Supplementary Materials

Figure S1. Photographs of AudioMoth passive acoustic monitors deployed in the field.

Acoustic Indices and Analysis

More than one index is recommended in order to capture a wide range of the potential biological acoustic energy [8,20]. However, in practice, this recommendation is impractical as optimal index selection is dependent on *a priori* species information. In situations where species are being evaluated *posteriori*, there is no consensus in the literature other than diversifying spectral and temporal acoustic energy [8,20]. This is difficult in practice because recordings with high amounts of broad frequency band energy coming from wind and rain (geophony) are often promoted in place of biological acoustic activity (biophony). All of the indices available within the R packages seewave and soundecology (Acoustic Complexity, Temporal Entropy, Spectral Entropy, Acoustic Evenness, Acoustic Diversity, Bioacoustic Index) were explored by ranking the recordings by the index value [36,37]. The Bioacoustic Index (BIO) was chosen for this study because acoustic recordings of wind and rain did not receive high values, which were more frequent in the other indices results.

Both sampling approaches demonstrated trends towards reaching sampling saturation (Figure S1), however the dawn sampling approach was selected as the most reliable approach because more species were identified and there was more spread in the data (Table 1).

Table S1. Noncrop vegetation proportions within 100 m from sample site for UAS and PlanetScope (PS) data. Also included are songbird richness counts using the dawn sample approach and the bioacoustic index (BIO) sorted rank approach.

Name	UAS_Noncrop	PS_Noncrop	Dawn	BIO
Allee 1	35.834	33.8788	10	14
Allee 2	37.5175	33.5436	12	10
Allee 3	6.1471	0	8	3
Allee 4	1.8186	0	4	1
Armstrong 1	47.5379	45.0817	20	9
Armstrong 2	27.7273	58.6583	14	10
Armstrong 3	23.9781	36.9235	11	6
BKG	99.7515	98.7357	22	16
McNay	25.9572	17.5594	14	10
Northeast 1	16.6443	9.0284	8	10
Northeast 2	22.7218	23.132	11	7
Northeast 3	25.7796	29.3004	4	3

