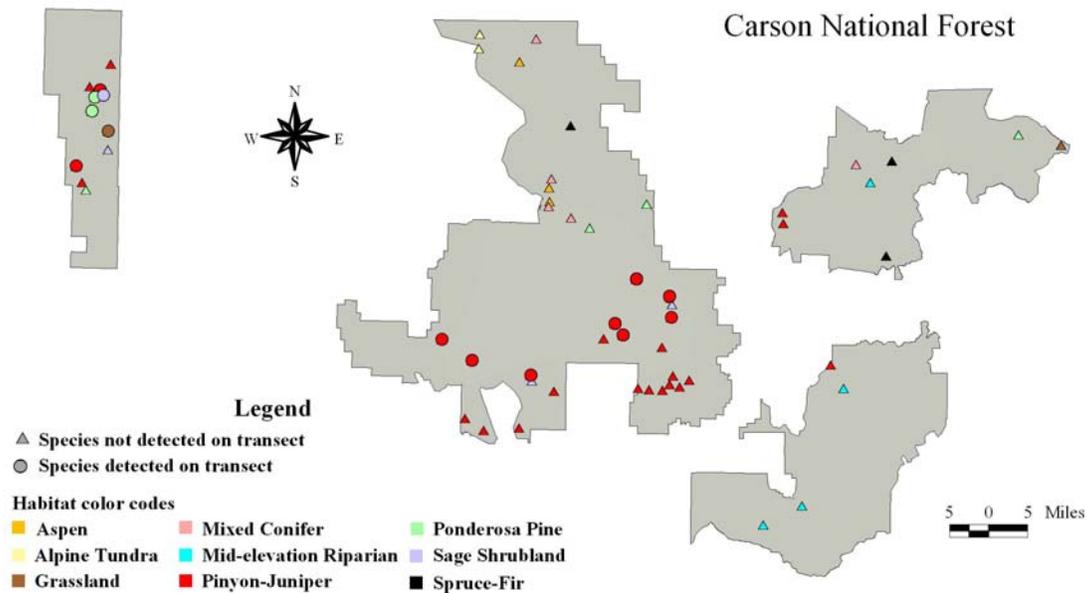


Virginia's Warbler



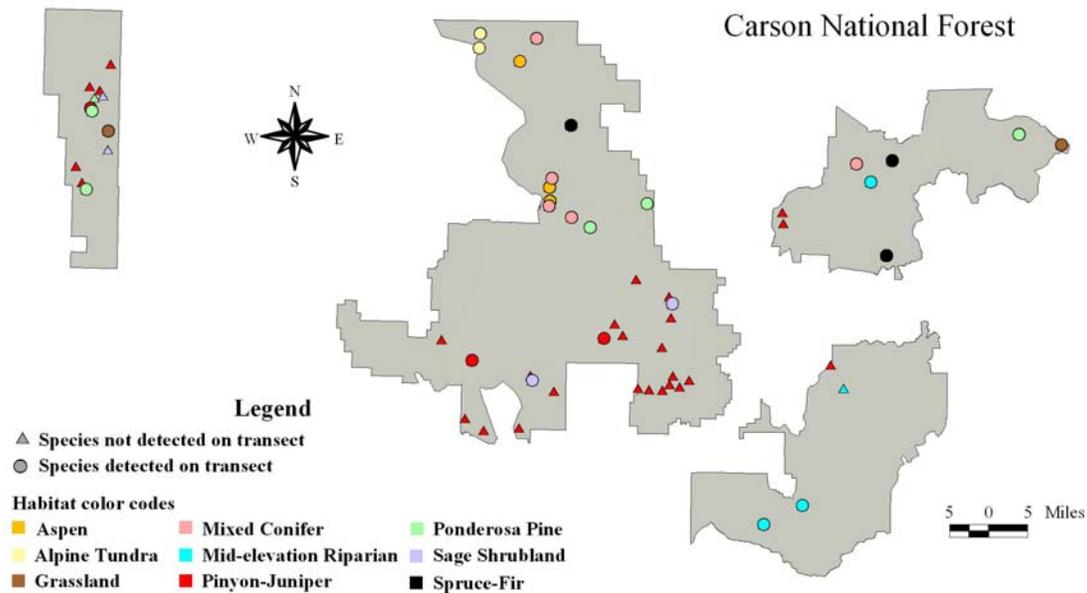
We detected 49 Virginia's Warblers in Pinyon-Juniper during the summer of 2003. This is the only habitat where we were able to obtain a density estimate for this species. Virginia's Warbler is listed by NMPIF as a Priority management species in Montane Shrub. We did not perform transects in pure Montane Shrub habitat, however, Gambel's Oak, a major component of this habitat, is often present in Pinyon-Juniper. In areas where Virginia's Warblers were detected in Pinyon-Juniper, Gambel's Oak was also recorded as an understory shrub on 25 out of 44 (57%) points. We also recorded 10 individuals in Ponderosa Pine where this it is listed as a Highest Priority management species by NMPIF. Ornithologists are concerned that the loss of wintering habitat in western Mexico may result in a decline of the Virginia's Warbler's population.

Habitat-specific density estimates for Virginia's Warbler in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
GR	ID	--	--	--	1
PJ	0.0434	0.0264	0.0712	26%	44
PP	ID	--	--	--	10
SA	ID	--	--	--	1

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Yellow-rumped Warbler

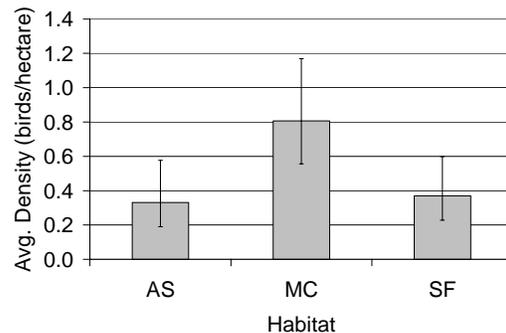


Yellow-rumped Warbler is a common breeder in forested habitats in the southern Rocky Mountains. This species was recorded in all habitat types in 2003. We were able to estimate densities for the Yellow-rumped Warbler in three habitats: Aspen, Mixed Conifer, and Spruce-Fir. This species was most common in Mixed Conifer habitat this season.

