

## Landscape in Two Languages: Yucatec Maya Vegetation and Ecotype Terms in Quintana Roo

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### Abstract

The Yucatec Maya of central Quintana Roo, Mexico, classify landscape and vegetation in several ways. The Maya language is used for successional terms (such as *k'aanal k'aax*, high forest), geological landforms (*wits*, rocky hills) and associated vegetation, and some agricultural terms (*pachpak'al*, mixed annual plantings). Spanish introduced many midrange plant taxonomic terms lacking in Maya, such as *palma* (palm) and *pastiza* (pasture grass), and associated vegetation terms based on Latin endings: *palmar*, palm grove; *pastizal*, pasture. These have enriched Maya discourse—all adults are bilingual enough to combine these terminologies into one quite elaborate and productive terminological set. This has implications for environmental language use and management.

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The Yucatec Maya now comprise about a million people, more or less, concentrated in the Yucatan Peninsula of Mexico, with a small number in Belize and Guatemala. The Yucatec form a large percentage of the population of the Mexican states of Campeche, Quintana Roo, and Yucatán. It is hard to tell exactly how large the population is, because the Maya grade into the mestizo population. Individuals of pure Maya ancestry often move to town, drop their use of the Maya language, and become Hispanic Mexicans. Non-Maya who settle in Maya villages may go through the reverse process, becoming Maya after a generation or two.

“Yucatec” is a misnomer based on multiple confusion. The people in question are the original Maya, that is, the people who actually call themselves that—correctly *Maayah* or *Maayaj* (depending on the spelling system and the local pronunciation). Spelling “Yucatec” as if it were an Indigenous word (“Yukatek”) is a mistake, though now established in some of the literature. I shall henceforth refer to the people in question as Maya, qualifying appropriately if I make reference to the speakers of the 30 or so related languages of the Mayan language family.

The traditional lifeway of the Maya is slash-and-burn farming, with maize the most important crop. It regularly provides 75% of calories, a striking consistent figure found in archaeological studies (Staller and Carrasco 2010), then again by F. G. Benedict and Morris Steggerda in the 1930s (Benedict and Steggerda 1936; Redfield and Villa Rojas 1934), Peraza Lopez (1986) in the 1980s, and myself in the 1990s (Anderson 2010a) for more traditional families (more modernizing ones now eat an appreciable amount of white flour and sugar—a great deal too much of it for their health). The second most important food in ancient times was apparently squash seeds, but now there is no second-most-important native food; introduced items have taken that role. Indigenous foods still important include squash, chiles, tomatoes, beans of various species, and a host of fruits and vegetables.

Maya agriculture defies the stereotype of swidden agriculture as “primitive” or “mere horticulture.” It is among the most knowledge-intensive, fine-tuned, information-rich, and skill-

demanding agricultural traditions on earth (see Anderson 2003, 2005, 2010b; Barrera-Bassols and Toledo 2005; Fedick et al. 1996; Gomez-Pompa 1987; Gomez-Pompa et al. 2003; Staller and Carrasco 2010). This is necessary because the Yucatan Peninsula is a harsh, unforgiving landscape. The soil is very thin and not usually very fertile. There are some very fertile patches, but one has to know where they are. Potassium and nitrogen are often deficient. The land is a limestone terrain, and surface water is rare—nonexistent in Chunchuhub, my base of work. This has led to an incredibly elaborate and detailed soil classification, more scientific than anything the soil scientists have come up with for the peninsula (see Barrera-Bassols and Toledo 2005 for details). Proverbially, “every plant has thorns and every animal bites or stings.” Not true, but one certainly feels as if it were, especially in young regrowing woodland, which tends to be dominated by thorny species.

More seriously, the climate is hot, with an extremely hot and dry season from March into June. The northwestern part of the peninsula is dry enough to support near-desert vegetation. Rainfall increases southeastward, the southern end of Quintana Roo having true rainforest. Droughts, however, are common. They can devastate the maize crop, especially when the rains are late or when they fail during the *canícula* in late summer when the dog star is ascendent at dawn. Conversely, torrential or long-lasting rains can flood low-lying fields, erode higher ones, wash out a crop, and encourage pests and diseases. This is especially true of the dreaded *choko ha* ‘hot water’ rains, which are hot thunderstorms that greatly increase fungal and bacterial blights. Hurricanes are frequent enough to be named from the Maya word *huracan*. A given area of the peninsula can expect to be devastated every twenty-five years, but recently there seems to be an uptick in the number of hurricanes.