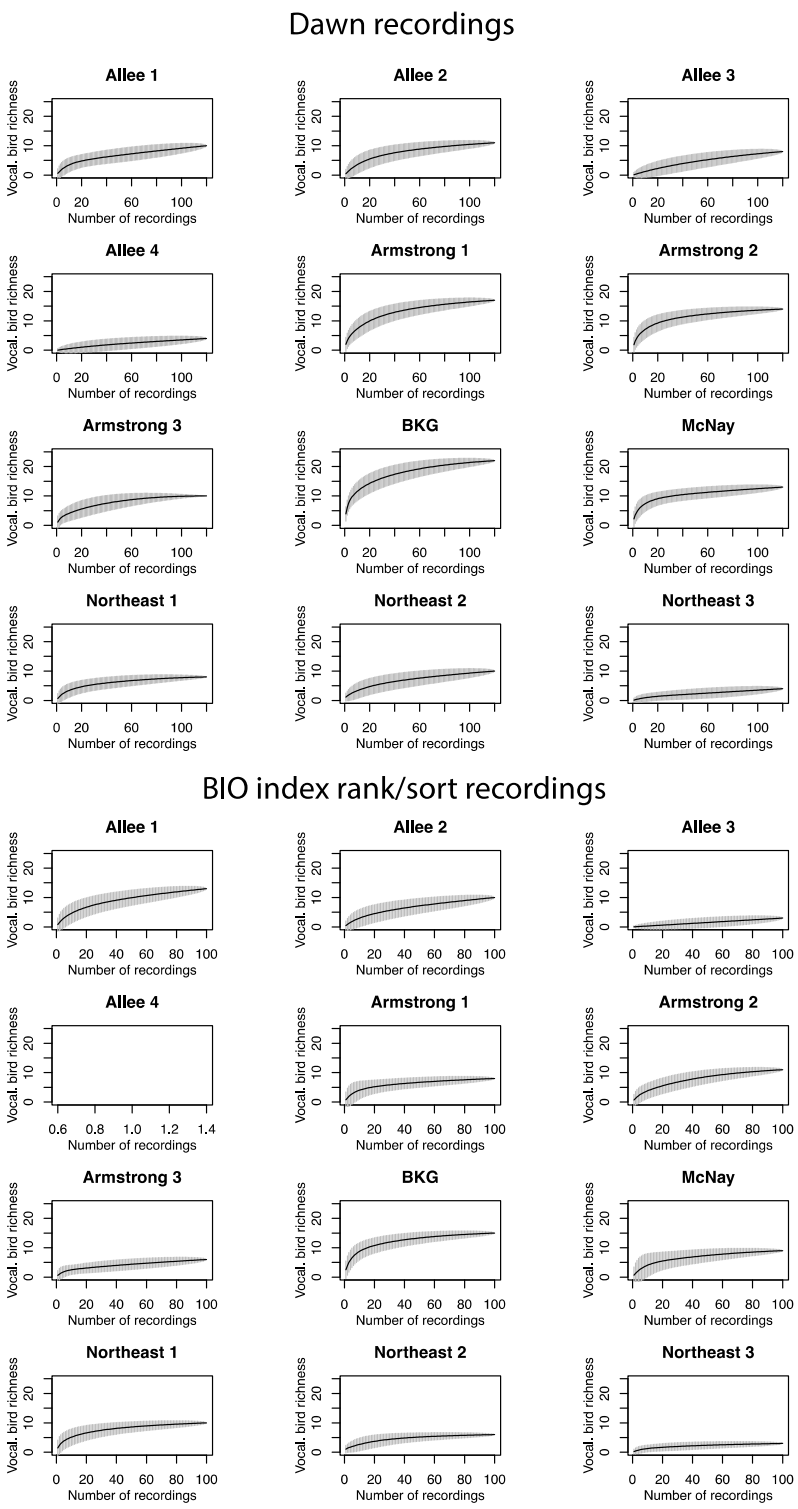

Figure S2. Individual species area curves using for each acoustic recording sampling method with error bars showing standard deviation from 100 permutations to compute the rarefaction.

Spatial Extent and Resolution

The correlation between proportion of noncrop vegetation and vocalizing bird richness were not significantly different across spatial extents (Figure S3). This was not expected but became apparent when observing that the total change in noncrop proportion between spatial extents was not common (Figure S4).

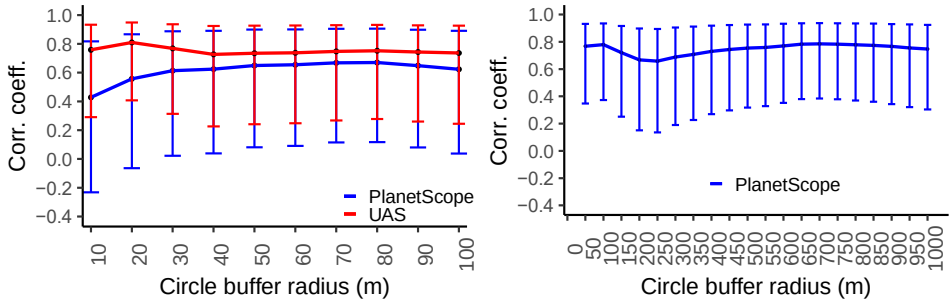

Figure S3. Pearson's correlation at each radial buffer distance for PlanetScope data from 50 to 1000 m. Error bars show 95% confidence intervals based on Fisher's r to z transformation.

