Supplementary Material

Reassessing banana phylogeny and organelle inheritance modes using genome skim data

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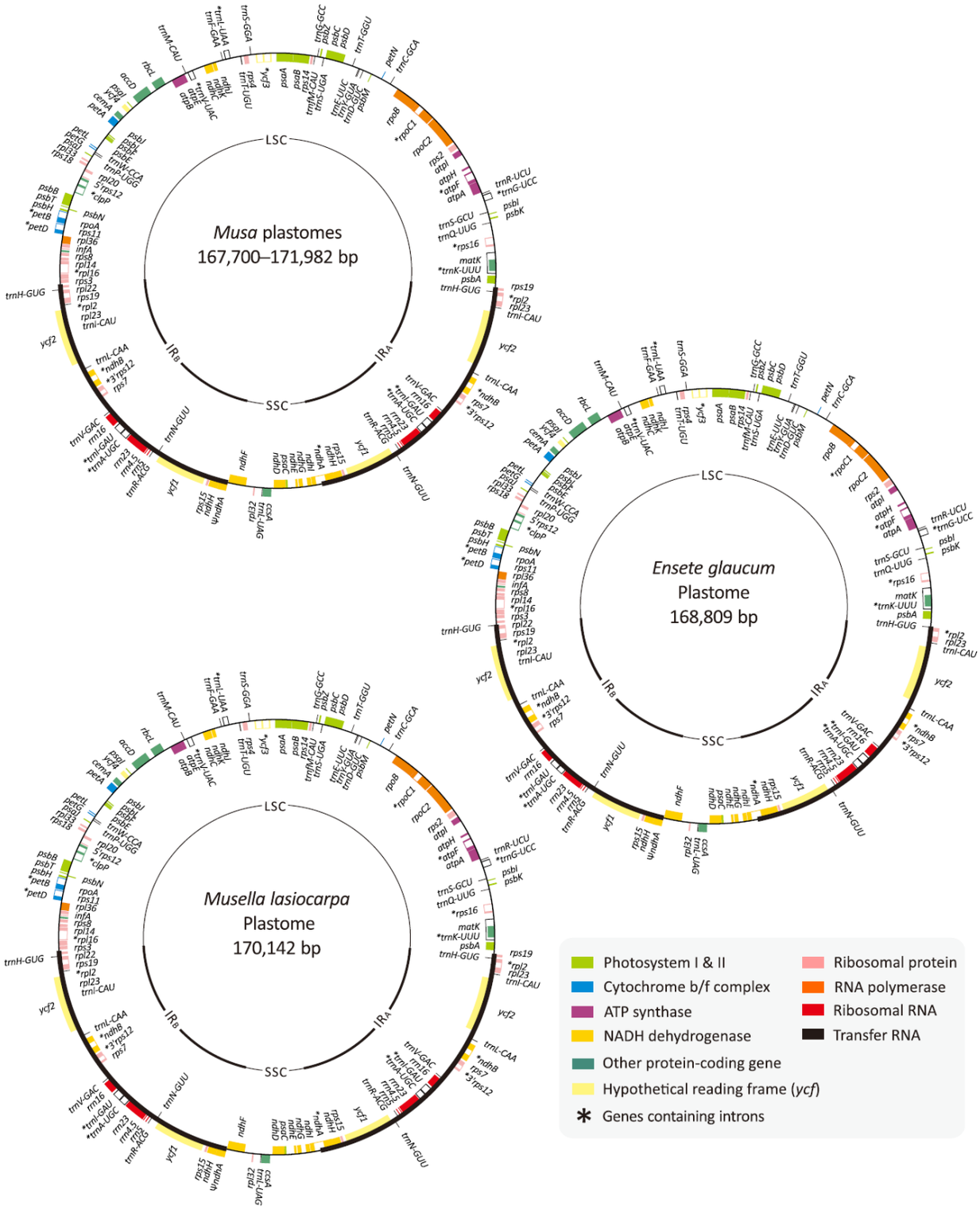
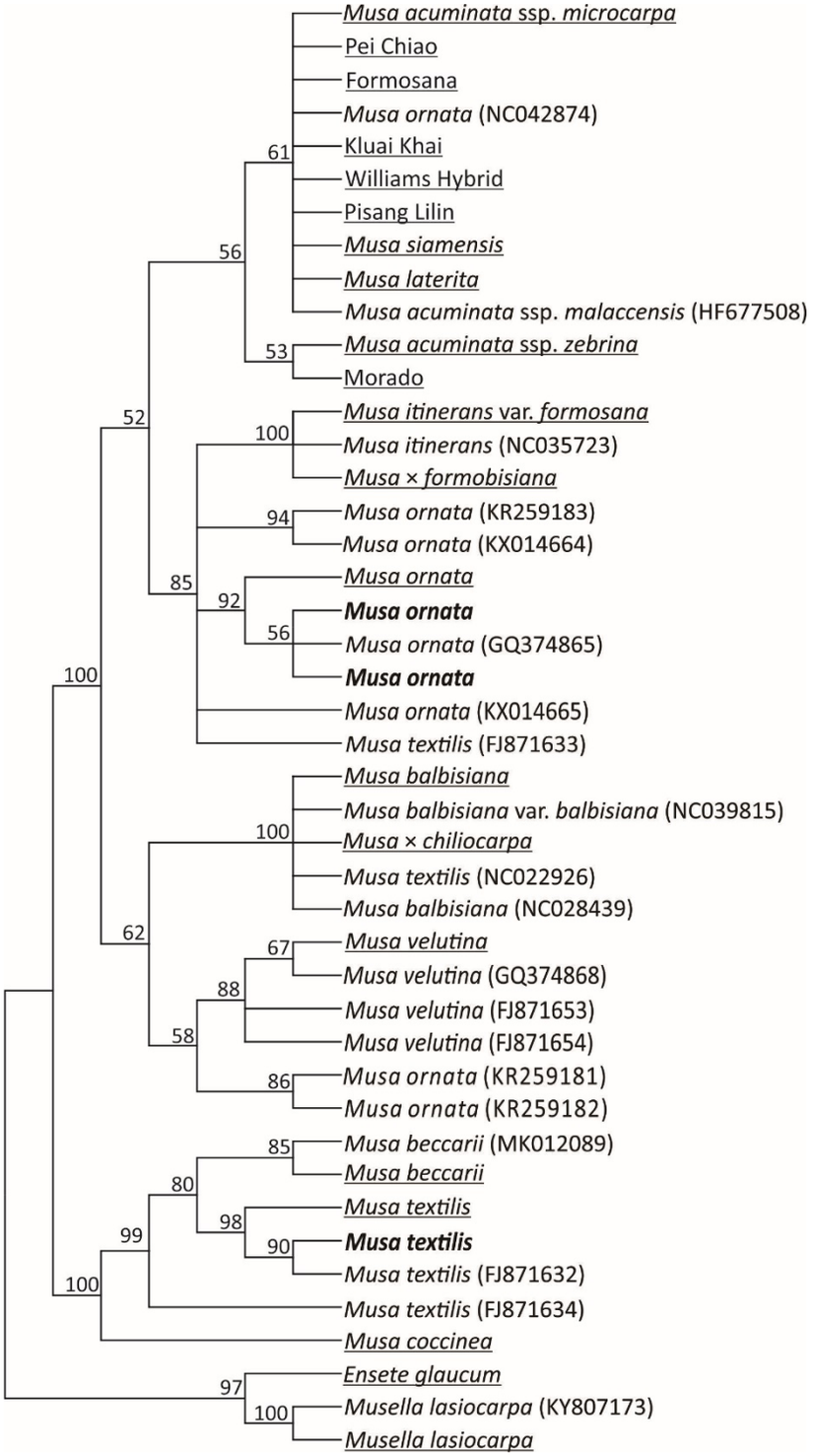
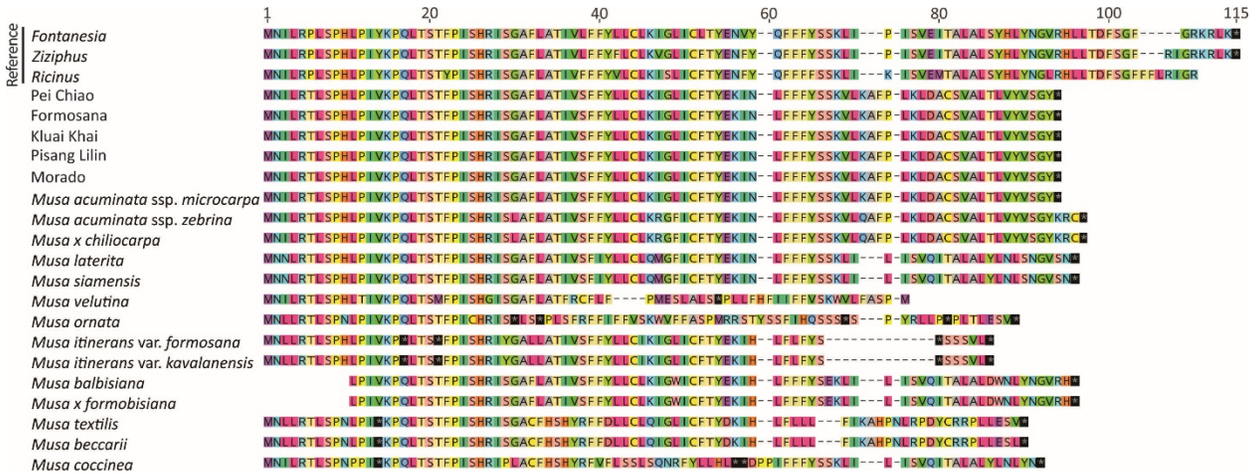


