

Bananas of Cook Islands

A catalog of banana diversity seen on the islands of Rarotonga and Aitutaki



Gabriel Sachter-Smith and Julie Sardos



Table of Contents

Collection Expedition Notes	pg. 3
Regional Map and Collection Locations	pg. 4
Collected Specimens	pg. 5
Non-collected Specimens Observed	pg. 24
Index of All Observed Specimens	pg. 40

Cover photos: 'Akamou', 'Utu Anikitao', and 'Utu Tekou 1'

Collection Expedition Notes:

This field exploration took place in Cook Islands from May 20th to May 31st 2019. The project was co-organised by Bioversity International and the Ministry of Agriculture of Cook Islands, with the essential support of the Pacific Community (SPC). In Rarotonga, the team benefited from the essential support of William Wigmore, Ngatokorima Maireroa, Ngatamariki (Moe) Tutira and Edwin Apera from the Ministry of Agriculture. Ms. Celine Dyer from the Climate Change Office shared her precious knowledge on Fe'i bananas (locally named Utu or Ve'i) growing in Takuvaine valley and allowed the collection of suckers from her private garden. In Aitutaki, the team was greatly assisted by Fred Charlie, Pepe Raela, Victor Ioane, Ben Samuel and Jamayne Loane from the Agriculture Department of the Aitutaki Island Administration Office. In Mangaia, Mr. Atetu Atetu from the Agriculture Department collected a rare Maoli banana and sent it to the team in Rarotonga (COOK015).

Overall, we are extremely grateful to all the women and men in Rarotonga and Aitutaki who answered our questions and provided samples and suckers from their plants. Additional thank you to Dr. Jeff Daniells who provided critical feedback on identification of specimens both during (remotely) and after the expedition.

This catalog presents banana cultivars as collection and observed on Rarotonga and Aitutaki. Information on the collection mission itself can be found in the collecting mission report (Sardos et. al. 2019, Report of the Banana Collecting Mission to Rarotonga and Aitutaki, Cook Islands, 20 May to 31 May, 2019).



Group picture taken in Takuvaine Valley (Rarotonga), from left to right: Ms. Celine Dyer, Mr. Ngatokorima Maireroa, Ms. Julie Sardos, Mr. Gabriel Sachter-Smith (in front), Mr. Moe Tutira, Mr. Edwin Apera, Mr. Teariki (Sene) Turua. Photo credit: G. Sachter-Smith.

Regional Map:

Location of collection for each accession collected during the expedition.



Rarotonga



Aitutaki

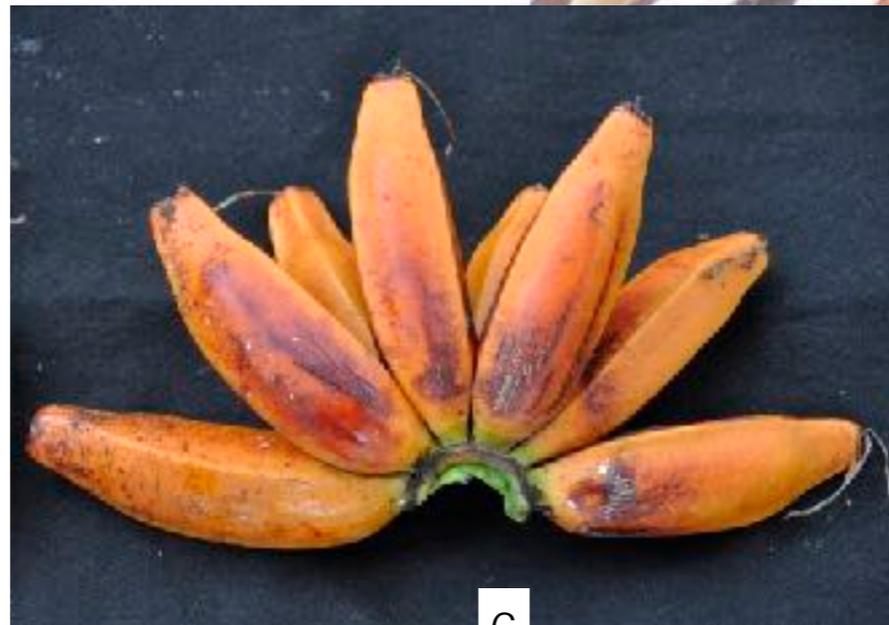
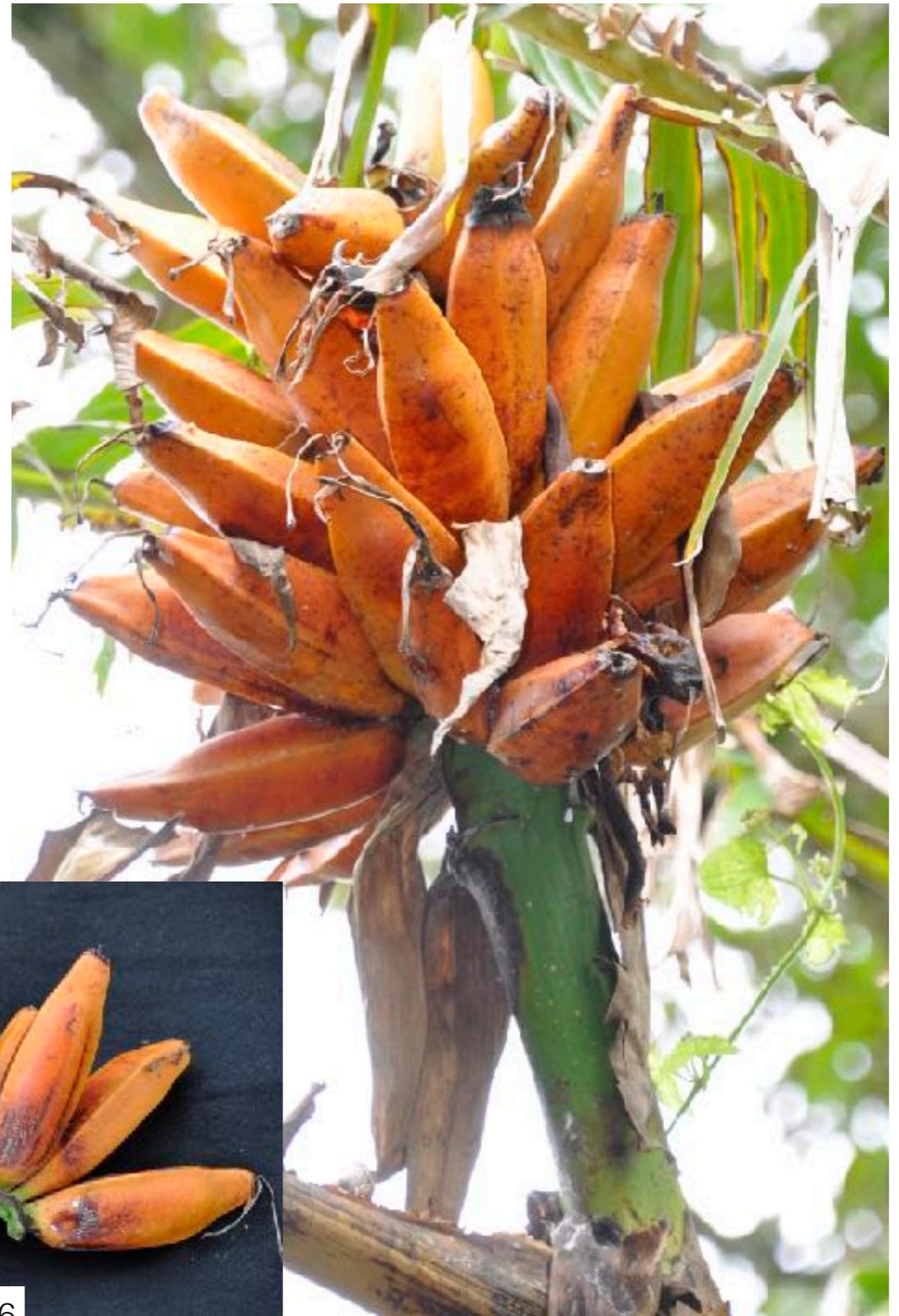
(Map data: ©2019 GBRMPA, Google)