Add to this animal pests such as coatis and peccaries, insect pests including locusts, and other problems, and one realizes that only a highly skilled individual with a huge knowledge of the land could make a living here.

Agricultural modernization has generally failed, because the poor land, thin water resources, and aggressive pests and weeds stifle attempts to use machinery, high-yield crops, or the like. Among introduced regimes, only tree cropping really succeeds, and citrus and mango orchards are now major sources of income. This, however, merely added itself to an earlier tree-cropping regime based on *Annona* spp., *Pouteria* spp., and other native crops, locally including cacao, vanilla, and other New World favorites. Monocrop cultivation has led to disease spread in citrus, showing the value of the old Maya polycrop system.

Among the many forms of knowledge that the Maya possess is an intimate knowledge of terrains, vegetation associations, and vegetation types. These are the subject of the present paper.

The present paper, however, is as much about language as about vegetation. The Maya have picked up Spanish terms, since the conquest in the 16<sup>th</sup> century. This process was probably slow at first, but has probably become more rapid over time. In any case, Maya may or may not have had broad terms for vegetation types and landscapes before 1500, but seems not to have; there are few such in the available dictionaries. Today, however, Maya use many Spanish loanwords for general terms describing plants, animals, and landscapes. It is of some interest to chronicle the major ones, and inquire somewhat into the dynamics of linguistic borrowing.

The Maya tend to see contemporary Maya as “*mestiza Maya*,” “mixed Maya,” and to describe themselves as “*Mayeros*,” people who speak Maya but of a mixed sort different from the ancient, pure language. There are varying degrees of ideology here: some see the modern speech as degenerate and contaminated, some simply see it as necessary accommodation to the

modern world. In any case, Spanish loanwords are important. They are altered to fit with Maya pronunciation, but I will not indicate this in what follows. Thus, for instance, *loro* “parrot” will not be respelled *looroh*, nor will *palma* become *paalmah*, though that’s the way these words are pronounced by the more traditional Maya. (Maya is also a tonal language, and the words get tones added, also, but that is even more difficult to spell, and in any case people are not at all consistent about tonalizing loanwords.)

Particularly interesting, and quite common, is combining Maya roots with Spanish endings, especially in vegetation terms, for instance *tasistal*, “place where *tasiste*’ grows,” *tasiste*’ being a kind of palm.

These examples may serve to start off the substance of this paper. Spanish words tend to be borrowed for three purposes:

1. Intermediate taxonomic levels.
2. Vegetation types dominated by one species.
3. Wider vegetation and landscape types.

From here on, this paper refers to Central Quintana Roo Maya, not identical to the Maya spoken in the neighboring states of Yucatán or Campeche. I have described the general terminology for landscapes and for plants and animals elsewhere (Anderson 2003, 2005, 2010; Anderson and Medina Tzuc 2005).

Beginning with intermediate taxonomic levels, Maya, like all other languages of small-scale societies about which I know anything, has or originally had a shallow taxonomy. It is highly descriptive, with words for each species of deer, each species of opossum, each species of peccary, each species of parrot, and so on—general terms for these being absent. There were no words for “mammal” or “insect,” or probably even for fairly obvious things like “toad.” As Cecil Brown showed was typical for such languages, there were words for “bird,” “snake,” and “fish,” and words for folk-generics and some folk-species of birds, snakes, and fish, using Berlin’s terminology (Berlin 1992) for taxonomic levels. There were, however, apparently no words for intermediate taxa equivalent to orders and families in the Linnaean system. If people wanted to speak of a broad category, they would—or at least now they do—use the name of the commonest representative of a category to label the whole category. Thus, if one needs to refer to all woodpeckers in general, one can use the term *chehum* “golden-fronted woodpecker”; for parrots, the commonest parrot, the *t’uut* “white-fronted parrot” is the generalized bird. Hawks get called *ii’* from the Gray Hawk, by far the commonest, whose call is, indeed, *ii’*. However, an alternative word, *ch’uy*, seems to be a genuine family-level term for hawks. Other words that translate to whole families in Linnaean terms, such as *ts’unuun* for hummingbirds, really act as folk generics and contrast as such. One, *ch’om* for vultures, probably took on a generalized meaning only recently, since it seems to refer only to the Black Vulture in early colonial dictionaries.

