

Camera traps and acoustic approaches are needed to monitor Malagasy seed dispersers

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Online Resource 1: Expected seed disperser species list across the five study sites. The species list was made based on the listed references (Raherilalao, 2001; Andrianjakarivelo et al., 2003; Glaw & Vences, 2007; Mittermeier et al., 2009; Soarimalala & Goodman, 2011; Wright et al., 2011; Gerber et al., 2012; MBG 2014, 2015, 2018; Rocha et al., 2015; Goodman et al., 2023; Raherilalao et al., 2023; Ramanankirahina & Ralison, 2023; Soarimalala & Goodman, 2023). *: Species not detected in this study; A: species detected by arboreal camera traps; T: species detected by terrestrial camera traps; O: species detected using AudioMoth acoustic recorders (Ranomafana only).

Site	Taxon	Scientific Name	References	Detection
Analalava	Bats	<i>Pteropus rufus</i> *	MBG, 2015	
Analalava	Birds	<i>Agapornis canus</i>	MBG, 2015	A
Analalava	Birds	<i>Alectroenas madagascariensis</i> *	MBG, 2015	
Analalava	Birds	<i>Copsychus albospectularis</i>	MBG, 2015	A
Analalava	Birds	<i>Coracina cinerea</i> *	MBG, 2015	
Analalava	Birds	<i>Coracopsis nigra</i> *	MBG, 2015	
Analalava	Birds	<i>Coracopsis vasa</i> *	MBG, 2015	
Analalava	Birds	<i>Corvus albus</i> *	MBG, 2015	
Analalava	Birds	<i>Coua caerulea</i>	MBG, 2015	A
Analalava	Birds	<i>Coua cristata</i>	MBG, 2015	A
Analalava	Birds	<i>Coua reynaudii</i>	MBG, 2015	T
Analalava	Birds	<i>Dicrurus forficatus</i>	MBG, 2015	A
Analalava	Birds	<i>Eurystomus glaucurus</i> *	MBG, 2015	
Analalava	Birds	<i>Hartlaubius auratus</i> *	MBG, 2015	
Analalava	Birds	<i>Hypsipetes madagascariensis</i>	MBG, 2015	A
Analalava	Birds	<i>Leptopterus chabert</i>	MBG, 2015	A
Analalava	Birds	<i>Margoperdix madagascariensis</i> *	MBG, 2015	
Analalava	Birds	<i>Nesoenas picturatus</i>	MBG, 2015	A,T
Analalava	Birds	<i>Ploceus nelicourvi</i> *	MBG, 2015	
Analalava	Birds	<i>Treron australis</i>	MBG, 2015	A
Analalava	Birds	<i>Zosterops maderaspatanus</i> *	MBG, 2015	
Analalava	Other vertebrates	<i>Galidia elegans</i>	This study	T
Analalava	Primates	<i>Avahi laniger</i>	MBG, 2015	A,T
Analalava	Primates	<i>Cheirogaleus crossleyi</i>	MBG, 2015	A
Analalava	Primates	<i>Eulemur albifrons</i>	MBG, 2015	A,T
Analalava	Primates	<i>Haplemur griseus</i>	MBG, 2015	A,T
Analalava	Primates	<i>Microcebus simmonsii</i>	MBG, 2015	A
Analalava	Reptiles	<i>Phelsuma spp</i>	MBG, 2015	A