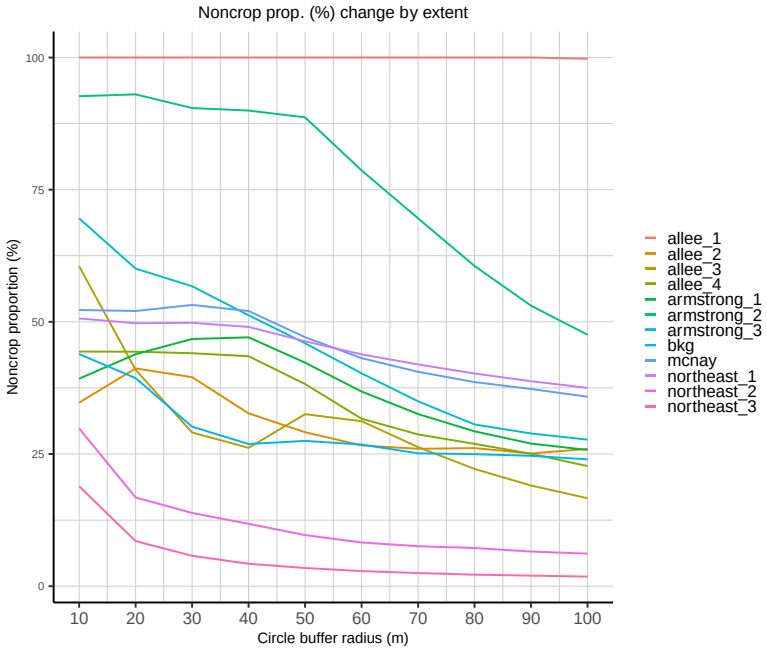

Figure S4. Noncrop vegetation proportion change by analysis extent using UAS data.

Table S2. Vocalizing bird species codes for each site using the dawn recording sampling approach.

Allee 1	Allee 2	Allee 3	Allee 4	Armstrong 1	Armstrong 2	Armstrong 3	BKG	McNay	Northeast 1	Northeast 2	Northeast 3
AMGO	AMCR	VESP	AMRO	AMGO	AMGO	AMGO	AMCR	AMCR	AMCR	AMCR	AMCR
AMRO	AMGO	MODO	BLJA	BARS	AMRO	AMRO	AMGO	AMGO	AMGO	AMGO	BLJA
BARS	AMRO	RWBL	SOSP	BLJA	BARS	BARS	AMRO	COYE	AMRO	AMRO	SOSP
BLJA	BLJA	AMGO	WEME	BRTH	COHA	BRTH	BLJA	DICK	GRSP	BLJA	VESP
DICK	COGR	INBU		CONI	CONI	COHA	COYE	EAME	NOCA	DICK	
HOFI	DICK	CCGO		COYE	COYE	COYE	DICK	INBU	SOSP	INBU	
INBU	HOFI	UNKN		EAME	DICK	DICK	EATO	MAWR	VESP	NOCA	
KILL	MODO	WEME		EATO	GRSP	NOBO	FISP	NOBO	UNKNOWN	SOSP	
RWBL	RWBL			GRCA	MODO	NOCA	GRSP	NOFL		VESP	
SOSP	SOSP			INBU	NOBO	WEME	HOFI	RWBL		WEME	
	WEME			MAWR	NOCA	UNKNOWN	HOLA	SOSP		UNKNOWN	
	UNKNOWN 1			NOBO	RNEP		MODO	SSHA			
				NOCA	WEME		NOCA	WEME			
				RNEP	UNKNOWN		NOFL	UNKNOWN			
				RWBL			NOMO				
				SOSP			RBGR				
				WEME			RTHA				
				YEWA			RWBL				
				UNKNOWN 1			SOSP				
				UNKNOWN 2			WEME				
							WOTH				
							UNKNOWN				

Table S3. Species names and codes.

