

## WOMEN'S PLANTS AND MATERNITY IN VANUATU\*

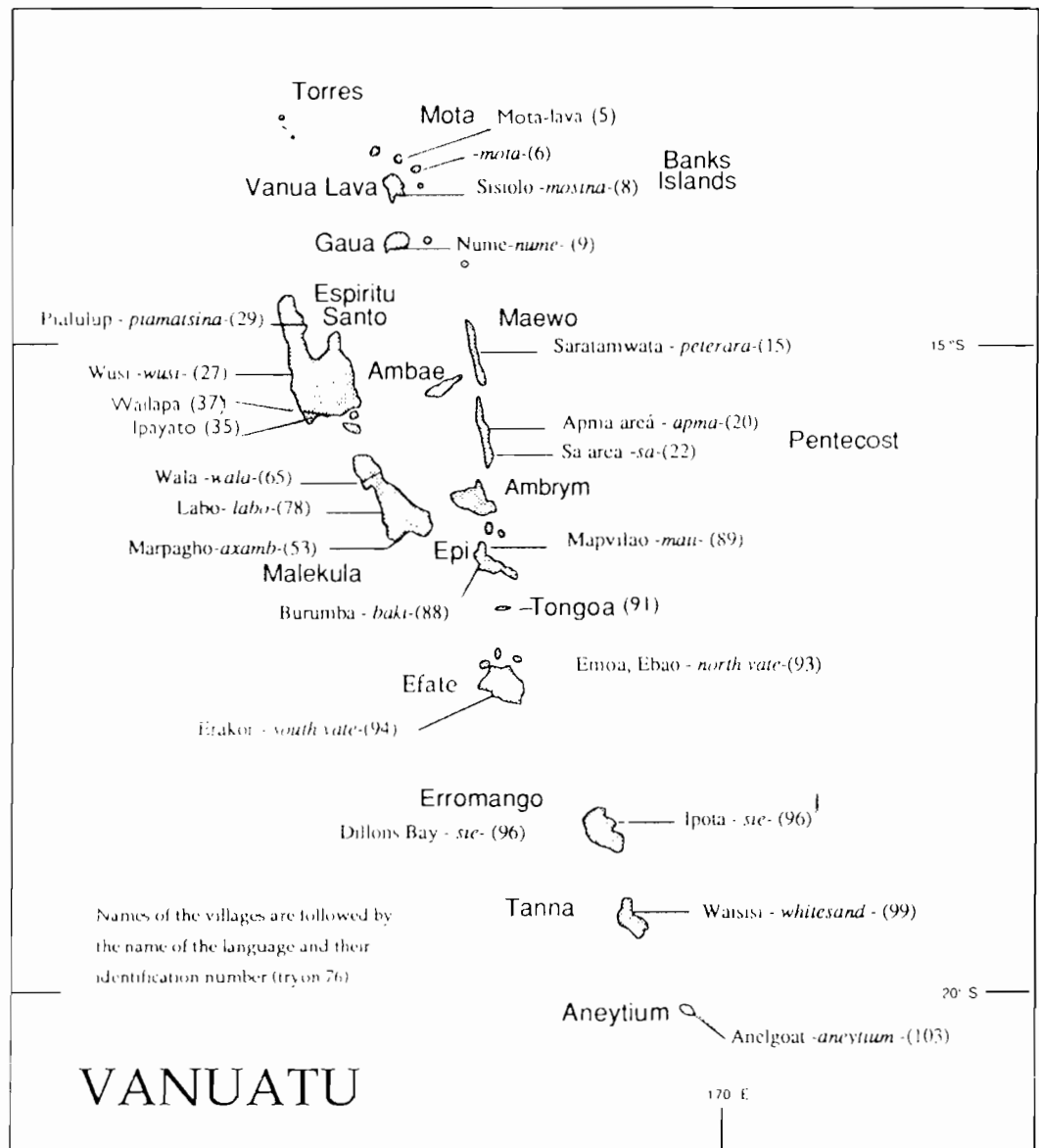
*G. Bourdy & A. Walter*

### **MENSTRUATION**

The onset of menstruation marks a woman's entry into reproductive life. Folk explanations of its origin, periodicity, and links with fertility and/or sexuality are numerous and have led to various types of behaviour. In Vanuatu (figure 1), we observed three different attitudes towards menstruation, influenced by traditions now falling into disuse because of Christianity and other socio-cultural changes.

First, the Piamatsina, Wusi and Wailapa peoples of Espiritu Santo traditionally arranged marriages when girls were still very young—sometimes at birth. In the past, these girls left home at a very early age to live with their in-laws, where they had daily contact with their future husbands. Loss of virginity often occurred before the onset of the menses, and was considered an inevitable, not shameful, occurrence. In these societies, the menstruation phenomenon is still described as a small basket which is present in each woman's belly; this fills gradually with blood and tips over at regular intervals. These groups see puberty as an event which occurs on a fixed schedule, independent of sexual relations: no attempt is made to provoke the onset of a girl's first period, and few folk treatments exist for this event.

