

Supplementary material

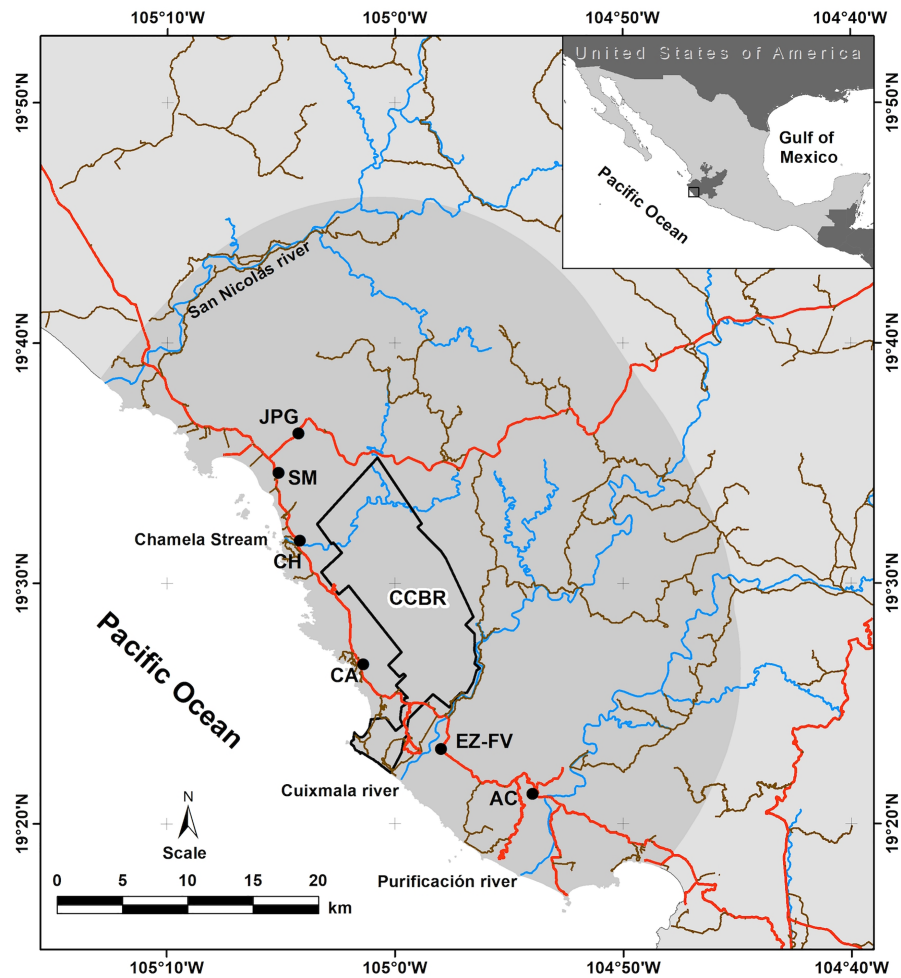


Figure S1. Location of the study area which includes the Chamela-Cuixmala Biosphere Reserve (CCBR; black polygon) plus a 20 km buffer including the villages of Juan Gil Preciado (JGP), San Mateo (SM), Chamela (CH), Careyes (CA), Emiliano Zapata-Francisco Villa (EZ-FV) and Agua Caliente (AC). Principal rivers (blue lines), primary (red lines) and secondary roads (brown lines) are shown.

Table S1. Least cost path distances calculated for pairs of patches with suitable habitat for *T.*

canescens. ED calculates the distance in a straight line, measured in meters. WDC calculates the distance to the nearest origin for each cell, minimizing the specified cost in a cost area, measured in meters. LCP calculates the least cost path from an origin to a destination, minimizing the specified cost in a cost area.

