Herrera Environmental Consultants, Inc.

Memorandum

To	Naomi Tsurimi and Dave Helzer, Portland Bureau of Environmental Services
From	Josh Cerra, Herrera Environmental Consultants
Date	September 30, 2009
Subject	Mt. Tabor Park Avian Survey Summary Memo

Herrera conducted avian bird surveys at Mt. Tabor Park on June 3 and 4, June 12 and 13, and June 22 and 23, 2009. Avian bird surveys were conducted using audial point count methods identified in the Avian Point Count Protocol memo provided for the project.

Twenty-three avian point count stations were identified for data collection. Results of the survey are summarized below in terms of overall species abundance and diversity for the project based on the point count data collected.

During field visits, individuals detected during point counts were recorded as occurring either within 0-50m of the point count location, greater than 50m from the point count location, as associated or independent flyovers, or as flushes or juvenile sightings. The summary below concentrates on data collected within the 0-50m category, unless otherwise indicated.

Note: Station 10 was explored as a possible point count location, but it was determined to be a non-conforming point. No data was collected for Station 10, and it is not represented in the accompanying tables and graphs.

Species Abundance

During analysis two overall indicators of avian abundance, average number of individuals per visit and average number of sitings of a particular species per visit, were calculated. On average, more individuals per visit were detected within 50m of a point count (average 13.9 individuals) compared to areas greater than 50m from the point count location (average 7.5 individuals). See Table 1. This is likely due to the fact that individual birds located closer to the person collecting data were easier to detect than birds located farther from the data collector. Notably, this indicator varied widely throughout all point count station visits- between 6.7 to 20.7 individuals were detected within 50m of a point count per visit at a given station. See Figure 1.

Not surprisingly, the abundance of individual species was also variable. Of the 69 point counts conducted, American robin, house finch, song sparrow, and unidentified juncos were the most commonly encountered species in the 0-50m detection category. These species averaged from one to two individuals detected per point count visit. The second most commonly detected

species were American crow, black-capped chickadee, brown creeper, bushtit, lesser goldfinch, and spotted towhee. Individuals of these species were detected on average from 0.5 times to one time per visit. Other species were encountered less frequently, and sometimes only once during the entire survey field season. See Table 2 and Figure 2.

Diversity

A total of 45 species were detected during the survey season. For all detections recorded in the 0- 50m and greater 50m detection categories, the average number of species detected per visit over the course of three visits at a given station ranged from 7.0 to 13.3 species. See Figure3. In the same data categories, on average 10.2 species of birds were detected during the course of a given point count over the course of the entire project. See Table 1.

The species encountered during the surveys were generally typical of the types of habitats encountered in the Portland Metro Region and on Mt. Tabor. Many of the species identified are capable of breeding and nesting in conditions encountered on Mt. Tabor. About one-half of the species identified are typically observed as year-round residents of the park itself.

Table 1. Indicators of diversity and abundance.

STATION	ABUNDANCE INDICATOR		DIVERSITY INDICATOR			
	Avg Detections/Visit	Avg Detections/Visit	Number of Species Detected/Visit, 0-50m and >50m			
	0-50m, 0-8 minutes	>50m, 0-8 minutes	Visit 1	Visit 2	Visit 3	Station Average
1	10.0	8.7	10	11	11	10.7
2	15.3	8.0	11	8	8	9.0
3	8.7	11.7	14	7	10	10.3
4	20.0	10.3	15	13	12	13.3
5	8.0	12.3	10	13	9	10.7
6	19.0	5.3	13	12	10	11.7
7	20.7	5.0	13	8	8	9.7
8	16.3	5.7	12	11	9	10.7
9	16.7	7.7	8	11	9	9.3
10	na	na	na	na	na	na
11	12.7	6.3	7	6	8	7.0
12	12.7	6.0	8	9	8	8.3
13	16.3	8.0	17	11	11	13.0
14	13.3	9.0	8	8	13	9.7
15	17.3	6.7	12	9	11	10.7
16	6.7	6.7	10	6	9	8.3
17	21.0	6.0	11	12	13	12.0
18	15.3	4.7	11	12	13	12.0
19	18.0	7.3	8	10	13	10.3
20	10.0	8.0	9	13	9	10.3
21	10.3	5.0	10	9	8	9.0
22	10.7	8.7	12	10	9	10.3
23	10.7	8.0	10	8	8	8.7
24	10.3	7.3	11	8	11	10.0
Totals	**Average Detections per Visit, 0-50M**	**AverageDetections Per Visit, >50M**				**Average Number of Species Detected per visit, 0-50m and >50m Data Categories**
	13.9	**7.5**				**10.2**

