrai choose a location to build Chiang Mai. The Northern (Chiangmai) Chronicle says that Phra Ruang went to China. The Mon Chronicle says that Phra Ruang appointed Makkatho as Chao Fa Rua. All the events related happened during the reign of King Ram Khamhaeng Maharaj... It is possible that Phra Ruang was the former name of King Ram Khamhaeng Maharaj, as it appears in the stone inscription where he related that he received the name Ram Khamhaeng after he won the battle on elephant back against Khun Sam Chon, ruler of Muang Chot" (Prince Damrong, 1949: 34-36).

In this book, Prince Damrong also talks about other things. Although they do not concern history directly, they give the reader fascinating pieces of historical insight. For example, he relates the reason why people like to build temples in the old days.

"They built temples in the old days for two reasons: to make the Buddhist faith continue and prosper, which was the religious reason; the other reason was worldly, concerning the members of their family lineage that passed away to the other world. According to the ancient custom, after the cremation of the dead, the relics were gathered up, but were not kept in their homes. When their relations died and were cremated, they built a stupa to contain the relics in the temple. When the living missed

them, or on religious occasions, they went to make merit at the stupa which contained the relics. For this reason, any family, that could afford to build a temple, would build one for the members of the family line, to make it a place to bury the relics and make merit for the family. Building a temple was generally considered an honour for the family lineage. That is why numerous temples were built" (Prince Damrong, 1949: 57-58).

The name "Chao Phraya River", Prince Damrong explains, "is so called only in the Rattanakosin period. Formerly it was just called Menam[3]. At Tambon Paknam[4] (Paknam sub-district) before the town of Samut Prakan was built, it was called Bang Chao Phraya. So it was called Paknam Bang Chao Phraya in the same way as (we call) Paknam Bang Pakong. Then it became the name of the river (Prince Damrong, 1949: 72).

The name of the Chao Phraya River, in old books written by European writers about Siam, appears as Menam. (Pallegoix, 1854: 8) Some Thais who do not know the facts think that the Europeans called it incorrectly. If they had read Prince Damrong's explanation, they would know the true origin of the name.

Poetry

People generally do not realize that Prince Damrong had poetic talent, for he did not compose a lot of poetry, indeed only sixteen titles altogether (Prince Damrong, 1944). Princess Poon Pisamai collected them for publication. The following excerpts can demonstrate his talent. Many poems are noted for their beauty and depth.

Vajirayan Subhasit

This poem from the collection shows the value of knowledge.

"Knowledge can be a friend when one is alone,
It can be one's ornament when speaking,
It becomes strength when one makes decision,
It is one's wealth evenings and mornings."
(Prince Damrong, 1944: 20)

[3] Menam simply means 'river'.

[4] Paknam means the river mouth.

Bot Doksoi Subhasit

These poems were formerly selected for singing and reciting by primary school children because the language is simple and the contents can teach them good conduct.

"Try to put an egg upright.
However hard we try, the round egg will tumble.
Though we can boil the fallen egg,
What can we do if it falls on the ground?
We had better put our effort
To reading, writing and learning from books,
Trying to acquire knowledge and putting it to practice.
Don't insist on wasting time putting an egg upright."

"Toot Too[5], Dear Toot Too,
How can you live in a hole?
You are so lazy, what a shame!
You invite me to chew betel nuts with you.
I do not want to mix with your kind,
Lazy bones who take advantage of their neighbours,
And try to avoid even a small task.
We should wake up early and work till evening,
We shun idle people who are loathsome.
(Prince Damrong, 1944: 29-30)

A poem for King Rama V in R.S. 112

MC Poon Pisamai Diskul wrote the explanation why Prince Damrong composed the poem.

When difficulty arose with the French in R.S. 112 (C.E. 1893), King Chulalongkorn was so depressed that he became seriously ill and stopped taking medicine. He wrote a farewell Chand (a type of poem) to some of his brothers. My father related to me, " As soon as I received the Chand, I wrote the reply immediately. I did not

[5] A kind of mole.

keep a copy but someone told me that when he finished reading it, the King continued to take medicine and recovered from his illness soon after." (Prince Damrong, 1944: 43).

Before quoting Prince Damrong's poem for King Chulalongkorn, it is necessary to quote the King's Chand to Prince Damrong, so that one may see Prince Damrong's genius in composing his answer.

King Rama V's Chand to Prince Damrong

"Sorely ill for such a long time,
I have no wish to seek recovery.
My mind is no longer at ease,
My head troubling, my heart broken.
Were I to recover, I would have a heavy heart,
Thinking of all the troubles that weigh upon me.
I fear to resemble the king who failed to defend Ayutthaya,
Losing the land and forever earning blame.
Seeking the solution, I can find none.
Ashamed to face all men, I wish to die and disappear."
(Prince Damrong, 1944: 46)

Prince Damrong's poem:

"It is usual for an ocean to be
Sometimes calm, when the storm abates.
When the tempest causes high waves,
But yet, the ship is strong enough,
She will survive unscathed.
If Fate wills it so, every ship will sink.
Mariners know this in their heart.
While the ship still floats, they join forces to steer.
If they get through, they will be safe and glad.
If they misguide the ship, she is doomed to sink.
If they do nothing, make no effort to strive,
They finally lose the ship like those who try but fail.
The difference lies between trying hard though sinking,

And being careless, foolish, doing nothing.
Losing can be renowned and praised by all
With sympathy that Fate is stronger than human effort."
(Prince Damrong, 1944: 47-48)

Poem given to Princess Siriratnabusabong

This poem is outstanding because it makes one see the truth about human life.

"As a child, one sees the world full of fun,
As a youth, one enjoys happiness night and day,
At middle age, one begins to feel both sad and glad,
In old age, one realizes all is transient."
(Prince Damrong, 1944: 135)

The translations cannot express well the original compositions. They can only give a glimpse into his poetic talent.

Conclusion

Prince Damrongrajanubhab had composed a great deal of literary works and was a great Thai writer. He wrote everything clearly, always presented everything based on evidence and facts, as far as he could discover during his time. His works have become the source for later generations to utilize. In every piece of his extensive literary works, he uses simple language that is considered a model of good Thai writing. Many of his works have been selected for studies in Thailand and abroad. At Ecole des Langues orientales in Paris where the Thai Language is one of the subjects, Prince Damrong's works are selected as texts for the curriculum (Burnay, 1938: Chrestomathie siamoise).

One can see the whole collection of Prince Damrong's works in the Prince Damrongrajanubhab Library on Lan Luang Road. HRH Princess Maha Chakri Sirindhon presided at the introduction ceremony of the new ongoing e-Library project there in June 20, 2012 to keep up with the age of e-Learning and thereby continue the Prince's idea of literary preservation.

It is evident that Prince Damrong's works enrich several fields of knowledge while they express the beauty of Thai Language. His literary works contribute significantly to the field of Thai literature. The Thais should be forever grateful to Prince Damrong.

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Translations of National Literature: Existing Translation Works as Means to Promote Better Understanding among Nations

Malithat Promathatavedi[1]

Abstract

This paper traces the history of translation from ancient time to the present, especially the translation of literature. The translation of literary works in Thailand also has a long history going back to the Sukhothai Period. Through trade and cultural connection with countries in Asia and the intrusion of Western ideology and technology, there have been broader scopes of translation. In the first stages translation was of a religious nature. During the turbulent times in history when Thailand was still waging wars with neighboring countries there were many literary works in reference to the wars, most of them glorifying the heroic deeds of various Thai kings who had fought to maintain peace and sovereignty of the country. In the country-building periods it was time to concentrate on the intellectual side. Eminent writers and poets vied to present their works to the court and artists in all fields produced their works of art. There were poems praising the splendor of the architecture of palaces and temples, the royal barge procession, and even the exquisite cuisine and floral arrangement. After World War II regional cooperation among countries in Southeast Asia has resulted in the launching of several bi-lingual volumes of the *Anthology of ASEAN Literatures* and the *S.E.A. Write Award-Winning Stories* in English translations as an attempt to make the

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literatures and cultures of ASEAN known to the world. In comparison to works translated from foreign languages into Thai, there are fewer Thai literary works being translated into foreign languages. The modern trend in the age of globalization is the translation of romances and thrillers. There is a shift of translation purposes from entertainment to business and economic development and the source and target languages of translation vary. A good translation can promote better understanding among nations, thus linking people all over the world together in a world made smaller by globalization.

Keywords: translation, national literature, ASEAN, S.E.A. Write Award

Translation has been in existence since 3000 B.C. but it started to play an important role in the Western world around 300 B.C. Influenced by Greek civilization and religion, the Romans translated writings on arts and sciences from Greek into Latin. Such eminent Roman writers as Catullus and Cicero translated works from Greek into Latin. Later on when the Roman Empire became powerful, the process was reversed, that is, there were translations from Latin into Greek. When the Arabs rose to power around the 12th century, works by Aristotle, Plato, Galen and Hippocrates were translated into Arabic. In the same century the Moors invaded Spain, resulting in the influx of academic books into Toledo. Contact between the Moors and the Western world popularized the translation between Arabic and European languages. When the Moorish influence in Spain came to an end, the Toledo School of Translation translated the Arabic version of Greek scientific and philosophical knowledge into English. Some books had been translated back and forth from one language to another in succession, causing the contents of the translated versions to deviate from the originals. One area of translation, the translation of the Bible, has played a significant role in the diffusion of Christian teachings and has been continuously revised and improved. Translation has progressed through time and the 20th century was considered “the Age of Translation”.

Translation, especially the translation of literary works, is not a novel subject in Thailand. The country has had a long history of translation from dealings with Western countries as well as its Eastern neighbors. There was a translation of

Vessantara Jataka from Pali into Thai by the name of *Mahachat Kham Luang***,** the first religious literature of the Ayutthaya Period in the reign of King Borommatrailokkanat (1448-1488). *Sam Kok (The Three Kingdoms)* was translated from Chinese into Thai in the reign of King Rama I (1782-1809), founder of the Royal House of Chakri, in the Early Rattanakosin Period. In the reign of King Rama III (1824-1850) the coming of missionaries to disseminate Christianity in Thailand gave rise to English-Thai translations. More Thai people were interested in learning English in the reign of King Mongkut (King Rama IV, 1850-1868) and during the transitional period between the reigns of King Chulalongkorn (King Rama V, 1868-1910) and his son, King Vajiravudh (King Rama VI, 1910-1925). The Oxford-educated King Vajiravudh, whose reign was called the Golden Age of Thai Literature, rendered a beautiful Thai translation of three of William Shakespeare's works: *As You Like It***,** *Romeo and Juliet,* and *The Merchant of Venice***.** The king also translated the play *Les Sauterelles* by Émile Fabre into English entitled *The Locusts***.** From that time on there were increasing numbers of translation works from English into Thai. This has been the trend up to the present. King Bhumibol Adulyadej (King Rama IX, 1946-), the current monarch, translated William Stevenson's book, *A Man Called Intrepid***,** and *Tito***,** a biography of Marshal Tito of Yugoslavia by Phyllis Auty, into Thai and translated *Mahajanaka***,** the story of one of the lives of Buddha, from the Thai text into English. He wrote *Thongdaeng***,** a story about his pet dog in Thai and then translated it into English.