Species Code	English name
AMCR	American crow
AMGO	American goldfinch
AMRO	American robin
BARS	Barn swallow
BLJA	Blue jay
BOBO	Bobolink
BRTH	Brown thrasher
CCGO	Canada goose
CHSW	Chimney swift
COGR	Common grackle
COHA	Cooper's hawk
CONI	Common nighthawk
COYE	Common yellowthroat
DICK	Dickcissel
EAKI	Eastern kingbird
EAME	Eastern meadowlark
EATO	Eastern towhee
FISP	Field sparrow
GHOW	Great-horned owl
GRCA	Gray catbird
GRSP	Grasshopper sparrow
HAWO	Hairy woodpecker
HOFI	House finch
HOLA	Horned lark
INBU	Indigo bunting
KILL	Killdeer
MAWR	Marsh wren
MODO	Mourning dove
NOBO	Northern bobwhite
NOCA	Northern cardinal
NOFL	Northern flicker
NOMO	Northern mockingbird
RBGR	Rose-breasted grosbeak
RBWO	Red-bellied woodpecker
RNEP	Ring-necked pheasant
RTHA	Red-tailed hawk
RWBL	Red-winged blackbird
SEPL	Semipalmated plover
SOSP	Song sparrow
SSHA	Sharp-shinned hawk
VESP	Vesper sparrow
WAVI	Warbling vireo
WEME	Western meadowlark
WOTH	Wood thrush
YEWA	Yellow warbler

Land Cover Class Codes

1 Herbaceous noncrop
2 Herbaceous crop
3 Woody
4 Built
5 Water

Table S4. Confusion matrix for all PS land cover classifications.

	1	**2**	**3**	**4**
1	7484	691	37	0
2	1155	8136	43	0
3	6	1	169	0
4	0	0	0	131

Users accuracy: 0.87; Producers accuracy: 0.94; Total accuracy: 0.89; Kappa: 0.79

Table S5. Confusion matrix for all UAS land cover classifications.

	1	**2**	**3**	**4**	**5**
1	7156	412	0	1	0
2	48	99,297	0	1	1
3	0	0	13874	0	0
4	0	0	0	2435	0
5	0	0	0	0	10,931

Users accuracy: 0.99; Producers accuracy: 0.99; Total accuracy: 0.99; Kappa: 0.9

Table S6. Proportion of UAS data with No data values These areas occurred due to limited coverage by photographs taken aboard the UAS. Areas were compared with the USDA Cropland Data Layer to confirm reclassification into crop vegetation.

Site	**No Data (%)**
Allee 1	13.6
Allee 2	28
Allee 3	7
Allee 4	7.2
Armstrong 1	10.4
Armstrong 2	0
Armstrong 3	0
Broken Kettle Grasslands	0
McNay	0
Northeast 1	2.5
Northeast 2	14.2
Northeast 3	14.7

Exploring Sample Location Bias

The geographic distribution of the passive acoustic monitors was both widespread with a few points clustered because the sampling design was partly based on feasibility of location. Therefore, we conducted an ancillary analysis examining these potential effects on our results. We tested for variations in UTM latitude, grouping of the sites by north and south, and total distance (in meters) between acoustic recording locations (Figure 3). Models exclude Broken Kettle Grasslands as an outlier. Results indicated that geographic bias may be having an impact. However, AICc values are not different enough to warrant the suggestion that the impact is significant. The increase in explained deviance (the GLM equivalent of R^2) may be due to simply adding a model term.

The first model is the same univariate GLM used in the main text and is included here for comparison.

The second model (NC + lat) uses noncrop proportion and latitude and longitude from the UTM Zone 15N projection as predictor variables.

The third model (NC + group) 3 includes noncrop proportion and grouped the sites between North and South as predictor variables. Included in the North category were all Allee and Northeast sample locations. Included in the South category were Armstrong and McNay locations.

The fourth model (NC + distance) includes noncrop proportion and the distance to the next sample point in meters as predictor variables.

Table S7. GLMs examining the impact of geographic bias in the dataset.

	NC	NC + lat	NC + group	NC + dist
(Intercept)	1.68 ***	13.20 *	1.67 ***	1.63 ***
	(0.24)	(5.52)	(0.24)	(0.25)
Noncrop	0.03 ***	0.02 *	0.02 *	0.03 ***
	(0.01)	(0.01)	(0.01)	(0.01)
Latitude		−0.00 *		
		(0.00)		
Group.			0.41 *	
			(0.20)	
Distance				0.00
				(0.00)
N	11	11	11	11
AICc	60.5	60.1	60.2	63.1
Exp. Dev.	0.536	0.741	0.733	0.597

