

This table is the appendix for: Flesch, A.D., P. Warshall, and S. Jacobs. 2015. Avian richness, status, and conservation in the northwestern Neotropics in Sonora, Mexico. *Natural Areas Journal* 35(2):288-296.

APPENDIX: Status of 214 bird species observed on and around the Northern Jaguar Reserve in east-central Sonora, México, between 2007 and 2013. Abundance was classified as: A-abundant, C-common, F-fairly common, U-uncommon, R-rare, and S-sporadic. Residency status was classified as: PR-permanent resident, SR-summer resident, WR-winter resident, M-migrant, FM-fall migrant, and V-visitant. Breeding status was classified as: Co-confirmed breeder, Pr-presumed breeder, Po-possible breeder, O-nonbreeder, and U-unknown. Species of conservation concern in México (Mx) are listed as E-endangered, T-threatened, and P-subject to special protection (SEMARNAT 2010), whereas those listed in the U.S. by U.S. Fish and Wildlife Service are listed as US-CC (USFWS 2008). Avian nomenclature follows the American Ornithologists' Union.

Common name	Species	Abundance – Status	Breeding Status	Habitat ^a	Conservation status, notes
Greater White-fronted Goose	<i>Anser albifrons</i>	R-M	O	Be, Aq	
American Wigeon	<i>Anas americana</i>	U-WR and M	O	Aq	
Mallard	<i>Anas platyrhynchos</i>	R-PR	Po	Aq	Mx–T, subspecies <i>diazi</i>
Cinnamon Teal	<i>Anas cyanoptera</i>	U-WR and M	O	Aq	
Green-winged Teal	<i>Anas crecca</i>	U-WR and M	O	Aq	
Ring-necked Duck	<i>Aythya collaris</i>	U-WR and M	O	Aq	
Common Merganser	<i>Mergus merganser</i>	U-WR and M	O	Aq	
Elegant Quail	<i>Callipepla douglasii</i>	C-PR	Pr	FT, RW, Fi	
Gambel's Quail	<i>Callipepla gambelii</i>	R-PR	Pr	DS, FT, RW	lowlands
Montezuma Quail	<i>Cyrtonyx montezumae</i>	U-PR	Co	OW, Gr, FT	Mx–P, highlands
Wild Turkey	<i>Meleagris gallopavo</i>	U-PR	Co	OW, FT	
Least Grebe	<i>Tachybaptus dominicus</i>	R-PR	Co	Aq, Be	
Pied-billed Grebe	<i>Podilymbus podiceps</i>	U-WR and M	O	Aq	
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	R-M or V	O	Aq	
Great Blue Heron	<i>Ardea herodias</i>	F-PR	Po	Aq, RW, Be	
Great Egret	<i>Ardea alba</i>	R-PR	Po	Aq, Be	
Green Heron	<i>Butorides virescens</i>	R-WR	O	Aq, Be	
Black Vulture	<i>Coragyps atratus</i>	U-SR, R-WR	Po	FT, OW	
Turkey Vulture	<i>Cathartes aura</i>	C-SR, R-WR	Po	FT, OW	
Osprey	<i>Pandion haliaetus</i>	U-M, R-WR	O	Aq, Be, RW	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	R-PR	Co	Aq, Be, Cl	Mx–E, US–CC
Northern Harrier	<i>Circus cyaneus</i>	R-M	O	DS, Gr	