Second, the Mosina and Nume peoples of Banks, the Peterara people of Maewo, the Axamb and Ninde peoples of Malekula, and the Apina people of Pentecost had different beliefs. Relevant also in this context are the Lewo and Baki peoples on Epi. In the Banks and Maewo groups, girls were traditionally married at puberty. It was believed that a woman's husband was responsible for her first flow of blood. It was expected that a second loss of blood would occur from one month to one year after the first; a show of blood was then expected each month,



thus establishing a young girl's menstrual cycle. If this chain of events did not occur, treatments were administered to provoke their onset. In these groups, menstruation is today considered as a special illness whose cause is sometimes attributable to men; it was here that we gathered the greatest number of treatments pertaining to menstruation. On Pentecost, in the Apmas tribe, lack of menstruation is traditionally explained by an excessive dryness of the blood or by insufficient blood supply. Menstrual flow is here again described as the monthly filling and emptying of a little basket. Absence of flow (late onset of puberty or lack of menstruation in non-pregnant women) is explained as the basket's filling too slowly or improperly. Plants are then administered to make the blood more abundant or more fluid.

Third, on the archipelago's southern islands from Efate to Tanna, girls traditionally married well after puberty. Menstruation was considered as the sign of sufficient bodily development, rendering a young girl fit for her first sexual relations and procreation. These groups make no attempt to provoke a girl's first menstrual period; we heard of few treatments.

Today these ancestral beliefs are being progressively abandoned as young girls choose to marry later, well after puberty. At some time after marriage, if all goes well, a young woman expects her first baby.

## **PREGNANCY**

As soon as she knows she is pregnant, a woman consults a 'matron', who will treat her until delivery. The matron is responsible for preparing all plant remedies and for massaging. If a woman gives birth at home, her matron assists the birth. During the first months of pregnancy, a woman may experience physical ailments typical of her condition: nausea, vomiting, weakness, back pain. These symptoms, considered normal during pregnancy, are not always treated, for fear that treatment may lead to miscarriage.

All pregnant women take other prescriptions regularly until term. Their purpose is to keep mother and foetus "happy", in other words to prevent miscarriage, strengthen the mother and protect her from witchcraft, to which she is considered to be especially vulnerable. The preventive, rather than curative, properties of these numerous recipes mirror the overall goals of Vanuatu's traditional medicine.

Among these prescriptions for pregnant women, a primary ele-

ment is a type of red, clay-like earth, roasted or smoked in a copra drier. A woman may eat as much of it as she wishes until the birth of her child. This mixture possibly provides a necessary mineral supplement. In the past, certain foods were forbidden, but nowadays women rarely adhere to this type of restriction.

Toward the seventh month of pregnancy, attention focuses on the baby's position in the uterus. Many women ask their midwives or other skilled women for massages, with or without the use of coconut oil. Just before the approximate due date, the woman prepares for the birth by drinking potions which are meant to increase the efficiency of the contractions moving the baby from the uterus into the birth canal.

## **DELIVERY**

Given a choice, most women prefer to give birth in clinics. If a clinic is too far away, however, births will take place at home, where experienced women assist. True midwives in Vanuatu are not many. Those who help the parturient women tend to be old women, who have had many children themselves and who have a good knowledge of medicinal plants. As contractions begin, plants are administered to speed the delivery process and sometimes to ease the accompanying pain. Some plants are used throughout the archipelago; examples are *bura* (*Hibiscus tiliaceus*, Malvaceae) and an orchid, whose long stem "leans over and falls head first" (*Dendrobium* sp.).

When the first contractions are delayed, preparations are administered to induce them, although a few weeks' delay is not seen as abnormal. External massage is said to facilitate expulsion of the placenta. Slow placental descent is viewed with concern; each group has its own remedy or remedies for such cases.

## **POSTNATAL CARE AND NURSING**

After expulsion of the placenta, a mother's thighs and belly are washed. She is given potions to drink which will "cleanse" her insides and prevent haemorrhaging. These preparations are also intended to help her system expel the lochia and are administered for the duration of confinement until every discharge has stopped. Other herbal teas are administered to ease residual postpartum pains and to strengthen the mother.

In order to have plenty of milk, mothers are kept on a diet of taro, sweet potato and cooked papaya, supplemented with small portions of the young fern fronds, lightly boiled. New mothers are encouraged to drink a great deal of liquid, mainly coconut water, fresh or after roasting the coconut.