*** p < 0.001; ** p < 0.01; * p < 0.05.

Classification Accuracy Assessment Reports for UAS and PlanetScope Land Cover Classifications

UAS Land Cover Classification Results

#Broken Kettle Grasslands

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction   1   3
##         1 740  30
##         3   6 161
##
##               Accuracy : 0.9616
##                 95% CI : (0.9472, 0.9729)
##    No Information Rate : 0.7962
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 0.8758
##
##  Mcnemar's Test P-Value : 0.0001264
##
##            Sensitivity : 0.9920
```

```
##            Specificity : 0.8429
##         Pos Pred Value : 0.9610
##         Neg Pred Value : 0.9641
##             Prevalence : 0.7962
##         Detection Rate : 0.7898
##    Detection Prevalence : 0.8218
##       Balanced Accuracy : 0.9174
##
##        'Positive' Class : 1
##
```

#McNay UAS

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction   1   2   4
##         1 208   1   0
##         2   3 144   0
##         4   0   0 131
##
## Overall Statistics
##
##               Accuracy : 0.9918
##                 95% CI : (0.9791, 0.9978)
##    No Information Rate : 0.4333
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 0.9874
##
##  Mcnemar's Test P-Value : NA
##
## Statistics by Class:
##
##                     Class: 1 Class: 2 Class: 4
## Sensitivity           0.9858   0.9931    1.000
## Specificity           0.9964   0.9912    1.000
## Pos Pred Value        0.9952   0.9796    1.000
## Neg Pred Value        0.9892   0.9971    1.000
## Prevalence            0.4333   0.2977    0.269
## Detection Rate        0.4271   0.2957    0.269
## Detection Prevalence   0.4292   0.3018    0.269
## Balanced Accuracy     0.9911   0.9922    1.000
```

#Northeast 1 UAS

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction   1   2   3
##         1 129   0   0
##         2   0 717  22
##         3   0   1   8
##
## Overall Statistics
##
##               Accuracy : 0.9738
##                 95% CI : (0.9609, 0.9833)
##    No Information Rate : 0.8187
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 0.909
##
##  Mcnemar's Test P-Value : NA
##
## Statistics by Class:
##
##                     Class: 1 Class: 2 Class: 3
## Sensitivity           1.0000   0.9986 0.266667
## Specificity           1.0000   0.8616 0.998819
## Pos Pred Value        1.0000   0.9702 0.888889
## Neg Pred Value        1.0000   0.9928 0.974654
## Prevalence            0.1471   0.8187 0.034208
## Detection Rate        0.1471   0.8176 0.009122
## Detection Prevalence   0.1471   0.8426 0.010262
## Balanced Accuracy     1.0000   0.9301 0.632743
```

#Northeast 3 UAS

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction   1   2
##         1 978 353
##         2  85 795
##
##               Accuracy : 0.8019
##                 95% CI : (0.7847, 0.8183)
##    No Information Rate : 0.5192
```

```
##     P-Value [Acc > NIR] : < 2.2e-16
##
##                   Kappa : 0.6069
##
##  Mcnemar's Test P-Value : < 2.2e-16
##
##             Sensitivity : 0.9200
##             Specificity : 0.6925
##          Pos Pred Value : 0.7348
##          Neg Pred Value : 0.9034
##              Prevalence : 0.4808
##          Detection Rate : 0.4423
##    Detection Prevalence : 0.6020
##       Balanced Accuracy : 0.8063
##
##        'Positive' Class : 1
##
```

#Northeast 4 UAS

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction    1    2    3
##          1 1214   40    7
##          2   39  591   21
##          3    0    0    0
##
## Overall Statistics
##
##               Accuracy : 0.944
##                 95% CI : (0.9328, 0.9539)
##    No Information Rate : 0.6553
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 0.8771
##
##  Mcnemar's Test P-Value : 3.61e-06
##
## Statistics by Class:
##
##                     Class: 1 Class: 2 Class: 3
## Sensitivity           0.9689   0.9366  0.00000
## Specificity           0.9287   0.9532  1.00000
```