The literary works of a country reflect its people's linguistic ability, art and science, customs and traditions, myths, religious beliefs, historical, social and political developments. In the past, geographic and linguistic barriers made it difficult for communication among nations. Thus, there were accounts of fabulous lands and exotic peoples and animals related by travelers of yore. These accounts were for the most part exaggerated and tended to be misleading. Westerners who thought of themselves as being sophisticated looked down on peoples in Asia or Africa as primitive and uneducated, whereas Eastern nations with a long history of civilization thought of Westerners as vulgar and uncultured. Before the age of Information Technology it was through translation works that one could learn and understand more about people in other countries. The teachings of great religious and philosophical

figures, literary works by eminent authors, as well as works in other fields of knowledge have been translated into several languages. Nowadays, one can read quotations from the Bible or the works of Shakespeare in almost any language.

The Association of Southeast Asian Nations (ASEAN), a geo-political and economic organization comprising ten countries located in Southeast Asia was formed on 8 August 1967. Its founding members were Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Later the membership was extended to include Brunei Darussalam, Cambodia, Laos, Myanmar, and Vietnam. ASEAN aims at accelerating economic growth, social progress, and cultural development among its members, protecting regional peace and stability, and providing opportunities for member countries to discuss differences peacefully. From the early 1980's to the early 1990's there had been efforts to compile the diversity of literary works in regional languages of Southeast Asia into an anthology.

Sponsored by the ASEAN Committee on Culture and Information (COCI), this project selected masterworks of literature from every regional language of Southeast Asia and translated them into English as a means to promote better understanding and exchange of appreciation on each individual country's culture and way of life. This is a good example of how linguistic and cultural diversity of Southeast Asia has been recognized as an integral part of ASEAN common interests. Compiling the works and translating them into English has built and enhanced understanding among ASEAN members of their common cultural heritages. It can also lead to further cooperation in preserving and developing linguistic and cultural diversity in Southeast Asia. It was also concluded that it would be more appropriate if the selected works for translation be translated into the national or the official indigenous language of each nation, especially in the case of ASEAN countries which rely on more than one language for their communication. This could help enhance wider appreciation of their local literature and also would benefit the study of the national literature in each particular member country.

As a result of this project several volumes of the bilingual *Anthology of ASEAN Literatures* were issued. It was decided at the Preliminary Meetings in Singapore during 14-16 June 1982 that the selection of literary works to be included in the

Anthology, based on the criteria of literary merit and on a broad chronological order, should be left to the national teams. Thus, **Brunei Darussalam** chose to deal with folklore and classical poetry. **Indonesia** presented a variety of oral literary genres observed in different linguistic areas and pre-Islamic written literature. **Malaysia** chose a collection of excerpts of traditional texts and folklore taken from both the indigenous tradition and early classics. **The Philippines** concentrated on epics from the different regions of the country and the Spanish influenced metrical romances. **Singapore** followed the broad chronological approach and concentrated on poetry and fiction.

In the case of **Thailand** where there is solely one official language used for the whole country, the Thai National Team on *Anthology of ASEAN Literatures* deemed it appropriate to produce translated version and simplified or paraphrased Thai version of the Thai Anthology as Volumes a and Volumes b. Thai literary works existing in written form are divided into five periods as follows:-

1. Sukhothai Literature	(1238-1377)
2. Early Ayutthaya Literature	(1350-1529)
3. Late Ayutthaya Literature	(1620-1767)
4. Thon Buri Literature	(1768-1781)
5. Rattanakosin Literature	(1782-present)

For Volume I, the Thai team presented the **"***Traibhumikatha," (The Story of the Three Planes of Existence)* believed to have been composed by King Lithai of Sukhothai. A treatise on Buddhist cosmology, actually a sermon which King Lithai while in the monkhood preached to his mother, it represents the first work of Buddhist literature ever written in the Sukhothai Period describing the Three Planes, namely the Sensual Plane which includes the Human World, Heaven and Hell; the Corporeal Plane or the Plane of the Brahma; and the Incorporeal Plane or the Plane of the Form-less Brahma.

Volume II comprises eight literary works of the Ayutthaya Period starting with *Ongkan Chaeng Nam (Oath of Allegiance)***,** an incantation in verse to be uttered by courtiers, princes and representatives of vassal states in the ceremony of Drinking the

Water of Allegiance; *Mahajati Kham Luang (The Great Life of Lord Buddha)***,** the royal version of a poem based on the story of Vessantara, believed to be the greatest of Buddha's incarnations, aiming at showing the basic doctrines to which all Buddhists adhere, particularly mercy, kindliness, and willingness to help; *Lilit Yuan Phai***,** a historical poem eulogizing King Borommatrailokkanat's meritorious deeds and victory over Prince Tilokaraj of Chiang Mai. This piece of work reflects the heroic and virtuous deeds of Thai kings in defending the land and bringing peace and happiness to the people throughout the Thai history; *Lilit Phra Lor***,** the first poem that plays on the emotions of the readers, is an anonymous narrative poem the plot of which is based on a Northern folktale with a tragic theme similar to that of *Romeo and Juliet.*

The remaining four selections are *Khlong Thawa Thotsamas (Twelve Months Poem)***,** in which the anonymous author refers to the rites and ceremonies observed each month; *Dutsadi Sangwoey Klom Chang***,** a lullaby for a newly captured royal white elephant. The white elephant, believed to be sacred among the peoples of Asia, is a symbol of grandeur and prosperity, bringing fame and honor to its owner, usually a king. The greater number of white elephants a king has in his possession, the more renowned he is. The lullaby is meant to pacify the elephant which has just been taken from the jungle in order that it may acclimatize to the new surroundings in the royal stable; *Phleng Yao Phayakon Krung Si Ayutthaya (Prophecy of Ayutthaya)***,** dating back to the second half of the 17th century, describes sixteen bad omens foretelling the collapse of Ayutthaya; and *Krung Kao Chronicle: Luang Prasert Aksonnit's Version (The Royal Chronicle of Ayutthaya)***,** a prose narration of the historical events of Ayutthaya, a former capital of Thailand, starting from King Chai Rajathiraj up to King Naresuan the Great. This chronicle is renowned for its exceptionally accurate accounts.

In Volume III a, literary works of the Thon Buri and Early Rattanakosin periods are featured. They consist of *Poem in Tribute of King Taksin of Thon Buri* by Nai Suan, the Page; *Fighting the Burmese at Tha Din Daeng***,** a poem by King Rama I; *Nirat Narin* by Nai Narinthibet; *The Floating Maiden* episode of *Ramakian* by King Rama II; *Being Captivated by a Portrait* and *Carried off by the Whirlwind* episodes of *I-nao*, a dance drama by King Rama II; *Phlai Kaeo's Wedding* episode of *Khun*

*Chang-Khun Phaen***,** a narrative poem about the lives of common people by King Rama II; *Wali Pledges Her Service, The Birth of Sudsakhon***,** and *Extraordinary Adventure***,** three episodes of *Phra Aphai Mani***,** a narrative poem by Sunthon Phu, declared a world personage by UNESCO in 1986.

Volume III b contains two long works of the Rattanakosin Period namely *Lilit Taleng Phai (King Naresuan's Victory over the Burmese)***,** an epic poem lauding the feat of King Naresuan the Great of Ayutthaya who defeated the Burmese Crown Prince in a fight on elephant back, by His Holiness Prince Paramanuchitchinoros, the 7th Supreme Patriarch of Rattanakosin, and *Ngo Pa: Romance of the Sakai***,** a poignant drama in verse by King Chulalongkorn about a love triangle that ends with the deaths of the three principal characters belonging to a primitive tribe living in the jungle of South Thailand. It is the only Thai literary work that thoroughly explores the living conditions of the Ngo or Sakai, also called "Semang" in Malay that should be of interest to those studying cultural anthropology.

It can be seen from the Thai selections that most of the works were written by kings, royals, or courtiers. This is because in former time education started in the court. The royal children were the first ones to have formal education, followed by children of courtiers, before education spread outside the palace. Many Thai kings were renowned writers, dramatists and poets and some were well-versed in foreign languages. For example, King Mongkut who had spent many years in the monkhood before his ascension to the throne was an expert on the ancient languages of India like Pali and Sanskrit and knew English and French. It was he who employed the service of an English governess to teach his children, one of them being Prince Chulalongkorn who succeeded his father as King Rama V.

It should be noted that the subject matters of the selected works are varied. Some are religious or historical in nature and others deal with warfare, as during the Ayutthaya, Thon Buri, and Early Rattanakosin periods Thailand was constantly engaging in wars with neighboring countries. Foreign influences derived through commercial or cultural contact with other countries appear in such works as *I-nao***,** the story of a Javanese prince, and *Ramakian***,** the Thai version of the Indian *Ramayana* epic. Though the plot and characters come from abroad the customs and traditions

depicted in these works are typically Thai. Sometimes royal personages did not write only about stories pertaining to courtly life. King Chulalongkorn, after hearing the tragic story involving the three Ngo from an old woman while he was taking a forest trip in the south of Thailand, was so captivated by it and wrote the play *Ngo Pa* (Wild Sakai) in eight days while convalescing from an illness. The play reveals a universal fact that human nature is the same everywhere regardless of race or status as illustrated by the following excerpts in English translation:-

"Look at the power of love,
That could lure people to their deaths.
Here are three corpses in a row,
All of them were slaves of love."

"**Thus concludes** my poetic endeavor,
A tale which can be turned into a play,
Of Sakai born on the high land of Phatthalung,
Wild forest their home, how to love they do know."

The South East Asian Writers or S.E.A. Write Award founded in 1979 by the Oriental Hotel, Bangkok is an annual event that recognizes and honors the works of contemporary poets and writers within Southeast Asian countries, presenting one award to a winner from each country. The award is given in the categories of poetry, short story and novel in rotation. In the early years, Indonesia, Malaysia, the Philippines, Singapore and Thailand were the key participants. Winning writers receive a commemorative plaque, cash, and an all-expenses-paid vacation in Thailand or another ASEAN country. The initiative was well-supported by several organizations and other entities also joined in providing additional sponsorship. At the onset the Award was presented by Her Majesty Queen Sirikit. In later years, members of the royal family or their representatives have graciously presided over the annual award presentation ceremony and gala dinner, during which a keynote speech is delivered by a prominent literary figure.

The English translations of selected S.E.A. Write award-winning works have appeared in *The S.E.A. Write Anthology of Thai Short Stories and Poems*; *ASEAN Short Stories and Poems by S.E.A. Write Awardees 1999*; *Old Truths, New Revelations*; and *The S.E.A. Write Anthology of ASEAN Short Stories and Poems—The 30th Anniversary*. These volumes were aimed at promoting good understanding and mutual respect among ASEAN nations. Since the works are in English, it is hoped that they will also interest readers all over the world and make international literary circles aware of the distinctive as well as common cultures and aspirations of ASEAN countries.