## **REGULATION OF FERTILITY**

After the delivery, a period of abstinence lasts until weaning, approximately 16 months, when a child's psychomotor development is well established and when he/she is able to eat the full range of foods. This abstinence allows the couple to space the children at regular intervals. It is preferred to other contraceptive methods, such as birth control pills, contraceptives or abortive plants. Birth control pills are freely available in Vanuatu, but they are seldom used. They are unpopular because of their inconvenience and the side-effect that worries women most, the decrease in the length and volume of their menstrual periods. Women are apt to treat these symptoms with medicinal plants; in the end they abandon the pill in favour of traditional contraceptive plants.

Contraceptive plants are rarely used as methods for spacing births; abstinence during breastfeeding is more prevalent. Women tend to use plants when they want no more children, plants that effectively sterilize them. Healers know such plants. Some plants must be taken daily, as long as a woman wants to prevent conception. Their effect is believed to be reversible, ending as soon as the plants are no longer taken. Others must be taken at regular intervals to be effective. Some are reputed to cause temporary sterility; they are reversible by using another plant. This method can cause problems when a woman decides to conceive again but can no longer find the healer who had prescribed the contraceptive plant. The last category is also the largest and most widely used. These are remedies which are known as definitive sterilizing measures; they are taken once or repeated for several days. This type of prescription may be accompanied by a ban on sexual relations of variable duration, which is supposed to help "shrink" the uterus. None of these plant preparations is claimed to interfere with the menstrual cycle.

Abortion may also be used as a birth control method. Abortion remedies are administered orally. Matrons and some healers are aware of them; however, because the use of such preparations is now outlawed, it was difficult for us to research the subject. As a general rule, women feel that it is permissible to abort a pregnancy up to three

months. After that time, a mother's life is felt to be at risk and abortion is seen as dangerous.

The reputation of the efficacy of some plants may be exaggerated; women sometimes take them as soon as their menstrual periods are delayed, when pregnancy is not yet confirmed. In the same way, it has been difficult to determine whether some plants are abortifacient or contraceptive, as certain 'contraceptive' plants when administered late are claimed to produce abortion. Many plants are multi-purpose: contraception, abortion, menstruation induction, delivery aid. The pharmacological effects searched may be in some cases very similar. An active principle present in the plant that stimulates birth could very well provoke an abortion if administered during early pregnancy.

## CONCLUSION

This brief survey of some beliefs and behaviours related to women's reproductive life in Vanuatu must be conditioned by the fact that Ni-Vanuatu society continues to change. In areas where modern knowledge is more widespread, women abandon their traditional ways. For example, they might not respect postpartum abstinence. In other more remote groups, traditional knowledge and behaviour are still present. During this survey, we found that 10% of the flora of Vanuatu is used for purposes relating to human reproduction. This fact bears witness to the wealth and variety of this still thriving traditional pharmacopoeia.

## NOTE

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## WOMEN'S PLANTS IN VANUATU

Voucher specimens were sent to the Museum of Natural History in Paris, to Kew Gardens in London, and to ORSTOM in Nouméa. A specimen of each plant is also kept in the National Herbarium of Vanuatu, at Port-Vila. Another version of this table appeared in the *Journal of Ethnopharmacology*, 1992, **37**:3(179-196). Localization of the recipe: each village has an identification number on the map. Frequency of use: 1) recipe indicated by a group of experienced women, 2) recipe in use by many communities.

### PLANTS USED TO TREAT MENSTRUAL PROBLEMS

Species (family) herbarium no. accd'g to collection (GB, AW, PC, DB)	Localization, vernacular name of plant	Frequency of use	Part of plant	Preparation, references
<i>Abelmoschus manihot</i> (L.) Medik. (Malvaceae) GB796	37 kabis	1	Leaves	Menorrhagia Place handful of leaves of <i>A. manihot</i> with handful of leaves of an undeter- mined species in bamboo stem over fire until stem turns black. Squeeze juice from cooked leaves. Drink twice daily for 6 days.
<i>Achyranthes aspera</i> L. (Amaranthaceae) AW133	65 20 nokorin	1	Leaves	Amenorrhea Grind 10 leaves finely. Add 1/2 cup cold water. Drink.



<i>Alphitonia zizyphoides</i> (Solander) A. Gray (Rhamnaceae) GB997	9 vilivil	1	Leaves	Menorrhagia Grind 4-8 leaves finely, slowly adding cold water. Drink twice daily for 2 days, then stop for 2 days. Repeat if necessary.
<i>Artocarpus altilis</i> (Parkinson) Fosberg (Moraceae) GB878bis	8 per	1	Latex	Menorrhagia Mix equal amount latex of <i>F. adenosperma</i> Miquel (Moraceae) and <i>A. altilis</i> . Drink.
<i>Breynia disticha</i> JR&G Forster (Euphorbiaceae) GB1233	27 & 35 kairave	2	Living bark Leaves	Menorrhagia Grind a handful of living bark to a pulp. Add 50ml cold water. Drink thrice daily. Another recipe: Use 4 leaves instead of bark.
<i>Codiaeum variegatum</i> (L.) Blume (Euphorbiaceae) DB29	103 inloptahow	1	Leaves	Amenorrhea Chew 3 leaves. Swallow juice.
	99 tangaloa		Leaf stem	Another recipe: Chew 2 leaf stems. Swallow juice. All parts of plant are used as emmenagogue, to induce abortion, or to facilitate parturition.
<i>Entada phaseoloides</i> (L.) Merrill (Mimosaceae) GB680	15 raofaorv	1	Leaves	Menorrhagia Crush 4 leaves in hands. Rub over abdominal area. Repeat thrice daily.