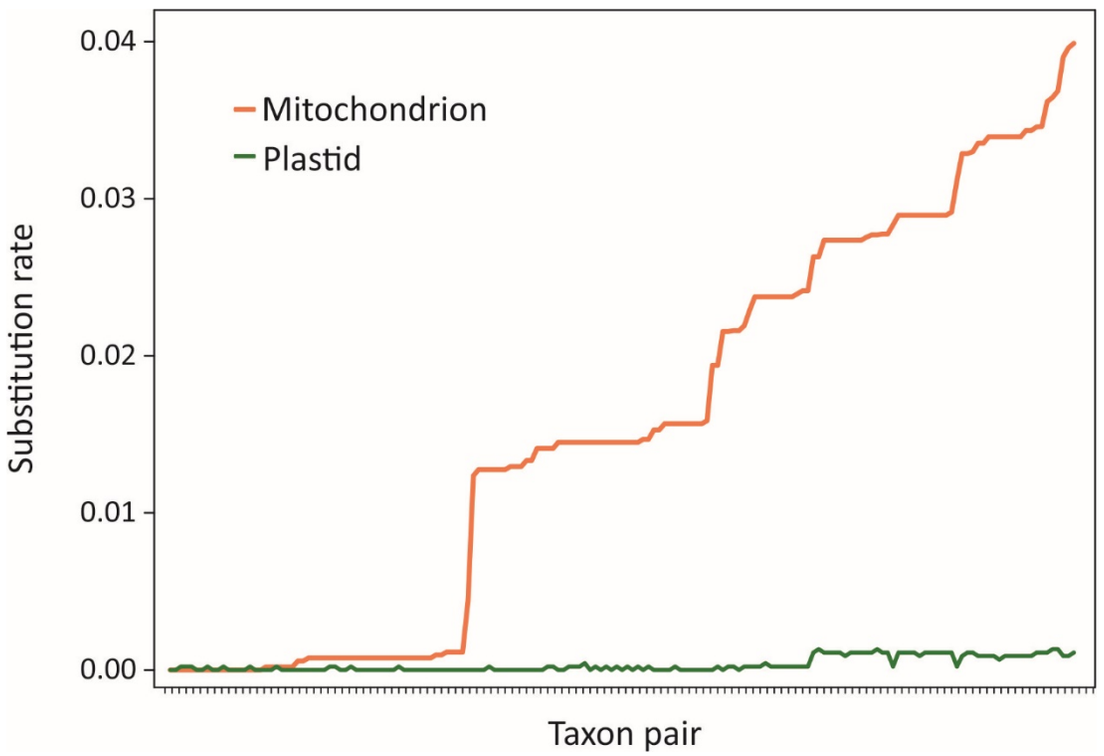
Supplementary Figure S1. *Musa*, *Ensete*, and *Musella* plastome maps. Genes inside and outside the outermost circle are transcribed clockwise and counterclockwise, respectively. IR, inverted repeat; LSC, large single-copy region; SSC, small single-copy region.



Supplementary Figure S2. An ML tree inferred from *matK* sequences. The underlined and bolded taxa are accessions whose plastomes and *matK* genes are sequenced in this study. Publicly available data retrieved from GenBank are labeled with their accession numbers within parentheses. Values along branches are bootstrap supports estimated from 1,000 replicates.



Supplementary Figure S3. An amino acid alignment of mitochondrial *sdh3* genes.



Supplementary Figure S4. Comparing nucleotide substitution rates of organellar rRNAs in bananas. A paired t-test indicates significantly elevated mitochondrial nucleotide substitution rate compared to plastids after the Bonferroni correction ($P = 2.21 \times 10^{-34}$). Taxon pairs were sorted based on the mitochondrial rate from the slowest to the fastest.

Supplementary Table S1. Summary of the sequencing amount and targeting scaffolds for the 21 sequenced bananas