Habitat-specific density estimates for Yellow-rumped Warbler in the Carson National Forest, summer 2003

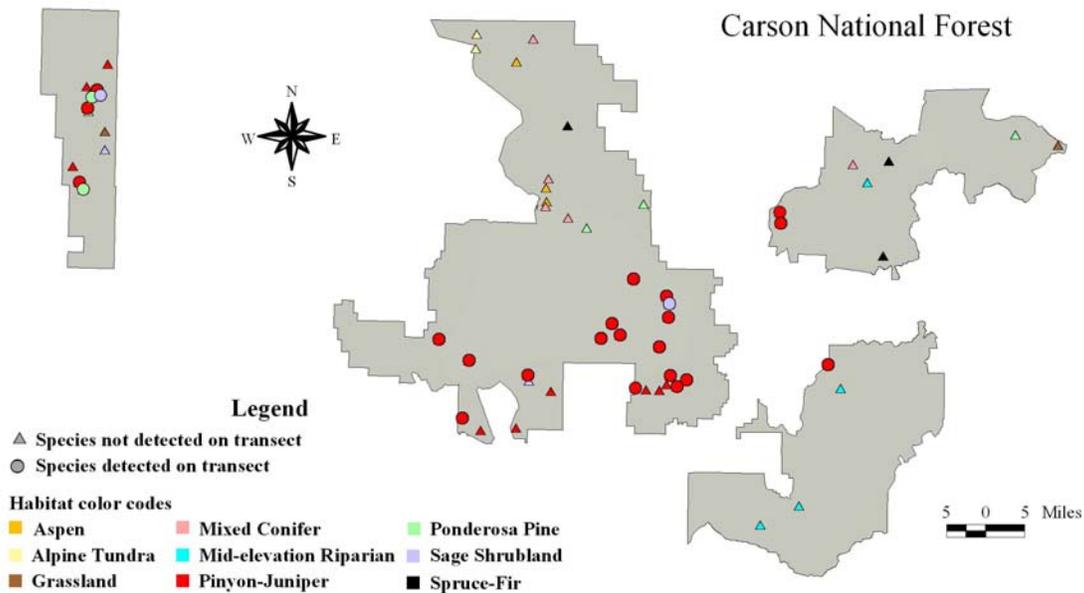
HABITAT	D	LCL	UCL	CV	n
AS	0.3312	0.1905	0.5760	28%	44
AT	ID	--	--	--	6
GR	ID	--	--	--	9
MC	0.8062	0.5560	1.1689	19%	53
MR	ID	--	--	--	8
PJ	ID	--	--	--	8
PP	ID	--	--	--	22
SA	ID	--	--	--	2
SF	0.3700	0.2286	0.5990	25%	45

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data



Relative density of Yellow-rumped Warbler among habitats in the Carson National Forest, summer 2003.

Black-throated Gray Warbler



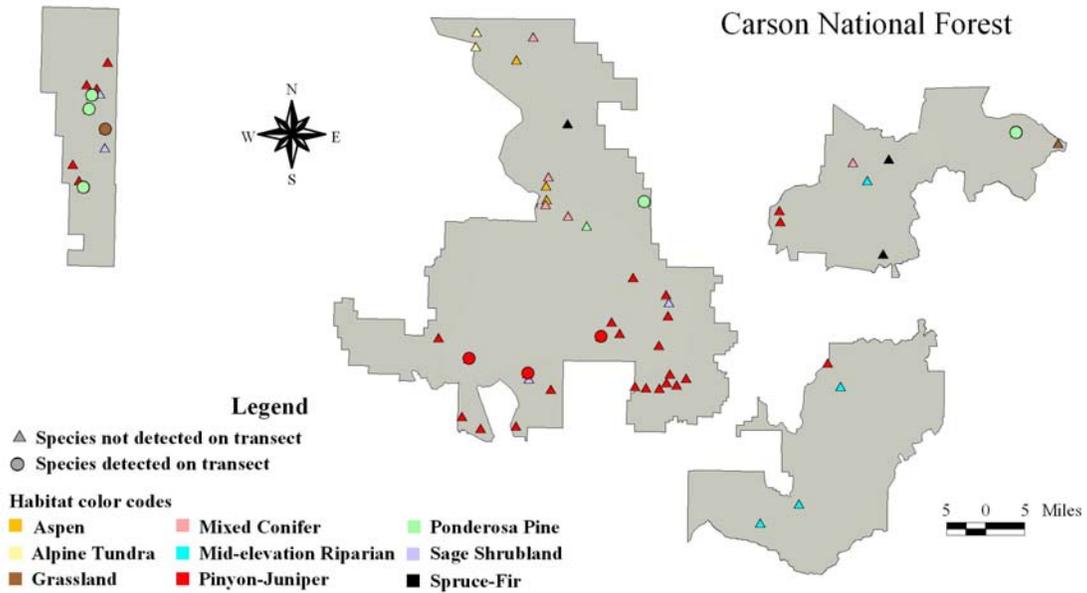
Black-throated Gray Warbler is a common breeder in Pinyon-Juniper habitat. We detected 232 Black-throated Gray Warblers on 21 Pinyon-Juniper transects in the summer of 2003. This species was the 2nd most common species detected in Pinyon-Juniper and is listed as a Highest Priority management species in this habitat by NMPIF. It is not certain how this species will be affected by the Pinyon Pine die-off. It is certain, however, that there will be an overall reduction in nesting cover for this species.

Habitat-specific density estimates for Black-throated Gray Warbler in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
PJ	0.2227	0.1816	0.2731	10%	232
PP	ID	--	--	--	6
SA	ID	--	--	--	3

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Grace's Warbler



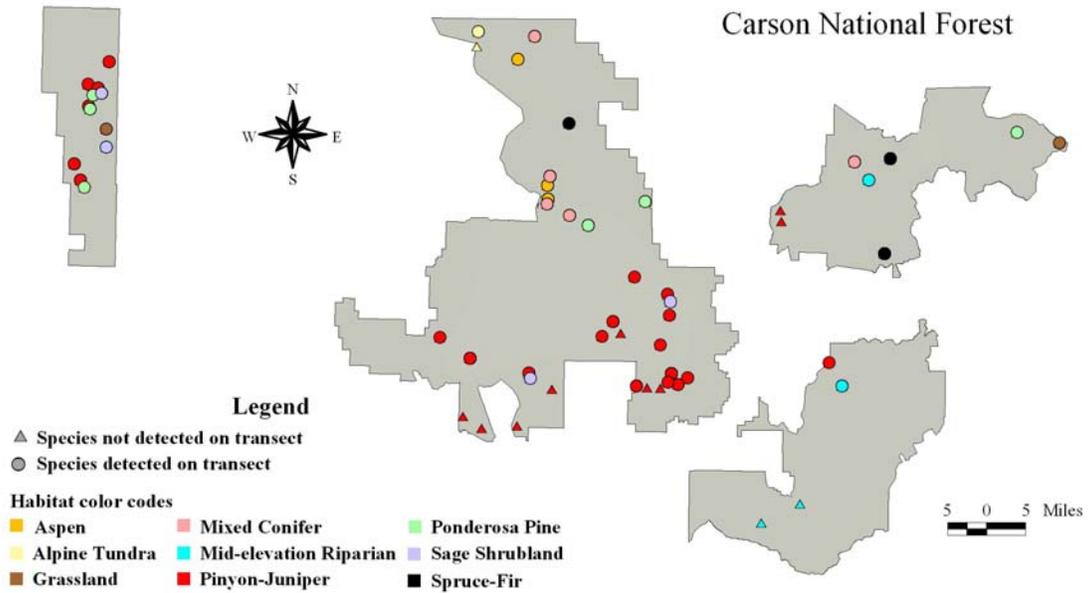
We were able to provide a density estimate for Grace's Warbler in Ponderosa Pine habitat this season. A total of 34 were detected in this habitat, however, we eliminated one outlier to generate this density estimate. Grace's Warbler is a Highest Priority management species in Ponderosa Pine habitat according to NMPIF.