Analalava	Rodents	<i>Rattus rattus</i>	MBG, 2015	A,T
Ankafobe	Birds	<i>Alectroenas madagascariensis</i> *	MBG, 2018	
Ankafobe	Birds	<i>Copsychus albospecularis</i>	MBG, 2018	A,T
Ankafobe	Birds	<i>Coracina cinerea</i> *	MBG, 2018	
Ankafobe	Birds	<i>Coracopsis nigra</i> *	MBG, 2018	
Ankafobe	Birds	<i>Corvus albus</i> *	MBG, 2018	
Ankafobe	Birds	<i>Dicrurus forficatus</i>	MBG, 2018	A
Ankafobe	Birds	<i>Hartlaubius auratus</i>	This study	A,T
Ankafobe	Birds	<i>Hypsipetes madagascariensis</i>	MBG, 2018	A,T
Ankafobe	Birds	<i>Margroperdix madagascariensis</i>	MBG, 2018	T
Ankafobe	Birds	<i>Nesoenas picturatus</i>	This study	A,T
Ankafobe	Birds	<i>Saxicola torquata</i> *	MBG, 2018	
Ankafobe	Birds	<i>Zosterops maderaspatanus</i> *	MBG, 2018	
Ankafobe	Primates	<i>Cheirogaleus crossleyi</i>	MBG, 2018	A
Ankafobe	Primates	<i>Eulemur fulvus</i>	MBG, 2018	A,T
Ankafobe	Primates	<i>Microcebus lehilahytsara</i>	MBG, 2018	A,T
Ankafobe	Reptiles	<i>Phelsuma spp</i> *	MBG, 2018	
Ankafobe	Rodents	<i>Rattus rattus</i>	MBG, 2018	A,T
Marojejy	Bats	<i>Pteropus rufus</i> *	Goodman et al., 2023	
Marojejy	Bats	<i>Rousettus madagascariensis</i> *	Goodman et al., 2023	
Marojejy	Birds	<i>Alectroenas madagascariensis</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Artamella viridis</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Copsychus albospecularis</i>	Raherilalao et al., 2023	A,T
Marojejy	Birds	<i>Coracina cinerea</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Coracopsis nigra</i>	Raherilalao et al., 2023	A
Marojejy	Birds	<i>Coua caerulea</i>	Raherilalao et al., 2023	T
Marojejy	Birds	<i>Coua reynaudii</i>	Raherilalao et al., 2023	T
Marojejy	Birds	<i>Coua serriana</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Cyanolanius madagascarinus</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Dicrurus forficatus</i>	Raherilalao et al., 2023	A
Marojejy	Birds	<i>Hartlaubius auratus</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Hypsipetes madagascariensis</i>	Raherilalao et al., 2023	A,T
Marojejy	Birds	<i>Leptopterus chabert</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Margroperdix madagascariensis</i>	This study	
Marojejy	Birds	<i>Neodrepanis coruscans</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Nesoenas picturatus</i>	Raherilalao et al., 2023	A,T
Marojejy	Birds	<i>Philepitta castanea</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Ploceus nelicourvi</i>	Raherilalao et al., 2023	A
Marojejy	Birds	<i>Treron australis</i> *	Raherilalao et al., 2023	
Marojejy	Birds	<i>Zosterops maderaspatanus</i> *	Raherilalao et al., 2023	
Marojejy	Other vertebrates	<i>Galidia elegans</i>	This study	