In any case, Spanish has been very useful, providing words for such levels. In ethnozoology, a wealth of intermediate words have been borrowed. Insects can now be labeled *insectos*, instead of generalizing terms for bees or bugs. Ants, too, can all be *hormigas*; Maya has different words for every species of ant that can be recognized visually (and the same goes for wasps and bees; see Anderson and Medina Tzuc 2005 for the full story). Maya now routinely use such words as *rana* “frog,” *pato* “duck,” *loro* “parrot,” *gavilán* “hawk.” Almost nobody uses *picocarpintero* for “woodpecker,” however, though the word is known; people still prefer to generalize *chehum*. The Maya do not even know a generic for flycatchers; they all use the extension method. Large flycatchers are all *takay*, from the Couch’s Kingbird, whose call is *taa-*

*KAY!* Small ones are *yah*, from the Yucatan Flycatcher, whose mournful, drooping call sounds like the Maya word *yah*, “pain.” Some separate middle-sized flycatchers as *huiiro*, generalizing from the name of the Bright-rumped Attila, whose call is *huiiiir*. Also, there is still no word for “mammal” (only the educated know book words like *mamífero*); if people need to refer to mammals in general, they use *animales*. But that too is, of course, a Spanish term.

In plant lore, there is no Maya free noun for “plant,” but the classifier *k’ul* fills the function; all plants, and only plants, are covered by it. Cecil Brown’s categories of tree, vine, grass, and herb (Brown 1984, 1985, 1986) are represented, but the word for herb is a very old borrowing from Nahuatl: *xiiw* from Nahuatl *xiuitl*. No word for “bush” existed, and Spanish *arbusto* has been borrowed. Grass is more interestingly complicated. The Maya word *su’uk* applies to smaller grasses. The Nahuatl word *zacate* has been borrowed, almost certainly from Mexican Spanish rather than directly from Nahuatl, to refer to large grasses, few of which are native to the Yucatan Peninsula.

In ethnobotany, the most useful Spanish terms cover things that the Maya apparently see as different life form classes, but have no Maya words for. These include *palmas* “palms” (which are trees, *te’*, but anomalous ones), *hongos* “fungi,” *bambu* “bamboo” (but it is rarely used). Here again, previously the Maya had to generalize; *xa’an*, the most salient and common palm (*Sabal mexicana*), tended to provide the term generalized to refer to all palms, if such a term was needed. Interestingly, there are still no general words for rosette plants, which are extremely common and important in the Peninsula, though once again a Nahuatlism in Spanish—*maguey*—is used for agaves in general; each agave has its own unique name in Maya. There is no general word for cacti, the Spanish *cactáceas* being too arcane for everyday borrowing, but this is not much of a handicap, since there are few types of cacti and they are extremely different from each other. More odd and problematic is that there is no general word either in Maya or in Spanish for reeds and reedlike plants (cattails, bulrushes, etc.). *Caña* is used, but is really specific to sugar cane and very similar plants; *caña*, *cañal* and *cañar* (usually the first) can all be potentially used for an area where cane grows. *Cañada* refers to areas grown up with any sort of annual vegetation with long woody or reedy stems, e.g. sunflowers (*tah* and the like). Reedlike plants truly different from canes—bulrushes and cattails, for instance—are common, diverse, and not at all like any other plants. They are certainly not trees or vines, and no one thinks of them as grasses. As far as I can determine, they do not represent a “covert category” either. They simply are *taxa incertae sedis*, as the Latinized taxonomists used to say—taxa of uncertain placement.

Incidentally, it may be worth pointing out that Spanish once had the same shortage of general terms. All oaks native to Spain, for instance, have their own particular names; there was no word for “oak” in Spanish until late in the language’s development. There was similarly no general term for conifers, or for stone fruits, or for other broad categories of useful trees. There were also specific names for most species of easily recognized and salient birds and mammals. Spanish evolved due to contact with the wider world, including above all the “New” World, and invented familial-level names accordingly. This puts the whole issue in perspective.

