

## Chapter 2

# Traditional Q'eqchi' Maya Reproductive Ethnomedicine

Q'eqchi' Maya traditional medicine utilizes an extensive plant-based ethnopharmacopoeia for reproductive health and fertility regulation. This branch of traditional Q'eqchi' medicine also includes traditional practices and beliefs related to child bearing and gender-specific health. The goal of my ethnomedical research was to document, as comprehensively as possible, the plant-based remedies, traditional medical treatments, beliefs and practices related to reproductive health, in collaboration with the Belizean Q'eqchi' community. My collaborators were the male healers from the Q'eqchi' Healers Association (QHA), the few remaining Q'eqchi' midwives, and other women knowledgeable in medicinal plants, whom I refer to as *herbalists*, living in the Toledo District of southern Belize.

There has been an accelerated loss of knowledge in women's healing traditions among the Q'eqchi' Maya living in Belize due to a number of cultural factors. Treating women's reproductive health was traditionally the realm of female healers; however, there are very few Q'eqchi' midwives who practice in Belize today, as traditional midwifery has been discouraged by the Belize Ministry of Health. Migration and loss of familial networks have contributed to the loss of women's healing traditions in Belize as well. Chapter 4 takes a closer look at these factors. This accelerated loss of a particular branch of traditional knowledge highlighted the critical need for a comprehensive study of Q'eqchi' reproductive ethnomedicine in Belize. What follows is a brief review of related research, the study's methodology, and the totality of the results from our collaborative ethnomedical study on reproductive health and fertility regulation.

Research on the ethnobotany of the Q'eqchi' Maya of Belize has included other collaborative studies with the QHA, including consensus ethnobotany of the QHA's use of medicinal plants and the diseases treated (Amiguet et al. 2005), a regression analysis of medicinal plants used by the QHA (Amiguet et al. 2006), and a rapid ethnobotanical survey of the Maya Mountains Range with the QHA (Pesek et al. 2006). A survey of medicinal plants used by the QHA to treat neurological and mental health disorders (Bourbonnais-Spear et al. 2005), and pharmacological research on plants used to treat the culture-bound syndrome, *susto*, for their anxiolytic effects (Bourbonnais-Spear et al. 2007) have been conducted. The QHA's cultural healing center and medicinal garden, Itzama, which means "home of the Maya god of

wisdom, Itzamna'' and a place of spiritual and herbal healing, has been proposed as a model to be used internationally for holistic, sustainable healthcare in indigenous communities, and conservation of the associated biodiversity (Rojas et al. 2010).

While my study constitutes the only known research on plants used by the Q'eqchi' Maya specifically for reproductive health in Belize, a similar study was carried out in the Q'eqchi' communities surrounding the Livingston area of Guatemala, just 1 h across the sea by boat from Punta Gorda, Belize. Joanna Michel's doctoral dissertation titled *Medical Ethnobotany of the Q'eqchi Maya: Perceptions and Botanical Treatments Related to Women's Health* (2006) documented medicinal plants used for reproductive health, as well as cultural conceptions of and choices related to Q'eqchi' women's health in Guatemala. Nineteen medicinal species from Michel's study were screened for their ability to bind to estrogen, progesterone, and serotonin receptors, which is discussed in more detail in Chap. 3. Similarities to Michel's findings as well as other studies throughout Latin America and the Caribbean are mentioned throughout this chapter.

## 2.1 Methodology

### 2.1.1 Study Site and Timeline

My fieldwork in Belize began in 2006 in the western Cayo District, working with Yucatec Maya healers with guidance from Dr. Rosita Arvigo and Dr. Michael Balick. In 2007, I initiated research in the southernmost Toledo District, working with the Q'eqchi' Maya and in 2008 also began research with the Garifuna communities in Toledo as well. During the years of 2007–2011, I spent nearly 30 months doing fieldwork in Toledo, based in Punta Gorda Town. I interviewed traditional healers, midwives, and herbalists in Punta Gorda's Indianville neighborhood and the villages of Laguna, Indian Creek, Big Falls, Midway, and San Pedro Columbia. I made plant collections in forested areas surrounding Punta Gorda and the villages of Jalacte, Indian Creek, Laguna, and San Pedro Columbia.