Collected Specimens

Local Name: Utu Va'airua
Classification: Fe'i
Collection Code: COOK001
Island: Rarotonga

Notes:

All Fe'i cultivars are collectively called 'Utu' on Rarotonga. Name assigned by owner upon collection in honor of a family member. Skin mostly smooth and without many cracks, fruit apex elongated like a Plantain.



Local Name: Utu Marua
Classification: Fe'i
Collection Code: COOK002
Island: Rarotonga

Notes:

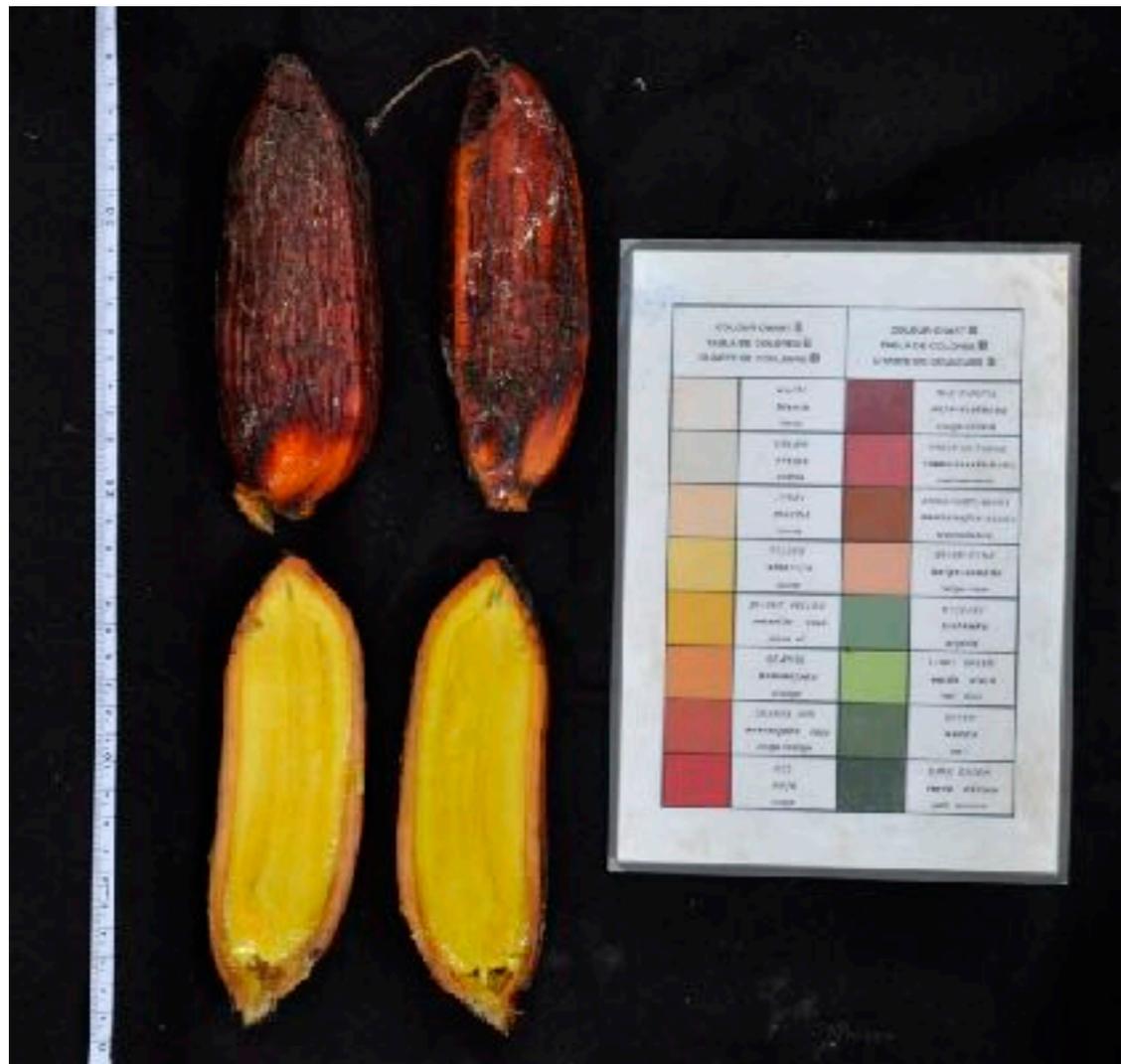
All Fe'i cultivars are collectively called 'Utu' on Rarotonga. Name assigned by owner upon collection in honor of a family member. Skin mostly smooth and uncracked at time of observation, fruits larger and with a broader apex as compared to 'Utu Va'airua'.