<i>Evodia kajeowski</i> Guillaumin (Rutaceae) GB298	20 1 butsu namsil	Leaves	Dysmenorrhea Grind a few leaves. Place in cold water. Drink.
<i>Ficus adenosperma</i> Miquel (Moraceae) GB878	8 1 nonum	Latex	Menorrhagia See <i>Artocarpus altilis</i> .
<i>Hibiscus rosa-sinensis</i> L. (Malvaceae) GB1243	27 2 tutuatchatch	Leaves	Menorrhagia Crush 6 leaves in water. Bring to boil. Cool. Drink.
	99 nakelop	Stem bark	Menorrhagia Grate handful of bark, prepare a concoction, cool. Drink maximum of 3 doses.
	22 warisisnos	Flower	Amenorrhea Drink concoction petals.
<i>Musa</i> sp. (Musaceae)	20 1 butsu is wul	Rind of fruit	Amenorrhea See full recipe under <i>M. troglodytarum</i> (Musaceae).
<i>Musa troglodytarum</i> L. (Musaceae)	20 1 butsu sohak wasusup	Rind of fruit	Amenorrhea With pestle, crush finely one skin each of <i>Musa</i> sp.(Musaceae) and <i>M. troglodytarum</i> , adding some water. Drink 3 spoonfuls juice, slightly heated, every month until cured.

<i>Phyllanthus ciccoides</i> M-A (Euphorbiaceae) GB239	35 ekame	1	Stem bark	Menorrhagia Grind small handful of inner bark with some water. Drink small glass thrice daily.
<i>Plectranthus scutellarioides</i> (L.) R.Br.(Labiatae) AW11	9 watatmer	1	Leaves	Amenorrhea Crush 4-6 young leaves in hands. Soak in cold water for a few hours. Drink.
<i>Pseuderanthemum</i> sp. (Acanthaceae) AW493	53 namlandr panpan	1	Leaves	Menorrhagia Squeeze glassful of juice from the leaves. Drink once a day.
<i>Pteris ensiformis</i> Burman (Polypodiaceae) AW435	78 mesongo mis	1	Leaves	Dysmenorrhea Rub handful of fronds over abdomen.
<i>Pterocarpus indicus</i> Willdenow (Papilionaceae) GB153	20 butsu nana	1	Leaves	Amenorrhea Boil handful of leaves in water. Cool. Drink once daily. At the same time make poultice for the abdomen, using heated leaves.
<i>Syzygium richii</i> (A Gray) Merrill & Perry (Myrtaceae) AW744	78 nepkeva	1	Leaves	Menorrhagia Mix juice of leaves with juice of leaves of an undetermined species in equal parts. Add a little water. Drink. Do not repeat.

## PLANTS USED TO FACILITATE BIRTH

Species (family) herbarium no. accd'g to collection (GB, AW, PC, DB)	Localization, vernacular name of plant	Frequency of use	Part of plant	Preparation, references
<i>Abelmoschus manihot</i> (L.) Medik. (Malvaceae) GB796	35 era matua 9 sorosop	2	Leaf bud	Squeeze a large handful of leaves. Drink 2-3 spoonfuls juice. Wash pubic area with remaining juice. Place 10 leaves in pan, cover with water, bring to boil. Cool. Drink full glass.
<i>Begonia</i> sp. (Begoniaceae)	6 water mowol	1	Leaves, Flowers	Macerate flowers and leaves (Vienne 1981).
<i>Canarium indicum</i> L. (Burseraceae) AW400	78 nindi or nangeigas malange	1	Stem bark Leaves	Take 4 leaflets from right side of compound leaf, add water, squeeze into glass. Drink. Also use handful of bark and squeeze juice.
<i>Cayratia trifolia</i> (L.) Domin (Vitidaceae) GB597	8 nagamat nding nding	1	Leaves	Squeeze large handful of leaves. Drink.