At present the genres of literature translated into Thai are short stories and novels. Romance, detective story, mystery and science fiction are the most popular. A large number of people are addicted to Chinese martial arts or gung fu novels in translation. With the invasion of Japanese movies and soap operas, the trend has shifted to the translation of Japanese literature into Thai, especially the "manga," the Japanese word for "comics," consisting of comics and print cartoons, popular among people of all ages in Japan. With the trend of Korean romance becoming prominent among Thai youngsters, new translators emerge in a large number. Their works are often met with criticism that they lack linguistic efficiency and appeal only to young college and school girls. The texts often lose their original meanings and flavors in the process of translation. Apart from English, Chinese and Japanese texts, there is a rise in the number of texts dealing with philosophy being translated into Thai from the European languages like French, German, Italian, Russian and Spanish.

On the other hand, there are fewer works by Thai authors translated into other languages. Apart from the selected works included in *The Anthology of ASEAN Literatures* and *The S.E.A. Write Anthology of Thai Short Stories and Poems*, the popular novel *Khu Kam* by Dhamayanti has been translated into English as *Sunset at Chao Phraya* and also into Japanese as the hero of the story is a Japanese naval officer who meets and falls in love with a Thai girl during World War II in Japan-occupied Thailand. *Si Phaendin (The Four Reigns)*, a novel by the late Prime Minister of Thailand Mom Rajawongse Kukrit Pramoj, depicts the life of the principal character, Mae Ploy, from her childhood to death spanning four reigns. The readers can follow the

development of Ploy's life along with the cultural and political changes in Thailand. The winner of the SEATO Prize for Thai Literature, *Chotmai Chak Mueang Thai* **(***Letters from Thailand)* by Botan, is the story of Tan Suang U who leaves China to make his fortune in Thailand at the close of World War II. His life is unfolded through the letters he writes from Bangkok Chinatown to his mother in China.

Translations of the S.E.A. Write award-winning novels include *Kathang Chaniang Rim Natang (The Chaniang Pot by the Window)* by two-time winner Win Lyovarin and *Khwam Suk Khong Kati* **(***The Happiness of Kathi)***,** a novelette by Jane Vejjajiva. The first story is a psychological novel with a twist ending about a paralyzed victim of a head-on collision who is hospitalized and unable to speak. His suffering makes him want to end his life but a kind nurse convinces him to change his mind by telling him about her own miserable life. The second one, a story of love and sorrow from the viewpoint of Kati, a nine-year-old girl, has been translated into English, French and Japanese. The aforementioned examples seem to show that only popular and award-winning books get translated, often by native speakers of foreign languages, but also by competent Thai translators.

In modern days, globalization not only leads us into the world of technology and computerized space but also the realm of translation as well. The impact of globalization is the functional determinant for the translator to choose between "what to translate" and "for whom the translation is meant." In the past, translated literatures in Thailand generally dealt with religious and cultural themes. After Western literature was introduced into the country there have been constant translations mostly through the medium of English. Many of them, from the Greek plays and Shakespeare's dramas to Steinbeck's novels, have been adapted and staged. Modern Thai readers tend to read translated novels with themes based on romances or action-packed thrillers. The makeshift trends of readers' interest from religious and classical literary texts could possibly be the impact of globalization.

Translation needs not be the sole means for the translation of literary texts. Because of business expansion in today's world, we see the shift of translation purposes from entertainment to business and economic development in our competitive world. "Know-how" books in translation are trendy with modern

readers. The source and target languages of translation can also vary and in Thailand the upcoming of Japanese and Korean as target languages is popular. Rudyard Kipling's words "East is East and West is West, and never the twain shall meet" no longer apply to the "small world" in the age of globalization. We know what is happening in other parts of the world in just seconds, sometimes at the same time that it is happening. We share the joys and sorrows of our fellow human beings. It remains the duty of the translator to transfer facts and ideas from one language to another as accurately as possible while still retaining the aesthetic aspect of the source language, keeping in mind that nothing gets "lost in translation."

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Inflections in English Nouns, Verbs, and Adjectives

Suwaree Yordchim[1]

Abstract

The objectives of the study are to analyse inflections as they occur in the English language in nouns, verbs and adjectives, including both regular and irregular forms, in order to quantify how many types of variations there are and to determine what these variations are. The instrumentation of the study comprises of a content analysis of inflections in English that yields an 8-point framework of the inflection of nouns, verbs and adjectives: 1. plural nouns, 2. possessive nouns, 3. present verb third-person singulars, 4. present participle verbs, 5. past tense verbs, 6. past participle verbs, 7. comparative adjectives, and 8. superlative adjectives. Checklists were then derived from this framework and filled by data collection of lexical units from a variety of sources. The data obtained was then analysed with a focus on suffix morphemes. Useful findings include a complete inventory of inflectional variation and irregularities that reveal the true complexity of this grammatical component of the English language. Insights regarding these inflectional variations and irregularities are offered to encourage deeper understanding and improvement of English skills as a foreign language in Thailand for both teachers and serious students of English.

Keywords: English Inflection, Noun, Verb, Adjective

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Introduction

In recent years, inflection in a language is significant because it can convey information regarding tense, agreement, person, number or aspect, and other details. But, despite its significance, it is often omitted or incorrectly substituted. The omission of inflection could be expected in usage by second language (L2) learners or agrammatic users when exposed to a highly inflectional language with rich verbal paradigms, where multiple verb forms compete for the learner's or user's attention and overwhelm the processing system. English, with its residual inflectional paradigm, should not be as challenging (Szupica-Pyrzanowski, 2009).

Purpose of the Study

To achieve the goals of the study, the purposes of the study are to:

1. analyse inflection in nouns,
2. analyse inflection in verbs, and
3. analyse inflection in adjectives.

Significance of the Study

This research study of inflection in English nouns, verbs and adjectives is significant in terms of the pedagogy of developing the students' level of ability in linguistic competency, but research related to inflection in the study of foreign languages has rarely been conducted into the analysis of English language inflection in Thailand. In particular, when selecting foreign language programmes, universities often simply choose the programs and teaching methods that are popular in other Asian countries, or in the USA.

It is believed that this research study delivers rich and useful data, which will give a broader idea of the usage of inflection in the English language. Also, it will also be beneficial for educators, educational systems and international research as the findings can be advantageous to the educational system in neighbouring countries such as Myanmar, Laos, Vietnam and Cambodia where the cultural factors and languages are similar to Thailand. Understanding the system of inflection as used in the English language will further contribute to the improvement of educational development in the region of Southeast Asia and beyond.

Research Methodology

This research started with a content analysis of English inflection in nouns, verbs and adjectives, including both regular forms and irregular variations. Additonally, there was a collection of the data from a number of different dictionaries. Variations in inflection were analysed and summarised for each unique environment, in order to find how many types of exist variations in the English inflection of nouns, verbs, and adjectives, and what these variations are. Finally, the data was analysed.

Research Questions

To achieve the objectives, the research set out to answer the following key research questions:

1) What types, varieties and environments of inflection occur in English nouns.

2) What types, varieties and environments of inflection occur in English verbs.

3) What types, varieties and environments of inflection, occur in English adjectives.

Instrumentation

The instrumentation included three parts, namely 1) content analysis, 2) data collection and 3) data analysis. The details of the instrumentation are as follows:

1. Content Analysis

The first step of this research study was a content analysis of the environments of English inflection, which are classified by noun, verb and adjective inflection. For each type of inflection, both regular and irregular forms were surveyed. The focus of the analysis was on the irregular forms, in order to find all of the commonly accepted variations from the regular types and forms of inflection, namely those which are considered to be the exceptions to the rules.

The first step of the content analysis was the construction of the instrument. The instrument of content analysis was constructed from 8 categories of inflectional affixes for nouns, verbs and adjectives. These are the regular forms as listed below:

Nouns:

1. Plural *–s*
2. Possessives *–'s*

Verbs:

3. Third person SG non-past *–s*
4. Progressive *-ing*
5. Past tense *–ed*
6. Past particle *-en*/*-ed*

Adjectives:

7. Comparative *–er*
8. Superlative *-est*

The second step of the content analysis involved an examination of each type of inflection that is used in the English language in order to catalogue every possible environment. The examination began with the standard or regular processes and then went on to find all of the variations or irregular processes that occur in relation to each type. This analysis resulted in a thorough and complete view of the field of inflection in the English language and provided checklists for each category of English language inflection.

2. Data Collection

The second part of the instrumentation was to find all lexical occurrences for each type or environment and to classify them according to the process by which they are formed and to ascertain if that process is considered to be a regular or irregular variation. This step involved a survey of the vocabulary items involved with each variation or irregular occurrence, in order to find which words can be considered as irregular for that particular environment. The purpose of these first two steps was to collect data related to the research objective.

The research data was collected by the following methods using a lexical analysis. They can be classified as below:

1) For English inflection analysis, the data was collected by recording into the checklists provided, according to each variation. There was a collection of the data from a number of different dictionaries, such as the Oxford Advanced

Learner's Dictionary, the Merriam-Webster Dictionary, the Longman Dictionary of Contemporary English and the Collins Cobuild Dictionary and Rhyming Dictionary.

2) The next step was sorting the cases, and putting the same variants together. The vocabulary chosen according to the following criteria:

a) nouns - they must have

plural forms, such as in inflectional environments, both at word level and compound level.

b) verbs - all verbs were included in the analysis.

c) adjectives - irregular forms were focused on.

Lexicons and parts of speech were considered while they were collected from the various dictionaries. Words with prefixes were eliminated and only the simplest form was chosen, for example, between *write* and *rewrite*, the word *write* was chosen.

Then, each type of environment and the suffixal occurrences were explained.

3) Finally, analysis of the phenomenon in each category in noun, verb and adjective inflection was conducted and conclusions were drawn from the data.

Results of this study

Findings related to noun inflection

Noun inflections occur in the following environments: 1) Nouns ending with –f, -fe, -ff, -ffe, -gh and –ph, 2) Nouns ending with –o, -oo, -oe, -ou -ow, and –eau, 3) Nouns ending with –y.-ay, -ey, -oy, and –uy, 4) Nouns ending with –th, 5) Nouns having suffixes –en and –ren, 6) Nouns with suffixes –ee, -e, and –i, 7) Nouns with a zero suffixal plural , 8) Nouns with Greek and Latin suffixes -a, -e, -es, –ces and –i, 9) Compound nouns with different forms of affixes, and 10) Nouns with multiple plural forms.

The pronunciation of suffix –s is affected by voiced, voiceless and sibilant phonemes of the final consonant and by final vowels sounds, all of which are voiced. Some of them are inflected within the word, such as in *man - men* and *woman - women*. A few of them are inflected by a zero suffixed plural with no change occurring either within or at the end of the word, such as *fish - fish*. Some nouns ending with –e will retain a silent –e when inflected for plural form, such as *note – notes*; while others will have the –e pronounced, such as *bridge - bridges*.

The suffixes that are added in noun plural inflections in English are as follows: -s, -es, -ves, -ies, -en, -ren, –ee, -e, and –i. There are also Greek and Latin suffixes -a, -e, -es, –ices and –i and a zero suffixed plural included.

This indicates that noun inflection for plural in English is not a simple process but one that requires a broad knowledge of numerous environments and irregular inflectional affixes. The options for noun plural inflection are much more complicated than simply adding –s to the end of a noun.