Some introduced categories of plants have loanwords for general names; the most obvious and important is *cítricos* for citrus fruits.

Names for particular plant associations, in Maya with Spanish ending or in pure Spanish, are usually formed with the Spanish ending *-al*, “place, area.” These include the following: *tasistal*, wet savannah with *tasiste’* palms; *zacatal*, area dominated by large grasses; *ramonal*, area with *ramon* trees (*Brosimum alicastrum*, *oox* in Maya); *frutical* (rare), “fruit orchard”; *tintal*,

low seasonal wetlands dominated by *ek'* or *tinto* (*Haematoxylon campecheanum*); *corozal*, place of corozo palms; *cocotal*, cocoanut grove or orchard; *tajonal*, place of sunflowers (*tah*, *Viguera dentata*); *chayal*, chaya patch, from Maya *chay*; *naranjal*, “orange orchard”; *cafetal*, coffee planting; rarely, *bananal* for “banana orchard”; a few others. There are no words for the very common and widely recognized associations dominated by *Acacia*, *Lysiloma*, *Piscidia*, or other trees. There is no word for a mango orchard. No one seems to need to pick them out as special. The ending is, however, productive, and anyone can coin a new word at will, so there is no reason not to expect someone to come up with something like *\*ja'abinal* “place of *Piscidia* trees” someday.

The related Spanish ending *-ar* occurs in *palmar*, area dominated by palms. I have not encountered the common Mexican word *chilar*, “chile patch,” in Maya usage. The Nahuatl-Spanish hybrid *tular*, “place of bulrushes,” also seems rare or lacking. Bulrushes are uncommon in Mayaland.

The Spanish ending *-eda*, “garden (of...),” is not found in any Maya word I know, though *rosaleda* “rose garden” is known to some people as a girl’s name. This ending is the Spanish reflex of Latin *-etum*, and the Latin word *arboretum* is not totally unknown; the perfectly good Spanish reflex *arboleda* does not seem to exist in central Quintana Roo Maya, however.

The Nahuatlism, again via Spanish, *milpa* for “cornfield” has not replaced Maya *kool*, and there is no locally-used Spanish equivalent for Maya *pachpak'al* “mixed planting or polycropping in a field.” Maya *k'aax* covers all forest and woodland types, and thus it is useful in many cases to distinguish *selva* “tall deep forest” from *monte* “woodland or short-tree forest,” though the Maya *ka'anal k'aax* “tall forest” is actually much commoner and more usual for the former concept. (Barrera-Bassols and Toledo 2005 report *suhuy k'aax* for very mature forest, but I have not heard this in the field.)

There are general Spanish terms that have no Maya equivalent and have now been borrowed by the Maya. These include *pastizal*, “pasture.” PreHispanic Maya had no domestic animals that needed pasturage. Also found is *chaparral*, area of short dense vegetation (from Spanish, originally Basque, *chapparro*, “scrub oak”). *Pantanal* “wetland, especially wet grassland” is a useful borrowing, though the Maya *ak'alche'* was and is usable—it means a low wet area in general, not specifically a grassy one. *Manglar*, another *-ar* word, is similar. *Sabana* is another borrowing. *Temporal* for seasonal rainfed agriculture could be included here, in which case we may mention *riego*, “irrigation,” used also for irrigated land.

Another Nahuatl word probably borrowed via Spanish is *huamil*, “young secondary vegetation,” though the indigenous Maya word *huubche'* covers pretty much the same ground, and *sak'al* is used for younger stages. (*Sak'al* may just possibly be *mestiza Maya*, the *-l* being from the Spanish ending; the word is generally pronounced *sak'ah*, but terminal *-l* is routinely realized as *-h* in Quintana Roo, so we are probably dealing with a fully Maya word.) A purely Spanish word and concept is *maleza*, “weed”; the Maya did not think of any plants as useless, let alone “bad” (*maleza* literally means “badness”). The nearest Maya equivalent is *loob*, generalizing the name of a singularly useless small tree (*Eugenia mayana*) to useless plants in general.