Local Name: Utu Anikitao
Classification: Fe'i
Collection Code: COOK003
Island: Rarotonga

Notes:

All Fe'i cultivars are collectively called 'Utu' on Rarotonga. Name assigned by owner upon collection in honor of the place where it was collected from. Fruits with extensive cracking on skin, and ripens to a darker reddish color as compared to other types observed.



Local Name: Utu Turoa
Classification: Fe'i
Collection Code: COOK005
Island: Rarotonga

Notes:

All Fe'i cultivars are collectively called 'Utu' on Rarotonga. Name assigned by owner upon collection, not an old traditional name. Similar to 'Utu Va'airua' but with more extensive cracking on skin.



Local Name: Utu Tekou 1
Classification: Fe'i
Collection Code: COOK006
Island: Rarotonga

Notes:

All Fe'i cultivars are collectively called 'Utu' on Rarotonga. Name assigned by team based on collection location, not an old traditional name. Collected as a representative sample from an extensive ancient grove in the mountains.



Local Name: Utu Tekou 2
Classification: Fe'i
Collection Code: COOK007
Island: Rarotonga

Notes:

All Fe'i cultivars are collectively called 'Utu' on Rarotonga. Name assigned by team based on collection location, not an old traditional name. Collected as a representative sample from an extensive ancient grove in the mountains.



Local Name: Ve'i
Classification: Fe'i
Collection Code: COOK011
Island: Aitutaki

Notes:

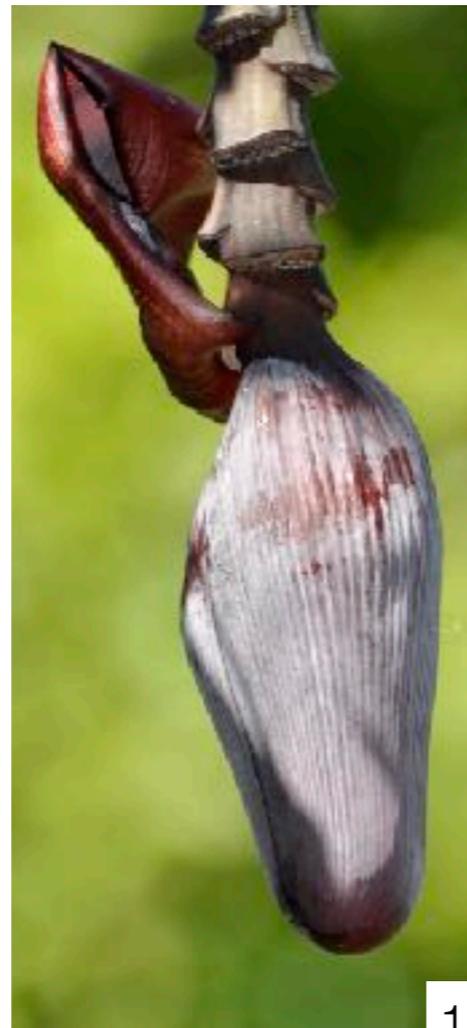
Last Fe'i plant known on Aitutaki. Previously, a large grove was present, but was cleared by an errant landowner. This single plant regrew and was kept.



Local Name: Mangaro Aumarei
Classification: AAB Maoli-Popoulu
Collection Code: COOK008
Island: Aitutaki

Notes:

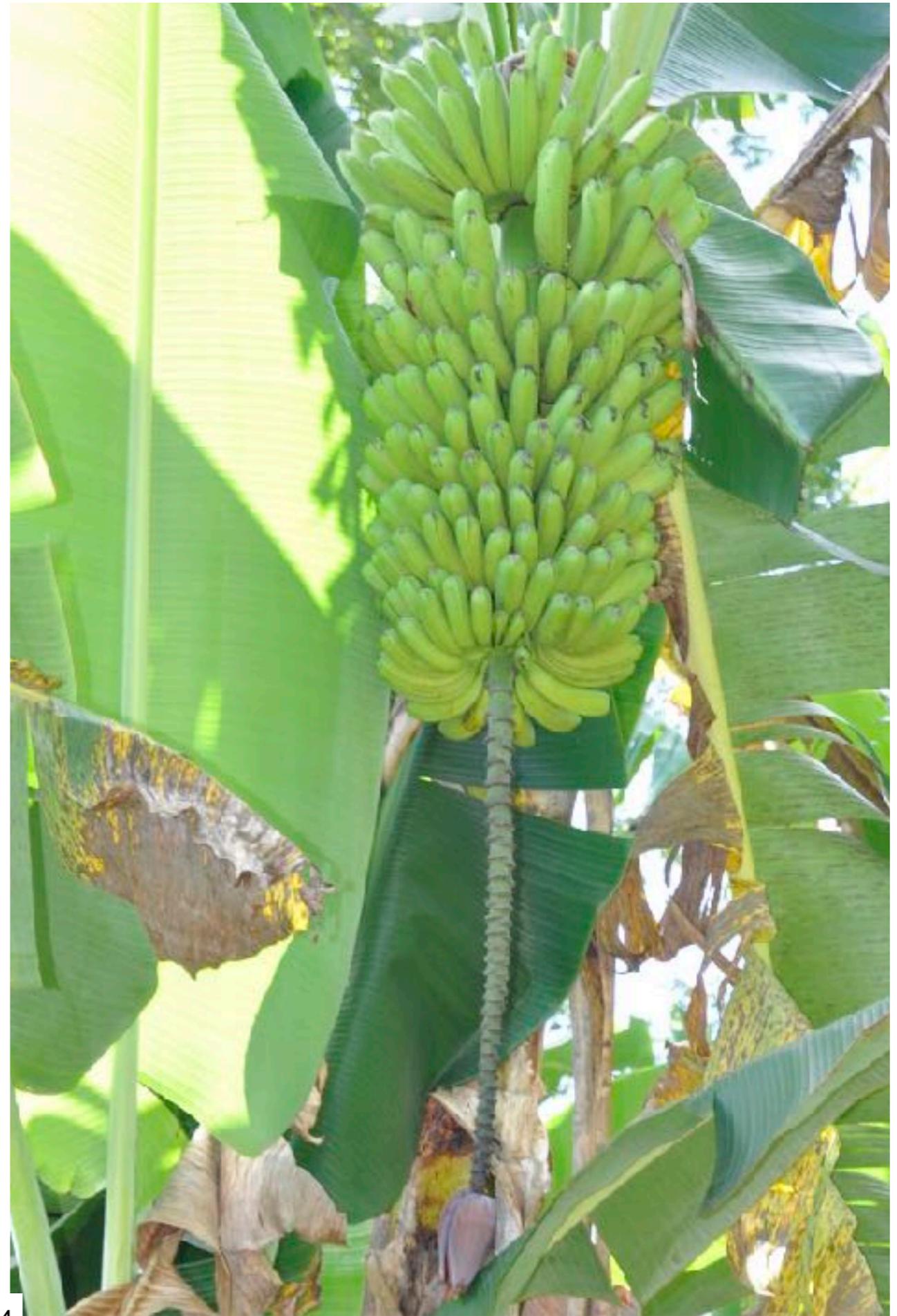
Some red coloration on pseudostem with blotches, mostly green petioles, large bunches, rachis straight, advanced male bud with rounded apex. Formerly important in barter systems.