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Sharp-shinned Hawk	<i>Accipiter striatus</i>	U-WR and M	O	FT, RW	Mx-P
Cooper's Hawk	<i>Accipiter cooperii</i>	R-SR, U-M	Po	RW, OW	Mx-P
Common Black-Hawk	<i>Buteogallus anthracinus</i>	F-SR, R-WR	Co	RW, Be	Mx-P, C river
Gray Hawk	<i>Buteo nitidus</i>	U-SR	Co	RW, FT	
Short-tailed Hawk	<i>Buteo brachyurus</i>	R-SR?	U	FT, OW	
Swainson's Hawk	<i>Buteo swainsoni</i>	U-M	O	FT, OW, Gr	Mx-P, US-CC
Zone-tailed Hawk	<i>Buteo albonotatus</i>	R-SR	Co	OW, RW	Mx-P
Red-tailed Hawk	<i>Buteo jamaicensis</i>	U-PR	Co	FT, OW, Cl	
Golden Eagle	<i>Aquila chrysaetos</i>	R-WR?	O	Gr, OW, FT	Mx-T
American Kestrel	<i>Falco sparverius</i>	U-WR and M	O	FT, RW	
Merlin	<i>Falco columbarius</i>	R-WR and M	O	FT, Fi	
Peregrine Falcon	<i>Falco peregrinus</i>	U-PR	Co	FT, Cl, RW	Mx-P, US-CC
Killdeer	<i>Charadrius vociferus</i>	R-SR?	U	Be	
Spotted Sandpiper	<i>Actitis macularius</i>	C-WR and M	O	Be	
Solitary Sandpiper	<i>Tringa solitaria</i>	R-M	O	Be	
Greater Yellowlegs	<i>Tringa melanoleuca</i>	R-WR? and M	O	Be	
Wilson's Snipe	<i>Gallinago delicata</i>	R-WR or V	O	Be	
Band-tailed Pigeon	<i>Patagioenas fasciata</i>	R-WR or V	O	OW	
Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	R-V	O	Ho	
White-winged Dove	<i>Zenaida asiatica</i>	A-SR, U-WR	Co	FT, RW	
Mourning Dove	<i>Zenaida macroura</i>	F-PR	Pr	FT, OW, RW	
Inca Dove	<i>Columbina inca</i>	U-PR	Pr	Ho, RW, Fi	
Common Ground-Dove	<i>Columbina passerina</i>	C-SR, U-WR	Pr	FT, RW, Fi	
Ruddy Ground-Dove	<i>Columbina talpacoti</i>	R-SR or V?	U	Ho, RW, Fi	
White-tipped Dove	<i>Leptotila verreauxi</i>	U-PR	Co	FT, RW	
Military Macaw	<i>Ara militaris</i>	R-SR	Co	FT, Cl	Mx-E
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	F-SR	Pr	FT, RW	US-CC
Greater Roadrunner	<i>Geococcyx californianus</i>	U-PR	Po	FT, DS, RW	
Western Screech-Owl	<i>Megascops kennicottii</i>	U-PR	Pr	FT, RW	lowlands
Whiskered Screech-Owl	<i>Megascops trichopsis</i>	U-PR	Pr	OW, RW	highlands