### 2.1.2 Research Ethics

Research methodologies, including interview questions (Appendix I) and consent forms were reviewed and approved by The City University of New York's Institutional Review Board (IRB Number: 09-12-1892). The Belize Forest Department approved my research proposal and granted me a research and collection permit for the Toledo, Stann Creek, and Cayo Districts, though plant collections were only made in the Toledo District. A research agreement was signed between the researcher and the Belize Indigenous Training Institute (BITI). All interviews were undertaken only after obtaining prior informed consent, using a consent form provided in the participant's native language. Interviews were conducted in the participant's language of choice, using an interpreter when necessary.

**Fig. 2.1** Walking interview with Q'eqchi' *ilonel*, Don Domingo and my Q'eqchi' Mayan interpreter and research assistant, Maria



**Fig. 2.2** Photo elicitation interview with Ms. Francisca



### 2.1.3 Interviews

My approach to fieldwork was multidimensional, using several techniques that contributed layers of data that deepened, clarified, reaffirmed, and on the rare occasion, contradicted the larger body of my ethnographic findings. Semi-structured interviews, forest and home garden “walking” interviews (Fig. 2.1), photo elicitation (Fig. 2.2), plant collections, and observations of remedy preparations and treatments were used to collect data with 21 Q'eqchi' individuals (6 men and 15 women) knowledgeable in medicinal plants. These and other interviewing methodologies are discussed in detail in the work of Miguel Alexiades (1996). The 6 males interviewed are recognized healers, but only 3 of the 15 women are recognized as traditional healers, specifically—midwives. One of those midwives is no longer practicing, and one agreed to do the interview with my interpreter only, so I did not have the opportunity to meet her. The third midwife, who was still practicing, had moved to Belize from Guatemala only in recent years.

The Q'eqchi' traditional healers, or *ilonels*, I interviewed were identified through the BITI, under which operates the QHA, at that time an association of six male *ilonels*. From there my two interpreters suggested a few midwives and many knowledgeable women, whom I refer to as “herbalists,” that they knew of. Beyond this, my interpreters inquired in their networks for other knowledgeable people their family and friends knew of.

Semi-structured interviews lasted 45 min–3 h and typically took place at the home of the person being interviewed, either inside the house or outside near the house. Occasionally, the interviews were held at my interpreter's house or at the house I was renting in Punta Gorda. Interviews focused on plants used to treat reproductive ailments, in particular conditions sometimes linked to estrogen deficiency, such as infertility, menopausal complaints, and lack of menstruation, as well as for conditions related to estrogen dominance in the body, such as heavy or painful menstruation. Detailed information was gathered regarding the procedures for collection, preparation, and administration of remedies. Other sections of the interview covered socio-demographic data, life history, aspects of their healing practice, and beliefs regarding reproduction and reproductive health.

### 2.1.4 Plant Collection and Identification

I made plant collections in forested areas surrounding Punta Gorda and the villages of Jalacte, Indian Creek, Laguna, and San Pedro Columbia with the healers I interviewed. Trips were made to collect voucher specimens for the species discussed in our interviews, as well as bulk samples for the species selected for bioactivity screening. Plants were collected at sites where the healers collect plants or other sites that were more accessible where they know the species grow. Plant species were identified with the aid of the *Checklist of the Vascular Plants of Belize* (Balick et al. 2000) and the collections at The New York Botanical Garden's herbarium (NY). Daniel Atha and Ricardo Kriebel from The New York Botanical Garden made many of the final determinations of the specimens collected in Belize for this study. When possible, collections were made in triplicate. One set of specimens is deposited at The New York Botanical Garden herbarium (NY), one set at the Belize National Herbarium (BRH), and one set with the BITI.

## 2.2 Results and Discussion

Traditional remedies; treatments; beliefs; and practices regarding reproductive health, fertility regulation, and infant care are reported here. Plant names used by the healers and herbalists are in bold text, with additional local names parenthetically listed preceding the Latin names and authors of the botanical nomenclature. Q'eqchi' and Spanish words are italicized. Only four Q'eqchi' research collaborators are referred to by name: Don Francisco and Don Manuel of the QHA and

Ms. Francisca and Ms. Adelina, who are elder Q'eqchi' herbalists. These two men and two women were among my closest collaborators.