In another complex case, *jardín* and *huerta* “garden” have tended to replace the Maya words *petpach*, *wolk'ot* and *petk'ot*.

Finally, from Spanish comes the word and concept *naturaleza*, “nature.” The Maya opposition is not culture vs. nature but *kaah* “village,” *kool* “fields” and *k'aax* “forest,” all being

considered managed landscapes. All parts of the Maya landscape are managed to some degree, and all have some element of natural growth to them also, so the Spanish term represents a genuinely new concept in Maya thinking. It seems not to have been borrowed, as word or concept, until well into the 20<sup>th</sup> century. Early dictionaries do not use it or have anything equivalent. Even using the word *naturaleza* does not necessarily go with absorbing the concept; many Maya clearly use it simply to translate *k'aax*, or more generally to comprise *k'aax*, *ak'alche'*, and other words—in any case, retaining the concept of a managed landscape.

It should be emphasized that this was not a one-way flow. Yucatecan Spanish has borrowed hundreds of Maya words, and most of them are names of animals, plants, geological features, and landforms. At first the Spanish tended to use Spanish names for Maya life forms, but soon realized that this was hopeless—there were too few Spanish names, and the animals and plants bore very little resemblance to the Maya ones. Maya names have tended to replace even the Spanish names that had entered regular usage. For instance, the Gray's Thrush (*Turdus grayi*) was called *ruiseñor*, “nightingale,” in Spanish, but the Maya name *k'ok'* has tended to replace this, usually in a Hispanicized punning form, *coquita* (coquette). Listing the dozens of Maya plant, animal and mineral names that have entered Spanish would be pointless (see Amaro Gamboa 1987; Suarez 1979), but one observation should be made: All these borrowings are for specific entities—folk generics or species. The relative lack of broad terms in Maya led to a complete lack of borrowing of such terms.

In summary:

First, whether there were “covert categories” in Maya or not seems rather unclear. A general category could always be labeled by extending the reference of a term whose root meaning was more specific. The Spanish names are very useful, however, to eliminate this need and make recognized relationships clear.

Second, Spanish really comes into its own in talking about vegetation associations. Indeed, even among European languages with scientific traditions, Spanish is exceptional—perhaps unique—in the fluency, accuracy, productivity, and ease with which it can represent vegetation types. English, like Maya, has found it expedient to do a lot of borrowing from Spanish: such words as “chaparral,” “tulares” and “savannah.” We English speakers are reduced to such locutions as “a place where a lot of palm trees grow” when we could simply say *palmar*.

All this says something about mentalities. The Maya know the forests and fields so well that they find it more useful to recognize every single distinction, and generalize as little as possible; still, they find generalizing more useful than they seem to have linguistically realized in the past. The Maya also have a much finer sense of managing vegetation, with many words for stages of regrowth and the like (Barrera-Bassols and Toledo 2005). The Maya do not recognize a “nature” separate from human activities.

It seems philosophically useful to think further about all these various linguistic differences and the worldviews they embody. They represent particular ways of looking at and representing the world. All such are useful.

These various worldviews all developed from daily interaction with actual, real, material things—from working with people and with nonhuman beings (Engels 1966; Ingold 2011). It is certainly not true that “cultures” somehow “construct” reality. What actually happens is that individuals deal with reality, and then talk about it. In talking, they gradually come to highlight particular aspects of reality, according to how they have worked with it. Eventually, this all

constructs into a particular cultural worldview. Cultural constructionists get this all backward; they appear to think that culture constructs itself and then shoves the world into the boxes thus created.

We can see this is false when we examine such systematic linguistic borrowing as has been discussed in the present paper. The Maya found it expedient, partly because of felt need and partly because of changing conditions, to borrow a particular suite of terms from Spanish. They did not borrow randomly, nor did they become submerged by Spanish culture. They simply picked a lot of terms they found useful, and incorporated those terms in their own language. Over time, this changes the language, and even changes the worldview somewhat. Vegetation associations become more salient; the strongly individualizing character of Maya discourse on plants is balanced out somewhat. New concepts like “pasture” and “orchard” come into the culture, creating new segments of reality. The Maya seem to be slowly incorporating an idea of “nature” as genuinely different from human space.

