

## Bioforms and biophilia in Thai poetry and the extinction of experience<sup>1</sup>

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The evolutionary biologist Dr. Edward O. Wilson coined the term 'biophilia' in a 1984 book of the same name. Biophilia (from Greek *bios* 'life' and *philos* 'dear, friendly') refers to the emotional response of people towards nature. It is a type of engagement that has, according to Wilson, a genetic base. The genetic code of the human organism predisposes one towards an emotional need to ally oneself to the natural world. A recently published book, *The Biophilia Hypothesis* (1993, Island Press/Shearwater Books), presents the evidence for the theory and supports several of the notions put forth in this paper.

Thai poetry, in particular classical poetry, is noted for its long catalogs of flora and fauna, arranged in stanzas governed by the rules of Thai prosody. My own explanation for this rhetorical device is that, for one, it enumerates a poet's encyclopedia of flowers, trees, fish, animals, and fruits—a compendium of biological knowledge of the time, just as oral poetry lists the lineage of a "not-to-be-forgotten" clan going back for tens of generations or folk tales memorialize culturally significant flora and fauna. But in poetic form and placement within a narrative text, the chain of bioforms is also a manifestation of biophilia. The recitation of the names, the music it creates, and the images of the lush and exotic interacting wildlife of the jungle, streams, and mountains that they evoke, induces a deep love of and need for nature and the desire to be in harmony with it. In purely literary terms, the catalogs, which might have roots in Chinese *fu* or the Indic literary tradition of describing garden and forest and their spiritual powers, advance the plot of the narrative and provide mood and setting for the actors in the tale.

This paper presents examples from Thai poetry to illustrate the biophilia hypothesis. Implications for the modern urban Thai biophile and the vanishing bioforms in Thailand will also be discussed. Ultimately, the extirpation of bioforms also entails the extermination of experience, an experience that informs the poet and his audience.

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### Introduction: The Modern Thai Biophile

An episode in a recent Thai short story, *The Capital*,<sup>2</sup> deals with a young male day laborer who has recently come to find work in the capital city, Bangkok. It is the end of a work day when the story takes place. He is caught in a traffic jam inside a bus packed with tired and sweaty working class commuters. The young man is a villager from Northeastern Thailand or "Isan," the poorest and harshest region of the country and hence the most undeveloped, the most rural. The counterpart of the country boy, who finds himself on the same bus, is a young city clerk, most likely dressed in obligatory white shirt and tie. He too is a recent rural migrant to the city, an up-country transplant who needs money to support himself and his dreams, which include eventual marriage to his sweetheart back home. Both young men are seated in the back of the bus, within earshot of each other, as it inches its way along the rain-drenched streets of the megalopolis. Just as the heat, humidity, tedium, and fatigue seem about to overtake all of the passengers, the city clerk in particular, whose thoughts of discomfort we read, the sound of the Isan youth singing a folk song softly to himself is heard. Eyes closed, as if to blot out the pain of the present, he sings these poetic lines:<sup>3</sup>

...hǒm ʔəy hǒm, dǒk krathĭn	Sweet is the fragrance of the <i>krathĭn</i> blossom,
ruay rarĭn khĭlāw kĭn kǒŋ faaŋ	mingled with the fragrance of hay---
hēt tǎp tǎw khūn ʔyùu rim thǎw yāa naaŋ	the <i>tap taw</i> mushrooms sprouting alongside the
	<i>yāa naang</i> vines.
mǒŋ hĕn bua salāaŋ	I gaze at the eye-catching lotus blossoms
lǒy pĭm rim buŋ	floating at the edge of the marsh.
...yāk cǎ? dèt maa dǒm hǒm nǒy	I would like to pick a blossom to sniff its
	fragrance.
lǒŋ ʔúam muu khǒy khǒy	To let it caress my hand,
kǒ ʔúam mây thūŋ	But it is beyond my reach.
yāk cǎ? plēŋ raaŋ pen maleŋ phū fūŋ	I would like to turn myself into a dragonfly
	or a bee
plēŋ dǎy cǎ? bin pay khĭlūŋ khĭlāw	Once transformed, I would fly to fondle
cǎw bua tuum bua baan	The lovely lotus blossom.

The song, full of the emotion of longing, is also a mini-catalog of bioforms: *krathĭn* and lotus blossoms, hay grasses, and *tap taw* mushrooms, *yāa naang* vines, dragon flies and bees. A country song, sung by a country boy, the lyrics bespeak of a definite displaced "biophilia," a feeling of longing and fondness for the "friendliness" of the life forms of nature found only in the remote countryside far from congested Bangkok, coupled with a passionate desire for love. At the end

<sup>2</sup> *The Capital*, by Wanich Jarunggidanan. A short story translated into English by M.R. Usnisa Sukhsvasti and published by Chulalongkorn Translation Center, Faculty of Arts, Chulalongkorn University, Bangkok, 1985. The volume begins with the original Thai and is translated into eight foreign languages.

<sup>3</sup> The author attempts to write out the lyrics in the Isan dialect, which I, in turn, have transcribed from his Thai transcription into a phonemic one; hence some of the words are not Standard Thai spellings. I have bolded the words that form the rhyme pattern. I have also changed the original English translation somewhat in an attempt to pick up some details that were dropped.

of the song, tears can be seen collecting on the eyelashes of the Isan migrant decrying the absence of human love expressed through the language of symbols drawn from the flora and fauna familiar to an upcountry young man.

The author's intent is to recreate a feeling of loss and longing and the consequential alienation experienced by the newly urbanized man. At the same time, the hot and humid bus ride is presented as a metaphor for modern Bangkok. The ride encapsulates the cramped, dirty, and sweaty environment that the common person is forced to endure there.

One dimension of expressing the sense of loss is through an enumeration of biological forms, both plants and insects. The longing is for him, transformed and transported as dragonfly or bee, to be reunited with his love, the lotus or *krathin* blossoms. The song is full of meaning for both men crammed into the bus because they grew up with these life forms, and the affinity endures even within the fields of cement and asphalt in Bangkok.

The ultimate loss that gnaws at the pit of the stomach of the reader, however, lies in the future, when generations who have not grown up with contact with or access to nature will find less experiential meaning in such songs and poetry. The knowledge of some of these bioforms will endure only as names in an old song or as a catalog of trees, flowers, fishes, and elephants in classical poetry, such as the lines below from *The Tales of Prince Sammutakote*, parts of which date from the Auythaya period, some 300 hundred years ago. By juxtaposing the folk song and the following excerpt from the classic poem, we can see the continuity of Thai aesthetic experience over the centuries, between the fictional Thai prince and the Isan farm boy turned laborer. The excerpt below (stanzas 436-439) depicts Prince Sammutakote setting up camp in the forest in preparation for an elephant hunt. The experience of being alone in an environment of pairs of birds flying about in a forest of trees and perfume-enveloping flowers leads him to think of and long for his beautiful Surasuda, the woman he left behind waiting in the court with his parents. It is in these sections that the reader is presented with part of the catalogs of bioforms—in this particular stretch of stanzas, a list of trees and flowers. The key phrase that defines biophilia is in the fifth stanza: "...the wind blew...to invite His Majesty to wander about to delight in the delicate plants."

From each nest the husband  
Flew out to compete,  
To seek food for his wife  
Swiftly diving and whirling about.

The prince saw these birds,  
Felt alone, strove to endure,  
But missed his heavenly wife  
as loneliness pervaded.

Every kind of tree  
filled the vast forest.  
Pollen spread, unlocking  
Heavenly, delightful perfumes.  
Flowers budded in chains,  
In clusters and bunches;

Branches grouped together  
Like hands stretching out.

He gazed at the trees as the wind blew,  
As though it came to admire,  
To invite His Majesty to wander about  
To delight in the delicate plants. [tree and flower catalog  
begins]

Du, pru, prayong, yom,  
Sarapi, phikun, janjana—  
Muang and monthan,  
Flowers mixed with the kamyang.