Marojejy	Other vertebrates	<i>Potamochoerus larvatus</i>	Andrianjakarivelo et al., 2003	
Marojejy	Primates	<i>Cheirogaleus crossleyi</i>	Ramanankirahina & Ralison, 2023	A
Marojejy	Primates	<i>Eulemur albifrons</i>	Ramanankirahina & Ralison, 2023	A,T
Marojejy	Primates	<i>Eulemur rubriventer*</i>	Ramanankirahina & Ralison, 2023	
Marojejy	Primates	<i>Microcebus lehilahytsara</i>	Ramanankirahina & Ralison, 2023	A
Marojejy	Rodents	<i>Eliurus ellermani*</i>	Soarimalala et al., 2023	
Marojejy	Rodents	<i>Eliurus minor*</i>	Soarimalala et al., 2023	
Marojejy	Rodents	<i>Eliurus myoxinus*</i>	Soarimalala et al., 2023	
Marojejy	Rodents	<i>Nesomys audeberti</i>	This study	
Marojejy	Rodents	<i>Rattus rattus</i>	Soarimalala et al., 2023	A,T
Ranomafana	Bats	<i>edilon drupanum*</i>	Goodman, 2011	
Ranomafana	Bats	<i>Pteropus rufus*</i>	Goodman, 2011	
Ranomafana	Bats	<i>Roussettus madagascariensis</i>	Goodman, 2011	A
Ranomafana	Birds	<i>Agapornis canus</i>	This study	O
Ranomafana	Birds	<i>Alectroenas madagascariensis</i>	Raherilalao, 2001	A
Ranomafana	Birds	<i>Artamella viridis</i>	Raherilalao, 2001	O
Ranomafana	Birds	<i>Copsychus albospectularis</i>	Raherilalao, 2001	A,T,O
Ranomafana	Birds	<i>Coracina cinerea</i>	Raherilalao, 2001	A,O
Ranomafana	Birds	<i>Coracopsis nigra</i>	Raherilalao, 2001	O
Ranomafana	Birds	<i>Coracopsis vasa</i>	Rocha et al., 2015	O
Ranomafana	Birds	<i>Coua caerulea</i>	Raherilalao, 2001	A,O
Ranomafana	Birds	<i>Coua cristata</i>	This study	O
Ranomafana	Birds	<i>Coua reynaudii</i>	Raherilalao, 2001	A,T,O
Ranomafana	Birds	<i>Cyanolanius madagascarinus</i>	Raherilalao, 2001	O
Ranomafana	Birds	<i>Dicrurus forficatus</i>	Raherilalao, 2001	A,T,O
Ranomafana	Birds	<i>Eurystomus glaucurus*</i>	Rocha et al., 2015	
Ranomafana	Birds	<i>Hartlaubius auratus</i>	Raherilalao, 2001	O
Ranomafana	Birds	<i>Hypsipetes madagascariensis</i>	Raherilalao, 2001	A,T,O
Ranomafana	Birds	<i>Leptopterus chabert</i>	Raherilalao, 2001	A,O
Ranomafana	Birds	<i>Margroperdix madagascariensis</i>	This study	T
Ranomafana	Birds	<i>Monticola sharpei</i>	Raherilalao, 2001	T,O
Ranomafana	Birds	<i>Neodrepanis coruscans</i>	Raherilalao, 2001	A,O
Ranomafana	Birds	<i>Nesoenas picturatus</i>	Raherilalao, 2001	A,T,O
Ranomafana	Birds	<i>Philepitta castanea</i>	Raherilalao, 2001	A,O
Ranomafana	Birds	<i>Ploceus nelicourvi</i>	Raherilalao, 2001	T,O
Ranomafana	Birds	<i>Saxicola torquata</i>	This study	A,T
Ranomafana	Birds	<i>Zosterops maderaspatanus*</i>	Raherilalao, 2001	A,O
Ranomafana	Other vertebrates	<i>Eupleres goudotii*</i>	Gerber et al., 2012	