Inflection for noun possessives also has numerous variations for the use of –'s. These include: 1) Singular nouns with -'s, 2) Plural nouns without -s affix 3) Two owners with one thing 4) Noun phrases 5) Names of some places 6) Nouns telling time. 7) Nouns telling distance 8) Nouns telling monetary value 9) Nouns telling weight. For S apostrophe (-s'), they are: Plural nouns without -s affix, 3) Either –'s or –s' affixes: Specific nouns ending with –s. This category of inflection also includes possessive suffix-'s in plural of numbers: 1) Plural of letters, numbers or words 2) Plural of abbreviations and 3) Decades.

This also indicates that noun inflection in possessive form in English is also not a simple process, but one that requires a broad knowledge of the environments in which–'s and–s' can occur. According to Conway (1998), he discussed the problem of English plurals, claimed that even at the lexical level, it can be a complex matter to correctly inflect the individual words of a sentence to reflect their number, person, mood, case, etc. However, Wagner (2008), posed questions regarding teaching morphemes in a certain order, asking if it should be broadened to include other factors, for example, should teachers focus on the morphemes on which students make the most mistakes; should teachers focus on the most frequently used morphemes and disregard acquisition order altogether and should teachers focus less on grammatical morphemes and more on communicative ability.

The options for noun possessive inflection are more varied than simply adding –'s or –s' to the end of a noun.

Findings related to verb inflection

Inflection for verbs was also found to include a number of variations. While there are very few variations for 3rd-person non-past, and just five variations for the present participle, there are approximately 100 irregular verbs of different types for past tense and past participle forms, as well as other types of variation. This also indicates that inflection for verbs in English requires more consideration than simply adding the affixes –s, –ing, and –ed.

For present 3rd–person singular, verbs are formed by adding the affix –s for both regular and irregular verbs. In the case of verbs ending with a sibilant consonant, the suffix –es is added. Also, verbs that end with –y preceded by a consonant have the –y changed to –i- and then the suffix –es is added.

To form the present participle, the suffix –ing is added to all verbs. However, the spelling of the present participle varies slightly according to the specific environment. When the verb ends with –e, that –e is deleted and when the verb ends with a consonant preceded by a short vowel, that consonant must be doubled. A few verbs ending with –ie will have the –ie changed to –y and a few others ending with –c will have a –k added before the suffix –ing.

The suffix –ed is normally added to verbs in order to form them into both the past tense and past participle forms. This is considered the regular process for verbs in Modern English. Depending on the environment of the verb, a number of spelling variations can be found for these regular forms using the suffix -ed.

Verbs that are formed in ways other than through the use of the suffix –ed are considered to be irregular. Some of these verbs add suffixes –d or –t similar to regular past tense verb forms. Many others are formed through changes in the vowels of the verbs. Some of them have a zero suffix and do not change at all. While there are some general patterns for the irregular past tense forms, the number of variations is greatly varied and not easily predicted.

For the past participle forms, there are also various ways other than the affix –ed. These irregular forms have many variations. Although there are some general patterns, this aspect of inflection is also highly irregular and unpredictable. Also, some past participles have two accepted forms, regular and irregular.

Findings related to adjective inflection

Although inflection for adjectives is relatively more straightforward than both noun and verb inflection in the English language, it was also found to include two main variations and some spelling variations for comparative and superlative forms using –er and –est affixes.

For comparative and superlative forms, adjectives are formed by adding the suffixes –er and –est respectively. The rules of spelling for words ending with –e or a consonant preceded by a vowel are followed. If the adjective has two or more syllables, the comparative and superlatives forms are generally made by adding more or most before the adjective. Some two-syllable adjectives follow both of the two rules by either adding –er / -est at the end or using more or most before. Also, there are a small number of adjectives that do not follow either of these inflectional patterns and thus are considered to be irregular. It can be concluded that adjective inflection in English is also more complicated than following simple rules of grammar.

Conclusion

The main findings of the study showed that inflectional variation in the English language is significant, especially for plural noun inflection. Other types of inflection are also rather complicated. Thai students are not normally exposed to these variations, even when they study English outside of their regular school programs. Variations in inflection are not focused on during instruction and practice of its use then is minimal.

In addition, an inflectional language or the concept of a changing process is difficult for Thai students. They are not familiar with the different environment of inflected nouns, verbs and adjectives, because there is no inflection occurring in the Thai language: there is no plural form of nouns, varied verb form in present or past participle, or a comparative and superlative of the adjective form in the Thai language. As a result they suffer from interlanguage interference and their development of accuracy is negatively affected.

Furthermore, inflection and the various linguistics are interlinked, for example, the phenomenon at the phonological level is affected by English inflection, as in the sound change from a plural noun morpheme, possessive noun morpheme and a third person singular verb *–s* can be inflected to one of three possible phonemes /s/, /z/, and

/əz/. In addition, inflection at the syntax level, for example subject and verb agreement, is more complicated. Thus, English competency should be developed along with both communicative and linguistic competence in the learning process and the way that the various aspects of inflection are presented and taught in the classroom has to be reconsidered. Inflection should not be taught as separate from the other various elements, but they should all be taught in an integrated system at the beginner and elementary levels. In other words, inflection should be explained and taught in context during classroom activities when practising reading comprehension and speaking skills.

The implication of this correlation is that changes and adjustments to language teaching programs should be considered by schools and institutes. This language curriculum reform should focus on providing students with courses that emphasize inflection and inflectional variations and exceptions. Universities could also be encouraged to provide more activities and opportunities for using English for both communicative skills and linguistic competence, in order to improve students' second language acquisition in the future.

These findings regarding the complexity of noun, verb and adjective inflection usage in the English language are in line with the statement of Conway (1998); "The English language is overburdened with idiosyncratic grammatical features, a legacy of its eclectic accretion over 1500 years. One unfortunate consequence of this otherwise admirable richness is that automatically generating correct English is fraught with difficulty. Composing the simplest of sentences may require quite sophisticated semantic understanding to enable the correct syntax to be chosen."

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Thai Food: A Gateway to Cultural Understanding

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Abstract

The purpose of this paper is to deliver a key part of findings of the author's doctoral thesis in order to support a concrete relationship between food and cross-cultural understanding. Food choice is a multidimensional consumer decision making activity. Typically, consumers perceive their native food more favourably; thereby, adoption of ethnic foods is primarily correlated with their openness to new cultures. Seeking symbolic meanings for Thai food products within multicultural American consumers, a qualitative research reported in the thesis was conducted across eight sets of respondents, who resided in Thailand and five states in the United States. The findings reveal that Caucasian Americans have a strong food culture and are diverse consumers. As Thai food can be incorporated with any ethnic foods, it is a unique and valuable cuisine. It is well-accepted among consumers, restaurateurs, marketers, and mass media. Importantly, cultural appreciation is required for a high degree of food acculturation and marketing.

Keywords: Thai/ethnic food, acculturation, cultural appreciation, food marketing

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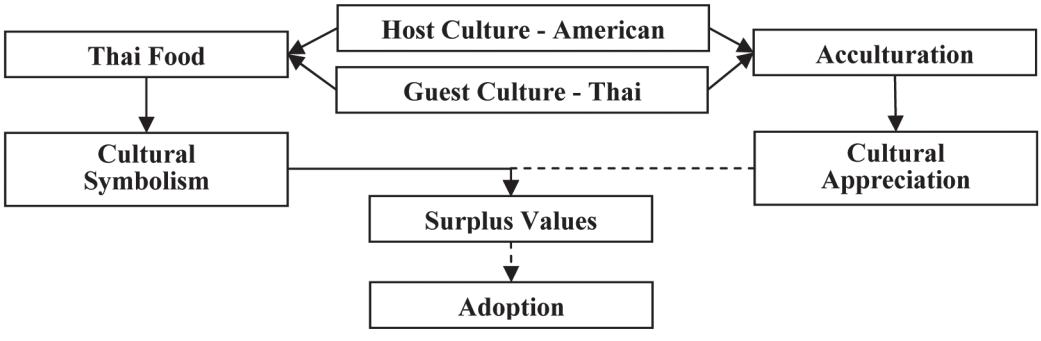
Introduction

Food has become a regular topic in academia, public policy, and mass media. In big cities, consumers have easy access to gourmet and exotic foods, ethnic cookbooks, high-end cookware, cooking shows, eating and cooking contests, culinary tours, and even food exhibits in museums (Lockwood, Long, 2009: 92). Food choice is a multidimensional consumer decision making activity. Typically, consumers perceive their native food more favourably; thereby, adoption of ethnic foods is primarily correlated with their openness to new cultures (Verbeke, Lopez, 2005: 823), as well as opportunities to exchange cultures (Bryant et al., 2003). In the United States, food products intensely compete with functional elements, such as nutrition factors, flavour, and presentation. The level of Thai food adoption thus depends upon how Americans perceive Thai culture and Thai food products, especially when comparing with their set of values and norms. As portrayed in Figure 1, if cultural symbolism and appreciation are in alignment during the acculturation process, symbolic meaning will add surplus values to increase satisfaction and motivate Americans to adopt new cultures or unfamiliar products. Undeniably, American culture, as the host culture, often overpowers the guest cultures, like Thai culture, as the number of Thai immigrants and the proportion of Thai food consumption among Americans are negligible.

Figure 1 Cultural symbolism, acculturation, appreciation, and adoption of Thai food products



Food culture

Food literature largely agrees that humans do not eat just to fill their stomachs (Gabaccia, 1998; Harris et al., 2005). The virtue of food is far beyond a source of nutrition and sensory preference, it involves personal and social value creation (Mintz, Du Bois, 2002: 22-33), such as lifestyles, relationships, and rituals, as well as celebrations, and personal, ethnic, regional, and national identities (Lind, Barham, 2004: 47-60). In that way, it is a basis of civilisation, and contains profound, multidimensional meanings (Bentley, 2001: 179-183). Food symbolises a power to influence lives through its meanings (Bryant et al., 2003), for example, family memory or foreign adventure, reward or punishment, preference or repulsion, and so on. As functional and symbolic good (Korthals, 2002: 313), food can provide functional benefits (nutrients), emotional pleasures (challenges in trying ethnic foods), socially-desirable activities (trendy cuisines), and self-expression (fancy restaurants), as well as political statement (identity) (Lefferts, 2005: 247-258). It determines how you look or what you feel (Harris et al., 2005). The acquisition, consumption, disposal, and thought, as well as feeling related to the food, define the self-identity or who you are (Gabaccia, 1998).

There are two fundamental elements of food culture: (1) humans eat what they can find from their environment; and (2) they eat what their ancestors ate (Pillsbury, 1998). Besides those elements, what they eat is determined by preference. In addition, when they are older, they interact with other cultures and acquire new tastes. Their daily choices vary widely. Though the concept of a proper meal is culturally different, its symbolic meaning is equally valued (Holm, 2003: 531). That is, a good meal is marked as a happy and healthy meal.

The meaning of a food varies with the contexts in which the experiences occur. Whenever consumers hear a food name, their memories recall a meaningful past (e.g. images, thoughts, feelings), and then they process a meaning for such food. The meaning represents attitudes towards the food, as well as the self, sensory experience, and contexts when and with whom the associated experiences occur (Lyman, 1989). To understand the true meaning of a particular food requires historical exploration of the persons and their culture (Lind, Barham, 2004: 47-60). Symbolic consumption gains interest among marketers since it can enhance consumers' self-concept, personality, and social development (Khalil, 2000: 53); in so doing, it encourages affective consumers to buy.

