

Additional file 1

Table S1 Amplification characteristics of single (S) and multiplex (M) reactions and the respective microsatellite loci used in *T. longipes*

Reaction	Annealing temperature	Loci
S1	65°C (-1°C) x 35 circles	Js22 ^a
S2	68°C (-1°C) x 9 circles, 58°C x 26 circles	TB14 ^b
M1	58°C x 35 circles	Js183 ^a , TB18 ^b
M2	56°C x 35 circles	Js188 ^a , TB8 ^b
M3	64°C (-1°C) x 5 circles, 58°C x 30 circles	TB15 ^b , TB16 ^b

^aMunshi-South and Wilkinson 2006, ^bLiu and Yao

Table S2 Upper table: Genetic ([F_{ST}-values], upper matrix) and geographic (Euclidean) distances ([km], bottom matrix) among forest sites.

Lower table: Mean relatedness (*r*, upper matrix) and geographic (Euclidean) distances ([km], bottom matrix) among and within forest sites.

<i>Distances</i> [km]/F _{ST}	NA	NB	ND	SE	SF	SG
NA	-	0.0158	0.0040	0.0438**	0.0396**	0.0475***
NB	9.71	-	0.0235**	0.0544***	0.0569***	0.0497***
ND	22.36	15.51	-	0.0847***	0.0732***	0.0680***
SE	4.20	7.02	21.78	-	0.0239*	0.0440***
SF	8.56	1.66	16.67	5.92	-	0.0381***
SG	13.58	4.23	11.61	11.58	5.74	-

<i>Distance</i> [km]/ <i>r</i>	NA	NB	ND	SE	SF	SG	Within sites
NA	-	-0.0256	0.0532	-0.0323	0.0118	-0.0092	0.0490
NB	9.71	-	-0.0222	-0.1027	-0.0562	-0.0577	-0.0253
ND	22.36	15.51	-	-0.1054	-0.0463	-0.0387	0.0712
SE	4.20	7.02	21.78	-	0.0294	0.0049	0.0640
SF	8.56	1.66	16.67	5.92	-	0.0488	0.1184
SG	13.58	4.23	11.61	11.58	5.74	-	0.1140

* ≤ 0.05, ** ≤ 0.01, *** ≤ 0.001

Table S3 Results from MWU test (relatedness (r) on the northern and southern riverside, and relatedness (r), interindividual distances of related dyads ($r \geq 0.25$), $mAlc$ in males and females) or Levene's test ($vAlc$ in males and females). For each sample set tests were conducted for the whole sets and for within and among forest site/sampling location comparisons. Significant differences are in bold

North vs South		ALL		Within forest sites		Among forest sites	
MWU Test	Z	p	Z	p	Z	p	
r	-7.2962	< 0.001	-6.0751	< 0.001	-4.1245	< 0.001	

Males vs Females		ALL		Within sampling locations		Among sampling locations	
MWU Test	Z	p	Z	p	Z	p	
r	-3.1440	0.002	0.4100	0.682	-3.0987	0.002	
distance among related dyads	-2.9150	0.004	0.0704	0.944	-3.2379	0.0012	
$mAlc$	-0.0618	0.953					

Males vs Females		ALL	
Levene's Test	F	p	
$vAlc$	9.6273	0.002	

Table S4 Relative proportion of individuals per site and riverside, respectively, which were assigned to one of the clusters under $k = 2$ ($\text{LnP}(D)$: -3112.2), with a probability of $q > 80\%$

	Cluster I (n = 60) [%]	Cluster II (n = 43) [%]
NA	81.82	9.09
NB	100.00	0.00
NC	100.00	0.00
ND	94.12	0.00
<i>North</i>	<i>94.12</i>	<i>1.96</i>
SE	9.09	81.82
SF	0.00	80.95
SG	27.59	55.17
SI	27.59	55.17
<i>South</i>	<i>18.46</i>	<i>64.62</i>