Ranomafana	Other vertebrates	<i>Galidia elegans</i>	Gerber et al., 2012	A,T
Ranomafana	Other vertebrates	<i>Potamochoerus larvatus</i>	Andrianjakarivelo et al., 2003	T
Ranomafana	Primates	<i>Avahi peyrrierasi</i>	Wright et al., 2011	A
Ranomafana	Primates	<i>Cheirogaleus crossleyi</i>	Wright et al., 2011	A,T
Ranomafana	Primates	<i>Daubentonia madagascariensis*</i>	Wright et al., 2011	
Ranomafana	Primates	<i>Eulemur rubriventer</i>	Wright et al., 2011	A,T
Ranomafana	Primates	<i>Eulemur rufifrons</i>	Wright et al., 2011	A,T
Ranomafana	Primates	<i>Hapalemur aureus*</i>	Wright et al., 2011	
Ranomafana	Primates	<i>Hapalemur griseus</i>	Wright et al., 2011	A,T
Ranomafana	Primates	<i>Microcebus rufus</i>	Wright et al., 2011	A,T
Ranomafana	Primates	<i>Prolemur simus*</i>	Wright et al., 2011	
Ranomafana	Primates	<i>Propithecus edwardsi</i>	Wright et al., 2011	A,T
Ranomafana	Primates	<i>Varecia variegata*</i>	Wright et al., 2011	
Ranomafana	Reptiles	<i>Phelsuma spp</i>	Glaw & Vences, 2007	A
Ranomafana	Rodents	<i>Brachytarsomys albicauda</i>	Soarimalala & Goodman, 2011	A
Ranomafana	Rodents	<i>Brachyuromys betsileoensis*</i>	Soarimalala & Goodman, 2011	
Ranomafana	Rodents	<i>Eliurus majori</i>	Soarimalala & Goodman, 2011	A
Ranomafana	Rodents	<i>Eliurus minor*</i>	Soarimalala & Goodman, 2011	
Ranomafana	Rodents	<i>Eliurus tanala</i>	Soarimalala & Goodman, 2011	A,T
Ranomafana	Rodents	<i>Eliurus webbi</i>	Soarimalala & Goodman, 2011	A
Ranomafana	Rodents	<i>Gymnuromys roberti*</i>	Soarimalala & Goodman, 2011	
Ranomafana	Rodents	<i>Monticolomys koopmani*</i>	Soarimalala & Goodman, 2011	
Ranomafana	Rodents	<i>Nesomys audeberti</i>	Soarimalala & Goodman, 2011	T
Ranomafana	Rodents	<i>Nesomys rufus</i>	Soarimalala & Goodman, 2011	T
Ranomafana	Rodents	<i>Rattus rattus</i>	Soarimalala & Goodman, 2011	A,T
Ankarabolava-Agnakatrika	Bats	<i>Pteropus rufus</i>	This study	A
Ankarabolava-Agnakatrika	Bats	<i>Rousettus madagascariensis</i>	This study	A
Ankarabolava-Agnakatrika	Birds	<i>Agapornis canus*</i>	MBG, 2014	
Ankarabolava-Agnakatrika	Birds	<i>Alectroenas madagascariensis</i>	MBG, 2014	A
Ankarabolava-Agnakatrika	Birds	<i>Copsychus albospectularis</i>	MBG, 2014	A,T
Ankarabolava-Agnakatrika	Birds	<i>Coracina cinerea*</i>	MBG, 2014	

Ankarabolava-Agnakatrika	Birds	<i>Coracopsis nigra*</i>	MBG, 2014	
Ankarabolava-Agnakatrika	Birds	<i>Coracopsis vasa</i>	MBG, 2014	A
Ankarabolava-Agnakatrika	Birds	<i>Corvus albus*</i>	MBG, 2014	
Ankarabolava-Agnakatrika	Birds	<i>Coua caerulea</i>	MBG, 2014	A,T
Ankarabolava-Agnakatrika	Birds	<i>Coua reynaudii</i>	MBG, 2014	T
Ankarabolava-Agnakatrika	Birds	<i>Dicrurus forficatus</i>	MBG, 2014	A,T
Ankarabolava-Agnakatrika	Birds	<i>Hypsipetes madagascariensis</i>	MBG, 2014	A,T
Ankarabolava-Agnakatrika	Birds	<i>Leptopterus chabert</i>	MBG, 2014	A
Ankarabolava-Agnakatrika	Birds	<i>Nesoenas picturatus</i>	MBG, 2014	A,T
Ankarabolava-Agnakatrika	Birds	<i>Philepitta castanea</i>	This study	A
Ankarabolava-Agnakatrika	Birds	<i>Ploceus nelicourvi*</i>	MBG, 2014	
Ankarabolava-Agnakatrika	Birds	<i>Treron australis</i>	MBG, 2014	A
Ankarabolava-Agnakatrika	Birds	<i>Zosterops maderaspatanus*</i>	MBG, 2014	
Ankarabolava-Agnakatrika	Other vertebrates	<i>Galidia elegans</i>	This study	T
Ankarabolava-Agnakatrika	Other vertebrates	<i>Potamochoerus larvatus</i>	Andrianjakarivelo et al., 2003	T
Ankarabolava-Agnakatrika	Primates	<i>Avahi ramanantsoavanai</i>	MBG, 2014	A,T
Ankarabolava-Agnakatrika	Primates	<i>Cheirogaleus major</i>	MBG, 2014	A
Ankarabolava-Agnakatrika	Primates	<i>Daubentonia madagascariensis</i>	This study	A,T
Ankarabolava-Agnakatrika	Primates	<i>Eulemur cinereips*</i>	MBG, 2014	
Ankarabolava-Agnakatrika	Primates	<i>Eulemur collaris</i>	MBG, 2014	A
Ankarabolava-Agnakatrika	Primates	<i>Hapalemur griseus</i>	MBG, 2014	A,T
Ankarabolava-Agnakatrika	Primates	<i>Microcebus rufus</i>	Mittermeier et al., 2009	A
Ankarabolava-Agnakatrika	Reptiles	<i>Phelsuma spp*</i>	MBG, 2014	
Ankarabolava-Agnakatrika	Rodents	<i>Rattus rattus</i>	This study	A,T