Budding flowers ordered,  
Pleasant sandalwood perfumes  
Wondrous jambok,  
Kannika mixed with kaew

Karakate, ket kaew,  
Mali and maludi mixed,  
Bunnak beside  
Maliwan and wannawan.

The girth of the tree seemed  
Like the waist of his beauty,  
An encircling golden vine,  
Like his Lady's arms embracing him.

Nangyaem, khatueng,  
Dancing and pulling lamduan,  
Jik, jaeng, maeng, mong-  
Kut, khuy, khu khlay.

Trees stood high and low  
As though dancing and turning.  
Branches, when breezes blew,  
Swayed as dragons lifted high.

Fragrant scents and aromas hung,  
Gentle breezes blew,  
Ready ripe mangoes exuded their aroma,  
And the monnak tree flitted uneasily.

He finished admiring every tree  
 As evening drew near,  
 Suriya late in the day  
 Hiding behind Mount Meru.

And now with Suriya hidden,  
 "Surasuda, my beauty,  
 Now, looking before me  
 You're not there, only loneliness!

Both common sense and linguistic research tell us that comprehension of a "text," be it a popular song, a piece of classical Thai poetry, or a treatise on nature, is a matter of prior knowledge, experience, interest, and focused attention. The two young men on the bus share the common knowledge and experience of the countryside and closeness to nature. The reader of the short story will fully comprehend the experiences the writer is detailing only to the degree that he or she has known and experienced both urban and rural Thailand. Likewise, the student of Thai literature will better be able to enter the world of Prince Sammuthakote to the extent that he or she has had direct sensory contact with the natural world so carefully catalogued and thereby used to capture the complex emotion of biophilia. However, as the world of market economies moves in to dominate modern life, the rural experience and knowledge of bioforms recedes. That experience, in part "the biophilia tendency," however is preserved in classical Thai poetry to an uncanny degree for those decreasingly few who have the knowledge and experience to fully participate in the recreation of the "biostate".

As E.O. Wilson has commented recently, "just the nearness or even the depiction of natural environments is psychologically restorative."<sup>4</sup> Thai poets have that very ability to evoke biophilia—the affiliation for nature—in their works. This is especially true of the earlier classical poets. But even modern Thai poets and songwriters continue the tradition. As bioforms disappear, as the tropical rainforests that once covered much of Southeast Asia are leveled by the saw and the bulldozer, so too will the poet's source of inspiration and material be lost. Bioforms and biophilia go hand in hand.

#### Disappearing Oral Catalogs of Southeast Asian Bioforms

On a global scale, knowledge of the names of things in nature is being lost at a rapid rate even in our lifetime as forests are clearcut and their human inhabitants displaced. Jared Diamond records the phenomenal encyclopedic memory of lifeforms among preliterate peoples in "New Guineans and Their Natural World."<sup>5</sup>

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<sup>4</sup> "E. O. Wilson, An Interview with the Father of Biodiversity." *Nature Conservancy*, July/August 1994, p. 26.

<sup>5</sup> See *The Biophilia Hypothesis*, edited by Stephen F. Kellert and Edward O. Wilson, Washington, D.C.: Island Press/Shearwater Books, 1993. pp. 251-271.

While on the island of Kulambangra in the Solomon Archipelago, I had two free days at the end of my fieldwork, and so I spent that time transcribing the knowledge of local birds possessed by one Kulambangra villager, Teu Zinghite. For every one of Kulambangra's eighty resident bird species, Teu dictated to me an account consisting of its name in the Kulambangra language, its song, preferred habitat, abundance, size of the group in which it usually foraged, diet, nest construction, clutch size, breeding season, seasonal altitudinal movements, and frequency and group size for overwater dispersal...New Guineans have such detailed recollections not only for people but also for certain bird and animal species that they encountered only once. (p. 257)

Jared also points out that the knowledge of this jungle inhabitant extends largely to species that are of economic utility. Butterflies, for example, had little or no importance in the Kulambangra economy, and they are not cataloged to the same extent as the birds, which are killed for meat and feathers and for the cash income derived from foreign export.

In the same general area in Southeast Asia we find the Temiar, mountain dwelling hunters and gatherers, who even more dramatically illustrate the biophilia hypothesis. Roseman captures Temiar affinity with nature in these words.<sup>6</sup>

Temiar have a peculiarly intimate relationship to the land of the jungle, its flora and fauna, hills and rivers. They move through it daily, hunting, gathering, fishing and gardening, garnering cues as they travel from the sounds of various birds, insects, and animals that penetrate the dense jungle foliage. They cut each stalk of rice by hand, dig tubers, climb up into the trees to gather fruits. This closeness to the land comes out in the way they think about it. In the Temiar worldview, all entities—humans, other animals, plants, mountains—embody bounded souls that can be liberated as unbound spirit. The world resonates with life, with potentially animated being. (Roseman, p. 24)

According to Roseman, Temiar music—meaningfully patterned sounds and movements constructed with the pulsing of bamboo-tube percussion accompanying singing and swaying ceremonies—"sets the cosmos in motion, releasing spirits from their bounded forms so they can interact with humans." (p. 15) The feeling, the esthetic experience of "longing" that was so striking in the folksong of the Isan laborer on the Bangkok bus and the "loneliness" of Prince Sammutakote is not unlike that experienced by the Temiar.

The Temiar say that pulsating sounds of the Malaysian rainforest, such as calls of particular birds and insects, move with the beat of the heart, and thus move the listener to feel longing...These socially structured sounds, sonic icons of the heartbeat, move the heart to longing. (Roseman, p. 15)

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<sup>6</sup> Marina Roseman, *Healing Sounds from the Malaysian Rainforest: Temiar Music and Medicine*. 1991. Berkeley: The University of California Press. p. 24.

## Out of Love, or For Money—Or from the Genes?

The episodes of Prince Sammutakote, the young laborer on the Bangkok bus, the Kulambangra villager, and the Temiar hunter-gatherer illustrate a spectrum of attitudes towards the natural environment. All exhibit extraordinary intimacy with nature. The sensual experience of the natural world moves Prince Sammutakote to long for his Lady Surasuda. The Thai worker is caught up in love and in the romance and reproductive aspects of nature also. His urges are mimetic; he wishes to transform himself, indeed transport himself, in such a way as to express his sexuality, to realize the truly sensual. The Kulambangran native, as we see him, is drawn in economic terms. He is the entrepreneur, the dealer in exotic birds who knows his avian inventory well. Excluded from his range of knowledge and interest are the uneconomic, such as (at that time) unmarketable butterflies, of which he has little classified information or interest.<sup>7</sup> Finally, the Temiar forest dweller does not appear to see himself as all that separate from the rest of the forest world.

However, none of these instances of behavior that engages nature would seem to support the Wilsonian theory of a genetic-based biophilia to a very strong degree. As Jared suggests in his research, human attitudes towards nature are cultural constructs, behavioral systems peculiar to specific societies. Attitudes towards nature vary so much from people to people, even within a common culture, that it is difficult to generalize about a strong genetic base to humankind's response to bioforms. The genetic argument, it seems to me is weak but the cultural argument much stronger because it can be observed, discussed and compared across community lines.

Alternatives to the genetic argument, as put forth by Nabhan and St. Antoine are as follows:<sup>8</sup>

1. Perhaps biophilia is not genetically determined but is a set of learned responses.

or 2. Biophilia could be a set of behavior based on a number of genes, for which any particular individual may have some but not all of the genes.

or 3. A child's learning environment greatly conditions the expression of any genetic basis for biophilia. Unless the appropriate environmental triggers are present in a certain cultural/environmental context, biophilia is unlikely to be fully expressed.