Additional file 2

Table S5 *Cytochrome b* haplotypes in *T. longipes* (n = 60) and their spatial distribution (upstream → downstream) along the northern (NA – ND) and southern (SE – SI) riverside

Haplotype	Haplotype frequency																Accession No.
	Total	NA ₁	NA ₂	NB ₁	NB ₂	NC ₁	NC ₄	ND ₁	ND ₂	ND ₃	SE ₁	SE ₂	S _F	SG ₁	SG ₂	SI	
TI 1	13	-	-	-	-	1	-	-	-	-	1	1	3	5	2	-	MK111987
TI 2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	MK111988
TI 3	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	MK111989
TI 4	2	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	MK111990
TI 5	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	MK111991
TI 6	14	-	-	-	-	-	-	-	-	-	2	1	2	8	1	-	MK111992
TI 7	7	1	-	-	1	-	1	1	1	2	-	-	-	-	-	-	MK111993
TI 8	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	MK111994
TI 9	4	-	-	-	-	-	-	2	-	1	-	-	1	-	-	-	MK111995
TI 10	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	MK111996
TI 11	5	-	-	3	1	-	-	-	-	1	-	-	-	-	-	-	MK111997
TI 12	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
TI 13	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
TI 14	3	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	

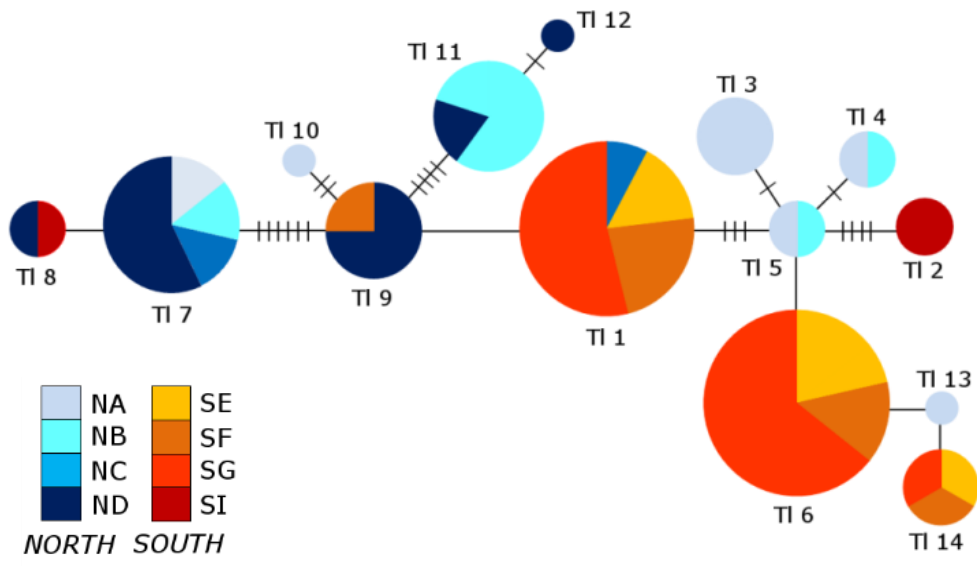


Figure S1: Haplotype network based on *cyt b* sequences

Additional file 3

Table S6 Home range area, the maximum (*D max*) and minimum (*D min*) home range diameter for the two *T. longipes* observed with the triangulation method

Sex	Number of individuals	Area [ha]	D max [m]	D min [m]
Male	1	15.6	621.43	305.86
Female	1	13.4	675.71	264.23