Online Resource 2: Number detections of seed dispersing bird species from each of AudioMoth Schedule A (recording one minute of sound every 20 minutes) and Schedule B (recording one minute of sound every two minutes) at Ranomafana

Seed dispersal role	Scientific Name	Schedule A	Schedule B
Known disperser	<i>Cyanolanius madagascarinus</i>	35	25
Known disperser	<i>Philepitta castanea</i>	1	1
Known disperser	<i>Coracopsis nigra</i>	177	58
Known disperser	<i>Coracopsis vaza</i>	64	16
Known disperser	<i>Dicrurus forficatus</i>	101	41
Known disperser	<i>Hypsipetes madagascariensis</i>	374	181
Known disperser	<i>Leptopterus chabert</i>	70	11
Potential disperser	<i>Agapornis canus</i>	33	0
Potential disperser	<i>Artamella viridis</i>	1	0
Potential disperser	<i>Ceblepyris cinereus</i>	37	16
Potential disperser	<i>Copsychus albospectularis</i>	447	198
Potential disperser	<i>Coua caerulea</i>	338	190
Potential disperser	<i>Coua cristata</i>	5	1
Potential disperser	<i>Coua reynaudii</i>	9	3
Potential disperser	<i>Hartlaubius auratus</i>	1	1
Potential disperser	<i>Monticola sharpei</i>	8	0
Potential disperser	<i>Neodrepanis coruscans</i>	434	186
Potential disperser	<i>Nesoenas picturatus</i>	0	1
Potential disperser	<i>Ploceus nelicourvi</i>	6	0
Potential disperser	<i>Zosterops maderaspatanus</i>	118	129

Online Resource 3: Species richness estimates using first order jackknife estimator to calculate additional effort required to detect rare species across the five study sites and across the different habitat types. Estimated effort required corresponds to the predicted sampling effort needed to reach the Jack1 richness estimate. Additional effort required is the difference between estimated and sampling effort; the values shown are calculated from the central Jack1 estimate and do not account for the uncertainty indicated by Jack1 SE. (n = Camera Trap Nights or Hours of acoustic data recording)