<i>Cordia</i> <i>variegatum</i> (L.) Blume (Euphorbiaceae) DB29	103 inloptahow	1	Bark	Wash and massage parturient woman with water in which roots of <i>Phyllanthus virgatus</i> Forster f. (Euphorbiaceae), leaves and fruits of <i>Cordyline terminalis</i> (L.) Kunth (Agavaceae), bark of <i>C. variegatum</i> , and 2 undetermined species have been soaked.
<i>Cordyline terminalis</i> (L.) Kunth (Agavaceae) DB68	103 ndrowet	1	Leaf & fruits	See <i>Cordia</i> <i>variegatum</i> .
<i>Cyathea lunulata</i> (JR & G Forster) Copeland (Cyatheaceae) GB712	15 gwatia	1	Leaf buds	Rub leaf buds on mother's abdomen.
<i>Cymbopogon citratus</i> (D.C.) Stapf (Poaceae)	78 niesap	1	Leaves	Prepare strong tea with large handful of leaves. Drink.
<i>Dendrobium</i> sp. (Orchidaceae) GB155	96 93 20 sipalil 78 maxa	2	Leaves	Squeeze leaves. Drink the juice. Can also be used with <i>Schoenoplectrus</i> sp. (Cyperaceae), <i>Scleria polycarpa</i> Boeckeler (Cyperaceae) and <i>Procris pedunculata</i> (JR & G Forster) Weddell (Urticaceae). Pick 1 leaf of each species. Squeeze together well. Drink juice.
<i>Dennstaedtia samoensis</i> (Brackenridge) Copeland (Dennstaedtiaceae) AW418	78 netetaxe	1	Sap	Drink glass of sap from rachis of frond.

<i>Dioscorea bulbifera</i> (Dioscoreaceae) AW113	20 bwip	1	Leaf bud, shoots	Eat 4 leaf buds and 4 shoots to ease birth, or to aid expulsion of a dead fetus.
<i>Dracontomelon vitiense</i> Engler (Anacardiaceae) AW421	78 nahu	1	Stem bark	Soak hand-sized piece of bark in cold water until soft, then apply to woman's navel.
<i>Dysoxylum aneytiense</i> Guillaumin (Meliaceae) GB1170	27 auchupe	1	Bark	Place hand-sized piece of bark over fire. The woman must spread her legs so smoke reaches vaginal area.
<i>Dysoxylum gaudichaudianum</i> (Juss.) Miq. (Meliaceae) GB1092	93 nakau poa	1	Leaves	Squeeze juice of 10 leaves with water. Drink.
<i>Elatostema beccarii</i> H. Schoeter (Urticaceae) GB144	96 wamplenmpla	1	Leaves	See <i>Dendrobium</i> sp.
<i>Epipremnum pinnatum</i> (L.) Engler (Araceae) GB951	9 ragdalo	1	Aerial root	Eat 4 aerial root tips.
<i>Hemigraphis reptans</i> (G Forster) T Anderson ex Hemsley (Acanthaceae) AW88	20 makadakada	1	Root	Squeeze juice of root in water.

<i>Hibiscus tiliaceus</i> L. (Malvaceae) GB1001	9 var	2	Stem bark	Squeeze big handful of bark to obtain half a glass of juice. Drink.
	78 burao		Sap	Collect 100ml sap from slit in trunk. Drink.
	96 burao		Leaves	Squeeze large handful of young leaves with water. Use sap to wash mother's abdomen.
<i>Homalanthus nutans</i> (Forster f.) Guillemain (Euphorbiaceae) AW122	20	1	Leaf bud	Eat handful of leaf buds.
	butsu salingi			
<i>Leea indica</i> (Burman f.) Merrill (Leeaceae) GB910	8	1	Leaves	Crush handful of leaves (or, in some cases,
	saraouia		Leaf buds	leaf buds). Roast over fire. When hot, squeeze with water to obtain glassful of juice. Drink.
<i>Macropiper latifolium</i> (L.f.) Miquel (Piperaceae) GB598	22	2	Leaves	Crush some leaves with leaves of undetermined species. Add water. Drink. (Jolly 1979).
	rah mwil			Eat 4 galls from the leaves.
	mwil			
	9 womwogogo			
<i>Melochia odorata</i> L.f. (Sterculiaceae) GB145	96	1	Leaves	Squeeze 10 leaves each of <i>M. odorata</i> and <i>Merremia peltata</i> (L.) Merrill (Convolvulaceae) together. Drink juice.
	nemlap			
<i>Merremia peltata</i> (L.) Merrill (Convolvulaceae) GB255	96	1	Leaves	See <i>Melochia odorata</i> .
	nosivilyau			

<i>Phyllanthus virgatus</i> Forster f. (Euphorbiaceae)	103 inparreiny	1	Roots	See <i>Codiaeum variegatum</i> .
<i>Pipturus argenteus</i> (Forster f.) Weddell (Urticaceae) PC1171	88 dame	1	Sap	Mix sap and water in equal parts. Drink.
<i>Pometia pinnata</i> JR & G Forster (Sapindaceae) GB266	29 natsaria	1	Stem bark	Roast hand-sized piece of bark over fire. When warm, squeeze and mix with water. Drink.
<i>Pongamia pinnata</i> (L.) Pierre (Papilionaceae) AW89	20 kamtsi	1	Stem bark	Macerate inner bark and mix with water of a full green coconut. Drink all the mix.
<i>Procris pedunculata</i> (JR & G Forster) Weddell (Urticaceae) PC1401	96	1	Leaves	See <i>Dendrobium</i> sp.
<i>Schoenoplectus</i> sp. (Cyperaceae) PC1372	96 nilahela	1	Leaves	See <i>Dendrobium</i> sp.
<i>Scleria polycarpa</i> Boeckeler (Cyperaceae) PC1372	96 tae nmapram	1	Leaves	See <i>Dendrobium</i> sp.