```
## Pos Pred Value         0.9627   0.9078      NaN
## Neg Pred Value         0.9401   0.9683  0.98536
## Prevalence             0.6553   0.3300  0.01464
## Detection Rate         0.6349   0.3091  0.00000
## Detection Prevalence   0.6595   0.3405  0.00000
## Balanced Accuracy      0.9488   0.9449  0.50000
```

#Armstrong 1 UAS

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction    1    2
##         1 2016  139
##         2  147 1242
##
##               Accuracy : 0.9193
##                 95% CI : (0.9098, 0.9281)
##    No Information Rate : 0.6103
##    P-Value [Acc > NIR] : <2e-16
##
##                  Kappa : 0.8305
##
##  Mcnemar's Test P-Value : 0.6789
##
##            Sensitivity : 0.9320
##            Specificity : 0.8993
##         Pos Pred Value : 0.9355
##         Neg Pred Value : 0.8942
##             Prevalence : 0.6103
##         Detection Rate : 0.5688
##   Detection Prevalence : 0.6081
##      Balanced Accuracy : 0.9157
##
##       'Positive' Class : 1
##

## Confusion Matrix and Statistics
##
##          Reference
## Prediction    1    2
##         1  603   67
##         2  278 1515
##
##               Accuracy : 0.8599
```

```
##                95% CI : (0.8456, 0.8734)
##    No Information Rate : 0.6423
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                 Kappa : 0.6781
##
##  Mcnemar's Test P-Value : < 2.2e-16
##
##            Sensitivity : 0.6844
##            Specificity : 0.9576
##         Pos Pred Value : 0.9000
##         Neg Pred Value : 0.8450
##             Prevalence : 0.3577
##         Detection Rate : 0.2448
##   Detection Prevalence : 0.2720
##      Balanced Accuracy : 0.8210
##
##       'Positive' Class : 1
##
```

#Armstrong 3 UAS

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction    1    2
##         1  603   67
##         2  278 1515
##
##               Accuracy : 0.8599
##                 95% CI : (0.8456, 0.8734)
##    No Information Rate : 0.6423
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                 Kappa : 0.6781
##
##  Mcnemar's Test P-Value : < 2.2e-16
##
##            Sensitivity : 0.6844
##            Specificity : 0.9576
##         Pos Pred Value : 0.9000
##         Neg Pred Value : 0.8450
##             Prevalence : 0.3577
##         Detection Rate : 0.2448
```

```
##    Detection Prevalence : 0.2720
##       Balanced Accuracy : 0.8210
##
##        'Positive' Class : 1
##
```

#Allee 1

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction   1   2
##          1 603   1
##          2  15 718
##
##                Accuracy : 0.988
##                  95% CI : (0.9806, 0.9931)
##     No Information Rate : 0.5378
##     P-Value [Acc > NIR] : < 2.2e-16
##
##                   Kappa : 0.9759
##
##  Mcnemar's Test P-Value : 0.001154
##
##             Sensitivity : 0.9757
##             Specificity : 0.9986
##          Pos Pred Value : 0.9983
##          Neg Pred Value : 0.9795
##              Prevalence : 0.4622
##          Detection Rate : 0.4510
##    Detection Prevalence : 0.4518
##       Balanced Accuracy : 0.9872
##
##        'Positive' Class : 1
##
```

##Allee 2 UAS

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction   1   2
##          1 302   1
##          2   0 349
```