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Great Horned Owl	<i>Bubo virginianus</i>	R-PR	Po	FT, RW	
Northern Pygmy-Owl	<i>Glaucidium gnoma</i>	R-PR	Pr	OW, RW	
Elf Owl	<i>Micrathene whitneyi</i>	U-SR	Po	FT, RW	US-CC
Burrowing Owl	<i>Athene cunicularia</i>	R-M?	O	Fi	
Lesser Nighthawk	<i>Chordeiles acutipennis</i>	R-SR	Po	FT, DS	lowlands
Common Poorwill	<i>Phalaenoptilus nuttallii</i>	R-PR or WR?	O	FT, CI	
Buff-collared Nightjar	<i>Caprimulgus ridgwayi</i>	U-SR, R-WR	Pr	FT, RW, OW	
Black Swift	<i>Cypseloides niger</i>	R-M	O	Ae, CI	US-CC
White-throated Swift	<i>Aeronautes saxatalis</i>	R-SR, R-WR	Po	Ae, CI	
Broad-billed Hummingbird	<i>Cynanthus latirostris</i>	C-SR, U-WR	Co	FT, RW, OW	
White-eared Hummingbird	<i>Hylocharis leucotis</i>	R-WR	O	RW	
Berylline Hummingbird	<i>Amazilia beryllina</i>	R-WR and M	O	RW, FT	
Violet-crowned Hummingbird	<i>Amazilia violiceps</i>	F-SR, R-WR	Co	RW, FT	
Plain-capped Starthroat	<i>Heliomaster constantii</i>	R-M or SR?	U	FT, RW	
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	U-M	O	RW, FT	
Anna's Hummingbird	<i>Calypte anna</i>	U-WR	Po	FT, DS	early breeder
Costa's Hummingbird	<i>Calypte costae</i>	U-WR and M	Pr	DS, FT	US-CC, early breeder
Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	U-M	O	FT, RW	
Rufous Hummingbird	<i>Selasphorus rufus</i>	U-M	O	FT, RW	
Allen's Hummingbird	<i>Selasphorus sasin</i>	R-M	O	RW	US-CC
Elegant Trogon	<i>Trogon elegans</i>	F-SR, R-WR	Co	RW, OW	US-CC
Belted Kingfisher	<i>Megaceryle alcyon</i>	U-M, R-WR	O	RW, Be	
Green Kingfisher	<i>Chloroceryle americana</i>	R-PR	Pr	RW, Be	
Acorn Woodpecker	<i>Melanerpes formicivorus</i>	U-PR	Pr	OW	
Gila Woodpecker	<i>Melanerpes uropygialis</i>	C-PR	Co	FT, RW, DS	
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	R-WR and M	O	RW	
Ladder-backed Woodpecker	<i>Picoides scalaris</i>	C-PR	Co	FT, DS, RW	
Arizona Woodpecker	<i>Picoides arizonae</i>	U-PR	Po	OW	US-CC
Northern Flicker	<i>Colaptes auratus</i>	R-SR, R-WR	Pr	OW	
Gilded Flicker	<i>Colaptes chrysoides</i>	U-PR	Co	FT, DS	

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White-striped Woodcreeper	<i>Lepidocolaptes leucogaster</i>	R-PR	Pr	RW	
Northern Beardless-Tyrannulet	<i>Camptostoma imberbe</i>	U-PR	Pr	RW	
Tufted Flycatcher	<i>Mitrephanes phaeocercus</i>	R-WR	O	RW	
Olive-sided Flycatcher	<i>Contopus cooperi</i>	U-M	O	RW, FT	US-CC
Greater Pewee	<i>Contopus pertinax</i>	R-WR	O	RW, FT	
Western Wood-Pewee	<i>Contopus sordidulus</i>	U-SR and M	Pr	RW, FT, OW	
Willow Flycatcher	<i>Empidonax traillii</i>	R-M	O	RW	US-CC
Hammond's Flycatcher	<i>Empidonax hammondii</i>	F-M, U-WR	O	RW, FT	
Gray Flycatcher	<i>Empidonax wrightii</i>	U-M and WR	O	RW	
Dusky Flycatcher	<i>Empidonax oberholseri</i>	F-M, U-WR	O	RW	
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	R-WR?, C-M	O	RW, OW	
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>	R-WR? and M	O	RW, OW	
Buff-breasted Flycatcher	<i>Empidonax fulvifrons</i>	R-WR	O	RW	
Black Phoebe	<i>Sayornis nigricans</i>	U-PR	Co	RW, Be, Cl	A along rivers
Eastern Phoebe	<i>Sayornis phoebe</i>	R-WR or V	O	RW, Be	
Say's Phoebe	<i>Sayornis saya</i>	U-WR and M	O	Ho, Be	
Vermilion Flycatcher	<i>Pyrocephalus rubinus</i>	C-SR, R-WR	Co	RW, Be	
Dusky-capped Flycatcher	<i>Myiarchus tuberculifer</i>	C-SR, R-WR	Co	FT, OW, RW	
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	U-PR	Pr	DS, FT, OW	
Nutting's Flycatcher	<i>Myiarchus nuttingi</i>	R-SR, F-WR	Pr	RW, FT	
Brown-crested Flycatcher	<i>Myiarchus tyrannulus</i>	F-SR	Co	RW	
Sulphur-bellied Flycatcher	<i>Myiodynastes luteiventris</i>	F-SR	Co	RW	
Tropical Kingbird	<i>Tyrannus melancholicus</i>	U-SR	Pr	RW, Be	
Cassin's Kingbird	<i>Tyrannus vociferans</i>	U-M, R-WR	O	RW	
Thick-billed Kingbird	<i>Tyrannus crassirostris</i>	F-SR	Co	FT, OW, RW	
Western Kingbird	<i>Tyrannus verticalis</i>	C-M	O	FT	
Rose-throated Becard	<i>Pachyramphus aglaiae</i>	F-SR	Co	RW	
Loggerhead Shrike	<i>Lanius ludovicianus</i>	R-WR and M	O	OW, Gr	US-CC
Bell's Vireo	<i>Vireo bellii</i>	C-SR, R-WR	Co	RW	US-CC
Gray Vireo	<i>Vireo vicinior</i>	R-M	O	RW, FT	US-CC