Habitat-specific density estimates for Grace's Warbler in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
GR	ID	--	--	--	1
PJ	ID	--	--	--	3
PP	0.1268	0.0687	0.2341	32%	33

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Western Tanager

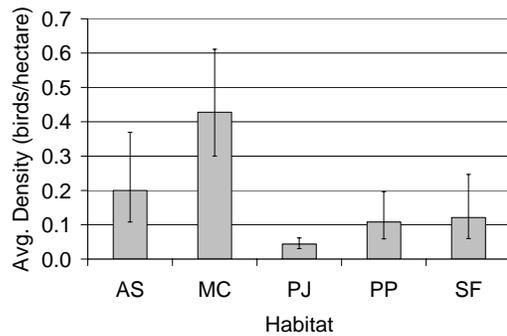


Western Tanager is a fairly common breeder in forest areas dominated by conifers and was the third most commonly detected species in all habitats combined during the summer of 2003. We detected sufficient numbers of this species in Aspen, Mixed Conifer, Pinyon-Juniper, Ponderosa Pine, and Spruce-Fir to obtain a density estimate. Highest densities for this species were found in Mixed Conifer and Pinyon-Juniper.

Habitat-specific density estimates for Western Tanager in the Carson National Forest, summer 2003

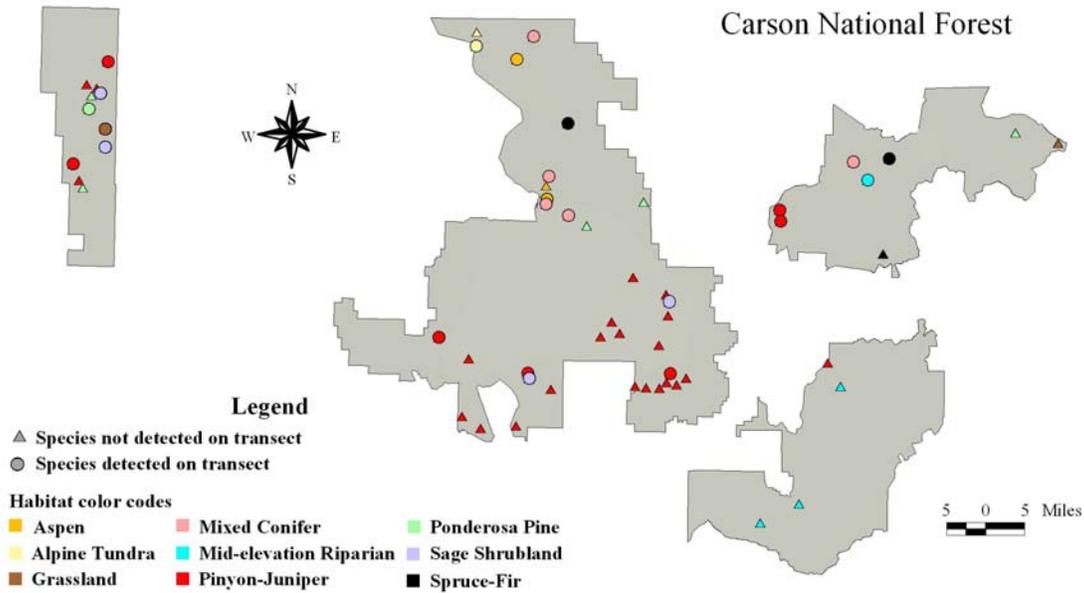
HABITAT	D	LCL	UCL	CV	n
AS	0.1999	0.1081	0.3697	31%	31
AT	ID	--	--	--	2
GR	ID	--	--	--	4
MC	0.4281	0.2998	0.6113	18%	64
MR	ID	--	--	--	8
PJ	0.0434	0.0307	0.0614	18%	95
PP	0.1078	0.0591	0.1965	31%	30
SA	ID	--	--	--	12
SF	0.1213	0.0596	0.2466	37%	24

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data



Relative density of Western Tanager among habitats in the Carson National Forest, summer 2003.

Green-tailed Towhee



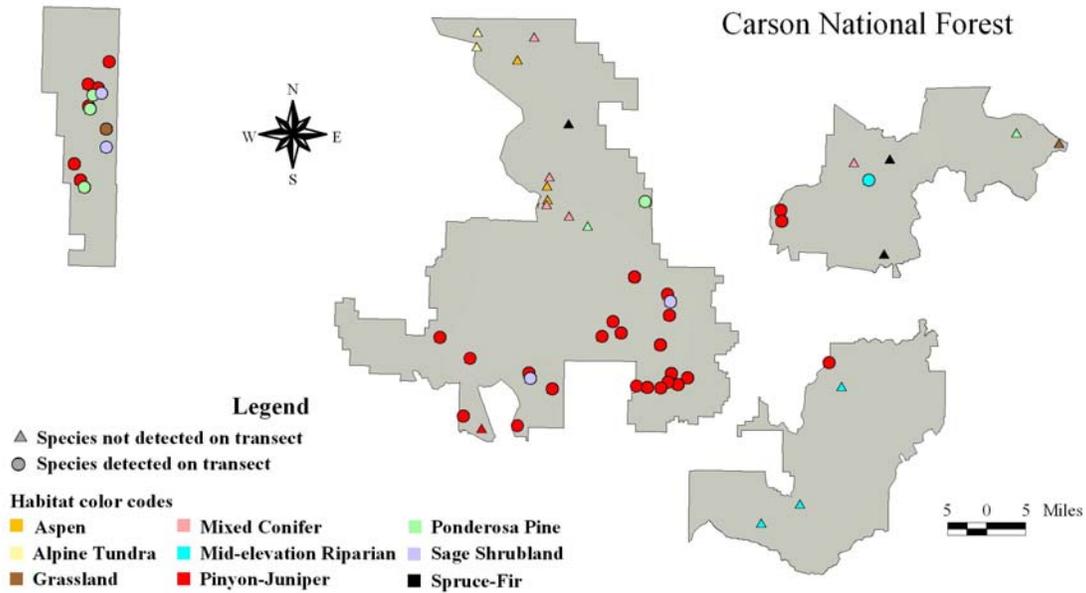
We recorded Green-tailed Towhees in all habitats surveyed during the summer of 2003. However, we were able to generate a density estimate in Sage only. We also detected 16 in Grassland habitat and ten in Pinyon-Juniper. Green-tailed Towhee is listed as a Highest Priority management species in Montane Shrub habitat by NMPIF. The habitats in which we survey that are most similar to Montane Shrub are Pinyon-Juniper and Sage.

