

# Supplementary material

Manuscript title: Mangrove propagules are limited in their capacity to disperse across long distances

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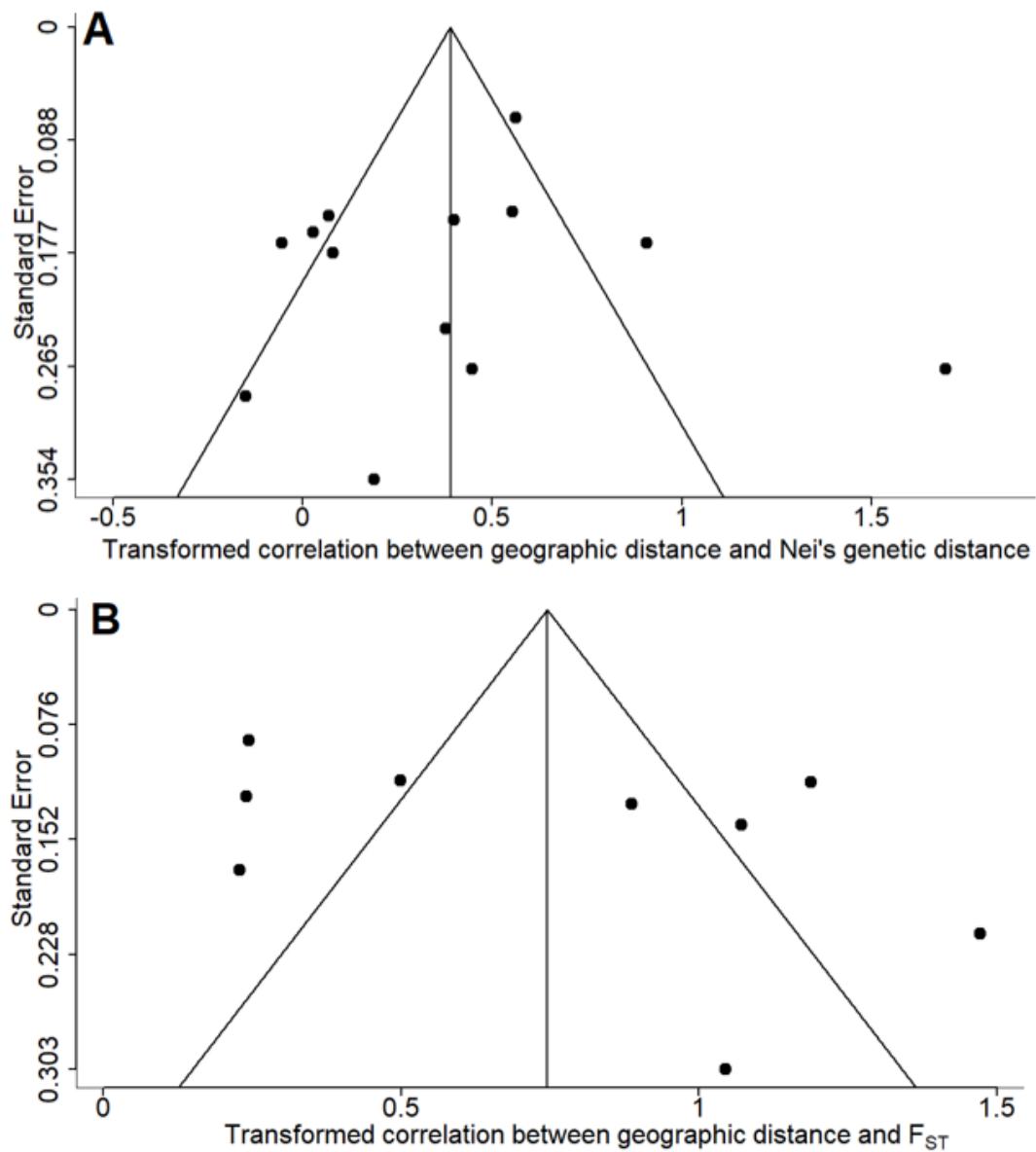


Figure S1. Funnel plots for Fisher's z transformed correlation coefficient (x axis) against study weight (standard error on a reverse scale, y axis) for (A) Nei's meta-analysis and (B)  $F_{ST}$  meta-analysis.