*Don* is the Spanish prefix used to denote respect for a male elder, and is utilized when referring to male *ilonels*. Don Francisco is considered to be the most knowledgeable *ilonel* or traditional healer involved with the BITI. He specializes in reproductive health among a few other areas of traditional medicine, but treats nearly all health conditions. Don Manuel is an elder healer, also very knowledgeable in treating all types of health conditions. He has an impressive home garden with a vast variety of edible and medicinal plants, and built his own traditional wooden violin that he would play for us after interviews.

The female equivalent of *Don* is *Doña*; however this is not commonly used in the Belizean Q'eqchi' community. In English, Belize's national language, any older woman is referred to as Ms. (though pronounced "Miss") followed by her first name, out of respect. So, herein I refer to the traditional healers and herbalists how I address them. Ms. Francisca's family addresses her as *Na'chin*, which means Grandmother in Mopan Mayan, which much of the family speaks in addition to Q'eqchi' and English. Ms. Francisca is a knowledgeable herbalist, a woman who has been using medicinal plants to treat herself, her children, grandchildren, great grandchildren, and close friends and neighbors for decades. Ms. Adelina is a farmer and a knowledgeable herbalist who maintains many traditional practices in her plant cultivation and daily life. She has her own *milpa* where she grows an impressive variety of fruits and vegetables that she brings to Punta Gorda from her village to sell on market days. They are both elders in their community and familial networks, and are each a wealth of Q'eqchi' women's traditional knowledge.

### 2.2.1 Disorders of the Womb

In Q'eqchi' Maya ethnomedicine, there is a culturally specific uterine condition, known as *k'uub'sa'* ("disorder of the womb") or *ke sa'* ("cold inside") which can be caused by displacement of the womb, or "cold" entering the womb. In Spanish, it is known as *matriz* or *enfermadad de matriz* ("womb" or "womb illness"). According to Don Francisco, the age range of women affected by *k'uub'sa'* is 14–48; however it is most common in women aged 20–30. He says some of the cases he has treated were due to lack of postpartum abdominal massage "when the womb is typically open," lifting heavy objects, falling during menstruation, having sex too soon following childbirth, and physical abuse. Others added that this disorder can also be caused by poor sleeping positions, falling by the river or anywhere anytime though especially during menstruation, heavy lifting during menstruation, or not binding the abdomen with a cloth after childbirth.

Don Francisco says he knows when a patient has this condition because the woman's menses will be too heavy, come too early, or will be otherwise abnormal, along with lower back pain and abdominal pain. He also says you can feel *k'uub'sa'* in the pulse because it will feel slower than normal. According to another traditional healer, symptoms of "cold in the womb" include excess pain in the

**Fig. 2.3** Don Francisco demonstrating his womb massage with naturopath Dr. Zoe Palmer-Wright, beginning with the prayer for this treatment



stomach, crunching sounds when the stomach is pressed, and abnormal stool. *K'uub'sa'* is treated with medicinal plants coupled with prayer, massage, and “feet knocking” while the patient is lying in a hammock. A healer will “knock” or gently hit the bottom of the woman’s feet that are sticking high up in one end of the hammock she is laying in. Using only the medicinal plants by themselves is not sufficient Don Francisco says, but the whole treatment is very effective. “Knocking the woman’s feet is part of the secret to putting the womb back into place, since it has fallen down, the knocking with the feet up high in the hammock will put the womb back up,” he explained. Another healer said they “knock the feet because it is tradition and knocking the feet three times will set the womb back in place.”

Don Francisco would give three massages, with 3 days in between each massage. He says the prayer he uses while giving the massage is more important than the touch of the massage in treating *k'uub'sa'* (see Fig. 2.3). The most important part is asking God to help him set the womb. The massage and prayers last 10–15 min. The massage involves long, light strokes from the ends of the legs toward the center of the woman’s abdomen, and in upward motions from the lower to middle abdomen.