Table2. Species encountered and average detections per visit by species.

COMMON NAME	SPECIES CODE	AVE DETECTIONS/VISIT, 0-50M	AVE DETECTIONS/VISIT,>50M	AVE DETECTIONS/VISIT, FLYOVER/JUV/FLUSH
American crow	AMCR	0.83	1.30	0.10
American goldfinch	AMGO	0.32	0.32	0.03
American robin	AMRO	1.90	1.49	0.17
Anna's hummingbird	ANHU	0.14	0.00	0.00
barn swallow	BARS	0.00	0.04	0.00
black-capped chickadee	BCCH	0.54	0.04	0.04
Bewick's wren	BEWR	0.09	0.00	0.00
brown-headed cowbird	BHCO	0.09	0.10	0.00
black-headed grosbeak	BHGR	0.23	0.03	0.00
brown creeper	BRCR	0.57	0.12	0.00
band-tailed pigeon	BTPI	0.07	0.06	0.01
bushtit	BUSH	0.61	0.01	0.00
chestnut-backed chickadee	CBCH	0.28	0.03	0.00
cedar waxwing	CEWA	0.22	0.07	0.03
Cooper's hawk	COHA	0.04	0.00	0.00
downy woodpecker	DOWO	0.03	0.01	0.00
house finch	HOFI	2.01	0.80	0.03
house sparrow	HOSP	0.00	0.01	0.00
Hutton's vireo	HUVI	0.28	0.04	0.00
lesser goldfinch	LEGO	0.74	0.22	0.00
mallard duck	MALL	0.03	0.07	0.00
mourning dove	MODO	0.00	0.01	0.00
orange-crowned warbler	OCWA	0.01	0.00	0.00
olive-sided flycatcher	OSFL	0.00	0.04	0.00
pine sisken	PISI	0.28	0.10	0.00
Pacific-slope flycatcher	PSFL	0.13	0.03	0.00
red-breasted nuthatch	RBNU	0.38	0.20	0.00
red-shafted flicker	RSFL	0.23	0.12	0.00
red-tailed hawk	RTHA	0.01	0.03	0.00
rufous hummingbird	RUHU	0.06	0.00	0.00
song sparrow	SOSP	1.41	0.49	0.06
spotted towhee	SPTO	0.58	0.36	0.00
Stellar's jay	STJA	0.23	0.32	0.01
Swainson's thrush	SWTH	0.03	0.00	0.00
tree swallow	TRES	0.00	0.06	0.00
unidentified dark-eyed junco	UDEJ	1.16	0.75	0.06
unknown species	UNK	0.16	0.00	0.07
Vaux Swift	VASW	0.00	0.00	0.09
varied thrush	VATH	0.01	0.00	0.00
violet-green swallow	VGSW	0.00	0.00	0.01
warbling vireo	WAVI	0.01	0.00	0.00
western scrub jay	WESJ	0.04	0.03	0.00
western tanager	WETA	0.07	0.01	0.00
western wood pewee	WEWP	0.09	0.14	0.00
Wilson's warbler	WIWA	0.01	0.00	0.00

Figure 1. Average number of individuals detected per visit, by station, 0-50m and >50m detection categories.