Sampling unit	Observed species richness	Estimated species richness (Jackknife 1)	Jackknife 1 SE	Sampling_effort (n)	Estimated effort required	Additional effort required
Analalava	18	22	2	2,720	3,324	604
Ankafobe	10	10	-	2,212	2,212	-
Marojejy	17	18	1	3,568	3,778	210
Ranomafana	34	40	2	5,572	6,555	983
Ankarabolava-Agnakatrika	22	25	2	3,823	4,344	521
Cleared_land	7	10	2	1,120	1,600	480
Forest	45	53	3	8,226	9,688	1,462
Forest_burned	7	10	2	685	978	293
Natural regeneration	14	14	-	1,328	1,328	-
Plantation	12	14	1	796	928	132
Restoration	29	33	2	5,740	6,532	792
Analalava_Arboreal	16	19	2	1,343	1,595	252
Analalava_Terrestrial	7	10	2	1,377	1,967	590
Ankafobe_Arboreal	9	11	1	963	1,177	214
Ankafobe_Terrestrial	8	10	1	1,249	1,561	312
Marojejy_Arboreal	11	12	1	1,543	1,683	140
Marojejy_Terrestrial	12	15	2	2,025	2,531	506
Ranomafana_Arboreal	28	36	3	2,743	3,526	783
Ranomafana_Terrestrial	21	25	2	2,829	3,368	539
Ankarabolava-Agnakatrika_Arboreal	19	21	1	1,421	1,570	149
Ankarabolava-Agnakatrika_Terrestrial	12	14	1	2,402	2,802	400
Forest_Arboreal	39	49	3	4,079	5,125	1,046
Forest_Terrestrial	26	34	3	4,147	5,423	1,276
Forest_burned_Arboreal	6	9	2	379	568	189
Forest_burned_Terrestrial	4	5	1	306	382	76
Natural regeneration_Arboreal	10	11	1	665	731	66
Natural regeneration_Terrestrial	10	11	1	663	729	66

Plantation_Arboreal	11	13	1	379	448	69
Plantation_Terrestrial	4	5	1	417	521	104
Restoration_Arboreal	25	29	2	2,511	2,913	402
Restoration_Terrestrial	12	13	1	3,229	3,498	269
Schedule_A	19	22	2	619	717	40
Schedule_AB	20	22	1	1,009	1,110	59
Schedule_B	16	20	2	390	487	45
Forest_Schedule_A	18	20	1	474	527	53
Forest_Schedule_AB	19	21	1	680	751	71
Forest_Schedule_B	15	19	2	206	261	55
Restoration_Schedule_A	11	14	2	146	186	40
Restoration_Schedule_AB	12	15	2	238	297	59
Restoration_Schedule_B	8	12	2	92	137	45
Natural regeneration_Schedule_B	4	6	1	92	138	46

Online Resource 4: Indicator Species Analysis to identify species associated with arboreal and terrestrial camera traps. Camera type indicates the camera method primarily associated with detection of each species, where 1 = arboreal cameras only, 2 = terrestrial cameras only, and 3 = both arboreal and terrestrial cameras. The Stat column reflects the strength of the association, and the p-value indicates the statistical significance of this association

Seed dispersal role	Taxon	Scientific Name	Camera type	Stat	p-value
Known dispersers	Primates	<i>Cheirogaleus crossleyi</i>	1	0.556	0.001
Known dispersers	Primates	<i>Cheirogaleus major</i>	1	0.325	0.001
Potential dispersers	Birds	<i>Coua caerulea</i>	1	0.344	0.003
Potential dispersers	Birds	<i>Coua reynaudii</i>	2	0.383	0.001
Known dispersers	Birds	<i>Dicrurus forficatus</i>	1	0.353	0.001
Known dispersers	Primates	<i>Eulemur albifrons</i>	1	0.431	0.003
Potential dispersers	Other vertebrates	<i>Galidia elegans</i>	2	0.432	0.001
Known dispersers	Birds	<i>Hypsipetes madagascariensis</i>	1	0.380	0.001
Known dispersers	Birds	<i>Leptopterus chabert</i>	1	0.257	0.004
Potential dispersers	Primates	<i>Microcebus lehilahytsara</i>	1	0.379	0.001
Known dispersers	Primates	<i>Microcebus rufus</i>	1	0.413	0.001
Potential dispersers	Primates	<i>Microcebus simmonsii</i>	1	0.345	0.001
Potential dispersers	Rodents	<i>Nesomys audeberti</i>	2	0.336	0.001
Known dispersers	Rodents	<i>Nesomys rufus</i>	2	0.237	0.003
Known dispersers	Other vertebrates	<i>Potamochoerus larvatus</i>	2	0.439	0.001
Potential dispersers	Primates	<i>Avahi laniger</i>	1	0.268	0.007
Potential dispersers	Reptiles	<i>Phelsuma sp</i>	1	0.215	0.016
Known dispersers	Primates	<i>Eulemur rufifrons</i>	1	0.244	0.04
Potential dispersers	Birds	<i>Margaroperdix madagarensis</i>	2	0.179	0.049
Potential dispersers	Primates	<i>Avahi ramanantsoavanai</i>	1	0.246	0.07
Known dispersers	Primates	<i>Eulemur rubriventer</i>	1	0.198	0.081
Known dispersers	Birds	<i>Treron australis</i>	1	0.181	0.073
Potential dispersers	Rodents	<i>Eliurus webbi</i>	1	0.181	0.059
Potential dispersers	Birds	<i>Coua cristata</i>	1	0.162	0.129
Potential dispersers	Birds	<i>Monticola sharpei</i>	2	0.127	0.216
Potential dispersers	Primates	<i>Daubentonia madagascariensis</i>	1	0.163	0.207
Known dispersers	Birds	<i>Alectroenas madagascariensis</i>	1	0.140	0.264

