Good morning/afternoon everyone

The Solomon Islands is aptly described by one of its tourist slogans as ‘Islands adrift in time’. A destination where time pieces are not so important.

And when I reflected on the bananas I saw there, they fitted the description too – a rich resource, seemingly from another time waiting to come ashore somewhere.
The Solomon Islands are located in the south western Pacific region adjacent to Papua New Guinea.

Visits were made to Kirakira and Manivovo in Makira. Co-author Gabe Sachter-Smith also travelled to Malaita
In the Solomon Islands most of the population live in small villages, clinging to a lifestyle that has barely changed for centuries. Many villages are quite remote with access only by boat or on foot. And on the weather coasts, dangerous seas whipped up by strong south east trade winds greatly limits sea travel.
I travelled to Kirakira on Makira Island to visit the collection made by Dorothy Tamasia which required a 4hr trek including river crossings.
Kastom Gaden Association (KGA) in association with the Solomon Islands Planting Material Network helped set up community-based seed and planting material production/distribution networks.

In 2002 local farmer and volunteer Dorothy Tamasia and support team collected > 100 banana cultivars on the island of Makira. The bulk of these accessions were established at Manivovo Rural Training Centre with the remainder in the highlands west of Kirakira.

In 2007 I visited the 2 collections on Makira to characterise and document the cultivars, collect unique genotypes and make recommendations on a strategy for their optimum conservation and use.

One of the features of Dorothy’s collection were the Fe’i type bananas.
But I was grieved last week by the tragic news of her early death.

I spent just 2 days with Dorothy and her family but I was made so welcome there.

This is Dorothy as I remember her.

She made a difference through her life and has left a lasting legacy.
The Fe’i bananas are quite distinct from other cultivated bananas [Eumusa section] and belong to the separate section, Australimusa in the Musa genus. The people of Makira also recognize this distinction calling them collectively by the name of Toraka whilst other cultivated bananas are known as Huki.

Cavendish [left] compared to Bonubonu

Just a note that there is currently still some debate about whether the section Australimusa should be fused with another section known as the Callimusa.
Fe’i bananas are characterised by their erect and semi-erect bunches and the sap colour which ranges from pink to dark violet.
The late Lois Englberger, who was part of the team I travelled with to the Solomons, was the first (Englberger, 2001) to discover that Fe’i bananas are very rich sources of provitamin A and the fruit samples we collected from Makira were no exception (Englberger et al., 2010).
Before our mission we were unaware of how abundant Fe’i bananas were in Makira.

Fe’i bananas are a highly valued cultural food as indicated by their prominence in this fruit display at the customary *Hora* feasts shown here.

[Point out the Fe’i bunches]
However, what was most surprising was the large diversity in the Fe’i bananas on Makira in addition to their relative abundance. On our missions 9 different Fe’i cultivars were identified.
A quick look at some bunches of the Fe’i types.
Bonubonu one of the more common Fe’i.
Gatagata had the largest fruit
T. Morikera

T. Warowaro

2 more
Suria
And still more
During my mission I collected suckers of 17 unique varieties which included the 9 Fe’i types.
These were to be established in the in vitro collection held in the SPC’s Centre for Pacific Crops and Trees (CePaCT) in Suva, Fiji.

Unfortunately, there was a bad fall at the last hurdle, the suckers I collected took 3 weeks to reach Suva due to a major delay in obtaining the necessary Material Transfer Agreement (MTA) and only 6 accessions survived.
I also encountered a wild species of banana known as ‘Awawe’, which is common in and around the rainforests of Makira. It is a member of the Australimusa section with a subhorizontal bunch, purple sap and is tall growing (>6 m), and has very fibrous pseudostems and leaf petioles/midribs. It is similar to *Musa bukensis* but does not match all the characteristics described by Argent (1976). Notably the male bud of Awawe is green, not “dark purple with some cream at the base”.
Gabe Sachter-Smith also located wild populations on Malaita (called ‘Ba’u Lalao’) with similarities to those on Makira.
It included 1 form with bract retention on the male peduncle below the bunch.
The most likely explanation is that what we have found are just different, previously undescribed forms of *Musa bukensis*.

Further field study is required to determine the full geographical spread of this species and the extent of variability of morphological traits in the population.
The closeness of the Solomon Islands to Papua New Guinea is reflected strongly in the diversity of varieties present. There were many AA diploid and AAA cooking bananas present in Makira typical of the PNG lowlands but still others that were new to me.
There were about 5 AAB Pacific Plantains such as this one being held.
as well as several representatives of the Kalapua subgroup on Makira, which are typical ABB cooking bananas common in Papua New Guinea
More diversity

Francis Wehi, pictured, was the curator of the Manivovo collection
A variegated form
Altogether the I saw about 64 different varieties on Makira during my visit, which have been listed and tentatively classified.
Catalogues showing photographs of the diversity we encountered in both missions have been prepared and are available from Musalit, the online bibliographical database on bananas managed by Bioversity International.

This catalogue contains photos of 57 different varieties
And Gabe’s contains 40 varieties
The collections we visited in Makira and Malaita can be described as ‘community based conservation sites’. The community sites provide local points of focus for banana variety demonstration, utilization and distribution. Community involvement in conserving traditional germplasm in this way also reconnects cultural traditions to enhance utilization and peoples’ health and wellbeing. The Solomon Islands Planting Material Network also believes that farmers are better placed than research institutions or government to make such diversity collections as they are more accountable and can ensure that there are real practical benefits to farmers. These local conservation sites linked together create a network which helps to raise awareness as to the diversity that exists and the importance of that diversity.

In many countries in the Pacific, and the Solomon Islands is no exception, communities and governments are being challenged by increasing rates of Non-communicable diseases (NCDs), largely due to the over-consumption of nutritionally-poor food, often imported. Community-based conservation can also serve to raise awareness as to the importance of diversity in diet; the
Whether in regional or community conservation sites, knowledge of variety characterization methods is essential for description and identification purposes helping to ensure collections remain manageable by eliminating duplicates. Subsequent to my travel to the Solomons a 3-day training workshop was held in July 2008 at Qld DAFF’s South Johnstone Research Station (Daniells et al., 2009) at which 22 curators and managers from 14 Pacific Island countries received training in characterization, pest and disease identification and general germplasm collection management. Gabe Sachter-Smith also provided on-site training in characterization for curators of community based collections on both Makira and Malaita unable to participate in the training provided in north Queensland.
Community based sites have their place but a collection at another level is required to evaluate and classify the diversity of a region. National germplasm collections in the Pacific can be problematic because of lack of resources, frequent turnover of staff and the challenge of characterizing varieties maintained in different collections and therefore environments. So well maintained field collections and associated *in vitro* collections are unrealistic for many countries. Therefore one regional field collection in a location free of major viruses is an attractive option for thoroughly characterizing, classifying and comprehensively evaluating the genetic resource. This has subsequently been instigated in Tahiti, French Polynesia under the care of scientist and curator Maurice Wong, and will greatly assist in properly appreciating and utilizing the rich diversity of the Pacific.

However, most of the unique diversity of the Solomon Islands still remains to be included in such a collection.
Sharing of diversity once it has been well-characterized is also important and this function can be performed by a regional or international *in vitro* collection, assuming virus testing can be effectively carried out.
CONCLUSION
Further collecting and study/evaluation is required of the rich diversity which we have identified in the Solomon Islands, to promote its appreciation and potential utilisation to meet the challenges and opportunities ahead.