American food culture and acculturation

The conventional "melting pot", whereby diverse ethnic groups constantly influence American culture, and the long-term evolution process erodes ethnic distinctiveness, is no longer valid (Ueltschy, Krampf, 2001: 14-31). Today, the American cultural complexity has to be explained by the Anglo conformity, the melting pot, and the cultural pluralism (Alba, Nee, 1997: 826). Now, "salad bowl" is a more preferable term to explain the diversity of American cultures (Gabaccia, 1998). That is, immigrants can decide if they want to assimilate into the Anglo-American culture, fuse with to create a hybrid cultural mix, or maintain their cultural distinctions, which represent cultural plurality. Apparently, ethnicity in America is no longer something to hide or be forced to assimilate (Harris et al., 2005).

Ethnic food, or non-American food, is an influential, social communicator, which conveys ethnic values in terms of tradition and history (Inness, 2001). Immigrants do not necessarily bring the actual food, recipes, and utensils to America; yet, they live with the memories of their old-country foods and the foodways which they preserve within their family, and later introduce to others through events, celebrations, or commercialisation (Rahn, 2006: 30-46). For Americans, ethnic foods mean those that come from so-called "foreign" cultures, not the ones that already assimilated to American food culture, such as British fish and chips or spaghetti and meatballs (Inness, 2001). Since cultural values (e.g., symbolic meaning of food, preferences in tastes) are not entirely comparable and translatable (de Mooij, 2005), local and ethnic foods are unequally appreciated (Mintz, 2002: 24-32). Normally, consumers are more attached to their native food. Yet, values are changeable, as proven by German and Italian foods which were once more foreign to Americans. Particularly now that German and Italian descendants have become parts of the host American culture (Inness, 2001).

Even with the fear of cultural differences, Americans often suspend ethnic prejudices and open up to cross-cultural culinary exchanges. As such, food acculturation has occurred peacefully in America because it involves pleasure in seeking new tastes and experiencing different cultures, as well as economic exchanges (Barbas, 2003: 669; Gabaccia, 1998). Moreover, dining places only propose slight threats during ethnic socialisation. For Americans, ethnic food reflects not only a desire to differentiate pleasure, but a symbolism of connection with their own diverse culture (Lu, Fine,

1995: 535-553). Even so, the popularity of ethnic foods has done so little in fostering ethnic understanding. They only inspire few Americans to learn more about ethnic cultures (Barbas, 2003: 669).

According to Barbas , restaurants are the starting points of mass acculturation among host consumers. The popularity of pasta, bagels, or fajitas was sparked by the availability in numerous restaurants. Yet, the real acculturation begins only if the dishes are served at home. Bailey and Tian (2002: 58-65) believe that ethnic cooking is quite different from the norm; yet, a consumer's attempt to replicate ethnic food at home demonstrates cultural appreciation and willingness to be the medium for further acculturation. Since a person rarely forsakes his own culture, when he learns a new culture, he normally manages acceptable and unacceptable aspects and integrates both cultures in his own unique way (Davies, Fitchett, 2004: 315). For example, a tourist may try cooking American dishes at home, but his cooking tends to be neither that of American nor native foods. That is to say, it is his understanding of American culture, or how he chooses to acculturate with the culture.

American cuisine and Americanization

America is a great country without a national cuisine (Gabaccia, 1998; Mintz, 2002: 23-33). Homogeneous food, such as hamburger, french fries, hotdog, and pizza, cannot be considered a cuisine. Even so, newcomers or visitors perceive them as stereotypically American food. Regional and ethnic foods, such as Pennsylvania Dutch, Native American, Louisiana Creole, Italian, Mexican, Chinese, and Thai foods are parts of diversity. Separately, the homogeneity, the diversity, and even the foods served at American restaurants cannot be called American cuisine since they cannot entirely represent diverse cultures in America (Mintz, 2002).

In culinary history, radical food varied regionally due to the ancestral patterns of land settlement (Jekanowski, Binkley, 2000: 38) and geographic characteristics (Levenstein, 2002: 75-89). Initially, American food was a concoction of cuisines from the three legacies: the early European settlers, native Indians, and slaves from Africa. Later, it was shaped by regionalism when territorial expansion offered plentiful resources (Gabaccia, 1998; Lockwood, Long, 2009: 92). In recent history, the "New American cuisine" started in the 1970s by a chef in California, who incorporated his

French culinary art with local produce (Harris et al., 2005). The new cuisine has grown through restaurant proliferation and later seeped into American homes.

Presently, American eating patterns are defined by two causes, the incessant influx of immigrants and the changes in food production and marketing (Gabaccia, 1998). Foods of new ethnic groups, such as Mexican, Japanese, Korean, Thai, Vietnamese, and Mediterranean, are added into American markets. New technologies, such as inventions to allow easy preparation, longer preservation, mass production, and low-cost and efficient logistics system, have become vital parts of the American food industry (Pillsbury, 1998), and they are major establishments that accelerate the creation of new and adapted ethnic food products and services. Also, demographic and socio-economic factors, such as an increase in the non-white population, aging and health-conscious consumers, working females, long-hour working patterns, at-home and away-from-home food expenditures, and economic crisis, are driving changes in American eating patterns.

Even without a national cuisine, America has a culinary culture, which can be seen in two preferences, the taste for a variety of ethnic specialties and for standardised processed food (Gabaccia, 1998). Gabaccia cites that there are no firm boundaries in American eating habits. Americans always desire to consume ethnic foods and make them a part of their culture. When an ethnic food enters American markets, it would be adjusted to suit American palates. The adjustment or Americanisation is a common practice in the American food industry. In fact, since ethnic ingredients were hardly available and the prices were high (Levenstein, 2002: 75-89), consumers and businesses had little to no choice but to use local substitutes. They had to acculturate (Wallendorf, Reilly, 1983: 292). Seeing a good opportunity, producers have come up with American-versions of ethnic foods (Barbas, 2003). Mintz (2002a) suggests that authentic ethnic food is the one that cannot be shipped nationally. Consequently, simplified, reduced, cheapened, or mass-produced versions of the original way are offered. For that reason, Americans experience cultural losses and are hungry for authenticity. Though the deficit is responded by marketers who try to deliver authentic experiences (Gabaccia, 1998), they are hardly made possible in American markets (Pillsbury, 1998). The failure partially comes from the fact that the "authenticity" concept is based on a static assumption of place and culture. But, as all cultures constantly change, few societies can maintain pure cultures (Sims, 2009: 231-336).

Food knowledge and understanding

Provided that ethnicity has socio-psychological power to affect self-image, consuming ethnic food reflects an attempt to be cosmopolitan, or assimilate foreign cultures (Lu, Fine, 1995: 535-553). As an outcome of growing ethnic contacts and variety seeking, popularity of ethnic consumption persuades Americans to keep up with the trend, and experience different cultures (Lyman, 1989). They are expected to have an ability to recognise and appreciate other cultural beliefs and norms, and respond appropriately to different practices.

Yet, Bailey and Tian (2002: 58-65) and Barbas (2003: 669) agree that Americans have little knowledge of ethnic cuisines. They like the authentic experience concept, but they cannot differentiate if the food is authentic or Americanised. Basically, they try ethnic foods since they are interested in the tastes, and are fairly aware of the level of richness, spiciness, or unusual flavours and ingredients. In many cases, they visit ethnic restaurants only because of price. As affirmed by Lu and Fine (1995: 535-553), many ethnic restaurants rely on the host consumers. They modify traditional recipes and cooking processes, and the outcomes do not deserve to be called authentic. However, if ethnic food is too Americanised, consumers will be dissatisfied with the loss of ethnic distinctiveness. Unfortunately, they are not always aware, or try to make certain, if the restaurant food is authentic. In fact, it is difficult to define ethnic experience if consumers only consume ethnic foods at restaurants. In order to clarify cross-cultural understanding, it is required to recognise the differences in food meanings perceived by the natives who always cook the same cuisine for a life time, the host consumers who eat in exotic restaurants, as well as the ones who eat at ethnic homes. That is, the meanings are deep in the minds of those who prepare the food, those who consume it (Inness, 2001), as well those who market it.

Methodology

The research undertaken in the author's thesis was aimed at Caucasian Americans to answer the question, "*What are the perceived meanings of Thai food, and its associated cultural symbolism, in the United States markets?*", with the purpose of understanding the symbolic meanings of processed Thai food products and Thai food acculturation.

Research paradigm

The researcher's decision to adopt constructive, interpretive, and qualitative paradigm derived from two reasons. First, the issues relating to the research questions had not been clearly identified and/or addressed by Thai researchers. Any interests in Thai food leaned towards restaurant food with the purpose of supporting the Thai government's "Thai Kitchen to the World" plan, rather than towards processed Thai food products. Since each research endeavour differs greatly according to the context and is not totally interchangeable with others, qualitative exploratory research is best suited in explaining a detailed view of the socially constructed reality that has not been identified (Creswell, 2007).

Second, there are insignificant numbers of Thai ethnic and marketing activities to generate a satisfactory level of Thai cultural visibility in American society. However, the growing popularity of Thai food induces great interest in understanding American values, attitudes, and behaviours, especially when interacting with Thai culture and cultural symbolism. Given that Thai food is a fairly new ethnic product, its values are needed to be confirmed. Moreover, consumer acculturation is a multidimensional process that potentially occurs across generations, a researcher with sufficient time and resources to spend on extensive field research can explore detailed views of American consumers and other related parties by participating in their natural setting (Creswell, 2007).

The researcher approached theoretical perspectives using grounded theory methodology (Glaser, Strauss, 1967). The theory consists of systematic inductive guidelines for data collection (theoretical sampling), analysis (coding, categorising, and constant comparisons), and theoretical frameworks for data interpretation (conceptualisation) (Charmaz, 2005: 507). According to Strauss, Corbin (1990), it is suitable for the discovery of phenomena that are less known and difficult to uncover with quantitative methods. The grounded theory also allows researchers to interview people who are engaging in the phenomena in question, make multiple visits to the field, develop categories of information, and generate a theory grounded in data from the respondents' worldviews (Creswell, 2007). Given the emergent principles of pure grounded theory, this research was more targeted towards specific elements of food

culture. Thus it reflected more grounded research (Whiteley, 2004: 27-46), such that data were to some extent 'forced' into specific questions relating to food consumption and symbolism.

Research process

Data triangulation allows the respondent's theory to emerge from multifaceted data settings (Chadwick et al., 1984: 454). Original respondents were American consumers. Due to the difficulties found in preliminary interviews; that is, Americans had limited knowledge of Thai processed food products, other related parties were also included in the interviews. Out of a total of 162 respondents, the researcher interviewed eight sets of respondents including (American and Thai) consumers, (Thai) exporters, (Thai and Asian) importers, (American, Thai, and Asian) retailers, (Thai) restaurateurs, (American and Thai) food experts, (Thai) government officers, and (Thai) community leaders.