Local Name: Mangaro Torotea
Classification: AAB Maoli-Popoulu
Collection Code: COOK009
Island: Aitutaki

Notes:

Green pseudostem and petioles, almost no red coloration on plant. Rachis very straight, bunches large and relatively compact with many fingers and hands.



Local Name: Mangaro Manii
Classification: AAB Maoli-Popoulu
Collection Code: COOK010
Island: Aitutaki

Notes:

Mosltly green pseudostem, reddish on petiole margins only, small and pointed male bud upon maturity, often with a slight curve in rachis. Bunch more lax than other Mangaros.



Local Name: Akamou
Classification: AAB Maoli-Popoulu
Collection Code: COOK014
Island: Aitutaki

Notes:
One of very few “Popo’ulu” type plants remaining on Aitutaki. More red coloration, especially on petioles, as compared to similar ‘Ta’anga’.



Local Name: Ta'anga
Classification: AAB Maoli-Popoulu
Collection Code: COOK016
Island: Aitutaki

Notes:

One of very few "Popo'ulu" type plants remaining on Aitutaki. Plants with less red, especially on petioles, as compared to similar 'Akamou'.



Local Name: Meika Maori Atetu
Classification: AAB Maoli-Popoulu
Collection Code: COOK015
Island: Mangaia

Notes:

No photos, not observed. Collected on Mangaia island by Mr. Atetu Atetu and suckers were sent by plane to the team on Rarotonga. Named for the farmer who provided suckers. Said to be a Meika Maori (“native banana”) type (presumably Maoli-Popo’ulu subgroup) with distinct purple/black coloration on petioles and pseudostem. According to information received during the final meeting with the Aitutaki Island Council on May 30th, this cultivar was most likely introduced to Mangaia from Aitutaki during the 1970’s but is no longer found on Aitutaki.

NO PHOTO

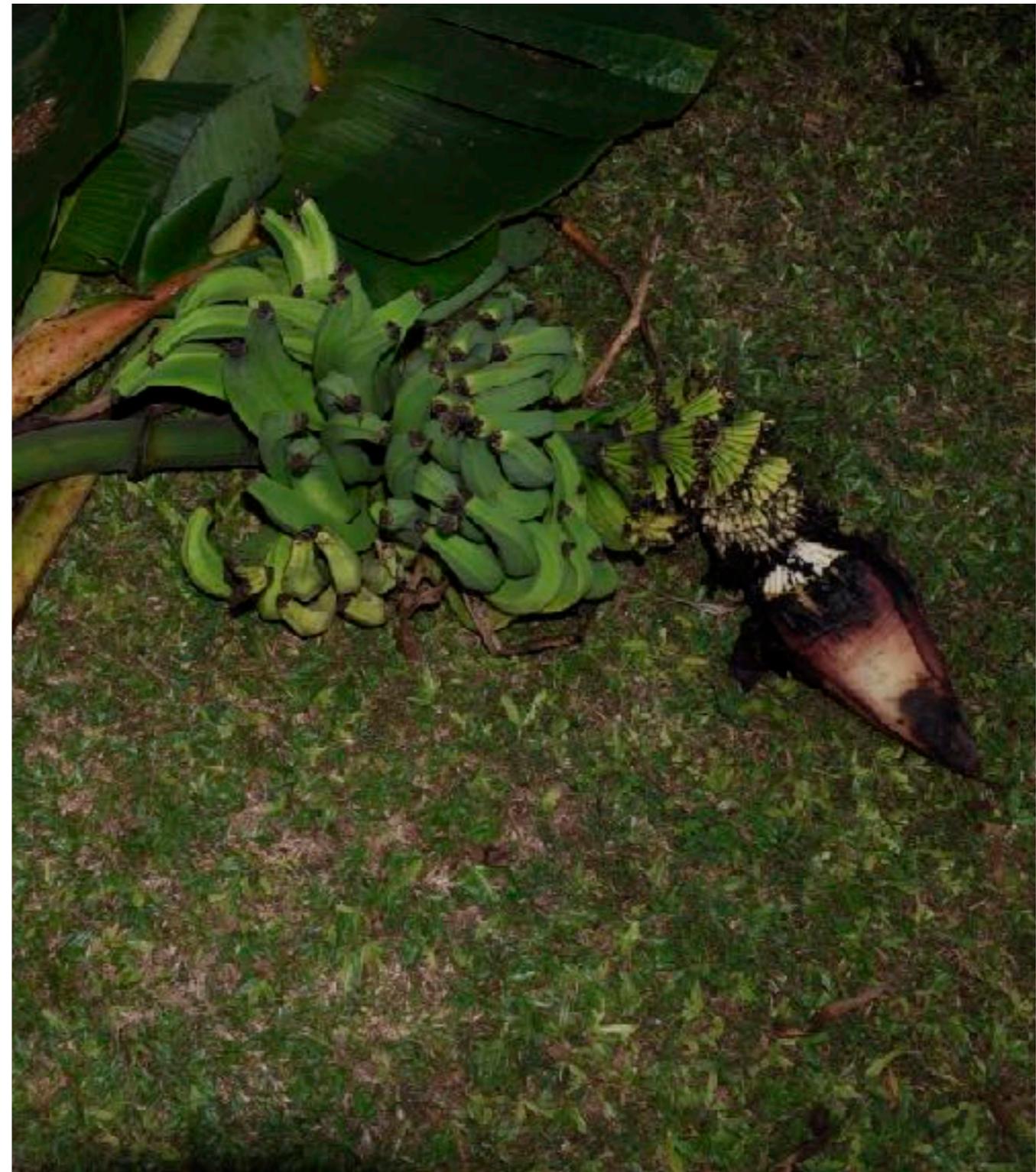
Local Name: Tarapuakatoro
Classification: AAB Plantain, false-horn
Collection Code: COOK012
Island: Aitutaki

Notes:
One of two Plantains, False-Horn type. Name means “cow horn”.