Species/common name	No. of reads (million)	No. of bases (Gb)	Targeting scaffold		
			45S rDNA	Plastid	Mitochondrion
Pei Chiao	14.45	2.18	1/6.8[1]	1/170.3	29/1,380.4
Formosana	13.89	2.09	1/6.8	1/170.3	22/1,598.8
Kluai Khai	14.14	2.13	1/6.8	1/170.0	28/1,367.2
Morado	14.52	2.19	1/6.8	1/169.7	27/1,197.6
Pisang Lilin	14.99	2.25	1/6.8	1/170.6	28/1,842.5
Williams Hybrid	14.54	2.19	1/6.8	1/169.9	25/1,404.8
Musa acuminata ssp. *zebrina*	14.71	2.21	1/6.8	1/169.9	29/1,845.8
Musa acuminata ssp. *microcarpa*	13.86	2.06	1/6.8	1/170.5	25/1,890.7
Musa balbisiana	14.59	2.19	1/6.8	1/169.9	17/2,244.7
Musa itinerans var. *formosana*	14.54	2.19	1/6.8	1/171.5	26/2,545.7
Musa × *chiliocarpa*	13.46	2.03	1/6.8	1/171.0	22/1,722.6
Musa × *formobisiana*	14.66	2.01	1/6.8	1/172.0	24/1,977.8
Musa beccarii	13.77	2.07	1/6.5	1/168.2	26/694.8
Musa coccinea	15.07	2.27	1/6.8	1/167.7	25/2,115.4
Musa laterita	14.11	2.13	1/6.8	1/170.1	26/2,369.5
Musa ornata	15.67	2.34	1/6.8	1/170.3	26/3,104.4
Musa velutina	14.35	2.16	1/6.8	1/170.1	26/1,458.6
Musa siamensis	12.71	1.87	1/6.8	1/170.3	27/2,243.4
Musa textilis	14.46	2.14	1/6.8	1/168.2	23/1,633.3
Ensete glaucum	15.42	2.31	1/6.8	1/168.8	32/514.1
Musella lasiocarpa	15.39	2.30	1/6.8	1/170.1	21/2,340.2

[1]No. of scaffolds/total length of scaffolds (Kb)

Supplementary Table S2. Analyzed sequences and their GenBank accession numbers in this study

Species/common name	Collection	GenBank accession number			SRA accession number
		45S rDNA	Plastome	Mitochondrial gene	
Pei Chiao	This study	LC610764	LC609626	LC610986–LC611027	SRX11421497
Formosana	This study	LC610757	LC603789	LC611028–LC611069	SRX11421498
Kluai Khai	This study	LC610760	LC609620	LC612017–LC612057	SRX11421502
Morado	This study	LC610762	LC609770	LC611112–LC611153	SRX11421499
Pisang Lilin	This study	LC610765	LC609627	LC611070–LC611111	SRX11421500
Williams Hybrid	This study	LC610769	LC609628	LC612058–LC612098	SRX11421496
Musa acuminata ssp. *banksii*	Publicly available	n.a.	MK210631	Banana Genome Hub (Genome assembly v2)	n.a.
Musa acuminata ssp. *malaccensis*	Publicly available	n.a.	HF677508	Banana Genome Hub (Genome assembly v2)	n.a.
Musa acuminata ssp. *zebrina*	This study	LC610751	LC609622	LC610944–LC610985	SRX11421501
Musa acuminata ssp. *microcarpa*	This study	LC610750	LC609621	LC610902–LC610943	SRX11421490
Musa balbisiana	Publicly available	n.a.	NC028439	n.a.	n.a.
Musa balbisiana var. balbisiana	Publicly available	n.a.	NC039815	n.a.	n.a.
Musa balbisiana	This study	LC610752	LC609623	LC611772–LC611812	SRX11421503
Musa itinerans	Publicly available	n.a.	NC035723	n.a.	n.a.
Musa itinerans var. *formosana*	This study	LC610758	LC609773	LC611362–LC611402	SRX11421508
Musa × *chiliocarpa*	This study	LC610754	LC609625	LC611154–LC611195	SRX11421505
Musa × *formobisiana*	This study	LC610756	LC609772	LC611813–LC611852	SRX11421507
Musa beccarii	Publicly available	n.a.	MK012089	n.a.	n.a.
Musa beccarii	This study	LC610753	LC609624	LC611894–LC611934	SRX11421504
Musa coccinea	This study	LC610755	LC609771	LC611935–LC611975	SRX11421506
Musa laterita	This study	LC610761	LC609775	LC611196–LC611237	SRX11421509
Musa ornata	This study	LC610763	LC609776	LC611280–LC611320	SRX11421491
Musa ornata	Publicly available	n.a.	NC042874	n.a.	n.a.
Musa velutina	This study	LC610768	LC609778	LC611321–LC611361	SRX11421494
Musa siamensis	This study	LC610766	LC610771	LC611238–LC611279	SRX11421492
Musa textilis	Publicly available	n.a.	NC022926	n.a.	n.a.
Musa textilis	This study	LC610767	LC609777	LC611853–LC611893	SRX11421493
Ensete glaucum	This study	LC610749	LC610748	LC612099–LC612134	SRX11421489
Musella lasiocarpa	Publicly available	n.a.	KY807173	n.a.	n.a.
Musella lasiocarpa	This study	LC610770	LC610747	LC611976–LC612016	SRX11421495
Heliconia collinsiana	Publicly available	n.a.	JX088660	n.a.	n.a.
Ravenala madagascariensis	Publicly available	n.a.	NC022927	n.a.	n.a.

n.a.: Not available