Data collection was conducted in Thailand and the United States from November 2004 to May 2007. According to Bailey and Tian (2002: 58-65), the host-culture consumers, who are primarily Caucasian and highly educated Americans, are more likely to feel comfortable with their own culture, and start exploring other cultures. Thereby, this research focused on the stories of Caucasian Americans who had experiences with Thai food, or Thai people. Four large cities, being Los Angeles-California, Chicago-Illinois, New York City-New York, and Dallas/Fort Worth-Texas, were chosen because the Americans who resided there possibly had more opportunity to encounter different cultures. As multiple realities were needed to enrich the research, interviews in Tacoma-Washington, a small city, were added.

Semi-structured interviews were used to regulate the research direction. However, sets of questions were varied according to the nature of respondents. Also, responsive and situational questions were applied to enhance and probe the respondent's answers. Since Americans have limited knowledge of Thai culture and symbolism, semiotic tools containing pictures and actual products were applied to stimulate the respondents' memories.

Findings

Thai food as explained by Thai food experts

Thai food culture has always been related to Thai homes, Buddhist temples, and the royal palace. Its invention, adaptation, and meanings emerge from those influential factors. Buddhist Thais offer well-prepared food to monks on various occasions and rituals, as this signifies a merit making. At the height of the royal Thai courts, the courtiers competitively modified many recipes, presentations, and names as the innovative delicacies were for the interest and well-being of the kings and the royal families. They applied new recipes, ingredients, and techniques brought in by Asian and Western traders and travellers, as well as missionaries. The royal cuisines later entered Thai homes via the courtier families. Today, though the palace role in Thai food culture is not as active, it still is seen, however, as a reference for superior standards.

Thais are very proud of their cuisine. They believe that Thai food is flavourful and good for health. Yet, medicinal herbs are the key to its reputation. Basically, Thai food comes from a local abundance of produce and knowledge. Foreign foods were brought in to increase variety, but they must be adapted to fit Thai palates. Unavailable or unfavourable ingredients will be substituted. Regarding spiciness and sweetness, Thai food experts confirm that Thai food is neither spicy nor sweet. It is consumers' choice to add spiciness or sweetness into their food.

Thai food in the United States markets

For Americans, Thai food and Thailand are exotic.

I think people think it's exotic. Like the new lead thing. You're urban. You're college. You don't eat hamburger.

Exotic is a preferable word to label Thai culture since it is still "foreign." Exotic holds a symbolic power that entices consumers to seek out new cuisines and cultural exchanges. Regarding functional aspects, American respondents were impressed with the unique flavours and valued herbal ingredients. Spiciness and sweetness were prominent characteristics of Thai food since they contrasted well with the bland and plain flavours of basic American food. Yet, too spicy or too sweet food was negatively perceived. Though Thai food is labelled as a hot cuisine, social preference encouraged

many Americans to try Thai food. Since the method used in Thai restaurants was more of a stir-fry than deep-fry cooking, Thai food was perceived as lighter food or having less fat, as well as freshly-cooked food with vegetables. Also, since the respondents hardly saw overweight Thais in Thai restaurants, they assumed that Thai food was healthier. In conclusion, Thai food was best suited to the current health trend, but health was not the only deciding factor. Most respondents preferred varieties of flavours and choices.

> *Thai food is one of the few foods that seem to bridge many gaps. Bring people together. For example, I know very conservative people who don't really like Chinese food, don't really like Japanese food, but then for whatever reason they eat Thai food.*

Most respondents were unfamiliar with processed Thai food products since they did not cook Thai food and usually consumed at Thai restaurants. Thus, they did not recognize Thai ingredients. For example, they thought pictures of ingredients on food packages were just parts of decoration. Thai symbolism such as language, names, and designs were good representations of authenticity. The respondents did not recognize them as Thainess, but they were foreign or exotic enough to imply "Not American products". Since Thai restaurants were the main sources of Thai food knowledge and interactions, consumers' understanding, derived from what they learned in Thai restaurants, was sometimes inaccurate.

> *Is that the curry with coconut and all that? I love that, but I didn't know that was green. Is that green? What I got is more white?*

Due to its uniqueness and popularity among consumers and mass media, other ethnic restaurants utilised Thai cuisine. They offered Thai-style food, or their version of Thai food.

I recommend "Houston" for real American food. American food is a melting pot, so I am not surprised if Houston has other ethnic foods about 20%. It has something called Thai Jungle Soup.

There is Thai-style pasta. I didn't see any Japanese-style pasta. I didn't see any Vietnamese-style. I didn't see other type of pasta. All Italian and one Thai-style. And I've seen that often. That kind of makes Thai a little special on the menu and stuff. It seems like cooks are able to incorporate Thai style with other styles in the good way.

However, their understanding was stereotypical, which was either "sweet" or "spicy."

You can go to a normal American place and if they want a little variety on their menu, often they put Thai and that just means either spicy or sweet.

Lots of time restaurant food isn't the same. It's like Americanised. It would be like sweet.

Authentic food

American respondents, who valued authentic food for a cultural experience, wanted Thai restaurants to maintain the elements that made Thai food unique, believing authentic food would sustain its values. Mild adaptation was acceptable, while what was arguable by many Thais should not be advertised as authentic food.

Lots of the recipes are hundreds or thousands of years old. I don't know how old. So, traditionally, they were used as medicine. I'm sure that this recipe and herbal usage had come from ages, from that time. Traditionally, we should keep them intact. Once, we start to go too much in different directions with thing like that, then it's gonna lose its authenticity and effectiveness.

American and Thai respondents agreed that average Americans did not recognise authentic Thai food. They indicated the authenticity from where most Thais

ate, or if the restaurateurs were Thais. Americans who had close contacts with Thais or visited Thailand sought authentic Thai food. Consumers who appreciated authentic experiences often disliked ethnic food products that was cooked or produced by Americans or other ethnics.

> *I said Sawasdee krap. Sabuy dee rua krab. He looked at me like I'm crazy. He said, "I'm not Thai." I said, "I'm sorry. I thought you were Thai". My wife said, "Anybody is here, Thai?" "No, we're not Thai. We're from Indonesia. We cook Chinese, but we know how to cook Thai." We said, "Forget it".*
> *I often go to Vietnamese restaurants and they're all Chinese. I ask if they're Chinese from Vietnam or China. If they're from China, I don't want to eat here.*

Thai food acculturation

There are two degrees of food acculturation, eating and cooking. Americans mainly acculturated Thai processed food products through restaurant food since they rarely were acquainted with Thais or someone who cooked Thai food. They often started with widely available Americanised Thai food, the food that was adapted to suit the American palates. Thai food must be a favourite before becoming a part of daily life. At that point, Thai food is acculturated into American homes. Americans may start cooking Thai food for fun or adding Thai ingredients into their cooking. However, a respondent's story conveyed a doubtful future for Thai food acculturation. It was a result of inadequate understanding of Thai cuisine and ingredients. Cooking Thai food at American homes presumably continues to be very rare.

> *Today I put turmeric, green tea…I didn't have any tomato so I just put fresh salsa in there and then Thai pepper…I don't know how. I try, though. So I did the soup stuff. I started making the soup after I had Tom Yum. I try to make Thai style, Thai stuff with pepper. Now I put pepper in anything.*

Since the American food industry is highly competitive, restaurateurs and marketers like borrowing popular cuisines. They apply unique parts of Thai food to differentiate their products, Americanised or fusion food. In fact, they sometimes apply only the word "Thai", coming from the fact that Thai food represents a fine cuisine, without using any parts of Thai cuisine or ingredients. Except for some outstanding dishes such as Pad Thai and Tom Yum.

> *They have like special Thai chicken salad or something. That's actually something that's good to know. And a lot of American places. No, not only American, but like I'm speaking from an American's standpoint...They try to do a Thai style. You're knowing Thai food. I'm knowing Thai food. We go and we eat and like ooh, not Thai at all. But it's the representation to Americans who don't know Thai food, of what Thai food would be like if they're familiar with it.*

Cultural appreciation

Thai food possesses desirable functional benefits, including complex flavours and unique herbs. In time as Americans become more familiar with Thai food, they may select it using basic determinants, such as flavours, physical wellness, convenience, and price. Thus, the ever-lasting emotional benefit of Thainess, conveyed through Thai symbolism and personal relationships between Americans and Thais, as well as cultural activities and media, can potentially enhance cultural appreciation and food marketing.

> *I forgot one of the great things about Thai food. It's the family style. That's so cool. That's the social thing. Instead of I'm going to get my food. Nobody can touch my food. All for me, me, me. That's so American. Me, my, mine. Like we all share. Ah, I like that. That's the big thing I like. Kind of like sharing. Try this, try this. There is something new. And then you put on your plate. You can change it if you want. Like add a little more spice, whatever. I like that. That's something I forgot to mention. Thai is very social. I think Thai people like to talk and eat together. It seems very welcoming.*

Thai symbolism is largely a creation of Thai marketers. The extent of their work depends on their knowledge and budget. It is important to understand that the degree of acculturation depends on how Thais educate Americans and how much, and in which way, they experience Thai food and culture.

> *I think that's why I was saying that Thai, the key learning about Thailand is through the food because you see it on the menu. Hopefully, people are more interested and smart and driven to find out why they like Thai food. I was lucky enough that I had the opportunity to go there forcibly…Food is a good key to open the door.*

Unfortunately, there are indications that Thai producers lack accurate knowledge regarding authentic recipes and food culture, required for creating meaningful symbolism.

Discussion

American respondents demonstrate a strong food culture and suggest diverse eating patterns. However, the diverse consumption was a rather recent phenomenon. Americans may have long embraced the concept of diversity, but the respondents reported the lack of actual food experience due to its unavailability during their childhood. Some respondents are loyal to their familiar food, but the prevalence of ethnic restaurants encourages others to explore several kinds of food. Though some respondents indicated Thai food as their preference, their daily choices were circumstantial. It suggested that Thai food was just one of the ethnic choices.

Bailey and Tian (2002) found that preparing ethnic dishes at home was a way to express a cultural appreciation. Yet, consumers tended to have a cross-cultural cooking style, which was their interpretation of another culture. In fact, their preference and ingredient availability are crucial factors. Moreover, there were apparent indications of selective acculturation. The respondents demonstrated limited consumption patterns. They mostly did not try many Thai dishes. Some were loyal to very few dishes. Regarding cooking, the ones who tried Thai cooking were closely related to Thais, or had visited Thailand. Yet, they often had insufficient knowledge

and ingredients. As Barbas (2003) suggested, the popularity of ethnic foods had done little to contribute to the cultural understanding. This statement corresponds with the findings. The indifference in learning about Thai culture is overwhelming. Even with positive attitudes, most respondents had limited knowledge about Thai culture, cultural symbolism, and Thailand, and seldom expressed any interest to learn beyond the food consumption.

> *We are not as educated on Thailand in America as we should be, especially being that there are so many Thai dishes shown on the menu, right? It's kind of weird contradiction when we think we know something, we really don't.*

As intermarriage is a factor affecting acculturation (2004), the findings confirm its importance. The respondents who married Thais had more understanding of Thai values and norms, demonstrated more cultural appreciation, and paid more attention to authenticity. Also, tourism is another key factor. Americans who visited Thailand saw the importance of marketing authentic Thai food. Particularly the ones who learned Thai cooking in Thailand, they preferred authentic to cross-cultural cooking. Unfortunately, they had difficulties interpreting Thai recipes and finding authentic ingredients.