Habitat-specific density estimates for Green-tailed Towhee in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
AS	ID	--	--	--	4
AT	ID	--	--	--	2
GR	ID	--	--	--	16
MC	ID	--	--	--	9
MR	ID	--	--	--	1
PJ	ID	--	--	--	10
PP	ID	--	--	--	2
SA	0.1338	0.0672	0.2662	35%	29
SF	ID	--	--	--	2

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Spotted Towhee

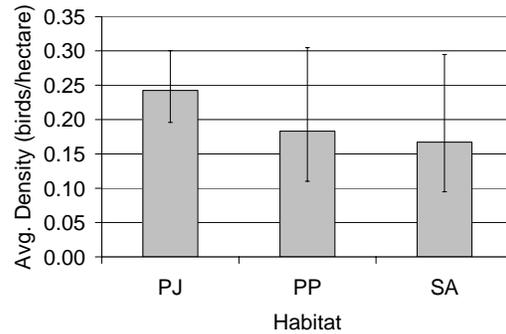


Spotted Towhee was the most common species detected in all habitats combined for transects run in the summer of 2003. A total of 369 individuals were detected in five habitats this season. We detected 258 in Pinyon-Juniper, 51 in Ponderosa Pine, and 44 in Sage and were able to estimate densities in these three habitats. Spotted Towhee is listed as a representative species for Montane Shrub habitat by NMPIF.

Habitat-specific density estimates for Spotted Towhee in the Carson National Forest, summer 2003

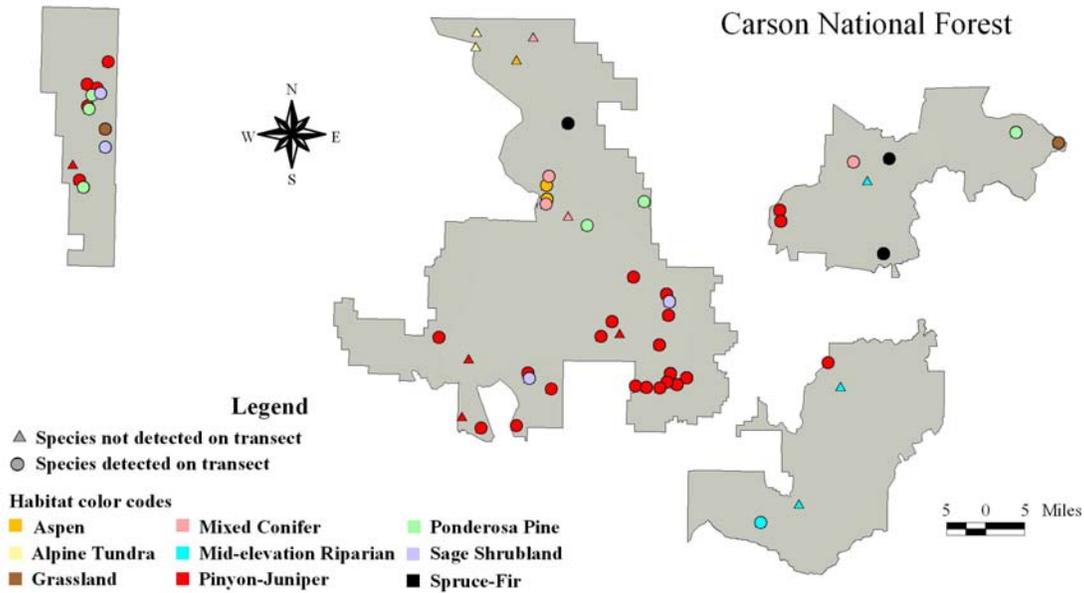
HABITAT	D	LCL	UCL	CV	n
GR	ID	--	--	--	13
MR	ID	--	--	--	3
PJ	0.2425	0.1958	0.3003	11%	257
PP	0.1831	0.1100	0.3048	26%	51
SA	0.1671	0.0947	0.2947	29%	44

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data



Relative density of Spotted Towhee among habitats in the Carson National Forest, summer 2003.

Chipping Sparrow

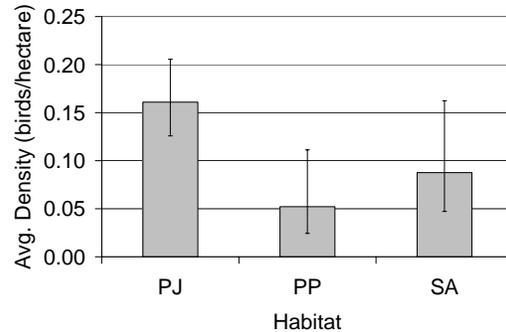


Chipping Sparrow was the 2nd most commonly detected species in all habitats with 303 detections and 3rd most common in Pinyon-Juniper with 182 detections. Chipping Sparrows were detected in all habitat types except Alpine Tundra. We were able to estimate densities for Chipping Sparrow for Pinyon-Juniper, Ponderosa Pine, and Sage habitats this season. Nests of this species are frequently parasitized by Brown-headed Cowbirds. The reduction of cover due to the loss of Pinyon Pine may result in an increase in nest parasitism for this species.

Habitat-specific density estimates for Chipping Sparrow in the Carson National Forest, summer 2003

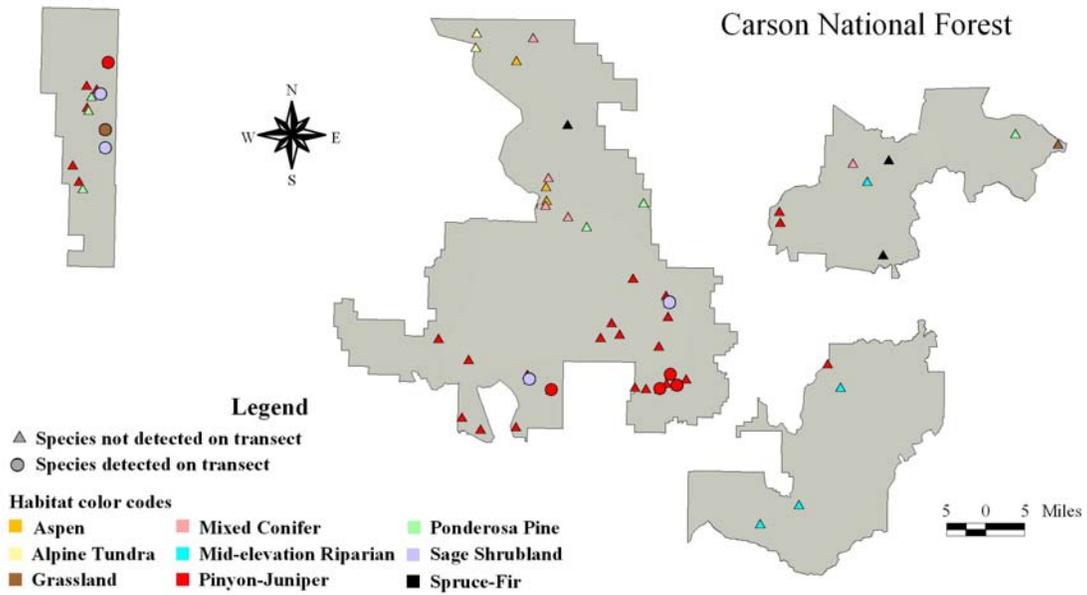
HABITAT	D	LCL	UCL	CV	n
AS	ID	--	--	--	16
GR	ID	--	--	--	21
MC	ID	--	--	--	9
MR	ID	--	--	--	2
PJ	0.1609	0.1259	0.2056	13%	181
PP	0.0521	0.0244	0.1113	39%	26
SA	0.0875	0.0471	0.1625	32%	30
SF	ID	--	--	--	17

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data



Relative density of Chipping Sparrow among habitats in the Carson National Forest, summer 2003.