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<sup>7</sup> See The New York Times, Sunday, June 5, 1994: "Isolated Papua New Guineans Fall Prey to Foreign Bulldozers: 'Last Rain Forest' Timber vs. a Culture" p. 1. This article points alarmingly to the recent rapid deforestation of Papua New Guinea. It also notes that the island series is home to what is perhaps the greatest diversity of bioforms anywhere, including the world's largest butterfly.

<sup>8</sup> Gary Paul Nabhan and Sara St. Antoine. Chapter 7 "The Loss of Floral and Faunal Story: The Extinction of Experience." *In The Biophilia Hypothesis*, edited by Stephen R. Kellert and Edward O. Wilson, 1993. Washington, D.C.: Island Press, pp. 229-250.

The third explanation is easiest to affirm with any certainty, as Nabhan and St. Antoine do. Pointing to Brown's article<sup>9</sup> on Ifugao hunter-gatherer's 2,700 labeled categories of biota, the authors go on to note the large numbers of plants and animals mentioned in O'odham and Yaqui (U.S. Southwest Indian communities) stories, ceremonial orations, and songs.

The O'odam refer to at least 26 taxa of plants, 16 taxa of invertebrates, 13 taxa of reptiles, amphibians, and fish, 28 taxa of birds, and 20 taxa of mammals. Only 7 large native mammals, 3 large domesticated plants are represented among the 103 folk taxa featured in O'odham oral literature.

These numbers suggest that O'odham mythology is not merely focused on creatures that are conspicuous or have economic importance but extends to a wide range of local and extralocal biota. (p. 235)

These examples and arguments aside, what I wish to show now is that Thai classical poetry (court poetry) from the Authaya period is both a continuation and a departure of the biophilia tendency in Southeast Asian culture. The Authayan Thai (Siamese) poet was urbanized to a very high degree. Yet he or she was not all that divorced from the small-scale agriculturalist that formed the economic base of the 15th century Siamese world. The very large repertoire of biological knowledge possessed by the community of urban Thai poets working in this particular genre and time period was probably a close reflection of, indeed recording of, the knowledge of their rural cousins. Nabhan and St. Antoine note that this type of agriculturalist has maximum categorized information on biological life, reflected in the lengthy lists of the early Thai court poets.

The lexicons of small-scale farmer-forager societies tend to contain a greater number of binomial labels for plant taxa than do those of hunter-gatherer societies, suggesting that farmer-foragers give greater attention to the morphological and behavioral detail of local species, whether wild or cultivated. The depth of folk taxonomic knowledge in a cultural community is not, however, static; like biodiversity, it can be affected by social and environmental forces which change through time. (page 232)

#### Biophilia in the Poetry of the Early Bangkok Period

Bangkok was established in 1772, nineteen years after the sacking of Ayuthaya by the Burmese. Nineteen years later, the most famous poet of the Early Bangkok Period, the period of the Four Reigns, from Rama I to Rama IV, was Sunthorn Phu (1786-1855). His father was a native of Rayong, his mother came from Phetchaburi. His parents did not get along and separated early, his father retiring to the life of a monk in a monastery in his birthplace. Sunthorn Phu's childhood and adolescence was spent with his mother, who was a wet nurse to a

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<sup>9</sup> Cecil H. Brown. "Mode of Subsistence and Folk Biological Taxonomy." *Current Anthropology* 26(1) (1985):43-64.



princess in the Rear Palace. He was educated in Wat Sri Sudaram in Bangkok, where princes were schooled as well. When he was about twenty, he wrote his first story in verse, dedicated to a prince. By the time he was thirty-five, he had entered the royal service during the Second Reign. Essentially he was an urban and palace creature with country and common connections. His poetry reflects both the city-courtly life and the rural and vegetational. He wrote many travel poems, called *nirat*. Lines from his poetry illustrate the presence and continuity of biophilia in Thai poetry and the persistence of nature and poetry in the lives of the Thais. The following excerpt is taken from a translation of *Nirat Phukhao Thong*.<sup>10</sup>

When the moon rises, I see clusters of water chestnuts  
And plenty of waterlilies.  
I discern waterways on both sides.  
We push with poles at front and stern.  
Towards dawn, I see plants.

They look lovable and delicate, sending forth pollen,  
The *phyan* lotuses growing lush beside the path,  
*Kam kung*<sup>11</sup> in overlapping layers,  
crowding the *sàaràay* beneath the water;

*saay tin* alternating with *tabtao*<sup>12</sup>  
In clusters seen in rows to the left and right;  
Water chestnuts, water lettuce, and lotus blossoms full  
blown, scattered white like glistening stars.

Oh, if the girls come and see this,  
They will descend to play in the meadows;  
Those who have little boats will float and paddle about,  
Pulling stems of *phăn* lotuses and *sântàwaa* plants<sup>13</sup>  
How could I keep still before these flowers?

The poet has a very strong reaction when he witnesses the vegetation and flowers in the flooded rice fields; call it a demonstration of biophilia. Phya Anuman's explanation (in an essay on growing rice) was, "These are lines in admiration of fields in the wet season by Sunthōn Phūu, showing that the fields also have a distracting beauty if one has a poet's eye to see."<sup>14</sup>

<sup>10</sup> See Montri Umavijani, *Sunthorn Phu: An Anthology*. Bangkok: The Office of National Culture Commission. 1990. p. 71 for the first five lines, and for the remainder, William J. Gedney's translation found in *Essays on Thai Folklore by Phya Anuman Rajadhon*, Bangkok: The Social Science Association Press of Thailand, p. 353.

<sup>11</sup> Lit. 'prawn's claws' *Begonia obovoidea*.

<sup>12</sup> Lit. 'turtle's liver'. The 'turtle's liver mushroom' was mentioned in the song quoted earlier from *The Capital*.

<sup>13</sup> *sântàwaa* is *Otellia alsimoides*.

<sup>14</sup> See fn. 10.

The Bioform Catalogs of Thai Classical Poetry: *The Tale of Prince Samuttakote*

One of the remarkable features of Thai classical poetry is the listing of names of flora and fauna. At least two of the older Thai classics, *Phra Law* and *The Tale of Prince Samuttakote*, are replete with this phenomenon. An Anonymous epic, *Phra Law* dates from the early Ayuthaya period, ca. 1448-1533. Cambodian influences were very strong during this time, and the language of *Phra Law* has been described as "a mixture of the language of Sukothai and the Khmerized Thai of Ayuthaya. Hudak<sup>15</sup> (1993:xiii) remarks that during this period, "Cambodian *kaap* and Indic *chan* meters became the favorites of the court and the intelligentsia, the educated and the learned audiences for poetry." The predilection to use catalogs of trees, flowers, fish, fowl, and animals (elephants in particular) as a literary device in both literary classics might well have been inherited from Khmer and Indic sources by the early Thai poet as well.

*The Tale of Prince Samuttakote* was begun during the reign of Prince Naray (1656-88), subsequent to *Phra Law*. It was enlarged by two later authors over a period of 150 years and completed in 1849. It is composed of 2221 stanzas, each of which has 2-4 lines of rhyming verse. Based on a Jataka tale, the more elaborate epic changes some of the content while retaining the original outline of the story. Some aspects are reminiscent of the Rama epic; it is a marriage contest that involves an elaborate elephant hunt (supposedly a reflection of Prince Naray's prowess), a marriage contest testing the ability of suitors to draw the iron bow, a battle with the losing suitors, marriage, separation of husband and wife, and their reunion. Very much in keeping with Indian traditions, the hero and heroine make visits to the Royal Gardens, the Himaphan Forest, and the Chattan Ponds, natural settings bursting with natural life that are inventoried in those portions of the poem. In the explanatory notes to his English translation of the poem, Hudak notes (fn. 142):

Within descriptive passages appear various kinds of catalogues. The simplest type involves the listing of flowers, trees, or the like in no particular order, although sound play helps to order the terms. A slightly more sophisticated list, as in this example, lists the terms in rhyming or alliterative sequences. No special patterns of rhyme or alliteration dominate the following catalogue. Since sound aesthetics are an important part of all catalogues, the listed items have been left in their Thai forms in this translation.