## Referemces

Amaro Gamboa, Jesús. 1987. *Vocabulario del Uayeismo en la cultura de Yucatán*. 2 v.

Anderson, E. N. 2003. *Those Who Bring the Flowers*. Chetumal, Q. Roo, Mexico: ECOSUR.

--- 2005. *Political Ecology in a Yucatec Maya Community*. Tucson: University of Arizona Press.

--- 2010a. “Food and Feasting in the Zona Maya of Quintana Roo.” In John Staller and Michael Carrasco (eds.), *Pre-Columbian Foodways: Interdisciplinary Approaches to Food, Culture, and Markets in Ancient Mesoamerica*. New York: Springer. Pp. 441-465.

--- 2010b “Managing Maya Landscapes: Quintana Roo, Mexico.” In Leslie Main Johnson and Eugene S. Hunn (eds.), *Landscape Ethnoecology: Concepts of Biotic and Physical Space*. New York: Berghahn. Pp. 255-276.

Anderson, E. N., and Felix Medina Tzuc. 2005. *Animals and the Maya in Southeast Mexico*. Tucson: University of Arizona Press.

Barrera Vásquez, Alfredo, with Juan Ramón Bastarrechea Manzano; William Brito Sansores; Refugio Vermont Salas; David Dzul Góngora; Domingo Dzul Poot. 1980. *Diccionario Maya Cordemex*. Mérida: Ediciones Cordemex. (Since reissued as *Diccionario Maya Porrúa*.)

Barrera-Bassols, Narciso, and Victor Toledo. 2005. “Ethnoecology of the Yucatec Maya: Symbolism, Knowledge and Management of Natural Resources.” *Journal of Latin American Geography* 4:9-41.

- Benedict, F. G., and Morris Steggerda. 1936. *The Food of the Present-Day Maya Indians of Yucatan*. Washington, DC: Carnegie Institute of Washington. Publication 456, Contribution 18.
- Berlin, Brent. 1992. *Ethnobiological Classification*. Princeton: Princeton University Press.
- Brown, Cecil D. 1984. *Language and Living Things*. New Brunswick, NJ: Rutgers University Press.
- Brown, Cecil. 1985. "Mode of Subsistence and Folk Biological Taxonomy." *Current Anthropology* 26:43-64.
- Brown, Cecil. 1986. "The Growth of Ethnobiological Nomenclature." *Current Anthropology* 27:1-18.
- Engels, Frederick. 1966. *Anti-Duhring: Herr Eugen Duhring's Revolution in Science*. New York: International Publishers. (New printing. Orig. US edn. 1939. Orig. English edn. 1894.)
- Fedick, Scott (ed.). 1996. *The Managed Mosaic: Ancient Maya Agriculture and Resource Use*. Salt Lake City: University of Utah Press.
- Gómez-Pompa, Arturo. 1987. "On Maya Silviculture." *Mexican Studies/Estudios Mexicanos* 3:1:1-17.
- Gómez-Pompa, Arturo; Michael Allen; Scott Fedick; J. J. Jiménez-Osornio (eds.). 2003. *The Lowland Maya Area: Three Millennia at the Human-Wildland Interface*. New York: Haworth Press.
- Ingold, Tim. 2011. *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill*. 2<sup>nd</sup> edn. London: Routledge.
- Peraza Lopez, M. Elena. 1986. *Patrones alimenticios en Ichmul, Yucatán: Sus determinantes socioeconómicas, ecológicas y culturales*. Thesis, Universidad Autónoma de Yucatán, Escuela de Ciencias Antropológicas.
- Redfield, Robert, and Alfonso Villa Rojas. 1934. *Chan Kom, A Maya Village*. Washington, DC: Carnegie Institution of Washington.
- Staller, John, and Michael Carrasco (eds.). 2010. *Pre-Columbian Foodways: Interdisciplinary Approaches to Food, Culture, and Markets in Ancient Mesoamerica*. New York: Springer.
- Suarez, Victor M. 1979. *El español que se habla en Yucatán*. Mérida: Universidad Autónoma de Yucatán.