Don Francisco uses a plant called *kux sawi'* (*Piper tuerckheimii* C. DC. ex Donn. Sm; JD 1) to treat *k'uub'sa'* or the associated heavy menstruation. The exact origin and meaning of the Q'eqchi' name is unknown; however, *Kux* is the Q'eqchi' version of the name *Marcos* and *Sawi'* could have been a surname. Don Francisco is not sure, but says perhaps this is the origin of the plant’s Q'eqchi' name, and that perhaps it references a healer who may have used and taught the remedy. To treat *k'uub'sa'* or heavy menstruation, he would uproot two whole plants and boil them in a quart of water for 1 h. The whole plant is used, including the root, stem, and leaves. The woman should drink a glass in the morning and one in the evening until she gets better. He says this treatment works very effectively because he first performs a healing including abdominal massage to “fix the womb within the woman” and pulls her feet up high in the hammock and “knocks” her feet to restore her womb. It is very effective in 2 or 3 days he says. According to Don Francisco, this plant could be dried and stored and be effective for 1 or 2 months after collection. He has to go far out into “the bush” now to collect the plant and has difficulty finding it because of the damage to the forest in the last 20–25 years caused by



hurricanes and slash-and-burn agriculture. He says the plant is found growing mostly in primary forests, close to the hills or riversides. It is considered a hot plant in his system of classification. Another traditional healer also uses *kux sawi'* to treat women who are experiencing problems with the womb, such as womb pain. He boils a handful of the leaves, and the woman drinks one cup of the tea, three times a day until she gets better.

To treat a woman with *k'uub'sa'*, Don Francisco could also use *yut it* (*Piper peltatum* L.; JD 15). The name of the plant is translated to “tied bottom” and is named so because all the leaf veins join together to one stem (the plant has peltate leaves). Don Francisco uses the whole plant including root, stem, and leaves. To treat *k'uub'sa'* he would boil the whole plant, and the woman would drink a warm cup twice a day, once in the morning and once in the evening until she gets better. This treatment would also be accompanied by massage to put the womb back in place. Massage, prayer, and “feet knocking” are all done before the plant remedy is given. This plant is considered a cold remedy according to Don Francisco’s classification system. The root and stem of this plant can be stored for later use, but not the leaf. The plant is common and found only in secondary forests he says.

For treating “cold in the womb” caused by not bathing in warm water during menstruation, one healer uses *puchuch q'ehen* (unidentified; JD 85). He says there are two plants with the same name, but one has darker leaves and the other has lighter leaves. He would boil the darker-leaved one with the roots of *yut it* (*Piper peltatum* L.; JD 15) and the “skin” or bark of *saq xook'* (unidentified). The patient would drink one warm cup. According to this healer, not many people know this remedy.

For a fallen womb caused by falling and lifting heavy things, the woman would be treated by having her feet “knocked,” her abdomen massaged upwards, and then banded with a cloth and kept on for 1 week. A shifted womb can cause excessive menses that is treated with massaging as well as binding of the pelvic region. Women are not allowed to do heavy lifting during this treatment. One midwife said she would also boil five open *hibiscus* (*Hibiscus rosa-sinensis* L. var. *rosa-sinensis*) flowers and four closed *hibiscus* flowers and have the woman drink this tea three times a day during her period. Her husband, a traditional healer, said he would treat a woman whose womb is out of place with prayers, medicinal plants, hammock work, and words to bind the abdomen, not a cloth, he emphasized.

If a woman has “fibers in the womb” (uterine fibroids), a healer explained that “the woman’s belly will feel round, even though she is not pregnant, and she will have excess pain in her belly.” To treat this he would use white rum with whole black pepper (*Piper nigrum* L.), cinnamon (*Cinnamomum* sp.), cloves (*Syzygium aromaticum* (L.) Merrill & Perry), anise (*Pimpinella anisum* L.), and honey together in a bottle, which is then buried for 24 h. He would then have the woman drink this regularly. *Pimpinella anisum* L. is also used by Latino healers in New York City to treat uterine fibroids (Balick et al. 2000). This healer said he could also collect *wara k'ix* (sleeping prickly: *Mimosa pudica* L.; JD 50), *saq pach'aya'* (unidentified; translated as “white grass”; JD 89), and the root of *kwoyo'* (possibly *Triumfetta semitriloba* Jacq.) to treat “fibers in the womb.” The three are boiled together and given to the woman to drink in the amount of 1 gallon/day.