> *It said, "Steam the rice" and I used the rice cooker. They don't mean cook the rice. They mean, "Steam it, like steamed vegetables."*
> *You cannot find like fresh coconut cream. You can go to the market. Like when we were in Thailand, we went to the market and they made that right there. You can buy canned coconut milk, but I could not find coconut cream anywhere. Finally, I did find some, but I want it fresh.*

Conclusion

The findings confirmed a high degree of Thai food acculturation among Americans. However, the apparent pattern indicated the adoption at the level of restaurant consumption, rather than home cooking. In that sense, it does not greatly increase the benefits of Thai food exportation, as the researcher expected to find that

Americans consumed more processed Thai food products and adopted Thai cooking into their homes. Moreover, the findings found the indifference in learning beyond food consumption. Yet, food activity is pleasurable. Since Thai food has become a social interest, it is prospective to say that it is a gateway, or a first step to learn about Thai culture and Thailand. However, cultural appreciation is the key to a high degree of food acculturation and marketing.

Thai food is dissimilar with the basics of American food culture, especially in terms of ingredients and cooking style. It is possible that the adoption of Thai food will encounter a long period of stagnation before diffusion. Some respondents suggested that it would occur when the next generations grew up with Thai food. In conclusion, since there are many ethnic foods in America**,** Thai marketers must comprehend American consumers, their culture, as well as Thai food and cultural symbolism, in order to enhance the values of Thai food.

Limitation and recommendations

Language barriers and difficulties in interpreting other cultures propose major risks for a cross-cultural research. Moreover, regarding the nature of qualitative research, the rigorous research process and audit, data triangulation, and extended period in the field can enhance trustworthiness. Also, it is a stepping stone for further quantitative research. Reflecting on Chinese food which has been in America for over one hundred years and remained an ethnic food, in order to enhance long-term sustainability, the Thai food industry needs *additional research to clarify consumer motivation, explore market segments, and define favourable product elements and marketing activities*. Also, Americans demonstrate the feeling of a 'lack of culture.' Fortunately, they have good attitudes towards Thai culture and value authenticity. Thus, Thai producers should be aware of the risks in favouring customers and customising until cultural identity is lost. Yet, forcing Thai culture on Americans is also risky. *To be more complete, comparative research about preferential elements towards authentic, Americanised, and fusion food is required*.

Acknowledgements

The paper presents key findings in the author's thesis, "Cultural symbolism: Thai food products in the United States markets", which was presented for the Doctoral Degree of Business Administration at Curtin University of Technology, Australia. The author is highly grateful to Professor Alma Whiteley and Professor Mohammed Quaddus, her supervisors, for their invaluable guidance, Professor James McCullough and University of Puget Sound, for their research supports, as well as all the respondents and key informants, especially the ones from Thai temples in the United States.

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Biodiversity and Sustainable Agriculture for Medicine, Health, and Food

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Abstract

In mid-year 2011, the world population was increased to 7 billion. The rising figure of world population is estimated to be 8 billion in 2025 and 9.0 billion people in the year 2050. The overgrowth will be the critical threshold for biological chaos in future. The chaotic consequences include deteriorated environment, insufficient supply of food, insufficient medication for people, and lack of or poor quality shelter. Furthermore, diseases, disaster, starvation and poor sanitary are all negative consequences. Deforestation and urbanization destroyed biodiversity leading to natural disaster. Combination of at least two disciplines; medical science and agriculture might be the solution to this issue. The agricultural strategy is integration among biodiversity of ecology, plants and land for agriculture. Agriculture for medicine, health and good quality food will be the good direction of economic development with the solution of overgrowth of world population. Biodiversity provide complete trace elements from plants to human to fulfill good health condition. Research for value addition and value chain of plants products from rich resources of plants could then be of importance for adequate health system and food at global level in future. This article aims at creating model of combination between primitive wisdom and the newly advance knowledge of agriculture and medical science. An attempt of integrating agriculture, biodiversity and health in medical science, following the philosophy of sufficiency economy, is proposed in this article.

Keywords: Agriculture, Biodiversity, Food, Health, Medicine, Sustainability, Sufficiency economy

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Introduction

Among plants and animal varieties, human is the tertiary consumer in all pyramid models: number, biomass and energy. Theoretically, the tertiary consumers could survive when they keep their number, mass and total energy in balance with plants and animals which are products and primary and secondary consumers. The overgrowth of human population or tertiary consumer during last decade is now leading to the biological alteration in food chain. More plants and animals are required for providing energy as food for human. Then, the land for agriculture and farming is of great demand. However, urbanization in many countries leads to land manipulation by human in following direction: deforestation, agriculture and construction. All of these processes lead to the change of natural land of biodiversity into man-made area. Construction makes people away from natural way of life. In addition, agriculture technology might be dangerous to human and cause deteriorating effect on environment. The authors of this article try to elaborate the problems of devastating effect to nature by human misconduct. The overgrowth of world population may, in the near future, leap across the threshold of critical mass leading to biological chaos. The model of integrating agriculture, biodiversity and health in medical science, following the philosophy of sufficiency economy, is proposed in this article.

Materials and Methods

As problems and future trend mentioned in the introductory part, the relevant subjects were studied as follows:

Data of world population growth were analyzed using histogram plot. Population, health and environment data are estimated among countries and regions of the world with special emphasis on Thailand and Southeast Asia.

To evaluate the impact of human population growth on social development, the necessaryitems of related matters (Figure 1) were selected by using the models of human basic needs. Basic needs for human compose of four main factors: food supply, drug for treatment, good shelter, and environment. The first two were selected in this study to find the good model by combination of agriculture and medical science. The models include two scenarios; optimal human population and overgrowth of human population.

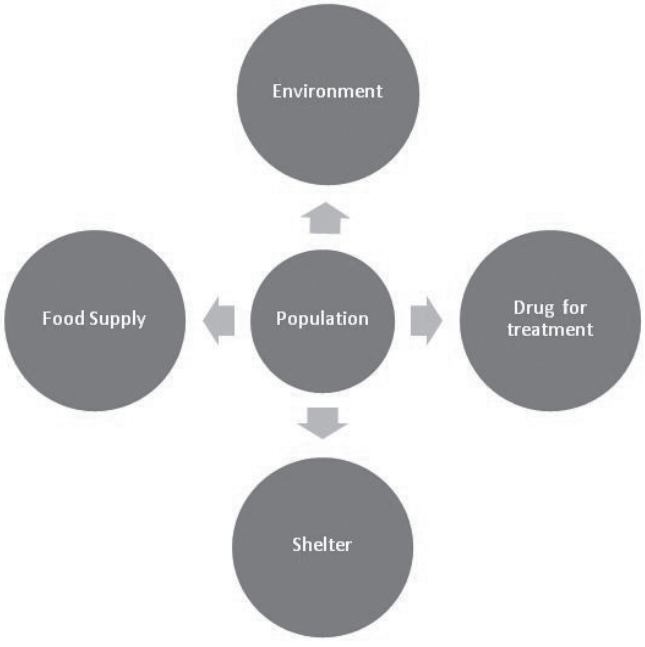

Figure 1: Basic needs of human in the scenario of optimal human population

Results and Discussion

Histogram of rising world population from year 1 to year 2083 was analyzed using geographic data (Rosenberg M., 2012). The world population was six billion in1999 and was estimated at **7,021,836,029** in mid-year 2011. Although control of population growth in some countries, particularly developing countries, has been successful the overall population is still rising during the current decades as shown in Figure 2.

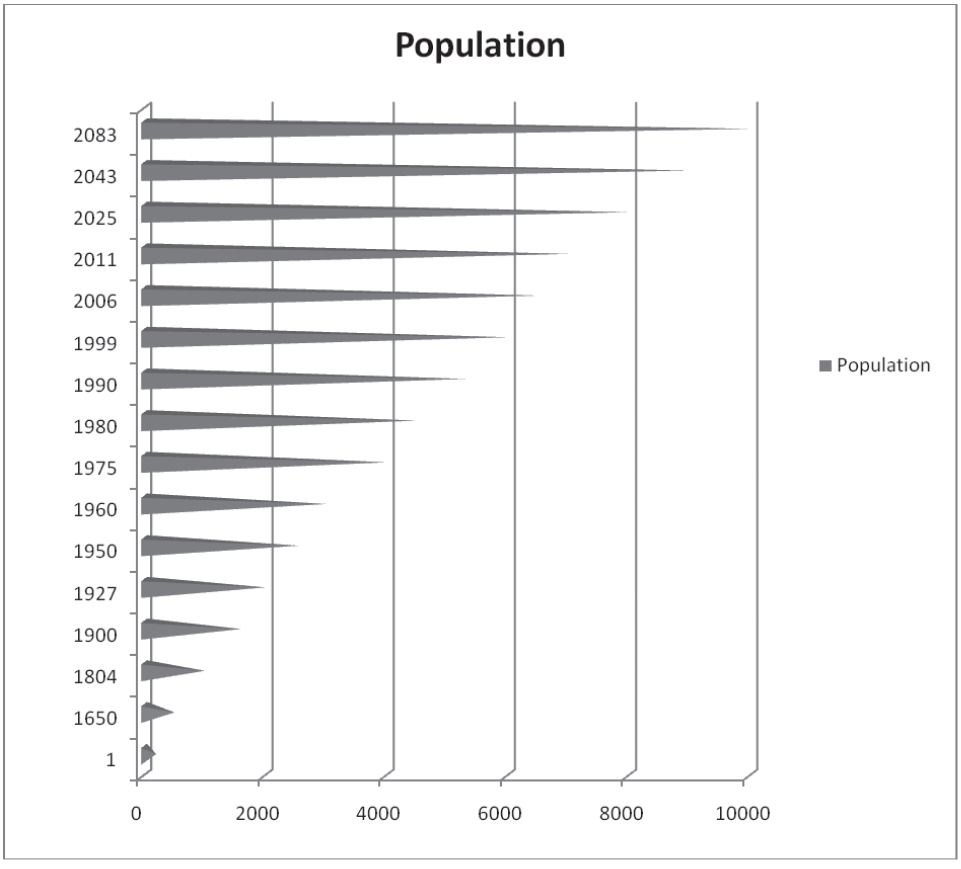

Figure 2: Histogram show rising world population from year 1 to year 2083.

For evaluation of the impact of population growth, data of population, health and environment were analyzed. With increasing world population, health and environment data were evaluated for the prediction of life expectancy at birth, health, land for living and agriculture in relation to population, percent urban and improved water supply (Table 1). The data indicates the problem of shortage food supply from agriculture might be the future issue due to increasing urbanization and inadequate water supply for people in some countries, particularly less developed countries. The average of life expectancy at birth in least develop countries is much lower than those of more developed countries at 19 years. This indicates the health condition must be improved simultaneously with agriculture and environment manipulation.