Local Name: Tarapuakanio
Classification: AAB Plantain, French
Collection Code: COOK013
Island: Aitutaki

Notes:
One of two Plantains, French type. Name means “goat horn”.



Local Name: Rekuā
Classification: ABBT
Collection Code: COOK017
Island: Rarotonga

Notes:

Very rare, no fruiting plants observed, plant somewhat resembling an ABB Saba type, but with more drooping leaves. Confirmed tetraploid. The name is derived from an ancient warrior chief associated with this plant. A well known chant about the chief and this plant persists today in which it is suggested that this plant produces large bunches with many fruits. Classification suggested by preliminary molecular characterization, potentially similar to ITC0811/PNG170 'Giant Kalapua' based on a previous observation by Jeff Daniells.



Local Name: Titikaveka Red
Classification: AAB Mysore
Collection Code: COOK004
Island: Rarotonga

Notes:

Name was given upon collection based on its location as no local name was known. Similar to standard Mysore types except with extensive red coloration on pseudostem. The only bunches observed were particularly small and weak appearing, though the plants appeared healthy.



Local Name: Meika Initia

Classification: AA hybrid breeding line?

Collection Code: COOK018

Island: Rarotonga

Notes:

Name means “Indian Banana”, which is a name often applied to any small, sweet, foreign-introduced type. Likely a hybrid from a breeding program introduced by an Australian development program in the relatively recent past. Rare, only one plant observed in a home garden.



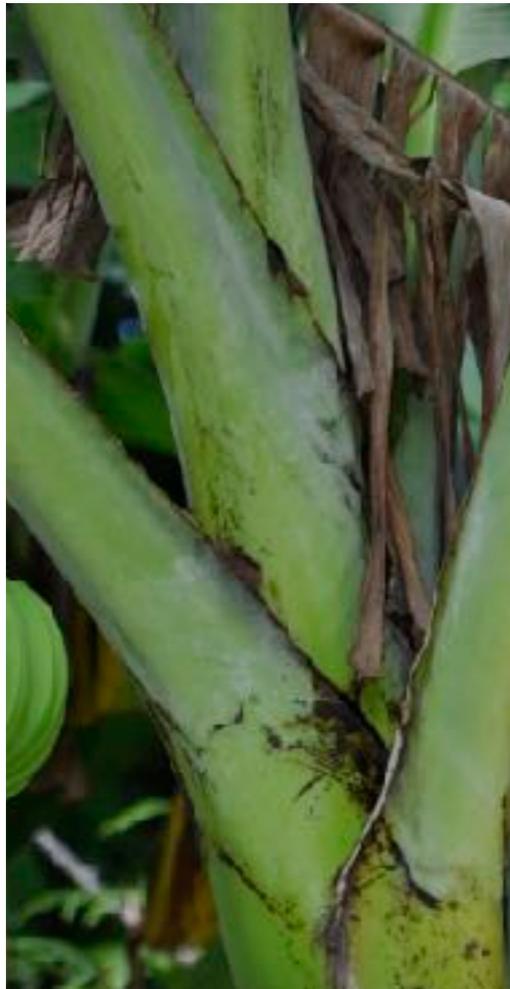
Non-Collected Specimens

Local Name: Kauare

Classification: AAA Cavendish

Notes:

A number of Cavendish variants exist, many are remnants from former commercial export production.



Local Name: unknown
Classification: AAA Red

Notes:
Typical 'Green Red' form of Red, uncommon.



Local Name: unknown
Classification: AAA Red

Notes:
Typical tall Red type.



Local Name: Mario, Ladyfinger
Classification: AAB Pome

Notes:
Typical tall form of Pome, abundant.