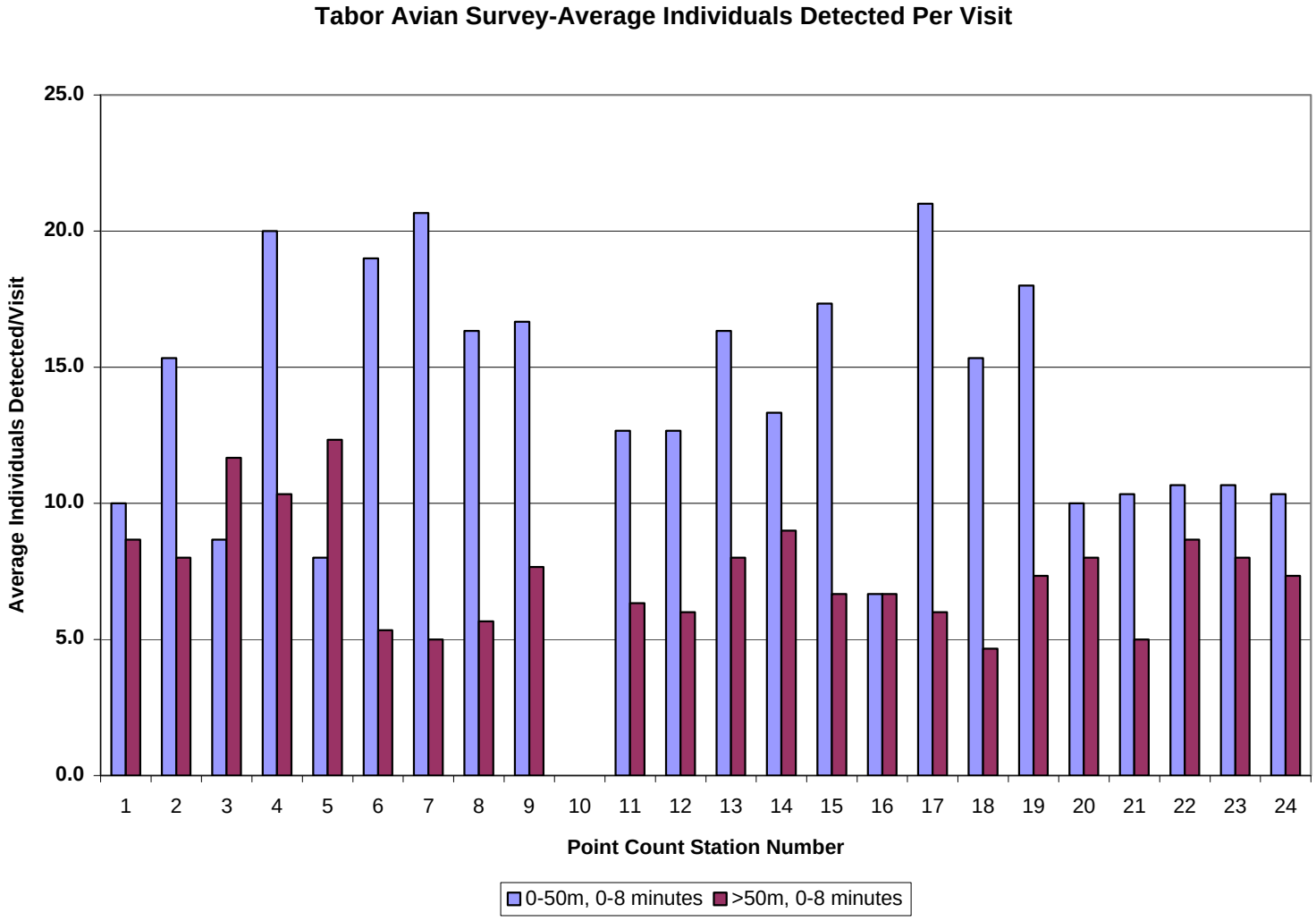

Figure 2: Average Number of Sightings of Species per