Known dispersers	Primates	<i>Propithecus edwardsi</i>	1	0.142	0.377
Potential dispersers	Primates	<i>Avahi peyrierasi</i>	1	0.115	0.493
Known dispersers	Birds	<i>Coracopsis vasa</i>	1	0.115	0.506
Known dispersers	Birds	<i>Coracopsis nigra</i>	1	0.115	0.489
Known dispersers	Bats	<i>Rousettus madagascariensis</i>	1	0.115	0.519
Potential dispersers	Birds	<i>Ceblepyris cinereus</i>	1	0.115	0.51
Known dispersers	Birds	<i>Philepitta castanea</i>	1	0.115	0.487
Potential dispersers	Birds	<i>Agapornis canus</i>	1	0.081	1
Potential dispersers	Rodents	<i>Brachytarsomys albicauda</i>	1	0.081	1
Potential dispersers	Rodents	<i>Eliurus majori</i>	1	0.081	1
Known dispersers	Primates	<i>Eulemur collaris</i>	1	0.081	1
Potential dispersers	Birds	<i>Neodrepanis coruscans</i>	1	0.081	1
Known dispersers	Bats	<i>Pteropus rufus</i>	1	0.081	1
Potential dispersers	Birds	<i>Zosterops maderaspatanus</i>	1	0.081	1
Potential dispersers	Birds	<i>Copsychus albospectularis</i>	3	0.301	NA
Potential dispersers	Rodents	<i>Eliurus tanala</i>	3	0.085	NA
Known dispersers	Primates	<i>Eulemur fulvus</i>	3	0.301	NA
Potential dispersers	Primates	<i>Hapalemur griseus</i>	3	0.289	NA
Potential dispersers	Birds	<i>Hartlaubius auratus</i>	3	0.085	NA
Potential dispersers	Birds	<i>Nesoenas picturatus</i>	3	0.404	NA
Potential dispersers	Birds	<i>Ploceus nelicourvi</i>	3	0.104	NA
Known dispersers	Rodents	<i>Rattus rattus</i>	3	0.692	NA
Potential dispersers	Birds	<i>Saxicola torquata</i>	3	0.134	NA

Online Resource 5: Indicator Species Analysis to identify species associate with Audiomoth schedules.

AudioMoth type indicates the AudioMoth schedule primarily associated with detection of each species, where 1 = schedule A only, 2 = schedule B only, and 3 = both schedule A and B. The Stat column reflects the strength of the association, and the p-value indicates the statistical significance of this association.