Local Name: Mario, Ladyfinger
Classification: AAB Pome

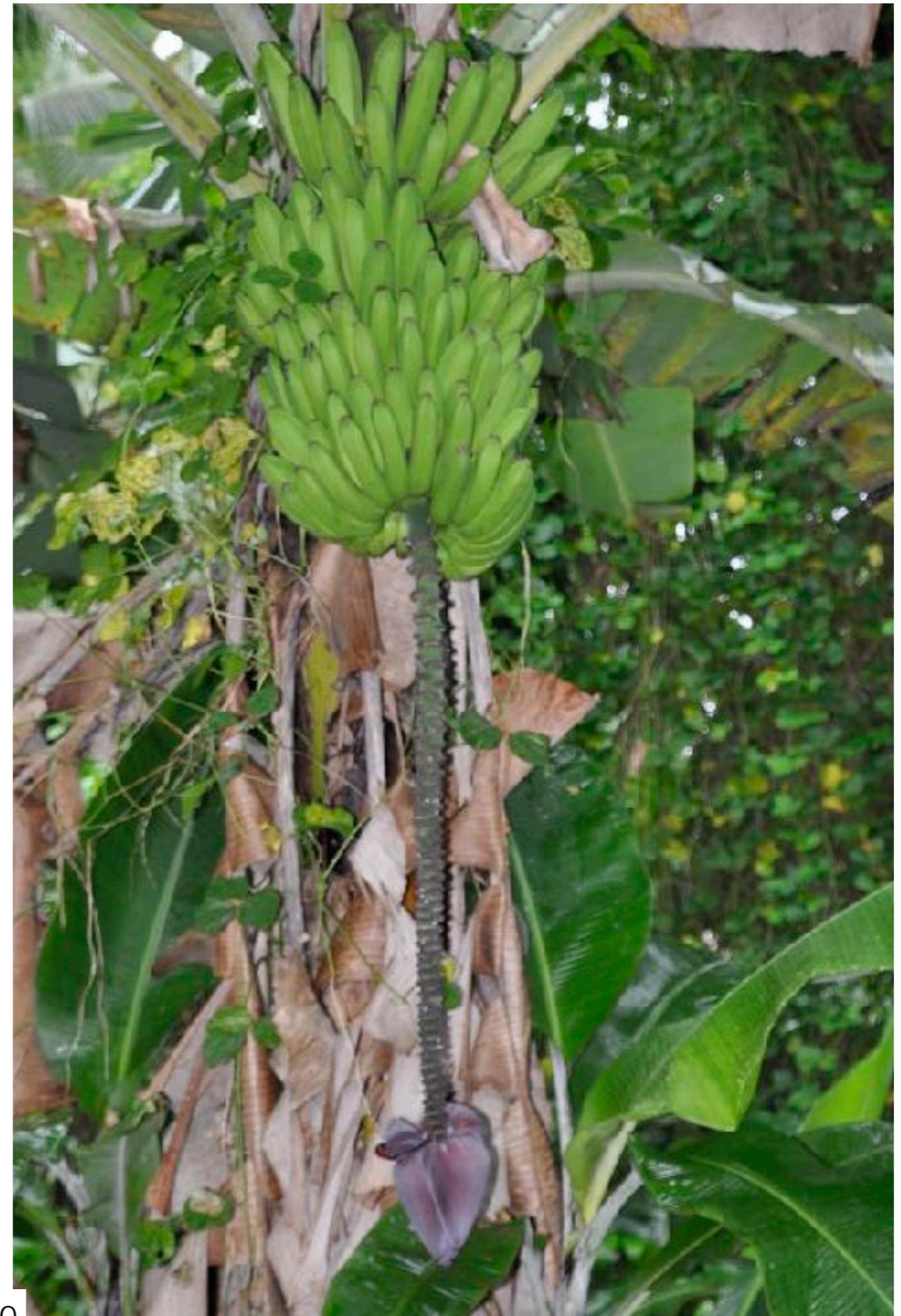
Notes:

Typical dwarf form of Pome, not as common as tall form.



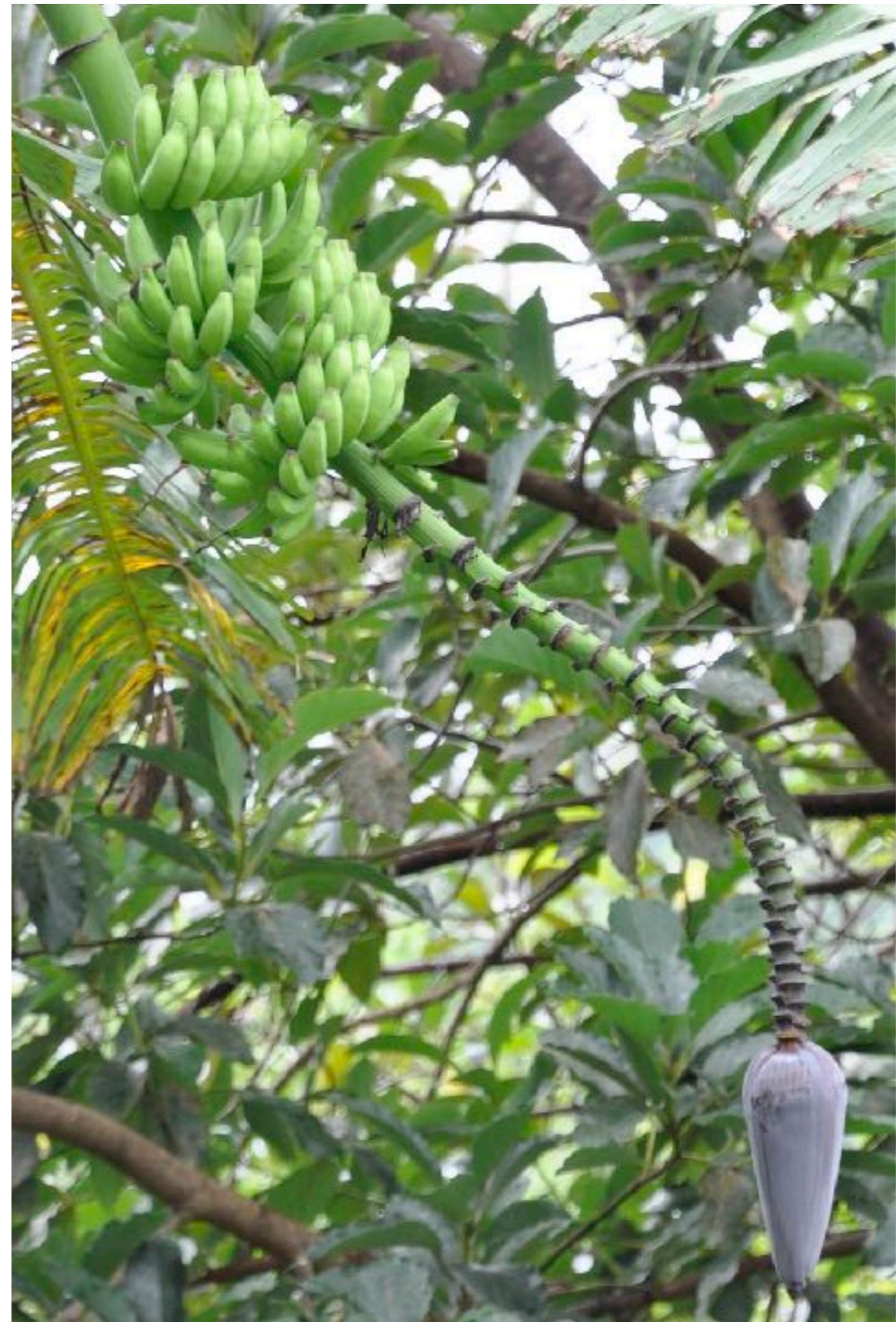
Local Name: Goldfinger
Classification: AAAB hybrid

Notes:
Some off-types with bud and fruit shape variations present.



Local Name: Tiki
Classification: AAB Silk

Notes:
Typical Silk type.



Local Name: Mitiruki
Classification: AAB Mysore

Notes:
Typical Mysore type.



Local Name: unknown

Classification: AAB Maoli-Popo'ulu

Notes:

Likely ITC0210 'Pacific Plantain' introduced in the relatively recent past by an Australian program.