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Plumbeous Vireo	<i>Vireo plumbeus</i>	R-WR, F-M	O	RW, OW	
Cassin's Vireo	<i>Vireo cassinii</i>	R-WR, U-M	O	RW, OW	
Hutton's Vireo	<i>Vireo huttoni</i>	U-WR and M	O	OW, RW	
Warbling Vireo	<i>Vireo gilvus</i>	C-M	O	RW, OW	
Yellow-green Vireo	<i>Vireo flavoviridis</i>	R-SR	Pr	RW, FT	
Western Scrub-Jay	<i>Aphelocoma californica</i>	R-WR	O	FT, MS	
Mexican Jay	<i>Aphelocoma wollweberi</i>	F-PR	Pr	OW, MS	
Common Raven	<i>Corvus corax</i>	U-PR	Co	RW, FT	
Tree Swallow	<i>Tachycineta bicolor</i>	U-M	O	Ae	
Violet-green Swallow	<i>Tachycineta thalassina</i>	F-M, R-WV	O	Ae	
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	U-SR and M, R-WV	Pr	Ae, Be	
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	U-SR	Po	Ae, Cl	
Barn Swallow	<i>Hirundo rustica</i>	U-M, R-WV	O	Ho, Ae	
Bridled Titmouse	<i>Baeolophus wollweberi</i>	U-PR, S-V	Pr	OW, RW	PR in OW, V in RW
Verdin	<i>Auriparus flaviceps</i>	C-PR	Co	RW, FT	
Cactus Wren	<i>Campylorhynchus brunneicapillus</i>	C-PR	Pr	FT, DS	
Rock Wren	<i>Salpinctes obsoletus</i>	U-PR	Pr	Cl, DS, TS	
Canyon Wren	<i>Catherpes mexicanus</i>	F-PR	Pr	Cl, Ho, RW	
Sinaloa Wren	<i>Thryothorus sinaloa</i>	C-SR, U-WR	Co	RW, FT	
Happy Wren	<i>Thryothorus felix</i>	R-PR	Po	RW, Be	dense thickets
Bewick's Wren	<i>Thryomanes bewickii</i>	R-WR and M	O	RW	
House Wren	<i>Troglodytes aedon</i>	F-WR and M	O	RW, FT	
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	U-SR, F-WR	Co	RW, FT	
Black-tailed Gnatcatcher	<i>Polioptila melanura</i>	U-PR	Pr	OW, MS	
Black-capped Gnatcatcher	<i>Polioptila nigriceps</i>	C-PR	Co	DS	
Ruby-crowned Kinglet	<i>Regulus calendula</i>	C-WR and M	O	FT, RW	
Western Bluebird	<i>Sialia mexicana</i>	S-WV	O	FT, OW	
Brown-backed Solitaire	<i>Myadestes occidentalis</i>	U-WR	O	RW	Mx-P
Swainson's Thrush	<i>Catharus ustulatus</i>	U-M	O	RW	
Hermit Thrush	<i>Catharus guttatus</i>	U-WR and M	O	RW	