Table S1. Studies included in the meta-analysis of the effect of geographic distance on (A) Nei's genetic distance (B) genetic distance measured by  $F_{ST}$ . The effect size is Pearson's  $r$  value, and the sample weight is according to the formula developed by Reed and Frankham 2003 (see methods). Taxon and genetic marker are moderator variables. For the genetic markers AFLP refers to Amplified Fragment Length Polymorphism and ISSR refers to Inter Simple Sequence Repeats. The full citations for the studies including the DOIs can be found in the reference list.

Study ID	Citation	Effect size	Number of individuals	Number of populations	Sample weight	Taxon	Genetic marker	Region
<b>(A) Nei's genetic distance:</b>								
1	Azman et al. 2020	0.51	1,120	39	204	<i>Rhizophora apiculata</i>	Microsatellites	Malaysia
2	Cisneros-de la Cruz et al. 2018	0.72	130	13	38	<i>Rhizophora mangle</i>	Microsatellites	Yucatan peninsula
3	Albrecht et al. 2013	-0.05	130	13	38	<i>Rhizophora mangle</i>	AFLP	Florida and Caribbean
4	Wu et al. 2012	0.03	220	10	42	<i>Derris trifoliata</i>	ISSR	Southern China (mainland)
5	Wu et al. 2012	0.36	142	5	21	<i>Derris trifoliata</i>	ISSR	Southern China (Hainan Island)
6	Deng et al. 2009	0.38	202	13	47	<i>Aegiceras corniculatum</i>	AFLP	South China, Malay Peninsula, Sri

								Lanka, and North Australia
7	Jian & Shi 2009	0.50	234	13	51	<i>Heritiera littoralis</i>	AFLP	China, Japan and Thailand
8	Arbeláez-Cortes et al. 2007	0.42	92	5	17	<i>Rhizophora mangle</i>	Microsatellites	Colombian Pacific
9	Castillo-Cárdenas et al. 2005	-0.15	57	6	15	<i>Pelluciera rhizophorae</i>	AFLP	Colombian Pacific
10	Cerón-Souza et al. 2005	0.19	56	4	11	<i>Avicennia germinans</i>	AFLP	Colombian Pacific
11	Li & Chen 2004	0.93	100	5	17	<i>Sonneratia alba</i>	ISSR	Hainan Island, China
12	Núñez-Farfán et al. 2002	0.07	400	8	49	<i>Rhizophora mangle</i>	Allozymes	Atlantic coast of Mexico
13	Núñez-Farfán et al. 2002	0.08	300	6	35	<i>Rhizophora mangle</i>	Allozymes	Pacific coast of Mexico
<b>(B) Wright's <math>F_{ST}</math>:</b>								
1	Triest et al. 2021	0.46	670	12	82	<i>Avicennia marina</i>	Microsatellites	Kenya and Tanzania

2	Da Silva et al. 2021	0.90	77	10	25	<i>Avicennia saurian</i>	SNP	South American coast
3	Da Silva et al. 2021	0.78	48	6	14	<i>Avicennia germinans</i>	SNP	South American coast
4	Al-Qthanin & Alharbi 2020	0.23	193	9	37	<i>Avicennia marina</i>	Microsatellites	Farasan archipelago, the Red Sea, Saudi Arabia
5	Triest et al. 2020	0.79	457	8	52	<i>Avicennia marina</i>	Microsatellites	Gazi Bay, Kenya
6	Binks et al. 2019	0.83	336	21	80	<i>Avicennia marina</i>	SNP	Western Australia
7	Guo et al. 2018	0.24	418	47	137	<i>Excoecaria agallocha</i>	Chloroplast DNA	Indo-West Pacific
8	Wee et al. 2014	0.24	432	13	69	<i>Rhizophora mucronata</i>	Microsatellites	Southeast Asia
9	Yahya et al. 2014	0.71	312	15	64	<i>Rhizophora apiculata</i>	Microsatellites	Greater Sunda Islands of Indonesia



Figure S2: Map of locations of study sites included in the meta-analysis.

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