<i>Selaginella firmuloides</i> Warburg (Selaginellaceae) AW449	88 mapula	1	Leaves	Drink a decoction with leaves.
<i>Senna occidentalis</i> (Mimosaceae) GB143	96 noki-noki	1	Leaves	Grind big handful of leaves into a pulp. Add water. Squeeze well. Drink juice. Repeat if necessary.
<i>Terminalia catappa</i> L. (Combretaceae) GB1183	27 mariri	1	Bark	Boil 400ml water. Add handful of bark. Reduce to 300ml. Drink.
<i>Tetrastigma vitiense</i> (A Gray) AC Smith (Ampelidaceae) AW123	20 uakas temit	1	Leaves	Squeeze handful of leaves into half-full green coconut. Drink coconut water.

### PLANTS USED TO EXPEL THE PLACENTA AND AS PROTECTIVE POST-PARTUM MEDICINE

Species (family) herbarium no. accd'g to collection (GB, AW, PC, DB)	Localization, vernacular name of plant	Frequency of use	Part of plant	Main use	Preparation, references
<i>Burckella obovata</i> (Forster f.) Pierre (Sapotaceae) GB301	29 nabou	1	Leaves	Quiet residual pain	Heat leaves with leaves of undeter- mined species over fire. Use as poultice on woman's abdomen.

<i>Cayratia trifolia</i> (L.) Domin (Ampelidaceae) GB597	6 nagamat nding nding	1	Leaves	Clean mother	Squeeze leaves. Drink juice.
<i>Cocos nucifera</i> L. (Arecaceae)	78 nimit	1	Roots	Restore strength	Crush roots. Add water. Drink just after delivery.
<i>Diplazium harpeoides</i> Moore (Athyriaceae) AW25	20 ilambet	1	Leaves	Restore strength	Cook and eat as vegetable.
<i>Donax cannaeformis</i> (JR & G Forster) K Schum (Marantaceae)	78 netesmeswor kon	1	Leaves	Draw placental fragments	Squeeze right side of leaf blade into glass of water. Drink.
<i>Ficus septica</i> Burm.f.var. <i>cauliflora</i> (Moraceae) GB1258	78 noboloboi	1	Fruits	Draw placental fragments	Crush 10 fruits into a pulp. Add water. Drink.
<i>Graptophyllum</i> sp. (Acanthaceae) GB146	96 urube	1	Leaves	Clean mother	Squeeze juice of handful of leaves. Drink.
<i>Hibiscus rosa-sinensis</i> L. (Malvaceae) GB1243	27 tutuatchatch	2	Leaves	Treat uterine	Squeeze 8 leaves with water. Boil for a few minutes. Drink. Repeat hemorrhage if necessary.

<i>Macropiper latifolium</i> (L.f.) Miquel (Piperaceae) GB598	9	1 womwogogo	Leaves	Draw placental fragments	Eat 4 scales from leaves.
<i>Polyscias scutellaria</i> (Burman f.) Fosberg (Araliaceae) GB245	9	2 ndosir	Leaves	Clean mother	Heat leaves gently over fire. When warm and soft, eat 1-2. Repeat if necessary.
	96	umroki	Leaves	Draw placental fragments	Squeeze 4 leaves. Drink juice. Repeat twice daily for 2 days.
<i>Pterocarpus indicus</i> Willdenow (Papilionaceae) AW153	20	1 butsu nana	Leaves	Induce 1st men- struation following childbirth	Prepare tea with leaves. Drink cold cup every day until menstruation returns. At the same time make poultice with preheated leaves for the navel.
<i>Terminalia catappa</i> L. (Combretaceae) GB1183	27	1 mariri	Leaves	Draw placental fragments	Prepare strong tea with leaves. Drink more than 3 cups in 1 sitting.
			Bark	Clean mother	Prepare strong tea with bark. Drink 1 cup daily.