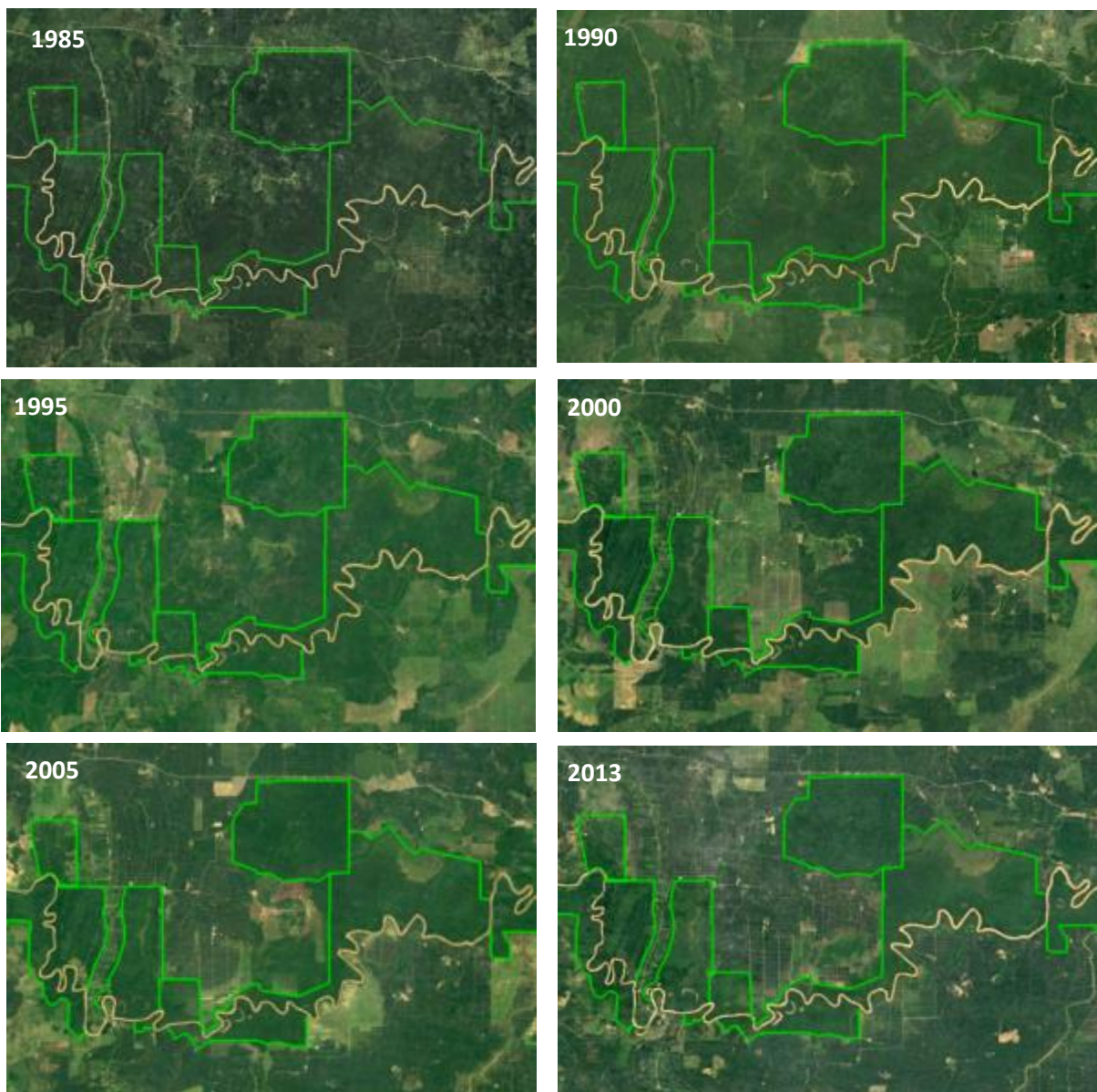


Figure S2 Landscape changes along the Kinabatangan River between 1985 and time of study (2013). Study sites are marked with green lines (Pictures: Google Earth Pro V 7.3.2, 12/1985 – 12/2013, Kinabatangan River, lat.: 5.465153° long.: 118.071165°. [01/2020])