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<sup>15</sup> Thomas J. Hudak. *The Tale of Prince Samuttakote: A Buddhist Epic from Thailand*. 1993. Athens, Ohio: Ohio University Center for International Studies Monographs in International Studies. Southeast Asia Series Number 90. pp. 276.

TABLE 1. *Catalog of Plant Life: Grasses, Trees, Flowers, Vines*<sup>16</sup> (114 items)

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เกลี้ยง /kliang/
kliang - a species of grass
โพ /phoo/
Bho tree - under which the Buddha attained enlightenment
สามิต : ใบมะม่วง, ใบทอง, ใบตะขบ /samit: bay māmûarj, bay thokw, bay tàkhòp/
"He offered three leaves with blossoms"—probably a reference to three special leaves (samit) used in ceremonies, especially those involving the king. These leaves include leaves of the mango, leaves of the flame of the forest, <i>Butea frondosa</i> ( <i>Leguminosae</i> ), and the leaves of the <i>takob</i> , <i>Flacourtia cataphracta</i> ( <i>Flacourtiaceae</i> )
ขาม /khǎem/
khaem - a species of tall grass sometimes used as a fodder, <i>Sorghum halapense</i> ( <i>Gramineae</i> )
คู่ (ประคู่) /dùu, prādùu/
duu (or pradu) - a large, beautiful timber tree, <i>Pterocarpus macrocarpus</i> ( <i>Leguminosae</i> )
ปรง /pruu/
pru - a scented hardwood used for medicinal purposes, <i>Alangium salvifolium</i>
ประยงค์ /prayong/
prayong - a flowering tree, <i>Aglaia odorata</i>
ยม (มะยม) /yom, máyom/
yom/mayom - the star gooseberry, used in purification rituals, <i>Phyllanthus distichus-euphobiaceae</i>
สารภี (สุรภี) /sàráphii, sùráphii/
sarapi (also surapi) - sweet scented flowers, <i>Ochrocarpus siamensis</i>
พิкул /phĩkun/
phĩkun - small, star shaped, sweet smelling flowers, <i>Mimusops elengi</i> ( <i>Sapotaceae</i> )
กาญจนมวง /kaancànámûarj/
kanjanamuang - golden mangoes
มณฑาทิพย์ /monthaan/
monthan - a large leafed tree with yellow flowers believed to grow in heaven

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<sup>16</sup> Transliterations of Thai names of biodata, their English definitions and Latin names are taken with very few modifications from the footnotes to Thomas Hudak's annotated translation, *The Tale of Prince Sammutakote*. On the line above his transcribed form, I have inserted the original Thai spelling and a phonetic transcription of a spelled pronunciation. My list of approximately 300 life forms, culled from the footnotes to the translated poem and rearranged into three categories (plants, birds, fish), does not include the elaborate catalog of elephant types that fill the scenes dealing with the elephant hunt and battles. Any errors in the transcriptions should be attributed to me.

กำยาน /kamyaan/

kamyan - a tree yielding fragrant gum resin, *Styrax benzoides*

จันทน์ /cambòk/

jambok - *Buchanania fastigiata*, *Amygdalicerca stipulata*, or *Irvingia harmandii*

กรรณิศา /kaníkkaa/

kaanika - a tree with sweet-smelling white flowers, *Nyctanthes arbor-tristis*

แก้ว /kĕəw/

kaew - a tree with fragrant white flowers, *Murraya paniculata*

การเกศ /kaarákĕet/

karakate - the screwpine, *Pandanus furcatus* (*Pandanaceae*)

เกศ /kĕet/

ket - palu, hardwood timber, *Mimusops hexandra*

มะลิ (มะลิ) /má lí/

mali - jasmine, *Jasminum sambac* (*Oleacea*)

มาลุดี /maalúdí/

maludi (maluli?) - a type of tree <sup>17</sup>

บุนนาค /bunnâak/

bunnak - Indian rose chestnut, *Mesua ferra* (*Ternstroemiaceae*)

มะลิวัลย์ /má líwan/

maliwan - jasmine

วรรณवार /wanáwaan/

wannawan - hibiscus (?) *Hibiscus rosa-sinensis*

นางแย้ม /naanyĕem/

nangyaem - a shrub with fragrant flowers, literally the name means 'a woman slightly open', nang 'woman' and yaem 'slightly open', and therefore frequently appears as an image in erotic passages, *Clerodendron fragans*

ขี้ผึ้ง /khàthiŋ/

khatueng - a tree with reddish brown bark, *Calophyllum inophyllum* (*Guttiferae*)

ลำดวน /lamduan/; รำดวน /ramduan/

lamduan (or ramduan) - a tree with three-petaled strongly-scented flowers used as offerings to Buddhist monks, *Aphaerocoryne clavipes* (*Annonceae*)

จิก /cĭk/

jik - a tree or shrub with leaves used medicinally, *Barringtonia spicata* (*Myrtaceae*)

แจ่ง /cĕəŋ/

jaeng - a type of tree, *Niebuhrria decandra* (*Capparidaceae*)

<sup>17</sup> The use of the "?" means that Hudak is unsure; in many instances, he writes "a type of something" in the definition, perhaps as an indication of inexact or lost knowledge. For a fascinating account of language and knowledge decay, see Allan Pred's *Lost Words and Lost Worlds: Modernity and the Language of Everyday Life in Late Nineteenth-Century Stockholm*, 1990, Cambridge: Cambridge University Press.

แมง /mæŋ/

maeng (maenglak?) - sweet basil, *Ocimum basilicum* (*Labiatae*)

มงกุฎ /monkhút/

mongkhut - the mangosteen, *Garcinia mangostana*

คูน /khuy/

khuy - a kind of creper used as a red dye

ขลุ /khlùu/

khlù - a small bush, *Pluchea indica* (*Compositae*)

ขลาย /khláay/

khlay - a type of tree

มอนนาก /monnâak/

monnak (nakkbut ?) - a moderate-sized tree with large white flowers, *Mesua ferra* (*Guttiferae*)

รากกล้วย /râakklûay/

rakklûay - bananas, *Gyrinocheilus koznokovi* (*Cyprinidae*)

พุดตาด /phúttaan/

phuttan - hibiscus, *Hibiscus mutabilis* (*Malvaceae*)

อโศก /àsòok/

asok - the asoka tree, native to India, *Saraca indica* (*Leguminosae*)

กฤษณา /krísanâa/

krisana - a large tree with fragrant resin often used as incense, *Aguilaria agallocha* (*Thymelaeaceae*)

กระวาน /krâwaan/

krawan - cardamoms, *Amomum xanthioides* (*Zingiberaceae*)

การบูร /kaarâbuun, kaanbuun/

karabun (or kanbun) - a low-blooming annual, *Sphaeranthus indicus* (*Compositae*)

กุน /kuun/

kun (kala ?) - a tree with white flowers found on banks of streams, *Hydnocarpus castanea* (*Bixaceae*)

กระเพียน /krâniat/

kraniat - *Adhatoda vasica* Nees

กำขุ่น /kamkhuun/

kamkhun (kun?) - plant with clusters of yellow flowers, *Cassia fistula* (*Leguminosae*)

สุพรรณกา /sùphankaa/

sùphanka - *Cochlospermum Cochlospermaceae*

เพกา /pheekaa/

pheka - a tree with large pods, *Oxoxylum indicum* (*Begoniaceae*)

รัง /rang/

rang - small tree upon which a lac insect feeds, *Pentacme siamensis* (*Dipterocarpaceae*)