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Rufous-backed Robin	<i>Turdus rufopalliatus</i>	R-WR or V	O	RW	
American Robin	<i>Turdus migratorius</i>	R-WR	O	RW, FT	
Northern Mockingbird	<i>Mimus polyglottos</i>	F-PR	Pr	FT, DS	
Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	U-PR	Co	FT, DS	
Blue Mockingbird	<i>Melanotis caerulescens</i>	R-SR	Pr	RW, FT	
American Pipit	<i>Anthus rubescens</i>	R-WR or V	O	Be	
Phainopepla	<i>Phainopepla nitens</i>	F-WR and M, R-SR	Po	RW	
Louisiana Waterthrush	<i>Parkesia motacilla</i>	R-WR and M	O	RW, Be	
Northern Waterthrush	<i>Parkesia noveboracensis</i>	R-M	O	RW, Be	
Black-and-white Warbler	<i>Mniotilta varia</i>	R-M	O	RW, OW	
Orange-crowned Warbler	<i>Oreothlypis celata</i>	U-WR, C-M	O	RW, FT, OW	
Lucy's Warbler	<i>Oreothlypis luciae</i>	C-SR and M	Pr	RW, FT	US-CC, spring breeder
Nashville Warbler	<i>Oreothlypis ruficapilla</i>	C-M	O	RW, FT	
Virginia's Warbler	<i>Oreothlypis virginiae</i>	U-M	O	RW, FT	US-CC
MacGillivray's Warbler	<i>Geothlypis tolmiei</i>	U-M	O	RW, FT, OW	
Common Yellowthroat	<i>Geothlypis trichas</i>	R-WR, U-M	O	RW, Be	
Northern Parula	<i>Setophaga americana</i>	R-M	O	RW	
Yellow Warbler	<i>Setophaga petechia</i>	U-M	O	RW, FT	
Yellow-rumped Warbler	<i>Setophaga coronata</i>	C-WR and M	O	RW, OW, FT	
Grace's Warbler	<i>Setophaga graciae</i>	R-M	O	OW	US-CC
Black-throated Gray Warbler	<i>Setophaga nigrescens</i>	F-WR and M	O	RW, FT, OW	
Townsend's Warbler	<i>Setophaga townsendi</i>	R-WR, U-M	O	RW, FT, OW	
Hermit Warbler	<i>Setophaga occidentalis</i>	U-M	O	RW, FT, OW	
Fan-tailed Warbler	<i>Basileuterus lachrymosa</i>	U-SR	Co	RW, Cl, FT	in wet canyons
Rufous-capped Warbler	<i>Basileuterus rufifrons</i>	F-PR	Co	RW, FT	
Wilson's Warbler	<i>Cardellina pusilla</i>	R-WR, C-M	O	RW, FT, OW	
Painted Redstart	<i>Myioborus pictus</i>	R-WR and M	O	RW	
Slate-throated Redstart	<i>Myioborus miniatus</i>	R-WR	O	RW	
Yellow-breasted Chat	<i>Icteria virens</i>	A-SR	Co	FT, RW	
Green-tailed Towhee	<i>Pipilo chlorurus</i>	U-WR and M	O	FT, RW	