Visit, All Stations

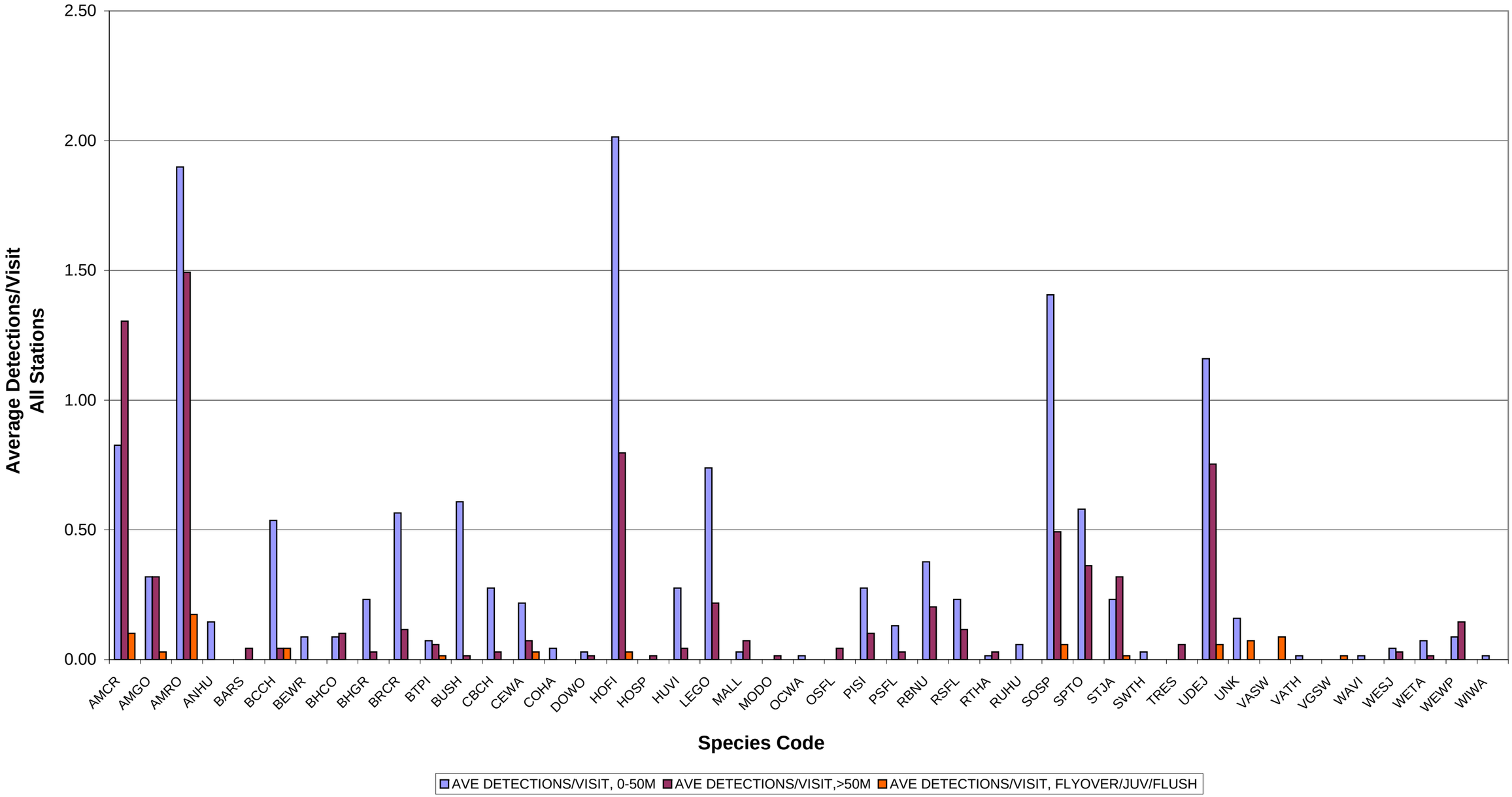
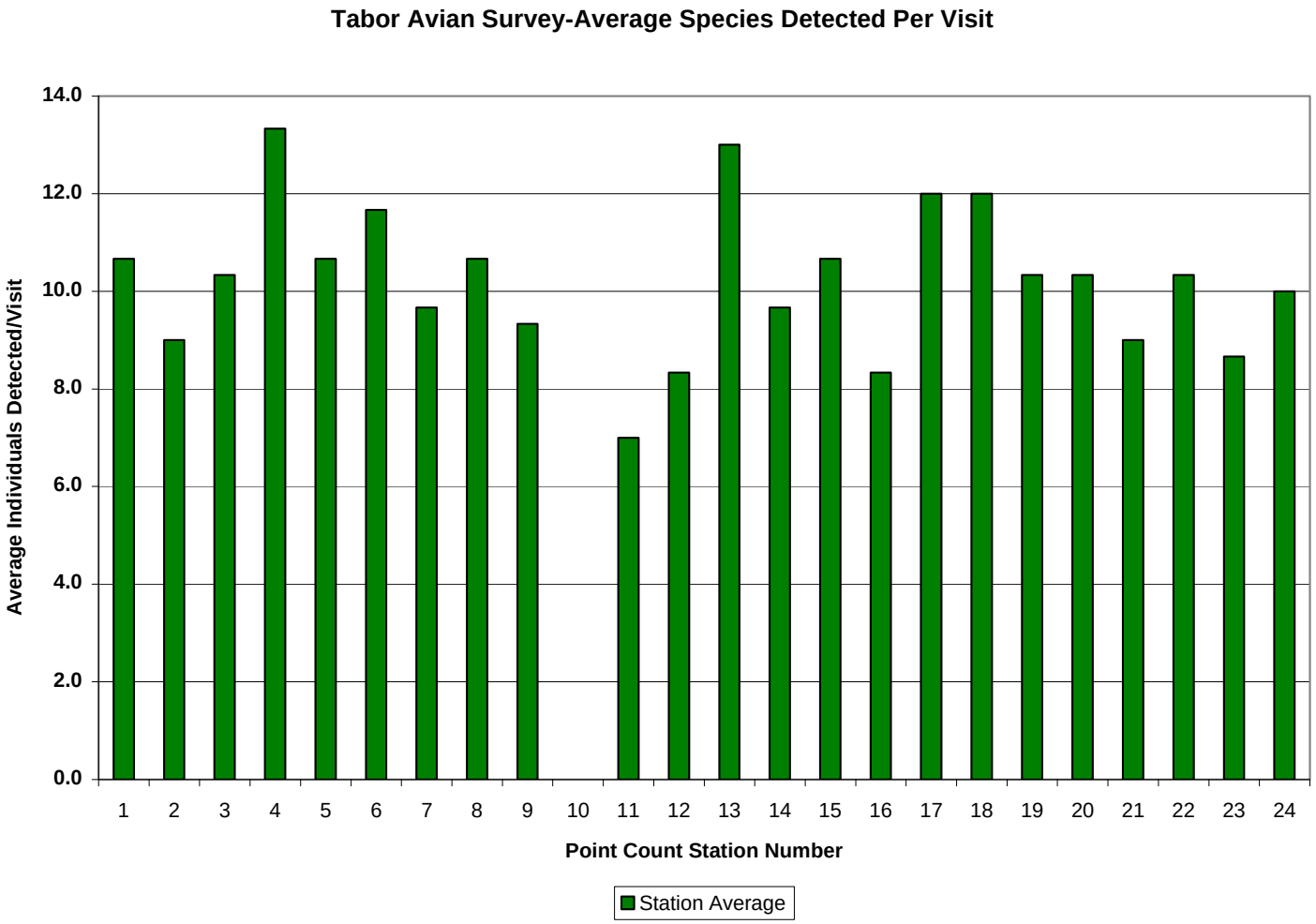
Figure 3. Average number of species detected per visit, by station, 0-50m and >50m detection categories