รัก /rák/

rak - a tree from which laquer is obtained, *Melanorrhoea usitata* (*Anacardiaceae*)

ศครว้ /sàkhrwǎ/

sakraw - a tree used for medicinal purposes

จรัลึง /càrálīŋ/

jaraling - *Averrhoa bilimbi*

กก /kòk/

kok - umbrella plant, *Cyperus alternifolius*

รำย /ramyay/

ramyai (lumyai ?) - *Nephelium longana*

ไพ /phay/

phai - type of tree used in building, *Adenanthera microsperma* (*Leguminosae*)

ไพ /phoo/

pho - pipal tree, *Ficus religiosa* (*Urticaceae*)

เทพารู /thêepthaaŋ/

theptharu - a peppermint smelling pine, *Cinnamomum parthenoxylon*

ลำพูน /lamphuun/

lampu - tree with fruit for flavoring chutneys and curries, *Sonneratia caseolaris* (*Sonneratiaceae*)

ตองแตก /tongtæk/

tongtaek - shrub, *Baliospermum axillare* (*Euphorbiaceae*)

ตาคุ่ม /taatúm/

tatum - small tree with milky juice, *Excoecaria agallocha* (*Euphorbiaceae*)

ระกำ /rákam/

rakam - a palm, *Zallaca wallichiana* (*Palmae*)

ราชพฤกษ์ /ráacháphrík/

ratchaphrik - laburnum, golden shower, *Cassia agnes Brenan*

ขานาง /khãanaaŋ/

khanang- *Homalium tomentosum*; *khanang* also means 'arms of a lady'

รักซ้อน /rákswǎn/

raksorn - shrub with double-petaled flowers, *Calotropis gigantea* (*Asclepiadaceae*); *raksorn* also means 'love increases'

เล็บนาง /lépnaaŋ/

laepnang - woody climber, *Quisqualis densiflora* (*Cembretaceae*); *laep* [*lep*] *nang* also means 'fingernails of a lady'

ลำเจียก /lamciak/

lamjikak - species of screwpine, *Pandanus tectorius* (*Pandanaceae*)

จันทน์ (จันทน์) /can/

jan - sandalwood, *Sirium myrtifolium*

มัลลิกา /mallíkaa/

malika - double jasmine

- กุมารี /kùmaarii/  
 kumari - an unidentified species of flower
- พลับ /phláp/  
 phlap - evergreen, *Diospyros embryopteris* (*Ebenaceae*)
- ตระขบ /tràkhòp/  
 trakop - berry producing tree, *Flacourtia cataphracta* (*Flacourtiaceae*)
- ขนุน /khanün/  
 khanun - jackfruit, *Artocarpus integrifolia* (*Urticaceae*)
- ชามชุน /chaamchun/  
 chamchun - an unidentified species of fruit\*
- ขวิด /khwít/  
 khwit - wood apple, *Feronia elephantum* (*Rutaceae*)
- ชวต /khwàat/  
 khwat - evergreen tree, *Garcinia speciosa* (*Guttiferae*)
- ไม้เหียง /máyhīang/  
 mayhiang - *Dipterocarpus intricatus* (*Dipterocarpaceae*)
- ชรห่าน /charahǎan/  
 charahan - an unidentified species of tree
- มหาด /mahâat/  
 mahat - a large deciduous tree, *Artocarpus lakoocha*
- ไม้ไผ่ /máiphài/  
 bamboo - *Bambusa arundinaceae*
- บง /boŋ/  
 bong - bamboo, *Bambusa tulda*
- ช้างยาง /cháanyaaŋ/  
 changyang - an unidentified species of bamboo
- อঁฉั้น /anchan/  
 anchan - blue climber; has prominent blue flowers and is found throughout the tropics; *Clitoria ternatea* (*Leguminosae*)
- สุมาลี /sùmaalii/  
 sumali - a flower, a collection of flowers
- กาฬ /kaan/  
 kan (kala) is dark blue-green like the anchan flower
- จงกลนี /coŋkonni/  
 jongkonni - a lotus that bears multiple white blossoms per stem
- อุบล /ubon/  
 ubon - a white lotus
- นิล /nin/  
 nin - a blue lotus
- โลหิต /loohitoo/  
 lohito - a red lotus

บัว /patthámá?, pàtmá?/; also spelled บัวม, บัวม

patthama - a lotus, *Nelubrium speciosum*

เสวย /sawèet/

sawet - a white lotus

กมูท /kamút/

kamut - a long-stemmed white lotus

รัก /rák/

rak - *Calotropis gigantea* (Asclepiadeae); rak also means 'to love'

สละ /salá?/

sala - a short-stemmed palm, *Zalacca wallichiana* (Palmae); sala also means 'to relinquish, renounce'.

ระกำ /rákam/

rakam - *Calotropis gigantea* (Asclepiadeae); rakham also means 'sorrow, grief'

กระทุ้ม /kràthúm/

kratum - a species of evergreen, *Excoecaria agalloch* (Euphorbiaceae); a modification of the first syllable *kra* to *kara* produces the meaning 'hands' with the whole word meaning 'to beat the chest with the hands'

ตูม /tuum/

tum - bael fruit tree, *Aegle marmelos* (Rutaceae); onomatopoeia for the sound of beating

โศก /sòok/

sok - the tree under which Buddha was born, *Saracaindica* (Leguminosae); sok also means 'sorrow'

พันสก /phanlòok/

phanlawk - a tree that probably produces a fire-red flower.

สายหยุด /sáayyùt/

sayyut - fragrant climber, *Desmos chinensis* (Annonaceae); reversing the syllables, the meaning is 'to stop in late morning'

สุกกรม /sùkkrom/

sukkrom - a tree with red fruit used for medicine; reversing these syllables produces a homonym *krom* 'to be melancholy' and *suk* 'happiness' which is negated in the Thai

สท้อน /sathòon/

sathorn - *Milletia buteoides* (Leguminosae); sathorn also means 'to recoil'

ทิ้งถอน /thíngthòon/

thingthotn - *Albezia procera*; thing means 'to throw away'

โรก /ròok/

rok - probably a woody sprawler, *Terminalia alata* (Combretaceae); a homonym means 'disease'

กันภัย /kanphay/

kanphay - *Afgekia sericea* Carib; split into two syllables, the two syllables mean 'to protect against (kan) danger (phay)'



มรุ /márum/

marum - horseradish tree, *Moringa oleifera* (*Moringaceae*); the second syllable means 'to gather, flock together'.

กำจัต /kamcàt/

kamjat - *Zanthoxylum budrunga* (*Rutacea*); kamjat also means 'to limit'

มะกอก /mákòók/

makawk - hog plum, wild olive, *Spondias pinnata* (*Anacardiaceae*); the second syllable, kawk, means 'to suck'

จาก /càak/

jak - nipa palm, *Nipa fruticans*; jak also means 'to be separated from'.

เต็ง /teŋ/

teng - a large forest tree, *Shorea obtusa* (*Dipterocarpaceae*); teng also refers to a type of Chinese scales with a horizontal bar.

มะฝอ /máfóo/

mafaw - *Trewia nudiflora*; faw means 'to be withered or wilted'.