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Spotted Towhee	<i>Pipilo maculatus</i>	R-WR and M	O	OW, MS, FT	
Rusty Sparrow	<i>Aimophila rufescens</i>	R-SR	Co	OW, MS	highlands
Rufous-crowned Sparrow	<i>Aimophila ruficeps</i>	U-PR	Co	OW, Gr, MS	
Canyon Towhee	<i>Melospiza fuscus</i>	C-PR	Co	FT, RW, MS	
Rufous-winged Sparrow	<i>Peucaea carpalis</i>	C-PR	Co	FT, RW	US-CC
Botteri's Sparrow	<i>Peucaea botterii</i>	R-M	O	Gr, OW	
Cassin's Sparrow	<i>Peucaea cassinii</i>	R-SR	Po	Fi, Gr	
Chipping Sparrow	<i>Spizella passerina</i>	C-WR, F-M	O	RW, FT, Gr	
Clay-colored Sparrow	<i>Spizella pallida</i>	R-WR and FM	O	RW, Gr	
Brewer's Sparrow	<i>Spizella breweri</i>	U-WR	O	RW, FT, MS	US-CC
Black-chinned Sparrow	<i>Spizella atrogularis</i>	R-WR	O	FT, MS	US-CC
Vesper Sparrow	<i>Pooecetes gramineus</i>	R-WR	O	Gr, MS, Fi	
Lark Sparrow	<i>Chondestes grammacus</i>	U-WR and M	O	Fi, Gr	
Five-striped Sparrow	<i>Amphispiza quinquestriata</i>	A-SR, R-WR	Co	FT, RW, MS	US-CC
Black-throated Sparrow	<i>Amphispiza bilineata</i>	U-WR	O	DS, FT	
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	R-WR	O	Gr	
Lincoln's Sparrow	<i>Melospiza lincolni</i>	U-WR and M	O	RW, Be, FT	
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	C-WR and M	O	RW, FT	
Dark-eyed Junco	<i>Junco hyemalis</i>	U-WR	O	MS, Gr, OW	
Hepatic Tanager	<i>Piranga flava</i>	U-SR, U-WR	Po	OW, RW	OW in S, RW in W
Summer Tanager	<i>Piranga rubra</i>	C-SR	Co	RW, FT	
Western Tanager	<i>Piranga ludoviciana</i>	F-M	O	RW, FT, OW	
Northern Cardinal	<i>Cardinalis cardinalis</i>	C-PR	Co	FT, RW	
Pyrrhuloxia	<i>Cardinalis sinuatus</i>	U-PR	Pr	DS, FT	
Yellow Grosbeak	<i>Pheucticus chrysopheplus</i>	R-SR or V?	U	FT, RW	
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	C-SR, R-WR	Co	FT, OW, RW	
Blue Grosbeak	<i>Passerina caerulea</i>	C-SR	Co	FT, RW, OW	
Lazuli Bunting	<i>Passerina amoena</i>	C-M, U-WR	O	RW, FT	
Varied Bunting	<i>Passerina versicolor</i>	C-SR	Co	FT, RW	US-CC
Painted Bunting	<i>Passerina ciris</i>	U-FM	O	FT, RW	Mx-P, US-CC

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Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	R-M	O	Be	
Bronzed Cowbird	<i>Molothrus aeneus</i>	U-SR	Co	Ho, Be	
Brown-headed Cowbird	<i>Molothrus ater</i>	U-SR	Co	FT, RW, OW	
Black-vented Oriole	<i>Icterus wagleri</i>	U-SR, R-WR	Co	RW, Pa	
Orchard Oriole	<i>Icterus spurius</i>	R-FM	O	RW, FT	
Hooded Oriole	<i>Icterus cucullatus</i>	A-SR, R-WR	Co	RW, Pa, FT	A in palms
Streak-backed Oriole	<i>Icterus pustulatus</i>	U-SR, R-WR	Co	RW, FT	
Bullock's Oriole	<i>Icterus bullockii</i>	U-M	O	RW, FT	
Scott's Oriole	<i>Icterus parisorum</i>	U-SR, R-WR	Pr	MS, OW	in <i>Yucca</i>
House Finch	<i>Carpodacus mexicanus</i>	C-PR	Co	FT, RW	
Pine Siskin	<i>Spinus pinus</i>	R-M	O	OW, Fi	
Lesser Goldfinch	<i>Spinus psaltria</i>	C-SR, F-WR	Pr	RW, FT, Fi	

^a Habitat types: foothills thornscrub (FT), riparian woodland (RW), oak woodland (OW), grassland (Gr), desert-scrub (DS), mountain scrub (MS), beachfronts and emergent vegetation (Be), aquatic (Aq), palm groves (Pa), cliffs and rocky outcrops (Cl), fields and man-made vegetation openings (Fi), houses or other developed areas (Ho), and aerial (Ae).