Patch 1	Patch 2	Euclidean distance (ED m)	Weighted distance cost (WDC m)	Least cost path (LCP m)	WDC:EuCD	WDC:LCP
1	32	32	1020	60	31.88	17
2	35	221	5255.88	422	23.78	12.45
2	14	1265	16704.06	1660	13.2	10.06
3	12	13	2190	60	168.46	36.5
3	38	30	2430	60	81	40.5
3	5	1209	21164.91	1485	17.51	14.25
4	35	216	17985	240	83.26	74.94
5	12	769	23767.6	896	30.91	26.53
5	38	1316	22995.14	1521	17.47	15.12
6	20	24	2160	60	90	36
6	37	25	1320	60	52.8	22
7	36	36	2086.25	102	57.95	20.45
7	30	1044	19614.03	1716	18.79	11.43
8	35	14	1020	60	72.86	17
9	37	20	1020	60	51	17
9	38	21	2160	60	102.86	36
9	25	67	5700.55	102	85.08	55.89
10	24	19	1320	60	69.47	22
10	33	982	27525.43	1324	28.03	20.79
11	15	29	2160	60	74.48	36
11	37	23	2565	60	111.52	42.75
11	21	1059	37908.25	1398	35.8	27.12
13	29	7	1485	60	212.14	24.75
13	17	65	5520.55	102	84.93	54.12
13	36	143	3466.17	217	24.24	15.97
14	35	33	990	60	30	16.5
15	37	28	2160	60	77.14	36
16	38	33	2160	60	65.45	36
17	36	72	2518.42	114	34.98	22.09
17	29	1079	22222.49	1226	20.6	18.13
17	19	1263	29271.42	1473	23.18	19.87
18	33	8	2385	60	298.13	39.75
18	38	32	1785	60	55.78	29.75
19	27	546	22212.16	1488	40.68	14.93
19	29	686	22456.09	1550	32.73	14.49
20	24	14	1320	60	94.29	22
20	37	66	4325.88	114	65.54	37.95
21	23	10	1188.82	72	118.88	16.51
22	30	30	2160	60	72	36
22	28	568	36204.36	741	63.74	48.86
23	30	22	2250	60	102.27	37.5
23	36	17	2160	60	127.06	36
24	37	27	2160	60	80	36
25	37	17	1050	60	61.76	17.5
25	38	31	2843.45	72	91.72	39.49
25	33	375	8627.79	686	23.01	12.58
26	37	39	1590	60	40.77	26.5

26	29	39	1655.51	72	42.45	22.99
27	35	116	5869.04	199	50.6	29.49
28	34	18	2160	60	120	36
29	37	78	3140.44	114	40.26	27.55
29	36	183	6107.53	199	33.37	30.69
30	36	18	2190	60	121.67	36.5
31	35	26	1261.25	72	48.51	17.52
31	38	119	7229.07	386	60.75	18.73
32	34	20	1050	60	52.5	17.5
33	37	49	1231.25	72	25.13	17.1
33	38	188	8333.04	272	44.32	30.64
34	36	162	6664.81	264	41.14	25.25
35	38	11	1020	60	92.73	17

Table S2. Integral index of connectivity (dIIC) and probability of connectivity (dPC) of each suitable patch for the maintenance of connectivity for *Tlacuatzin canescens*. dIICflux and dPCflux indicate how well a node is connected to other nodes in the landscape without considering its contribution to intrapopulation connectivity. dIICconnector and dPCconnector show whether a node contributes to the connectivity between other nodes as a stepping stone. The sum of dIICflux or dPCflux and dIICconnector or dPCconnector equals dIIC or dPC.