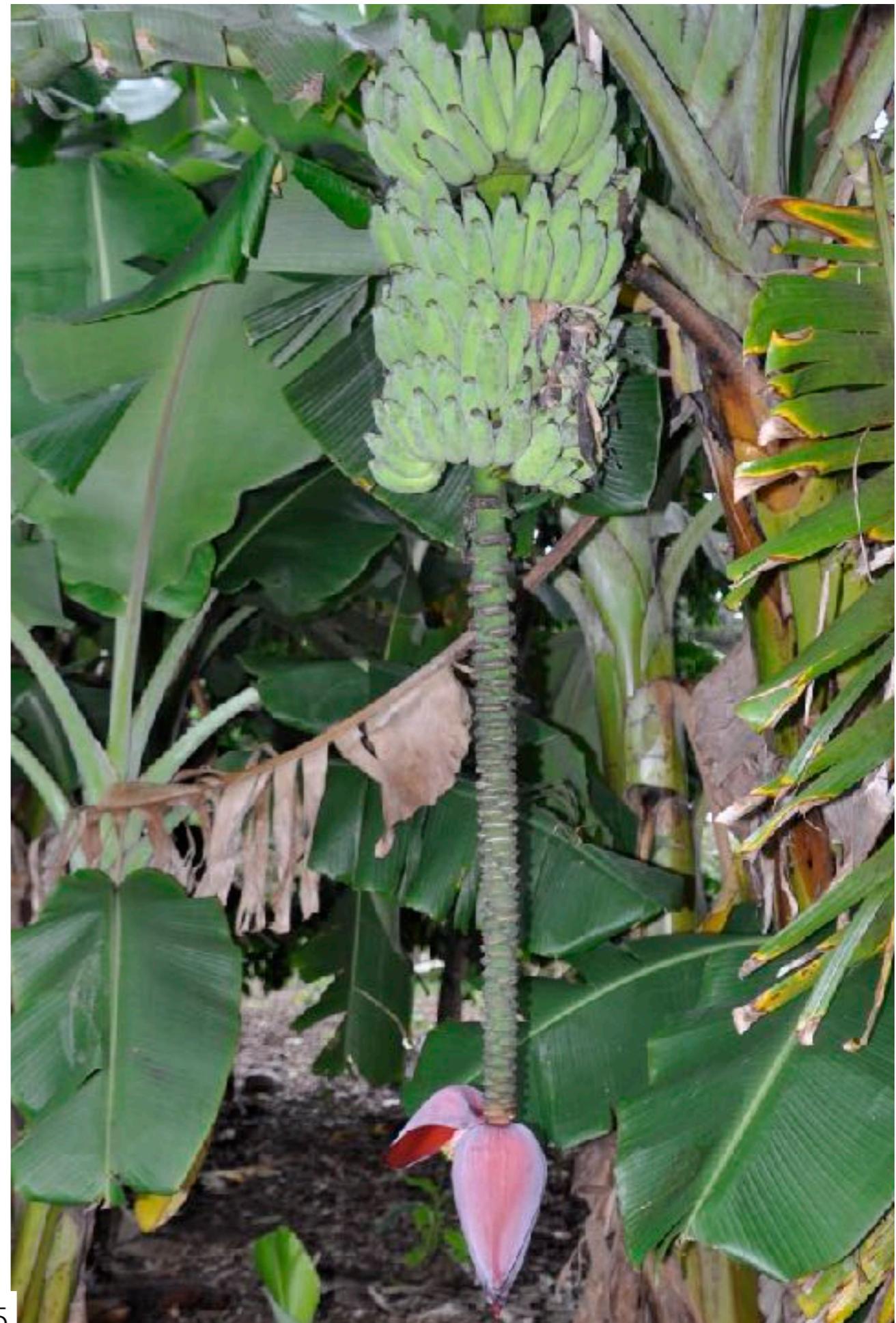
**Local Name: Ladyfinger, Australian Banana,
Australian Mario, Ducasse**
Classification: ABB Pisang Awak

Notes:
Typical tall Pisang Awak type.



Local Name: Ladyfinger, Australian Banana, Ducasse
Classification: ABB Pisang Awak

Notes:
Typical dwarf Pisang Awak type.