## 2.2.2 Menstruation

Ms. Francisca believes that women who are menstruating should not take any cold baths or have any cold food or they will have excess pain during their periods, births, and menopause. According to Don Francisco, women are not supposed to bathe for long periods of time during their menstruation nor in water that is too cold. The Qiché Maya in Guatemala also feel that a woman should not bathe in cold water when she is menstruating, as the hot/cold extreme of her hot menstruating state and the cold water could cause her menstruation to cease and her abdomen to swell (Cosminsky 2001). The Q'eqchi' in Belize also feel that women should not eat or drink things that are too cold during menstruation and should also take care not to over work or lift heavy things. There is a Q'eqchi' belief that a menstruating woman should not hold a baby because menstruating women are too “hot” and the baby would get thin and wrinkled, as a result. Similarly, among the Qiché in Guatemala, menstruating and pregnant women are felt to be “hot” and can cause illness to babies unintentionally or intentionally through their admiration of others' children, in the form of the “evil eye” caused by their excess heat (Cosminsky 2001).

In the Dominican Republic, “women who are menstruating are not allowed in *conucos* (small plots of cultivated land) or to touch flowers because their presence will harm plants. In addition, they are not allowed to collect or touch plants because it may cause the plants to wither and to have spots or blemishes. Women who are menstruating are neither allowed to touch babies or carry them, nor can they cut a person's hair. Although many still believe these taboos, there are many who no longer do” (Ososki 2004).

My female interpreter carried *garlic* (*Allium sativum* L.) cloves tucked in her bra while we were collecting plants in the forest with a traditional healer one day. She said it was because she was menstruating, and this was important to ward off “tigers” (jaguars) and other animals in the forest. Walking home, we each picked some *wild basil* (*Ocimum campechianum* Mill.) plants with seed to bring back to grow at our respective rented houses. She said that if women collect plants while they are menstruating, the plants will wilt quickly. A mile or so later we were home, and much to my surprise the plant she was carrying was drooped over in her hand, very wilted, while mine still looked just as it had when I pulled it from the ground.

### Dysmenorrhea (Painful Menstruation)

Painful menstruation is due to “too much cold inside” and is treated with prayer, rubbing a warm rock over the abdomen, and teas of medicinal plants. Don Francisco massages his patient to treat for dysmenorrhea, by putting her in a hammock with her feet higher, and her head lower than normal in the hammock. He would “knock” her in the feet three times and continue with the massage, including massaging the womb, as he would for *k'uub'sa'*, which is the likely cause for the dysmenorrhea.

Don Francisco uses *chinta pim* (1) (*Desmodium incanum* DC.; JD 9) to treat back pain associated with menstruation. The name comes from the Spanish word *cintura*,



which means a belt or ribbon used to tie or hold, since the seeds stick to your clothing when you brush past the plants. *Pim* means herb; in this case, medicinal plant. Don Francisco uproots the whole plant to use. He says the plant is considered either a hot or cold remedy because it is boiled, but then it is cooled down to be used. Some plants are considered hot or cold according to their uses, as in the temperature of their preparation and administration. This one is like a 50/50 usage he says. He boils the plant and leaves it to cool down. Then the woman would drink some of the water, and bathe in the rest. She would drink it once a day every morning for 3 days and bathe every morning in it as well. He says this is a common plant that grows in primary and secondary forests. The plant could be stored for 2–3 months. Another species in the same genus, also referred to as *chinta pim* (2) (*Desmodium axillare* DC.; JD 11), is used for the same purpose. Both are prepared and administered in the same way for back pain associated with menstruation.

*Yut it* or *yut u it* (*Piper peltatum* L.; JD 15) leaves are wrapped around a warm rock and rubbed on the stomach for 2 days, in the morning and in the evening to treat menstrual pain. *The Handbook of Kekchi Medicinal Plants of Belize* (Maquin et al. 2005) reports that the leaves are crushed in cold or hot water and drunk to treat a heavy menstrual cycle and the liquid is used to wet the area of the body with associated menstrual pain. According to one healer, if someone does not want to use *yut it* they can use *copal* (*Protium copal* (Schltdl. & Cham.) Engl.) and rub that on their stomach instead. Other plants mentioned for treating menstrual pain were *kok'mox* (*Maranta arundinacea* L.; JD 6), *b'aknel pim* (*Drymonia serrulata* (Jacq.) Mart.; JD 16) and *kux sawi'* (*Piper tuerckheimii* C. DC. ex Donn. Sm; JD 1), along with prayer. One traditional healer uses *rix choql* (unidentified), *saq q'ehen* (unidentified; JD 48), and *saq kampaan* (unidentified) leaves boiled together to ease menstrual pain, as he says this remedy “can bring down the cold.”