สำบ้า /sabāa/

saba - elephant creeper, *Entada phaseoloides*; ba means 'to be crazy'

รำงับ /ramŋáp/

ramngap - *Mimosa pudica* (*Leguminosae*); ramngap means 'to curb or lessen'

หนาด /nàat/

nat - camphor plant, *Clumea balsamifera* (*Compositae*); a homonym, anat, means 'to be destitute'

วัลย์น้ำ /wannám/

wannam - creepers; wan has a homonym meaning 'day' and nam means 'water'

ดับพิษ /dàpphit/

dapphit - phitsanat - *Mimosa sirissa*, used as an antidote against poisoning; dap means 'to extinguish and phit means 'poison'

TABLE 2. *Birds* (76 items)

กู่ไก /kùŋgòok/

kungok - a peacock

กุงาน /kùŋaan/

kungan - a goose, *Cygnus*

กุงอน /kùŋgòon/

kungon - white ibis, *Ibis milanocephala*

จิบ (กระจิบ) /kràcĭp

jip (krajip) - warblers or wrens; jip also means 'to swallow a little at a time'

จาบ (กระจาบ) /càap, kràcàap/

jap (krajap) - weaver bird, *Ploceus Baya*; jap also means 'to rob or steal'

คลังโคลง /khlīŋkhlōŋ/

klīngklong - black necked mynah, *Gracupica nigricollis*

เจ้า (กระเจ้า) /càw, kràcàw/

jaw (krajaw) - a type of heron; *jaw* also means 'to sit quietly'

กระสา /kràsǎa/

krasa - common heron, *Ardea cinera*

รังนก /rangnaan/

rangnan - a species of bird

นางนวล /naanuan/

nangnuan - sea gull, sea terns, *Sterna sp.*; *nang* also means 'lady' and *nuan* 'creamy skin'

กาน้ำ /kaanám/

kanam - cormorant, *Phalacrocorax sp.*; the *kanam* is a symbol of gluttony

เป็ดน้ำ /pèt náam/

petnam - whistling teal, *Dendrocygna javanica*. The repeated use of the word *nam* 'water' in the bird's name and in the description of their actions in the water helps to produce a rhyming effect in the Thai.

งู /ŋūa/

ngua - *Anhinga melanogaster* (*Phalacrocoracidae*)

เขา /khâw/

khaw - Malay spotted dove, *Turtur tigrinus*

เตน /teen/

ten - kingfisher, *Alcedinidae*

กระโน (ตระโน) /krànay, tranay/

krany - (or tranay) a small bird similar to the woodpecker

หัวขวาน /hūakhwǎan/

huakhwan - scaly belly green woodpecker, *Gecinus vittatus eisenhoferi.*; *huakhwan* also means 'head of the axe'

เปลา /plâaw/

plaw - turtle dove, *Aenopopelia tranquebarica humilis*

สาริกา /sǎaríkkaa/

sarika (or sari ?) - mynah, *Acridotheres tristis*

พริก /prík/

prik - watercock, *Gallicrex cinereus*

แอ่น /lèæn/

aen - ashy swallow, *Artamus fuscus*; *aen* also means 'to bend'

ซังแซ้ว /sangsew/

sangsaew - a common bird with black plumage, the king crow, *Buchanga atra*

ไผ่ /phây/

phay - a species of bird

lang (กะลาง) /laaŋ, kàlaaŋ/

lang (kalang) - Siamese white-crested laughing thrush, *Garrulax diardi*

ปลิง /plin/

pling - an unidentified species of bird

บ่าวขุน /bàawkhūn/

bawkhun - a species of bird; *bawkhun* also can mean 'a young nobleman'

กางเขน /kaaŋkhēen/

kangkhen - a species of magpie, *Copsychus saularis*; *kangkhen* also can mean 'shield'

เขวาก /khwèek/

khwaek - night heron, *Nycticorax nycticorax*

อีลุ้ม /iilúm/

ilum - watercock, *Gallix cinera*

คุ่ม /khūm/

khum - small quail

ไส้ /sây/

say - an unidentified species of bird

หัวหาง /hūahǎaŋ/

huahang - an unidentified species of bird

ยุง /yun/

yung - Burmese peafowl, *Pavo muticus*

แสก /sèek/

saek - collared pygmy owlet, *Glaucidium brodiei*

เค้า /kháw/

khaw - collared pygmy owlet, *Glaucidium brodiei*

คั่นแค /khápkhæ/

khapkhæ - cotton teal goose, *Nettapus coromandelianus*

ยาง /yaaŋ/

yang - Indian pond heron, *Ardeola grayi*

ควัก /kwàk/

kwak - Chinese white-breasted water rail, *Amaurionis phoenicurus chinensis*; *kwak* also means 'shake, wave' and also represents the sound the bird makes

พรหิต /pharáhīt/

pharahit - an unidentified species of bird

จก /càak/

jak (wak) - a mythological bird said to wail at night when separated from its mate; the name may also be translated as 'separated from'

ตบยุง /tòpyun/

topyung - *Caprimulgidae*; the name can also mean 'to slap mosquitoes'

นกกจอก /nókacòk/

nokkajok - common sparrow, *Passer sp.*

ค้อนทอย /khwǎnhwǎy/

khonhooy - *Pelican ibis, Tantalus leucocephalus*

ภูรโดก /phúrǎdòok/

phuradok - an unidentified species of bird

โคกม้า /khòokmáa/

kokma - a species of bird

กตเพลิง /kòtphlǎeng/

kotphloeng - black-necked stork, *Xsnorhynchus asiaticus*

ช่างเหล็ก /cháanglǎek/

changlek - Indian crimson-breasted barbet, *Xantholaema haemacephala indica*.

The *changlek* bird makes sounds similar to its name, 'lek, lek'. The bird's name also means 'blacksmith', a person that makes similar sounds striking iron.

กระวาน /kràwaan/

krawan - black racket-tailed magpie, *Crypsirhina varians*

กระแวน /kràwǎen/<sup>18</sup>

krawaen - black racket-tailed magpie, *Crypsirhina varians*.

ขมิ้น /khamín/

khamin - babbler, *Mixornis rubicapella minor*

กรวิก /karáwík/

karawik (nanwika?) - a melodious bird of fairyland whose songs entrance the spirits and deities of the forest. The Indian cuckoo is referred to by this name.

ไกรจง /kronca/

kronca (or konca) - sarus crane, *Grus antigone*

โกกิล /kookin/

kokin - cuckoo or coel, *Eudynamis malayana*

กระเรียน /kàrian/

karian - crane, *Grus sharpi*

ยางโทน /yaangthoon/

yangthon - little egret, *Egretta garzetta garzetta*

คันทศ /khápkhǎe/

khapkhǎe - cotton teal goose, *Nettapus coromandelianus*

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<sup>18</sup> McFarland's *Thai-English Dictionary* records four variant spelling: /krawǎen, kawǎen, krawǎen, trawǎen/ กระแวน, กะแวน, กะแวน, ๓๕๖๖. A close examination of different version of the poem would probably show many variant spellings—a reflection of dialect variation, such as the /๓๕๕/ and /๕๕ / in the Thai spelling in this instance, and the general absence of standardized spelling until modern times. It should also be borne in mind that the most authoritative published editions of the poem (1979, 1980: Krom Silapakorn) that Hudak based his translation on are not critical editions. Hudak states (p. XXVI): "As such, the third edition [1979] is not a critical edition since no critical apparatus has been used to solve textural problems. While spelling has been modernized in some cases, spelling errors still remain and frequently hinder comprehension."