Seed dispersal role	Scientific Name	AudioMoth type	Stat	p-value
Known dispersers	<i>Coracopsis.nigra</i>	3	0.84	NA
Known dispersers	<i>Coracopsis.vaza</i>	3	0.70	NA
Known dispersers	<i>Cyanolanius.madagascarinus</i>	3	0.80	NA
Known dispersers	<i>Dicrurus.forficatus</i>	3	0.88	NA
Known dispersers	<i>Hypsipetes.madagascariensis</i>	3	1	NA
Known dispersers	<i>Leptopterus.chabert</i>	3	0.84	NA
Known dispersers	<i>Philepitta.castanea</i>	3	0.37	NA
Potential dispersers	<i>Agapornis.canus</i>	1	0.75	0.075
Potential dispersers	<i>Ceblepyris.cinereus</i>	3	0.80	NA
Potential dispersers	<i>Copsychus.albospecularis</i>	3	1	NA
Potential dispersers	<i>Coua.caerulea</i>	3	0.84	NA
Potential dispersers	<i>Coua.cristata</i>	3	0.377	NA
Potential dispersers	<i>Coua.reynaudii</i>	3	0.65	NA
Potential dispersers	<i>Hartlaubius.auratus</i>	3	0.37	NA
Potential dispersers	<i>Monticola.sharpei</i>	1	0.53	0.458
Potential dispersers	<i>Neodrepanis.coruscans</i>	3	0.84	NA
Potential dispersers	<i>Nesoenas.picturatus</i>	2	0.37	1
Potential dispersers	<i>Ploceus.nelicourvi</i>	1	0.65	0.206
Potential dispersers	<i>Zosterops.maderaspatanus</i>	3	0.80	NA

Online Resource 6: Indicator Species Analysis to identify bird species associated with AudioMoth and camera types in Ranomafana. Sensor type indicates the sensor method primarily associated with detection of each species, where 1 = arboreal cameras only, 2 = AudioMoth only, 3 = terrestrial cameras only, 4 = both arboreal cameras and AudioMoth, 5 = both arboreal and terrestrial cameras, 6 = both terrestrial cameras and AudioMoth. The Stat column reflects the strength of the association, and the p-value indicates the statistical significance of this association.

Seed dispersal role	Scientific Name	Sensor type	Stat	p-value
Known dispersers	<i>Coracopsis.nigra</i>	2	0.85	0.001
Known dispersers	<i>Coracopsis.vaza</i>	2	0.82	0.001
Known dispersers	<i>Cyanolanius.madagascarinus</i>	2	0.75	0.002
Known dispersers	<i>Dicrurus.forficatus</i>	4	0.82	0.004
Known dispersers	<i>Hypsipetes.madagascariensis</i>	4	0.87	0.004
Known dispersers	<i>Leptopterus.chabert</i>	4	0.79	0.008
Known dispersers	<i>Philepitta.castanea</i>	1	0.27	1
Potential dispersers	<i>Agapornis.canus</i>	2	0.67	0.011
Potential dispersers	<i>Artamella.viridis</i>	2	0.24	1
Potential dispersers	<i>Ceblepyris.cinereus</i>	2	0.82	0.001
Potential dispersers	<i>Copsychus.albospecularis</i>	6	0.81	0.009
Potential dispersers	<i>Coua.caerulea</i>	2	0.78	0.004
Potential dispersers	<i>Coua.cristata</i>	2	0.53	0.079
Potential dispersers	<i>Coua.reynaudii</i>	3	0.55	0.2
Potential dispersers	<i>Hartlaubius.auratus</i>	2	0.33	0.485
Potential dispersers	<i>Margaroperdix.madagarensis</i>	3	0.35	0.228
Potential dispersers	<i>Monticola.sharpei</i>	6	0.55	0.134
Potential dispersers	<i>Neodrepanis.coruscans</i>	2	0.76	0.004
Potential dispersers	<i>Nesoenas.picturatus</i>	5	0.31	1
Potential dispersers	<i>Ploceus.nelicourvi</i>	6	0.52	0.2
Potential dispersers	<i>Zosterops.maderaspatanus</i>	2	0.79	0.001

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