Brewer's Sparrow



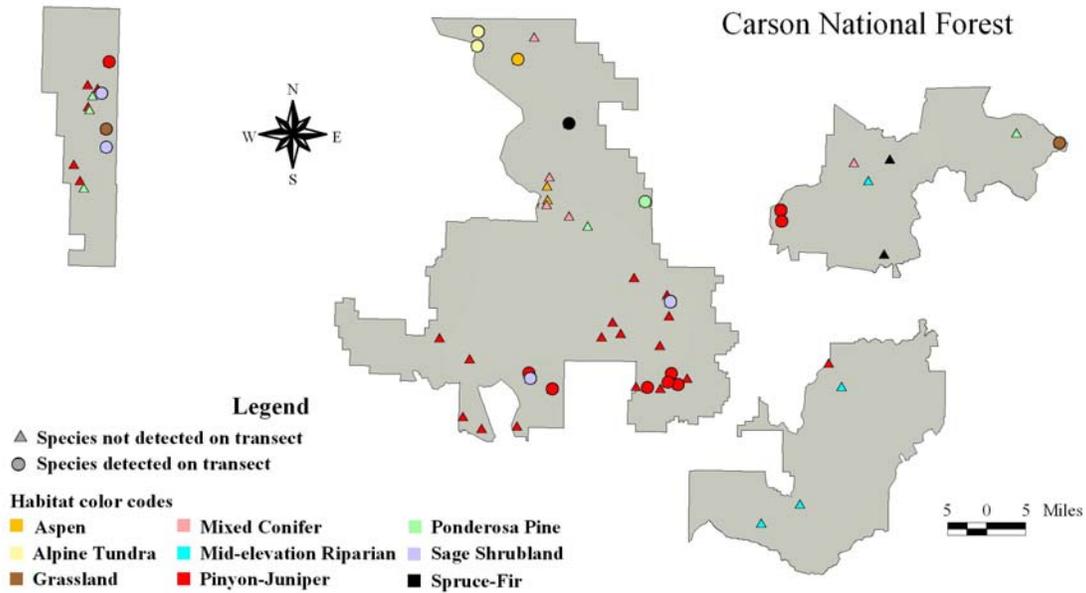
We detected Brewer's Sparrows primarily in sage habitat during the summer of 2003. We also detected nine in Pinyon-Juniper and seven in Grassland. This species is listed as a Representative species in Great Basin Desert Shrub (Sage) habitat by NMPIF. Brewer's Sparrow may benefit from the loss of Pinyon Pine in the CNF as this event may increase the amount of open habitat which this species prefers.

Habitat-specific density estimates for Brewer's Sparrow in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
GR	ID	--	--	--	7
PJ	ID	--	--	--	9
SA	0.0935	0.0524	0.1666	30%	27

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Vesper Sparrow

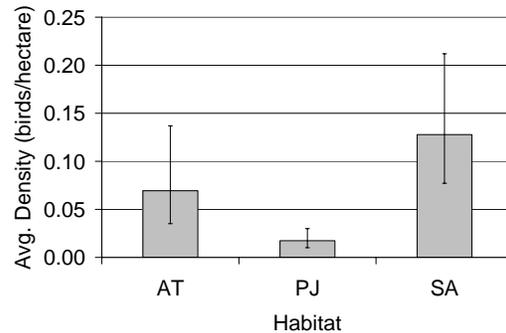


We detected sufficient numbers of Vesper Sparrows in each of three habitats to provide a density estimates. Vesper Sparrow was the only species for which we were able to estimate a density in Alpine Tundra this season. We also detected sufficient numbers of this species to obtain densities in Pinyon-Juniper and Sage habitats. Vesper Sparrow is listed as a Representative species for the Plains and Mesa Grassland habitat by NMPIF. This is a species that may benefit from the loss of Pinyon Pine, as it also prefers open habitats.

Habitat-specific density estimates for Vesper Sparrow in the Carson National Forest, summer 2003

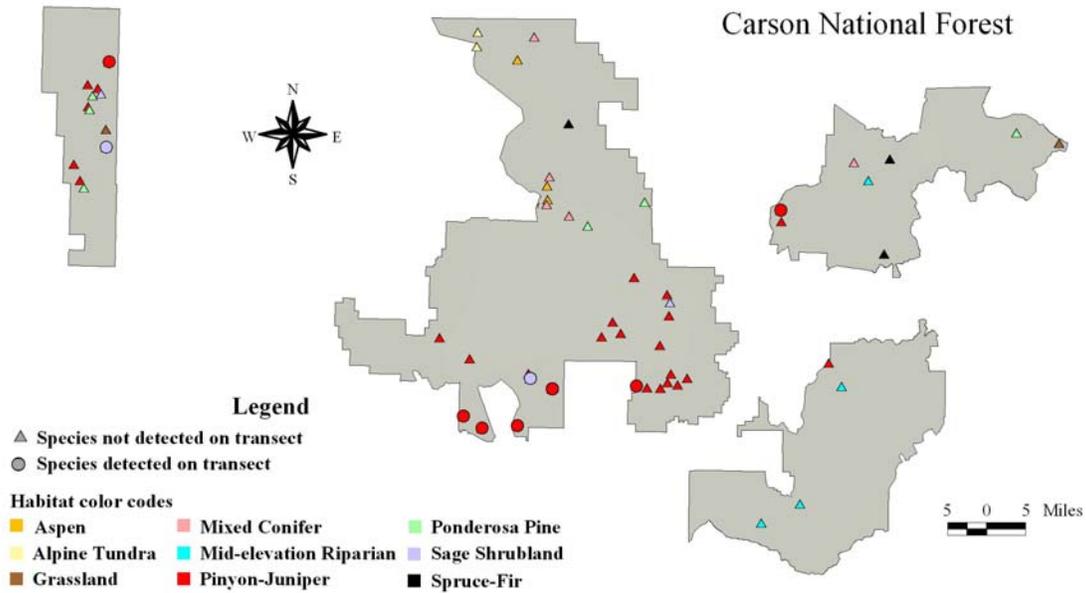
HABITAT	D	LCL	UCL	CV	n
AS	ID	--	--	--	3
AT	0.0693	0.0351	0.1369	34%	23
GR	ID	--	--	--	10
PJ	0.0173	0.0100	0.0299	28%	52
PP	ID	--	--	--	2
SA	0.1278	0.0770	0.2119	26%	45
SF	ID	--	--	--	1

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data



Relative density of Vesper Sparrow among habitats in the Carson National Forest, summer 2003.