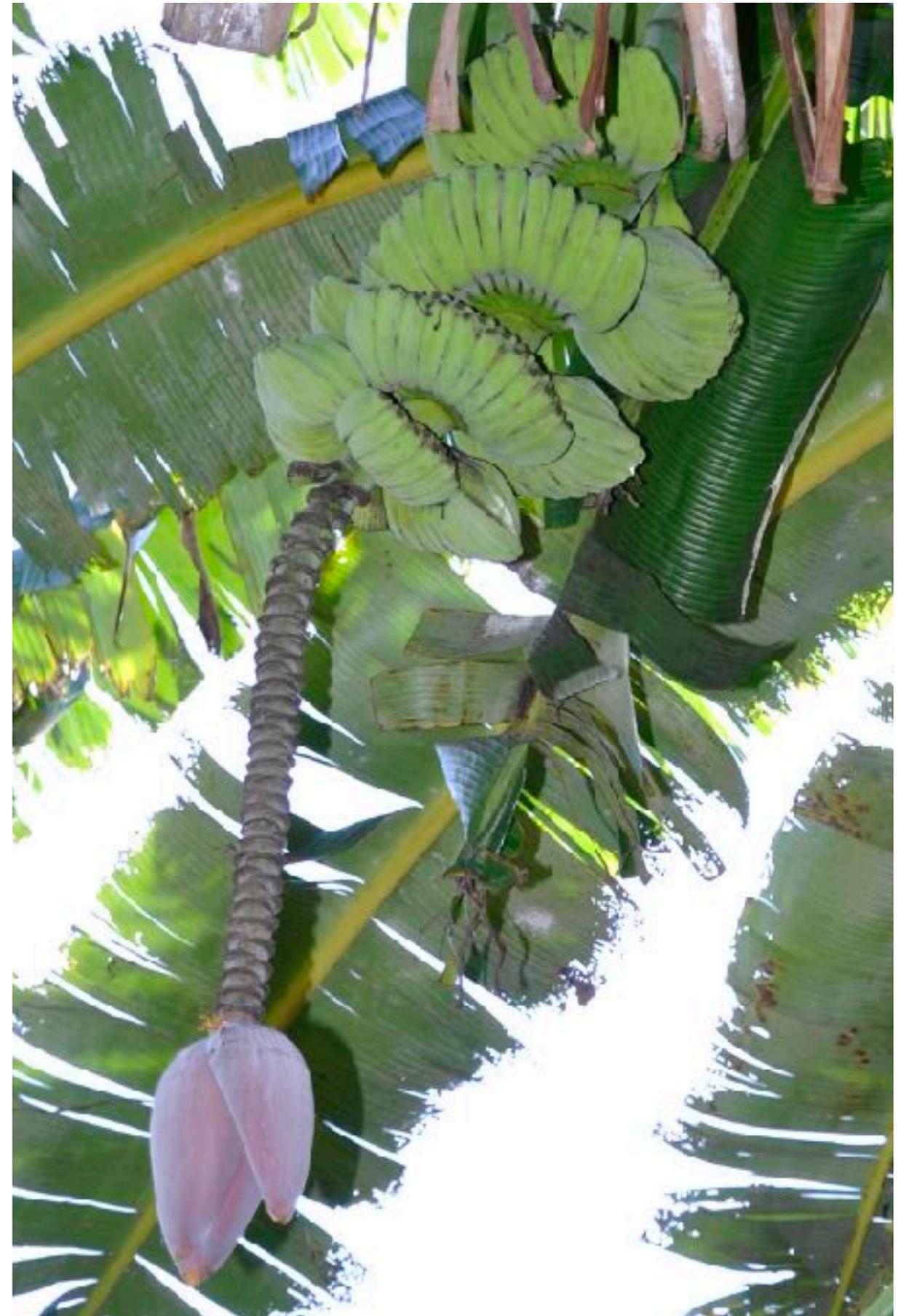


Local Name: Paua

Classification: ABB Saba

Notes:

Typical 'Praying Hands' cultivar of Saba. Only observed in one garden on Aitutaki near to the former garden of a well known collector of exotic plants. Paua means "clamshell".



Local Name: Tarua Matie
Classification: ABB Bluggoe

Notes:
Typical 'Bluggoe' type. Tarua is the name for *Xanthosoma*, and "matie" means "green".



Local Name: Tarua Teatea
Classification: ABB Bluggoe

Notes:
Typical 'Silver Bluggoe' type. Tarua is the name for *Xanthosoma*, and "teatea" means "white".



Local Name: Tarua Teatea
Classification: ABB Ney Mannan

Notes:

Typical 'Ice Cream'/'Blue Java' type. Tarua is the name for *Xanthosoma*, and "teatea" means "white".



All Types of Bananas Observed on Expedition

Status	Island	Code	Local Names	Genome	Subgroup	Morphotype	Notes	Page Number
Collected	Rarotonga	COOK001	Utu Va'airua (assigned name)	Fe'i			Given by Tina Maoate	6
Collected	Rarotonga	COOK002	Utu Marua (assigned name)	Fe'i			Given by Celine Dyer	7
Collected	Rarotonga	COOK003	Utu Anikitao (assigned name)	Fe'i			Given by Celine Dyer	8
Collected	Rarotonga	COOK005	Utu Turoa (assigned name)	Fe'i			Maybe same as COOK001, Given by C. Dyer	9
Collected	Rarotonga	COOK006	Utu Tekou 1 (assigned name)	Fe'i			Maybe same as COOK003	10
Collected	Rarotonga	COOK007	Utu Tekou 2 (assigned name)	Fe'i			Maybe same as COOK003 and COOK006	11
Collected	Aitutaki	COOK011	Ve'i	Fe'i				12
Collected	Aitutaki	COOK008	Mangaro Aumarei, Meika Maori	AAB	Maoli-Popo'ulu	Maoli		13
Collected	Aitutaki	COOK009	Mangaro Torotea, Meika Maori	AAB	Maoli-Popo'ulu	Maoli		14
Collected	Aitutaki	COOK010	Mangaro Manii, Meika Maori	AAB	Maoli-Popo'ulu	Maoli		15
Collected	Rarotonga	COOK014	Akamou	AAB	Maoli-Popo'ulu	Popo'ulu	maybe same as Ta'anga	16
Collected	Rarotonga	COOK016	Ta'anga	AAB	Maoli-Popo'ulu	Popo'ulu	maybe same as Akamou	17
Collected	Mangaia	COOK015	Meika Maori Atetu (assigned name)	AAB	Maoli-Popo'ulu		purple petioles	18
Collected	Aitutaki	COOK012	Puakatoro ("cow horn"), Tarapuakatoro	AAB	Plantain	false-horn		19
Collected	Aitutaki	COOK013	Puakanio ("goat horn"), Tarapuakanio	AAB	Plantain	French		20
Collected	Rarotonga	COOK017	Rekua, Purekua	ABBT?				21
Collected	Rarotonga	COOK004	Titikaveka Red (assigned name)	AAB	Mysore	red		22
Collected	Rarotonga	COOK018	Indian Banana, Meika Initia	AA			likely introduced breeding line	23
Non-collected		N/A	Kuare	AAA	Cavendish	various		25
Non-collected		N/A		AAA	Red	green, tall		26
Non-collected		N/A		AAA	Red	red		27
Non-collected		N/A	Mario, Ladyfinger	AAB	Pome	tall		28
Non-collected		N/A	Mario, Ladyfinger	AAB	Pome	dwarf	said to be introduced from Hawaii	29
Non-collected		N/A	Goldfinger	AAAB			off-types present	30
Non-collected		N/A	Tiki	AAB	Silk			31
Non-collected		N/A	Mitiruki	AAB	Mysore	normal		32
Non-collected		N/A	Meika Maori	AAB	Maoli-Popo'ulu	Maoli	Pacific Plantain	33
Non-collected		N/A	Ladyfinger, Australian Banana, Ducasse	ABB	Pisang Awak	tall		34
Non-collected		N/A	Ladyfinger, Australian Banana, Ducasse	ABB	Pisang Awak	dwarf		35
Non-collected		N/A	Paua ("clam shell")	ABB	Saba	Praying Hands		36
Non-collected		N/A	Tarua Matie	ABB	Bluggoe	normal		37
Non-collected		N/A	Tarua Teatea ("white Tarua")	ABB	Bluggoe	Silver		38
Non-collected		N/A	Tarua Teatea ("white Tarua")	ABB	Ney Mannan	Blue Java		39