For severe menstrual cramps, one midwife suggested holding pressure points between the thumb and forefinger. The young leaves of the *achiote* (*Bixa orellana* L.) tree can be made into a tea to drink three times a day for treating cramps. The water is boiled and then the young leaves are mashed into the water. For painful periods, some women use *serosi* (*Momordica charantia* L.; JD 69). A small handful of the vine and leaves are boiled in three cups of water, until the water turns dark and yellowish. Three cups of tea are consumed warm daily before meals. Q'eqchi' women in Livingston, Guatemala also use *Momordica charantia* L. leaf tea to treat dysmenorrhea (Michel 2006).

In a remedy for menstrual cramps and “cold inside,” the leaves of *yerba cancer* (*Acalypha arvensis* Poepp.; JD 54) and *albahaca* (*Ocimum campechianum* Mill.) are boiled together and taken as a tea. One entire *b'enk* (basil: *Ocimum campechianum* Mill.) plant can be boiled in approximately four cups of water for 5–10 min, for menstrual cramps, which is consumed three times during the day. *Frijoli* (thought to be *Senna occidentalis* (L.) Link) is used for painful menstruation. The roots are boiled in a small amount of water for 5–10 min. This is consumed three times a day during the menstrual cycle. For menstrual pain, six “pear” (avocado: *Persea americana* Mill.) leaves are boiled and the woman would drink one cup of the liquid in the morning and one cup in the evening. *Pimienta gorda* (*Pimenta dioica* (L.) Merr.)

**Fig. 2.4** *Yerba de cancer*  
(*Acalypha arvensis* Poepp.)  
leaves and flowers



seed can also be boiled as a tea to use for alleviating menstrual cramps. The fruit of *P. dioica* is also used for the treatment of menstrual cramps in the Petén region of Guatemala, boiled along with avocado seeds, cinnamon, and cloves (Comerford 1996). *Pimenta dioica* leaves are used for managing menopausal symptoms in Costa Rica, and have been shown to be a partial agonist/antagonist of human estrogen receptors (Doyle et al. 2009).

*Yerba de cancer* (*Acalypha arvensis* Poepp.; JD 54; Fig. 2.4) is used to treat painful menstruation with odor, indicating an infection, according to one herbalist. She would use one handful of the plant to make one cup, which would be given to the woman to drink two or three times a day for 3 days. For vaginal infection, she says a woman should take a bath then wash the vagina with a small bowl of water containing three drops of vinegar with half a lime (*Citrus aurantifolia* (Christm.) Swingle). *Chupil pim* (unidentified) is used for menstrual cramps, pain, excess period and menstrual odor. Approximately three entire plants are boiled with one clove of garlic (*Allium sativum* L.) and black pepper (*Piper nigrum* L.) seed for 20 min. The woman would drink this approximately three times per day during her menstruation.

### Menorrhagia (Heavy Menstruation)

Don Francisco uses *ch'ajom k'aham* (*Gouania lupuloides* (L.) Urb.; JD 4) to treat heavy menstruation, as a “stoppage for the heavy flow of blood.” *Ch'ajom* means young man or boy, and *k'aham* means vine. Either the bark or the leaves could be used for a tea. He would collect a 6-in piece of vine “bark” scraped off the vine, cut to pieces and boiled, or 12 or 20 leaves boiled to make tea for the woman to drink. A woman would drink this twice per day, once in the morning, once in the evening for 2 days or until she gets better. This is a hot remedy, according to his classification system. This is a common plant found in primary or secondary forests, though it takes a long time for it to grow into a big vine, according to Don Francisco. He says the bark could be stored for over a year and could still be used. *Gouania lupuloides* (L.) Urb. was reported to be used by Latino healers in New York City for the treatment of uterine fibroids (Balick et al. 2000), a condition that typically causes heavy menstruation.

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