Lark Sparrow



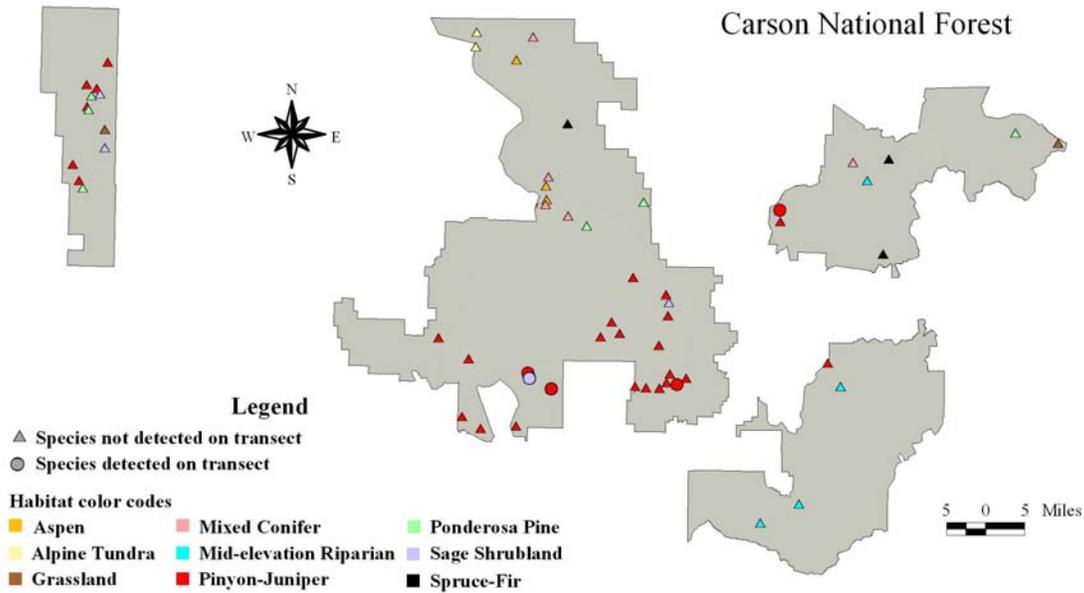
Lark Sparrow is an uncommon breeder in open, arid habitats. We were able to provide a density estimate for this species in the Pinyon-Juniper habitat only. This species was detected in only two habitats, Pinyon-Juniper and Sage. Lark Sparrow is listed as a High Responsibility management species by NMPIF in the Pinyon-Juniper habitat.

Habitat-specific density estimates for Lark Sparrow in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
PJ	0.0292	0.0154	0.0555	33%	29
SA	ID	--	--	--	4

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Sage Sparrow



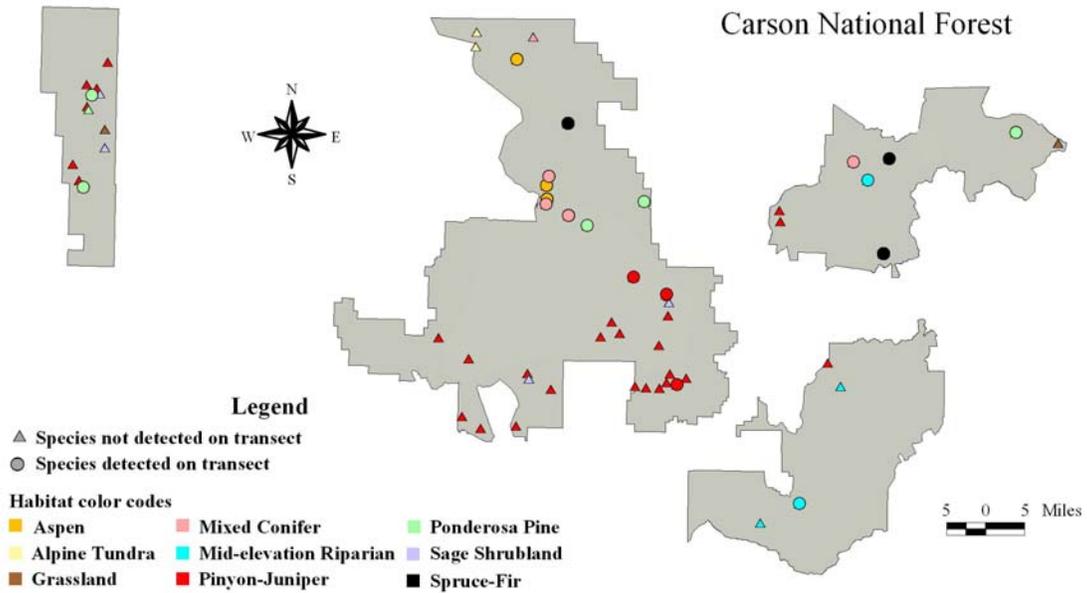
Sage Sparrow is an uncommon and local breeder in stands of pure sage. We detected 25 Sage Sparrows in Sage habitat during the summer of 2003 (two were detected between points and not used in our analysis) and obtained a density estimate in this habitat alone. Interestingly, all of the detections of this species in Sage were from one transect. We also detected 15 Sage Sparrows in Pinyon-Juniper habitat this season. Sage Sparrow is listed as a Highest Priority management species in Great Basin Desert Shrub (Sage) habitat by NMPIF. The pinyon pine die-off may result in an increase in Sage throughout CNF which would benefit this species.

Habitat-specific density estimates for Sage Sparrow in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
PJ	ID	--	--	--	15
SA	0.0735	0.0332	0.1629	41%	23

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Dark-eyed Junco



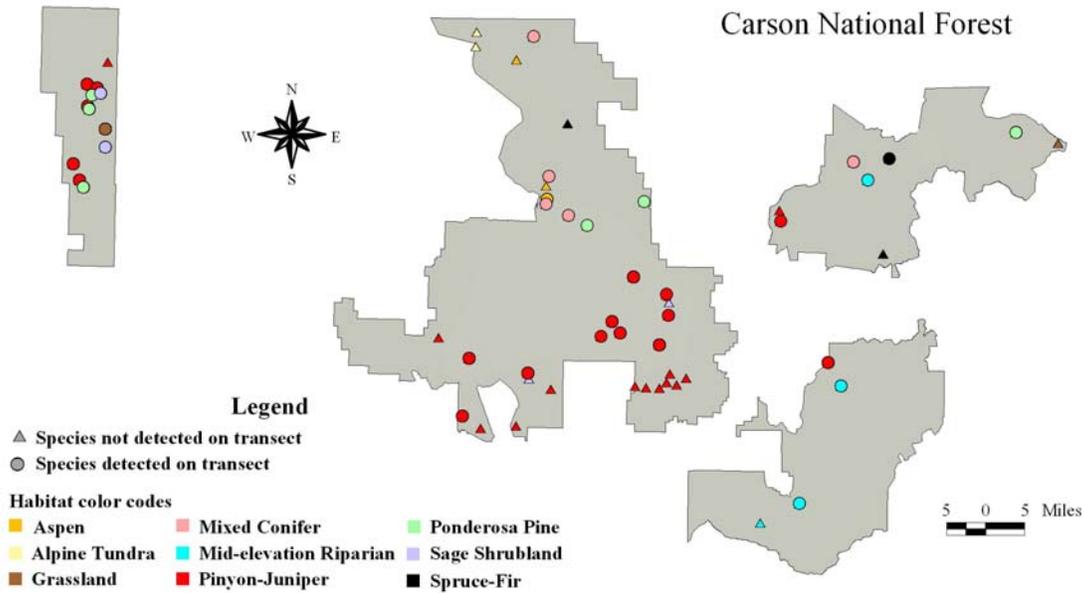
Sufficient numbers of Dark-eyed Juncos were detected in Spruce-Fir habitat to obtain a density estimate during the 2003 season. Dark-eyed Juncos were also found in five other habitat types. Dark-eyed Junco is listed as a High Responsibility management species in Spruce-Fir habitat. The subspecies, Gray-headed Junco, is the only type that breeds in the CNF.