	Life expectancy at birth (year)	Population/ Square kilometer	Percent Urban	Percent of Population with Improved Water Supply (Urban)	Percent of Population with Improved Water Supply (Rural)
World	70	51	51	96	77
More developed	78	27	75	100	97
Less developed	68	69	46	94	76
Less developed (Excl. China)	66	60	44	93	74
Least Developed	59	41	28	80	54

Table 1: Population, health and environment data and estimates for the countries and regions of the world. (PRB's World Population Data Sheet 2011)

The population growth of Thailand is in good condition as shown by the sligh increase to 71.0 million people in the year 2050 as compared with 69.5 million in the year 2011. The total world population turns to be more than 9.0 billion people in the year 2050 from 7.0 billion in year 2011. Comparing among countries in Southeast Asia, Thailand has 70 percent of people with working age between 15-65 years. This figure is better than many other countries in South East Asia. The percentage of population having improved water supply in rural area is 77 (Population Reference Bureau MEASURE *communication*). Again, as compared with average figures in Asia and world, Thailand is still much better.

	Population Mid 2011	Projected Population Mid 2025	Projected Population Mid 2050	2050 Population as multiple of 2011	Percent of Population Age < 15	Percent of Population Age 65^{+}
South East Asia	602	698	796	1.3	28	6
Thailand	69.5	72.9	71.0	1.0	21	9
Myanmar	54.0	61.7	70.8	1.3	28	5
Vietnam	87.9	100.4	109.3	1.2	25	7
Malaysia	28.9	35.3	43.6	1.5	28	5
Singapore	5.2	5.8	6.1	1.2	17	9
Cambodia	14.7	18.0	22.3	1.5	33	4
Laos	6.3	7.9	10.3	1.6	41	4
Philippines	95.7	120.2	150.1	1.6	36	4
Indonesia	238.2	273.2	309.4	1.3	28	6
Timor	1.2	1.7	2.8	2.3	45	3
Brunei	0.4	0.5	0.6	1.5	30	4
Asia	4216	4780	5228	1.3	26	7
WORLD	6987	8084	9587	1.4	27	8

Table 2: Projected population and percent population distribution as of school and retirement ages in South East Asian. (countries Extracted from PRB's World Population Data Sheet 2011)

Agriculture has been then done in systematic way to gain sufficient supply of food at varying levels from individuals, family, community, country and global people.

For the sake of humanity, agriculture in the globalization era should be considered how to achieve adequate food supply for world population. However, for global sustainability, adequate food supply will not be an only target, but also the wise agriculture management of land and food quality for health is the matter to be seriously considered. Large mass of food is daily required particularly, in the situation of rapidly growing population. Misconduct of agriculture is not only lead to economic loss, but also negative impact both directly on human at individualism scale as well as to holistic scale between human and environment. Agriculture is responsible for 87 % of the total water used globally. A great deal of water is returned to surface runoff. Usually that water is contaminated however, whether used for agriculture, domestic

consumption, or industry. Water, agriculture and human health are closely related. More than 5 million people die each year from diseases caused by unsafe drinking water, and the lack of sanitation and water for hygiene (Postel, S.L., G.C. Daily et. Al). Human health, malnutrition and other related diseases are the matter to be seriously considered. World health organization (WHO) has recommended four strategies of intervention for preventing malnutrition. These include firstly, improved water supply, secondly, education for a healthy diet, thirdly improved access, by the poor, to adequate amounts of healthy food and fourthly, ensuring that industrial and agricultural development (WHO, 2000 , WHO/NHD/00.7).

Thailand has been a country of agriculture for more than 700 years. Wisdom of agriculture of Thai ancestor is precious heritage transferred from time to time until to our generation. In addition, medical wisdom has developed in Thai society as shown by the reflection of intelligence of Thai precursors in the welfare of Thai life style at that time. Advanced medical science has been currently been developed and adopted in Thai society. However, expenditure of medical service could hardly cover for the whole people in the nation. The solution to this issue is how to manipulate two disciplines; medical science and agriculture. This article has elaborated in an attempt of integrating and creating the model of combination between local wisdom and the newly advance knowledge of agriculture and medical science.

Basic needs for human

Four basis needs of human including environment, food, shelter and medication are brought up for addressing the new strategy of agriculture. The optimal world population and the balanced needs are shown in Figure 1. As shown in Figure 3, the scenario of world overpopulation will interfere with all these four factors. Deteriorated environment, insufficient food supply, shortage of drug for people, and lack of or poor quality shelter are the major consequence of overpopulation. Deforestation and urbanization cause degeneration of biodiversity. This leads to high risks of disaster, starvation, poor sanitary and diseases which are all the further consequences.

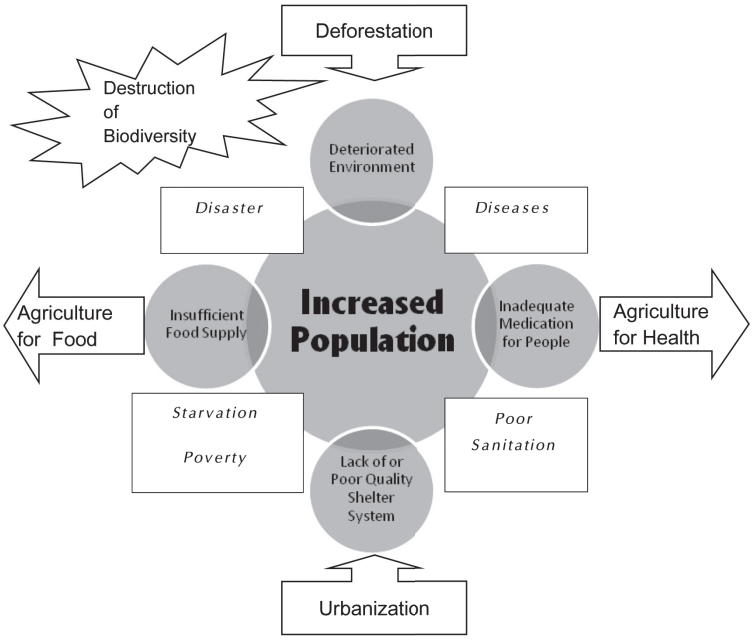

Figure 3: Analysis of increased population and consequences in relation to basic needs of human.

Insufficient food supply due to population overgrowth and the agricultureal model for food and health in Thailand

Thailand provided adequate food in the country and produced substantial surpluses of some commodities for export. The country's agricultural success is ability to adapt for increased world population in both quantity and quality. The quality is directly related to human health. Availability of large areas for cultivation is required. The acceptance of new technologies and the adoption of more intensive cultivation have extensively occurred in agriculture sector. During the mid-1980s, agriculture accounted for an average of about 25 percent of GDP, and agricultural commodities accounted annually for over 60 percent of the value of all exports (Falvey L, 2000).

This report proposed the synthesized models of agriculture for serving at least two basis needs of human i.e. agriculture models for food supply and for health as shown in Figure 4.

To understand the development of agriculture in Thailand, four models (A to D) are synthesized. Model A is the traditional way of life of the former Thai people. Food nutrients and food elements from plants in biodiversity could provide complete trace elements to human to fulfill good health condition. Although there are adequate food supply, agriculture for massive production of some particular types of food may cause a lack of some trace elements in food that causes poor health system e.g. malnutrition in large population as shown in Model B. We are now approaching the condition of overgrowth population with inadequate food both in quantity and quality (Model C). The problem in model C can be solved by model D of which agriculture is combined with biodiversity. Mass production is still performed using the appropriate technology, friendly to environment. At the same time, agriculture in biodiversity is strongly recommended for maintaining essential food elements for health. Some plants considered as useless weed, instead of throwing away, could be of importance for medication. For example, the seed extract of *Macuna gigantia*, the useless weed contains dopamine, the important substance for medication of Parkinson's disease. Such component could successfully induce neuronal cell differentiation (Kongros K, Bunyaratvej A, et al, 2012). Agriculture for both food and health will be the new potential of economic development. Quality of food is necessary for human health using as prevention, fortification and therapeutic effect on various human diseases. Almost 100 rich resources of natural plants could provide plant-derived compounds potentially served for drug development in clinical trials. However, many plant compounds are limited by low production which is not sufficient for clinical potential. Value chain management has to be systematically managed.

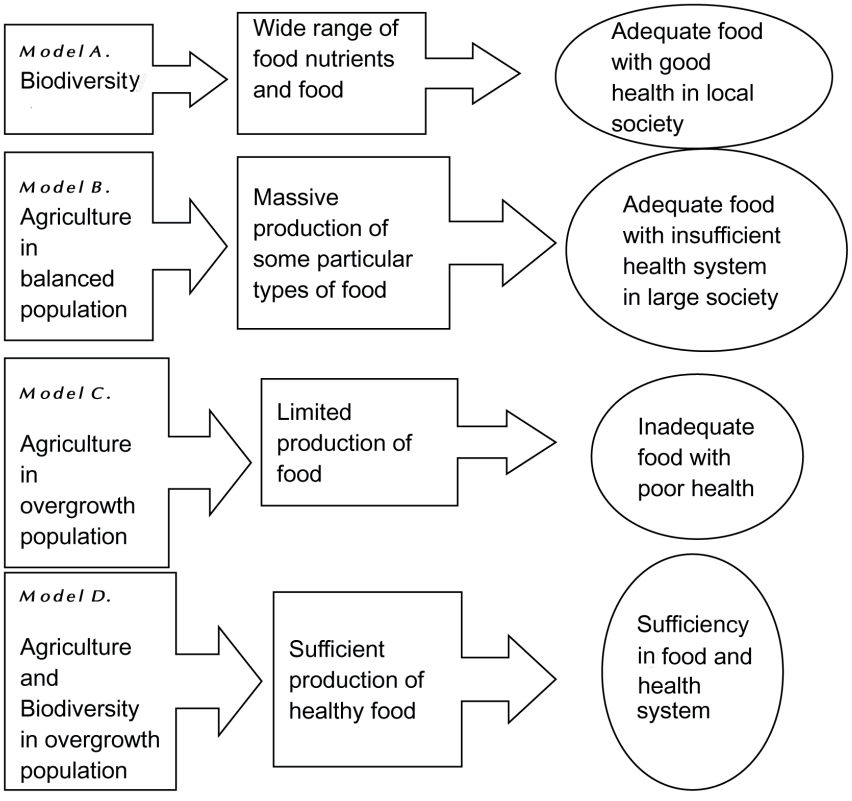

Figure 4: Synthesized Models of Agriculture and Biodiversity in Overgrowth Population

In conclusion, the good strategy of agriculture in Thailand is the integration among biodiversity of ecology, plants and land for agriculture. Many plants from biodiversity could provide complete trace elements to human to fulfill good health status. Value addition and value chain of drug research form plants from rich resources of plants could then be of importance, in future, for adequate health system at global level. To overcome the imbalance between overgrowth population and environment could be started from people with readiness in mind and attitude toward the philosophy of sufficiency economy (Royal speech, December 23, 1999). Hopefully, agriculture for medicine, health and food will be one of the future paths for people in the future scenario of overgrown population.

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Books:

Olive EA, 1995. *Lymphatic Filariasis Infection and Disease.* London: Academic Press.

Chapters:

Migasena P, 1982. Liver flukes: Relationship to dietary habits and development program in Thailand. In: *Adverse Effects of Foods*. Patrice Jellife EF, Jelliffe DB, eds. Plenum Publishing Company, 307-312.

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