```
##
##               Accuracy : 0.9985
##                 95% CI : (0.9915, 1)
##    No Information Rate : 0.5368
##    P-Value [Acc > NIR] : <2e-16
##
##                  Kappa : 0.9969
##
##  Mcnemar's Test P-Value : 1
##
##             Sensitivity : 1.0000
##             Specificity : 0.9971
##          Pos Pred Value : 0.9967
##          Neg Pred Value : 1.0000
##              Prevalence : 0.4632
##          Detection Rate : 0.4632
##    Detection Prevalence : 0.4647
##       Balanced Accuracy : 0.9986
##
##        'Positive' Class : 1
##
```

#Allee 3

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction   1   2
##          1  57  22
##          2 310 436
##
##               Accuracy : 0.5976
##                 95% CI : (0.5632, 0.6312)
##    No Information Rate : 0.5552
##    P-Value [Acc > NIR] : 0.007664
##
##                  Kappa : 0.1163
##
##  Mcnemar's Test P-Value : < 2.2e-16
##
##             Sensitivity : 0.15531
##             Specificity : 0.95197
##          Pos Pred Value : 0.72152
```

```
##          Neg Pred Value : 0.58445
##              Prevalence : 0.44485
##          Detection Rate : 0.06909
##    Detection Prevalence : 0.09576
##       Balanced Accuracy : 0.55364
##
##        'Positive' Class : 1
## 3
```

#Allee 4

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction   1   2
##          1  31   0
##          2   0 114
##
##               Accuracy : 1
##                 95% CI : (0.9749, 1)
##    No Information Rate : 0.7862
##    P-Value [Acc > NIR] : 7.126e-16
##
##                  Kappa : 1
##
##  Mcnemar's Test P-Value : NA
##
##             Sensitivity : 1.0000
##             Specificity : 1.0000
##          Pos Pred Value : 1.0000
##          Neg Pred Value : 1.0000
##              Prevalence : 0.2138
##          Detection Rate : 0.2138
##    Detection Prevalence : 0.2138
##       Balanced Accuracy : 1.0000
##
##        'Positive' Class : 1
##
```

PlanetScope land cover classifications were completed for each general study area, and then clipped to the analysis extent for sites. Therefore, there are only five PlanetScope classifications.

#Allee 1 PLANET

```
#Allee 1
## Confusion Matrix and Statistics
##
##          Reference
## Prediction     1     2     4     5
##          1  2369    19     1     0
##          2    15 24645     0     1
##          4     0     0  1144     0
##          5     0     0     0  1242
##
## Overall Statistics
##
##               Accuracy : 0.9988
##                 95% CI : (0.9983, 0.9991)
##    No Information Rate : 0.8379
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 0.9958
##
##  Mcnemar's Test P-Value : NA
##
## Statistics by Class:
##
##                     Class: 1 Class: 2 Class: 4 Class: 5
## Sensitivity          0.99371   0.9992  0.99913  0.99920
## Specificity          0.99926   0.9966  1.00000  1.00000
## Pos Pred Value       0.99163   0.9994  1.00000  1.00000
## Neg Pred Value       0.99945   0.9960  0.99996  0.99996
## Prevalence           0.08099   0.8379  0.03890  0.04223
## Detection Rate       0.08048   0.8372  0.03886  0.04219
## Detection Prevalence  0.08116   0.8378  0.03886  0.04219
## Balanced Accuracy     0.99648   0.9979  0.99956  0.99960
```

#Armstrong