ID	Area (ha)	dIIC	dIICflux	dIICconnector	dPC	dPCflux	dPCconnector
1	198	0.2526	0.2514	0.0000	0.4388	0.4383	0.0000
2	210	0.3068	0.3054	0.0000	0.4675	0.4668	0.0000
3	231	0.4035	0.4019	0.0000	1.0220	0.5494	0.4718
4	233	0.3388	0.3371	0.0000	0.5184	0.5176	0.0000
5	240	0.4190	0.4172	0.0000	0.4301	0.4293	0.0000
6	247	0.4375	0.4356	0.0000	0.5872	0.5863	0.0000
7	258	0.4215	0.4194	0.0000	0.6062	0.6052	0.0000
8	285	0.4161	0.4136	0.0000	0.6784	0.6772	0.0000
9	299	0.6121	0.6093	0.0000	0.7176	0.7163	0.0000
10	299	0.5450	0.5422	0.0000	0.7091	0.7078	0.0000
11	308	0.6115	0.6085	0.0000	0.7393	0.7379	0.0000
12	324	0.4209	0.4176	0.0000	0.8308	0.7677	0.0615
13	364	0.5954	0.5912	0.0000	0.8700	0.8531	0.0150
14	383	0.5543	0.5498	0.0000	0.9031	0.9009	0.0000
15	387	0.6941	0.6893	0.0000	0.9237	0.9215	0.0000
16	388	0.6750	0.6703	0.0000	0.9217	0.9195	0.0000
17	407	0.6817	0.6765	0.0000	0.9482	0.9436	0.0021
18	412	0.7352	0.7299	0.0000	1.0239	0.9805	0.0408
19	416	0.9358	0.7208	0.2096	0.7866	0.7841	0.0000
20	550	0.9834	0.9739	0.0000	1.3045	1.3000	0.0000
21	583	0.9540	0.9420	0.0014	1.3682	1.3632	0.0000
22	620	0.8722	0.8528	0.0073	1.4472	1.4415	0.0000
23	667	1.0963	1.0824	0.0000	1.9879	1.5650	0.4163
24	681	1.2175	1.2030	0.0000	1.7240	1.6148	0.1024
25	801	1.6663	1.6463	0.0000	1.9114	1.9019	0.0000
26	841	1.5249	1.5027	0.0000	1.9940	1.9836	0.0000
27	1076	1.8210	1.7380	0.0468	2.4881	2.4493	0.0217
28	1167	1.6073	1.5644	0.0000	2.6224	2.6022	0.0000

29	1174	2.3542	2.3093	0.0016	2.7871	2.7295	0.0372
30	1198	1.9824	1.9343	0.0030	3.1180	2.7934	0.3033
31	1265	2.3519	2.3016	0.0000	2.9919	2.9683	0.0000
32	1295	2.4599	2.1640	0.2434	3.1275	2.8744	0.2284
33	3559	7.4479	7.0490	0.0006	8.3216	8.1343	0.0000
34	7091	12.5213	10.6918	0.2497	17.0356	14.6635	1.6291
35	8795	17.7090	14.1142	1.1714	22.5048	18.8619	2.5032
36	11288	29.8083	19.9755	5.8376	33.2847	23.1015	8.3045
37	16675	44.5310	29.9802	5.8285	49.0355	32.0701	12.8639
38	18884	45.5121	30.6910	3.6253	49.0211	35.0412	8.7151

Table S3. List of small mammal species that could benefit through the proposed corridors from the functional connectivity analyzes of the study area.

Order	Family	Species	Common name	NOM059-ECOL-2010		
Cingulata	Dasypodidae	<i>Dasypus novemcinctus mexicanus</i>	Nine-banded Armadillo			
Didelphimorphia	Didelphidae	<i>Didelphis virginiana californica</i>	Virginia Opossum			
		<i>Tlacuatzin canescens</i>	Grayish Mouse Opossum	Endemic		
Lagomorpha	Leporidae	<i>Sylvilagus cunicularius insolitus</i>	Cottontail	Endemic		
		<i>Baiomys musculus musculus</i>	Southern Pygmy Mouse			
		<i>Hodomys alleni alleni</i>	Allen's Wood Rat	Endemic		
	Rodentia	Cricetidae	<i>Nyctomys sumichrasti colimensis</i>	Sumichrast's Vesper Rat		
			<i>Oligoryzomys fulvescens</i>	Fulvous Harvest Mouse		
			<i>Oryzomys couesi mexicanus</i>	Coues' Oryzomys		
			<i>Oryzomys melanotis colimensis</i>	Black-eared Oryzomys	Endemic	
			<i>Osgoodomys banderanus banderanus</i>	Osgood's Deermouse	Endemic	
			<i>Peromyscus perfulvus chrysopus</i>	Tawny Deermouse	Endemic	
			<i>Sigmodon mascotensis mascotensis</i>	West Mexican Cotton Rat	Endemic	
			<i>Xenomys nelsoni</i>	Magdalena Woodrat	Endemic and threatened	
			Geomyidae	<i>Pappogeomys bulleri burti</i>	Buller's Pocket Gopher	Endemic
			Heteromyidae	<i>Heteromys pictus pictus</i>	Painted Spiny Pocket Mice	
Sciuridae	<i>Sciurus colliaei nuchalis</i>	Collie's Squirrel	Endemic			
Soricomorpha	Soricidae	<i>Megasorex gigas</i>	Mexican Shrew	Endemic and threatened		