# PLANTS USED AS CONTRACEPTIVES AND TO INDUCE OR REVERSE STERILITY

Species (family) herbarium no. accd'g to collection (GB, AW, PC, DB)	Localization, vernacular name of plant	Frequency of use	Part of plant	Type <sup>c</sup>	Preparation, references
<i>Acalypha grandis</i> Bentham (Euphorbiaceae)	96 nornompi navlag	1	Leaves	3/no	Mix 2-3 young leaves with 3 young fronds of <i>Lomagramma polyphylla</i> Brakenridge (Lomagrammaceae) and 2 leaves and grated bark of undetermined species. Wrap around a hot stone. When hot, unwrap and eat.
<i>Alstonia pacifica</i> Seemann (Apocynaceae) MD2156	103	1	Sap	1/no	Drink a concoction of sap.
<i>Alstonia vitiensis</i> Seemann var. <i>neo-ebudica</i> Monachino (Apocynaceae) DB26	103 niete tel	1	Leaf buds	3/no	To induce sterility, macerate leaf buds with leaf buds of <i>Glochiclon</i> sp (Euphorbiaceae) in water. Drink small glassful daily for 2 months. To reverse, crush aerial part of <i>Apluda mutica</i> L. (Poaceae), leaves of <i>Cyclosorus truncatus</i> Farv. (Thelypteridaceae), and leaves, stems, aerial tuber of

					<i>Dioscorea bulbifera</i> L. (Dioscoreaceae) with water. Drink 1 cup before menstruation (during treatment, menstrual flow occurs).
<i>Apluda mutica</i> L. (Poaceae) DB24bis	103	1	Aerial part	3/no	See <i>Alstonia vitiensis</i> .
<i>Asplenium nidus</i> L. (Aspleniaceae) PC839	65 91	2	Leaves	3/no	To induce sterility, eat 2 young coiled frond, just after menstruation, in the morning. To reverse, squeeze leaves of <i>Hemigraphis reptans</i> (G Forster) T Anderson ex Hemsley (Acanthaceae) with water to obtain 2 x 300ml extract. Drink 300ml one morning; drink 300ml next day.
<i>Barringtonia edulis</i> Seemann (Lecythidaceae) AW311	20 butsu vel	1	Bark	4/no	A strong tea is claimed to induce definitive sterility.
<i>Casuarina equisetifolia</i> JR & G Forster (Casuarinaceae) AW469	53 niyar	2	Bark and leaves	4/no	To induce sterility, eat handful of raw leaves. Drink juice squeezed from grated bark 5 days after childbirth.

	96 yorset			1/no	To prevent conception, chew 5-10 cm young stems of <i>C. equisetifolia</i> with 5-10cm young stems of <i>Pterocarpus indicus</i> Willdenow (Papilionaceae) Monday-Friday. Swallow juice, spitting out fibres. Another recipe: chew young stems of <i>C. equisetifolia</i> with young stems of <i>Phyllanthus ciccoides</i> M.-A. (Euphorbiaceae) Monday-Friday. Swallow juice, spitting out fibres.
<i>Cayratia trifolia</i> (L.) Domin (Vitidaceae)	6 nagamat nding nding	1	Fruits	1/no	To prevent conception, eat raw fruits (Vienne 1981).
<i>Cyclosorus truncatus</i> Farv. (Thelypteridaceae)	103 inmotwa nthan	1	Leaves	3/no	See <i>Alstonia vitiensis</i> .
<i>Dioscorea bulbifera</i> L. (Discoreaceae) DB27	103 nabon	1	Leaves, stem, aerial tuber	3/no	See <i>Alstonia vitiensis</i> .
<i>Elatostema macrophyllum</i> Brongniart (Urticaeae) PC2139	96 naghulu	1	Whole plant	4/no	Squeeze handful of leaves with water. Drink 1 glass.

<i>Flagellaria indica</i> L. (Flagellariaceae) GB1317	5 narakpui	1	Leaf buds	4/no	To induce definitive sterility, crush handful leaf buds with water and salt. At any time of month, drink 1 glass juice before breakfast. Continue 4 following days.
<i>Glochidion</i> sp. (Euphorbiaceae) DB25	103 namlahow	1	Leaf buds	3/no	See <i>Akstonia vitiensis</i> .
<i>Hemigraphis colorata</i> (Blume) Hall. f. (Acanthaceae)	6 noyon gengen	1	Leaf buds	3/yes	Squeeze sap of buds with water. Drink at dawn for 4 days (Vienne 1981).
<i>Hibiscus rosa-sinensis</i> L. (Malvaceae) GB1243	99 rropol	2	Leaves	4/yes	To induce sterility, squeeze large handful leaves into 250ml water. Drink all at once during menstruation. Repeat during following period. Abstinence: 1 month.
<i>Kopsia</i> sp. (Apocynaceae) GB715	15 somu	1	Leaf buds	2/no	To prevent conception, heat 4-6 buds over flame. Eat them on 3rd day of period, repeat each month. Avoid salt during treatment.
<i>Lomagramma polyphylla</i> Brakenridge (Lomagrammaceae) GB236	96 tampal imelwo	1	Leaves	3/no	See <i>Acalypha grandis</i> .