แขกเต้า /khêektâw/

khaektaw - a species of parrot; *khaektaw* could also mean 'guest comes'

ลางลิง /laanjin/

langling - a small medium-sized palm, *Pinanga*; langling also means 'kinds of monkies'

เท้งทูต /théngthûut/

thengthut - a kind of bird; thengthut also means 'to call out a message'

หงสา /hôngsaa/

hongsa - a goose or swan

สุวา /sùwaa/

suwa - a species of parrot

กุกกุฏ /kùkùt/

kukkut - jungle cock

กุนาน /kùnaan/

kunan (kunala) - Malayan coel, *Eudynamis malayana*

จกพราก /càakphrâak/

jakphrak - a mythological bird with a wailing sound at night when separated from its mate; the words also mean 'to be separated from'

พิราบ /phírâap/

phirap - a kind of dove, *Columbidae*; a rhyming syllable means 'to lament'

เท้งทูต /théngthûut/

thengthut - a kind of bird; *theng* [*thing*] means 'to throw out' and *thut* means 'message'

เค้าโมง /kháwmoon/

khawmong - owl, *Glaucidium cuculoides*; mong means 'time' [daylight]

เค้ากู่ /kháwkùu/

khawkun - a type of owl; *kun* means 'to call out'

แซก /sèek/

saek - a type of owl, *Tyto alba*; *saek* means 'to make clear'

เขสกขวาน /khwèekkhwân/

khwaekkhwan - a heron; *khwan* means 'ax'

รังนาน /raŋnaan/

rangan - a species of bird; *nan* means 'a long time'

ลาง /laan/

lang - Siamese white-crested laughing thrush, *Garrulax diardi*; *lang* means 'a sign of destiny, an omen'

โนรี /noorii/

nori - a parrot-like bird, *Loriidae*

แขกเต้า /khêektâw/

khaektaw - a species of parrot, *Psittacidae alexandre*, (*Psittacidae*)

เบญจวรรณ /bencàawan/

benjawan - a multi-colored parrot.

ไผ่ฟ้า /kàyfáa/

Kayfa - silver pheasant, *Euplocamus lineatus*; fa means 'sky, heaven'

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TABLE 3. Fish (94 items)

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กระโห้ /kràhōo/

kraho - giant carp, *Catlocarpio siamensis*

กระแหะ /krahǎe/

kraehae - edible water fish, *Puntius schwanefeld*

วัว /wua/

wua - perhaps the seacow, *Halicore* sp.

กริม /krim/

krim - small fish similar to the fighting fish, *Ctenops vittatus*

กราย /kraay/

kray - featherback, a freshwater fish, *Notopterus chitala* (Notoperidae)

สวาย /sawǎay/

saway - *Pangasius fowleri* (Pangasiidae)

คางเบือ /khaaŋbian/

khangbuean - freshwater catfish, *Belodontichthys dinema* (Siluridae)

ค้ำว /kháaw/

khaw - catfish, *Wallago attu*

สลิต /salit/

salit - *Trichopodus pectoralis* (Anabantidae)

โผ /phoo/

pho - freshwater fish, *Drepane punctatus*, *Tor stracheyi*

พรวน /phruan/

phruan - freshwater fish, *Labeo pruel*

เขมาโครย /khǎemaakrooy/

khemakroy - a fish with a black back

พามหลัง /nǎamlǎy/

namlang - *Amblyshynchichthys truncatus* (Cyprinidae)

หัวหลวง /hǔalüay/

hualuang - an unidentified species of fish

พราม /phraam/

phram - a species of fish

สลุมพอน /salümpthon/

salumphon - a fleshy fish

ปลวง /phluay/

pluang - a carp, *Labeobarbus soro* (Cyprinidae)

- พรหม /phrom/  
 phrom - *Osteocheilus melanopleura* (Cyprinidae)  
 เพลี้ยเพลน /phliaphleen/  
 pliaplen - an unidentified species of fish  
 ทอง /thwong/  
 thong - *Parasilurus*  
 คันโทง /kanthoong/  
 kanthong - spear fish, *Istiophorus sp.* (Istiophoridae)  
 เหมงเหลน /hěnglěen/  
 henglen - an unidentified species of fish  
 กระบอ กะระบอ ก /kàbòk, kràbòk/  
 kabork - (krabork) sea mullet, *Mugil tade*  
 กระเบน /kàbeen/  
 kaben - ray or skate, *Raia*  
 เทโพ /theephoo/  
 thepo - *pangasius larnaudil* (Pangasiidae)  
 ชะโด /chàdoo/  
 chadao - serpent-headed fish, *Ophicephalus micropeltes* (Ophicephalidae)  
 แก้มชำ /kěemchám/  
 kaemcham - freshwater fish with bright red cheeks, *Puntius orphoides*  
 (Cyprinidae); *kaem* means 'cheeks' and *cham* means 'to kiss'  
 มอ /mòw/  
 maw - *Anabas testudineus* (Anabantidae)  
 แมว /mɛw/  
 maew - *Thryssa*, *Sepipinna*, *Lycotrissa crocodilus*  
 ลินหมา /línmǎa/  
 linma - *Cynoglossus borneensis*  
 หมู /mǔn/  
 mu - *Acanthopsis choirorhynchus* (Cobitidae)  
 กชรา /kòtcháraa/  
 kotchara - an unidentified species of fish  
 ราหู /raahūn/  
 rahu - *Mobula Mobulidae*; *rahu* is also the mythological monster of the moon that devours it during an eclipse  
 จันทรเมต /canthámet/  
 janthamet - butter fish, *Stromateus*; *janthamet* means 'to devour the moon'  
 ทอรัมม /thoramaan/  
 thoramang - an unidentified species of fish  
 วาฬ /waan/  
 wan - a whale

ตาตุ่ม /taatùm/

tatum - small whale, *Puntius bulu* (Cyprinidae); the name *tatum* can also mean 'protruding eyes'

ชอน /chwon/

chon - loach, *Lepidocephalus hasselti*

กิ้ง /kathin/

kathing - spring eel, *Mastacembelus armatus*

อ้าว /flâaw/

aw - *Luciosoma harmandi* (Cyprinidae)

ม้า /mâa/

ma - a seahorse (?)

คลัง /khlân/

khlang - an unidentified species of fish

กา /kaa/

ka - a freshwater fish, *Morulius chrysophekadion*; also catfish, *Mystus micrakanthus*

เฮอร์ /hěeraa/

hera - a fabulous marine creature

สร้อย /sŏy/

soy - *Danglia leprocheila* (Cyprinidae)

ผักพรา /fâkphrâa/

fâkphra - a bean, sword, a river fish, *Chelaoxygastroides* (Cyprinidae)

ซ่า /sâa/

sa - an unidentified species of fish

เสื่อ /sěa/

suea - *Toxotex jaculator*

สูบ /sùup/

sup - freshwater fish, *Hampala macrolepidota*

เขือ /khěa/

khuea - goby fish, *Apocryptes serperaster*

หางกิว /hâan̄kiw/

hangkiw - species of saltwater fish, *Caranx mate* (Carangidae)

กูรา /kùraw/

kuraw - thread-thin fish, *Eleutheronema tetradactylum*

กานะก /khan̄èk/

kanaek - an unidentified species of fish

กุด /kòt/

kot - catfish, *Mystus micrakanthus*

หมุ่คำ /mùkham/

mukham - *Boita cobitidae*



- ชิว /siw/  
 siw - small edible fish, *Rasbora retrodorsalis* (Cyprinidae)  
 กระตี่ /kràdii/  
 kradi - freshwater fish, *Trichopodus trichopterus*  
 กระตริป /kràtràp/  
 kratrap - freshwater fish, *Pristolepis fasciatus* (Nandidae)  
 ชอน /chvôn/  
 chorn - serpent-headed fish, *Mujrrel*  
 ชาวต /chawâat/  
 chawat - an unidentified species of fish  
 ชาง /chawæŋ/  
 chawaeng - an unidentified species of fish  
 ทุ๊ง /thúkan/  
 thukang - species of saltwater fish  
 ผึ่ง /phîŋ/  
 phuang - *Gymocheilus kaznakovi*  
 ตะเพียน /tàphian/  
 taphian - species of carp  
 เป๋น /pěen/  
 paen - *Leiognathus dussumieri*  
 เป๋น /pěep/  
 paep - *Paralaubuca typus* (Cyprinidae)  
 จวด /cùat/  
 juat - saltwater fish, *Johnius belengeri* (Sciaenidae)  
 หลด /lòt/  
 lot - *Mastacembelus circumcinctus* (Mastacembelidae)  
 มอม /móm/  
 morm - an unidentified species of fish  
 ฉลามหนู ฉลาม /chalāmñũ, chalām/  
 chalamnu (or chalam) - shark, *Scoliodon palasorrah*  
 กระลุมพุก /kràlumphúk/  
 kralumphus - shad, *Hilsa Alosa toli*  
 дук /dùk/  
 duk - freshwater catfish, *Clarias batracus* (Clariidae)  
 แดง /dæŋ/  
 daeng - white catfish  
 ขยง /khayæŋ/  
 khayaeng - catfish  
 อุก /ùk/  
 uk - *Hemipimilodus borneensis*  
 อัมพัน /amphan/

amphan - an unidentified species of fish

กุ้ง /kûng/

kung - shrimp

กั้ง /kâng/

kang - mantis shrimp

กুমภิน /kùmáphin/

kumapin - long-nosed alligator

มกร /màkorn/

makorn - a mythical fish

สลาค /salàat/

salat - featherback, *Notopterus notopterus*

บู๋ /bùu/

bu - gobies, *Glossogobius giuris* (Gobiidae)