Habitat-specific density estimates for Dark-eyed Junco in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
AS	ID	--	--	--	21
MC	ID	--	--	--	12
MR	ID	--	--	--	2
PJ	ID	--	--	--	4
PP	ID	--	--	--	7
SF	0.2792	0.1491	0.5227	32%	34

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Black-headed Grosbeak

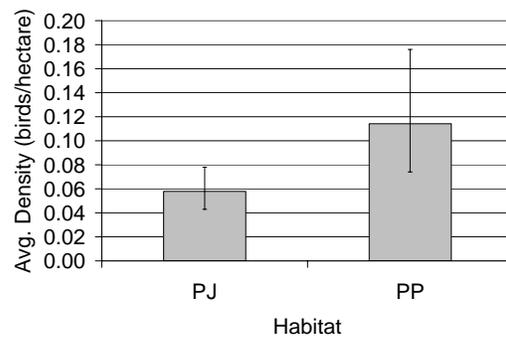


Black-headed Grosbeak is a common breeder in lower-elevation, forested areas. We were able to provide a density estimate in Pinyon-Juniper and Ponderosa Pine from data obtained during the summer of 2003. This species was one of the most common species in the Pinyon-Juniper habitat where we detected 120 individuals. In arriving at the density estimate given for this species in Pinyon-Juniper, we found it necessary to eliminate 3 outliers to achieve a lower CV. Black-headed Grosbeaks were detected this season in every habitat except for Alpine Tundra.

Habitat-specific density estimates for Black-headed Grosbeak in the Carson National Forest, summer 2003

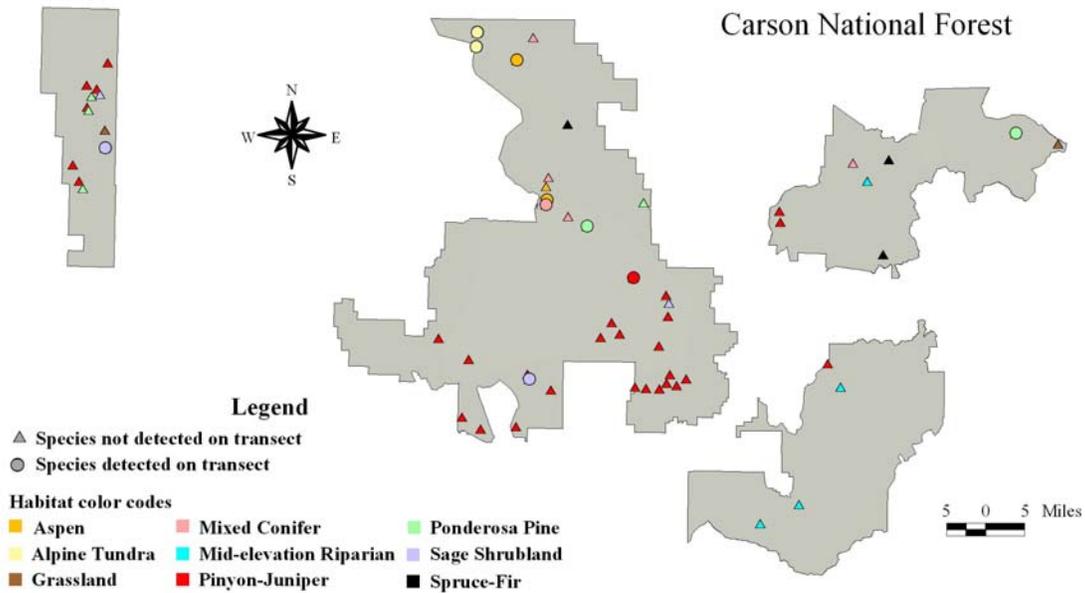
HABITAT	D	LCL	UCL	CV	n
AS	ID	--	--	--	3
GR	ID	--	--	--	14
MC	ID	--	--	--	8
MR	ID	--	--	--	7
PJ	0.0578	0.0429	0.0780	15%	117
PP	0.1141	0.0740	0.1759	22%	41
SA	ID	--	--	--	12
SF	ID	--	--	--	1

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data



Relative density of Black-headed Grosbeak among habitats in the Carson National Forest, summer 2003.

Western Meadowlark



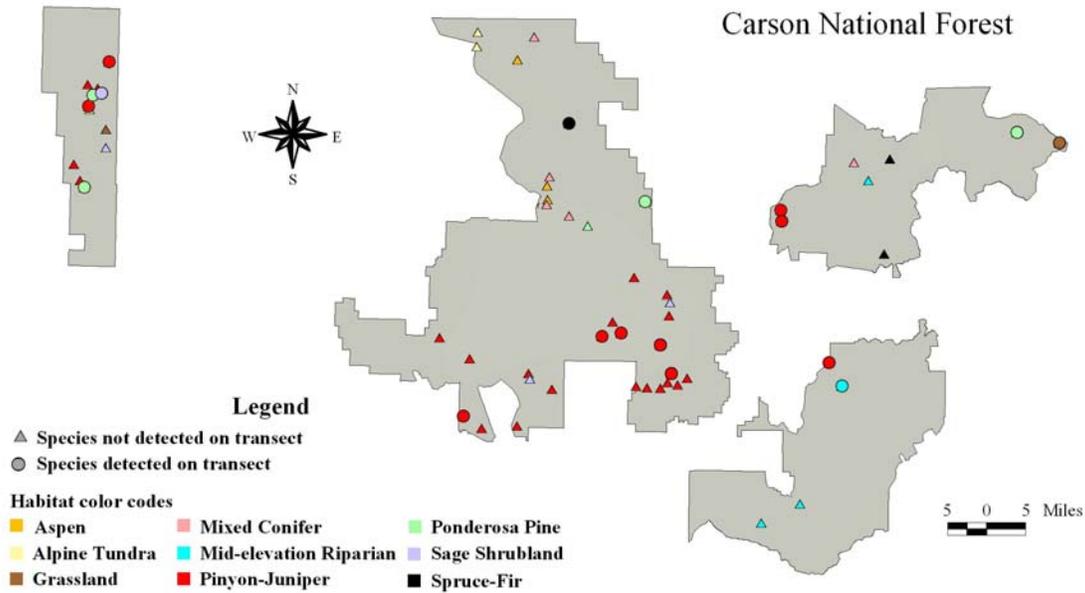
Western Meadowlark is a common breeder in open, grass-dominated areas. During the summer of 2003, we detected 29 Western Meadowlarks in six habitats. Nearly half, 14, of these individuals were detected in Alpine Tundra. Western Meadowlark is listed as a Representative species by NMPIF for the Plains and Mesa Grassland habitat. Curiously, this species was not detected on any of our Grassland transects this season.