```
## Confusion Matrix and Statistics
##
##          Reference
```

```
## Prediction     1     2     3     4     5
##          1   285     0     0     0     0
##          2     0 21550     0     0     0
##          3     0     0  3909     0     0
##          4     0     0     0    54     0
##          5     0     0     0     0   837
##
## Overall Statistics
##
##               Accuracy : 1
##                 95% CI : (0.9999, 1)
##    No Information Rate : 0.8091
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 1
##
##  Mcnemar's Test P-Value : NA
##
## Statistics by Class:
##
##                     Class: 1 Class: 2 Class: 3 Class: 4 Class: 5
## Sensitivity           1.0000   1.0000   1.0000 1.000000  1.00000
## Specificity           1.0000   1.0000   1.0000 1.000000  1.00000
## Pos Pred Value        1.0000   1.0000   1.0000 1.000000  1.00000
## Neg Pred Value        1.0000   1.0000   1.0000 1.000000  1.00000
## Prevalence           0.0107   0.8091   0.1468 0.002027  0.03142
## Detection Rate        0.0107   0.8091   0.1468 0.002027  0.03142
## Detection Prevalence   0.0107   0.8091   0.1468 0.002027  0.03142
## Balanced Accuracy     1.0000   1.0000   1.0000 1.000000  1.00000
```

#McNay

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction    1    2    3    4    5
##          1  160    0    0    0    0
##          2    3 9297    0    0    0
##          3    0    0 1999    0    0
##          4    0    0    0   88    0
##          5    0    0    0    0  571
##
## Overall Statistics
##
```

```
##               Accuracy : 0.9998
##                 95% CI : (0.9993, 0.9999)
##    No Information Rate : 0.7672
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 0.9994
##
##  Mcnemar's Test P-Value : NA
##
## Statistics by Class:
##
##                     Class: 1 Class: 2 Class: 3 Class: 4 Class: 5
## Sensitivity          0.98160   1.0000    1.000 1.000000  1.00000
## Specificity          1.00000   0.9989    1.000 1.000000  1.00000
## Pos Pred Value       1.00000   0.9997    1.000 1.000000  1.00000
## Neg Pred Value       0.99975   1.0000    1.000 1.000000  1.00000
## Prevalence           0.01345   0.7672    0.165 0.007262  0.04712
## Detection Rate       0.01320   0.7672    0.165 0.007262  0.04712
## Detection Prevalence  0.01320   0.7675    0.165 0.007262  0.04712
## Balanced Accuracy     0.99080   0.9995    1.000 1.000000  1.00000
```

#Northeast

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction     1     2     3     4     5
##          1   451     6     0     0     0
##          2     6 24655     0     1     0
##          3     0     0  6763     0     0
##          4     0     0     0   782     0
##          5     0     0     0     0  7827
##
## Overall Statistics
##
##               Accuracy : 0.9997
##                 95% CI : (0.9995, 0.9998)
##    No Information Rate : 0.609
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 0.9994
##
```

```
##  Mcnemar's Test P-Value : NA
##
## Statistics by Class:
##
##                     Class: 1 Class: 2 Class: 3 Class: 4 Class: 5
## Sensitivity          0.98687   0.9998    1.000  0.99872   1.0000
## Specificity          0.99985   0.9996    1.000  1.00000   1.0000
## Pos Pred Value       0.98687   0.9997    1.000  1.00000   1.0000
## Neg Pred Value       0.99985   0.9996    1.000  0.99997   1.0000
## Prevalence           0.01129   0.6090    0.167  0.01934   0.1933
## Detection Rate       0.01114   0.6089    0.167  0.01931   0.1933
## Detection Prevalence  0.01129   0.6091    0.167  0.01931   0.1933
## Balanced Accuracy     0.99336   0.9997    1.000  0.99936   1.0000
```

#BKG

```
## Confusion Matrix and Statistics
##
##          Reference
## Prediction     1     2     3     4     5
##          1  3891   387     0     0     0
##          2    24 19150     0     0     0
##          3     0     0  1203     0     0
##          4     0     0     0   367     0
##          5     0     0     0     0   454
##
## Overall Statistics
##
##               Accuracy : 0.9839
##                 95% CI : (0.9822, 0.9854)
##    No Information Rate : 0.7669
##    P-Value [Acc > NIR] : < 2.2e-16
##
##                  Kappa : 0.9591
##
##  Mcnemar's Test P-Value : NA
##
## Statistics by Class:
##
##                     Class: 1 Class: 2 Class: 3 Class: 4 Class: 5
## Sensitivity           0.9939   0.9802  1.00000  1.00000  1.00000
```

```
## Specificity            0.9821   0.9960  1.00000  1.00000  1.00000
## Pos Pred Value         0.9095   0.9987  1.00000  1.00000  1.00000
## Neg Pred Value         0.9989   0.9386  1.00000  1.00000  1.00000
## Prevalence             0.1537   0.7669  0.04722  0.01441  0.01782
## Detection Rate         0.1527   0.7517  0.04722  0.01441  0.01782
## Detection Prevalence   0.1679   0.7526  0.04722  0.01441  0.01782
## Balanced Accuracy      0.9880   0.9881  1.00000  1.00000  1.00000
```