บ้า /bâa/

ba - *Leptobarbus hoeveni* (Cyprinidae)

สังคหวาต /sǎngkháwâat/

sangkhawat - *Pangasius pangasius* (Pangasiidae)

แมลงภู /mǎlɛngphûu/

malaengphu - a type of mollusk

ฉานาก /chanàak/

chanak - sawfish, *Pristis perotteti*

เทพา /theephaa/

thepa - freshwater catfish, *Pangasius santiongsei* (Pangasiidae)

ตระพาก /tràphâak/

trapak - *Puntius daruphani*

ชะโด /chádo/

chado - serpent-headed fish, *Ophicephalus micropeltes* (Ophicephalidae)

กระโดง (กะโดง) /kràdoong, kàdoong/

kradong - an unidentified species of fish; kradong means 'the spine of a fish or ship mast'

การก /karákòt/

karakot - crab

กัจฉาปะ /kàtchhàpà?/

katchaba - tortoise

จิว /cariw/

jariew - turtle

จราว /caraaw/

jaraw - sea turtle

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## Mon-Khmer Bioform Borrowing into Thai (Siamese)

In scanning the foregoing list of over 300 bioforms, it is safe to assume from word shapes alone that many are borrowings from Khmer. Perhaps the heavy borrowing should not come as a surprise, considering the fact that the form of the poem is Khmer in origin too. Even taking that into account, the fact remains that as the Thai moved out of South China and into Mon-Khmer areas of Southeast Asia, they encountered a new environment and civilization and borrowed new words along with the new Mon-Khmer culture. Indeed, the Thai writing system is a borrowing and adaptation of Khmer script.

To illustrate the degree of borrowing of terms for bioforms, examine the last list in this paper, the ninety-four fish. In her masterful study of Khmer elements in the formation of Thai (Siamese), Uraisi Varasarin lists a sampling of just nine Khmer names for fish that have been borrowed into Thai; all nine are found in the poem, *Samutthakhōot Kham Chǎn*. They are shown below, this time with their Khmer reflexes, as given by Uraisi Varasarin (1984:233-234).<sup>19</sup> Of the remaining eighty-five fish named in the poem, easily the majority are Khmer script.

กริม /krim/ from Khmer /krɨm/

krim - small fish similar to the fighting fish, *Ctenops vittatus*

กราย /kraay/ from modern Khmer /kraay/

kray - featherback, a freshwater fish, *Notopterus chitala* (*Notoperidae*)

สวาย /sawǎy/ from middle or modern Khmer /svaay/

saway - *Pangasius fowleri* (*Pangasiidae*)

พรวน /phruan/ from modern Khmer /pruue/

phruan - freshwater fish, *Labeo pruol*

เขมาโครย /khǎemaakrooy/ from Khmer /khmau/ 'black', /kroy/ 'back'

khemakroy - a fish with a black back - *Alosa kanagurta* (*Clupeidae*)

สลัด /salàat/ from modern Khmer /slaat/

salat - feather back, *Notopterus notopterus*

ชะโด /chádoo/ from modern Khmer /cdaao/

chado - serpent-headed fish, *Ophicephalus micropeltes* (*Ophicephalidae*)

ฉลามหู (ฉลาม) /chalǎamnū, chalǎam/ from modern Khmer /claam/

(or chalam) - shark, *Scoliodon palasorrah*

ตะเพียน /tǎphian/ from middle or modern Khmer /cpuun/

taphian - species of carp - *Puntius sp.*

## Conclusions

By now it is a commonplace to remark that rapid modernization in the tropical regions of the world has accelerated the rate of deforestation and the

<sup>19</sup> Uraisi Varasarin 1984. *Les Éléments Khmers dans la Formation de la Langue Siamoise*. Paris: SELAF.

extirpation of plant and animal species. Southeast Asia is not an exception. What evolved over millennia as "vegetational civilizations" (food, clothing, housing, tools, derived largely from plant sources) are now competing to become industrial, urbanized societies.

This paper has attempted to show that there has been a remarkable continuity in the Thai attitude toward nature as reflected in Thai literature, from the earliest poetic narratives written in classical meters down to the poetic lines of simple folk songs. Because of the richness of Thai tropical nature—noted in the very earliest historical inscription attributed to King Ramkhaeng: "nay náam mii plaa; nay naa mii khâaw" [in the waters there are fishes; in the fields there is rice]<sup>20</sup>—the Thai, regardless of their state in life, could not help but be confronted with tremendous diversity of life forms, that we, as outsiders, stand in awe of and label "exotic." So it is not surprising to see Nature's fecundity represented in Thai verbal arts.

What is remarkable is the degree of saturation of bioforms in the poetic arts. In the particular piece of classical Thai verse cited in this paper, there are roughly 300 named species of trees, flowers, plants, and fishes interwoven in the narrative text as "catalogs" of bioforms. One way of explaining their function is to employ the notion of *biophilia*, the emotional/aesthetic response of the poet towards nature. To be able to craft these gems of the verbal art, whether in the form of classical verse or a regional folk song, the poet has to be a biophile of extraordinary experiential knowledge, living close to the natural life forms he writes of so lyrically. The same holds true for his audience.

As the Thai tropics are denuded and the rural Thai move increasingly into urban centers, the experience of biophilia so exquisitely captured in classical verse and folksong is thereby reduced as a meaningful enterprise. Looking into the future, we are not only facing the extinction of bioforms but the extinction of experience<sup>21</sup>—of actually seeing with one's own eyes the *taptaw* mushrooms sprouting along the edge of the *yaanang* vines, or a sea of lotus blossoms (the very symbol of Buddhist teaching) floating on a marsh, or to hear and see the elusive bright-yellow *khamin* 'babblers', the subject of one of the oldest and most beautiful Thai lullabies.

The time has come for the poet and the politician to sit down together to seriously discuss the ultimate result of loss of bioforms—the loss of the experience that is the very basis of our evolution, intimacy with nature and the feelings that it

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<sup>20</sup> Ramkhamhaeng Inscription No. 1 dates from 1283 A.D.

<sup>21</sup> Not to mention the loss of whole languages. Mountain and forest dwellers comprise the greatest remaining diversity of languages and cultures, including indigenous knowledge of "forest products". For a discussion of this topic, see "The Death of Languages" in *The Chronicle of Higher Education*, April 20, 1994, page A8. According to the author, David Wheeler, "up to half of the world's 6,000 languages will die out... in the next century." Wheeler also comments on the loss of verbal art: "Since many languages do not have a written form and have not been captured on linguists' tape recorders, countless forms of "verbal art" that stitch sound and meaning together are also being lost, including religious chants, rhyming verse, and songs of love and anger."

engenders and finds expression in the most fundamental of the human arts, namely the verbal arts. We desperately need to listen to the Southeast Asian poet-singer, be he or she Thai or Temiar.

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