Observations of Western Meadowlark in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
AS	ID	--	--	--	5
AT	ID	--	--	--	14
MC	ID	--	--	--	1
PJ	ID	--	--	--	1
PP	ID	--	--	--	2
SA	ID	--	--	--	6

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Brown-headed Cowbird



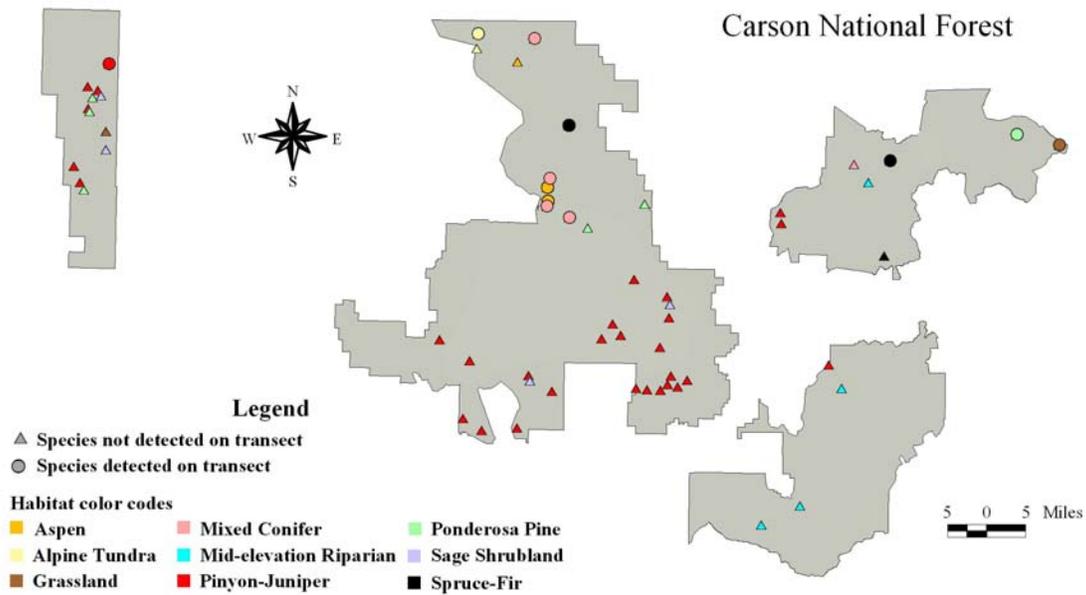
Brown-headed Cowbirds were detected in six of the nine habitats surveyed in the CNF during the summer of 2003. We detected sufficient numbers of this species in the Pinyon-Juniper habitat to obtain a density estimate. This species has negatively impacted populations of some passerines through nest parasitism in the southwestern United States and should be closely monitored. The Pinyon Pine die-off will most likely make it easier for this species to find nests of other species in which to lay its eggs.

Habitat-specific density estimates for Brown-headed Cowbird in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV	n
GR	ID	--	--	--	3
MR	ID	--	--	--	2
PJ	0.0115	0.0056	0.0235	37%	24
PP	ID	--	--	--	8
SA	ID	--	--	--	4
SF	ID	--	--	--	1

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Red Crossbill



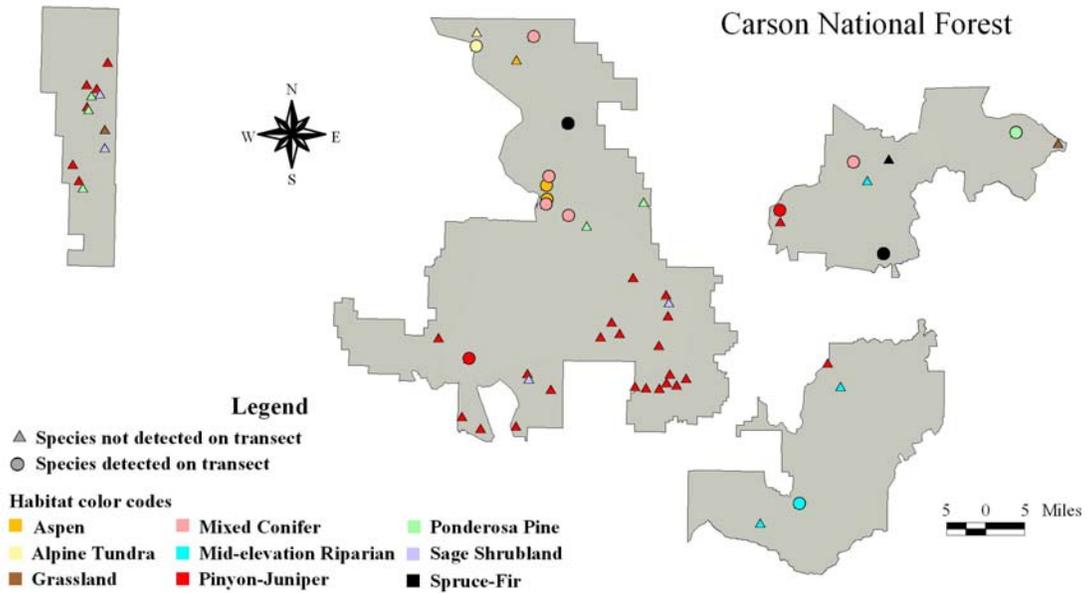
Red Crossbills are an uncommon breeder in high elevation forested areas. It is possible that at least two types of Red Crossbills, which occupy different habitats, breed in CNF. Red Crossbills were found in seven habitats and were most frequently detected in Aspen in the summer of 2003. A total of 51 individuals were detected in all habitats, but we did not detect sufficient numbers to estimate density in any single habitat type.

Observations of Red Crossbill in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV(%)	n
AS	ID	--	--	--	17
AT	ID	--	--	--	5
GR	ID	--	--	--	1
MC	ID	--	--	--	10
PJ	ID	--	--	--	2
PP	ID	--	--	--	3
SF	ID	--	--	--	13

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

Pine Siskin



Pine Siskin is a common breeder in high elevation forested areas. We detected a total of 58 Pine Siskins in all habitat types, but we did not detect sufficient numbers in any one habitat type to provide a density estimate. This species was most common in Spruce-Fir where we detected 21 individuals and in Mixed Conifer where we detected 16.

Observations of Pine Siskin in the Carson National Forest, summer 2003

HABITAT	D	LCL	UCL	CV(%)	n
AS	ID	--	--	--	5
AT	ID	--	--	--	1
MC	ID	--	--	--	16
MR	ID	--	--	--	3
PJ	ID	--	--	--	4
PP	ID	--	--	--	8
SF	ID	--	--	--	21

D=Density in birds/hectare; LCL=lower confidence limit on D;
 UCL=upper confidence limit on D; CV=coefficient of variation on D;
 n=number of observations; ID=insufficient data