<i>Pandanus tectorius</i> Parkinson (Pandanaceae)	53 pandanus	1	Stem bark	4	To induce sterility, mix small cup grated coconut meat with spoonful grated bark. Eat at any time. Abstinence: 2 years.
<i>Phyllanthus ciccoides</i> M.-A. (Euphorbiaceae) GB239	96 fonfati	1	Bark	1/no	See <i>Casuarina equisetifolia</i> .
<i>Pipturus argenteus</i> (Forster f.) Weddell (Urticaceae) GB234	88 dame	1	Inner bark	4/no	To induce sterility, mix equal amount of dry grated coconut meat with grated inner bark. Eat.
<i>Pneumatopteris glandulifera</i> 9 (Brackenridge) Holtun (Thelypteridaceae) GB978	wutubo	1	Leaves	4/yes	To induce sterility, eat 4 young fronds at 1 sitting. Abstinence: 1 year.
<i>Pterocarpus indicus</i> Willdenow (Papilionaceae) GB153	96 yatrong rong	1	Bark	1/no	See <i>Casuarina equisetifolia</i> .
<i>Pyrrosia confluens</i> (R. Brown) Ching (Polypodiaceae) GB791	93 natali ni nanui	1	Stem	4/no	To induce sterility, cut 12 finger- length pieces stem. Roast banana in skin over fire; peel. Stick pieces in banana and eat all 1st day following period.



<i>Scaevola sericea</i> Vahl (Goodeniaceae)	5 negeelao	1	Leaf buds	4/no	To induce sterility, heat handful of buds over fire. Squeeze with water. Drink.
<i>Ventilago neo-caledonica</i> Schlechter (Rhamnaceae) AW124	20 labalaba	1	Leaf buds	4/no	To induce sterility, eat 4-5 young leaves at 1 sitting.

- ° Type of contraception method. 1) Effect is believed to be reversible, ending as soon as remedy is no longer taken; must be taken every day. 2) Effect is claimed to be reversible; must be taken at regular intervals. 3) Remedy is reputed to cause temporary sterility; can be reversed by using another remedy. 4) Remedy is claimed to induce definitive sterility. Yes) Prescription accompanied by ban on sex for variable duration. No) Prescription not accompanied by ban on sex.

## PLANTS USED TO INDUCE ABORTION

Species (family) herbarium # accd'g to collection (GB, AW, PC, DB)	Localization, vernacular name of plant	Frequency of use	Part of plant	Preparation, references
<i>Alphitonia zizyphoides</i> (Solander) A Gray (Rhamnaceae) GB997	99 vilivil	1	Bark	Drink juice extracted from stem.
<i>Barringtonia edulis</i> (Lecythidaceae) AW311	20 butsu vel	1	Bark	Infusion.

<i>Bischofia javanica</i> Blume (Bischofiaceae)	91	1	Bark	Grind bark to pulp. Add water. After filtration, drink 1 litre juice daily for 2 days. On 3d day prepare another bottle with marc of 2d day.
<i>Carica papaya</i> L. (Caricaceae)	91 popo	1	Fruits	Swallow 4 small green fruits with 4 tablets of nivaquine and juice of 2 limes.
<i>Codiaeum variegatum</i> (L.) Blume (Euphorbiaceae) DB29	103 inloptahow	1	Whole	All parts of plant used.
<i>Dysoxylum gaudichaudianum</i> (Juss.) Miq. (Meliaceae) GB799, GB1092	35 eamopul 93 nakau poa	2	Leaves	Prepare 12 leaves in strong tea.
<i>Hibiscus rosa-sinensis</i> L. (Malvaceae) GB1243	22 warinisos	1	Flowers	Prepare aqueous extract.
<i>Homalanthus nutans</i> (Forster f.) Guillemain (Euphorbiaceae) GB900	6 sala	1	Fruits	Eat 30 small fruits at 1 sitting.
<i>Nothocnide repanda</i> (Bl.) Blume (Urticaceae) GB696	15 rawe mandisi	1	Leaves	Pound handful of leaves, add water and squeeze. Drink juice. Repeat treatment until abortion occurs.

<i>Pemphis acidula</i> JR & G Forster (Lythraceae) GB1149	96	1	Sap	Prepare infusion with handful bark. After filtration, drink at once.
<i>Plectranthus</i> <i>scutellarioides</i> (L.) R.Br. (Labiatae) AW11	20 bwinga tebungu	1	Leaves	Pound 10 leaves with 10 leaves of undetermined species and water. Drink all juice at once. Repeat if necessary.
<i>Pongamia pinata</i> (L.) Pierre (Papilionaceae) AW89	20 kamtsi	1	Bark	Grind handful bark into pulp. Add water, squeeze well and drink juice.
<i>Sterculia banksiana</i> Guillaumin (Sterculiaceae)	6 maploa panoi	1	Leaves	Squeeze leaves in water and drink juice (Vienne 1981).

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